# Annex I: EIT Raw Materials – Call for MineCuON Task Partner’s

selection

|  |
| --- |
| 1. Project information |
| Project name: | 24650-MineCuON- Mining pre-concentration system for copper ores based on XRT and XRF sensors |
| Lead Partner: | KGHM CUPRUM  |
| Project Partners: | Comex Polska Ltd. – technology providerKGHM Cuprum Ltd. R&D Centre – Project LeaderKGHM Polska Miedź S.A.Łukasiewicz Research Network – Institute of Non-Ferrous MetalsThe Central Mining Institute (GiG)Technical University of Košice (TUKE) |

2. Project description

The MineCuON project (TRL4 -TRL6) aims to develop an innovative Cu ore sorting system for enhancing the energy-economic efficiency of the mining and processing operations, including reducing energy consumption for transport and processing, lowering the consumption of flotation reagents, decreasing the quantity and cost of fine-grained waste storage, and minimizing environmental impact. The technology development will eliminate the gangue and low Cu content particles from run-of-mine copper ores at the earliest possible stage of supplying to the concentrators. Different copper ores will be used to conduct a series of tests, including pilot-scale pre-concentration, as well as flotation enrichment. Developed pre-concentration system is projected to reduce ore waste by 15%, energy consumption by 20-30% and CO2 emissions by 20-40%.

The integration of advanced XRT/XRF sensor technology aims to:

1. improve the energy and economic efficiency of mining and processing,
2. reduce energy consumption and flotation reagents,
3. lower the costs of fine-grained waste storage,
4. improve beneficiation feed quality,
5. minimize environmental impact.

One of the key tasks in I2mine was to evaluate the potential of implementation of underground close to-face mineral processing facility and underground ore preconcentration installation. The analyses showed that the most economically effective technologies setups are the one involving preconcentration. However, during the project implementation, a sorting technology capable of meeting the requirements was not developed. The development of sorting technology enabling pre-concentration of ores, including copper ores, was the focus on the X-MINE. Its results indicate that the XRT and XRF imaging technology is not yet ready for implementation and requires further analysis. Data gaps and limitations in the existing approach highlight the need for additional research. To address these challenges, comprehensive data collection from representative Cu ore samples is necessary to refine analytical algorithms and improve the quality and stability of the analysis. Large-scale testing on specific ore samples will be required to validate the technology. Similar conclusions were made during the realization of PRECON project, where the technology was tested on copper and zinc-lead ores. The results showed that the material variability has a great impact on the preconcentration efficiency and thus the technology needs to be further optimized and adapted to ensure stable and reliable performance under varying ore conditions. These additional research and tests as the continuation and development of the previous projects are essential to prepare a robust, targeted solution for the Upscaling Project, where the mine or processing plant will take the lead, as the end solution user. Mining companies see significant potential in a solution that can substantially reduce extraction costs and improve the quality of both the input and final product in the beneficiation process. Building cooperation within the framework of capacity building for enterprises in the RIS region will be the foundation for testing the developed system on a larger scale in subsequent phases of work. The variability of Cu ores stems from the heterogeneous nature of deposits, so testing variability samples enables the calibration of algorithms, ensuring that the MineCuON system remains robust against these fluctuations, regardless of the mining conditions

The MineCuON contributes to the RIS strategy and capacity building in RIS countries by transferring the new technology, by integrating 2 new RIS partners into the EIT RM community, as well as by contributing to the energy efficiency and carbon footprint reduction of mineral processing.

MineCuON is led by KGHM Cuprum Ltd. R&D Centre (Poland) and partnered by the Comex Polska Ltd. (Poland), KGHM Polska Miedź S.A. (Poland), Łukasiewicz Research Network – Institute of Non-Ferrous Metals (Poland), The Central Mining Institute (GiG) (Poland), Technical University of Košice (TUKE) (Slovakia).

The Project consists of 8 Work Packages. Task Partners are expected to be involved in all of the WPs listed below:

WP1 Project Management

WP2 Communication, Dissemination and Market Awareness

WP3 Sampling, Material Characterization, and Sorting Thresholds

WP4 Analytical Studies on Material Classification and Recognition Using XRT and XRF Sensors

WP5 Variability Ore Samples Preparation and Characterization for Pilot Tests with

Process Flow Analysis

WP6 Pilot Sorting Tests

WP7 Pilot Flotation Tests

WP8 Evaluation of the Impact on the Final Technological Process

3. Expected role of RIS Task Partner

The RIS Task Partner will contribute to knowledge dissemination, stakeholder engagement, and the promotion of project results across RIS countries**.**By leveraging its regional expertise and networks, the partner will facilitate the transfer of innovative technologies into practical applications, support local industry participation, and ensure alignment with smart specialization strategies. The RIS Task Partner plays a supporting role in WP1 (coordination), WP7 (dissemination and engagement), and WP8 (integration and evaluation), enhancing the project’s impact in RIS regions and contributing to the overall success of cross-regional collaboration.

