

Industrial Cybersecurity Technical Team Manager

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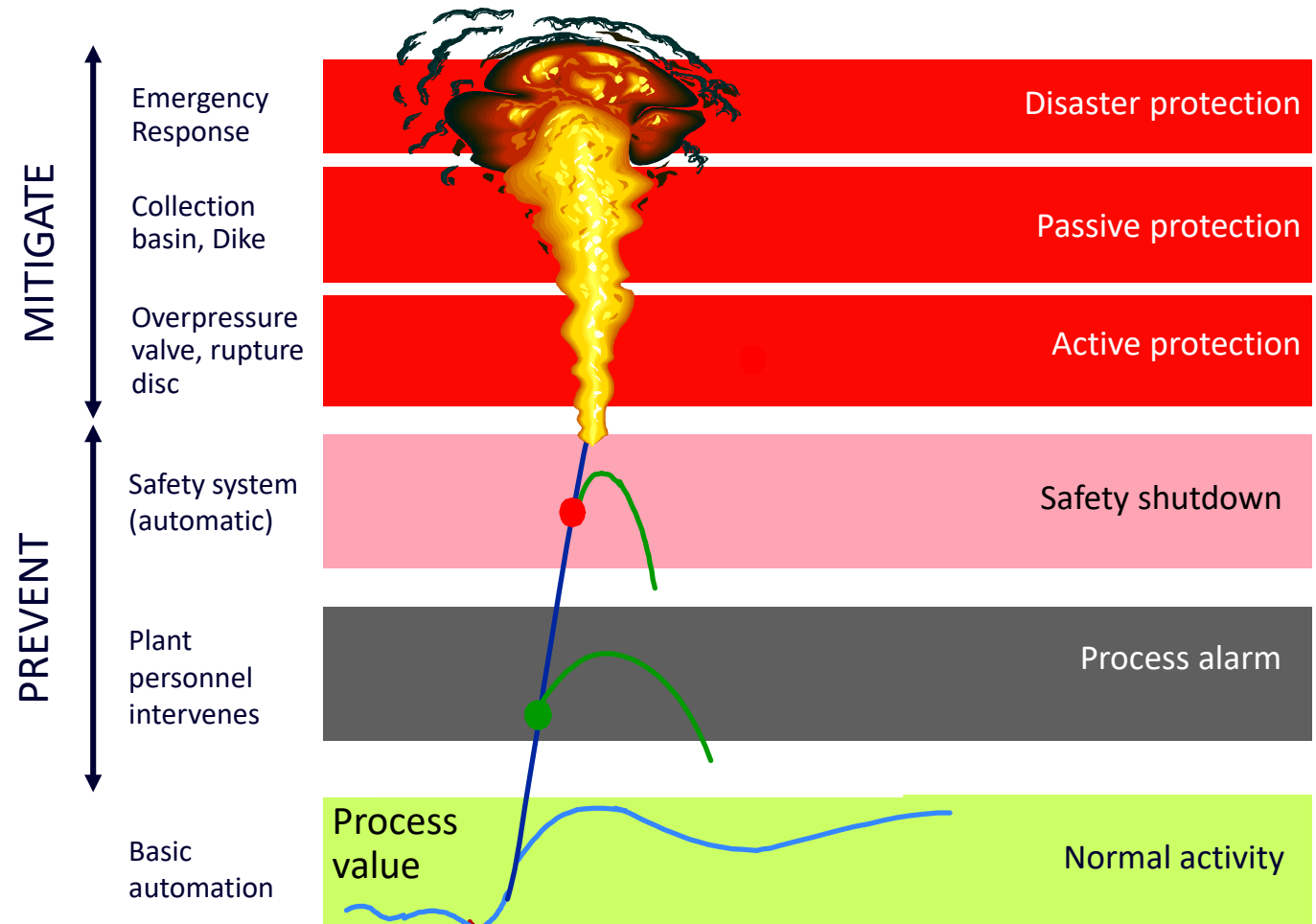
Jacob.Morella@aesolns.com

