CHEMICAL INDUSTRY
FULL MANUFACTURING SYSTEMS AND SOLUTIONS

Polytron, is a CSIA-Certified Full Manufacturing Systems and Solutions Integrator and 2015 System Integrator of the Year. Applying over 30 years of manufacturing engineering expertise, we deliver full manufacturing systems and solutions from process to material handling, to packaging and warehousing - *anything inside the four walls.*

Polytron is uniquely positioned and fully qualified with certified best-in-class systems integration talent and industry expertise.

This enables us to provide you with application solutions that help you meet your business objectives while reducing risk and improving overall performance in:

- Process Systems and Utilities
- Industrial Network and Security Solutions (INSS)
- Packaging Systems and Material Handling
- Automation and Controls
- Machine Safety
- Manufacturing Intelligence / MES
- Workforce Development and Training

Polytron offers a full set of engineering capabilities from start to finish: front end engineering discovery efforts; detailed design; construction installation packages; network integration; operator interface design; and, total system training.

Grounded in a Partnership and Trusted Advisor approach, our project delivery methodology provides your company with the value of a strong partnership based on trust – open and honest communications, collaboration, a focus on success for all parties, and a commitment to develop the most appropriate solutions. It is this approach that has established long-term relationships with the majority of our global clients.

APPROACH TO FULL MANUFACTURING SYSTEMS AND SOLUTIONS DELIVERY

Polytron is your one-stop provider - whether you're in need of strategy, systems, automation, equipment, processes, or training for manufacturing. We deliver project success at a lower risk.

Project Management provides the cornerstone of risk mitigation for your manufacturing projects. When the Project Delivery Team — a cross-functional team of project stakeholders — create the shared vision, promote a "common purpose" through defined project success criteria that align the project team with the business goals, you are able to realize project success: lower risk, shorter startup, and a sound ROI for your business.

Through a clear definition of your needs and priorities from both the business and plant perspective, we develop and deploy your solution through an appropriate blend of system engineering, automation, manufacturing intelligence, and people development – *Putting Performance in the Hands of Your People.*

Clients: Fortune 500 companies - majority retained over 20 years.

Our Employees: 65 Certified Project Managers, Electrical and Mechanical Engineers, IT Professionals, Training professionals and support staff.

Areas of Expertise
Process, Packaging, and Material Handling
Manufacturing Intelligence
Automation and Controls
Workforce Development & Training
Industrial Network & Security
Machine Safety
Project Management

Industries Served
Chemical
Food
Beverage
Consumer Packaged Goods
Automotive / Tire
Life Sciences
Energy

CHEMICAL INDUSTRY SECTORS

Polytron has over 33 years expertise in many sectors of the Chemical Industry. Our project experience includes:

• Speciality Chemicals
• Dry / Liquid Speciality Chemicals
• Cleaning Chemicals
• Automotive Fluids
• Polymers
• Plastics
• Personal Care Products
• Paints and Coatings
• Formed Fiber
• Extruded and Cast

PROCESS ELECTRICAL CAPABILITIES

Polytron provides a full range of Chemical manufacturing solutions. Our comprehensive solutions offering includes:

• ISA88 Batch Process Control
• Continuous Batch Process Control
• Batch Processing and Recipe Management
• Dry/Liquid Ingredient Storage, Blending, and Mixing
• Advanced Process Control - Internal Model Control / Coordinated Control / Modular Multivariable Controls
• Rockwell Automation PlantPAx (Distributed Control System migration)
• SCADA/PAC/HMI Programming
• Instrumentation - Specifications, Selection and Supply
• Electrical Design and Installation Packages
• Power System Single Lines - Design and Development
• Industrial Network Upgrades / Security
• Control System Emulation and FAT
• MI/MES - Data Visibility from ingredient receiving through packaging, including company-wide performance, recipe management and integration with ERP system
• Track and Trace, Quality Analysis, Compliance Reporting
• Downtime Tracking, KPI Dashboards
• Machine Safety Risk Assessments and Mitigation

PROCESS MECHANICAL ENGINEERING

• Process Flow Diagrams (PFD) Design and Development
• Piping & Instrumentation Diagram (P&ID) Design and Development
• Configuration of New and Existing Manufacturing Lines
• Facility Consolidation for Production Efficiency
• Construction Management and Procurement
• Process General Arrangements: Tank Farms, Pumps, Skids. etc.
• Process Equipment Specification and Selection
• Process Calculations and Mass Balance
• Mechanical Design and Installation Packages
• Piping Design and Installation Packages
• Isometric Piping Diagrams

CHEMICAL PACKAGING CAPABILITIES

Polytron provides a full range of packaging solutions for the Chemical industry. Our comprehensive solutions offering includes:

- Full System Packaging Solutions
- Multi-format, High-speed Packaging Lines
- Multi-product Packaging
- Bottle, Bucket, Barrel, Tote
- Bag, Supersak, Bulk
- ASRS, AGV, Manual, Robotic and Conventional Palletizing
- Warehouse Capacity and Automation Optimization

Control System Update
Chemical Plant Case Study

Polytron was engaged to design and implement a new control system for a 30-year old chemical plant. The old system had been modified over the years and the current technologies used were obsolete. Replacement parts for the PLC and HMI were no longer available and the old Windows XP system exposed the plant to viruses and exploits.

