



SCRREEN

Coordination and Support Action (CSA)

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 730227.

Start date : 2016-11-01 Duration : 38 Months
www.screen.eu

Report on engagement with the general public and recommendations for future actions

Authors : Mrs. Chloe CHAVARDES (LGI)

SCRREEN - Contract Number: 730227

Project officer: Jonas Hedberg

Document title	Report on engagement with the general public and recommendations for future actions
Author(s)	Mrs. Chloe CHAVARDES
Number of pages	25
Document type	Deliverable
Work Package	WP10
Document number	D10.8
Issued by	LGI
Date of completion	2019-10-24 13:37:10
Dissemination level	Public

Summary

Report on engagement with the general public and recommendations for future actions

Approval

Date	By
2019-10-24 15:20:18	Dr. Marco DE LA FELD (ENCO)
2019-11-07 09:28:01	Mr. Stéphane BOURG (CEA)



SCRREEN

Coordination and Support Action (CSA)

This project has received funding from the European
Union's Horizon 2020 research and innovation programme
under grant agreement No 730227.

Start date: 2016-12-01 Duration: 30 Months

www.scrreen.eu

This project has received funding from the European Union's Horizon 2020 research and innovation
programme under grant agreement No 730227

Table of Content

Executive summary	5
Introduction	6
Development & monitoring of the awareness campaign	6
Recommendations	12
Visuals from the Superpowers of Critical Raw Materials Online Awareness Campaign	14

Index of Tables

Aucune entrée de table d'illustration n'a été trouvée.

Index of Figures

Figure 1: SCRREEN Awareness Campaign Banner 1	7
Figure 2: SCRREEN Awareness Campaign Banner 2	7
Figure 3: SCRREEN Awareness Campaign Banner 3	8
Figure 4: SCRREEN Awareness Campaign Banner 4	8
Figure 5: Google Analytics of SCRREEN website	9
Figure 6: Twitter Analytics of SCRREEN messages (February 2018 – May 2018).....	10
Figure 7: Twitter Analytics of SCRREEN messages (May 2018 – July 2018)	10
Figure 8: Twitter Analytics of SCRREEN messages (July 2018 - October 2018).....	11
Figure 9: Twitter Analytics of SCRREEN messages (October 2018 - January 2019)	11
Figure 10: Twitter Analytics of SCRREEN messages (January 2019 - May 2019).....	12
Figure 11: Twitter Analytics of SCRREEN messages (May 2019 - June 2019).....	12
Figure 12: 1 st visual: Cruise around in a cleaner car.....	15
Figure 13: 2 nd Visual : Explore the Earth's wealth	15
Figure 14: 3rd Visual: Smarter mobile phones.....	16
Figure 15: 4th Visual: Jobs of the future	17
Figure 16: 5th Visual: Rubber	18
Figure 17: 6th Visual: Fly in complete safety	19
Figure 18: 7th Visual: Europe's promising resources	20

This project has received funding from the European Union's Horizon 2020 research and innovation
programme under grant agreement No 730227

Figure 19: 8th Visual: Resource efficiency in medicine.....	21
Figure 20: 9th Visual: Better recycling of e-waste	22
Figure 21: 10th Visual: Ensuring productivity in agriculture	23
Figure 22: 11th Visual: Preventing potential shortages	24
Figure 23: 12th Visual: Tamper-proof banknotes	25

History of changes

Version	Author	Date	Comments
0.1	LGI	08.07.2019	
0.2			

EXECUTIVE SUMMARY

This report focuses on the implementation of the dissemination activities undertaken as part of the SCRREEN H2020 project particularly the online awareness campaign. It is composed of two main parts: the first provides a recap of the online critical raw materials awareness campaign – its reception by the general public via social media and the level of engagement garnered; the second part provides recommendations that could serve to promote the importance of critical raw materials in the future.

The Superpowers of Critical Raw Materials awareness campaign produced 12 interesting visuals and ran from March 2018 to June 2019. This campaign was geared towards informing and educating the European public on the challenges linked to the 27 raw materials classified as ‘critical’ by the European Commission.

INTRODUCTION

The importance of critical raw materials (CRMs) in the European Union cannot be understated. True to this, securing reliable and unhindered access to raw materials is important for the EU. Thus, it is in line that this online campaign is targeted at the general public to raise awareness on their importance in our daily lives, and better help them understand why these materials are deemed critical for the EU.

Through 12 visuals, The Superpowers of New Critical Raw Materials campaign shed light on the different forms which critical raw materials take in our day-to-day life. CRMs are raw materials which have economic importance and are subject to possible scarcity. Their exploitation often leads to environmental, economic and geopolitical challenges which the campaign will inform by shedding light on the different initiatives led by Europe to address them.

Engaging the public on critical raw materials meant that they could realise the wide range of opportunities that we can access due to the availability and use of critical raw materials. Cars, wind turbines, solar panels and smartphones... ‘critical’ raw materials (CRMs) are used in all the technologies that are essential for the energy and digital transition.

