Key Digital Technologies JU

Open Calls

Turkey in Horizon 2020 Phase II
18th February 2022

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APRE- Agency for the Promotion of European Research

30 NOVEMBER 2021- KDT ENTRY INTO FORCE
16 DECEMBER 2021 - FIRST KDT CALLS 2021

ECSEL JU becomes KDT JU

KDT JU - successor to ECSEL JU - is a EU-driven, public-private partnership, funding innovation in electronic components and systems.

KDT JU continues to support the ongoing activities of the ECSEL JU.

LEARN MORE

ECSEL JU Achieved:

16 Calls

92 Projects

More than **3100** participations

4.8 bn€ RDI cost

2.2 bn€ EU and National funding

2.6 bn€

ECS-SRIA 2021 vs 2022

Electronic
Components
and Systems

- Edited in 2020
- Published in January 2021

ECS COLLABORATION TOOL

https://ecscollaborationtool.eu/news-overview/news-ecs-sria-final.html

Strategic Research and Innovation Agenda 2021

ELECTRONIC COMPONENTS AND SYSTEMS
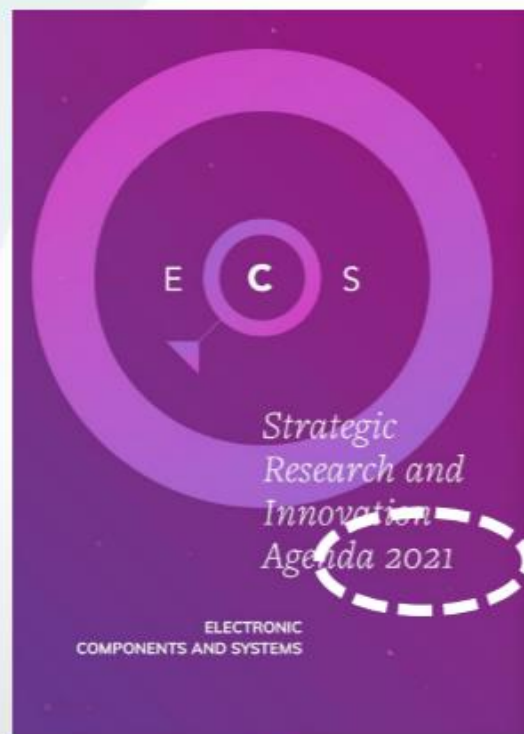
KDT-SRIA 2021

KDT Call 1 (16/12/2021)

Strategic Research and Innovation Agenda 2022

ELECTRONIC COMPONENTS AND SYSTEMS

- Edited in 2021
- Published in January 2022

ECS COLLABORATION TOOL

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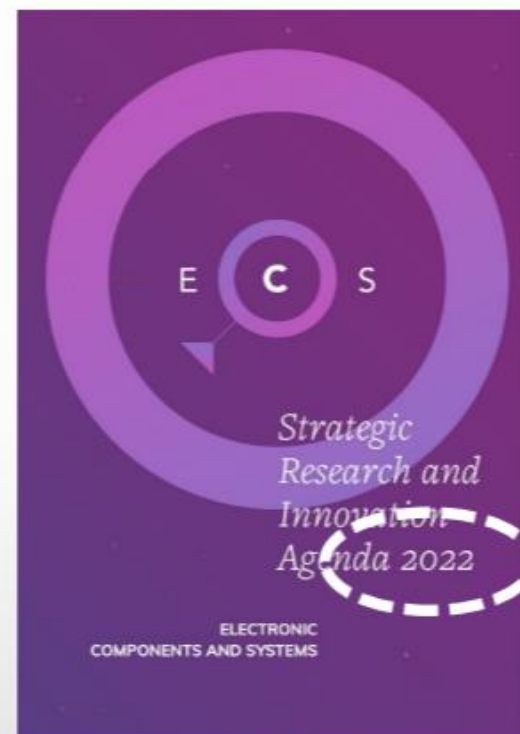
KDT-SRIA 2022

