Upgrade Your SCADA Controls in 3 (or 4) Easy Steps

Phased Replacement Options for a Legacy SCADA System
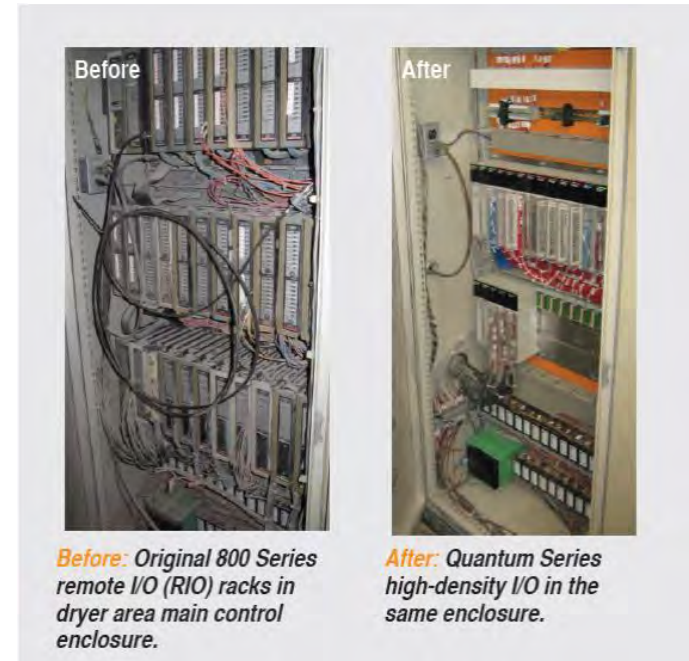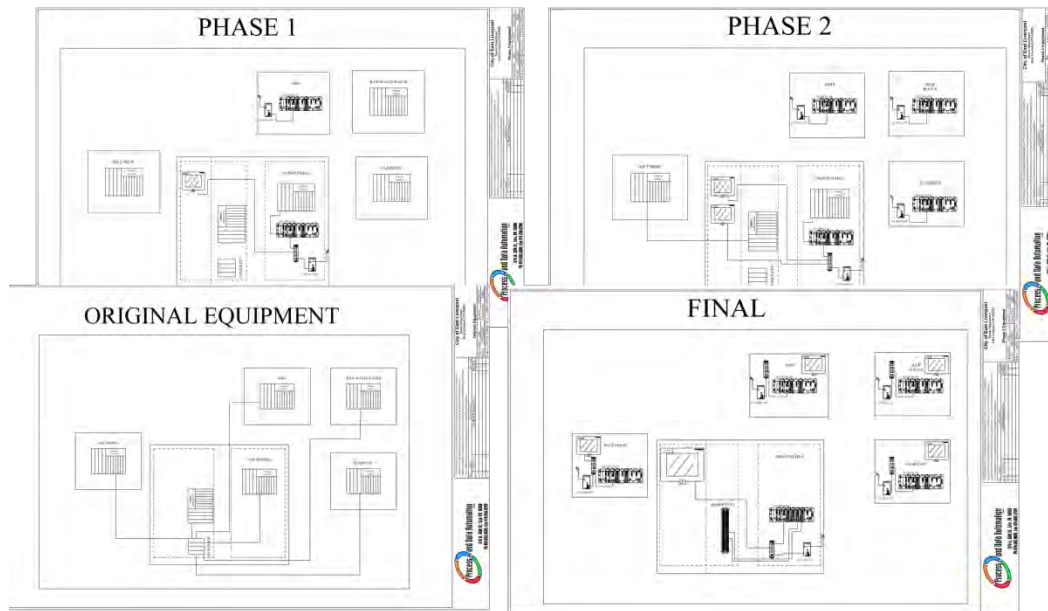

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Presenter: Jim Barish, Vice President of Sales & Client Services

Upgrade Your SCADA Controls in 3 (or 4) Easy Steps

PHASE 1

PHASE 2

ORIGINAL EQUIPMENT

FINAL

Before

After

Before: Original 800 Series remote I/O (RIO) racks in dryer area main control enclosure.

After: Quantum Series high-density I/O in the same enclosure.

Timeline

Early 80's

1981

1982

1983

GE Series One

Mid-Late 80's

1984

1987

1986

PLC 5

Early 90's

1989

1990

HTML Created and the Internet was Born

1991

SLC 500

Migration

In a 2010 study of process automation users, Automation Research Corporation (ARC) identified that 88% of these users confirmed the use of automation beyond the manufacturer's obsolescence date. In this same study, a clear majority of users acknowledge having <u>NO</u> lifecycle plan.