At the start of the campaign, it was planned that a new visual will be published and promoted monthly via the SCRREEN website and Twitter account [@SCRREEN_EU](#) however this was modified to take summer months into consideration. To ensure the maximum reach of this campaign, visuals and short informative messages were made available in 6 languages - French, English, Spanish, German, Italian and Portuguese.

The translation of each visual in English, French and Spanish was carried out in-house by LGI, within the consortium in German by KTN and Italian by ENCO and also in collaboration with FCT – Fundação para a Ciência e a Tecnologia for the Portuguese translations.

Each visual had a thematic focus that ranged from objects popular in our daily lives like cars or even sectors that are essential to our survival like agriculture, however, the constant factor that ran through all the 12 visuals developed remained the importance of critical raw materials. Platinum group metals, cobalt, tantalum and many other materials classified as ‘critical’ were highlighted for being crucial to the development of machinery and devices that are now completely integral to facilitating our daily lives.

DEVELOPMENT & MONITORING OF THE AWARENESS CAMPAIGN

In line with the Strategic Implementation Plan of the EIP on Raw Materials, the general awareness actions that have been being carried out within the SCRREEN project aimed to generate acceptance and open the path to building trust towards the sector, through improved communication and transparency. The SCRREEN awareness campaign was a fundamental part of the project. To ensure that we developed the right messages and communicated as clearly as possible, we established a process of development, validation, translation and then publication for each visual.

To kick off the campaign, we shared four main ‘teaser’ social banners via social media and other online channels mainly to arouse widespread attention and build excitement about the campaign. The campaign had several communication channels although the main ones were the SCRREEN dedicated website, Twitter account and the newsletter. However the project partners also played a pivotal role in boosting the reach of

This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 730227

the campaign as they often re-published the visuals through the communication channels of their respective organisations.

The main messages developed for each visual in this campaign were well-rounded so that they could remain useful and relevant long after its official end. Each visual was also accompanied by a modified version to facilitate sharing and use on social media. The teasers can be found below:



Figure 1: SCRREEN Awareness Campaign Banner 1

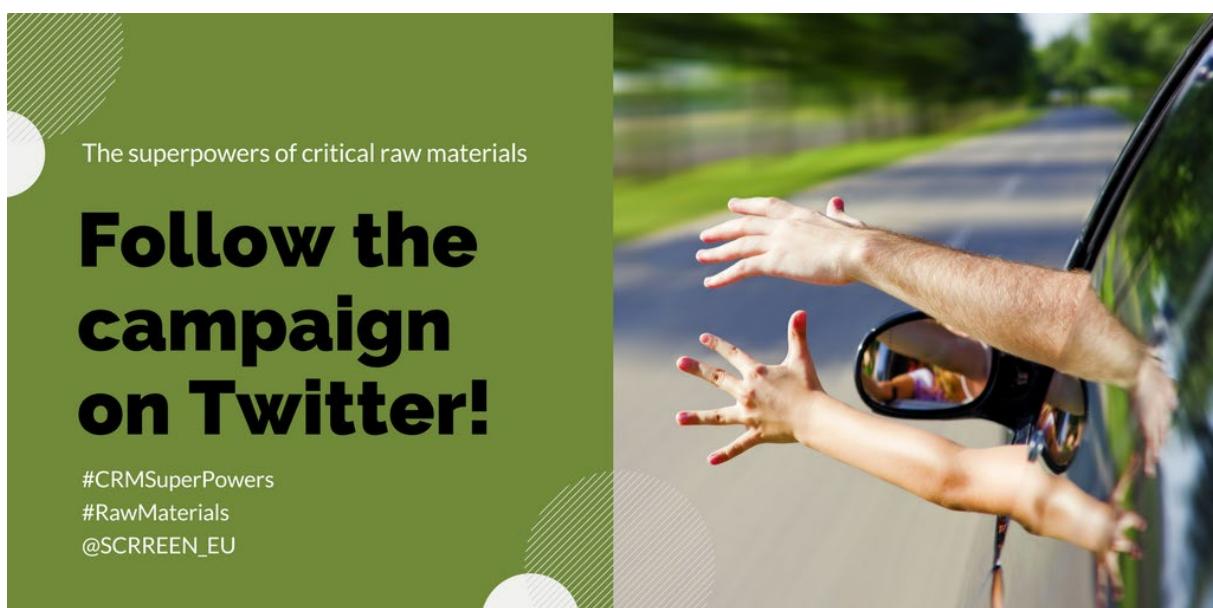


Figure 2: SCRREEN Awareness Campaign Banner 2

This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 730227



Figure 3: SCRREEN Awareness Campaign Banner 3



Figure 4: SCRREEN Awareness Campaign Banner 4

A press release was made available in five languages (English, French, German, Spanish and Italian) spoken across Europe to promote the significance of the awareness campaign. These can be found on the SCRREEN website here: <http://scrreen.eu/press-releases/>

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 730227

We will now proceed to assess the engagement level garnered by each of the campaign visuals across the communication channels that were used. The page dedicated to the [awareness campaign](#) has racked up approximately 1000 views and currently ranks in the top 5 most visited pages on the SCRREEN website.

