

KDT JU

CALL 2023

Yves GIGASE
Head of Programmes
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KDT JU

KEY DIGITAL
TECHNOLOGIES
JOINT UNDERTAKING



READ THE SECTIONS ON THE CALLS IN THE WORK PLAN 2023

Check regularly our call website under the KDT website:

www.kdt-ju.europa.eu

Changes in National conditions are to be expected!

Contact email for your questions (please use ONLY this email):

calls@kdt-ju.europa.eu

Read the sections on the calls in the Work Plan 2023!

But for every IT issue contact the IT helpdesk (link in participant portal). We cannot help you on IT issues!

STRUCTURE, TOPICS, EU BUDGET

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

NATIONAL BUDGETS

National funding shall be commensurate to the EU funding rates

Participating states	2023-1 T1	2023-1 T2	2023-1 T3	2023-1 T4	2023-2 T1	2023-2 T2	Total
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
CY							3.0
CZ	1.1	0.2	0.2	0.2	1.1	0.2	3.0
DE		0.0					32.0
EE							0.75
EL							0
ES AEI							3.0
ES MAETD							5.0
FI							10.0
FR							30.0

Participating states	2023-1 T1	2023-1 T2	2023-1 T3	2023-1 T4	2023-2 T1	2023-2 T2	Total
HU							2.0
IE							2.0
IL							3.5
IT MIMIT							20.0
IT MUR							14.0
NL							30.0
NO							0.0
PL							1.5
PT							1.5
SE	1.9	0.4	0.2	0.0	1.9	0.0	4.4
SK							0.8
SL							
TR							6.0
Total							192.85

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

2023-1-IA T1 GLOBAL CALL ACCORDING TO SRIA 2023 (153MEURO)

2023-2-RIA T1 GLOBAL CALL ACCORDING TO SRIA 2023 (76MEURO)

- 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”).

2023-1-IA T2 FOCUS TOPIC 6G INTEGRATED RADIO FRONT-END FOR TERAHERTZ COMMUNICATIONS (20MEURO)

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

Scope

- 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 Ft and Fmax 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
- Ultra-wideband and/or ultra-high-capacity **RF front-end**
- **Ultra-wideband baseband interfaces and processors**
- **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,
- **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.

2023-1-IA T3 FOCUS TOPIC ON INTEGRATION OF TRUSTWORTHY EDGE AI TECHNOLOGIES IN COMPLEX HETEROGENEOUS COMPONENTS AND SYSTEMS (20MEURO)

Scope

1. Interoperable and replicable edge AI hardware and software (HW/SW) solutions that facilitate the integration, rapid deployment and low maintenance in resource-constrained systems and collaborative edge AI architectures.

2. Efficient and standard engineering methods and tools for (HW/SW co-) design, validation, optimization (exploration/mapping), implementation, deployment, qualification/certif. of trustworthy edge AI solutions in complex/heterog. ECS.

3. Open & integrated platforms and ecosystems hosting edge AI solution toolkits and design frameworks that provide the necessary trust and transparency to facilitate seamless interoperability by using standards & open interfaces.

This call focuses on **large-scale integrated/integrable edge AI technologies** at **greater levels of energy efficiency, connectivity, collaboration, complexity and diversity**.

2023-1-IA T4 FOCUS TOPIC ON ELECTRONIC CONTROL SYSTEMS (ECS) FOR MANAGEMENT & CONTROL OF DECENTRALIZED ENERGY SUPPLY & STORAGE (20MEURO)

Challenges:

- Balance the fluctuations between the energy generation and consumption
- The distributed renewable energy systems require coordination and management improvement
- Energy storage must be integral part of distributed renewable energy systems DRES to mitigate imbalances in generation and demand
- Retrofittable and reconfigurable and interoperable with operational and maintenance systems.

Outcome: novel solutions in the form of electronic control systems, sensor technology and smart systems integration for the deployment and efficient and resilient operation of DRES.

Priorities:

- Study of use cases on building energy systems, HVAC, battery storage and hydrogen generation and storage.
- Evaluation of customer needs and requirements for these use cases
- Definition of solution concepts for the use cases: sensors and measurement devices, interoperability solutions, autonomous monitoring systems, predictive control, etc.

Collaboration for Hydrogen applications:

- Hydrogen can play an important role in the energy storage, which is an integral part of DRES to mitigate imbalances.
- Advances, in collaboration with Clean Hydrogen JU, on the operation conditions of electrolysers and fuel cells, as well as new generation of power electronics, sensors and monitoring devices for hydrogen applications.

