



## **APPENDIX 1: ACTIVITIES LAUNCHED IN 2023 FOR THE NON-INITIATIVE PART**



## **WORK PROGRAMME 2023**

**V2 – 23 January 2023**

In accordance with Council Regulation (EU) 2021/2085 of 19 November 2021, Official Journal: OJ L 427, 30.11.2021, p. 17–119, establishing the Joint Undertakings under Horizon Europe, and with the KDT JU Financial Rules (KDT GB 2021.02, Annex 30)

The annual work programme will be made publicly available after its adoption by the Governing Board.

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## 1. INTRODUCTION

This is the second work programme of the Key Digital Technologies Joint Undertaking (KDT JU). It covers the activities of the KDT JU for 2023 (from 1 January 2023 to 31 December 2023).

The scope of the work programme is mainly to inform potential beneficiaries in a transparent manner about the Joint Undertaking's intentions to support and fund actions in their specific field of research, in accordance with the legal provisions, in particular:

- Council Regulation (EU) 2021/2085 of 19 November 2021 establishing the KDT Joint Undertaking referred to as KDT Regulation or **Single Basic Act (SBA)**
- Regulation (EU, Euratom) 2018/1046 of the European Parliament and of the Council of 18 July 2018 on the **financial rules** applicable to the general budget of the Union,
- Regulation 2021/695 of the European Parliament and of the Council of 28 April 2021 establishing **Horizon Europe** – the Framework Programme for Research and Innovation, laying down its rules for participation and dissemination;
- Commission Delegated Regulation (EU) 2019/887 of 13 March 2019 on the model **financial regulation for public-private partnership** bodies referred to in Article 71 of Regulation (EU, Euratom) 2018/1046 of the European Parliament and of the Council;
- **Financial rules of the KDT Joint Undertaking**, decision KDT GB 2021.02, Annex 12;
- The **Strategic Research and Innovation Agenda (SRIA)** 2023 issued by the Private Members Board (decision KDT GB 2023.34).

### 1.1 Objectives of the KDT JU

The joint undertakings have three general objectives, in accordance with Article 4 of the SBA:

- strengthening and integrating the scientific, innovation and technological capacities and facilitating collaborative links,
- securing sustainability-driven global leadership and resilience of Union value chains in key technologies and industries and on developing, and
- accelerating the uptake of innovative solutions throughout the Union addressing climate, environmental, health, digital and other global challenges.

The SBA also lists five specific objectives for the Joint Undertakings:

- enhance the critical mass and scientific and technological capabilities and competences,
- accelerate the green and digital transitions,
- enhance the research and innovation capabilities and performance of existing and new European innovation ecosystem and economic value chains, including in start-ups and small and medium-sized enterprises (SME),
- accelerate the deployment, uptake and diffusion of innovative solutions, technologies, services and skills, and

- deliver environmental, energy, resource-saving, societal, circularity and productivity improvements in new products, technologies, applications and services by exploiting Union capabilities and resources.

In addition to the objectives set out above, the KDT JU has the following general objectives (SBA, Article 126):

- a) reinforce the Union's strategic autonomy in electronic components and systems to support future needs of vertical industries and the economy at large. The overall target is to contribute towards doubling the value of the design and production of electronic components and systems in Europe by 2030, in line with the weight of the Union in products and services;
- b) establish Union scientific excellence and innovation leadership in emerging components and systems technologies, including in activities related to lower TRLs; and promote the active involvement of SMEs, which shall represent at least one third of the total number of participants in indirect actions and at least 20 % of public funding should go to them;
- c) ensure that components and systems technologies address Europe's societal and environmental challenges. The target is to align with the Union policy on energy efficiency and contribute towards the reduction of energy consumption by 32.5 % in 2030.

Next to those general objectives, the KDT JU also has the following specific objectives:

- a) support research and development for establishing design and production capabilities in Europe for strategic application areas;
- b) launch a balanced portfolio of large and small projects supporting the fast transfer of technologies from the research to the industrial environment;
- c) foster a dynamic Union-wide ecosystem based on digital value-chains with simplified access to newcomers;
- d) support research and development for enhancing component technologies that guarantee security, trust and energy-efficiency for critical infrastructures and sectors in Europe;
- e) foster mobilisation of national resources and ensure coordination of Union and national research and innovation programmes in the field of electronic components and systems;
- f) establish coherence between the Strategic Research and Innovation Agenda of the Key Digital Technologies Joint Undertaking and Union policies so that electronics components and systems technologies contribute efficiently.

Besides the objectives in the HE regulation and the SBA, the KDT JU also contributes to a larger effort envisioned in the following documents: Joint Declaration on Processor and Semiconductor Technologies<sup>1</sup> (7 Dec 2020); Digital Compass communication<sup>2</sup> (COM(2021)

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<sup>1</sup> <https://digital-strategy.ec.europa.eu/en/library/joint-declaration-processors-and-semiconductor-technologies>

<sup>2</sup> <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A52021DC0118>

118 9 March 2021) and eventually the proposed European Chips Act<sup>3</sup> (published on 8 February 2022).

## **1.2 KDT JU as part of Horizon Europe**

KDT JU contributes to Cluster 4 of Horizon Europe.

Although KDT JU is not part of the Shared challenges and their causes as outlined in the work programme 2021-2022 of Horizon Europe, part 7 Digital, Industry and Space (European Commission Decision C(2021)7804 of 28 October 2021) require collaboration and cooperation from KDT with the other partnerships in Horizon Europe and shall be an integral part of the work programme of KDT JU.

## **1.3 New approach for the work programme of the KDT JU**

ECSEL JU and its predecessors ENIAC JU and ARTEMIS JU were conceived as bottom-up programmes. This approach has succeeded to bolster the European electronic components and systems sector in various strategically important domains such as power electronics, industrial systems, medical technology, autonomous driving, etc.

KDT JU operates in a different environment as is noted in recital (78) of the SBA that reads:

*(78) The term Key Digital Technologies refers to electronic components and systems that underpin all major economic sectors. The Commission highlighted the need to master those technologies in Europe, notably in the context of delivering on European policy priorities such as digital leadership. The importance of the area and the challenges faced by the stakeholders in the Union require urgent action in order to leave no weak link in Europe's innovation and value chains. A mechanism at Union level should therefore be set up to combine and focus the provision of support to research and innovation in electronic components and systems by member states, the Union and the private sector.*

The urgency<sup>4</sup> requires a different approach. The work programme shall tackle this by promoting focus topics in a more top-down manner, in line with national and European policy objectives. For certain focus topics, this may require a multi-annual strategy coordinated with activities of related JUs such as EuroHPC and discussed with Participating States and industry associations.

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<sup>3</sup> [https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/european-chips-act\\_en](https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/european-chips-act_en)

<sup>4</sup> <https://digital-strategy.ec.europa.eu/en/news/key-digital-technologies-new-partnership-help-speed-transition-green-and-digital-europe>



## 1.4 Main objectives described in the SRIA

The ECS SRIA 2023 (KDT GB 2023.34) identifies different major challenges that have emerged from the analysis of the foundational technologies, the cross-sectional technologies and the application key areas.

The challenges are frequently interdependent – they influence each other, become increasingly demanding, and impact on many areas, including technology innovation, industrial competitiveness, security, safety, business and environmental sustainability, society, etc. From this perspective, the Major challenges represent key factors for the achievement of the four main common objectives, which are aligned with the European Commission Strategic Targets.

## 2. KDT ANNUAL WORK PROGRAMME 2023

The KDT WP2023 foresees the launch of **three calls for proposals** with an estimated EU expenditure of **EUR 317.7 million**.

Other operational activities include:

- the GAP of the KDT calls 2022;
- the launch of the projects selected in KDT calls 2021 and calls 2022;
- the monitoring of the ECSEL projects selected in the ECSEL JU Calls 2014-2020;
- the preparation of the WP2024 in particular the focus topics
- various supporting activities to communication, administration & finance, preparation for the Chips JU.

### 2.1 Launch of KDT JU calls

The EU contribution is based on the budget foreseen for the JUs in the general Union budget.

The proposal establishing the Joint Undertakings under Horizon Europe (COM(2021) 87, 23 February 2021) indicates an estimated maximum operational budget for the KDT JU in 2023 of almost 317,704,061 Euro for the calls, and an amount of 700,000 Euro will be reserved for contracting experts involved in the evaluation of projects and monitoring of the project implementation.

In 2023, the KDT JU will launch three calls for proposals:

- A **first** call for **Innovation Actions** (higher TRLs) and will consist of a global topic and 3 focus and run in 2 phases.
- The **second** call for **Research and Innovation Actions** (lower TRLs) and will consist of a global topic and one focus topic and run in 2 phases.
- A **third** call will include three actions one RIA and two CSA that will be implemented as one phase call without national contribution.

The two global topics focus on all chapters of the SRIA and aim at the reinforcement of the industrial competitiveness, stimulating industrial innovation and transfer of innovation from research environments (RTOs and Universities) to SMEs and Large Enterprises. Research and Innovation Actions (RIA) and Innovation Actions (IA) essentially differ by the Technology Readiness Level (TRL) and therefore by the reimbursement rates.

Projects selected should demonstrate high impact, Europe wide collaboration with a mixed participation of large enterprises, SMEs and academia.

Expected outputs are novel technologies and applications, pilot lines, large scale demonstrators, and platforms for innovative product developments.

Next to those two global topics, the **following focus topics are included in the IA call**:

- Topic 2 IA: Focus topic on *6G Integrated Radio Front-End for TeraHertz Communications*;
- Topic 3 IA: Focus topic on *Integration of trustworthy Edge AI technologies in complex heterogeneous components and systems*;
- Topic 4 IA: Focus topic on *Electronic Control Systems (ECS) for management & control of decentralized energy supply & storage*.

And the following **focus topic is included in the RIA call**:

- Hardware abstraction layer for a European Vehicle Operating System (RIA)

The **third call** will cover three actions:

- Improving the global demand supply forecast of the semiconductor supply chain (IA)
- Pan-European network for Advanced Packaging made in Europe (CSA)
- Coordination of the European software-defined vehicle platform (CSA)

**EU estimated expenditure for the calls 2023**

<b>Action</b>	<b>Topic</b>	<b>Estimated EU Expenditure (M€)</b>
<b>Call 2023-1-IA T1</b>	Global call according to SRIA 2023 (IA)	153.0
<b>Call 2023-1-IA T2</b>	Focus topic <i>6G Integrated Radio Front-End for TeraHertz Communications</i> (IA)	20.0
<b>Call 2023-1-IA T3</b>	Focus topic on <i>Integration of trustworthy Edge AI technologies in complex heterogeneous components and systems</i> (IA)	20.0
<b>Call 2023-1-IA T4</b>	Focus Topic on <i>Electronic Control Systems (ECS) for management &amp; control of decentralized energy supply &amp; storage</i> (IA)	20.0
<b>Call 2023-2-RIA T1</b>	Global call according to SRIA 2023 (RIA)	76.7
<b>Call 2023-2-RIA T2</b>	Focus Topic on <i>Hardware abstraction layer for a European Vehicle Operating System</i> (RIA)	20.0
<b>Call 2023-3-IA T1</b>	<i>Improving the global demand supply forecast of the semiconductor supply chain</i> (IA)	5.0
<b>Call 2023-3-CSA T2</b>	<i>Pan-European network for Advanced Packaging made in Europe</i> (CSA)	1.0
<b>Call 2023-3-CSA T3</b>	<i>Coordination of the European software-defined vehicle platform</i> (CSA)	2.0
	<b>Total</b>	317.7 M€

## National Budgets for the call 2023

Participating states	Call 2023-1 T1	Call 2023-1 T2	Call 2023-1 T3	Call 2023-1 T4	Call 2023-2 T1	Call 2023-2 T2	Total (M€)
AT	3.7	0	0.5	0	1.6	1.2	7.0
BE-FL							12.0
BE-BR							1.0
BE-WL							0.4
BG							
CY							3.0
CZ	1.1	0.2	0.2	0.2	1.1	0.2	3.0
DE (2)		0.0					32.0
DE TH							
DK							
EE							0.75
EL							0
ES AEI							3.0
ES MAETD							5.0
FI							10.0
FR (1)							30.0
HR							
HU							2.0
IE							2.0
IL							3.5 tbc
IS							
IT MIMIT							20.0
IT MUR							14.0 tbc
LT							
LV							
LU							
MT							
NL							30.0
NO							0.0
PL							1.5
PT							1.5 tbc
RO							
SE	1.9	0.4	0.2	0.0	1.9	0.0	4.4
SK							0.8
SL							
TR							6.0
<b>Total</b>							<b>192.85</b>

(1) For FR: this amount is not a dedicated budget for KDT projects, but an estimation of the ability of French partners within KDT projects to obtain the national co-funding through

public funding mechanisms existing in France, as it is described in the French rules for eligibility

**(2)** For DE: Total 16.0 for IA Calls T1, T3 and T4 plus total 16.0 for RIA Calls

## 2.2 Call 2023-1-IA Topic 1: Global IA

### Scope and objectives

This topic is the IA-part of the bottom-up programming. The topic will be open to the following major challenges:

Topics and Major Challenges		Open/ Closed
1.1 - Process technology, equipment, materials and manufacturing		
	Major Challenge 1: Advanced computing, memory and in-memory computing concepts	Open
	Major Challenge 2: Novel devices and circuits that enable advanced functionality	Open
	Major Challenge 3: Advanced heterogeneous integration and packaging solutions	Open
	Major Challenge 4: World-leading and sustainable semiconductor manufacturing equipment and technologies	Open
1.2 - Components, modules and systems integration		
	Major Challenge 1: Enabling new functionalities in components with More-than-Moore technologies.	Open
	Major Challenge 2: Integration technologies, processes and manufacturing.	Open
	Major Challenge 3: Sustainability and recyclability	Open
1.3 - Embedded software and beyond		
	Major Challenge 1: Efficient engineering of embedded software	Open
	Major Challenge 2: Continuous integration and deployment	Open
	Major Challenge 3: Lifecycle management	Open
	Major Challenge 4: Embedding data analytics and Artificial Intelligence	Open
	Major Challenge 5: Support for Sustainability by embedded software	Open
	Major Challenge 6: Software reliability and trust	Open
1.4 - System of Systems		
	Major Challenge 1: SoS architecture and open integration platforms	Open
	Major challenge 2: SoS interoperability	Open
	Major Challenge 3: Evolvability of SoS composed of embedded and cyber-physical systems	Open
	Major Challenge 4: SoS integration along the life cycle	Open
	Major Challenge 5: Control in SoS composed of embedded and cyber-physical systems	Open

	Major Challenge 6: SoS monitoring and management	Open
2.1 - Edge Computing and Embedded Artificial Intelligence		
	Major Challenge 1: Increasing the energy efficiency of computing systems	Open
	Major Challenge 2: Managing the increasing complexity of systems	Open
	Major Challenge 3: Supporting the increasing lifespan of devices and systems	Open
	Major Challenge 4: Ensuring European sustainability	Open
2.2 - Connectivity		
	Major Challenge 1: Strengthening the EU connectivity technology portfolio to maintain leadership, secure sovereignty and offer an independent supply chain	Open
	Major Challenge 2: Investigate innovative connectivity technology (new spectrum or medium) and new approaches to improving existing connectivity technology to maintain the EU's long-term leadership	Open
	Major Challenge 3: Autonomous interoperability translation for communication protocol, data encoding, compression, security and information semantics	Open
	Major Challenge 4: Architectures and reference implementations of interoperable, secure, scalable, smart and evolvable IoT and SoS connectivity	Open
	Major Challenge 5: Network virtualisation enabling run-time engineering, deployment and management of edge and cloud network architectures	Open
2.3 - Architecture and design: methods and tools		
	Major Challenge 1: Extending development processes and frameworks (to handle connected, intelligent, autonomous, evolvable systems)	Open
	Major Challenge 2: Managing new functionality in safe, secure and trustworthy systems	Open
	Major Challenge 3: Managing complexity	Open
	Major Challenge 4: Managing diversity	Open
2.4 - Quality, reliability, safety and cybersecurity		
	Major Challenge 1: Ensuring HW quality and reliability	Open
	Major Challenge 2: Ensuring dependability in connected software	Open
	Major Challenge 3: Ensuring cyber-security and privacy	Open
	Major Challenge 4: Ensuring of safety and resilience	Open
	Major Challenge 5: Human systems integration	Open
3.1 - Mobility		
	Major Challenge 1: Enable CO2 neutral (electrified or sustainable alternative fuels based) mobility and required energy transformation	Open
	Major Challenge 2: Enable affordable, automated and connected mobility for passengers and freight on or off road, rail, air and water	Open
	Major Challenge 3: Modular, scalable, re-usable, flexible, cloud-based, safe&secure end-to-end software platform able to manage software-defined mobility of the future	Open

	Major Challenge 4: Provide tools and methods for validation and certification of safety, security and comfort of embedded intelligence in mobility	Open
	Major Challenge 5: Achieve real-time data handling for multimodal mobility and related services	Open
3.2 - Energy		
	Major Challenge 1: Smart & Efficient - Managing Energy Generation, Conversion, and Storage Systems	Open
	Major Challenge 2: Energy Management from On-Site to Distribution Systems	Open
	Major Challenge 3: Future Transmission Grids	Open
	Major Challenge 4: Achieving Clean, Efficient & Resilient Urban/ Regional Energy Supply	Open
	Major Challenge 5: Cross-Sectional Tasks for Energy System Monitoring & Control	Open
3.3 - Digital Industry		
	Major challenge 1: Responsive and smart production	Open
	Major challenge 2: Sustainable production	Open
	Major challenge 3: Artificial Intelligence in digital industry	Open
	Major challenge 4: Industrial service business, lifecycles, remote operations and teleoperation	Open
	Major challenge 5: Digital twins, mixed or augmented reality, telepresence	Open
	Major challenge 6: Autonomous systems, robotics	Open
3.4 - Health and wellbeing		
	Major Challenge 1: Enable digital health platforms based upon P4 healthcare	Open
	Major Challenge 2: Enable the shift to value-based healthcare, enhancing access to 4P's game-changing technologies	Open
	Major Challenge 3: Support the development of the home as the central location of the patient, building a more integrated care delivery system	Open
	Major Challenge 4: Enhance access to personalised and participative treatment for chronic and lifestyle-related diseases	Open
	Major Challenge 5: Ensure more healthy life years for an ageing population	Open
3.5 - Agrifood and natural resources		
	Major Challenge 1: Food security	Open
	Major Challenge 2: Food safety	Open
	Major Challenge 3: Environmental protection and sustainable production	Open
	Major Challenge 4: Water resource management	Open
	Major Challenge 5: Biodiversity restoration for ecosystems resilience, conservation and preservation	Open
3.6 - Digital Society		
	Major Challenge 1: Facilitate individual self-fulfilment	Open

	Major Challenge 2: Facilitate empowerment and resilience	Open
	Major Challenge 3: Facilitate inclusion and collective safety	Open
	Major Challenge 4: Facilitate supportive infrastructure and a sustainable environment	Open

- Detailed descriptions can be found in the ECS SRIA2023.
- Aspects of ECS value chain integration are important for the KDT programme and the whole European ECS sector, across applications and across capabilities. Consortia are encouraged to submit proposals that take this aspect into account.
- Proposals that cut across disciplines, support platform building, interoperability, establishment of open standards are particularly encouraged; even outside the regular ECS sector.
- Proposals shall encourage SMEs to participate in the developments, in particular paying attention to the needs of SMEs, involve SMEs in project execution, and develop solutions that can be taken up and/or exploited by SMEs
- Proposals shall attempt to establish links with other projects and consortia from the Horizon Europe family (within cluster 4 or in other clusters) working on topics related to the proposal.
- Note that National priorities may be applicable to specific topics (refer to Annex 4 “COUNTRY SPECIFIC ELIGIBILITY RULES” ).

### Specific Conditions

Type of action: Innovation Action (IA)

Mode: 2 stage call with submission of Full Project Proposal (FPP)

Publication date: 7 February 2023

Deadline (Project Outline (PO) phase): at 17:00:00 Brussels time on 03 May 2023

Deadline (Full Project Proposal (FPP) phase): at 17:00:00 Brussels time on 19 September 2023

In this call, the integration of the gender dimension (sex and gender analysis) in research and innovation content is not a mandatory requirement. However, work packages concerning user interaction or sensing (e.g. of medical devices, consumer goods, cars with automatic driving features, ...) need to include (if relevant) considerations of how the gender dimension affects system design, and hence whether it affects the technical specifications.

### Type of action: KDT Innovation Action

A KDT Innovation Action (IA) primarily consists of activities aiming at technology or method introduction, pilot lines, test beds, demonstrators, innovation pilots and zones of full-scale testing. These activities produce plans and arrangements or designs for new, altered, or improved products, processes, methods and tools or services. For this purpose, they may



include prototyping, testing, demonstrating, piloting, large-scale product validation and market replication.

A ‘technology or method introduction’ aims at the development, testing, and implementation of new technologies, tools or methods, which are a critical element of innovative products, which will be created in subsequent projects.

A ‘demonstration or pilot’ aims to validate the technical and economic viability of a new or improved technology, product, process, service or solution in an operational (or nearly operational) environment, whether industrial or otherwise, involving, where appropriate, a larger scale prototype or demonstrator.

A ‘market replication’ aims to support the first application/deployment in the market of an innovation that has already been demonstrated but not yet applied/deployed in the market due to market failures/barriers to uptake. ‘Market replication’ does not cover multiple applications in the market of an innovation that has already been applied successfully once in the market. ‘First’ means new at least to Europe or new at least to the application sector in question. Often such projects involve a validation of technical and economic performance at system level in real life operating conditions provided by the market.

The activities have their centre of gravity at the TRL 5-8. An IA proposal in KDT JU is characterized by one or more of the following:

- Execution by an industrial consortium that may consist of large enterprises and SMEs but also including universities, institutes, public organizations
- Using innovative technology
- Establishment of a new and realistic innovation environment connected with an industrial environment, such as:
  - a pilot line facility capable of manufacturing
  - a zone of full-scale testing
  - a development of new processes or tools and their introduction in several domains
  - the development of frameworks or platforms together with the usage of these frameworks or platforms in innovative products.
- Having a deployment plan leading to short to midterm economic value creation in Europe.

To maximize effective implementation of the KDT JU top-level objectives, the list of IA proposals to be retained for public funding should constitute a balanced portfolio of projects developing innovative technologies (as defined in the ECS SRIA 2023 in the functional technology layers and cross-sectional technologies sections) and applying them in different domains (as defined in the ECS SRIA 2023 in ECS key application areas section). The domains represent the demand side of technologies, and the development of new technologies represents the supply side of technologies.

The size of the proposal is not an evaluation criterion. KDT JU is looking at a balanced portfolio of small and large projects.

### **Admissibility and Eligibility conditions**

Admissibility conditions: Refer to Annex 1, but regarding page limits:

- The page limit for the chapter on EXCELLENCE is 60 pages in FPP and PO
- The page limit for the chapter on IMPACT is 100 pages in FPP and 60 in PO
- The page limit for the chapter on IMPLEMENTATION is 100 pages in FPP and 60 in PO.
- The application of those page limits (font size etc) is further described in the Guide for Applicants. The selected proposals maybe required to submit further information regarding the IMPLEMENTATION after selection.
- Proposals with more pages are admissible and will be evaluated but the pages in excess of those maxima will not be considered for the evaluation.

Eligibility conditions: Refer to Annex 1

Specific eligibility conditions:

- For the partners of a Participating State that coordinates grants, specific rules may apply regarding the eligibility to national funding.
- Size limit: the maximum size of the project is 70 participants.
- Capping: The EU contribution per project is capped at 25M€ and the maximum contribution per partner in a project is limited to 30% of the total EU funding for the project.

For the purposes of the eligibility conditions, applicants established in Horizon Europe Associated Countries or in other third countries negotiating association to Horizon Europe will be treated as entities established in an Associated Country if the Horizon Europe association agreement with the third country concerned applies at the time of signature of the grant agreement.

Given the illegal invasion of Ukraine by Russia and the involvement of Belarus, there is currently no appropriate context allowing the implementation of the actions foreseen in this programme with legal entities established in Russia, Belarus, or in non-government controlled territories of Ukraine. Therefore, such legal entities are not eligible to participate in any capacity. Exceptions may be granted on a case-by-case basis for justified reasons. This criterion also applies in cases where the action involves financial support given by grant beneficiaries to third parties established in Russia, Belarus or in non-government controlled territories of Ukraine (in accordance with Article 204 of the Financial Regulation No 2018/1046).”

### **Evaluation criteria, scoring and threshold**

The proposals will be evaluated for the **Project Outline phase** along the following three evaluation criteria:

Excellence: The following aspects will be taken into account, to the extent that the proposed work corresponds to the relevant work programme topic description in the ECS SRIA 2023:

- a. Clarity and pertinence of the project's objectives, and the extent to which the proposed work is ambitious, and goes beyond the state of the art.
- b. Soundness of the proposed methodology.

Impact: The extent to which the outputs of the project should contribute at the European and/or international level to:

- a. Credibility of the pathways to achieve the expected outcomes and impacts specified in the ECS SRIA 2023, and the likely scale and significance of the contributions to the project.

Quality and efficiency of the implementation: The following aspects will be taken into account:

- a. Quality and effectiveness of the work plan, assessment of risks, and appropriateness of the effort assigned to work packages, and the resources overall.
- b. extent to which the consortium as a whole brings together the necessary expertise.

The proposals will be evaluated for the **Full Project Proposal phase** along the following three evaluation criteria:

Excellence: The following aspects will be taken into account, to the extent that the proposed work corresponds to the relevant work programme topic description in the ECS SRIA 2023:

- a) Clarity and pertinence of the project's objectives, and the extent to which the proposed work is ambitious, and goes beyond the state of the art.
- b) Soundness of the proposed methodology, including the underlying concepts, models, assumptions, inter-disciplinary approaches, appropriate consideration of the gender dimension in research and innovation content, and the quality of open science practices, including sharing and management of research outputs and engagement of citizens, civil society and end users where appropriate.

Impact: The extent to which the outputs of the project should contribute at the European and/or International level to:

- a) Credibility of the pathways to achieve the expected outcomes and impacts specified in the ECS SRIA 2023, and the likely scale and significance of the contributions to the project.
- b) Suitability and quality of the measures to maximise expected outcomes and impacts, as set out in the dissemination and exploitation plan, including communication activities.

Quality and efficiency of the implementation: The following aspects will be taken into account:

- a) Quality and effectiveness of the work plan, assessment of risks, and appropriateness of the effort assigned to work packages, and the resources overall.
- b) Capacity and role of each participant, and the extent to which the consortium brings together the necessary expertise.

### Scoring

The scores will be given with a resolution of one decimal.

Criteria	Range	Weight (**)	Threshold (*)
Excellence	0-5	1.0	3
Impact	0-5	1.5	3
Quality and efficiency of the implementation	0-5	0.7	3
Total	0-15		11

(\*) threshold applies to unweighted score

(\*\*) the weight is only used to establish the ranking of the proposals

### Selection criteria

Financial capacity: In line with the Financial Regulation and the Rules for Participation of Horizon Europe. At the full project proposal stage, coordinators will be invited to complete a self-assessment using an on-line tool.

### Priority order for proposals with the same score

The following method will be applied. As part of the evaluation by independent experts, a panel review will recommend a ranked list for the proposals under evaluation, following the scoring systems indicated above. A ranked list will be drawn up for every indicative budget shown in the call conditions. If necessary, the panel will determine a priority order for proposals which have been awarded the same score within a ranked list. The following approach will be applied successively for every group of ex-aequo proposals requiring prioritisation, starting with the highest scored group, and continuing in descending order:

1. Proposals that address aspects of the call that have not otherwise been covered by more highly ranked proposals will be considered to have the highest priority
2. The proposals identified under 1) (if any) will themselves be prioritised per the scores they have been awarded for the criterion “Impact”. When these scores are equal, priority will be based on scores for the criterion “Excellence”.
3. Further ex-aequo proposals are discussed by the panel of experts and scored on the merit of the proposal to fulfil the objectives of KDT JU considering elements such as the enhancement of the quality of the project portfolio through synergies between

projects, balance between the type of partners, SME participation, and gender balance. These factors will be documented in the report of the Panel.

### **Indicative timetable for evaluation and grant agreement**

<b>Information on the outcome of the evaluation</b>	<b>Indicative date for the signing of grant agreements</b>
Maximum 5 months from the final date for submission	Maximum 8 months from the final date for submission

### **Consortium agreement**

In line with the Rules for Participation of Horizon Europe and the KDT JU Model Grant Agreement, participants are required to conclude a consortium agreement.

### **Reimbursement rate for establishing the EU contribution**

Reimbursement rates as percentages of the eligible cost according to HE.

Type of beneficiary	EU Contribution as % of the Eligible Cost according to HE (*)
Large Enterprise (for profit organization but not an SME)	20 %
SME (for profit SME)	30 %
University/Other (not for profit)	35 %

(\*) beneficiaries may ask for a lower contribution

## 2.2 Call 2023-1-IA Topic 2: Focus topic on 6G Integrated Radio Front-End for TeraHertz Communications (IA)

Type of action: Innovation Action (IA)

Mode: 2 stage call with submission of Full Project Proposal (FPP)

Publication date: 7 February 2023

Deadline (Project Outline (PO) phase): at 17:00:00 Brussels time on 03 May 2023

Deadline (Full Project Proposal (FPP) phase): at 17:00:00 Brussels time on 19 September 2023

Indicative budget: total indicative EU budget for the topic is EUR 20 million.

Technology readiness level: Targeted TRL at the end of the project is between 5 and 6

The current race towards the definition of 6G systems has already started and is the subject of a vibrant competition from Europe's main competitors, notably US, China, Japan and South Korea. Microelectronics is becoming a key issue for competitive solutions provided by the European system vendors. Microelectronics companies worldwide are expected to play an important role in the 6G standardisation activities, which should start around 2025. It is hence important to have a critical mass of microelectronic actors well prepared to contribute to the standardisation process, especially for the lower radio layers that are those where the bulk of essential patents for standards implementation are located.

The COREnect CSA (<https://www.corenect.eu/>) brought together the microelectronics and telecom sectors and included key players of the SNS and KDT Joint Undertakings. It released a roadmap for microelectronics in the context of communication platforms and applications. This focus topic addresses specific strategic actions identified in that roadmap:

- The development of a competitive, secure, and trustworthy supply chain for future telecommunications systems by ensuring a European strategical control over several critical parts of that chain.
- European leadership in microelectronics and connectivity within the next 10 years, towards the development of 6G, thus supporting Europe's twin transition towards a green and digital future.
- Prepare European actors for the standardisation debates that will emerge by the middle of the decade, and more generally being a key action towards ensuring a European digital autonomy in the telecommunications value chain.

The SNS Joint Undertaking Work Programme for 2023-2024 includes the call "SNS-2023-STREAM-B-01-05: Microelectronics-based Solutions for 6G Networks".

To decide whether they apply for the current KDT focus topic or the SNS Call, consortia should consider the following table comparing the respective scope of the two calls:

	<b><i>KDT Call 2023-1</i></b>	<b>SNS-2023-STREAM-B-01-05</b>
<b>Expected TRL at end of project</b>	5 to 6 (ready to be further integrated in a system-level prototype)	2 to 4
<b>Frequency ranges</b>	Sub-THz and THz range (100 GHz and above)	From sub-6GHz up to THz
<b>Transmission chain coverage</b>	Radio front-end (from baseband interface to antenna)	From baseband and mixed-signal processing to RF and antenna

More specific elements pertaining to the current topic can be found in the ECS SRIA 2023, in particular in the following major challenges:

In Chapter 1.1 “Process Technology, Equipment, Materials and Manufacturing”:

- Major Challenge 2: novel devices and circuits that enable advanced functionality
- Major Challenge 3: advanced heterogeneous integration and packaging solutions

In Chapter 2.2 “Connectivity”:

- Major Challenge 1: strengthening the EU connectivity technology portfolio to maintain leadership, secure sovereignty and offer an independent supply chain
- Major Challenge 2: investigate innovative connectivity technology (new spectrum or medium) and new approaches to improving existing connectivity technology to maintain the EU’s long-term leadership.

### **Expected Outcomes**

THz communications emerge as a strong contender for 6G communication for a number of high-capacity applications, such as cellular backhaul, direct connection in industrial environments, and joint communication and sensing. Sub-THz applications (starting at 100 GHz up to 300 GHz) however open a range of issues and notably: i) very large number of antennas to co-integrate compared to mmWave implementation; ii) low PA power output; iii) limitation due to constant envelope of operations; iv) integration of heterogeneous technologies for antennas and for beamformers (e.g. BiCMOS and InP for front-ends, CMOS for other functionalities). In addition, different antenna architectures are being considered.

The target is to avail from RF module solutions allowing communication distances of about 100 m (today 15 m in the lab) for a channel bandwidth of at least 10 GHz. Target TRLs between 5 and 6 would seem appropriate, ready to be integrated into a demonstrator at TRL 6

or above (to be used in complementary opportunities such as the planned SNS call “SNS-2024-STREAM-C-01-01: SNS Microelectronics Lighthouse”, scheduled for 2024).

Proposal results are expected to contribute to the following outcomes:

- Development of higher data rate lower power electronics integrated circuits and devices to support the required higher data rate RF communications for 6G
- Availability of solutions for achieving a high performance energy efficient RF analogue technology with high linearity.
- Solutions with potential to contribute to RF aspects of the 6G standardisation framework development of package, PCB and antenna technologies with low losses and small parasitics, as well as 2D, 2.5D or 3D heterogeneous integration technologies of CMOS chips with non-CMOS active devices, for the realisation of compact, low-energy transceivers operating at (sub-)THz frequencies.
- Laying the groundwork for the development of strong design capabilities in Europe for (sub-)THz front-end and transceivers.

