



Presentation of EU-ROK Joint Call

Dr. Yves Gigase, Head of Programmes Chips JU

EU-South Korea Joint Researchers Forum on Semiconductors
25 March 2024

EUROPEAN
PARTNERSHIP



Call HORIZON-Chips-2024-3-RIA: Joint call with Korea on Heterogeneous integration and neuromorphic computing technologies for future semiconductor components and systems

With this joint call for proposals, the Republic of Korea and the EU intend to set a framework:

- To **strengthen the relation** between R&I players in both jurisdictions
- To **undertake joint R&I** for EU and Korean R&I teams by cooperating in precompetitive projects on areas which are in the interest of both jurisdictions.
- To **build trust for further cooperation.**

This joint call topic will be **co-funded** by South Korea (KR) and the European Union (EU)

It is organized by the office of the **Chips Joint Undertaking** (Chips JU) and the **National Research Foundation** (NRF) of the Republic of Korea.

Type of Action	Research and Innovation Action (RIA)
Estimated EU Expenditure	6 M€
Mode	1 stage Call with submission of Full Proposal (FPP)
Publication date	06 Feb 2024
Deadline FPP Phase	14 May 2024 at 17:00 Brussels Time
TRL	The activities must have their centre of gravity at TRL 24 at the end of the project.

Proposal writing

Common Proposal

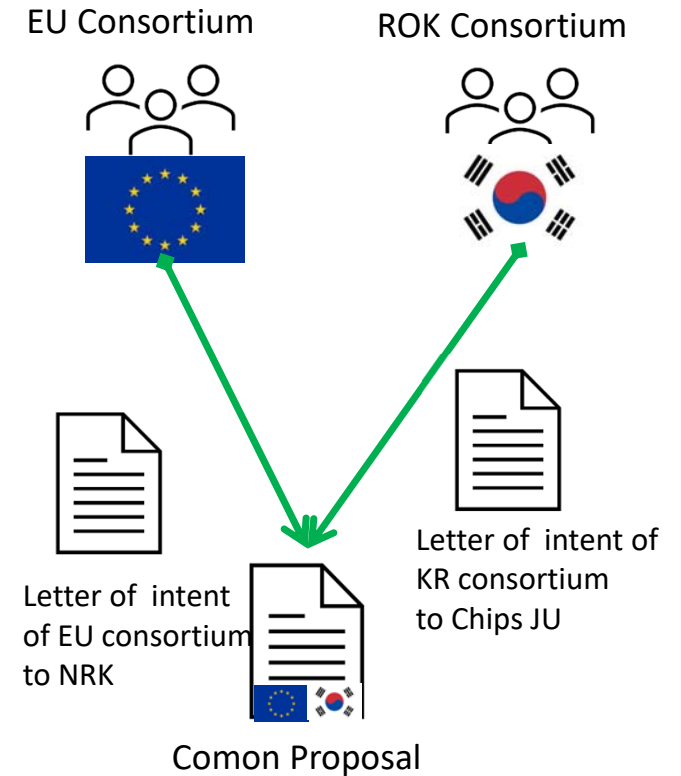
- Must address one of the 3 specific topics
- Fullfill certain conditions
- Full description of the joint action: excellence, impact and quality of implementation
- Must contain all the contribution and interaction between KR and EU partners
- Include 2 letters of intent

HE proposal

- Introduce the EU participants as beneficiaries to the grant
- Introduce the KR participants as third parties
- Cost for the EU participants and requested EU funding (100% of HE eligible cost)
- No cost for the KR participants, and 0 Euro requested funding from EU

NFR proposal

- Similar but according to NRK rules



Topics

1. New materials, process, device, integration and design concepts for **neuromorphic computing systems** supporting very low energy consumption, connectivity and embedded functions for mobile applications.
2. **Alternative manufacturing process technologies for semiconductor chips** including frontend or backend **for heterogeneous integration**. The technologies should sustain in the mid- and long-term the fast paced evolution of device performance, miniaturisation and cost, **while reducing the environmental footprint**. This includes the process of integrating individually produced chip components into a single assembly level, as well as solutions to streamline and improve this process.
3. **Advanced packaging solutions aiming at heterogeneous integration** of multiple functions and materials for **applications in AI, communication** (RF, mmW or THz), **sensing, actuating, power management and active/passive device integration**.

