

OECM/NNSA ProjNet Pilot Project for Project Management Lessons Learned

Purpose of Briefing:

1. Status of progress in the pilot project,
2. Introduce relevant DOE Orders and Standards,
3. Demonstrate the web-based tool for capturing lessons learned through the project life-cycle



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Pilot Project Sponsor: MA-50

ProjNet Pilot – Why?

Requirements: DOE O 413.3A mandates that Lessons Learned (good or bad) from the execution of projects be collected, analyzed and disseminated among the DOE project management community.

Learn the good practices and avoid the repeats of bad practices.

- The 2008 Root Cause Analysis Report and the associated Corrective Action Plan call for the development of a Lessons Learned System within the DOE Project Management Community to share information on good and bad experiences in project management. Overall: We don't share information effectively.
- Hence, OECM is a funding 12-months pilot of a web-based tool to support a project management lessons learned program. The tool also has a system to support design reviews for construction projects.
- If ProjNet is deemed suitable for full implementation, OECM intends to implement ProjNet DOE-wide, in compliance with other DOE requirements as they may apply (such as DOE O 210.2, DOE Corporate Operating Experience Program).



ProjNet Contents

The PROject extraNET (ProjNetSM) is a web-based collaborative service that allows the exchange of design and construction information among authorized business partners (customers include Federal and State Agencies and Commercial users).

Who are the players in the pilot project?

- **OECM**, the project sponsor
- **NNSA, NA-54**, the pilot project administrators
- The **Integrated Project Team** includes Pantex (S&S Training Facility; High Pressure Fire Loop) and Y-12 (Nuclear Facility Risk Reduction Project).
- **USACE's Engineering R&D Center (ERDC)** developed and maintains the ProjNet system including system improvement. Training/HelpDesk provided by a contractor.
- **National Institute of Building Sciences (NIBS)** manages ProjNet services.
- A **NNSA CIO / IT representative**
- **DOE HS-32** that supports DOE Corporate Lessons Learned Program (with an DOE IT representative).
- **NNSA Corporate Operating Experience (OPEX)** network.