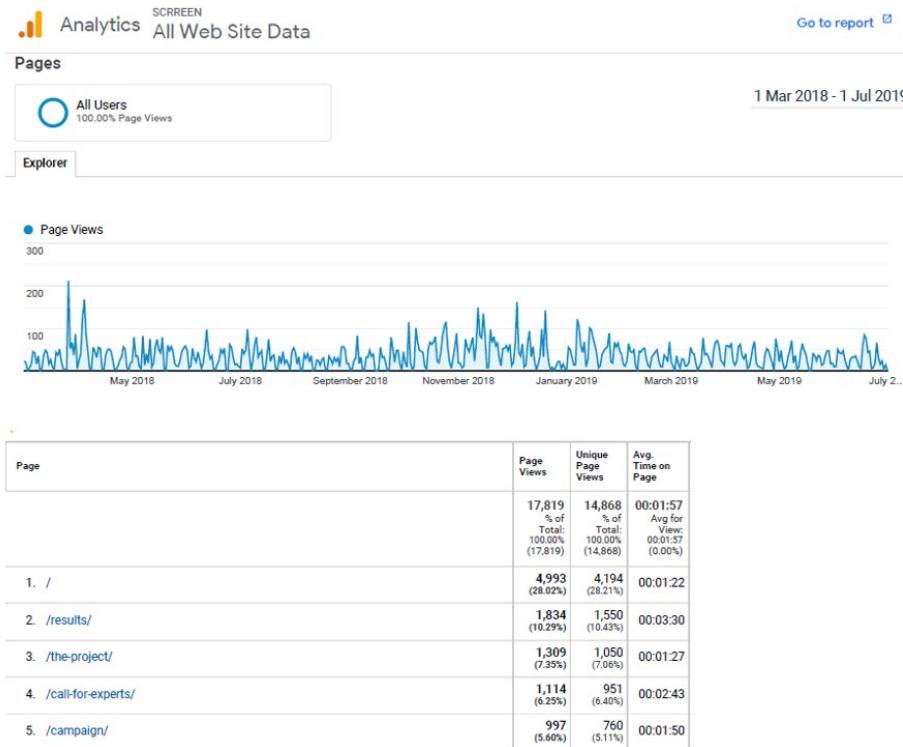


Figure 5: Google Analytics of SCRREEN website

The first round of messages pushed on Twitter was very well received with over 52,000 views within the first three months. During the whole campaign, there was a consistency in the number of views generated. For every 3-month, views ranged from 27,200 (lowest) to 52,300 (peak) making the average number of monthly views had an average of approximately 12,000 views per month.

The statistics from the Google Analytics of the dedicated SCRREEN website and the Twitter Analytics of the messages pushed on the SCRREEN Twitter account clearly show the reach that the campaign has had within the last 17 months. The SCRREEN website served as a repository for the campaign as the visuals remain accessible to all interested parties, however using Twitter as the main platform to push the Superpowers of Critical Raw Materials campaign has doubled, tripled and even quadrupled the reach that was achieved via the dedicated website.

The importance of social media cannot be understated for sensibilisation and awareness campaigns such as these. A key part of the messages pushed was the dedicated hashtags which were incorporated when third-party accounts shared visuals from the campaign. These hashtags served to strengthen the visibility of the campaign while also making it easy for interested parties to follow the visuals published as part of the campaign. By following [#SuperpowersofCRMs](#), [#CRMsuperpowers](#), #CRMs and [#criticalrawmaterials](#), interested users can view the messages that included these hashtags.

All through the period of the online awareness campaign, there were several notable interactions with the visuals and key messages through retweets and likes from several H2020 projects in the raw materials

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 730227

community such as ProSUMPoject, SMARTGround, ORAMA_EU Repromag amongst others. Other bodies that also consistently engaged with the visuals also include Decarb Europe, CORDIS and EIT Raw Materials amongst others. Projects partners who were active on Twitter also played a key role in ensuring that the platform for the campaign messages were appropriately maximised.

