



U.S. Department of Energy  
Office of Civilian Radioactive Waste Management

[www.ocrwm.doe.gov](http://www.ocrwm.doe.gov)

# Yucca Mountain Project – Lessons Learned/Generic Implications

Presented to:

**Society for Effective Lessons Learned Sharing (SELLS)**

Presented by:

**James McLaughlin**

**Bechtel SAIC Company, LLC**

**October 18, 2005**

**Oak Ridge, TN**



# Lessons Learned - The Next Level

- **Where We Were**





# Lessons Learned - The Next Level

- **Where We Were**



- **Where We Are**



# Lessons Learned - The Next Level

- **Where We Were**



- **Where We Are**



- **Where We Are Going**







# Where We Were



- **1999 - Program Begins**
  - Issue Procedure AP-REG-001, Managing Lessons Learned
- **2000 - Program Update**
  - Complete Rewrite of AP-REG-001 to Conform to the Intent of DOE-STD-7501, The DOE Corporate Lessons Learned Program
- **Screening Process**
  - Subjective
  - Responsibility of One Individual
- **Lessons Learned Sources**
  - Internal
  - DOE Lessons Learned List Server



# Where We Were



- **Database**
  - Lotus Notes-Based
  - Keyword Search Capability Only
  - Low Functionality Made Using the Database and Managing the Program Difficult
- **Distribution**
  - 39 Lessons Learned Issued Year One
- **Program**
  - Little or No Communications
  - Program Awareness - Very Low
- **Integration**
  - Little to no Integration with other processes
  - Work Order Usage - Minimal



# Where We Were



- **Measurement Tools**
  - Informal Metrics
  - Changed Frequently



# Where We Were

## Database Response Form



(Untitled) - Lotus Notes

File Edit View Create Actions Help

Workspace Marco Lee - Inbox CRWMS Contact Directory - LL Program Coordinator - Inbox Lessons Learned No... (Untitled) notes

OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT

LESSONS LEARNED  
ACTION RESPONSE

DOCUMENT IDENTIFIER: OCRWM-LL-1999-001

Title: ESF Pad Drilling Incident

ACTION: Reviewed

STATUS:

☒ Action Taken  
☐ Action Planned

AFFECTED LESSONS LEARNED COORDINATOR: Sheryl Morris/YD/RWDOE

Reply to Program Coordinator

ENTERED BY: Sheryl Morris/YD/RWDOE  
DATE: 09/11/2000 04:40 PM

Report Date

6149 unread document(s) remaining

Start (Untitled) - Lotus Notes O:\Organizational\_Assur... Microsoft PowerPoint - [S... 4:58 PM







# Where We Were

## Database Home Page View

Lessons Learned Notification - Posted Notifications - Lotus Notes

File Edit View Create Actions Help

Workspace LL Program Coordinator - Inbox Marco Lee - Inbox CRWMS Contact Directory - Phone List... Lessons Learned Notificat... notes

Search In: "Posted Notifications" Not indexed

Search for  Search

Compose Lesson Learned Notification

**Keyword Search Only**

Document ID	Title
* OCRWM-LL-2003-115	Document Processes And Agree To Communication Chan Complex Projects.
* OCRWM-LL-2003-116	CPSC, HOMIER DISTRIBUTING CO. ANNOUNCE RECAL PORTABLE LIGHTS, AND FLUORESCENT WORK LIGHT
* OCRWM-LL-2003-117	Completion Checklist Helps Achieve 100% Procedural Cor Reports (OCRs)
* OCRWM-LL-2003-118	Hazard Identified: Overhead Lines
* OCRWM-LL-2003-119	Vigilance Required When Backing up Trucks or Large Equ
* OCRWM-LL-2003-120	'Key Ring' Carabiner Used as Safety Equipment
* OCRWM-LL-2003-121	It may NOT be carpal tunnel syndrome.
* OCRWM-LL-2003-122	Inattention to Minor Discomfort and Work Priorities Leads
* OCRWM-LL-2003-123	Schedule Delays And Evaluation Difficulties With Root Cau And 107
* OCRWM-LL-2003-124	Worker Receives Electrical Shock After Contact with Weld
* OCRWM-LL-2003-125	CPSC, IBM AND LITEON TECHNOLOGY ANNOUNCE EX ANNOUNCED RECALL OF COMPUTER MONITORS
* OCRWM-LL-2003-126	Final Check of Software Package Documentation and Cod IV&V.

