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A composite image featuring a shipping yard at sunset. In the foreground, a yellow container truck is positioned next to a red crane. The background is filled with stacks of colorful shipping containers (red, white, blue, green) and a large white airplane flying in the sky. The sky is a mix of orange, yellow, and dark grey clouds.

# IOT and Big Data Disruptive forces in Business

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# Safe Harbor Statement

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# Digital Disruption: Consumer Engagement

## IoT, Is Actively Driving Digital Disruption



**Connected Things**



# The Opportunity Is Big....

\$3

Trillion  
Market

**By 2020**

25

Billion  
Devices

**By 2020**

8

Zeta bytes  
of data

**Today**

# IoT Adoption

## Global Implementation Investment by the end of CY2016

- 43% of businesses to implement IoT (50% growth over CY2015)
- An additional 21% planning to implement in CY2017
- Heavy industries (utilities, oil and gas, and manufacturing) leading with 56% adoption



*Gartner Survey, March 2016*

# IoT is enabling new business models..



Maintenance

Break / Fix  
or Scheduled

Preventative  
Predictive  
Prescriptive



Consumption Model

Ownership

As a Service



Business Analytics

Static  
Analytics

Real-Time  
Big-Data  
Analytics



Service

Central  
Service

Self-Serve /  
Self-Guided  
Service

# The OT-IT Disconnect

## IoT Devices



## Current processes



*Today, many conditions are manually detected, and then manually entered in the business applications*

## Business Applications



Manufacturing, Supply Chain, Asset Mgmt



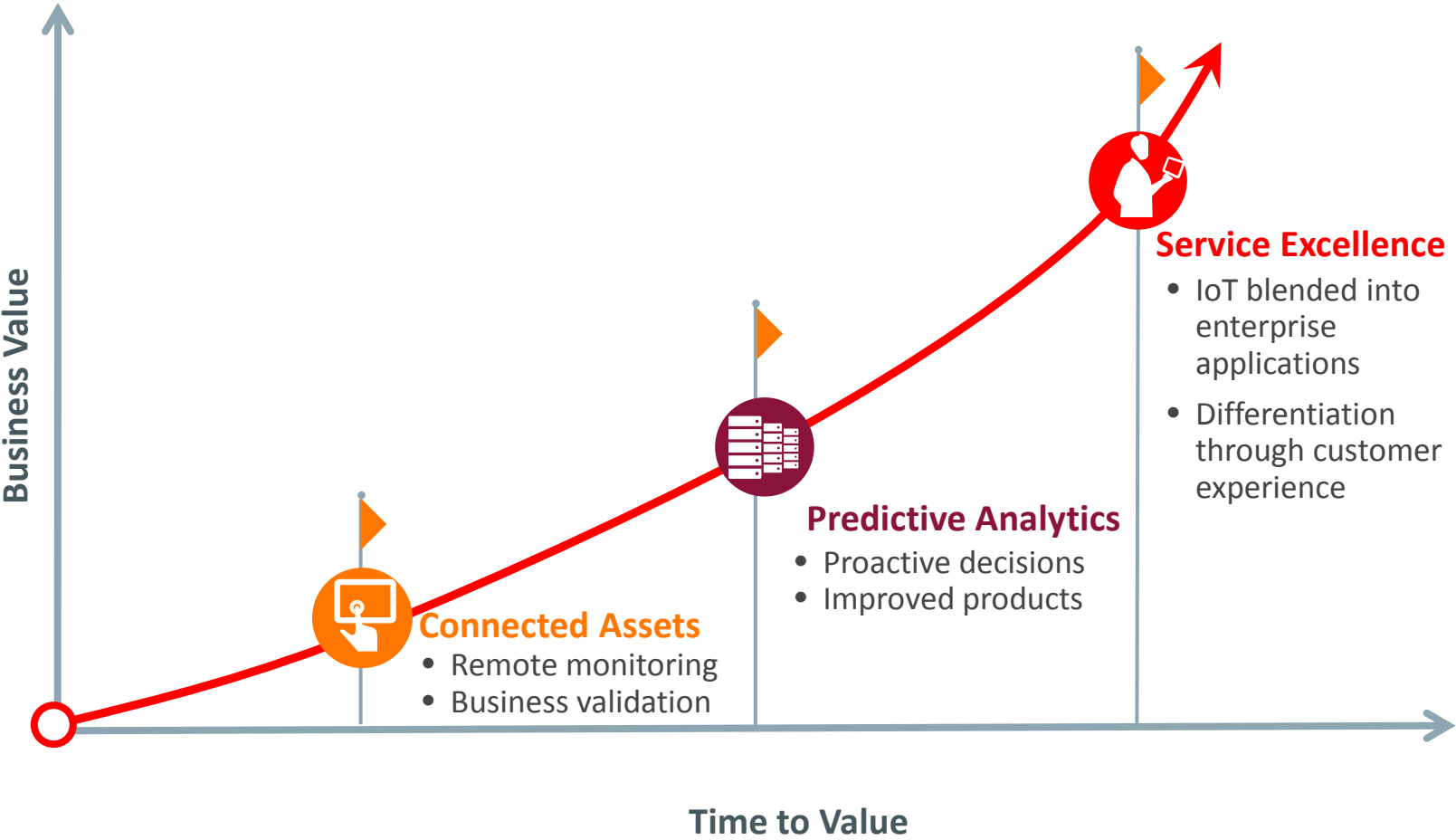
Customer Relationship Mgmt, Sales, Service



