The Converging Worlds of Big Data and IoT:
Why IoT will Fail to Deliver Value without the Context of Big Data

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IoT Bridges the Physical and Digital Worlds
Interoperability among IoT systems is required to capture 40% of the potential value.

Source: McKinsey Global Institute, Unlocking the potential of the Internet of Things.
Most of the IoT data collected today are not used, and data used are not fully exploited.

Source: McKinsey Global Institute, Unlocking the potential of the Internet of Things.
IoT will change bases of competition and drive new business models for users and suppliers.

Source: McKinsey Global Institute, Unlocking the potential of the Internet of Things.
IoT adoption will rise across all verticals.

Enterprises that deploy technology for technology’s sake

Enterprises focused on outcomes and transformation

The next generation of analytics will be about blending data where it lives, right now.
From a world of captured data... ...to a world where data is connected, open, and fluid
Value is in the context:

**Big Data provides context for IoT.**
IoT and Big Data
## IoT Drives Outcomes

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IoT Drives Outcomes
IoT is a Big Data Problem

- Equipment Temperature
- Customer Behavior
- Equipment Pressure
- Equipment Utilization
- Speed
- Trip Distance
- Equipment Vibration

LARGE VARIETY OF SENSOR DATA

LARGE VOLUME OF DATA PER DAY
Contextualize the Data

How to contextualize all these data?
Contextualize the Data

**UNSTRUCTURED DATA**
- Video or Voice Data
- Image Data
- Sensor Data
- Machine Data
- Geo-Location Data

**SEMI-STRUCTURED DATA**
- Machine Data

**STRUCTURED DATA**
- ERP
- Asset Management

SIMPLIFIED BY PENTAHO IOT ANALYTICS

Ingest → Process → Blend → Data Prep → Machine Learning → Action
The most important digital business priority is simply to start.
Where are you in the journey?

Operational Insights

Asset Intelligence

Maintenance Optimization

Manufacturing Optimization
Trains as a Service – Hitachi Rail Europe

EDGE

IoT Gateway

IoT Core

IoT Data Center

OUTCOMES

Improved On-Time Performance

Asset Intelligence

Predictive Maintenance
Operational Insights – Caterpillar

CONNECTED THINGS

EDGE IoT Gateway IoT Core IoT Data Center OUTCOMES

Operational Insights
Asset Intelligence
Maintenance Optimization
Manufacturing Optimization
SUMMARY

It is not about the technology: focus on outcomes.
Blending machine data with big data provides the context that drives the business outcome.
To reach business outcomes that transform, need to interoperate and leverage multiple data sources.
Q & A
Thank You

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