KDT Call 2 (05/2022)
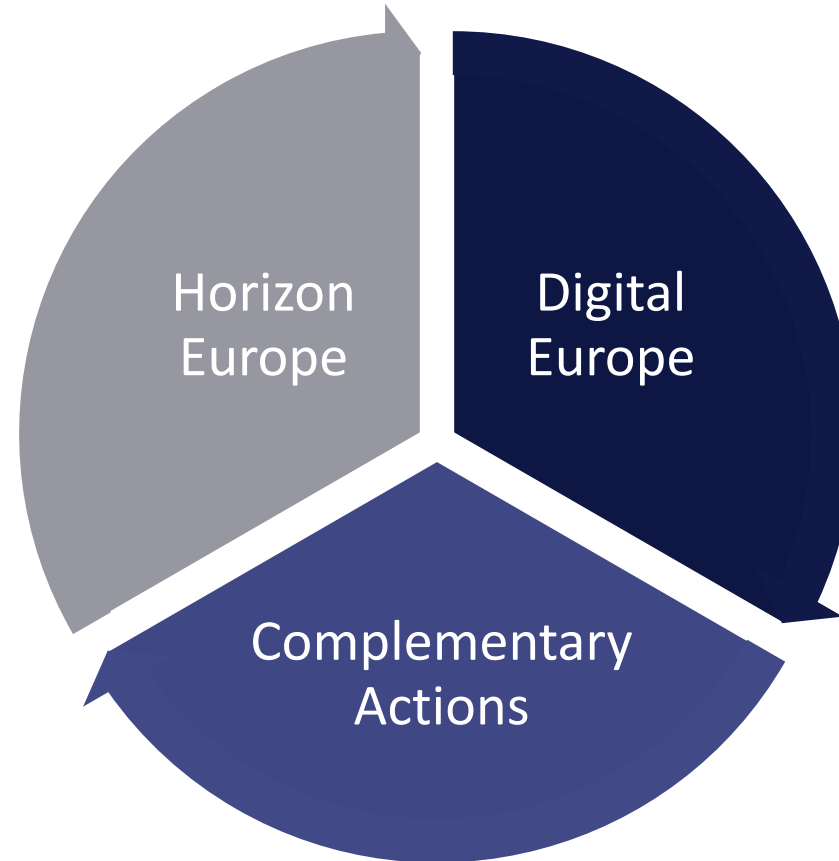
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ECS-SRIA 2022 structure
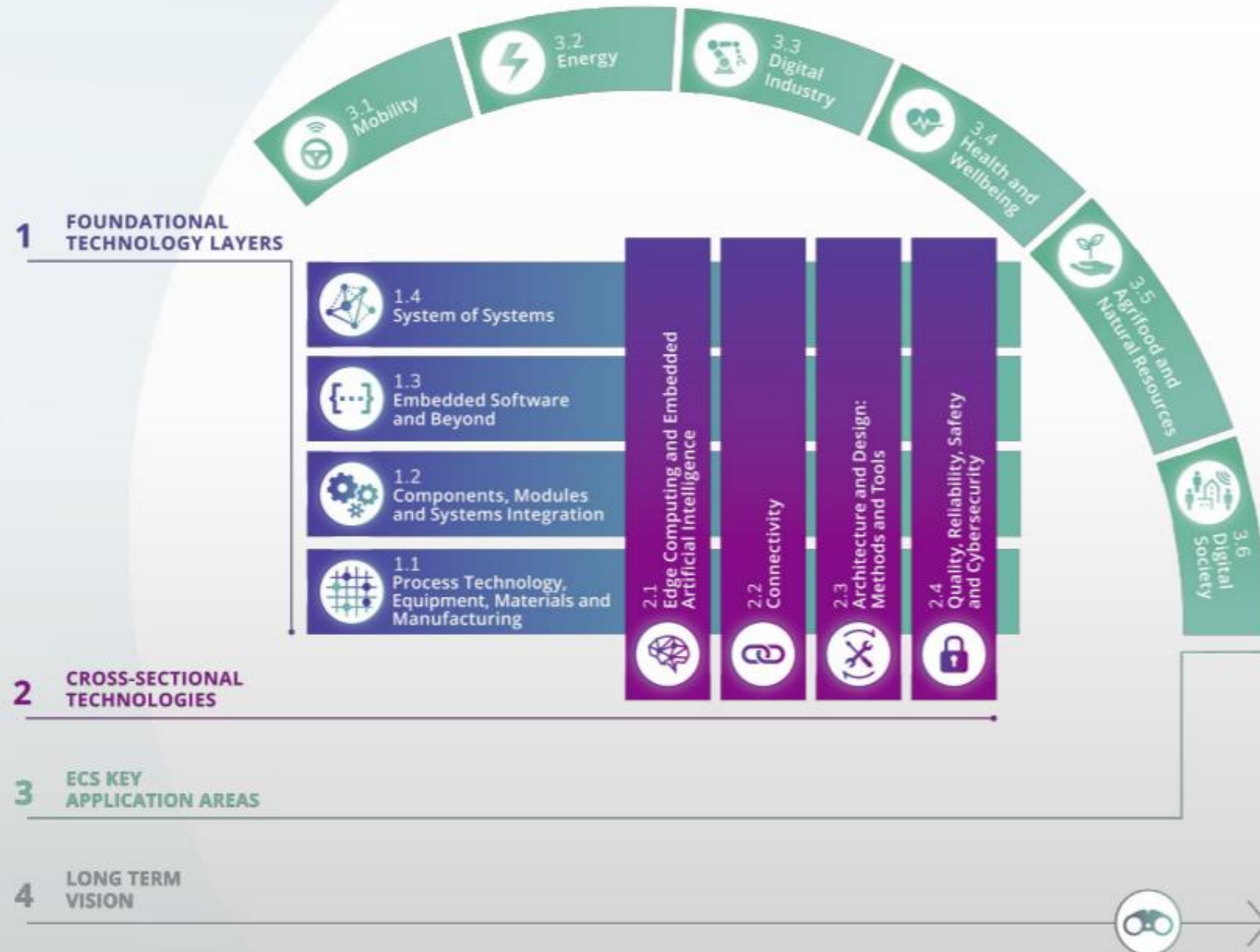
Complementarities with KDT JU