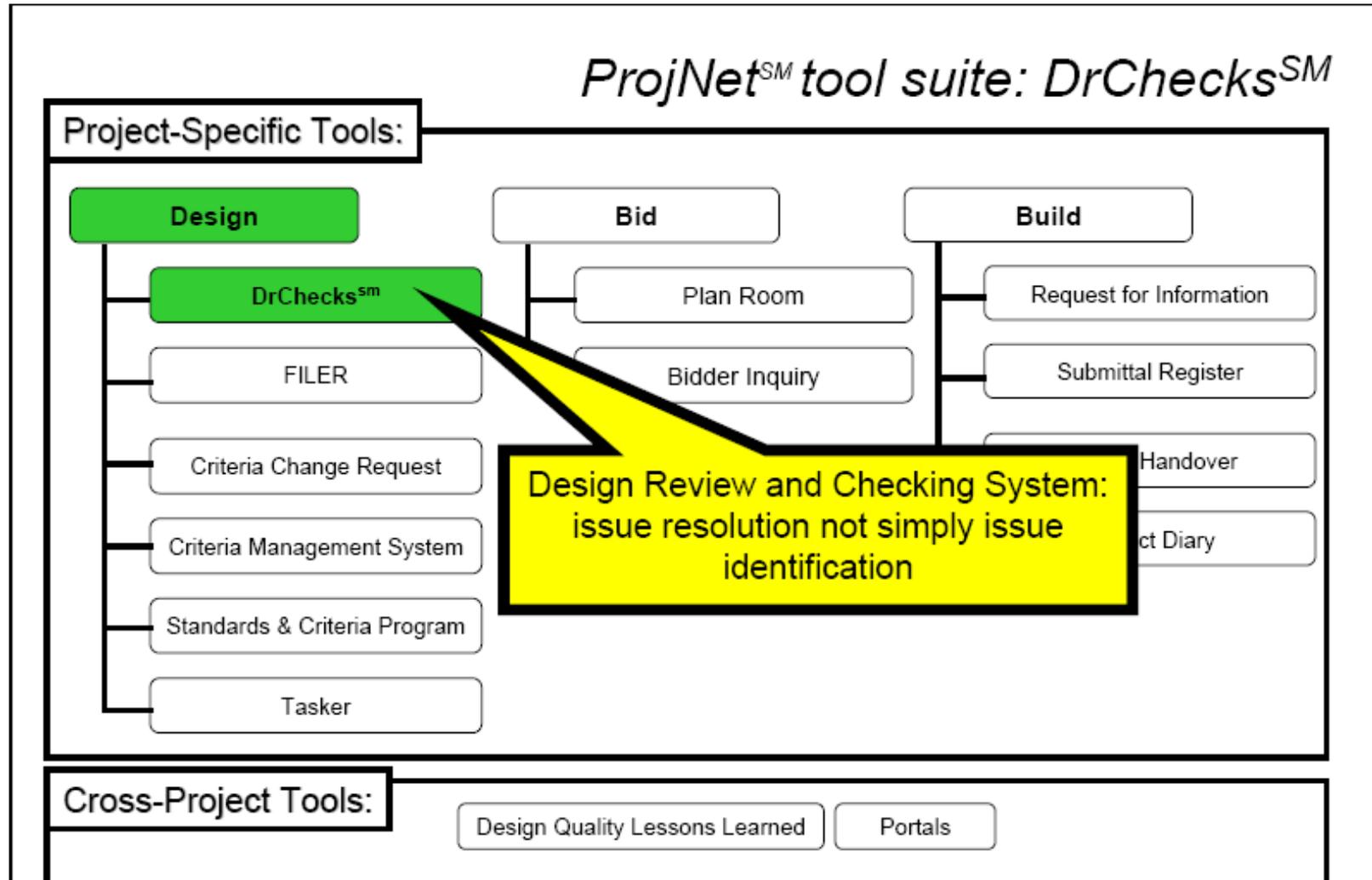


Pilot ProjNet Status

- **Established an IPT and started interactive web-based training in November 2008.**
- **Established a separate, functional, customized DOE account within ProjNet.**
- **Early runs indicate that ProjNet can facilitate online project reviews, track and document the resolution/status of review issues, and enable the generation of lessons learned.**
- **Team has begun populating the database with lessons learned from previous projects, and is testing ProjNet's capabilities.**



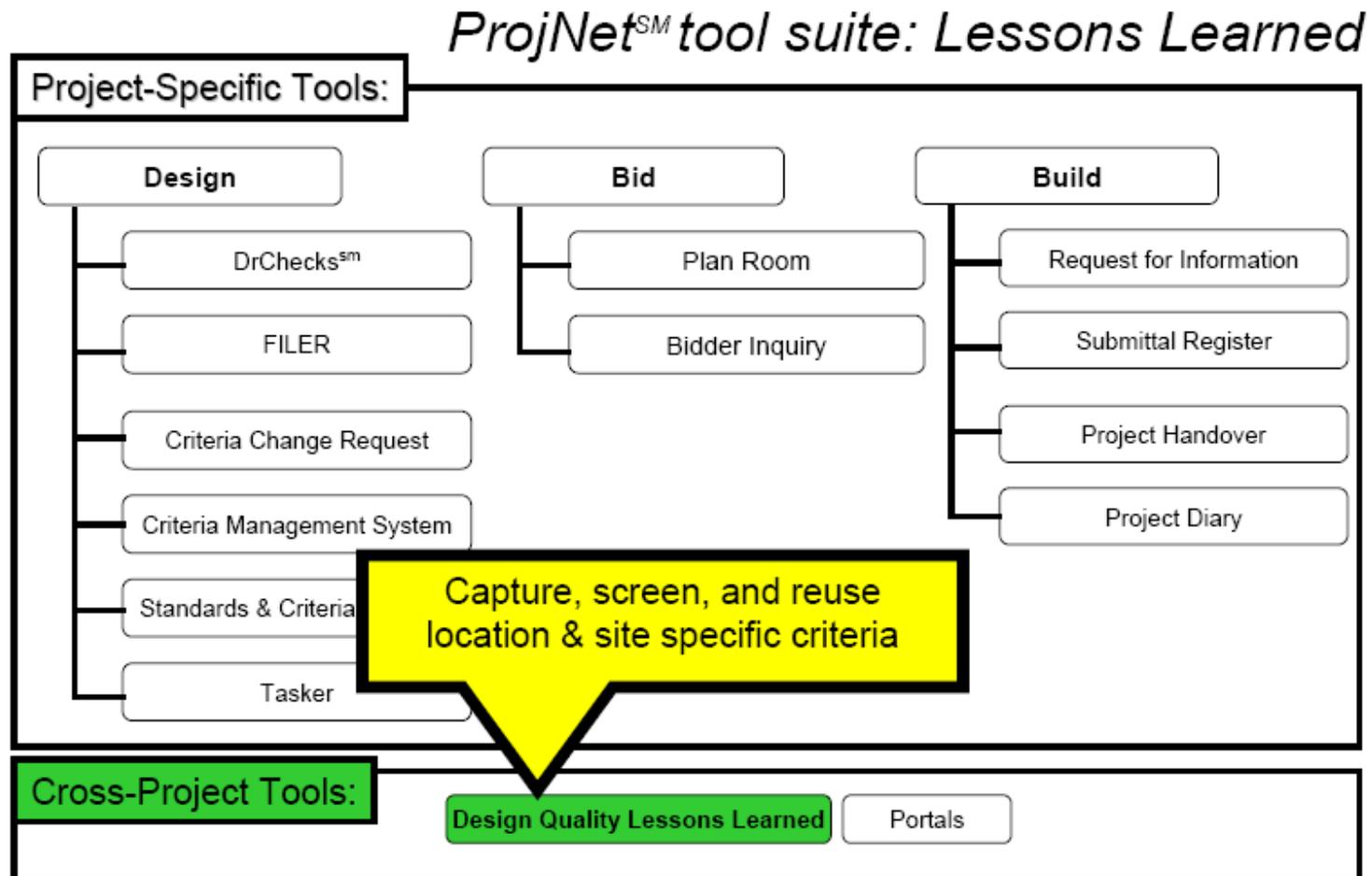
Design & Project Reviews Support Module – DrChecksSM (Virtual Reviews)



