



FULL MANUFACTURING SYSTEMS AND SOLUTIONS

Polytron, is a CSIA-Certified Full Manufacturing Systems and Solutions Integrator and 2019 System Integrator of the Year. Apply-ing 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.

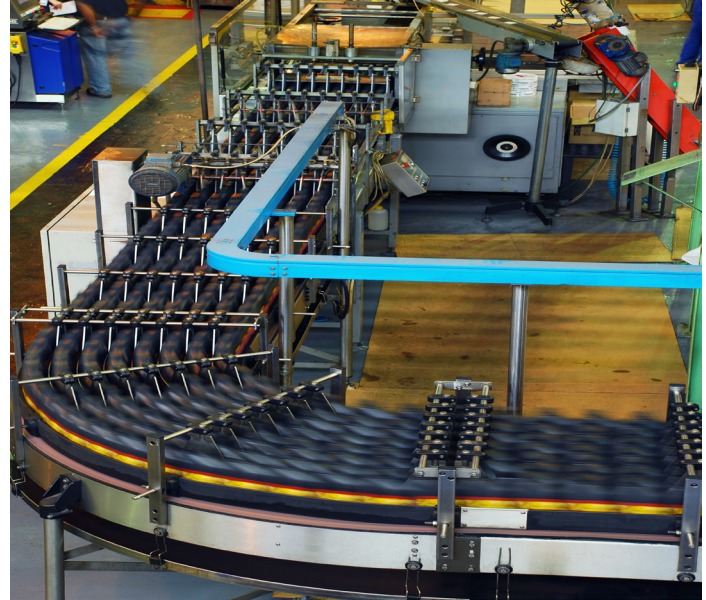
This enables us to provide you with application solutions that help you meet your business objectives while reducing risk and improving overall performance in:

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

Workforce Development is an often overlooked high risk factor to ensuring your business realizes a continuity of Performance with your new system. Our **Process** of developing and deploying performance-based manufacturing solutions while ensuring your **People** are fully prepared for the new system lowers your risk to achieve your business objectives.

Our complete services portfolio and wide-ranging expertise combine with our focus on the delivery of your business objectives at a lower risk to make Polytron your one-stop provider. Whether you're in need of strategy, systems, automation, equipment, processes, or training for manufacturing.



APPROACH - FULL MANUFACTURING SYSTEMS DELIVERY

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
Technology Transfer & Training
Industrial Network & Security
Machine Safety
Project Management

Industries Served

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

CASE STUDY

A global beverage company needed to add a new bottling line that included both new and existing equipment. These various subsystems came from multiple vendors and suppliers. The challenge was to ensure the equipment was working together smoothly in an integrated fashion on Day One.

Before working on physical installation, our engineers set up an emulation of the new line with Polytron's unique modeling tool, PolySimSM, using the customer's PLCs controlling the computer model. This enabled all the program testing, debugging and adjusting to be done virtually. We even brought in the operations staff to conduct a control system Factory Acceptance Test (FAT) before the new equipment was installed. This lowered risks and eliminated surprises at the actual installation, and allowed the customer to hit the ground running once the construction was complete.

Results: Water Running through New Line - Day One

Using Emulation:

- Lowered the risks
- Shortened project schedules
- Achieved faster time to market

" I recommend using emulation every time. It helped operators visualize how the line was designed to run and allowed them to challenge the line with various "what if" scenarios. To duplicate this on the production line would have been more time consuming and costly."

— *Project Manager, Global Beverage Manufacturer*

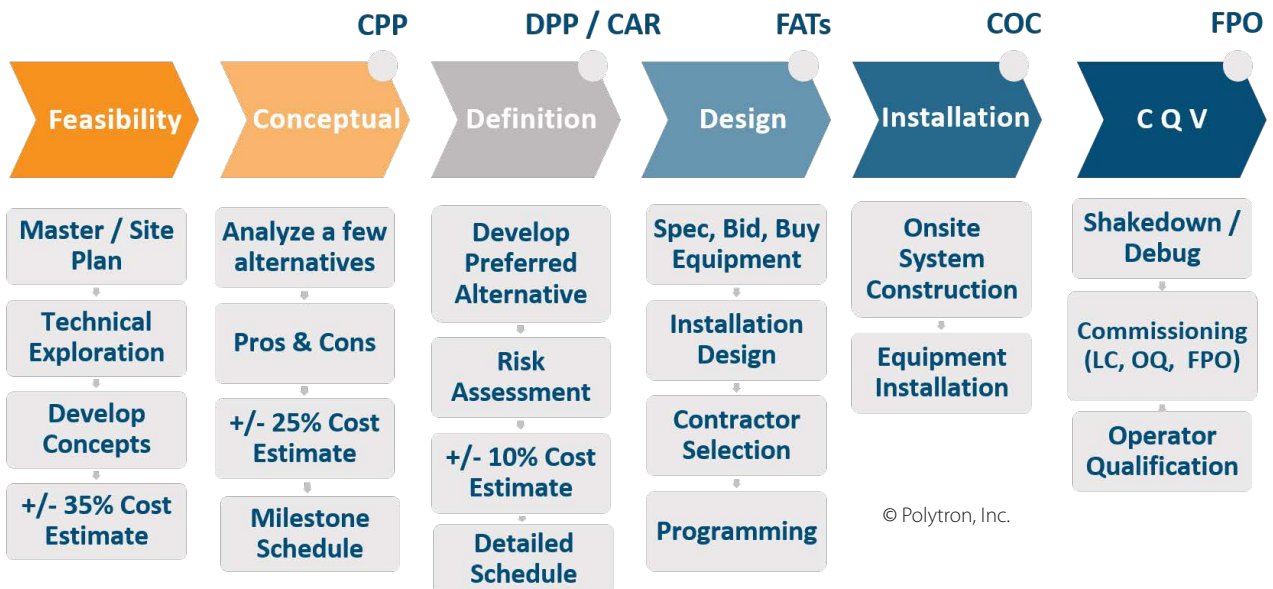
TURN-KEY OPERATIONS SOLUTIONS

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

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.

Polytron Objective-Focused Method



LOWER YOUR RISK WITH OUR PROJECT MANAGEMENT EXPERTISE

Today's speed of business increases your risk on any manufacturing project. Tied to the project are production deadlines, product promotions, stakeholders, and vendors who have never worked together before, and as always– the ROI.

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.



PMP Certification

Our Project Managers are Project Management Professionals certified by the Project Management Institute (PMI).

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 Beverage Company***



PEOPLE READINESS THROUGH 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.***

Putting Performance in the Hands of Your People

PACKAGING SOLUTIONS

For flexible lines, complicated system designs, OEE improvement, or unusual packages, Polytron has the technical know-how and dynamic solutions to address, improve and enhance each one. We combine best practices across multiple industries to come up with the right packaging solution for your unique challenges.

By offering turnkey automation solutions from concept to virtual commissioning, implementation, and workforce training, we help you maximize operational efficiency from beginning to end with options and solutions designed for your specific product variations.

Polytron delivers complete integrated packaging solutions including:

Material Flow – Increase your system throughput and reduce waste.

Line Layout – Optimize your line layouts with 2D and 3D visualizations.

Equipment Specification and Selection – Select the right equipment from the right vendor.

Product/Package Flexibility – Coordinate with your marketing and engineering groups to ensure flexibility—across the board.



INDUSTRY CERTIFICATIONS AND AFFILIATIONS



SIEMENS



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