

Engineering Digital Transformation: **Modernizing ALM for a Global Automotive Leader**

- ✓ 25% Productivity Increase
- ✓ 100% Compliance Achieved



**MICRO
GENESIS**

Client Profile:

Our client is an advanced R&D hub for electronics and mechatronics. They are a key global automotive component manufacturer with over six decades of industry presence. The company drives innovation for a diverse portfolio, serving leading OEMs and Tier-I suppliers. With facilities in Pune and Bangalore, it focuses on developing cutting-edge automotive electronics and system solutions, emphasizing quality, compliance, and rapid innovation.

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Business Challenges:

Client faced significant hurdles in its engineering lifecycle management, hindering efficiency and innovation:



Fragmented Tools & Data Silos:

Requirements, design, testing, and changes were managed in isolated tools and spreadsheets, causing version mismatches and duplication.



Limited Traceability:

Inability to maintain consistent links between stakeholder requirements, design, tests, and defects created compliance risks (e.g., for functional safety standards).



Inefficient Change Management:

Lack of a unified process to evaluate change impact led to delays and frequent rework.



Collaboration Barriers:

Distributed teams lacked a central platform for real-time collaboration, causing misalignment.



Manual Reporting:

Generating audit and customer reports was time-consuming and error prone.



Inconsistent Processes:

Absence of standardized workflows across teams led to inefficiencies in reviews, testing, and release management.

Our Solution

MicroGenesis implemented a comprehensive IBM Engineering Lifecycle Management (ELM) platform, tailored to client's processes to enable seamless collaboration and end-to-end traceability.

Strategic Implementation:

Duration: Phased rollout followed by a Managed Services model.

Approach: Hybrid Agile/Scrum methodology.



Key Technical Components

- **Single Source of Truth:** Centralized platform for requirements (DOORS Next), testing (ETM), work management (EWM), and reporting (JRS).
- **End-to-End Traceability:** Achieved 100% bidirectional linkage from stakeholder requirements through design, test cases, and defects.
- **Process Standardization:** Custom Agile templates for Epics, Stories, Tasks, and Milestones.
- **Change Impact Analysis:** Integrated workflows to assess and track changes, reducing assessment time from days to hours.
- **Compliance Automation:** Automated baseline and report generation via ELO-Publishing for instant audit readiness.



Integration Ecosystem

- **Core Platform:** Jazz Platform (JTS, WebSphere Liberty, Db2).
- **Systems Design:** Integrated with IBM Rhapsody for model-based systems engineering.
- **Infrastructure:** Secured on-premises deployment within client's network.



Adoption Enablement

- Hands-on training for users and administrators.
- Custom user guides and best practice documents for long-term self-sufficiency.

Quantified Outcomes:

The IBM ELM implementation delivered significant efficiency gains and strategic advantages:

Metrics	Before	After	Impact
Requirement-to-Test Cycle Time	Manual, disconnected processes	Streamlined, centralized workflows	25% faster
Change Impact Analysis	Manual assessment taking days	Automated workflows & linked artifacts	Reduced to a few hours
Process Deviation & Rework	Inconsistent team workflows	Standardized Agile processes across teams	20% reduction
Audit Compliance Effort	Manual evidence gathering	Automated traceability & reporting	Zero major non-conformities
Tool Licensing & Maintenance	Multiple legacy tools	Consolidated ELM platform	~15% annual savings
Cross-Location Collaboration	Email, scattered files	Real-time updates & shared visibility	30% fewer delays

Strategic Outcomes:

Established a future-proof, scalable ALM foundation for complex automotive programs.

Achieved full regulatory and audit compliance with automated evidence generation.

Enhanced collaboration and decision-making for distributed engineering teams.

Enabled a seamless transition to managed services for ongoing optimization.