Application of EFCOG CAS Self-Assessment Model at Sandia National Labs
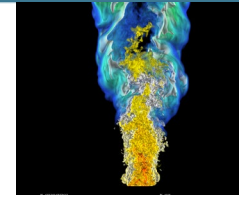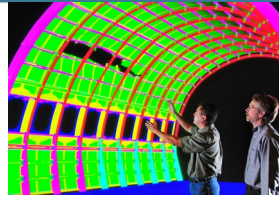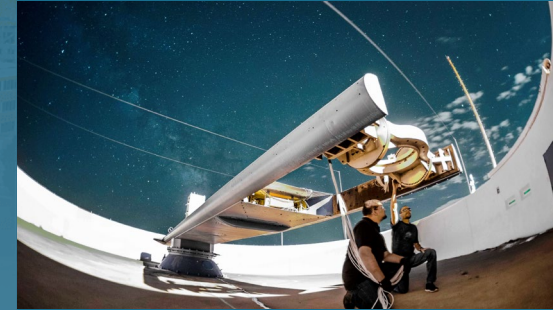
Presented by John Byram and Heidi Jones

EFCOG Spring Meeting 2023 - CAS

Background

An effective Contractor Assurance System integrates contractor management, supports corporate parent governance, and facilitates government oversight systems. The purpose of a CAS is threefold:
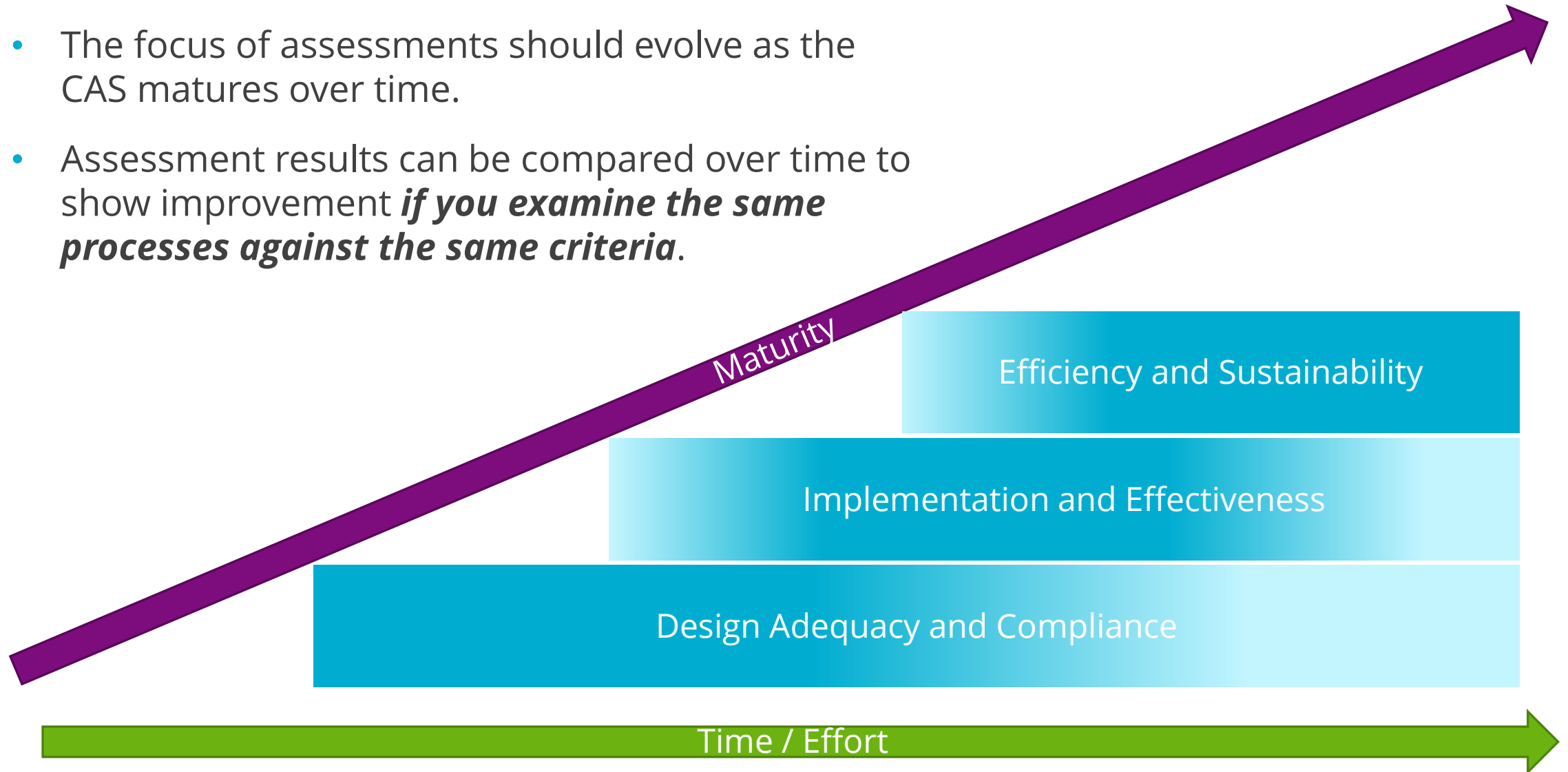
- A CAS is a primary tool used by contractor management to reasonably ensure that mission objectives and contract requirements are met; ensures that workers, the public, and the environment are protected; and ensures that operations, facilities, and business systems are effectively run and continuously improved.

