



**Rockwell
Automation**

DeltaV to PlantPAx Modernization Solutions

April 2020

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Global Need to Modernize Continues

\$65B

Installed DCS nearing
End of Life; many

>25 YEARS old
[ARC Link](#)

>20%

Legacy DCS Specialists have
Retired; 3rd Parties in
demand; often Retirees called
back = ***Increased Risk***

Challenges:

- ***Downtime***
- ***Risk***
- ***Financial Justification***

Traditional Legacy Distributed Control Systems:

- Designed as large, closed & monolithic
- Many end-of-life DCS are “all-or-nothing” to migrate
- Many current DCS still rely on ‘traditional’ approach

— Modernize by Leveraging Past Investments

- Modernization is often a “Once in a Career Event” for End Users...
- However, Modernization should not be viewed as a single Project, a Program, or an Initiative...
- Consider Modernization a Continuous Process with Regular Cadence

*Provides Best Value, Lowest Risk & Overall
Least Number of Unplanned Outages*

Is it Obsolete... or Not?

“Process Plant Legacy DCS Hardware is largely 20-30 years old. It works fine until it doesn't.”

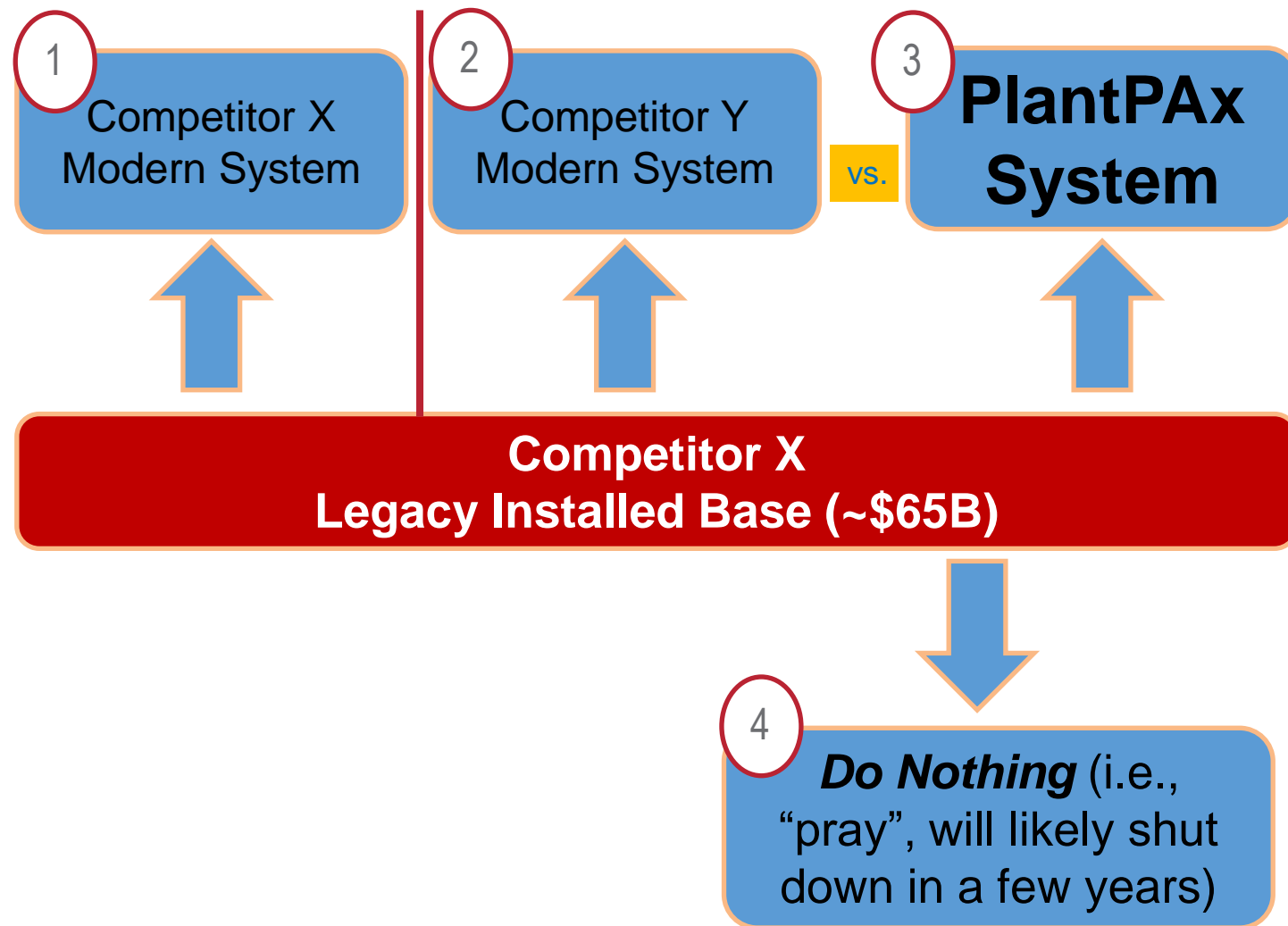
Larry O'Brien as paraphrased from [Failure Models for Process Automation System Components, 7/29/2009](#)

