BEST PRACTICES FOR THE CONVERGENCE OF IT & OT

Presented by: Kayla Wilson
DIGITAL TRANSFORMATION

Enabling...

- Faster time to market
- Lower total cost of ownership
- Improved asset utilization
- Enterprise risk management
AGENDA

1. Why Does Converging the Two Matter?
2. What is it?
3. Common Barriers
4. Strategies
5. Solutions
6. Use Case
7. Parking Lot Thoughts
8. Call to Action
WHY DOES CONVERGING THE TWO MATTER?
OUTCOMES

Improving Production Capabilities to Stay Competitive...

• Informed Decision-Making
• Increased
  • Supportability
  • Production Consistency
• Improved
  • Quality
  • Efficiency
  • Security

• Reduced
  • Downtime
  • Waste
• Lowered
  • MTTR
  • Operational Costs
WHAT IS THE CONVERGENCE OF IT & OT?
A DIFFERENCE IN PRIORITIES

CLASSIC IT PRIORITIES
- Confidentiality
- Availability
- Integrity
- Safety

CLASSIC OT PRIORITIES
- Confidentiality
- Integrity
- Availability
- Safety
A DIFFERENCE IN PRACTICES

CLASSIC IT PRACTICES

- Focus on Protecting IP
- HTTP Traffic
- Downtime = Wait
- Automatic Upgrades

CLASSIC OT PRACTICES

- Focus on 24/7
- CIP Traffic
- Downtime = $ Loss
- Scheduled Upgrades
DIGITAL MANUFACTURING

IT

OT
DIGITAL MANUFACTURING

IT

OT
WHAT DEVICES INVOLVE THE CONVERGENCE OF IT & OT?

- Mobile Equipment
- Motion
- Controllers & HMIs
- Meters
- Power
- Drives
- Safety
- Support

& More...
CONVERGED PLANTWIDE ETHERNET

Network Security within a Converged Plantwide Ethernet Architecture

White Paper

April 2009
COMMON BARRIERS

✓ Different Practices & Priorities
✓ Little Cross-Over Knowledge
✓ Not Enough Local Resources
✓ Poor Holistic Planning
  ◐ Long-term expectations
  ◐ Cannot Adapt
  ◐ Equipment Network Requirements
  ◐ User Persona Requirements
STRATEGIES

COMMUNICATE

Who has skin in the game?

Get them all in the room.

IDENTIFY

Layout your baseline.

List current devices & software.

Understand current traffic.

Get to know current policies.

ESTABLISH

Create goals for your network.

Who will use it?

How can they best use it?

Who will own it?

ACCOMMODATE

Plan the network to satisfy future production goals.
## SOLUTIONS

<table>
<thead>
<tr>
<th>BARRIERS</th>
<th>STRATEGIES</th>
<th>SOLUTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Different Practices</td>
<td>COMMUNICATE</td>
<td>WE Digital Transformation Readiness Engagement CPwE</td>
</tr>
<tr>
<td>Different Priorities</td>
<td></td>
<td>Formal Trainings</td>
</tr>
<tr>
<td>Little Cross-Over Knowledge</td>
<td>IDENTIFY</td>
<td>Werner Expertise</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Network Services</td>
</tr>
<tr>
<td>Not Enough Local Resources</td>
<td>ESTABLISH</td>
<td>Dashboards</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Premier Integration</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Network Diagnostic Tools</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Remote Access Support</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Werner Trusted Partners</td>
</tr>
<tr>
<td>Poor Holistic Planning</td>
<td>ACCOMODATE</td>
<td>Managed (or Lightly Managed)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Switches for that Scalability</td>
</tr>
</tbody>
</table>
USE CASE

We want to gather data and monitor our production lines.

The data and monitoring could be for...

- OSHA or FDA reporting
- Efficiency reports
- Monitoring downtime closer
- Predicting device failures
- Immediate notification of device failure
- Quicker support of devices during a failure
USE CASE

Think about who would need to be involved to network your production lines.

COMMUNICATE

Who has skin in the game?

Get them all in the room.

Who is Responsible?

- Budget
- Design
- Installation
- Maintenance
- Regular Usage
Where are we at now in the facility and in the business level?

- Drawings
- Topologies
- Technologies
- Traffic Types

**IDENTIFY**

- Layout your baseline.
- List current devices.
- Understand current traffic.
USE CASE

What capabilities are you looking for? What problems are you looking to solve?

- Efficiency
- Support
- MTTR
- Uptime

ESTABLISH

Create goals for your network.

Who will use it?

How can they best use it?

Who will own it?
USE CASE

Will this be able to adapt 10 years from now? How will we evolve?

ACCOMMODATE

- More connected lines
- Added devices
- More data pulled

Plan the network to satisfy future production goals.
USE CASE

What did we accomplish?

- Real-Time Information for Real-Time Business Decisions
- Predictive & Prescriptive Analytics Resulting in Improved Uptime
- Effective Communication Between IT & OT
- Network Ownership & Understanding
- Increased & Consistent Productivity
- Holistic Security Across Both Departments
7,100 KWh of Energy used today

Yield will meet today’s production needs

Time to reach temperature is longer than normal

Alert Maintenance Line #1
REAL STUDIES

What did they accomplish?

57% of organizations increased throughput
58% of these increased quality

75% decrease in mean time to repair

Integrated OT & IT Network infrastructure connected
21 remote sites
Information readily available to resolve issues
DIGITAL TRANSFORMATION

Enabling...

- Faster time to market
- Lower total cost of ownership
- Improved asset utilization
- Enterprise risk management
• This is one of many sessions you are attending today.

• If you don’t have a network...

• If your network is poorly implemented & maintained...

• How would you accomplish these capabilities discussed in those other sessions?
CALL TO ACTION

- **Assess** what your company is doing to address the converging of your industrial and enterprise networks.

- **Engage** with Werner Electric for further discussions and exploration of converging your plant network.

- **Ask** your Werner Electric team about a Digital Transformation readiness assessment.
Challenge us

DISCOVER MORE