KEYSIGHT

Transforming PLM Upgrade Cycles through AI Driven Test Automation

A real-world experience from a complex PLM landscape

Presenter - Mahavir Rathi, Co-Presenter: Sachin Gupta
Keysight Technologies – IT Global Apps

PLM Road Map™ & PDT EMEA 2026
AI in PLM: A Disruptive Opportunity and Challenge
Turning AI disruption into enterprise value:
Strategic insights for the PLM professional
4-5 November 2026
CIMdata
www.CIMdata.com

Agenda

Presenter’s Introduction

About Keysight Technologies

PLM Upgrade key Challenges

Transformation using AI driven Test Automation by Eggplant

Results and Way forward

Questions & Answers

Introduction - Mahavir Rathi



- Global IT Operating Manager at **Keysight Technologies**
- Leading Test Automation & Engineering team
- **AI driven Test Automation using Eggplant** and **RPA using UIPath**
- Business stakeholder and user of **Enovia 3DX, Teamcenter, and Oracle Agile PLM**
- 27+ years of Experience into IT Test management, R&D Business Operations & Program Management and AI Tools

Introduction - Sachin Gupta



- PLM Transformation & Solution Delivery Manager at **Keysight Technologies**
- Leading **Automation, Project Delivery and Support Teams**
- Driving **3DEXPERIENCE (3DX) DevOps, upgrades,** and continuous improvement initiatives
- Business stakeholder and user for **Enovia 3DX, Teamcenter and Oracle Agile PLM**
- **27+ years of industry experience** across:
  - IT DevOps & Solution Delivery, PLM & Mergers & Acquisitions (M&A)
  - AI and Digital Transformation
  - Semiconductor R&D & Business Operations
- Passionate about leveraging technology, automation and AI to accelerate innovation and business value

A Brief History of Keysight







1939 – 1998
Hewlett-Packard

The company was founded on electronic measurement innovation.

1999 – 2013
Agilent Technologies

Spun off from HP, Agilent became the world's premier measurement company. In September 2013, it announced the spin-off of its electronic measurement business.

2014+
Keysight Technologies

Keysight became an independent company focused on electronic measurement, software solutions.

PLM Upgrade Challenges

Transforming PLM Upgrade Cycles through AI Driven Test Automation

Release pressure

Quarterly releases
Recurring upgrades

M&A integrations
Tight delivery schedules

Off-hours releases
Release windows

Regression scope

Large test inventory
Extensive coverage

Connected modules
Cross-module regression

Legacy support
Compatibility risks

Test readiness

Test data setup
Preparation effort

Manual testing
Lower environments

Quality visibility

Page-load issues
Gaps in issue reporting

Manual Jira logging
Administrative effort

2 - 3 days Dev-to-test environment switch

8 - 10 days Regression test cycle

PLM Test Automation Summary

Transforming PLM Upgrade Cycles through AI Driven Test Automation

PLM Functionalities

- Search Index
- Engineering Central
- Material Compliance Central
- Bill of Materials (BOM)
- Supplier Central
- Part Master

Key Defects Identified

- UI / Functional Issues
- Application Changes
- Late-Cycle Regression in Connected Modules
- Test Data Issues
- Integration Failures
- Performance and Response Time

