

# Upgraded Performance Feedback & Improvement System

presentation to the EFCOG/CAWG

Nov 4, 2009

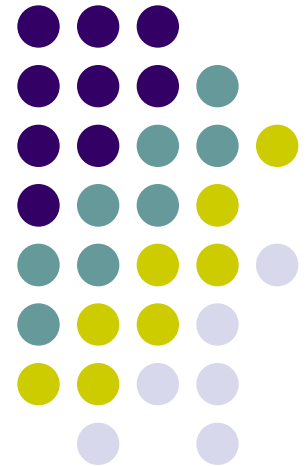
---

**Camilla S. Lopez**

CAWG Secretary

Contractor Assurance Manager of Deployment

Los Alamos National Laboratory



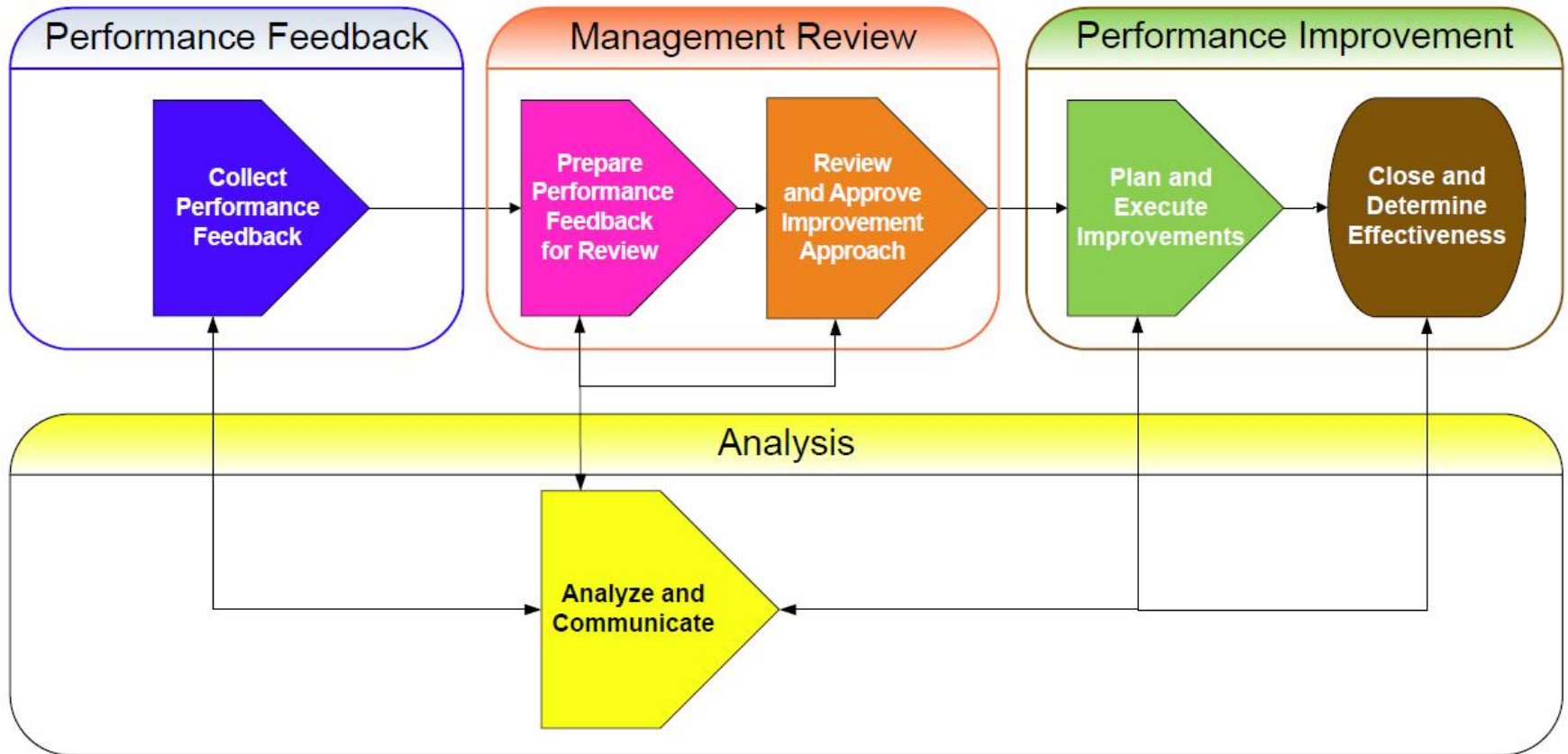
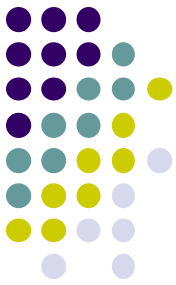