Vertical Apps – Utilities, Healthcare, Retail



# IoT Deployment Phases



# Introducing: Oracle Internet of Things Cloud Service



- **Connect:** Reliably and securely collect data from devices
- **Analyze:** Perform real-time, Big Data and predictive analytics on IoT streams and events
- **Integrate:** Seamlessly extend enterprise Applications and processes with IoT data
- Get started quickly and with no up-front capital costs
- Scale your applications rapidly as your business evolves

# IOT Cloud Service - Connect

## Devices



IOT Cloud Service



### Digital Twin

Software representation of a physical device/asset



### Trained System Integrators

Multiple System Integrator partners are trained to connect a wide variety of devices



### Client Libraries and Gateway Software

Connect directly or via a gateway



### Certified Device Partners Ecosystem

Certified Gateways and endpoint devices

## Connect

## Analyze



Stream Processing, Business Intelligence



Pre-built Patterns

## Integrate



EBS Asset Mgmt, JDE Condition based Maintenance, Logistics



Third-party or custom App integration

## Business Applications

**ORACLE**  
E-BUSINESS SUITE

  
**ORACLE**  
SALES CLOUD

**ORACLE**  
JD EDWARDS ENTERPRISEONE

  
**ORACLE**  
SERVICE CLOUD

**ORACLE**  
FUSION APPLICATIONS



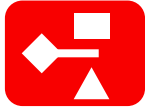

# IOT Cloud Service - Analyze

Devices



IOT Cloud Service

**IOT Analytics Application**  
*(e.g. Predictive Maintenance, Yield management or Genealogy/Traceability)*

 <p><b>Smart Libraries</b> Machine learning/Predictive, Time-series Libraries</p>	 <p><b>Stream/Event Processing</b> Pattern detection, Thresholds, Correlations</p>
 <p><b>Data Links &amp; App Objects</b> Links to streaming &amp; reference data, Device Models</p>	 <p><b>Analytics Processors</b> Spark-Java code for processing Streaming and Big data</p>

<p><b>Connect</b></p>  <p>Device Virtualization, Secure Device Onboarding</p>  <p>Reliable, Bi-directional communication</p>	<p><b>Analyze</b></p>	<p><b>Integrate</b></p>  <p>EBS Asset Mgmt, JDE Condition based Maintenance, Logistics</p>  <p>Third-party or custom App integration</p>
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**Business Applications**

**ORACLE**  
E-BUSINESS SUITE

  
**ORACLE**  
SALES CLOUD

**ORACLE**  
JD EDWARDS ENTERPRISEONE

  
**ORACLE**  
SERVICE CLOUD

**ORACLE**  
FUSION APPLICATIONS



# IOT Cloud Service - Integrate

## Devices



IOT Cloud Service

### Zero Effort Integration with Oracle Apps

Pre-built Integrations with Oracle Applications such as Service Cloud, E-Business Suite, JD Edwards, Fusion Applications