- ✓ Once parts start failing, MANY of them will fail around the same time
- ✓ Most users have no model for equipment failures
- ✓ Users may need to replace huge amounts of hardware all at the same time
- ✓ Further complicated with the loss of competent in-house DCS expertise

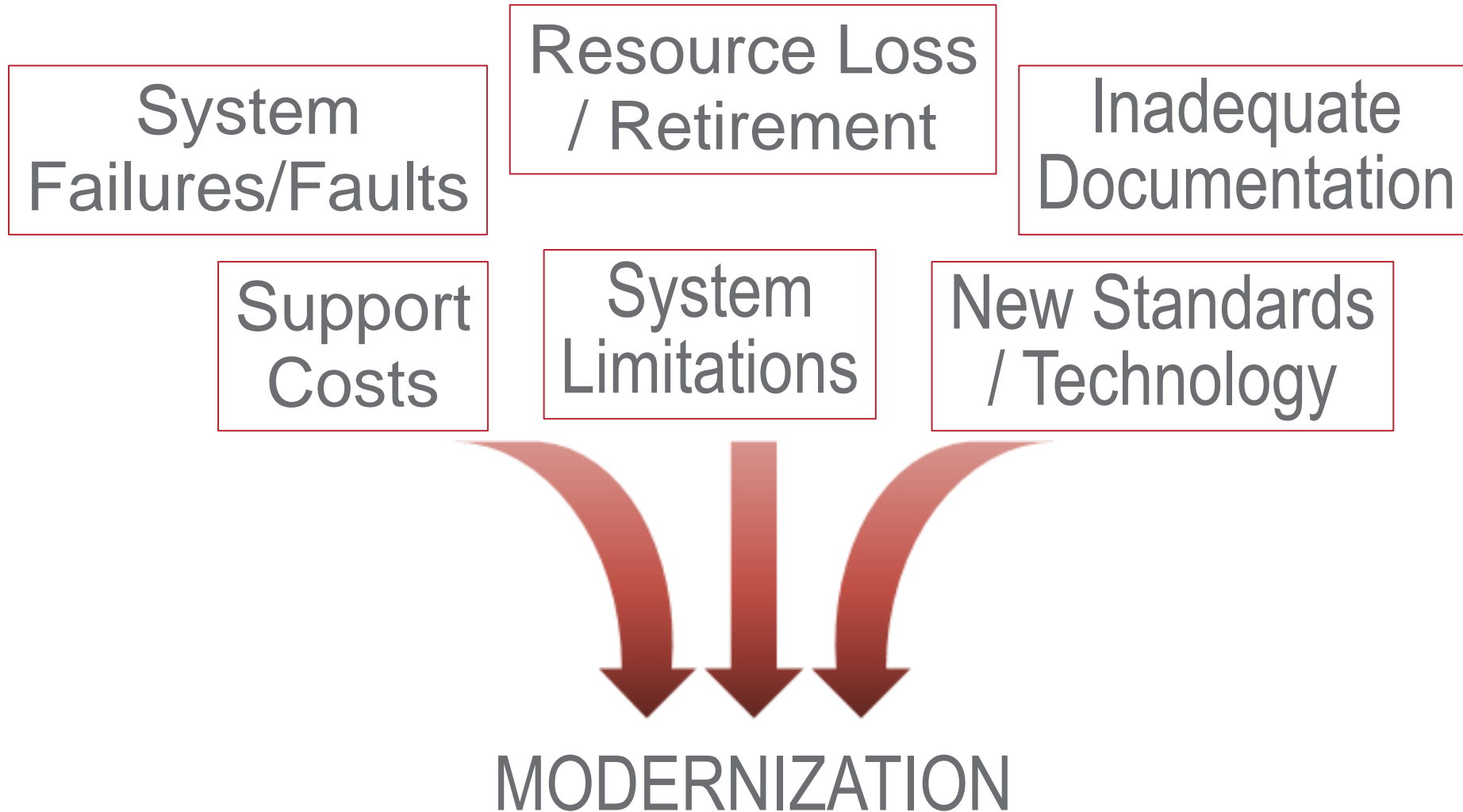
Where Can Legacy Base Go?

