Contractor Assurance Working Group

EFCOG Contractor Assurance Working Group
Spring 2014 Meeting
March 18-19, 2014

Updated 03/31/04

The EFCOG Contractor Assurance Working Group (CAWG) Spring 2014 Meeting was held on March 18-19, 2014 at Sandia National Laboratory, Albuquerque, New Mexico. Meeting agenda, information, documents and presentations are provided below.

CAWG Meeting Agenda - Updated 03/14/14

WG Meeting Attendees

Presentations - Updated 03/31/14

- CAWG 2013 Annual Report (Updated from the December report to the EFCOG Board)- Connie De Grange, LLNS, Contractor Assurance Working Group Vice Chair
- Working Together - More Than 20 Years of Sharing Best-in-DOE Solutions and Lessons Learned to Meet Mission Needs Across the Complex, Pat Smith, EFCOG Vice-Chair Elect
- NNSA's Vision Line Oversight & Utilization of CAS - Roger Liddle, Office of the Program Executive Officer
- EFCOG CAWG, A DOE Perspective - Johnny Moore
- Sandia's Assurance and Quality Maturity Journey - Emily Gaffney, Quality Engineer Sandia National Laboratories, Department 00753, Management Systems Operations
- Measuring Customer Satisfaction - Mary-Bernadette Garza, Quality Engineer, CMQ/OE Dept 751 – Performance Assurance Systems Planning & Integration
- Quest for Effective and Sustainable Performance at DOE - William H. Roege - Dep Dir, Security Strategy, Analysis & Special Opns, DOE HQ
- What can Metrics do for Assessments - Annette MacIntyre, LLNL Metrics Manager
- Assessment Feedback Process - Jason Prestridge, NSTec, Quality and Performance Improvement Division
- Accident Investigation Board (AIB) for the Test Site 9920 Event - Michael Hazen, Vice President, SNL
- Sustainable Issue Resolution - Rita Henins, Gary Thompson & Vanessa De La Cruz, Quality and Performance Assurance Group, LANL
- Issues and Corrective Action Management Software Solutions - Chris Hott, Director, Laboratory Performance, INL
- Evaluations of Assessment Quality - Grant W. Fondaw, Department Manager, G&PA , Pantex

For additional information regarding the EFCOG Contractor Assurance Working Group Meeting contact:

Jan Preston, Chair **Connie DeGrange, Vice Chair**

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EFCOG Contractor Assurance Working Group (CAWG) Spring Meeting Agenda

March 18-19, 2014

Sandia National Laboratories, Albuquerque, New Mexico

Thunderbird Conference Room (Room 2225), IPOC Building, 1611 Innovation Parkway

Tuesday, March 18

8:00-8:15	**Welcome** Safety, Logistics, Intros, & FY2014 Updates	Connie De Grange, CAWG Vice Chair, LLNL
8:15-8:30	Sandia and SFO Welcomes	Pat Smith, Sandia Director of Mission Support/ Corporate Governance
8:30-9:00	**Update from the EFCOG Board**	Pat Smith, EFCOG Vice-chair Elect Ray Skwarek, EFCOG Board Sponsor
9:00-10:00	**DOE vision of CAS Future** HQ NNSA Office of Science, Field Office	Roger Liddle, NNSA Office of the Program Executive Officer (NA-PEO) Johnny Moore, DOE ORNL Site Office
10:00-10:45	Tips from HQ reviews of CAS to date: What are the contractor's most common strengths and weaknesses?	John Boulden, DOE Office of Enforcement & Oversight
10:45-11:00	**Break**	
11:00-11:30	**Assurance and Quality** Sandia's Assurance and Quality Maturity Journey	Barb Boyle/ Emily Gaffney, Sandia
11:30-12:00	Measuring Customer Satisfaction	Mary Bernadette Garza, Sandia
12:00-1:00	**Lunch**	
1:00-1:45	Quest for Effective and Sustainable Performance	Bill Roege, DOE Office of Security Strategy, Analysis & Special Operations
1:45-2:45	**Panel Discussion (60 Min):** "How can CAS help reduce risk and best support mission accomplishment?" **Moderator:** John Longenecker, Managing Director EFCOG	Steven Erhart, NNSA Production Office Johnny Moore, DOE ORNL Site Office Geoff Beausoleil, NNSA Sandia Field Office John Boulden, DOE Office of Enforcement & Oversight Bill Roege, DOE Office of Security Strategy, Analysis & Special Operations
2:45-3:00	**Break**	
3:00-3:30	**Assessments** What can Metrics do for Assessments?	Annette MacIntyre, LLNL
3:30-4:00	Quality Reviews of Completed Assessments	Jason Prestridge, NSTec
4:00-5:00	**Operating Experience** Contractor-DOE Accident Co-Investigation Board Experience	Michael Hazen, Sandia
5:00-5:30	**FY2014 and Beyond CAWG Initiatives**	Connie DeGrange, Jan Preston

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March 18-19, 2014

Sandia National Laboratories, Albuquerque, New Mexico

Thunderbird Conference Room (Room 2225), IPOC Building, 1611 Innovation Parkway

Wednesday, March 19

8:00-8:20	**Welcome** Perspectives on Governance and Risk Management	Connie De Grange, CAWG Vice Chair, LLNL Kim Sawyer, Sandia Deputy Laboratories Director/Executive VP for Mission Support
8:20-9:00	**Governance and Risk Management**	Steven Erhart, NNSA Production Office
9:00-10:00	**Risk Management** Panel Presentations (10 min) and Discussion (50 min) Executive Risk Management and Managing Risk with the CAS **Moderator:** John Longenecker, Managing Director EFCOG	**Panel:** Cynthia Williams, SRS Ernie Petru, LANL Cindy Doyle, PNNL
10:00-10:15	**Break**	
10:15-11:30	**Evaluation/Learning from Assessment** Sustainable Issue Resolution Issues and Corrective Action Management Software Solutions Evaluations of Assessment Quality	 Rita Henins, LANL Chris Hott, INL Grant Fondaw, B&W Pantex
11:30-12:00	**Wrap-up** Possible EFCOG CAWG guidance document Determine Fall 2014 EFCOG CAWG Meeting Date and Location Other Steering Committee Volunteers?	 Connie De Grange, CAWG Vice Chair, LLNL Jan Preston, CAWG Chair (new), Fluor
12:00-1:00	**Lunch**	
1:30-3:00	**Optional "windshield" tour of the Sandia Site**	Meet at IPOC
1:00-2:30	**Executive Committee Meeting** CAWG Officers, Sponsors & Steering Committee	Jan Preston, CAWG Chair (EM, NNSA) Connie De Grange, CAWG Vice Chair (NNSA) Ramie Wilkerson, CAWG Secretary (OS) Ray Skwarek, EFCOG Sponsor John Boulden, HSS Sponsor Bill Roege, HSS Sponsor Cynthia Williams, EM Contractor StC Jim McConnell, NNSA StC DOE EM StC TBD DOE OS StC TBD

Contractor Assurance Working Group
Spring 2014 Meeting Attendees

Nr.	Name	Job/Title	Site	Company
1.	Andrews, Brian, T	Contractor Assurance Mgr	Y-12 NSC	B&W Y-12 LLC
2.	Bange, Marilyn S	ESH Assurance	SNL	Sandia Staffing Alliance
3.	Beausoleil, Geoffrey L.	Manager	Sandia Field Office	DOE/NNSA
4.	Beckman, Tom	Readiness Review and ConOps SME	SNL	Sandia Corp.
5.	Boston, Robert D	Dep Mgr Opns Spt/Ch Operating Office	INL	DOE
6.	Boulden, John S. III	Dir, Ofc of Enforcement & Oversight	HQ	DOE
7.	Boyle, Barbara, A	Manager	SNL	Sandia Corporation
8.	Buckland, Heath	Contractor Assurance Manager	INL	BEA
9.	Butler, Michal, V	Quality Engineer	SNL	Sandia Corporation
10.	Castillo, Randy, J	Safety/Security Regulatory Support	SNL/NM	Sandia Corp.
11.	Clark, Vicki L	Quality Engineer	SNL	Sandia Corporation
12.	De Grange, Constance, E	Mgr, Performance Analysis & Improvement	LLNL	LLNS
13.	Doyle, Cindy W	Mgr, Contractor Assurance Program	Hanford	PNNL
14.	Eichorst, Adam Jeff	CAS Program Manager	Los Alamos	DOE/NNSA
15.	Erhart, Steven C.	NPO Manager	NNSA Production Office	DOE/NNSA
16.	Fondaw, Grant W	Dept Mgr, Governance & PA	Pantex	B&W Pantex, LLC
17.	Gaffney, Emily M	Quality Engineer	SNL	SNL
18.	Garza, Mary-Bernadette	Quality Engineer	Albuquerque, NM	SNL
19.	Halford, Vaughn, E	Quality Engineer	SNL	Sandia Corporation
20.	Hazen, Michael, W	Vice President	SNL	SNL
21.	Henins, Rita J.	QPA Specialist 4	LANL	LANS, LLC
22.	Hott, Chris A	Lab Performance Director	INL	BAE
23.	Huff, Benjamin, N	Security Assurance Program Lead	SNL	SNL
24.	Jenkins, Deborah	Performance Analysis & Quality Mgr	ORNL	UT-Battelle
25.	Liddle, Roger H	Sr Advisor, NNSA Office of the Program Executive Officer	NNSA - Albuquerque	DOE-NNSA
26.	Longenecker, John	Managing Director EFCOG	All	L&A

Contractor Assurance Working Group
Spring 2014 Meeting Attendees

Nr.	Name	Job/Title	Site	Company
27.	Macintyre, Annette, T	Metrics Manager	LLNL	LLNS
28.	Maese, Alice	Department Manager	SNL	SNL
29.	Martin, Constance M.	Program Analyst	DOE/NNSA/SFO	DOE
30.	Martini, Robert, J	Mgr/Contractor Assurance Processes	SRS	SRNS
31.	Massey, Stephen P.	QA Manager	Kirtland AFB	CB&I Federal Services
32.	McPhee, Carrie	Quality Engineer	Albuquerque	SNL
33.	Moore, Johnny	ORNL SIte Manager	ORNL	DOE
34.	Mozley, David, R	Software Systems Engineer	SNL	SNL
35.	Nation, Mary	Quality Generalist, 753	SNL	SNL
36.	Nicodemus, Dennis	ES&H Analyst	Sandia	SNL
37.	Petru, Ernest F.	Acting QPA Division Leader	LANL	LANL
38.	Portillos, Stefanie, C.	Quality/Security Assurance	Kirtland AFB	SNL
39.	Preston, Jan (NMI)	Sr Dir, Performance Assurance	Fluor Corporate	Fluor Government Gp
40.	Prestridge, Jason H	Performance Improvement Dept Mgr	Nevada Field Office	NSTec
41.	Rivera, Felipe, A.	Quality Assurance	IPOC	SNL
42.	Roege, William H	Dep Dir, Security Strategy, Analysis & Special Opns	DOE HQ	HSS
43.	Seier, R. William	Sr. Vice President	Sandia	nStone Corporation
44.	Sheriff, Marnelle L	Quality & Performance Assurance Dir	Hanford	MSA, LLC
45.	Skwarek, Ray	Mgr, One System Integrated Proj Team	Hanford	WRPS
46.	Smith, Pat N.	Director	SNL	Sandia Corporation
47.	Swenning, Steven H	ISMS Coordinator	Hanford Tank Farm	WRPS
48.	Vigil, Keith	Quality Engineer	SNL	SNL
49.	Ward, Richelle	Quality Engineer	SNL	SNL
50.	Weadock, Tony	Acting Dir, Office of Operational Safety	HQ EM-42	DOE
51.	Wilkerson, Ramie V	Mgr, Business Planning & Process Improvement	ORNL	UT-Battelle
52.	Wilke, Jessica	Dep Mgr - Quality Management Office	BNL	BSA

Contractor Assurance Working Group
Spring 2014 Meeting Attendees

Nr.	Name	Job/Title	Site	Company
53.	Williams, Cynthia N	Mgr, Compliance & Perf Assurance	SRS	SRNS
54.	Wright, Emily D.	Quality Engineer	SNL	SNL

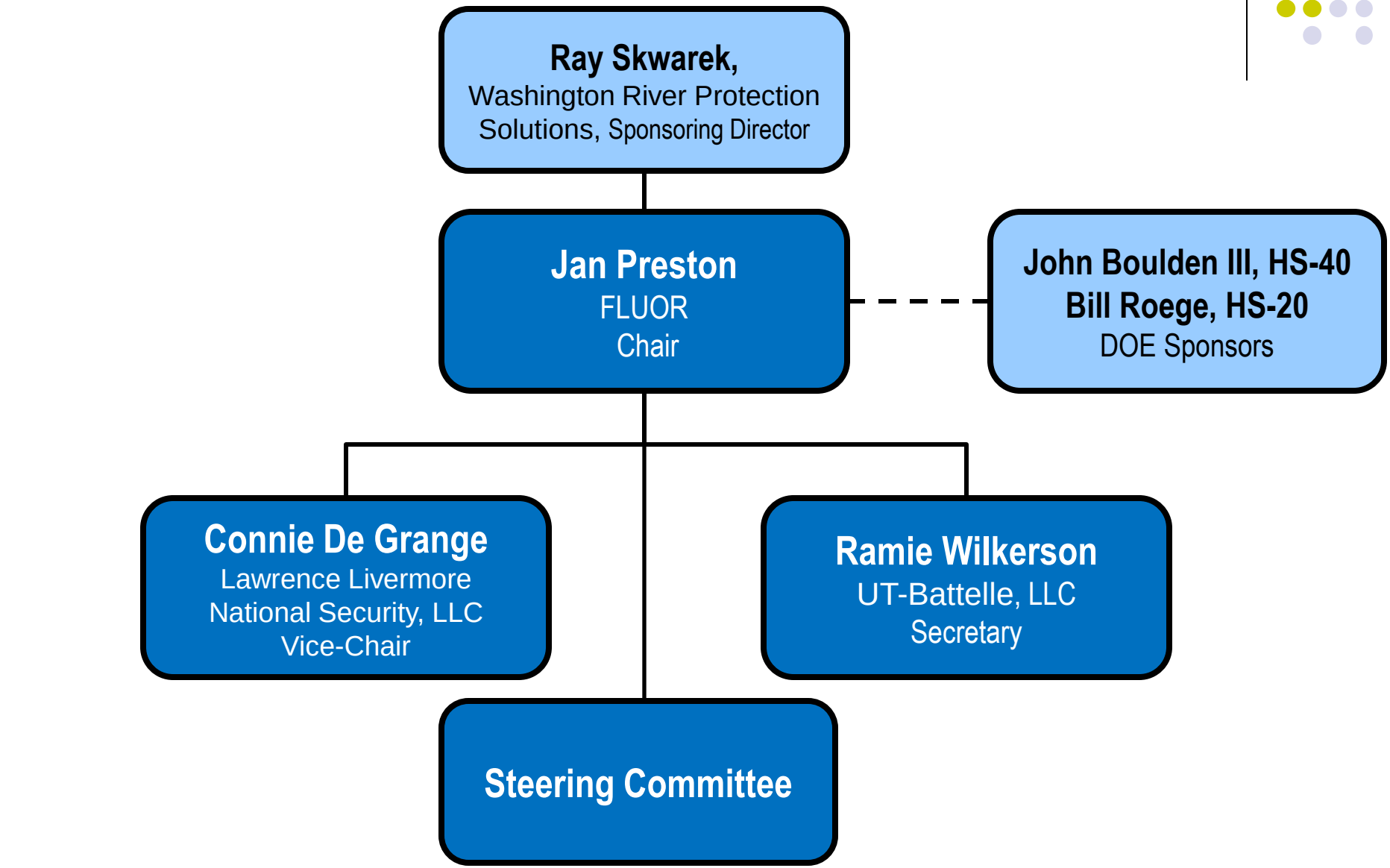
CAWG 2013 Annual Report
(Updated from the December report to the EFCOG Board)

Connie De Grange
Lawrence Livermore National Security
Working Group Vice Chair

March 18, 2014

“‘Achieving Mission and Sustaining Operational Excellence in a Challenging Budget Environment”

Contractor Assurance Working Group
January 2014



FY13 Key Achievements

CAWG meeting in early FY13 facilitated and promoted discussions:

- Sharing specific practices of risk management, independent oversight and peer reviews
- Causal Analysis by sharing how R&D organizations have incorporated these practices into their day-to-day operations to improve performance
- Key Performance Indicators referencing the EFCOG Guidance Document, “Development and Use of Leading Indicators” published in 2011; several sites shared how they are implementing processes, systems and tools, maturing their metric portfolios and the value gained through their use
- Effectiveness Reviews and sustainability of improvements; feedback from the working group provided a general consensus that due to increasing expectations this is an area for continuing improvement

FY13 Key Achievements

CAWG meeting in early FY13 facilitated and promoted discussions (continued):

- Change Management was discussed with a focus on how CAS effectiveness was heavily dependent on the behaviors that drive the most productive changes in an organization as well as the processes and best practices.
- The Y-12 Security Complex provided an overview of the security event that occurred in July 2012 and the lessons learned regarding their contractor assurance system during the event and the subsequent reviews

Teleconference in August 2013

- 22 participants expressed strong support and enthusiasm

CAWG meeting planned for November 2013

- Productive and informative agenda, 45 registered participants

FY14 Planned Achievements

Planned Achievement	Possible Mechanism
An area of continued interest among the CAWG members is risk determination, risk management, risk-based assessments and risk-informed planning and decision-making. The CAWG will spend more time in FY2014 discussing this area in more detail and may suggest guidance for the complex	Task Group
Identifying the common key elements of contractor assurance across DOE program offices (specifically NNSA, EM and SC) and the best practices to implement these key elements	Steering Committee
Continue enhancement of DOE-requested contractor assurance training material	Ad Hoc

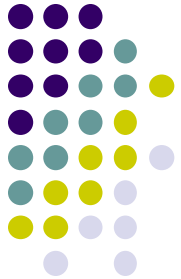
FY14 Planned Achievements

Planned Achievement	Possible Mechanism
Evaluate and promulgate key elements of a corporate governance model	Task Group
Continue engagement with HSS and other work groups on topics of common interest: human performance improvement, metrics and leading indicators, causal analysis, and social media and networking	Steering Committee, Joint meetings
Integrate with the HSS Operating Experience Committee (lessons learned)	Steering Committee

FY14 Planned Achievements

Planned Achievement	Possible Mechanism
Continue to develop an approach to an integrated risk-based assessment schedule	Task Group
Consider new approaches to performance improvement	Task Group
Effectiveness Reviews and possibly updating the 2004 EFCOG guidance to reflect the increasing expectations in this area	Teaming with ISMS/QA WG

Best Practices Development Status and Plans for FY14



- The CAWG has considered best practices in the following areas:
  - Causal Analysis of issues reported in assessment reports
  - Risk-based prioritizing and scheduling of assessments
  - Verifying completion of corrective actions
- Target: 1

Energy Facility Contractors Group

Working Together

More Than 20 Years of Sharing Best-in-DOE Solutions and Lessons Learned to Meet Mission Needs Across the Complex

Pat Smith
Vice-Chair Elect, EFCOG
Contractor Assurance Working Group
March 18, 2014

Our Mission

Maximize DOE/NNSA mission success by achieving management and operational excellence

Our Value Proposition

- A comprehensive network of leading companies partnering with DOE to
  - ✓ promote safe, secure, and effective operations,
  - ✓ develop, share, and advance innovative practices,
  - ✓ deliver cost-effective solutions to challenges and issues, and
  - ✓ strengthen performance measurement and accountability
- Access to un-matched leadership and experience across member sites and companies
- A collective voice for DOE/NNSA contractors across missions, functions, and sites

Our Critical Few and Working Group Efforts

2014-2015

Achieve the highest levels of safety, security, and reliability, promote excellence in the operations of DOE facilities

Innovate to improve the performance of the DOE enterprise

Deliver value to member companies in furthering DOE's mission

EFCOG Strategic Agenda and Critical Few

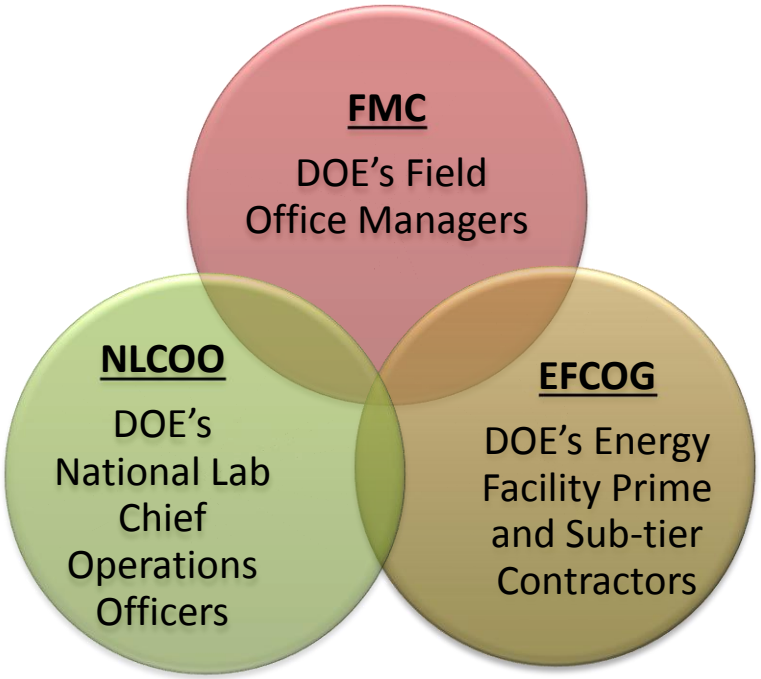
Strategic Objectives	*Enabling Activities*	*Measurable Outcomes*
Operational Excellence *Promote the highest levels of safety, security, and reliability – promote excellence in the operation of DOE facilities*	**Develop with member participation cost effective implementation guidelines/practices on key operational issues affecting the DOE contractor community** • Maintaining excellence in safe and reliable nuclear facility operations • Achieving a safety-focused, performance-based self-regulatory framework • Improving security performance • Improving the acquisition, operation, and maintenance of infrastructure • Consistently delivering on project performance • Supporting the cost effective disposition of waste and surplus assets • Using environmentally sustainable practices • Increasing consistency in operational outcomes – reducing performance variability	Improved operations and mission performance
	Provide a forum to resolve technical and business issues between the DOE and the contractor community • Hosts discussions to promote frank, constructive dialogue to further the DOE mission and operational performance	

Strategic Objectives	*Enabling Activities*	*Measurable Outcomes*
Membership Deliver *value to member companies in furthering DOE's mission*	**Increase small business contribution to DOE mission** • Expand access to network of management and operations contractors • Offer mentoring opportunities • Develop pro-active and innovative solution(s) for small business resourcing	Increased small business membership in EFCOG Expanded small business contribution to DOE mission
Management Effectiveness *Advance innovative practices to strengthen contractor accountability and flexibility*	**Improve contractor self-performance and accountability** • Advance innovative practices in contractor assurance and performance evaluation – promote transparency and rigorous self-identification and management of risks	Contractors operating more nimbly with greater transparency and accountability Cost savings and/or reinvestment/cost avoidance
	Identify opportunities to eliminate stifling rules, regulations, burdensome implementation approaches, and excessive oversight/micro-management • Perform top to bottom review across all working groups with the goal of identifying opportunities to reduce redundant bureaucratic processes, implementation approaches; and/or regulations/rules that hinder contractor performance • Identify opportunities to leverage broad contractor economies to achieve cost savings and/or reinvestments	

EFCOG Delivers Value in Many Forms

To DOE/NNSA:	To Our Members:
Trusted agent and partner in mission success	**Advocate** for contractors (collective voice)
Problem solver – address cross-cutting issues and provide workable solutions	Effective **networks of leaders and professionals** to address common issues, share, communicate, and improve
Change agent – drive performance improvement, leverage inter-contractor solutions, hold ourselves to high level of performance	**Best practices and lessons learned** – broad-based, openly shared and evaluated, readily available to DOE and contractors
"Go to" organization – provide voice of the contractor, serve as a enterprise-wide sounding board	**Team to achieve enterprise-wide improvements** and resolve issues; leverage experience and perspectives for effective solutions
Timely Communication -- flow down and out	**Timely information dissemination** – HQ to the field, inter-site, across the complex
Reach-back support – bring commercial and global experience	**Open communications** with DOE/NNSA leadership and between contractors.
Innovation to strengthen performance, safety, efficiency, and effectiveness	Leadership and human capital **development**, training
Outcome-oriented – agile, responsive, relevant	Source of **peer reviews**, assist visits, mentoring

Teaming to Maximize Mission Performance



- Three groups, each representing different aspects of DOE operations
- Teaming at the points of mission execution to maximize performance
- Focus areas
  - Enhancing project management performance
  - Streamlining and assessing effectiveness of DOE Orders and Directives
  - Promoting safety and security performance through sharing of best practices
  - Maturing Contractor Assurance Systems
  - Leveraging contracting approaches for mission impact and effectiveness

Looking Forward

EFCOG's Critical Few

Specific 2014 goals:

- Review **contract methods/tools** and identify performance improvement opportunities
- Publish lessons learned for the **management of large/complex and one-of-a-kind projects**
- Attain member insights on effective ways for DOE to increase **small business contracting**
- Continue to **improve safety performance** through shared learning and peer reviews
- Publish guidance for **work prioritization** based on best practices, tools, an approaches
- Update **strategic sourcing** best practices to assist programs with cost savings / cost avoidance goals

NNSA's Vision
Line Oversight & Utilization of CAS

Roger Liddle
Office of the Program Executive Officer
March 19, 2014

History

- Line Oversight & Contractor Assurance (LOCAS)
  - Codified CAS use in NAP-21 dated 2/2011
- LOCAS Affirmation Process
  - Affirmation's of Nevada, Y-12, and Sandia in 2011
- ***Y-12 Security Incident of July 28, 2012***
- Multiple Re-Organizations
  - Lessons Learned
  - Affirmations "re-tooled" but not continued
  - Significant ongoing Federal improvement efforts
- Two ongoing and closely related GAO Audits
- NDAA report on "Kansas City Pilot" extension

Collective Lessons Learned

- LOCAS badly misunderstood
  - Internal and External
    - Y-12 anonymous comment – “CAS caused the problem”
    - GAO initial Audit objective
      - Assess how NNSA manages “IT’S CAS”
- DNFSB Strong Negative Reaction
  - S-2 and NA-1 commitment to continued transactional Oversight of “High Risk” Activities
- Affirmation
  - Also not understood
  - Affirmed “a system in place”
    - Did not ask (by design) “Does it work”
- Kansas City Plant unique in NNSA complex

NNSA has stayed the Course

From Jim McConnell to all Queries

- **What is a Contractor Assurance System (CAS)?**
  - A CAS is a primary tool used by Contractor management to measure, improve, and demonstrate performance and ensure that mission objectives and contract requirements are achieved. CAS is the same as basic concepts of successful industry quality management systems such as ISO 9000/9001.
- **How do we intend to use the information coming from the CAS?**
  - A robust and effectively functioning CAS provides transparency and builds trust between NNSA and its Contractor Partners and helps to ensure alignment across the NNSA Enterprise to accomplish and address mission needs.
- **What did we learn from early CAS affirmations and the performance failure at Y-12?**
  - The early affirmations were challenged to actually confirm demonstrated performance improvements that directly linked to the contractor's use of the CAS.
- **How will we be utilizing CAS as a part of our oversight responsibilities going forward?**
  - We will continue to require CAS for our M&O contracts and will use the transparency of data associated with these systems to increase the data available to us for our oversight.

Improving the Federal Processes

- Weaknesses in Federal Oversight:
  - Performance Testing
    - CAS Data – Pull string on selected data
  - Consistency of application in Field oversight
  - Consistency in HQ oversight of Field data
    - Beyond Integrated Assessment Planning
      - Provide “Forest from the Trees” view
- Significant effort underway to address all processes within NNSA
  - Piloting in NA-00 with Field Office participation

IMPROVING INTEGRATION, TRANSPARENCY, AND EFFICIENCY

STEP I: STRATEGIC
(July – Aug '13)

MISSION ALIGNMENT
- ✓Mission and Vision
- ✓Primary Customers & Stakeholders
- ✓Business Lines & Goals
- ✓Crosswalk Offices and Business Lines
- ✓Begin Identifying Functional Areas
- ✓Begin Identifying Key Services
- ✓Begin Documenting Roles and Responsibilities

→ Common Organization Chart

→ Revised Organization, Authorities and Responsibilities

→ Capabilities Based Field/Functional Office Plans

→ EMPOWERED INTERDEPENDENCE

STEP 2: OPERATIONAL
(Sept '13 – Feb '14)

BUSINESS LINE DESCRIPTION *
- Complete Identification of Functional Areas
- Complete Identification of Key Services
- Identify Major Products*
- Identify Customer Requirements
- Identify Business Line Metrics
- Identify Key Processes
- Identify Hand-Off Points
- Begin Process Mapping
- Continue flushing Roles and Resp.

*Phased implementation

→ NA-00 "Strategic" Plan

→ NA-00 "Integrated" FY14 Implementation Plan

→ Revised NA-00 Business Management Plan

→ INTEGRATED AND EFFECTIVE ENTERPRISE

STEP 3: TACTICAL
(Jan '14 – Jan '15)

PROCESS STANDARDIZATION*
- Complete Process Mapping
- Identify Milestones
- Identify Q/A Standards
- Develop Key Procedures
- Develop Hand-off Procedures
- Develop Plans
- Complete Roles and Responsibilities

→ How We Do Our Business is clearly articulated and available on the Business Model

→ REPEATABLE, PREDICTABLE, TRANSPARENT CYCLICAL, AND EFFICIENT PROCESSES

DOE/NNSA Wide Actions

- S-1 Actions for Security and Safety
  - New Under Secretary for "Management and Performance
    - Department's key support functions for security, health and safety, as well as the security policy team which provides support to the Security Committee, with that Under Secretary.
  - Created position of Chief Security Officer for each Under Secretary
    - Form Security Committee reporting to the Associate Deputy Secretary
- Acting Administrator of NNSA
  - Solidifying the role of the Office of the Chief, Defense Nuclear Security, headed by the NNSA CSO
  - The CSO will participate in the development of Departmental security policy
- The "likely parallels" with other critical functional areas leading to oversight are clear*

**Personal Opinion*

What does this mean?