**** “issue resolution” is related to reviews, not LLs and not for Action Tracking.**



Lessons Learned Support Module (DQLLSM)





ProjNet: Add Lessons Learned Template

ProjNet SM **SBU**

My Account Design Bid Build Portals Lessons Help Admin

Lessons Learned / Add Lesson ?

After saving the draft, you can update the item and submit it for evaluation.

a. Business Process (req.)

b. Discipline (req.)

c. Title (req.)

d. Problem (req.)

e. Solution (req.)

f. Problem Backup (opt.) ?

g. Solution Backup (opt.) ?

DOE ProjNet Data Categories

Business Process	Disciplines/SUBJECT	Project Phase / Critical Decision	Facility Type	Doc Type
Budget	Architectural	Pre-CD-0	Administrative	Acquisition
Communication	Chemistry	CD-0	Infrastructure	Baseline
Construction	Civil/ Structural	CD-1	D&D - Nuclear	BCP
Design	Electrical	CD-2	D&D - NonNuclear	Budget
Environmental	Energy Conservation	CD-3	Production-Nuclear	Contract
Human Resources	Environmental	CD-4	Production-NonNuclear	Design
Integrated Project Team	Information Technology	Non-CD	R&D - Nuclear	EIR
Legal	Infrastructure/Site/Util.		R&D - NonNuclear	ES&H
Operations and Maintenance	Management/Admin.		Security/Safeguards	EVMS
Procurement / Contracting	Mechanical		Storage - Nuclear	ICE
Program Mgmt (above Project level)	Nuclear - Non Safety		Storage - NonNuclear	IPR
Proj. Controls/Parameters (Cost/schedule/scope)	Real Estate		Waste - Nuclear	LL
Quality Assurance (Training)	Safety - Nuclear		Waste - NonNuclear	Mission Need
Regulatory	Safety - NonNuclear		Other	Operations
Reviews (Tech., Cost, Scope, EIR, IPR)	Transportation		Site-Wide	Other
Risk Management	Other / N.A.			PDS
Safety	DNFSB			PEP
Security / Emergency Mgmt	NRC			QA
Other / N.A.				Readiness
				Requirements
				Risk
				Security
				System Engr.
				T-PIR
				TPC
				Value Engr.
				WBS

Generic Role/Players in ProjNet and Lessons Learned

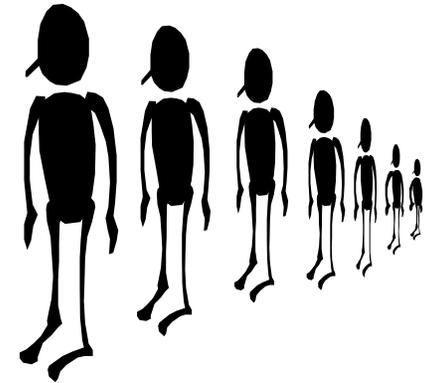
SITE

DrChecks:

- “Submitters” of comments
- Reviewers / “Evaluators” (respond to the submitted comments)
- IPT/FPD (at times review/comment on the design, at times defend it)
- “Back-Checkers” (often the original Submitter)

Lessons Learned:

- IPT/FPD – Often the source of LLs
- IPR/EIR (additional sources of LLs)
- Site Controllers



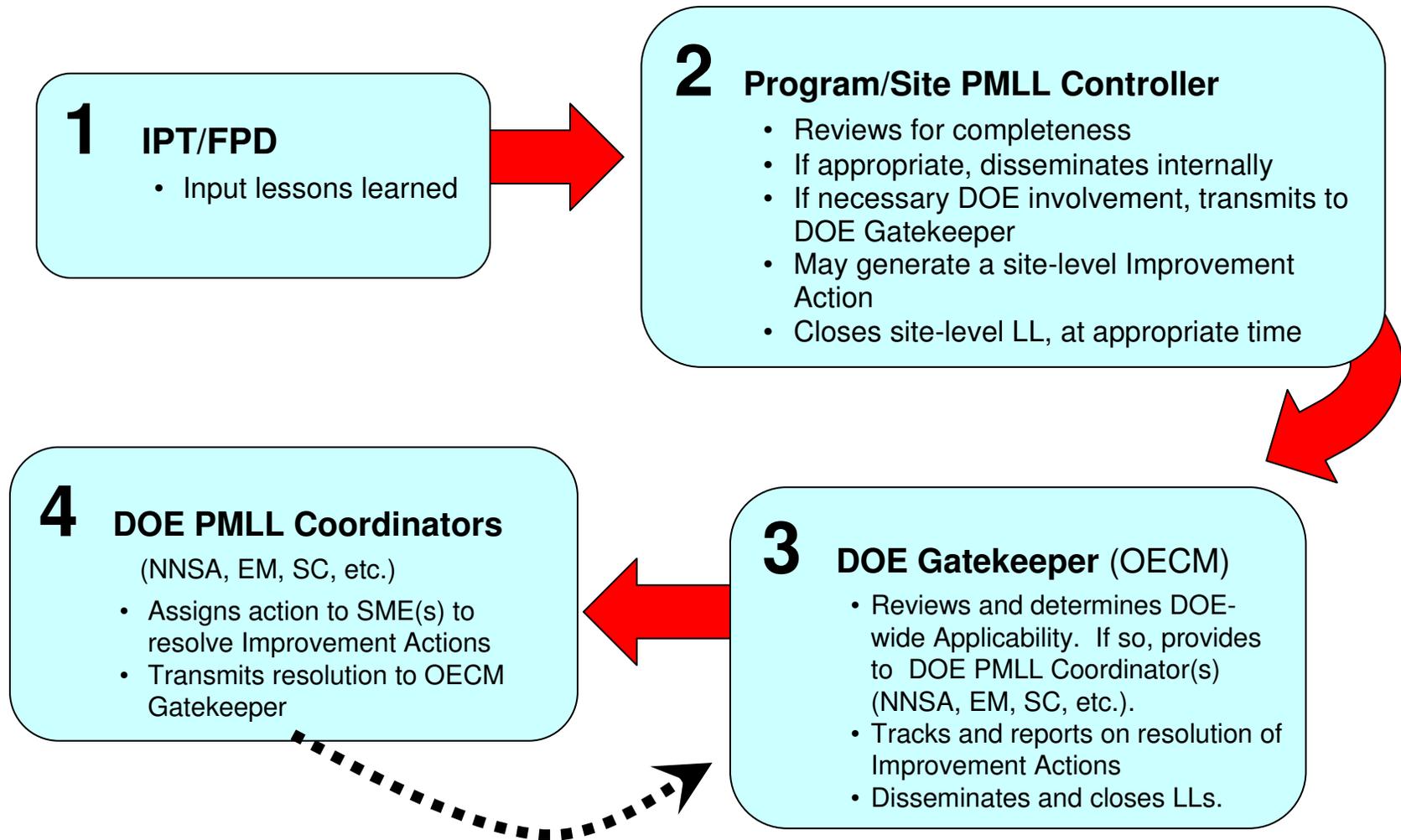
DOE

- DOE Gatekeeper (OECM) – resolution of cross-issues
- Program Coordinators (NNSA, EM, SC, etc.) – Receive LL “Improvement Actions” from Gatekeeper and coordinate required actions within their DOE Program organizations.

