yexle
Driven by Innovation,
Committed to Quality

DigiTwin

An AI / ML based case management solution to monitor, manage and control TOTEX for organizations

Organizations today face an increasing demand for shorter time-to-market, a need to simulate performance outcomes and tackle issues real-time of their assets. Yexle's DigiTwin solution ingests data and replicates processes in a virtual environment so organizations can obtain valuable insights, predict possible outcomes that the real world product might undergo and pro-actively recommend options to repair, service or replace these products thereby improving the processes and performance of these physical objects

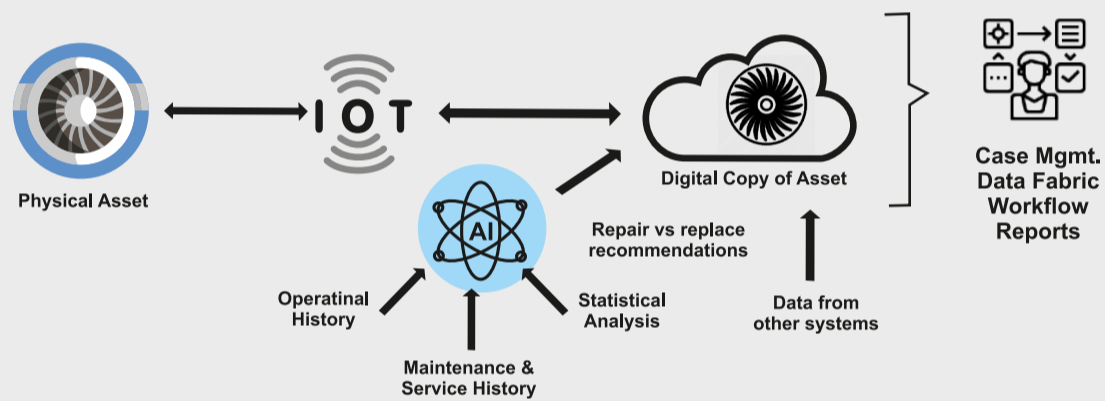**62%** of organisations are trying to automate adoption of Digital Twin Technology

ONLY 13% of organizations have adopted Digital Twin Technology

Challenges

- Maintenance of assets is a challenge due to resource unavailability
- No real time monitoring of assets leading to fatigue and stress failures
- Siloed maintenance of records
- Replacement of assets is time consuming leading to higher downtime
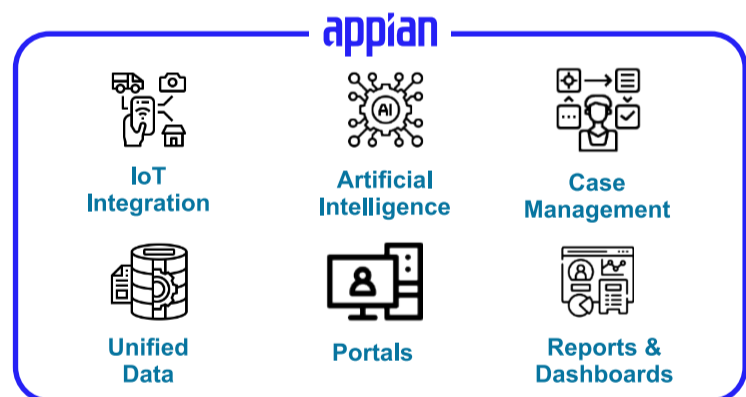- Lack of data standards

DigiTwin - Explained

A digital twin is a digital representation of a physical object, process, service or environment that behaves and looks like its counterpart in the real world.

Physical Asset — I O T — Digital Copy of Asset — Case Mgmt. Data Fabric Workflow Reports

Operatinal History, Maintenance & Service History, Statistical Analysis, Repair vs replace recommendations, Data from other systems

DigiTwin - Features

- IoT to monitor the assets real-time
- Prescriptive analytics to intelligently identify issues and suggest repair vs. replace decisions (Improve Total Expenditure – TOTEX)
- Predictive analytics to identify areas of frequent issues
- Raise case to monitor whether the issue identified needs verification, repair or replace
- Case management to reassign, instruct for replacement

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- **IoT Integration**
- **Artificial Intelligence**
- **Case Management**
- **Unified Data**
- **Portals**
- **Reports & Dashboards**

Solution Roadmap

Extended Reality (XR)

Use a mix of immersive technologies like Virtual Reality (VR), Mixed Reality (MR) to allow Real-life and Digital Asset to coexist, simulate and interact real-time

Intelligent Quality Monitoring & Asset Identification

AI to identify defects, recommend repair vs replace and create cases

Decisions & Offline Capability

Intelligently analyse the assets and suggest for repair / replacement and assign a new case. Offline capability to improve productivity.

DigiTwin - Other Usages of this Solution

Manufacturing

- Design customization
- Validate stages of development
- Ops Enhancement
- Predictive, Prescriptive, Adaptive maintenance
- Monitor / Manage System performance

Aerospace & Automotive

- Design customization
- Validate stages of development
- Ops Enhancement
- Aircraft tracking
- Transport load optimization
- Vehicle defect detection
- Predictive, Prescriptive, Adaptive maintenance
- Monitor / Manage System performance

Healthcare

- Diagnosis & Therapy
- Medical device utilization
- Drug development and simulation

Mining

- Machine Productivity improvement
- Ops Enhancement
- Predictive, Prescriptive, Adaptive maintenance
- Monitor / Manage System performance
- Health and Safety / DR scenarios