Four Choices:

1. Modernize w/ legacy vendor
2. Modernize w/ other vendor
3. Modernize w/ PlantPAx
4. “Do Nothing” (aka EBay & Pray)



Modernization Drivers



Modernization / Migration: Why, Who, How?

WHY

- Replace Legacy DCS or risk failures (Reduce Production Loss Risks)
- Replacements difficult to find & expensive
- Reduce TCO
- Users need process enhancements or expansions for future automation requirements
- Optimize performance & profitability

WHO

Seasoned Subject Matter Experts:

- Consult with customers
- Provide/Develop Process Standards
- Perform studies, Execute Services
- Complete Projects Effectively

HOW

Tools & Methods

- Up front FEED/FEL studies guide path
- Useful Conversion Tools Reduce Risk
- Comprehensive Phased Migration Services

Legacy Process Control Systems

Rockwell Automation Migration Expertise, Tools & Services

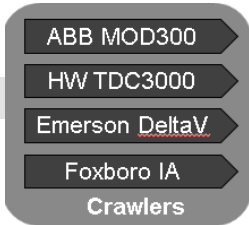
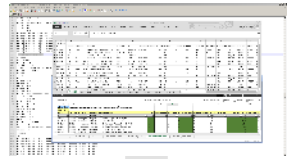
- Emerson DeltaV
- Emerson Ovation
- Bailey NET90/INFI90
- Honeywell TDC 3000
- Honeywell IPC
- Honeywell PlantScape
- Honeywell Experion
- Fisher Provox
- Rosemount RS3
- Rosemount RMV9000
- Moore APACS
- Westinghouse WDPF
- Schneider/Foxboro I/A
- Wonderware
- Taylor MOD300
- SATTLine
- RTP
- Yokogawa Centum
- Yokogawa VP
- Database Conversion
- Logic Conversion
- HMI Conversion
- OPC Server connectivity
- Custom Cabling Solutions
- Engineered Interface (SAM)
- I/O Scanner Modules
- Conversion Services

***For Emerson DeltaV, Rockwell Automation
has a great & easy conversion path!***

Tool assisted migration services

Exports from
legacy system

Crawlers / ACM



Automated
conversion



Manual
conversion



Fully migrated system

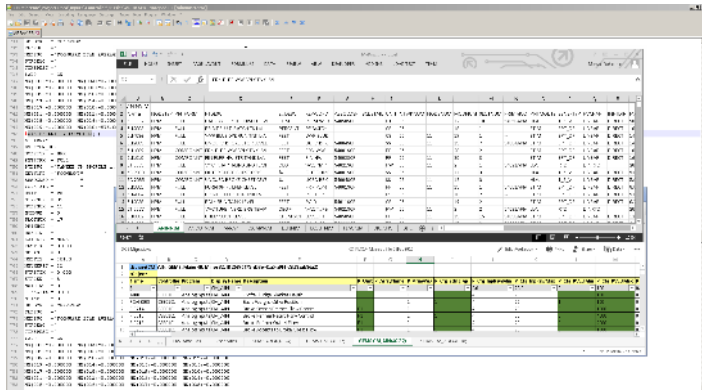
PlantPax
Distributed Control System

Review legacy logic /
graphics / configuration,
normalize for every platform

- Reduce risk
- Reduce timelines
- Leverage SMEs
- Global consistency
- Enforce PlantPax[®] guidelines and recommendations