Using database on Local

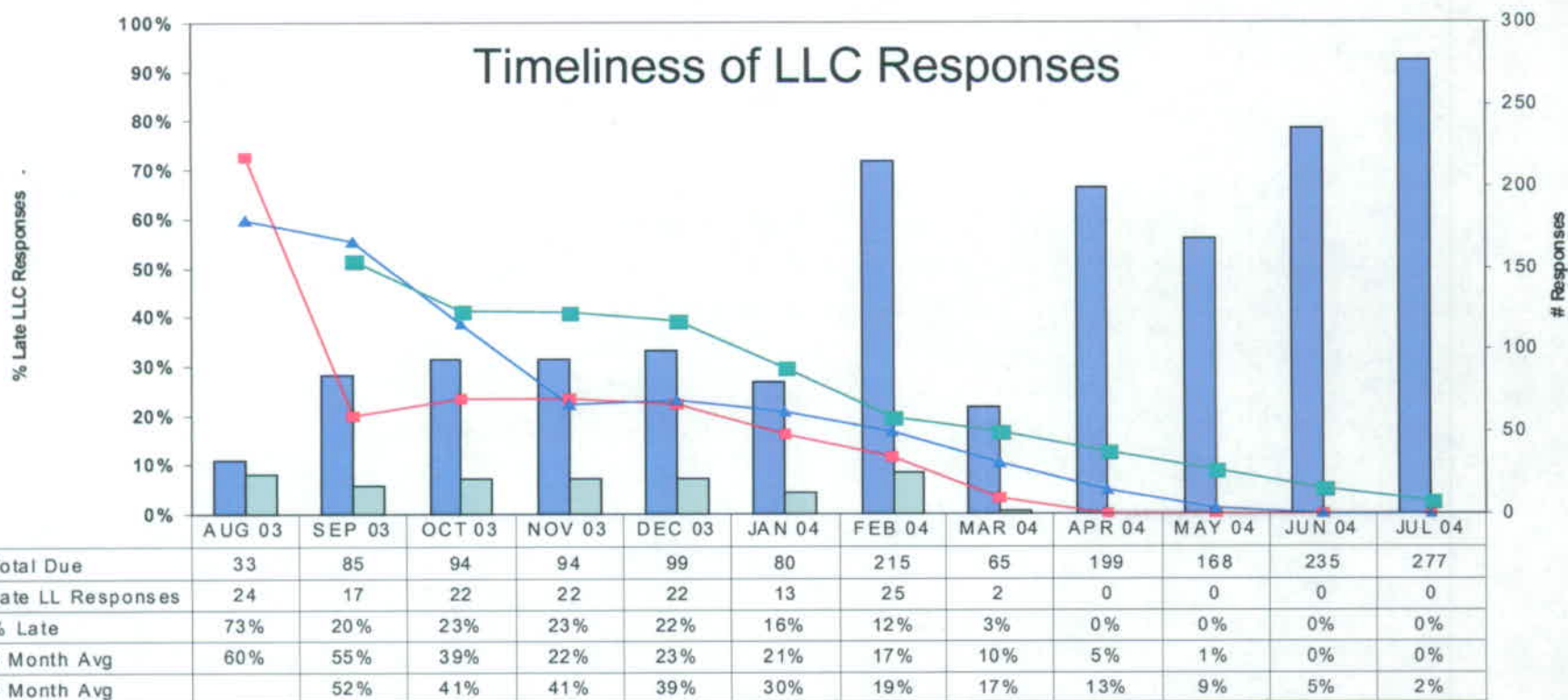
Start Lessons Learned Notifi... O:\Organizational\_Assur... Microsoft PowerPoint - [S...