### **Scope**

Proposals for this call shall address most of the following topics in a coherent way to reach integrated demonstrators supporting the upcoming standardisation efforts on 6G:

- Investigate differentiated semiconductor technologies targeting THz connectivity (III-V on Si, FD SOI, RF SOI, advanced BiCMOS) and viable for a wide, cost-effective deployment, with target for  $F_t$  and  $F_{max}$  of 500 GHz and beyond, and their optimal combination with CMOS.
- High power, high efficiency heterogeneous integration of III-V and silicon MMICs aiming for THz scalable large phased-arrays and communication systems
  - 2D, 2.5D and/or 3D integration of external InP front-end circuits (e.g. PA and LNA) with CMOS/BiCMOS beamforming transceiver chips
  - Integrated frequency extenders for communications
  - Efficient III/V sources and receivers
- Ultra-wideband and/or ultra-high-capacity RF front-end
  - Techniques for exploit the large band available at sub-THz and THz frequencies with low power consumption
  - Channel bonding techniques, wideband RF front-ends, diversity front-ends.
- Ultra-wideband baseband interfaces and processors
  - Wideband, low power digital converters
  - Wideband analog demodulators resilient to group delay
  - Novel signal waveforms for wideband channels and mitigating (sub-)THz RF impairments
- Antennas and beamforming for sub-THz and THz to overcome the high path loss of THz bands that can be integrated by 6G networks to meet the new demanding KPIs, including any innovative technologies, e.g. – but not limited to – substrate-integrated waveguides (SIW), meta-materials for antennas, meta-materials for intelligent reflective surfaces and meta-surfaces, Novel phased-array antenna and/or system architectures, incl. hybrid



beamforming, MIMO, sub-arrays, sparse arrays, for efficient THz phased-array scaling for arrays with >>100 elements.

- Architecture and design tools and methodologies for radio front-end modules for THz communications and joint communications and sensing, including chip-package-antenna co-design, test, validation, and verification solutions.

Proposals should lay the groundwork for future deployment of 6G networks. Consequently, the Call encourages the involvement of OEMs able to provide 6G system requirements, ensuring that the prototype components developed within the selected actions can be further integrated in system-level demonstrators (which could be developed within other programmes such as the planned SNS call “SNS-2024-STREAM-C-01-01: SNS Microelectronics Lighthouse”, scheduled for 2024).

Proposals for this call shall pay special attention to the following aspects:

Cost effectiveness is a prerequisite for future deployment of 6G networks. So, proposals are expected to take that aspect into account. In particular, one of the main cost contributors to the cost of sub-THz components is the test and characterisation time. The testability of sub-THz transceivers, PA, antennas, and systems should therefore be considered in the proposals submitted within this call.

The deployment of 6G communication systems will be sustainable only if the energy efficiency is taken as a main driving principle in all aspects of the technology, from materials to devices, system architecture and algorithms. 6G will have to cater for a mobile data traffic volume that is between 100x to a 1000x larger than 5G<sup>5</sup>. To keep the energy consumption of 6G comparable to 5G, the overall energy use per terminal, base station, network node must come down and the energy efficiency per transported and processed data needs to improve in line with the growth of mobile data traffic volume. Proposals are expected to demonstrate strong a contribution in this area.

Packaging is an integrated aspect of any successful demonstration of the 6G component technologies to be developed. It encompasses any advanced packaging, PCB and heterogeneous 2.5D/3D integration technologies to address the challenges of higher frequencies and massive MIMO in a sustainable, energy-efficient way; Efficient heat management solutions for THz MMICs and front-end modules and systems; Advanced packaging solutions for integrating THz antennas, filters and active MMIC on light-weight platform – e.g. substrate-integrated waveguides (SIW); THz interfaces to circuits and packages, e.g. THz 3D interconnections, packaging interfaces to board and to other propagation media (e.g. plastic waveguide).

Proposals are encouraged:

- to build up on already ongoing activities from related projects selected in KDT calls 2021 and 2022.

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<sup>5</sup> According to the 5G-IA (“European Vision for the 6G Ecosystem” - <https://5g-ppp.eu/wp-content/uploads/2021/06/WhitePaper-6G-Europe.pdf>), since then renamed as 6G IA

- to organise activities promoting the cooperation between the ECS and the SNS communities.
- to contribute to standardisation activities
- since results of actions selected within this call are expected to be further integrated in system-level telecommunications demonstrators, proposals are encouraged to plan coordinated activities with actions funded under the SNS Joint Undertaking, for example to explore innovative system architectures. In particular, the innovative RAN solutions which will be investigated under the Call SNS-2023-STREAM-B-01-02: “Wireless Communication Technologies and Signal Processing”, of the Smart Networks and Services JU, could provide useful guidance for components being developed as a result of this focus topic.

### **Specific conditions**

The participation of OEMs in the consortium to ensure alignment of project results with 6G system requirements is highly encouraged.

All the specific conditions (admissibility, eligibility, evaluation criteria, scoring and threshold, etc) are the same as for Topic 1 of this call 2023-1 except:

#### ***Evaluation criteria***

For PO and FPP phase, in the Excellence and Impact criteria, the proposed work corresponds to the topic description given under this topic.

#### ***Reimbursement rate for establishing the EU contribution***

Reimbursement rates as percentages of the eligible cost according to HE.

Type of beneficiary	EU Contribution as % of the Eligible Cost according to HE (*)
Large enterprise (for profit organization but not an SME)	<b>25 %</b>
SME (for profit SME)	<b>35 %</b>
University/Other (not for profit)	<b>35 %</b>

(\*) beneficiaries may ask for a lower contribution

### **Grant conditions**

In case there are several actions selected within this topic, they will be implemented as ‘linked actions’. The respective options under Article 3 and Article 7 of the Model Grant Agreement will be used to this end.

Formal arrangements between linked actions could include, for example, common dissemination activities, joint workshops, common contribution to standardisation activities, technical coordination committees, data exchanges (non-exhaustive list).

### 2.3 Call 2023-1-IA Topic 3: Focus topic on Integration of trustworthy Edge AI technologies in complex heterogeneous components and systems (IA)

Type of action: Innovation Action (IA)

Mode: 2 stage call with submission of Full Project Proposal (FPP)

Publication date: 7 February 2023

Deadline (Project Outline (PO) phase): at 17:00:00 Brussels time on 03 May 2023

Deadline (Full Project Proposal (FPP) phase): at 17:00:00 Brussels time on 19 September 2023

Indicative budget: total indicative EU budget for the topic is EUR 20 million

Expected EU contribution per project : The KDT JU estimates that an EU contribution of EUR 10 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

Technology readiness level: Targeted TRL at the end of the project is between 5 and 6

The long-term strategy of KDT JU is to tackle *edge artificial intelligence (edge AI)* research and innovation by a series of aligned focus topics throughout KDT JU calls. **KDT JU's Call 2021** included a focus topic primarily oriented to push the technological boundaries in terms of "*processing solutions for AI at the edge addressing the design stack and middleware*". **KDT JU's Call 2023** focuses on "*integration of trustworthy edge AI technologies in complex heterogeneous components and systems*".

The market of edge AI currently features a *fragmented offering of heterogeneous solutions* that fail to meet users' needs in terms of end-to-end coverage and large-scale integration and deployment. While it is a general practice for developers to use different frameworks, models and hardware providers to build out end-to-end edge AI solutions<sup>6</sup>, information processing and seamless integration of these is time-consuming and costly. In addition, the massive transformations needed to place edge AI computing at the core of European business strategy and operations often rely on non-EU technologies. Europe needs to revert this trend.

Europe has a unique opportunity to invest in processing intelligence at the edge by building up on its *strengths in designing trustworthy and complex heterogeneous components and systems that are interoperable*. To meet European and global customer demand for integrated and trustworthy solutions, edge AI technologies and services will need to be interconnected,

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<sup>6</sup> End-to-end edge AI solutions, from the system to the device level, in terms of data pipelines, device control/orchestration, and lifecycle management are essential for security and sovereignty purposes.

easy to use, and to involve interoperability and standardization, regulation and commoditisation. When it comes to heterogeneous integration of separately manufactured components (at chip, software and system level), Europe has an extensive record championing openness, interoperability and the ability to manage multi-provider ecosystems, which allow users to choose and assemble the best of what the market offers. Building on this strength can play a leading role in maximising the benefits of edge AI technologies to customers' competitiveness, growth and innovation.

In addition, it is expected that a new paradigm of truly ***collaborative edge AI*** will emerge, as characterized by intelligent edge devices automatically and securely collaborating to perform complex tasks. Collaboration and orchestration are expected at all levels of the architecture (hand-over, load balancing of AI related tasks, model splitting, distributed/federated learning/training, etc.) for reaching specific goals such as scalability, energy efficiency, robustness, low latency, as well as self-configuration, self-healing, resilience and data protection. The mass deployment of tiny, smart, edge devices at this level of autonomy raises all kinds of ***trustworthiness and sovereignty challenges*** that must be addressed.

### **Expected Outcomes:**

While many EU projects and initiatives have already contributed to the aforementioned challenges, this call focuses on large-scale ***integrated/integrable*** edge AI technologies at greater levels of energy efficiency, connectivity, collaboration, complexity and diversity.

Projects are expected to contribute to the following outcomes:

- Develop interoperable and replicable edge AI hardware and software (HW/SW) solutions, namely sensing/actuation, processors, storage, data management, network, that facilitate the integration, rapid deployment and low maintenance in resource-constrained systems and collaborative edge AI architectures.
- Develop efficient and standard engineering methods and tools for (HW/SW co-) design, optimization, qualification/certification and regulatory compliance of trustworthy edge AI solutions in complex heterogeneous components and systems.
- Consolidate open and integrated platforms and ecosystems hosting edge AI solution toolkits and design frameworks that provide the necessary efficiency, trust and (access) transparency to stakeholders but also facilitate seamless interoperability and connectivity at different levels of the edge AI architecture by using standards and open interfaces.

The projects selected under this call are expected to incrementally co-create a ***strong European edge AI ecosystem*** with these existing projects and initiatives, as well as with other related technological and business communities, to strengthen the established platforms/technologies, and to bridge the gaps and enable interconnections between them.

### **Scope**

Proposals need to particularly address several but not necessarily all following aspects:

- Development of *end-to-end AI architectures* including the continuum of AI-based algorithms, devices, as well as interoperability, upgradability and trusted exchangeability through standardized APIs across resource-constrained device-connected systems (including interfaces between sensing/actuation and computation), edge processing units (to facilitate tight combination of logic and memory providing wide interface lanes and low latency), on-premises servers, etc.
- Development of the next generation of HW/SW edge AI technologies that support *fully collaborative AI* by allowing devices to learn at the edge and to incrementally evolve their AI/ML models over time (supporting e.g., transfer learning and meta learning), as well as to coordinate with one another (orchestration), to combine their updates and to send the result out (potentially including cognitive reasoning tasks) in a meaningful manner.
- Development of design tool chains featuring *automated tasks* (e.g. AutoML) and *standardized interfaces* to deliver *optimized* edge AI solutions in heterogeneous embedded systems. The tools chains should support fast and *early exploration and efficient mapping*<sup>7</sup> of complex AI structures such as Deep Neural Networks (DNNs) on embedded architectures and implementation of algorithms for selection, compression, handling and collection of *meaningful data sets*, in order to generate efficient collaborative AI applications at a rapidly accelerated pace.
- Development of assurance frameworks for edge AI trustworthiness<sup>8</sup> with a primary focus on *privacy, robustness, safety, security* as well as evaluation of associated *error/uncertainty bounds, certification/qualification* management, and paths towards *explainable AI*.
- Establishing sustainable impact and creation of an industry-driven community by building *tightly integrated open edge AI platforms and ecosystems*, with support for the *entire lifecycle of edge AI-based solutions*, including design toolkits supported on public and royalty-free *standards*. These ecosystems must promote *trusted and transparent governance frameworks* for the whole digital infrastructure stack, applications and users/stakeholders.
- Development of *benchmarking frameworks* with meaningful metric sets of relevance to edge AI, with particular focus on at-scale technology availability, energy efficiency, security, safety and privacy for a given set of specifications and constraints. A special care on measuring the environmental impact of the developed solutions, for example using Life Cycle Assessment (LCA), must be considered to meet the sustainability challenge.
- Support of *open-source* is strongly encouraged to make the platforms (open-source hardware, software, training datasets, etc.) accessible and to spread it easily in the edge AI community and in the market.

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<sup>7</sup> For example, using automatic pruning, quantization, network slimming, weight pruning, low-rank factorisation, knowledge distillation, neural architecture search, etc.

<sup>8</sup> reference to [Ethics Guidelines for Trustworthy AI](#)

**Compulsory aspects** in this focus topic are:

- ***Strong participation of SMEs and start-ups*** in solution developments, in particular paying attention to their needs, and developing solutions that can be taken up and/or exploited with fast and simple access to open, standardized and business-friendly edge AI technologies and platforms, as well as a rich ecosystem (networks of stakeholders and potential customers).
- ***Allocating tasks to roadmapping, co-creation and cohesion activities*** with related projects (including ECSEL JU/KDT JU, H2020/Horizon Europe or EUREKA-cluster projects) and initiatives (including partnerships and Horizon Europe clusters, e.g., the European Processor Initiative, GAIA-X, among others) towards an European edge AI ecosystem. Particular focus is expected on the identification of a roadmap for standardization that does not hinder innovation: the right balance that ensure European leadership in edge AI.

Of **high importance** for this call are:

- Edge computing and embedded AI (edge AI) is covered in the ECS-SRIA 2023 under Chapter 2.1. In that chapter, the following major challenges (MC) are relevant MC-2: Managing the increasing complexity of systems, MC-3 on supporting the increasing lifespan of devices and systems, as well as MC-4: Ensuring European sustainability.
- Liaising to the project which was selected under Call DIGITAL-2021-CLOUD-AI-01-TEF-EDGE - Testing and experimentation facility for edge AI, is strongly encouraged.

### **Specific conditions**

In this topic the integration of the gender dimension (sex and gender analysis) in research and innovation content is not a mandatory requirement.

All the specific conditions (admissibility, eligibility, evaluation criteria, scoring and threshold, etc) are the same as for Topic 1 of this call 2023-1 except:

### ***Evaluation criteria***

For PO and FPP phase, in the Excellence and Impact criteria, the proposed work corresponds to the topic description given under this topic.

The participation of OEMs in the consortium to ensure alignment of project results with 6G system requirements will be positively evaluated by the experts in the implementation criterion.

***Reimbursement rate for establishing the EU contribution***

Reimbursement rates as percentages on the eligible costs according to Horizon Europe.

Type of beneficiary	EU Contribution as % of the Eligible Cost according to HE (*)
Large Enterprise (for profit organization but not an SME)	<b>25 %</b>
SME (for profit SME)	<b>35 %</b>
University/Other (not for profit)	<b>35 %</b>

(\*) beneficiaries may ask for a lower contribution

**Grant conditions**

In case of several actions being selected under this topic, they will be implemented as ‘linked actions’. The respective options under Article 3 and Article 7 of the Model Grant Agreement will be used to this end.

Formal arrangements between linked actions could include, for example, common dissemination activities, joint workshops, common contribution to standardisation activities, road-mapping, technical coordination committees, data exchanges (non-exhaustive list).



## 2.4 Call 2023-1-IA Topic 4: Focus topic on Electronic Control Systems (ECS) for management & control of decentralized energy supply & storage

Type of action: Innovation Action (IA)

Mode: 2 stage call with submission of Full Project Proposal (FPP)

Publication date: 7 February 2023

Deadline (Project Outline (PO) phase): at 17:00:00 Brussels time on 03 May 2023

Deadline (Full Project Proposal (FPP) phase): at 17:00:00 Brussels time on 19 September 2023

Indicative budget: total indicative EU budget for the topic is EUR 20 million

Technology readiness level: Targeted TRL at the end of the project is between 6 and 7

### Background

The current shortage of fossil energy resources in parts of Europe is accelerating the transformation of the energy system. In the coming years, the ramp-up of renewable generation capacities must be accelerated considerably in order to compensate this shortage and meet the Green Deal targets. The increase of renewable generation capacities needs to cover today's electricity sector, mobility & road transportation, thermal processes in buildings and industry, and other fossil fuel based industrial processes. Further, the following challenges must be addressed: First, renewable electricity generation based on wind or solar shows large fluctuation and does not fit to the demand. Second, overload of the electric transmission and distribution grids designed and rated for the actual demand covered by well controlled centralized generation (fossil fuel, nuclear, or hydropower based) must strictly be avoided.

### Research & Innovation Task

Thus, research and innovation enabling the complete energy transition must provide technologies fulfilling the following requirements:

- Renewable generation and load must be balanced locally as much as possible.
- Thus, conversion between energy-modes partly needs to be done locally.
- The power flux in the distribution grid now aggregating renewable generation must be limited applying multi-modal energy storage.
- System flexibility allowing to adapt to changing demands (energy mode dependent).
- Long term reliability, safety, security & resilience being guaranteed in spite of growing complexity.

In summary, multi-modal energy supply, demand, conversion, and storage should be controlled locally in Distributed Renewable Energy Systems (DRES) which in turn need to be coordinated in overlaying networks for electricity, heat, and gas. Currently, hydrogen (H<sub>2</sub>) generated using renewable electricity is considered being the alternative to fossil fuels. Since

aggregation of strongly fluctuating renewable generation resulting in critical grid loads shall be avoided, technologies are assumed to cover powers from 10 kW to 10 MW.

The base technologies for energy conversion & storage are available. Thus, research and innovation activities shall address:

- monitoring & control technologies for energy conversion & storage components implemented in DRES and the
- management system of the DRES taking care for the component integration and control on one side and integration of DRES into the overlaying grids on the other side.

The monitoring & control technologies shall enable optimization of energy efficiency both on the component and on the system level, and keeping grid loads below critical limits.

Long term reliability of DRES can be addressed by condition-based monitoring systems (sensor systems, algorithms and communication infrastructure) allowing state of health estimation. This enables predictive and preventative operation regimes. For flexibility reasons systems should be retrofittable, reconfigurable and interoperable. Installation and operation costs shall be kept low e.g., using wireless sensors and energy harvesting.

For resilience reasons, DRES need island mode operation and black start capability. This requires control systems for DRES that can reestablish the power supply from the switched-off state independently of external power sources and synchronize the DRES with the rest of the power grid.

These challenges show the complexity of DRES. A great deal of communication between DRES, subsystems, and components is required to optimally manage energy flows and enable resilient system operation. To solve this task, system complexity must be reduced through aggregation, automation and smart software solutions. Electronic control systems (ECS), sensor systems and communication interfaces based on state-of-the-art standards (hardware and communication protocols) are a key-enabler for the efficient, secure, and resilient operation of DRES. By applying these technologies, the coordination of the individual components and subsystems can be automated, aggregated and thus made controllable. Significant progress is needed in this area in order to optimally combine and use renewable energies and energy storage in DRES.

### **Expected Outcomes**

The results of the project are expected to contribute to the following outcomes:

- Novel solutions in the **form of electronic control systems, sensor system technology and smart systems integration for the deployment and efficient and resilient operation of DRES**. These solutions are intended to lay the foundation for the **automation of energy system management for DRES**.
- Multi-modal energy solutions promoting sector coupling. A particular focus is on the development of monitoring & control for the safe integration of hydrogen equipment and components.

- The development goal is to reach TRL levels 6 to 7. Accordingly, **representative prototypes are expected to be successfully tested in relevant environments**. Technically more advanced applications are to be further developed to the point of successful demonstration in real world applications in DRES.
- In order to facilitate further **exploitation** of the results obtained, an analysis of user needs and technical requirements for relevant use cases has to be carried out at the beginning of the research project. In addition, an appropriate communication and **dissemination** strategy is expected to ensure that the results are made available to the expert communities from the field of electronic control systems as well as from the power engineering and energy industry.

## Scope

Since monitoring & control of energy conversion and storage components requires domain specific know-how, research & innovation, the proposals are expected to work either at component level or system level of the DRES, and should cover at least one of the following areas:

- (1) **Electric:** Electrical energy storage solutions and integration of bi-directional EV-charging, demand side management of electrical appliances / machines
- (2) **Thermal:** Electric heating & cooling, HVAC, H<sub>2</sub>-based heating & cooling, thermal energy storage, integration of heat sources, connection to thermal grids
- (3) **Hydrogen:** Electrolyser and fuel cell systems including its balance of Plant and thermal management, hydrogen transport, distribution and storage, interfaces for connection to hydrogen grids.

In case of addressing the system level, this includes areas such as: DRES management system providing overarching control of components and grid connection based on component status information, distribution & transmission grid status information, generation & load forecasts, asset management for the system components or adaptable security features.

All R&I proposals should include evaluation of customer needs and requirements for the use cases to ensure an excellent problem solution fit.

The proposals should address, within the research priorities covered by them, at least one of following points:

- a) **Monitoring & sensing:** Sensor systems technology and smart systems integration allowing operation optimized for efficiency, reliability, and safety, health status evaluation, prediction of remaining lifetime, asset management
- b) **Digital twins** being the basis for smart control allowing interoperability, reconfigurability and retrofit ability of sensing systems onto existing assets and infrastructure with long term performance
- c) **New generation power electronics** for shared DC buses (e.g. coupling of renewables, with batteries and electrolyser,

- d) integrated power electronics for advanced controls

***Baseline for the scope of the focus topic:***

Some of the activities in the scope of this focus topic have synergies with the recommendations defined in several High-Level Use Cases (HLUCs), and Priority Project Concepts (PPCs), defined in the ETIP SNET R&I Implementation Plan, that are in most cases translated in Clusters 4 and 5 HE Calls, for example in DG ENERGY. Therefore proposals submitted to this topic should not duplicate activities that are performed under projects from other programmes, but should rather build on those project results.

Successful proposals are encouraged to establish synergies with other projects and activities related to the topic supported by the KDT Joint Undertaking, and the same with the Clean Hydrogen Joint Undertaking for those proposals addressing hydrogen related solutions.

**Specific conditions**

In this topic the integration of the gender dimension (sex and gender analysis) in research and innovation content is not a mandatory requirement.

All the specific conditions (admissibility, eligibility, evaluation criteria, scoring and threshold, etc) are the same as for Topic 1 of this call 2023-1 except:

***Evaluation criteria***

For PO and FPP phase, in the Excellence and Impact criteria, the proposed work corresponds to the topic description given under this topic.

***Reimbursement rate for establishing the EU contribution***

Reimbursement rates as percentages of the eligible cost according to HE.

Type of beneficiary	EU Contribution as % of the Eligible Cost according to HE (*)
Large enterprise (for profit organization but not an SME)	<b>25 %</b>
SME (for profit SME)	<b>35 %</b>
University/Other (not for profit)	<b>35 %</b>

(\*) beneficiaries may ask for a lower contribution

## 2.5 Call 2023-2-RIA Topic 1: Global RIA call

### Scope and objectives

This topic is the RIA part of the bottom-up programming. The topic will be open to the following major challenges:

Topics and Major Challenges		Open/ Closed
1.1 - Process technology, equipment, materials and manufacturing		
	Major Challenge 1: Advanced computing, memory and in-memory computing concepts	Open
	Major Challenge 2: Novel devices and circuits that enable advanced functionality	Open
	Major Challenge 3: Advanced heterogeneous integration and packaging solutions	Open
	Major Challenge 4: World-leading and sustainable semiconductor manufacturing equipment and technologies	Open
1.2 - Components, modules and systems integration		
	Major Challenge 1: Enabling new functionalities in components with More-than-Moore technologies.	Open
	Major Challenge 2: Integration technologies, processes and manufacturing.	Open
	Major Challenge 3: Sustainability and recyclability	Open
1.3 - Embedded software and beyond		
	Major Challenge 1: Efficient engineering of embedded software	Open
	Major Challenge 2: Continuous integration and deployment	Open
	Major Challenge 3: Lifecycle management	Open
	Major Challenge 4: Embedding data analytics and Artificial Intelligence	Open
	Major Challenge 5: Support for Sustainability by embedded software	Open
	Major Challenge 6: Software reliability and trust	Open
1.4 - System of Systems		
	Major Challenge 1: SoS architecture and open integration platforms	Open
	Major challenge 2: SoS interoperability	Open
	Major Challenge 3: Evolvability of SoS composed of embedded and cyber-physical systems	Open
	Major Challenge 4: SoS integration along the life cycle	Open
	Major Challenge 5: Control in SoS composed of embedded and cyber-physical systems	Open
	Major Challenge 6: SoS monitoring and management	Open
2.1 - Edge Computing and Embedded Artificial Intelligence		
	Major Challenge 1: Increasing the energy efficiency of computing systems	Open

	Major Challenge 2: Managing the increasing complexity of systems	Open
	Major Challenge 3: Supporting the increasing lifespan of devices and systems	Open
	Major Challenge 4: Ensuring European sustainability	Open
2.2 - Connectivity		
	Major Challenge 1: Strengthening the EU connectivity technology portfolio to maintain leadership, secure sovereignty and offer an independent supply chain	Open
	Major Challenge 2: Investigate innovative connectivity technology (new spectrum or medium) and new approaches to improving existing connectivity technology to maintain the EU's long-term leadership	Open
	Major Challenge 3: Autonomous interoperability translation for communication protocol, data encoding, compression, security and information semantics	Open
	Major Challenge 4: Architectures and reference implementations of interoperable, secure, scalable, smart and evolvable IoT and SoS connectivity	Open
	Major Challenge 5: Network virtualisation enabling run-time engineering, deployment and management of edge and cloud network architectures	Open
2.3 - Architecture and design: methods and tools		
	Major Challenge 1: Extending development processes and frameworks (to handle connected, intelligent, autonomous, evolvable systems)	Open
	Major Challenge 2: Managing new functionality in safe, secure and trustworthy systems	Open
	Major Challenge 3: Managing complexity	Open
	Major Challenge 4: Managing diversity	Open
2.4 - Quality, reliability, safety and cybersecurity		
	Major Challenge 1: Ensuring HW quality and reliability	Open
	Major Challenge 2: Ensuring dependability in connected software	Open
	Major Challenge 3: Ensuring cyber-security and privacy	Open
	Major Challenge 4: Ensuring of safety and resilience	Open
	Major Challenge 5: Human systems integration	Open
3.1 - Mobility		
	Major Challenge 1: Enable CO2 neutral (electrified or sustainable alternative fuels based) mobility and required energy transformation	Open
	Major Challenge 2: Enable affordable, automated and connected mobility for passengers and freight on or off road, rail, air and water	Open
	Major Challenge 3: Modular, scalable, re-usable, flexible, cloud-based, safe&secure end-to-end software platform able to manage software-defined mobility of the future	Open
	Major Challenge 4: Provide tools and methods for validation and certification of safety, security and comfort of embedded intelligence in mobility	Open
	Major Challenge 5: Achieve real-time data handling for multimodal mobility and related services	Open

3.2 - Energy		
	Major Challenge 1: Smart & Efficient - Managing Energy Generation, Conversion, and Storage Systems	Open
	Major Challenge 2: Energy Management from On-Site to Distribution Systems	Open
	Major Challenge 3: Future Transmission Grids	Open
	Major Challenge 4: Achieving Clean, Efficient & Resilient Urban/ Regional Energy Supply	Open
	Major Challenge 5: Cross-Sectional Tasks for Energy System Monitoring & Control	Open
3.3 - Digital Industry		
	Major challenge 1: Responsive and smart production	Open
	Major challenge 2: Sustainable production	Open
	Major challenge 3: Artificial Intelligence in digital industry	Open
	Major challenge 4: Industrial service business, lifecycles, remote operations and teleoperation	Open
	Major challenge 5: Digital twins, mixed or augmented reality, telepresence	Open
	Major challenge 6: Autonomous systems, robotics	Open
3.4 - Health and wellbeing		
	Major Challenge 1: Enable digital health platforms based upon P4 healthcare	Open
	Major Challenge 2: Enable the shift to value-based healthcare, enhancing access to 4P's game-changing technologies	Open
	Major Challenge 3: Support the development of the home as the central location of the patient, building a more integrated care delivery system	Open
	Major Challenge 4: Enhance access to personalised and participative treatment for chronic and lifestyle-related diseases	Open
	Major Challenge 5: Ensure more healthy life years for an ageing population	Open
3.5 - Agrifood and natural resources		
	Major Challenge 1: Food security	Open
	Major Challenge 2: Food safety	Open
	Major Challenge 3: Environmental protection and sustainable production	Open
	Major Challenge 4: Water resource management	Open
	Major Challenge 5: Biodiversity restoration for ecosystems resilience, conservation and preservation	Open
3.6 - Digital Society		
	Major Challenge 1: Facilitate individual self-fulfilment	Open
	Major Challenge 2: Facilitate empowerment and resilience	Open
	Major Challenge 3: Facilitate inclusion and collective safety	Open
	Major Challenge 4: Facilitate supportive infrastructure and a sustainable environment	Open

- Detailed descriptions can be found in the ECS SRIA 2023
- Aspects of ECS value chain integration are important for the KDT programme and the whole European ECS sector, across applications and across capabilities. Consortia are encouraged to submit proposals that take this aspect into account.
- Proposals that cut across disciplines, support platform building, interoperability, establishment of open standards are particularly encouraged; even outside the regular ECS sector.
- Proposals shall encourage SMEs to participate in the developments, in particular paying attention to the needs of SMEs, involve SMEs in project execution, and develop solutions that can be taken up and/or exploited by SMEs
- Proposals shall attempt to establish links with other projects and consortia from the Horizon Europe family (within cluster 4 or in other clusters) working on topics related to the proposal.
- Note that National priorities may be applicable to specific topics (refer to Annex 4 “COUNTRY SPECIFIC ELIGIBILITY RULES”).

### **Specific Conditions**

Type of action: Innovation Action (IA)

Mode: 2 stage call with submission of Full Project Proposal (FPP)

Publication date: 7 February 2023

Deadline (Project Outline (PO) phase): at 17:00:00 Brussels time on 03 May 2023

Deadline (Full Project Proposal (FPP) phase): at 17:00:00 Brussels time on 19 September 2023

In this call, the integration of the gender dimension (sex and gender analysis) in research and innovation content is not a mandatory requirement. However, work packages concerning user interaction or sensing (e.g. of medical devices, consumer goods, cars with automatic driving features, ...) need to include (if relevant) considerations of how the gender dimension affects system design, and hence whether it affects the technical specifications.

### **Type of action: KDT Research and Innovation Action**

A KDT Research and Innovation Action (RIA) primarily consists of activities aiming to establish new knowledge and/or to explore the feasibility of a new or improved technology, product, process, service, method, tool or solution. For this purpose they may include applied research, technology development and/or method/tool and integration, testing and validation on a small-scale prototype in a laboratory or simulated environment. The activities have their centre of gravity at TRL 3-4.

A RIA proposal is characterised by:

- Execution by a consortium that may consist of SMEs, large enterprises, universities, institutes, public organizations;



- Developing innovative technologies and/or using them in innovative ways;
- Targeting demonstration of the innovative approach in a relevant product, service or capability, clearly addressing the applications relevant for societal challenges;
- Demonstrating value and potential in a realistic lab environment reproducing the targeted application;
- Having a deployment plan showing the valorisation for the KDT ecosystem and the contribution to the KDT goals and objectives.
- In order to maximize effective implementation of the KDT top-level objectives, the list of RIA proposals to be retained for public funding shall constitute a balanced portfolio of projects developing innovative technologies and applying them in different domains. The domains represent the demand side of technologies, and the development of new technologies represents the supply side of technologies.

### **Admissibility and Eligibility conditions:**

Admissibility conditions: Refer to Annex 1, and regarding page limits:

- The page limit for the chapter on EXCELLENCE is 60 pages in FPP and PO
- The page limit for the chapter on IMPACT is 100 pages in FPP and 60 in PO
- The page limit for the chapter on IMPLEMENTATION is 100 pages in FPP and 60 in PO.
- The application of those page limits (font size etc) is further described in the Guide for Applicants. The selected proposals maybe required to submit further information regarding the IMPLEMENTATION after selection.
- Proposals with more pages are admissible and will be evaluated but the pages in excess of those maxima will not be considered for the evaluation.

Eligibility conditions: Refer to Annex 1.

Specific eligibility conditions:

- For the partners of a Participating State that coordinates grants, specific rules may apply regarding the eligibility to national funding.
- Size limit: the maximum size of the project is 50 participants.
- Capping: The EU contribution per project is capped at 12M€ and the maximum contribution per partner in a project is limited to 40% of the total EU funding for the project.

For the purposes of the eligibility conditions, applicants established in Horizon Europe Associated Countries or in other third countries negotiating association to Horizon Europe will be treated as entities established in an Associated Country, if the Horizon Europe association agreement with the third country concerned applies at the time of signature of the grant agreement.

Given the illegal invasion of Ukraine by Russia and the involvement of Belarus, there is currently no appropriate context allowing the implementation of the actions foreseen in this programme with legal entities established in Russia, Belarus, or in non-government controlled territories of Ukraine. Therefore, such legal entities are not eligible to participate in any capacity. Exceptions may be granted on a case-by-case basis for justified reasons. This criterion also applies in cases where the action involves financial support given by grant beneficiaries to third parties established in Russia, Belarus or in non-government controlled territories of Ukraine (in accordance with Article 204 of the Financial Regulation No 2018/1046).”

