

Blurb: Five sustainable ways the SIM Industry can close the loop in the circular economy.

Title: [Five Sustainable Ways the SIM Industry Can Close the Loop in the Circular Economy](#)

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Telecommunications is an energy-intensive industry. Operators alone account for [2-3% of total global energy consumption](#) and the pressure to produce more innovative technologies to meet – and exceed – consumer demand continues to grow. The result of which means that the amount of greenhouse gas (GHG) emissions produced while facilitating these technological developments increases too.

The topic of sustainability continues to be a hot topic and was discussed at length during the largest and most influential connectivity event in the world earlier this year, Mobile World Congress. And so, it is clear that sustainable practices, processes, products and services must remain high priorities for industry leaders to successfully roll out to progress on the road to Net-Zero 2050.

Making eco-conscious decisions that positively impact the planet do not have to cost the earth and this is where the SIM industry can truly lead from the front. Following on from a [previous blog](#) on mobile sustainability, here are some ways SIM players can assist in the transition towards a circular economy – one that successfully recycles, reuses and remanufactures.

1. Encourage a Reduction in Plastic and SIM Size

Since connectivity remains highly important, the SIM will continue to play a critical role in how people work, live and play. So, how can this technology be reimaged to facilitate environmental change? Fortunately, there are success stories to inspire the transition to sustainability. For example, some telecommunications operators have started to adopt circular business models that emphasise recycling and repurposed materials to minimise waste.

Importantly too, the SIM industry is not bound by any specific size of SIM card carrier and therefore offers a great opportunity to reduce its impact. Half card sizes not only reduce the amount of plastic used, but they also help optimise the pallet load so that a larger volume of cards can be shipped more efficiently.

2. Commit to the Use of Recycled Materials

The industrial process for manufacturing smartphones requires a vast amount of raw materials – GSMA reports it takes, on average, [50 different materials](#) to produce a smartphone. While these products can have a negative impact on the environment, there are many opportunities to mitigate that impact by incorporating more sustainable practices into every step of the supply chain and manufacturing process.

Looking at the SIM card, manufacturers can begin exploring the use of post-industrial and post-consumer materials, such as recycled plastics, and determine how these materials can be utilised to create new components.

3. Switch to Greener Packing and Packaging

Eco-packing solutions offer a great opportunity for many operators to improve their carbon footprint, as they enable companies to promote their green ambitions and associate sustainability efforts with key messaging and branding.

Other, more eco-friendly alternatives for operators to explore include opting for paper and packaging materials made from sustainable sources or using water-based varnish or vegetable-based inks. Additionally, when it takes around 50cm of tape to seal a box of 500 SIM cards, a simple switch from plastic tape to a paper option could make over 4,000km of tape more sustainable.

4. Use Greener Shipping Methods

Following the global chip shortage, mobile operators have had to swiftly adapt to anticipate unpredictable lead times, manage orders effectively and continue to reach customers during a challenging climate. Therefore, a range of alternative supply chain solutions continue to be sought after throughout the industry.

Sea freight can be considered a robust option for operators wanting to transport high volumes of goods despite ongoing economic pressures. Additionally, it also represents a significant opportunity to reduce CO2 emissions compared to air, for example, the UK government indicated that aeroplanes [create 44-times more carbon dioxide](#) than ships over the same distance.

5. Promote Reuse and Recycling in Product End of Life

While SIM players have a big responsibility to encourage more sustainable practices, the burden should not rest solely on their shoulders. Educating end users about the importance of and opportunities to reduce their carbon footprint can lead to achieving more climate goals and building an even greater level of awareness across the globe.

Many operators already encourage sustainable end of life management by using Plastic Recycling Symbols providing end users with the information they need to understand the type of plastic used for the SIM carrier, and if it can be recycled. The European Union's WEEE Directive also helps facilitate the correct treatment of waste electrical and electronic equipment, including for some countries the SIM card.

Overall, it is important to stress that the mobile industry has made important strides in promoting eco-friendly alternatives to traditional SIM cards. However, to reach Net-Zero by 2050, more can—and must—be done.

Standards such as ISO 14001:2015 help the mobile industry to take sustainability to the next level, meanwhile, SIM suppliers are working to transform their industrial practices to become more eco-friendly – such as switching to renewable energy sources. However, there must be an ongoing commitment in the adoption of environmentally friendly processes and methods.

To support the industry's transition, [TCA's Sustainability Working Group](#) is dedicated to helping operators maximise their green credentials because it recognises the leading role that the mobile industry must play in encouraging other sectors to reduce their carbon footprint through digitalisation. The Working Group understands that operators need to quantify their CO2 reduction

objectives and results too, and is working to provide integrity and transparency on the environmental performance of the products that are promoted as 'green'.

While accelerating decarbonisation remains the ultimate goal, nothing can be achieved overnight. Mitigating impact is a journey that requires long-term and dedicated sustainability resources if the industry is to assist in closing the loop in a circular economy. Achieving Net-Zero 2050 requires collaboration and organisations such as TCA to support members every step of the way.

[Improving the Environmental Credentials of the SIM Industry](#) is now available to download.

About Trusted Connectivity Alliance

Trusted Connectivity Alliance (TCA) is a global, non-profit industry association working to enable trust in a connected future. The organisation's vision is to drive the sustained growth of a connected society through trusted connectivity which protects assets, end user privacy and networks.

TCA members are leaders within the global Tamper Resistant Element (TRE) ecosystem and work collectively to define requirements and provide deliverables of a strategic, technical and marketing nature. This enables all stakeholders in our connected society to benefit from the most stringent secure connectivity solutions that leverage TCA members' expertise in tamper proof end-to-end-security.

TCA members are: Card Centric, COMPRION, Eastcompeace, Giesecke+Devrient, IDEMIA, Kigen, Linxens, NXP Semiconductors, Oasis Smart SIM, Qualcomm, STMicroelectronics, Thales, Valid, Workz Group and Wuhan Tianyu.

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