Office 12:33 PM



# Where We Were

## Metrics



# Where We Are



- **2003 - Implemented Web-Based Database**
- **Screening Process**
  - Formal Screening Process Established
  - Team of Subject Matter Experts From Key Organizations Established
  - Sources of Potentially Applicable Information Increased
- **Lessons Learned Sources**
  - Internal
  - DOE Lessons Learned Database
  - ORPS
  - Institute of Nuclear Power Operations (INPO)





# Where We Are



- **Database**

- Web-Based
- 16-Field Drill Down Search Capability
- Refine Search Capability
- Save Query Capability
- Required Action and Response Tracking
- General User Feedback Form

- **Distribution**

- FY 2004
  - ◆ 76 Internal
  - ◆ 41 External
- FY 2005
  - ◆ 70 Internal
  - ◆ 30 External





# Where We Are



- **Program**

- Communication Blitz (Brochures, Posters, Home Page Hyperlink, Intranet Site, Articles)
- Program Awareness – High
- Special Emphasis Area - Work Control
- Quarterly Award Program for LL Initiators

- **Integration**

- Through Procedure Call-Outs LL Program Integrated with:
  - ◆ Corrective Action Program
  - ◆ Safety
  - ◆ Self-Assessments
  - ◆ Work Control
  - ◆ Quality Assurance
  - ◆ Specifications

# Where We Are



- **Measurement Tools**


- Formal Metrics Established Including:
  - ◆ Lessons Learned Use in Work Control
  - ◆ Lessons Learned From Significant Condition Reports
  - ◆ Timeliness of Dissemination



# Where We Are

## Database Response Form





**Generic Implications Database**

[Admin](#)  
[Help](#)  
[LLHome](#)

[Submit New](#) | [Search](#) | [Just-in-Time Reports](#) | [Top Ten](#) | [Related Links](#) | [Coordinators](#)

[Previous Page](#) | [View this Lesson Learned](#) | [Printer Friendly Version](#)

**OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT**

**LESSONS LEARNED ACTION RESPONSE**

DOCUMENT IDENTIFIER: OCRWM-LL-2005-092

**Title:** Ensure Product Output Including DTNs Are Correct, Accurate, And Technically Appropriate

**Coordinator:** David Broach

Document results of actions below in 'Feedback/Additional Comments:'

☒ Lessons Learned Evaluated. Does Apply. The following actions were taken:

☒ Forwarded to appropriate personnel via e-mail

initial entry on 7/26/05: Forwarded to science training program owner and developer for checker training to determine applicability and actions.

<p>

Updated entry 08/29/2005: Not applicable to engineering personnel.

☐ Discussed with staff in meeting

☐ Required Action taken

☐ Initiated Policy, Desk Instruction, or Procedure Change



# Where We Are

## Database Response Form



☐ Other Action taken

☐ Lessons Learned Evaluated. Does Apply. No Actions Necessary because...

☐ Our procedures, processes, culture already reflect the lesson that was learned

☐ Other

☐ Lessons Learned Evaluated. Does Not Apply because...

☐ Does not relate to job function

☐ Other

FeedBack/Additional Comments:

☐ **Final Response** Once you check this box and submit your response, you will not be able to edit this response again unless you receive permission from an LLPC.

Submit to Program Coordinator






# Where We Are

## Database Home Page View





**Generic Implications Database**


[Admin](#)  
[Help](#)  
[LLHome](#)

[Submit New](#) | [Search](#) | [Just-in-Time Reports](#) | [Top Ten](#) | [Related Links](#) | [Coordinators](#)

Click [here](#) to manage your responses.

