Accelerating Aerospace Prototyping with Industrial 3D Printing Solutions

Industry: Manufacturing

Client: Tier-1 Aerospace Component Supplier

The Challenge

- ✓ 6–10 week prototype turnaround
- ✓ Frequent design changes
- ✓ High cost for complex parts
- ✓ Material waste and rigid tooling

Our Approach

We audited **R&D workflows and introduced 3D printing** across metal and polymer applications:

- ✓ SLM, FDM, SLA printer deployment
- ✓ Print queue automation with RFID
- ✓ Generative design + ANSYS simulation
- ✓ On-demand print & reverse engineering hub

Key Solutions

- ✓ Advanced Industrial 3D Printing
- ✓ Automated Print Scheduling
- ✓ Generative Design & CAD Optimization
- ✓ Print Farm for Agile Prototyping

Tech Stack

formlabs | Ansys | SIEMENS | python | Markforged | Azure

Impact Summary

Metric	Before	After
Prototype Time	6–10 weeks	<2 weeks
Cost/Prototype	~$800	~$320
Avg. Weight Reduction	Limited	Up to 20%
Design Iterations	Tooling-dependent	Rapid & tool-less

Results at a Glance

70%	60%	20%	45%
faster prototyping	cost reduction	lighter designs	less inventory holding

QeMatic helps manufacturers automate, analyze & scale smarter.

QeMatic

Start Your Journey Towards Smarter Operations

Ahmedabad | Rajkot | Nadiad | Delhi | Bhopal | Pennsylvania | Toronto | London

Phone:
+91 98983 30717
+1 323 455 4591

Email:
hello@qematic.com

Website:
www.qematic.com

Powered by Ace Software Exports LTD