

INNOVATION IN COMPOSITE MANUFACTURE

FINALIST: Plataine

Plataine's AI Agents for Manufacturing represent a new approach to production management for composite manufacturers. Unlike traditional planning, MES and maintenance systems that provide information for human intervention, the AI Agents continuously monitor operations, identify issues, recommend corrective actions and can autonomously execute approved decisions in real time.

The platform combines AI, optimisation algorithms, digital twins, machine learning and conversational AI to coordinate production scheduling, materials, tooling, equipment and delivery commitments. It understands the interdependencies of complex composite manufacturing environments and evaluates the wider impact of decisions across the factory. Used by production planners, operations managers and manufacturing engineers, the technology identifies bottlenecks, dynamically reschedules work, optimises material and tooling utilisation, improves delivery performance and reduces energy consumption. What-if simulation allows teams to assess alternative production scenarios before implementation.

The innovation builds on more than a decade of manufacturing optimisation expertise across aerospace, composites, automotive and industrial manufacturing. Development required specialist knowledge in composite processes, scheduling, materials management, AI, software engineering and industrial systems integration. Customer collaboration ensured the technology was validated against real manufacturing challenges. Unlike conventional analytics or AI-assisted reporting, Plataine's AI Agents move beyond visibility to intelligent decision-making and execution, enabling manufacturers to respond dynamically to changing shop-floor conditions while reducing waste and improving productivity.

The technology has significant potential across aerospace, advanced composites, automotive, wind energy, defence and industrial manufacturing. As manufacturers move towards autonomous, self-optimising factories, AI Agents could become an important layer of future production systems.

The programme combined phased development with continuous customer validation. Collaboration with organisations including the NCC and Advanced Manufacturing Research Centre supported industry awareness, knowledge sharing and adoption.

Learn more at: www.plataine.com



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