BOTH

- Subject Matter Experts (SME)

413.3 GUIDE Lessons Learned -- Roles & Workflow (suggested)



DOE STD-7501-99

The DOE Corporate Lessons Learned Program

DOE-STD-7501-99	
DOE Lessons Learned Template	
Title:	_____
Date:	_____
Identifier:	_____
Lessons Learned Statement:	_____
Discussion of Activities:	_____
Analysis (May be incorporated into the Discussion):	_____
Recommended Actions:	_____
Estimated Savings/Cost Avoidance (if applicable):	_____
Priority Descriptor:	_____
Work / Function(s):	_____
User-Defined Category:	_____
Hazard(s):	_____
ISM Core Function(s):	_____
Originator:	_____
Contact:	_____
Authorized Derivative Classifier:	_____
Reviewing Official:	_____
Keywords:	_____
References:	_____

Measures of Success of LL Pilot



- **Meets the requirements of relevant DOE Orders and Standards.**
- **Capable of improving cost-effective Federal Construction by:**
 - **Incorporating an effective lessons learned system into user's daily business practices;**
 - **providing a centralized real-time collection tool and subject matter repository to document and share LLs; and**
 - **Increasing the opportunities for the capture of LLs.**
- **Capable of access by all authorized FPDs, DOE sites and HQ's.**
- **State of the art system (flexibility, sustainability and robustness).**
- **A system that moves toward analysis, trending, and Action Tracking capabilities – LLs are being utilized and not just sitting in an email inbox.**

DOE requirements/standards for Lessons Learned

DOE Order 413.3A (Discussed)

DOE Guide 413.3-11 on Project Management LL

- Four stages: Capture, Check, Learn, and Close
- LEARN stage includes actions that translate LLs into actionable tools and create and implement improvement actions.

DOE STD 7501-99, *The DOE Corporate Lessons Learned Program*

- LL Programs include two basic processes.
 - 1) identification, documentation, validation, and dissemination of a LL.
 - 2) A utilization and incorporation process can identify and distribute LLs and associated actions, and follow-up to ensure that appropriate actions were taken. Contain processes to **measure operational performance improvement and program effectiveness.**
- Includes a template for capturing LLs.
- Analysis and trending of LL information to evaluate improvements, or identify trends to focus improvement efforts.

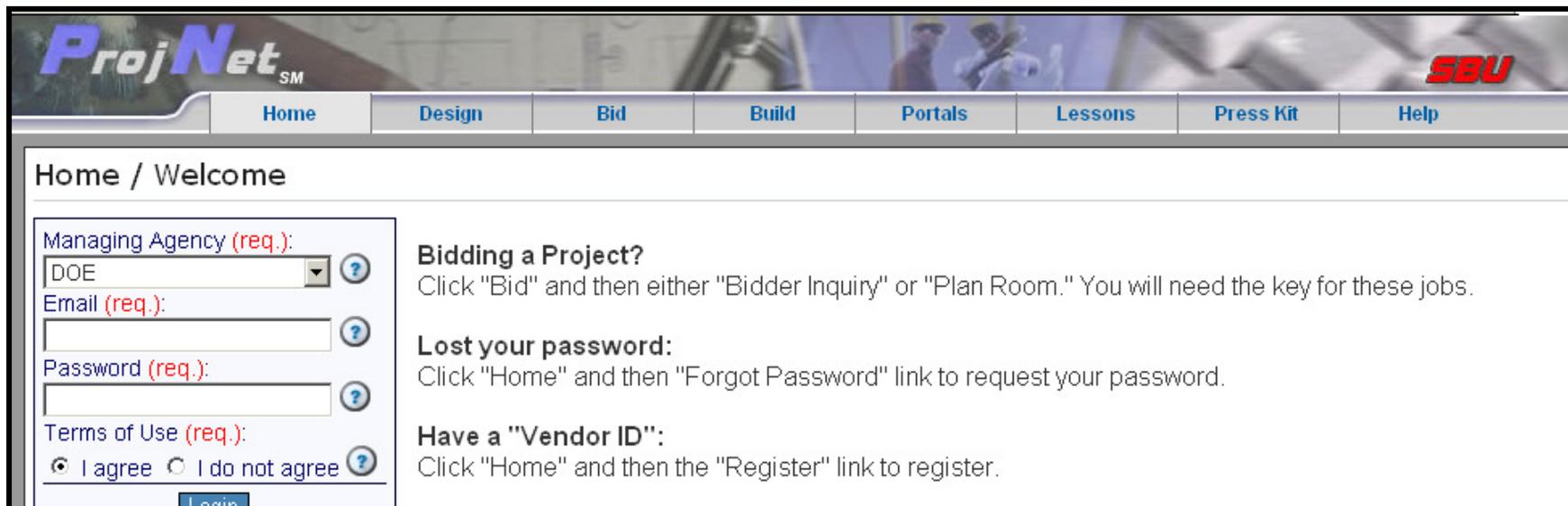
DOE O 210.2, *DOE Corporate Operating Experience Program*