# Main improvements

Issues and corrective action management (ICAM) repackaged to:

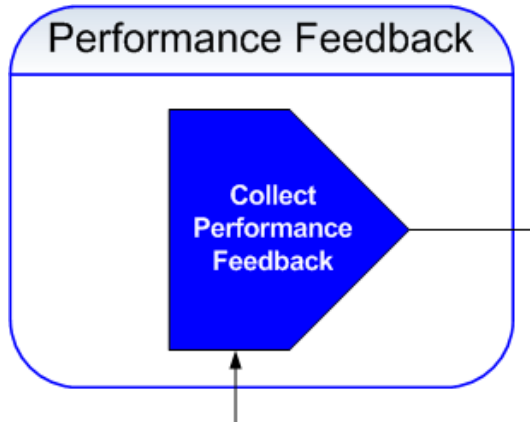
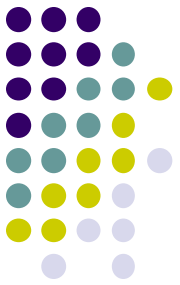
- add greater flexibility for management
- integrate better with other LANL processes
- solve 50+ problems with ICAM and tracking system
- better address stakeholder needs and expectations
- meet all external requirements
- provide more intuitive and user-friendly software (PFITS (Performance Feedback & Improvement Tracking System))
- add better reports, trending, and analysis capability

# Roadmap



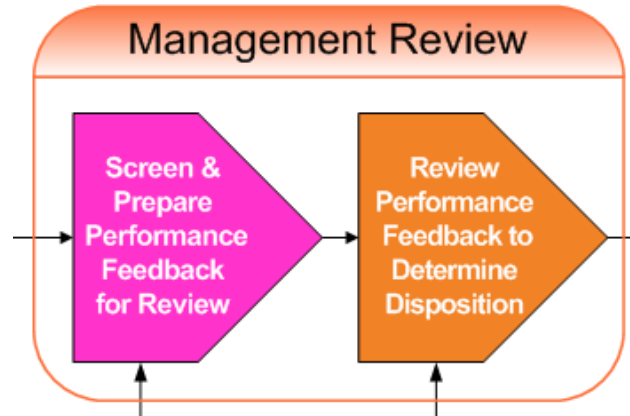
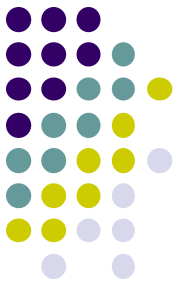
Please note that “issue” is redefined to include only non-compliances that pose significant risk to performance. The full rigor of ICAM now applies only to Risk Level 1 and 2.

# Expand and simplify collection of performance feedback data



- Easier entry of data
  - Allow “best-effort” entry of performance feedback data
- Expand range of performance data that can be input
  - Support capture of all types of feedback data (e.g. technical & program reviews, *etc.*)
  - Formalized collection of data from parallel systems (illness/injury, *etc.*)
  - Inputs are NOT issues
  - Identify issues from trending and analysis
- Simplified requirements
  - Required: deficiencies, weaknesses, non-compliances, opportunities for improvement

# Provide more information and options for managers

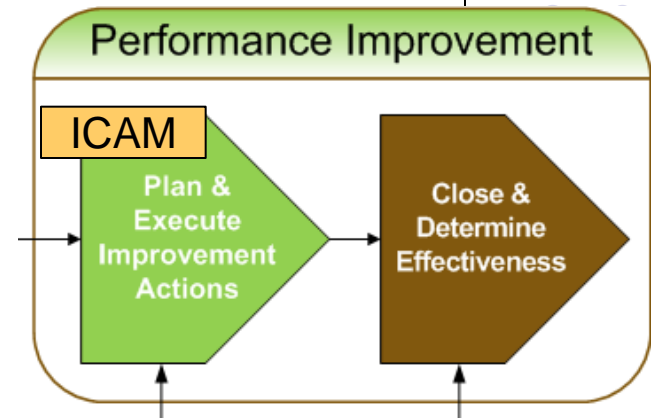


- More information on risk to support management decisions
- More flexibility for management to select methods to improve
- More focus on most significant issues

