

Authentise Ltd (UK)
DigiAM: Design-Intent-Driven
Additive Manufacturing
Project Documentation



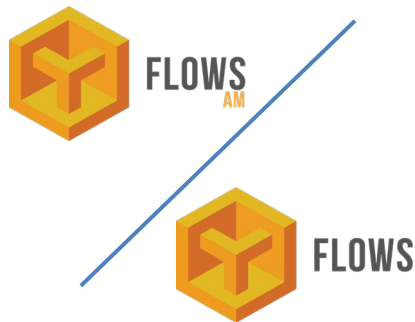
- SME Software company providing “DataDriven Workflow Management” for manufacturing companies
- 30 people world -wide
- Involved in running previous UK, EU and US grant funded R&D projects

1 Agile Engineering Collaboration



Manage the most flexible engineering & manufacturing processes such as R&D, field maintenance, Non-conformance and more.

2 End-to-End Production Process Management



Manage Orders from Quoting to Shipment using Machine Data.

3 Standalone Tools for Specific Workflows



Manage & Track Material Genealogy & Inventory



Securely Share & Assess Designs. Create a Hub of Ideas.



One API to connect all your machines on the shop floor.



In-depth Quoting for Engineering Applications

Authentise Solutions



THREADS

Engineering Collaboration : Make Idea → Design process more efficient with AI, 3D Annotation, Chat , Event Tracking & Integrations



WHISPER

Agentic Collaborative Data Capture: Use AI to capture and act on data from structured and unstructured data sources.

IDEA

PART



DIGITAL WAREHOUSING

Design Sharing
*incl AM Viability
Assessment*



FLOWS

Production workflow , more a transparent, efficient and compliant
*incl spin-outs covering Quoting, Material Genealogy and Edge Machine Data
connections.*



RFQ
RESPONDER



MATERIAL
MANAGEMENT



DATA
CONNECTOR



Tools to Deliver Value to Operators Today, and Help Capture the Digital Thread

DigiAM: Design-Intent-Driven Additive Manufacturing Project Documentation

Vision: The DigiAM project aims to establish an end-to-end digital "idea-to-part" platform that directly connects upstream engineering design to additive manufacturing (AM) production execution. By bridging this connectivity gap, the project **enables contract AM bureaus to act as design-capable, high-value engineering partners** rather than simple job-shop fabricators, unlocking the full potential of AM across advanced supply chains

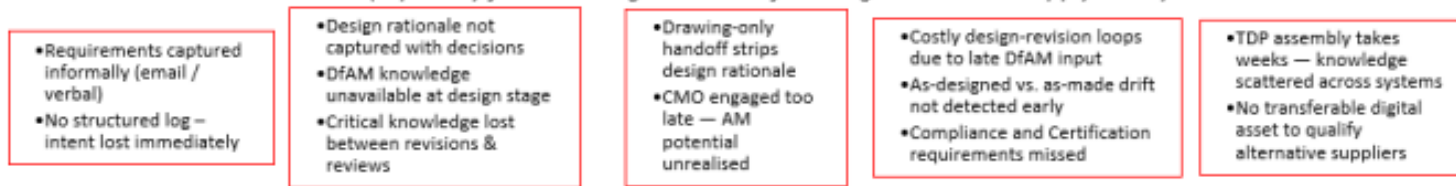
Motivation: Current advanced manufacturing supply chains suffer from a critical bottleneck where contract manufacturers are engaged too late in the design lifecycle after key choices are already locked in. Consequently, vital design rationale and Design-for-AM (DfAM) expertise are lost across handoffs, causing costly design-revision cycles and preventing components from achieving optimal weight savings, part consolidation, and rapid qualification

Content: The project integrates Authentise's software ecosystem—combining Whisper (agentic AI for passive, real-time design intent capture), Threads (engineering collaboration), and FLOWS (manufacturing execution)—into a unified digital workflow. It deploys specialized AI agents to monitor compliance and DfAM rules dynamically, validating the system through demanding industrial use cases including consolidated automotive structural components and lightweight aerospace micro-turbines

