

Self Introduction

Name: Chetan Naduvinamani

IOT DE (Digital Engineering) Connected Services Unit

My Career:

- Started my career as Software Application Developer in 2004
- Moved to Japan in 2007 & served in multiple roles like Application development, Presales, Sales as BRM (Business Relationship Manager)
- Currently managing Alliance Partnership with Hexagon, in the area of ALM/EAM/APM
- Have vast knowledge of IOT, Digital Twin. Instrumental in promoting Digital Transformation to our customers across all industries



TCS Keynote Speech at Hexagon Event

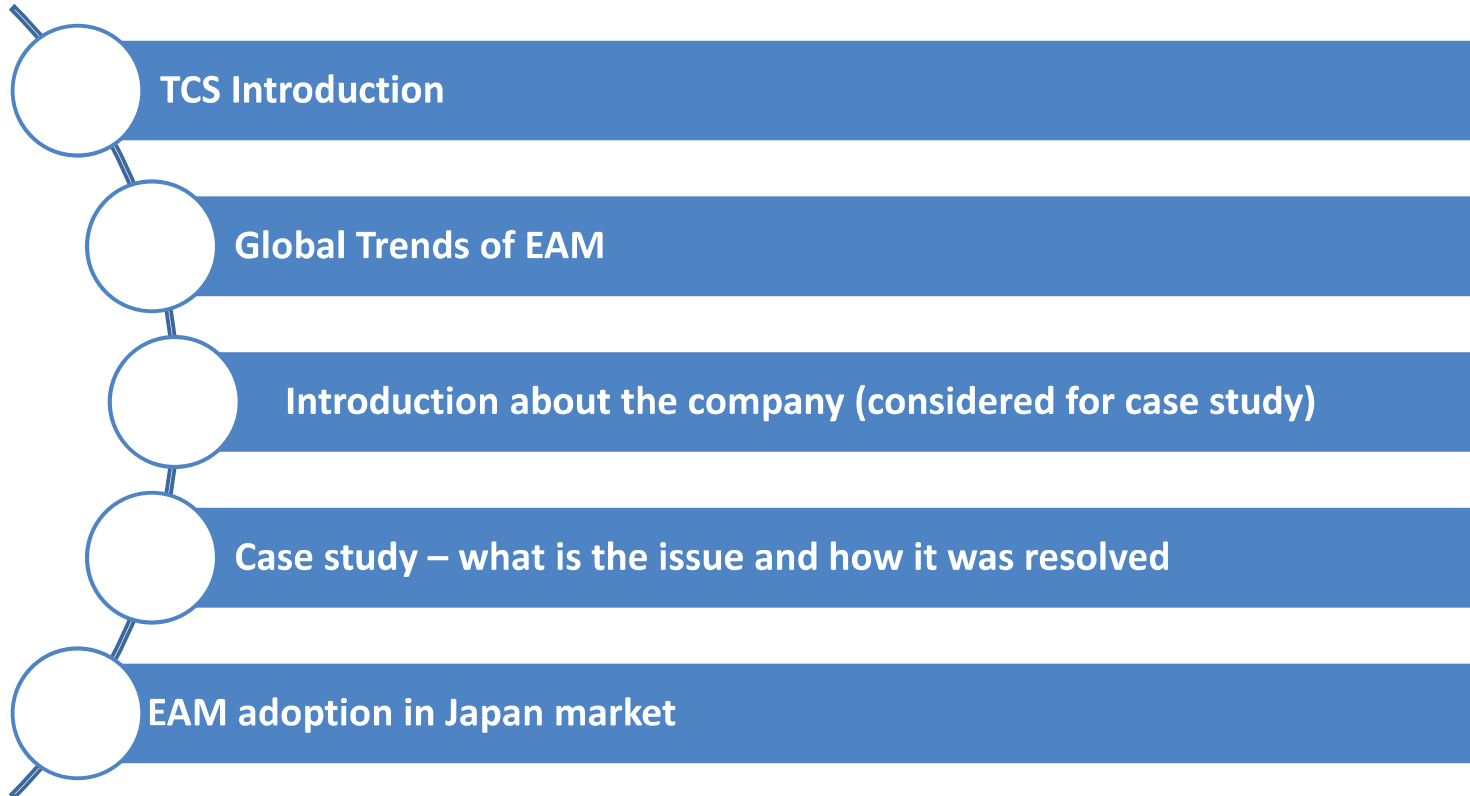
Introducing EAM implementation case study for UK Based Global Biopharma



