Big Data generated by Machines:

Why it's useful

After this video you will be able to...

- Understand how machine generated big data is being used to enable real-time actions

- Identify what is needed to start creating a big data strategy that includes machine generated data
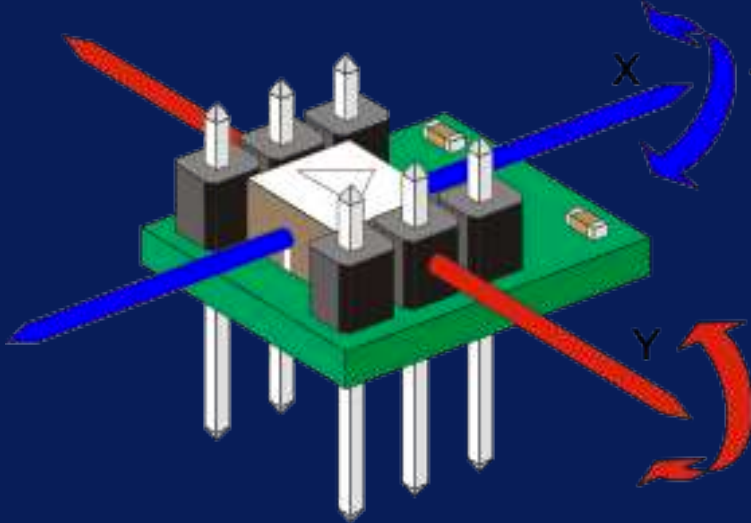
Big Plane → Big Data???

Half a TB of data every time it flies!

What produces data?

Accelerometers →
turbulence

Sensors:
temperature, pressure, etc.
→ malfunctions

Real-time problem detection at 40,000 ft. with machine generated data!

In-Situ Processing

Then (RDBMS)

Data moved to computational space

Now (In-Situ)

Bring computation to data

Real-time Notification Enables Real-time Actions

Design Differently!

Machine Health

Smart Metering

Environmental Monitoring
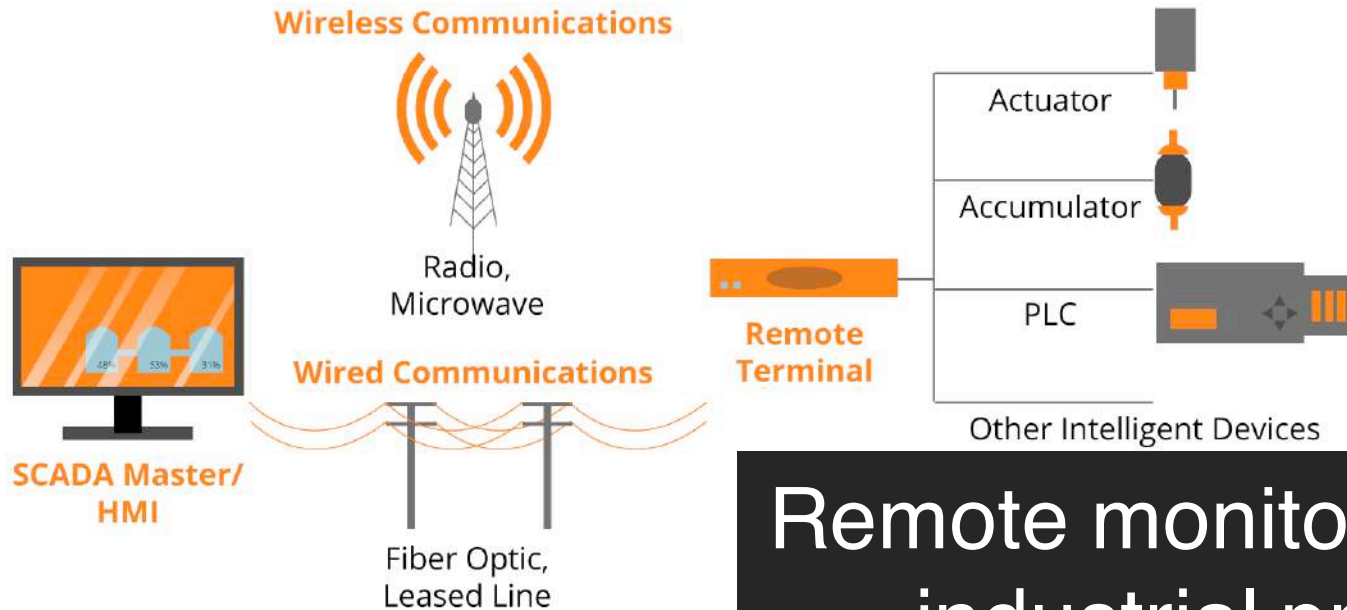
Culture shift to real-time operations

- **Customer relations**
- **Fraud detection**
- **System monitoring/control**

Increased use of scalable computing

Supervisory Control and Data Acquisition (SCADA)

GENERAL SCADA SYSTEM LAYOUT

Wireless Communications

Radio, Microwave

Wired Communications

SCADA Master/ HMI

Fiber Optic, Leased Line

Remote Terminal

Actuator

Accumulator

PLC

Other Intelligent Devices

Remote monitoring / control industrial processes

Supervisory Control and Data Acquisition (SCADA)

Reduce waste, improve efficiency

Identify trends, patterns, and anomalies

Smart Metering

Activity Tracking

Machine Health

Environmental Monitoring

Culture shift to real-time operations

Increased use of scalable computing