Client Requirements for the new Control system were:
- Long-term availability of hardware and software
- Budget viability for initial and future maintenance costs
- Availability of qualified technicians for control system
- Expandability of HMI, Historian and reporting systems

New Project solution included:
- Drop-in-place control panel back-plane.
- ControlLogix PAC and IO System communicating over Ethernet.
- PLC utilizing PlantPAx for all process control elements.
- Alarms and events-based alarms used PlantPAx alarming structure.
- HMI system used Microsoft 2012 and thin clients. Two 42" monitors were installed in the control room. Thin clients communicated over Ethernet to HMI servers.
- HMI system used FactoryTalk View SE software.
- FTVantagePoint reporting was available via Web server to any PC accessing the server. Reports available are: Product batch reports, Alarm Frequency reports, Process Variables reports.

The new Control System Project met the client's 10-day retrofit and startup schedule. The system went into production producing saleable product in the first batch runs.

No matter which company I work for or the manufacturing, packaging, or process solution I need, Polytron is my first choice and the preferred partner to which I turn to help me and my employer be successful. Their project management methods are the best in the market. Risk management, design issues, procurement, engineering, start-up issues, everything that goes into a project, is identified, managed, confirmed, documented, and delivered.

Instrumentation and Controls Manager, Global Manufacturing Company

TURN-KEY OPERATIONS SOLUTIONS

Polytron provides a single point of contact for your projects. with a comprehensive solutions offering including:

- Collaboration with your team to create the Functional Design Specification
- Development of the Electrical / Controls and Mechanical design based upon the Functional Design Specification
- Machine/System Integration and Programming
- OEM procurement and management
- Supply of electrical and mechanical hardware and installation
- Onsite support for construction management, debug and system validation
- Documentation and Training for performance continuity

Our certified Project Management Professionals apply a collaborative team approach aligning a comprehensive project team with your project objectives. Using our expert knowledge in best-practices and standards we ensure the highest degree of project success in all areas of the project.

A customized approach to your engagement addresses all the possible variables, and through our project management methodology – the glue that holds everything on the project together – we are able to deliver within project scope, on time and within budget.

PEOPLE READINESS WITH WORKFORCE DEVELOPMENT AND TRAINING

Polytron's Workforce Development and Training Group focuses on delivering successful training strategies to your key production employees. Our proprietary training program delivers the development and management to strengthen your workforce for optimal performance.

Workforce Development and Training services ensure that your workforce is knowledgeable in the processes and procedures of upgraded or new operations including:

- Training needs analysis
- Training documentation development
- Training facilitation
- Training validation
- Job Aids

Using proven adult learning methodologies, we create and execute targeted training plans, develop effective materials, create easy-to-use learning aids, and facilitate hands -on blended learning events to ensure that your workforce is equipped to deliver stated business goals at the time of start-up. The training program's goal is to close knowledge gaps and ultimately increase your Overall Equipment Effectiveness (OEE) by utilizing your greatest resource – *your people*.

INDUSTRY CERTIFICATIONS AND AFFILIATIONS

Rockwell Automation
Solution Partner
Control • Process • Information

Wonderware CERTIFIED
SYSTEM INTEGRATOR
SYSTEM PLATFORM

SIEMENS

THINMANAGER PLATINUM INTEGRATOR

Microsoft CERTIFIED Partner
Data Management Solutions

PARSEC™
Partner Program | Certified

BEDROCK CERTIFIED SOLUTION PARTNER
A REVOLUTION IN INDUSTRIAL CONTROL

GE Partner
Intelligent Platforms

Mtell

CISCO CERTIFIED
CCNA
ROUTING & SWITCHING

CONTROL ENGINEERING
2015
System Integrator
of the Year
PLANT ENGINEERING

Institute of **Packaging Professionals**

csia ✓
CERTIFIED

POLYTRON

3300 Breckinridge Boulevard
Ste 100
Duluth, GA 30096
678.328.2999 Local

855.794.7659 (Toll Free)