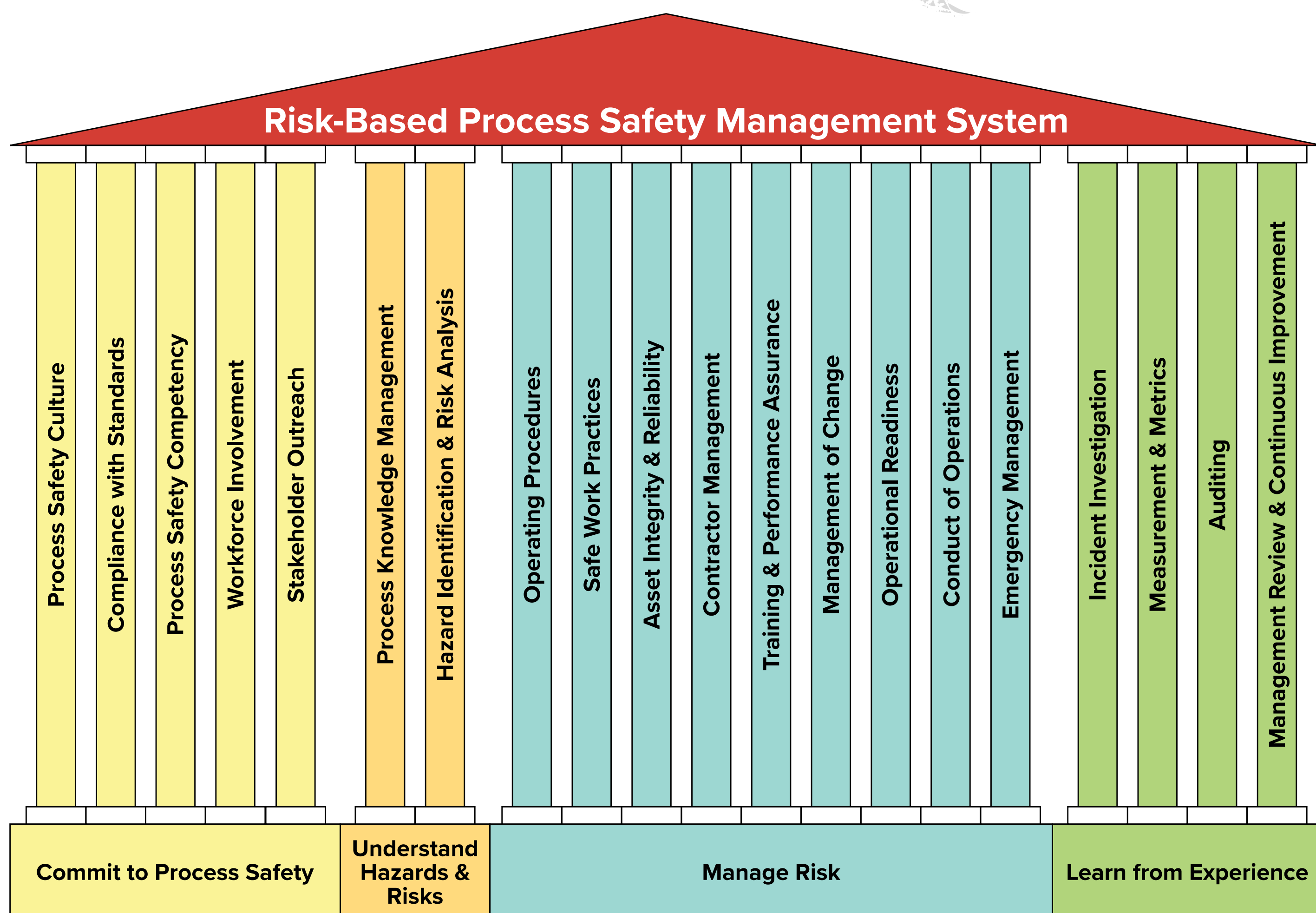


PROCESS SAFETY AT A GLANCE

A Roadmap to CCPS® Tools,
Management Systems and
Technical Resources



OPEN THIS POSTER TO DISCOVER CCPS RESOURCES PERTAINING TO THE 20 RBPS ELEMENTS!

