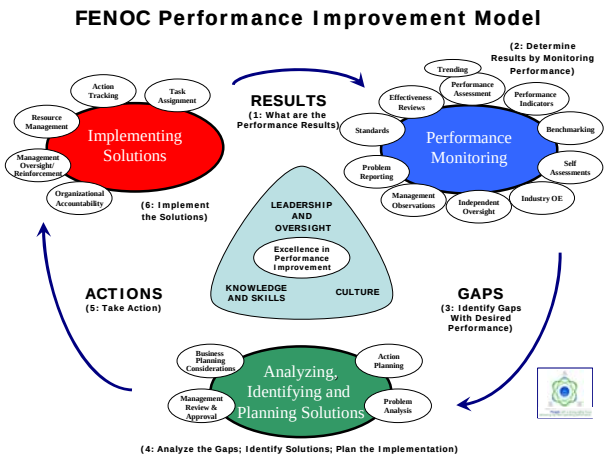
FENOC

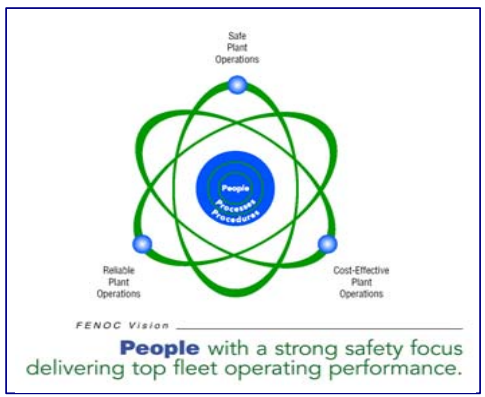
FirstEnergy Nuclear Operating Company

APPLICATION OF A PERFORMANCE IMPROVEMENT MODEL AND IMPLEMENTING PROCESS



Dale Wuokko

August 2007



APPLICATION OF A PERFORMANCE IMPROVEMENT MODEL AND IMPLEMENTING PROCESS

Objective

Present the FENOC Performance Improvement Model and implementation process that was developed and implemented based on the Institute of Nuclear Power Operations document INPO 05-005, Guidelines for Performance Improvement at Nuclear Power Stations

PERFORMANCE IMPROVEMENT MODEL

Development of a Performance Improvement Model

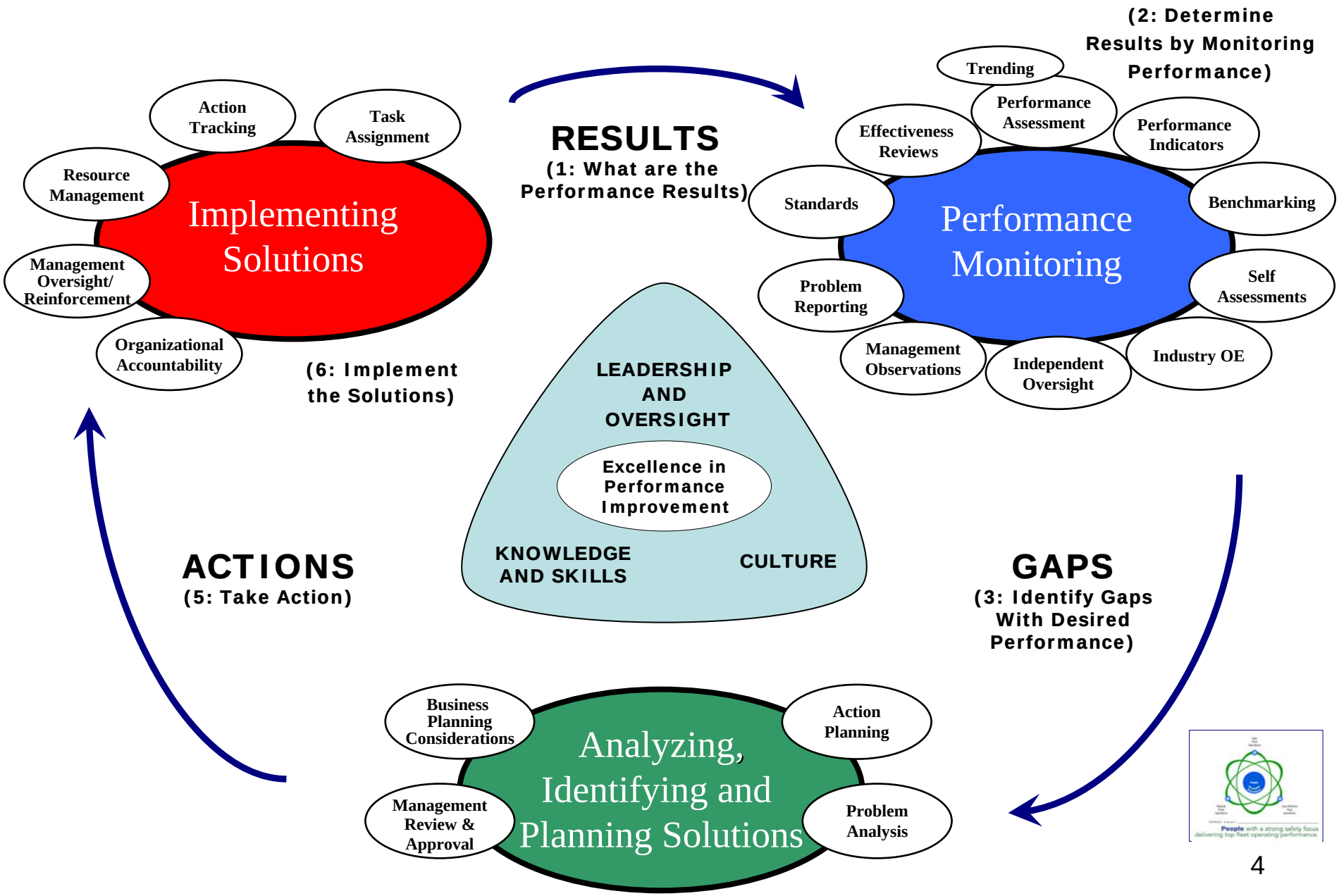
INPO 05-005 captures industry standards of excellence in a single document that fully integrates the various elements into a one workable, management-level guideline.

