

Promoting Sustainable Global Connectivity: TCA Lifecycle Assessment Methodologies for SIM and eSIM Products

Trusted Connectivity Alliance (TCA) has published the first industry-led, common lifecycle assessment methodologies to provide a consistent and reliable approach for determining the environmental impact of SIM and eSIM products.

To enable mobile operators, connectivity providers and device manufacturers to realise ambitious sustainability goals and meet climate commitments, SIM and eSIM providers are innovating to deliver more eco-friendly products.

Yet there are different ways of assessing the environmental impact of these products, which can limit transparency throughout global value chains.

Introducing the TCA Lifecycle Assessment Methodologies

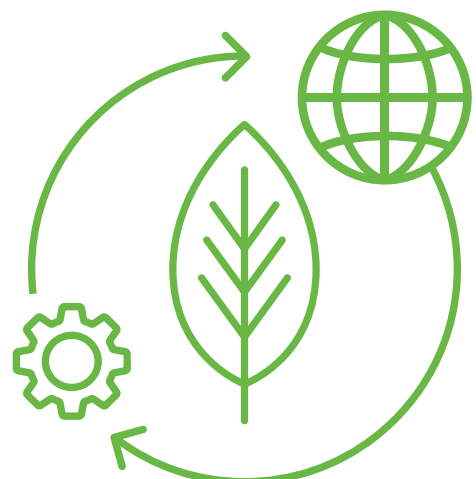
TCA recognised that offering a consistent approach for assessing and communicating the environmental performance of SIM and eSIM products would help to address this challenge.

In response, TCA partnered with SE Advisory Services – Schneider Electric’s global consulting practice experienced in the connectivity services industry – to define common lifecycle assessment methodologies for both SIM and eSIM products.

The methodologies are guided by the principles of the European Union’s Product Environmental Footprint (PEF) Method to define Category Rules (PEFCR) for SIM and eSIM products. They assess the lifecycle of SIM and eSIM products from “cradle-to-grave” – which spans raw material extraction, processing, distribution, storage, use, and disposal or recycling. While this provides a comprehensive framework, the methodologies are not designed for comparing the environmental performance of SIM and eSIM products, either from the same manufacturer or across different manufacturers.

Promoting More Sustainable Global Connectivity

By ensuring that environmental claims are supported by credible, reliable and objective methodologies collectively developed and backed by leading industry players, TCA aims increase trust, transparency and informed decision-making. Ultimately, this will help to promote more sustainable solutions and practices across the connectivity ecosystem.



Frequently Asked Questions

Why is TCA well-positioned to develop the lifecycle assessment methodologies?

As a global industry association comprising the world's leading SIM and eSIM providers, TCA has a proven record built over decades of promoting interoperability across the SIM ecosystem. Applying this expertise and experience to developing common lifecycle assessments will help to promote more sustainable solutions and practices across the connectivity ecosystem.

Are the TCA LCA methodologies available to all industry participants?

Yes. The methodologies are available upon request to any industry participant. To access, email info@trustedconnectivityalliance.org.

Can the TCA LCA methodologies be used in any region?

Yes. While the methodologies are guided by the principles of the European Union's Product Environmental Footprint (PEF) Method to define Category Rules (PEFCR) for SIM and eSIM products, they can be used by organisations in any region.

How can SIM and eSIM providers demonstrate they comply with the TCA LCA methodologies?

To increase trust and transparency, TCA strongly encourages SIM and eSIM providers to proactively communicate to their customers that they have integrated TCA's methodologies to assess the environmental performance of their SIM or eSIM products.

Has TCA designed the LCA methodologies to enable the comparison of SIM products versus eSIM products?

No. TCA has defined individual methodologies which are not designed for comparative assessment. For instance, results cannot be compared due to differences in the use phase of the lifecycle. Additionally, SIM products are usually manufactured and personalised by a single company, whereas eSIM products may involve multiple stakeholders for hardware production and software provisioning.

As such, the TCA methodologies should not be used to compare environmental performance across product types – even if they are manufactured by the same company. They should also not be used to compare performance between different manufacturers.

Will TCA be updating the LCA methodologies?

Yes. TCA is committed to evolving and enhancing the methodologies to reflect market and regulatory developments. All organisations across the SIM and eSIM industry committed to climate leadership are encouraged to join TCA to play a proactive role in shaping their ongoing development.

About Trusted Connectivity Alliance

Trusted Connectivity Alliance (TCA) is a global industry association working to enable trust in a connected future. The organisation evolved from the SIMalliance, reflecting the continued expansion of the global SIM industry and the need for broader collaboration.

Its members are leading providers of secure connectivity solutions for consumer, IoT and M2M devices. This spans Tamper Resistant Element (TRE) technologies including SIM, eSIM, integrated SIM, embedded Secure Element (eSE) and integrated Secure Element (iSE), as well as hardware and software provisioning and other personalisation services.