2 Co-programmed partnerships (supported via HE)
AI, Data and Robotics
Photonics

2 Istitutional partnerships (Art.187, Public-Private)
EuroHPC JU
Smart Networks and Services JU (ex 5G PPP)

2 Alliances
Secretariat for the Alliance on Processors and Semiconductor Technologies

Secretariat for the Alliance on Industrial Data, Edge and Cloud

Horizon Europe

Digital Europe

Complementary Actions

1 IPCEI on Microelectronics

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"The **European Chips Act**, which will be proposed in early February, aims to increase microchip production across the continent in response to rising demand and to reduce dependency on suppliers from outside Europe.

The European need for chips will double in the next decade, this is why we need to radically raise Europe's game on the development, production and use of this key technology."

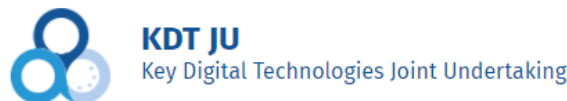Ursula von der Leyen,
Davos Agenda 2022 - 20 Jan 2022

With this in mind…

THE KDT CALLS FOR 2021

Where to find information

KDT JU opens 3 concurrent Calls in 2021

- **HORIZON-KDT-JU-2021-1 IA**
  - HORIZON-KDT-JU-2021-1-IA
  - HORIZON-KDT-JU-2021-1-IA - Focus Topic 1: Development of open-sources RISC-V building blocks

- **HORIZON-KDT-JU-2021-2 RIA**
  - HORIZON-KDT-JU-2021-2-RIA
  - HORIZON-KDT-JU2021-2-RIA - FocusTopic 1: Processing solutions for AI at the edge addressing the design stack and middleware

- **HORIZON-KDT-JU-2021-3-CSA** - A Pan-European chip infrastructure for design innovation

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EU Estimated Expenditure for the calls 2021-1 to 2021-3

Action		Estimated EU Expenditure (M€)
Call 2021-1 IA	General according to SRIA 2021	108.0 M€
Call 2021-1-IA-Focus Topic	Development of open-source RISC-V building blocks	20.0 M€
Call 2021-2 RIA	General according to SRIA 2021	50.0 M€
Call 2021-2-RIA-Focus Topic 1	Processing solutions for AI at the edge addressing the design stack and middleware	20.0 M€
Call 2021-3-CSA	A Pan-European chip infrastructure for design innovation	10.0 M€
	Total	208.0 M€

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KDT Research and Innovation Action (RIA)

◲ It 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 (4-5 for the Focus Topic 1; Processing Solutions at AI at the edge addressing the design stack and middleware). 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 (as defined in the **ECS SRIA 2021** in the functional technology layers and cross-sectional technologies sections) and applying them in different domains (as defined in the ECS SRIA 2021 in key application areas section). The domains represent the demand side of technologies, and the development of new technologies represents the supply side of technologies.