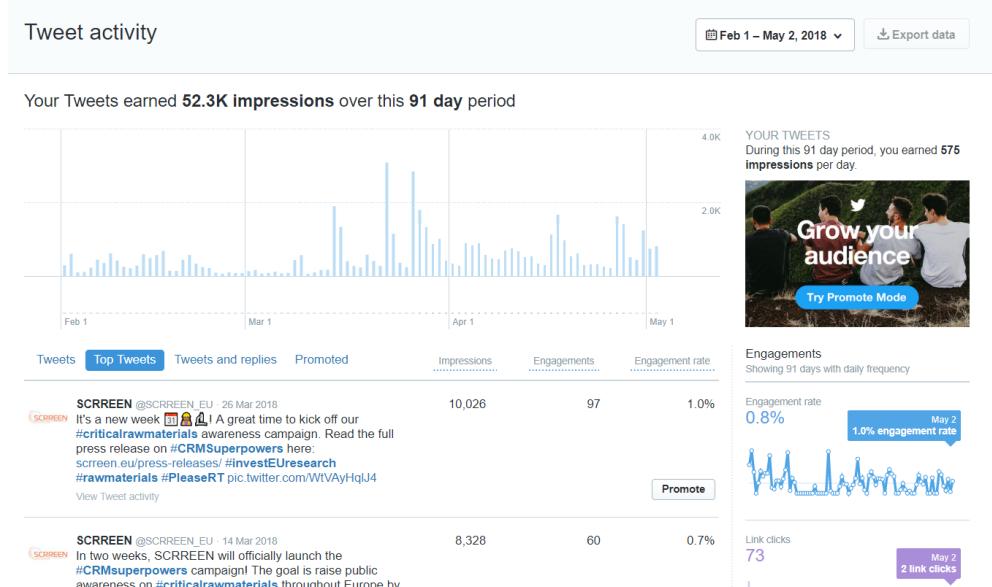


Figure 6: Twitter Analytics of SCRREEN messages (February 2018 – May 2018)

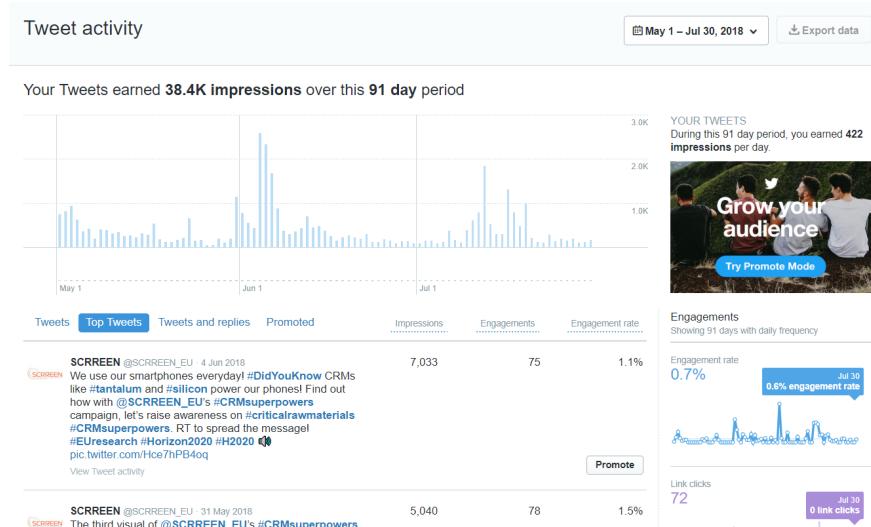


Figure 7: Twitter Analytics of SCRREEN messages (May 2018 – July 2018)

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 730227



Tweet activity

Jul 31 – Oct 29, 2018 Export data

Your Tweets earned **30.8K impressions** over this **91 day** period

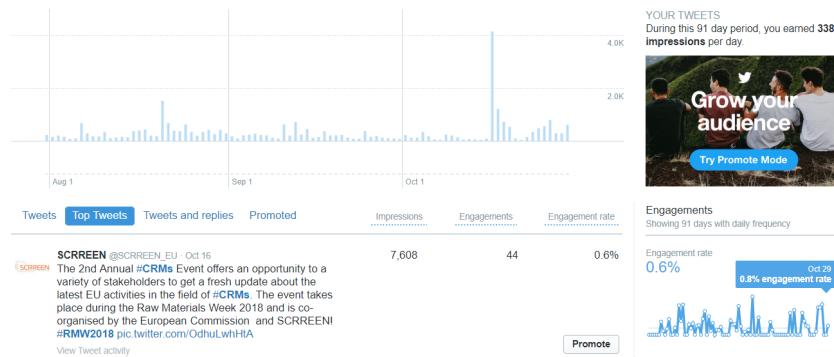


Figure 8: Twitter Analytics of SCRREEN messages (July 2018 - October 2018)

Tweet activity

Oct 30, 2018 – Jan 29, 2019 Export data

Your Tweets earned **28.2K impressions** over this **92 day** period

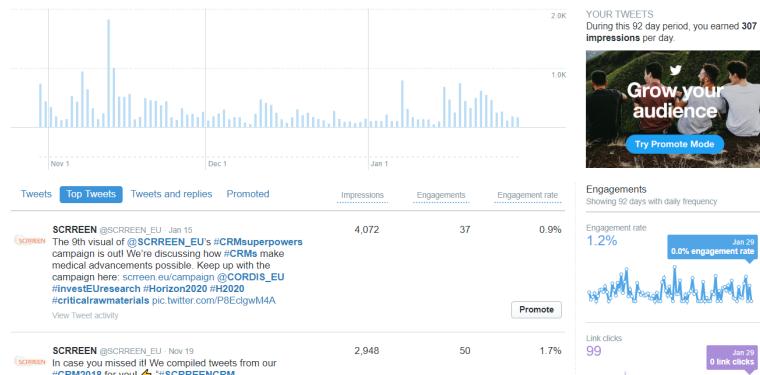


Figure 9: Twitter Analytics of SCRREEN messages (October 2018 - January 2019)

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 730227

Tweet activity

Jan 30 – May 2, 2019

[Export data](#)

