

Session: Is transport on track for the circular economy?

24 May 2023, 11:00-12:30 | [Session outline](#)

This session brought together speakers from technology component providers, the energy sector, and the transport industry to discuss circular economy strategies.

Making resource use in transport more circular could save costs, lower environmental impacts, and increase resilience. Technology innovation, stronger partnerships between actors, and better regulations and standards could enable the sector to tap into these benefits.

The automotive sector has a history of optimising material use in production and has focused on product designs that reduce material use, reusing still-functioning components from end-of-life products, and recovering materials from waste streams. Valeo confirmed that industry initiatives to save costs and materials drive circular supply chains more than regulation. These programmes may face obstacles, such as waste regulation that complicates recovering components and materials from end-of-life products. Another example from Michelin is that standards could fail in awarding equal certificates to refurbished and new tyres, even though they meet the same longevity requirements.

Using resources efficiently is becoming increasingly important in the automotive sector with the shift to electric vehicles, whose production has a greater weight in lifetime environmental impacts than that of conventional vehicles. Valeo stressed that lifecycle assessment is an effective tool for identifying and reducing environmental impacts. Technology innovations deploying blockchain could promote the traceability of fuels, products and materials within the economy, which panellists identified as an essential enabler for circular supply chains.

The energy industry supports circular economy principles in transport by promoting renewable fuels that can close carbon loops, thus avoiding a net increase of carbon in the atmosphere. The challenge is enormous, and REN21 lamented that transport's share of renewables is lower than that of other sectors. Shell described recent investments in Latin America and Europe to produce biofuel, an indispensable low-carbon technology for transport modes that are hard to electrify.

Biofuels have undergone a dynamic market development in recent years, yet a higher growth rate is necessary to reach deployment targets. Shell emphasised that governments must implement policies that increase investor certainty and contribute to achieving decarbonisation objectives. Hydrogen is another promising decarbonisation option for the sector. REN21 warned that many countries had softened renewable energy policies and targets in response to recent price increases. Lowering the pace of the energy transition not only risks delaying emission savings but also losing other benefits, including a more resilient energy supply.

Rail has a smaller carbon footprint than other modes thanks to its low fuel use and a high share of electrified operations. The long lifetime of rolling stock and rail infrastructure help to reduce material use, and the sector strives to optimise this further. Innovations that can make operations more efficient and shift traffic to rail from modes with a higher carbon footprint offer further opportunities for environmental savings. Europe's Rail Joint Undertaking brings together governments and industry to facilitate innovations, such as making cross-border operations more seamless.