### **Evaluation criteria, scoring and threshold**

The proposals will be evaluated for the **Project Outline phase** along the following three evaluation criteria:

**Excellence:** The following aspects will be taken into account, to the extent that the proposed work corresponds to the relevant work programme topic description in the ECS SRIA 2023:

- a. Clarity and pertinence of the project’s objectives, and the extent to which the proposed work is ambitious, and goes beyond the state of the art.
- b. Soundness of the proposed methodology.

**Impact:** The extent to which the outputs of the project should contribute at the European and/or international level to:

- b. Credibility of the pathways to achieve the expected outcomes and impacts specified in the ECS SRIA 2023, and the likely scale and significance of the contributions to the project.

**Quality and efficiency of the implementation:** The following aspects will be taken into account:

- b. Quality and effectiveness of the work plan, assessment of risks, and appropriateness of the effort assigned to work packages, and the resources overall.
- c. extent to which the consortium as a whole brings together the necessary expertise.

The proposals will be evaluated for the **Full Project Proposal phase** along the following three evaluation criteria:

**Excellence:** The following aspects will be taken into account, to the extent that the proposed work corresponds to the relevant work programme topic description in the ECS SRIA 2023:

- a) Clarity and pertinence of the project’s objectives, and the extent to which the proposed work is ambitious, and goes beyond the state of the art.
- b) Soundness of the proposed methodology, including the underlying concepts, models, assumptions, inter-disciplinary approaches, appropriate consideration of the gender dimension in research and innovation content, and the quality of open science practices, including sharing and management of research outputs and engagement of citizens, civil society and end users where appropriate.

**Impact:** The extent to which the outputs of the project should contribute at the European and/or International level to:

- a) Credibility of the pathways to achieve the expected outcomes and impacts specified in the ECS SRIA 2023, and the likely scale and significance of the contributions to the project.
- b) Suitability and quality of the measures to maximise expected outcomes and impacts, as set out in the dissemination and exploitation plan, including communication activities.

**Quality and efficiency of the implementation:** The following aspects will be taken into account:

- a) Quality and effectiveness of the work plan, assessment of risks, and appropriateness of the effort assigned to work packages, and the resources overall.
- b) Capacity and role of each participant, and the extent to which the consortium as a whole brings together the necessary expertise.

### Scoring

The scores will be given with a resolution of one decimal.

Criteria	Range	Weight (**)	Threshold (*)
Excellence	0-5	1.0	3
Impact	0-5	1.0	3
Quality and efficiency of the implementation	0-5	0.7	3
<b>Total</b>	<b>0-15</b>		<b>11</b>

(\*) threshold applies to unweighted score

(\*\*) the weight is only used to establish the ranking of the proposals

### Selection criteria

**Financial capacity:** In line with the Financial Regulation and the Rules for Participation of Horizon Europe. At the full project proposal stage, coordinators will be invited to complete a self-assessment using an on-line tool.

### Priority order for proposals with the same score

The following method will be applied. As part of the evaluation by independent experts, a panel review will recommend a ranked list for the proposals under evaluation, following the scoring systems indicated above. A ranked list will be drawn up for every indicative budget shown in the call conditions. If necessary, the panel will determine a priority order for proposals which have been awarded the same score within a ranked list. The following approach will be applied successively for every group of ex-aequo proposals requiring prioritisation, starting with the highest scored group, and continuing in descending order:

- Proposals that address aspects of the call that have not otherwise been covered by more highly ranked proposals will be considered to have the highest priority
- The proposals identified under 1) (if any) will themselves be prioritised per the scores they have been awarded for the criterion “Excellence”. When these scores are equal, priority will be based on scores for the criterion “Impact”.
- Further *ex-aequo* proposals are discussed by the panel of experts and scored on the merit of the proposal to fulfil the objectives of KDT JU considering elements such as the enhancement of the quality of the project portfolio through synergies between projects, balance between the type of partners, SME participation, and gender balance. These factors will be documented in the report of the Panel.

### **Indicative timetable for evaluation and grant agreement**

<b>Information on the outcome of the evaluation</b>	<b>Indicative date for the signing of grant agreements</b>
Maximum 5 months from the final date for submission	Maximum 8 months from the final date for submission

### **Consortium agreement**

In line with the Rules for Participation of Horizon Europe and the KDT JU Model Grant Agreement, participants are required to conclude a consortium agreement.

### **Reimbursement rate for establishing the EU contribution**

Reimbursement rates as percentages of the eligible cost according to HE.

Type of beneficiary	EU Contribution as % of the Eligible Cost according to HE (*)
Large enterprise (for profit organization but not an SME)	<b>25 %</b>
SME (for profit SME)	<b>35 %</b>
University/Other (not for profit)	<b>35 %</b>

(\*) beneficiaries may ask for a lower contribution

## 2.6 **Call 2023-2-RIA Topic 2 : Focus topic on Hardware abstraction layer for a European Vehicle Operating System**

As vehicles become increasingly electric, autonomous, connected and service-oriented, the importance and market value of vehicle software and hardware is growing at a fast pace. The rapidly rising software complexity calls for more software reuse and standardisation enabled by a software platform (including the operating system and middleware layer). This goes hand-in-hand with profound changes in the electrical and electronic architecture (E/E) of vehicles. Despite of strong global competition and of an automotive software talent shortage, the efforts of European companies remain fragmented. A European collaboration in a pre-competitive R&I setting would accelerate the emerging trend of increased cooperation.

An open software-defined vehicle (SDV) platform, driven by leading EU stakeholders (e.g. OEMs, suppliers, tech companies, chip providers) and open for broader participation would allow collaboration on non-differentiating aspects, such as functions not visible to the user of a vehicle and highest levels of cyber-security. Leveraging EU strengths and complementing existing initiatives, such an initiative would allow saving resources and focusing investments on competitive solutions. This topic is the first action supporting the emergence of an open European software-defined vehicle platform, which will be gradually rolled-out towards full operations by 2030. As part of a layer-based approach, the action will provide the basis for an SDV reference architecture, supported by development tools, facilitating prototyping and testing, with a focus on the hardware abstraction layer embedded in a holistic SDV architecture. A collaboration and support action (CSA)<sup>9</sup> will support coordination between this action and other existing or future projects under this focus area, under any initiative on European processors and open-source hardware for the automotive sector, and under relevant European partnerships like CCAM or 2ZERO; ensuring their coherence under a joint roadmap, longer-term strategy and reference architecture, and helping maximise their impact.

Type of action: Research and Innovation Action (RIA)

Mode: 2 stage call with submission of Full Project Proposal (FPP)

Publication date: 7 February 2023

Deadline (Project Outline (PO) phase): at 17:00:00 Brussels time on 03 May 2023

Deadline (Full Project Proposal (FPP) phase): at 17:00:00 Brussels time on 19 September 2023

Indicative budget: total indicative EU budget for the topic is EUR 20 million.

Technology readiness level: Targeted TRL at the end of the project is between 3 and 4

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<sup>9</sup> Call 2023-3 Topic x. Coordination of the European software-defined vehicle platform

Although there is a clear shift from hardware and system integration to software-driven services, the realisation of SDVs will rely heavily on the rapid evolution of the Electrical/Electronic (E/E) architectures towards a domain-oriented or central topology with more computing capacity at the edge. New E/E architectures will increasingly be based on decoupling software from hardware, on the separation of safety-critical from AI and value-added connected functions, leading to vehicle systems built with a layered architecture from the computing to control and middleware layers. This new paradigm will allow continuous innovation at HW and control levels, whilst adding more functions, applications and services within and across vehicle domains, and mastering the increasing SW complexity. A common SW toolset is essential to strengthen the integration of European actors in the automotive value chain and to accommodate for different HW & SW innovation.

With complex computing functions and containerised services in mind, the next E/E architecture has to find solutions to abstract from the vehicle hardware (covering sensing, perception, control/decision making and actuation). Future vehicle computers will benefit from the concept of “separation of concerns”, implemented through abstraction layers and common APIs, allowing to manage software more selectively. Moreover, the connected and autonomous functions require a separation of safety, control and perception functions, more computing capacity and novel architecture designs at processor-microcontroller level. Decoupling SW from the underlying HW, while facilitating the integration of co-designed software-hardware stacks where relevant, will reduce the complexity and risks of software development, accelerate certification and facilitate SW innovations, benefiting consumers and reinforcing the competitiveness of European automotive industry.

The action will contribute to reinforcing the resilience and competitiveness of European automotive supply chains by reducing the dependence on specific automotive processors, notably solutions offered by non-EU providers, avoiding vendor lock-in and ensuring the adoption of the most competitive solutions on the market. This will also facilitate the integration of emerging European processors and open-source hardware.

### **Expected outcomes**

Within the overall objective of providing an open software-defined vehicle framework, the action shall help decouple holistic automotive software development from the underlying sensing, safety and control hardware, improving software modularity, reusability and expandability. The action will achieve the following outcomes:

- Concept, reference architecture and standardised API framework for software-defined vehicles meeting the safety, security and real-time requirements of connected, electric and automated vehicles;
- Common software toolset (software, debugging, continuous integration/continuous delivery including automated testing) to facilitate development, and to reduce integration effort and costs;
- Demonstration of applicability through proof-of-concepts and a reference implementation, which is based on open source components as far as this is appropriate.

All these expected outcomes should take into account future integration through the SDV architecture with cloud-native applications for example allowing OTA updates.

### **Scope**

The topic targets concepts and solutions for an SDV reference architecture and implementation of a hardware abstraction layer that abstracts from the underlying central or distributed computing topologies (MP, SoC, DCU, ECUs, etc.) and that allows the dynamic mapping of computing resources to different runtime environments which enable the execution of advanced sensing, control and perception functions at the edge, whilst supporting the integration of emerging advanced high-performance chip architectures or open hardware like RISC-V. This will provide a first basis for the development of a common European SDV platform facilitating the integration of digital components, systems and functions in the vehicle. The topic includes the definition of common and open APIs for the integration of higher level vehicle functions, and should manage the integration of legacy frameworks like AUTOSAR and emerging frameworks like for example the ECLIPSE SDV Working Group and COVESA, while ensuring real-time performance, system integrity, safety and security in the respective vehicle domains.

The proposed reference architecture shall:

- define core functionalities to be targeted by SW developers and to be implementable in (various) underlying hardware;
- provide appropriate abstractions of hardware resources to be managed by a run-time system and its services;
- propose integration concepts for new functional extensions and align with a broader SDV reference architecture including the middleware and interfaces to the application framework.

The concepts should be supported by an open SW toolset and integrated development environment (IDE) that forms the glue between major open source SW initiatives in the area, whilst building on electronic and SW development methods for evolving E/E and SW architectures. The required toolset should lay down the baseline for a reference framework to standardize key non-differentiating abstraction of computing and control functions, integrating where applicable hypervisor, accelerators, container runtime, and hardware abstraction layers. It should support a limited set of HW/processor/advanced microcontroller systems and runtime environments whilst ensuring functional safety, dependability and reliability for cross-domain and service-oriented architecture. It should involve innovative SW development processes which allow dynamic configuration, simplify the certification of new functionalities and the ability to deploy them with over-the-air (OTA) SW upgrades.

The SW toolset may allow incorporation of third-party proprietary tools next to open source ones when this is justified for achieving higher efficiency of the systems under design or when similar open source tools do not exist yet. Such incorporations shall be allowed with the option for interchangeable use of proprietary and open source tools whenever the latter are or may become available.

The action will closely coordinate with the CSA under this Focus Area<sup>10</sup> on the joint technical roadmap and the open reference architecture. Under coordination of the CSA, and in collaboration with future projects in the focus area, the project will establish a sustainable support of the emerging SDV platform, including a repository for its outcomes and a framework for longer-term maintenance and further development of its main components.

The project should demonstrate the applicability of the concepts and solutions through proofs of concept and reference implementations at least in the following safety-critical and non-safety critical areas:

- Chassis/powertrain domain;
- Battery and charging management;
- ADAS/autonomous driving.

The proofs of concept should focus on verifying the feasibility of the approach and developed toolset to support applications in different domains of mobility. This should support the adoption of developed solutions by participants of the SDV initiative and beyond, relying on an open-source strategy to facilitate the participation in the ecosystem.

The consortium should be coordinated by a leading European industrial actor of the automotive industry (OEM or tier 1), or by a neutral organisation well established in the sector . The consortium must include:

- a large and representative number of European OEMs of motorised vehicles with headquarters in several Member States;
- a large and representative number of European tier-1 automotive suppliers and technology companies, including semiconductor companies;
- universities and research and technology organisations bringing the newest advances in relevant digital and other technologies and/or acting act as neutral mediators.

### **Specific conditions**

In this topic the integration of the gender dimension (sex and gender analysis) in research and innovation content is not a mandatory requirement.

All the specific conditions (admissibility, eligibility, evaluation criteria, scoring and threshold, etc) are the same as for Topic 1 of this call 2023-2 except:

- Capping: The EU contribution per project is capped at **20M€** and the maximum contribution per partner in a project is limited to 40% of the total EU funding for the project.

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<sup>10</sup> Call 2023-3-CSA. Topic 3: Coordination of the European software-defined vehicle platform



## 2.7 Call 2023-3 Topic 1: Improving the global demand supply forecast of the semiconductor supply chain (IA)

Type of action: Innovation Action (IA)

Mode: 1 stage call with submission of Full Project Proposal (FPP)

Publication date: 7 February 2023

Deadline (Full Project Proposal (FPP) phase): at 17:00:00 Brussels time on 03 May 2023

Indicative budget: total indicative EU budget for the topic is EUR 5 million

Technology readiness level: Targeted TRL at the end of the project is towards 6

The semiconductor supply chain<sup>11</sup> has undergone significant disruptions over the past few years. While the COVID pandemic, natural disasters and logistics issues have captured headlines, those challenges are responsible only for a part of the shortage situation of electronic chips.

Most companies have limited views of the overall demand and supply conditions and have to act with limited data. As economic theory goes the invisible hand takes care for matching demand and supply. Yet, without a clear view of true demand and supply, companies either over-order in the up cycle, or under-order in the down cycle. In some supply chains like the semiconductor one, this leads to the build-up of a bullwhip effect, i.e. strong amplifications of demand variations through the supply chain leading to mismatches between supply and true demand. This effect leads to consequences such as: excess inventory that affects all players in the supply chain, inventory write-offs, reduced revenue with eventually a workforce reduction and all ultimately resulting in drastic shortages as seen in the last two years.

Hence, it is important to improve substantially the efficiency of the global semiconductor value chain making semiconductor manufacturing more sustainable and able to play its pivotal role for societal goals such as the digitalization of our societies, drastic improvement of our energy system, enable the transition to a global mobile society, improved healthcare for all., etc.

The present call requires that the tools to be developed are integrated in a platform. This type of platform should offer services to companies of the supply chain that will allow them to efficiently control their manufacturing planning thereby achieving an overall improvement of the efficiency of the whole supply chain and a better overall match between supply and demand without disrupting the competitiveness of the market.

The proposed tools should achieve: 1. A better prediction of the true demand for semiconductor components and 2. A real time analysis of the effect of that demand on the global

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<sup>11</sup> The semiconductor supply/value chain refers to the different value chains that include the production and use of semiconductor components

semiconductor supply chain. Those tools require sensitive data from companies along the supply chain. This data will only be provided by the companies if the tools can be trusted. Trust requires that company-owned confidential data must be kept confidential and only aggregated data are shared. Each partner using the tool would only have access to their own data and the services provided would only rely on aggregated anonymised data. Appropriate safeguards to avoid any lessening of competition should be introduced.

When looking for technical solutions, the development of the common European data space and the associated tools and standards should also be considered. They will support the necessary trusted data exchange. In addition, the Manufacturing Data Space will specifically address the issue of data exchange along the supply chain and facilitate the use of data to forecast supply and demand. Synergies should be sought here.

The data for the true demand estimates, obtained from multiple participants to the semiconductor supply chain, are aggregated into estimates with a high level of granularity. To collect unbiased demand data for that purpose it is important to anonymize the collection in a trusted way. Only then, it is believed, one can achieve the requisite level of confidence for the true demand data. Developing a tool suited for this purpose and convincing an ensemble of companies to provide the data for this tool is a first challenge. The ensemble should consist of companies covering the whole semiconductor supply chain while being sufficiently representative and in sufficient numbers. Next the impact of the true demand on the supply chain must be assessed. Here, the mismatch between the high granularity of the demand estimates and the low granularity needed to predict the effect on the global supply chain poses a challenge that needs to be resolved. Then this low granularity needs to fit a model of the supply chain that needs to be developed and is based on a combination of data coming from multiple manufacturing sites. Finally, an attractive offer of services must be developed to encourage participation in data sharing and to the platform continuous improvements.

### Expected Outcomes

A validated and secure platform that:

- Handle the collection of demand data in an anonymous way
- Delivers aggregated demand data with high granularity
- Transforms this coarse granularity information into fine granularity information, generating the True demand information.
- The fine granularity matches an ontology for the semiconductor supply chain such as under development in the SC3 project.
- Develop a consistent, modular and semantic description of semiconductor supply chains (i.e. an ontology) building on said ontology
- Use the True Demand forecast to generate supply chain forecasts for the semiconductor industry
- Using those forecasts, provide services to the semiconductor supply chain community

### Further requirements for the platform

- The platform should be validated by representative organizations (preferably a large group of users)
- The platform should be secure in all its aspects/functions
- The infrastructure needed to house the platform should be scalable, i.e. needs to be designed towards future size enlargement and growing use of the services and data collection
- A community of first-time users need to be attracted to provide first data both on demand and supply. Those first-time users should be representative of the semiconductor supply chain including semiconductor manufacturers, Tier 1, Tier 2 and OEMs.
- A business model needs to be developed to ensure that the platform can grow and be maintained, i.e. accessed, updated, modified, and deployed.

### Scope

- Development of software for the various tools and for the platform: demand and supply data collection, results sharing, secure access, supply chain simulation, semantic web link, services, ...
- Incentivisation for participation in order to get data
- the collection of demand data is done through anonymous surveys and a clear methodology should be established reflecting the periodicity of the surveys, the kind of data, etc.
- For the survey, secure MPC (Multi Platform Computing) methodologies should be considered
- For the granularity transformation AI/ML techniques should be envisaged utilizing semantic web technologies to assure the interlinking of the data
- For the supply chain description, interfacing with ERP systems must be considered
- For the ontology underlying the semantic web, use of the SC3 project results and linking with the SC3 consortium are mandatory.
- By the end of the project a credible track to collect demand data within 3 years after the end of the project that covers around 25% of the semiconductor supply chain should be described in a confidential deliverable
- Validation should be done with a small group of market participants in real world use cases that can be participants to the consortium or other parties that participate on a voluntarily basis. The results of the validation are part of the deliverables
- Demonstrators reflecting the different aspects of the platform are part of the deliverables
- At least one realistic service should be demonstrated
- Promote the use of the data sharing platform amongst the semiconductor supply chain organizations
- Propose a complete business model including types of services, type and growth of users, pricing options for the services, cost of maintenance of the platform, governance, infrastructure investments, etc.

- In general, the action should build and re-use where possible on results developed in other projects (EU or National).
- Participation of non-European actors along the supply chain is encouraged preferably through targeted activities, e.g. workshops, etc.

### **Specific conditions**

In this topic the integration of the gender dimension (sex and gender analysis) in research and innovation content is not a mandatory requirement.

All the specific conditions (admissibility, eligibility, evaluation criteria, scoring and threshold, etc) are the same as for Topic 1 of this call 2023-1 except:

### ***Evaluation criteria***

For PO and FPP phase, in the Excellence and Impact criteria, the proposed work corresponds to the topic description given under this topic.

### ***Reimbursement rate for establishing the EU contribution***

Reimbursement rates as percentages of the eligible cost according to HE.

Type of beneficiary	EU Contribution as % of the Eligible Cost according to HE (*)
Large enterprise (for profit organization but not an SME)	<b>70 %</b>
SME (for profit SME)	<b>70 %</b>
University/Other (not for profit)	<b>100 %</b>

(\*) beneficiaries may ask for a lower contribution

## 2.8 Call 2023-3-CSA Topic 2: Pan-European network for Advanced Packaging made in Europe (CSA)

Type of action: Coordination and Support Action (CSA)

Mode: 1 stage call with submission of Full Project Proposal (FPP)

Publication date: 7 February 2023

Deadline (Full Project Proposal (FPP) phase): at 17:00:00 Brussels time on **03 May 2023**

Indicative budget: The KDT JU estimates that an EU contribution of EUR 1 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts. 1 proposal

Duration: 1 year

### Context

The European Chips Act aims to reinforce the semiconductor ecosystem in the EU, ensure the resilience of supply chains and reduce external dependencies. Integration on the chips is reaching physical limits, the next integration is at packaging level with 2.5D to 3D chips arrangements in/on the package. A key step for the EU's technological sovereignty will be to resurrect SOA packaging capabilities and processes, plus deploy latest advanced packaging capabilities and associated processes inside Europe, especially for critical applications. The major objective and the urgency of this call for a CSA is to snapshot and map the current situation in Europe to define a strategy how SMEs and LE commonly could establish a Pan-European ecosystem for advanced packaging made in Europe with RTOs or Academic support. Based on an analysis of European fabs and R&D strength in this field, its existing packaging companies' capabilities and future application demands, the CSA should give guidance for investments in advanced packaging -lines in the framework of the envisaged Chips Act and Chips JU activities and establish a Pan-European value chain of networked actors (providers, suppliers, and users) at the nearest possible date.

### Expected Outcomes

The CSA will create a better understanding of the actual situation in Europe with regard to SOA Packaging technologies and processes as well as with regard to Advanced Packaging demands by mapping European, national and regional strength. Furthermore, the action will investigate the needs of especially SMEs and LE for future, critical applications (e.g. energy, health, security, sensors, power, mobility, aerospace). Through speedy collaborative analysis of the situation in Europe, a community to address future R&D&I efforts will be built. Results of the CSA will give guidance for setting up initiatives in the Chips JU, to align developments in different member states towards common targets in the field. Potential challenges and shortages in materials, assembly & test equipment, processes, supply chains as well as the necessary qualification and skills of human resources for advanced packaging will be analysed. The need for specific design capabilities (hardware, software, know-how and skills) and methodologies for advanced packaging will be analysed as well.

A list of top priorities to follow regarding immediate and potential business cases of high interest for Europe will be deducted. A first report of activities should be presented within 6 months at a conference (e.g., IEEE Conference on Advanced Packaging in Portugal in September 2023) and made available at earliest in an “executive summary” to MS policy and decision makers and the EU Commission.

The results of the CSA are urgent and are expected to contribute to the following:

- Recommendations for investments in the Chips JU with regard to Advanced packaging lines and other R&D&I projects;
- Analysis of the value chains for various applications and recommendations on prioritisation;
- Analysis of skill and education needs in Europe on the topic;
- Recommendations for future education and skills programmes in the Framework of the Chips Act

### Scope

Today, almost all semiconductor chips produced in Europe are packaged in South-Asia. Initially, this was mainly for cost reasons, but more recently – due to lost process capabilities in Europe. As the technologies evolve, sovereignty and security issues grow, the European Chips Act should mark a turning point and open the chance to establish pilot-lines and lab-in-fabs for packaging technologies in Europe. The goal is to reclaim the field and enhance European resilience of value chains in advanced electronic components and systems in the future. According to Yole, Advanced Packaging Revenues will grow from 37.4 to 65 billion USD and thereby will double between 2021 and 2027. The development of innovative advanced packaging technologies, especially heterogeneous packaging technologies and advanced processes for critical applications are considered a cornerstone. In addition, packaging and its processes will be a main differentiator of future electronic systems and important for the resilience of the European ECS industry.

The CSA should address the following topics and should provide a report for each:

- Analysis of the current **strength and weaknesses of Europe in R&D&I**
  - Analysis of current European Packaging landscape (RTOs, start-ups, scale-up SMEs active in the field in Europe), the existing or upcoming technological capabilities in Europe and the critical limitations or hurdles;
  - Generate an overview on pilot-line activities at RTOs and lab-in-fabs in industrial packaging lines across Europe;
  - Give an overview of technologies and processes recently developed with potential for industrial deployment in Europe.
  - Map the competences and capacities for today's leading packaging technologies and processes in Europe
- Analysis of the demand side for advanced packaging solutions by European actors (SME and LE) for e.g. future highly automated cars, telecommunications, energy, health care, security and other main applications.

- Identification of priority topics for Europe to start catching up with Asian or the USA and regain leadership in advanced packaging (e.g., highest performance and integration density) as well as to strengthen European leadership in certain segments with new processes.
- Describe needs for packaging and process methods to be cost competitive from inside Europe and analyze growth potential as well as the effects of smart manufacturing or a light out (fully automated) factory.
- Needs for advanced equipment and automation,
- Potential of strategic partnerships and networks of EU based companies and companies in like-minded countries to co-develop equipment and infrastructure to establish a smart advanced packaging network, including start-up and spin-off companies to foster innovations
- Analysis and definition of measures for a secured sustainable supply chain of (raw) materials (like Cu, leadframes, polymers, EMC, adhesives, prefabs etc.). The Commission invites Member States, industry, academia and research and technology organisations to use the [‘safe and sustainable by design’ framework](#) (Commission Recommendation on the assessment framework for ‘safe and sustainable by design’ chemicals and materials and [Annex](#)) which provides guidance on the design and assessment of chemicals and materials throughout the innovation process taking account the needed functionality and end use. It considers safety and sustainability throughout the whole lifecycle of chemicals and materials with the aim is to ensure the lowest possible impact on our environment, health and biodiversity. The framework can be applied to develop new chemicals and materials or to redesign existing ones.
- Analysis of member states activities and regional focus areas
  - Map of regional activities in Advanced Packaging by member states and for key regions;
  - Analysis of actors, current investment programs, funded projects;
- Policy recommendations regarding:
  - The role and potential involvement of RTO initiatives (e.g. EDIHS, ECICs under Chips JU) for technology transfer
  - Co-operative pilot-lines of RTOs and industry vs. Lab-in-Fabs at industrial sites
  - Development of recommendations how to reestablish a local European based expertise and production base in advanced packaging and advanced processes to secure the entire supply chain.
  - Evaluation of the establishment options and conditions for recognized OSATs in Europe in the framework of the European Chips Act.
- Creation of a European network for advanced packaging in R&D&I via a common event in 2024.
  - Connect main clusters and scientific associations gathering all actors from research, industrial players and public authorities across Europe (common workshop of RTOs with industry, Arrange meetings with regional clusters, RTOs and SMEs on specific needs of SMEs);
  - Establish a dialogue on needs and aligned investments in Advanced Packaging on European basis.

Reminding that of general importance to the KDT calls are:

- Re-use of results from previous ECSEL JU, KDT JU, H2020, HE or EUREKA-cluster projects on the Packaging topic is encouraged.
- Developing synergies with other relevant European, national or regional initiatives and/or funding programmes on the Packaging topic.
- Collaboration with industrial associations in the field (e.g. with EPoSS and AENEAS), specialized clusters and market research companies. Collaboration with associations of microelectronic assembly and packaging science.
- In particular, paying attention to the needs of SMEs, involve SMEs start-ups and scale-ups in project execution, and develop solutions that can be taken up and/or exploited by SMEs.

### **Specific conditions**

#### ***Admissibility and Eligibility conditions:***

Admissibility conditions: Refer to Annex 1

Eligibility conditions: All proposals must comply with the conditions set out in the Rules for Participation of Horizon Europe. A proposal will only be considered eligible if:

- Its content corresponds, wholly or in part, to the topic description for which it is submitted;
- At least one legal entity established in an EU Member State or Horizon 2020 associated country

Regarding page limits for CSA KDT actions

- The page limit for the chapter on EXCELLENCE is 30 pages
- The page limit for the chapter on IMPACT is 30 pages
- The page limit for the chapter on IMPLEMENTATION is 30 pages

The application of those page limits (font size etc) is further described in the Guide for Applicants. The selected proposals maybe required to submit further information regarding the IMPLEMENTATION after submission.

Proposals with more pages will be evaluated but the pages in excess of those maxima will not be considered for the evaluation.

#### ***Evaluation criteria, scoring and threshold***

#### Evaluation procedure

The HE rules will be followed, refer to Annex 1

The proposals will be evaluated along the following three evaluation criteria:



Excellence: The following aspects will be taken into account, to the extent that the proposed work corresponds to the relevant topic description as described under this topic:

- a) Clarity and pertinence of the project's objectives,
- b) Quality of the proposed coordination and/or support measures, including soundness of methodology

Impact:

- a) Credibility of the pathways to achieve the expected outcomes and impacts, and the likely scale and significance of the contributions from to the project.
- b) Suitability and quality of the measures to maximise expected outcomes and impacts, as set out in the dissemination and exploitation plan, including communication activities.

Quality and efficiency of the implementation: The following aspects will be taken into account:

- a) Quality and effectiveness of the work plan, assessment of risks, and appropriateness of the effort assigned to work packages, and the resources overall.
- b) Capacity and role of each participant, and the extent to which the consortium as a whole brings together the necessary expertise.

Scoring: The scores will be given with a resolution of 0.5 decimal.

Criteria	Range	Weight (**)	Threshold (*)
Excellence	0-5	1.0	3
Impact	0-5	1.0	3
Quality and efficiency of the implementation	0-5	1.0	3
Total	0-15		11

(\*) threshold applies to unweighted score

(\*\*) the weight is only used to establish the ranking of the proposals

### Selection criteria

- *Financial capacity:* In line with the Financial Regulation and the Rules for Participation of Horizon Europe. At the full project proposal stage, coordinators will be invited to complete a self-assessment using an on-line tool.
- *Operational capacity:* As a distinct operation, carried out during the evaluation of the award criterion 'Quality and efficiency of the implementation', experts will indicate whether the participants meet the selection criterion related to operational capacity, to carry out the proposed work, based on the competence and experience of the individual participant(s).

### Indicative timetable for evaluation and grant agreement

Information on the outcome of the <b>evaluation</b>	Indicative date for the signing of grant agreements
Maximum 5 months from the final date for submission	Maximum 8 months from the final date for submission

### Consortium agreement

In line with the Rules for Participation and the KDT JU Model Grant Agreement, participants are required to conclude a consortium agreement.

### Reimbursement rate for establishing the EU contribution

Reimbursement rates as percentages of the eligible cost according to HE.

Type of beneficiary	EU Contribution as % of the Eligible Cost according to HE
Large Enterprise (for profit organization but not an SME)	100 %
SME (for profit SME)	100 %
University/Other (not for profit)	100 %

## 2.9 Call 2023-3-CSA Topic 3: Coordination of the European software-defined vehicle platform

As vehicles become increasingly electric, autonomous, connected and service-oriented, the importance and market value of vehicle software and hardware is growing at a fast pace. The rapidly rising software complexity calls for more software reuse and standardisation enabled by a software platform (including the operating system and middleware layer). This goes hand-in-hand with profound changes in the electrical and electronic architecture (E/E) of vehicles. Despite of strong global competition and of an automotive software talent shortage, the efforts of European companies remain fragmented. A European collaboration in a pre-competitive R&I setting would accelerate the emerging trend of increased cooperation.

An open software-defined vehicle (SDV) platform, driven by leading EU stakeholders (e.g. OEMs, suppliers, tech companies, chip providers) and open for broader participation would allow collaboration on non-differentiating aspects, such as functions not visible to the user of a vehicle and highest levels of cyber-security. Leveraging EU strengths and complementing existing initiatives, such an initiative would allow saving resources and focusing investments on competitive solutions. This topic is the first action supporting the emergence of an open European software-defined vehicle platform, which will be gradually rolled-out towards full operations by 2030. As part of a layer-based approach, the action will provide the basis for an SDV reference architecture, supported by development tools, facilitating prototyping and testing, with a focus on the hardware abstraction layer embedded in a holistic SDV architecture. A collaboration and support action (CSA)<sup>12</sup> will support coordination between this action and other existing or future projects under this focus area, under any initiative on European processors and open-source hardware for the automotive sector, and under relevant European partnerships like CCAM or 2ZERO; ensuring their coherence under a joint roadmap, longer-term strategy and reference architecture, and helping maximise their impact.

Type of action: Coordination and Support Action (CSA)

Mode: 1 stage call with submission of Full Project Proposal (FPP)

Publication date: 7 February 2023

Deadline (Full Project Proposal (FPP) phase): at 17:00:00 Brussels time on **03 May 2023**

Indicative budget: total indicative EU budget for the topic is EUR 2 million, 1 proposal

Duration: 3 years

A successful open common European SDV platform, within the context of related European initiatives for the vehicle of the future, requires the involvement of the whole value chain and R&I ecosystem, the coordination and alignment of the key actors and initiatives, jointly

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<sup>12</sup> Call 2023-3 Topic x. Coordination of the European software-defined vehicle platform

defining a roadmap and a reference architecture built on complementary know-how, and developing a dynamic and rich ecosystem. A coordination and support action (CSA) is crucial to ensure that the wide collaboration between diverse actors is sufficiently agile and effective and it requires a strong capacity of coordination and governance.

