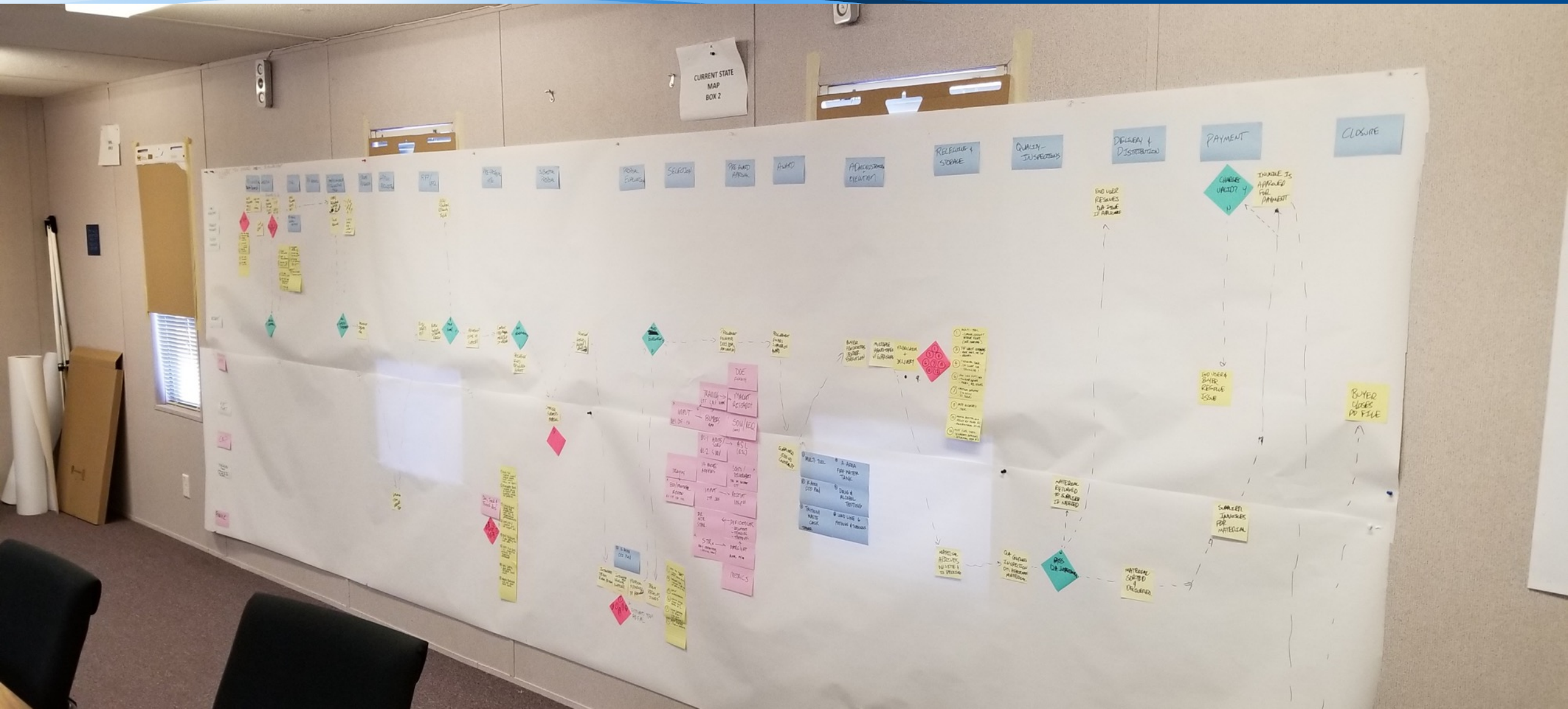
Programmatic Issue: Proactive RCA of a Negative Trend of Procurement Program Issues at SRNS