Date	Identifier	Most Recent Lessons
08/29/2005	OCRWM-LL-2005-103	<a href="#">Repeated Faxing Leads to Illegible Records</a>
08/29/2005	OCRWM-LL-2005-102	<a href="#">Good Work Practices Improve Self-Assessment Quality and Effectiveness</a>
08/26/2005	OCRWM-LL-2005-101	<a href="#">More Care Needed for Subcontract Work on BSC Property</a>
08/18/2005	OCRWM-LL-2005-100	<a href="#">Review Hazards Even For Routine Tasks</a>
08/09/2005	OCRWM-LL-2005-099	<a href="#">Ensure the Traceability and Transparency of Project Documentation</a>
08/08/2005	OCRWM-LL-2005-098	<a href="#">Unsafe Attitudes and Risky Behaviors Result in Electrical Shock</a>
08/03/2005	OCRWM-LL-2005-097	<a href="#">Participate in Evacuations and Evacuate Calmly But Quickly to Ensure Your Own Safety and the Safety of Others</a>
08/01/2005	OCRWM-LL-2005-096	<a href="#">Improve the Execution of Long-Range Change Management Plans</a>
08/01/2005	OCRWM-LL-2005-095	<a href="#">Change Management Successful Through Selecting The Right Strategy, Plan Elements, And Team</a>
08/01/2005	OCRWM-LL-2005-094	<a href="#">Change Management Plan Successfully Executed Despite Emerging Issues</a>
07/28/2005	OCRWM-LL-2005-093	<a href="#">Evaluate Hazards and Use Proper Equipment When Working With Locomotives</a>
07/26/2005	OCRWM-LL-2005-092	<a href="#">Ensure Product Output Including DTNs Are Correct, Accurate, And Technically Appropriate</a>
07/22/2005	OCRWM-LL-2005-091	<a href="#">Using Performance Indicators To Improve Performance</a>
07/20/2005	OCRWM-LL-2005-090	<a href="#">Minimize Link Maintenance in Websites</a>
07/14/2005	OCRWM-LL-2005-089	<a href="#">Ensure Traceability Within The Corrective Action Program</a>

[Next 15 Lessons Learned >>](#)



\*Note: This site was developed in and is best viewed using a display resolution of 800 x 600 pixels or greater. To change your settings, please contact the Computer Support Center at 821-8200.

Contact a Lessons Learned Program Coordinator: [James A. McLaughlin, Sr.](#) or [Marcel Lee](#)

[General Concerns/Comments](#)



# Where We Are

## Database Search



Lessons Learned  
Generic Implications

**Database**

Admin  
Help  
LLHome

Submit New

Search

Just-in-Time Reports

Top Ten

Related Links

Coordinators

**Search Lessons Learned**

Please enter search criteria.

Reset for New Search

Show Help

Search

Free Text Search

☒ Any words   ☐ All words   ☐ Exact phrase

External/Internal Source

Priority Descriptor

ISMS Core Function

Hazard

Cause Code

Equipment

Functional Category

Lessons Learned # (yyyy-###)

OCRWM-LL-  -

LL Date (mm/dd/yyyy)

from  to

Site Area

Consequence

Work Discipline

Sub-Hazard

Select a Hazard First ...

Sub-Cause Code

Select a Cause Code First ...

Sub-Equipment

Select Equipment First ...