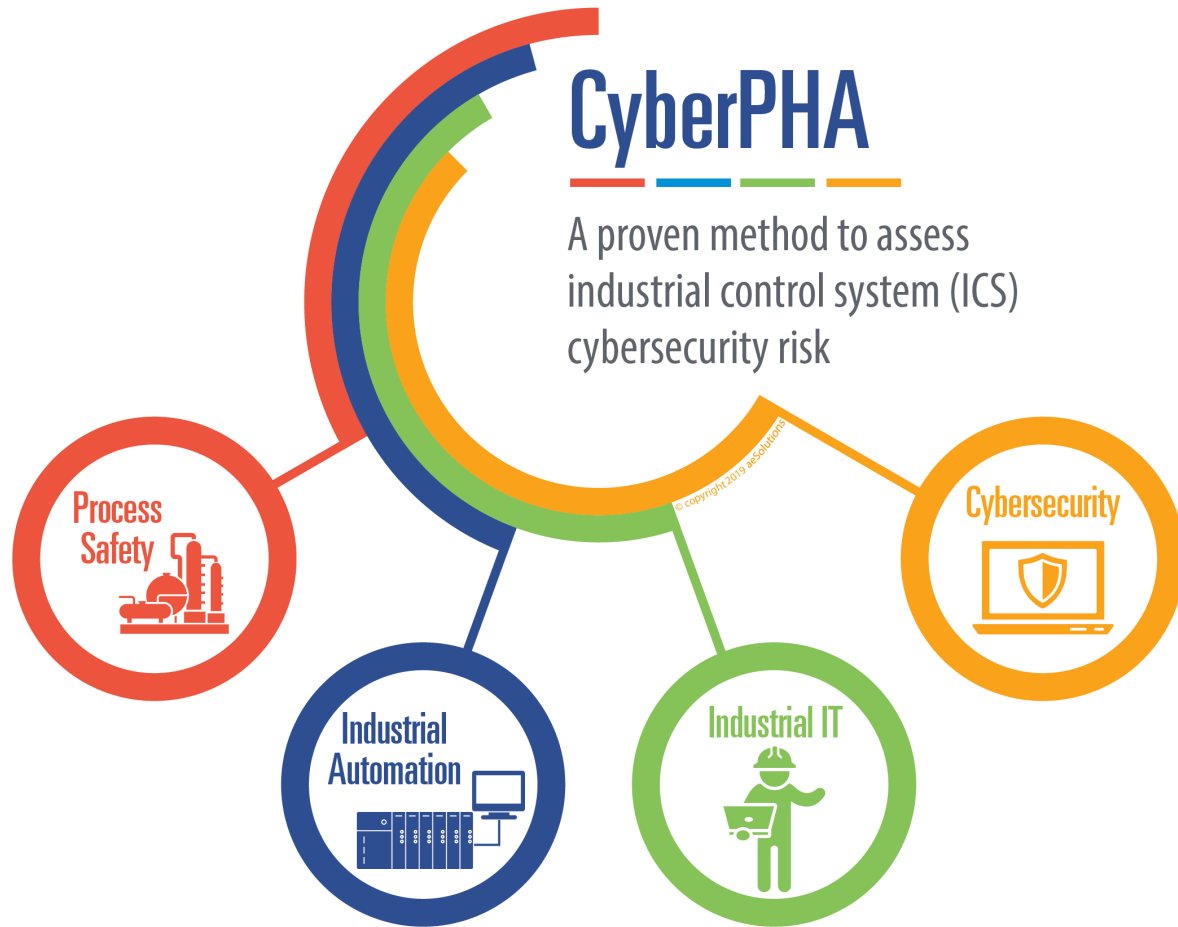
- Experience in the process and process safety industries
 - Process/Production Engineer
 - Automation Engineer
 - PHA, LOPA, and Alarm Rationalization Facilitator
- Specialization in:
 - ICS Cybersecurity
 - Process Safety
 - Safety Instrumented Systems



What is a PHA?