By using INPO 05-005, line managers can compare current station performance and make necessary performance improvements to fill identified gaps.

INPO 05-005 Performance Improvement Model was used to develop a FENOC model that focuses on identifying performance gaps, developing actions to close the gaps, and achieving results.

INPO Performance Improvement & Learning and other utilities contacted for benchmarking. Reviewed information from four INPO Performance Improvement Working Group Meetings on INPO 05-005 .

FENOC PERFORMANCE IMPROVEMENT MODEL



PERFORMANCE IMPROVEMENT MODEL

Model Components

Three Major *Performance Improvement Activities*:

- **Performance Monitoring**
- **Analyzing, Identifying, and Planning Solutions**
- **Implementing Solutions**

Nineteen *Performance Improvement Elements* support the above three major activities. For each of these, performance improvement implementing processes were identified.

INPO 05-005 defines the *Principles and Attributes* of Performance Improvement Excellence for each of the Performance Improvement Elements (refer to "Standards" example on next page).

PERFORMANCE IMPLEMENTING PROCESSES
EXAMPLE OF "STANDARDS"

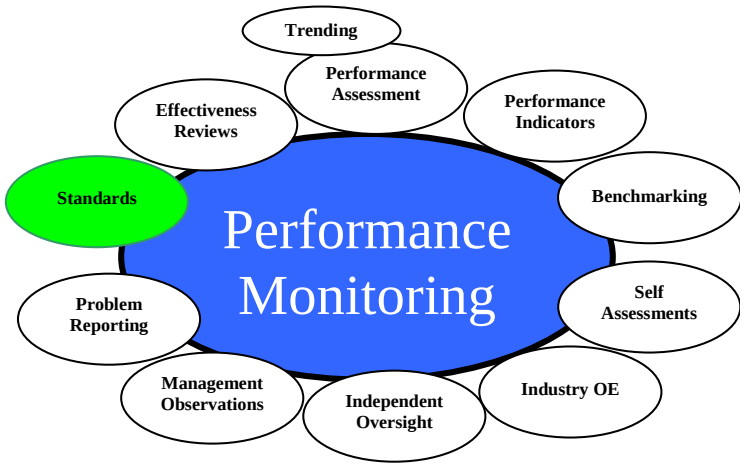
ACTIVITY: Performance Monitoring

ELEMENT: Standards

INPO 05-005 PRINCIPLES AND ATTRIBUTES:

1. **High standards are used as a baseline to identify gaps and advance performance. They are frequently incorporated into top-level business goals, and are realistic, achievable, yet challenging. These may include broad station management standards, best industry practices, industry operating experience lessons-learned, selected regulatory requirements, and management expectations for a particular activity.**
2. **Stations avoid comparing their performance only to practices that are internal or only to practices within their fleet of plants. This reduces the likelihood of missing important opportunities to embrace new, higher standards from outside the organization. Stations consider comparing their performance or practices to other industries; e.g., benchmarking contamination control practices with the pharmaceutical or microchip manufacturing industries.**
3. **Members from outside the station or line organization periodically participate on self-assessment teams to add diverse performance standards. Such outside involvement protects high-performing stations from becoming overly dependent on internal standards as a basis for defining performance gaps.**
4. **Benchmarking and self-assessment against industry standards of excellence are not solely relied on to identify performance improvement opportunities. Individually and collectively, managers and leaders consider areas where existing performance, while perhaps acceptable, could be significantly improved through a "breakthrough" approach. In some cases, the potential for performance breakthroughs is discovered during benchmarking outside the nuclear industry.**
5. **Ingenuity, innovation, and a willingness to try new approaches are among the attributes that come into play when breakthrough performance improvement is considered. An example of this is the vision and subsequent achievement of short-duration yet effective refueling outages within the industry.**

FENOC Performance Improvement Model & Processes



PLANT IMPLEMENTING PROCESSES:

- **NOBP-LP-2001, FENOC Self-Assessment/Benchmarking**
- **NOBP-LP-2012, FENOC Oversight Standards and Expectations**
- **NOBP-LP-2018, Integrated Performance Assessment/Trending**
- **NOBP-LP-2023, Performance Assessments**
- **NOBP-LP-2501, Safety Culture Assessment**
- **DBBP-OPS-0001, Operations Expectations and Standards**
- **DBBP-VP-0009, Management Plan for Confirmatory Order Independent Assessments**
- **NOP-LP-2100, Operating Experience Program**
- **NOP-OP-1002, Conduct of Operations**
- **NOP-SS-2101, Engineering Program Management**

GAPS TO EXCELLENCE:

(Self-Assessments and Collegial Assessment to be completed)

PERFORMANCE IMPROVEMENT MODEL
AND
IMPLEMENTING PROCESS

The Performance Improvement Model and Implementing Process are described and maintained in the business practice document:

Performance Improvement Model and Implementation Process

IDENTIFICATION OF GAPS TO EXCELLENCE

Business practice describes means to identify *Gaps to Excellence*:

Existing Performance Improvement Implementing Processes (normal day-to-day business such as Condition Reports)

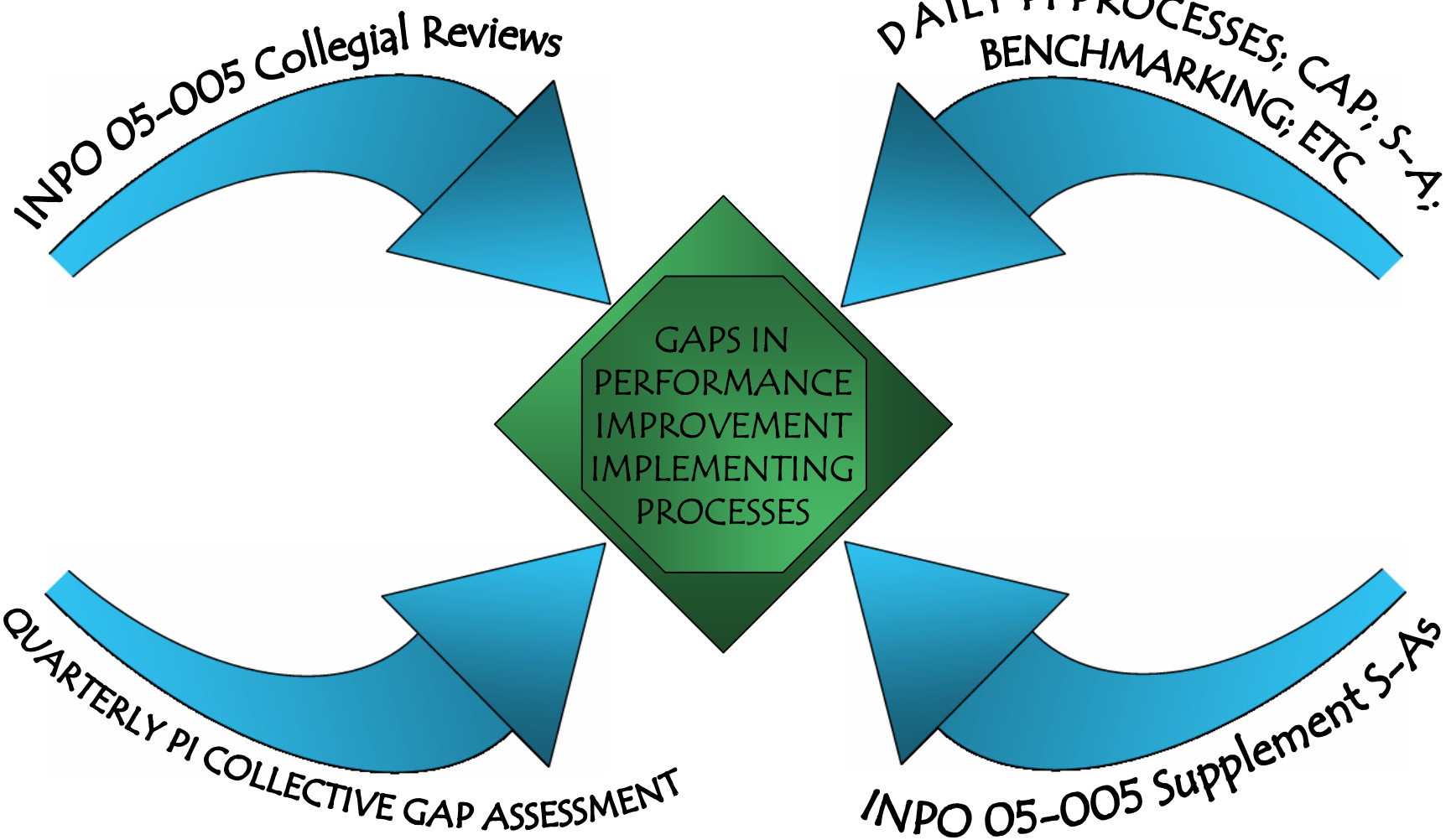
Performance Improvement Quarterly Collective Gap Review by binning gaps identified by:

- **Industry and Plant Operating Experience**
- **Self-Assessments**
- **Internal and External Oversight**
- **Site Integrated Performance Assessments**
- **Benchmarking Reports**
- **NRC Inspection Reports**

Collegial Assessment of Performance Improvement Implementation

Self-Assessments (focused and snapshot) incorporating INPO 05-005 Supplement guidance

IDENTIFYING GAPS IN PERFORMANCE IMPROVEMENT IMPLEMENTING PROCESSES



COLLEGIAL ASSESSMENT OF PERFORMANCE IMPROVEMENT IMPLEMENTATION

Collegial assessment meeting completed on no less than an annual basis by the site Vice President, Directors and Managers.

For each Performance Improvement Element, the following from INPO 05-005 and its Supplement are discussed and rated for the plant:

- **Principles and Attributes**
- **Supporting Manager Behaviors**
- **Warning Signs**

COLLEGIAL ASSESSMENT OF PERFORMANCE IMPROVEMENT IMPLEMENTATION

Example of *Standards*

Supporting Manager Behaviors:

Managers set attainable, high standards for organizational performance.

Managers seek out and embrace appropriate external standards as a further basis of performance comparison.

Warning Flags:

Station managers seem comfortable with or rationalize current performance despite evidence of decline or a gap to standards of excellence.

Station managers overly focus on how far they have come, rather than on the gaps to excellence remaining to be closed.

Self-assessment efforts do not detect obvious performance issues, or external groups identify performance shortfalls.

COLLEGIAL ASSESSMENT OF PERFORMANCE IMPROVEMENT IMPLEMENTATION

As part of the Collegial Assessment, ratings are assigned to each of the Performance Improvement Elements: Red, Yellow, White, or Green