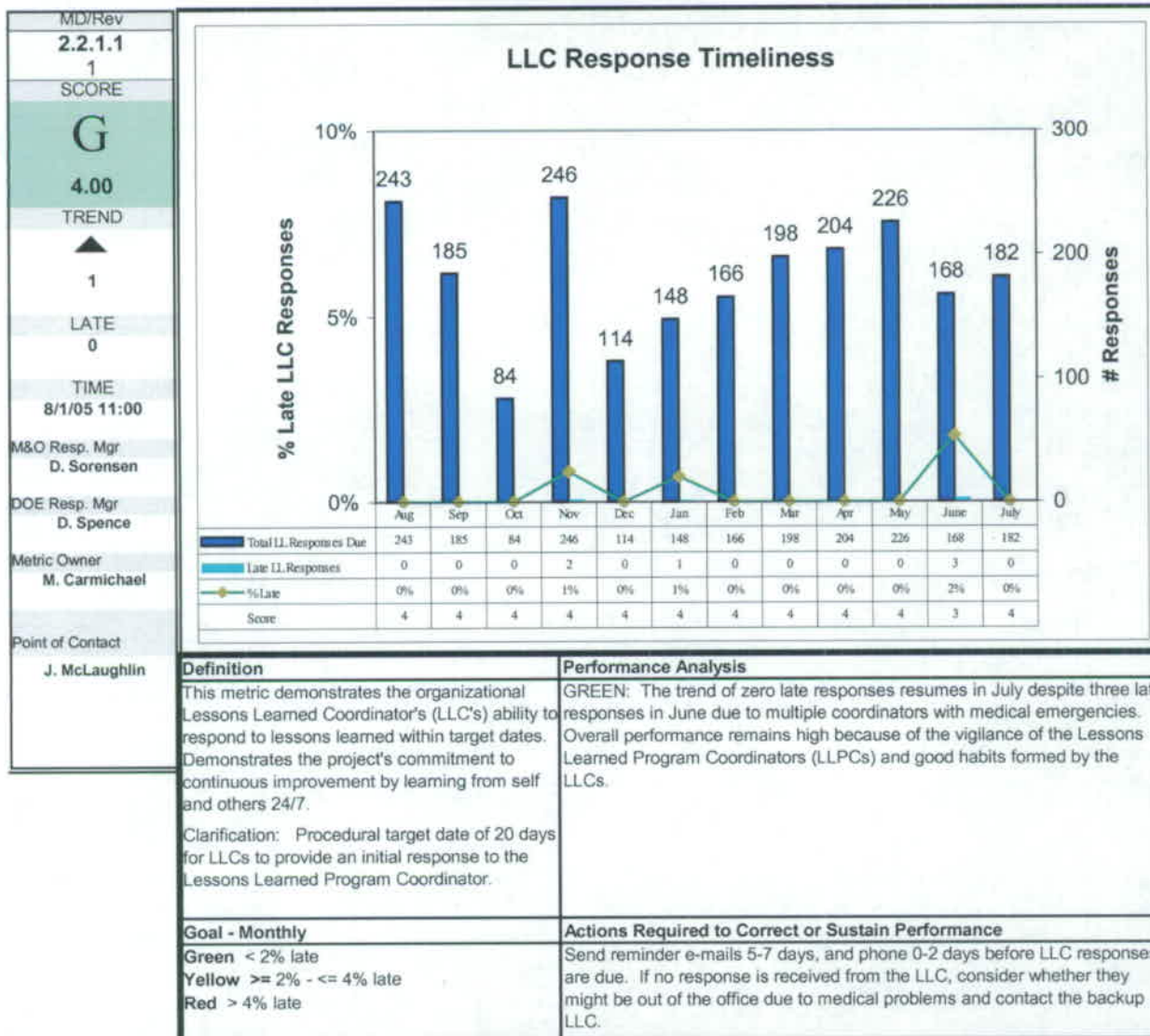
Search

**Your Saved Queries**

Query Name		
Fall Protection	Run this Query	Delete this Query



# Where We Are Metrics





# Where We Are Going



- **2006 - Program Update**

- DOE Operating Experience Order Issued
  - ◆ Rewrite LP-REG-009-BSC, Lessons Learned
  - ◆ Develop and Distribute Project-Wide Communication

- **Screening Process**

- Expand Key Organization Participation to Include Site Operations and Others as Applicable
- Formalize Screening Criteria to an Increased Level of Detail (i.e. pass over found and fixed ORPS items)
- Increase the Number of Required Actions