Your Tweets earned **34.4K impressions** over this **93 day** period

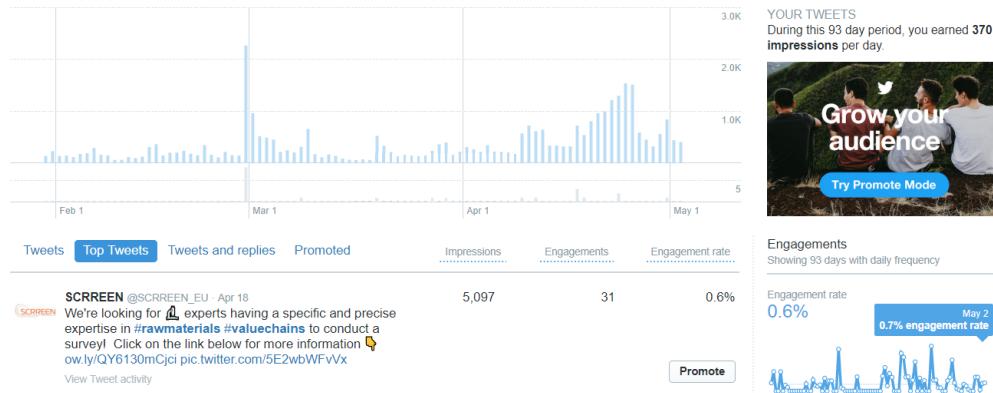


Figure 10: Twitter Analytics of SCRREEN messages (January 2019 - May 2019)

Tweet activity

May 1 – Jun 30, 2019

[Export data](#)

Your Tweets earned **27.2K impressions** over this **61 day** period



Figure 11: Twitter Analytics of SCRREEN messages (May 2019 - June 2019)

RECOMMENDATIONS

The SCRREEN campaign, Superpowers of Critical Raw Materials successfully achieved its aim of raising awareness about critical raw materials in our daily lives by leveraging social media as a tool and a dedicated project website as both a tool and a repository. A few recommendations for future campaigns in this line:

- Develop a more concise awareness campaign: drawing from the statistics derived from Twitter, higher levels of engagement with the visuals were registered within the first 6 months of the campaign

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 730227

during which the first 6 visuals were pushed. After this, the engagement rate slightly reduced and remained within the same range until the end of the campaign.

- Take a more interactive approach: as the messages had already been developed and finalised by the consortium before publication on social media via the dedicated Twitter account, there was little room for the audience to actively interact with the visuals. Perhaps integrating quizzes or polls with trivia questions generated from the visuals could further ensure an increased rate of interaction and engagement from the general public.
- Continue to leverage social media channels: SCRREEN used Twitter as its major social media platform because it provided a larger platform and encouraged engagement between a wide range of stakeholders. Interested parties were also able to interact with the tweets by clicking through to the website, resharing or even liking the messages. Since Twitter is open to all, the campaign was accessible to all.
- Niche influencers could be enlisted to boost campaigns further. A benchmark of interesting niche influencers could be carried out to identify those who have a solid following so that their influence on their followers could be leveraged to spread the reach of future campaigns in a personable way.
- A quality website is crucial for all projects, it creates a first impression for interested parties as it is often the first point of contact. Ensuring that the dedicated websites are responsive goes a step further to ensuring ease of access for all. Having a responsive website means that web pages are accessible to all - regardless of the screen size of the device they use to access the website, the layout will adapt so that they have optimal user experience.
- Incorporate campaign updates into project newsletters for even wider reach. Newsletters keep interested stakeholders up to date with the progress being made. By pushing content generated from campaign, the SCRREEN project was able to inform even a larger audience informed on the Superpowers of Critical Raw Materials campaign.

Overall, the Superpowers of Critical Raw Materials campaign performed well across different channels and sparked interest among civil society and general public, with high levels of engagement.

VISUALS FROM THE SUPERPOWERS OF CRITICAL RAW MATERIALS ONLINE AWARENESS CAMPAIGN

1st Visual: [Cruise around in a cleaner car](#)



Cruise around in a cleaner car

Thanks to **the platinum group metals (platinum, rhodium and palladium)** found in its catalytic converter, this car emits less toxic gases. Its electric model has a rechargeable battery made from cobalt, one of the 27 raw materials classified as 'critical' by the European Commission. Half of the world's cobalt reserves are in the Democratic Republic of the Congo (DRC). Since the different extraction and purification processes for these critical raw materials can have severe consequences on the environment and the locally employed miners, Europe is committed to respect and comply with **the 17 UN Sustainable Development Goals set for 2030** to ensure "peace and prosperity for people and our planet".

www.scrreen.eu 

The superpowers of the new critical raw materials for Europe
is a communication campaign organised by SCRREEN, a European project which
has received funding from the Horizon 2020 under Grant Agreement n°730227.