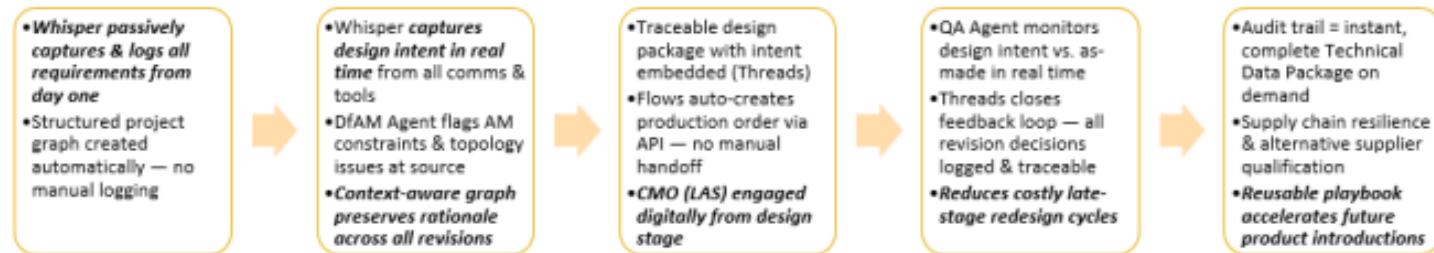
Typical Engineering Workflow



Major Issues Encountered *(especially for SME design and manufacturing teams in the supply-chain)*



DigiAM Process Augmentation



Schematic of Engineering Design workflow, Issues with existing method & Augmented DigiAM solution

Expected Outcomes

- Validated Idea-to-Part Platform: A TRL 6 digital thread software platform that integrates agentic AI (design-intent capture), engineering collaboration, and manufacturing execution (FLOWS).
- Industrial Physical Demonstrators: Fully manufactured and tested high-value AM components (e.g., consolidated structural or propulsion/fluid parts) validated under real-world operating conditions.
- Replicable Deployment Playbook: A standardized onboarding framework to rapidly roll out the software package across contract AM bureaus without bespoke development.
- Quantified Performance Benchmarks: Demonstrated reductions in design-revision iterations, lead times, total part counts, and component mass compared to conventional workflows.

Impacts

- Commercial & SaaS Growth: Drives new recurring SaaS revenue streams for Authentise while enabling contract manufacturers to capture higher-margin, design-led engineering work.
- **Supply Chain Productivity & Resilience:** Eliminates communication silos between design and production, transforming reactive job shops into proactive engineering partners and reducing reliance on vulnerable supply chains.
- Workforce Upskilling: Empowers engineering and shop-floor teams with real-time AI guidance and automated DfAM compliance rules.
- Sustainability & Resource Efficiency: Achieves near-net-shape manufacturing with reduced raw material waste and enables operational energy/fuel savings through advanced component lightweighting.

Schedule

- Duration: 24 Months
- Timeline: Start Q3/Q4 2027 – End Q3/Q4 2029 .

PARTNERS

Types of Partners Sought:

- Contract (AM) Manufacturing business: A metal 3D printing service provider (e.g., LPBF / DED) to test and validate shop-floor software integration in live production.
- Automotive End-User / Tier 1 Supplier: An OEM or systems specialist in high-performance vehicles or braking/chassis components to supply design use cases and perform dyno testing.
- Aerospace / Defence End-User: An OEM or developer of UAVs (drones), micro-turbines, or propulsion systems to provide aerospace qualification requirements and testbed hardware.
- RTO / University (Optional): An advanced manufacturing research center for independent benchmarking and DfAM rule validation.

CONTACT INFO

Open Innovation Head: Dr Simon McCaldin

- simon@authentise.com
- [linkedin.com/in/simacsee/](https://www.linkedin.com/in/simacsee/)

Open Innovation Projects manager: Dr Vicente Rivas

- vicente@authentise.com
- [linkedin.com/in/virivas/](https://www.linkedin.com/in/virivas/)

You partner for
**Digitally scaling
manufacturing
Innovations**

Other Research Interests:



People, Software, Machine
& Device connectivity



Compliance, Tracking
& Genealogy



Agile Digital
Thread



Data Driven
Insights & Analytics



Materials, Assets Tracking &
Management



Closed Loop Design,
Test & Manufacturing



Distributed
Supply Chain
Execution



Lifecycle
Sustainability &
Costing

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