



Nuclear Regulatory Commission Briefing

July 24, 2007

**Palo Verde
Nuclear Generating Station**

Introductions

**Randall K. Edington
Senior Vice President and
Chief Nuclear Officer**

APS Participants

- ◆ William Post- APS Chairman of the Board
- ◆ Jack Davis- APS CEO
- ◆ Dwight Mims- Vice President, Regulatory Affairs and Performance Improvement
- ◆ John Hesser- Vice President, Nuclear Engineering
- ◆ Mike Perito- Plant Manager

APS Participants

- ◆ Maria Lacal- Director, Executive Projects and Plant Support
- ◆ Mike Shea- Director, ImPACT
- ◆ George Andrews- Director, Performance Improvement
- ◆ Scott Bauer- Director, Regulatory Affairs

Opening Remarks

William Post
APS Chairman of the Board

Jack Davis
APS CEO

Opening Remarks

◆ Historical/Lessons Learned

◆ Actions

◆ Resources

Historical/Lessons Learned

- ◆ Historical plant performance
- ◆ Metrics
- ◆ Workload
- ◆ Defensive/historical rationalization
- ◆ Accountability

Historical/Lessons Learned

- ◆ Team performance
- ◆ Workforce turnover
- ◆ Internal orientation
- ◆ Communication
- ◆ Remember, high nuclear performance is more a function of people than technology

Opening Remarks

- ◆ Historical/Lessons Learned

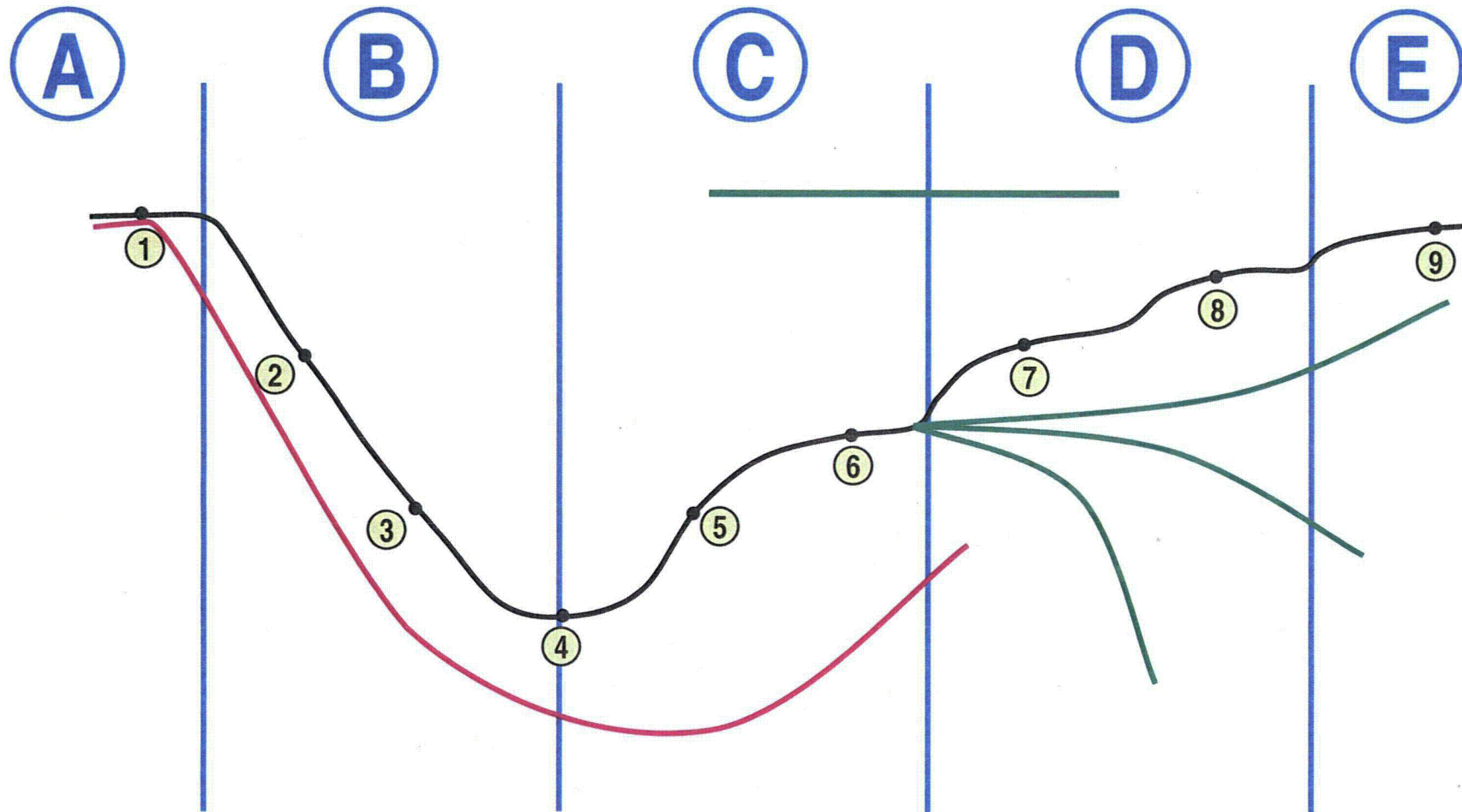
- ◆ Actions

- ◆ Resources

Improving Palo Verde for the Long Term

**Randall K. Edington
Senior Vice President and
Chief Nuclear Officer**

Stages of Power Plants



Recognize

where we have been

Emphasize

where we are!

and where we are going!!