Follow the campaign on Twitter!
[@SCRREEN_EU](https://twitter.com/SCRREEN_EU)  



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 730227

Figure 12: 1st visual: Cruise around in a cleaner car

2nd Visual: Explore the Earth's wealth



Figure 13: 2nd Visual : Explore the Earth's wealth

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 730227

3rd Visual: Smarter mobile phones

Smarter mobile phones



Smartphones possess multiple features that would not exist without critical raw materials. For example, **indium** enables your screens to be tactile. The performance of the microphone and loudspeaker relies on magnets (a mixture of iron, boron and **neodymium**). **Tantalum** and **silicon** are the perfect allies for electronic chips. Be it metal (**magnesium alloy**) or plastic, the casing of your device contains a rechargeable battery made of eight grams of **cobalt**. With seven million mobile phones sold worldwide since 2007, the reserves for certain raw materials are declining. Since 2011, the European Commission has been publishing a list of critical raw materials: currently, there are 27. To better preserve these resources, **the EU H2020 project – SCRREEN** proposes solutions for eco-design, substitution and recycling of electronic devices. Its main objective: to develop and promote European policies on circular economy.

www.scrreen.eu 



The superpowers of the new critical raw materials is a communication campaign organised by SCRREEN, a European project which has received funding from the Horizon 2020 under Grant Agreement n°730227.

Follow the campaign on Twitter!
@SCRREEN_EU



Figure 14: 3rd Visual: Smarter mobile phones

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 730227

4th Visual: Jobs of the future



As pillars of the energy and digital transition, **critical raw materials** represent considerable growth opportunities for Europe. Metallurgy, the mining industry, electronics, renewables, recycling: many economic sectors use these resources. Chemists, geologists, IT specialists, researchers will be needed and millions of tomorrow's jobs are still to be created. With its list of **27 critical raw materials**, the European Commission identifies the most promising sectors in which a human resources policy must be carried out as a top priority. Indeed, certain skills are becoming scarce and could even lead to labour shortages, in particular in the geology and metallurgy fields. To educate the young generation, Europe organises the "**Raw Materials University Days**" every year in big European cities, during which lab visits, conferences and exhibitions take place. The next Raw Materials University Day will be held in Zagreb (Croatia) on 14 June 2018.

www.screen.eu



The superpowers of the new critical raw materials is a communication campaign organised by SCRREEN, a European project which has received funding from the Horizon 2020 under Grant Agreement n°730227.

Follow the campaign on Twitter!
@SCRREEN_EU



Figure 15: 4th Visual: Jobs of the future

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 730227

5th Visual: Rubber



Cooling off by the water

Your pool float is most likely made of *Hevea brasiliensis*, more commonly known as the **rubber tree**. It can be found in many products including latex gloves, baby bottle nipples or condoms. The automotive sector mainly uses it to manufacture tyres for cars, trucks and aircrafts, as it is more resistant than its synthetic cousin derived from petroleum. Rubber is primarily produced in Thailand (32%) and Indonesia (26%) by small producers who are clearing acres of forests to plant this tree that is native to the Amazon rainforest. A highly concentrated production coupled with stressed ecosystems and a global consumption that has doubled in 40 years have led the European Commission to list natural rubber among the **27 critical raw materials**. To anticipate possible shortages, Europe has created the "**European Union Raw Materials Knowledge Base**" to bring together member states and industry and facilitate the exchange of information on these resources.

www.screen.eu



The superpowers of the new critical raw materials is a communication campaign organised by SCRREEN, a European project which has received funding from the Horizon 2020 under Grant Agreement n°730227.

Follow the campaign on Twitter!
@SCRREEN_EU

Figure 16: 5th Visual: Rubber

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 730227

6th Visual: Fly in complete safety



In civil and military aviation, critical raw materials allow for the design of safer lightweight aircrafts that are also quieter and less polluting. In engines, **cobalt, tantalum and tungsten** are prized for their heat and corrosion resistance. **Magnesium-based superalloys** can be found in the cabin. Coveted for being lightweight, they reduce fuel consumption. In the cockpit, the instruments for flight monitoring and pilot assistance function thanks to the electro-optical properties of **neodymium and yttrium**. Increasingly popular and valuable, 27 of these raw materials have been classified as critical by the European Commission. To address the risks of shortage, Europe facilitates cooperation between economic actors. In line with this, the EUROMINES association encourages the exchange of information between manufacturers in the European extractive sector. The SCRREEN project accomplishes this objective by developing a dedicated information portal.

www.screen.eu



The superpowers of the new critical raw materials is a communication campaign organised by SCRREEN, a European project which has received funding from the Horizon 2020 under Grant Agreement n°730227.

Follow the campaign on Twitter!
@SCRREEN_EU



Figure 17: 6th Visual: Fly in complete safety

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 730227

7th Visual: Europe's promising resources



Palladium, tantalum, silicon: manufacturers extract these resources to build cars, solar panels and computers. But, like the 24 other raw materials considered as critical by the European Commission, most of the supply comes from China. To ensure its mineral sovereignty, Brussels identifies the most promising mining deposits in Europe. France, Spain and the United Kingdom are potential producers of **tungsten**, which is very appreciated by the aeronautic industry. As for Romania and Sweden, they could supply the market with **rare earths**, a subgroup of 17 elements with adjoining properties. Various European geological bodies (BRGM in France, BGS in England, BGR in Germany, SGU in Sweden...) share several mineralogical databases. Yet, reviving the European mining sector cannot be done without the support of the local population. This is why Brussels is developing 'responsible' mining programmes (REMIND, SUSMINE...) on one hand to limit the ecological impact of mining, and on the other hand to support projects aimed at improving social acceptance of mines (such as MIREU).

www.screen.eu



The superpowers of the new critical raw materials is a communication campaign organised by SCRREEN, a European project which has received funding from the Horizon 2020 under Grant Agreement n°730227.

