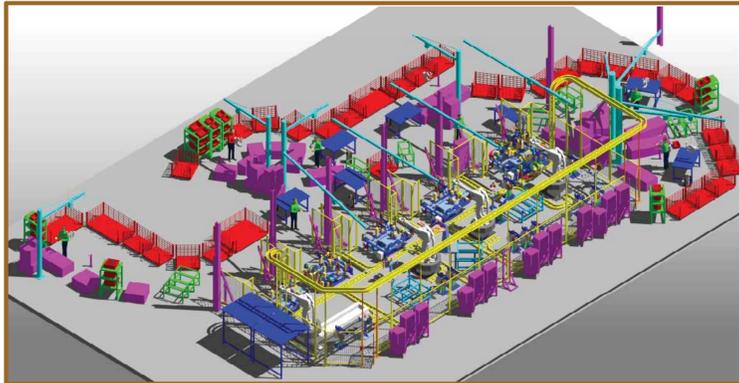


Remote Laser Welding (RLW) System *Navigator* for Eco & Resilient Automotive Factories



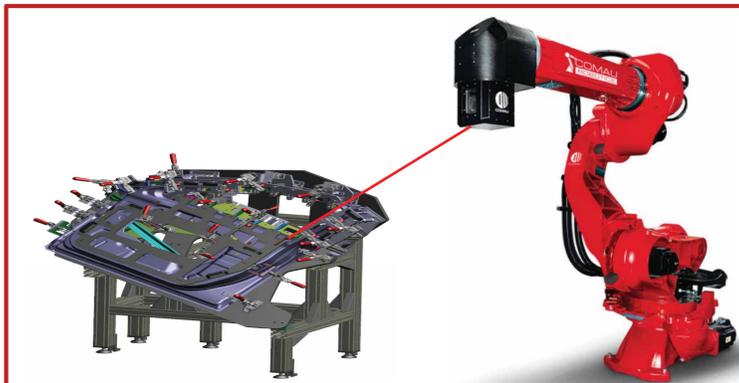
PRODUCTION SYSTEM CONFIGURATION

- Select candidate station to meet KPIs
- Configure Hybrid Assembly System that includes RLW and RSW operations
- Synthesise and evaluate Hybrid Assembly System performance



RLW CELL CONFIGURATION

- Optimise cell configuration
- Optimise robot trajectory and welding sequence
- Off-line programming of robot
- Evaluate performance of the RLW Cell



RLW PROCESS DESIGN OPTIMISATION

- Generate error budget map
- Optimise fixture layout (Max and Min part-to-part gap control)
- Select and optimise laser parameters



RLW PROCESS CONTROL

- Process monitoring strategies
- Root Cause Analysis (RCA)
- Corrective Action and Preventive Action (CAPA)



VEHICLE DESIGN GUIDELINES and ECO-EFFICIENCY EVALUATION

- Eco-efficiency evaluation
- RLW Navigator software architecture
- Design guidelines for RLW

Further Information: <http://rlw-navigator.eu/> or Prof. Darek Ceglarek, proj. Coordinator, The University of Warwick, d.j.ceglarek@warwick.ac.uk

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