Test Scenarios Automated

3DX Enovia PLM

- Regression Test Scenarios – 450
- Non-Regression Test Scenarios –190

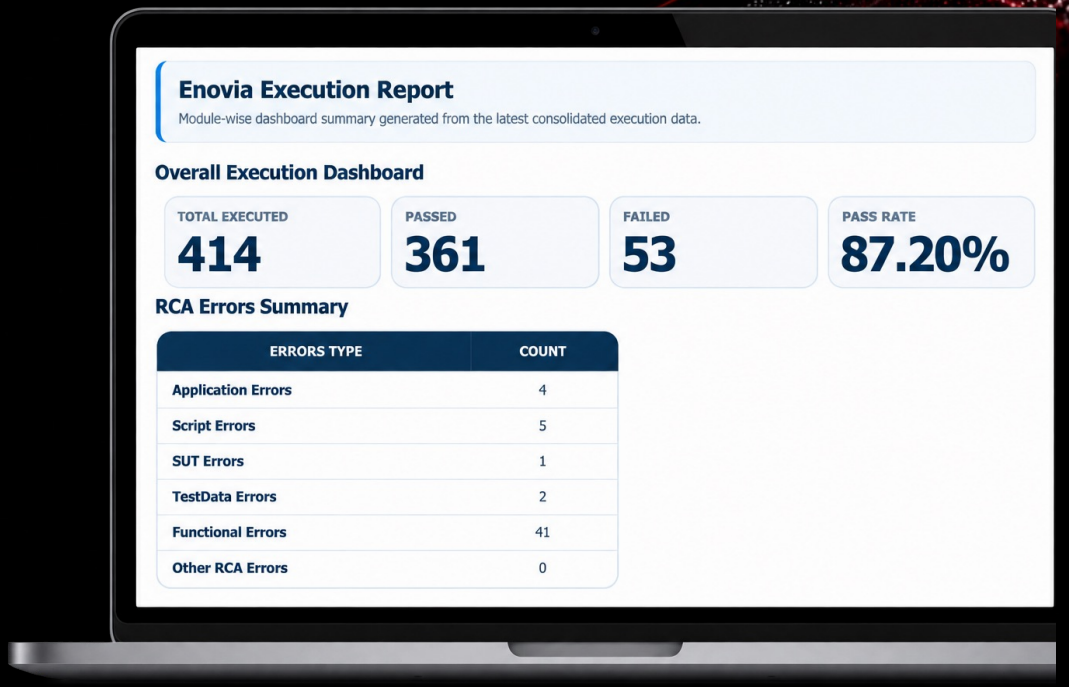
Team Center PLM

- Golden Transactions for Production validation

Key Results

Transforming PLM Upgrade Cycles through AI Driven Test Automation

- **~4100 hours** of manual work automated
- Regression Testing Time Reduced from **8 days** to **3.5 days**
- Accommodated **~30%** increase in test coverage
- Lower operational effort = **~85% efficiency gained**
- Improved user experience, **higher confidence** in new solution
- Fast defect detection, **Reduced project timeline**



Eggplant Test Automation Journey



2021

TRIAL & ADOPTION
- Broad based early adoption trials
- Scalability issues and failures

2022

INCEPTION
- Virtual test center formed with IT, Business & Eggplant teams

2023

POCs and Reviews
- Started with POCs for Oracle & KCOM

2024

Siemens TEAMCENTER

Expand and Leverage
- Expansion to Salesforce Sales

2025

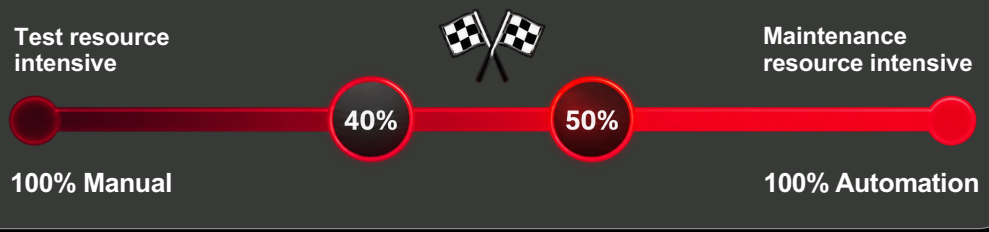
ENOVIA

Scale & Analytics
- SF Modules
- Oracle Modules
- **Teamcenter PLM**
- Supply Chain Collaboration