PROCESS SAFETY AT A GLANCE 2025

GUIDELINES (G/L) FOR RISK BASED PROCESS SAFETY

CCPS® PUBLICATIONS	CCPS RISK BASED PROCESS SAFETY ELEMENT	CCPS TECHNICAL RESOURCES & TOOLS	ADDITIONAL RESOURCES
COMMIT TO PROCESS SAFETY <ul style="list-style-type: none">PS Leadership from the Boardroom to the FrontlineEssential Practices for Creating, Strengthening, and Sustaining Process Safety CultureThe Business Case for Process Safety, 4th ed.G/L for Implementing Process Safety Management, 2nd ed.G/L for Process Safety in Outsourced Manufacturing, 2nd ed.Practical Compliance with the EPA Risk Management Program: A CCPS Concept BookProcess Safety for Engineers: An Introduction, 2nd ed.	Process Safety Culture Standards, Codes, Regulations, and Laws Process Safety Competency Workforce Involvement Stakeholder Outreach	SOFTWARE APPLICATIONS <ul style="list-style-type: none">Risk Analysis Screening Tool (RAST) and Chemical Hazard Engineering Fundamentals (CHEF)CCPS GlossaryCCPS Process Safety Incident Evaluation Tool (PSIE 2.1)CCPS Chemical Reactivity Worksheet Tool (CRW 4.0.3)Process Safety Incident Database (PSID®) (Members Only)Vision 20/20 Self-Assessment ToolRBPS Self-Assessment Tool (Members Only) New tools and videos will be added to aiche.org/ccps/resources/tools	Find CCPS resources to meet your needs from the chart on this page. Additional information can be found at aiche.org/ccps
UNDERSTAND HAZARDS AND RISKS <ul style="list-style-type: none">G/L for Process Safety Knowledge ManagementG/L for Process Safety During the Transient Operating ModeG/L for Facility Siting and LayoutRecognizing and Responding to Normalization of DevianceG/L for Defining Process Safety Competency RequirementsA Practical Approach to Hazard Identification for Operations and Maintenance WorkersG/L for Chemical Process Quantitative Risk Analysis, 2nd ed.G/L for Chemical Transportation Safety, Security, and Risk Management, 2nd ed.G/L for Hazard Evaluation Procedures, 3rd ed.Layer of Protection AnalysisG/L for Enabling Conditions and Conditional Modifiers in Layer of Protection AnalysisGuidelines for Initiating Events and Independent Protection Layers in Layer of Protection AnalysisRecognizing Catastrophic Incident Warning Signs in the Process IndustriesProcess Safety in Upstream Oil and Gas	Process Knowledge Management Hazard Identification and Risk Analysis	VENTING AND EMERGENCY RELIEF <ul style="list-style-type: none">Deflagration and Detonation Flame ArrestersEmergency Relief Systems Design Using DIERS TechnologyG/L for Pressure Relief and Effluent Handling SystemsSafe Design and Operation of Process Vents and Emission Control Systems CHEMICAL REACTIVITY HAZARDS <ul style="list-style-type: none">Essential Practices for Managing Chemical Reactivity HazardsG/L for Process Safety in Batch Reaction Systems, 2nd ed.G/L for Chemical Reactivity Evaluation and Application to Process Design, 2nd ed.G/L for Safe Storage and Handling of Reactive Materials	 It always makes sense to start with "Guidelines for Risk Based Process Safety".
MANAGE RISK <ul style="list-style-type: none">G/L for Preparing Process Equipment for Maintenance and Return to ServiceG/L for Managing Abnormal SituationsBow Ties in Risk Management: A Concept Book for Process SafetyDealing with Aging Process Facilities and InfrastructureG/L for Integrating Management Systems and Metrics to Improve Process PerformanceConduct of Operations and Operational DisciplineG/L for Management of Change for Process SafetyG/L for Managing Process Safety Risks during Organizational ChangeG/L for Improving Plant Reliability through Data Collection and AnalysisG/L for Asset Integrity ManagementG/L for Performing Effective Pre-Startup Safety ReviewsG/L for Process Safety DocumentationG/L for Technical Planning for On-Site EmergenciesG/L for Managing Abnormal SituationsG/L for Revalidating Process Hazard Analysis, 2nd ed.G/L for Analyzing and Managing the Security Vulnerabilities of Fixed Chemical SitesG/L for Writing Effective Operating and Maintenance ProceduresGuide for Making Acute Risk DecisionsLocal Emergency Planning Committee GuidebookTools for Making Acute Risk Decisions	Operating Procedures Safe Work Practices Asset Integrity and Reliability Contractor Management Training and Performance Assurance Management of Change Operational Readiness Conduct of Operations Emergency Management	SAFE DESIGN <ul style="list-style-type: none">Handbook for Process Safety in Laboratories and Pilot Plants: A Risk Based ApproachContinuous Monitoring for Hazardous Material ReleasesG/L for Engineering Design for Process Safety, 2nd ed.G/L for Integrating PS into Engineering ProjectsG/L for Fire Protection in Chemical, Petrochemical, and Hydrocarbon Processing FacilitiesG/L for Safe Warehousing of ChemicalsG/L for Inherently Safer Chemical Processes, A Life Cycle Approach, 3rd ed. CONSEQUENCE MODELING <ul style="list-style-type: none">G/L for Consequence Analysis of Chemical ReleasesG/L for Evaluating Process Plant Buildings for External Explosions, Fires, and Toxic Releases, 2nd ed.G/L for Vapor Cloud Explosion, Pressure Vessel Burst, BLEVE, and Flash Fire Hazards, 2nd ed.Understanding ExplosionsWind Flow and Vapor Cloud Dispersion at Industrial and Urban SitesG/L for Determining the Probability of Ignition of a Released Flammable Mass	Check out CCPS Publications at aiche.org/ccps/publications Note: Many CCPS publications are available in different languages.
LEARN FROM EXPERIENCE <ul style="list-style-type: none">Book of Beacons (Members Only)Driving Continuous Process Safety Improvements from Investigated IncidentsG/L for Process Safety MetricsCCPS PS Metrics Guide for Leading and Lagging IndicatorsEffectively Using Metrics to Improve Process Safety PerformanceProcess Safety Leading Indicators Industry SurveyG/L for Acquisition Evaluation and Post Merger IntegrationG/L for Auditing Process Safety Management Systems, 2nd ed.G/L for Investigating Process Safety Incidents, 3rd ed.Incidents that Define Process SafetyMore Incidents that Define Process Safety	Incident Investigation Measurement and Metrics Auditing Management Review and Continuous Improvement	BIOPROCESS SAFETY <ul style="list-style-type: none">G/L for Process Safety in Bioprocess Manufacturing Facilities DUST EXPLOSION HAZARDS <ul style="list-style-type: none">G/L for Safe Handling of Powders and Bulk SolidsG/L for Combustible Dust Hazard Analysis HUMAN FACTORS <ul style="list-style-type: none">Human Factors Handbook for Process Plant Operations: Improving Process Safety and System PerformanceG/L for Preventing Human Error in Process Safety AUTOMATION <ul style="list-style-type: none">Managing Cybersecurity in the Process Industries: A Risk-Based ApproachG/L for Safe and Reliable Instrumented Protective SystemsG/L for Safe Automation of Chemical Processes, 2nd ed.	CCPS Process Safety Professional Certification (CCPSC®)  aiche.org/ccps/ccpsc CCPS Education Courses, in-person, and virtual training covering various elements of Risk Based Process Safety are available at aiche.org/ccps/education The CCPS Process Safety Fundamentals Certificate Program (CCPSf) is a training initiative based on a curated list of SACHE course offerings.  aiche.org/ccps/ccpsf

