



# Applications, Environmental & Industrial Challenges: How to Improve Public Perception of the CRMs?

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Raw Materials Week, “CRMs in our everyday life”- Session II



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**#crm2018**



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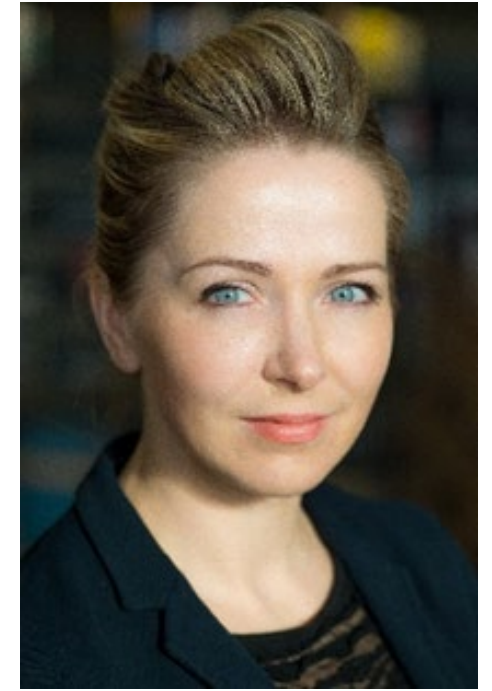
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# Cruise around in a cleaner car



Thanks to the platinum group metals (platinum, rhodium and palladium) found in the catalytic converter, this car emits less toxic gases. The catalytic converter has a redox catalyst made from cobalt, and offers 27 low volatility additives, as defined by the European Commission. Half of the work to make these additives is the Democratic Republic of the Congo (DRC). After the different extraction and purification processes, these 27 metal raw materials can be used to equip cars on the continent and in the rest of the world. Hence, Europe is committed to respect and comply with the 17 UN Sustainable Development Goals set for 2030 to ensure "universal prosperity for present and future".

[www.screen.eu](http://www.screen.eu)



The European Commission has selected the SCREEN project as a pilot project for the Horizon Europe programme.

Follow the campaign on Twitter!  
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# Explore the Earth's wealth



Development of the new critical raw materials is a key challenge for Europe. The SCREEN project is a pilot project for the Horizon Europe programme.

**Magnesium, terbium, silicon** various minerals are essential for the production of 27 critical raw materials. As demand booms, the reserves are declining. Since 2011, the European Commission has been committed to make Europe self-sufficient in critical raw materials. There are 27 materials listed today. On the global scale, there is a high competition between major countries which produce them. In the EU production, rare metals, for example, China supplies 90% of rare earth elements - a group of 17 critical raw materials. GPs of beryllium, a key component of alloys and additives, is essential in the USA. Hence, the export restrictions imposed by some countries (China, Argentina, Indonesia, ...) Europe will be in respect of the national public needs concerning the 27 materials. Encouraging Europe encourages dialogue but can't keep a competition with the World Trade Organization (WTO) as well as case 1/2012 against China.

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# Smarter mobile phones



Smartphones possess multiple features that would not exist without critical raw materials. For example, Indium enables your smartphone to be so thin. The performance of the touchscreen and multigrip relies on mixtures of iron, cerium and neodymium. Tantalum and silicon are the perfect allies for electronic chips. The lithium (magnesium alloy) or plastic are used in your device to make rechargeable battery made of 3000 grams of cobalt. With so many critical raw materials used worldwide since 2007, the reserves on these raw materials are declining. Since 2011, the European Commission has been publishing a list of 27 critical raw materials, currently the 27. To better protect these resources, the EU H2020 project - SCREEN - encourages Europe to improve the distribution and recycling of these raw materials. The main objective is to develop and promote European policies on a global scale.

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# Creating tomorrow's jobs

As part of the one by one digital transition, critical raw materials top count could double growth opportunities for Europe. Moreover, the mining industry, electronics, renewables, new digital and transport sectors, as well as health, energy, robotics, IT applications, researchers will be needed and millions of tomorrow's jobs a result to be created. With a list of 27 critical raw materials, each covered by a research objective, the next research sectors in which skills are needed are: policy must be carried out at a top level. Indeed, excellent skills are becoming scarce and could even lead to labour shortages in particular in the energy and metal supply fields. To address this gap, we are organising the "Raw Materials University Days" every year in Belgium, Romania, during which lectures, conferences and exhibitions take place. The next Raw Materials University Day will be held in Warsaw (Poland) on 14 June 2018.

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The support of the new critical raw materials knowledge campaign is financed by ERDF/ERDF, a European project which has reached funding from the Horizon 2020 research and innovation programme.

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# Cooling off by the water

Your pool float is most likely made of Bauxite (aluminium), more commonly known as the rubber tree. It can be found in many countries and is highly durable, easy to clean and resistant to the sun. The aluminium sector mainly uses the main factories for cars, trucks and aircrafts, as it is more resistant than any other material derived from petroleum. Rubber is primarily produced in Thailand (10%), India and Indonesia (20%) by small producers and is a very scarce resource. The steel needed to make the Amazon rainforest, a highly concentrated production coupled with stressed ecosystems and a global perspective, the steel industry 40 years ago and the European Commission is focused on developing the 27 critical raw materials. To anticipate possible shortages, Europe has created the "European Union Raw Materials Knowledge Base" to bring together and coordinate stakeholders, to share, build and disseminate information on these resources.

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# Fly in complete safety

In order to improve aviation, critical raw materials allow for the design of safer, knowledge materials that are also lighter and less polluting. In engines, control, tankium and tungsten are used for their heat and corrosion resistance. Magnesium-based superalloys can be found in the cabin. Devoted for being lightweight, they reduce fuel consumption. In the cockpit, the aluminium, light, maintenance and seat assembly systems. Based on the aluminium, titanium, niobium and yttrium. Therefore, copper, boron, vanadium, 27 of these raw materials have been classified as critical by the European Commission. In order to anticipate possible shortages, Europe has created the "European Union Raw Materials Knowledge Base" to bring together and coordinate stakeholders, to share, build and disseminate information on these resources.

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**Is the public perception of the importance of CRMs becoming stronger?**

**What arguments do you use to convince your professional partners of the importance of CRMs?**



**What new solutions do you suggest  
to strengthen the public perception  
of the importance of CRMs?**

# Q&A

# Thank you!

## Get in touch for more information!



All of the reports produced in the project will be available for download on the SCRREEN website.



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