- Transparent, reliable, verifiable CAS data will remain, and may become a more important, data source enabling efficient and effective Federal Oversight
- The Department including the NNSA is working from the highest levels to the “boots on the ground” level to develop clear and consistent guidance and consistent and repeatable processes

Bottom Line

- As Federal Oversight is improved the expectations of the Contractor Partners CAS will increase
  - Robust
    - No area gaps
  - Transparency
    - Consistency in formats
    - More easily integrated with federal systems
  - Verifiable
    - Test any portion any time – easily
  - Clear Metrics
    - Allow federal “risk informed” oversight

U.S. DEPARTMENT OF ENERGY
Office of Science
ORNL Site Office

EFCOG Contractor Assurance Working Group

A DOE Perspective

Johnny Moore

March 18, 2014

Topics

- SC Focus in 2009
- Peer Review Process
- Forensic Workshop
- Current/Future Actions

Early in Journey

ISM

- DNFSB Recommendation 95-2
- Implementation of ISM
- Hiccups along the way (recision/reaffimation, etc.)
- ISSM Issues

CAS

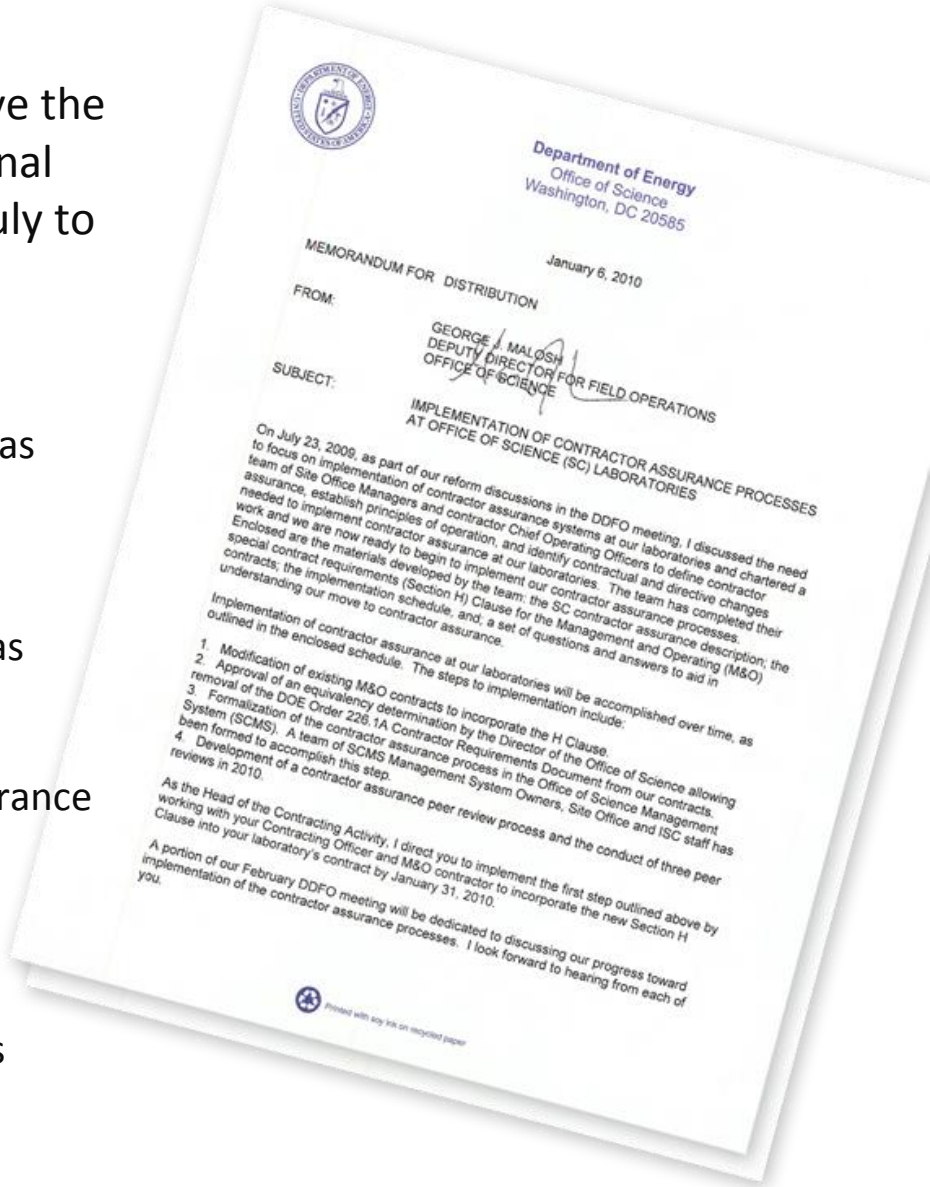
- Draft Policy 2003 finalized 2005
- 226.1 2005
- 226.1A 2007
- 226.1B 2011
- Line management oversight
- Is it Effective?

Office of Science Approach (2009)

The SC Deputy Director for Field Operations chartered a federal/contractor team to improve the execution of Contractor Assurance at SC National Laboratories considering reform initiatives. (July to December 2009)

The team established expectations:

- ✓ Try to work within existing approaches as much as possible
- ✓ Eliminate redundancy
- ✓ Apply Contractor Assurance to all operating areas
- ✓ Remove DOE O 226.1 to reduce confusion
- ✓ Connect to PEMP, contractor management assurance systems/processes
- ✓ Laboratory systems and processes should be transparent to the Site Office Manager
- ✓ Oversight can be modified as Assurance Systems mature



Department of Energy
Office of Science
Washington, DC 20585

January 6, 2010

MEMORANDUM FOR DISTRIBUTION

FROM:

GEORGE J. MALOSH
DEPUTY DIRECTOR FOR FIELD OPERATIONS
OFFICE OF SCIENCE

SUBJECT:

IMPLEMENTATION OF CONTRACTOR ASSURANCE PROCESSES AT OFFICE OF SCIENCE (SC) LABORATORIES

On July 23, 2009, as part of our reform discussions in the DDFO meeting, I discussed the need to focus on implementation of contractor assurance systems at our laboratories and chartered a team of Site Office Managers and contractor Chief Operating Officers to define contractor assurance, establish principles of operation, and identify contractual and directive changes needed to implement contractor assurance at our laboratories. The team has completed their work and we are now ready to begin to implement our contractor assurance processes. Enclosed are the materials developed by the team: the SC contractor assurance description; the special contract requirements (Section H) Clause for the Management and Operating (M&O) contracts; the implementation schedule, and, a set of questions and answers to aid in understanding our move to contractor assurance.

Implementation of contractor assurance at our laboratories will be accomplished over time, as outlined in the enclosed schedule. The steps to implementation include:

1. Modification of existing M&O contracts to incorporate the H Clause.
2. Approval of an equivalency determination by the Director of the Office of Science allowing removal of the DOE Order 226.1A Contractor Requirements Document from our contracts.
3. Formalization of the contractor assurance process in the Office of Science Management System (SCMS). A team of SCMS Management System Owners, Site Office and ISC staff has been formed to accomplish this step.
4. Development of a contractor assurance peer review process and the conduct of three peer reviews in 2010.

As the Head of the Contracting Activity, I direct you to implement the first step outlined above by working with your Contracting Officer and M&O contractor to incorporate the new Section H Clause into your laboratory's contract by January 31, 2010.

A portion of our February DDFO meeting will be dedicated to discussing our progress toward implementation of the contractor assurance processes. I look forward to hearing from each of you.

Office of Science Approach (2009)

- What is different?
- We adhere to the H clause as base
- We do not apply the DOE O 226.1, DOE G 226.1-1, or HSS-recommended CRADs
- Scope includes all areas – not just those mentioned in DOE O 226.1
- We properly document in SCMS the federal approach
- Execution is done in the field and transactions/approvals/acceptance are between contractor and site office

Office of Science Approach (2009)

What should we commit to?

- Reestablishing line/mission management responsibilities.
- Holding the contractor accountable when event occurs instead of proliferating changes and new requirements broadly.
- Effective assurance can only happen in a trusting environment.
- Modifying behaviors to enhance trust from contractor (and Parent) to site office to HQ.
- Balancing risk avoidance/mitigation with mission accomplishment.
- The approvals for different activities should be as close to the accomplishment of work as appropriate.
- Execution is done in the field and transactions/approvals/acceptance are between contractor and site office.

Science Approach Challenges (2009)

- All agreeing to same methodology/approach
- Stay the course if bad things happen
- Modifying our oversight as contractor exhibits CAS performance

  (Partner/modify frequency or focus)
- All parties' behavior has to change
- Getting peer process going so in the journey for continuous improvement, SC sites can help each other

Specific Assurance System Expectations are Derived from the H-Clause

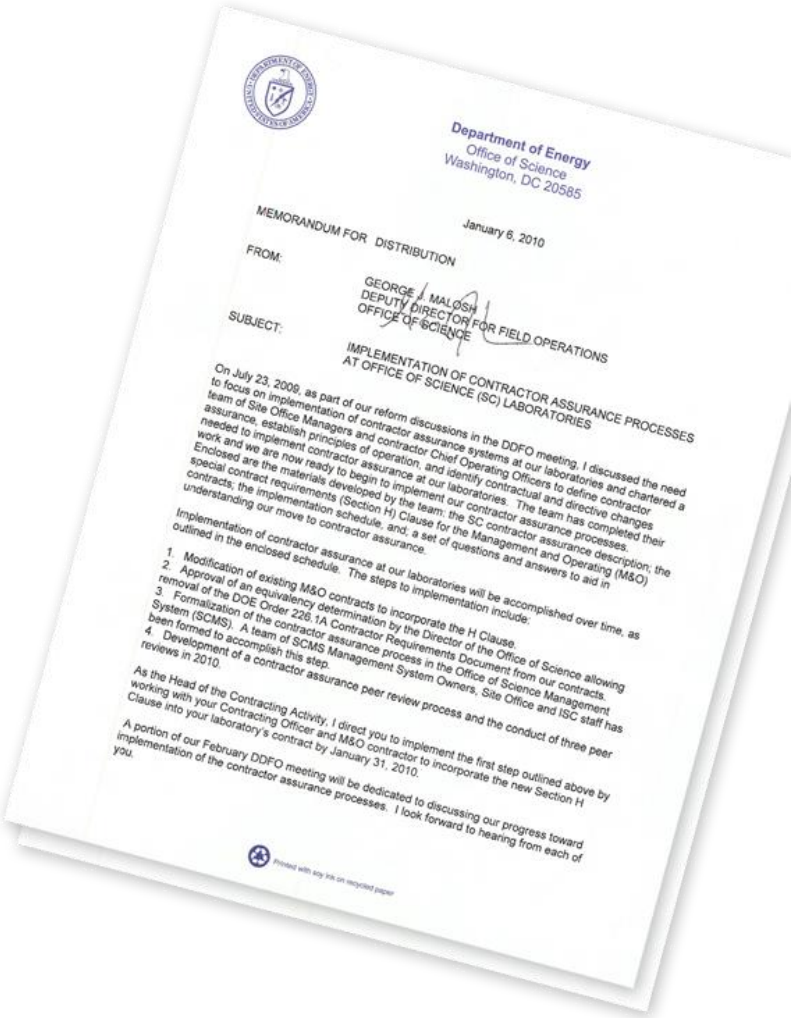
H Clause: Contractor Assurance System

(a) The Contractor shall develop a contractor assurance system that is executed by the Contractor's Board of Directors (or equivalent corporate oversight entity) and implemented throughout the Contractor's organization. This system provides reasonable assurance that the objectives of the contractor management systems are being accomplished and that the systems and controls will be effective and efficient. The contractor assurance system, at a minimum, shall include the following key attributes:

(1) A comprehensive description of the assurance system with processes, key activities, and accountabilities clearly identified.
(2) A method for verifying/ensuring effective assurance system processes. Third party audits, peer reviews, independent assessments, and external certification (such as VPP and ISO 9001 or ISO 14001) may be used.
(3) Timely notification to the Contracting Officer of significant assurance system changes prior to the changes.
(4) Rigorous, risk-based, credible self-assessments, and feedback and improvement activities, including utilization of nationally recognized experts, and other independent reviews to assess and improve the Contractor's work process and tc carry out independent risk and vulnerability studies.
(5) Identification and correction of negative performance/compliance trends before they become significant issues.
(6) Integration of the assurance system with other management systems including Integrated Safety Management.
(7) Metrics and targets to assess performance, including benchmarking of key functional areas with other DOE contractors, industry and research institutions. Assure development of metrics and targets that result in efficient and cost effective performance.
(8) Continuous feedback and performance improvement.
(9) An implementation plan (if needed) that considers and mitigates risks.
(10) Timely and appropriate communication to the Contracting Officer, including electronic access, of assurance related information.

The initial contractor assurance system description shall be approved by the Contracting Officer.

(b) The Government may revise its level and/or mix of oversight of this contract when the Contracting Officer determines that the assurance system is or is not operating effectively.



Department of Energy
Office of Science
Washington, DC 20585

January 6, 2010

MEMORANDUM FOR DISTRIBUTION

FROM:

GEORGE A. MALOSH
DEPUTY DIRECTOR FOR FIELD OPERATIONS
OFFICE OF SCIENCE

SUBJECT:

IMPLEMENTATION OF CONTRACTOR ASSURANCE PROCESSES AT OFFICE OF SCIENCE (SC) LABORATORIES

On July 23, 2009, as part of our reform discussions in the DDFO meeting, I discussed the need to focus on implementation of contractor assurance systems at our laboratories and chartered a team of Site Office Managers and contractor Chief Operating Officers to define contractor assurance, establish principles of operation, and identify contractual and directive changes needed to implement contractor assurance at our laboratories. The team has completed their work and we are now ready to begin to implement our contractor assurance processes. Enclosed are the materials developed by the team: the SC contractor assurance description; the special contract requirements (Section H) Clause for the Management and Operating (M&O) contracts; the implementation schedule, and; a set of questions and answers to aid in understanding our move to contractor assurance.

Implementation of contractor assurance at our laboratories will be accomplished over time, as outlined in the enclosed schedule. The steps to implementation include:

1. Modification of existing M&O contracts to incorporate the H Clause.
2. Approval of an equivalency determination by the Director of the Office of Science allowing removal of the DOE Order 226.1A Contractor Requirements Document from our contracts.
3. Formalization of the contractor assurance process in the Office of Science Management System (SCMS). A team of SCMS Management System Owners, Site Office and ISC staff has been formed to accomplish this step.
4. Development of a contractor assurance peer review process and the conduct of three peer reviews in 2010.

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A portion of our February DDFO meeting will be dedicated to discussing our progress toward implementation of the contractor assurance processes. I look forward to hearing from each of you.

Peer Review Process* Conclusions

The conduct of the reviews applied a **consistent set of expectations** across the SC complex, provided a vehicle for uniform **corporate parent engagement**, strengthened partnerships between the Site Office, and provided a "forcing function" to self-assess CAS status and address gaps relative to expectations prior to the review. Overall, the ten peer reviews indicated that SC Laboratories have adequately developed CAS programs at their respective sites. All teams noted that the CAS is adequately defined and contains the essential elements which, if fully implemented, will result in a realization of the benefits of continuous improvement, transparency and trust, sharp mission focus, and provision of a streamlined and nonintrusive approach to performance assurance. It was clear that most laboratories had realized several current benefits from CAS notably in the areas of improved communication among the tri-parties, reduced oversight burdens through assessment partnering and streamlining, greater insight into risk management, and more effective leveraging of external resources to provide their laboratories a competitive edge. However, most reviews acknowledged that further maturity was necessary in order to assure that CAS benefits were fully realized and sustainable and transferrable from the leadership/managers down to the first line supervisors and working level staff. **More run time** and experience with implementation was a frequent observation from the peer reviews. Essentially all of the CAS related systems exist at the laboratory instead of the Corporate Parent or the Site Office, and typically over 85% of the staff implementing CAS are at the laboratory. A key attribute of management systems strength is the **contractor's inherent ability to find and correct weaknesses before they become problems** The Corporate Parent and Site Office engagement in CAS is very important. Due to a much larger organization**, cultural changes are more challenging at the laboratory**. **Whatever CAS improvements are developed, we would need representation from each of the four CAS partners – Laboratory Management, Corporate Parent, Site Office and SC-3 to effect change.**

The CAS Steering Committee, or a subset of the Committee, is an appropriate forum for the development of a strategy and implementation plan for our future SC-Contractor CAS effectiveness in support of the DDFO. The Steering Committee should further refine the approach to ensure SC benefits from the future efforts and **CAS implementation stimulates a learning and growing environment and continuous improvement.**

***Peer review conducted at all 10 laboratories / Ten site reports generated**
Integrated Report was developed and issued (12/12)

From Forensic Workshop Conducted 2013

CAS Shortcomings

(not necessarily prevalent in all case studies)

- Existing performance management processes were ineffective at the program level
- Performance Issues were uncovered by external or independent reviews rather than program owners
- Assessments did not fully evaluate all risk areas (compliance versus risk focus)
- Previous attempts to correct issues were not effective
- CAS programs need to adapt to dynamic risks and changing expectations
- Senior management was either not informed, or sufficiently engaged, on the issue prior to the "defining event" – important information was compartmentalized
- Multiple negative performance indicators prior to all parties aligning on the problem and resolution
- Lack of analysis or "conversation" around performance indicators
- Cultural weaknesses were recognized but not fully evaluated or corrected

From Forensic Workshop Conducted 2013
What Worked Well

- Good collaboration and partnership between Lab, Corporate Parent, and DOE once an issue is raised
- Effective use of external and independent assessments
- Significant effort to understand key lessons and use them to improve overall CAS effectiveness
- Accountability mechanisms were utilized; DOE held contractor accountable, contractor held lab management accountable.
- Sharing of lessons learned across Lab and Department
- The reviews and investigations related to the four case studies did ultimately reduce risks and strengthen the Lab's CAS system

From Forensic Workshop Conducted 2013
CAS Basic Principles to be Sustained

- Need very strong partnership between Lab, Corporate Parent, and DOE
  - ✧ Must enable frank conversations and transparency
- Senior management engagement drives the improvement agenda
  - ✧ It is important to understand the culture and impact on effectiveness
  - ✧ Make it safe for staff to identify risk areas
  - ✧ Consider human factors
  - ✧ Managers must be “in the field” evaluating operational practices and engaging staff in direct conversation about the conduct of work.
- Must be informed and engaged in performance management
- Focus on improvement and sustainability – there is no static end state

From Forensic Workshop Conducted 2013
CAS Improvement Themes

Internal to Laboratory

- Need to institutionalize CAS improvements across all program areas
- Good effectiveness reviews of corrective actions is very important
- Need for an appropriate 'institutional' corrective action review process prior to implementation
- Assurance processes need to be risk-focused and effective at all levels of the organization

Peer Input and Perspective

- Greater use of external, independent, and partnered assessments are needed to strengthen internal assurance processes
- Performance management process need to pay more attention to leading indicators

From Forensic Workshop Conducted 2013
Questions, Comments, Potential Actions

Questions

- Are risk areas calibrated across laboratories?
- How are we looking for our blind spots?
- What are the missed opportunities?
- Are we accepting ineffective assurance processes (i.e., MAM)?
- Are we adequately testing ourselves during peer reviews?

Comments

- After an event, don't let communication of "good news" or "what went right" overwhelm the key lessons that need to be learned and acted on.
- Managers need to spend time at the working level to determine how the culture is responding to expectations
- We need more candid, frank discussions of risks and mitigations
- Contractor assurance systems needs to have a "rapid response" element that quickly identifies compensatory measures and corrective actions

Potential Actions

- Review use and effectiveness of the Manager's Assurance Memorandum
- There is a need to include the Science perspective in DOE's response to the IG report on NNSA's CAS
- We should evaluate how expected changes in DOE Leadership and the evolving financial budget outlook will impact how we execute our CAS program

Ongoing Actions

- SCMS Refresh – Federal Behavior
- Metrics Examination – How do we Measure Progress?
- DDFO Measures – Engagement, Resolution, Continuous Improvement
- DDFO Meeting in April

Science Site Office Oversight Approach
(Examples)

Performance Management

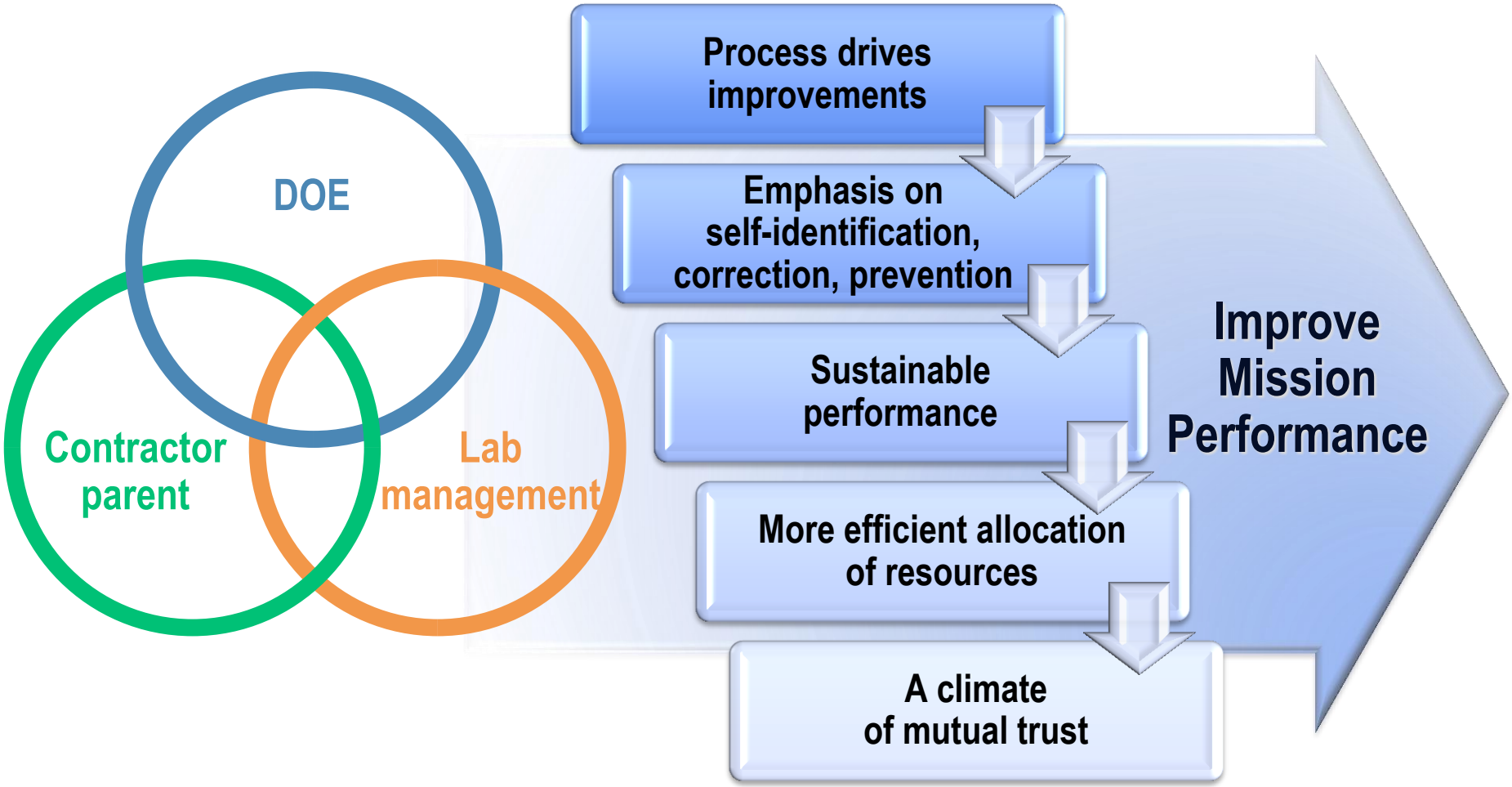
- Goals/Notable Outcomes established in PEMP
- Formal progress monitoring at mid and end of year
- Informal monitoring throughout FY
- DOE conducts annual appraisal

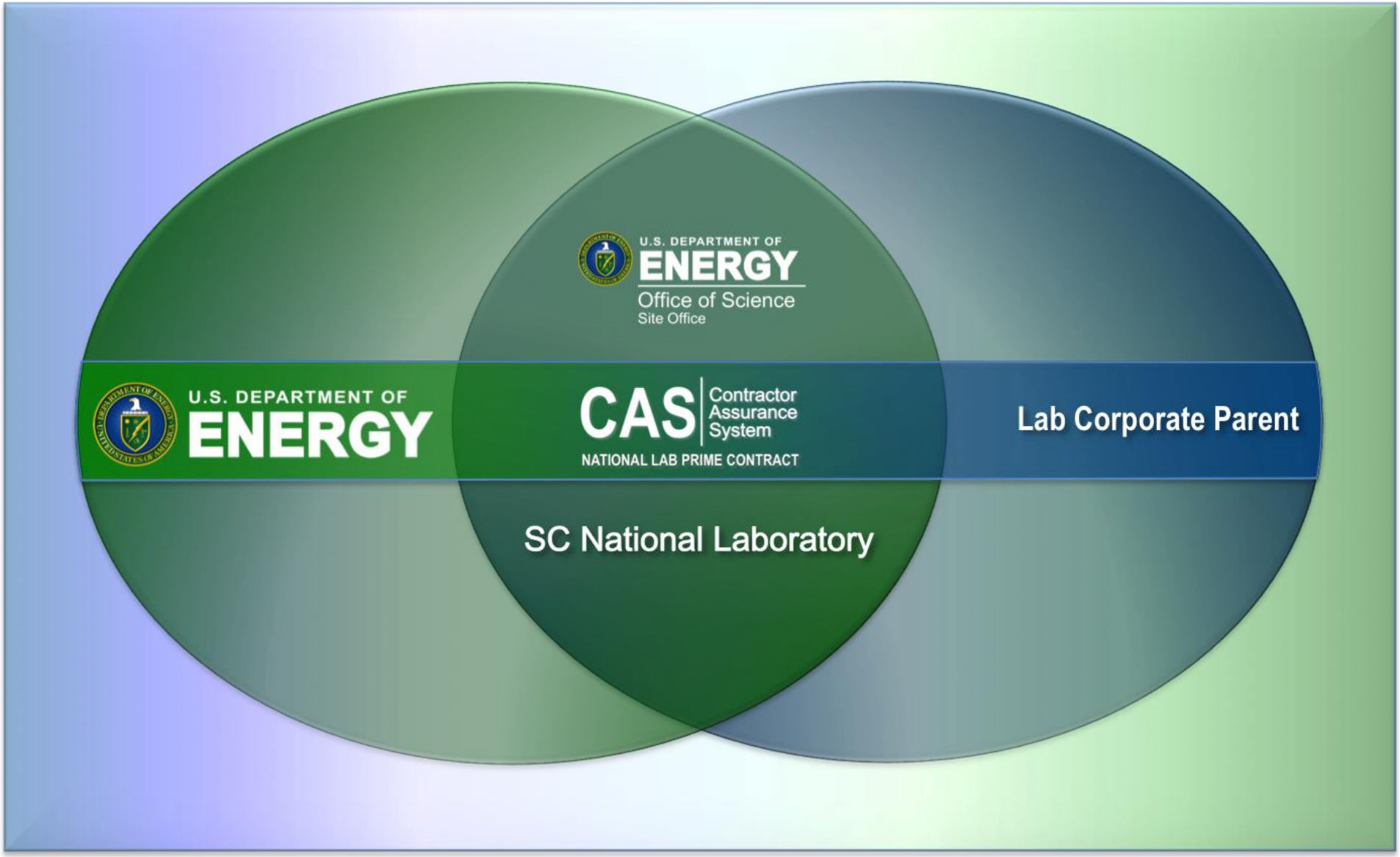
Set Expectations	Facilitate	Monitor/assess	Evaluate
• Establish contract terms and conditions • Implement DOE directives and SCMS • Set/Approve standards • Authorize work (WAs, FWPs, LDRD, WFO, CRADAs)	• Program/project management • Facilities/infrastructure planning/prioritization • Owner's responsibilities: MOAs, permits, etc. • DSA review and approval/ startup and restart • Federal functions: CO/COR, Davis-Bacon, NEPA, etc.	• Monitor performance • Program/project reviews • Coordinate reviews by external organizations • Regulatory compliance oversight • Assessment Program • Commitment tracking	• Measure performance • Day-to-day interactions with Lab management and staff at all levels • Feedback from oversight activities

Outcomes

- Mission execution
- Contract compliance

Success Depends on the Engagement of Three Parties: DOE, Lab Management, and Contractor Parent

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Site Office
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ENERGY
CAS
Contractor
Assurance
System
NATIONAL LAB PRIME CONTRACT
Lab Corporate Parent
SC National Laboratory

Suggested Critical Factors

Human Performance

- Federal Leadership
- Contractor Leadership

Special Relationship with NLDC (Chu/Moniz)

- Lab Leadership communication pathway
- Partner with SO/DOE for success

Site Office

- Performance Based not compliance based
- Mission delivery rewards
- Risk focus needs to yield integrated plan for recognition/abatement