# Flexible approach to solving problems and improving

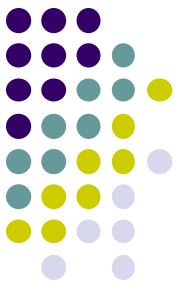


Issues and deficiencies are required to be in single, transparent database



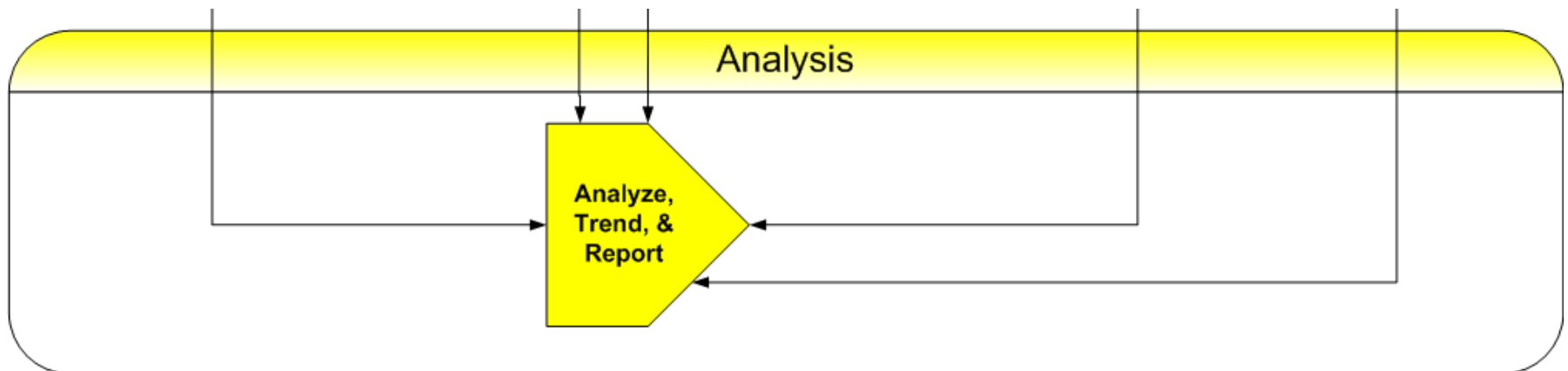
Six pathways for addressing performance feedback:

1. ICAM/ORPS for issues (*i.e.* significant, non-compliances, risk levels 1 & 2;)
2. Action Tracker for other deficiencies
3. Alternative improvement methods (Lean Six Sigma, specific quality system, *etc.*) to address other drivers for improvement
4. Management initiative (note: no action tracking)
5. Hold (schedule for consideration at a later date)
6. No further action required, trend only



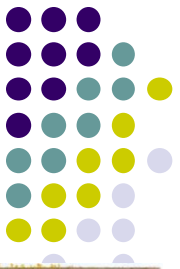
# Improve trending, analysis, and reporting

- Better reports and searching capabilities
- Better use of Trending Manager
- Introduction of trending and extent of condition analysis using LANL's Natural Language technology



# Artificial intelligence software\* helps interpret large amounts of performance data

- Most ICAM systems are Information Management Systems
- Corporate Knowledge stored in them is hard to assimilate – no one has time or capacity to digest it all
- Benefits of new software:
  - allows us to operate at a higher level to understand & interpret trends in performance data
  - facilitates 30:1 reduction of content, extracts key concepts and shows the relationships between them
  - frequency of recurrence can be mined



\* Natural Language Processing

# Schedule and ongoing maturation



- Deploy re-engineered performance improvement system in September 2009:
  - Two new institutional policies/procedures
  - Revised software tool: Performance Feedback & Improvement Tracking System (PFITS)
  - Delivery of training, job aids, and development of IMC networking
- Maturation in 2010 and beyond
  - Establish electronic interfaces to data collection systems
  - Use LSS process management to manage ICAM
  - Enhance connections to process management
  - Expand availability of risk information
  - Expand reporting and analysis tools