* **Comex Polska Sp. z o.o. (Poland)** – Leads WP2 and WP6, focusing on algorithm development and pilot-scale validation. Supports WP1, WP4, and WP8 with strong R&D capabilities and advanced lab infrastructure.
* **Główny Instytut Górnictwa - Państwowy Instytut Badawczy (Poland)** - Leads WP4 (recognition/classification algorithms, efficiency assessment) and contributes to WPs 1, 2, 3, 5, 6, and 8.
* **Łukasiewicz Research Network – Institute of Non-ferrous Metals (IMN, Poland)** - Leads WP5 (flotation pilot testing) and supports WP4, WP7, and project evaluation. Promotes circular economy and resource security.
* **KGHM Cuprum Ltd. Research & Development Centre (Poland)**- Leads WP1 (coordination) and WP8 (integration, evaluation), ensuring technological validation and alignment with industry needs.
* **KGHM Polska Miedź S.A. (Poland)** - Leads WP3 by providing industrial samples, defining sorting parameters, and enabling pilot validation, ensuring real-world applicability of project outcomes.
* **Technical University of Košice (Slovakia)**- Leads WP7 (flotation tests on European ores) and contributes to WP1, WP2, and WP8, enhancing academic collaboration and dissemination, particularly in RIS regions.

##  4. Conditions for financial support

* 1. Maximum amount of financial support for each third party ('recipient')
		1. RIS Task Partner will receive their funding via the Leading Partner KGHM Cuprum Ltd. Research & Development Centre (Poland).
		2. Funding for RIS Task Partner will not exceed 7 500 EUR in this particular action in 2025, 15 000 EUR in 2026 and 4 000 EUR in 2027 (per Task Partner)
		3. Annual funding for RIS Task Partner will not exceed 60,000 EUR across all KAVAs, EIT RM will take care of keeping this maximum amount via the use of internal project management tools.
			1. Criteria for calculating the exact amount of the financial support

Financial support to selected RIS Task Partner will be categorised under Article 6 D1 of the GA, "financial support to third parties" ("grants") and reported based on actual costs.

Financial support to RIS Task Partners will be based on actual costs incurred by the Task Partner while executing their activities/actions in the specific project. The following cost categories will apply:

|  |  |  |
| --- | --- | --- |
| Cost category | Description | Evidence\* |
| Direct Personnel | Actual personnel costs | Time sheets |
| Travel and subsistence | Travel, accommodation costs and applicable per diem in accordance with usual accounting principles of the RIS Task Partner related to participation in Project related activities | Travel & Expense policy Receipts |
| Other direct costs | Other costs incurred in relation to Task Partneractivities in the Project | Receipts |
| Indirect costs | 25% of all direct costsmentioned above | N/A |

\* Further details can be found here: <https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021->2027/common/guidance/aga\_en.pdf

At the reporting time, the Task Partner Patron will report one total sum of actual costs under the cost category "subgranting" together with the list of evidence documents. In addition, on request, the supporting evidence must be provided by the Task Partner, e.g., in case of an audit of the Task Partner Patron.

* + - 1. The different types of activity that qualify for financial support, on the basis of a closed list
				1. Managing raw materials sampling, sample handling for batch and pilot scale tests related to sensor-based sorting validation within the MineCuON Project in RIS country
				2. Providing analitycal data (e.g. chemical, mineralogical, physical) for raw materials sampled
				3. Providing access to copper ore raw materials sites/test sites or pilot-scale facilities, and enabling their use for sampling, data collection in the MineCuON Project
				4. Active participation in Network and Capacity Building Events of the MineCuON Project and supporting the engagement of stakeholders from Task Partner’s country of origin
				5. Participation in Communication and Dissemination Activities of the Project
			2. The persons or categories of persons that will be supported

A RIS Task Partner must belong to the Knowledge Triangle and/or strengthen the Knowledge Triangle Integration approach of EIT RawMaterials. In particular, the Task Partner nee to be an **Industry representative/company active in the field of raw materials**.

* + - 1. Criteria and procedures for giving financial support

*Criteria*

At the time of selecting a RIS Task Partner, the following criteria will be considered:

1. Task Partner must originate from a RIS-eligible country.
2. Task Partner is able to contribute to and maximize the impact of a project coordinated by KGHM Cuprum Ltd. Research & Development Centre (Poland)
3. The selected candidate shall provide the expertise in the raw materials sector as the legal entity with specific knowledge, access to data-set or equipment available in the RIS country of their origin. The expertise is in particular demonstrated by the following:
	1. Capable of managing local raw material sampling, sample handling, and processing for use within the project.
	2. Capable of providing analitycal data (e.g. chemical, mineralogical, physical) for raw materials sampled
	3. Able to provide relevant information and technical input for processing the sampled raw material (copper ore) for batch and pilot-scale flotation tests.
	4. Being the owner of, or having access to, raw material (copper ore) sites, test facilities, or related materials/processes, and enabling their use within the project.
		* *0.5–1.0 tons (in 3 batches) for laboratory testing (2025)*
		* *1–3 tons (in 3 batches) for pilot-scale testing (2026)*
4. Main activity related to the project is performed in the specific RIS country where the Task Partner originates from.
5. A RIS Task Partner be an Industry representative / company active in the field of raw materials.

