Contextualizing the Digital Era
Data Sources to Visualization
Getting the Right Data to the Users that need it

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I know my role...
Spartan Controls – Then and now

Before

After
Three Necessary Ingredients for Success

- People
- Technology
- Process
ISA S95 View General, Hierarchal Model - Applications
Systems Integration; Traditional

The System is Underutilized and the Workforce’s Access to Data is Independent of Workflow
Creating your Digital Ecosystem

IT / OT Convergence
New Connectivity Solutions
“Big Data” solutions are not just about sharing all your data.
Augmenting Subject Matter Expertise
Outsources Monitoring Services Example; Valves

**Summary**

- **Highlighted Valves**
  - **Valve Tag #**
    - FP01002: Pressure Sensor
    - FP013143: Travel Deviation
    - FP001629: High Drive Signal
    - FP001012: G0 Card
    - FP02015: External Friction

- **25 → 20%**
  - Valves monitored
  - Need Maintenance

**Monthly Valve Status**

- Graph showing monthly valve status from Jul-15 to May-16

**Recommendation Detail**

- **Problem:** Excessive friction came in at 330 lb.
- **Recommendation:** Friction should be at about 304 lb. Trend shows consistent friction. Continue to monitor but recommend opening and inspecting valve assembly at next maintenance opportunity.

**Parts needed to open and inspect Valve:**

- Packing Box Ring
- Gasket
- Ring Back-Up
- Seal Ring/Spool/Drum
- Seal Ring/Pin/Retainer

**Recommended Spare Parts for Actuator:**

- See end of report for notes on part numbers.
Mobility; Role Specific
Example #1: Asset Performance Management Integration

- Data Historian
- Data Historian Tools
- Data Organization and Validation
- Analytics and Modeling
- Actionable Information
- History and Analytics
- Asset Class Specialized Tools
  - Instruments and Valves
  - Rotating Equipment
  - Other Asset Category Tools
- Real Time Field / Plant Connectivity
- Wired and Wireless Infrastructure
  - Connected Sources
  - Stranded Sources
  - Missing Sources
- Automation Systems
- Control System
- SCADA
- Information Distribution
  - ERP
  - CMMS
  - Reliability Workflow Management
  - Knowledge Capture / Case Management
  - HMI, Dashboards, Reports, Alerts
  - Remote and Mobile Connectivity

- ERP
- CMMS
- Remote and Mobile Connectivity
Example #1: Quantified days to know failure occurring
Example #2 RIN (Reliability Information Network) and Analytics
Ambyint IIoT

Well Site Devices
Hi-Resolution Data Collection
and
Automated Control

Flexible Communications
Ambyint Managed
or
Client Network Integrated

Access Anywhere
Web Browser and Mobile
(iOS, Android, Microsoft)

Analytics & Optimization
Physics Based & Artificial Intelligence
and
Industry Leading Data Lake
Focus first on the problem, not the technology…

• What am I trying to solve/fix?
• What is causing me issues?
• How will this information be used?
• Who wants this information?
• Where is the user of this information?
• How frequently do I need the information?
• Do I want to store the results?
• Where do I want to store the results?
• When do I want to get this up and running?
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