- A CAS integrates the contractor's governance and management system to manage acceptable performance outcomes, to provide oversight of contract performance, and to hold contractor management accountable for these outcomes and provide assurance to NNSA.

- A robust and effectively functioning CAS provides transparency and builds trust between NNSA and its contractor, helps to ensure alignment across the NNSA enterprise in accomplishing and addressing mission needs, and allows NNSA to optimize its oversight functions by leveraging the processes and outcomes of its contractors.

https://efcog.org/safety-working-group/integrated-safety-management-subgroup/contractor-assurance-system-subgroup/?drawer=_Contractor%20Assurance%20System%20Task%20Group*Documents

Source: *A Model for CAS Self-Assessment*, EFCOG Contractor Assurance Working Group, 2010

Theoretical Basis of Previous EFCOG Work

- The focus of assessments should evolve as the CAS matures over time.

- Assessment results can be compared over time to show improvement *if you examine the same processes against the same criteria*.

Maturity

Efficiency and Sustainability

Implementation and Effectiveness

Design Adequacy and Compliance

Time / Effort

EFCOG Methodology

1. Scope → **2. Design** → **3. Perform** → **4. Analyze**

1. **Scope**: Select CAS elements to be assessed.

2. **Design**: Define criteria for implementation and effectiveness for each element.
   - 3-5 characteristics
   - Relevant "observables" for each characteristic
   - Determine information to be collected
   - Thresholds for each "observable" to be implemented and/or effective

3. **Perform**: Conduct assessment.

4. **Analyze**: Evaluate and present results.

EFCOG Methodology - Scope

1. Scope > 2. Design > 3. Perform > 4. Analyze

1. **Scope**: Select CAS elements to be assessed.

- General CAS Program
- Assessments
- Metrics
- Issues & Corrective Action (Problem Solving)
- Enterprise Risk Management
- Feedback & Continuous Improvement

Characteristics for Each CAS Element

1. Scope › 2. Design › 3. Perform › 4. Analyze

2. **Design**: Define criteria for implementation and effectiveness for each element.
   - 3-5 characteristics

Increasing Maturity

1. **Compliance** – Extent to which requirements are met
2. **Implementation** – Extent to which processes are established, controlled, and used
3. **Transparency** – Extent to which information flows within the organization and to relevant external parties
4. **Integration** – Extent to which system elements are connected to enable system-level improvement
5. **Performance** – Extent to which intended outcomes are defined and achieved
6. **Efficiency** – Extent to which the system minimizes the level of effort required to achieve its objectives

Characteristics and "Observables" for Each CAS Element

| 1. Scope | 2. Design | 3. Perform | 4. Analyze |

2. **Design**: Define criteria for implementation and effectiveness for each element.
- Relevant "observables" for each characteristic
- Determine information to be collected

CAS Element	Characteristics	Observables	Info Needed
Assessments	Compliance impl...	Scheduled assessments based on...	...ws; data from GRC tool
	Imp...	...	...ws; data from GRC tool; audit announcements
	Transparency	Assessments reported to Field Office	Interviews; Field Office presentations; meeting minutes
	Integration	Assessment results feed the corrective action process	Interviews; data from GRC tool
	Performance	Assessments prevent problems	Interviews; data from GRC tool
	Efficiency	Improvements to user experience or cost	Interviews; Board presentations

Lesson: This is where it's easy to get carried away…. A PICK chart can be helpful for downselecting after brainstorming.