# Where We Are Going



- **Lessons Learned Sources**
  - Nuclear Regulatory Commission
  - INPO
  - DOE Sources
  - Internal Sources
- **Database**
  - Develop Features That Elicit Feedback to Ensure Content is Current and Useful
- **Distribution**
  - Keep Quantity at approximately 10/month
  - Focus On Quality and Impact



# Where We Are Going



- **Program**

- Implement Quarterly Success Story Award Program For Best Use of LL/GI Information

- **Integration**

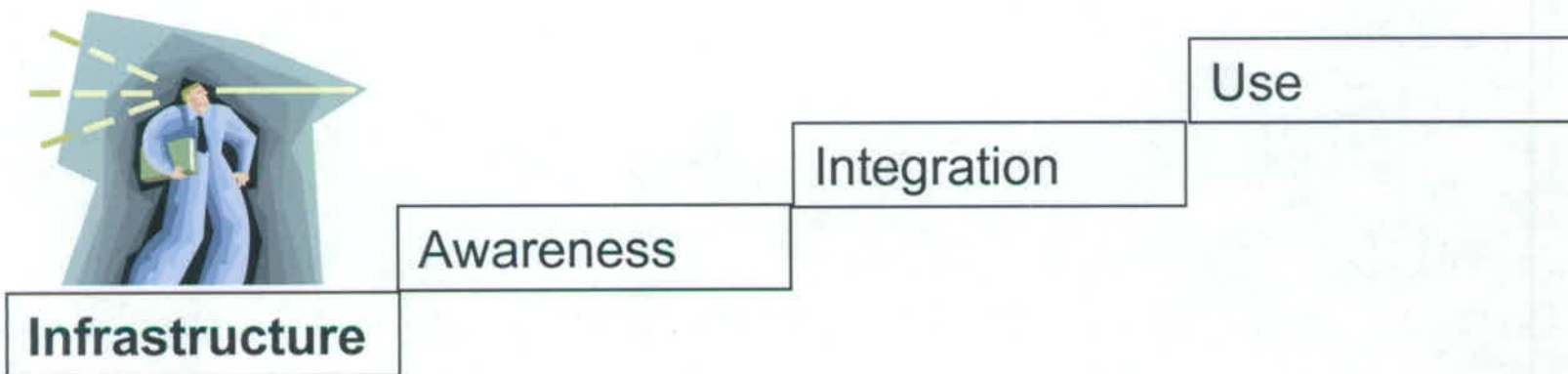
- Lessons Learned Integrated With Human Performance and Performance Indicators
- Second Nature for Employees to Apply Lessons Learned
  - ◆ During Development of New Processes
  - ◆ During the Implementation of New and Existing Processes
  - ◆ When Archiving Old Processes

- **Measurement Tools**

- Feedback From Post Work Control Process
- Measure Use in Other Areas Beyond Work Control (i.e. Procedures, Six Sigma)