History + New + Change = Palo Verde Way

Controlled change at deliberate speed

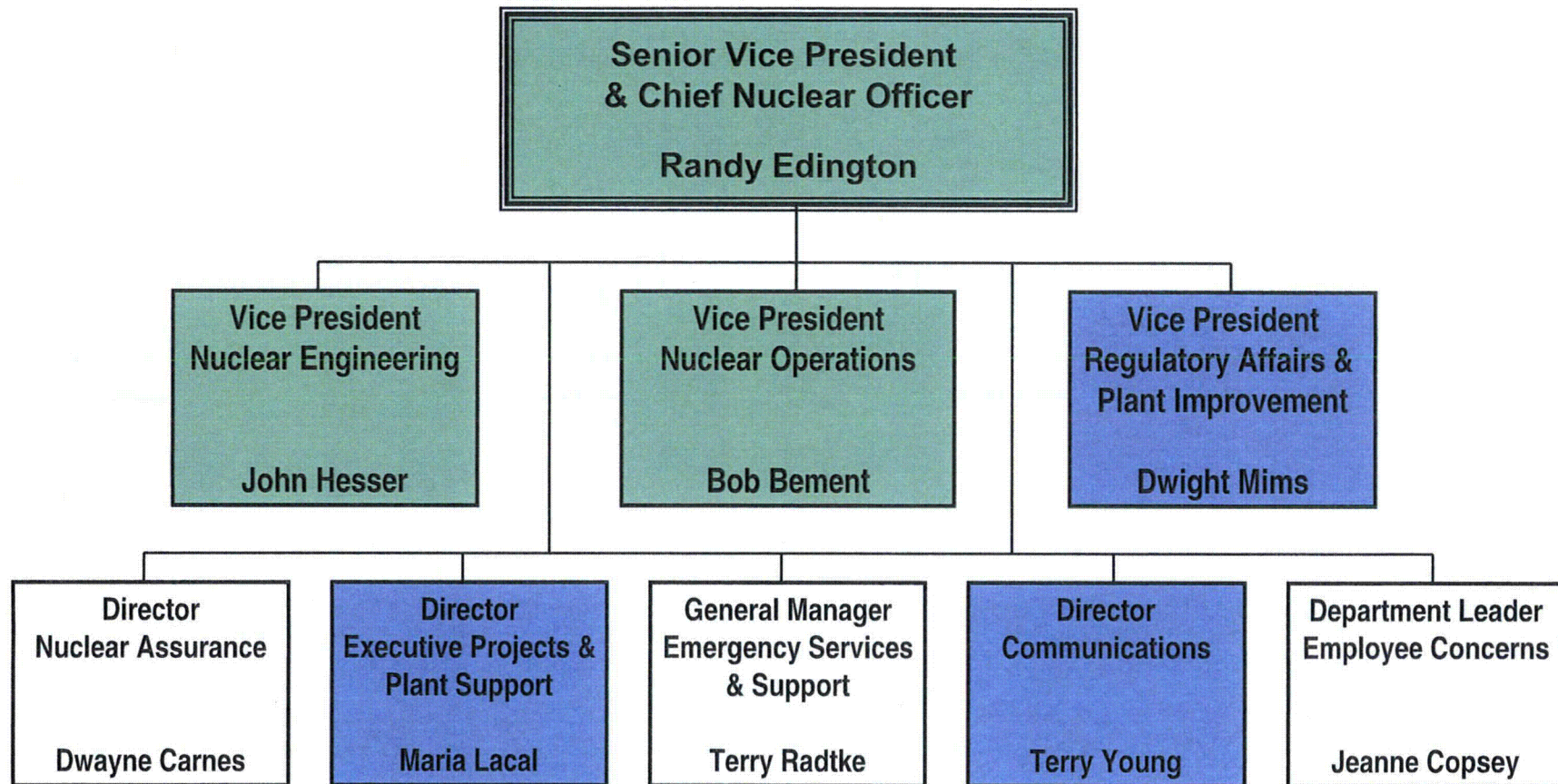
Map and understand

Then choose

- **execution**
- **evolution**
- **revolution**

Our Organization

History + New + Change

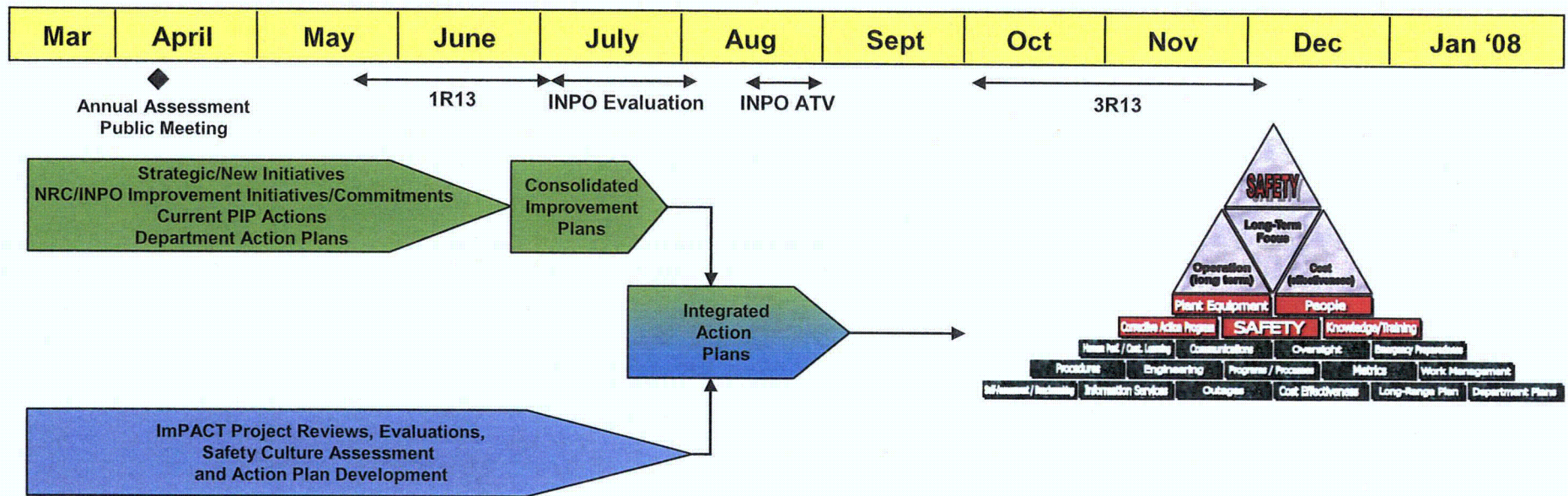


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Long-Term Focus

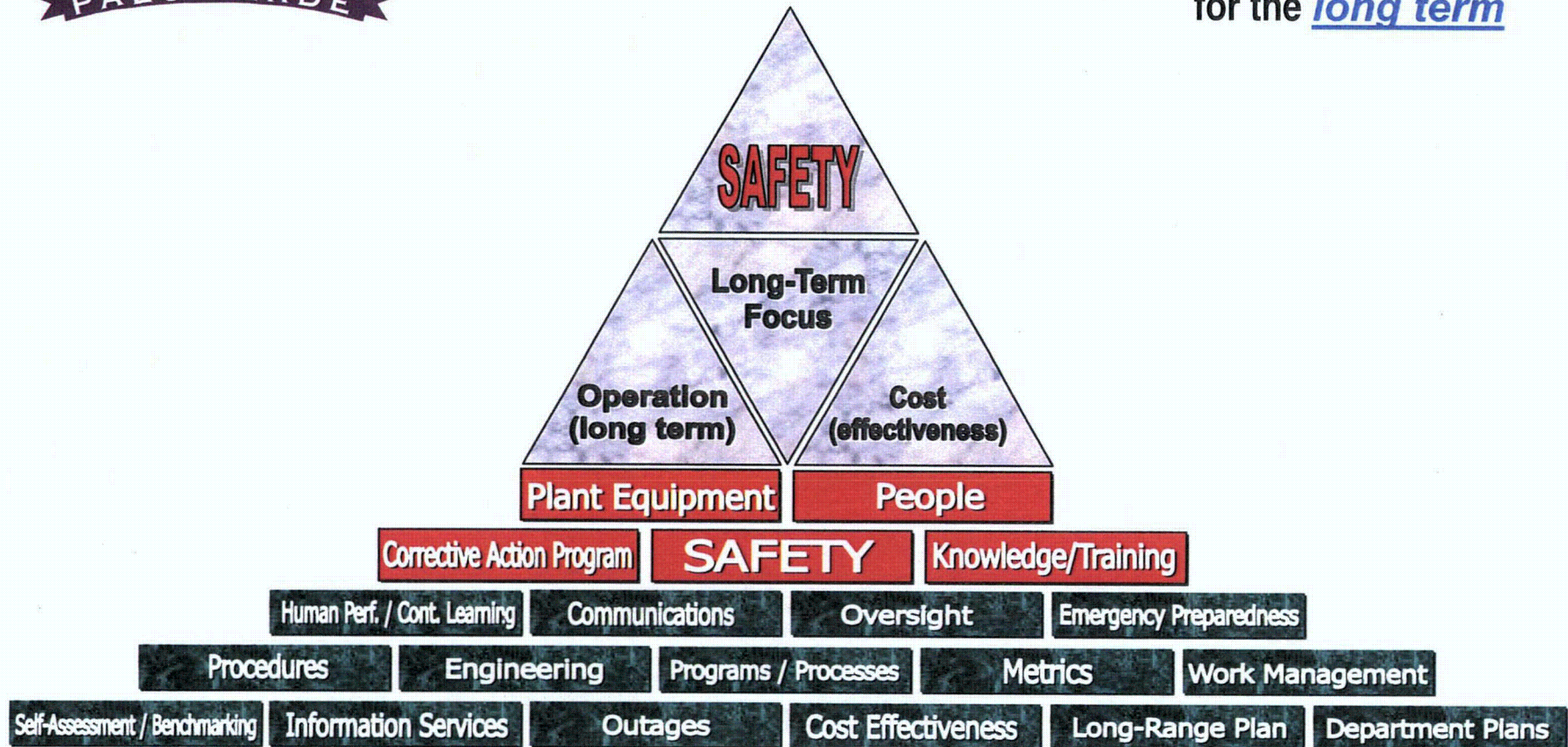
- ◆ Developing 3-5 year improvement plan to assure long-term, sustainable performance
- ◆ Build upon existing improvement plan
- ◆ Perform a detailed evaluation of performance issues through the ImPACT team
- ◆ Looking broader than Inspection Procedure 95003
- ◆ Obtaining organizational alignment

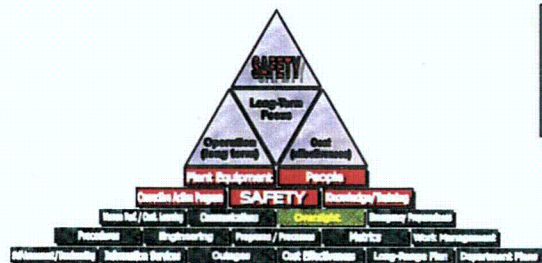
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Current State

Palo Verde has not been fully engaged with the industry and the culture has, at times, been one of complacency. Behaviors do not consistently drive continuous improvement and feedback from external sources has not been effectively integrated into plant processes and programs. As a result, performance has declined over time and opportunities to improve performance have been missed.

Goal

We seek and value input from internal and external oversight organizations and assessment teams to ensure excellence in nuclear safety. We keep our eyes on our problems and effectively integrate feedback into our processes and programs for continuous improvement.

Actions Completed Prior to 2007

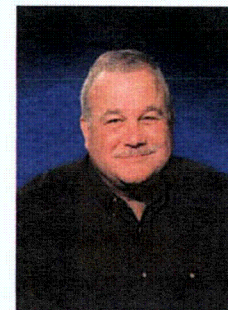
Building Block 8 Oversight

PVAR # 3040083

Executive Sponsor: Randy Edington

Major Initiatives

- 8.1 Increase Board of Directors' understanding of PVNGS operations
- 8.2 Improve the effectiveness of the Nuclear Oversight Committee (NOC)
- 8.3 Improve the effectiveness of the Off-Site Safety Review Committee (OSRC)
- 8.4 Improve the effectiveness of the Management Review Meetings (MRM)
- 8.5 Increase line organization QA perspective and improve effectiveness of site nuclear assurance oversight
- 8.6 Develop and implement an alignment strategy from senior leadership throughout the organization
- 8.7 Improve use of other external oversight and assessments
- 8.8 Increase station awareness of industry best practices
- 8.9 Improve station challenge board process



How We Measure Success

Metrics

Core Station Performance Indicators

Effectiveness Reviews

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Palo Verde Nuclear Generating Station