Developing a clear roadmap taking into account the international landscape and fostering agreement on a common open reference architecture, will ensure a shared vision and guarantee the coherence of the developed platform. Building a dynamic community is also crucial to ensure solutions are rapidly brought to the market, scalable and economically profitable. The CSA plays a central role for the Focus Area supporting the KDT/Chips Joint Undertaking (JU) in structuring and managing a series of closely linked actions based on the agreed roadmap, coordinating the R&I projects and ensuring their outcomes are integrated in an overarching reference architecture, to maximise their impact, support ecosystem building and foster the adoption of the SDV platform. With regard to Europe's position in the development of the vehicle of the future, work on a European software-defined vehicle platform must be well integrated with actions under the planned Chips Joint Undertaking on European automotive processors. This CSA will support the development of a holistic roadmap between the software-defined vehicle focus area and any automotive processor initiative under the Chips JU. It will further support the coordination with relevant partnerships (e.g. CCAM, 2ZERO) and national programmes, to ensure that projects supporting the development of applications can benefit from the outcomes of this Focus Area.

### **Expected outcomes**

The CSA shall achieve the following outcomes:

- Agreement of key European companies of the automotive industry on a joint technical roadmap for a common open SW-defined vehicle platform and ecosystem in alignment with the development of an open automotive hardware platform and the evolution of automotive electronic architectures;
- Agreement on an open reference architecture and jointly developed open source components;
- Development of a dynamic ecosystem including leading automotive manufacturers and suppliers representing a significant share of the EU automotive and motorised vehicle industry, but also major EU tech companies (chips, data and cloud providers), local authorities, mobility service providers, research, technology and standardisation organisations, SMEs and start-ups;
- Strong and sustainable European initiative enabling an open platform for software-defined vehicles, with high engagement of participants, clear and agile governance, and ability to deliver, in coordination with other European initiatives for the vehicle of the future.

### **Scope**

The action will need to address the following tasks:

- Facilitate the development and regular update of a joint technical roadmap for a common open SDV platform with gradual roll out and aiming for the start of full operation as soon as possible, but at latest in 2030;
- Facilitate the development and agreement on an open reference architecture for the software-defined vehicle;
- Support the Commission and the JU in setting up a high-level governance structure for research and innovation actions under the KDT/Chips JU, and beyond, targeting the vehicle of the future.
- Support and cooperate with the KDT/Chips JU in structuring, steering and coordinating the Focus Area, starting from call 2023<sup>13</sup>, notably by integrating the outcomes of the different actions in its roadmap and reference architecture, by ensuring the coherence of these actions with the overall governance of the initiative and by contributing to establishing a framework for the sustainability, maintenance and continuous development of the actions' outcomes;
- Ensure regular exchange, alignment, and a common holistic roadmap with other activities under the Chips Act, focusing on EU-designed open-source hardware for the automotive sector;
- Follow and align with related Member States projects, other EU funding instruments and partnerships (e.g. CCAM, 2ZERO) and support the development of an EU-wide investment roadmap;
- Positioning vis-à-vis automotive initiatives such as AUTOSAR, COVESA, the ECLIPSE Foundation SDV Working Group, SOAFEE, Catena-X, etc. and SDV-related developments in other global regions;
- Steer consensus on jointly developed open source components of the SDV software stack, drawing from the outcomes of the projects in the Focus Area, and coordinating with related initiatives to support convergence;
- Facilitate the establishment of a sustainable framework for an open European SDV platform and ecosystem;
- Organise a European conference on automotive software, targeting software engineers and developers, building on the open-source projects stemming actions under the Focus Area and related initiatives, in partnership with leading European industrial players.

The consortium should include at least a representative set of associations of the automotive and motor vehicle industry representing a significant numbers of OEMs and suppliers across the European Union and Associated Countries. It should include members with a capacity to act as neutral mediators, such as leading automotive consultancies or research and technology organisations. The consortium should demonstrate a strong capacity to mobilise the whole ecosystem (OEMs, suppliers, tech companies, chip manufacturers, data and cloud companies, cities and mobility service providers, universities and research and technology organisations, SMEs and start-ups, standardisation bodies). It should include partners with the experience and capacity to set up and steer pre-competitive industrial

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<sup>13</sup> Call 2023-2 Topic 2: Hardware abstraction layer for a European Vehicle Operating System

collaboration initiatives in the motor vehicle sector, covering a broad technical expertise on automotive SW and HW.

### **Specific conditions**

#### ***Admissibility and Eligibility conditions:***

Admissibility conditions: Refer to Annex 1

Eligibility conditions: All proposals must comply with the conditions set out in the Rules for Participation of Horizon Europe. A proposal will only be considered eligible if:

- Its content corresponds, wholly or in part, to the topic description for which it is submitted;
- At least one legal entity established in an EU Member State or Horizon 2020 associated country

Regarding page limits for CSA KDT actions

- The page limit for the chapter on EXCELLENCE is 30 pages
- The page limit for the chapter on IMPACT is 30 pages
- The page limit for the chapter on IMPLEMENTATION is 30 pages

The application of those page limits (font size etc) is further described in the Guide for Applicants. The selected proposals maybe required to submit further information regarding the IMPLEMENTATION after submission.

Proposals with more pages will be evaluated but the pages in excess of those maxima will not be considered for the evaluation.

#### ***Evaluation criteria, scoring and threshold***

##### Evaluation procedure

The HE rules will be followed, refer to Annex 1

Excellence: The following aspects will be taken into account, to the extent that the proposed work corresponds to the relevant topic description as described under this topic:

- a) Clarity and pertinence of the project's objectives,
- b) Quality of the proposed coordination and/or support measures, including soundness of methodology

##### Impact:

- a) Credibility of the pathways to achieve the expected outcomes and impacts, and the likely scale and significance of the contributions from to the project.
- b) Suitability and quality of the measures to maximise expected outcomes and impacts, as set out in the dissemination and exploitation plan, including communication activities.

Quality and efficiency of the implementation: The following aspects will be taken into account:

- a) Quality and effectiveness of the work plan, assessment of risks, and appropriateness of the effort assigned to work packages, and the resources overall.
- b) Capacity and role of each participant, and the extent to which the consortium as a whole brings together the necessary expertise.

Scoring The scores will be given with a resolution of 0.5 decimal.

Criteria	Range	Weight (**)	Threshold (*)
Excellence	0-5	1.0	3
Impact	0-5	1.0	3
Quality and efficiency of the implementation	0-5	1.0	3
Total	0-15		11

(\*) threshold applies to unweighted score

(\*\*) the weight is only used to establish the ranking of the proposals

### Selection criteria

- *Financial capacity:* In line with the Financial Regulation and the Rules for Participation of Horizon Europe. At the full project proposal stage, coordinators will be invited to complete a self-assessment using an on-line tool.
- *Operational capacity:* As a distinct operation, carried out during the evaluation of the award criterion 'Quality and efficiency of the implementation', experts will indicate whether the participants meet the selection criterion related to operational capacity, to carry out the proposed work, based on the competence and experience of the individual participant(s).

### **Indicative timetable for evaluation and grant agreement**

Information on the outcome of the <b>evaluation</b>	Indicative date for the signing of grant agreements
Maximum 5 months from the final date for submission	Maximum 8 months from the final date for submission

### **Consortium agreement**

In line with the Rules for Participation and the KDT JU Model Grant Agreement, participants are required to conclude a consortium agreement.

### **Reimbursement rate for establishing the EU contribution**

Reimbursement rates as percentages of the eligible cost according to HE.

Type of beneficiary	EU Contribution as % of the Eligible Cost according to HE
Large Enterprise (for profit organization but not an SME)	100 %
SME (for profit SME)	100 %
University/Other (not for profit)	100 %



### **Managing the projects/Dissemination and information on projects**

This covers the activities related to the project management: grant agreement signature, amendments, cost eligibility recognition and payments, checks, reporting, monitoring and audits, Information sessions, management of the EPS information exchange.

For the evaluation of the calls 2023 around 70 experts will have to be appointed.

For the monitoring of the ECSEL projects selected in previous calls, approximately 30 reviews are planned, that will require approximately 60 expert appointments.

Project dissemination will be encouraged and facilitated, through direct help to projects in developing attractive project documentation (posters, project descriptions...) and active support at appropriate community and JU events.

Impact follow-up after the end of the project for all ECSEL projects that are finished will be implemented up to 5 years after the end of the project.

Grant preparation of around 40 projects.

### **Other activities**

- Running the programme: portfolio analysis, KPI tracking, audit support, etc.
- Information sessions: coordinator info sessions on cost recognitions, information session towards PAB regarding JU payments, information session for new coordinators, etc.
- Liaising with the different services of the CSC and implementing the Sygma-Compas tools
- Support to audits and audit processes
- Support the other departments: administration, finance and communication as well as the ED

### **CALL MANAGEMENT RULES**

The rules for evaluation and selection are regulated by decision KDT GB 2022.28 “on the evaluation and selection procedures related to Calls for Proposals”.

The General Annexes of the Horizon Europe Work Programme 2021 – 2022 shall apply for the actions covered by this Work Programme. Any specificity for KDT JU is highlighted in the Annexes.

As referred to in Article 12 of the SBA, selection decisions may deviate from the ranking list provided by the evaluation committee to ensure the overall consistency of the portfolio approach. Such decisions may be taken in case proposals have a clear similarity and/or overlap with highly ranked proposals. Such decisions may also be taken in case lower ranked proposals are expected to contribute more directly to policy objectives than higher ranked proposals. Policy objectives to be considered are those of the Participating States and policy objectives of

the European Union, including but not limited to the Digital Compass communication<sup>14</sup> (COM(2021)118 of 9 March 2021). Proposers are also referred to the evaluation and selection procedures related to Calls for Proposals<sup>15</sup>.

As provided for by Article 134 of the Single Basic Act, Article 22.5 of the Horizon Europe Regulation is hereby not triggered for the KDT call 2023; rules for eligibility to participate follow Horizon Europe rules. With reference to Recital 17 of the Single Basic Act, eligibility of participants in a proposal submitted to a Call for Proposals for any of the topics in this work programme will take into account any application of Art 22.5 of the Horizon Europe Regulation triggered for topics from other HE Work Programmes for proposals with similar scope.

Participants declared by their national authority in crisis according to the State-Aid rules as defined by EU regulation 651/2014 will not be eligible for EU funding.

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<sup>14</sup> <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A52021DC0118>

<sup>15</sup> KDT PAB 2021.02

### 3. SUPPORT TO OPERATIONS

#### 4.1 Communication activities

The following summarises the key elements of the adopted Communications' Policy and Strategy for the KDT JU, secures an alignment between the multiannual and the annual plan and gives an indicative guide to the allocation of resources.

Internal Communications are to be regarded as part of the general management of the Office, though recognises the essential need for communication on operational issues with the participants (mostly, coordinators or to those delegated for communications aspects).

The concrete external communication objectives are to:

1. **Increase the visibility and strengthen the credibility of the KDT JU** as the leading European strategic initiative for focused, coordinated and competitive research and innovation activities relevant to the whole Electronic Components and Systems (ECS) value chain.
2. **Demonstrate the added value of the KDT JU** programme in addressing societal and industrial challenges and needs, both technologically and economically.
3. **Create a strong identification with the KDT JU programme** and strengthen the cohesion of the KDT JU community.
4. **Increase the public and political awareness** of ECS technologies and their applications recognising that ECS capability is a key enabler for securing global leadership, technology digital autonomy across many fields, enabling creation of growth, jobs and additional economic opportunities at all levels within the EU.
5. **Facilitate access to support mechanisms** at European, national and regional level which are complementary to those offered by the KDT JU, including new and additional financial resources.
6. **Expand the outreach of the KDT JU** to new public and private audiences and potential partners with the objective of building bridges to other JUs, PPPs, EUREKA clusters and national programmes.
7. **Attract appropriate and dedicated political support** to maintain an adequate and effective European regulatory framework for ECS technologies.
8. **Ensure that KDT JU beneficiaries' needs are well known** and the communication policies of all KDT JU members are aligned, wherever possible.
9. **Channel the information** from the operational group in charge of the projects about the programme successes.
10. **Establish a calendar of actions/events** in alignment with the KDT JU stakeholders.

These objectives can be addressed by delivering easy-to-understand technical information about:

- ECS,
- KDT JU (including the rationale about the tripartite model),
- the projects (**also from ECSEL JU**) and their added value induced by the public funding as well as their impact on competitiveness, growth and quality of daily life.

The following tables describe the potential audiences for external communication activities, the associated topics of interest and suggested media for communication.

	<b><i>Potential audiences</i></b>	<b><i>Possible communication topics</i></b>	<b><i>Possible communication media</i></b>
A. Peer groups and KDT JU (potential) stakeholders	<ul style="list-style-type: none"> <li>- Active and potential participants in KDT / ECSEL JU projects and initiatives;</li> <li>- Industrial associations, European Commission and KDT Participating States;</li> <li>- Organisations with a specific interest in the activities and results of the KDT programme (including ECSEL JU projects)</li> <li>- RD&amp;I actors not (yet) participating in JU activities, specifically SMEs</li> <li>- Other funding instruments or organisations (e.g. EUREKA, other JUs, PPPs, etc.)</li> <li>- National/regional organisations;</li> <li>- KDT Mirror Groups ( e.g. "ECSEL/KDT Austria, Italy", etc.).</li> </ul>	<ul style="list-style-type: none"> <li>- Themes to be addressed in future calls;</li> <li>- Brokerage opportunities for active and potential project participants;</li> <li>- How to create or engage in a project consortium; dos and don'ts when drafting an KDT proposal;</li> <li>- Creating support for KDT at relevant levels through dedicated events;</li> <li>- Publication of results;</li> <li>- Alignment of messages and coordinated actions between KDT public and private stakeholders to underline the KDT profile and strengthen important communication moments. Examples: joint press releases on call launches and funding decisions or sharing messages at national events.</li> </ul>	<ul style="list-style-type: none"> <li>- Website;</li> <li>- Social media (Twitter and LinkedIn channels);</li> <li>- Publications;</li> <li>- Workshops, seminars, forum sessions, brokerage events;</li> <li>- Events at national level;</li> <li>- Press releases;</li> <li>- Public appearances of KDT stakeholders.</li> </ul>

	<b><i>Potential audiences</i></b>	<b><i>Possible communication topics</i></b>	<b><i>Possible communication media</i></b>
B. Decision makers relevant to KDT on European, national and regional level	<ul style="list-style-type: none"> <li>- EU Institutions;</li> <li>- National Parliaments;</li> <li>- Other policy makers and dedicated bodies (e.g. regional authorities etc.);</li> </ul>	<ul style="list-style-type: none"> <li>- Demonstration of results of projects and the societal relevance of the “communication toolbox” items, in terms of new solutions to problems or economic benefits etc.;</li> <li>- The justification of the public funding of the project should be specifically highlighted;</li> <li>- Underlining the unique tripartite nature of the KDT concept and the (pan-European) synergies it creates on various policy fields;</li> <li>- The combination of European and national priorities and interests and KDT’s capability to mobilise and combine substantial European, national and regional funds;</li> </ul>	<ul style="list-style-type: none"> <li>- Website;</li> <li>- Factsheets, Position documents;</li> <li>- Active dissemination of project results by the consortium partners;</li> <li>- Participation of KDT Office and its stakeholders at relevant events organised at EU and national level.</li> </ul>

	<b>Potential audiences</b>	<b>Possible communication topics</b>	<b>Possible communication media</b>
C: Interested public and specific audiences not related to KDT JU	<ul style="list-style-type: none"> <li>-</li> <li>- Sister JUs and other programmes focused on application areas covered by KDT;</li> <li>- Civil society organisations.</li> <li>- NGO's;</li> <li>- Students;</li> <li>- Other interested groups.</li> </ul>	<p>Key application areas: mobility, society, energy, health, security and the solutions that KDT-generated technology can offer;</p> <ul style="list-style-type: none"> <li>- Interaction with relevant organisations on societal issues and possible technology solutions e.g. in the areas of health, automotive, energy, IoT, environment etc.;</li> <li>- Opportunities for cooperation and for joint initiatives.</li> <li>- Key application areas: mobility, society, energy, health, security and the solutions that KDT-generated technology can offer;</li> </ul>	<ul style="list-style-type: none"> <li>- Website;</li> <li>- Social media (Twitter and LinkedIn channels);</li> <li>- Daily newspapers; technical Press, "Brussels-EC-press";</li> </ul> <p>Television, notably programmes that address science and technology for a broader audience;</p> <ul style="list-style-type: none"> <li>- Dedicated information packages e.g. for schools.</li> </ul>

\* Internal Communications are to be regarded as part of the general management of the Office, but it is noted here for completeness. The reference descriptions in the above table will in future be updated to reflect the further outcome of any Communications WG's recommendations. However, it is expected that the major audiences identified will remain unchanged.

In 2023 the following activities are proposed:

**KDT JU Events 2023:**

**A. MAJOR “KDT JU” branded events for communication and dissemination**

1. A specific KDT JU Call Information Day about participation in the KDT Calls for 2023 and all related application aspects. This may be coupled with a special information session for coordinators of running or new ECSEL/KDT JU projects (see “Coordinators’ Day” below).
2. Speaking slot at the consortium-building activities (“Brokerage Event”) organised by the KDT JU Private Members (Industry Associations), where general information about KDT JU activities, and specific information about upcoming calls can be disseminated.
3. KDT JU Stakeholders’ Forum. This mandatory event of the Private Members Board (PMB), in which the Office has no role beyond possible logistic support. Note that it has become common practice under ECSEL and KDT JU for the Associations (in their role as PMB) to organise a specific event “EFECS” (see below) that incorporates this function.
4. “European Forum for Electronic Components and Systems” (EFECS). EFECS has become the participating industries’ key event for coordinating funded RD&I activities, independently of specific instruments. The KDT JU Office provides support, if requested, along with the 3 Associations, the European Commission, and potentially other stakeholders (e.g. Eureka). Usually, one of the 3 Associations provides for the necessary manpower support.

**B. KDT JU events on specific topics**

1. Coordinator’s Day. This is to provide updates, training and general information of specific use to project coordinators.
2. KDT JU Programme Dissemination Support, such as workshops, seminars, or similar events, is to be foreseen. To that end, KDT JU may offer, as a service with specified budget, the (co-)organisation of such events, that should extend beyond the boundaries of a specific project, thereby ensuring fair treatment.
3. PAB / NFA events to clarify administrative arrangements through tutorials, workshops, etc..

**C. Specific events for communication with EU Institutions (Parliament, Council, EC) and national States representatives**

1. Breakfast Sessions with MEPs / PermRep / DGs of the EC (in addition to DG CNECT). Exchanges shall be carried out in compliance with the still ongoing decision-making process of the Chips Act.
2. Presence and active participation in working-group meetings of the various committees (e.g. CoR, EESC, etc.).
3. Participation in exhibition / promotion events at the relevant EU institutions (for example in conjunction with other JUs sharing common interest).
4. Events gathering KDT JU PAB/GB representatives as well as National delegates from the Permanent Representations of the countries participating in KDT JU (see conditions defined under 1.).
5. Dedicated meetings with high-level and focused discussion with relevant political representatives in some commonly selected national states capitals.

**D. Support to Community-building and road-mapping facilitation**

1. Support of other events organised by 3As (or Members of an Industry Association), if requested.
2. Support by direct participation in relevant events organised by the European Commission.
3. Support by direct participation to events set up by National and/or Regional authorities to promote KDT participation in their area. (KDT JU may pro-actively request such meetings ad-hoc, with specific National/Regional or other relevant authorities).

**PUBLICATIONS**

**Media Agencies Services**

To increase the public and political awareness of Electronic Components and Systems (ECS) technologies and their applications as well as to achieve wide support of European society, a specialised assistance is considered of paramount importance to carry out effective Dissemination and Communication activities. Therefore, execution of parts of the KDT JU Communications and Events and related actions (e.g. articles) may be implemented by media agencies services via creative tools and solutions.

**Flyers/Brochures:**

KDT JU will publish informative brochures / flyers on relevant topics for general promotion of the programme. Specific instruments of this type that are relevant for participants in the programme will be developed. These instruments shall be foreseen for primarily digital distribution but could also be eco-friendly printable, if needed. Other eco-friendly promotional materials (“Merchandising”) will be prepared, as supporting tools for events.

KDT JU will also help the projects in achieving the levels of active dissemination required by the Dissemination and Exploitation Strategy of Horizon Europe by providing for preparation of basic materials such as exhibition poster and project summary information, professionally edited and produced to assure clear and concise communication to a broad public.

**Website and social media:**

KDT JU has fully reworked its public website, based on that of the ECSEL JU predecessor. The design reflects the subject matter and goals of the KDT JU programme, with attractive features that facilitate information dissemination and facilities for integrating Social Media exposure. KDT JU will maintain and expand the website and the use of YouTube channel, Twitter account and LinkedIn page.

Although, improvements to the current KDT JU website will continue to be undertaken, a full redesign is needed. It might be executed through a public procurement procedure in 2023 (Q3/4). The website will be also equipped with an event registration portal allowing automatic creation of registration form, store of event’s information, and sharing documents with participants.



## Press releases

In addition to press releases independently published by members, KDT JU can foresee other press releases, distributed by the JU using its own means, covering, but not limited to, the following key events:

- KDT JU Call launches.
- Event relevant for the JU Members and their constituencies.
- Key events relevant for the European Institutions.
- Outcome of the KDT JU Calls (funding decisions previous year).

## Promotional Video

In view of KDT JU re-focus on the semiconductor industry, in 2023 the communication team will publish a promotional video centred on KDT JU successful projects and past achievements.

## 4.2 Procurement and contracts

Procurement and contracts are managed in accordance with the provisions of the Financial Rules adopted by the Governing Board of KDT JU (Decision KDT GB 2021.02 Annex 12).

In order to reach its objectives and adequately support its operations and infrastructures, KDT JU will allocate funds to procure the necessary services and supplies.

To make tender and contract management as effective and cost-efficient as possible, KDT JU concludes Service Level Agreements (SLAs) with relevant Commission Services as well as its private members and makes use of inter-institutional framework contracts (FWC).

Also, the Office has started implementing **Back Office Arrangements** with other Joint Undertakings end of 2022. The first arrangement concerns the accounting function that has ceased to be provided by DG Budget. The official Accounting Officer of the EU-Rail JU is appointed as the Accounting Officer for the KDT JU as from 1st December 2022.

Arrangements in the fields of Human Resources, Procurement and ICT services are in preparation, service level agreements will be signed to this effect with other Joint Undertakings.

In 2023, KDT JU foresees to run several procurement procedures mainly for very low and low value contracts<sup>16</sup>

<b>Supply/service</b>	<b>Max. indicative expenditure (EUR)</b>	<b>Type of procedure</b>	<b>Indicative schedule</b>
Trainings	70,000.00	Very low and low value contracts or specific contracts / order forms implementing FWC or negotiated procedure for low value contracts	Q1, Q2, Q3 and Q4 2023
IT services and equipment	400,000.00	Very low and low value contracts or specific contracts / order forms implementing FWC or negotiated procedure for low value contracts	Q1, Q2, Q3 and Q4 2023
Office furniture	5,000.00	Very low and low value contracts or specific contracts / order forms implementing FWC or negotiated procedure for low value contracts	Q1, Q2, Q3 and Q4 2023
General administrative expenditure	120,000.00	Open procedure or very low and low value contracts or specific contracts / order forms implementing FWC or negotiated procedure for low value contracts	Q1, Q2, Q3 and Q4 2023
Catering and meeting support services	50,000.00	Very low and low value contracts or specific contracts / order forms implementing FWC or negotiated procedure for low value contracts	Q1, Q2, Q3 and Q4 2023
Communication and event organisation	320,000.00	Open procedure or very low and low value contracts or specific contracts / order forms implementing FWC or negotiated procedure for low value contracts	Q1, Q2, Q3 and Q4 2023
Legal and audit services	60,000.00	Very low and low value contracts or specific contracts / order forms implementing FWC or negotiated procedure for low value contracts	Q1, Q2, Q3 and Q4 2023
Legal and audit services	66,000.00	Low value contracts or specific contracts / order forms implementing FWC or negotiated procedure for low value contracts	Q1, Q2, Q3 and Q4 2023

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<sup>16</sup> According with Article 43(2) of the KDT JU Financial Rules , for contracts with a value between EUR 60,000.00 and the thresholds laid down in Article 175 of the Financial Regulation 2018, the procedure set out in Section 2 of Chapter 1 Annex I of Regulation (EU, Euratom) 2018/1046 for contracts with a low value not exceeding EUR 60,000 may be used.

This list shall be considered indicative, non-exhaustive, as other procurement procedures may be launched within the budgetary limits approved by the Governing Board. The Executive Director shall report to the Governing Board about the procedures launched as part of the AAR 2023.

#### **4.3 IT and logistics**

At present, six Joint Undertakings are sharing the housing location in the building “White Atrium”, Brussels Belgium.

The arrangements for the facilities are subject to a common contract for both the office space and the IT management of equipment, maintenance and help desk.

The six Joint Undertakings have jointly developed a common IT work programme and a common IT security policy. They also developed joint Business Continuity and Disaster Recovery Plans (BCP+DRP). The common IT programme includes a roadmap and a timeline, in order to be able to cope with business needs and required updates of networks and equipment. The SLA for IT between the JUs (in the frame of the BOA) will further communalise some of the IT activities.

In accordance with the principles of economy, efficiency and effectiveness, KDT JU as well as the other JUs are also using and paying for tools and applications developed by the European Commission, namely for finance (ABAC and SAP), for evaluation and grant management under H2020 to be used for Horizon Europe (SEP, SYGMA and COMPASS) and administration (Sysper, ARES, web hosting, ...). KDT will with the other JUs implement a Common Back Office for further to be defined tasks (see point above).

#### **4.4 JU Executive Team – HR matters**

The number of staff employed by KDT JU in 2023 will be kept at 30 statutory staff. Due to the unexpected departure of several key administrators, several recruitment procedures will need to be launched.

These limited human resources are to be considered as a challenge for KDT JU, which manages two programmes at the same time (Horizon 2020 and Horizon Europe) running with different rules. In this context, trainees and interim solutions have proven necessary and are expected to remain needed in 2023.

Details on the staff establishment plan can be found in KDT JU annual budget for year 2023 (decision KDT GB 2023.35).

In 2023, the SLA for HR signed between the JUs in the frame of the BOA will be implemented.

## 4.5 Administrative Budget and Finance

The administrative budget of KDT JU will be **5,486,000.00 €** for 2023.

Funding sources for the budget of KDT JU are at present:

- The EU budget for the operational costs and 50% of the running costs,
- The Private Members for the remaining 50% of the running costs.

The part of the running costs on the total budget is kept at a very low level which is to be considered as an indicator for efficiency. More specifically, the part of **administrative costs** in the total budget will be as follows:

- with regard to Commitment Appropriations: **1.78%**
- with regard to Payment Appropriations: **2.12%**

Accounting tasks have been transferred to European Commission's DG BUDG, which has been formally appointed JU's accountant as of 1 July 2018. Interface with KDT JU is ensured through an "accounting correspondent" function within the JU.

In 2023 the accounting tasks have been re-organized in the frame of the Common Back Office. From 1<sup>st</sup> December 2023, Europe's Rail Joint Undertaking will provide Back Office Accounting Services for all the other Joint Undertaking and including KDT JU.

## 4.6 Data protection and conflicts of interest

### Data protection

The EUI-GDPR N°2018/1725, implemented by KDT JU in internal set of documents, is regularly updated to include recent developments. Mostly, these are internal privacy policies that are concerned, as published on the KDT JU website.

The role of the Data Protection Officer (DPO) is exercised by the Legal Officer of KDT JU, assisted by an assistant legal officer.

### Conflicts of interest

The Governing Board has adopted comprehensive rules on the prevention and management of conflicts of interest (KDT GB 2021.02 Annex 4). It addresses all actors involved in the Joint Undertaking activities, including staff, PAB and GB members, experts involved in projects reviews and evaluations, participants in procurement and recruitment committees.

## 4. GOVERNANCE

Governance of the Joint Undertaking includes the following bodies:

The **Governing Board** has overall responsibility for the strategic orientation and the operations of the KDT Joint Undertaking and supervises the implementation of its activities.

The Chair of the Governing Board is [Mr Ralf Bornefeld](#).

The **Executive Director** is the chief executive responsible for the day-to-day management of the KDT Joint Undertaking in accordance with the decisions of the Governing Board. Since 1<sup>st</sup> November 2022, [Mr Yves Gigase](#) has been appointed as interim Executive Director.

A procedure for recruiting a new Executive Director is ongoing, led by the Commission.

The **Public Authorities Board** is competent for matters related to calls for proposals and allocation of public funding.

The Chair is [Ms Doris Vierbauch](#).

The **Private Members Board** is responsible for drawing up the SRIA.

The Chair is [Mr Jean-Luc di Paola-Galloni](#).

## 5. INTERNAL CONTROL FRAMEWORK

### 6.1 Financial procedures

#### Legacy projects (ECSEL)

The financial procedure for projects under H2020 depends on the H2020 IT tools developed by the European Commission. These IT tools encompass the full cycle of the process, including work-flows, check-lists, etc.

#### KDT projects

The financial procedure for projects under Horizon Europe depends on the IT tools developed by the European Commission. These IT tools encompass the full cycle of the process, including work-flows, check-lists, etc.

### 6.2 Ex-ante and ex-post controls

The internal control processes and methods have been subject, from the first days of existence of KDT JU, to a decision of the Governing Board (KDT GB 2021.02 Annex 11) adopting the internal control standards for efficient management.

With regard to financial matters, ex-ante and ex-post controls are organised in accordance with the Financial Rules of the KDT JU (KDT GB 2021.02 Annex 12, in particular articles 21 and 22).

### 6.3 Audits

Audits are organised both on an internal and external basis:

**Internal audits** are operated by the internal auditor of the JU (the competent service of the Commission) and by the staff member appointed by the Governing Board for performing the internal audit capability, in accordance with the provisions of Chapter 5 of the Financial rules of the KDT JU.<sup>17</sup>

**External audits** are operated by the European Court of Auditors, reporting to the European Parliament and the Council, responsible for the discharge procedure.

**Ex-post audits of beneficiaries** are also operated by or on behalf of the KDT JU, with methods which are adapted to the specificities of the programmes:

#### Legacy projects (ECSEL)

Under the regime of H2020, the JU has defined the needs and methods for the ex-post audits, in close cooperation with the CIC, in view of a coordinated approach of audits of beneficiaries.

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<sup>17</sup> Decision KDT GB 2021.02 Annex 12

A common audit plan for all EU services involved in the programme H2020 will be implemented by the CIC of the Commission, acting on behalf of the KDT JU.

KDT projects

Under the regime of Horizon Europe, the JU will establish the needs and methods for the ex-post audits, as done in H2020, in close cooperation with the CIC. The common audit plan has not been developed yet and the JU is involved in the ongoing discussions.

## 6. ANNEXES

### List of annexes:

Annex 1 - General Annexes for the KDT call 2023

Annex 2 - Management of contributions from the participating states

Annex 3 - Key Performance Indicators

Annex 4 – Country specific eligibility rules



## Annex 1: General Annexes for the KDT calls 2023

The “Horizon Europe 2021-2022 13.General Annexes (European Commission Decision C(2021)1940 of 31 March 2021)”<sup>18</sup> apply with some exceptions specific for the KDT JU Calls 2022-1 and 2022-2.

**A – Admissibility.** The page limits as mentioned under the different call descriptions in the KDT JU Work Programme 2022 are applicable as well as in the Guide for Applicants regarding the format.

**B – Eligibility.** Where eligibility is limited to certain technology readiness levels (TRLs), the table below provides guidance for assessing the TRLs. The table emphasizes the differences between the different levels as well as the difference between hardware and software related actions.

	Definition in HE WP	Hardware description	Software description	Exit criteria
1	Basic principles observed and reported.	Scientific knowledge generated underpinning hardware technology concepts/applications.	Scientific knowledge generated underpinning basic properties of software architecture and mathematical formulation.	Peer reviewed publication of research underlying the proposed concept/application.
2	Technology concept formulated	Invention begins, practical application is identified but is speculative, no experimental proof or detailed analysis is available to support the conjecture.	Practical application is identified but is speculative, no experimental proof or detailed analysis is available to support the conjecture. Basic properties of algorithms, representations and concepts defined. Basic principles coded. Experiments performed with synthetic data.	Documented description of the application/concept that addresses feasibility and benefit.
3	Experimental proof of concept	Analytical studies place the technology in an appropriate context and laboratory demonstrations, modelling and simulation validate analytical prediction.	Development of limited functionality to validate critical properties and predictions using non-integrated software components., modelling and simulation	Documented analytical/experimental results validating predictions of key parameters.
4	Technology validated in a lab	A low fidelity system/component breadboard is built and operated to demonstrate basic functionality and critical test environments, and associated performance predictions are defined relative to the final operating environment.	Key, functionally critical, software components are integrated, and functionally validated, to establish interoperability and begin architecture development. Relevant Environments defined and performance in this environment predicted.	Documented test performance demonstrating agreement with analytical predictions. Documented definition of relevant environment.
5	Technology validated in relevant environment. (industrially relevant environment in the case of key enabling technologies)	A medium fidelity system is built and operated to demonstrate overall performance in a simulated operational environment with realistic support elements that	End-to-end software elements implemented and interfaced with existing systems/simulations conforming to target environment. End-to-end software system, tested in	Documented test performance demonstrating agreement with analytical predictions. Documented

<sup>18</sup> Refer to [https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/wp-call/2021-2022/wp-13-general-annexes\\_horizon-2021-2022\\_en.pdf](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/wp-call/2021-2022/wp-13-general-annexes_horizon-2021-2022_en.pdf)

		demonstrates overall performance in critical areas. Performance predictions are made for subsequent development phases.	relevant environment, meeting predicted performance. Operational environment performance predicted. Prototype implementations developed.	definition of scaling requirements.
6	Technology demonstrated in relevant environment (industrially relevant environment in the case of key enabling technologies)	A high fidelity system/component prototype that adequately addresses all critical scaling issues is built and operated in a relevant environment to demonstrate operations under critical environmental conditions.	Prototype implementations of the software demonstrated on full-scale realistic problems. Partially integrate with existing hardware/software systems. Limited documentation available. Engineering feasibility fully demonstrated.	Documented test performance demonstrating agreement with analytical predictions.
7	System prototype demonstration in an operational environment.	A high fidelity engineering unit that adequately addresses all critical scaling issues is built and operated in a relevant environment to demonstrate performance in the actual operational environment and platform.	Prototype software exists having all key functionality available for demonstration and test. Well integrated with operational hardware/software systems demonstrating operational feasibility. Most software bugs removed. Limited documentation available.	Documented test performance demonstrating agreement with analytical predictions.
8	System complete and qualified	The final product in its final configuration is successfully demonstrated through test and analysis for its intended operational environment and platform	All software has been thoroughly debugged and fully integrated with all operational hardware and software systems. All user documentation, training documentation, and maintenance documentation completed. All functionality successfully demonstrated in simulated operational scenarios. Verification and Validation (V&V) completed.	Documented test performance verifying analytical predictions.
9	Actual system proven in an operational environment (competitive manufacturing in the case of key enabling technologies, or in space)			

## D – Award criteria

Scores and weighting factors are indicated in the calls/topics specific annexes

## F - Procedure. Evaluation procedure and ranking.

The call specific annexes contain the rules applicable to the KDT JU call evaluations. The rules for evaluation and selection of proposals, as adopted by the KDT JU PAB (Decision KDT PAB 2021.02), include the rules on conflicts of interest. This document is available in the calls pages in the Funding and tenders portal.

