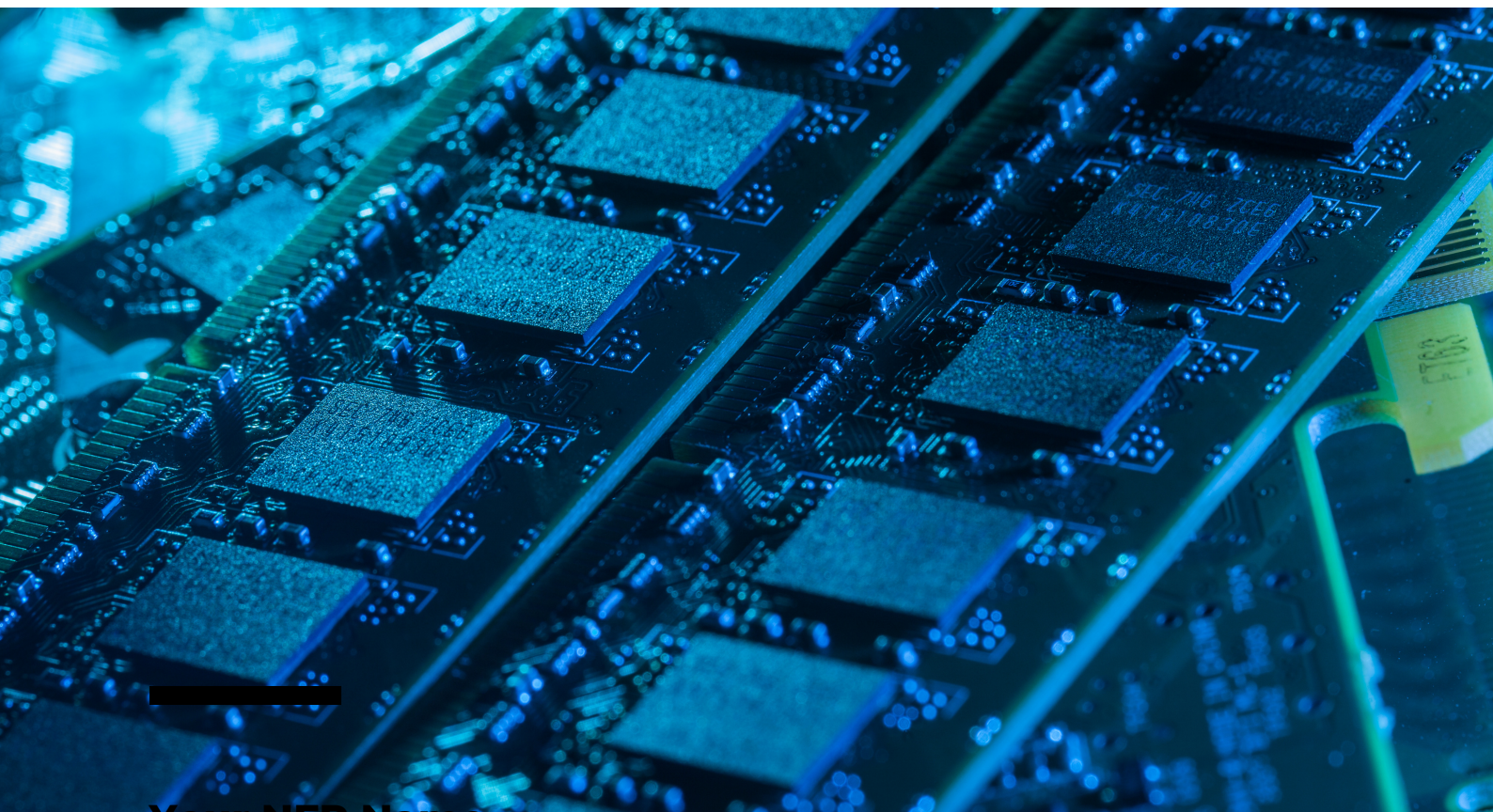


# **COPING WITH ENGINEERING TRANSFORMATION WITH ENGINEERING LIFECYCLE MANAGEMENT**



# INTRODUCTION

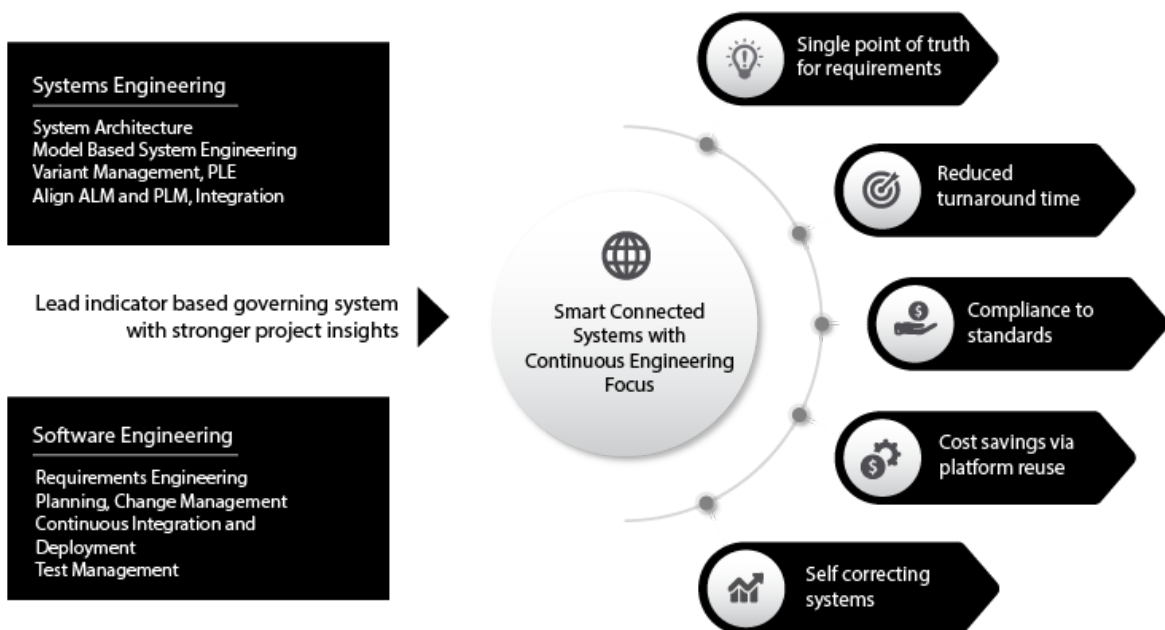


## No more simple products - Speed Matters

Engineers across the globe are developing complicated products in shorter cycles organizations are faced with the challenge of managing complex product designs which are multi-disciplinary in nature yet ensure continuous innovations with minimal cost overruns and system failures.

They have to deal with increasing quality, safety, usability and other design drivers. Complex products are also in most cases assembled from subsystems provided by suppliers. To orchestrate the flow of deliverable from concepts to components and subsystems, sophisticated and inter-dependent supply chain need new approaches.

## Key advantage of systems engineering - Transformation via ALM/ELM



# OUR SOLUTIONS

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1

## **SYSTEM ARCHITECTURE PLANNING**

Planning phase include capturing project plans, schedules, cost estimates and procurement requirements.

2

## **MODEL-BASED REQUIREMENTS MANAGEMENT**

Gather requirements of stakeholders & SME to create a log of tasks to be performed.

3

## **DESIGN & PROTOTYPE**

Use visual modelling to validate requirements, derive architecture and build embedded software

4

## **CHANGE MANAGEMENT & DEFECT TRACKING**

Track & manage ever-increasing change request from different sources to ensure defect is fixed within stipulated time.

5

## **PROJECT DEVELOPMENT & MANAGEMENT**

Integrate planning and execution, automate workflows and manage change across different teams.

6

## **TESTING & QUALITY MANAGEMENT**

Implement meticulous planning, automated testing & defect management to achieve quality