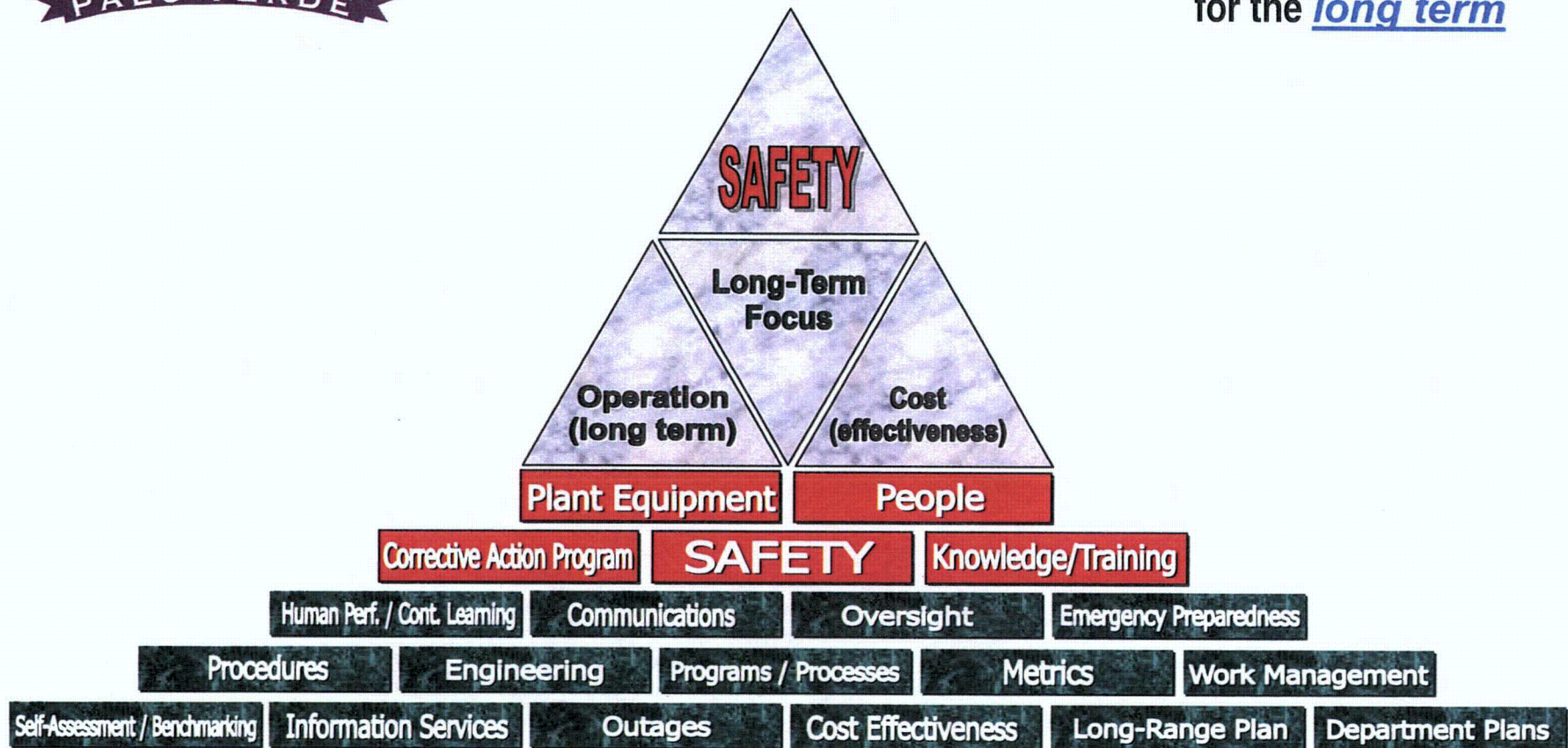
Site Integrated Improvement Plan - Building Block 8 - OVERSIGHT

Initiative: 8.3		Improve the effectiveness of the Off-Site Safety Review Committee (OSRC)						
Lead: R. Edington			CRDR - 3040637		Due Date: 06/30/08			
Current State:		The Off-Site Safety Review Committee has not been used effectively to provide an external industry perspective of Palo Verde performance. Consequently, actions to drive station improvements have been weak and untimely and desired changes in performance have not been fully realized.						
2007 Tasks								
Task #	CRAI #	Description	Owner	Due Date	Source	Progress	Closure	Effective-ness Review
8.3.1	3040638	Benchmark industry OSRC organization, structure, and charter and provide report to the site senior leadership team.	B. Fenech	08/31/07				
8.3.2	3040642	Evaluate effectiveness of OSRC using external assessment members and provide report to the senior leadership team.	M. Shea	09/30/07				
8.3.3	3040646	In coordination with site senior leadership, restructure/reorganize, as appropriate, OSRC internal membership, subcommittees, and external membership based on 8.3.1 and 8.3.2, above.	M. Lacal	09/30/07				
8.3.4	3040650	Revise reporting relationship to Senior Vice-President, Nuclear and Chief Nuclear Officer.	M. Lacal	09/30/07				
8.3.5	3040651	Revise OSRC charter, as appropriate, to institutionalize results of 8.3.3 and 8.3.4, above.	M. Lacal	10/31/07				
8.3.6	3040652	Revise OSRC charter to require conducting periodic reviews of Confirmatory Action Letter (CAL), ImPACT, and site integrated improvement plan action implementation, closure and effectiveness during time of increased regulatory scrutiny.	M. Lacal	10/31/07				
8.3.7	3040653	Develop and institutionalize a process for OSRC Chair to provide periodic status to Board of Directors (at least annually).	M. Lacal	12/31/07				

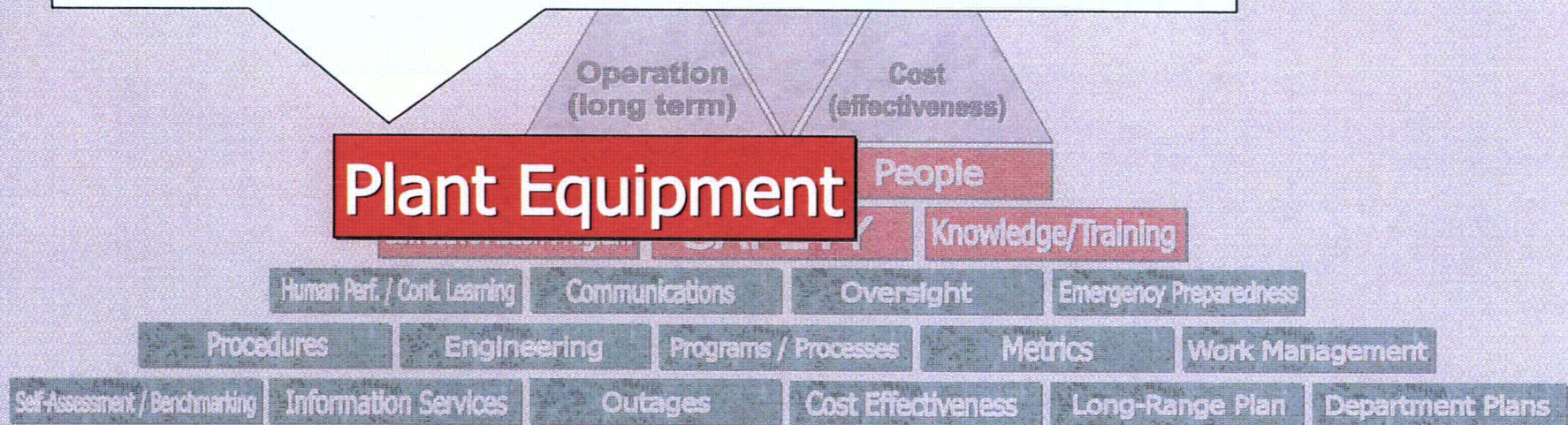
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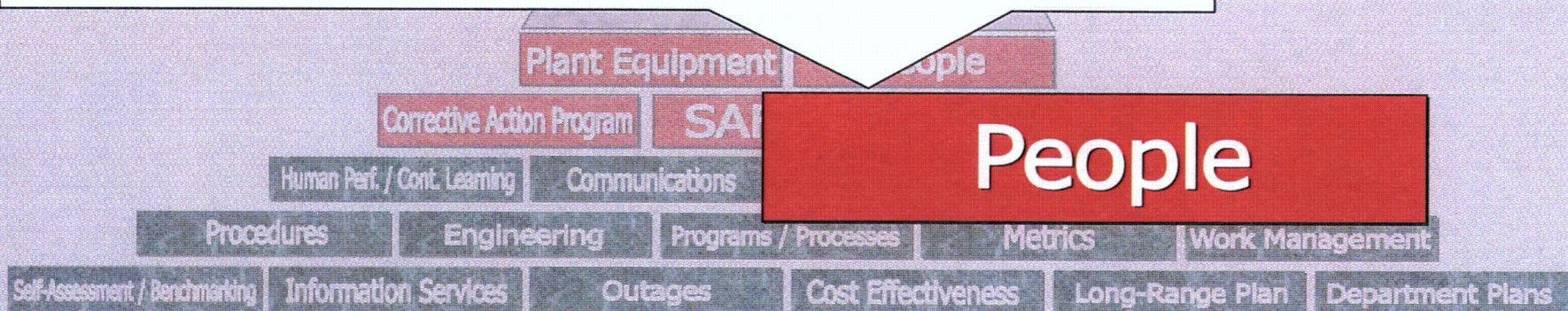
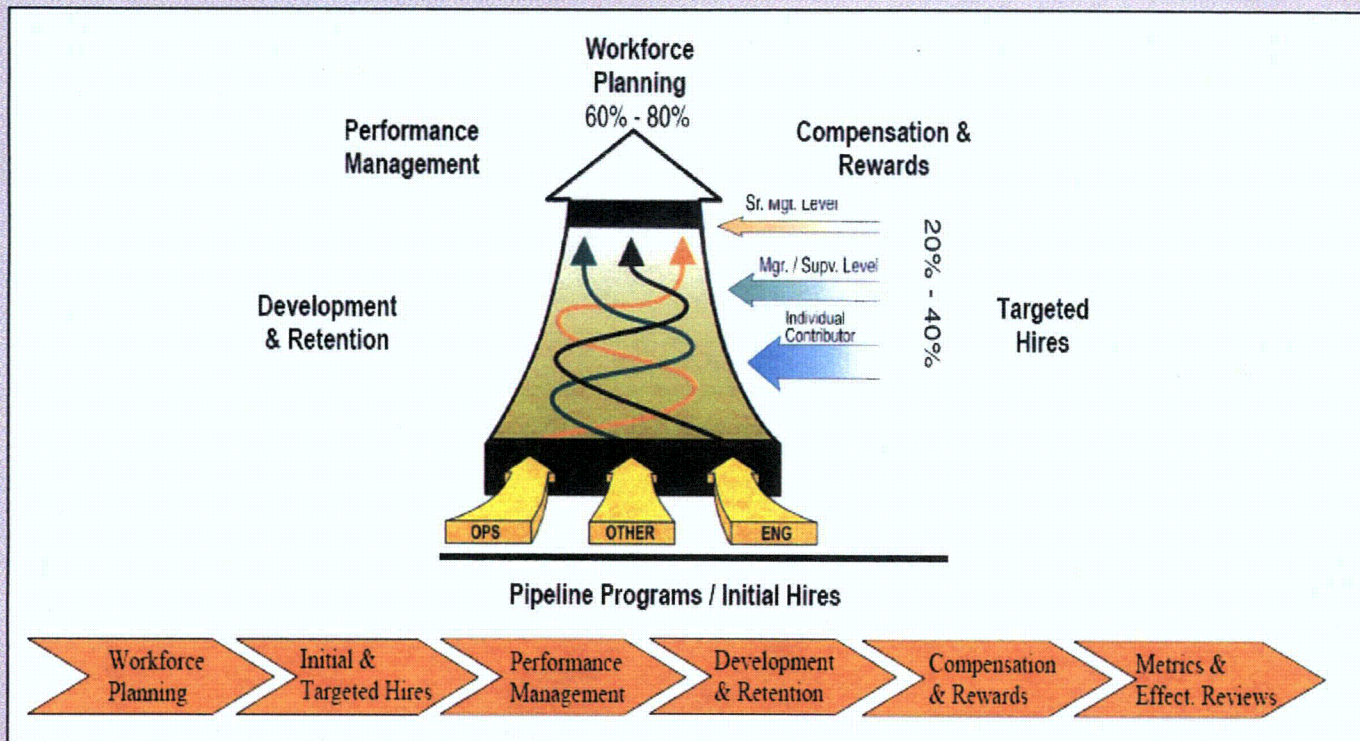