As a manufacturer today, you are being driven to <u>leverage</u> your <u>automation investment</u> in order to create an architecture for <u>continuous optimization</u>.

Drivers for Migration

- *Productivity Gains*
- *Process Innovation*
- *Rising maintenance & parts costs*
- *Reducing Downtime*
- *Increase Capacity/Throughput*

Business Goals

- *Improving*
  - *Data availability & security*
  - *Production flexibility & quality*
- *Reducing downtime & maintenance costs*
- *Meeting regulatory standards*

Migration Plan

Assess
- Assess & document your control system
- Understand your current & future needs
- Identify reliability and longevity issues
- Determine scope of project
- Understand your cost

Develop A Plan
- Work with your partners to review your options
- Develop migration plan to meet your needs
- Document the benefits of the new system

Implement
- Engage the right partner
- Execute developed plan
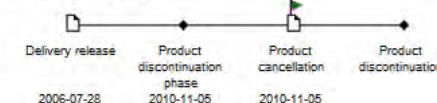- Document benefits of migration

Product Lifecycle Mapping

Product description

SIMATIC S7-300 CPU 315-2 PN/DP, CENTRAL
PROCESSING UNIT WITH 256 KBYTE WORKING MEMORY,
1. INTERFACE MPI/DP 12MBIT/S, 2. INTERFACE ETHERNET
PROFINET, MICRO MEMORY CARD NECESSARY

Version release

Product version: 04 Firmware version: V2.6.12 Software
version: -

Product life cycle

Delivery release	Product discontinuation phase	Product cancellation	Product discontinuation
2006-07-28	2010-11-05	2010-11-05	

Further pictures
Spare part investigation

- **Active** - Current, in-stock product, Full support (consulting, repair, training, transactional, and contract services)

- **Matured**- Low inventory, support through forecasted date, Well-defined migration path with incentives

- **Discontinued** - No new product; repair services available

- **Obsolete** - Product and repair services unavailable

Upgrading Programs

StepForward™

Rockwell Automation — Allen-Bradley

Resources

▸ Silver Series
▸ Migration Solutions

Technology Management Made Simple

The StepForward program offers promotional incentives for companies wanting to upgrade/migrate Rockwell Automation equipment. Call your local Rockwell Automation Distributor for applicable products and credits.

GE Intelligent Platforms

Trade-Up Program

Process and Data Automation Inc.

Manufacturers	Common Legacy Systems	Current Systems
Rockwell Automation / **Allen-Bradley**	SLC 150 PLC 3 SLC 500 PLC 2 PLC 5	MicroLogix ControlLogix CompactLogix GaurdLogix
SIEMENS	S5 Series	LOGO! S7 Series
Schneider Electric	Gould/Modicon 984 Gould/Modicon 884	Modicon M340 Quantum Preventa Premium
GE Intelligent Platforms	Series 90-70 Series 1	VersaMax Micro PACSystem RX7i VersaMax Modular PACSystem RX3i Series 90-30 VersaSafe
EMERSON Process Management	Bristol 3000 Series	Controlwave
Automation Direct	Koyo DL Series	Productivity3000 Direct Logic Do-more Series CLICK Series