Aug 2024

Building on belief

Agenda



Tata Group




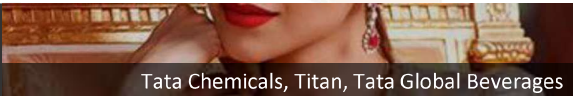

One of the World's Largest Business Conglomerates






- ✓ Established over 150 years ago (1868)
- ✓ 30 major companies across 10 verticals
- ✓ 1,020,000+ employees

- ✓ Revenues : USD 150.0 BN (FY2023*)
*year ended March 2023
- ✓ Operating in 100+ countries
- ✓ TCS is the group's largest member



Major Group Companies

Information Technology	 TCS
Steel	 Tata Steel
Automotive	 Tata Motors, Jaguar Land Rover
Consumer & Retail	 Tata Chemicals, Titan, Tata Global Beverages
Infra-structure	 Tata Power

Financial Services	 Tata Capital
Aerospace & Defense	 Tata Advanced Systems
Tourism & Travel	 Indian Hotels Company, The Taj
Telecom & Media	 Tata Communications
Trading & Investments	 Tata International



Tata Consultancy Services (TCS) at a glance



- Throughout its more than 50 Year history, TCS has maintained high growth.
- Today, TCS is recognized as a leading global IT services enterprise and sees it vying for the top position amongst its global peers.

1968 Established (as a division of Tata Sons Limited)

USD29B Revenues ^{※1}

601,546 Head-count ^{※1}

152 Nationalities of employees ^{※1}

55 Countries ^{※1}

USD142.4B Market Capitalization ^{※2}

※1: Year ended Mar, 2024

※2: Year ended Mar, 2023



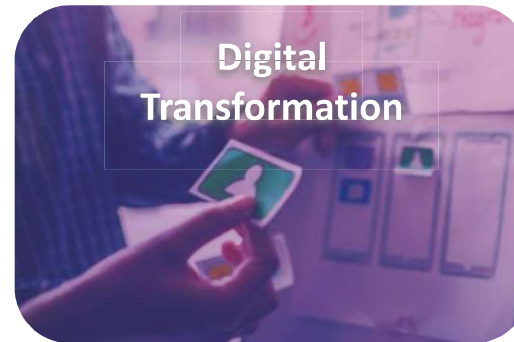
Services

- Digitally-enabled services delivered end-to-end, with speed and impact
- Vendor neutrality to ensure that the solutions, tools, and software products best suited to customer's requirements are selected



IT Outsourcing

- PRISM™
- HαVEN™
- Application Support
- Business Process Service
- Testing Service



Digital Transformation

- Cloud
- Digital Workplace
- Analytics & Insights
- TCS Interactive
- Automation



Enterprise Application

- SAP S/4HANA
- SAP SuccessFactors
- Salesforce
- TCS BαNCS™
- Legacy Modernization





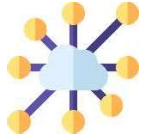


IoT & Digital Engineering

- Automotive Industry Services
- Digital Thread(PLM)
- Connected Plants(MES)
- Connected Services

Global Trends of EAM

EAM has become a focal point for organizations seeking to optimize their asset management practices. As industries adapt to the **ever-evolving landscapes shaped by technological progress**, EAM serves as a crucial tool to ensure efficiency and responsiveness.

