ACBM Solutions



Real Time Asset Data with EnterpriseOne Orchestrator

About Us

- so Larry Furino (Founder) JDE Consultant with over 12 years of experience
- 80 Headquarters in Berkeley Heights, New Jersey
- so Oracle Gold Partner
- so Oracle Validated Integration JDE EnterpriseOne 9.1 & 9.2







Validated Integration

JD Edwards EnterpriseOne

Agenda

- **Digital Transformation and IoT**
- so Common Use Cases
- so Benefits of IoT
- **50** Implementation Considerations
- **50 Data Transmission Comparison**
- **50** Integration Method Comparison
- Bo How Does it Work?
- **So Features & Integrations**
- 50 Commonly Available Data
- Bo Demo
- so Questions???

Digital Transformation and IoT

Data Integrity

(Validity)

n Digital Transformation enables business to apply technology in a way that **Data Availability** improves data quality, availability, and integrity. Internet of Things Data Quality (Completeness)

The Internet of Things (IoT) achieves this by connecting the physical world with JD Edwards and transforming your assets into smart users.

Use Case: Asset Maintenance

Summary

- Asset availability and usability is critical to the success of asset intensive companies
- Failure to proactively maintain and monitor the assets will result in unnecessary losses
- Corrective maintenance occurs after equipment failure
- Preventative maintenance relies on time and meter readings to schedule maintenance
- Condition based maintenance continuously monitors operating conditions and triggers alerts when defined thresholds are violated

Traditional Limitations

- Condition based maintenance requires real time monitoring
- Preventative maintenance requires meter readings to trigger PM schedules
- Corrective maintenance is expensive and results in unnecessary downtime

IoT Advantages

- Real time condition monitoring for assets
- Meter readings are automatically entered directly from assets
- Improved maintenance and monitoring reduces unexpected failures and downtime

Use Case: Equipment Rental & Project Costing

Summary

Equipment Rental

 Equipment rental is traditionally done based on the number of days a piece of equipment is rented without regard to actual usage.

Project Costing

 Equipment and resource costs shared between multiple projects are allocated based on estimates and don't provide an accurate record of actual expenses.

Traditional Limitations

- Manual data entry is time consuming and error prone
- Location or usage based billing is difficult to record and requires significant effort

IoT Advantages

- Equipment becomes "Smart" system users ensuring data is entered accurately and in a timely manner
- Billing can be automated and generated by actual usage or location

Use Case: Facilities & Service Management

Summary

- Facilities and service management is achieved through managing distributed repair services
- Work order assignment is critical to the success of providing timely responses
- Service locations are needed to dispatch qualified resources

Traditional Limitations

- Defined service routes are not updated which ignores changes in factors of route optimization
- On demand service routes may be assigned using a priority queue instead of optimal assignment

IoT Advantages

- Location tracking enables real time optimization of service routes
- Better route management improves labor costs through a reduction in overtime
- Monitoring driver behavior reduces fraud

Benefits of IoT



Reduced Overtime/Labor costs

Implementation Considerations



Hardwired

Data Transmission Comparison

Method	Price	Installation	Range
Wired	Low	Difficult	Short
Bluetooth	Low	Easy	Medium
Wi-Fi	Low	Easy	Medium
Cellular	High	Easy	Long

Integration Method



How Does it Work?



IoT Fleet Features & Integrations



Commonly Available Data

Data Points										
Odometer	DTC (Check Engine Light-CEL)	Airflow Rate								
Engine Hours	Engine Temp.	Manifold Pressure								
Fuel Usage	Coolant Temp.	Engine Load								
Speed	Battery Voltage	Commanded Equivalence Ratio								
GPS Location (Lon,Lat,Alt)	Idle Time	Short Term Fuel Trim								







Orchestrator Studio



Vehicles Supported

- no Automobiles and Light Trucks
 - GPS (less accurate): 1996 Present
 - CAN Bus (most accurate): 2007 Present
- 80 Heavy Machinery
 - o J1939: Since 2000, (Significantly revised in 2010)
 - o J1587/J1708: Since 1994

Technical Details

- **Software Solution**
 - \circ Cloud based
 - $_{\circ}~$ Uses Amazon AWS EC2
 - Data stored on Amazon RDS (mySQL)
- 80 Hardware
 - Plugs directly into OBD2 Port or 9-Pin Deutsch Connector (J1939)
 - Reads directly from CAN bus
 - $_{\odot}~$ Transmission of data from vehicle to ACBM cloud via GSM

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