CSIA CERTIFIED

Design Considerations

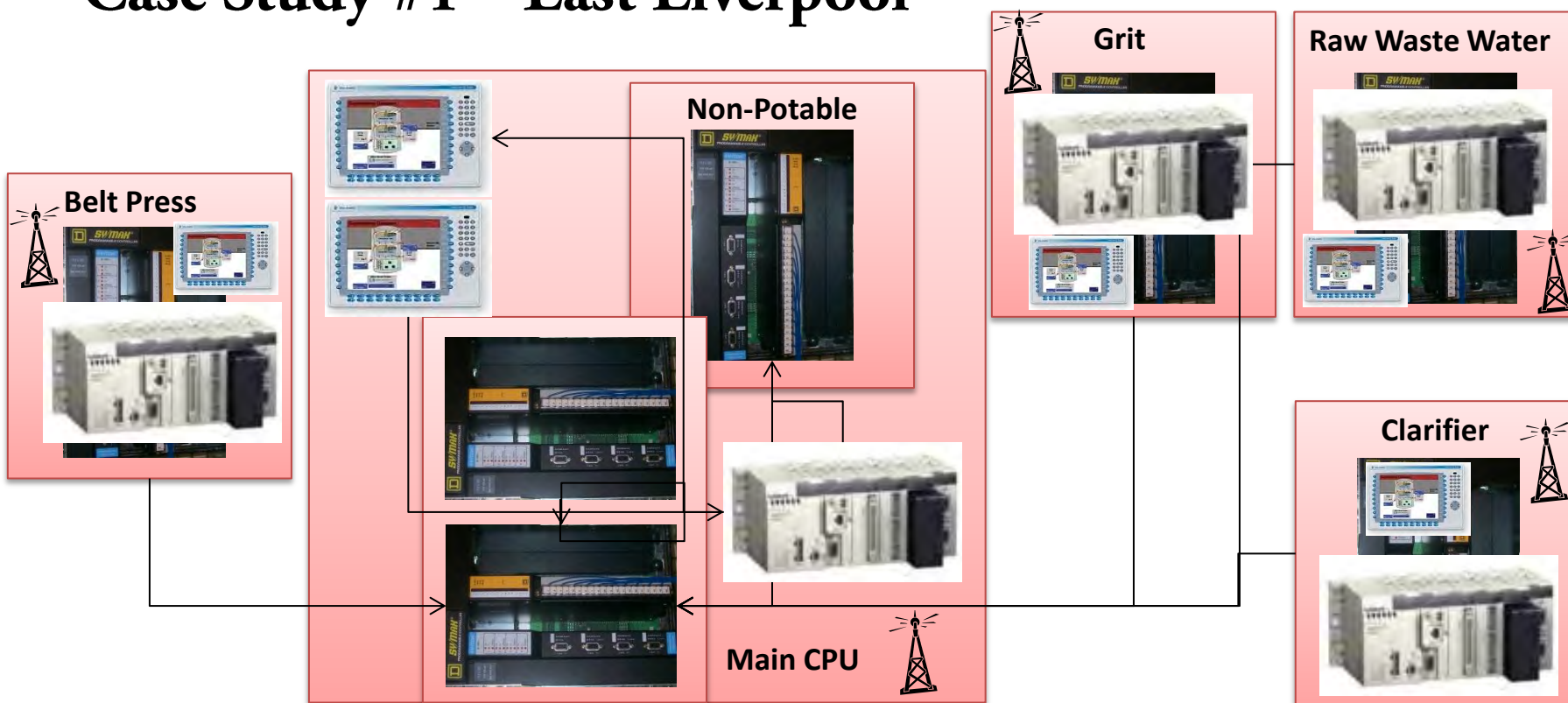| Design Questions |
|---|
| How do I Identify my obsolete components that I need to upgrade? |
| How will I know what products to use? |
| How do I preserve my application code? |
| How do I change my controller without disrupting my current operations? |
| What happens to all of my operator interface screens? |
| What happens to my I/O? |

Case Study #1 – East Liverpool

Belt Press

Non-Potable

Grit

Raw Waste Water

Clarifier

Main CPU

Case Study #2 – Erie Water Works

Design Considerations

- **Separation Of Process Control and HMI And Data Collection Networks.**

- Integration Of Membrane Cells HMI Control Into Existing SCADA System.

- **Membrane Cell PLC Control and Local HMI Layout.**

- Upgrade and Combine Support Systems Controls.

- **SCADA Computer Centralization Improvements.**

Case Study #3 – Albion

Important Information & Resources

- **Trade-Up and Migration Programs**
  - Rockwell Automation- Step Forward
  - GE Intelligent Platforms- Trade-Up
  - Most Manufacturers have these programs, have your supplier ask.
  - Stay updated on Product Lifecycle Lists
- **Tips to Implementation of a System Upgrade**
  - Find a trusted Partner to work with you through the entire process.
  - Assess, Develop a Plan, and Implement. Make sure all Design Considerations are accounted for.
  - Understand your needs and the value of having a system that utilizes current technologies.
  - Understand the Importance in moving away from a Legacy System.

Visit Booth #xx for our extended Information & Resources Hand-out

Process and Data Automation
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Process and Data Automation Inc.

Industry Partners:

- CSIA CERTIFIED
- Rockwell Automation Recognized System Integrator
- SIEMENS
- PHŒNIX CONTACT
- Wonderware
- Schneider Electric
- ICONICS — Visualize Your Enterprise™
- GE Intelligent Platforms

Questions?

Thank you for attending our presentation!

Visit us at Booth #xx

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