### Minimal Effort

Integrate using a large set of built-in adapter in Integration Cloud Service



Integration Cloud Service

### Custom

Build your own integration using HTTPS/REST APIs

Custom Integration for tight integration

### Connect



Device Virtualization, Secure Device Onboarding



Reliable, Bi-directional communication

### Analyze



Stream Processing, Business Intelligence



Pre-built Patterns

### Integrate

## Business Applications

ORACLE  
E-BUSINESS SUITE

ORACLE  
SALES CLOUD



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ORACLE  
SERVICE CLOUD

ORACLE  
FUSION APPLICATIONS

# Oracle IoT Applications

**Asset Monitoring**


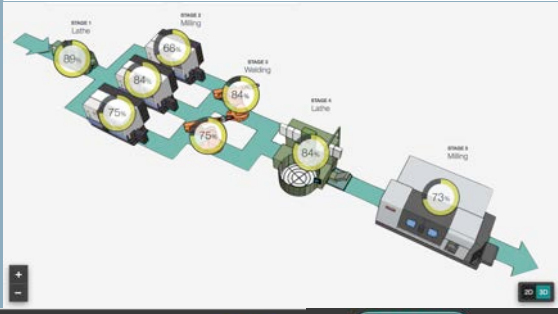



**95%**  
Asset Availability

**1**  
Open Incidents

For monitoring assets, their utilization, availability, and data from connected sensors

**Production Monitoring**

**2%** Down

**78%** In Use

**3h to 5h ago**

Manufacturing factory floor equipment monitoring and prognostics

**Fleet Monitoring**




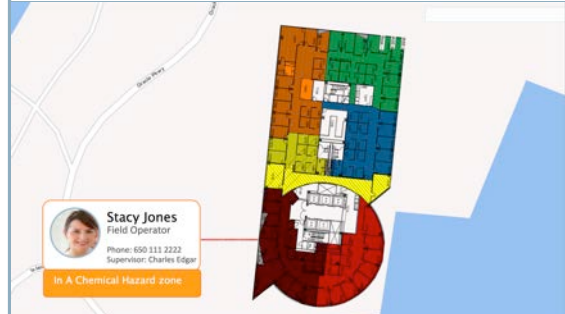

**68%** On Track

**5%** Down

**3** Driver Alerts

For medium sized business who have fleets of vehicles (trucks, buses, maintenance vehicles, delivery vehicles)

**Connected Worker**

**21** Over Time

**3** Evacuation risks

**0%** Unsafe Zones

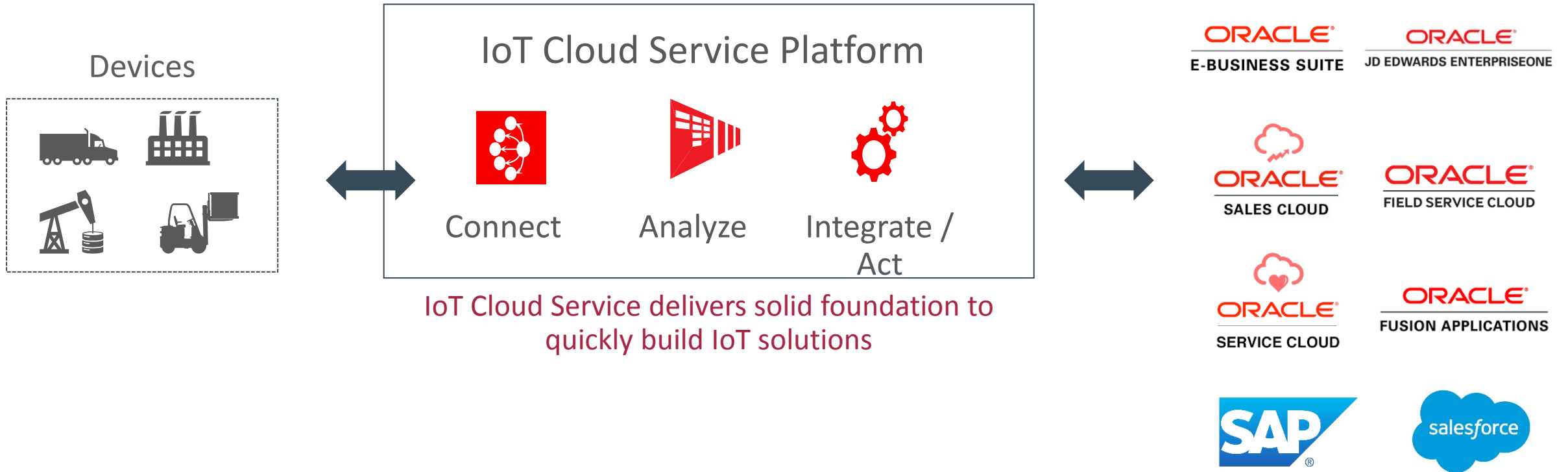
For tracking employees in Mining industry, Engineering and Construction industry