Behaviors Exhibited – Ideal World

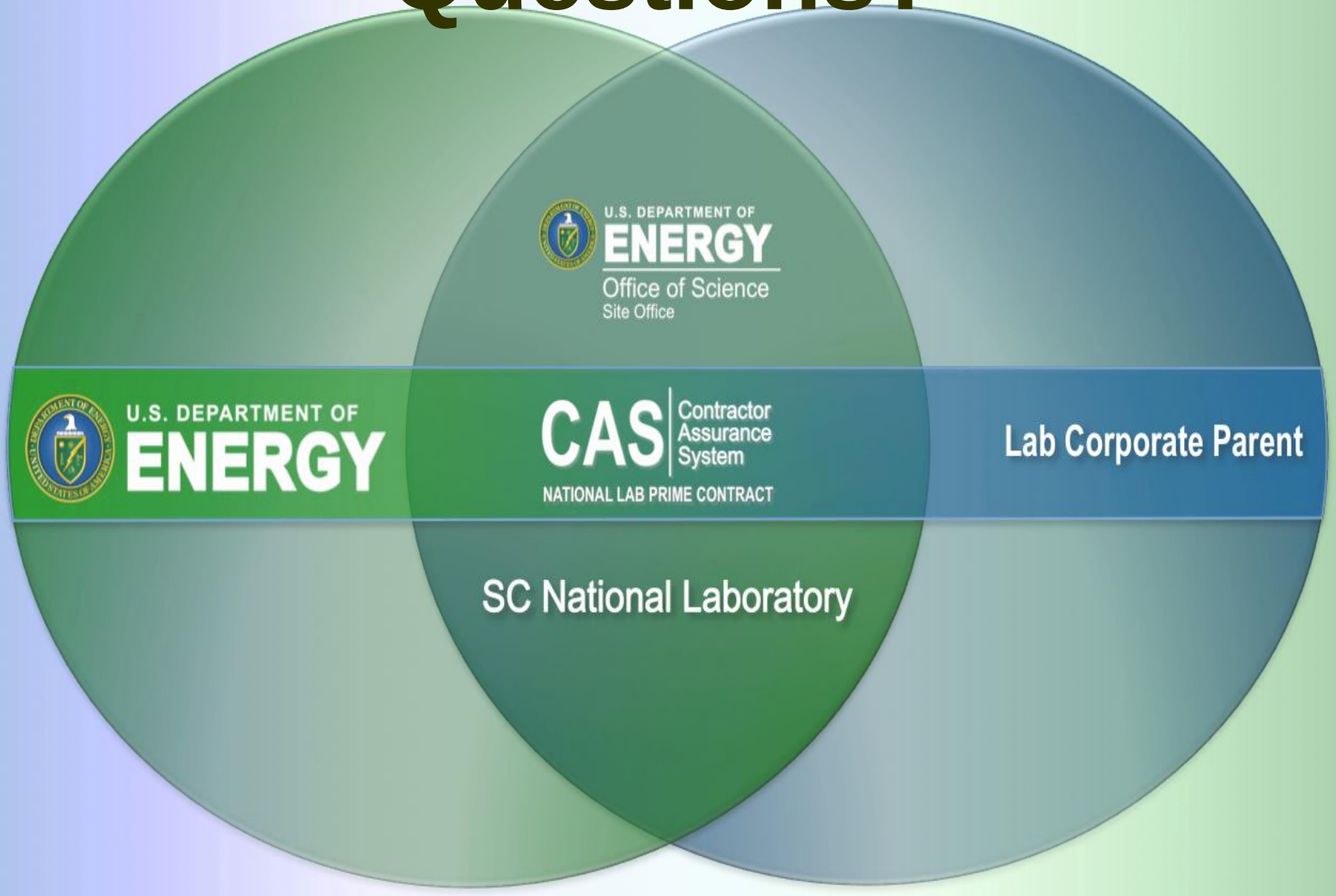
- Trust
- Mutual respect
- Every one knows their swim lanes
- Open for learning
- Critical in self assessment
- Act on deficiencies and willing to partner or change course if not working for staff
- Committed

Ways to Measure Progress along Continuous Improvement Interstate

DRAFT Office of Science
CAS Engagement Achievement Matrix

	Characteristics	Demonstration Features	Federal Activity Focus	Corporate Parent Activities
Implemented	• Tri-party commitment to approach • Lab work reflects CAS principles and self-assessment	• H-clause in contract • CAS defined with clear Lab R&R • CAS description in place • Management systems developed	• Structured and constant interface • Confirmation of management systems and performance data • Direct activity observation to confirm performance • Direction as needed to align performance	• Routine contact • Development of key measures • Evaluation of Lab CAS data and direction • Lab resource augmentation
Proficient	Implemented+: • Emerging risks identified and addressed • Alignment of tri-party activities • Lessons learned are applied	Implemented+: • Management systems producing meaningful performance data and predictive insight • Risk based decision processes in place	• Routine interface • Analysis of Lab CAS data • Direct activity observation with Lab personnel • Influencing improvements	• Routine contact • Monitoring of key measures • Feedback and experience sharing with Lab • Lab resource development
Mature	Proficient+: • Performance predictable and repeatable • Trust improved and with stakeholders	Proficient+: • Investment increasing-more mission work done • Others using model of success	• Routine interface • Collaboration with Lab on improvement initiatives • Focus on enabling activities	• Routine contact • Monitoring of improvement initiatives • Sharing success and Lab resources with other Labs

Questions?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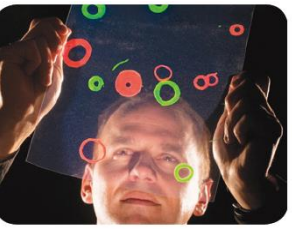
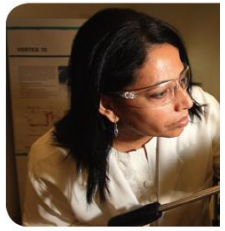




Sandia National Laboratories

Exceptional service in the national interest

Sandia's Assurance and Quality Maturity Journey

Emily Gaffney, Quality Engineer

Sandia National Laboratories

Department 00753, Management Systems Operations

Presentation to EFCOG/CAWG

March 18, 2014

U.S. DEPARTMENT OF ENERGY

NNSA National Nuclear Security Administration

Sandia National Laboratories is a multi-program laboratory managed and operated by Sandia Corporation, a wholly owned subsidiary of Lockheed Martin Corporation, for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-AC04-94AL85000.

What we're going to talk about

Sandia National Laboratories

- Overview of Sandia's objectives and our organization's role in improving quality
- What is the Quality Maturity Assessment?
- How did the Quality Maturity Assessment evolve?
- What challenges did we face and how did we overcome them?
- What did we learn?
- How will this improve the delivery of quality products and services?

Sandia National Laboratories

SANDIA'S QUALITY OBJECTIVES

Sandia has established strategic goals to improve performance

- From Sandia's Strategic Plan
  - Strategic Objective #3: Lead the complex as a model 21st-century lab
  - "Increase our own confidence…in our ability to effectively manage business and technical processes and deliverables"
- FY14 Strategic Performance Evaluation Plan (PEP) complement Strategic Objective # 3
  - *Performance Objective-4*: "Effectively and efficiently manage … ; demonstrate accountability for mission performance and management controls; assure mission commitments are met with high-quality products and services; and maintain excellence …."
  - *Performance Objective-5*: "Promote a culture of critical self-assessment and transparency across all areas.." "Demonstrate performance results through the institutional utilization of the Management Assurance System…"

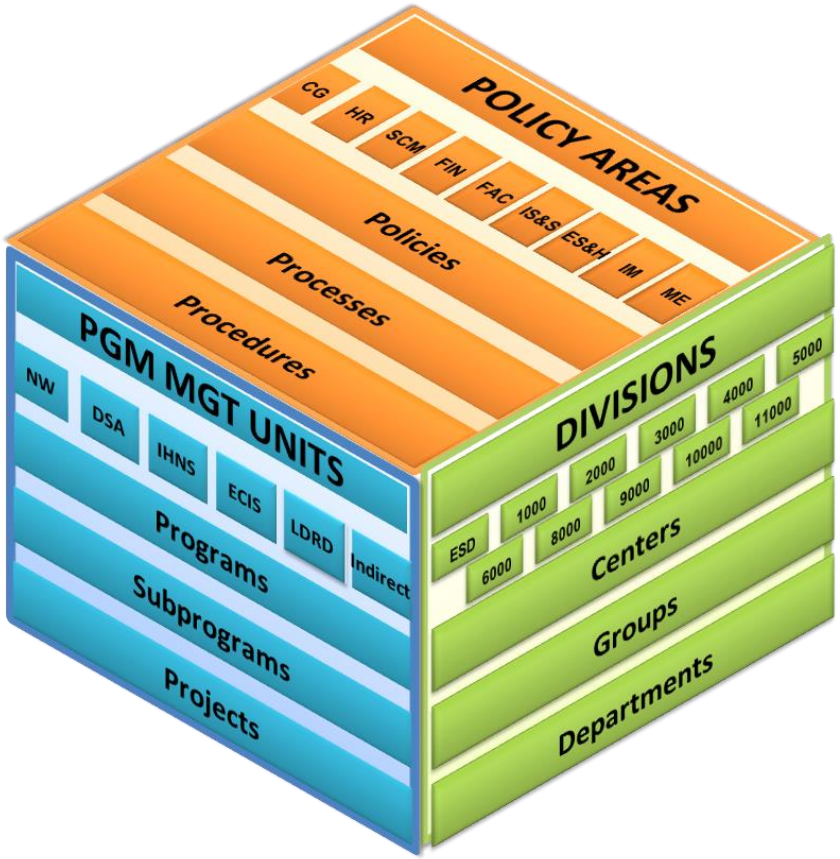
Group 00750 monitors Sandia's approach to delivering high quality products and services

Sandia National Laboratories

- Sandia's quality expectation is that we will "meet customer and Sandia expectations consistently and predictably through flawless execution of personal and collective responsibilities"
- Management and Assurance Systems' (Group 00750) goal is to enable the delivery of high quality products and services using a Plan-Do-Check-Act workflow
- Group 00750 is accountable to provide visibility as to whether Sandia is meeting quality expectations

Sandia's organization is distributed

- Responsibility and accountability delivery of quality products and services is distributed across 24 Management Entities
- To assess Sandia's "health of quality" we need to assess all entities
- We seek to understand how work is done across organizational boundaries



Sandia National Laboratories

THE ASSURANCE MATURITY ASSESSMENT

The beginning: Assurance Maturity Assessment

Sandia National Laboratories

- In 2011, the Assurance Maturity Assessment (AMA) was designed as a way to measure the effectiveness of Sandia's Performance Assurance System
- A maturity approach was used rather than an audit to
  - Drive improvement and progression rather than "check the box"
  - Establish a baseline
  - Acknowledge the graded approach
- Maturity levels were defined to promote understanding of what we must do

*NAP-21

Maturity levels were designed to promote a dialog

Sandia National Laboratories

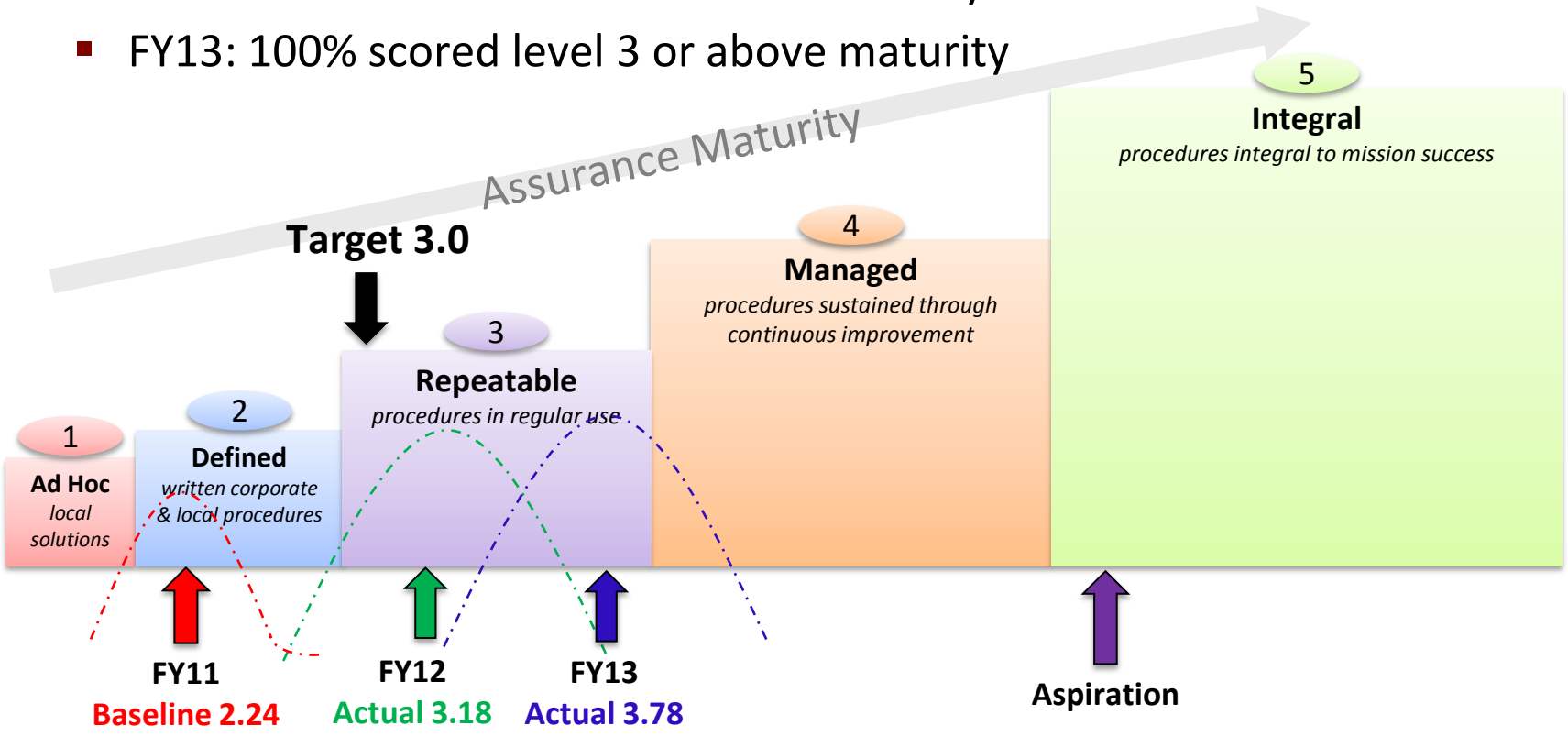
Sandia's Assurance Maturity Model- Levels 1-5

1. *Ad Hoc* – local point solutions
2. *Defined* – written corporate and local procedures
3. ***Repeatable* – procedures in regular use**
4. *Managed* – procedures sustained through continuous improvement
5. *Integral* – procedures integral to mission success

AMA resulted in measurable improvements

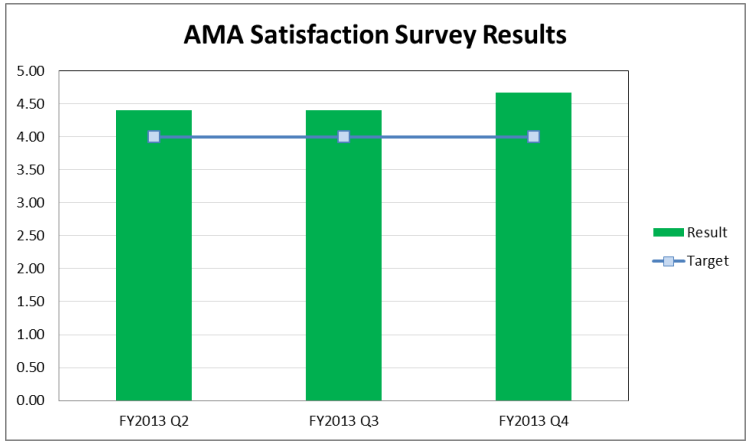
Measured 5 aspects of assurance for 3 years

- FY11: 29% scored level 3 or above maturity
- FY12: 91% scored level 3 or above maturity
- FY13: 100% scored level 3 or above maturity



Best practices from AMA

- Leadership Engagement and high visibility (through metrics and management review) brought attention to assurance
- Mentoring and coaching increased engagement and understanding
  - Team the right competencies
  - Develop and improve relationships



Comment from an Entity Representative:
"The coaching was very helpful. I liked the expertise and willingness to suggest alternatives and provide examples of what others have done."

Sandia National Laboratories

IMPLEMENTING THE QUALITY MATURITY ASSESSMENT

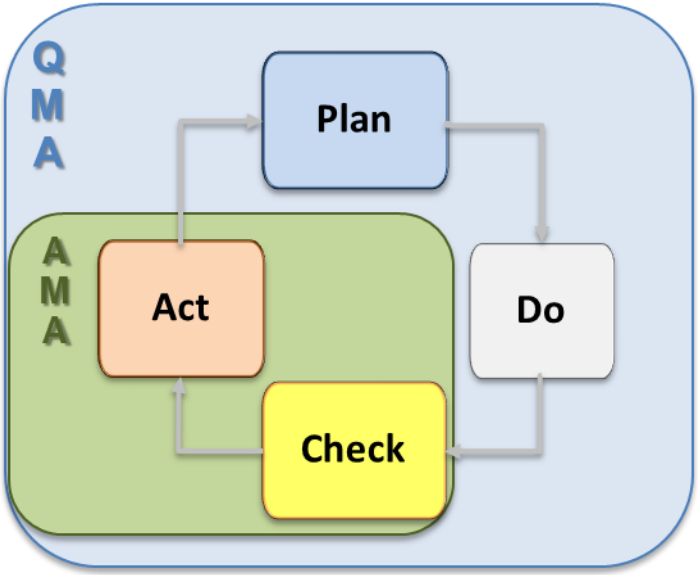
In FY13 Sandia focused on defining and improving its quality program

Sandia National Laboratories

- External and internal reviews found gaps
- Sandia's management and stakeholders need data-based answers to understand "the health of quality"
- FY13 efforts defined expectations for quality
  - Quality Declarations
    - Declare and endorse quality standard in use (e.g.; ISO 9001, DOE O 414.1D, AS9100)
  - Quality Self-Ranking
    - Simple self-assessment of what management entities believed their maturity to be
  - Some management units participated in appreciative inquiry exercise
    - Sought understanding of how our diverse, distributed organizations were implementing expectations

The evolution: AMA becomes QMA

- Sandia's focus on improving quality products and services drives us to assess implementation of quality
- The structure of AMA has proven effective so we will use it to assess Quality
  - Assurance is determining how effectively the work is done (checking and acting on the work)
  - Quality is the entire Plan-Do-Check-Act cycle
- QMA will use mentoring for shared learning and to drive improvement



Challenges of moving from AMA to QMA required collaborative solutions (1 of 3)

Sandia National Laboratories

- **Challenge:** Entities were reluctant to be mentored.
- **Solution:** The QMA team partnered with the Quality Roundtable (a self-formed practitioner working group) provide a forum for self-mentoring
- **Lessons Learned**
  - Practitioners have more influence over each other than the Corporate Governance team does.
  - A functional "Community of Practice" like the Quality Roundtable increases chances of sustainability by sharing knowledge with more people and using collaboration to improve work products

Challenges of moving from AMA to QMA required collaborative solutions (2 of 3)

Sandia National Laboratories

- **Challenge:** Expanding the assessment scope added complexity and caused some confusion
- **Solution:** We have slowed our schedule and revised our approach allow for the Quality Roundtable, QMA, and implementers to gain clarity of the objectives
- **Lesson Learned**
  - Initiatives that require engagement and participation from other groups should be developed in partnership with those organizations
  - Flexibility to modify our approach allowed us to improve our working relationships, clarify expectations, and increase our confidence in the fidelity of our assessment

Challenges of moving from AMA to QMA required collaborative solutions (3 of 3)

Sandia National Laboratories

- **Challenge:** Applying the same criteria to diverse businesses makes it hard to set performance expectations
- **Solution:** The QMA team has partnered with the Quality Roundtable to define the assessment criteria and enable like entities to work together to understand how best to implement Plan-Do-Check-Act
- **Lessons Learned:**
  - In a diverse, distributed business like Sandia's there is a fine balance between defining common expectations and allowing for a graded approach
  - We have to balance a common approach and consistent assessments across diverse businesses

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WHERE DO WE GO FROM HERE?

Improving the quality of products and services

Sandia National Laboratories

- The expected outcome of QMA is better understanding of how to implement Plan-Do-Check-Act to deliver high quality products and services
  - When entities have information on how to improve their work, they can improve their outcomes
  - Our partnerships will help us be a trusted resource for entities to execute improvements
- QMA will also identify strengths and areas for improvement across the corporation
  - We can articulate how effectively we manage business and technical processes to result in quality deliverables
  - The corporation cannot deliberately improve until we know what needs action and attention

When you know better, you do better

Summary

- Sandia and customer expectations created the need to assess (and improve) assurance and quality
- Maturity assessments have proven to be an effective way to monitor and improve performance
- Mentoring/coaching/partnering is a best practice
- Changing the scope of our project would have been easier if we had verified communication and understanding
- Taking time to understand the concerns of our partners slowed our schedule but should increase the fidelity of our assessment
- QMA results over the next three years will show how Sandia is improving the Quality of Products and Services through Partnering and Feedback

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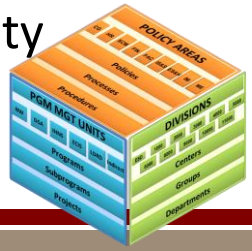
Backup slides

Details of the FY14 QMA Approach

- Partnered with Sandia Quality Roundtable to define Level 3 (Visible/Repeatable) maturity for each criterion of DOE O 414.1D
  - QRT is ensuring understanding across all entities at Labs
  - Defining common vocabulary, discussing appropriate evidence to demonstrate performance
  - Coaching/teaming/mentoring each other
- Chose 4 criteria of 414.1D for assessment in FY14:
  - #1 Program
  - #2 Training and Qualification
  - #9 Management Assessment
  - #10 Independent Assessment
- Scheduled Divisions and Program Management Units for assessment, one criterion at a time
- Policy Areas responsibilities and accountabilities for Quality are not well understood by implementers so we are taking more time to get clarity



The Future of QMA

- All 24 management entities have engaged with this process through influence
- We have begun our Quality Maturity Assessments
- The schedule is aggressive to make up for lost time but we are confident we can meet the schedule
- Our partnership with the Quality Roundtable is a valuable resource that couldn't work better if we'd designed it ourselves.

Measuring Customer Satisfaction

Mary-Bernadette Garza

Quality Engineer, CMQ/OE

Dept 751 – Performance Assurance Systems Planning & Integration

Presentation to EFCOG/CAWG

March 18, 2014

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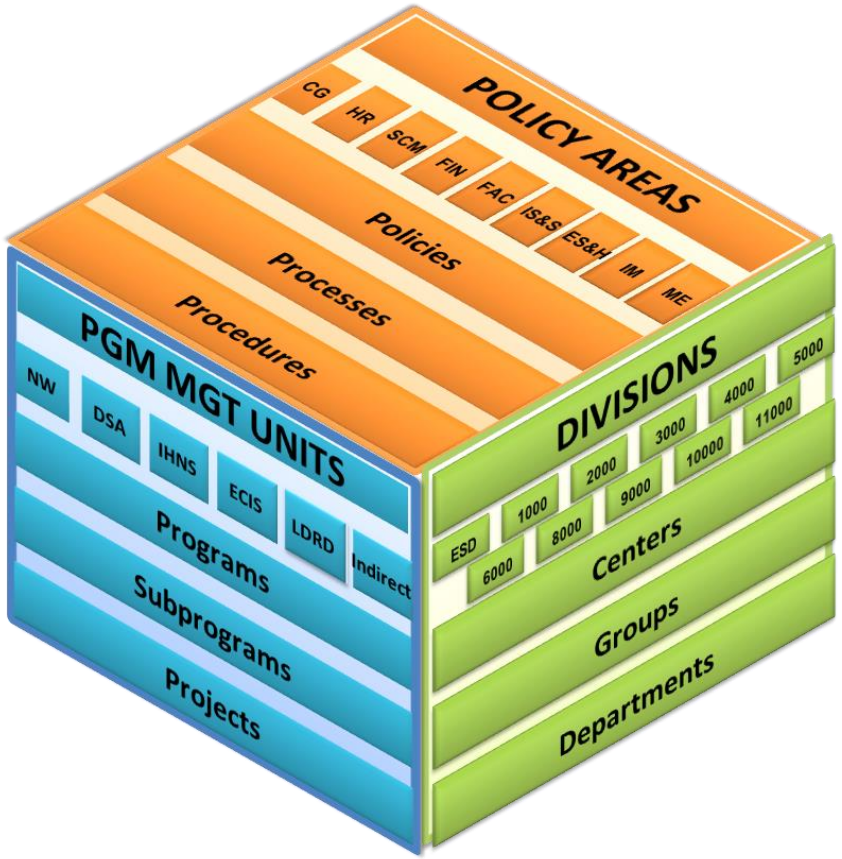
What we are going to talk about

Sandia National Laboratories

- What is Sandia's customer feedback strategy?
- How is the customer survey conducted?
- What results are achieved?
- What has worked well?
- What are some challenges?
- What are some next steps for continual improvement?

Before we start…some important terms

- **Program Management Units (PMUs)**
  - PMUs secure work and funding from either external or internal customers
  - Tasks and funding distributed to particular divisions, project by project
- **Divisions**
  - Divisions are line organizations
  - Operational responsibilities to perform work assigned to them by PMUs
  - Steward their capabilities and workforce
  - Operate effectively, efficiently, and in compliance with regulations and constraints



CUSTOMER FEEDBACK STRATEGY

Feedback strategy and objectives

Strategy

Measure customer perception by means of an annually conducted survey using a stratified approach to determine data population.

Objectives

Assure an unbiased, valid, and representative measurement is obtained to identify customer perception and foster continuous improvement.

Ascertain strengths and weaknesses at the corporate wide level and to understand customer perceptions specific to programs.

Solicit feedback as a coordinated activity across Sandia to reduce duplication of efforts and minimize number of queries to a single customer.

CUSTOMER SURVEY PROCESS (WHO, WHAT, WHEN, HOW)

WHO - Survey target audiences

Key customers are:

- High level officials with whom Sandia deals (or would like to)
- Individual identified by PMU VP and program managers who may influence direction of Sandia
- These individuals are always interviewed rather than mailed a survey
- Sampled every other year

Project customers are:

- Middle level official with whom Sandia deals
- Identified by Sandia project/ program manager
- Stratified random sampling from funding/ project/ charging codes
- Surveys conducted online, telephone, or interview
- Surveys are conducted each year

WHO - Roles and Responsibilities for Executing the Process

Sandia National Laboratories

Project Administration: Facilitate the completion of sampling, survey release, collection, and reporting; find resolutions, and provide liaison with PMUs where requested.

PMU Representative: Deliver summary findings internally and provide summary findings to SFO as part of PMU deliverable. Liaison with VP, internal Directors, and project managers.

Statistician: Analyze data received and provide summary findings.

Database (IT) Support: Program survey and website, transfer online survey results to tool, and develop standard reports.

Mission Integration liaison: Liaise between C-Sat team, SFO, and Mission Vice-President.

WHAT - Key Customer Question Set

Sandia National Laboratories

You have been identified by Sandia National Laboratories' Executive Management as one of our key customers whose feedback is essential. This feedback provides vital data regarding Sandia National Laboratories' performance in providing exceptional service in the national interest and becoming the laboratory that customers turn to first for technology solutions to their most challenging problems.

Survey _____ Key Customer Name:_____ Sandia Contact: _____

Respondent's Name (If different from Key Customer Above): _____ Interviewer's name: _____

Please select one: Survey conducted by: ☐Mail ☐ Phone Interview ☐Personal Interview

Part I: Customer Satisfaction

1. Please identify what Sandia National Laboratories is doing well. How important is this to you?

_____

_____

_____

2. Please identify what Sandia National Laboratories needs to improve. How important is this to you?

_____

_____

_____

3. Please identify areas where you think Sandia National Laboratories should increase or decrease its activities.

Increase or add:

_____

_____

Decrease or eliminate:

_____

_____

WHAT - Key Customer Question Set

Part II: Overall Evaluation **Survey:_____**

Please rate, by circling the appropriate number, each item listed below on the scales provided.

1. What is your overall level of satisfaction with Sandia National Laboratories' work?

Very Dissatisfied									Very Satisfied
1	2	3	4	5	6	7	8	9	10

2. How would you rate your willingness to continue to work with Sandia National Laboratories?

Extremely Unwilling									Extremely Willing
1	2	3	4	5	6	7	8	9	10

3. How would you rate your willingness to recommend Sandia National Laboratories to a colleague or business associate?

Extremely Unwilling									Extremely Willing
1	2	3	4	5	6	7	8	9	10

4. Compared to this time last year your Overall Level of Satisfaction with Sandia National Laboratories' work has ….

Decreased									Increased	N/A
1	2	3	4	5	6	7	8	9	10	☐

Part III: Customer Comments

Additional comments:

_____

_____

_____

_____

Thank you for your participation

WHAT - Project Customer Question Set

2013 Project/Program External Customer Satisfaction Survey

The purpose of this survey is to determine the satisfaction and importance of various project/program factors to you as an external customer of Sandia National Laboratories (SNL).

Survey: _____ Project/Program Name: _____ Sandia Contact: _____
Customer's Name: _____ Interviewer's name (if applicable): _____
Please select one: Method of Survey: ☐Email ☐Phone Interview ☐Personal Interview

Project/Program Satisfaction

Please rate, by selecting the appropriate number, each item listed below on each of the scales provided. The first rating scale pertains to your level of satisfaction. The Second rating is an identification of which attributes are most important to you in your Sandia relationship.