CCPS MONOGRAPH SERIES

Note: Please check the URL for each series to view available translations, updates, and the complete list for each series.

GOLDEN RULES (GR) AND KEY PRINCIPLES (KP)
aiche.org/ccps/GR&KP

SAFE WORK PRACTICES (SWP)
aiche.org/ccps/SWP

PROCESS SAFETY MONOGRAPHS
aiche.org/ccps/monographs

- GR for Ammonium Nitrate
- GR for Combustible Dust
- GR for Chlor- Alkali
- GR for Hydrogen Sulfide
- KP for Operating Procedures
- KP for Management of Change
- KP for Operational Readiness
- KP for Incident Investigation

- Access to Hazardous Area
- Common Elements
- Confined Space Entry
- Emergency Response
- Energy Isolation
- Equipment Filling and Mixing
- Equipment Identification

- Excavation
- Field Review of Permits
- Hot Tapping
- Hot Work
- Job Safety Analysis (JSA)
- Line Opening
- Permit to Work

- Process Plant Portable Buildings
- Scaffolding
- Simultaneous Operations (SIMOPS)
- Temporary Instrumentation and Controls Bypass
- Temporary Isolation of Relief Devices
- Working at Heights

- Process Safety and the Energy Transition
- Process Safety and the Energy Transition: Battery Technology
- How Business Financial Decisions Impact Process Safety Performance
- Methods to Analyze Loss-of-Containment Scenarios
- Process Safety in Outsourced Manufacturing Operations

- Safer Technologies and Alternatives Analysis (STAA)
- Effectively Using Metrics to Improve Process Safety Performance
- Human Factors Primer for Front Line Leaders
- Assessment of and Planning for Natural Hazards
- RBPS During COVID-19 & Similar Disruptive Times
- Reflections from Global Process Safety Leaders During and Following Pandemics
- Be Smart: Safe Restart