SNACK SERIES

TEAM DEFENCE INFORMATION
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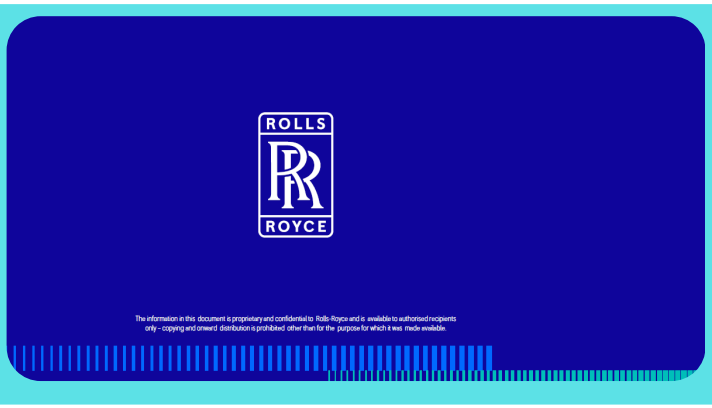
Session 7 2nd December 2025

CRITICAL RAW MATERIALS

SUSTAINABLE THROUGH LIFE SUPPORT



Sustainability and Resilience in Defence

Rolls-Royce and MOD representatives discussed how to embed sustainability and resilience more effectively into defence programmes. They highlighted the need to shift from a "take, make, waste" mindset toward circular economy models, supported by clear policy alignment and stronger organisational buy-in. Participants agreed that sustainability must be framed.

Critical Raw Materials and Supply-Chain Risk

The team reviewed the growing risks around defence-critical raw materials and global supply-chain dependencies. While programmes like Rolls-Royce's Revert enable high levels of metal recovery, not all critical materials can be sourced or recycled easily. With geopolitical uncertainty–especially around China–participants stressed the need for better material transparency, recycling, and early risk planning.

Additive Manufacturing and Factory-in-a-Box

Updates on additive manufacturing highlighted its potential to reduce lead times, tackle obsolescence, and support operations with localised production. The "factory-in-a-box" concept–a deployable, modular manufacturing unit–offers a way to produce tooling and parts closer to the point of use. Early deployments will focus on components with lower certification hurdles.

Digital Product Passports

Digital Product Passports were presented as a key tool for improving material traceability, product history, and lifecycle management. They will help consolidate data such as material composition and maintenance records, supporting circular economy goals and regulatory compliance. Ensuring secure, tamper-proof data ownership across the supply chain remains essential

Circular Economy & Material Recovery

Participants discussed improving material identification, recovery, and reuse across defence. New analytical tools may help unlock more value from waste streams, while cross-sector collaboration is needed to repurpose materials that no longer meet aerospace standards. Stronger data control and producer responsibility were flagged as long-term needs.

Next Steps

Cross-sector and international collaboration remain essential for addressing shared challenges in materials, recycling, and manufacturing innovation. Participants highlighted upcoming opportunities to engage through NATO sessions and new MOD-funded programmes, encouraging continued knowledge sharing and exploration of emerging technologies.