Below mentioned are the key trends

<h3>1. Integration of Internet of Things (IoT)</h3>  <ul style="list-style-type: none"> • Connected devices/equipment • With IoT, organizations can anticipate and address potential issues before they occur • Supports data driven decision making <p>• Proactive and efficient approach to maintaining and maximizing the lifespan of valuable assets.</p>	<h3>2. AI for Predictive Maintenance</h3>  <ul style="list-style-type: none"> • Predicting before failure happens • Reactive to predictive maintenance • Optimal performance of assets • Resource utilization <p>• Safeguards assets</p> <p>• Streamlines maintenance processes</p> <p>• Overall cost savings</p>	<h3>3. Cloud-Based EAM Solutions</h3>  <ul style="list-style-type: none"> • Real-time updates • Reducing downtime • Improved decision-making • Optimize resource utilization • Enhance overall productivity <p>• A strategic move towards a more dynamic and interconnected approach to unlock new possibilities</p>
<h3>4. Mobility and Field Service Management(FSM)</h3>  <ul style="list-style-type: none"> • Instantaneous access to crucial asset information and documentation even though users are offline. <p>• make informed decisions on the go</p>		<h3>5. Sustainability and ESG Integration</h3>  <ul style="list-style-type: none"> • Monitor and regulate assets in alignment with environmental responsibility • Examples: <ul style="list-style-type: none"> • Tools to observe energy consumption patterns • Assess carbon footprints <p>• Broader corporate commitment to sustainability and responsible governance.</p>

ESG - Environmental, Social, and Governance

Trends

Optimize asset performance

Cut operational costs

Promote sustainability

HxGN Practice within TCS & HxGN Relationship

01

GLOBAL SI OF HxGN

02

02+ DECADES OF HxGN EXPERIENCE

100

100+ ENGAGEMENTS OVER 2 DECADES

500

500+ CONSULTANTS IN THE PRACTICE



- Agile Borderless Model™, SBWS™, TDM amalgamated with HxGN Deployment Method (IDM) (including HxGN Agility)
- Holistic services –HxGN core, Integration, data migration, program management
- Wider industry expertise, Testing and Integration

Global Alliance

- TCS Manufacturing Unit on HxGN
- Multi Geo & Industry Experience
- Comprehensive Template and Reusable components for accelerated delivery
- Delivery governance from CoE
- Solution Labs for Prototyping/PoC/Demo

TCS as an HxGN Customer

- CloudSuite F&B, Fashion, Distribution, Equipment
- CloudSuite Auto, CloudSuite A&D, CloudSuite Industrial Enterprise
- Other Applications: HxGN Visual, HxGN, OS, d/EPM & Birst

Joint Solutioning Partner

360° Relationship with HxGN

- Close collaboration with HxGN product team, HxGN accelerators, Roadmap
- Preferred Partner for product development of HxGN Financials, ION, HCM
- Involved in Test Case Automation for multiple HxGN applications including M3