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- ◆ Major equipment improvements
- ◆ Top Ten equipment process
- ◆ Plant Health Committee
- ◆ Equipment process reviews
- ◆ Engineering equipment programs
- ◆ Component design basis review

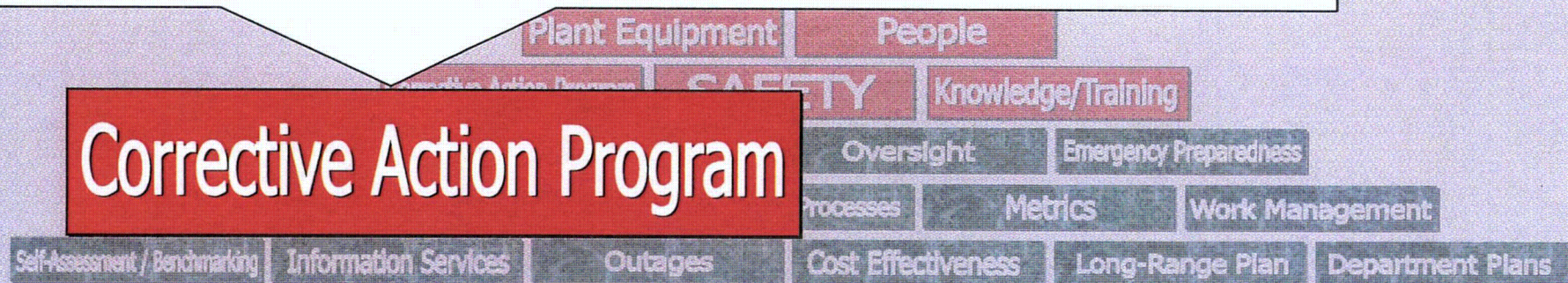




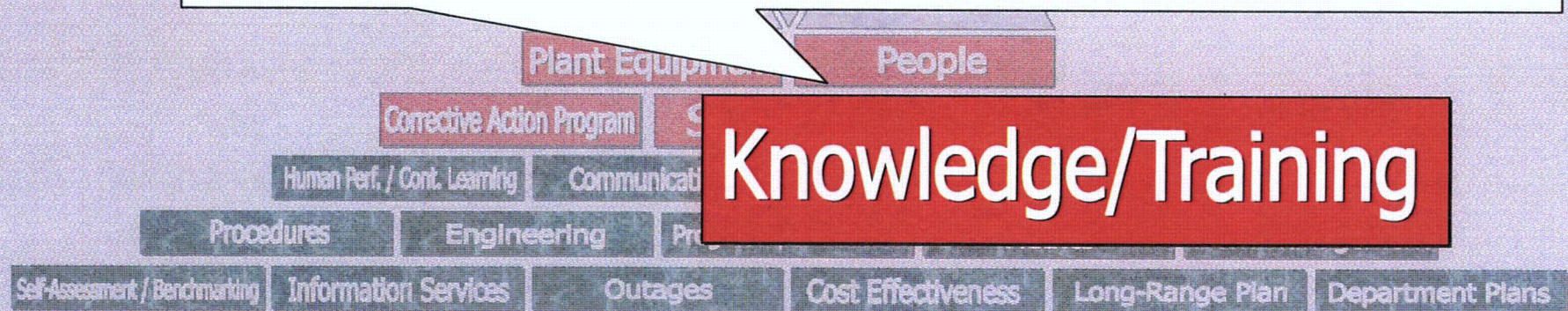
- ◆ Plant status and safety (nuclear, industrial, radiological, safety culture)
- ◆ Improving risk models, knowledge, structure
- ◆ Develop a “green stripe” certification
- ◆ Improve radioactive material control program
- ◆ Focus on behaviors and culture
- ◆ Implement actions to address independent safety culture assessment



- ◆ Mapping corrective action program (CAP) and related processes
- ◆ Improving CAP metrics
- ◆ Improving site accountability for CAP
- ◆ Providing additional dedicated resources
- ◆ Further process improvements in progress
- ◆ Establishing CAP as core business

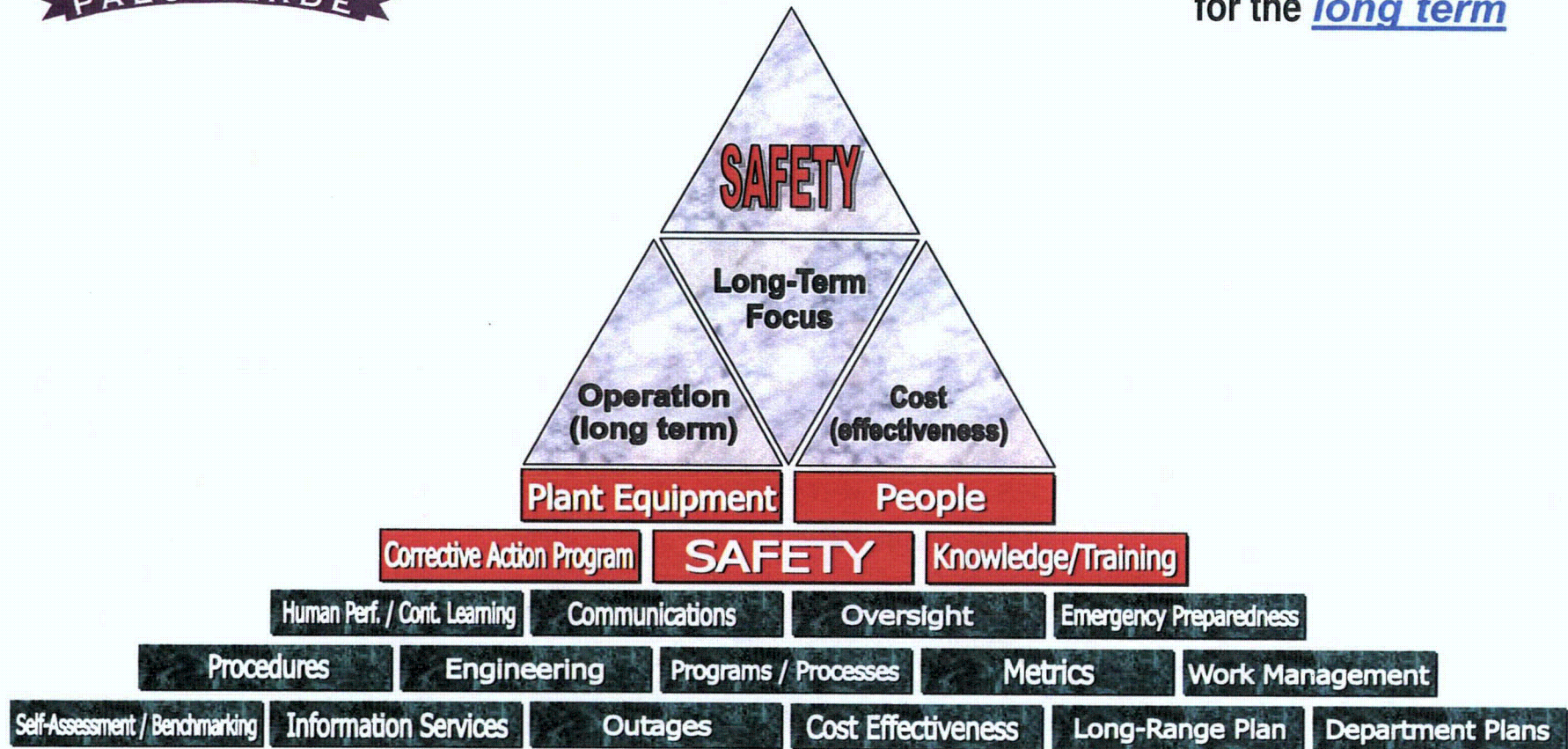


- ◆ Expanding site-specific power plant course
- ◆ Upgrading site-specific certification course
- ◆ Upgrading continuing training for workforce/leaders
- ◆ Improving training involvement in line activities
- ◆ Focus on training as core business for the long term