- Follows the DOE STD LL template for capturing LLs.
- “LL must be collected, stored, and retrieved through a central clearinghouse that allows ready access to and communication about collected information on a timely, unimpeded basis by all DOE elements.”
- LLs must be incorporated into training, maintenance and work planning, operations, and **design and construction.**

Short Demonstration of

- **ProjNet**

- Lessons Learned (Design Quality LL – DQLL)
- DrChecks (Design Review Checks)



The screenshot displays the ProjNet website interface. At the top, there is a navigation menu with links for Home, Design, Bid, Build, Portals, Lessons, Press Kit, and Help. The SBU logo is visible in the top right corner. Below the navigation menu, the page title is "Home / Welcome". On the left side, there is a login form with the following fields: "Managing Agency (req.)" with a dropdown menu showing "DOE", "Email (req.)", "Password (req.)", and "Terms of Use (req.)" with radio buttons for "I agree" and "I do not agree". A "Login" button is located at the bottom of the form. On the right side, there are three sections of text: "Bidding a Project?" with instructions to click "Bid" and then either "Bidder Inquiry" or "Plan Room."; "Lost your password:" with instructions to click "Home" and then "Forgot Password"; and "Have a 'Vendor ID':" with instructions to click "Home" and then "Register".

LL Pros & Cons: ProjNet

Pros:

- Accessible to all authorized individuals within DOE, including FPDs and contractor project managers
- Searches well on defined categories, limited search for text/key words
- File Sharing capability
- Very Good technical and training support/help desk



Cons:

- Doesn't have a network of LL Controllers at HQ or Site Offices
- Doesn't have e-mail "Push" capability to disseminate LLs
- Processes and procedures are not yet in place for LL activities
- Doesn't have a full system for tracking coordination and completion of LL corrective actions
- Does not appear to have full Boolean* search capability

**Boolean searches allow you to combine words and phrases using the words AND, OR, & NOT (otherwise known as Boolean operators) to limit, widen, or define your search. Most Internet search engines and Web directories default to these Boolean search parameters.*

DOE CORPORATE LESSONS LEARNED

“SUBMIT LL” screenshot

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Text size: [Smaller](#) - [Normal](#) - [Larger](#) - [Largest](#) You are Here: [DOE](#) > [HSS](#) > [CSA](#) > [Analysis](#)

Submit Lesson

Do not fill out Security related lessons on this form.
All Security related lessons learned need to be fill out at the [Security Lessons Learned Center](#).

Please fill in all items below to submit a lesson:

Date: (mm/dd/yyyy)

Identifier:

Title:

Lesson Learned Statement:

Discussion:

Analysis:

DOE CORPORATE LESSONS LEARNED

“SUBMIT LL” screenshot

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Recommended Actions:

Priority Descriptor
Red / Urgent

Work Function Categories:
NOTE: Hold down the Ctrl key to select multiple items below.

- Alternate Fuels
- Authorization Basis
- Business and Support Services
- Conduct of Operations - Configuration Management
- Conduct of Operations - General
- Conduct of Operations - Lock and Tag

Hazard:
NOTE: Hold down the Ctrl key to select multiple items below.

- Access Authorization
- Access Controls
- Approvals & Reporting
- Barriers & Delay Mechanisms
- Basic Requirements
- Classification Guidance

ISM Category:
NOTE: Hold down the Ctrl key to select multiple items below.

- Define Work
- Analyze Hazards
- Develop / Implement Controls
- Perform Work
- Feedback and Improvement
- Not Identified

Originating Organization or Contracting Company:

DOE CORPORATE LESSONS LEARNED

“SUBMIT LL” screenshot

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ISM Category:
NOTE: Hold down the Ctrl key to select multiple items below.