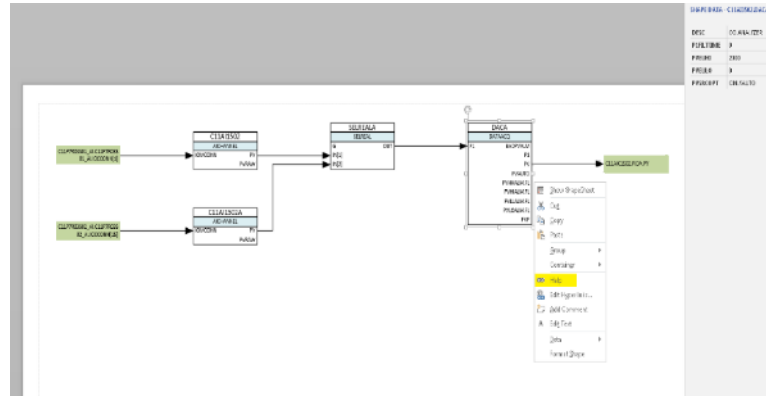
Review existing configuration; normalize all for every platform

Configuration



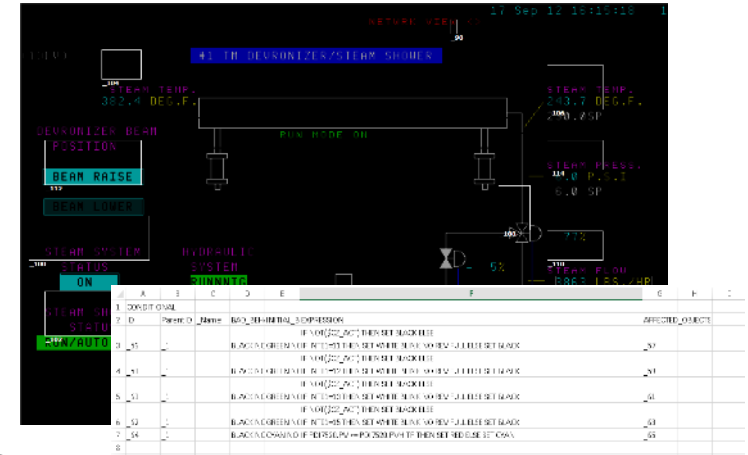
- Review data extracted from Legacy system
- Full report containing:
 - A complete list of all instructions
 - 1 sheet / instruction type, including all instances & all configuration details for each instance
- Formatted for ACM import

Logic



- Graphical representation of Legacy logic
- Supports navigation between pages
- Click on instructions to:
 - Review instruction configuration
 - Launch instruction help file

Graphics



- Graphical representation of Legacy displays
- Identifies animated graphical objects
- Report lists all objects & animation
- Click graphical objects to Review:
 - Configuration
 - Animation
 - Connections