IT & Engineering Partner



Client and Program Introduction

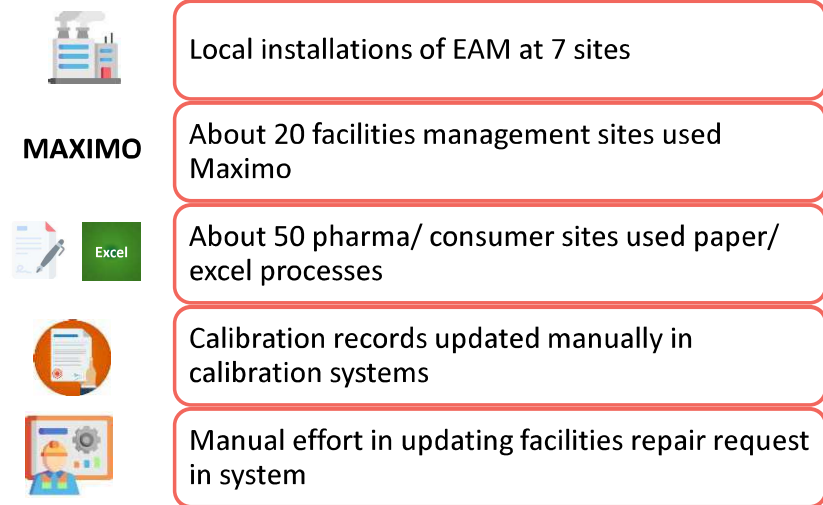
- **About the client:** A UK based global biopharma company focusing on Vaccines, Specialty Medicines and General Medicines, with operations in over 75 countries. The company has over 35 manufacturing sites located across the globe with a workforce of more than 70K and a revenue of more than £30B.
- **About the program and TCS relationship:** The EAM deployment program was kick started by the client in partnership with TCS and EAM Vendor (HxGN) in 2013 to **digitalize the maintenance process across sites and move to a single centrally managed maintenance system**. This initiative had later grown into a maintenance transformation program in continued partnership with TCS covering system integrations, data quality improvements, paperless maintenance, maintenance data analytics and MRO optimization.

Hexagon EAM Usage Statistics



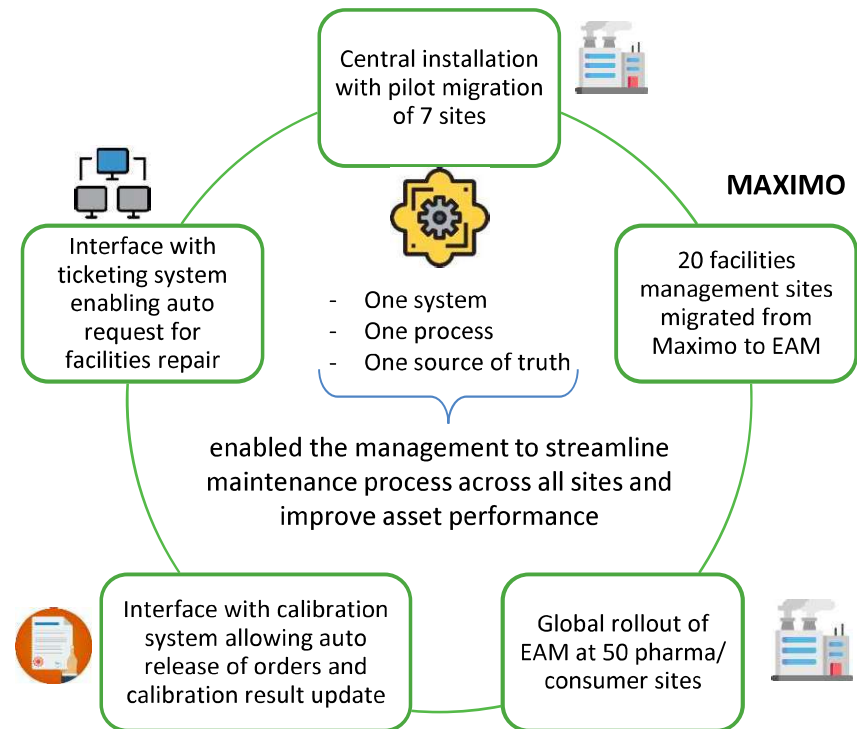
UK Pharma Client's EAM Journey (Phase 1) Analog/Semi Analog to Digital Systems

Initial state and challenges faced by the client



Disparate systems
Localized business processes
Reduced maintenance efficiency
Reduced asset performance