Category	Item	Satisfaction of Item to You						*Indicate items of "most" importance (no more than five)*
		Poor		Satisfactory		Excellent		High Importance
		1	2	3	4	5	NA	√
Performance	1. Appropriate scope of work negotiated	☐	☐	☐	☐	☐	☐	☐
	2. Project/program technical requirements identified and met	☐	☐	☐	☐	☐	☐	☐
Schedule	3. Schedule clearly negotiated or renegotiated as needed	☐	☐	☐	☐	☐	☐	☐
	4. Schedule milestones met	☐	☐	☐	☐	☐	☐	☐
Project Management	5. Project well managed by SNL	☐	☐	☐	☐	☐	☐	☐
	6. Products or services benefited from teaming	☐	☐	☐	☐	☐	☐	☐
Relationship	7. SNL took initiative to understand my needs fully	☐	☐	☐	☐	☐	☐	☐
	8. SNL responsive to my changing needs	☐	☐	☐	☐	☐	☐	☐
Customer's Culture/Values Reflected	9. SNL respected customer's culture/values in interactions	☐	☐	☐	☐	☐	☐	☐
	10. SNL considered customer's culture/values in work proposed and performed	☐	☐	☐	☐	☐	☐	☐
Communication	11. Contacts at SNL easy to reach when necessary							
	12. Letters, proposals, reports, etc. clearly written	☐	☐	☐	☐	☐	☐	☐
Value	13. Products/services costs appropriate for value received	☐	☐	☐	☐	☐	☐	☐
	14. Products/services delivered within negotiated budget	☐	☐	☐	☐	☐	☐	☐

Overall Evaluation

Please rate, by selecting the appropriate number, each item listed below on the scales provided. ***Please select only one rating.***

1. What is your overall level of satisfaction with Sandia National Laboratories' work? Very Dissatisfied Very Satisfied
☐1 ☐2 ☐3 ☐4 ☐5

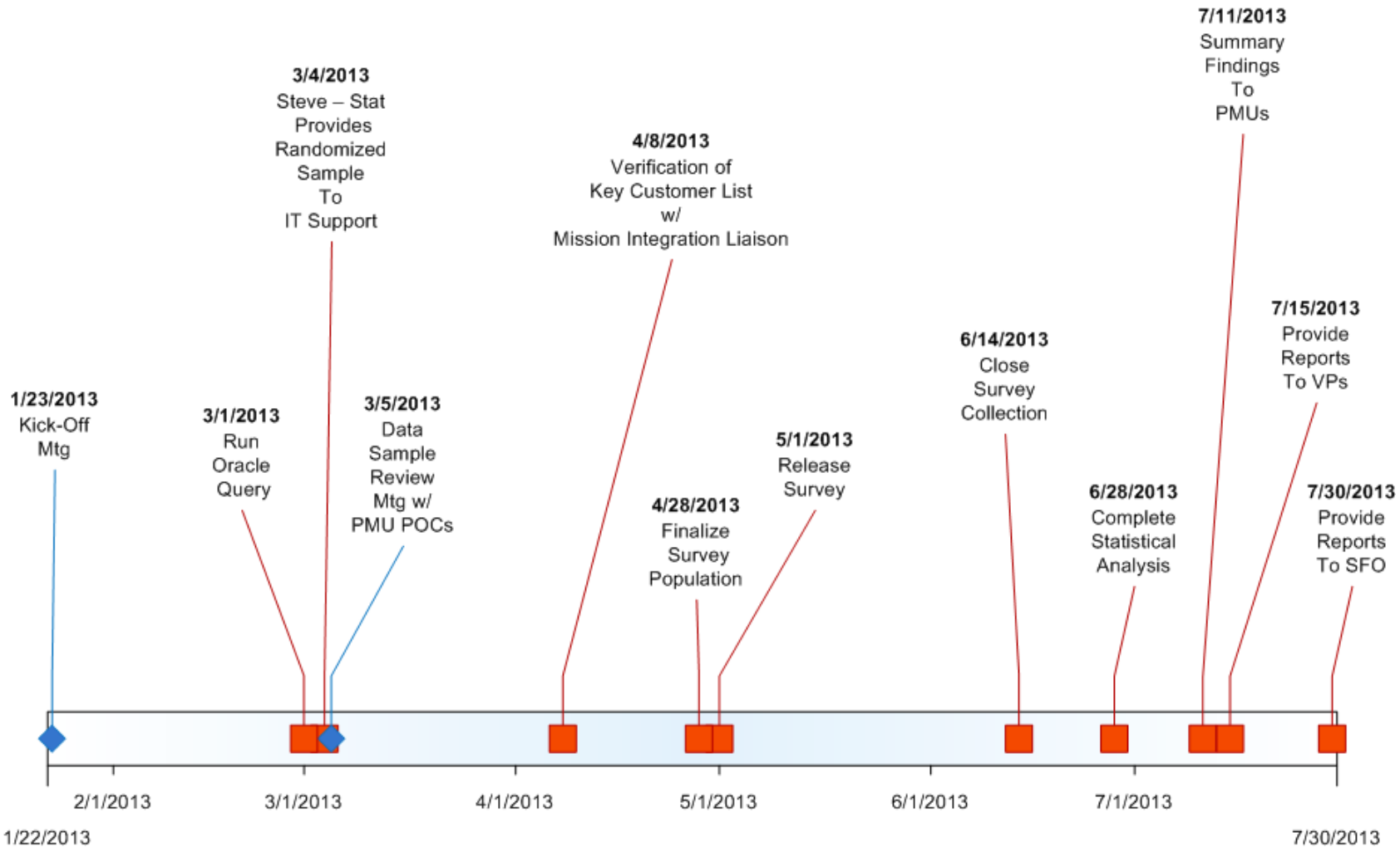
2. Based on our performance, would you continue to work with Sandia National Laboratories?
Unlikely Very Likely
☐1 ☐2 ☐3 ☐4 ☐5

3. Based on our performance, would you recommend Sandia National Laboratories to a colleague or business associate?
Unlikely Very Likely
☐1 ☐2 ☐3 ☐4 ☐5

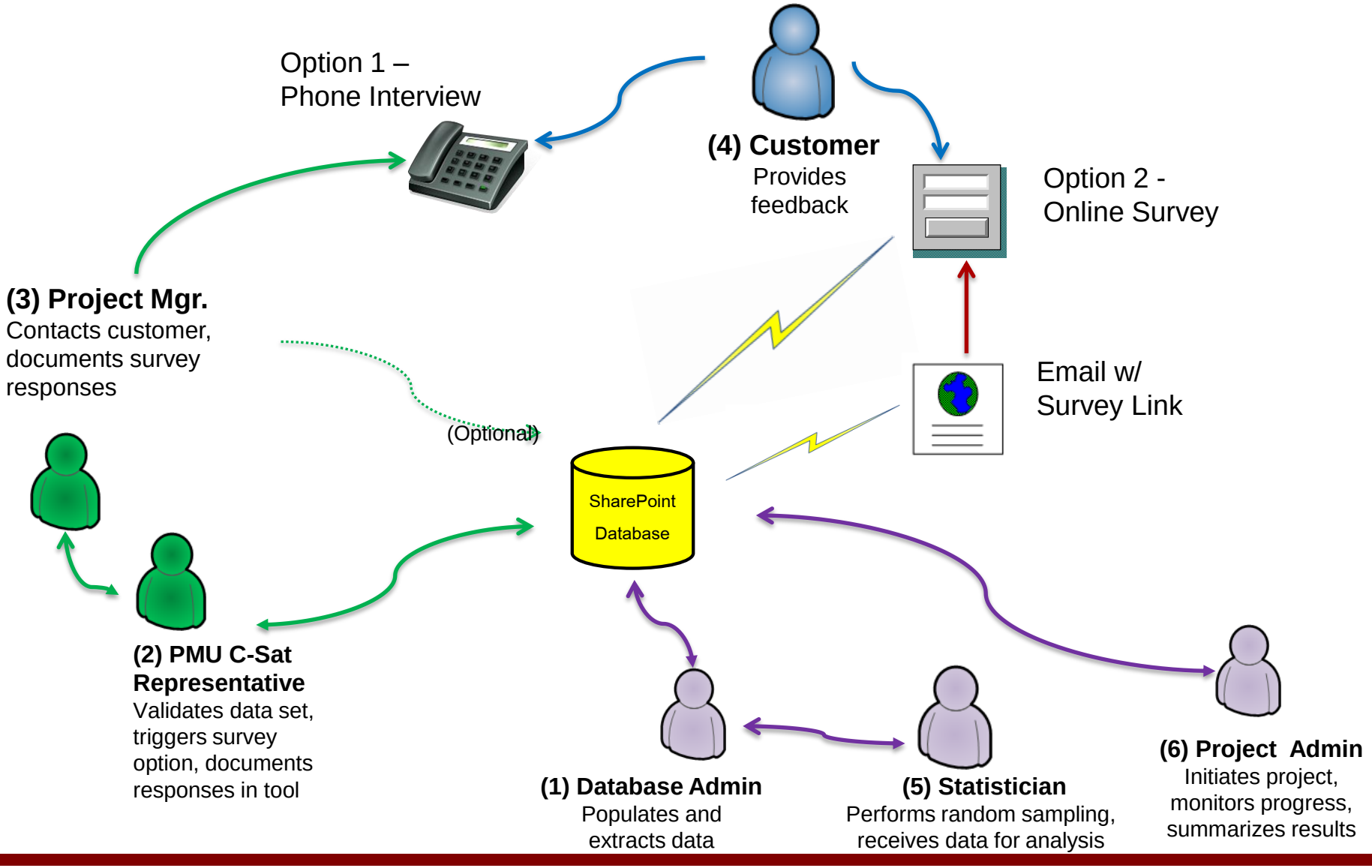
Please comment on Sandia's strengths and areas for improvement:

_____
_____

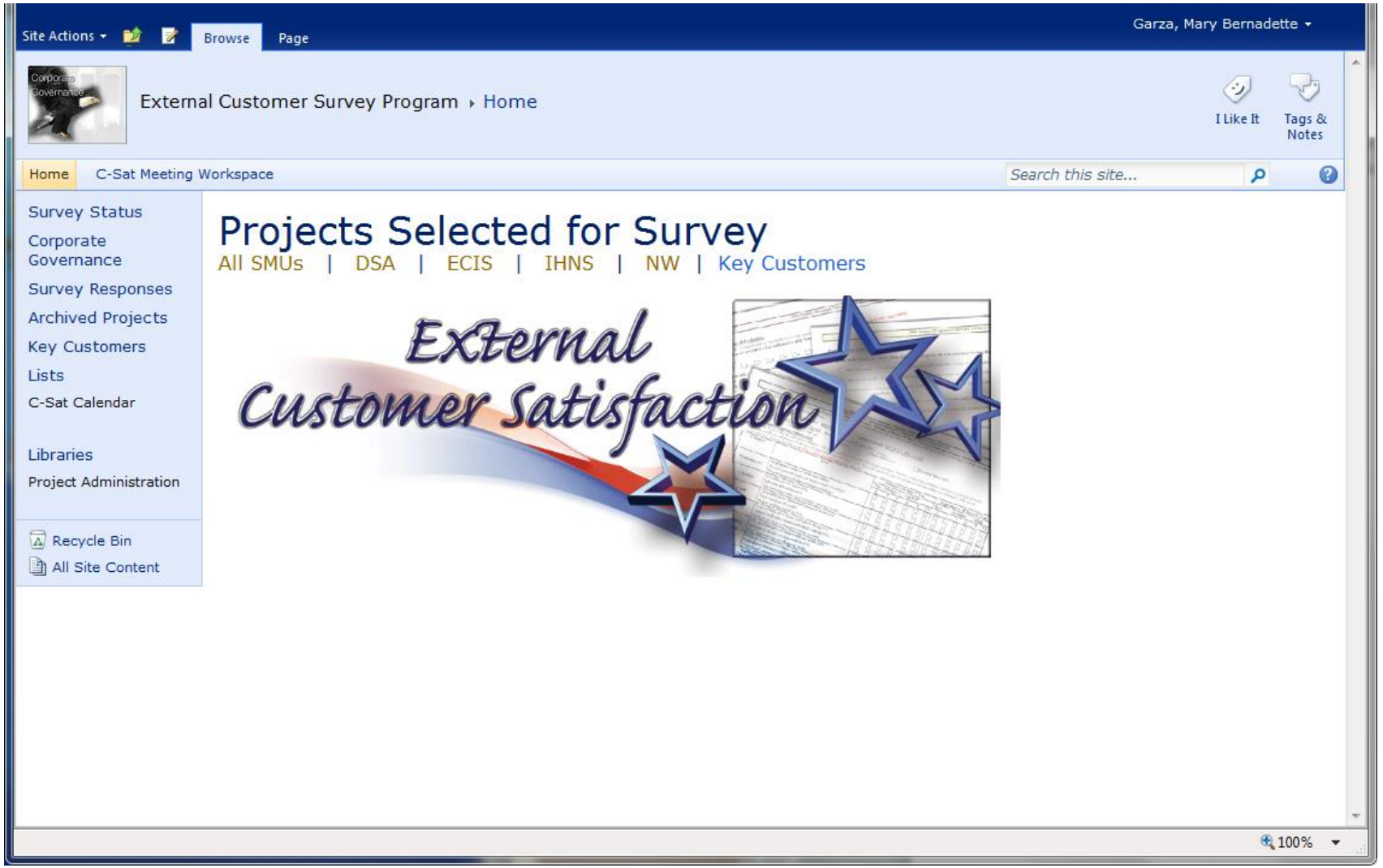
WHEN - Project Timeline Example



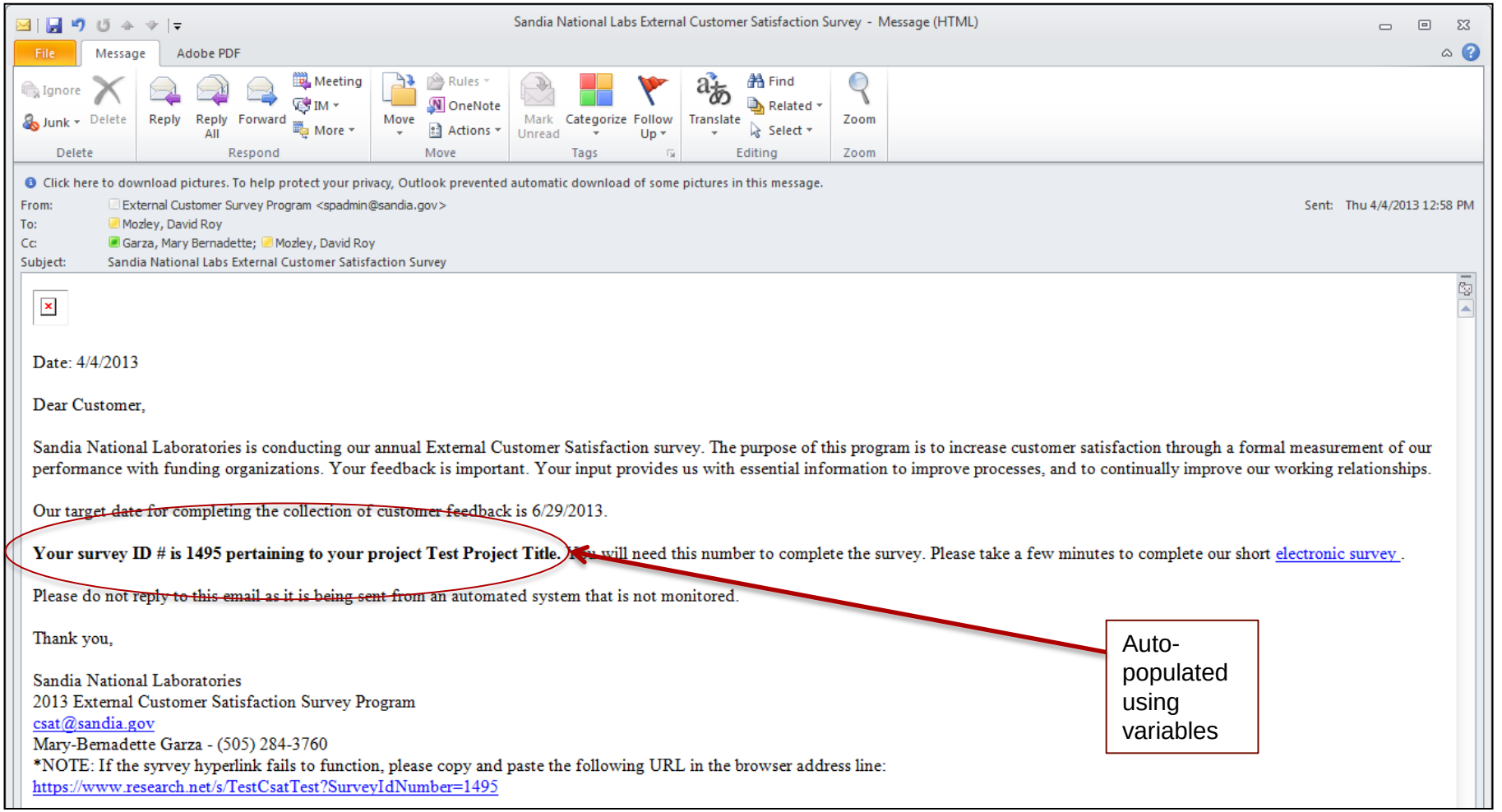
HOW – Survey Process



SharePoint Site



Email Example



PROCESS RESULTS ACHIEVED

Process Results

Survey dates back to 1996 and has gone through several refinements based on best practices and industry standards.

Strategy was effect in reducing number of contacts made to the same customer.

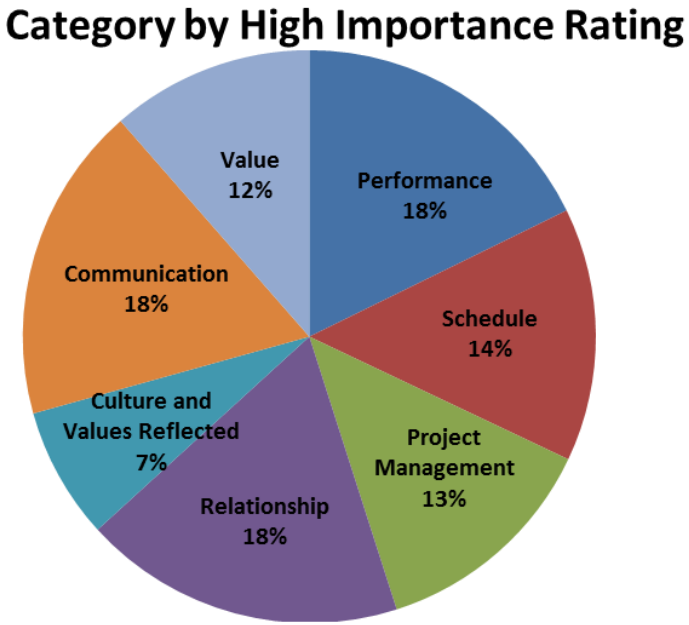
Data collected to-date has provided substantiation of identified issues that are being addressed through our corporate strategic objectives and organizational improvement plans.

Primary Trending indicators

- Quantitative responses
  - Satisfaction scores by category
  - Satisfaction scores by question
- Loyalty index derived from three key questions
- Qualitative analysis of comments referencing strengths and weakness

Import to the customer in FY13

Performance, Communication, and Relationship rank the highest in project customer importance



SUCCESSES

Best Practices

An assessment finding indicated that an approximate ½ of 1% bias did exist for project managers who conducted their own survey interviews. *The bias indicated that Sandia project managers were slightly harder on their own activities, than would have been recorded if someone else conducted the interview*. (2005)

Sandia SFO/DOE representatives identified the survey as "best practice" in DOE. The survey and process were provided to Los Alamos and Lawrence Livermore Labs at their request. (2008)

The Sandia survey and process were identified as "best practice" in Lockheed Martin in assessment findings of DOE Diversity Maturity Model. (2008)

The survey process and methodology was reviewed by the Lockheed Martin Diversity Assessment auditors and identified as "best practice" in Lockheed Martin. The survey and process were provided to two other LM companies at their request. (2009)

Practical Application

Sandia National Laboratories

- Demonstrates our commitment to customer focus and inform decision-making process
- Provides the overall customer perspective by coordinating questions from different stakeholders into one instrument
- Uses statistical tools and expertise to obtain a representative sample for all PMUs to ensure a consistent methodology
- Provides documentation to meet multiple ISO registrations requirements within Sandia
- Affords input for Performance Evaluation Report

SOME CHALLENGES

Process feedback

- PMU offices prefer to do a customized survey and implement the survey at a different time during the fiscal year
- Customers perceive standardized question set as not applicable in some cases
- Survey results are not visibly tied to specific organizational corrective actions
- Single instrument does not appear to be fulfilling diverse internal needs
- Process is not perceived as providing sufficient actionable feedback

CONTINUAL IMPROVEMENT

Continual improvement

- Conduct a Structured Improvement Activity using Lean Six Sigma techniques
- Improve the customer feedback collection process and corresponding mechanisms
- Develop an interim product for FY14

DIALOG & EXCHANGE

BACKUP SLIDES

Query Criteria

- Eliminate records tied to funding other than from a funding customer (IPA's, etc.)
- Projects that are too new
- Projects that are too old
- Closed projects
- On hold for closing
- Funding received from royalties

Quest for Effective and Sustainable Performance at DOE

Bottom Line Up Front

DOE and its predecessor organizations have repeatedly experienced significant operational failures costing lives, wasting billions of dollars and damaging its credibility with stakeholders.

Study after study has cited dysfunctional management and poor organizational culture as primary causes. In other words—leadership failures.

DOE's traditional reaction has been to reorganize. This strategy has proven ineffective, if not detrimental.

In order to break the cycle, DOE must fundamentally change how it thinks about itself and how it does business. To begin with, everyone in the organization must

- Commit to becoming an enterprise
- Embrace a strong set of core values and standard management principles
- Value the workforce and lead it effectively
- Implement a functioning enterprise management system that provides accountability

This transformation will require a significant effort over many years.

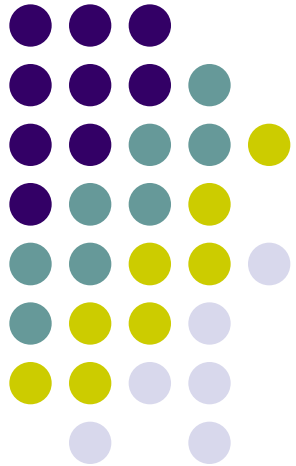
Questions to consider before embarking:

1. Can the Department (and nation) accept the continued failures if DOE does not change?
2. Can the Department generate and sustain the leadership commitment required to improve, especially in the career SES?

What can Metrics do for Assessments

March 18, 2014

Annette MacIntyre, LLNL Metrics Manager



Agenda

- Scope
- Basic Definitions
- Basic Elements
- Basic Processes
- Metric Context
- Metric Types
- Metric Input to Functional Assessments
- Metric Input to Program Assessments
- Path Forward
- Final note…

Discussion is encouraged through out the presentation

Basic Definitions

ASSESSMENTS

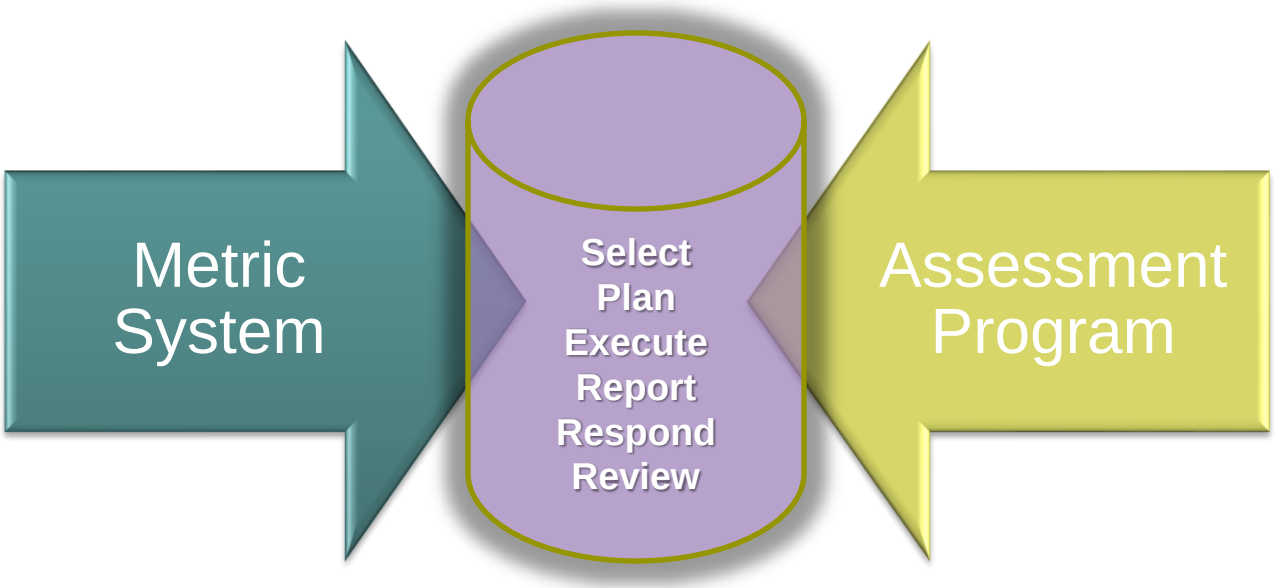
The process by which an organization, team or individual evaluates its performance, compliance and effectiveness compared to established expectations, such as goals, requirements, procedures, instructions, or other applicable documents.

METRICS & MEASURES

A metric is a comparison of a value (descriptive attribute or characteristic of an object) to an expected result, target, or goal and its resulting performance threshold. A measure is the value. Metrics are generally incorporated in a metric system.

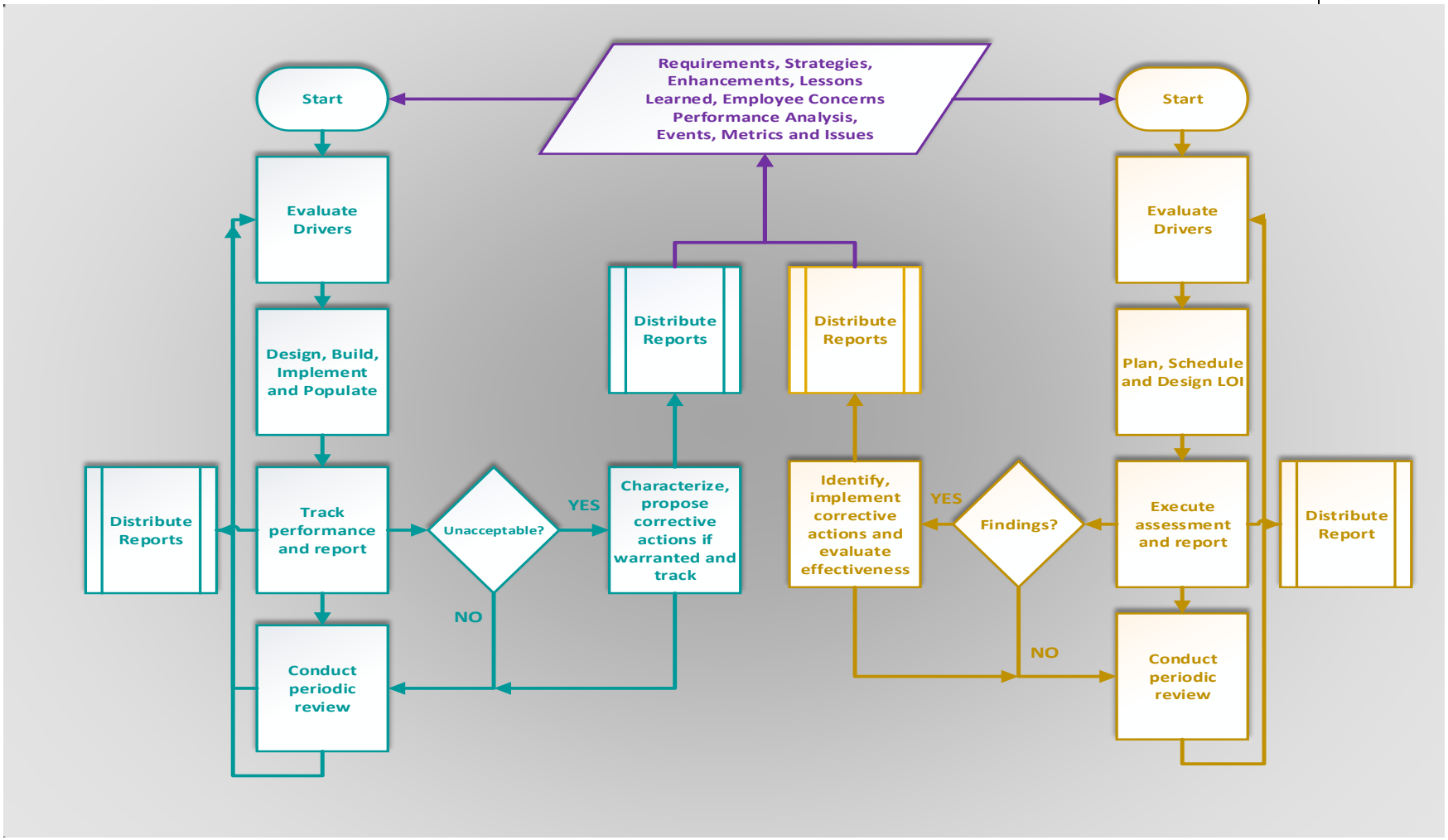
Can be function- or program-oriented and can address processes or capabilities

Basic Assessment and Metric Elements



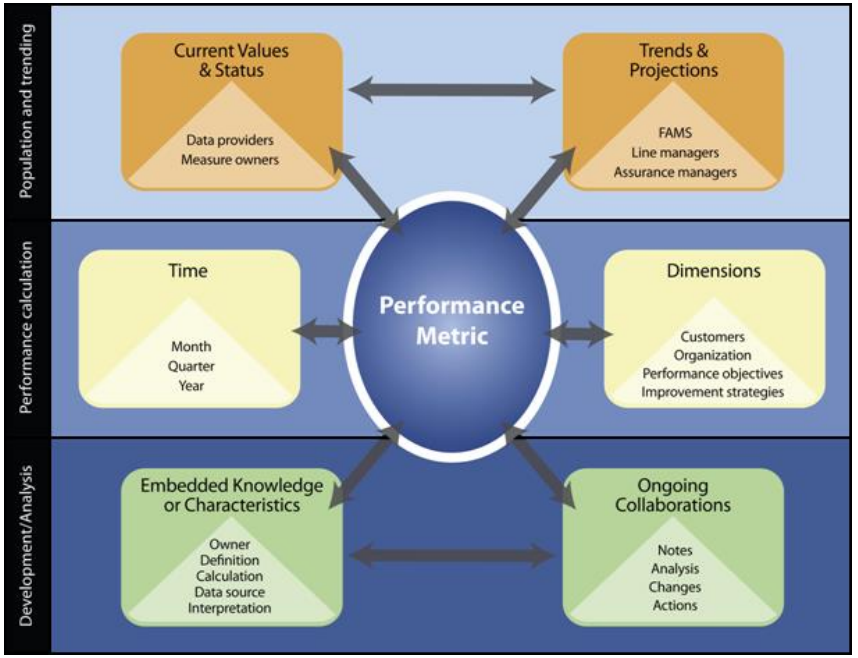
- Drivers include requirements, operational efficiencies, past performance, risk and capability enhancements
- Responses include corrective actions, improvement programs and functional enhancements
- Reviews include direct and indirect analysis of effectiveness

Basic Assessment and Metric System Processes

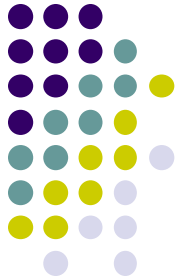


Metric Performance must always be placed context

1. Needs meaningful comparatives
2. Needs trend and characterization information to take action
3. Needs timely review against changing objectives