OPC Servers

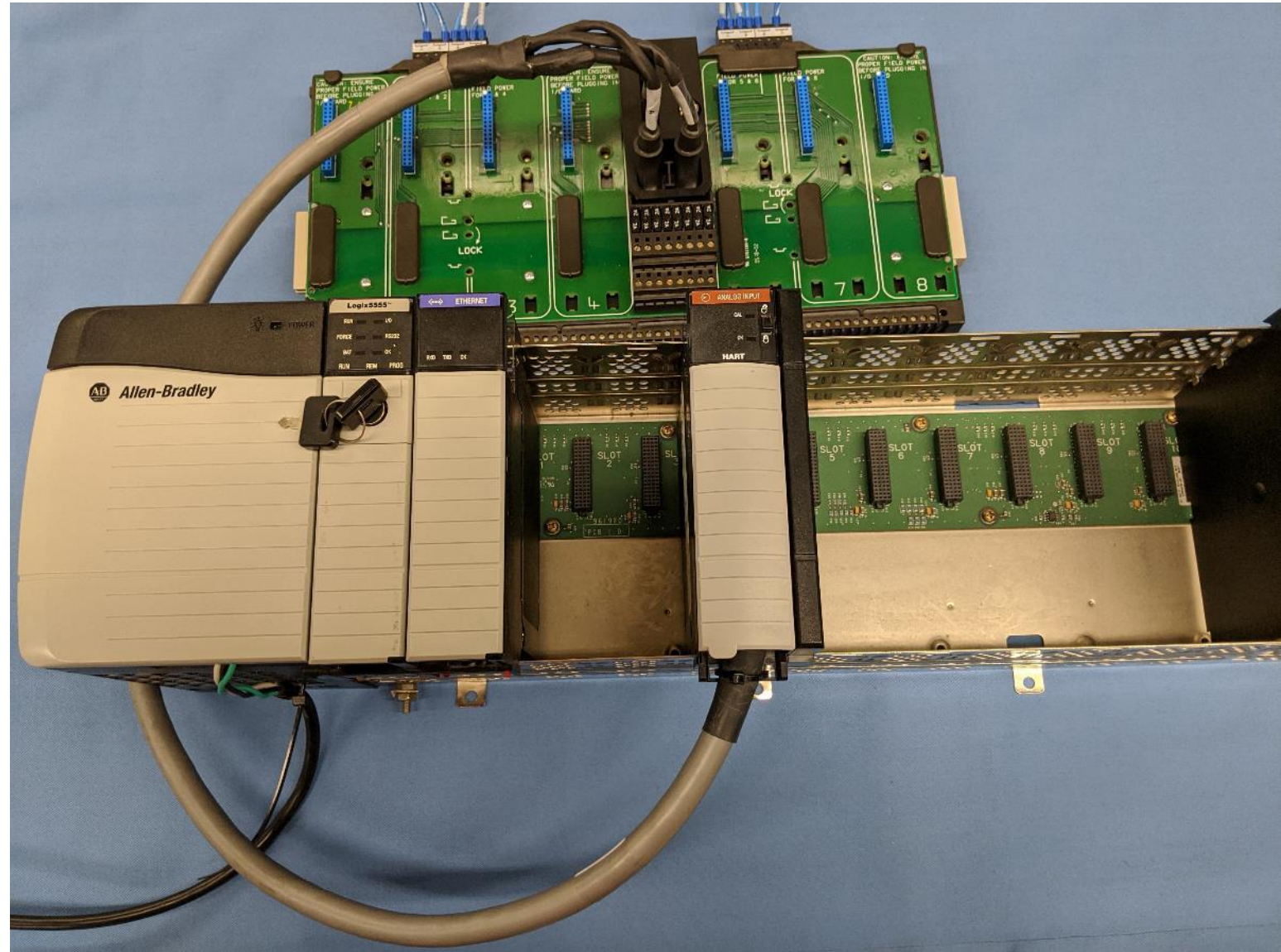
- Commercially available – field proven
- “White box” PC or SAM (PC in a ControlLogix[®] rack)
- FactoryTalk[®] view can be host server