# Change

from Baldrige evaluation criteria

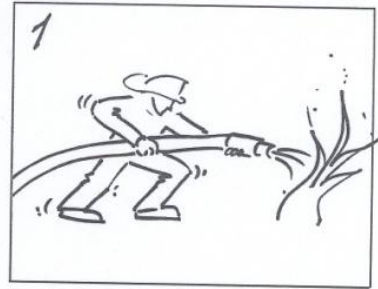
General improvement orientation

Learning and strategic improvements

## An Analogy for Learning: From Fighting Fires to Innovation

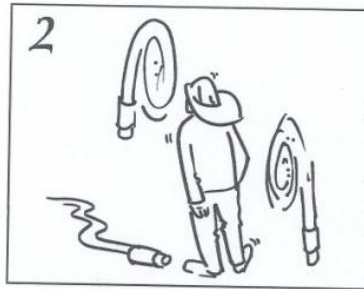
Learning is an essential attribute of high-performing organizations and, therefore, a critical concept in performance excellence. It is a key term used throughout the Criteria booklet and is one of the four scoring factors used to assess the maturity of an organization's processes (pages 66 and 68, Scoring System and Scoring Guidelines).

Effective, well-deployed organizational learning can help an organization improve from the early stages of reacting to problems (0-5% in the Scoring Guidelines) to the highest levels of organization-wide improvement, refinement, and innovation (70-100%). The firefighting analogy illustrated here depicts a progression through the levels of maturity for this scoring dimension.

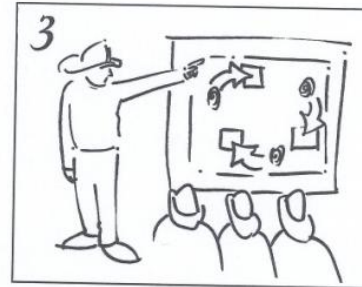


**Reacting to the problem:**  
Run with the hose and put out the fire.  
(0-5%)

React to the problem

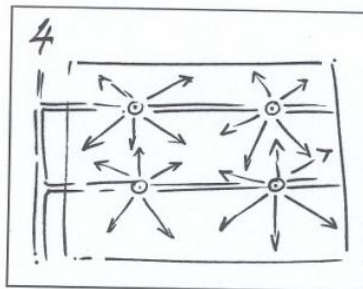


**General improvement orientation:**  
Install more fire hoses to get to the fires quickly and reduce their impact.  
(10-25%)

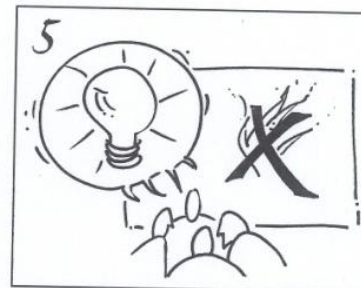


**Systematic evaluation and improvement:**  
Evaluate which locations are most susceptible to fire. Install heat sensors and sprinklers in those locations.  
(30-45%)

Systematic evaluation and improvement

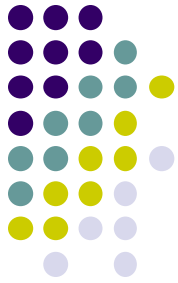


**Learning and strategic improvement:**  
Install systemwide heat sensors and a sprinkler system that is activated by the heat preceding fires.  
(50-65%)