2023-2-RIA T2 FOCUS TOPIC ON COMMON OPEN EUROPEAN SOFTWARE-DEFINED VEHICLE PLATFORM (20MEURO)

Scope:

- A reference architecture for a HW abstraction layer for software-defined vehicles meeting the safety, security and real-time requirements for motorised vehicles
- Engineering support for SW development and integration effort and costs, building on and linking major software initiatives in the area
- Demonstration of applicability through a proof-of-concept and open source reference implementation

It prepares the ground for the second level of decoupling (from the OS) and for the creation of the SOA, the Vehicle Service Framework.

One project

2023-3-IA T1 IMPROVING THE GLOBAL DEMAND SUPPLY FORECAST OF THE SEMICONDUCTOR SUPPLY CHAIN (5MEURO)

The project will deliver a **validated and secure platform** that, among others,

- 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 effective demand information
- The fine granularity matches an ontology for the semiconductor supply chain such as under development in the SC3 project;
- The platform should also be secure in all its aspects/functions, and
- The infrastructure needed to house the platform should be scalable

One project

2023-3-CSA T2 PAN-EUROPEAN NETWORK FOR ADVANCED PACKAGING MADE IN EUROPE (1MEURO)

- Objectives of the CSA:
 - map the **current situation in Europe** (analysis of the European R&D strengths in this field);
 - **define a strategy** how RTOs, SMEs and LEs could commonly establish a Pan-European ecosystem for advanced packaging made in Europe.
- Scope:
 - **Recommendations** for **investments** (in the Chips JU) with regard to Advanced packaging pilot lines and R&D&I projects;
 - **Analysis** of **the value chains** for various applications and **recommendations** on prioritisation;
 - **Analysis** of **Skills** and **education** needs in Europe on the topic; **Recommendations** for future education & skills programmes in the Framework of the Chips Act.

CALL 2023-3-CSA T3 COMMON OPEN EUROPEAN SOFTWARE-DEFINED VEHICLE PLATFORM (2MEURO)

Scope

- to help stakeholders of the open SDV platform to come together and align;
- to support the development of a clear roadmap and ensure timely delivery.
- By fostering agreement on a common open reference architecture, it will ensure the coherence of the developed platform.
- Building a dynamic community is crucial to ensure solutions are rapidly brought to the market, scalable and economically profitable.

SCHEDULE

Call 2023-1-IA and Call 2023-2-RIA

- Mode: **2 stage call** with submission of Full Project Proposal (FPP)
- Publication date: **7 February 2023, TODAY**
- 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**

Call 2023-3

- Mode: **1 stage call** with submission of Full Project Proposal (FPP)
- Publication date: **7 February 2023, TODAY**
- Deadline (Full Project Proposal (FPP) phase): at 17:00:00 Brussels time on **03 May 2023**
- **Please note: Call 2023-3 T1 is an IA BUT still in one phase!!!**

EU FUNDING RATES

Type of beneficiary	2023-1-IA	2023-1-IA Focus Topic	2023-2-RIA	2023-2-RIA Focus Topic	2023-3-IA	2023-3-CSA
Large Enterprise	20 %	25 %	25 %	25 %	70%	100%
SME	30 %	35 %	35 %	35 %	70%	100%
University/Other (not for profit)	35 %	35 %	35 %	35 %	100%	100%
National Funding	YES	YES	YES	YES	NO	NO

PAGE LIMITS

The number of pages below are maxima.

A good proposal will achieve concise and clear explanations in less pages!

Type of beneficiary	2023-1-IA	2023-2-RIA	2023-3-IA	2023-3-CSA
PO phase	60/60/60	60/60/60	na	na
FPP Phase	60/100/100	60/100/100	60/100/100	30/30/30

SPECIFIC ELIGIBILITY CONDITIONS

Important for the FPP phase!

2023-1-IA

- 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.

2023-2-RIA

- 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. (not applicable to focus topic!)

KDT CALL 2023: OTHER CHARACTERISTICS

- Major challenges according to ECS SRIA 2022
- KDT encourages projects of all sizes! Small projects are certainly welcome.

IMPORTANT DIFFERENCES WITH ECSEL CALLS

- EU Funding Rates in the Budget table (EU Budget/EU Funding) in the Part A, correct manually the requested amounts in the Part A table!
- Upload National Budgets Table
- National Part (previous Part C)

(detailed instructions in the Guide for Applicants)

WHERE TO FIND INFORMATION?

- Call is open!
- Today: on the Funding and Tender portal of HE
- As of tomorrow on the KDT website (look under current call)

THANK YOU AND GOOD LUCK!