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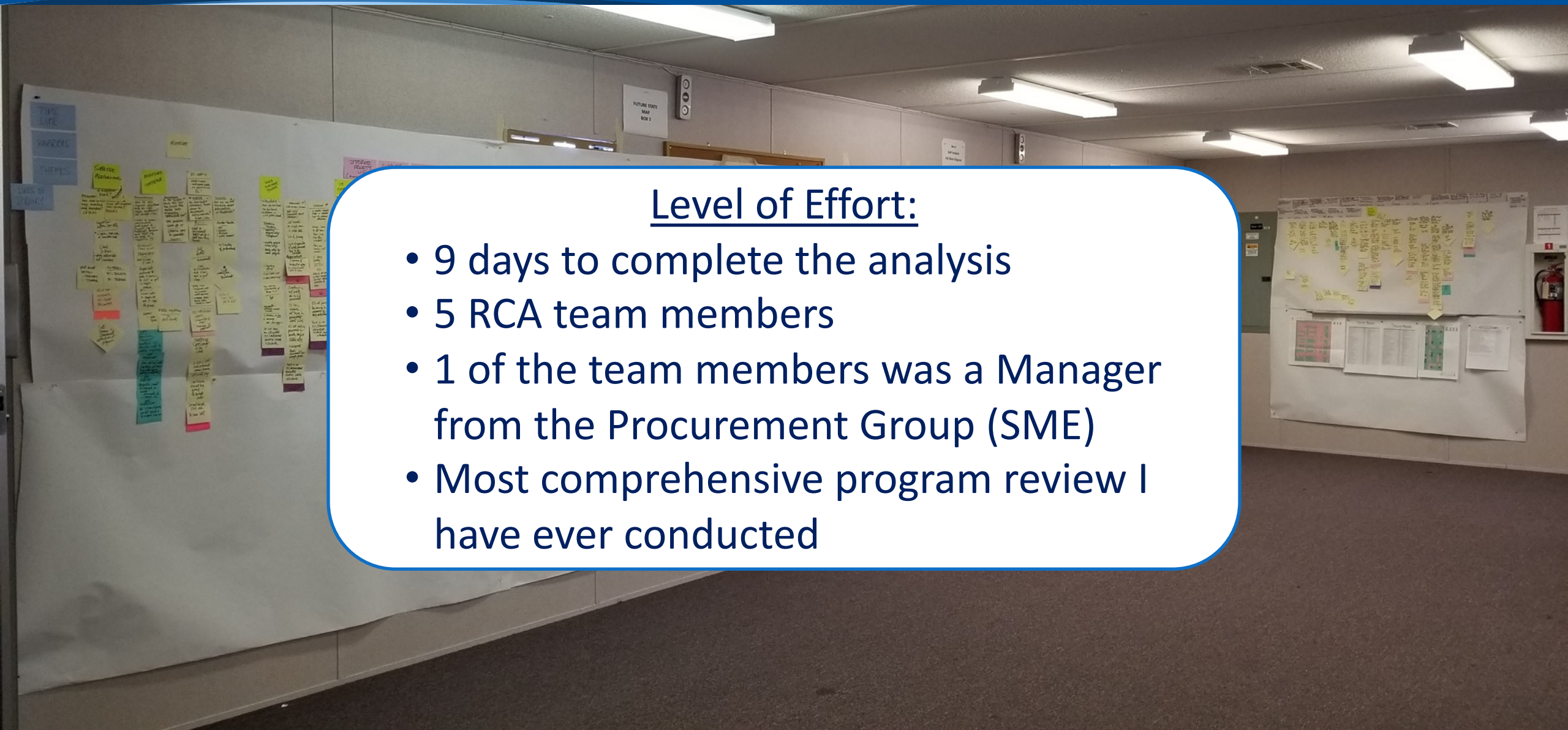


