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[1], include indium, which is used in touchscreens and solar panels, and tantalum, which is used in microcapacitors for a range of applications from mobile phones to wind turbines.

2019 is the International Year of the Periodic Table, and this has made us, at the Royal Society of Chemistry, think about the amazing applications, but also the supply risks of some of the elements. Several elements that are important in electrical and electronic equipment (EEE) such as mobile phones, tablets and smart TVs, have associated supply risks. At the same time, waste electrical and electronic equipment (WEEE) is the fastest growing waste stream on the planet. Risks could be mitigated by reducing the use of CRMs, increasing the re-use of products or components that contain CRMs and by increasing CRM recycling rates. Chemical scientists have a key role to play in this, by developing alternative materials, informing designers on the properties of alternatives, and finding effective ways to extract CRMs from used devices. However, they cannot face this challenge alone and concerted action is needed from government, manufacturers, retailers and consumers to reduce, reuse and recycle CRMs.

To decrease supply risks and enable the continued use of CRMs in EEE as well as in medical applications and sustainable energy solutions, the RSC recommends that more ambitious measures to improve the resource efficiency of CRMs should be set out in the implementation plans of Resources & Waste Strategies across the UK, based on the following four principles:

Critical raw materials

Critical raw materials (CRMs) are materials that are important to an economy and that are, or could become difficult to get hold of. The list of CRMs that is most relevant to the UK currently is the European Commission's 2017 list[1], which contains 27 materials that are 'critical' due to their high economic importance combined with high supply risk for the European economy. CRM lists also can be determined at national, regional and sectoral level (a lis(C)7.1e95a* ar2s(C)7.1e95a*719.11 57a6M4[(C)2 o*onr.onr.5a*

- a lack of adopted design principles for circularity that will enable cost-effective upgrade, repair, remanufacturing and disassembly for re-use and recycling of product components and products;
- a lack of economic models and digital data solutions that connect collection facilities with re-use/recycling infrastructure and the producers that could use secondary components or materials;
- a lack of the ability to identify where the CRMs are present in components and products and the need for globally harmonised reporting and labelling methods to facilitate this;
- a lack of critical infrastructure to

Contact

The Royal Society of Chemistry would be happy to discuss any of the issues raised in our statement in more detail. Any questions should be directed to policy@rsc.org

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