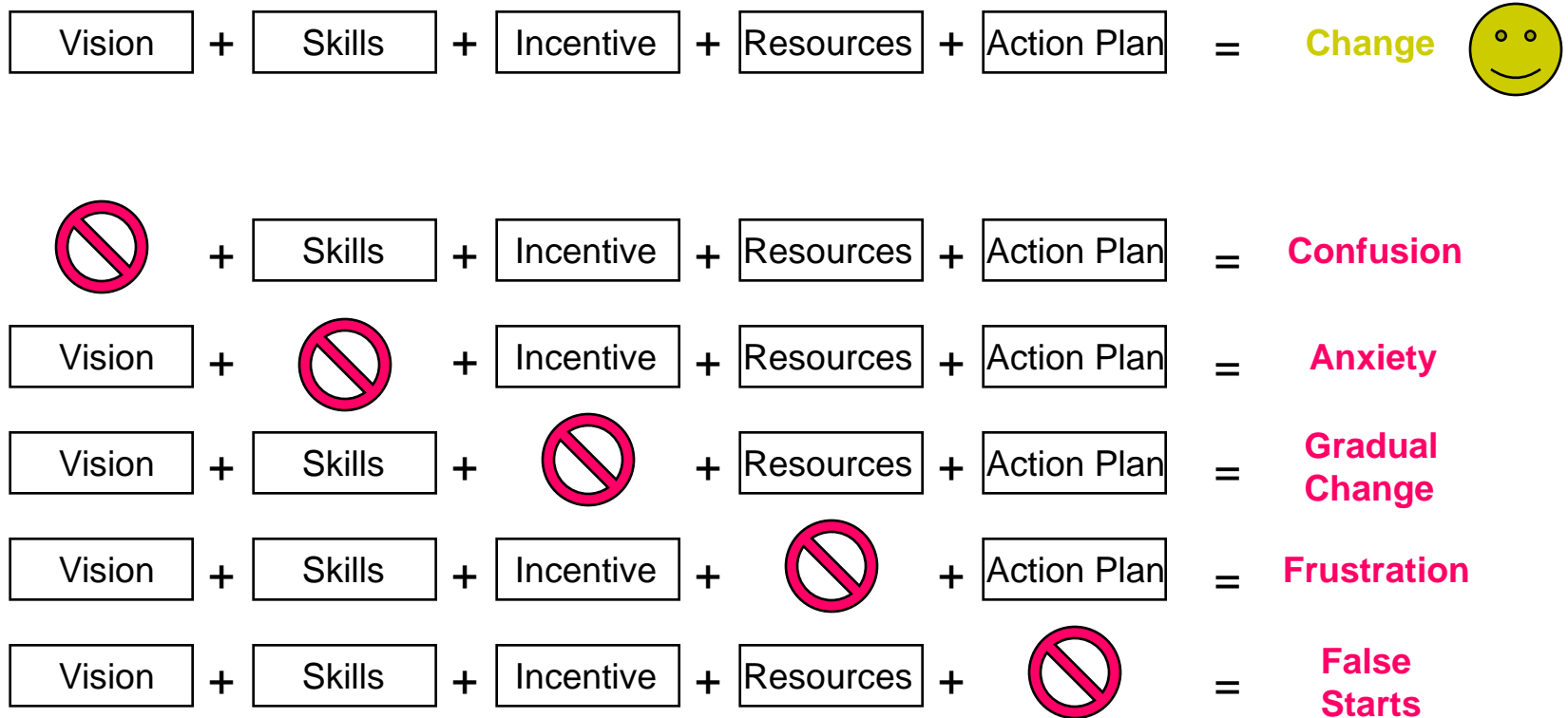
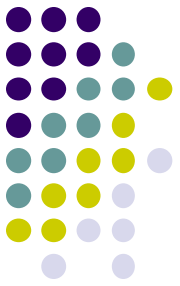


**Organizational analysis and innovation:**  
Use fireproof and fire-retardant materials. Replace combustible liquids with water-based liquids. Sensors and sprinklers become the secondary line of protection, with prevention the primary approach for protection.  
(70-100%)

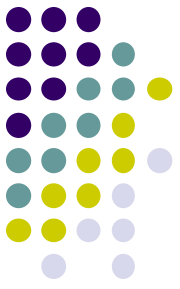
Organizational Analysis and innovation



# Ingredients for successful change efforts



Reference: Managing Organizational Change, Darrell P. Piersol



# All change ultimately impacts individuals

Scope of Change

Scope of Impact

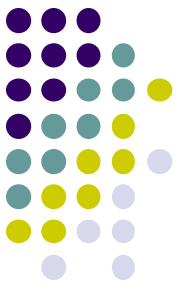
<b>Micro change</b> you, family, friends	<b>I must change</b>
<b>Organizational change</b> work, club, union	<b>We must change</b>
<b>Macro change</b> 9/11/01 WTC, global warming	<b>Everyone must change</b>

Reference: Managing at the Speed of Change, Daryl R. Conner

# Impacts and longer term changes



- **Increased integration of various LANL tracking systems**
  - OSHA illness/injury, radiation protection, Worker safety 10CFR851, ...
  - Directly linking PFITS and 851 work safety database
  - Add other direct links in 2010
- **Reduced cost of performance improvement**
  - Accelerates performance improvement and reduction of risk
- **Applies world class LANL-developed technology to LANL business and operations**
  - Application of Natural Language Processor (NLP) technology can lead the DOE complex
  - Set up to accept and analyze high-volume, low-consequence performance data
  - Helps solve the “trending problem” – no need for fixed bins
  - “This could change everything” – Graem Meter, President, Nuclear Industry Corrective Action Program Owners Group



## Impacts and longer term changes (cont.)

- **Sets stage for more mature risk management**
  - More risk data from SMEs (for some risks) to support risk based decision making
- **Supports broader role of MRBs for overall performance management**
  - Can support feedback from technical and program reviews
- **Beginning of shift to process-centered management**
  - PFITS to operate under LSS process controls and monitoring
- **Allows more focus on systematic evaluation and improvement**