DeltaV M-Series Cable Solution

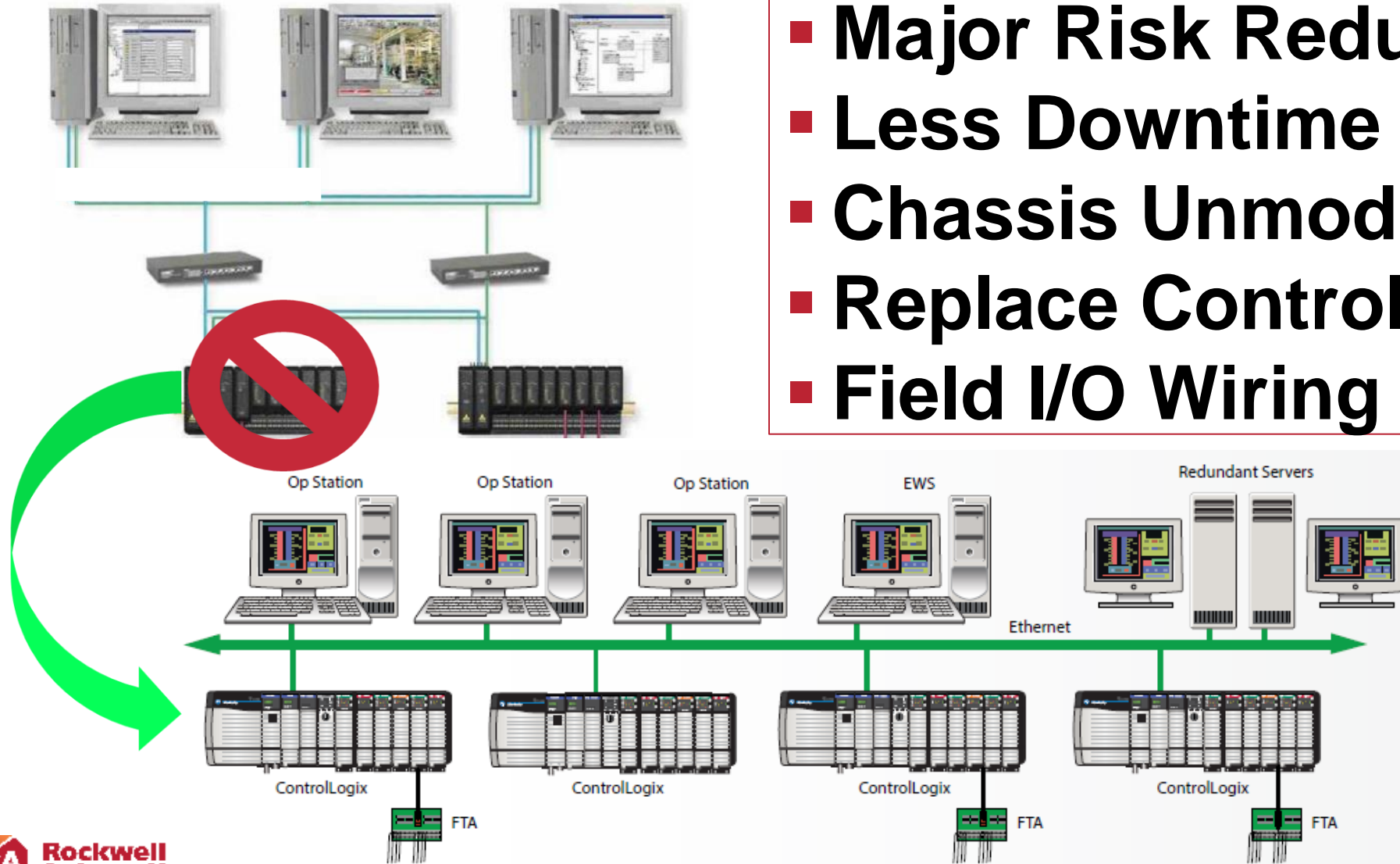
Benefits

- Eliminates Field Re-wiring
- Reduces Downtime
- Mitigates Risks
- Cost-effective



What are we doing?