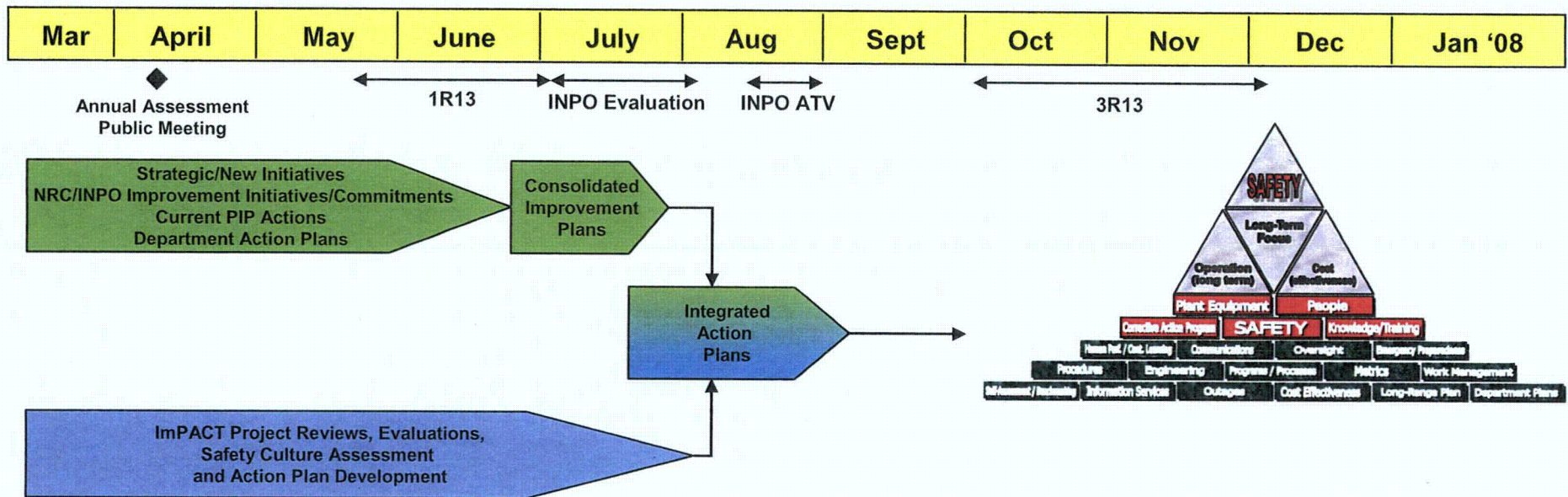


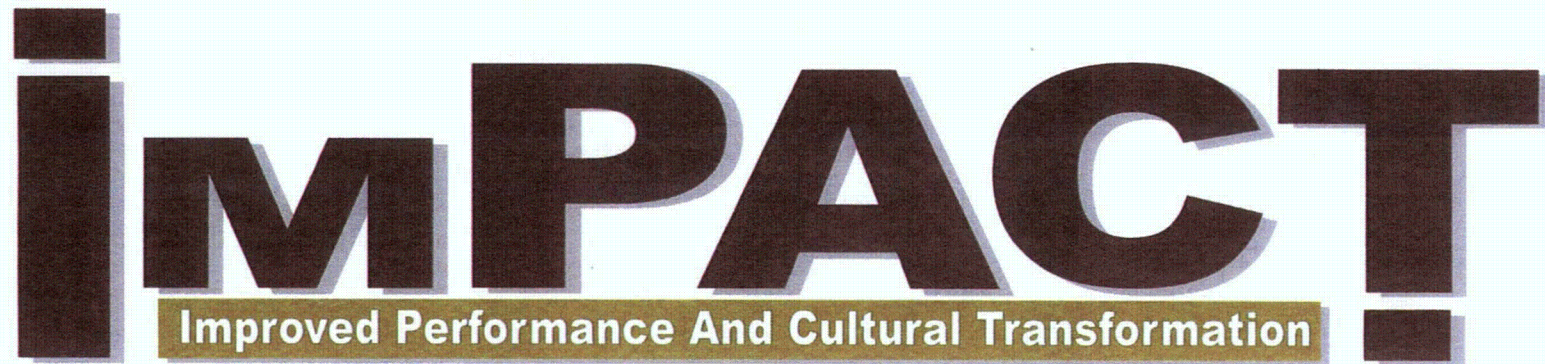


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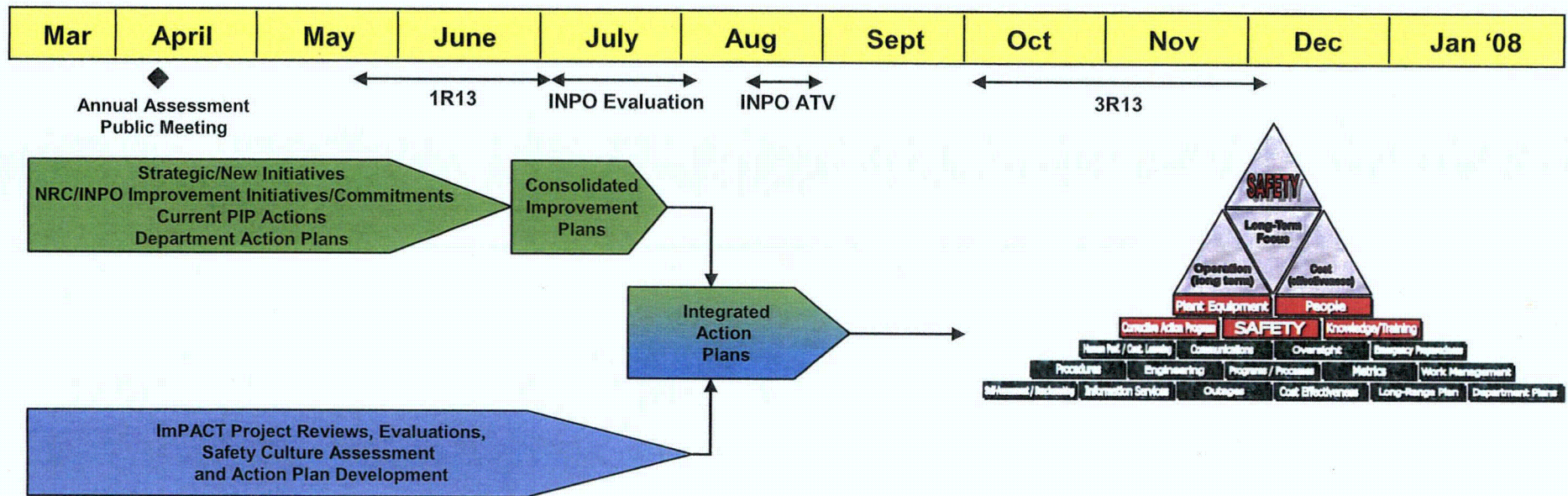
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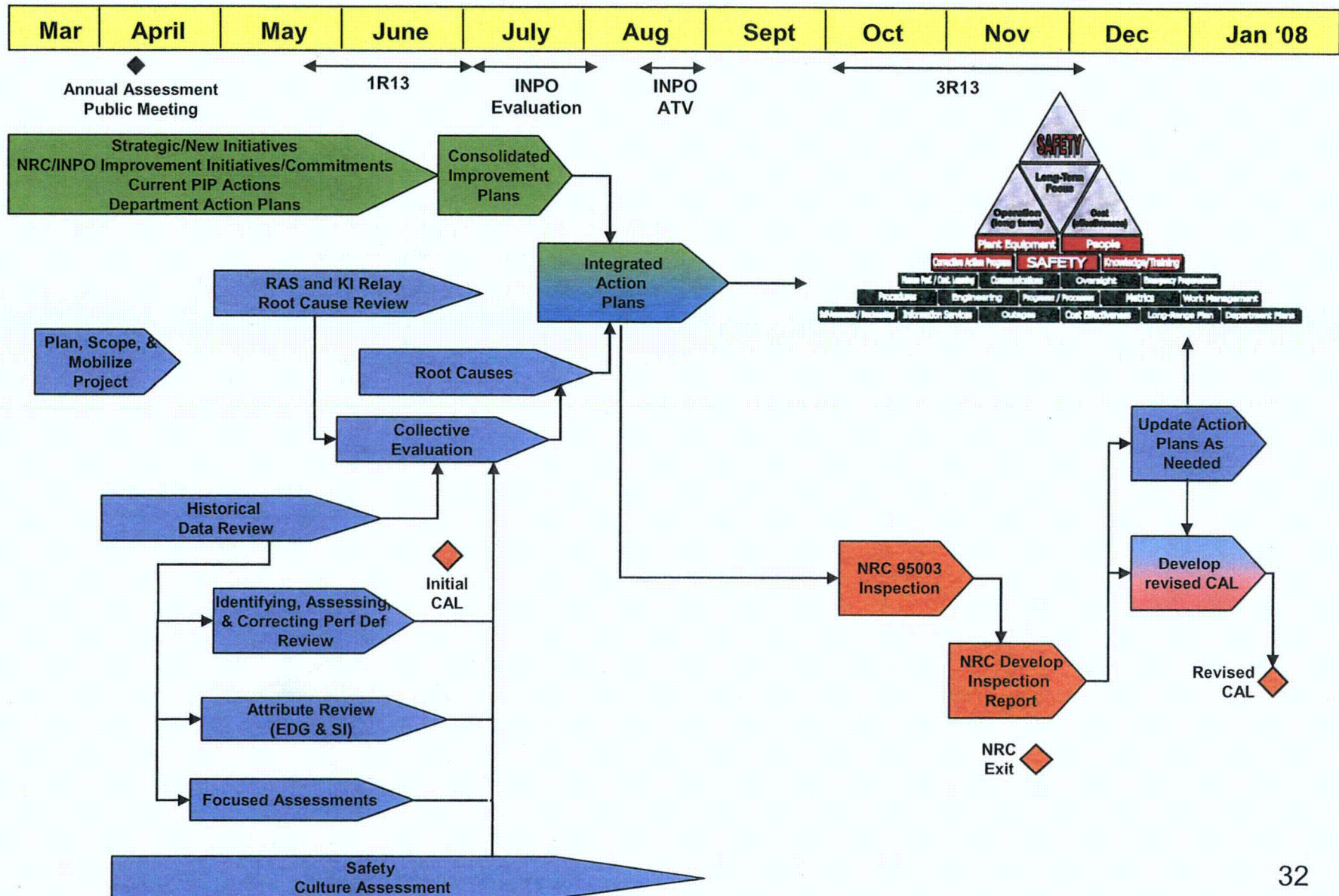