## G – Legal and financial set-up of the grant agreement.

The call/topic descriptions contain the provisions and funding rates applicable to the KDT calls.

## Annex 2: Management of contributions from the participating states

In accordance with Article 12 SBA, Participating States shall conclude an administrative agreement with the joint undertaking laying down the coordination mechanism for the payment of and reporting on contributions to applicants.

Two administrative agreements are possible:

- Article 12(2): coordination with no entrustment,
- Article 12(3): entrustment of the joint undertaking by the participating state with the payment if its contribution to its beneficiaries.

For **KDT Calls 2023**, all participating states **have signed an administrative agreement based on Article 12(2)**.

### **Annex 3: Key Performance Indicators**

The KPI for KDT JU will be developed in the frame of the Chips JU in 2024.

#### **Annex 4: Country specific eligibility rules**

The conditions and rules expressed in the next Participating State' sections apply only to the participants of that Participating State in particular as to their eligibility for national funding or as to the attribution of national funding.

## Austria

### National contact person for KDT JU programme

Country	Name	First name	Tel	E-mail
AUSTRIA	Almansa	Ana	+43 (0)5 7755-5029	<a href="mailto:ana.almansa@ffg.at">ana.almansa@ffg.at</a>
AUSTRIA	Vierbauch	Doris	+43 (0)5 7755-5024	<a href="mailto:doris.vierbauch@ffg.at">doris.vierbauch@ffg.at</a>

National Funding Agency for Austria: [FFG](https://www.ffg.at)

**The full version of the national eligibility criteria can be found at the national homepage of the Call in [www.ffg.at](http://www.ffg.at).**

### Legal requirements for the eligibility of a partner or a project

#### **1) Type or nature of participants**

Legal entities, partnerships and sole traders that are not part of the Austrian federal administration are eligible to receive funding. The following are eligible for funding:

- Companies of any legal form
- Institutions of research and knowledge dissemination
  - Universities<sup>19</sup>
  - Universities of applied sciences
  - Non-university research institutions
  - Technology transfer institutions, innovation agents and other research-oriented organisations such as associations with a relevant purpose
- Other non-commercial institutions
  - Local authorities<sup>20</sup> and autonomous bodies
  - Non-profit making organisations such as NPOs<sup>21</sup>

#### **1) Legal, administrative and financial conditions**

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<sup>19</sup> The smallest possible unit of a university is an institute of the university or a organisation comparable to a UOG 2002/§20 organisation unit. It is a precondition that the participating organisation unit (institute or comparable unit) is authorised with corresponding mandate according to UOG 2002/§ 27. Units below (for example working groups) can not act as project partners.

<sup>20</sup> Activities of local authorities falling within their statutory mandate are not eligible for funding.

<sup>21</sup> "Non-profit making organisations" do not distribute profits to their owners, members or other natural persons or legal entities in accordance with their legal status or articles of association.

The national application for participation of Austrian partners in KDT projects has to be submitted electronically via eCall: <https://ecall.ffg.at> before the deadline of the project submission. For further details on the electronic application process for Austrian participants in KDT projects please see the full version of the national eligibility criteria on the FFG website for the KDT Calls 2023.

FFG experts will check the financial viability (credit rating and liquidity) of the participating enterprises. It is not possible to provide funding to undertakings in difficulty<sup>22</sup>. Austrian enterprises have to provide the following documents:

- Annual statement of accounts (balance sheet, profit and loss account) from the past 2 financial years
- [Declaration of SME Status](#) for associations and sole traders

The company size is to be determined according to the SME definition as specified by EU competition law: [information on SME definition](#).

### **3) Consortium configuration**

Specific details on the Austrian requirements to the consortium configuration (in particular concerning the ratio of the personnel resources between Austrian companies and Austrian research organisations) are described in the full version of the Austrian eligibility criteria, which is available in the FFG web page of the Calls.

### **4) Other conditions**

The following Topics are eligible for national funding:

- Calls 2023-1-IA Topic 1: Global IA Call
- Call 2023-1-IA Topic 3: Focus topic on Integration of trustworthy Edge AI technologies in complex heterogeneous components and systems
- Calls 2023-2-RIA Topic 1: General RIA Call
- Call 2023-2-RIA Topic 2: Focus Topic on Hardware abstraction layer for a European Vehicle Operating System (RIA)

Further details and relevant conditions are described in the full version of the Austrian guidelines and eligibility criteria, available in the FFG web page of the Calls.

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<sup>22</sup> Undertakings in difficulty as defined in the General block exemption Regulation (EU) N°651/2014 of 17 June 2014

## **Eligibility of the costs and funding**

### **1) Eligibility of costs**

The eligibility of costs is in accordance with the national rules on eligible costs. For details on the eligibility of costs see the national Cost Guidelines Version 2.2, as well as the full version of the national eligibility criteria on the FFG web page of the KDT Calls 2023.

## **Funding rates**

The funding rates are described in the full version of the national eligibility criteria on the FFG web page of the KDT Calls 2023.

## **Additional Information to be provided at submission and other conditions**

- **Registration at the eCall System of the FFG** at <https://ecall.ffg.at/> – completion of all relevant forms for both stages (Project Outline and Full Project Proposal).
- Upload of relevant documents in the eCall: balance sheets,...



## Belgium

### National contact person for KDT JU programme

Country	Name	First name	Tel	E-mail
<b>BELGIUM</b>	Flanders	DEPREZ	Francis	+32 2 432 4301 <a href="mailto:francis.deprez@vlaio.be">francis.deprez@vlaio.be</a>
		SILEGHEM	Maarten	+32 2 432 4207 <a href="mailto:ann.monte@vlaio.be">ann.monte@vlaio.be</a>
	Brussels-Capital Region	MAAS	Stijn	+32 2 600 5067 <a href="mailto:smaas@innoviris.brussels">smaas@innoviris.brussels</a>
	Wallonia	MORANA	Cedric	+32 81 33 45 37 <a href="mailto:cedric.morana@spw.wallonie.be">cedric.morana@spw.wallonie.be</a>
		Marie	Suleau	+32 81 33 45 37 <a href="mailto:Marie.suleau@spw.wallonie.be">Marie.suleau@spw.wallonie.be</a>

Funding authority websites: Flanders: [www.vlaio.be](http://www.vlaio.be)  
 Brussels: [www.innoviris.brussels](http://www.innoviris.brussels)  
 Wallonia : [www.recherche.wallonie.be](http://www.recherche.wallonie.be)

Additional for KDT (Flanders):

- [www.vlaio.be](http://www.vlaio.be) KDT specific pages
- [www.vlaio.be/nl/subsidies-financiering/subsidies-voor-ooi-een-internationaal-consortium/networks](http://www.vlaio.be/nl/subsidies-financiering/subsidies-voor-ooi-een-internationaal-consortium/networks) KDT specific pages

### Legal requirements for the eligibility of a partner or a project

#### 1) Type or nature of participants

##### *For Flanders:*

The participant must be a company established in Belgium, with a sustainable economic activity in Flanders, based upon a sound business model.

Flemish Strategic Research Centres (SOC) can be independent legitimate participants.

Research centres and universities can only be legitimate participants in projects compliant to the Flemish O&O-subsidy conditions (Research Partner)

##### *For Brussels:*

Participants in KDT projects wishing to receive funding from Innoviris must be companies, universities or research organisations (in accordance with the definitions provided for by the General Block exemption Regulation for State Aid and the Brussels legislation regulating the action of Innoviris) established on the territory of the Brussels-Capital Region and performing RDI activities within the project.

Please note that no individual partner alone is allowed to support more than 70% of the project's cost.

##### *For Wallonia:*

Participants in KDT projects must be companies, universities/Colleges or accredited research centres established in the Walloon Region and performing RDI activities within the project.

## **2) Legal, administrative and financial conditions**

### ***For Flanders:***

Any double public funding of activities is prohibited.

In case of a multinational company, the application needs to be done by the Belgian legal entity or subsidiary.

For the independent project participation of a research centre or university, the legitimate status of Strategic Research Centre (SOC) is mandatory. A specific agreement with VLAIO is compulsory and Flemish governmental funding outside “Fonds voor Innoveren en Ondernemen” applies.

For enterprises “State Aid for Rescuing and Restructuring Firms in Difficulty” is applicable, according Europea definitions (holding level).

### ***For Brussels:***

For Brussels enterprises wishing to benefit from Innoviris funding, the financing conditions are as follows:

- develop all or some of its R&D activities within the territory covered by the Brussels-Capital Region
- present an innovative RDI project likely to have a favourable impact on employment and/or sustainable development of the Brussels-Capital Region
- show one's ability to finance one's share in the project
- the company is not in difficulty, in accordance with the European legislation
- have fulfilled its obligations in the context of previous support initiatives allocated by the Region.

No other public funding (except the European contribution provided by the JU) can be received by the beneficiaries for the activities performed within the project. Any other funding must be declared to Innoviris.

### ***For Wallonia:***

The Walloon decree on RDI support (25/06/2008) is the Walloon legal basis to determine the funding of the participants. Participants must be based in Wallonia and the Walloon company(ies) must have a business unit in Wallonia.

The companies have to present an innovative RDI project with a favourable impact on the Walloon economy and/or in terms of employment in alignment with the Walloon S3, as well on sustainable development in Wallonia.

The participants cannot benefit from any other public funding for the same activities.

The participants have fulfilled their obligations in the context of previous support allocated by the Region.

The companies in difficulty, in accordance with the European legislation, cannot not be funded.

### 3) Consortium configuration

#### ***For Flanders:***

Project application is done by either an enterprise with a legal entity in Belgium and effective operations in Flanders or a legitimate Strategic Research Centre.

Project participation needs to be primarily executed to the benefit of the applying entities. Participation of research organisations is only possible as research partner (legal subcontracting) to the participation of an enterprise with co-funding by the enterprise.

Applications compliant to the status of Strategic Research Centre need to be done independently.

#### ***For Brussels:***

Participants in KDT projects wishing to receive funding from Innoviris must be a company or a research organisation.

#### ***For Wallonia:***

The Walloon partners of the consortium must include at least one company and the research budget of the Walloon partner company(ies) must correspond to at least 40% of the total budget of all Walloon partners.

### 4) Other conditions

#### ***For Flanders:***

Enterprises need to prove adequate (financial) means to execute the project and a potential to use the results.

The project should yield socio-economic effects which can be quantified by activities or investments after the completion of the project, by exploitation in Flanders based entities, in accordance with the ruling detailed in the document (except for project applications by Strategic Research Centres). Conditions are compliant to the impact conditions of O&O, detailed on:

[www.vlaio.be/nl/subsidies-financiering/onderzoeksproject/voorwaarden-om-aanmerking-te-komen-voor-de-subsidie](http://www.vlaio.be/nl/subsidies-financiering/onderzoeksproject/voorwaarden-om-aanmerking-te-komen-voor-de-subsidie) (RIA-projects)

[www.vlaio.be/nl/subsidies-financiering/ontwikkelingsproject/wie-komt-aanmerking-en-onder-welke-voorwaarden](http://www.vlaio.be/nl/subsidies-financiering/ontwikkelingsproject/wie-komt-aanmerking-en-onder-welke-voorwaarden) (IA-projects)

Project qualification 'research' or 'development' will follow KDT call rationale (IA, RIA or additional calls).

In case of potential military applications (including dual use), funding can be restricted.

#### ***For Brussels:***

Exploitation and valorisation conditions:

Brussels-based participants must demonstrate their capability to carry out the tasks assigned to them in the project, exploit the results of the latter and the project's likelihood to have a positive impact on the Brussels-Capital Region from a social, environmental and the regional ecosystem perspective's (economy, employment, and/or sustainable development, inequalities, working conditions, well-being, ...).

In case of potential military applications (including dual use), funding can be restricted.

#### ***For Wallonia:***

The participants must demonstrate their capability to carry out the tasks assigned to them in the project, exploit the results of the latter and have positive impacts on Wallonia from a socio-economic and sustainable development perspective.

**Projects must be targeted at civilian technologies, products, processes and services only.**

## **5) Eligibility of costs**

### ***For Flanders***

Eligibility of costs is in accordance with the ruling of the O&O bedrijfssteun of Flanders, detailed in the documents available on:

<https://www.vlaio.be/nl/subsidies-financiering/onderzoeksproject/welk-bedrag-kan-je-krijgen-de-subsidie-onderzoeksproject>

[www.vlaio.be/nl/subsidies-financiering/ontwikkelingsproject/financiele-steun-voor-een-ontwikkelingsproject](https://www.vlaio.be/nl/subsidies-financiering/ontwikkelingsproject/financiele-steun-voor-een-ontwikkelingsproject)

Eligible cost calculation will be done on the costs formulated in the KDT application. The cost model applicable is the KDT eligible cost system (Horizon Europe)

In case of stand-alone Strategic Research Centre projects, KDT eligible cost system (Horizon Europe) is applicable for both KDT and SOC funding.

### ***For Brussels***

For KDT projects, the Brussels-Capital Region will align on the JU and will therefore not apply additional rules, such as the regional rules applicable for individual RDI projects, on the eligibility of costs. The eligible costs will therefore be those retained by the JU for the European contributions in accordance with the Horizon Europe Rules for Participation.

### ***For Wallonia:***

The eligibility of costs is in accordance with the guidelines issued by the Public Service of Wallonia available on:

[Guide-des-dépenses-admissibles\\_aides.pdf](#)

## **6) Funding rates**

### ***For Flanders***

<div> Type of Organisation  Type of activity </div>	Percentage of the national subsidy to the beneficiaries			
	Large Enterprises, Groups and Associations of Enterprises	Medium Enterprises	Small Enterprises	Public Research Institutes and Universities (2) (3)
Industrial/Applied Research projects	65%-JU	70%-JU	70%-JU	= JU (1:1 ratio)

Experimental development projects	40%-JU	50%-JU	60%-JU	= JU (1:1 ratio)
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## Notes:

1. These percentages are maxima and given under the constraints that the project proposal fulfils the KDT eligibility criteria and that no participant in the KDT project holds more than 70% of the total (international) KDT project budget.
2. In case of RIA-projects for large enterprises, if there is no Flemish RTO participation in the project, maximum funding is topped at 60%.
3. In case of IA-projects for large enterprises, if there is no Flemish RTO participation in the project, maximum funding is topped at 45%.
4. In case of IA-projects for medium enterprises, if there is no Flemish RTO participation in the project, maximum funding is topped at 35%.
5. In case of IA-projects for small enterprises, if there is no Flemish RTO participation in the project, maximum funding is topped at 55%.
6. The funding of stand-alone Strategic Research Centre contributions is determined by specific project related agreement with VLAIO. These projects have no specific funding limit. The eligible costs for these projects may be set equal to the KDT eligible costs.
7. The funding of public research institutes and universities in projects initiated by enterprises in Belgium, is determined by the general principles of O&O-bedrijfsprojecten as published on the websites  
[www.vlaio.be/nl/subsidies-financiering/onderzoeksproject/wat-houdt-de-subsidie-onderzoeksproject](http://www.vlaio.be/nl/subsidies-financiering/onderzoeksproject/wat-houdt-de-subsidie-onderzoeksproject)  
[www.vlaio.be/nl/subsidies-financiering/ontwikkelingsproject/wat-is-een-ontwikkelingsproject](http://www.vlaio.be/nl/subsidies-financiering/ontwikkelingsproject/wat-is-een-ontwikkelingsproject)

In case of non-SOC RTO participation, the funding level of the participating (initiating) enterprise applies. The participating (initiating) enterprises are to cover the non-funded costs.

Except for stand-alone Strategic Research Centre projects, funding is limited to € 3M per project. Total funding for FIO funded projects (non SOC) may be limited to € 4M. Funding to enterprises may be limited if combined R&D funding (national and Joint Undertaking) to an enterprise exceeds VLAIO applicable ruling, part of the extended eligibility criteria.

***For Brussels:***

<div> <div>Type of Organisatio</div> <div>Type of activity</div> </div>	Percentage of the national subsidy to the beneficiaries			
	Large Enterprises, Groups and Associations of Enterprises	Medium Enterprises	Small Enterprises	Public Research Institutes and Universities
Industrial/Applied Research projects	65%-JU%	75%-JU%	80%-JU%	100%-JU%
Experimental development projects	40%-JU%	50%-JU%	60%-JU%	100%-JU%

**Notes:**

These percentages are maxima and given under the constraints that the project proposal fulfils the KDT eligibility criteria and that no participant in the KDT project holds more than 70% of the total (international) KDT project budget.

Project funding for Brussels may be limited to € 0,5M.

***For Wallonia:***

Type of Organisation Type of activity	Percentage of the regional subsidy to the beneficiaries				
	Large Enterprises, Groups and Associations of Enterprises	Medium Enterprises	Small Enterprises	Universities	Accredited Research Centers
Industrial/Applied Research projects	65%-JU%	75%-JU%	80%-JU%	100%-JU%	75%-JU%
Experimental development projects	40%-JU%	50%-JU%	60%-JU%	100%-JU%	75%-JU%

## Notes:

1. These percentages are **maxima** and given under the constraints that the project proposal fulfills the KDT eligibility criteria and that no participant in the KDT project holds more than 70% of the total (international) KDT project budget.

2. The proposed research activities will be qualified ‘industrial research’ or ‘experimental development’ according to the above-mentioned Walloon decree. The funding of Experimental Development projects might be carried out by means of recoverable advances ([Taux de financement des projets internationaux 2021.pdf](#)).

**Additional Information to be provided at submission and other conditions*****For Flanders:***

Additional information is mandatory as of the FPP-phase. Application according the KDT application form [www.vlaio.be/nl/media/739](http://www.vlaio.be/nl/media/739) is mandatory (endorsing the application compulsory by KDT FPP closing date). European application format is requested. Starting the application procedure (without endorsement) is recommended as of the KDT PO phase.

***For Brussels***

The submission of a Part C containing additional information is compulsory for all Brussels partners. The Part C template is available on the INNOVIRIS website <https://innoviris.brussels/> (get-funded/ Collaboration/ECSEL).

***For Wallonia:***

The submission of a Part C containing additional information is compulsory for all Walloon partners. The Part C template is available on the website ([www.recherche.wallonie.be](http://www.recherche.wallonie.be)).

## Bulgaria (BG)

No information available.

## Croatia (HR)

No information available.

## Cyprus (CY)

**Total Budget for 2023 WP:** € 3.000.000

**Max. Funding Per Project:** € 500.000

**Funding Agency:** [Research and Innovation Foundation \(RIF\)](#)

### National contact person for KDT JU programme

Country	Surname	Name	Email	Tel.
CYPRUS	Portokallides	Marinos	<a href="mailto:mportokallides@research.org.cy">mportokallides@research.org.cy</a>	+35722205052

### Legal requirements for the eligibility of a partner or a project

#### A. Specific Restrictions and Conditions for Participation

All general rules and procedures for the participation of organisations and individuals, the eligible activities and costs, as well as the specific information regarding the «Innovation Vouchers» Programme, as well as the other RESTART 2016-2020 Programmes, are included in the [RIF's Work Programme for the «RESTART 2016-2020» Programmes for Research, Technological Development and Innovation – Programmes for the Period 05/2022 – 03/2023](#), which is the main reference document and an important information source for interested parties.

Furthermore, specific information for each Call can be found in the relevant National Call Documents, available in the [RIF's Portal](#).



## 1) Beneficiaries

Host Organisation (of the Cypriot Consortium) could be an Enterprise, a Research Organisation or an Other Private or Public Organisation.

Research Organisations, Enterprises and Other Private or Public Organisations can participate as Partner Organisations (in the Cypriot Consortium).

Maximum number of organisations in the Cypriot Consortium should be between one to three (1-3).

Participation of Large Enterprises is only permitted when an SME is also participating in the Cypriot Consortium.

Participation of startups is not allowed except for those with marketable products/services, with a record for sales and turnover and audited financial statements for at least two (2) years.

For Innovation Actions:

- The participation of an SME in the Cypriot Consortium is obligatory.
- At least 30% of the Cypriot consortium's participants budget should be allocated to Enterprises.

## 2) National Application

The Coordinator of the Cypriot Consortium should also submit a Proposal on the RIF's IRIS Portal (<https://iris.research.org.cy>). The Project Coordinator and all local participating organizations of the Cypriot Consortium, should register in advance on the IRIS Portal.

Potential applicants are advised to read the «**Guide for Applicants**», which contains guidelines and clarifications regarding the Submission procedure and the «**IRIS Portal User Manual**» which can be found on the IRIS Portal (<https://iris.research.org.cy/#/documentlibrary>).

The Proposal submitted to the RIF includes only general information regarding the Transnational Proposal (Title, Acronym etc), the Coordinator of the Cypriot Consortium and the partner organisations of the Transnational Consortium (including the Cypriot organisations) as well as detailed budget for each partner participating in the Cypriot Consortium. The budget of each organization should be the same with the budget to be included in the Proposal submitted to the EU.

The Project Proposal consists of the following parts:

1. Part A – General Information & Budget (electronic form (fields) to be completed online through the IRIS Portal).
2. Annex III – Call Specific Information (documents to be uploaded as Annexes on the IRIS Portal in PDF format):

*(a) Financial Statements: Audited Financial Statements of the Host Organisation for the previous financial year or the year preceding it, for the purposes of preliminary and financial viability check – Obligatory Submission. Organisations undergone a financial viability check by the RIF in the frame of previous contract preparation, with valid financial viability check results, are exempted.*

## Eligibility of Costs and Funding

National Calls will be co-financed by the Republic of Cyprus and the European Regional Development Fund (ERDF), in the frame of the Operational Programme «ΘΑΛΕΙΑ» 2021-2027 under Priority 1: «Competitive, Smart and Digital Economy» and the Specific Objective (1i): «Developing and enhancing research and innovation capacities and the uptake of advanced technologies».

### 1) Eligible Costs

Personnel costs, Instruments and Equipment Costs, Costs for External Services, Costs for Travelling Abroad, Consumables, Other Specific Costs, Overheads.

Eligible Costs are described in the [RIF's Work Programme for the «RESTART 2016-2020» Programmes for Research, Technological Development and Innovation – Programmes for the Period 05/2022 – 03/2023.](#)

### 2) National Funding Rates

	Small Enterprise	Medium Enterprise	Large Enterprise	«Research Organisations» and «Other Public and Broader Public Sector Organisations»
Call 2023-1-IA T1 Experimental Development	30%	20%	20%	65%
Call 2023-1-IA T2 Call 2023-1-IA T3 Call 2023-1-IA T4 Experimental Development	25%	15%	15%	65%
Call 2023-2-RIA T1 Call 2023-2-RIA T2 Industrial Research	45%	40%	40%	65%

## Czech Republic

### National contact persons for the KDT JU programme

Country	Name and surname	National funding authority	E-mail address
Czech Republic	Mr. Michal Vávra	Ministry of Education, Youth and Sports	<a href="mailto:michal.vavra@msmt.cz">michal.vavra@msmt.cz</a>

The National Funding Authority (NFA) of the Czech Republic for the KDT programme is the **Ministry of Education, Youth and Sports** (hereinafter referred to as the “MEYS”), Department for Research and Development – Unit for European Research Area. Principal legal regulations and documents on public funding of research, development and innovation in the Czech Republic are available on the websites [www.msmt.cz/vyzkum-a-vyvoj](http://www.msmt.cz/vyzkum-a-vyvoj) and [www.vyzkum.cz](http://www.vyzkum.cz).

### Legal requirements for the eligibility of a partner or a project

#### 1) Type or nature of participants

Public universities, public research institutes, private research organisations and/or other legal entities that can be classified as “**research and knowledge-dissemination organisations**” (hereinafter referred to as the “research organisation”) in accordance with the [Commission Regulation \(EU\) No 651/2014 of 17 June 2014](#) declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 of the Treaty (Chapter I, Article 2, Paragraph 83).

“**Enterprises**” – Small, medium and/or large-sized enterprises as defined by the [Commission Regulation \(EU\) No 651/2014 of 17 June 2014](#) declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 of the Treaty (Chapter I, Article 2, Paragraphs 2 and 24), listed in Business Register of the Czech Republic and performing research, development and innovation in the Czech Republic.

#### 2) Legal, administrative and financial conditions

Public funding of research, development and innovation in the Czech Republic is provided pursuant to the **Act No. 130/2002 Coll. on the Support of Research, Experimental Development and Innovation from Public Funds** and on the Amendment to Some Related Acts (hereinafter referred to as the “Act on the Support of Research, Experimental Development and Innovation”).

#### 3) Consortium configuration

**The Czech fraction of a KDT project consortium must be configured from at least one enterprise registered in the Czech Republic and at least one research organisation**, both these entities fulfilling the requirements stipulated in the clause 1 “Type or nature of participants”, thus complying with the Public-Private-Partnership principle.

#### 4) Other conditions

It is obligatory that a Czech participant involved in a KDT project consortium proves its compliance with the eligibility criteria and fulfilment of the conditions stipulated by § 18 of the Act on the Support of Research, Experimental Development and Innovation by the means of a **Statutory Declaration**. The required procedures are described and the Statutory Declaration template is available on the website <https://www.msmt.cz/vyzkum-a-vyvoj-2/spolecne-technologicke-iniciativy-5-1>.

Furthermore, applicants that seriously breached their obligations towards the MEYS, acting as the NFA, stemming from the applicable legislation or the Grant Agreement issued by the MEYS during validity of the KDT programme or any of its predecessors, shall be considered ineligible for the national funding.

### Eligibility of the costs and funding

#### 1) Eligibility of costs

**Eligible costs** for a Czech participant involved in a KDT project consortium are defined by:

Regulation (EU) 2021/695 of the European Parliament and of the Council of 28 April 2021 establishing Horizon Europe – the Framework Programme for Research and Innovation, laying down its rules for participation and dissemination, and repealing Regulations (EU) No 1290/2013 and (EU) No 1291/2013.

Regulation (EU, Euratom) 2018/1046 of the European Parliament and of the Council of 18 July 2018 on the financial rules applicable to the general budget of the Union, amending Regulations (EU) No 1296/2013, (EU) No 1301/2013, (EU) No 1303/2013, (EU) No 1304/2013, (EU) No 1309/2013, (EU) No 1316/2013, (EU) No 223/2014, (EU) No 283/2014, and Decision No 541/2014/EU and repealing Regulation (EU, Euratom) No 966/2012.

The **maximum indirect costs** are 25 % (flat rate) of the direct costs without the sub-contracting.

#### 2) Funding rates

**The MEYS consider the Research and Innovation Actions (RIA) being industrial research projects and the Innovation Actions (IA) being experimental development projects. Given these circumstances, the maximum intensity of the MEYS aid will be derived from the Commission Regulation (EU) No 651/2014 of 17 June 2014 declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 of the Treaty (Chapter III, Section 4, Article 25, Paragraph 5).**

The aid intensity for industrial research and experimental development will not be increased by the MEYS although the Czech participants in a KDT project consortium meet the conditions stipulated by the Commission Regulation (EU) No 651/2014 of 17 June

2014 declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 of the Treaty (Chapter III, Section 4, Article 25, Paragraph 6). The aid intensities stipulated in the table below are definitive.

<b>Funding rates</b>	<b>Large enterprises</b>	<b>Small and medium sized enterprises</b>	<b>Research organisations*</b>
Research and Innovation Actions (RIA) projects = <b>Industrial Research</b>	50 % including EU contribution	70 % including EU contribution	100 % including EU contribution
Innovation Actions (IA) projects = <b>Experimental Development</b>	40 % including EU contribution	50 % including EU contribution	100 % including EU contribution

\* **The aid intensity for research and development activities carried out by the research organisation might be at the level of 100 % (EU and the Czech national contribution included)** only if the research organisation entirely complies with the requirements stipulated by the Article 2.1.1 “Public funding of non-economic activities” of Framework for State Aid for Research and Development and Innovation (2014/C 198/03) and proves it by the means of a **Statutory Declaration** submitted to the MEYS using the form available on website <https://www.msmt.cz/vyzkum-a-vyvoj-2/spolecne-technologicke-iniciativy-5-1>.

If a legal entity does not comply with all the requirements stipulated for the research organisation, it will be considered as an enterprise (small, medium or large) and the aid intensity will be then adjusted appropriately by the MEYS.

#### **Additional Information to be provided at submission and other conditions**

All the information concerning additional requirements stipulated by the MEYS for the KDT programme are available on website <https://www.msmt.cz/vyzkum-a-vyvoj-2/spolecne-technologicke-iniciativy-5-1>.

## Denmark

### National contact person for KDT JU programme

Country	Last Name	First name	Telephone	E-mail
Denmark	Citirikkaya Vittrup	Cagdas Jens Peter	+45 6190 5013 +45 6190 5023	<a href="mailto:Cagdas.citirikkaya@innofond.dk">Cagdas.citirikkaya@innofond.dk</a> <a href="mailto:Jens.peter.vittrup@innofond.dk">Jens.peter.vittrup@innofond.dk</a>

### Legal requirements for the eligibility of a partner or a project

#### 1. Type or nature of participants (project partners)

- See IFDs Guidelines for International Projects 2022: <https://innovationsfonden.dk/sites/default/files/2022-03/Guidelines%20for%20international%20programmes%2022.%20marts%202022%20.pdf>

#### 2. Legal, administrative and financial conditions

- General eligibility criteria and conditions for receiving project funding from the Innovation Fund Denmark (IFD) will apply (i.e. the beneficiary must be a registered legal entity, have credible capacity to execute the project activities in Denmark, demonstrate financial viability, and provide transparency as to funding requested or received from other sources).
- See IFDs Guidelines for International Projects 2022 <https://innovationsfonden.dk/sites/default/files/2022-03/Guidelines%20for%20international%20programmes%2022.%20marts%202022%20.pdf>

#### 3) Consortium configuration

- At least one Danish company must be involved as a partner in the project.
- Companies must be established with a considerable business activity in Denmark within the scope of the KDT JU.

#### 4) Other conditions

- After the call deadline, Danish enterprises will be asked to upload documentation for the cash flow test in e-grant (See IFDs Guidelines for International Projects 2022). An invitation link to e-grant will be sent out after deadline.

### Eligibility of the costs and funding

#### 1) Eligibility of costs

Horizon Europe rules and guidelines on eligible costs will apply.

## 2) Funding rates

The maximum funding rates for the national share of the funding provided by the IFD will be as listed in the table below. In addition, the EU co-funding can be provided according to the KDT JU co-funding rates:

	IFD funding rates for ECSEL projects Max IFD funding per DK partner: €300.000, Max for all DK partners €500.000					
	Large industry	Medium Enterprises (50-249 FTE)	Small Enterprises (1-49 FTE)	Approved industrial clusters	Research organisations (GTS) and	Universities, hospitals & public institutions
Experimental Research (IA)	20 %	20 %	20 %	20%	25 %	55 %
Industrial Research (RIA)	40 %	40%	40%	40 %	25 %	55 %

\*For Call-2022-1 Topic 2 and 3 (IA): IFD funding rate will be adjusted to the KDT JU co-funding rate. The IFD rate will thus be 15 % for large industry, SMEs and approved industrial clusters. The total co-funding rates (IFD+EU) will as a consequence follow IFDs standard funding rates.

Other costs (overhead). Share of funding		
Universities	Hospitals	Approved industrial clusters
44%	3,1%	20 %

IFD funding to Danish partners in KDT JU follows the standard maximal funding for international projects. However, **in addition** the Danish participants will receive KDT JU funding from the call secretariat according to the KDT JU funding criteria.

IFD standard funding rates is adjusted for KDT JU co-funding rates. The total co-funding rates (IFD+EU) will as a consequence follow IFDs standard funding rates.

### **Additional Information to be provided at submission and other conditions**

The total Danish funding budget for the above KDT JU Call 2022-1 and Call 2022-2 is 2 mill. €<sup>23</sup>.