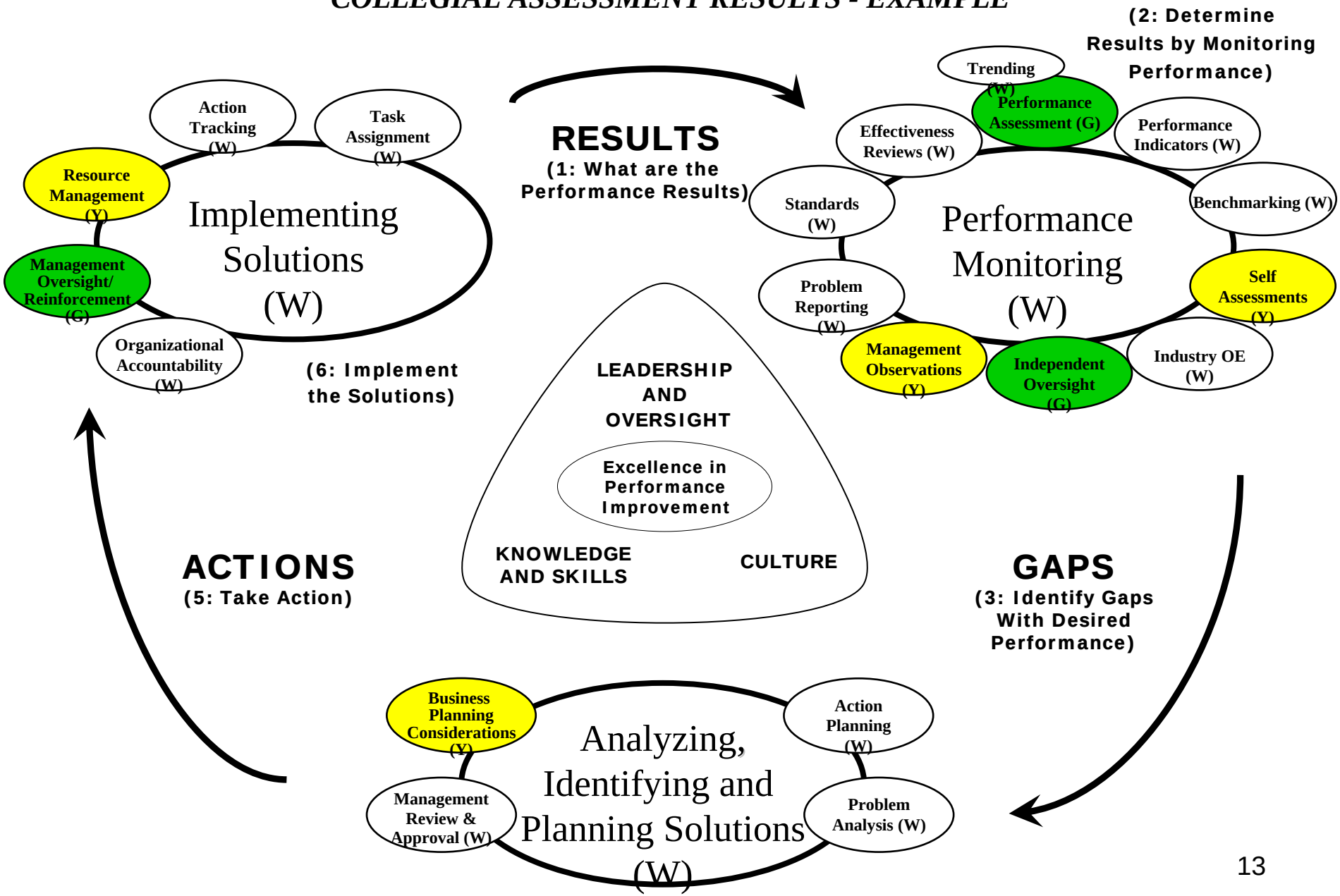
Ratings criteria is contained in the business practice document.

Element Ratings are rolled up to determine an overall rating for each of the three major Performance Improvement Activities:

- **Performance Monitoring**
- **Analyzing, Identifying, and Planning Solutions**
- **Implementing Solutions**

PERFORMANCE IMPROVEMENT MODEL

COLLEGIAL ASSESSMENT RESULTS - EXAMPLE



COLLEGIAL ASSESSMENT OF PERFORMANCE IMPROVEMENT IMPLEMENTATION

As a final consideration, the human performance organizational traits of:

- **Leadership and Oversight**
- **Culture**
- **Knowledge and Skills**

are assessed with respect to their adverse influence on each Performance Improvement Element and Activity that is not rated green.

Collegial assessment participants determine the top five Performance Improvement Element challenges to focus improvement efforts on during the upcoming year.

Corrective Action Program Condition Reports are initiated for each Element that is rated yellow or red.

Snapshot Self-Assessment report documents the meeting results.

Improvement in performance is measured by effectiveness reviews of the implemented Condition Report corrective actions.

COLLEGIAL ASSESSMENT OF PERFORMANCE IMPROVEMENT IMPLEMENTATION

Benefits inherent to this collegial assessment meeting process:

- **Improved cross-functional understanding of the integration of performance improvement activities, from both a gap and implementation perspective**
- **Reduction of a "silo-effect" between work groups and managers regarding performance improvement**
- **Sharing of performance improvement successes for cross-functional application and an identification of opportunities for further performance improvement**
- **Line management involvement in and ownership of performance improvement opportunities**
- **Refocusing on performance improvement excellence**

PERFORMANCE IMPROVEMENT MODEL
AND
IMPLEMENTING PROCESS

Summary

FENOC Performance Improvement Model and Implementing Process uses a combination of:

- **Routine improvement implementation processes**
- **Quarterly assessments**
- **Collegial assessments**

to identify deficiencies in human performance and performance improvement processes.

The Corrective Action Program is used to address these deficiencies and pursue continuous plant improvement.