Basic Metric Types



RESULT FOCUS

- Funds In
- Customer satisfaction survey
- Skills hired/retained
- Patents issued

Quality
Timeliness
Cost
Number
Rates
Ratios

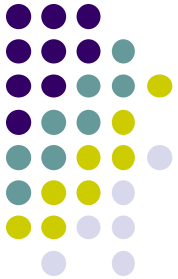
PROCESS-CAPABILITY FOCUS

- Defect reduction
- Customer growth/return rate
- Staff Agility performance
- Technology Deployment rate

INPUTS | ACTIVITIES | OUTPUTS | OUTCOMES

CREDIT: Bob Frost, *Measuring Performance (2000)* and *Designing Metrics (2007)*

Example Metric Input to Functional Assessments



Procurement Objective Matrix

- Single function
- Process well understood
- Scored system consistent across NNSA
- Captures overall performance
- Assessments conducted in high risk-poor performance areas

Research Projects Work Planning and Control

- Integrated functions
- Processes vary greatly
- Common elements but implemented site by site
- Captures some indicators and analytics
- Assessments conducted to assure overall performance as well as high risk-poor performance areas

Procurement Objective Matrix Balance

Metric system addresses requirements and overall performance

Procurement objective Matrix Chart- Balance Scorecard Measures Tier 1

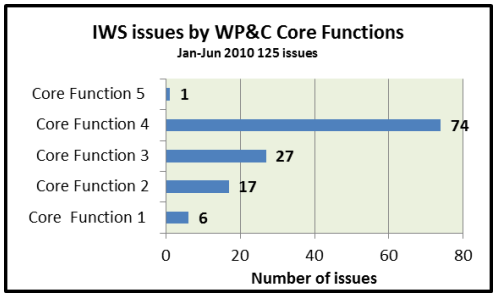
	Procurement Quality Index (See Tier 2)	Socioeconomic Goals Index (See Tier 2)	Customer Satisfaction	Cost to Spend Ratio	Information Availability
Performance =	1,000	960	95.5%	2.77%	99.9%
Outstanding = 10	≥900	≥900	≥92.0%	≤1.90%	≥95.0%
Good = 8	800 - 899	800 - 899	85.0% - 91.9%	1.90% - 2.40%	88.0% - 94.9%
Acceptable = 6	600 - 799	600 - 799	80.0% - 84.9%	2.41% -2.65%	82.0% - 87.9%
Caution = 3	400 - 599	400 - 599	75.0% - 79.9%	2.66% - 3.00%	76.0% - 81.9%
Unsatisfactory = 0	<400	<400	<75.0%	>3.00%	<76.0%
Scores =	10	10	10	3	10
Weights =	40	30	15	10	5
Values =	400	300	150	30	50
				BSC Measures Total =	930

Assessments supplement potential areas of risk

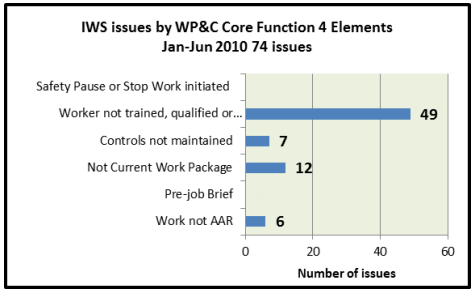
Concern over the independence of the assessing staff motivated 6 sub-contract allowable cost audits to be planned for FY14

Work Planning and Control Balance (Research Projects)

Metric system provides indicators and analytics



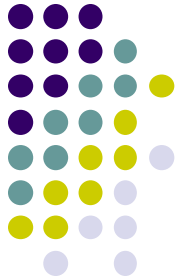
CF1: Define Work
CF2: Analyze Hazards
CF3: Develop Controls
CF4: Perform Work
CF5: Provide Feedback



Assessments address requirements and overall performance

- Assessments, events, worker feedback and employee concerns supported the need for an improved WP&C framework
- DOE orders and PEPs are requiring more rigor and formality
- New framework must include management of *all* risk, useful tools for workers in the actual performance of work, and scheduling, prioritization and deconfliction of multiple workgroups

Example Metric Input to Program Assessments

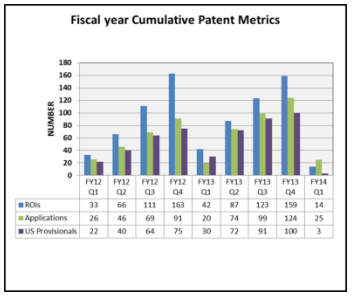


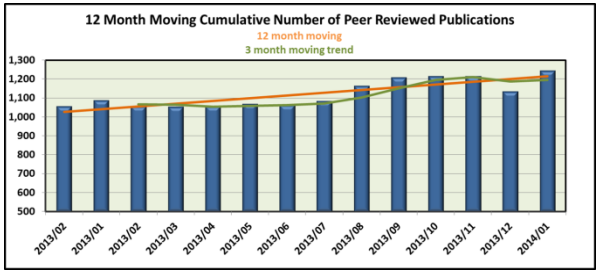
Science, Technology and Engineering Excellence

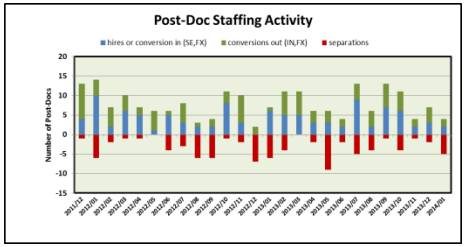
- Complex functions and dependencies
- Causality tenuous
- Specifics become program and locale dependent
- Captures some indicators and analytics
- Assessments conducted to review overall longer term capability

Science, Technology and Engineering Excellence Balance

Metric system provides indicators and analytics



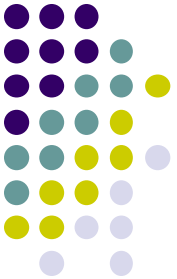




Assessments address capabilities

- Two discipline capability assessments in respect to strategic mission growth were recently conducted
- One recommended the expansion of *System Engineering* approaches and thinking to smaller projects; the other recommended refining target market strategies
- Both recommended defining success metrics!

Path Forward



- Expand or change scope?
  - What can Assessments do for Metrics?
  - Tradeoffs between metrics and assessments
  - Integrating Metric Systems and Assessment programs
- Form task group?
  - Best practices exchange
  - Benchmarking
- Develop EFCOG guideline?
  - Process oriented
  - Include examples
  - Include lessons learned

On a final note….

Held: DOE/NNSA Need "More Agile" Relationship With Nat'l Labs

'I Don't Like Metrics'

Held said a focus on metrics and requirements had taken its toll on the labs. "I'm a CIA ops guy. I don't like metrics," he said. "Even the word makes me feel kind of uncomfortable. And if we use kind of a metrics approach to drive national laboratories, we will be driving the national laboratories toward lower, lower risks; and we will be driving them to produce widgets." He added: "We don't need them to produce that. We need them to really think big and take on these big challenges." Previously, he said a focus on high fees at the labs was not serving as a motivator for contractors running them, suggesting a move to management of NNSA sites in the "public interest" that would involve significantly less fee. **A new, "more agile" governance structure would allow the labs to assume their unique role in the DOE complex,** Held said. "I don't think we need national laboratories to aspire to be the low cost producer of widgets. I don't think that's why national laboratories exist," he said. "**The low-cost producer role belongs to the American private sector. The American private sector knows how to do that very well. What we [need] national laboratories for [,] is to take on really hard technical challenges that are facing our nation and our national policymakers—take on high risk, hard problems that involve too much risk for the private sector to honestly support."**

Nuclear Security Monitor February 28, 2014

DOE/NV/25946--2011

Assessment Feedback Process

Jason Prestridge
National Security Technologies, LLC (NSTec)
Quality and Performance Improvement Division

This work was done by National Security Technologies, LLC, under
Contract No. DE-AC52-06NA25946 with the U.S. Department of Energy.

Topics

- Why do we need the Feedback Process?
- History of our Feedback Process
- Feedback Process Overview
- Metrics
- Benefits
- Applicability to other processes

Why Do We Need The Assessment Feedback?

- Expectation
  - QA Requirements: Managers assess their processes and identify and correct problems that hinder the organization from achieving its objectives.
  - CAS Requirements: Rigorous, risk-informed, and credible self-assessment and feedback and improvement activities. Assessment programs must be risk-informed, formally described and documented, and appropriately cover potentially high consequence activities.

- What should the assessment report include and how much detail is needed?
  - Purpose, Scope, Executive Summary, Assessors, Assessment Criteria, Approach (interviews, document reviews, observations), and List of Issues
  - Third Party Perspective!

History of the Management Assessment Feedback

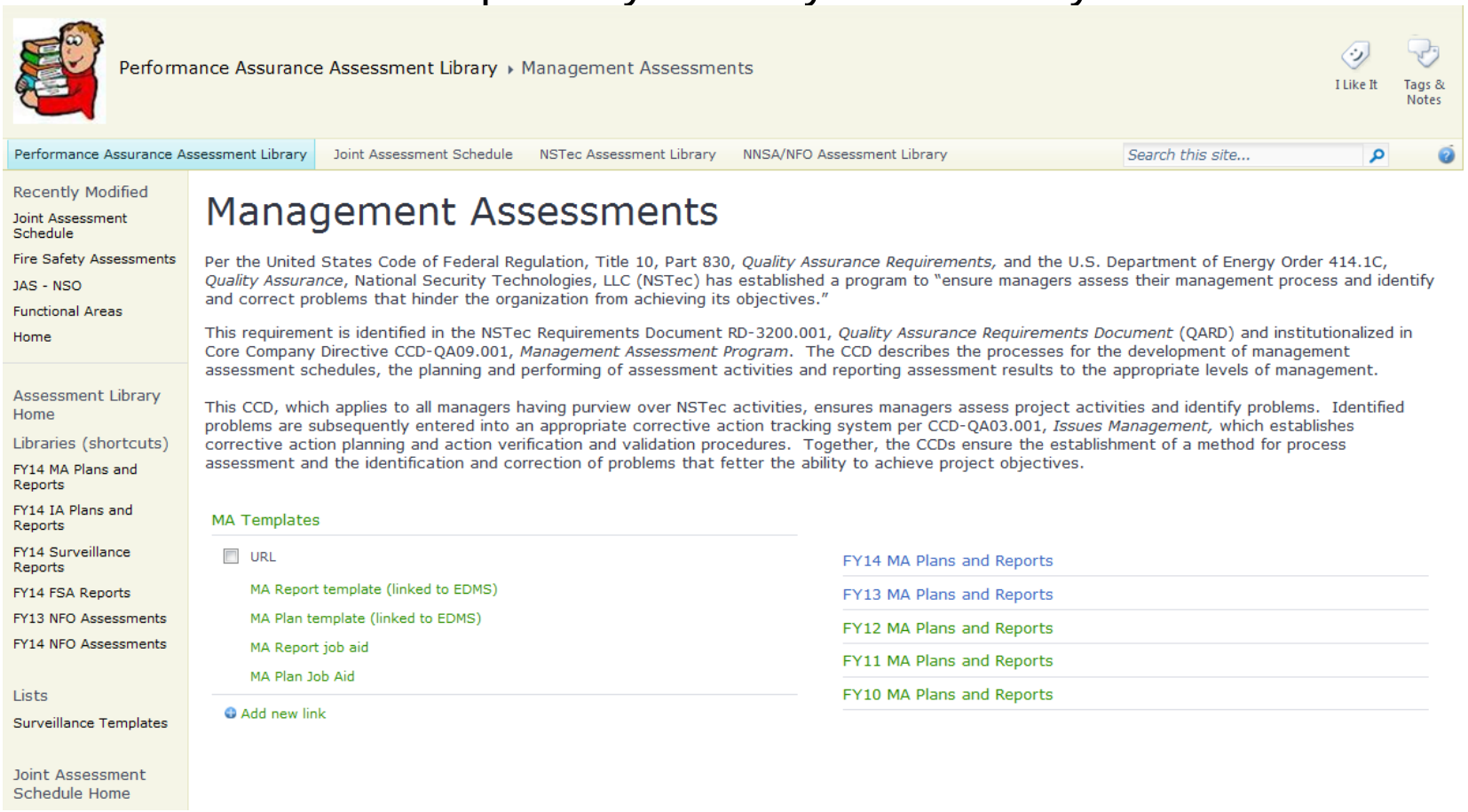
- Sometime in 2005 Management Assessment Feedback process was implemented
  - Benchmarked other DOE sites to see what mechanisms were being used to improve the quality of assessments
  - One person was assigned to review all management assessments
  - Feedback criteria fit into one of 3 categories: Met, Needs Improvement, and Not Met
  - Feedback sheets were provided to the Senior Management
- In 2006 the Feedback was scaled down to just the Line Managers and Assessors
- In 2008 the Feedback data was transposed into an MS Excel worksheet to see how well we were performing
- In 2011 we discovered technology

Change In Approach

- Core group of Independent QA Lead Assessors perform the feedback as Mentors
  - Disadvantages
    - Beauty is in the eye of the beholder and not everyone has the same eye
    - Different disciplines seem to provide more critical feedback on areas where they are more knowledge
  - Advantages
    - Keeps the Independent QA Lead Assessors informed of companywide performance
    - Better use of limited resources
- Changed to a numbering system vs. Met/Needs Improvement/Not Met
  - Line Managers and the Assessment Team Leaders wanted to know if they've got a passing grade
  - Some criteria is more important that others and the numbering systems allows a weighted value to be applied to criterion

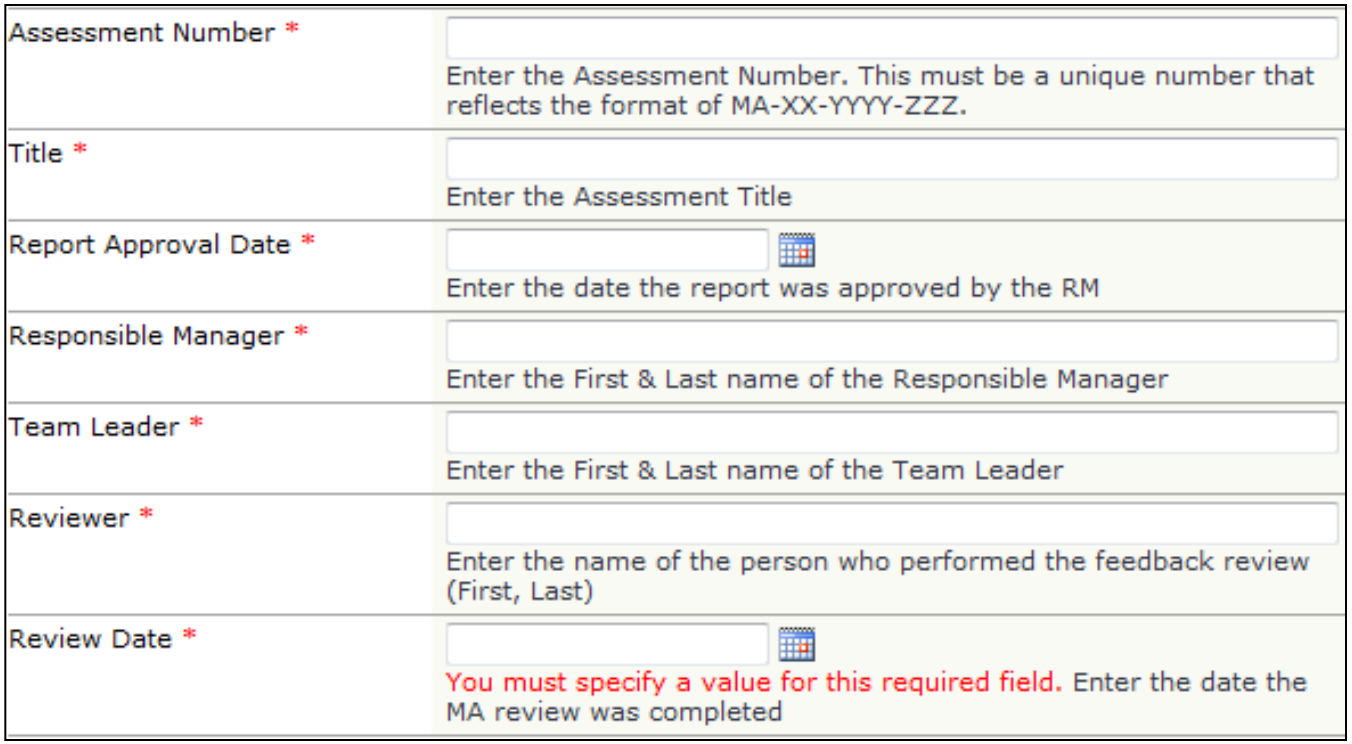
Centralized Assessment Library

- SharePoint (or any other electronic) based library provides automatic notifications of completed assessments
- Provides a central repository for easy accessibility



Feedback Database

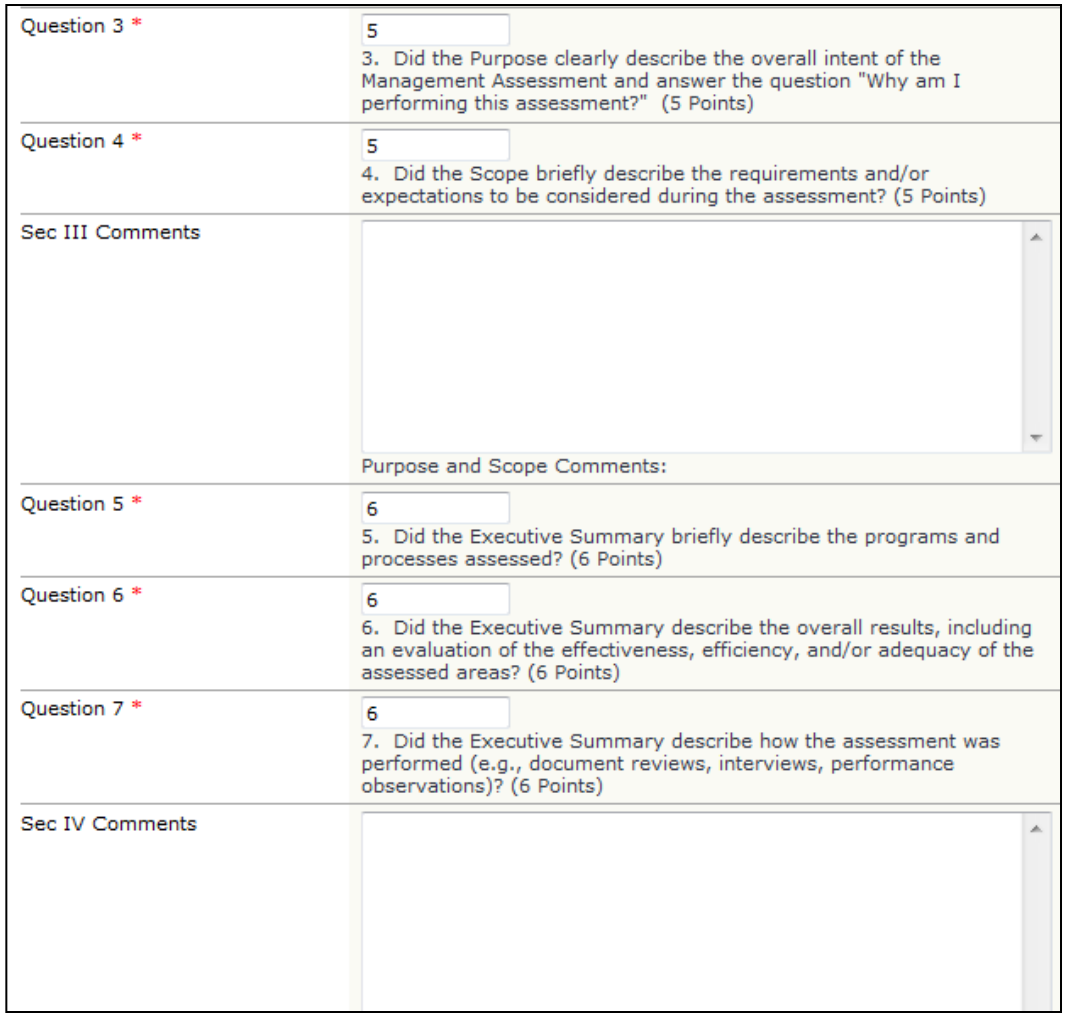
- SharePoint based dataset is used to capture Feedback information
- Each entry is tied to the unique assessment number and other collected data (e.g. dates, assessors, and feedback reviewers) supports tracking



Assessment Number *	Enter the Assessment Number. This must be a unique number that reflects the format of MA-XX-YYYY-ZZZ.
Title *	Enter the Assessment Title
Report Approval Date *	Enter the date the report was approved by the RM
Responsible Manager *	Enter the First & Last name of the Responsible Manager
Team Leader *	Enter the First & Last name of the Team Leader
Reviewer *	Enter the name of the person who performed the feedback review (First, Last)
Review Date *	You must specify a value for this required field. Enter the date the MA review was completed

Feedback Database (cont.)

- A Mentor reviews the report against the criteria provided in the report template and documents in the feedback database.
- **IF** the score for a particular criterion is less than the maximum possible points, **THEN** provide comments in the corresponding Comments field that provides suggestions for improved performance.
- We encourage the Mentors to provide positive comments as well as negative.



Sharing the Feedback

- A macro enabled MS Excel workbook is connected to the feedback dataset
  - The pulls the data from the dataset into a formatted report
  - The report is exported into a portable document file (pdf)
  - A canned email is generated and the pdf file is attached

Prestridge, Jason

Subject: Management Assessment Feedback
Attachments: MA-12-AXXX-XX1.pdf

As part of the overall effort to enhance the MA program, the Quality and Performance Improvement Division will continually review the majority of completed MAs against the criteria described in the MA report, checklist, and instructions template and governing directive CCD-QA09.001, Management Assessment Program. Feedback will be provided to Responsible Managers and Team Leaders regarding how well we believe their MA reports meet a set of standard expectations. The set of standard expectations used as the basis for the review were derived from a variety of industry and U.S. Department of Energy complex best practices and have been incorporated into the MA report, checklist, and instructions templates available for use at: https://website.htm.

Unless specifically called out in the feedback, you are not required to take any action on our comments; however, we believe that their consideration and implementation into future assessment efforts would enhance overall performance and customer satisfaction.

We are available to provide mentoring and training in management assessment techniques and documentation at your request. If you have any additional questions, please feel free to contact ????? at ???-???-????.

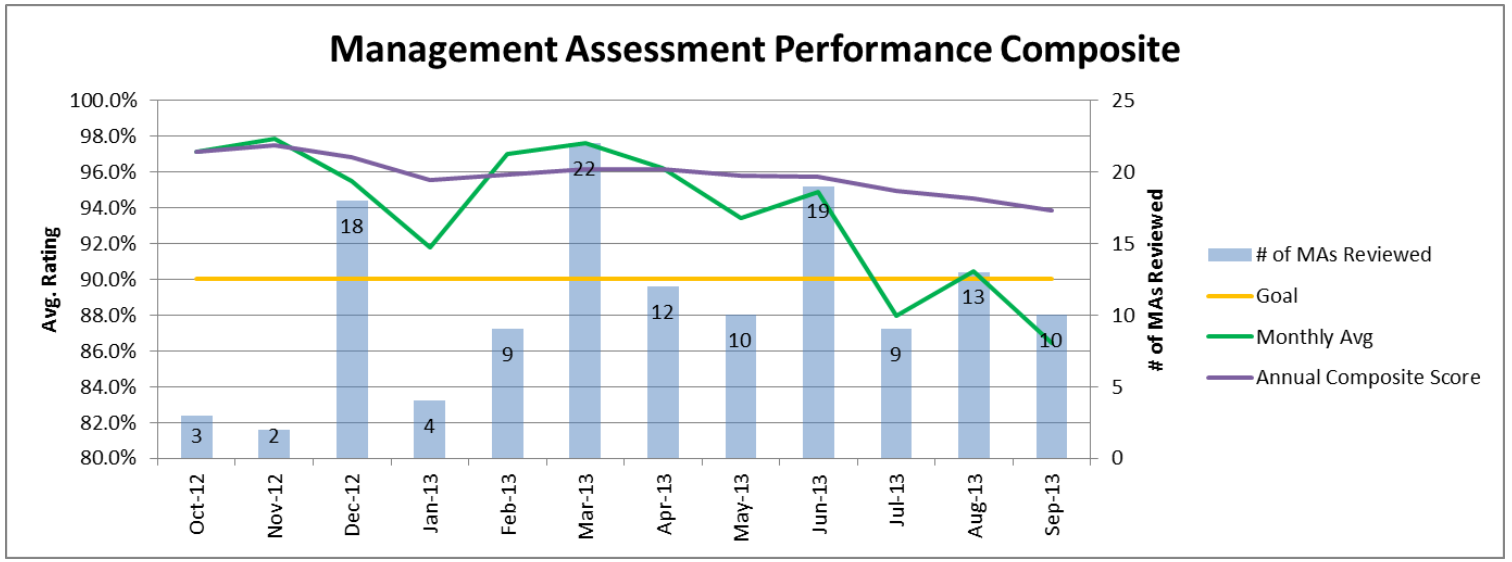
AGEMENT ASSESSMENT FEEDBACK TEMPLATE

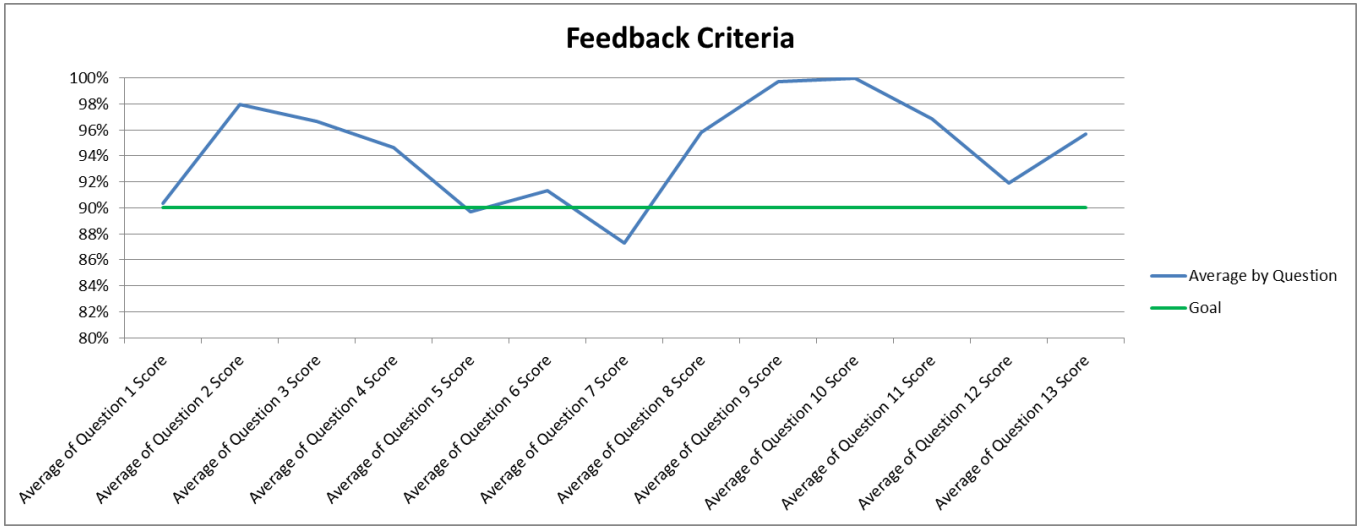
Rev. 7, 11/11

raining Programs for X-Ray and Laser Operations	Assessment Number:		MA-12-AXXX-XX1
	Report Approval Date:		3/7/2012
	Reviewer/Date:	0	03/08/12

n / Criteria / Points	Meets Expectation	Needs Some Improvement	POINTS	
ort? (3 Points)	X		3	
			Subtotal:	3
ent of the Management Assessment and answer the (5 Points)	X		5	
s and/or expectations to be considered during the	X		5	
			Subtotal:	10
e programs and processes assessed? (6 Points)	X		6	
ll results, including an evaluation of the effectiveness, (6 Points)		X	3	
assessment was performed (e.g., document reviews,)	X		6	
ication of any issues? (6 Points)		X	3	
Comments: *Q5: A clear, brief statement regarding your evaluation of the adequacy or effectiveness of the training programs should be included in the Ex Summary. Q6: Identified issues should be mentioned in the Ex Summary. The intent of the Ex Summary is that is could stand alone from the rest of the report and still contain the pertinent information that sr. mgmnt. will need.*			Subtotal:	18

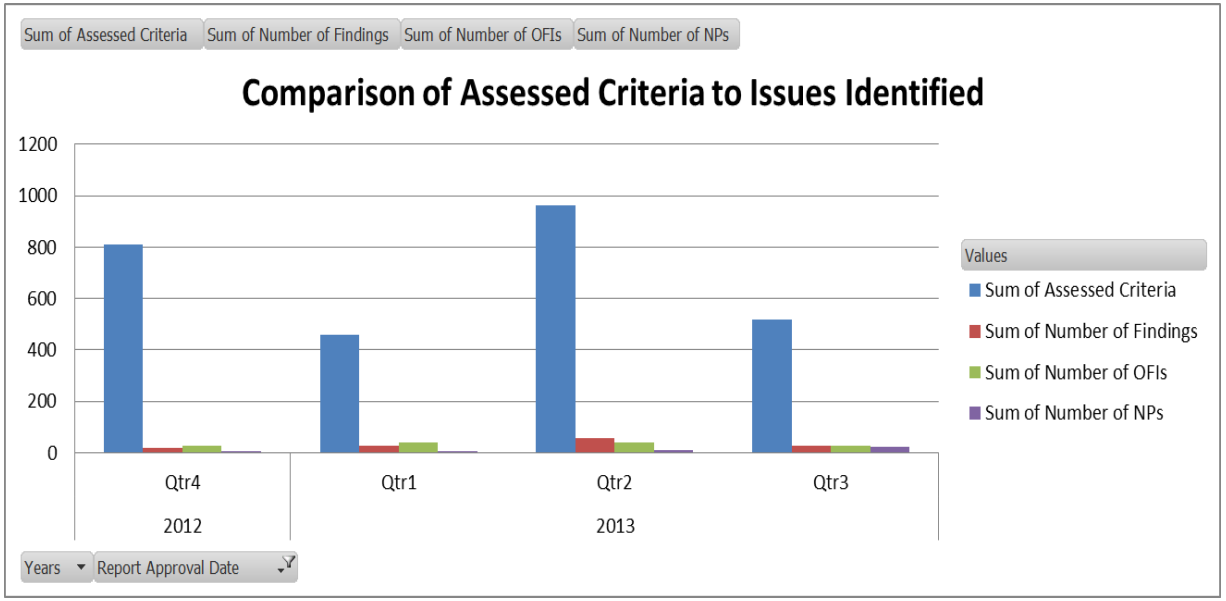
Metrics


Management Assessment Performance Composite
Avg. Rating
# of MAs Reviewed
100.0%
98.0%
96.0%
94.0%
92.0%
90.0%
88.0%
86.0%
84.0%
82.0%
80.0%
25
20
15
10
5
0
3
2
18
4
9
22
12
10
19
9
13
10
Oct-12
Nov-12
Dec-12
Jan-13
Feb-13
Mar-13
Apr-13
May-13
Jun-13
Jul-13
Aug-13
Sep-13
# of MAs Reviewed
Goal
Monthly Avg
Annual Composite Score