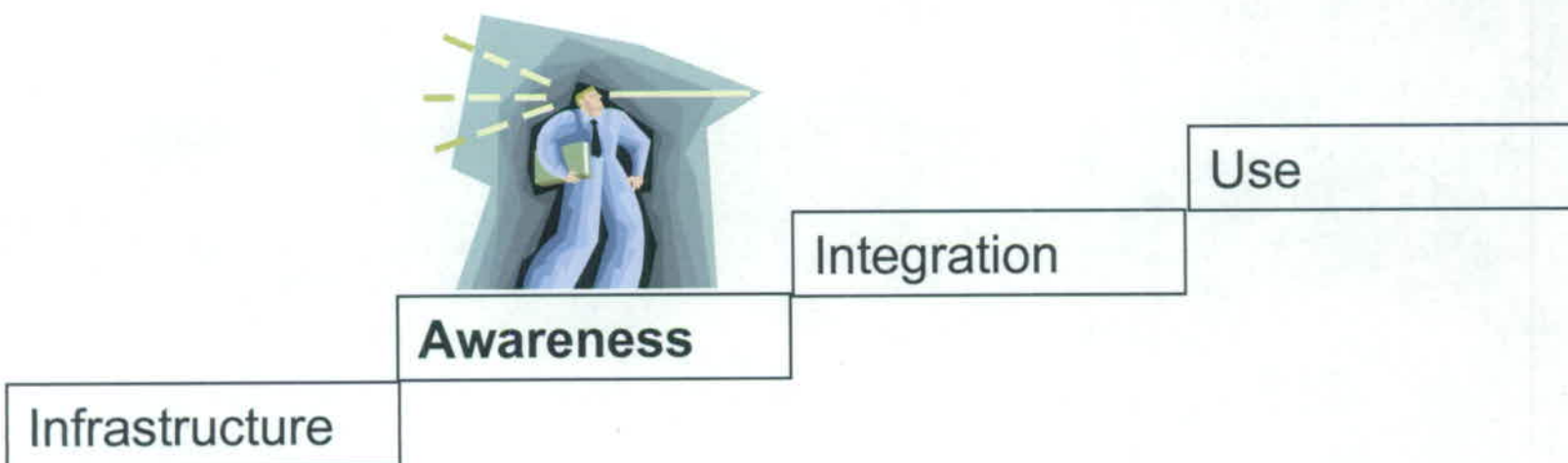
# STEPS TO EFFECTIVENESS



**Procedure, Process, Database, Roles & Responsibilities.**



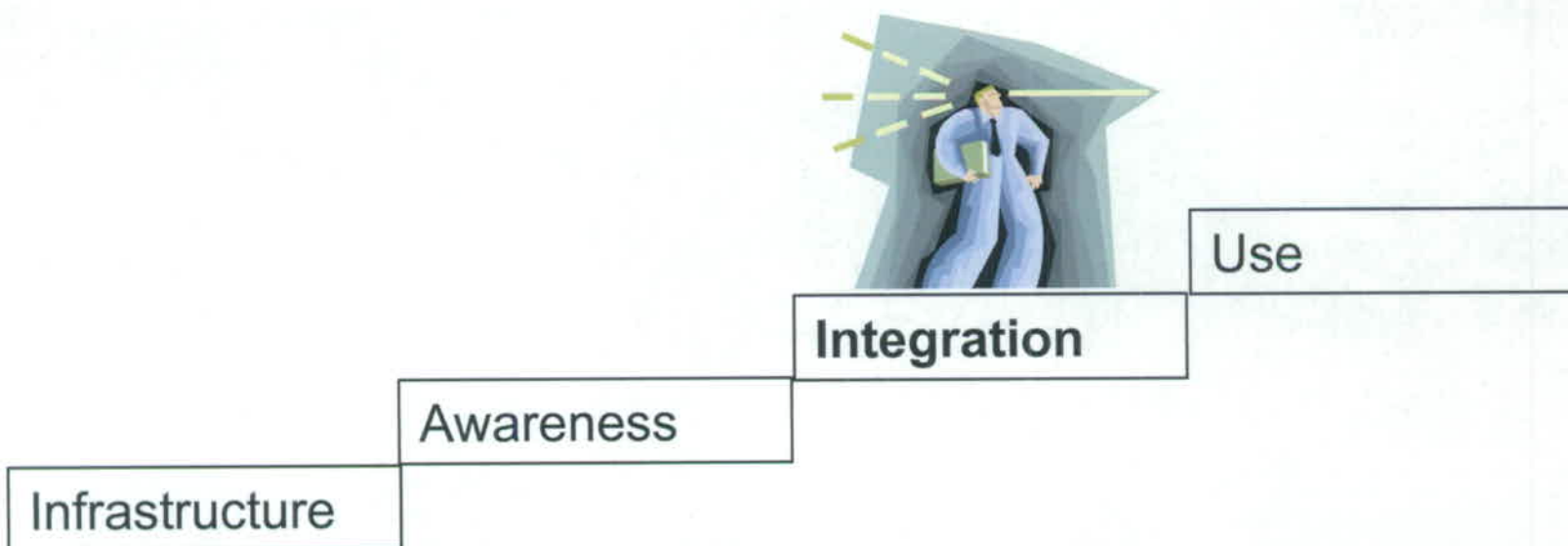
# STEPS TO EFFECTIVENESS



**Project personnel are aware of the program and the part they play in it.