

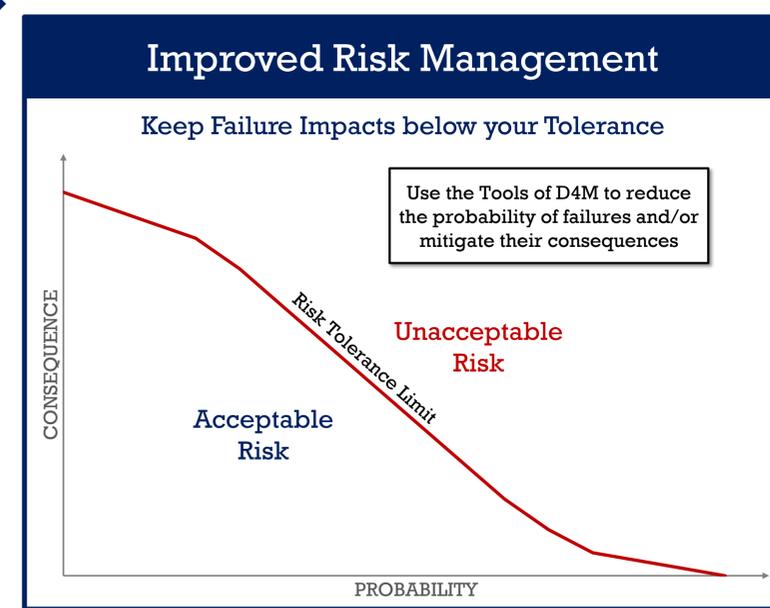
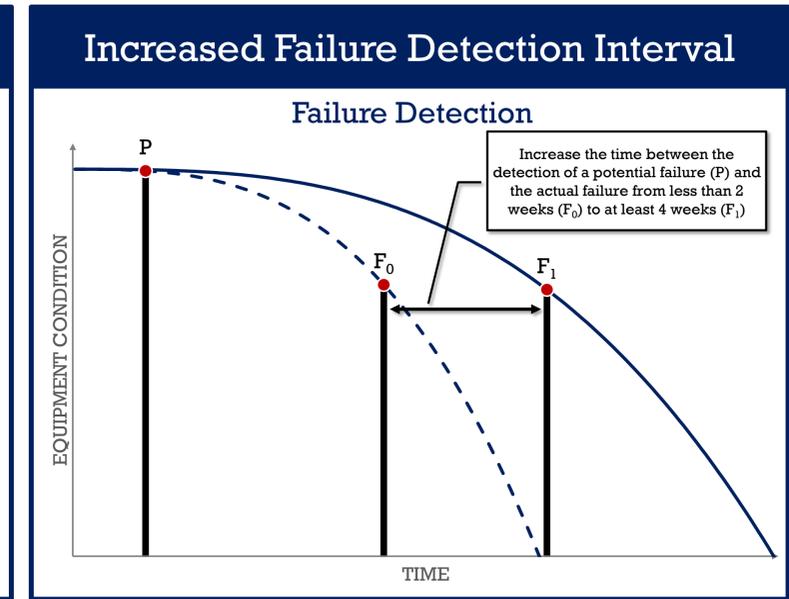
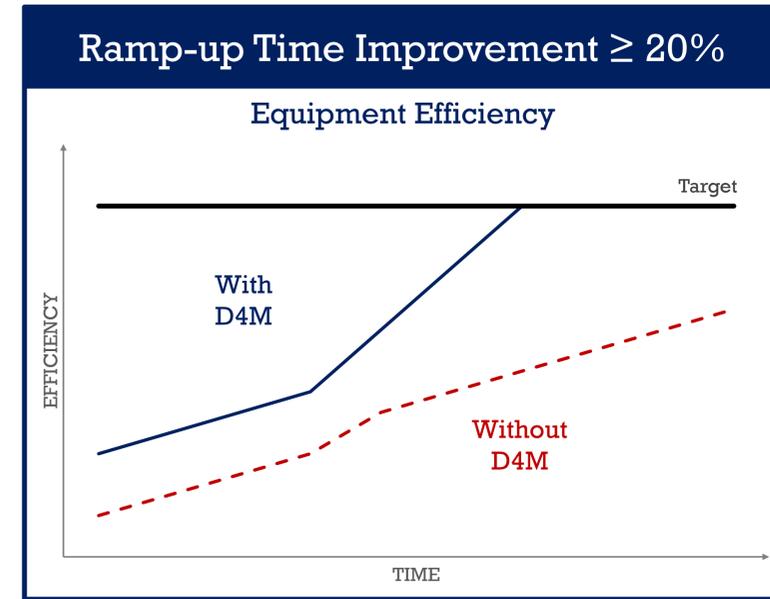
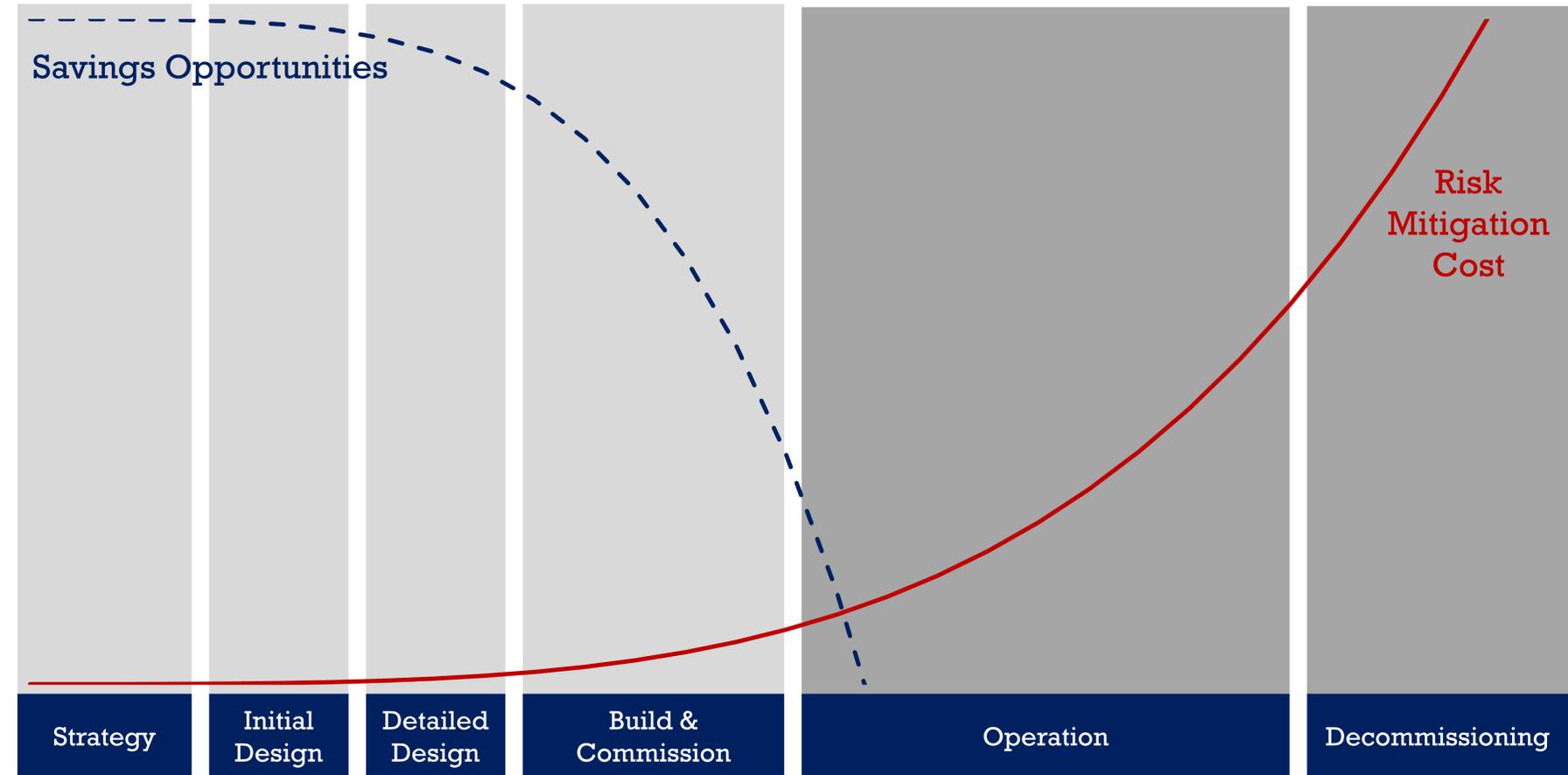


WORLD BREWING CONGRESS 2016

DESIGN FOR MAINTAINABILITY: The New Secret Cost Reduction for Breweries

(Louis Houle – Systemex Industrial Consulting)

World Brewing Congress
August 13-17, 2016
Sheraton Downtown Denver
Denver, CO 80202, U.S.A.



- ### Other Gains
- Tangible Gains**
- ✓ Project Delivered On-Time / On-Budget
 - ✓ Equipment Life Cycle Increase
 - ✓ Mean Time To Repair (MTTR) Reduction > 20%
 - ✓ Life Cycle O&M Costs Reduction ~10%
 - ✓ Efficiency Improvement ~5%
- Intangible Gains**
- ✓ Improved Employee Motivation and Ownership
 - ✓ Greater Credibility for Maintenance & Eng'g

Create Value during the Design Phase
Apply Design for Maintainability

- Design of Experiment → Systematic Cause-and-Effect Finding Method
- Failure Modes & Effects Analysis → Analyze Components Failures to Decrease Resultant Impact
- Return of Experience → Look at the Design from an Operator/Technician's Standpoint
- Visual Management → Improve Ergonomics and Ease of Operation/Troubleshooting