- Define Work
- Analyze Hazards
- Develop / Implement Controls
- Perform Work
- Feedback and Improvement
- Not Identified

Originating Organization or Contracting Company:

Validator:

Contact Name/ Phone Number:

ADC:

Savings:

Reviewer:

Keywords:

References:

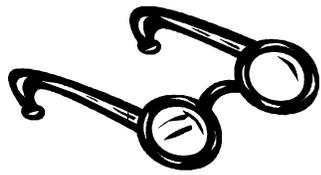
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Technical questions? E-mail us at: HSSUserSupport@hq.doe.gov
or call HSS InfoCenter at 800-473-4375

Comparison Checklist

Current Lessons Learned (LL) Capabilities	ProjNet	DOE Corporate LL
Meets DOE O 413.3A requirements	Y	Y
Meets DOE Guide 413.3-11 objectives	Y	Y
Meets DOE Order 210.2 requirements	Y	Y
Meets DOE STD-7501-99 requirements	R	G
Access Control System	G	G
Confidentiality Agreement	Pending	R
Processes, procedures and personnel are in place for LL activities	Pending	G
Search function has the ability to search by Site Office, Facility Type, Project Name, Critical Decision level, and key words	G	Y
Uses e-mail "Push" technology to disseminate LLs	R	G
Accessible to all individuals within DOE, especially FPDs and contractor project managers	G	G
System uses contemporary technology	Y	Y
Tracks coordination and implementation of LL corrective actions, analyzes trends and other data	R	R



Preliminary Findings



- Both ProjNet and the DOE Corporate LL systems have basic, suitable and somewhat tailorable LL platforms.
- Neither system was designed for or is well-suited for Action Tracking of LL “Improvement Actions” as identified in DOE Guide 413.3-11
- DOE Order 210.2 likely requires that Project Management LL would need to be posted into the DOE Corporate LL database, so LL data format and migration issues are being explored.
- NNSA Safeguards and Security developed an LL database that later became a DOE-wide system integrated with the DOE Corporate LL database. So we are learning lessons from them.
- The ProjNet pilot team sees value in, and is integrating/ networking with, the nearly 100 members of the DOE Operating Experience Committee (OEC) that are the human-resource backbone of the DOE Corporate LL database and system.

Preliminary Conclusions

- ProjNet's DrChecks (design) review tool looks promising for EIRs and IRPs and for gathering LL-related data.
- Relatively early in the LL pilot process (between CD-0 and CD-1) and exploring system engineering and integration issues.
- Recognize the need for any Project Management LL system to be integrated with the DOE Corporate LL system, we are looking at two options:
 - Having a separate system like ProjNet interface with the DOE Corporate LL system, or
 - Tailoring the DOE Corporate LL system to have "Project Management LL" component within it.