Feedback Criteria
100%
98%
96%
94%
92%
90%
88%
86%
84%
82%
80%
Average of Question 1 Score
Average of Question 2 Score
Average of Question 3 Score
Average of Question 4 Score
Average of Question 5 Score
Average of Question 6 Score
Average of Question 7 Score
Average of Question 8 Score
Average of Question 9 Score
Average of Question 10 Score
Average of Question 11 Score
Average of Question 12 Score
Average of Question 13 Score
Average by Question
Goal

Potential for Collecting Other Data

- # of Issues (Findings and OFIs) compared to Assessment Criteria

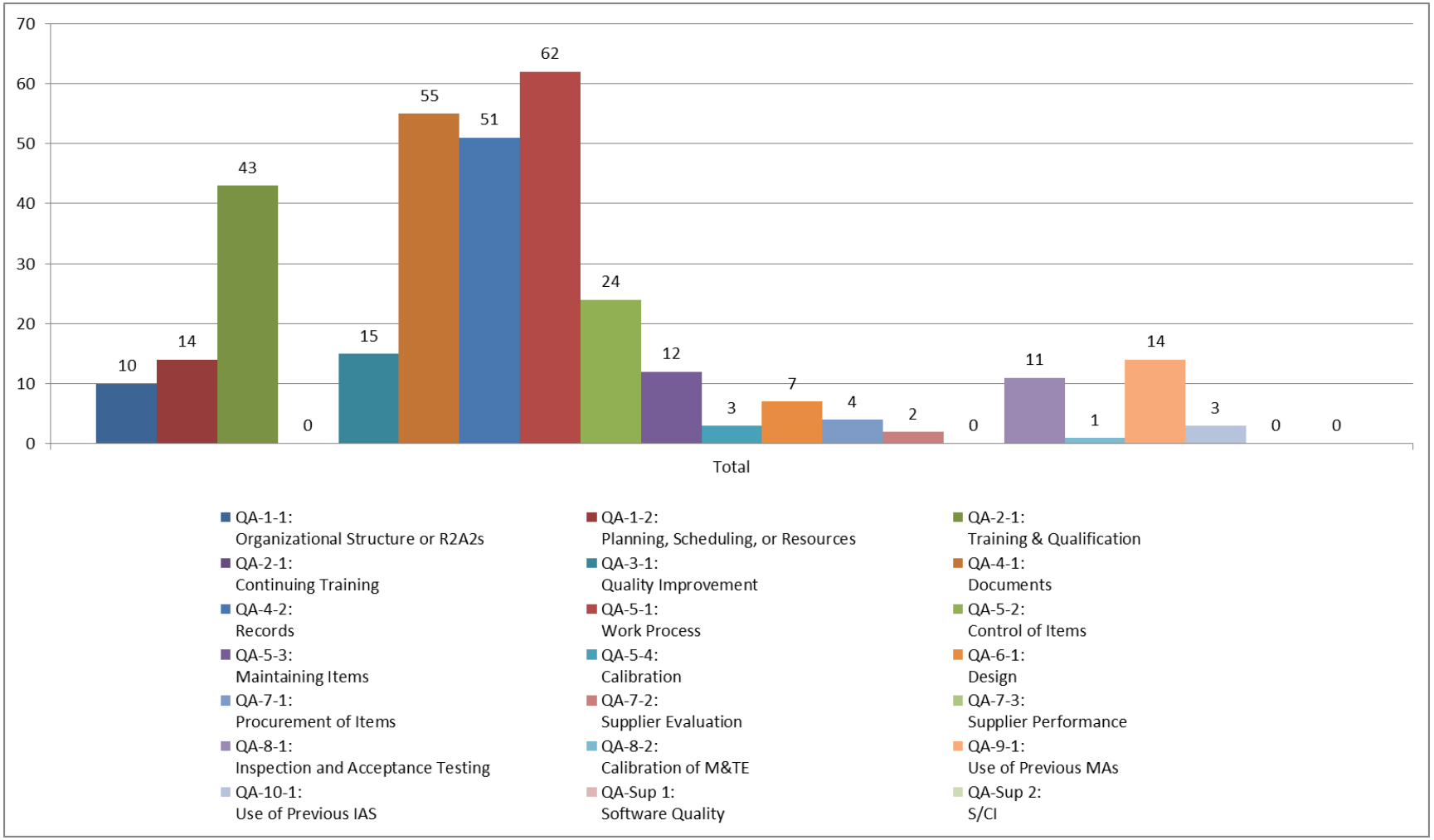


Multi-Year Comparison

FY12 - FY13	Assessment Number Difference	Finding Rate Difference	OFI Rate Difference
Oct	5	0.2%	2.1%
Nov	1	131.9%	19.4%
Dec	5	6.3%	0.7%
Jan	4	9.6%	3.3%
Feb	3	4.2%	-4.5%
Mar	16	3.5%	1.4%
Apr	-5	-3.9%	5.3%
May	2	-3.9%	0.2%
Jun	12	3.0%	5.2%
Jul	10	2.3%	0.8%
Aug	0	1.6%	-6.9%
Sep	29	-5.5%	-5.5%
Total	82	1.5%	0.6%

Potential for Collecting Other Data (cont.)

- Applicable QA Criteria



What's The Benefit

- Competition among organizations/assessors for highest quality rating
- Feedback is appreciated by the line organizations
- Improved trending capability
- Validation of assessment program's effectiveness
- Generally improved quality of the assessment reports

Application to other Processes

- Currently Applied
  - Cause Analysis, Extent of Condition, and Corrective Action Planning
- Considering
  - Lessons Learned
  - Performance Metrics
  - Tending and Analysis Reports
- Other Potential Candidates
  - Unreviewed Safety Question Screening
  - Work Package Quality Reviews
  - ????

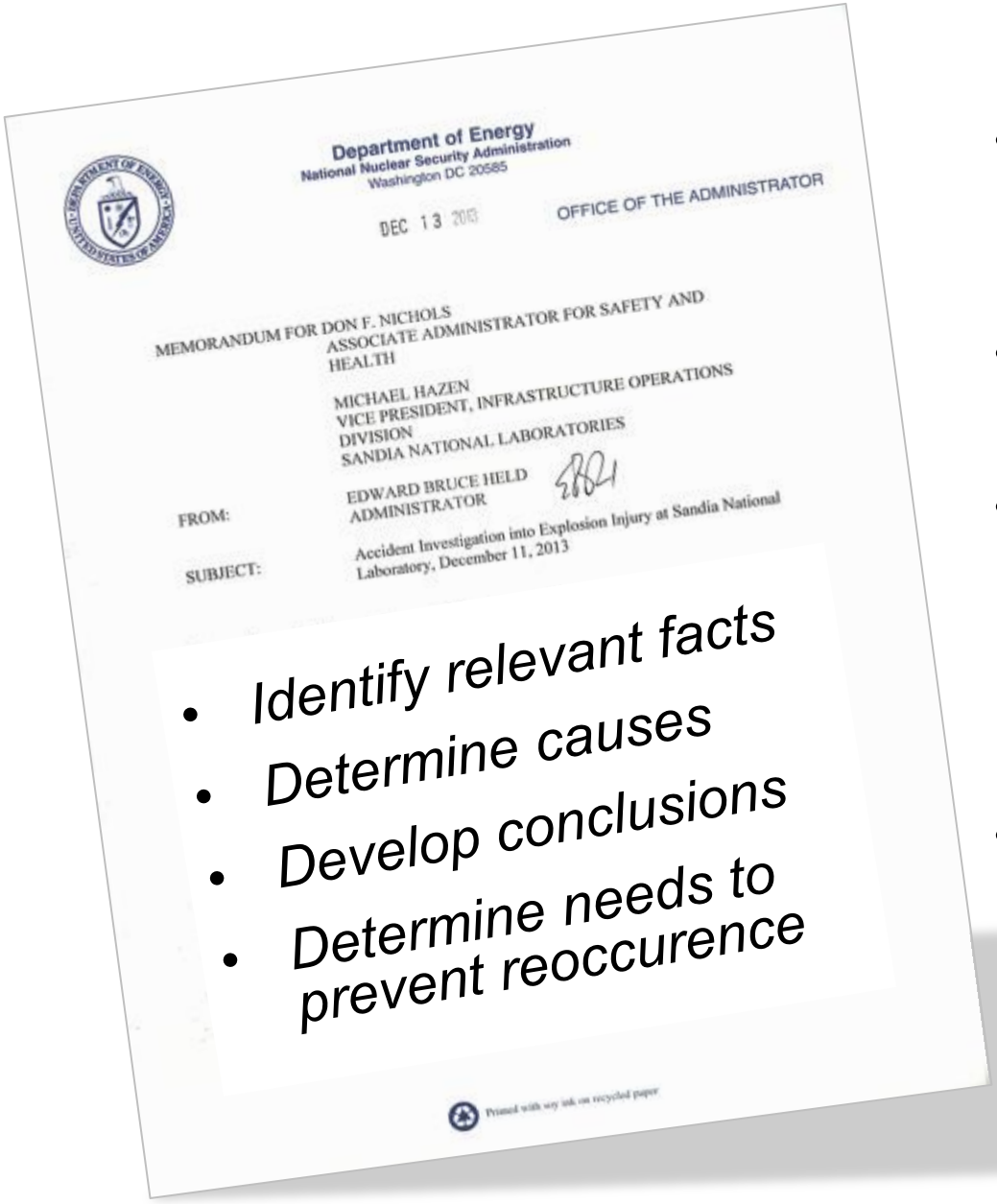
Accident Investigation Board (AIB)

for the Test Site 9920 Event

National Nuclear Security Administration

Sandia National Laboratories

SAND2014-2192 P



TEAM PRINCIPLES

- Maximize the investigation as a **learning experience**, not just for Sandia, but for the entire DOE Complex
- Find **solutions**, rather than blame while respecting individuals
- Review the event using the **principles** of Integrated Safety Management, **Safety Culture**, Human Performance Improvement and **Engineered Safety**
- Demonstrate a **Just Culture** by looking at the event as a result of a system of interoperable parts, not an individual failure, and find the underlying causes, not just ‘surface’ causes

AIB CORE TEAM

Don Nichols
Co-Chair

Michael Hazen
Co-Chair

Carol Adkins
AIB Team Lead

Philip Heermann
TAT Lead

AIB TEAM

Ralph Fevig
Noel Duran
Caren Wenner
Tim Wallace
Mike Lopez
Mike Zamorski
Jef Franchere
Marce Armendariz

SUPPORT TEAM

Bess Campbell-Domme
Pam Maestas
Stephanie Holinka
Robin Johnson

LESSONS LEARNED FROM THE AIB REVIEW

① **Maximized learning opportunities** - Used a joint review format led by senior Federal and Laboratories personnel.

② **Inclusion of management in learning process** - Allowed senior managers to attend end-of-day meetings.

③ **Conclusions with solid technical basis** - Used a Technical Advisory Team.

④ **Inclusion of staff in learning process** - Involved staff in the discovery process and conducted a small engineering review with the project team and an operations review with test personnel.

⑤ **Increased buy-in and personalization** - Discussed the results of the review in small group settings with the personnel directly involved.

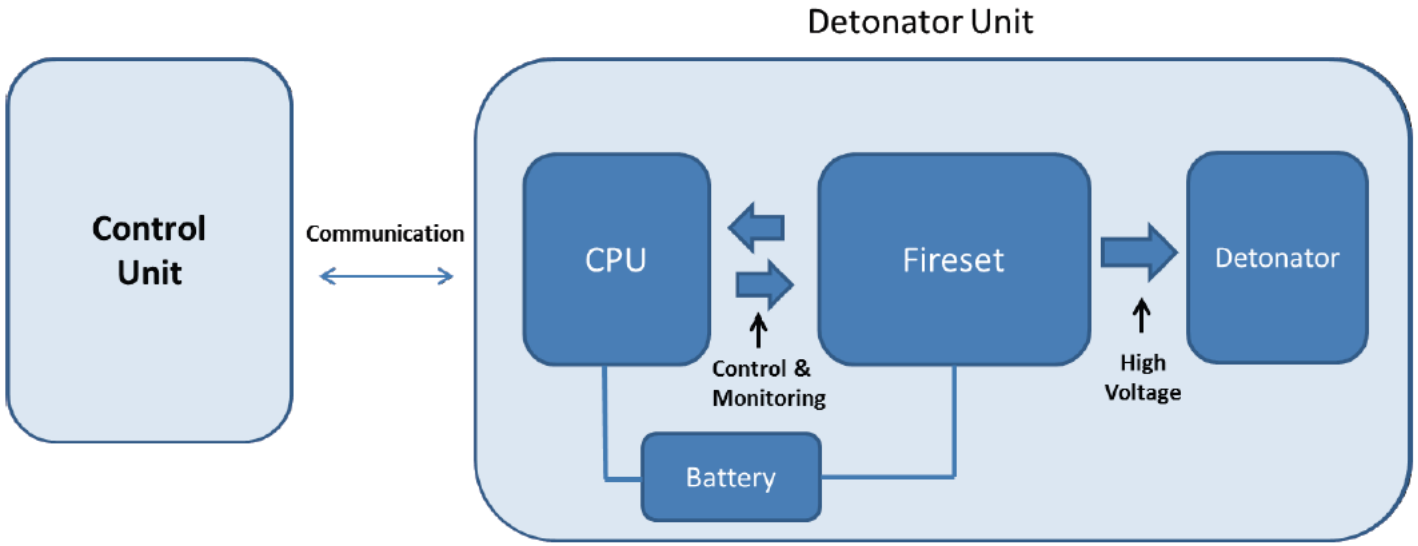
EVENT SUMMARY

During an explosives test at Site 9920, an individual received an injury to their left hand when the detonator in the test unit fired during troubleshooting.

TECHNICAL ADVISORY TEAM (TAT)

Conducted scientific and engineering analysis and provided technical expertise

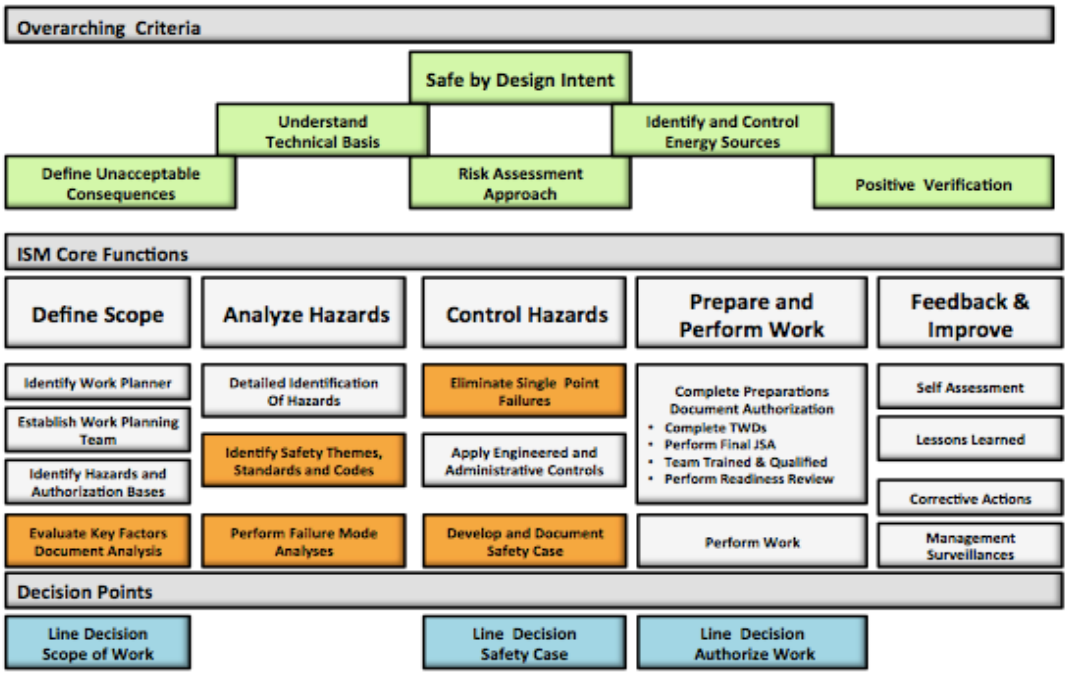
- Review and understand the design
- Determine potential failure paths



DIRECT CAUSE

The direct cause of this accident was a failure in the test device, from mechanical disturbance or electrostatic discharge, which caused an unexpected detonation.

Work Planning & Control/Engineered Safety Framework



CORE CAUSES

① Failure to effectively implement “safe by design” intent

② Insufficient WP&C of Test Operations

③ Lack of integration and understanding of the project

④ Differing safety culture maturity levels

1: FAILURE TO EFFECTIVELY IMPLEMENT “SAFE BY DESIGN” INTENT

Design group did not analyze the development and testing cycle of the device, make the device as safe as they could, and require it to be treated as unsafe while engineered safety protocols were being confirmed.

ENGINEERED SAFETY IN DESIGN

Fireset Design

- Recognized that safety of the system is inherent in the system design, not the design of individual components.
- Made safety recommendations to other component designers, such as the use of the shorting plug.
- Designed in safety features, such as the LED light.

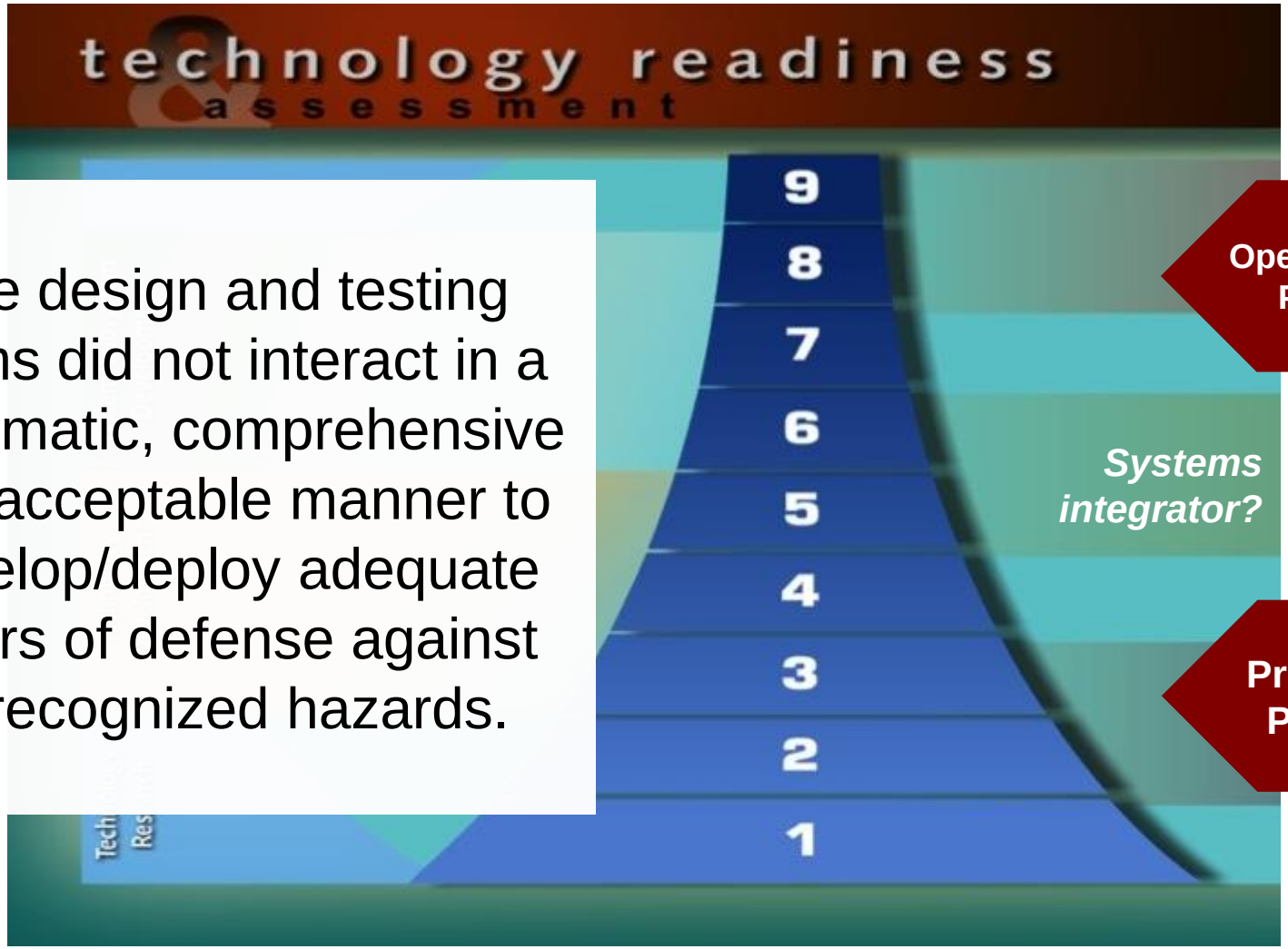
Explosive Assembly

- Applied engineered safety principles when installing the detonator into the test unit.
- Understood the technical basis by learning enough about the test unit to apply three controls to ensure energy would not reach the capacitor.
- Exhibited defense in depth by assuming the detonator would initiate anyway; used a blast shield to protect the worker.

2: INSUFFICIENT WP&C OF TEST OPERATIONS

The operations group accepted and then executed a job that their **existing hazards analysis** and operating procedures did not address, without analyzing the hazard, identifying controls & implementing controls.

3: LACK OF INTEGRATION AND UNDERSTANDING OF THE PROJECT



The design and testing teams did not interact in a systematic, comprehensive and acceptable manner to develop/deploy adequate layers of defense against unrecognized hazards.

4: DIFFERING SAFETY CULTURE MATURITY LEVELS

Sandia's diverse workforce has varying levels of safety practice maturity. Typical approaches to advancing the maturity of safety culture have not been sufficiently tailored to reach all individuals in the workforce, according to their individual needs.

People who think they "get it," but don't

People who don't realize they need it

SANDIA'S PATH FORWARD

- Develop and implement corrective actions to address shortcomings identified by the AIB
- Conduct extent of condition review activities
- Face-to-face discussions with the SNL president and all levels of management
- Engage the External Advisory Board – focus on safety culture and validate the implementation of Engineered Safety

Sustainable Issue Resolution

Presented by: Rita Henins

SMEs: Gary Thompson and Vanessa De La Cruz

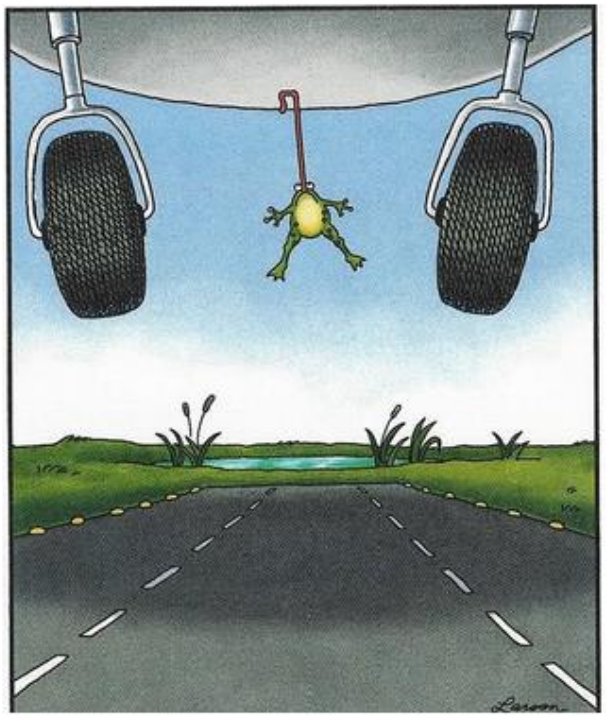
Quality and Performance Assurance Group

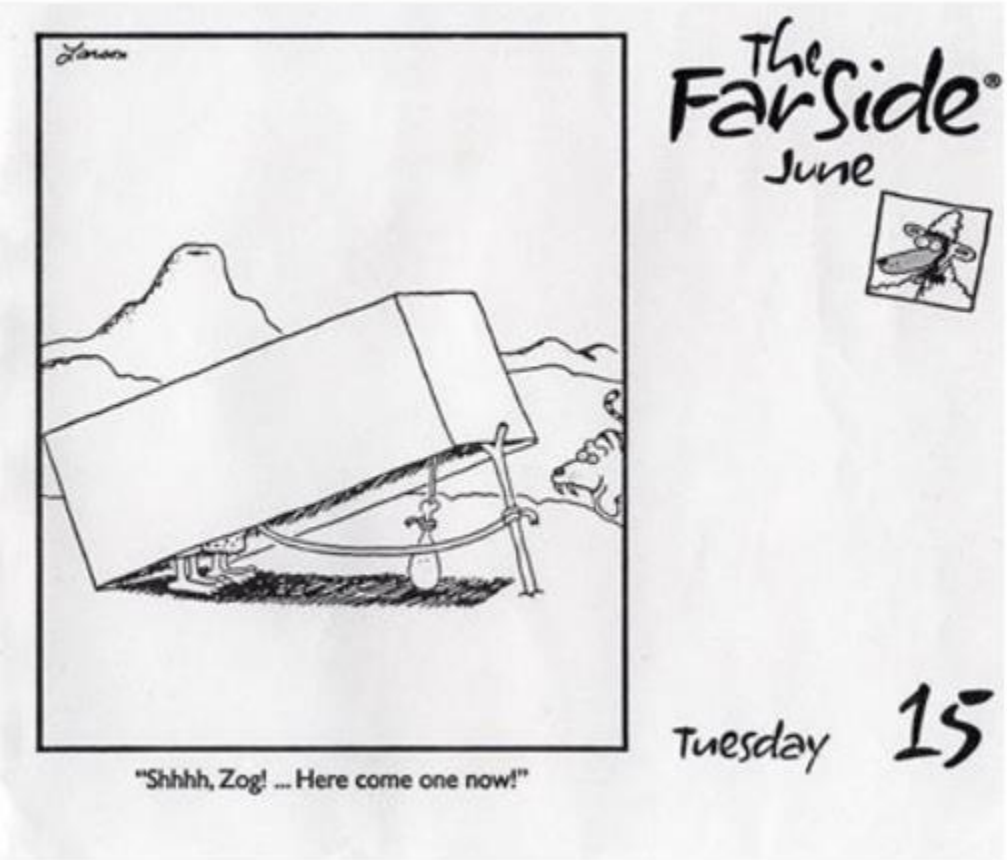
EFCOG CAWG Spring Meeting

March 19, 2014

UNCLASSIFIED

Solving Problems: Trickier than expected





What makes corrective actions effective?