# Oracle IoT Cloud Service

and extend the reach of the IoT and business applications to your physical devices and sensors

that integrates with your enterprise applications



# Oracle IoT Deployments- Remote Monitoring



- Next generation sensor-driven building automation
- Reduce the number of “truck rolls”
- Integration with Oracle Service Cloud and SAP



- Real-time filtering and processing of valve events
- Proactive parts replacement
- Integration with CRM and Service Ticketing system



- Drive better Customer experience at every dealership
- Deliver targeted promotions based on driving behavior
- OBDII integration with IOT, Mobile and Service Cloud

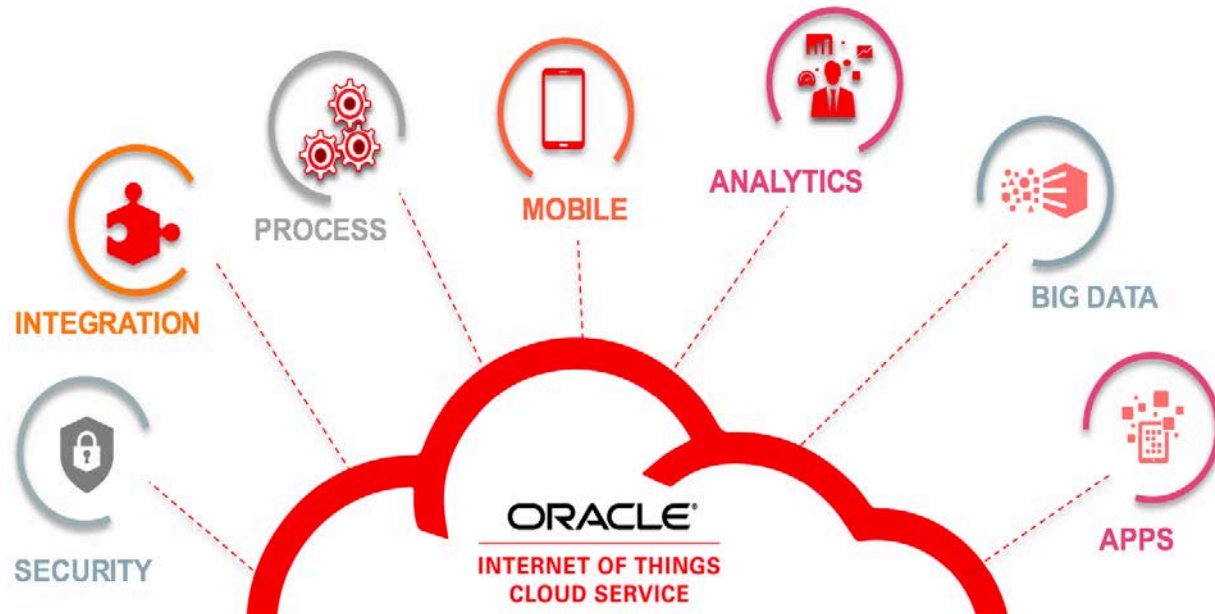


- IOT to deliver mobility as a service
- Monitoring vehicle location for billing and geo-fencing
- Launched in Mar 2016 in Japan





# For More Information



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