Conditions

Conditions

- Address **research reaching TRL of 4** (technology validated in lab) with high potential **not yet demonstrated** in the design, fabrication process and/or packaging segments of the micro-nanoelectronics or photonics value chain and their related integration technologies
- **Focus innovation** on materials, physical concepts or device architecture building on neuromorphic or integration technologies.
- **Provide a projection of the expected gains and main figures of merit** of the proposed approaches.
- **Multi-disciplinary research activities** should address part of the semiconductor value chain from materials, processes, equipment, metrology, back-end processing to packaging, integration and tests.

Specific Conditions:

- Type of project: **Research and Innovation Action (RIA)** under Horizon Europe programme with a Technology Readiness Level (TRL) from 2 to 4
- Typical **EU contribution to an Action is expected to be EUR 1.5 million for the full duration**. The RoK contribution is expected to be an approximately equal amount.
- **Typical duration: 3 years**
- Eligible applicants are consortia which should present one proposal for undertaking collaborative research
- The proposal describes the work of the whole consortium and the contributions of the individual research groups.

Letter of intent

Letter of intent EU/Korean Consortium

Dear [Mr Kinaret/ MrMs NRF],

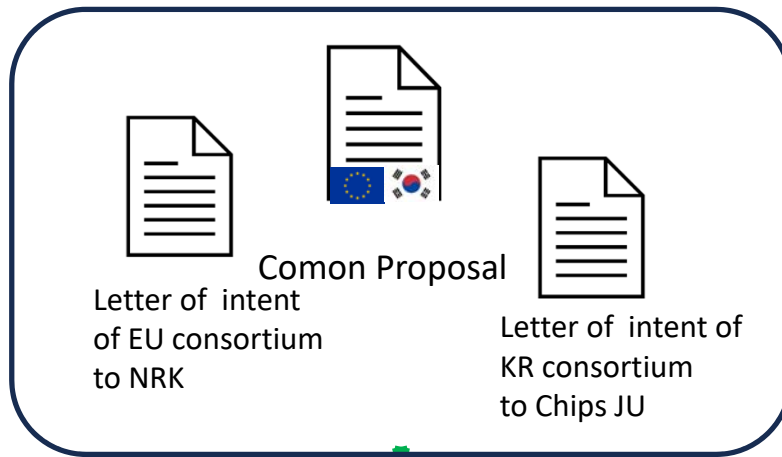
[[Name of the EU Consortium/Korea's Consortium], in representation of [name of the national funding authority]]

Should the proposal of [name of the proposal] be awarded, [name of the EU Consortium/Korean's Consortium] will enter into a 'joint research partnership' for common research goals of the EU-Korean joint consortium.

[please provide further explanation if necessary]

Signature(s) of the authorised representative(s) of the [EU Consortium/Korea's Consortium] representative

Proposal submission



HE submission portal



NRF submission portal



Admissible

- Applications will not be accepted if electronic application is not completed.