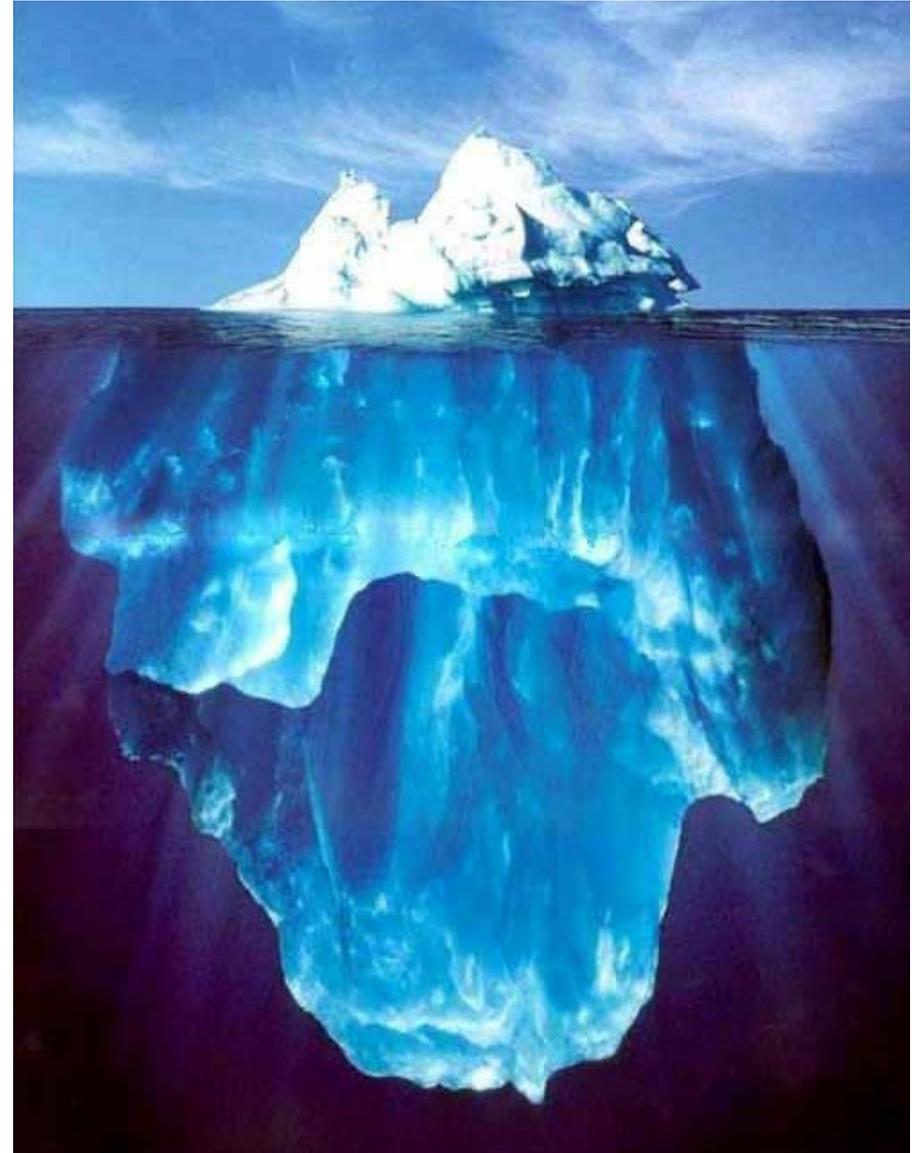
ProjNet / LL Pilot

Lessons Learned
System

LL Mission
Requirements



P.S. It's dark and foggy and so, unlike the Titanic, we are proceeding with caution.



Briefing to Operating Experience Workshop

OECM Requirements for Project Management Lessons Learned

- Mission Need
- Senior Management Requirements
- Performance Measures

Mission Need

- The DOE Root Cause Analysis Report (April 2008) on causes for poor project management performance identified consistently the lack of a common and accessible data base repository on lessons learned in project management. **The NNSA ProjNet Pilot Program is one of the means to find a solution for this deficiency.**
- GAO and other external review Agencies have identified a common flaw in DOE Project Management where mistakes or experiences from past projects are not shared over the DOE establishment. As a result, in many situations the same causes of problems in projects reappear over and over again.
- Today's repository for project management lessons learned resides in paper form in filing cabinets at Headquarters and the sites.
- Most of the data on lessons learned is gathered when a bad situation emerges (huge Baseline Change Proposal with cost and schedule overruns) or when the project is completed.

Mission Need (continue)

- There is no consistent method to gather good and bad project experiences or means to filter the quality of the data. There **is no query tool** by programs, topic areas or sites (or any project categorization means) to look for specific information on how a specific problem area was addressed in similar projects in the past.
- There is no Lesson Learned System where information from contracts and procurement experiences from construction projects is shared.
- **BOTTOM LINE: WE NEED A LESSONS LEARNED SYSTEM FOR PROJECT MANAGEMENT FROM THE BOTTOM TO THE TOP THAT IS RELIABLE, ROBUST AND ACCESSIBLE AND MAINTAINED IN REAL TIME.**

Senior Management Requirements (MA-1/50)

- Lessons Learned Application (whichever is chosen) should be simple, accessible and not difficult to use (**user friendly**).
- It should be **useful and of value** to the Integration Project Team and external reviewers using the system in real time for problem resolution and in query searches for lessons learned from previous projects.
- The query system should address something as simple: I have this risk with this project. **What have we done before in similar situations and who can help me for additional information?**
- Use the Media that everybody is used to (don't use complicated tools).
- Tracking system for actions pending is a plus (we learned we made this mistake. Is this being followed upon and... in other sites or projects?)

Measures of Success

- Meets the requirements of DOE Orders and Standards for Lessons Learned System.
- Useful to the DOE Project Management Community and cost effective.
- State of the art system (flexible, sustainable and robust)
- Accessible to all FPD's, DOE sites and HQ's
- Will assist DOE in being off from the GAO "High Risk List" for poor project management.

Bottom Line: We need a system/tool that will assist us not to repeat bad performance practices and to repeat the good ones.