# POLYTRON SAFETY SERVICES AND SOLUTIONS

Polytron, is a CSIA-Certified Full Manufacturing Systems and Solutions Integrator, and 2015 System Integrator of the Year. Applying years of machinery safety engineering expertise in manufacturing, we help your company reach its safety program goals by *meeting you where you are*.

You have made significant investments in both your people and plant assets. We will help you protect your assets and your productivity.

Polytron offers you complete machine safety project delivery – including risk assessment through functional specification to remediation; validation and start-up; with training for operators and maintenance, to ensure that your workforce is ready to safely operate your equipment.

Your company's safety program will most likely require the modification of existing machines to reduce the hazard and risk levels identified in your risk assessment. It is important to choose a system integrator that has both the experience and certified expertise. This allows you to realize benefits such as:

- Understanding of standards and how to effectively apply technology.
- Minimize machine downtime and impacted systems with a well-developed plan.
- Cost-effective changes that reduce the risk level of the equipment within the company allowable limits.
- Increase equipment efficiency (in majority of cases).

## RELATED SAFETY SERVICES

Polytron also offers related safety services to complement your machine safety program to improve workforce safety practices and performance.
- Lockout/Tagout
- Job Hazard Assessment
- ARC Flash Audit
- Safety Culture Training

## APPROACH - MACHINE SAFETY

There are several approaches to Machine Safety projects: New Safety Initiatives; Established Culture of Safety; or Response to an incident or near miss.

Safety can be implemented at any point:
- Developing new safety initiative roadmap helps effectively create or improve your safety program.
- Taking action on completed Risk Assessments - if hazards are known and no action has been taken - your workers, productivity and bottom line are at risk.
- Reaction to incidents or near misses call for audit and assessment to proactively address and identify risks and hazards.

Our approach to machine safety is to come alongside your team to help you prioritize your highest risk machines and effectively reduce hazards in your facility. Our goal is to help you create a safe working environment for your people and plant assets.

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![CONTROL ENGINEERING 2015 System Integrator of the Year PLANT ENGINEERING]

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

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

**Areas of Expertise**
Manufacturing Intelligence
Automation and Information
Technology Transfer & Training
Industrial Network & Security
Process, Packaging, and
Material Handling
Machine Safety
Project Management

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

## HOW POLYTRON HELPS YOU

**Polytron's methodology and approach to every machine safety project begins with a thorough plan.**
The diagram below outlines our approach to reach a safe machine state.

**Regulatory and Corporate Safety Standards:** We apply safety standards as the foundation for every decision and step in the process.

**Risk Assessment:** By conducting a risk assessment or safety audit, we identify the hazards and the risk level of each hazard.

**Definition:** Using the results of the risk assessment, Polytron creates a definition of how to address each hazard.

**Design:** A detailed safety design is created to provide a functional design spec, hardware/software requirements, installation bids, and final scope, schedule, and cost for the safety solution to mitigate each hazard.

**Implement:** Once approved, the solution is implemented on your equipment.

**Validation:** The solution is validated to ensure that it meets the design specification, regulatory and company safety standards.

**Training:** A machine safety project typically makes operational changes to the equipment. This requires that operators, maintenance and technical staff must be re-trained for the safe operation of the newly updated equipment.

## IMPLEMENTING THE PROJECT

Scheduling the implementation of the machine safety project requires extensive coordination due to the evident downtime of the equipment. Older equipment requires considerable updating to bring into compliance and can incur as much as one day to several weeks downtime based on the complexity of the project.

Our certified project management professionals develop the most time-efficient and cost-effective approach to your machine safety project to reduce the risk to your operational performance.

## TURN-KEY SAFETY SOLUTIONS

Polytron offers turn-key safety solutions to reduce identified machine safety risks.

Our solution includes the following:
- Collaborate with your team to create the Safety Functional Design Specification
- Development of the Electrical / Controls and Mechanical safety design based upon the Safety Functional Design Specifications
- Programming modifications
- Supply of electrical and mechanical hardware and installation
- OEM management
- Onsite support for construction management, debug and system validation
- Documentation and Training for new safe machine state



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## 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 machine safety program 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).

*Machine Safety upgrades offer an opportunity to address operational efficiency as the safety project requires a complete overhaul of older equipment. While some clients do not use the project to increase efficiency, the safety initiative do result in some productivity improvements.*

*This is effectively measured in reduced Mean-Time-To-Repair (MTTR). Since the equipment now has isolated safety / operational zones, repairs to the equipment or clearing faults can be accomplished in the affected zone without impacting the operation of the rest of the machine.*

## PEOPLE READINESS THROUGH WORKFORCE DEVELOPMENT AND TRAINING

Changes made to the machine through the addition of safety controls and equipment have created a new machine.

It is as vital for your employees to understand how the machine safety project has impacted the operation and interaction with the newly-updated machine.

Workforce Development and Training services ensure that your workforce is safe in the operation of the machine includes:
- Training needs analysis
- Training documentation development
- Training facilitation
- Training validation
- Safety Job Aids

Polytron's Workforce Development and Training Group focuses on delivering successful training strategies to your key production employees. 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*.

## TUV CERTIFICATIONS

Our Safety Practice leads hold certifications in global safety competency as Functional Safety Engineer - TÜV Rheinland and Certified Machine Safety Expert - CMSE® - TUV NORD.

These certifications validate that your safety projects will be delivered with proven competency and expertise in best-in-class machine safety practices and thorough understanding of safety standards.

Areas of expertise include:
European Guidelines, Standards
- Machinery Safety Legislation
- Risk Assessment and Analysis
- ISO 13849-1: 1999 (EN 954-1) / EN ISO 13849-1: 2006 / EN 62061
- Safety Devices
- Mechanical Guarding
- Electrical Safety
- Functional Safety of Control Systems
- Safety functions of Machines
- Circuits, Schematics, Examples
- New Standards Regarding Safety of Machinery
- Validation

## INDUSTRY CERTIFICATIONS AND AFFILIATIONS

Rockwell Automation
Solution Partner
Control • Process • Information

Wonderware invensys 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

Institute of Packaging Professionals

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