- Sydney Dekker:
  - Focus on work environment, tools, resources
- International Atomic Energy Agency and other:
  - Build on existing
  - Account for costs
  - Consider both interim and sustainable action
  - Account for ability to execute proposed change/correction
  - Unintended consequences/ corrective action failure modes

Why corrective actions fall short

- Often, the focus is on quick, easy, less costly
- Conversely, an action plan becomes too complex, cumbersome, or costly to complete
- Actions may address awareness or information-sharing, but not underlying process
- Actions often get applied only locally- don’t address common failure mode or extent of condition
- Actions may simply not be sustainable
- Actions are developed at a fixed point in time

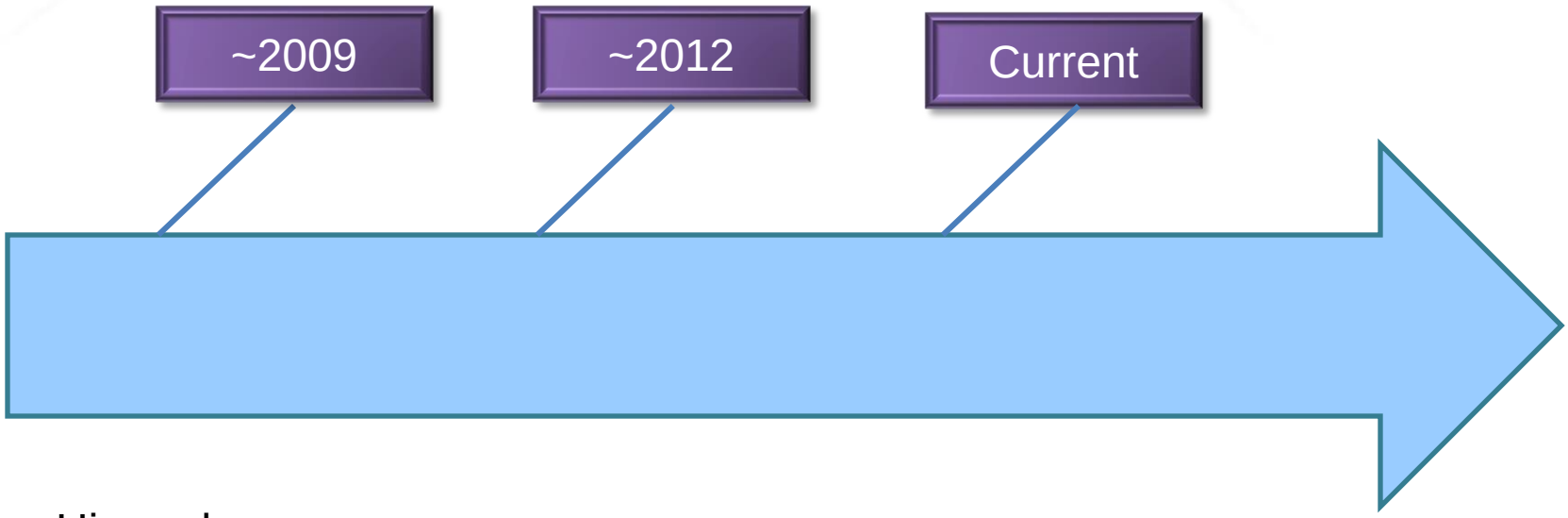
LANL Occurrence Reports

- “Trainer” event
  - Contact with 3570 volts DC
  - Resulted in burns and exit wound on abdomen
  - High degree of scrutiny
  - 19 corrective actions

LANL Occurrence Reports

- Fissile Material Handler Issue
  - Fissile Material Handlers (FMH)
  - Training and qualification system inaccurate
  - Unable to discern whether FMHs qualified to be handling nuclear material
  - 2 corrective actions

Los Alamos learning-issue evaluation:



Hierarchy of Controls

Expand Evaluation Criteria

Comprehensive Approach

Results- reviews reveal improvement opportunities

- Target areas:
  - Problem statement clarity
  - Action does not address problem
  - Objective evidence may not support action closure

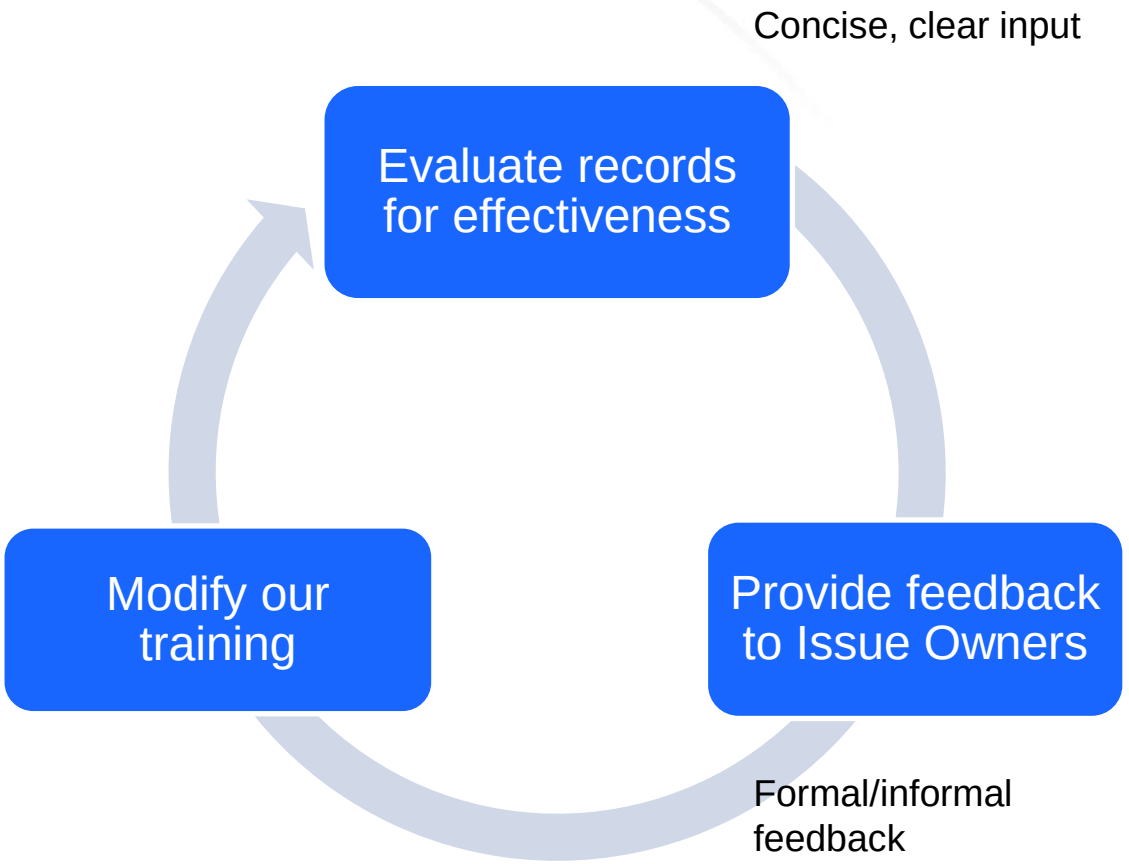
Results indicate need to increase employee engagement

- Enhance corrective action discussion:
  - Will action reduce likelihood of error?
  - Will improvements address underlying process/performance problems?
  - Will action reduce consequence if a similar occurrence?
  - Are costs of correction commensurate or exceed costs of continued problem?
  - Will investment in correction create sustainable improvement?
  - What is reasonable, given current constraints?

Engagement of Issue Owners:

We engage our stakeholders by:

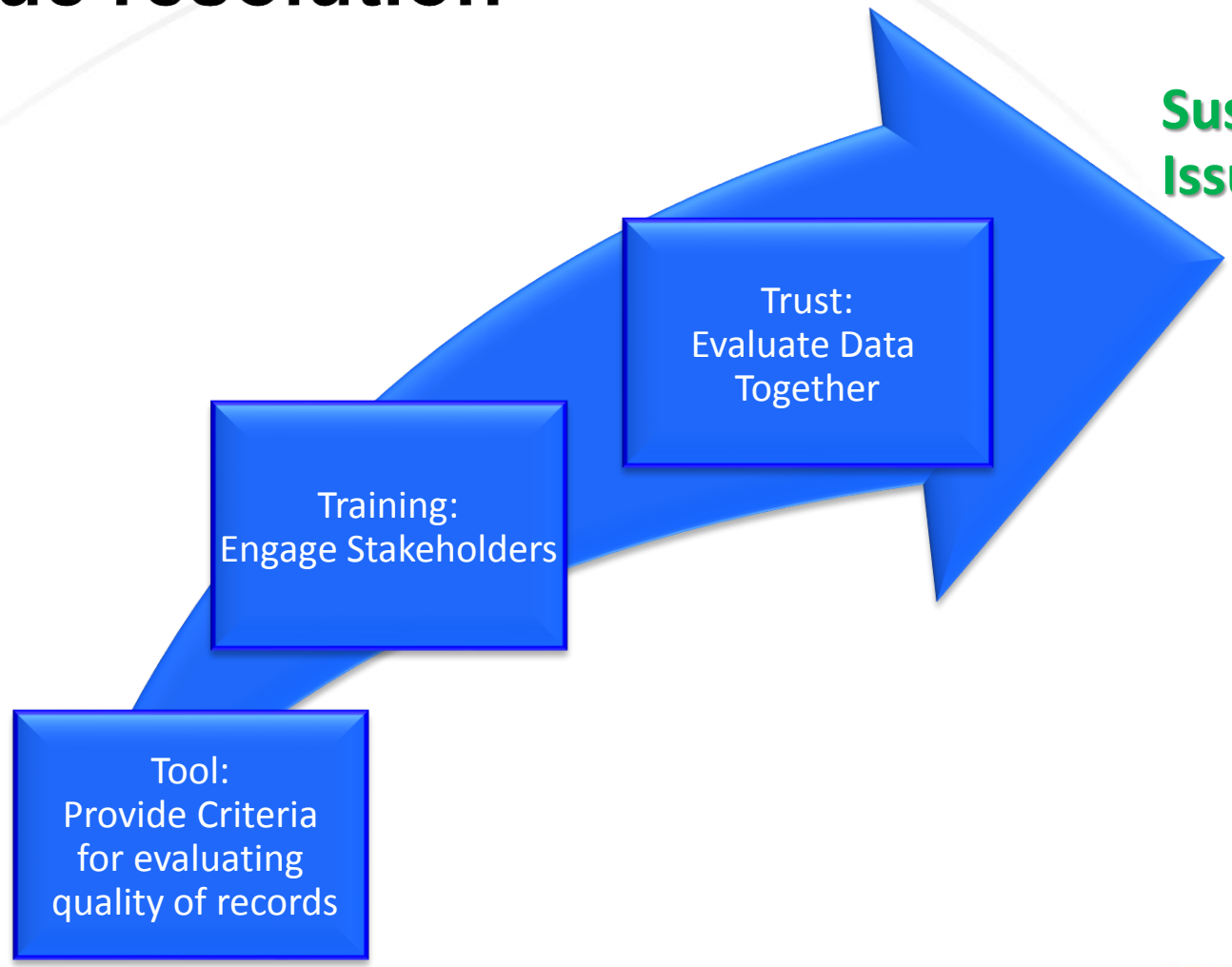
- **providing criteria we use to evaluate quality and sustainability;**
- **requesting feedback and incorporating it into our training documents; and**
- **fostering a continuous communication cycle.**



Engaging Management Review Boards:

- MRBs make issue-related decisions:
  - Problem statement clarity
  - Optimizing corrections to resolve original problem
  - Understanding cost/benefit
  - Understanding and employing project management principles

Laboratory populace is key to successful issue resolution



Issues and Corrective Action Management Software Solutions

Chris Hott
Director, Laboratory Performance

March 19, 2014

www.inl.gov

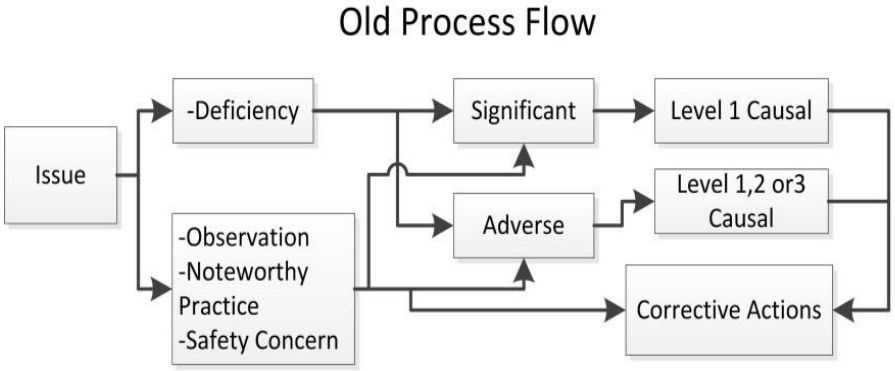
Idaho National Laboratory

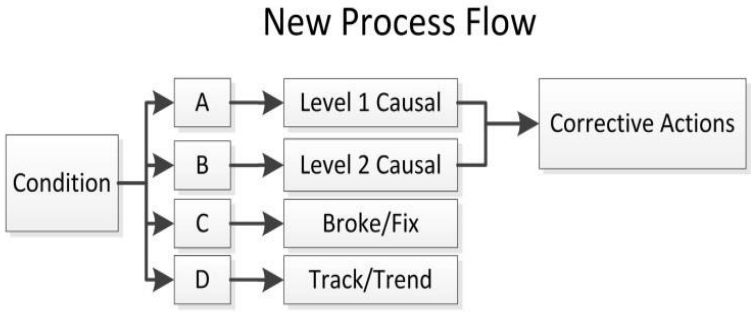
Basic Performance Improvement Tools

- Issues Management (a.k.a. CAP) Process: Identify and document conditions, identify causes, perform extent of condition reviews, and develop and implement meaningful corrective actions to prevent recurrence when appropriate
- Management Observation Program: Align managers and staff with respect to expected behaviors. Provides mentoring/coaching opportunities when done correctly. This is a core management function
- Lessons Learned Program: Share information to continuously maintain high awareness of behaviors that result or contributed to events. Secondary purpose to share equipment/process problems for entry into the CAP process when corrective actions are developed
- Self-Assessment Program: Structured topical review (LOIs, report, etc.) where performance trend is not well understood or were required based on inherit risk of the activity. Includes benchmarking
- Independent Oversight/Assessments: Similar to self-assessments but independence allows checks for drift in standards and integrity of performance information

INL Contractor Maturity Path

- INL is on a journey (not unlike many contractors) to mature our CAS systems, processes, and tools
- Major improvements over the next few years in Assessments, Issues Management, Lessons Learned, and Management Observations
- Desire to leverage the nuclear power industry approach to a low-threshold issues management process for it's predictive/leading indicator capabilities and positive impacts on employee engagement
- The best tool is of little value without an efficient and predictable process executed by competent personnel





Philosophy for Issues Management Changes

- Eliminate overlap between various approaches to Issues Management (Navy, Industry, DOE) and other lab-wide processes (NCR, NTS, etc.)
- Align functions to appropriate decision-makers – Operability vs NCR
- Recognize the difference between corrective actions and steps taken to implement a corrective action – the latter are not corrective actions
- While we always try to minimize the likelihood of recurrence, we only prevent recurrence for the most significant issues/conditions
- It's impossible to prevent recurrence when the root cause is a behavior
- Managers need to coach, mentor, and reinforce accountability instead of managing extraneous actions of little value
- Leverage industry lessons learned (Cumulative Impacts Study) related to ratcheted process controls that are unsustainable, add little value, and prevent managers from being in the field
- Cause analysis should yield specific causes vice broad generalizations
- Bloated corrective action plans may look good, but actually hurt safety

Other Items that Needed Fixing…

- Overlapping and sometimes conflicting causal analysis requirements between Critiques, Issues Management, ORPS, and NTS
- Lack of Lab-wide integration
  - Poor integration between mission centers, support orgs, determining need/appropriateness for Lab-wide EOCs
  - No one to assist support orgs or help manage lab-wide conditions
- Lack of graded approach – little difference between Level 1 & 2 cause analysis criteria, objective evidence requirements, closing to other processes not allowed regardless of low significance
- Issues bottlenecked at Directors - required to screen everything
- Issues management software tool extremely difficult to use – not intuitive was an understatement

Tool can be a Significant Barrier to Performance Improvement & Employee Engagement

- Lack of employee engagement due to non-user friendly tool
- Data entry process was difficult and cumbersome
- No notifications on status for issues
- Expert based tool
  - Lacked capabilities to easily pull and generate value-added data
  - Data generation was time consuming and labor intensive
  - Management and staff time focused on gathering data and not analytics/decisions
  - Resulted in full-time positions in various places across the lab just to feed and water the machine

What are the benefits of LabWay?

- Single point entry
- Seamless process handoffs
- Extremely intuitive to use, like using your home applications
- Powerful Google search capabilities including attachments
- Very quick entry of initial data
- Completely customizable workflows
- Easy access to feedback and following items of interest
- Flexibility in notifications
- Personalized dash board keeps work and routine items in an organized arrangement
- Cloud and mobile ready
- Managed Service fits vision for IM

DevonWay Standard Features

Design Search and Reporting

- Google search
- Ad hoc reporting and charting
- Unified trending and notifications
- Extensive reports, matrices, and KPI library

Workflow

- Individual workflows by department or plant
- Visual graphical workflow
- Individual or team task assignments

Ease of use

- 100% web based
- Dashboard showing only what matters
- Access using SmartPhones and tablets
- Enter and Approve on single screen

Enterprise Administration

- Object history - who changed what and when
- Role-based security
- Enforce robust password policies

Enforce safety culture

- Anonymous access
- Secure document attachments
- Ability to exclude individual fields from search

Collaboration throughout

- On-line discussions available in any module
- Invite external participants to collaborations
- Mark discussions public or private
- Keep important information in DevonWay, not email

Drawbacks?

- More expensive than some other software providers
- Completely customizable means your process has to be good already…
- Not as easy to generate reports as promised – there is a learning curve…

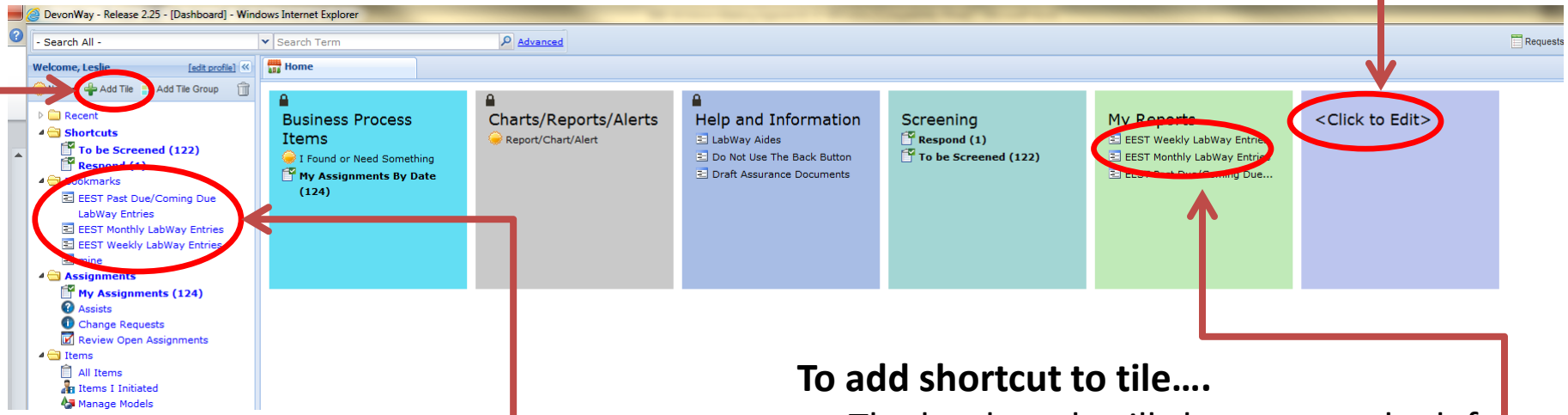
Initial Usage/Engagement Data

		2013										2014	
		March	April	May	June	July	August	September	October	November	December	January	February
ICAMS	Issues & Observations	672	704	484	523	535	747	433	362	307	31	11	9
LabWay	Conditions	--	--	--	--	--	4	155	225	211	422	678	493
	Observations	--	--	--	--	--	41	127	237	291	265	407	383
	Suggestions	--	--	--	--	--	0	56	48	27	44	54	172
						LabWay Totals	45	338	510	529	731	1139	1048

BACK-UP SLIDES

Adding Tiles, Bookmarking, and adding shortcuts to tiles

- Click Add Tile
- Click and add title

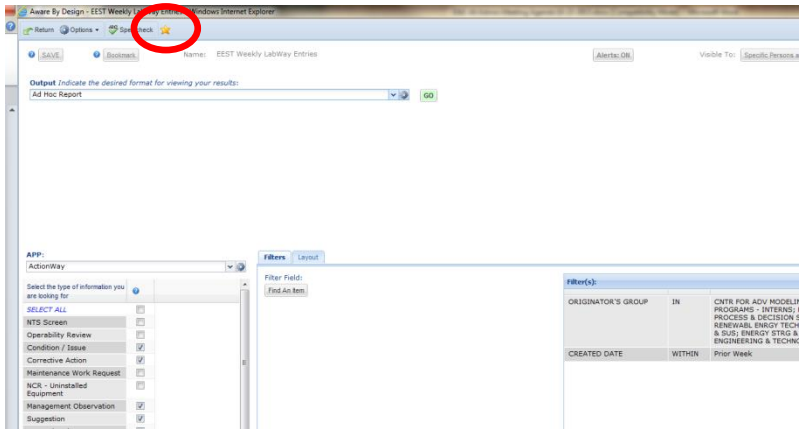


To add shortcut to tile….

- The bookmark will show up on the left hand menu under bookmarks
- Click and drag the item to the tile you created

To bookmark….

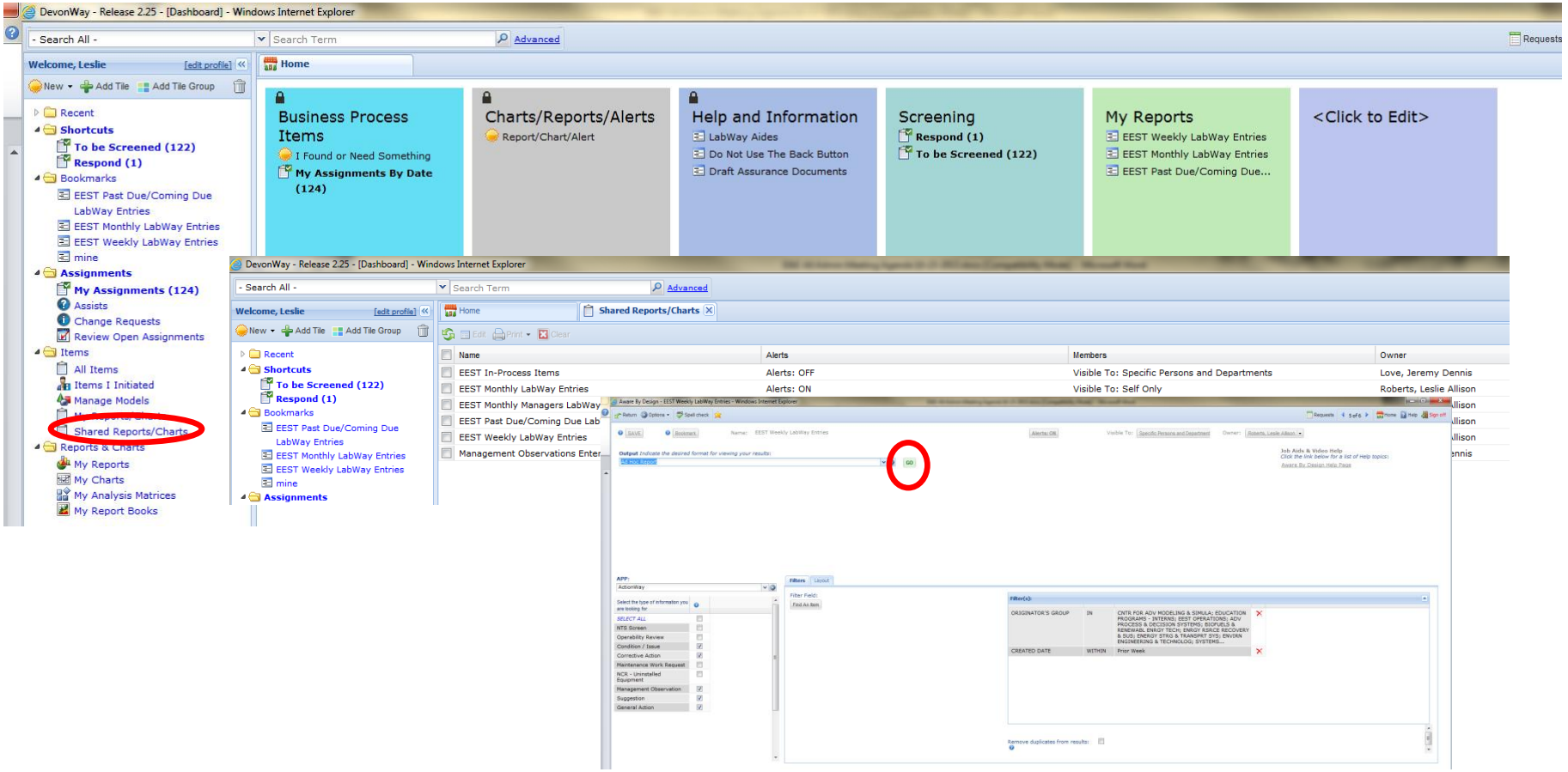
- Open the item you want to bookmark and click the yellow star at the top



- Tiles with locks cannot be changed
- You can change the color of a tile by holding cursor in the top right corner of the box and choosing change color
- You can delete a tile by holding cursor in top right hand corner and clicking the x

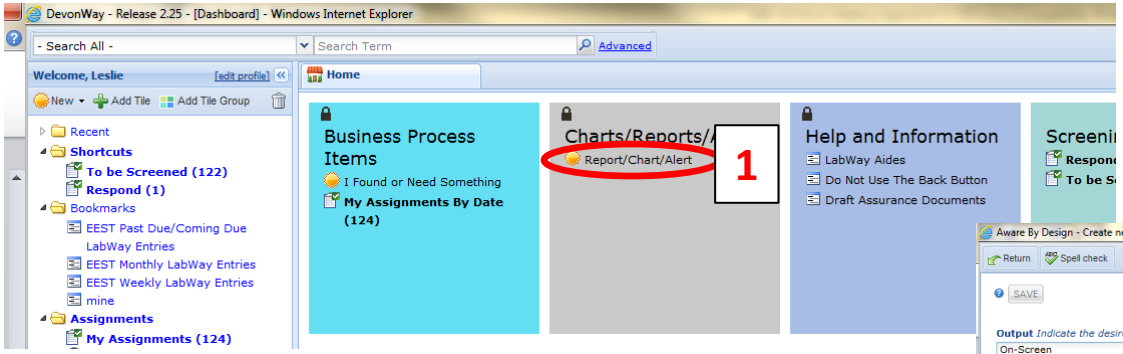
Shared Reports

- To run an already built report that has been shared, click on Shared reports/Charts
- Click on the report you want to run
- It will open in a separate window which you can download to several applications such as excel or PDF.

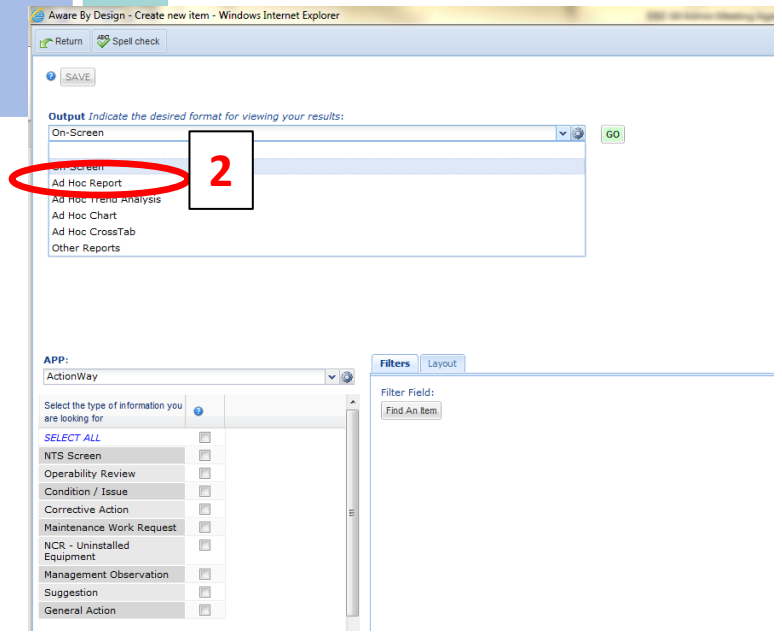


To Build a New Report

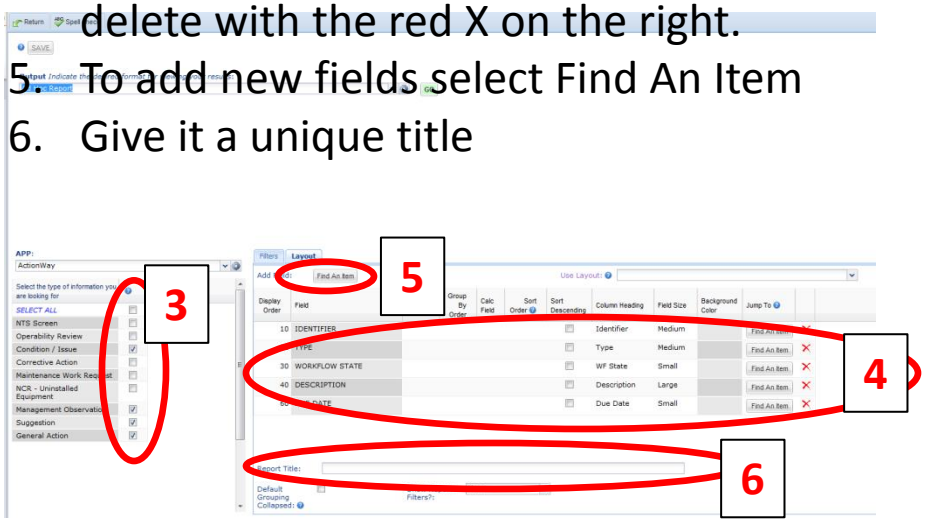
1. Click on Reports/Chart/Alert



2. Choose type of report (Usually Ad Hoc Report)

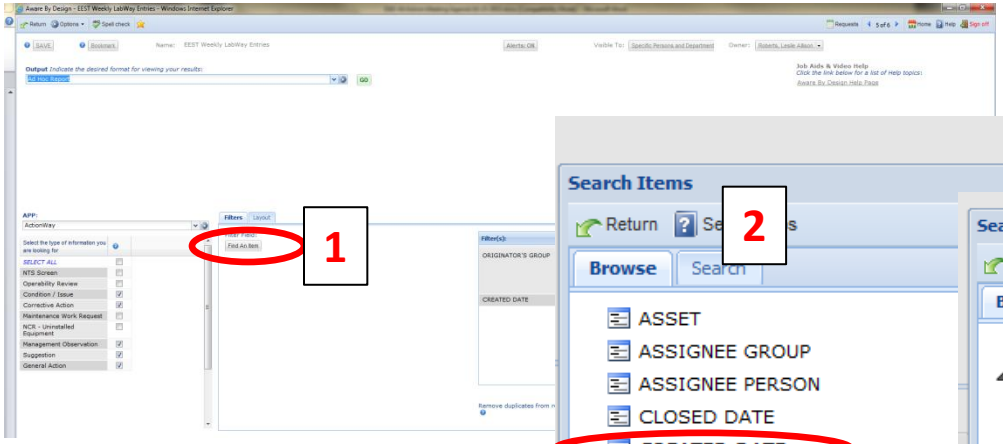


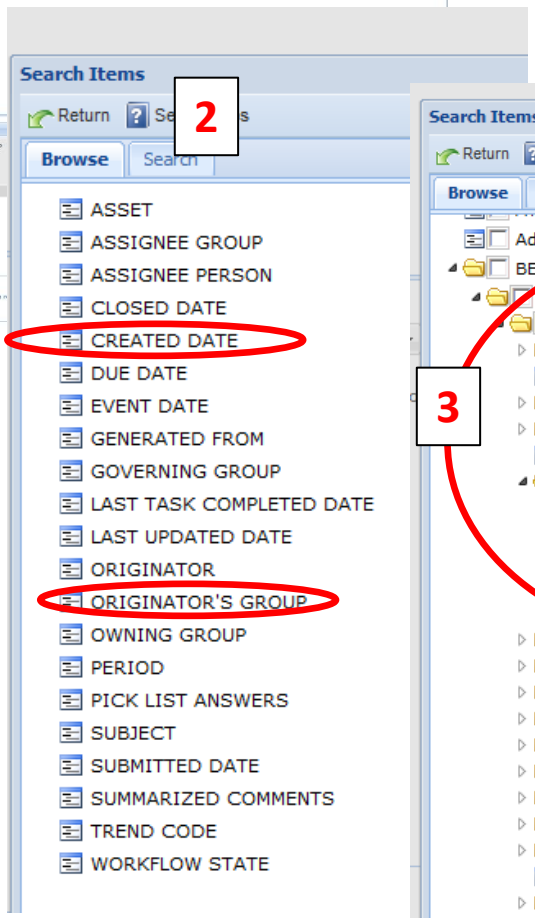
3. Select the items you want to show in your report (ie MO, General Action, Condition/Issue, etc.
4. Click on the layout tab. LabWay automatically suggests fields which you can delete with the red X on the right.
5. To add new fields select Find An Item
6. Give it a unique title