- (1) There is no pre-allocated distribution of the Danish funding budget between Call 2022-1 and Call 2022-2, nor to specific topics of Call-2022-1 and Call-2022-2.

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<sup>23</sup> Subject to final approval by the BoD of IFD Denmark and the annual budget law.

- (2) Danish applicants should consider 0,3 mill. € as a maximum amount of national funding if one Danish partner participate in the application and up to 0,5 mio. € for all Danish participants if more than one Danish partner participate in the project. In addition to the national funding EU co-funding can be received according to KDT JU co-funding rules.
- (3) National funding will be subject to conditions in current state aid rules (Commission Regulation (EU) No 651/2014). If other public funding, besides the EU funding, will be granted for the project, the listed maximum rates for national funding will be reduced if required to ensure that aid intensity limits in the state aid rules are respected. Beneficiaries must submit declarations regarding company size and financial situation.
- (4) After the call deadline, each Danish participant will automatically receive a national e-grant file number and be asked to upload the full application. The KDT JU application and budget annexes must be uploaded on e-grant no later than 14 days after the e-grant invitation has been send out to the applicants.



## Estonia

**National Eligibility Criteria for grant applications in partnership calls for transnational research projects**

**Estonian Research Council**

**National contact person for KDT JU programme at the Estonian Research Council**

Country	Organisation	Name	First name	Tel	E-mail
ESTONIA	Estonian Research Council	Vedina	Rebekka	+372 56976673	<a href="mailto:rebekka.vedina@etag.ee">rebekka.vedina@etag.ee</a>
ESTONIA	Estonian Research Council	Suuroja	Margit	+372 731 7360	<a href="mailto:margit.suuroja@etag.ee">margit.suuroja@etag.ee</a>

Funding authority website: [www.etag.ee](http://www.etag.ee)

The full version of the national eligibility criteria can be found at: [Lisa 1. Vastavusnõuded \(etag.ee\)](#)

### Legal requirements for the eligibility of a partner or a project

#### 1) Type or nature of participants

The Host Institution could be any legal entity that is registered and located in Estonia.

The Host Institution (the final recipient) is the applicant to which the grant will be allocated.

The Principal Investigator is a researcher who acts as the Estonian team leader in the project proposal. The Principal Investigator will be responsible for how the grant is used and how Estonia's part in the project is executed.

#### 2) Legal, administrative and financial conditions

The Principal Investigator:

- must have an updated public profile in the Estonian Research Information System (ETIS) by the submission deadline;
- must hold a doctoral degree or an equivalent qualification. The degree must be awarded at the latest by the submission deadline of the grant application;
- must have published at least three articles that comply with the requirements of Clause 1.1 of the ETIS classification of publications, or at least five articles that comply with the requirements of Clauses 1.1, 1.2, 2.1 or 3.1, within the last five calendar years prior to the proposal submission deadline.

If the Host Institution is an undertaking, EU Regulations on State aid and de minimis aid must be taken into account when requesting funding from the Estonian Research Council. For details on State aid and de minimis aid please see the full version of the national eligibility criteria at [Lisa 1. Vastavusnõuded \(etag.ee\)](#)

If the support is State aid or de minimis aid, then support will not be granted to a Host Institution who is subject to a support withdrawal decision pursuant to a previous European Commission decision deeming the aid illegal and incompatible with the common market, if that decision has not been complied with.

If a positive financing decision is made, the Host Institution and the Funding Organisation enter into a bilateral agreement. Information on the transnational project must be entered into ETIS once the agreement has been signed.

The Consortium Agreement should be signed at the latest six months after the grant agreement has been signed. If one year has elapsed and the CA has not been signed, the next instalment of funding will not be paid out.

### 3) Consortium configuration

The project is carried out by consortia, in which various research entities apply for support from national funding organisations. Each participant in a funded project will be funded by their national Funding Organisation. It is mandatory for all Estonian applicants to follow the national eligibility criteria. Please note that if one of the partners is not eligible, the entire proposal might be considered ineligible.

### 4) Other conditions

If human research or animal testing are intended in the project, a positive resolution by the Human Research Ethics Committee or the Authorisation Committee for Animal Experiments must be submitted to the Estonian Research Council by the start of the relevant activities.

By applying for funding by the Estonian Research Council, the applicants agree to consider the relevance of the Nagoya protocol for their research, and to submit the Due Diligence Declaration, if applicable.

## Eligibility of the costs and funding

### 1) Eligibility of costs

Research expenses consist of direct costs (personnel costs, travel costs and other direct costs) and subcontracting costs. The research expenses must be used to carry out the project and be separately identifiable.

Direct costs

1. Personnel costs are monthly salaries with social security charges and all the other statutory costs of the project participants, calculated according to their commitment and in proportion to their total workload at their Host Institution.

2. Travel costs may cover expenses for transport, accommodation, daily allowances and travel insurance.

3. Other direct costs are:

- consumables and minor equipment related to the project;
- publication and dissemination of project results;
- organising meetings, seminars or conferences (room rent, catering);
- fees for participating in scientific forums, conferences and other events related to the project;
- patent costs;
- all other costs that are identifiable as clearly required for carrying out the project (e.g. translation, copy editing, webpage hosting, etc.) and comply with the eligible costs.

Subcontracting costs should cover only the additional or complementary research related tasks (e.g. analyses, conducting surveys, building a prototype, etc.) performed by third parties. Subcontracting costs should not be included in the overhead calculation. The activities and budget should be described in the proposal. Core project tasks should not be subcontracted. Subcontracting costs may not exceed 15% of the total costs.

Indirect costs are overhead from the personnel costs only, which may not exceed 15% and should cover the general expenses of the Host Institution. Costs for equipment and services intended for public use (a copy machine or a printer that is publicly used, phone bills, copy service, etc.) should be covered from the overhead.

Double funding of activities is not acceptable.

## 2) Funding

Estonian Research Council funds a successful participant with up to 150 000 EUR.

## Finland

### National contact person for KDT JU programme

Country	Name	First	Phone	email
Finland	Ahola	Kimmo	+358 50 5577 756	<a href="mailto:kimmo.ahola@businessfinland.fi">kimmo.ahola@businessfinland.fi</a>
	Leino	Kari	+358 50 5577 698	<a href="mailto:kari.leino@businessfinland.fi">kari.leino@businessfinland.fi</a>

Finland's national public funding authority is Innovation Funding Agency Business Finland. Business Finland funding principles can be found at:

[www.businessfinland.fi/en](http://www.businessfinland.fi/en) (English)

[www.businessfinland.fi](http://www.businessfinland.fi) (Finnish)

### Legal requirements for the eligibility of a partner or a project

#### 1) Type or nature of participants

- Companies (enterprises)
- Industry associations
- Universities and polytechnics
- Public research institutes and similar research organizations

#### 2) Legal, administrative and financial conditions

- A company has considerable industrial or R&D&I activities in Finland
- A company has a clear financial record and has the financial capability to cover its own expenses during the project (e.g. the company must show positive equity at decision taking)

#### 3) Consortium configuration

- A public research institute, university or a polytechnic shall be accompanied in the project by at least two eligible companies in Finland
- Research and Innovation Actions (RIA) projects: The project volume (costs) of public research institutes, universities and polytechnics from Finland combined shall not exceed 50 % of the total volume (costs) of Finnish participants based on national (Business Finland) funding rules
- Innovation Action (IA) projects: The project volume (costs) of public research institutes, universities and polytechnics from Finland combined shall not exceed 30 % of the total volume (costs) of Finnish participants based on national (Business Finland) funding rules

#### 4) Other conditions

- The project participation must aim for significant business and export growth as well as have sufficient positive impact on the Finnish economy or society.

- Priority is given to the topics that are not covered by already funded projects.
- Priority is given to projects that implement strong cross-border industrial cooperation.

### **Eligibility of the costs and funding**

#### **1) Eligibility of costs**

- Eligibility of the costs is in accordance with the national (Business Finland) funding rules.

#### **2) National public funding**

Type of activity	Large enterprise	SME	Public Research Institutes and Universities
Research and Innovation action	20 % grant	35 % grant	38 % grant
Innovation Action	20 % grant or Max. 50 % loan	35 % grant or Max. 50 % loan	38 % grant

### **Additional Information to be provided at submission and other conditions**

- Every participant in Finland must submit a separate Business Finland funding application within 14 days of call closure date.

## France

### National contact person for KDT JU programme

Country	Name	First name	Tel	E-mail
France	RITOU	Arnaud	+33 1 53 18 36 16	<a href="mailto:arnaud.ritou@finances.gouv.fr">arnaud.ritou@finances.gouv.fr</a>
	MICHEL	Benoît	+33 1 53 18 36 07	<a href="mailto:benoit.michel@finances.gouv.fr">benoit.michel@finances.gouv.fr</a>

Website reference: <https://www.entreprises.gouv.fr/fr/numerique/enjeux/soutien-la-nanoelectronique>

### Exigences légales pour l'éligibilité d'un partenaire ou d'un projet.

*The items published in French in the following text are the official national eligibility criteria for funding. The following items published in English are a translation. The text in French takes precedence over the text in English.*

La contribution indicative inscrite dans ce programme de travail, dans la partie *National Budgets for the call 2023*, n'est pas un budget à allouer aux candidats français à des appels à projets KDT, mais une estimation basée sur les aides obtenues par les candidats français à des précédents appels à projet ECSEL et KDT à travers les mécanismes de financements décrits ci-dessous, ou leurs prédécesseurs.

**Les porteurs français d'une proposition de projet pour un appel à projets de KDT en 2022 doivent, pour être éligibles, avoir été retenus pour ce projet par un mécanisme de financement national, avant la sélection des projets KDT par le comité des autorités publiques de l'entreprise commune :**

- au titre du **volet français** du PIEEC électronique et connectivité, s'ils en sont bénéficiaires et dans les conditions prévues par le programme ;
- au titre d'un appel à projets national ou régional, en respectant les conditions spécifiques à cet appel.

**Les partenaires doivent impérativement contacter les correspondants nationaux indiqués au début de cette annexe avant le dépôt de la « Project Outline » (pour les appels en deux phases) ou de la proposition finale (pour les appels en une seule phase).**

**L'objectif de ce contact est d'orienter le demandeur vers le guichet le plus adapté, de préparer l'examen des critères d'éligibilité nationaux, et pour les chefs de file du**

**PIEEC électronique et connectivité, de préciser les démarches à mener afin de déterminer la conformité du projet avec les axes stratégiques du programme.**

## **I. Financement dans le cadre du volet français du PIEEC électronique et connectivité**

Les critères suivants ne s'appliquent qu'aux porteurs de projets retenus au titre du programme national (sans nom à date) dans le cadre du volet français du PIEEC électronique et connectivité et ne préjugent pas de l'application des règles légales et réglementaires en vigueur concernant l'attribution de subventions par l'État français.

Pour les partenaires ayant déposé une demande de financement au titre d'un appel à projets national ou régional, ils doivent se référer au cahier des charges de l'appel à projets en question.

### **1) Type ou nature des participants**

- Entreprises privées ou publiques de toutes tailles
- Universités
- Instituts de recherche

### **2) Conditions légales, administratives et financières**

Les travaux ne doivent pas déjà avoir fait l'objet d'un soutien public (hors mesures fiscales génériques) ni être en redondance avec des travaux similaires financés par les autorités françaises, ni avoir été engagés avant la date de début du projet indiqué dans la « *Full Project Proposal* »

La situation financière de chaque partenaire privé doit être validée (structure financière, flux de trésorerie, compte d'exploitation) et jugée compatible (volume d'activité, moyens humains, moyens financiers) avec le montant et le contenu de l'assiette des dépenses ainsi qu'avec le montant de l'aide sollicitée et des aides publiques déjà accordées par ailleurs.

### **3) Cohérence avec le PIEEC électronique et connectivité et le plan France 2030**

Les porteurs de projets doivent s'intégrer dans les objectifs globaux du PIEEC électronique et connectivité, et contribuer à lever un ou plusieurs verrous technologiques significatifs en vue de concevoir ou d'améliorer des produits, services ou procédés, ainsi que mettre en place les moyens de réalisation de ces produits et procédés. Ceux-ci doivent présenter pour eux des perspectives suffisantes de retombées sur le territoire de l'Union européenne, et notamment en France, en termes d'emplois, de compétitivité, de création de valeur et d'activité économique à court ou moyen terme.

Les propositions doivent comporter la participation d'au moins un chef de file français du PIEEC électronique et connectivité. Néanmoins, la coordination et le dépôt de la proposition peuvent être confiés à un autre partenaire du consortium.

Les travaux réalisés par les porteurs doivent être bien spécifiés et pouvoir être considérés comme « développement expérimental » ou « recherche industrielle » au sens de l'encadrement des aides d'Etat à la RDI. Conformément à ce régime d'aide, l'aide à chaque entreprise doit avoir un effet d'incitation sur ses activités de RDI.

Les partenaires doivent remplir les conditions d'éligibilité propres aux partenaires du PIEEC électronique et connectivité :

- déposer un dossier complet, au format imposé, sous forme électronique via la plateforme de Bpifrance,
- dont les modalités d'accès seront précisés par le contact national indiqué en début de cette annexe ;
- Pour les partenaires du projet qui ne sont pas chefs de file du PIEEC électronique et connectivité, remplir les conditions relatives aux montants de dépenses en ressources humaines et « emplois nouveaux » :
  - Les partenaires devront présenter un niveau de dépenses en RH équivalent au moins à 40% du total des dépenses éligibles.
  - Parmi ces 40%, il est attendu que des emplois nouveaux (CDI, CDD, contrat d'apprentissages, ...) représentent un minimum de 20% des dépenses éligibles du projet.

Intégrant les priorités de France 2030, l'aspect « émergent » ou « en développement » est un point particulier de sélection des partenaires de projets dans la mesure où France 2030 vise à faire émerger de nouveaux acteurs économiques.

Ainsi, les projets intégrant des acteurs tels que des entreprises de moins de 12 ans ou des PME/ETI opérant un pivot stratégique radical, les amenant à développer de nouveaux produits très innovants en rupture ou qui concernent des marchés émergents, ou en très forte croissance, ou procédant à des opérations de *build-up* avec des entreprises de moins de 3 ans ou encore en consortium de R&D collaborative avec des start-ups seront privilégiés.

#### 4) Coûts éligibles

Les coûts éligibles français seront basés sur le montant obtenu en remplissant les annexes financières disponible sur la plateforme de Bpifrance, pour chaque partenaire français.

#### 5) Taux de soutien

Type de recherche \ Type d'entreprise	Grande entreprise (GE et ETI)	PME	Organisme de recherche en <u>coûts marginaux</u>
<b>Research and Innovative Action (RIA) &amp; Innovative Action (IA)</b>	20 %	30 %	100 % – aide demandée à la JU

#### 6) Informations nécessaires à la soumission

Pour les porteurs éligibles au programme national (sans nom à date) dans le cadre du volet français PIEEC électronique et connectivité, et en complément du dossier de soumission du projet, transmis à l'entreprise commune, le responsable français de chaque projet doit adresser aux autorités



françaises, un dossier sur la plateforme de Bpifrance consacrée dont le contact national lui précisera les modalités d'accès.

Le dossier soumis doit **présenter les éléments permettant aux autorités françaises d'apprécier et de justifier l'admissibilité de l'aide** demandée par le porteur et ses partenaires. En particulier, le dossier doit comprendre, outre les documents requis au titre de l'appel à projets de l'entreprise commune, les documents spécifiés sur la plateforme mentionnée précédemment.

## II. Financement dans le cadre d'appels à projets nationaux ou régionaux

Les partenaires ayant déposé une demande de financement au titre d'un appel à projets national ou régional, doivent se référer au cahier des charges des dispositifs en question pour connaître leurs critères d'éligibilité et conditions de financements.

Des documents supplémentaires pourront être demandés, dans les conditions desdits appels à projets afin de permettre aux autorités décidant de l'octroi de l'aide, d'apprécier et de justifier l'admissibilité de l'aide demandée par le porteur et ses partenaires.

Les taux d'aide dépendront des conditions propres aux dispositifs dont les financements seront issus, et à la prise en compte par ces dispositifs de l'existence d'un cofinancement européen.

### 1) Précisions relatives aux dispositifs s'inscrivant dans le cadre de France 2030

Suivant les priorités du plan France 2030, l'aspect « émergent » ou « en développement » est un point particulier de sélection des partenaires, dans la mesure où France 2030 vise à faire émerger de nouveaux acteurs économiques.

Ainsi, les projets intégrant des acteurs tels que des entreprises de moins de 12 ans ou des PME/ETI opérant un pivot stratégique radical, les amenant à développer de nouveaux produits très innovants en rupture ou qui concernent des marchés émergents, ou en très forte croissance, ou procédant à des opérations de *build-up* avec des entreprises de moins de 3 ans ou encore en consortium de R&D collaborative avec des start-ups seront privilégiés.

Est notamment concerné, l'appel à projet I-Démo Europe.

À titre d'information, pour les projets dont le financement national serait obtenu au titre de l'appel à projets « I-Démo Europe », les taux prévus sont les suivants :

Type d'entreprise Type de recherche	Grande entreprise (GE et ETI)	PME	Organisme de recherche (coûts complets)	Organisme de recherche (coûts marginaux)
Research and Innovative Action (RIA)	25 %	35 %	25%	65%
Innovative Action (IA)	20 %	30 %		

## **Legal requirements for the eligibility of a partner or a project**

*The items published in French in the following text are the official national eligibility criteria for funding. The items published in English are a translation. The text in French takes precedence over the text in English.*

The indicative commitment previously indicated in this work programme, in the subpart *National Budgets for the call 2023*, is not a budget to allocate to French applicants to KDT calls, but an historical-based estimation of the ability of French partners to previous ECSEL and KDT calls to obtain national funding through mechanisms described below, or their predecessors.

Consequently, **the French applicants of a KDT 2022 project proposal must, to be eligible, have been selected for this project to a national funding schemes, before the selection of KDT projects made by the Public Authorities Board of the JU:**

- through national program such as the French framework (successor of Nano 2022, not yet named) in the context of the upcoming IPCEI Microelectronics and Communication Technologies, if they are beneficiaries of it, and under the conditions of the program:.
- through a national or regional call, with respect to the specific conditions of this call.

**Partners must contact the national correspondents before the Project Outline submission (for 2-stage calls) or before the final proposal submission (for single stage calls).**

**The aim of this contact is to direct the requestor to the most relevant financing mechanism, to prepare the national eligibility criteria examination, and for the French direct partner of the IPCEI ME-CT, to precise procedures to check the conformity of the project with the strategic lines of the program.**

## **I. Funding through the French framework of the upcoming IPCEI Microelectronics and Communication Technologies**

The following criteria are valid only for the applicants selected through the French framework ( not yet named) in the context of the upcoming IPCEI Microelectronic and Communication Technologies and are without prejudice to the application of legal rules and regulations concerning the allocation of public funding by the French State.

For partners who have submitted an application for funding under a national or regional call for projects, they must refer to the terms of reference of this call.

### **1) Type or nature of participants**

- Private and public companies of all sizes
- Universities
- Research Institutes

### **2) Legal, administrative and financial conditions**

The work to be done by the partners must neither have already benefited from public funding (excluding generic fiscal aid) nor be redundant with similar projects already funded by French authorities, nor engaged before the start date of the project indicated in the Full Project Proposal

The financial situation of each private partner must be validated (financial structure, cash flow, operating accounts) and considered compatible (activity volume, workforce, financial capability) with the amount and the content of the eligible costs as well as with the amount of the demanded aid and of the already granted public aid.

### **3) Coherence with the IPCEI Microelectronics and Communication Technologies and the French investment plan FRANCE 2030**

The applicants must contribute to the global objectives of the IPCEI Microelectronics and Communication Technologies and achieve one or several significant technological breakthroughs with the objective of designing or improving products, services or processes, and must set-up a capability to make these products or processes. These ones must have a sufficient potential impact on their activity in the European Union and in particular in France, in terms of employment, competitiveness, value creation and growth at short or medium-term.

The proposals shall include the participation of at least one direct partner of the IPCEI Microelectronics/Connectivity. Nevertheless, the coordination and the submission of the national proposal can be entrusted to another partner of the consortium.

The tasks assigned to applicants must be well specified and should consist in « experimental development » or « industrial research » as defined in the R&D&I framework. In accordance with the R&D&I framework, the aid to each company must have an incentive effect on its R&D&I activities.

Partners of the project have to fulfil the proper eligibility criteria of French partners of the IPCEI Microelectronics and Communication Technologies:

- Submit a complete file, in the required format, in electronic form via the Bpifrance platform. The terms of access to this platform will be provided by the national contact indicated in the beginning of this annex;
- For partners not being direct partners of the upcoming IPCEI ME/CT, fulfil conditions regarding the amount of expenses on human resources and “new jobs”:
  - Partners must present a level of human resources expenditures equivalent to at least 40% of the total eligible costs of the project.
  - Among these 40%, it is expected that new jobs (permanent, temporary, apprentices, etc.) represent at least 20% of the eligible costs of the project.

Following France 2030 support plan's priorities, the “emerging” or “developing” aspect of the project's partners is a key point of selectivity of the projects, France 2030 aiming at fostering new/emerging economic actors.

Project integrating companies less than 12 years old or project integrating companies operating a significant market or strategic reorientation towards new particularly innovative products or towards emerging markets, or experiencing an intense growth, or conducting external growth acquiring companies not older than 3 years on the relevant market or in a research and development consortium with start-ups, will be prioritized.

#### 4) Eligibility of costs

The French eligible costs will be based on the amount obtained using the financial data sheets that can be found on the Bpifrance online platform, for each French partner.

#### 5) Funding rates

Type of beneficiary Type de project	Large enterprises	SMEs	RTOs (incremental costs)
Research and Innovative Action (RIA) & Innovative Action (IA)	20 %	30 %	100 % – aid requested to the JU

#### 6) Additional information to be provided at submission

Applicants eligible to the French framework (not named yet) in the context of the upcoming IPCEI Microelectronic and Communication Technologies and in parallel to the documents sent to the KDT JU, the French leader of each submitted project will have to send to the French public authorities a set of documents through the dedicated platform of Bpifrance. The French national contact will precise the terms of access of this platform to the French leader of the project.

The application submitted must **contain all elements which will allow French authorities to assess and justify the eligibility of the aid** asked by the applicants. In particular, the application must include, besides the documents required for application to the Joint Undertaking call, all documents listed on the dedicated platform of Bpifrance previously mentioned.

## II. Funding through national or regional calls

Partners who have submitted an application for funding under a national or regional call for projects must refer to the terms of reference of this call to know their eligibility criteria and conditions for funding.

Additional documents may be asked, as per the conditions of the relevant program, in order to allow decisional bodies to assess and justify the eligibility of the aid asked by the applicants.

Rates for funding will depend on the conditions of these calls, who could also take into account the existence of a European co-funding.

### 1) Details regarding calls set up under the French investment plan France 2030

According to the priorities of the French investment plan France 2030, the “emerging” or “developing” aspect of the project’s partners is a key point of selectivity of the, France 2030 aiming at fostering new/emerging economic actors.

Project integrating companies less than 12 years old or project integrating companies operating a significant market or strategic reorientation towards new particularly innovative products or towards emerging markets, or experiencing an intense growth, or conducting external growth acquiring companies not older than 3 years on the relevant market or in a research and development consortium with start-ups, will be prioritized.

The I-Démo Europe call is particularly concerned.

For information, for projects whose national public funding originate from “I-Demo Europe” scheme, the support rates are as follows:

Type of beneficiary Type of project	Large enterprises	SMEs	RTO (full costs)	RTO (incremental costs)
Research and Innovative Action (RIA)	25 %	35 %	25%	65%
Innovative Action (IA)	20 %	30 %		

## Germany

### National contact people for the KDT JU programme

Country	Name	First name	Tel	E-mail
Germany	General information on funding under Horizon Europe			
	Schmidt	Uwe-Michael	+49 228 3821-2233	<a href="mailto:uwe-michael.schmidt@dlr.de">uwe-michael.schmidt@dlr.de</a>

Germany	Specific information on national funding applications for KDT			
	Schwartz	Gregor	+49 351 486797 47	<a href="mailto:Gregor.Schwartz@vdivde-it.de">Gregor.Schwartz@vdivde-it.de</a>
	Rittner	Johannes	+49 30 310078 230	<a href="mailto:Johannes.Rittner@vdivde-it.de">Johannes.Rittner@vdivde-it.de</a>

### Applicable documents

- The German Federal Government's Framework programme for Research and Innovation 2021-2024 „Mikroelektronik. Vertrauenswürdig und nachhaltig. Für Deutschland und Europa.“, English translation: “Microelectronics. Trustworthy and sustainable. For Germany und Europe.”; available from [www.elektronikforschung.de/rahmenprogramm](http://www.elektronikforschung.de/rahmenprogramm)
- Federal funding will be awarded by the Bundesministerium für Bildung und Forschung (BMBF) according to a national KDT call accessible via <https://www.elektronikforschung.de/foerderung/bekanntmachungen/kdt>
- Partners from Thuringia and Saxony may receive combined funding from the BMBF and the respective *Land*. Further Information is accessible from the above-mentioned BMBF/KDT website.

### Criteria and rules for the eligibility of a partner or a project

#### 1) Type or nature of participants

- Commercial companies in Germany
- State and non-state institutions of higher education and non-university research establishments in projects with commercial companies in Germany

#### 2) Legal, administrative and financial conditions

A contribution of German partners within the Work Programme 2023 is nationally eligible for funding by the BMBF if the contribution of the national partners focuses on research in electronics and smart systems as specified in the national KDT call (see above).

- The work planned by the partners must neither have already benefited from public funding nor be redundant with similar projects that are already being funded or that are under consideration in another programme.
- R&D&I projects shall relate to societally relevant questions. An essential ambition of

funding is to strengthen the position of project partners and companies located in Germany which aim to exploit research results in Germany and Europe, as well as to accelerate technology transfer from the pre-competitive area into practical applications. Projects should illustrate the added value of R&D&I results on the basis of an appropriate application, e.g. a demonstrator.

- Funding will be allocated to R&D&I projects which promise a lasting benefit for Germany and Europe in terms of safeguarding and creating employment, maintaining competitiveness and increasing added value. If the funding request for BMBF exceeds the available funding, projects with a greater national and European added value and contributions to the strategic objectives of the above-mentioned framework programme are a greater priority for BMBF funding, potentially leading to different national funding priorities than the ranking for EU funding.
- Reimbursement rates requested in national grant applications should correspond to the TRL of the planned work and the type of applicant. Each national grant application will be assessed individually to determine the maximum total reimbursement rate as well as the nationally eligible costs/expenditures.
- To be eligible for national funding, the overall effort of any project with participants from Germany should be at least 50 person years. Additionally, German participation in this project should be at least 10% of the overall effort. Moreover, each German partner should contribute substantially to the effort of the German consortium.
- The Project Outline (PO) and Full Project Proposal (FPP) submitted to the KDT JU shall include a fully completed “National Grant” table. The “National Grant” table shall include the budget (including national funding request) established according to the rules for cost eligibility and amounts applicable in Germany for purely national funding. Where a single legal entity (“organisation” in Part A of the KDT application form) requests funding for activities to be carried out at one or several organisational units (“departments”) that have a high degree of autonomy and/or are located in a different *Land* from the organisation, the budget for each such department shall be listed separately in the “National Grant” table. Please refer to <https://www.elektronikforschung.de/foerderung/bekanntmachungen/kdt> where a template for the “National Grant” table is available. **The eligibility of German project partners cannot be evaluated without the “National Grant” table.**
- National grant applications shall not be handed in before they are requested by the national funding authority. In case the FPP is selected to be funded nationally, the national funding authority will contact each partner individually in order to request a national grant application (for details please see the national call that is available via <https://www.elektronikforschung.de/foerderung/bekanntmachungen/kdt> ).

### 3) Consortium configuration

- As KDT is an industry-driven programme each consortium has to reflect an appropriate balance between industrial companies, RTOs and academia: the ratio of efforts (in person months) between companies and research institutions from Germany in any given project should be 2:1 or higher.
- Germany aims at a high participation of SMEs and supports the Horizon Europe goal that

a minimum of 20 % of the total public funding should be awarded to SMEs.

#### 4) Other conditions

##### **TRL 2 – 4:** application-oriented projects (RIA)

Funding may be awarded for high-risk pre-competitive industry-driven research and development projects of civil nature and civil use which focus on cross-border technologies in an application-oriented approach, meet a sufficiently high level of innovation and could not be accomplished without public funding.

##### **TRL 5 – 8:** production-related projects (IA)

Funding may be awarded for high-risk pre-competitive industry-driven research and development projects of civil nature and civil use related to production which focus on experimental development, meet a sufficiently high level of innovation and could not be accomplished without public funding.

The following projects are not eligible for BMBF funding:

- Projects that do not have an exclusive focus on civil applications and civil exploitation
- Projects of pure basic research

### **Eligibility of the costs and funding**

#### 1) Eligibility of costs

- The eligibility of costs is regulated in the BMBF's standard terms and conditions for grants on expenditure or cost basis and the administrative regulations under sections 23 and 44 of the Federal Budget Code (BHO). Rules for *Länder* that might provide funding are subject to negotiation between BMBF and the respective *Land*.

#### 2) Funding and funding rates

- Financial BMBF support is awarded in the form of grants to participants through project funding as non-repayable grants.
- Project grants will be awarded in accordance with the BMBF's standard terms and conditions for grants on expenditure or cost basis and the administrative regulations under sections 23 and 44 of the Federal Budget Code (BHO).
- The BMBF's "General Conditions for the Allocation of Benefits for Research and Development Projects to Commercial Companies on a Costs Basis 2017" (NKBF 2017) and the „General Conditions for the Allocation of Benefits on an Expenditure Basis“ (NABF) respectively form part of any award of grants. Rules for *Länder* that might provide funding are subject to negotiation between BMBF and the respective *Land*.
- Universities and other higher education institutions may request a "Projektpauschale" which will be granted on the national funding part managed by the BMBF.



- The national funding aims at mirroring the funding which a participant actually receives from the Joint Undertaking in absolute amounts (EUR), matching up to 1:1. Furthermore, the total public funding (EU + BMBF + any other public funding) will not exceed the level that usually applies for purely national funding, in line with EU state aid rules, national funding policies, budgetary considerations, and the project structure. The national funding may therefore be below a 1:1 ratio per partner.

### **Additional Information to be provided at submission and other conditions**

- Applicants from Germany need to use the electronic application system "easy-Online" for formal national applications upon request by the national funding authority. In addition, they must submit each grant application by mail including a legally binding signature and a short description for all cost positions as well as an exploitation plan of the planned project in German language.
- Guidelines, information for applicants and the terms and conditions for the award of grants are available at "Formularschrank BMBF":

[https://foerderportal.bund.de/easy/easy\\_index.php?auswahl=easy\\_formulare&formularschrank=bmbf](https://foerderportal.bund.de/easy/easy_index.php?auswahl=easy_formulare&formularschrank=bmbf)

Partners applying for funding from *Länder* need to submit the appropriate form (provided by the national funding authority or available via

<https://www.elektronikforschung.de/foerderung/bekanntmachungen/kdt>) in parallel with the BMBF grant application. This grant application will then be processed as one national application based on the agreements between BMBF and the respective *Land*.

- Applicants shall take care to ensure a consistent presentation of the project costs in the national and the European grant application, taking into account the respective criteria for the eligibility of costs.
- If additional information is requested, it will be specified in the national funding authority's request to submit a formal application.
- There is no legal entitlement to the award of a grant. BMBF will take a decision after due assessment of the circumstances and within the framework of the budget funds available.

## Greece

### National contact person for KDT JU programme

Country	Name	First name	Tel	E-mail
Greece	GONGOLIDIS	Vasileios	+302131300072	bgogol@gsrt.gr
Greece	KOTSIAS	Michael	+302131300102	<a href="mailto:m.kotsias@gsrt.gr">m.kotsias@gsrt.gr</a>

**National Funding Agency for Greece:** General Secretariat for Research and Innovation (GSRI), Ministry for Development and Investments ([www.gsrt.gr](http://www.gsrt.gr))

**The following conditions are provisional and without prejudice to the application of legal rules (legally binding documents), currently under preparation, concerning the terms and procedures for the management of the action at national level.**

### A. Legal requirements for the eligibility of a partner or a project

#### 1) Type or nature of participants

GSRI potentially supports all private and public legal entities legally operating in Greece (not natural persons) namely:

- Research and knowledge-dissemination organizations (e.g. Higher-education Institutions or Research Centres/Institutes)
- Undertakings (a private and/or public sector unit, regardless of its legal status or size, engaged in economic activity)
- Other entities that will be considered as Research and knowledge-dissemination organizations, if respective requirements are met, or undertakings

Besides natural persons the following categories of undertakings are also not eligible:

- An “undertaking in difficulty” (according to Reg. EU 651/2014, art.2).
- An undertaking which is subject to an outstanding recovery order following a previous Commission decision declaring an aid illegal and incompatible with the internal market.

#### 2) Legal, administrative and financial conditions

##### *Eligible activities*

- All funded activities should contribute to the aims and objectives of the National Recovery and Resilience Plan - Greece 2.0 (<https://greece20.gov.gr/to-plires-sxedio/>). It is mandatory; otherwise the proposal will be rejected.
- In case of participants falling under category (b) the main part of the project should fall within the categories of industrial research or experimental development or feasibility studies (according to the provisions of art 25 of Reg. EU 651/2014). For SMEs funding for innovation activities (art. 28 of Reg. EU 651/2014) may also be provided.