# ROLE OF SYSTEM ENGINEERING TOOLS

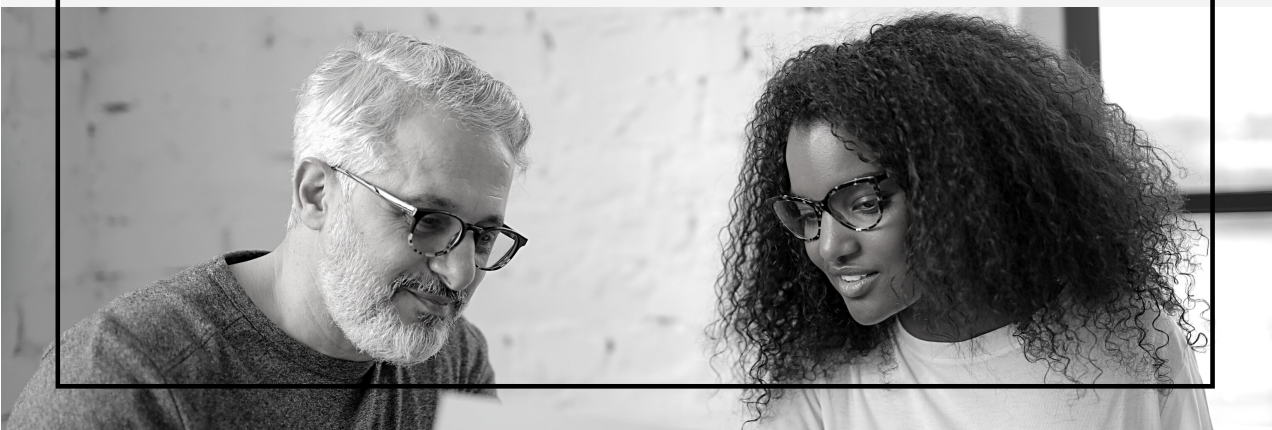
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Modern systems engineering tools facilitate systems engineering practices as part of a fully integrated engineering environment.

They benefit from internet-based connectivity and knowledge representation to readily exchange information with related fields

Leading systems engineering tools integrate with CAD/CAE/PLM environments, project management and workflow tools as part of a broader computer-aided engineering and enterprise management environment. First applications of artificial intelligence to augment systems engineering tools are being introduced. The technology is expected to gain in maturity and to cover more and more disciplines over the next few years.

SHAPING TOMORROW'S ENGINEERING ENVIRONMENT



The journey towards an optimal engineering environment remains long and difficult. Organizations face specific challenges to master through the transformation journey, but none of them will succeed without laying the foundations for a deep transformation that encompasses:

- **People and culture, lifelong learning**
- **Integration/federation of data across the engineering lifecycle**
- **An integrated digital environment to create, collaborate, share and manage engineering data**

With the onset of complexities in product and software, the challenge to manage and trace artefacts and information such as, requirements and test cases across functional boundaries becomes obvious. Application Lifecycle Management (ALM) meets all these challenges effectively from conceptual phase to retirement.



## **KEY ADVANTAGES OF ENGINEERING LIFECYCLE MANAGEMENT (ELM) SOLUTIONS**

- Keep up with the growing software and hardware complexity
- Single source of truth
- End-to-End lifecycle traceability
- Visualization through process enactment
- Compliance to internal and external process and regulations
- Risk & hazard management
- Comprehensive audit management
- Enable collaboration between all roles
- Deliver higher quality products, applications and systems, faster time to market

# WHY MICROGENESIS?



- 20+ years of technical know-how
- Hands-on experience in working with multiple ELM tools
- Has developed the Centre of Excellence (CoE) Competency Ecosystem
- Strong client base across geographies
- Training and complete handholding throughout new implementation or migration process
- 2 levels of technical support (MicroGenesis & OEM)

## Domain Experience



Aerospace



Defense



Automobile



Manufacturing



Medical and Life Science



Information Technology

## What we offer?

- Training
- License Procurement
- Installation, Upgradation & Migration
- Consulting, Customization & Implementation
- Model Based System Engineering
- Plugins & Extensions
- Integrations
- Data Migration

### Systems and Software Engineering



- System Engineering Workshops
- User-case driven requirement management
- Model-based System Engineering
- Model-based testing
- Consulting
- Managed Services

### ELM Services



- Training
- License procurement
- Integrations
- Data migration
- Plugins & Extensions
- Consulting and Implementation

### Embedded Software Development Services



- Innovative techniques, language and databases
- Expertise on Waterfall, Agile and DevOps

### Testing and Test Automation Services



- System End-to-end
- Functional Testing
- Exploratory Testing
- GUI Verification
- Safety and performance

### Managed Services



- Dedicated team for 24/7 IT Support
- Robust integration and delivery mechanism

### Reporting



- Organizational specific Custom Dashboard Solutions
- Document Style Reporting
- Compliance and Adherence

### Infra & Rollout



- Tool Upgrades and Migration
- Training & Enablement Services
- Support in Deployment Design
- Organization Rollout Support
- Tool Administration and customization

### Migration



- Migration Strategy
- Migration Execution
- Post Migration Support

## Our Solution Partners



Gold  
Solution Partner





**MICROGENESIS**

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