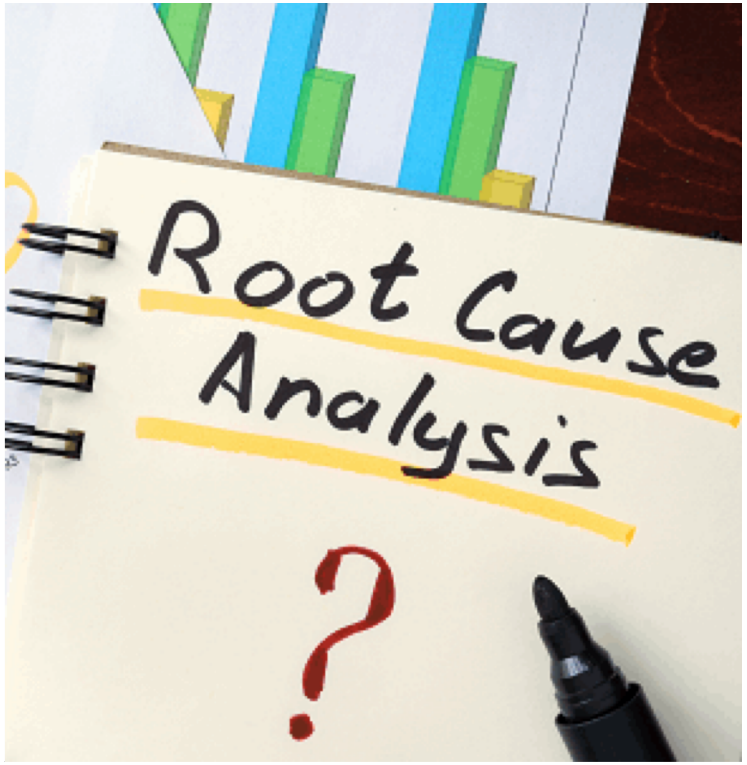
Level of Effort:

- 9 days to complete the analysis
- 5 RCA team members
- 1 of the team members was a Manager from the Procurement Group (SME)
- Most comprehensive program review I have ever conducted

Journey of Discovery:

Lessons Learned and Ways We Can Improve our Root Cause Analysis

What is our role as Root Cause Analysts?

