Beyond the Surface: How Coatings Can Enable the Transition to Renewable Carbon

Tim Kidd – Senior Open Innovation Manager

Protective coatings play a critical yet often invisible role in enabling the performance, durability, and sustainability of modern materials. At the same time, they offer a powerful lever to accelerate the transition from fossil-based to renewable carbon systems.

This presentation demonstrates how specialty coatings can support renewable carbon strategies while protecting high-value surfaces. Two complementary innovation pathways are addressed: the integration of renewable carbon into coating building blocks, using bio-based, recycled, or CO_2-derived feedstocks, and the development of coating systems designed to enable recycling and circularity of the coated material.

Life-cycle assessment and product carbon footprint data are used to guide material selection and quantify impact. Progress is accelerated through open innovation, combining in-house development with collaboration across the value chain, academia, and technology partners to validate scalable solutions. Application examples from fashion, mobility, and packaging illustrate how coatings can bridge renewable feedstocks, performance requirements, and circular material system design.