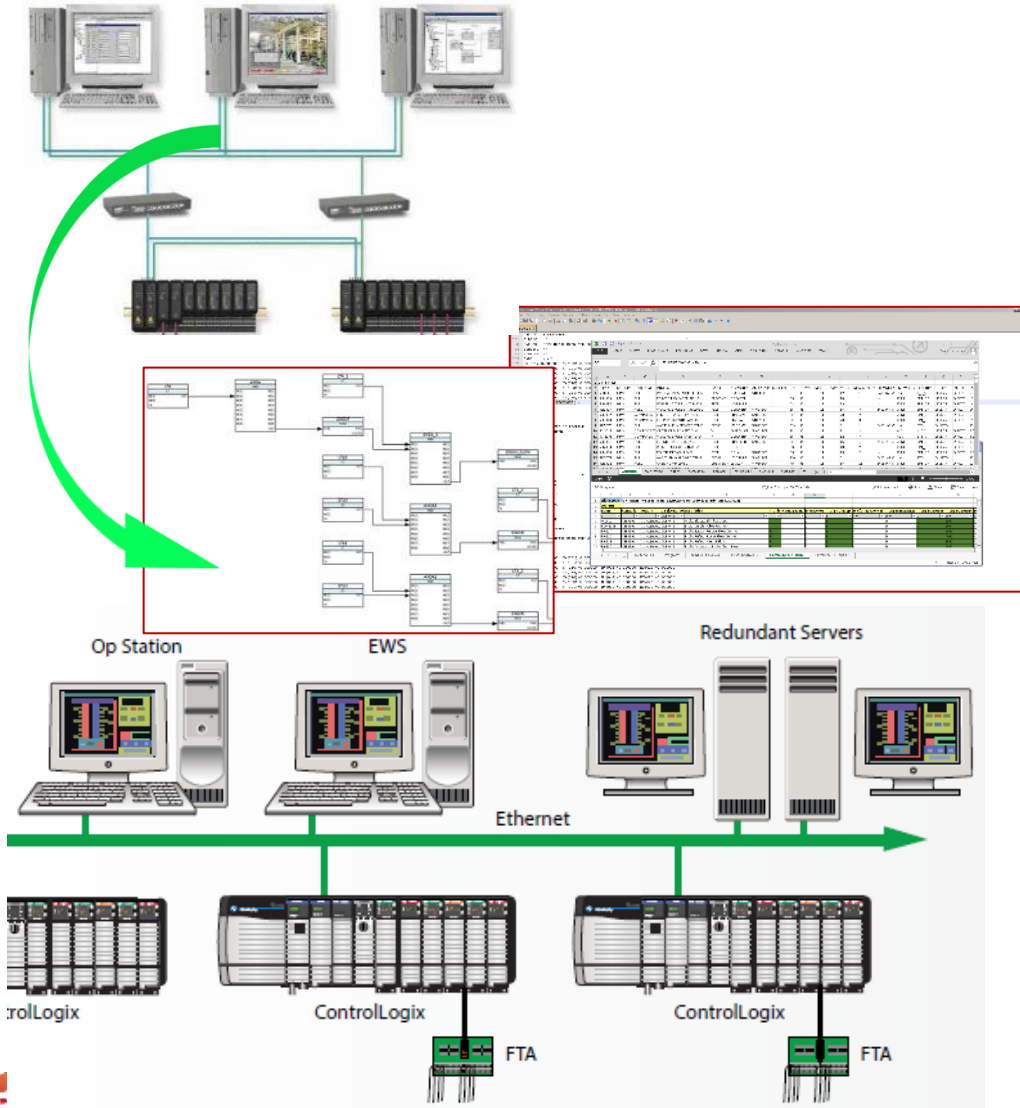
Hardware



- Major Risk Reduction
- Less Downtime
- Chassis Unmodified
- Replace Control, I/O modules
- Field I/O Wiring Untouched

What are we doing?

Software Conversion



- **Less Risk; Reduced Human Entry Errors**
- **Superior Execution Expertise**
- **DeltaV Database/Logic/Graphics: Minimal Engineering Required**
- **Leverage Enhanced Conversion Tools**

Modernizing Emerson DeltaV Systems to PlantPAx

- ✓ **Reduced Risk**
- ✓ Decreased Downtime
- ✓ **No Field Re-wiring** Needed, Leave Legacy Terminations in Place
- ✓ All New **Warrantied** I/O
- ✓ Strong RA **Expertise** / Services

Database, Logic & Graphics
Converted to PlantPAx using
Enhanced Tools & Services

Migrations may well be a “once-in-a-career” project for most customers. For Rockwell Automation & our partners, migrations are nearly an every day occurrence!

Rockwell Automation Value Proposition

Benefit for OEM, Distributors, SI/SP

- Decrease cost, risk, and development time by using Rockwell Automation domain expertise to obtain a fast & flexible migration solution

Benefit for End User

- Migrated control platform (Series M Controller → ControlLogix) & Modernized system (DeltaV → PlantPAx)
- Ability to leverage local support infrastructure (i.e. Distributor, Rockwell Automation, System Integrator) to maximize production and return on investment

Rockwell Automation: a Superior, Focused Offering

— Modernization Best Practices: The “*E*’s”

- 1. *E*arly Planning**
- 2. *E*ngage Experts**
- 3. *E*stablish Standards**
- 4. *E*xecution Discipline**
- 5. *E*xpect Innovation (Don’t Replicate!)**



Engage Rockwell, MAVERICK & Partners

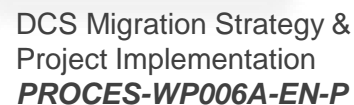
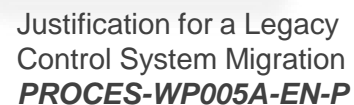
Leverage our Expertise in Migrations



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<http://Literature.rockwellautomation.com> > Support > Product Resources >

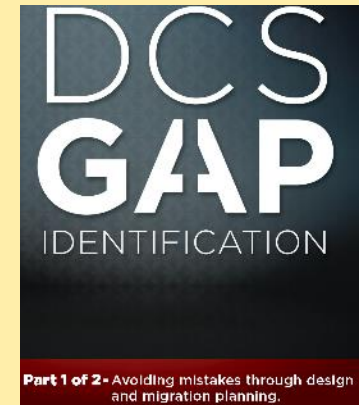
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Supplier and Platform Selection Criteria and Evaluation

Upgrading Your DCS: Why You May Need to Do It Sooner Than You Think

Chad Harper,
MAVERICK Technologies





expanding **human possibility**™

Thank you! Questions?



www.rockwellautomation.com