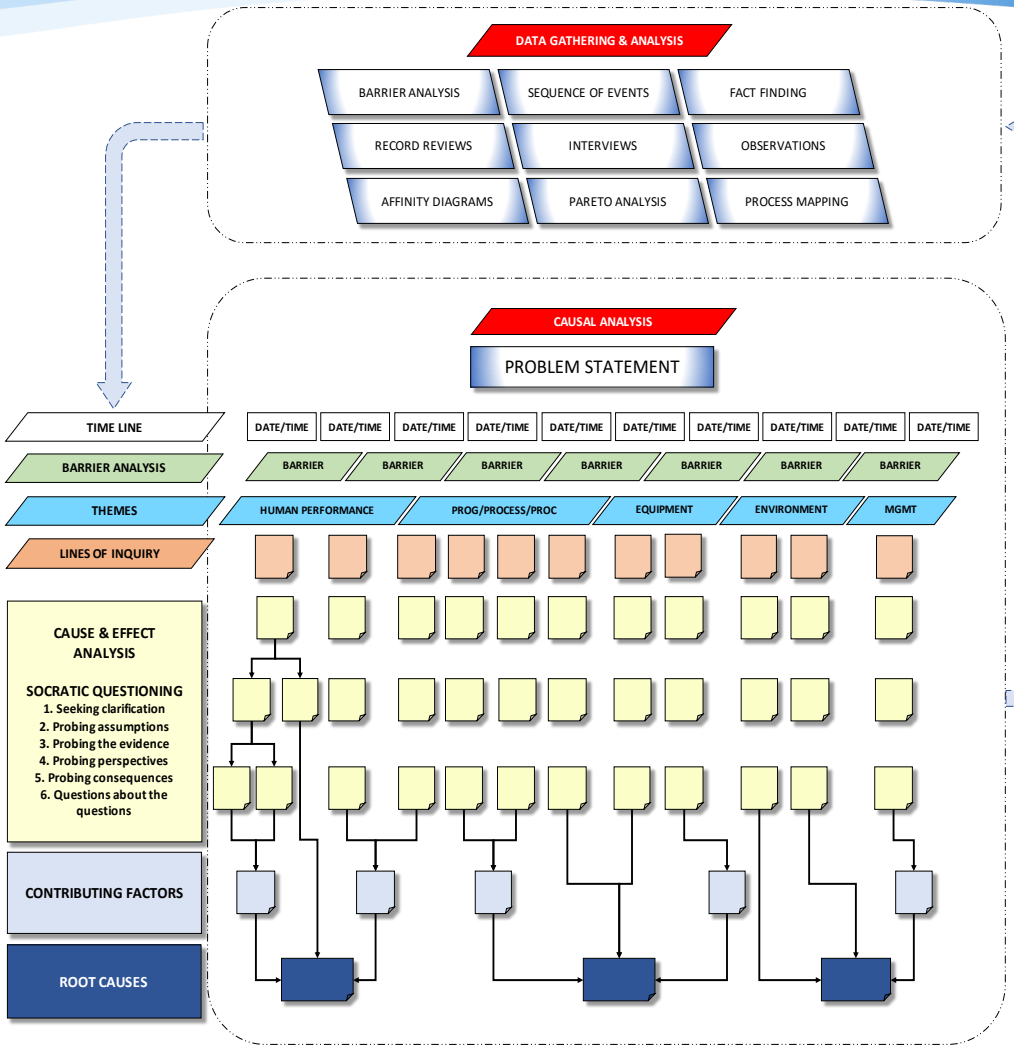


- Gather available information
- Organize the information using best available tools (data analysis)
- Analyze the information from multiple perspectives (causal analysis)
- Identify as many LATENT WEAKNESSES as possible (root causes and contributing factors)
- Recommend actions to eliminate those causes

What is our role as Root Cause Analysts?

Lesson Learned LL#1: our primary role should be to GUIDE the organization through the analysis and harness the expertise of the organization's SMEs

The result of 3 decades of iterations is a framework for complex problem solving (i.e. RCAs and ACEs) that…



- Is built with a deep understanding of "The Anatomy of an Event"
- Uses Critical Thinking tools to develop insights and lines of inquiry
- Uses Socratic Questioning to identify root causes
- Integrates Lean and Agile techniques for max efficiency
- Is a single, scalable framework that can be used for simple or complex issues
- Is accurate and repeatable
- Can be used proactively on negative trends before they cause events

LL#2: Understanding the anatomy of an event prompts us where we should look for latent weaknesses

HUMAN PERFORMANCE
(At-risk Behaviors)

Wrong Values & Beliefs

JOB HAZARDS

BARRIERS

Weak/Missing Barriers
- Firewalls
- Doors/Locks
- Procedures
- Training

Tools, Materials,
Equipment Interfaces

Equipment Performance

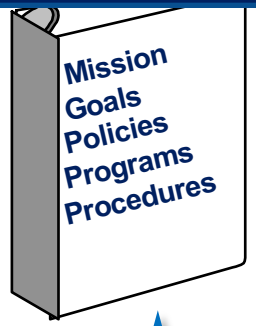
WORK ENVIRONMENT
(Error-likely Situations)

Human Factors
- Task Demands
- Individual Capabilities
- Work Environment
- Human Nature

Recurring Events

Corrective Actions
That Prevent Recurrence

PROGRAMS



Latent
Organizational &
Programmatic Factors

What skills do we need to identify latent weaknesses and solve recurring problems quickly and efficiently?