Dwight C. Mims
Vice President, Regulatory
Affairs and Performance
Improvement

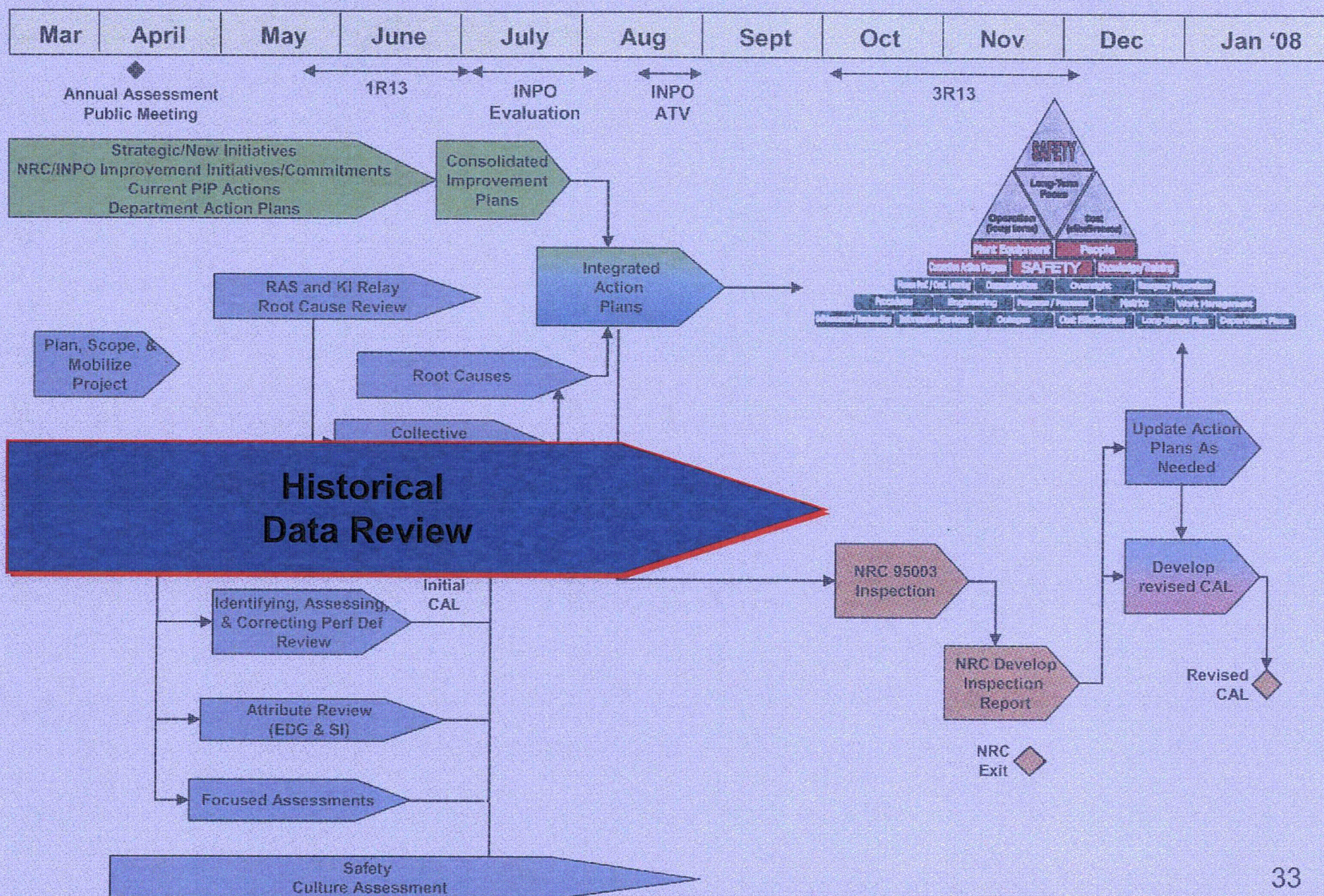
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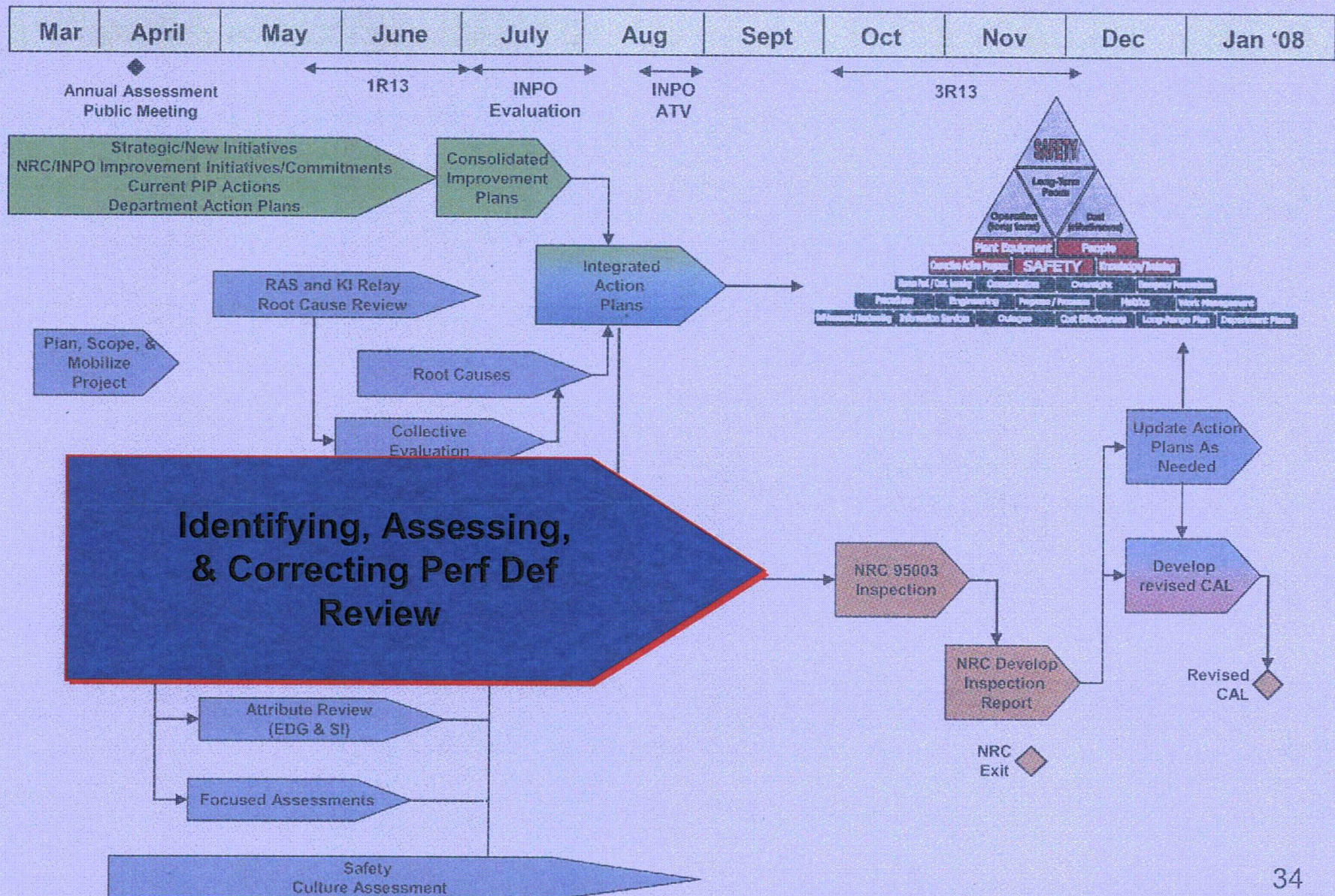
