

RAMSIS - Raw Materials Smart Innovation Strategies in the ESEE Region

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The idea for RAMSIS originated at EIT RIS ESEE (Regional Innovation Scheme for East- and South East Europe) at Montanuniversitaet Leoben, Austria, in cooperation with the network partners, University of Zagreb, Croatia, AGH, Poland, University of Belgrade, Serbia, TUKE, Slovakia and the University of Miskolc, Hungary, on the **basis of long-standing connections and cooperation** on the raw materials sector.

EIT RIS ESEE is the Regional outreach post for the South-Eastern European Region of the EU Knowledge and Innovation Community on Raw Materials (www.eitrawmaterials.eu), which aims at facilitating their partner in Central Europe with a **Europe-wide access to research networks** in the field of raw materials, **influence the content of R&D programs** and aims at providing graduates with **access to the industry**. The EIT RawMaterials preparatory phase started in 2014 and the community went into full operational mode on January 1, 2016. Within the EIT RawMaterials partners are grouped together into 6 Co-Location Centers and RIS ESEE is the outreach post to the East and South-East European Region. Participation in the EIT RawMaterials network is possible on numerous levels, as core, associated, or task partner and Montanuniversitaet Leoben, AGH Cracow and the University of Zagreb are all partners of the EIT RawMaterials.

Actions on the EIT RawMaterials Level are all based on the **Knowledge Triangle – Business, Research & Technology and Higher Education**. Within these three areas, and of course also



interloping, partners in the EIT RawMaterials have the opportunity to react to calls, work on projects and make use of synergies. A crucial factor within the planning of the EIT RawMaterials was the focus on the integrated aspects of the value-added chain and the joint development of new

and innovative business cooperation, research & technology as well as higher education cooperation.

The ESEE region is of particular interest to the EIT RawMaterials due to its **unique geographical location** and **potential on primary secondary raw materials**, which makes it highly relevant with regard to the **European Raw Materials Strategy**. Both from an economic (security of supply, economic value, employment) as well as from a political point of view (cohesion, regional development, “Candidate Countries” and “Potential Candidates”) the region bears vast potential.

The ESEE Strategy aims at **forming a community of industry, research and universities** and at bringing together good ideas with good partners to develop joint industrial projects from primary and secondary resources to create added value. The strategy further aims at bridging the gap between high potentials and industrial activities in the region by developing research and innovation. One can see that it will be of utmost importance for future sustainability of the sector for the Central European market to step up as a united global player, to show its assets and contribute to the worldwide development of the sector. The strategy's goal is to design **excellent education on Raw Materials**, and for that, we have **selected CEEPUS as our partner of choice**. The possibilities of long and short term mobility for students, teaching staff mobility as well as mobility for excursions present themselves as the perfect opportunity.

The CEEPUS strategy of connection within Central Europe follows the same philosophy of the integration of Central European partners into the education and research community by enabling the **exchange of knowledge, expertise and innovation** through the mobility of students on all levels, as well as through teaching staff mobility. By proposing a **broad, yet precisely defined thematic network** we believe that we will contribute to strengthen academic ties in the Raw Materials Sector across Central Europe.

One of RIC ESEE's main tasks is **bringing the ESEE Region to the EIT RawMaterials and the EIT RawMaterials to the ESEE Region** and we believe that this strategy, as accentuation of the overall EIT RawMaterials sector, will allow the Central European Partners to participate in European Projects and funding schemes through RIC ESEE. Mobility of academics aims at the result of cooperation projects along the lines of the *Knowledge Triangle* will lead to the **re-establishment of the ESEE region as confident industrial, research and academic player** in the Raw Materials sector.

In our first year of RAMSIS we are applying for the network from six partner countries and six Higher Education Institutions, but among them numerous faculties. Due to the **multidisciplinary background** of all partner institutions involved in the value-added raw materials chain, we believe it is of utmost importance that a **multitude of faculties** is represented in the network. Montanuniversitaet Leoben is the only partner where all participating faculties are coordinated through one unit, RIC ESEE. As coordination with different faculties can be challenging we opted to start out with fewer countries in order to make sure we can fulfill our mobility goals in 2016/17 and to then **build on expanding the network** in for future submissions, should we be granted funding.

An important aspect of our program are the **silent partners** involved (currently 24). As pointed out, the three sides of the *Knowledge Triangle* are always represented in our activities and we believe that our student as well as faculty should be **working together closely with the industry**. Silent partners were not asked for a financial contribution as their function will be in advisory roles for projects, but also for student internships. All silent partners are partners with whom the network partners have collaborated in the past and as such CEEPUS offers an institutionalization of these contacts.

RAMSIS mobility will include regular **student mobility** (on all levels) between the PPU as well as **teaching staff mobility**. Teaching staff mobility may be inter-lapping between the various faculties involved in the network at one institution of higher education, but the host PPU will be the one closer to the original field of expertise of the candidate. The spanning of bridge and thus the creation of sustainable cooperation is at the backbone of these mobility actions. Thematic **short term excursions** are planned covering all the raw material value chains from exploration, mining, processing and metallurgy. Participants for each of these excursions are students (approximately 2 students per PPU/excursion for 7 days) from the network universities and at least one lecturer. As these excursions are not at the host universities, but planned by them and go out in the field, it will be necessary to also allocate funds in order to fund students from the organizing PPU. Each excursion is planned to cover two partner countries, in this way geological situation, best available and applied technology of raw material exploitation and processing are going to be displayed for both students and also for lecturers who has benefit from the course as well. In the first phase the countries will be Hungary (Miskolc, FSE) and Slovakia (Košice, BERG). A further initiative which we aim for within the network, are **short courses and summer schools**. We believe that these will allow for specialized groups of students to gain insight into specific topics in unique learning environments. The constant contact with other students and lecturers will stimulate academic dialogue and lead to closer scientific ties between the partner institutions. A first project will be the Dubrovnik International ESEE Mining School, which is in planning between Montanuniversitaet Leoben and the University of Zagreb as main partners and will involve students from the other PPUs.

With regard to the implementation of **Joint Programs**, the PPUs of RAMSIS aim at collaborating on this level as well. Some partners are already actively involved in joint activities, Cracow and Leoben are, for instance, currently preparing an ERASMUS Mundus Joint Master Degree proposal for submission in 2017. The general trend at all PPUs is to work on the implementation of the legal framework of Joint. The RAMSIS partners believe that the network could benefit the further development and expansion of these efforts. Enhanced contact between faculty and students of all PPUs will set the ground work for future joint programs.

What do we want to achieve with our network?

- Institutionalization of higher education cooperation on the Raw Materials Sector in Central Europe
- Connecting the three sides of the *Knowledge Triangle* – Higher Education-Research-Business
- Provide Smart Innovation Strategies on the Raw Materials sector in Central Europe Spanning the value-added chain from raw material to final product
- Bringing the ESEE Region to the EIT RawMaterials and the EIT RawMaterials to the ESEE Region
- Re-establishment of the ESEE region as confident industrial, research and academic player