2026

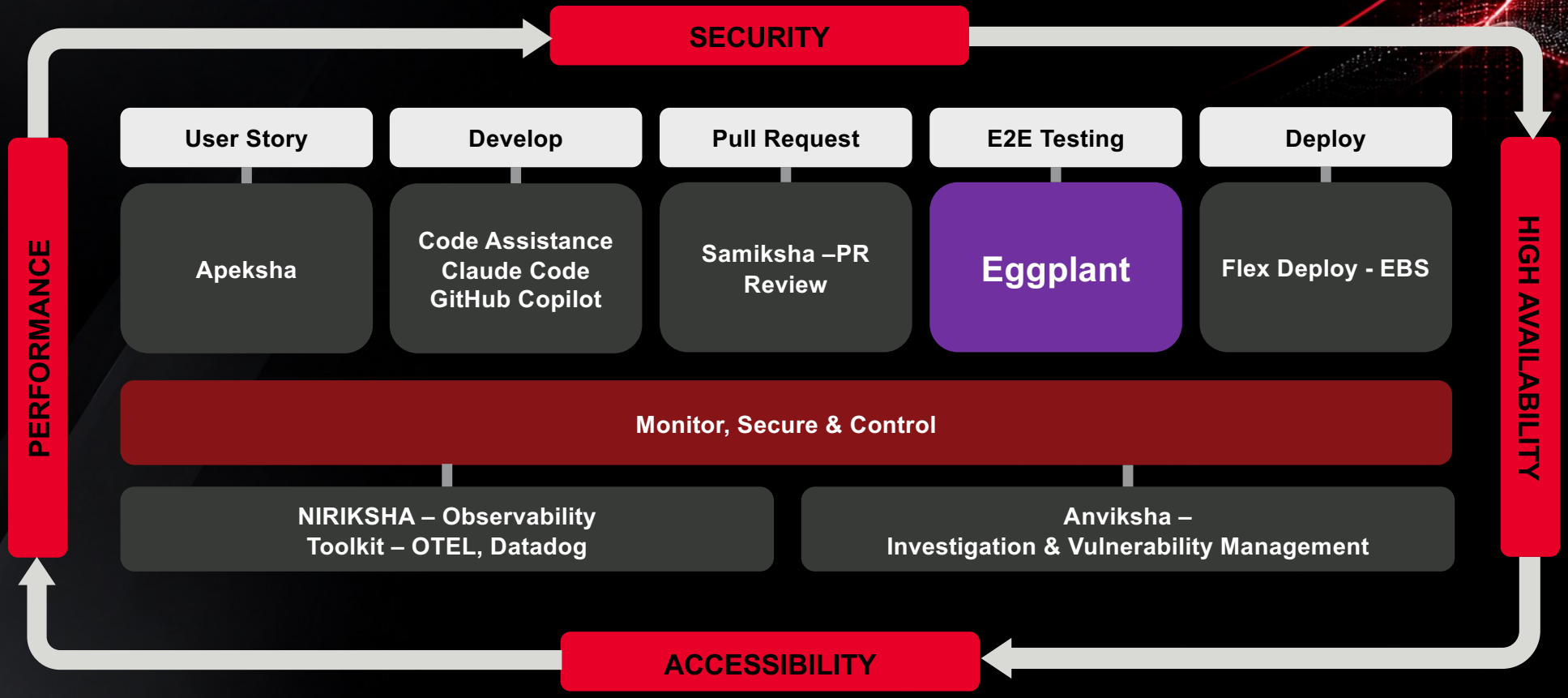
AI Capabilities
- SF Service Console
- Salesforce SDC SOM
- **3DX Enovia PLM**
- AI Capabilities

Amount of Test Automation ∝ Ongoing maintenance
- Productivity starts to decrease if we breach that sweet spot of 40-50% required for critical and ongoing regression needs.