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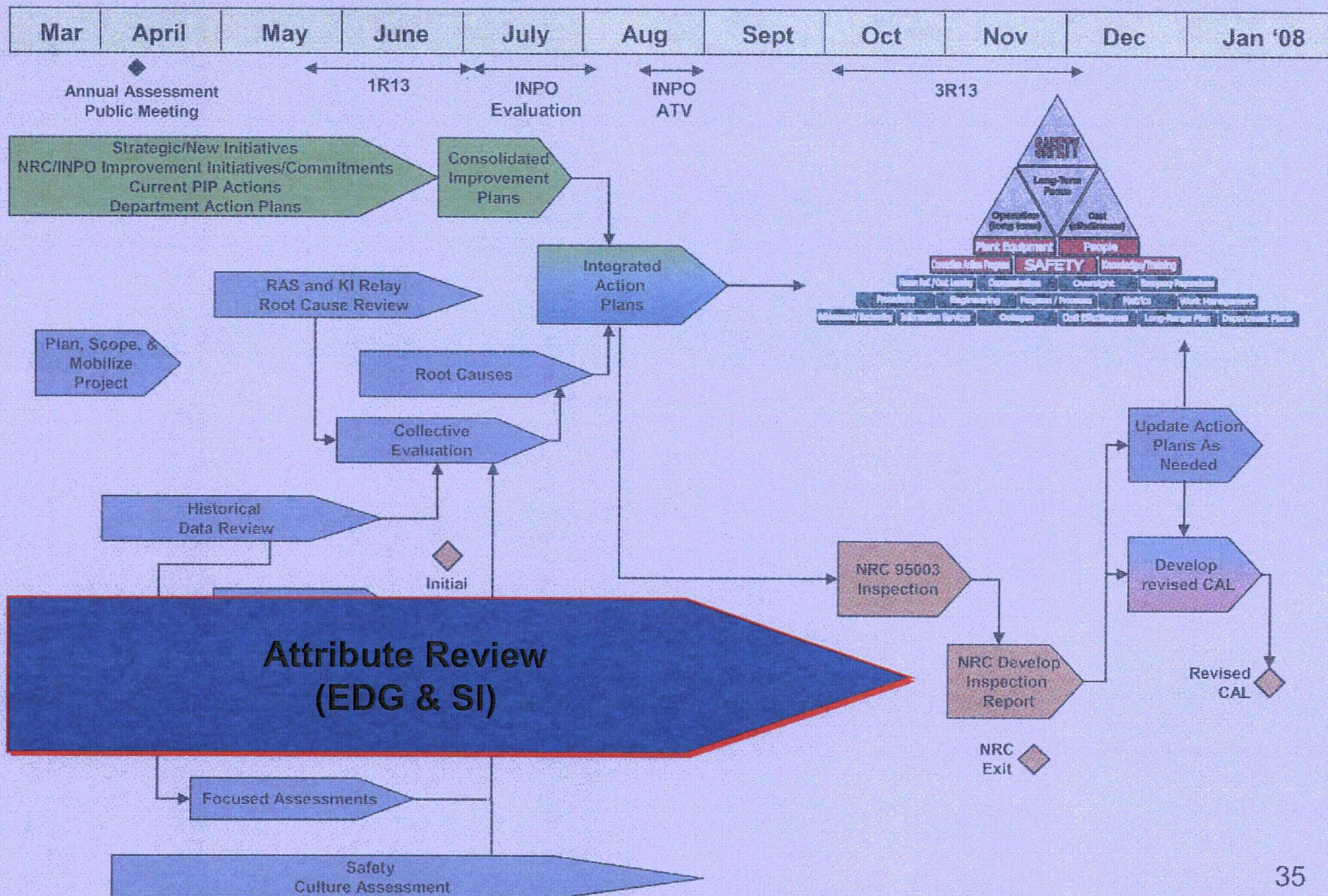
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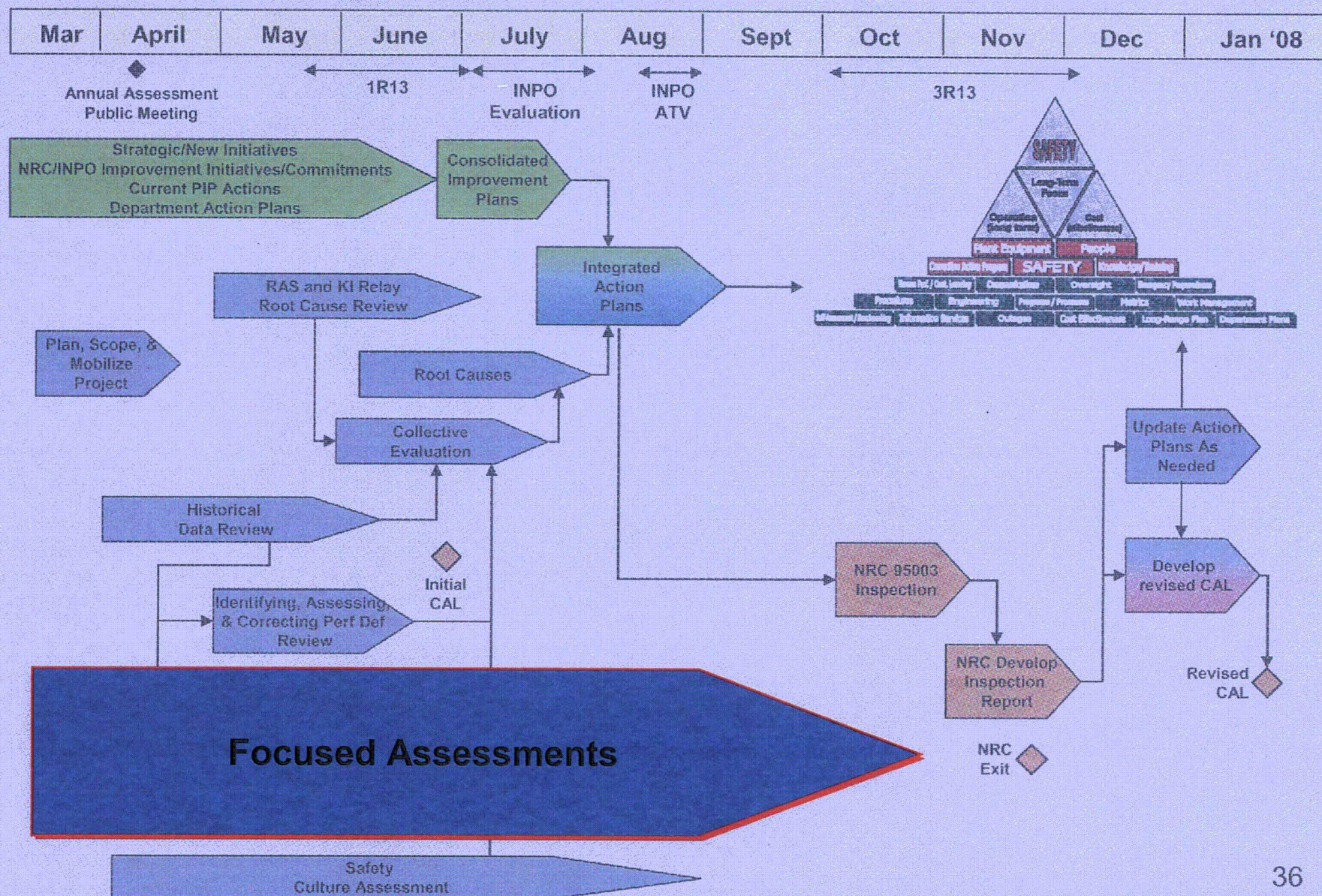
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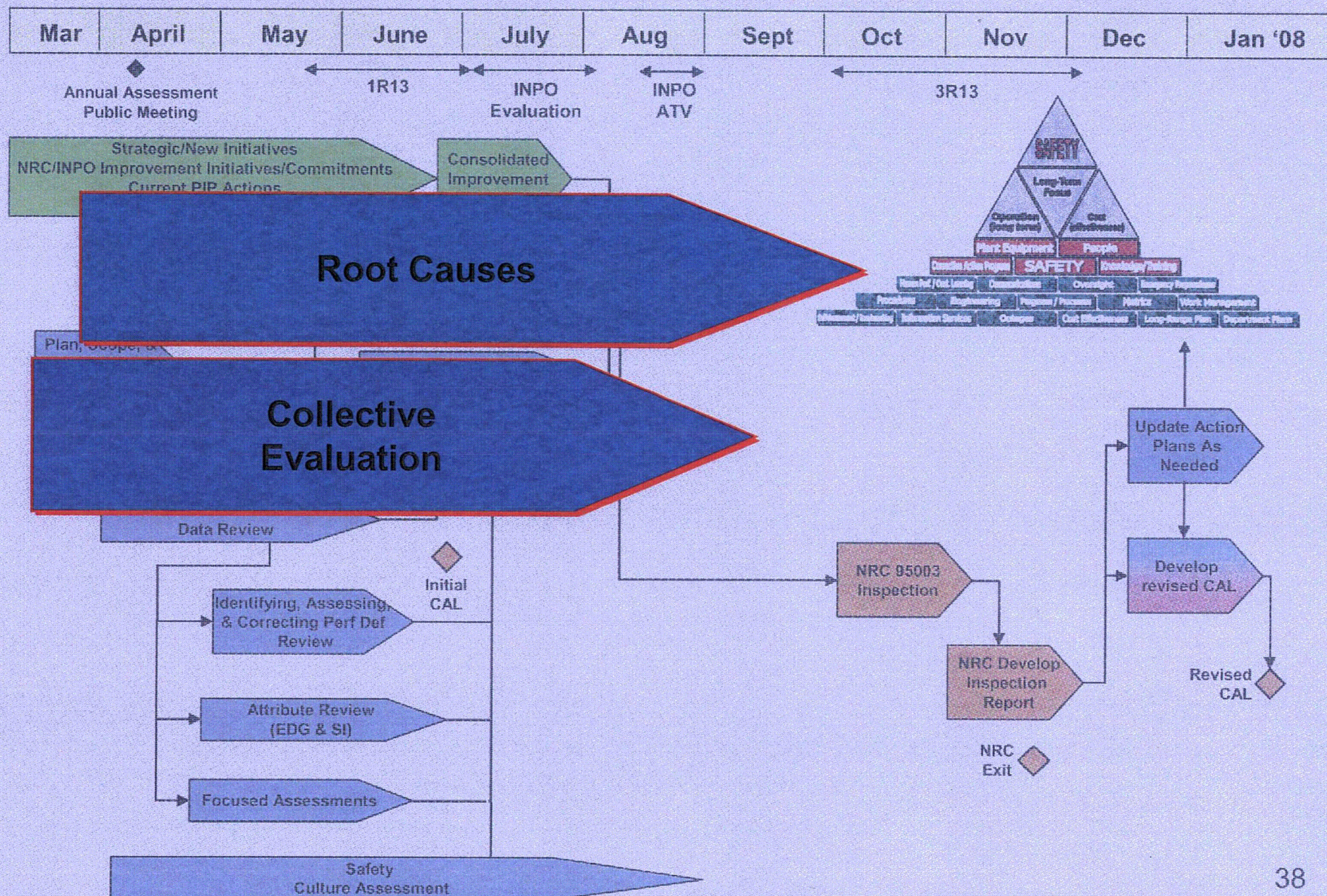