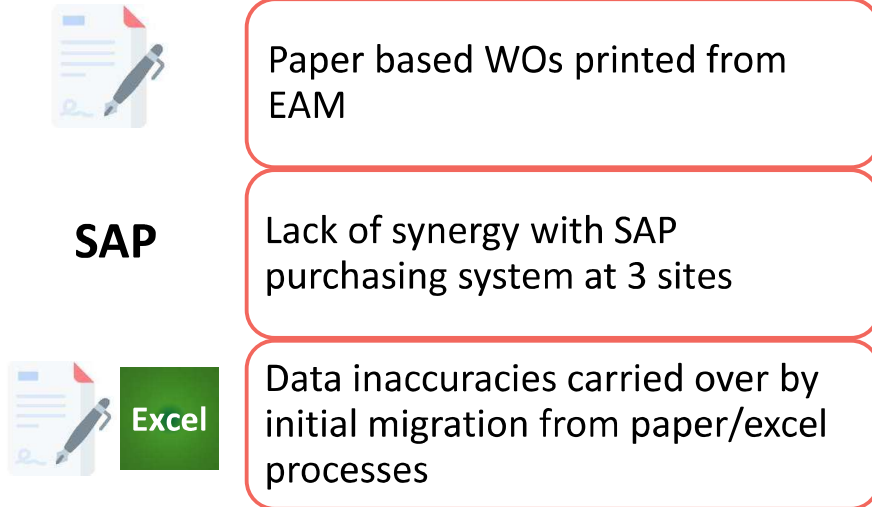
Solution Implemented and Benefits realized by the client



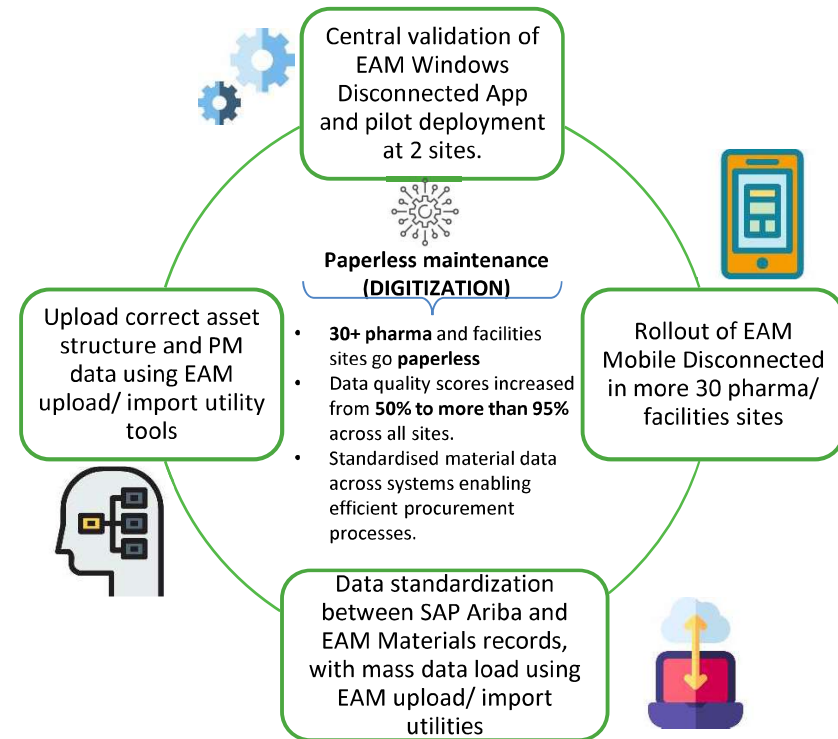
UK Pharma Client's EAM Journey (Phase 2) Connected Systems and Data Integrity

Solution Implemented and Benefits realized by the client

Initial state and challenges faced by the client



Disparate systems
Localized business processes
Reduced maintenance efficiency
Reduced asset performance