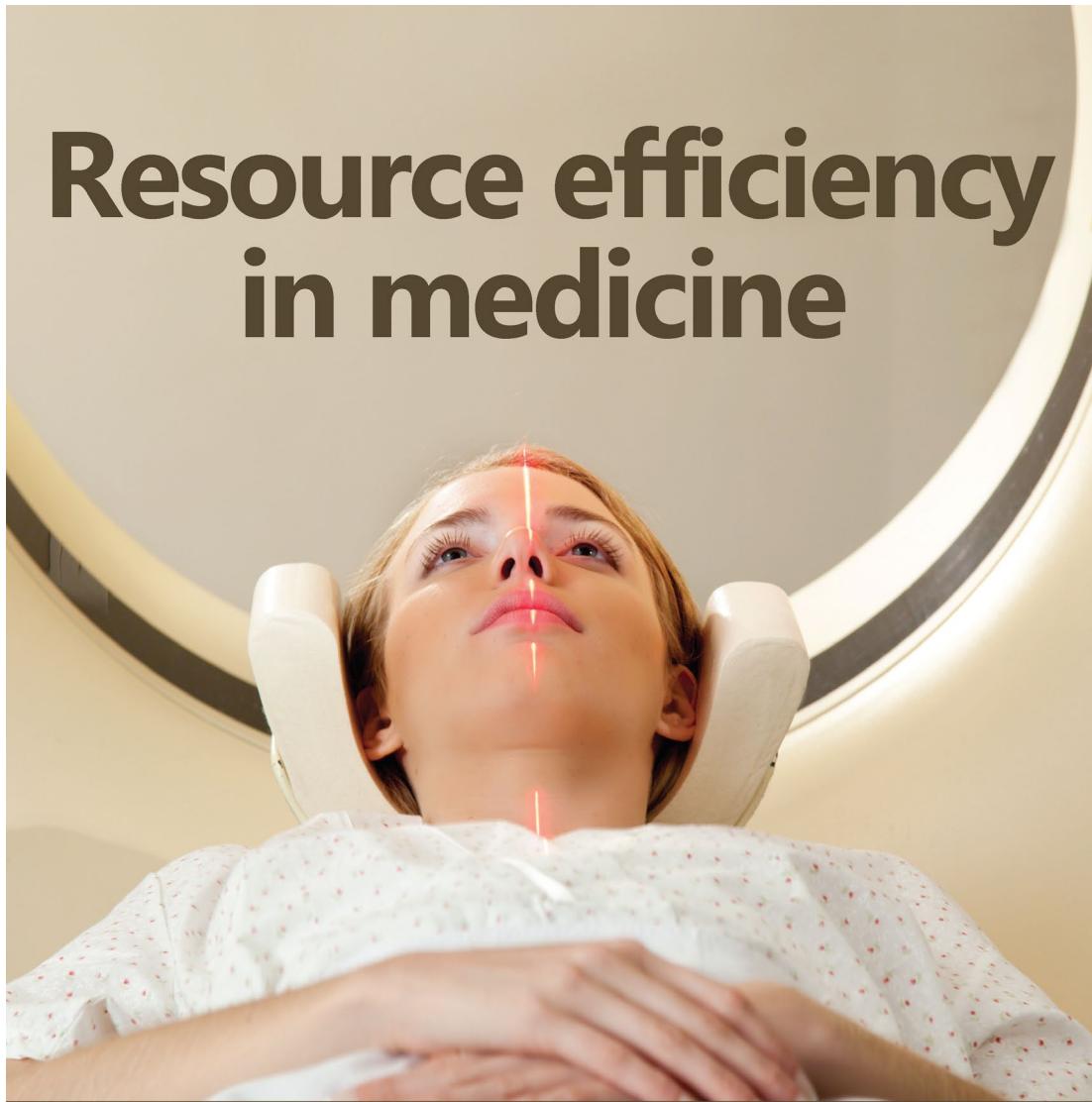
Follow the campaign on Twitter!
@SCRREEN_EU



Figure 18: 7th Visual: Europe's promising resources

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 730227

8th Visual: Resource efficiency in medicine



Most magnetic resonance imaging (MRI) devices function with a super-strength **neodymium-based magnet**. The lasers found in medical scanners contain **beryllium**, which is treasured for its X-ray qualities. Prosthetic devices, implants and surgical instruments contain **tantalum and niobium**, which make it possible to design very resistant anticorrosive steels, which the human body tolerates rather well. There are also **platinoinds** in pacemakers. Yet all these raw materials may diminish. That is why, since 2011, the European Commission has drawn up a list of the most critical ones: 27 are listed to date. To limit the tension between supply and demand, Europe is also supporting - through the SCRREEN project - research initiatives to substitute certain materials for less critical ones. Another dimension of this innovation: the reduction of their quantity in alloys, for similar efficiency.

www.scrreen.eu



The superpowers of the new critical raw materials is a communication campaign organised by SCRREEN, a European project which has received funding from the Horizon 2020 under Grant Agreement n°730227.