Focused Assessments

Scope

- ◆ Problem Identification & Resolution
- ◆ Human Performance
- ◆ Re-Engineering (1993-1994)
- ◆ 1989 Diagnostic Inspection
- ◆ Performance Improvement Plan
- ◆ ***Other issues as identified***

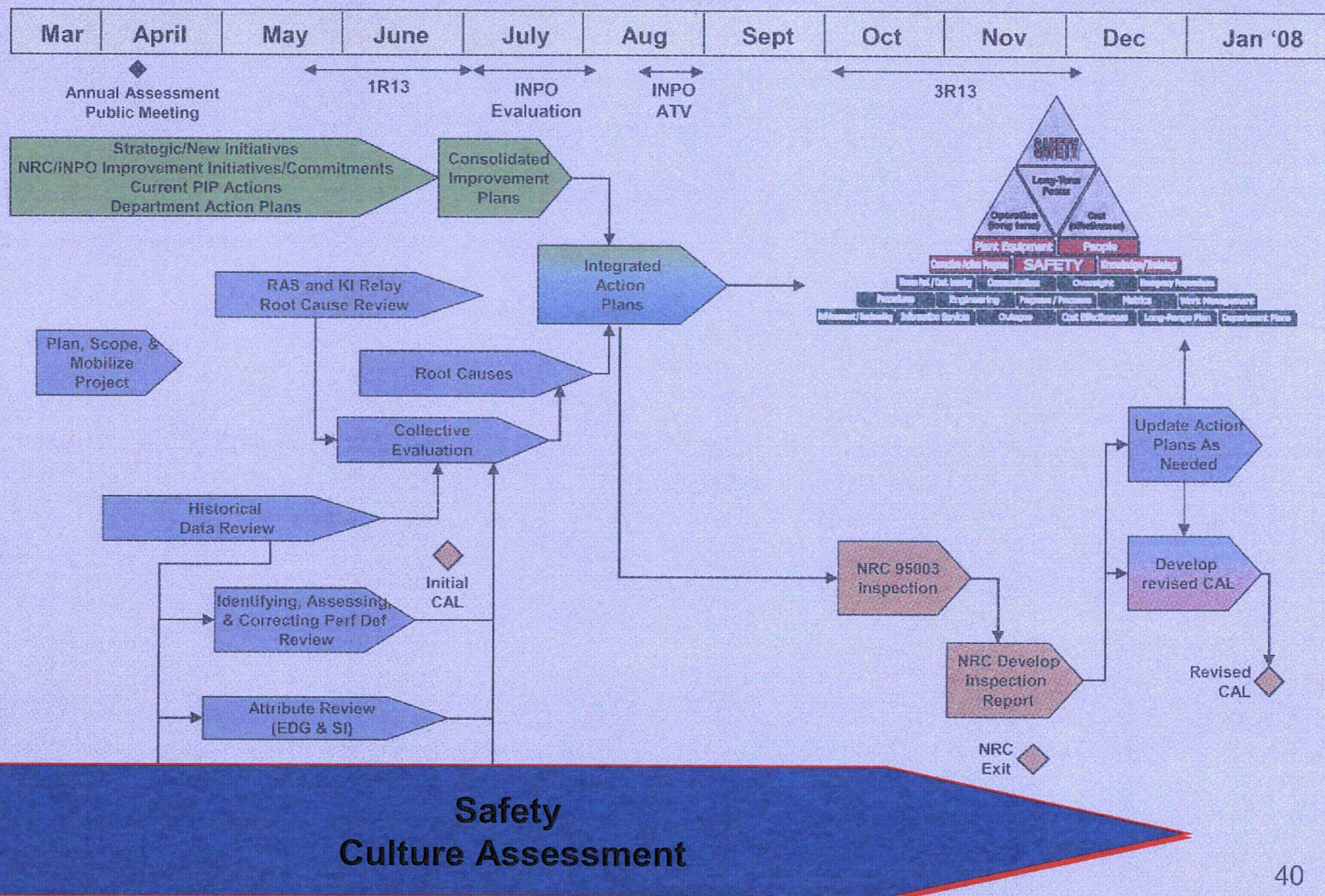
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ImPACT Identified Issues

- ◆ Operational focus
- ◆ Corrective action program effectiveness
- ◆ Organizational alignment and accountability
- ◆ Equipment reliability
- ◆ Human performance
- ◆ Work management
- ◆ Engineering quality
- ◆ Component Design Basis Review

Improving Palo Verde for the Long Term



Safety Culture Assessment

Overall Methodology

- ◆ Mapped new process to understand
- ◆ Used diverse and complementary teams
 - Independent Safety Culture Performance Evaluation Team (ISCPET)
 - Industry leaders and experts
 - SYNERGY consulting services

ISCPET Results

General Observations

- ◆ Majority of workforce will actively identify nuclear safety issues
- ◆ Corporate and site senior leadership communicating right safety message
- ◆ Policies and programs place priority on nuclear safety
- ◆ Alternative means for raising concerns generally function well and are trusted

ISCPET Results

Action Areas

- ◆ Alignment
- ◆ Accountability
- ◆ Site Processes and Programs
- ◆ Communications and Change Management
- ◆ Safety Conscious Work Environment

SYNERGY Survey

- ◆ Survey Participation Expectation
60 – 70 percent
- ◆ Industry Average for SYNERGY
Surveys is 78 percent
- ◆ PVNGS 2005 Survey Participation
was 86 percent
- ◆ PVNGS 2007 Survey Participation
was approximately 79 percent

SYNERGY Preliminary Results

- ◆ Overall nuclear safety culture (NSC) rating declined by 6.5 % since 2005
- ◆ Nine organizations identified as outliers
 - Interviews further characterizing
- ◆ Valuable insights provided by write-in comments
- ◆ Trend questions to assess current momentum in overall NSC indicate recent improvement
- ◆ Final report due September 1, 2007

Comparison of ImPACT to Previous Improvement Efforts

Different and Sustainable

- ◆ Focus on long-term, sustainable performance
 - Organization & Process
 - Dedicated project team and facilities
 - Greater external expertise
 - Rigorous, broad, systematic approach

Different and Sustainable

- ◆ Focus on long-term, sustainable performance
 - Ownership, Alignment & Engagement
 - Broader cross-section of employees involved in evaluation and action plan development
 - Frequent communication with the organization to ensure alignment and engagement

Different and Sustainable

- ◆ Focus on long-term, sustainable performance
 - Incorporation into Site Integrated Improvement Plan
 - Owners and due dates
 - Routine oversight for monitoring and accountability
 - Stronger review and closure process
- ◆ Common theme - fixing plant equipment

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Acronyms Used

- ◆ ImPACT – Improved Performance And Cultural Transformation
- ◆ ISCPET – Independent Safety Culture Performance Evaluation Team