Thresholds for "Observables"

| 1. Scope | 2. Design | 3. Perform | 4. Analyze |

2. **Design**: Define criteria for implementation and effectiveness for each element.
   - Thresholds for each "observable" to be implemented and/or effective
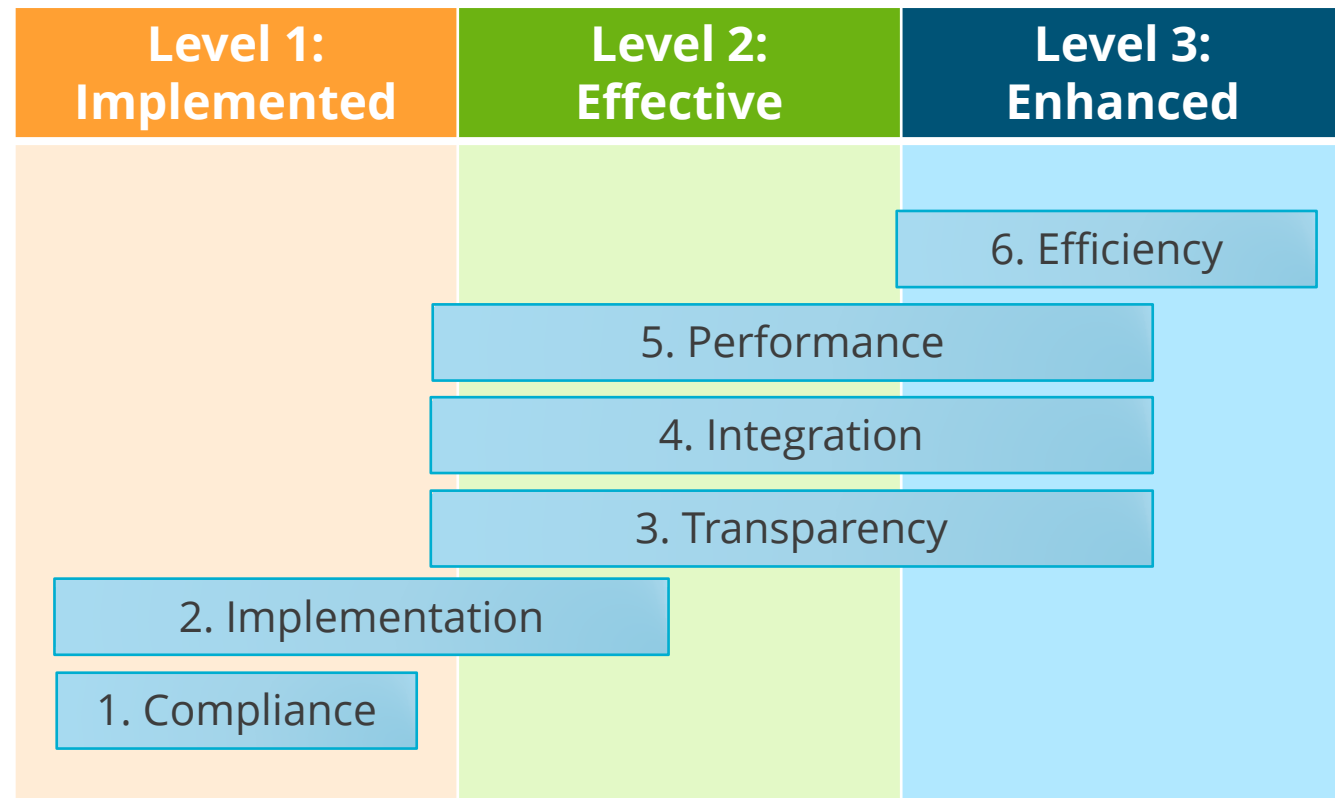
Departure from EFCOG model:

- Principles
  - In the absence of quantifiable thresholds, criteria must include detailed descriptions of the attributes of each level of maturity.
  - Aggregation of "observables" should paint a picture.
  - Process owners should have their own established performance targets.

- Strategy
  - Report detailed, quantitative results for each characteristic and "observable" in narrative report.
  - Draw conclusions (findings, opportunities for improvement, noteworthy practices) by comparing aggregate data to maturity-level descriptions.

Sandia/Honeywell Modification – Introduction of Maturity Aspects

1. Scope	2. Design	3. Perform	4. Analyze

For each CAS element:

- Assessors evaluated the level of performance in each of the six characteristics for that CAS element.

- Assessment team (with parent company) determined a Maturity Level for that CAS element in consideration of the six characteristics.