- Critical Thinking
- Complex Problem Solving

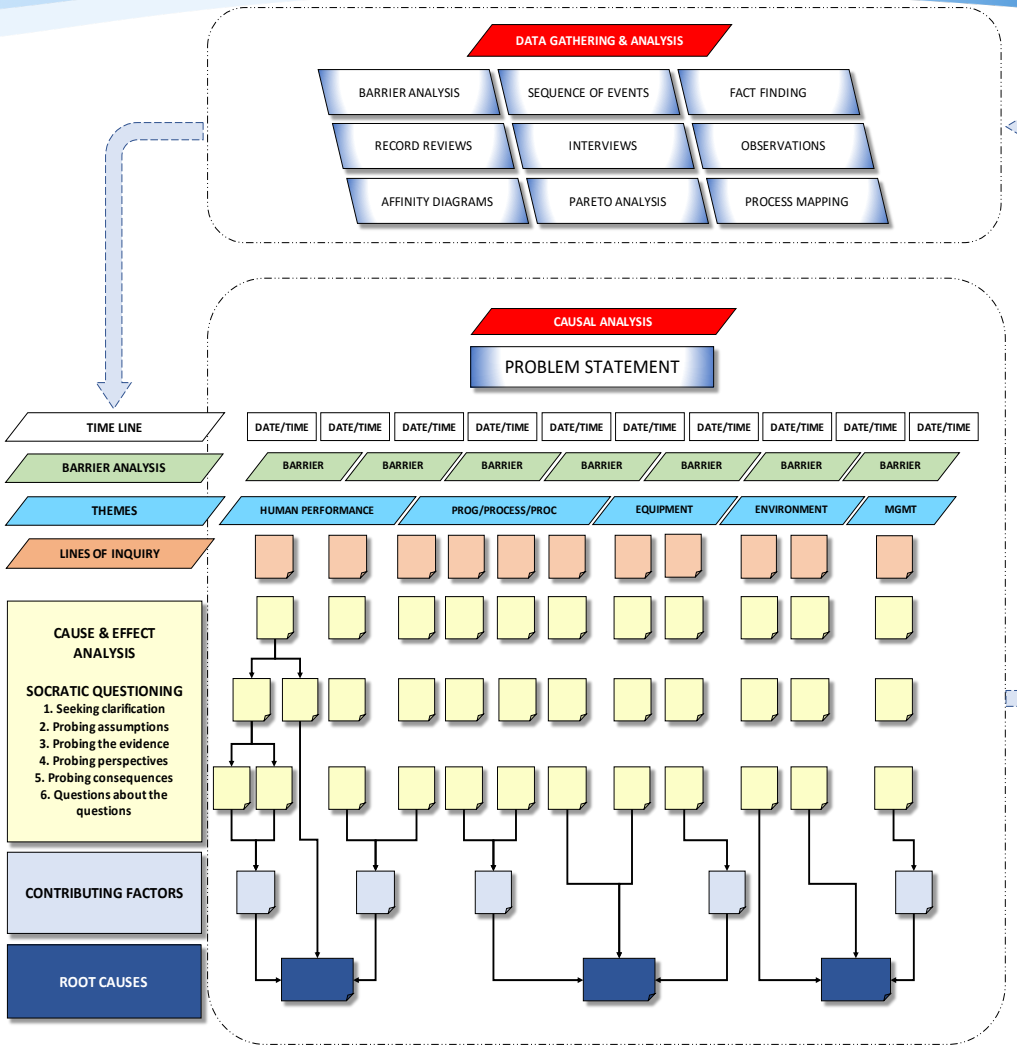
LL#3: with the advent of Artificial Intelligence and Machine Learning, we have gravitated towards root cause analysis software. Critical thinking and complex problem solving skills are becoming a lost art, but organizations should strive to develop these skills across the board.

Critical Thinking Simplified…

LL#4: Having a disciplined and organized process for conducting causal analysis prevents us from jumping from the problem straight to solutions

1. The intellectually disciplined process of…
   - ✓ Gathering data,
   - ✓ Organizing data,
   - ✓ Analyzing data…
2. …so we can take the best course of action

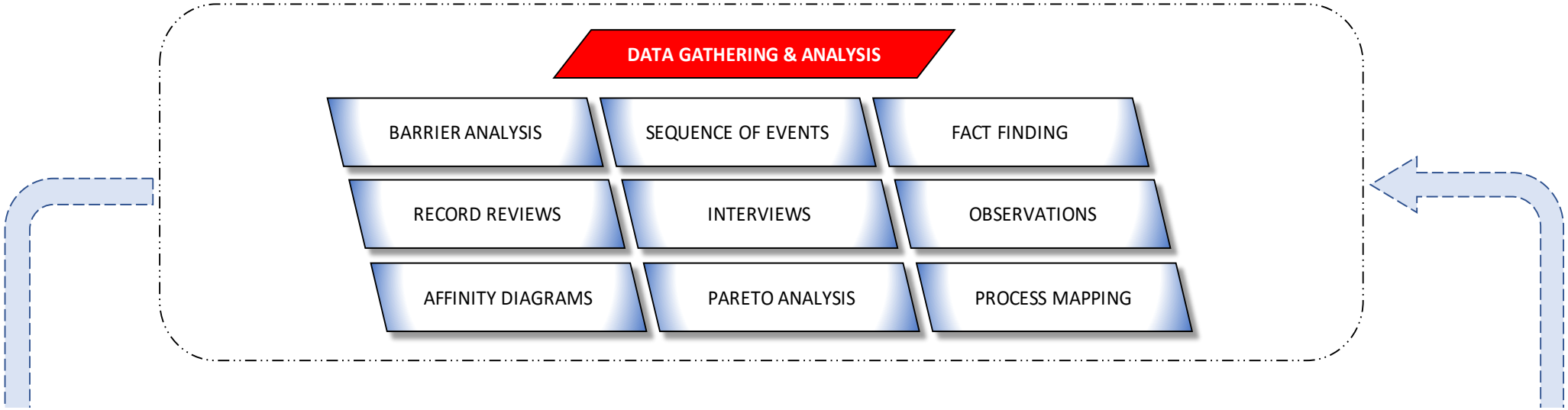
LL#5: Integrate critical thinking tools, data analysis and other approaches that were being done separately, to gain efficiency