**



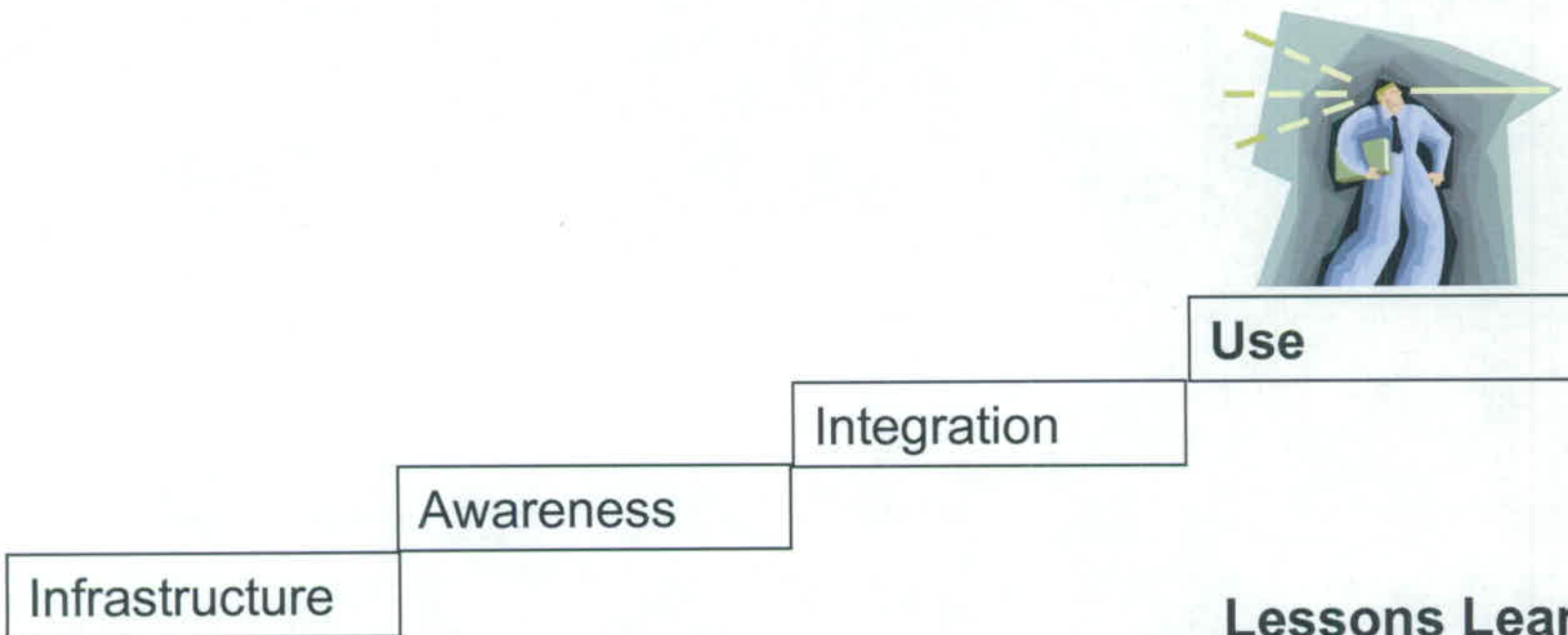
# STEPS TO EFFECTIVENESS



**All applicable  
processes tie to  
lessons learned  
and vice versa.**



# STEPS TO EFFECTIVENESS



**Lessons Learned  
are used to  
improve safety,  
quality and best  
business  
practices.**