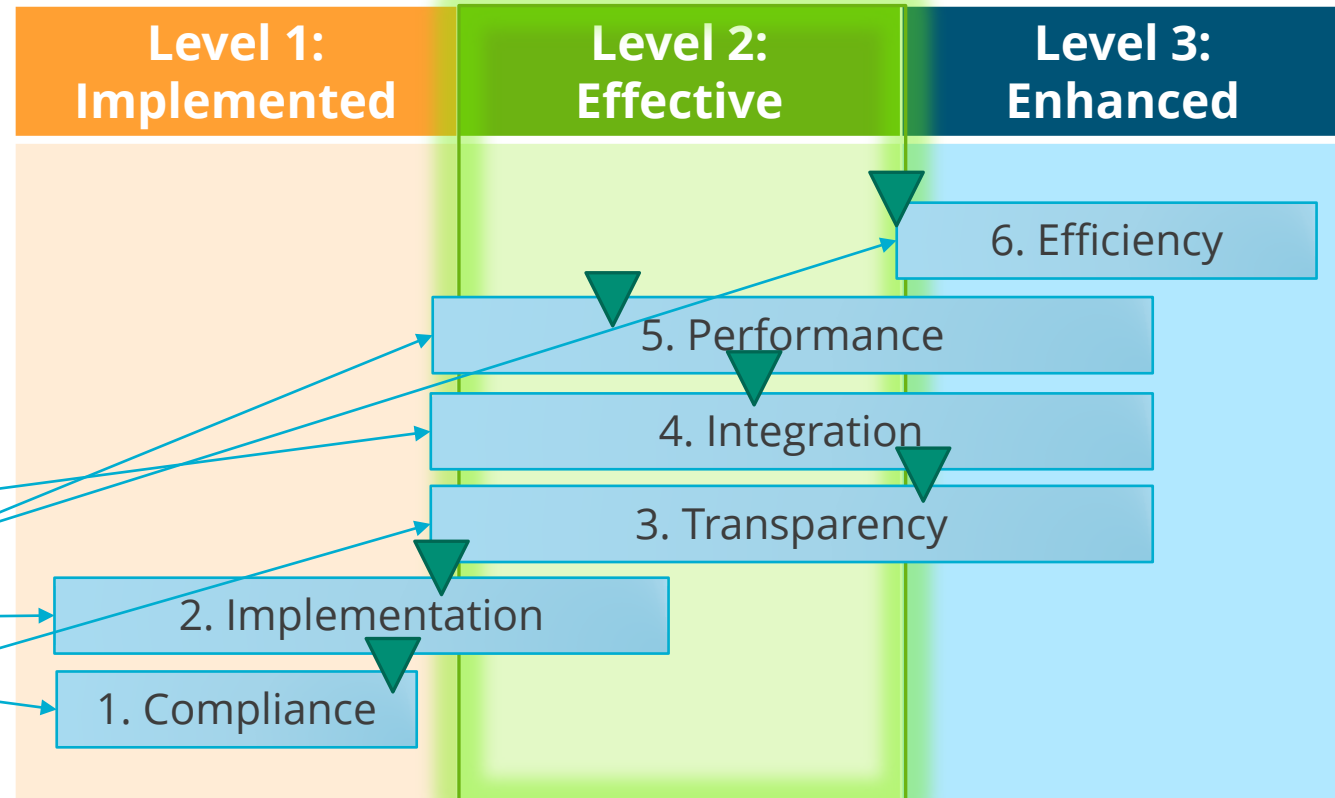| Level 1: Implemented	Level 2: Effective	Level 3: Enhanced
		6. Efficiency
	5. Performance	
	4. Integration	
	3. Transparency	
2. Implementation		
1. Compliance		

Relationship between six characteristics and three Maturity Levels

Illustrated Example

- Start with one CAS element.

- Gather information to evaluate the element against the maturity criteria.

- Evaluate the level of conformity with maturity criteria to determine the level of performance by Maturity Aspect.

- Calibrate with parent company.

- Assign the Maturity Level.

- Repeat for each CAS element.

CAS Element: Assessments

Level 1: Implemented	Level 2: Effective	Level 3: Enhanced

6. Efficiency

5. Performance

4. Integration

3. Transparency

2. Implementation

1. Compliance

	CAS identifies and schedules a suite of assessments based on requirements and risks.	Are assessments being planned and scheduled with visibility to the organization?
	Assessment schedules and plans for internal self-assessments include management assessments	Are assessments being performed as scheduled? What are some of the recent independent or 3rd-party assessments completed?
	There is evidence of independent assessments and 3rd-party assessments.	
	Assessments provide performance feedback information.	Are assessments reliably finding issues before they are identified by external assessors and before they become problems?
	Assessment programs include reviews of processes, systems, and programs and appropriately cover potential high consequence activities.	Have you been a participant in an assessment or participated in employing corrective action from an assessment result?
	Management supports the assessment program, owns the results of the assessment, and promotes action resolution.	Is management supportive of the assessment program and accountable for results and action resolution?
	Assessment program health is monitored, and results feed the corrective action system. The assessment strategy /plan is updated to address emergent issues.	

Questions?