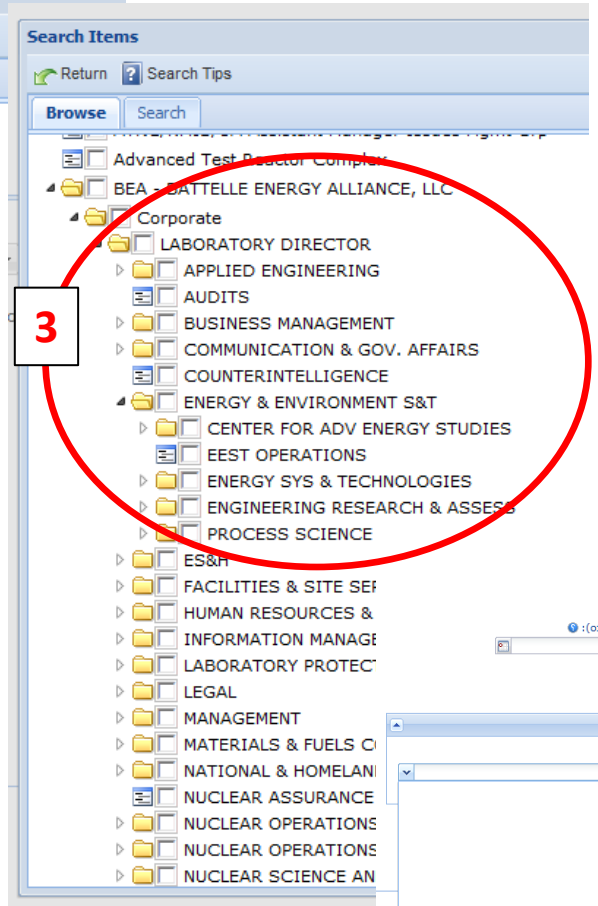


To Build a New Report, Continued

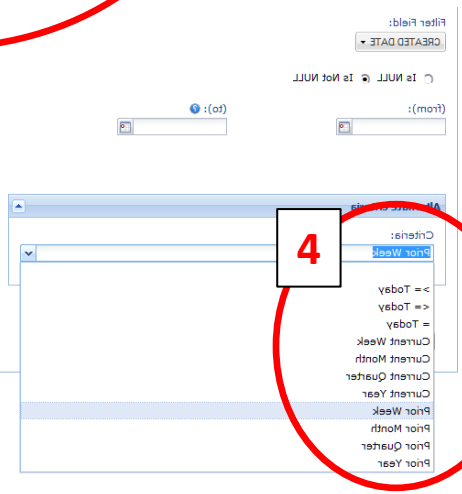
1. Click on the Filters Tab and click Find An Item







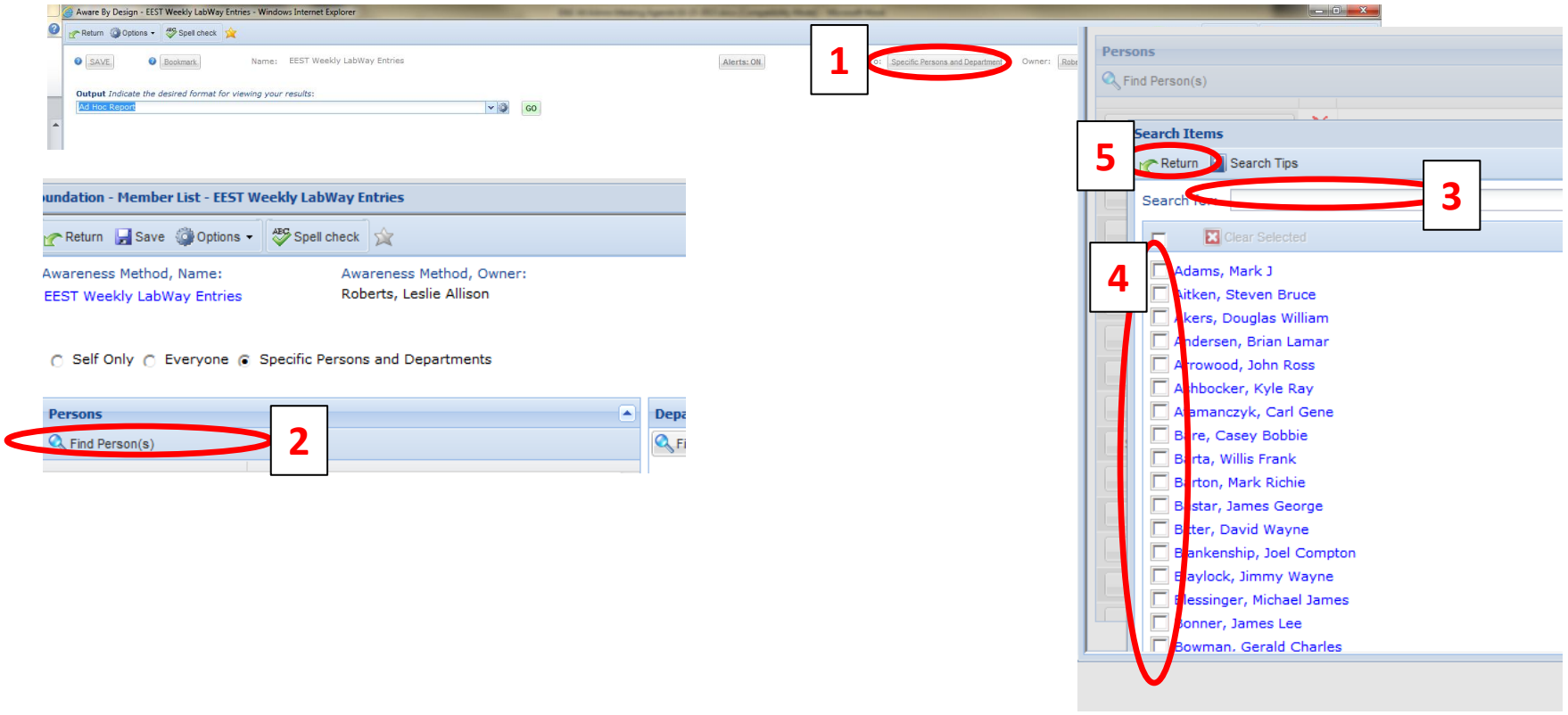
2. A box of categories will come up. Select the one you want.
3. Example: to select an EEST group, click on Originators Group. A list will come up, scroll down, expand folder next to BEA, expand Corporate, expand Laboratory Director, expand EEST. You can further expand the individual departments to select the one(s) you want or all for all EEST. Click Build Criteria.



4. Example: For time frame on created date, select created date, more fields will appear, you can put in a range from & to, or under Alternate Criteria drop down box to select timeframe. Click Build Criteria.

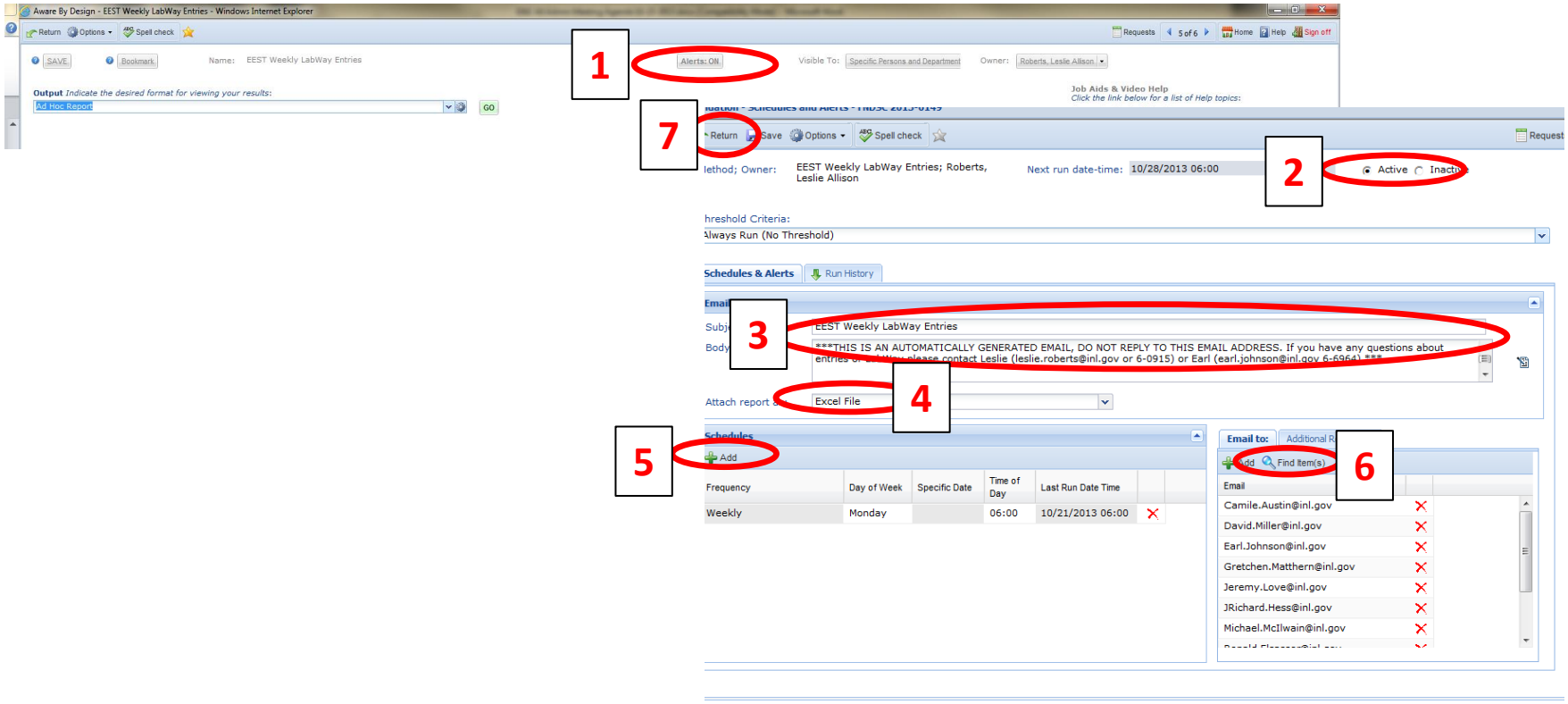
Sharing Reports

1. To share click on Visible To
2. In the next pop-up box select Find Person(s) which will bring up another pop-up box with names
3. Type the name in the Search for Box.
4. If you have multiple people to add just put a check mark next to their name and then search for the next until you have them all selected
5. Click Return



Setting Alerts

1. To share click on Alerts (will show Off but will change to On after you activate)
2. In the next pop-up box make sure the Active circle is marked
3. You can change the subject line and the body message
4. Select the type of attachment you want to send (i.e. PDF, Excel, etc.)
5. Under Schedules click add and select the type of frequency you want (i.e. weekly, monthly, etc.)
6. Under Email to click Find Items (NOT ADD) and select the people the same way you did in Sharing Reports instructions
7. Click Return



Evaluations of Assessment Quality

3/18/2014
Grant W. Fondaw
G&PA Department Manager

Identify the issue

- **The first step in solving a problem is to recognize you have a problem**
- **In this case, the problem was a lack of customer confidence in our Management Self-Assessments**
  - Customer felt:
    - That assessments were not being critical enough, and
    - If issues were identified, the issues were not being tracked sufficiently

Where are you currently at?

- **The next step is to determine your current situation**
  - In this case, the quality of our assessments was being questioned by the customer
  - In 2008, started an initiative to determine the current status and solve the problem
    - Established criteria to evaluate
    - Evaluated 100% of FY 2008 assessments against the criteria

The 'ART' of Assessments

- **This initiative was called the "Assessment Review Team" or ART**
  - Pilot team consisted of Performance Assurance Department with one individual from Quality Division
  - Mature team envisioned to include members from across the plant

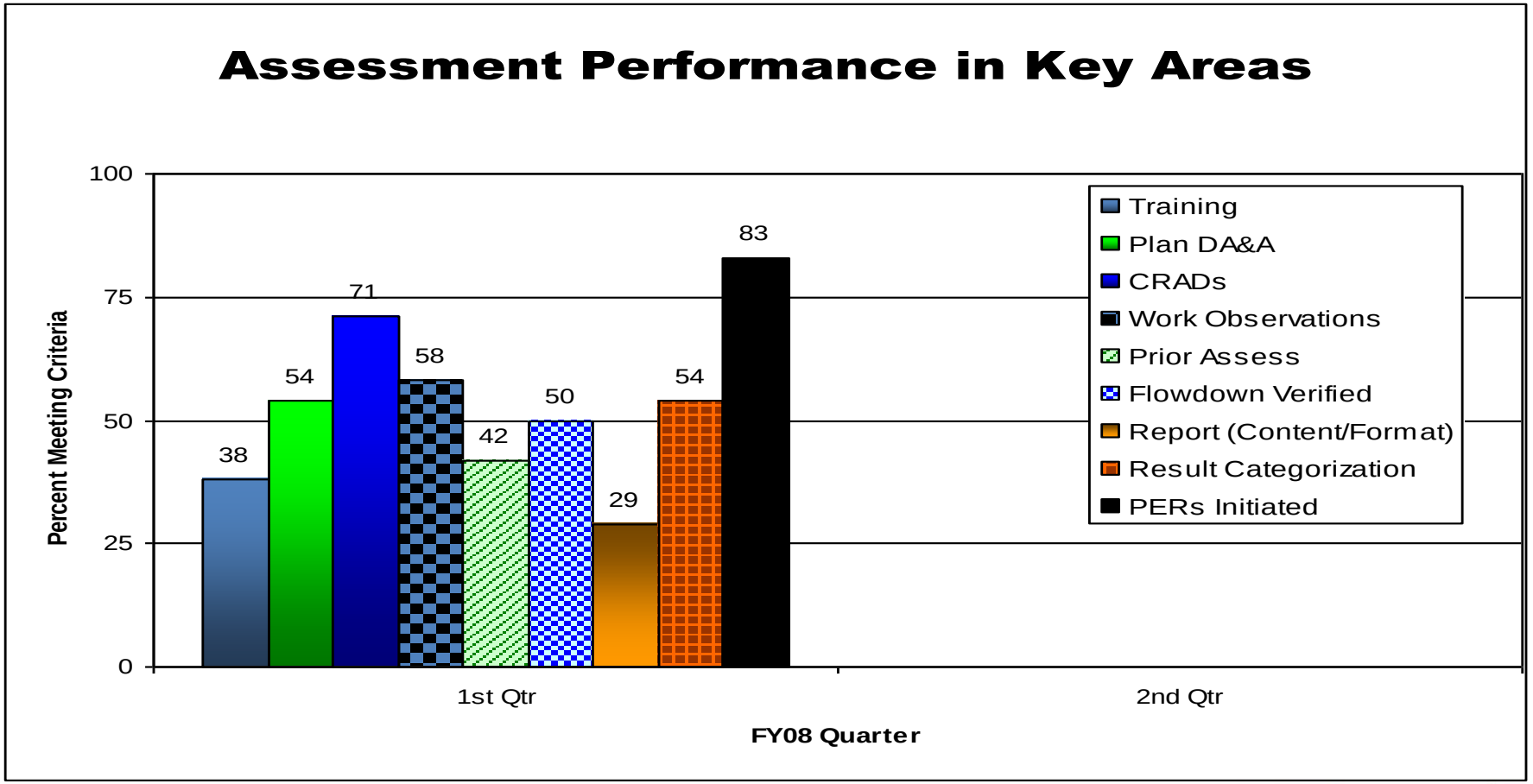
ART Purpose and Scope

- **Purpose:**
  - The Assessment Review Team (ART) will strengthen the oversight element of the Pantex Contractor Assurance System (CAS) by enhancing the quality of assessments
  - This is the first stage of the overall effort to strengthen “cradle-to-grave” corrective action effectiveness
- **Scope**
  - Review 100% of FY08 CAS Assessments and provide feedback

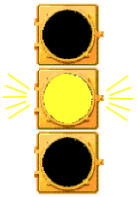
Destination and path?

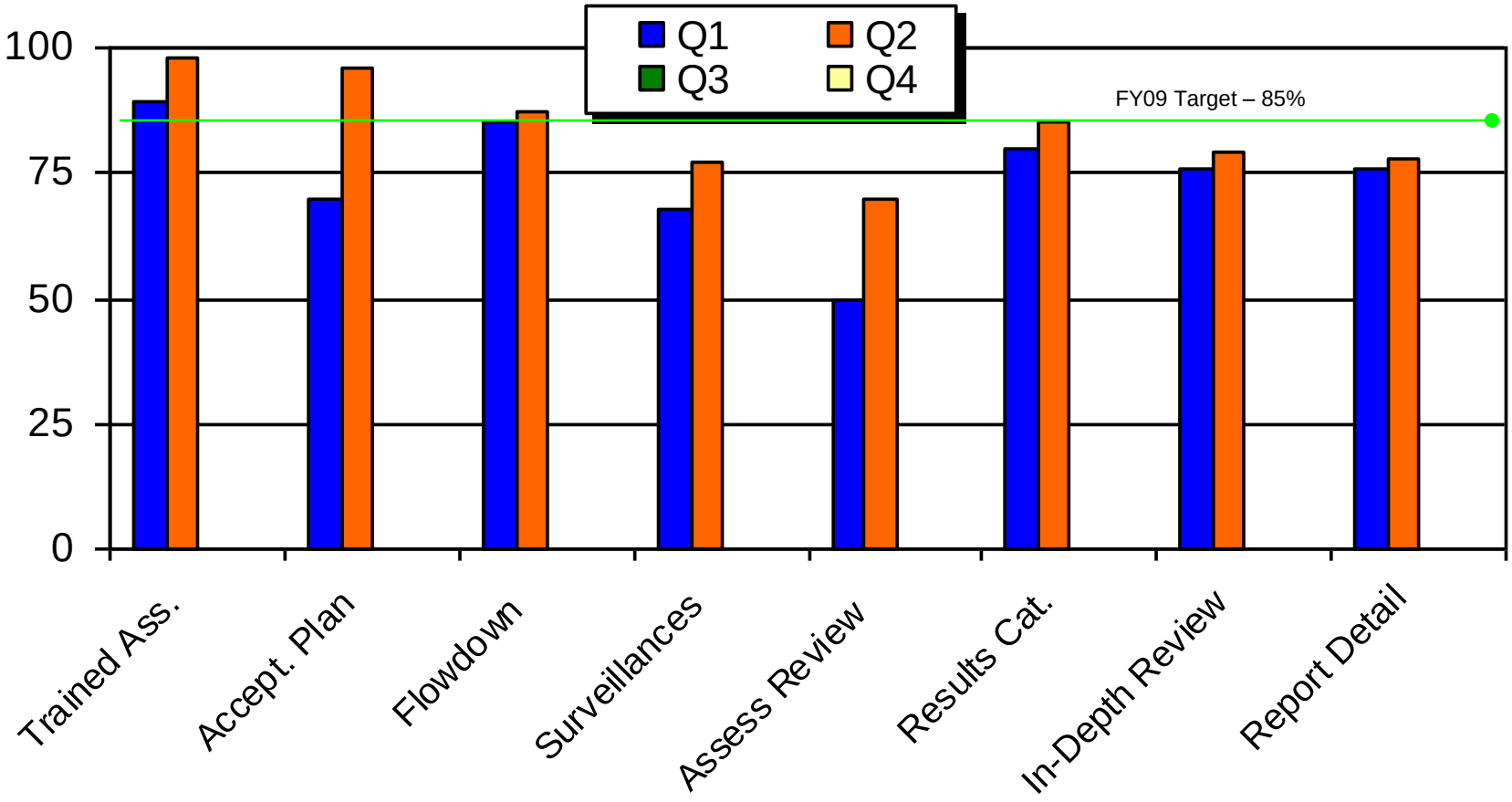
- **The next steps are to determine your destination and the path to get there.**
  - Review conducted upon completed assessments
  - Goals established for each criteria evaluated
  - Based on the “delta”, feedback provided to:
    - Management
    - Assessors
    - Training
  - Next slide is an early metric

Initial ART Results



FY09 ART Results





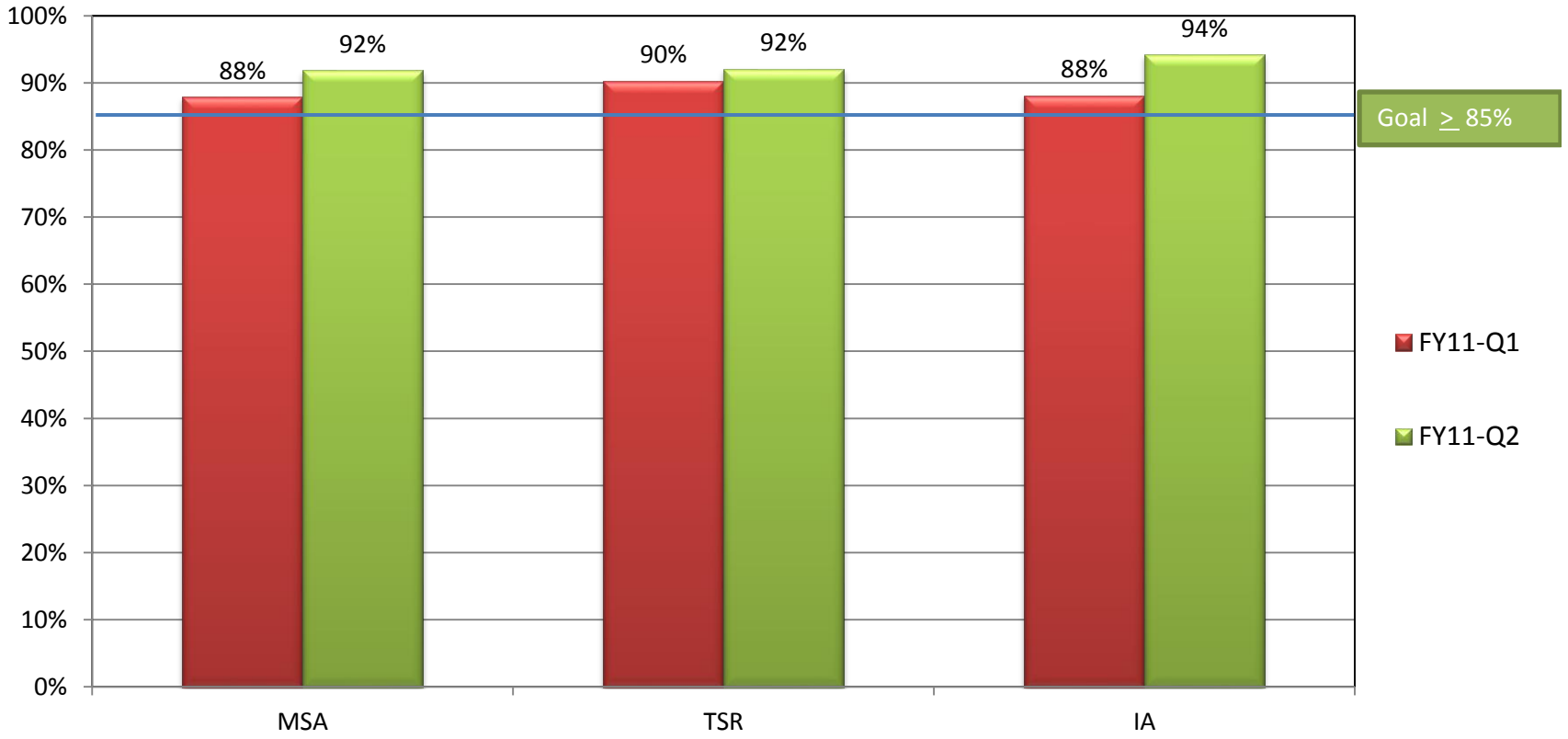
Monitor Progress

- **The final step is to monitor progress and adjust course as necessary.**
  - Main Problems
    - Work observations
    - Review previous assessments
  - Actions taken from the early metrics were:
    - Enhance assessor training based on ART results
    - Feedback into Risk Model discussions
    - General communications (PULSE articles)
    - Direct email communications with assessors
    - “Brown Bag Luncheon” topics

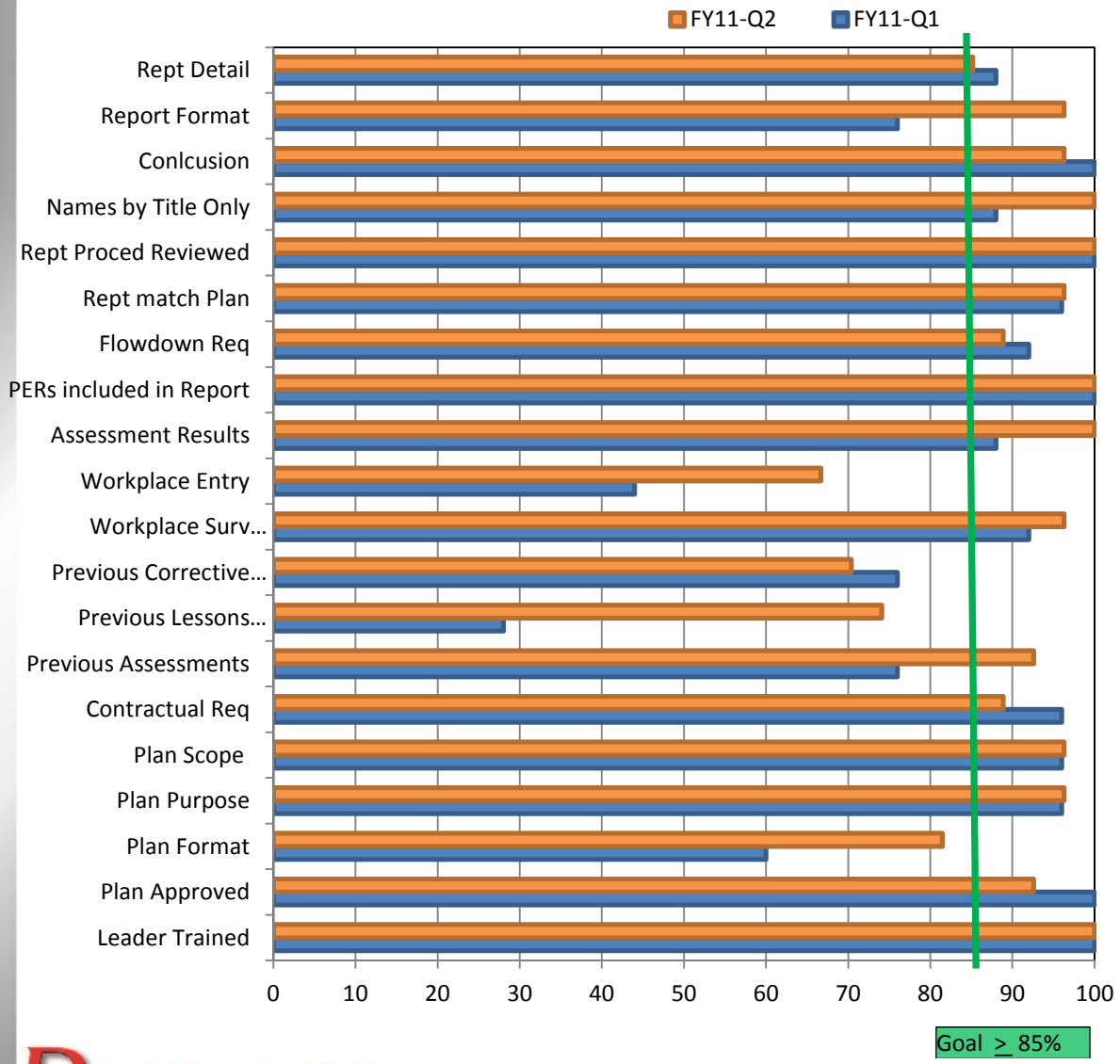
Other adjustments

- **Continued to adjust**
  - Training
  - As metrics improved, went to sampling plan
  - Shadowing MSAs
  - Revised evaluation criteria
  - Additional resolution on ART metrics
  - Additional instruction on sample planning and selection

Quarterly ART Evaluation Score by Assessment Type



FY11 MSA % Assessment Quality



Q1 – 25 MSA Assessments -Total Score: 88%
Q2 – 27 MSA Assessments Total Score: 92%
* = weighted

- Report Format – Report format met the requirements of MNL-293104 * 4
- Workplace Entry- Documented Workplace Surveillances in the Workplace Surveillance Database * 2
- Previous Corrective Actions -Documented value added by completion of corrective actions. * 7
- Previous Lessons Learned - Documented a search and/or review of previous Lessons Learned * 3
- Previous Assessments - Documented review of prior related assessment results
- Plan Format – Plan format met the requirements of MNL-293104 * 3

Results

- **Evaluation by Corporate recognized Assessments as “one of the best in the complex”**
  - The customer is performing fewer similar reviews and audits
  - Feedback from both internal and external customers indicate that there has been a significant improvement to the level of quality and detail of the CAS assessments completed

Takeaways

- **It helps to have customer confidence in the processes you directly own (in this case, the IAs)**
- **You must recognize the aspects of what you do have control over in processes not entirely under your control**
  - MSAs – Although we did not have direct control over the assessors, we did control:
    - Training
    - Assessment plan and report templates
    - Feedback
    - Standards

Takeaways (continued)

- **Standards and measures are essential to measure progress and obtain customer buy-in**
- **Must engage the customer to have buy-in on success**