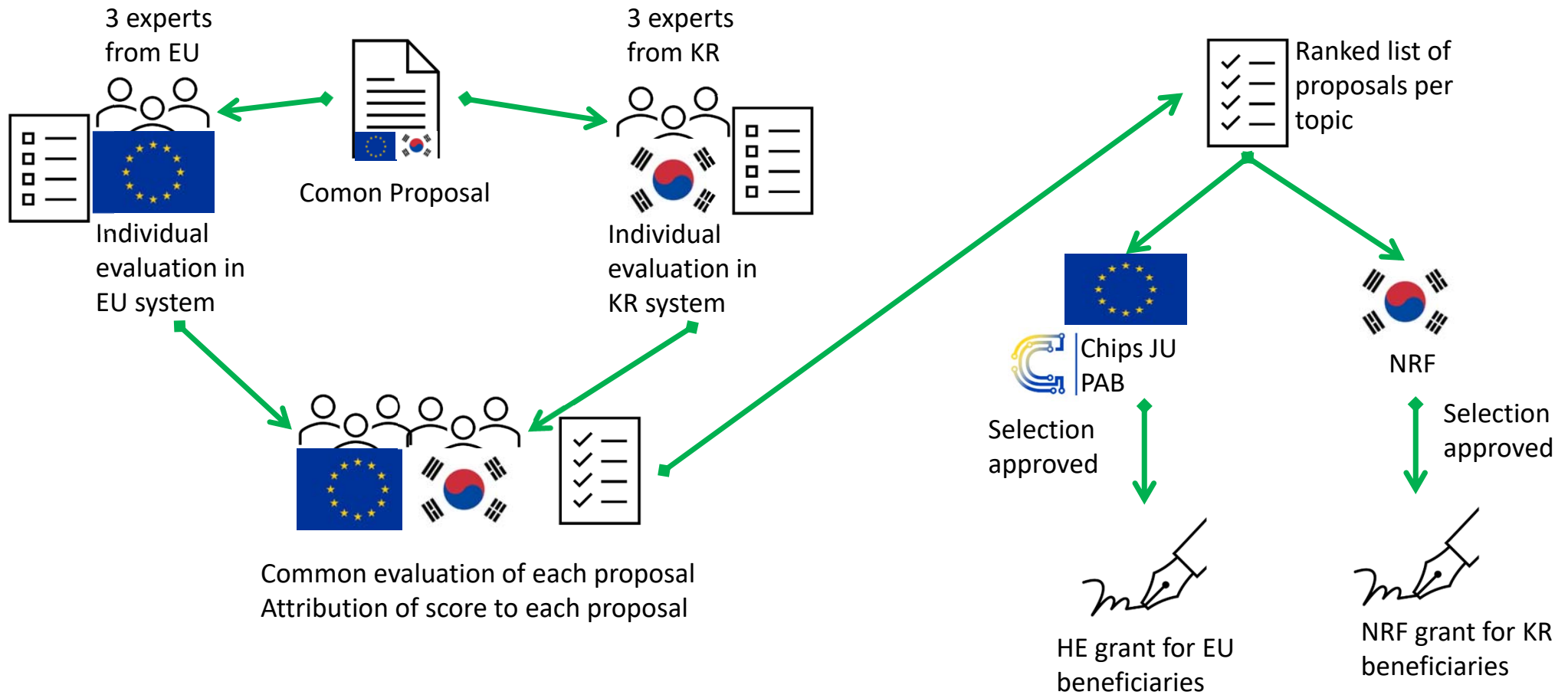
Eligible

- For the EU consortium according to Horizon Europe (HE) rules
 - consortium composition
 - covers topics
- For the Korean consortium according to National Research Foundation (NRF) rules
 - overlaps with national R&D projects

(Page limits)

COMMON SUBMISSION DATE
14 May 2024 at 17:00 Brussels Time

Proposal evaluation and selection



Proposal Submission



SRIA
2024



Work Programme
2023-2027



IA
Proposal Submission



IA
Call Documents



RIA
Proposal Submission



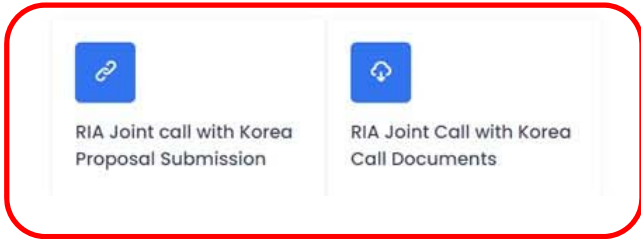
RIA
Call Documents



RIA Joint call with Korea
Proposal Submission



RIA Joint Call with Korea
Call Documents





Read the sections on the calls in the Work Plan

Check regularly our call website under the Chips JU website:

www.chips-ju.europa.eu

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

calls@chips-ju.europa.eu

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