RIA Focus Topics

Processing solutions for AI at the edge addressing the design stack and middleware

Overall strategy: need to **reinforce processors and semiconductor technology** for data processing, communication & related data infrastructure as well as **new applications of AI at the edge**.

Details:

- It is foreseen that this topic will remain, in the **next KDT calls**, a focus topic if possible at higher TRL provided sufficient progress has been made

- Development of **European processors/accelerators** for secure embedded intelligence supporting inference and machine learning in autonomous intelligent objects and AIoT (Artificial Intelligence of Things) at the edge.

- Development of **platforms and automated tools for HW/SW co-design** of edge-AI based systems including non traditional computing paradigms (e.g. neuromorphic).

- Development of **AI software algorithms and/or frameworks** and tools for dealing with sparse computing resources for edge-AI based systems.

- **Encouraging SMEs to participate in those 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

- **etc. Read the WP2021 section on this topic!**

KDT Innovation Action (IA)

It 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.

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 mid term economic value creation in Europe.

IA Focus Topics

Development of open-source RISC-V building blocks

Overall strategy: goal to develop **RISC-V to become a widespread industry standard** alternative to today's proprietary Instruction Set Architectures (ISA). For this, RISC-V needs a **powerful ecosystem** comprising technology, business models and pioneering use-case applications. Consortia should include partners to cover this entire value chain.

Details (some):
- Part of a **series of calls** (refer to tomorrow)
- Proposals need to give evidence of **readiness to cooperate with and provide clear inputs** to future RISC-V actions and/or initiatives
- Selected actions will be implemented as '**linked actions**', i.e. they are linked with other actions selected under 'RISC-V' topics in this call and future calls.
- Proposals for this call will develop RISC-V **compliant IP blocks**. Certain IP blocks may be proprietary solutions; however, a large share of developed building blocks provided with **a permissive open-source licence** is preferred. All developed blocks must come with **publicly available documentation, benchmarks, verification suites, and validated reference designs** (including firmware/drivers, if required). One or more **demonstrators** should be built in a close to industrial environment with a number of RISC-V building blocks.
- **etc. Read the WP2021 section on this topic!**

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EU Funding Rates

Type of beneficiary	IA	IA Focus Topic	RIA	RIA Focus Topic	CSA
Large Enterprise	20 %	25 %	25 %	25 %	100 %
SME	30 %	35 %	35 %	35 %	100 %
University/Other (not for profit)	35 %	35 %	35 %	35 %	100 %

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KDT Calls deadlines

Deadlines

All Calls 2021 will be single-stage calls with submission of Full Project Proposal (FPP)

- **Publication date: 16 December 2021**
- **Opening date of the submission tools in the Funding and Tenders portal (estimated): 18 January 2022**
- **Deadline (FPP proposals): at 17:00:00 Brussels time on 27 April 2022**

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Who can participate?

The KDT JU Programme is open to any organisation that can make a contribution to the RD&I objectives of the programme. However, there are specific eligibility criteria relevant in the each KDT JU Participating State: these are listed in the KDT JU Work Programme 2021 (see below).

PS	Call 2021-1 IA	Call 2021-2 RIA General	Call 2021-2 RIA Focus Topic 1	Call 2021-1 IA Focus Topic 1	Total (M€)
TR					6.0

https://www.kdt-ju.europa.eu/calls/kdt-ju-calls-2021-0

Call Documents

Access to the Call Documents via these links (also available through the Funding and Tenders Portal):

1. KDT JU Work Programme 2021
2. ECS-SRIA-2021
3. Guide for Applicants to KDT JU Calls for proposals
4. Proposal Template Model for IA and RIA Actions – KDT JU
5. Proposal Template Model for CSA Actions – KDT JU
6. Essential Information for Clinical Studies (only for proposals including clinical studies)
7. Template Model National Budgets Table
8. Evaluation Form IA an RIA Actions – KDT JU
9. Evaluation Form CSA Actions – KDT JU
10. KDT PAB Decision on evaluation and selection procedures
11. Model Grant Agreement
12. Rules for Legal Entity Validation, LEAR Appointment and Financial Capacity Assessment
13. EU Grants AGA — Annotated Model Grant Agreement

Caution for the first Calls

- 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

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

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