Follow the campaign on Twitter!
@SCRREEN_EU



Figure 19: 8th Visual: Resource efficiency in medicine

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 730227

9th Visual: Better recycling of e-waste



Cobalt, silicon, tantalum, indium... a smartphone contains 16 raw materials out of 27 listed as 'critical' by the European Commission. A strong demand, and production limited and/or controlled by a small group of countries, generate risks of scarcity. According to Kantar Worldpanel, in Western Europe, we change our phones every 20.4 months on average and the recycling rate remains low. This is why Europe is working to improve the collection of **waste electrical and electronic equipment (WEEE)**. In doing so, it enforces the Basel Convention (1989), which prohibits the export of hazardous waste to less wealthy countries. Thanks to the SCRREEN project, Europe is also developing recycling and reprocessing solutions for this waste. This circular economy approach is facilitated by better eco-design of products. The challenge is to make smartphone components more easily repairable, dismantled and recyclable.

www.screen.eu



The superpowers of the new critical raw materials is a communication campaign organised by SCRREEN, a European project which has received funding from the Horizon 2020 under Grant Agreement n°730227.

Follow the campaign on Twitter!
@SCRREEN_EU



Figure 20: 9th Visual: Better recycling of e-waste

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 730227

10th Visual: [Ensuring productivity in agriculture](#)



To enrich the soil, agriculture uses **phosphate** as source of phosphorous – one of the building blocks of life. Extracted from **phosphate rock**, this fertilizer provides essential nutrients for the growth of grains (and therefore livestock), thus enabling improved agricultural productivity. Beyond agriculture, phosphates are also used in powders for fire extinguishers, detergents and toothpaste. China, Morocco and the United States share 70% of the world production of phosphate rock. Demand is exploding, and reserves are dwindling, leading to potential shortages. This is why phosphate rock is included in the European Commission's list of 27 critical raw materials. In order to diversify its sources of supply, Brussels is engaged in diplomatic partnerships with many countries producing critical raw materials. For example, since 2014 the "**Dialogue between the EU and Latin America on raw materials**" has been boosting the Latin American extractive sector in support of technological innovation, academic partnerships and training of qualified personnel.

www.screen.eu



The superpowers of the new critical raw materials is a communication campaign organised by SCRREEN, a European project which has received funding from the Horizon 2020 under Grant Agreement n°730227.

Follow the campaign on Twitter!
[@SCRREEN_EU](https://twitter.com/SCRREEN_EU)



Figure 21: 10th Visual: Ensuring productivity in agriculture

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 730227

11th Visual: Preventing potential shortages



While the end of the oil age is expected to happen in about half a century, other resources essential to the energy and digital transition could run out even sooner. The first threat concerns **antimony**, cousin to arsenic and used as a flame-retardant in textiles, plastics and paints. China possesses half of the world's reserves which could be exhausted in 12 years; or in barely 4, if the demand becomes overwhelming. The reserves of **cobalt**, an essential ingredient in the rechargeable batteries found in our mobile phones and electric cars could reach zero in less than 60 years; or worse, 22 if consumption explodes. Based on market data, the European Commission has updated a list of critical raw materials (currently 27) in 2017. The SCRREEN project aims to complete this action by pushing for a more dynamic and forward-looking approach to the impending shortages.

www.scrreen.eu



The superpowers of the new critical raw materials is a communication campaign organised by SCRREEN, a European project which has received funding from the Horizon 2020 under Grant Agreement n°730227.

Follow the campaign on Twitter!
@SCRREEN_EU



Figure 22: 11th Visual: Preventing potential shortages

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 730227

12th Visual: [Tamper-proof banknotes](#)

Tamper-proof banknotes



Today the European Commission includes in its list of 27 critical raw materials a group of elements with chemically similar properties: **rare earths**. Among them are **euroium and terbium**. In order to avoid counterfeiting, Euro banknotes are made with special inks which contain these two raw materials, highly sought after for their luminescent properties. Exposed to ultraviolet rays, they generate a red fluorescent effect. More generally, euroium and terbium can also be found in lasers, cathode-ray tubes and medical radiography equipment. Demand is skyrocketing, and mining projects are multiplying. Yet, the extraction of these resources is a polluting process that directly threatens the health of local populations. This is why Brussels finances the development of "intelligent" mining technologies. Automation and robotics reduce the environmental footprint and the risk of accidents - thus improving the social acceptability of mines .

www.scrreen.eu 

The superpowers of the new critical raw materials is a communication campaign organised by SCRREEN, a European project which has received funding from the Horizon 2020 under Grant Agreement n°730227.

Follow the campaign on Twitter!  [@SCRREEN_EU](https://twitter.com/SCRREEN_EU) 

Figure 23: 12th Visual: Tamper-proof banknotes

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 730227