- Data Gathering and Analysis
- Comparative Time Line Analysis
- Task Analysis
- Change Analysis
- Barrier Analysis

- Fish Bone Themes
- Lines of Inquiry
- Cause & Effect Analysis
- Events & Causal Factors Charting
- Socratic Questioning (5-Why's)

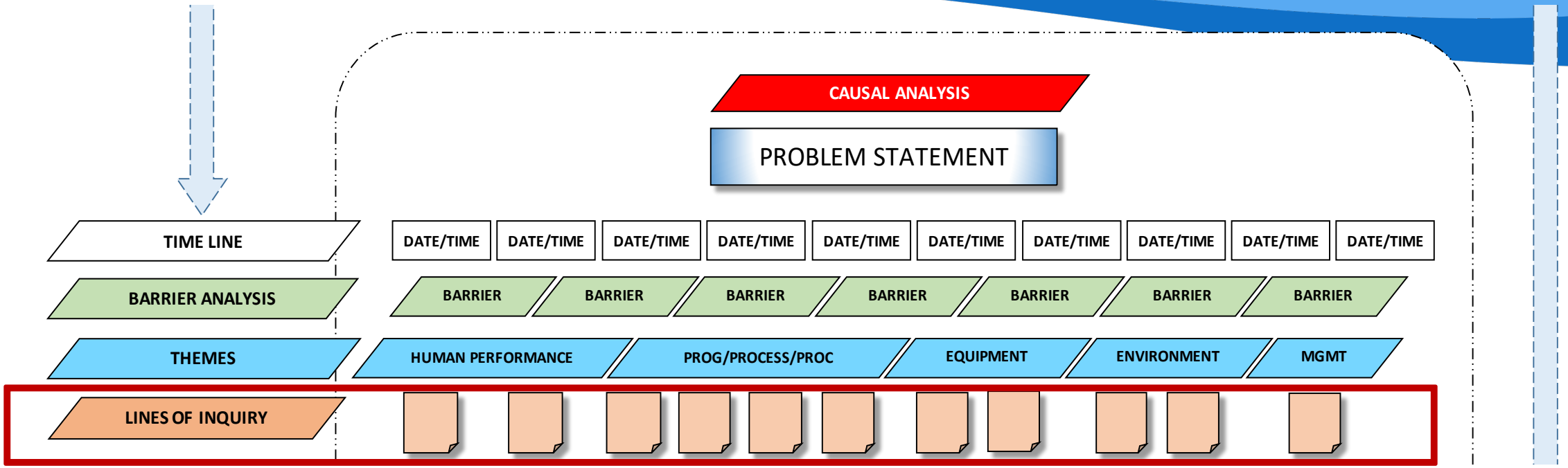
The first phase prompts us to analyze available information and gain insights that help focus our Causal Analysis



LL#6: Data Analysis is separate from Causal Analysis.

The results from the Data Analysis are used to develop Lines of Inquiry for the subsequent Causal Analysis

The second phase uses all available information to generate lines of inquiry and conduct the Causal Analysis



LL#7: "The RCA's outcome hinges on how well we develop our Lines of Inquiry"

Once we have developed a great set of lines of inquiry, the causal analysis proceeds quickly

Lines of Inquiry