SDLC Framework

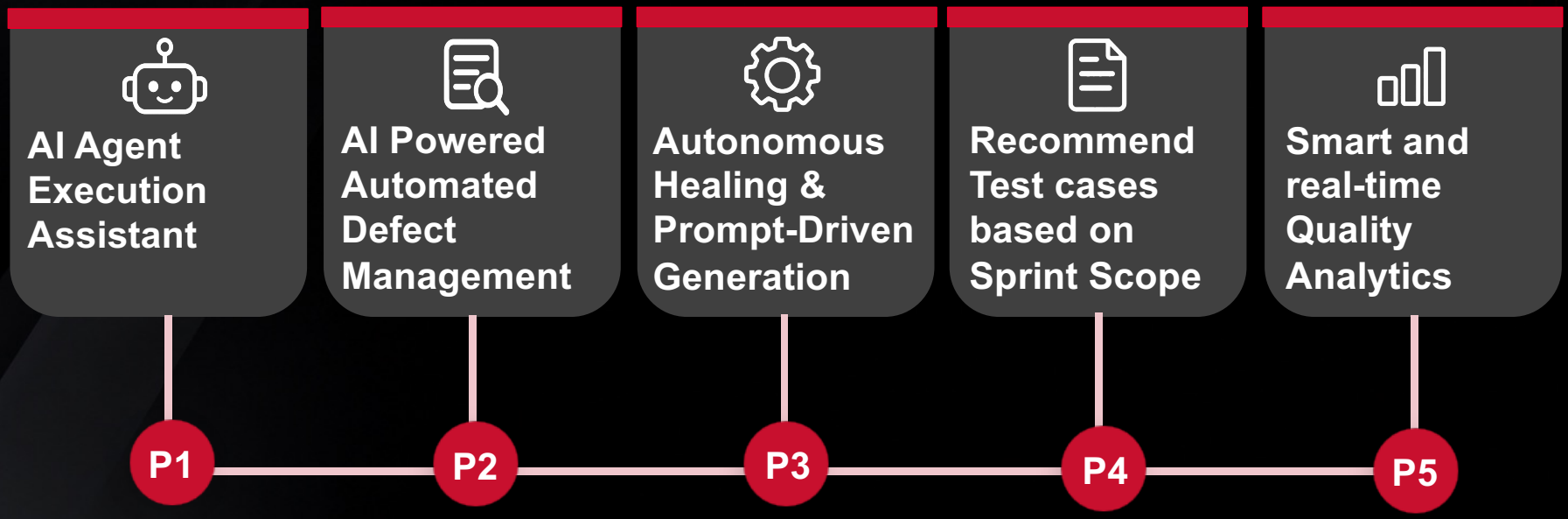
AI Driven SDLC → Enabling AI Ready IT Systems



AI Features Roadmap

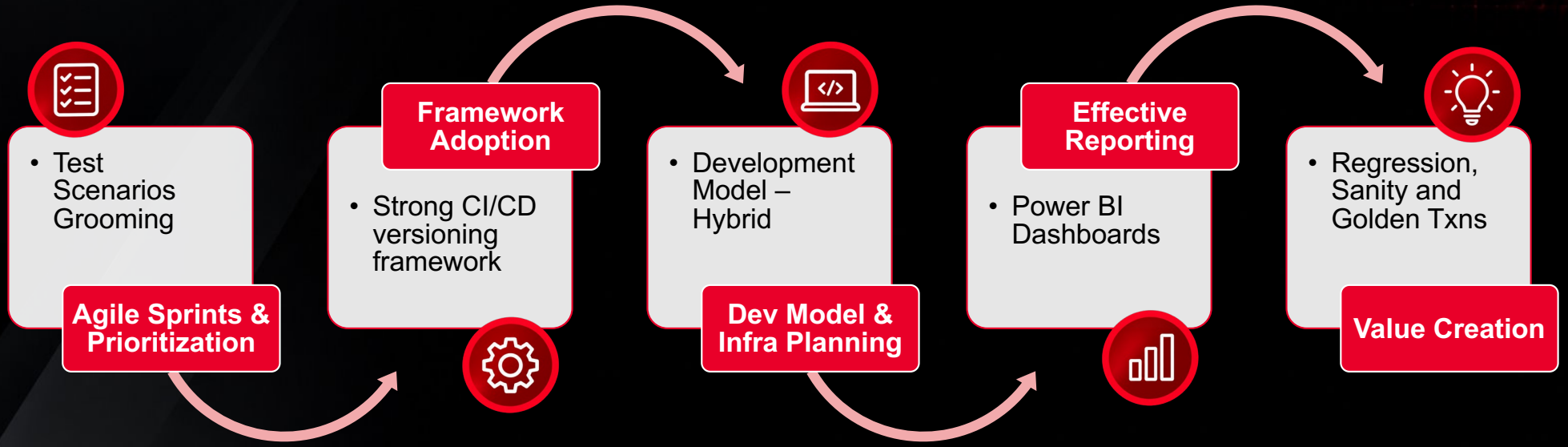
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KEY PHASES



Best Practices and Learnings

Transforming PLM Upgrade Cycles through AI Driven Test Automation



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Thank You



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