UK Pharma Client's EAM Journey (Phase 3) Data Analytics, AI and MRO Optimization

Solution Implemented and Benefits realized by the client

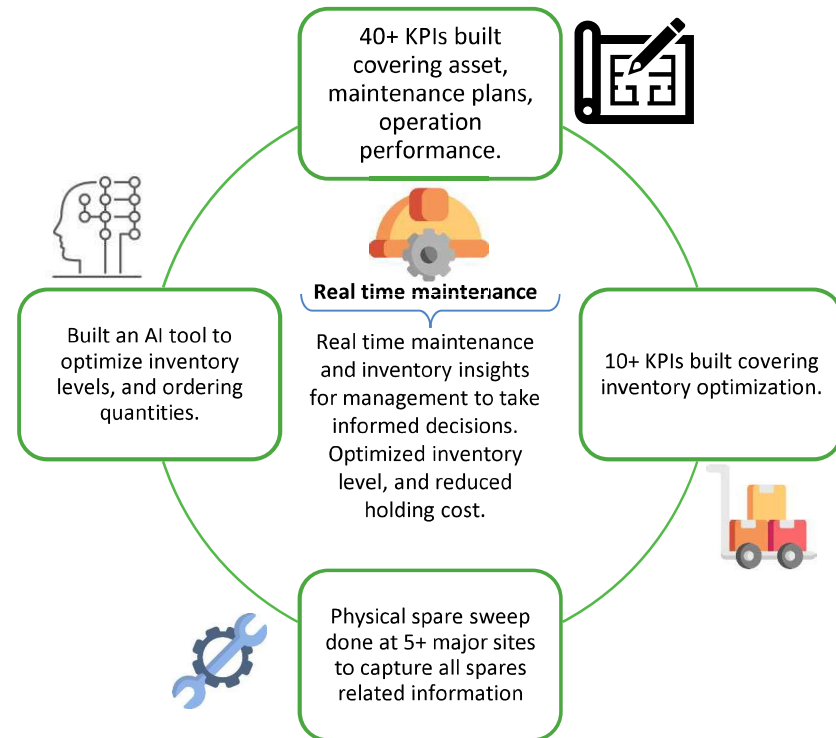
Initial state and challenges faced by the client



Lack of maintenance KPIs to make informed maintenance decisions



High inventory costs due to inaccurate inventory data



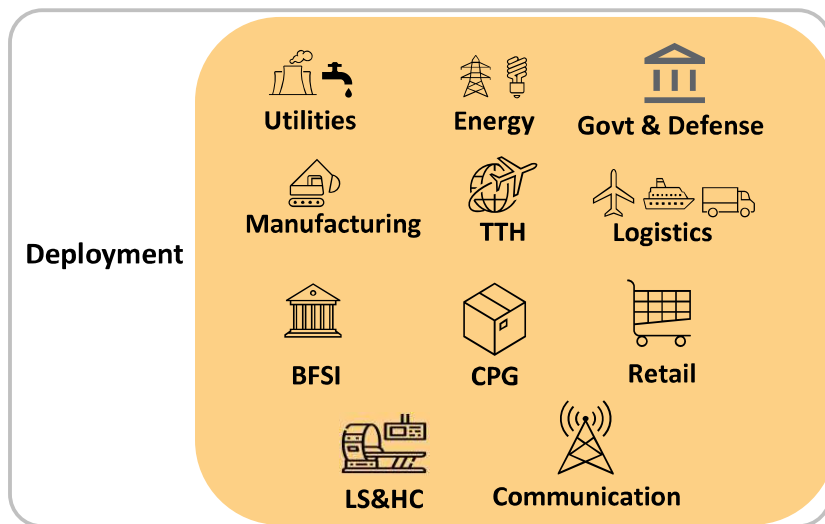
Japan Market for EAM Adoption



10.8%

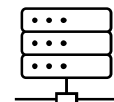
For next 5 years EAM market is estimated to grow significantly at a CAGR of around 10.8%

Industry Segment



Deployment

EAM Preferences



On-Prem



Cloud

Market analysis indicates that EAM Japan market is inclined towards **On-premise**



On-premise solutions are more easy to tailor to fulfill requirements of all end users



On-premise solutions are less vulnerable to cyber treats and can be managed by internal IT

Source: Orion Market Research Pvt. Ltd
<https://www.omrglobal.com/industry-reports/japan-enterprise-asset-management-market>



Thank you

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