*Selection process*

Up to Five Task Partners will be selected in total.

In case there are several organisations or persons that qualify for the Tasks to be implemented, applications received will be assessed on the basis of the following scoring grid and according to the pass thresholds for the award criteria indicated below.

For each Type of Activity a rating between 1 (poorly meeting the criteria) and 3 (criteria met by 100%) will be given

Table 1: Scoring Grid

|  |  |  |
| --- | --- | --- |
| Criteria | Pass Threshold | Score(1-3) |
| Organisation capable of managing local raw material sampling, sample handling, and processing for use within the project. | 2 |  |
| Organisation capable of providing analitycal data (e.g. chemical, mineralogical, physical) for raw materials sampled  | 2 |  |
| Organisation able to provide relevant information and technical input for processing the sampled raw materials (copper ore) for batch and pilot-scale flotation tests. | 2 |  |
| Organisation being the owner of, or having access to, raw material (copper ore) sites, test facilities, or related materials/processes, and enabling their use within the project.* *0.5–1.0 tons (in 3 batches) for laboratory testing (2025)*
* *1–3 tons (in 3 batches) for pilot-scale testing (2026)*
 | 2 |  |

Based on the sum of the individual ratings a ranking of organisations will be established.

Up to five top-ranked entities will be approached to become Task Partners. In case any of these potential entities decline the invitation, the next ranked entity (starting with the 6th) will be contacted.

Proposals will be selected on the basis of the evaluation results and the pass thresholds.

Agreements will be signed with selected Task Partners only if EIT approves the Businnes Plan for 2025 and the following years consecutively.

Submission of application / contact details for more information

The Application must be submitted via email:

kajetan.witecki@kghmcuprum.com

The following persons can assist you in case of questions: Kajetan Witecki (Poland)

Tel: +48 887 870 946

Email: kajetan.witecki@kghmcuprum.com

# Annex II: Application Form Template

*This Annex provides indicative information needed for submission of the application that must be done via* <https://webportalapp.com/sp/ris_taskpartnerselection_2022>

|  |
| --- |
| Project details |
| Project name: | 24650- MineCuON- Mining pre-concentration system for copper ores based on XRT and XRF sensors |
| Lead Partner: | KGHM Cuprum Ltd. R&D Centre – Project Leader |
| Project Partners: | Comex Polska Ltd. – technology providerKGHM Polska Miedź S.A.Łukasiewicz Research Network – Institute of Non-Ferrous MetalsThe Central Mining Institute (GiG)Technical University of Košice (TUKE) |

|  |
| --- |
| APPLICANT DETAILS |
| Legal name: | KGHM Cuprum Ltd. R&D Centre |
| Type of organisation: | Research institution |
| Legal address: | ul. gen. W. Sikorskiego 2-8, 53-659 Wrocław, Poland |
| VAT number: | 896 000 17 70 |
| Contact person: | Witecki Kajetan |
| Contact person email: | Kajetan.Witecki@kghmcuprum.com |
| Contact person phone number: | 71 78 12 464 |

|  |
| --- |
| APPLICANT EXPERTISE |
| **Please answer YES or NO to the following statements regarding your expertise:** |
| My organisation is capable of managing local raw material sampling, sample handling, and processing for use within the project. | Please tick relevant areas: Local raw materials sampling Sample handling |
| My Organisation is capable of providing analitycal data (e.g. chemical, mineralogical, physical) for raw materials sampled | YESNOPlease specify tape of data that will be provided. |
| My Organisation is able to provide relevant information and technical input for processing the sampled raw materials for batch and pilot-scale flotation tests. | YESNOPlease specify tape of data that will be provided. |
| My Organisation being the owner of, or having access to, copper ore raw material sites, test facilities, or related materials/processes, and enabling their use within the project.* *0.5–1.0 tons (in 3 batches) for laboratory testing (2025)*
* *1–3 tons (in 3 batches) for pilot-scale testing (2026)*
 | YESNO |
| Other relevant expertise | Please specify |

|  |
| --- |
| REQUIRED FUNDING: |
| YEAR | Year 1 | Year 2 | Year 3 | TOTAL |
| Requested KIC Contribution [€] | 416'526 € | 858'842 € | 424'094 € | 1'699'462 € |
| Partners Co-Funding [€] | 46'286 € | 146'494 € | 100'485 € | 293'265 € |