### 3) Consortium configuration: no restrictions

### 4) Other conditions

-It is mandatory for Greek applicants to submit on-line, in Greek, a short proposal description, regarding the work undertaken by Greek partners and the documents that are necessary for performing the eligibility check within 20 working days after the first and the second stage (if applicable) submission deadline.

All applications should be accompanied by all elements and relevant documents that allow the Greek authorities to assess the eligibility criteria and in particular those with regard to article 2 of GBER Regulation, 651/2014 for undertakings in difficulty and the size of undertakings/enterprises.

**In addition all Greek applicants should provide additional information on the contribution of the project to the national RRF plan objectives and the impact to the Greek economy/competitiveness and society, skills development and employment in particular for young and/or highly qualified people.** Furthermore Companies (business partner in the project) must provide specific information on the possible industrial and commercial impact of the project to the country and in the Europe and justify that they have the necessary means to exploit the project results.

More detailed information on proposal Submission and national rules for the signing of the grant agreement and monitoring of project implementation are currently under preparation and will be published at a later stage at the GSRI website.

## **B. Eligibility of the costs and funding**

### 1) Double funding

The project submitted for funding must neither have already benefited from public funding nor be redundant or overlap with projects or part of projects already funded.

### 2) Co-funding source

National Contribution from RRF / National Recovery and Resilience Plan - Greece 2.0

### 3) Funding rates

For Research and Knowledge-dissemination organizations, or other entities treated as such, the funding rate may reach a maximum of 100% of the eligible costs for non-economic activities, less the contribution of the JU.

Maximum aid intensity for undertakings is calculated according to paragraphs 5,6,7 of article 25 and art. 28 of Reg. EU 651/2014.

Table 1. Aid intensity

Type of enterprise/ Type of Activity	Aid intensity -TBD		
	Large Enterprises	Medium Enterprises	Small and too small Enterprises
<b>R&amp;D Activities (art.25 Reg. EU 651/2014)</b>			
<b>Industrial/applied research</b>	up to 50% - JU%	up to 60% - JU%	up to 70% - JU%
<b>Industrial/applied research given that conditions i) or ii) are met</b>	up to 65% - JU%	up to 75% - JU%	up to 80% - JU%
<b>Experimental development</b>	up to 25% - JU%	up to 35% - JU%	up to 45% - JU%
<b>Experimental development given that conditions i) or ii) are met</b>	up to 40% - JU%	up to 50% - JU%	up to 60% - JU%
<b>Feasibility Studies</b>	up to 50% - JU%	up to 60% - JU%	up to 70% - JU%
<b>Innovation Activities (art.28 of Reg. EU 651/2014)</b>			
<b>Activities defined in art. 28, REG. (EU) 651/2014</b>	0%	50% - JU%	50% - JU%

**Conditions for increasing the maximum aid intensity for research and development activities (Reg. (EU) No 651/2014):**

The aid intensities for industrial research and experimental development may be increased by 15 percentage points and up to a maximum aid intensity of 80% of the eligible costs if one of the following conditions is fulfilled:

(i) the project involves effective collaboration:

— between undertakings among which at least one is an SME, or is carried out in at least two Member States, or in a Member State and in a Contracting Party of the EEA Agreement, and no single undertaking bears more than 70 % of the eligible costs, or

— between an undertaking and one or more research and knowledge-dissemination organisations, where the latter bear at least 10 % of the eligible costs and have the right to publish their own research results;

(ii) the results of the project are widely disseminated through conferences, publication, open access repositories, or free or open source software.

**Cumulation:** In case of undertakings aid with identifiable eligible costs may be cumulated with:

(a) any other State aid, as long as those measures concern different identifiable eligible costs,

(b) any other State aid, in relation to the same eligible costs, partly or fully overlapping, only if such cumulation does not result in exceeding the highest aid intensity or aid amount as defined above.

#### 4) VAT eligibility

Only non-reclaimable VAT is eligible

## Hungary

### National contact person

Country	Last Name	First name	Telephone	E-mail
Hungary	Divinyi	Agnes	+36 1 896-3754	agnes.divinyi@nkfi.gov.hu

National Funding Authority: National Research, Development and Innovation Office (1077 Budapest, Kéthy Anna tér 1.). website: [www.nkfi.gov.hu](http://www.nkfi.gov.hu)

### Legal requirements for the eligibility of a partner or a project

#### Type of participants

The following types of organisations are eligible for funding:

- Business enterprises with legal entity;
- Non-profit organisations with legal entity;
- Public bodies or their institutes with legal entity

#### Legal, administrative and financial conditions

In order to conclude the national grant agreement the Hungarian applicants have to comply with the regulations of Act CXCV of 2011 on Public Finance, Government Decree No. 368/2011 on the implementation of Act on Public Finance, Government Decree No. 380/2014 on the rules of operation and use of National Research, Development and Innovation Fund.

Applicants are expected to contribute their own financial resources to the project costs. This amount depends on the project activities and the applicant's organization form. The own financial resources shall be determined by prevailing law.

#### Consortium configuration

There is no special national requirement.

### Eligibility of costs and funding

#### Eligibility of costs

Personnel costs, travel costs and related subsistence allowances, subcontracting, cost of other goods and services (e.g. consumables and supplies), equipment costs (depreciation) and immaterial expenses (depreciation), indirect costs.

Ineligible costs in particular: deductible VAT, currency exchange losses, penalties and fines, debt and debt service charges, interest owed, excessive or reckless expenditure, costs incurred during suspension of the implementation of the action etc.

#### Funding rates

Funding rates are based on Article 25 (aid for research and development projects) of Commission Regulation (EU) No 651/2014 of 17 June 2014 on declaring certain

categories of aid compatible with the internal market in application of Articles 107 and 108 of the Treaty.

Type of Organisation	Percentage of maximum subsidy (EU contribution and national funding together) to the beneficiaries (calculated on the basis of the national eligible costs)			
Type of activity	Large Enterprises	Medium enterprises	Small Enterprises	Public Research Institutes, Universities, non-profit organisations
Fundamental/Basic research	100%	100%	100%	100%
Industrial/Applied Research	up to 65%	up to 75%	up to 80%	100%
Experimental development	up to 40%	up to 50%	up to 60%	100%

The aid intensity in the case of industrial research is 50% and in case of experimental development is 25%, however these rates may be increased by 20 percentage points for small enterprises and by 10 percentage points for medium-sized enterprises.

Funding intensity per member may be increased by a further 15 percentage points up to a maximum of 80% (this means the whole public funding, i.e. Hungarian national funding + EC funding) if the project is implemented through effective collaboration between undertakings among which at least one is an SME, or is carried out in at least two Member States, or in a Member State and in a Contracting Party of the EEA Agreement, and no single undertaking bears more than 70 % of the eligible costs, or between an undertaking and one or more research and knowledge-dissemination organisations, where the latter bear at least 10 % of the eligible costs and have the right to publish their own research results or the results of the project are widely disseminated through conferences, publication, open access repositories, or free or open source software.

### **Additional Information to be provided at submission and other conditions**

Please note that Hungarian project partners shall submit a proposal to the National Funding Authority for national financing if the project has been selected and approved for funding through the international evaluation and selection process.

## **Iceland**

No information available.

## Ireland

### National contact person for KDT- JU programme

Country	Name	First name	Tel	E-mail
Ireland	O'Reilly	Stephen	+353 21 4800217	<a href="mailto:stephen.oreilly@enterprise-ireland.com">stephen.oreilly@enterprise-ireland.com</a>

### Legal requirements for the eligibility of a partner or a project

#### 1) Type or nature of participants

Companies that are eligible to receive R&D funding from one of the following agencies will be considered for funding; Enterprise Ireland, IDA Ireland or Údarás na Gaeltachta.

Irish third level research performing organisations will also be considered for national funding.

It is important to note that a successful application to KDT does not guarantee funding by a national agency. Participants from Ireland are strongly advised to discuss applications with their national agency contact prior to submission to KDT.

#### 2) Legal, administrative and financial conditions

The relevant national funding agency should be satisfied that a company seeking national funding has the potential to derive a benefit, proportionate to the national funding being sought, through the exploitation of the results of the proposed project or otherwise. Companies applying for National R&D support will need to be EBITDA positive for 9 consecutive months prior to any approval. Companies that are classified as 'High Potential Start-Up' (HPSU) are not normally eligible.

All participants are advised to contact the relevant national funding agency before committing to participate in any proposal.

Higher Education Institutions will be eligible only if there is also at least one Irish based company that meets the national eligibility criteria in the consortium, and the national funding agencies are satisfied that there will be a benefit from the participation of the Higher Education Institution, proportionate to the funding being sought, for an Irish based company or companies that the agencies are satisfied to support.

#### 3) Consortium configuration

Projects should be introduced by companies and primarily executed to the benefit of these entities.



## **Eligibility of the costs and funding**

### **1) Eligibility of costs**

All costs should be discussed in advance with the relevant funding agency contact

### **2) Funding rates**

All Grant funding to companies is provided on a scale, depending on company size and can reach a max of 50% of eligible expenditure for Enterprise Ireland and Údarás na Gaeltachta clients. Funding available to IDA Ireland clients can vary and exact levels should be confirmed with the company contact.

Funding to 3rd level institutions is provided as a grant of 100% eligible expenditure less JU contribution up to the value of €250,000 (excluding overhead)

Funds for companies are claimed on a retrospective basis.

## **Additional Information to be provided at submission and other conditions**

Only for the Full Project Proposal (not for the Project Outline):

Please note that each Irish participant must create a PDF file indicating how they meet the national eligibility criteria for funding as indicated in the Irish section of the Eligibility Criteria document published in the Call. You must upload this in the KDT JU Proposal Submission system as Part C of the **Full Project Proposal** (one file for each participant).

Note that Irish companies must clearly state in the proposal the following points:

1. From which of the three Irish agencies (Enterprise Ireland, IDA Ireland or Udaras na Gaeltachta) it is eligible to receive national R&D funding
2. Explain how it has the potential to derive a benefit, proportionate to the national funding being sought, through the exploitation of the results of the proposed project or otherwise.

## Israel

### Israel Innovation Authority (InnovationAuth)

Malha Technology Park,  
Derech Agudat Sport Hapoel 2, Jerusalem, 9695102, Israel

### National contact person for KDT JU programme – Calls 2021

Country	Name	First name	Tel.	E-mail
Israel	Seker	Danny	+972-3-5118121	Dan@iserd.org.il
Israel	Loutaty	Rachel	+972-3-5118152	Rachel.l@iserd.org.il

<http://www.iserd.org.il/ecsel>

### Funding Criteria and Regulations

#### Eligibility criteria:

The application and eligibility criteria are subject to the “**Procedure for Financing Israeli Partners by the Israel Innovation Authority under ECSEL**” (the “Procedure”) which is available online at <https://www.innovationisrael.org.il/rules/4750>

If the evaluation procedure will be in *two stages*:

- Each applicant **needs to provide** the InnovationAuth a **preliminary proposal** (The participant part in the proposal) and a **KDT 2021 participant document** in a format that will be inform at the InnovationAuth site, by the deadline of stage 1 of this call.
- Only applicants that passed InnovationAuth eligibility committee and KDT stage 1 technical evaluation check will be permitted to pass to stage 2 of the call.
- Each applicant, that passed the second round of the Technical evaluation, will **need to provide** the InnovationAuth (by the stage 2 deadline that appears in the formal KDT call) a **copy of the full proposal** that was sent to KDT and will need to sign the final “**KDT 2021 participant document**” prior to the final approval by InnovationAuth.

If the evaluation procedure will be in *one stage*:

- Each applicant, will need to provide the InnovationAuth (by the deadline that appears in the formal KDT call) a **copy of the full proposal** that was sent to KDT and will need to sign the final “**KDT 2021 participant document**” prior to the final approval by InnovationAuth.
- Only applicants that passed InnovationAuth eligibility committee will be permitted to pass to the technical evaluation phase

#### 1) Type or nature of participants

The following legal entities are eligible for funding:

- Industrial entities registered in Israel, with internal R&D capabilities, antthat register there IP in Israel
- Israeli universities may take part as sub-contractor of an Israeli Industrial entity

*2) Administrative and financial conditions*

The KDT rules applies for the Israeli participants.

*3) Consortium configuration*

The KDT rules applies

*4) Other conditions*

Financial viability and business soundness is verified by means of an internal check - companies that are in danger of insolvency cannot be funded

**Cost Eligibility and funding rates**

*1) Eligibility of the costs*

The KDT rules applies

*2) Maximum fund*

The maximum overall contribution for Israeli participant (EC contribution and InnovationAuth contribution) will not exceed 50% of the Total approved cost for this participant.

## Italy

Italy is participating to the present calls with funds coming from the following funding organizations:

- 1) Ministry of Universities and Research (MUR) which is committing 3 million euro as grants, coming from the Fondo per gli Investimenti nella Ricerca Scientifica e Tecnologica (FIRST) and 11 million euro coming from Cohesion Funds, this latter one is still to be confirmed. MUR supports the calls: 2023-2-T1 (RIA) and 2023-2-T2 (RIA Focus topic).
- 2) Ministry of Enterprises and Made in Italy (MIMIT) which is committing 20 million euro as grants coming from National Recovery and Resilience Plan (PNRR). MIMIT supports the calls: Call 2023-1 T1 (IA General), Call 2023-1 T2 (IA Focus topic), Call 2023-1 T3 (IA Focus topic) and 2023-1 T4 (IA Focus topic);

The specific eligibility criteria and funding rules for each funding organization are described the following paragraphs.

### **Ministry for Universities and Research (MUR)**

National contact person for KDT JU programme

Country	Name	First name	Tel	E-mail
Italy (MUR)	Covello	Aldo	+39 069772 6465	aldo.covello@miur.it

Website: <http://www.ricercainternazionale.miur.it/era/european-partnership-2021-27/key-digital-technologies.aspx>

Legal requirements for the eligibility of a partner or a project

#### *1) Type or nature of participants*

According to art. 60 of the Decree-Law n. 83/2012 and to art. 5 of its implementing Ministerial decree 1314/2021, the following entities are eligible, providing that they have stable organization in Italy: enterprises, universities, research institutions, research organizations in accordance with EU Reg. n. 651/2014 of the European Commission - June 17, 2014.

*2) Legal, administrative and financial conditions*

The participant must be registered at the "Anagrafe Nazionale della Ricerca"

The participant must not be defaulting with regard to other funding received by the Ministry.

The participant must not have requested/got any other funding for the same project, apart from the KDT funding.

The participant must respect the Italian law "D.Lgs. n 159 del 6/09/2011 e successive modificazioni ed integrazioni".

The participant must not be subject to bankruptcy proceedings as of art. 5, comma 4, letter b) of DM 1314/2021 or must not be a company in difficulty according to the definition under number 18) of article 2 "Definitions" of Regulation (EU) no. 651/2014.

The participant must be in compliance with the obligations laid down in the contributory and social security regulations (DURC).

The judicial and pending records of the legal representative of the participant are negative

For any private entity, the following financial criteria, calculated using the data reported in the last approved balance sheet, must be fulfilled

a)  $CN > (CP - I)/2$

Where:

CN = net assets (Capitale netto)

CP = sum of the costs of all the projects for which public funding has been requested by the participant during the year

I = sum of the contributions received, approved or requested for the same projects

b)  $OF/F < 8\%$

Where:

OF = financial charges (Oneri finanziari)

F = turnover (Fatturato)

*3) Consortium configuration*

The Italian consortium must include at least one Italian company, independently from the Ministry which is funding it. Other types of participants are allowed, provided that the

financial participation of companies is higher than 50% of the total cost of the Italian consortium. The project shall be executed primarily to the benefit of the company/es

4) *Other conditions*

Companies must have the financial means to execute the project and a potential to use the results.

The participant should foresee, after the end of the project, the exploitation of the results of the project so to guarantee the return of the investment.

The participants shall demonstrate the subsistence of the incentivisation effect as of art. 6 of GBER.

Further conditions linked to the usage of the cohesion funds will be published later.

Budget available and calls supported

MUR committed a budget of 3 million euro as grant coming from the Fondo per gli Investimenti nella Ricerca Scientifica e Tecnologica (FIRST) and 11 million euro coming from Cohesion Funds, this latter one is still to be confirmed.

The maximum funding per project that can be requested by Italian participants from the FIRST fund is 750.000 euro, regardless of the number of Italian partners. Funding that can be requested from the Cohesion Funds is not limited.

MUR supports the calls 2023-2-T1 (RIA) and 2023-2-T2 (RIA Focus topic).

Cost Eligibility and funding rates

1) *Eligibility of costs*

All costs incurred during the lifetime of a project under the following categories are eligible: personnel, equipment, subcontracting, consumables, and overheads. Overheads are calculated as a fixed percentage of the personnel cost. They include also coordination dissemination and travel expenses and in no cases can be larger than 50% of the personnel costs.

2) *Funding rates*

MUR will fund the Italian participants using the following funding rates:

	2022-2-T1 (RIA)
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	2022-2-T2 (RIA)
Type of partner	Grant
Large enterprise	25%
Medium Enterprise	35%
Small Enterprise	35%
Universities, research centers and research organizations	35%

On request of applicants a pre-payment may be done immediately after the signature of the national Grant agreement, equal to 50% of the total contribution.

Halfway through the project, on request of the beneficiaries, a second pre-payment may be done up to 40% of the total contribution, depending on the achievement of the deliverables and milestones planned for the first half of the project.

The remaining part of the contribution will be paid at the end of the project.

For those beneficiaries who does not request the pre-payments, the contribute will be paid in instalments after each reporting period.

[Additional Information to be provided to MUR and other conditions](#)

**All Italian participants must submit a national application through the dedicated web platform <https://banditransnazionali-miur.cineca.it>. These documents must be submitted to MUR by the same deadline of the KDT call. Any participant who does not send its national application by this deadline, will be considered ineligible.**

## **Ministry of Enterprises and Made in Italy (MIMIT)**

### National contact person for KDT JU programme

Country	Name	First name	Tel	E-mail
Italy	Valentina	Milazzo	+39 0654927928	valentina.milazzo@mise.gov.it
(MIMIT)	Rosario	Gargiulo	+39 0654444269	rosario.gargiulo@mise.gov.it

The partners of a KDT project proposal submitted for funding in the 2023 calls have to comply with all the criteria mentioned in the present document in order to be eligible for funding by the national authorities.

### Legal requirements for the eligibility of a partner or a project

The Ministry of Economy and Finance Decree, August 06, 2021 allocated financial resources for the implementation of the interventions of National Recovery and Resilience Plan (PNRR); Mission M4-Component C2; Id I2.2- Partnership Horizon Europe

The projects will be financed by respecting what is established in the Regulation (EU) GBER n.651/2014 and Regulation (EU) 2021/1237 of the Commission amending Regulation (EU) No 651/2014 declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 of the Treaty.

The projects financed by the Ministry of Enterprises and Made in Italy (MIMIT) shall comply with the acts related to the specific measure (Ministerial Decree, December 16 2022 nr. 186485, and the following DGTCSI-DGIAI Directorial Decree).

The selection procedure for the awarding shall include the commitment that the climate contribution of the investment as per the methodology in Annex VI of the Regulation (EU) 2021/241 shall account for at least 60% of the total cost of the investment supported by the RRF as well as the commitment that the digital contribution of the investment as per



the methodology in Annex VII of the Regulation (EU) 2021/241 shall account for at least 40% of the total cost of the investment supported by the RRF.

Applicants will be selected taking into account their capability to be environmentally sustainable in line with Regulation (EU) 2020/852 of the European Parliament and of the Council and Delegated Act C(2021) 2800, June 04, 2021 as well as the Ministry of Economy circular letter of 30 December 2021, n. 32, "National Recovery and Resilience Plan - Operational guide for compliance with the principle of not causing significant damage to the environment (DNSH- **Do Not Significant Harm**) and the updated version of 13 October 2022, n. 33, describing the general criteria so that every single economic activity does not cause significant harm by contributing to the objectives of mitigation, adaptation and reduction of environmental impacts and risks.

The applicants are expected to comply with the principle of gender equality in relation to Articles 2, 3 (3) of the TEU, 8, 10, 19 and 157 of the TFEU, and 21 and 23 of the Charter of Fundamental Rights of the European Union, and the obligation of protection and enhancement of young people, under penalty of the possibility of suspension or revocation of the loan in the event of ascertaining the violation of these general principles.

The Ministry of Enterprises and Made in Italy (MIMIT) will refer also to the Annex 2 of Commission Notice (2021/C 58/01) "Technical guidance on the application of do not significant harm under the Recovery and Resilience Facility Regulation" which includes the evidence of evaluation purposes of DNSH.

The Ministry of Enterprises and Made in Italy (MIMIT) will exclude from funding any activity included in the Annex V, point B of the Regulation (EU) 2021/523 of the European Parliament and of the Council establishing the InvestEU programme and amending the Regulation (EU) 2015/1017.

According to Article 2, paragraph 6-bis of the Decree Law 31 May 2021 n. 77, the Administrations ensure that at least 40% of the resources will be allocated to the beneficiaries of South Italy Regions. Nevertheless, it will be protected the interest in the total allocation of the resources put up for tender if the Ministry doesn't receive a number of applications, from Southern Italy applicants, that would exhaust the financial resources referred to the aforementioned reserve.

### 1) Type or nature of participants

The following entities are eligible:

- Enterprises;
- Research Centers
- Universities and research organizations - only in collaboration with enterprises with which to set up a Consortium or a Network of Companies. The lead partner of the joint project must be an Italian enterprise.

### 2) Legal, administrative and financial conditions

The participant must not be defaulting with regard to other funding received by the Ministry.

The participant must not have requested/got any other funding for the same project, apart from the KDT funding. Therefore, the participant must respect the article 9 of the EU Regulation 2021/241 (complementary funding) as well as the circular letter of the Ministry of Economy of December 31 2021 n. 33.

The participant must be in compliance with the obligations laid down in the contributory and social security regulations (DURC).

The judicial and pending records of the legal representative of the participant are negative

For any private entity, MIMIT, also through the Body managing the aid, will assess the financial and economic sustainability of the project, calculating some economic and financial indicators through the analysis of the data contained in the last two approved balance sheet.

### 3) Consortium configuration

The Italian consortium must include at least one Italian company. The project shall be executed primarily to the benefit of the company/es. The Ministry will apply the Virtual Common Pot by financing national applicants

### 4) Other conditions

Companies must have the financial means to execute the project and a potential to use the results.

The participant should foresee, after the end of the project, the exploitation of the results of the project so to guarantee the return of the investment.

### Budget available and calls supported

MIMIT committed a budget of 20 million euro.

MIMIT will support the following calls:

Call 2023-1 T1 (IA General); Call 2023-1 T2 (IA Focus topic); Call 2023-1 T3 (IA Focus topic); 2023-1 T4 (IA Focus topic);

### Eligibility of the costs and funding

#### 1) Eligibility of costs

All costs incurred during the lifetime of a project under the following categories are eligible: personnel, equipment, subcontracting, consumables, and overheads. Overheads are calculated as a fixed percentage 25% of eligible costs of the project, as established by art. 20 of the delegated regulation (EU) n 480/2014 and by art. 29 of the regulation (EU) n. 1290/2013, in line with the provisions of art 53.3 lett. c of Regulation (EU) 1060/2021 as referred to in art. 10 paragraph 4 of Decree 121/2021. They include also communication, dissemination and travel expenses.

#### 2) Funding rates

MIMIT will fund the Italian participants using the following funding rates:

	Call 2023-1 T1 (IA)	Call 2023-1 T2 (IA Focus topic)  Call 2023-1 T3 (IA Focus topic)  Call 2023-1 T4 (IA Focus topic)
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Type of partner	Grant	Grant
Large Enterprise	20%	25%
Medium Enterprise	30%	35%
Small Enterprise	30%	35%
Universities, research centers and research organizations	35%	35%

Each project will be funded by respecting the threshold of 3.000.000,00 (maximum amount of the contribution).

#### Additional Information to be provided at submission and other conditions

**All Italian participants must submit a national application to the following email address: [dgiai.div6@pec.mise.gov.it](mailto:dgiai.div6@pec.mise.gov.it). These documents must be submitted to MIMIT by the same deadline of the KDT calls. Any participant who does not send its national application by this deadline, will be considered ineligible.**

## Latvia

### National contact person for KDT JU program

Country	Name	First name	Tel	E-mail
LV	Sika	Lauma	Xxx	Lauma.Sika@mfa.gov.lv

### Legal requirements for the eligibility of a partner or a project

#### 1) Type or nature of participants

Following legal persons (as defined under the Latvian law) are eligible for funding, except natural persons:

- enterprises, companies and/or industry associations, when they form part of consortia with R&D institutions;
- R&D institutions - research institutes, universities, higher education establishments, their institutes and research centres etc.

#### 2) Legal, administrative and financial conditions

The funding of RTD activities is provided pursuant in accordance with the Regulation of the Council of Ministers of the Republic of Latvia No 259 on the procedure for providing support for participation in international cooperation programs for research and technology (adopted on 26 May 2015). This includes amendments, which include a reference to the Regulation (EU) 2021/695 of the European Parliament and of the Council of 28 April 2021 establishing Horizon Europe – the Framework Programme for Research and Innovation, laying down its rules for participation and dissemination, and repealing Regulations (EU) No 1290/2013 and (EU) No 1291/2013 (Text with EEA relevance) (OJ L 170, 12.5.2021), Council Regulation (EU) 2021/2085 of 19 November 2021 establishing the Joint Undertakings under Horizon Europe and repealing Regulations (EC) No 219/2007, (EU) No 557/2014, (EU) No 558/2014, (EU) No 559/2014, (EU) No 560/2014, (EU) No 561/2014 and (EU) No 642/2014 (OJ L 427, 30.11.2021) and European Partnerships under Horizon Europe.

R&D institution (research institutes, universities, higher education establishments, research centres etc.) must be listed in the Registry of Research Institutions operated by the Ministry of Education and Science of the Republic of Latvia.

Private entities must be registered in the Registry of Enterprises of the Republic of Latvia and provide most of its R&D&I activities in the Republic of Latvia.

The principle of forbidding double funding will be applied when granting National funding.

#### 3) Consortium configuration

Enterprises, companies and/or industry associations participate in the projects, when they form part of consortia with Latvian R&D institutions.

If there is no Latvian enterprise involved as a partner in the project, the industrial relevance of the involvement of a R&D institution must be justified by declaration from the Latvian Information and Communications Technology Association (LIKTA) or from the Latvian Electrical Engineering and Electronics Industry Association (LEtERA) confirming the relevance of the project outcomes to the national economy, which are included as a part C of the full project proposal.

If there is no research organisation involved as a partner in the project, Enterprises and industry associations must provide declaration on the possible industrial impact and justify that they have the necessary means to exploit the project results which is included as a part C of the full project proposal.

## **Eligibility of the costs and funding**

### *1) Eligibility of costs*

1. Direct costs:
  - 1.1. Personnel costs – R&D related personnel costs should reach 80% of person/months,
  - 1.2. Other direct costs such as consumables, equipment (only depreciation costs), materials and etc.,
  - 1.3. Subcontracts (up to 25% of total participant's direct costs),
  - 1.4. Travels costs (up to € 18,000 per participant per project),
  - 1.5. Project management costs,
2. Indirect costs (can reach a maximum of 25% of the total direct costs).

### *2) Funding rates\**

Type of activity	Large Enterprises	Small and Medium Enterprises	Public Research Institutes and Universities
Research and Innovation action	up to 50%	up to 60% **	up to 100% ***
Innovation action	up to 35%	up to 50% **	up to 100% ***

\* total public funding including National and EU contribution;

\*\* may be increased by 20%, if it is approved by National Funding Authority prior the proposal submission to KDT Call;

\*\*\* the aid intensity for research and development activities carried out by Public Research Institutes and Universities might be at the level of 100% only if the organisation entirely complies with the requirements set by the Commission Regulation (EU) No 651/2014 of 17 June 2014.

National funding for eligible Latvian partners is up to € 100 000 per partner, per year, per project.

## **Additional Information to be provided at submission and other conditions**

The national funding committed for the KDT Call 2021 is EUR 600 000 primarily to the Research and Innovation Actions..

## Lithuania

No information available.

## Luxembourg

Country	Name	First Name	Tel	E-mail
Luxembourg	Crean	Gabriel	00352 247 74147	Gabriel.crean@eco.etat.lu

### Funding authority websites:

The full version of the national eligibility criteria can be found at :  
<https://guichet.public.lu/en/entreprises/financement-aides/aides-recherche-developpement/rdi/aides-rdi.html>

### Legal requirements for the eligibility of a partner or a project

#### *1) Type or nature of participants*

The participant must be a company established in Luxembourg, with a sustainable economic activity in Luxembourg, based upon a sound business model.

#### *2) Legal, administrative and financial conditions*

The participant can have no other public funding for the same activities apart from the ECSEL funding.

The funding for R&D activities is provided in accordance with:

- the Commission Regulation (EU) No 651/2014 of 17 June 2014 declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 of the Treaty,
- the modified Law of 17 May 2017 relating to the promotion of Research, Development and Innovation activities.

Luxembourg partners are requested to contact Luxinnovation before the deadline of the project outline submission and before the deadline of the Full Project Proposal submission respectively.

Luxinnovation will check the financial viability of the participating enterprises. It is not possible to provide funding to undertakings in difficulty. Luxembourg enterprises have to provide the following documents:

- Annual statement of accounts (balance sheet, profit and loss account) from the past 2 financial years
- Organisational chart of the group's structure (if applicable), specifying existing links, the percentage of participating interests and the company name, address, distribution of the share capital, workforce, turnover and total balance sheet (data for the last accounting year ended) for each undertaking. The company size is to

be determined according to the SME definition as specified by EU competition law.

*3) Other conditions:*

- Participants need to prove adequate (financial) means to execute the project and a potential to use the results.
- Participant should develop all or some of its R&D activities within the territory of Grand Duché de Luxembourg
- The project should yield socio-economic effects, which can be quantified by activities or investments by the Luxembourg participants after the completion of the project.

**Eligibility of the costs and funding**

*1. Eligibility of costs*

All costs directly related to the R&D projects are eligible:

- payroll expenses: researchers, technicians and other support staff employed for the project or programme;
- expenses for instruments and equipment, if and for as long as they are being used for the project or programme. If such instruments and equipment are not used for their full life within the framework of the project or programme, only the depreciation costs corresponding to the duration of the project or programme, calculated in accordance with the generally accepted accounting principles, shall be deemed admissible, proratised of their use on the project.
- expenses for contract research or research services, the purchase of knowledge and patents or licences from external sources under conditions of full competition as well as costs of consultancy and equivalent services used exclusively for the project or programme;
- additional overheads and other operating expenses (in particular, cost of materials, office supplies and similar products) incurred directly as a result of the project or programme.

*2. Funding rates*

	Percentage of the national subsidy to the beneficiaries <sup>24</sup>
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<sup>24</sup> These percentages are maxima and given under the constraints that the project proposal fulfils the KDT eligibility criteria and that no participant in the KDT project holds more than 70% of the total (international) KDT project budget.



	Large enterprises	Medium enterprises	Small Enterprises
Industrial Research (Research and Innovation action)	Up to : 50+15 (max 65 %)	Up to : 50+10+15 (max 75 %)	Up to : 50+20+15 (max 80 %)
Experimental Development (Innovation action)	Up to : 25+15 (max 40 %)	Up to : 25+10+15 (max 50 %)	Up to : 25+20+15 (max 60 %)

In case the EU funding rates and/or conditions are modified the national funding rates may be amended.

### **Additional information to be provided at submission and other conditions**

Every participant in Luxembourg should submit a separate funding application to the ministry of the Economy within 14 days of KDT call closure date. The application is to be submitted using the **online assistant available on MyGuichet.lu.:**

<https://guichet.public.lu/en/entreprises/financement-aides/aides-recherche-developpement/rdi/aides-rdi.html>

## **Malta**

No information available.

## Netherlands

### National contact persons for KDT JU programme

Country	Name	First name	Tel	E-mail
Netherlands	van der Bijl	Bob	+31 6 21839477	<a href="mailto:robert-jaap.vanderbijl@rvo.nl">robert-jaap.vanderbijl@rvo.nl</a>
	de Boer	Jacob Jan	+31 6 23311252	<a href="mailto:jacobjan.deboer@rvo.nl">jacobjan.deboer@rvo.nl</a>

Background documents and other information can be downloaded from the website of Netherlands Enterprise Agency: <http://www.rvo.nl/kdt-ju>. The Dutch text on this website takes precedence over the English text below.

### Legal requirements for the eligibility of a partner or a project

#### 1) Admission conditions

The Netherlands will support the Dutch partners in projects selected by the KDT Joint Undertaking when:

- the project concerns industrial research, experimental development or a combination of these;
- in the project one or more Dutch partners are involved which include minimal one industrial partner. In the case of only one Dutch partner participating in a project, it has to be an SME;
- the industrial partners of the Dutch consortium provide the major contribution to the Dutch part of the project in such a way that the major part of the public funding (KDT + NL) involved goes to the industrial partners of the Dutch consortium;
- the objectives of the Dutch part of the project fit within the Innovation Contract High Tech Systems and Materials (HTSM) and its underlying Roadmaps (<https://hollandhightech.nl/innovatie/technologieen>);
- the project complies with the “Algemene wet bestuursrecht” and the “Kaderwet EZK-en LNV-subsidies”.

