



Project Activity



Save the date for the 2nd Innovation Network Workshop

CRM_InnoNet are delighted to announce the second workshop in the field of substitution of critical raw materials. Special focus will be given to strategic sectors such as Energy, Transport and ICT with the presence of key speakers as well as participatory activities.

The event is open to all stakeholders who are involved in the whole value chain of Critical Raw Materials and willing to exchange ideas and visions for enhancing the competitiveness of the EU R&D&I, industry and economy in the area of substitution of Critical Raw Materials.

The Workshop will take place on 14 May 2014 at the Diamant Conference & Business Centre - 80 Bd. A. Reyers LN - 1030 Brussels. Registration is open [now](#) open.

to address the research and innovation challenges and contribute to a secure, stable and profitable supply of raw materials for European industry.

The event was attended by over 50 people from seven European countries. Presentations and pitches can be viewed [here](#). Networking continues online [here](#): Why not propose a project idea or pitch your capabilities?

Close-up on VTT

VTT Technical Research Centre of Finland is a big multitechnological applied research organisation with about 2.900 employees. VTT's primary role is to carry out technological research and development in close interaction with industry. It also has active role in formulation of Finland's technology, industrial and energy policies.

Covering a broad range of technologies, VTT has a broad experience on the development of inorganic and biobased materials, as well as on the significant application areas of critical raw materials (CRM): renewable energies, ICT and electronics, transport, machine industry and construction. The research topics also include primary production and recycling of raw materials.

VTT leads Work Package 4, where a supply chain analysis of CRM containing applications is carried out on three sectors: Energy, ICT and electronics, and Transport. The aim is to understand better the relevance of applications for the European economy, covering economic and strategic relevance and vulnerability aspects. The output of this work package will be used in the prioritisation of applications for substitution roadmap exercise, which is the next step of the project. The two other key partners involved in the WP are [CEA](#) leading the analysis of energy sector and [SP](#) leading the analysis of transport sector.

Upcoming Events

- **February 21st, 2014:**
[Critical Rare Earth Materials Meeting](#)
- **April 9th-11th, 2014:**
[Industrial Technologies 2014](#)
- **May 14th, 2014:**
[2nd Innovation Network Workshop](#)
- **May 26th-30th, 2014:**
[E-MRS 2014 Spring Meeting](#)
- **May, 2014:**
[Europe in Motion – EMRS](#)
- **June 18th-19th, 2014:**
[Waste Not, Want Not – RSC](#)

European Industry and Academia network to address the raw materials challenge

A networking event, supported by CRM_InnoNet, was recently held in London to stimulate collaborations to address the raw materials challenge. Anne Auffret (European Commission Policy Officer for Raw Materials) detailed the activities of the [European Innovation Partnership for Raw Materials](#), which aims to consolidate and focus activities relating to securing supply of raw materials for Europe.

Horizon2020 will fund multiple projects on raw materials, including projects to substitute [materials in electronic devices](#) and [materials under extreme conditions](#).

Delegates were able to 'pitch' their project idea, followed by open networking to facilitate collaboration building. It is hoped that contacts made in London will develop into multinational, multidisciplinary collaborations

General enquiries and comments? Email CRM@CIKTN.co.uk or find us on [Twitter @CRM_InnoNet](#)



How important are CRM applications to the European economy? Two supply chain reports on Energy and ICT and Electronics give you the answer.

CRM_InnoNet has published two supply chain analysis reports assessing the importance of CRM dependent applications to the European economy: Analysis of [Energy Sector](#) and Analysis of [ICT and Electronics sector](#). In both reports the assessment focuses on selected economically relevant applications. The role of Europe in the supply chain, the dependence on critical raw materials and strategic importance for Europe are discussed for each application. As a result, a better sense of potential CRM supply risk to European industry will be achieved. This in turn will help to identify those areas where substitution may be one of the options to mitigate these risks. Both reports can be downloaded from the [CRM_InnoNet website](#).

The analysis was made using a uniform two-phase methodology: 1) screening based on the value of European production of the application and presence of CRMs in the application, and 2) actual supply chain analysis of the applications selected in the screening phase. The summary of European presence in the value chains of the selected ICT sector applications is presented below. From the table it can be seen that the European production is mainly focused on the end applications. Also production of electronic components is still quite strong in Europe.

In the energy sector wind power, PV and battery technologies were selected for a more detailed assessment. The focus was in CRM containing technology alternatives. It appeared that that exposure of EU wind power industry to potential CRM issues is significant. Battery technology may also be a risk, despite the relatively limited EU presence in the domain, but relating to the huge future potentials of Li-ion technologies for transportation.

Supply chain	Application/Component/Material	MRI	LED	Optical fibre	Display and screens	Washing machines	
End product	MRI	Green					
	LED lighting		Green				
	Optical fibre			Green			
	Display and screens				Green		
	Washing machine					Green	
Component	Display	Green			Green		
	Electric motor	Orange				Orange	
Sub-component	Electrical circuit	Green			Green	Green	
	Transistors	Orange	Orange		Orange	Orange	
	Capacitors	Orange	Orange		Orange	Orange	
	Resistors	Orange	Orange		Orange	Orange	
	Bare printed circuit board	Green	Green		Green	Green	
	Connectors	Green	Green		Green	Green	
	Permanent magnet	Red			Red	Red	
	Conducting electrodes (ITO)	Orange			Orange		
	Fluorescent tubes	Orange			Orange		
	Semiconductor light-emitting diodes (LED)	Red	Red		Red		
Material	Compounds of rare earth metals	Orange	Orange		Orange	Orange	
	Tantalum	Red	Red		Red	Red	
	Beryllium, gallium, germanium, indium and niobium	Orange		Orange	Orange	Orange	
	Platinum group metals	Orange			Orange	Orange	
	Production in EU and rather good position in global production in EU (the sector in which application/component/material manufacturer belong to)						
	Some production in EU, however main production outside EU (the sector in which application/component/material manufacturer belong to)						
	Not much production in EU (the sector in which application/component/material manufacturer belong to)						

CRM_InnoNet goes to Athens for Industrial Technologies 2014

CRM_InnoNet will host a booth at Industrial Technologies 2014 in April in Athens and has plenty to showcase: a comprehensive bottom-up and top-down mapping of critical raw materials usage in Europe has just been completed and it is now embarking on writing the roadmaps for substitution of critical raw materials in Europe.

Get involved!

Share your expertise and knowledge about substitution of critical raw materials with the Innovation Network of CRM_InnoNet at www.criticalrawmaterials.eu.