- ▶ Process Hazard Analysis (PHA) is an organized approach to evaluate hazards associated with industrial processes
- ▶ Mandated by OSHA in the Process Safety Management regulations for certain processes

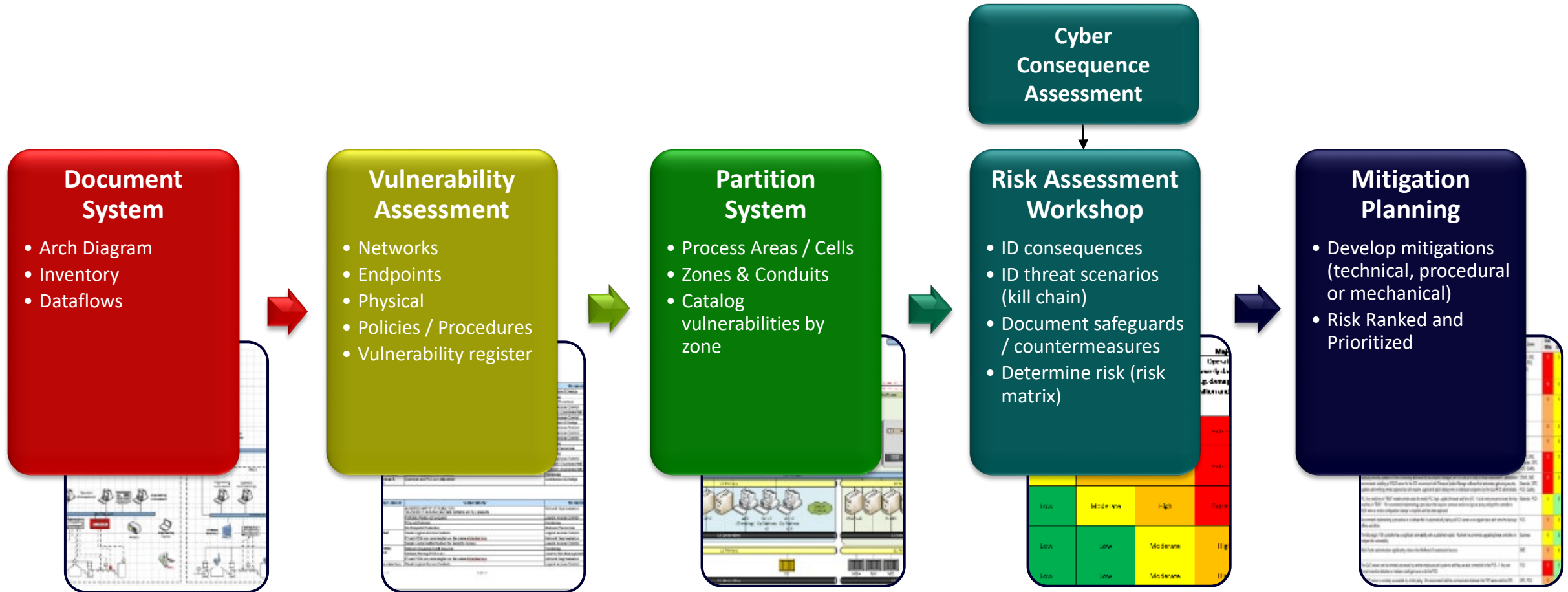




A safety-oriented methodology to conduct a security risk assessment for an ICS / SIS

- ▶ Systematic, consequence-driven approach
- ▶ Aligned with ISA/IEC 62443-3-2 and ISA TR84.00.09 standards
- ▶ Leverages established process safety information and techniques (e.g. PHA/HAZOP/LOPA)
- ▶ Integrates multiple engineering disciplines
- ▶ Delivers a risk-ranked mitigation plan

The CyberPHA Process



- ▶ Provides management with risk-ranked mitigation plan
- ▶ Encourages collaboration, practical solutions and buy-in
- ▶ Satisfies new IEC 61511 SIS security requirements
- ▶ Uncovers “hidden” risks
- ▶ Establishes a baseline to measure progress and justify decisions
- ▶ Raises cybersecurity awareness
- ▶ Successfully applied to hundreds of ICS since 2013