Dutch partners in a proposal must include in the Project Outline (PO) sent to the Joint Undertaking the following information:

- Explanation of the contribution to the objectives of the Innovation Contract High Tech Systems and Materials (HTSM) and its underlying Roadmaps (<https://hollandhightech.nl/innovatie/technologieen>)

Dutch partners in a proposal must include in the Full Project Proposal (FPP) sent to the Joint Undertaking the following information:

- Authorisation form;
- Explanation of the contribution to the objectives of the Innovation Contract High Tech Systems and Materials (HTSM) and its underlying Roadmaps

(<https://hollandhightech.nl/innovatie/technologieen>)

- Model overview of the costs.

**Note** that in case that there are several Dutch partners in the proposal, the Dutch partner coordinating them (the so-called "Dutch coordinator") will be in charge of submitting the above information on their behalf. The information and forms will be submitted as the **National Part** of the FPP in a ZIP file through the KDT Proposal Submission system. There will be only one ZIP file for all Dutch participants in a given proposal.

The required forms can be downloaded from the website of Netherlands Enterprise Agency: <http://www.rvo.nl/kdt-ju>.

## 2) Rejection conditions

An application for support of the share of Dutch participants of a project is rejected when:

- the partner that submits the application on behalf of all Dutch partners (the "Dutch coordinator") is not an enterprise;
- only one Dutch partner is participating that is not an SME;
- it is not credible that the Dutch partners can finance their share in the project;
- it is credible that the project without subsidy would have been finished without substantial delays;
- there is insufficient trust that Dutch partners have the necessary capacities to fulfil the project as submitted;
- the project has insufficient positive effects on the Dutch economy;
- the Dutch part of the project contributes insufficiently to the objectives of the Innovation Contract High Tech Systems and Materials (HTSM) and its underlying Roadmaps (<https://hollandhightech.nl/innovatie/technologieen>).

## Eligibility of the costs and funding

### 1) Eligibility of costs

- The **eligible costs for subsidy** are in compliance with the R&D&I State Aid Rules, the "Algemene wet bestuursrecht" and the "Kaderwet EZK- en LNV-subsidies".
- The Dutch subsidy percentages are indicated below in the section Funding Rates.
- In case another Dutch administrative body has already granted a subsidy for the eligible costs of the Dutch part of an KDT project or part of such project, the contribution by the Ministry of Economic Affairs and Climate Policy will be granted so that the total amount of subsidy will not exceed the before-mentioned Dutch subsidy percentages.
- In case that a contribution has been already granted for the eligible costs for subsidy to the Dutch part of an KDT project or part of it on the basis of a subsidy scheme of the Ministry of Economic Affairs and Climate Policy, no additional subsidy will be granted by the Ministry of Economic Affairs and Climate Policy for the already subsidized part.
- Per individual Dutch partner the subsidy percentages will be applied according to the activities. The project eligible costs per partner will be defined and the corresponding percentages will be applied.
- Per KDT project in which a Dutch consortium takes part a total national maximum of

€ 10.000.000 funding for the Dutch consortium will be initially applied in the case of IA projects and a total national maximum of € 5.000.000 funding for the Dutch consortium will be initially applied in the case of RIA projects.

- The Dutch budget for the KDT Calls 2023 is in total € 30.000.000 (subject to parliamentary approval).
- RVO (Netherlands Enterprise Agency) will be in charge of the project administration of all projects of the KDT Calls.

## 2) Funding rates

Large Enterprises, Groups and Associations of Enterprises	Small and Medium Enterprises	Public Research Institutes and Universities
20%	30%	25%

Rates apply to Call 2023-1-IA T1, Call 2023-1-IA T2, Call 2023-1-IA T3, Call 2023-1-RIA T4, Call 2023-2-RIA T1, Call 2023-2-RIA T2.

In case the EU funding rates and/or conditions are modified the national funding rates may be amended.

## Norway

### National contact person for KDT JU programme

Country	Name	First name	Tel	E-mail
Norway	Waqar	Ahmed	(+47) 47297558	wah@rcn.no
Norway	Kim	Davis	(+47) 93059307	kid@rcn.no

Currently, there is no planned allocation of national funding for Norwegian participation in KDT JU 2023 work programme. If Norwegian entities wish to participate in proposals under this programme, contact your national contact person(s) for updated information.

## Poland

### National contact person for KDT JU programme

Country	Name	First name	Tel	E-mail
Poland	Wajs	Andrzej	t: +48 22 39 07 499 m: +48 516 958 527	<a href="mailto:andrzej.wajs@ncbr.gov.pl">andrzej.wajs@ncbr.gov.pl</a>

The national authority is : [NCBR.gov.pl](https://ncbr.gov.pl)

### Legal requirements for the eligibility of a partner or a project

#### 1) Type or nature of participants

Following entities are eligible to apply:

- Research organizations;
- Micro, Small, Medium and Large Enterprises
- Industry organizations - only in Call 2021-3-CSA- A Pan-European chip infrastructure for design innovation. This call is funded entirely by the European Commission and therefore Polish applicants do not submit a national application for funding or sign a national agreement with NCBR, and thus do not receive any funding from NCBR in this particular call.

Organization must be registered in Poland.

#### 2) Legal, administrative and financial conditions

All proposals must be aligned with National regulations, inter alia:

- Act of 30 April 2010 on the National Centre for Research and Development (Journal of Laws item 1861, 2020);
- Act of 20 July 2018 on the Law of Higher Education and Science, (Journal of Laws item 478, 2021);
- Regulation of the Minister of Science and Higher Education of 17 September 2010 on the detailed mode of performance of tasks of the National Centre for Research and Development (Journal of Laws No 178 item 1200);
- Regulation of the Minister of Science and Higher Education of 19 August 2020 on granting state aid through the National Centre for Research and Development (Journal of Laws item 1456, 2020).

#### 3) Consortium configuration

None

#### 4) Other conditions

None

### Eligibility of the costs and funding

#### 1) Eligibility of costs

A detailed information (in Polish) will be available for applicants at

<https://www.gov.pl/web/ncbr/platforma-konkursowa#/ncbr?sort=announcementDate.desc&currentPage=0&limit=10>

when the call is published. Below are some key aspects:

1. Personnel costs (W) - researchers, technicians and other supporting staff to the extent employed on the research project;

2. Costs of subcontracting (E) - i.e. costs based on agreements with third parties to perform a portion of the project without a direct supervision of the project participant and without a relationship of subordination the subcontracting can be obtained from consortium partner only in justified case, this need will be verified by a national experts panel; Costs of subcontracting cannot exceed 70% of all eligible costs of the project.

3. Other costs (Op):

Costs of instruments, equipment and intangible assets (such as patents, certificates etc.) to the extent and for the period used for the research project; if they are not used for their full life for the research project, only the depreciation costs corresponding to the life of the research project, as calculated on the basis of good accounting practice, shall be considered eligible;

Purchase of land and real estate to the extent and for the period used for the research project; if such instruments and equipment are not used for their full life for the research project, only the depreciation costs corresponding to the life of the research project, as calculated on the basis of good accounting practice, shall be considered eligible; Other costs including costs of support services, materials, supplies and similar products incurred directly as a result of the research activity, travel costs (costs of delegations, costs of participation in conferences), costs of maintaining a separate bank account, costs of promoting the project.

4. Overheads (O) - incurred indirectly as a result of the research project; Overheads must be calculated according to the formula:  $O = (W + Op) \times 25\%$  <sup>25</sup>

## 2) Funding rates

Funding quota of Polish participants can be up to 100% for research organisations. In the case of enterprises, funding quota will be decided on a case-by-case basis depending on the size of the company, type of research/development, risk associated with the research activities and commercial perspective of exploitation. Organization must be registered in Poland.

	Large Enterprises	Medium Enterprises	Micro/Small Enterprises	Research Organizations
<b>Fundamental/Basic Research</b>	0%	0%	0%	0%
<b>Industrial/Applied Research</b>	Up to 50+15 (max 65 %)	Up to 50+10+15 (max 75 %)	Up to 50+20+15 (max 80 %)	Up to 100 %
<b>Experimental development</b>	Up to 25+15 (max 40 %)	Up to 25+10+15 (max 50 %)	Up to 25+20+15 (max 60 %)	Up to 100 %

## National phase of application procedure

After international evaluation has been completed and the ranking list established, Polish participants from consortia recommended for funding will be invited to submit the National Application Form (NAF). All eligible entities invited to submit the NAF are obliged to use the rate of exchange of the European Central Bank of the day of call opening (i.e. 16 December 2021).

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<sup>25</sup> percentage 25% estimated by the Applicant himself (the same percentage for every task in the project)

The Director of the National Centre for Research and Development subsequently issues a funding decision and signs national grant agreements with Polish participants providing that they have signed KDT JU grant agreements first.



## Portugal

### National contact person for KDT JU programme

Country	Name	First name	E-mail	Telephone
Portugal	Coelho	Filipa	filipa.coelho@fct.pt	+351 213924450
	Amaral	Mário	mario.amaral@fct.pt	

For the 2023 calls a total amount of up to **[1 500 000] Euro** from state budget is committed to co-fund Portuguese beneficiaries covering all topics. The total national co-funding amount of each national beneficiary in each project cannot exceed **[299 278.74] Euro**. [The indicated amounts are preliminary and subject to change based on the final decision by the Portuguese Minister of Science, Technology and Higher Education].

National co-funding is compatible with the internal market in the sense of article 107, paragraph 3, of the Treaty of Functioning of the European Union, being for that reason exempt from the obligation of notification foreseen in article 108, paragraph 3, of the referred Treaty, since it fulfils the conditions established in article 25-C and chapter I of the Regulation (EU) 2014/651 of the Commission of 17 June 2014.

The eligibility rules of Horizon Europe Regulation (EU) 2021/695 apply to Portuguese participation in KDT 2023 calls for proposals, with the exceptions indicated below.

### Legal requirements for the eligibility of a partner or a project

All proposals with national applicants **must include at least one Portuguese company** (large company or SME). Consortia consisting solely of non-entrepreneurial entities of the national research and innovation system (ENESII – “*entidades não-empresariais do sistema nacional de I&D*”) will not be considered eligible for Portuguese co-funding.

### Funding rates

Maximum national co-funding rates for Portuguese applicants are described in the table below.

Maximum national co-funding rates for KDT 2023 calls			
Type of action / Type of entity	Large companies	SMEs	ENESII
Innovation Actions	<b>30%</b>	<b>25%</b>	<b>65%</b>
Research and Innovation Actions	<b>25%</b>	<b>30%</b>	<b>65%</b>

### Eligibility of the costs

Cost eligibility applicable to national co-funding will be determined based on Horizon Europe (Regulation (EU) 2021/695).

**Additional Information to be provided at submission and other conditions**

National participants in selected proposals will have to sign a national grant agreement (“*Termo de Aceitação*”) with FCT in order to receive national co-funding.

## Romania

### National contact person for KDT JU programme

Country	Name	First name	Tel	E-mail
Romania – lead delegate	Cristina	Anania	+40 722 23 88 77	<a href="mailto:cristina.anania@research.gov.ro">cristina.anania@research.gov.ro</a>
Romania	Elena	Dinu	+40 (21) 303 41 99 int. 412	<a href="mailto:elena.dinu@research.gov.ro">elena.dinu@research.gov.ro</a>
Romania	Cristina	Gheorghiu		<a href="mailto:cristina.gheorghiu@research.gov.ro">cristina.gheorghiu@research.gov.ro</a>

## Slovak Republic

### National contact person for KDT JU programme

Country	Last Name	First name	Telephone	E-mail
Slovakia	Kontrík	Martin	+421 2 59374574	martin.kontrik@minedu.sk

### Legal requirements for the eligibility of a partner or a project

#### Type or nature of participants

Large Enterprise, SME, University, Research institutes registered in the Slovak Republic are eligible.

#### Legal, administrative and financial conditions

The national co-funding of KDT JU projects is provided according to:

- The Act No 172/2005 Coll. On the Organization of State Research and Development Support and Supplementation of Certain Acts
- Community Framework for State Aid for Research and Development and Innovation (2006/C323/01)
- Eligible to ask for national co-funding is an R&D organization from every sector according to §7 of Act No 172/2005 Coll. And legal entity to §2 art. 2 of the Slovak Code of Commerce.

#### Consortium configuration

Slovak partners are allowed to participate in project alone or in cluster.

### Eligibility of the costs and funding

The eligible cost are: all personal costs, material costs, services, travel expenses, equipment amortization costs, indirect costs related to project solution within a period of project duration.

#### Funding rates

Type of beneficiary	Max. total funding (EU Contribution + National) as % of the Eligible Cost*
Large Enterprise (for profit, non SME)	50% for Research & Innovation Action 40% for Innovation Action
SME (for profit SME)	70% for Research & Innovation Action 60% for Innovation Action
University & Research Organization (non for profit)	100%

\* if not otherwise specified

### Additional Information to be provided at submission and other conditions

The proposed projects should be within the scope of the national RIS3 initiative.

## **Slovenia**

No information available.

## Spain

Two funding organizations will grant Spanish applicants to the KDT 2023 calls:

1. The Ministry of Economic Affairs and Digital Transformation (MAETD) will support enterprises and other private agents.
2. The Agencia Estatal de Investigación (AEI, State Research Agency) depending on the Ministry of Science and Innovation (MICINN) will support research centers, universities and non-profit private research entities.

Each Spanish participant in a KDT Consortium needs to request the national funding from the corresponding funding entity at a later stage, in case the project is approved.

It is strongly recommended that all the possible applicants inform national contact person at the beginning of the proposal preparation.

### National contact persons for KDT JU Programme

Country	Name	Tel	E-mail
SPAIN	Juan Miguel Ibáñez de Aldecoa Quintana David de Francisco Marcos		id.tic@economia.gob.es
	Estrella Fernández García Severino Falcón Morales	+34916037238	estrella.fernandez@aei.gob.es severino.falcon@aei.gob.es
	Enrique Pelayo	+34 915815566	enrique.pelayo@cdti.es

### Shared conditions between the MAETD and AEI

It will be mandatory to fulfill all European current legal requirements for applying for public grants:

- Marco Comunitario sobre Ayudas Estatales de Investigación y Desarrollo e Innovación (DOUE 2014/C198/01).
- Joint Undertakings under Horizon Europe (Single Basic Act)
- Convocatorias de propuestas referentes al Programa KDT 2023.

Moreover, with respect to any aspect not covered by the KDT and European regulation, it will be mandatory to fulfill other Spanish current applicable legal requirements ruled in the following legal texts:

- Ley 38/2003, de 17 de noviembre, General de Subvenciones.
- Real Decreto 887/2006, de 21 de julio, por el que se aprueba el Reglamento de la Ley 38/2003, de 17 de noviembre, General de Subvenciones.
- Leyes anuales de Presupuestos Generales del Estado.
- Ley 47/2003, de 26 de noviembre, General Presupuestaria.
- Ley 39/2015, de 1 de octubre, del Procedimiento Administrativo Común de las

Administraciones Públicas.

- Ley 40/2015, de 1 de octubre, de Régimen Jurídico del Sector Público.
- Ley 9/2017, de 30 de octubre, de Contratos del Sector Público.

The Spanish legal texts can be found on <http://www.boe.es>

## **I- Requirements of the Ministry of Economic Affairs and Digital Transformation (MAETD)**

### **Legal requirements for the eligibility of a partner or a project**

#### **1) Type or nature of participants**

The Ministry of Economic Affairs and Digital Transformation (MAETD) is the national authority which funds in KDT calls from the following participants:

- Spanish enterprises (SME, LE, GE<sup>26</sup>)
- Private Technology Centers (TC, RD 2093/2008 29th December)
- Private Universities

According to the Spanish Regulation, enterprises and Technology Centers (RD 2093/2008 29th December) should follow the rules and procedures for loans and grants.

#### **2) Legal and administrative conditions**

Every national participant should be established in Spain, satisfy the Art. 13 of Ley 38/2003, de 17 de noviembre, General de Subvenciones (LGS) and not be in bankruptcy or not have requested the declaration of bankruptcy.

For that reason, every national participant should sign a Statement of Compliance, as well as authorize the access and consultation of data related to tax obligations, Social Security payments, fiscal residence and Full Statement of National Insurance contributions of the workers imputed to the project and/or the verification of any other data provide during the granting and monitoring of the aid. This document will be available at the website of the Secretariat of State for Digitalization and Artificial Intelligence and should be sent along with the Part C.

In case the participant does not authorize the consultation, the participant must submit the corresponding documentation.

Spanish participants must comply with the following requirements:

- The participating entities must have presented in the Mercantile Registry or equivalent register the closed accounts for the years 2021 and 2022. Otherwise, they should submit that information along with their part C.
- They must also submit, along with the rest of the documentation, a copy of the financial statements of 2021, signed by the administrators of the entity, audited if legally required, and with the financial statements of "Balance Sheet", "Profit and Loss Account" and "Explanatory Memory", at least, according to Art. 254 of Real Decreto Legislativo 1/2010, de 2 de julio, por el que se aprueba el texto refundido de la Ley de Sociedades de Capital.

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<sup>26</sup> Group of Enterprises

- If the submitted accounts do not provide the minimum financial statements indicated in the previous paragraph, the participant must provide the risk report from the Risk Information Center of the Bank of Spain (CIRBE) and / or the 303 VAT return model for the four quarters of 2021. Likewise, in the case of not being able to access the accounts presented to the Mercantile Registry, the applicant may be required to make a copy of these accounts. A request for assistance may be filed by the participant.

For the PO phase, the following documentation must be submitted to the KDT JU:

- Part C
- Responsible declarations, as well as authorization for the consultation of data.
- Templates for the aforementioned documents will be available at the website of the Secretariat of State for Digitalization and Artificial Intelligence.

For the FPP phase, the following documentation must be submitted to the KDT JU:

- Part C.
- Responsible declarations, as well as authorization for the consultation of data.
- Templates for the aforementioned documents will be available at the website of the Secretariat of State for Digitalization and Artificial Intelligence.
- Financial Statements for the years 2021 and 2022.

After the signing of the Grant Agreement MAETD will contact every beneficiary to assist in the completion of all the forms and documents requested by the Spanish Public Authorities, to sign the National Grant Agreement document.

Payment of the national contribution will be done in accordance with national rules in force.

The payment will be carried out after the establishment of the National Grant Agreement. This option will require collaterals up to 100% of the amount of national fund, according to a solvency assessment (see Additional information).

Collaterals must be in the form of guarantees provided by credit institutions or mutual guarantee societies.

Proposals could be rejected when:

- It is not considered credible by the Spanish Public Authorities that partners could adequately fund their share in the project or financial qualification is not enough (see table below).
- It is not credible by the Spanish Public Authorities that the project could be completed on time.
- Spanish partners do not provide enough proof of their technical or financial capacities needed to fulfil the project as submitted.
- The effect or positive impact on the local economy is considered insufficient by the relevant authorities.



## Eligibility of the costs and funding

### 1) Consortium configuration

To be eligible, a project must account for a minimum Spanish participation: Minimum share of the Spanish consortium 5% in terms of eligible costs.

Participants should set up a national sub-consortium with the following rules:

1. All members must prove knowledge and expertise in their relative project matters.
2. At least Fifty (50)% of the Spanish participation (budget) must come from enterprises.
3. The participating entities must have been legally established before 31/12/2021.
4. There must be at least one SME in the Spanish consortium.
5. Each participant will send its own form C and must comply with the stated conditions to be a beneficiary.
6. Budget of each Spanish participant: minimum 200.000 € of eligible costs.

### 2) Solvency and Financial Conditions

- MAETD will check if the participants are eligible making sure they are not in crisis as defined by EU regulation 651/2014.
- Each Spanish participant must be solvent and have the necessary financial capacity to carry out the project, and the Spanish Public Authorities will assess it positively. MAETD will perform a financial analysis and will define for each participant a solvency-rating factor. Depending on that factor, the level of the necessary collaterals shall be established (See table below).
- MAETD could require collaterals up to 100% the amount of national funding.

### 3) Funding rates

Maximum percentage of costs covered by MAETD  
as a percentage of the eligible costs for the call KDT 2023

Type of Organization Type of activity	Large Enterprise / RTO	Medium Enterprise / RTO	Small Enterprise / RTO
RIA (EPS) Research and Innovation Action	Up to 65% - JU%	Up to 75% - JU%	Up to 80% - JU%
IA (EPS) Innovation Action	Up to 40% - JU%	Up to 50% - JU%	Up to 60% - JU%

These percentages are maxima according to the funding provided by the KDT JU and the conditions stated by annex I and articles 25 and 28 of Regulation (EU) No 651/2014 related to definition of enterprise categories and maximum aid intensity.

MAETD will provide the same funding percentage than the JU if possible, never surpassing the aforementioned limits in any case.

**4) Amount of required collateral by MAETD**

Financial qualification	Collateral required
AAA	0%
AA	0%
A	15 %
BBB	45 %
BB	70 %
B	80 %
CC	100 %
CC	100 %
C	No funding
D	

**5) Additional Information to be provided at submission and other conditions**

MAETD will specifically encourage projects:

- Coordinated by a Spanish entity.
- Where there are SMEs working in the core of the project.
- Where Spanish entities that have never participated in previous ECSEL or KDT calls are integrated in order to broaden the range of participants.
- Which include Spanish participants in core activities in projects that aim at focus topics.

## ***II- Requirements of the Agencia Estatal de Investigación (AEI)***

### ***Legal requirements for the eligibility of a partner or a project***

#### **1) Type or nature of participants**

The AEI, ([Agencia Estatal de Investigación](#)) is the national authority which funds non-profit public R&D organizations such as:

- Public Research Centres
- Public Universities
- Other non-profit R&D organizations in which R&D activities are implicitly defined as the main objective.

The AEI encourages Spanish research centres and universities to participate in close collaboration with the Spanish industrial partners carrying out relevant parts of the KDT projects.

There is no limit to the number of Spanish participants per project in this call.

#### **2) Legal and administrative conditions**

KDT JU call 2023 will be managed by the [Subdivisión de Programas Científico-Técnicos Transversales, Fortalecimiento y Excelencia](#)

Applicants requesting national funds from AEI shall comply with the following regulations on grants:

- General Subsidies Law ([Ley 38/2003](#))
- Science Law ([Ley 14/2011](#))
- AEI Statutes ([Real Decreto 1067/2015](#))
- National PCI calls ([National PCI Call](#))

The projects granted by the AEI must be aligned with the main objectives described in the [National Plan for Scientific and Technical Research and Innovation 2021-2023](#).

The projects granted under this call are encouraged to comply with the DNSH criteria (do not significant harm) and state it so in the proposal.

The instrument for funding the Spanish groups will be the call *Proyectos de Colaboración Internacional*, (PCI. As a reference, applicants are advised to read the call PCI 2022-2.

Applicants are advised to keep the requested funds multiple of 1000.

The participation on this program means the acceptance and compliance with all the conditions stated on this document.

Any publication or dissemination activity resulting from the granted projects must acknowledge AEI funding even after the end of the project, according to [National PCI Call](#).

### *3) Consortium configuration*

Spanish non-profit research organizations funded by AEI must participate in consortia with at **least one Spanish profit organization partner**, funded by the MAETD.

Spanish Principal Investigators must demonstrate experience as investigators in projects funded by the Plan Estatal I+D+i 2013-2016, the Plan Estatal I+D+i 2017-2020, ERC Grants, European Framework Programmes or other relevant national or international programmes.

#### **Incompatibilities (read carefully):**

- Principal Investigators can only apply for funding in one proposal in KDT 2023 calls RIA and IA all together. The limit is NOT one proposal per subprogram (RIA or IA), but one proposal in both RIA and IA. If one PI submits two or more proposals he/she will be declared ineligible in all but one.
- Principal Investigators will not be eligible for funding in more than one proposal in a PCI call of the same year or consecutive years. This should be taken into account when participating in other ERA-NETS or international programmes funded through the PCI call.
- Principal Investigators must remain unchanged between the proposal to this transnational call and the PCI2023 call. Only force majeure reasons will be accepted to change a principal investigator (see point one of incompatibilities).
- To this end, and to avoid any issue, the Principal Investigator must be clearly identifiable in the KDT documents and must comply with these rules. Otherwise, he/she will be declared ineligible for funding by the AEI.

#### **Eligibility of tasks, the costs and funding and audit certificate.**

AEI will fund those tasks in the work packages indubitably related to research and technology development and innovation, not considering as such if only mere communication or dissemination or similar activities. Please contact AEI in advance to check eligibility.

AEI grants follow the rules of marginal costs, with a maximum request of 350.000 € (including direct + indirect costs) per participant or 60% of the total costs of the Spanish part of the project (whichever amount is lower). In any case, the total grant (AEI + KDT JU) will be a maximum 100% of the total project costs.

Eligible costs are:

1. Personnel costs: Contracts (gross remuneration and contributions to social security) exclusively intended to the funded project implementation. Fellowships are not eligible.
2. Current costs, small scientific equipment, disposable materials, travelling expenses and other costs that can be justified as necessary to carry out the proposed activities.
3. Indirect costs (overheads), 21% of the direct eligible costs (see points 1 and 2).

If the Spanish participant is the KDT project coordinator, the maximum request can be up to 500.000€ (including direct + indirect costs) or 60% of the total costs of the Spanish part of the project (whichever amount is lower).

Centers formed by different Spanish legal entities will be considered as a unique entity, and thus the maximum funding should not exceed the limits per proposal established above (f.i. mixed centers).

Double funding (overlapping with other EU or National funding) will be avoided and projects or parts of projects already funded will be not granted. Final funding will take into account the transnational evaluation of the collaborative proposal, the scientific quality of the Spanish group, the benefit of the international collaboration, the participation of the industrial sector, and the resources available.

Every institution funded by the AEI should justify the total costs of the project regardless of the origin of grants (KEDT JU or AEI). Therefore, every institution funded by the AEI must submit a valid audit certificate with the total costs of the project.

## Sweden

### National contact persons for KDT JU

Country	Name	First name	Tel	E-mail
Sweden	Saavedra Granholm	Adela	+46 8 473 31 50	<a href="mailto:adela.saavedragranholm@vinnova.se">adela.saavedragranholm@vinnova.se</a>
Sweden	Gustafsson	Lars	+46 8 473 32 12	<a href="mailto:lars.gustafsson@vinnova.se">lars.gustafsson@vinnova.se</a>

Detailed information for Swedish applicants in KDT JU is available at:

[Key Digital Technologies JU](#)

### Legal requirements for the eligibility of a partner or a project

#### Type or nature of participants

Calls are open for public and private companies of all sizes as well as for universities and research institutes in Sweden.

#### Funding conditions

The costs of all partners specified in the project budget and in the reporting to Vinnova shall harmonize with costs in accordance with the Grant Agreement with KTD JU and the costs reported to KDT JU, respectively.

Only legal entities are eligible for funding, natural persons will not be funded.

#### Consortium configuration

The total eligible project costs of participating Swedish companies must amount to at least 60% of the aggregated eligible project costs of all Swedish participants in the project consortium.

#### Legal, administrative and financial conditions

Participating companies must have fulfilled fiscal obligations and must be able to cover their own expenses for the duration of the project.

- Participating companies must be registered as a limited company in Sweden (Aktiebolag).
- Participating companies must have a permanent establishment in Sweden.

- Project activities must be conducted at sites that belong to a participating company. Project costs must belong to the participating company.
- Participating companies must be registered for employer's contribution.
- Participating companies must have submitted at least two annual reports to the Swedish Companies Registration Office (Bolagsverket).
- The company's most recent annual report/ financial statement should show that net sales or equity correspond to at least 50% of the public funding applied for from Vinnova and KDT JU.

Swedish SMEs must also show when submitting the full project proposal (FPP) that they:

- Have an annual net turnover of at least 1 million SEK according to the latest annual report.
- Have a minimum of three full time employees.

Net turnover does not include public funding from, for example, Vinnova or the EU Commission.

To calculate how big a company is, the EU's definition of small and medium-sized companies is applied: [EU-definition-smf.pdf](#)

#### Other conditions

Vinnova helps to build Sweden's innovation capacity, contributing to sustainable growth. We make it possible for organisations to address challenges together by enabling innovation that makes a difference. All projects that Vinnova funds within KDT JU are expected to contribute to this mission.

Vinnova will check if the Swedish applicants are eligible considering the national eligibility rules, including Vinnova's terms and conditions for grants. In addition to that, Vinnova will assess the national relevance of the international project proposal based on the information about the Swedish applicant's contribution to the project, Vinnova's projects portfolio and national priorities.

Swedish applicants to KDT Calls 2023 **must** submit a joint National Part with the international full project proposal (FPP). In case the applicants fail to submit the National Part with the international FPP, they will be considered **not eligible for national funding**. In the National Part, participating companies are required to provide a credible description of the project's impact on the company's technological knowledge, economic growth and future assets in Sweden. Participating universities or research institutes are required to provide a credible description of the project's impact on the university's or research institute's scientific and technological knowledge base and positive impact on Swedish society in general. It is important that each partner

clearly describes their role in the project, their goals with the project, how they will benefit from the project and added value from international collaboration. The Swedish consortium needs to specify in the National Part to which goals of Agenda 2030 the project contributes to and how the Swedish consortium contributes to the integration of gender equality aspects in the project.

A template for the Swedish National Part is available at Vinnova's website for the KDT JU Calls 2023.

If the international project proposal is selected for funding in KDT JU Calls 2023, the Swedish consortium must submit one joint national application to Vinnova. The project description attached to the national application should be based on the National Part submitted together with FPP application to KDT JU. After PAB decision on projects selected for funding in KDT JU Calls 2023, Vinnova will contact the Swedish applicants to provide a template for the national application for funding and specific information about the submission process.

### Eligible costs and funding rates

#### Vinnova's terms and conditions

§ 6.1 (Eligible costs) in Vinnova's terms and conditions for funding is replaced by the eligible costs and the calculation of these specified in the Grant Agreement with KDT JU. Otherwise Vinnova's general terms and conditions for national funding applies. In addition, observe Vinnova's national rules and special conditions for participation in KDT JU applies. For further details, please see the full version of the national eligibility rules in the Vinnova website for the KDT JU Calls 2023.

#### Funding rates

In the table below the national funding rates for Swedish participants in KDT JU is presented. The funding rates must be within the limits given by [State Aid Rules](#).

Please be aware that EU contribution doesn't count as state aid.

	Large Enterprises	Small and Medium Enterprises	Universities and Research Institutes
RIA - Research and Innovation Action	25%	35%	50%



<b>IA - Innovation Action</b>	20%	30%	50%
<b>Focus Topics</b>	20%	30%	50%

<b>Project Coordinator</b>	<b>Large Enterprises</b>	<b>Universities and Research Institutes</b>
<b>RIA - Research and Innovation Action</b>	40%	65%
<b>IA - Innovation Action</b>	35%	65%
<b>Focus Topics</b>	35%	65%

#### **Additional information and other conditions**

- Maximum Vinnova contribution to one project is limited to 1 500 000 €
- The maximum funding from Vinnova for a single large enterprise, university and research institute is equivalent to 730 000 €.
- The maximum funding from Vinnova for a small and medium enterprise is equivalent to 450 000 €.
- Vinnova use the exchange rate for Euro/SEK of the ECB on the date of KDT JU call FPP phase deadline.



## Turkey

### National contact person for KDT JU

Country	Name	First Name	Tel	E-mail
Türkiye	GEZİCİ KOÇ	Özlem	+903122981772	ncpdis@tubitak.gov.tr
Türkiye	TİFTİK	Hasan Burak	+903122981752	ncpdis@tubitak.gov.tr
Türkiye	BAL	Erenca n	+903122981465	ncpdis@tubitak.gov.tr

The National Funding Authority (NFA) of Türkiye for KDT JU is the Scientific and Technological Research Council of Türkiye (TUBITAK). Principal legal regulations and documents on the public funding of research, development and innovation in Türkiye are available on the TUBITAK websites.

### Legal requirements for the eligibility of a partner or a project

#### 1) Type or nature of participants

Calls are open for public institutions and private companies of all sizes as well as for universities and research institutes in Türkiye.

#### 2) Funding conditions

Only legal entities are eligible for funding. Natural persons will not be funded.

#### 3) Legal, administrative and financial conditions

In addition to international submission, Turkish partners also need to complete their national submissions to TUBİTAK. Typically, national submissions will be closed within a week after the deadline of international submissions. Eligible participants will be funded via TUBİTAK 1071 Programme. The national rules and the procedure for application will be available on the webpage: <https://ufukavrupa.org.tr/en>

#### 4) Consortium configuration

There is no limitation for the consortium configuration.

### Eligibility of the costs and funding

#### 1) Eligibility of costs

- Personnel cost
- Travel costs

- Expenditures for consumables
- Expenditures for instruments, equipment, software that would be used for R&D purposes
- Expenditures for subcontracting and other services need for R&D work

## 2) Funding rates

Type of activity/organisation	Large Enterprises	Small and Medium Enterprises	Universities and Research Institutes
<b>2023 Call</b>	%60-EU Contribution	%75-EU Contribution	% 100-EU Contribution

## Additional Information to be provided at submission and other conditions

- The total Turkish funding budget for KDT 2023 Call is 6 000 000 €.
- There is no pre-allocated distribution of the Turkish funding budget between the Calls in 2023, nor to specific topics of any of the Calls in 2023.
- While determining the project budget in national applications, the international project budget and the exchange selling rate of the Central Bank of the Republic of Türkiye on the date of national application are taken as basis.
- Participants are subject to TUBITAK 1071 Programme rules.