

# TURNING A DREADED CMMS UPGRADE INTO A MAINTENANCE PROCESS IMPROVEMENT

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# Agenda

- About SNL
- Sandia Facilities Facts
- Where We Were In 2005
- Scope of the Upgrade
- Our Approach
- Where We Are Now
- Where We Are Going
- Key Accomplishments
- Lessons Learned

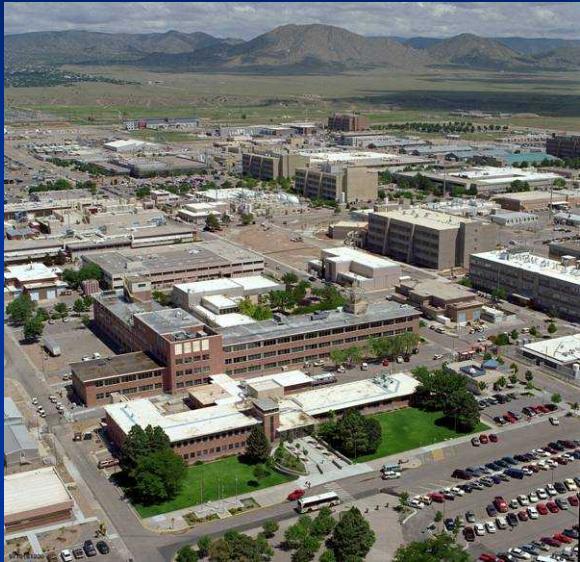
# Mission-Driven Laboratory



**We serve many agencies of the US Government with:**

- Design and development: nonnuclear portions of US nuclear weapons
- Production: advanced components
- Safety, security, use control
- Treaty verification, nonproliferation, counterproliferation
- Advanced military technologies
- Energy and environment
- Homeland security, countering weapons of mass destruction

# Distributed Facilities to Meet National Needs



Albuquerque,  
New Mexico



Kauai Test Facility,  
Hawaii



Yucca Mountain,  
Nevada



WIPP, New Mexico



Pantex, Texas



Tonopah Test Range,  
Nevada



Livermore, California

# Four Mission Areas

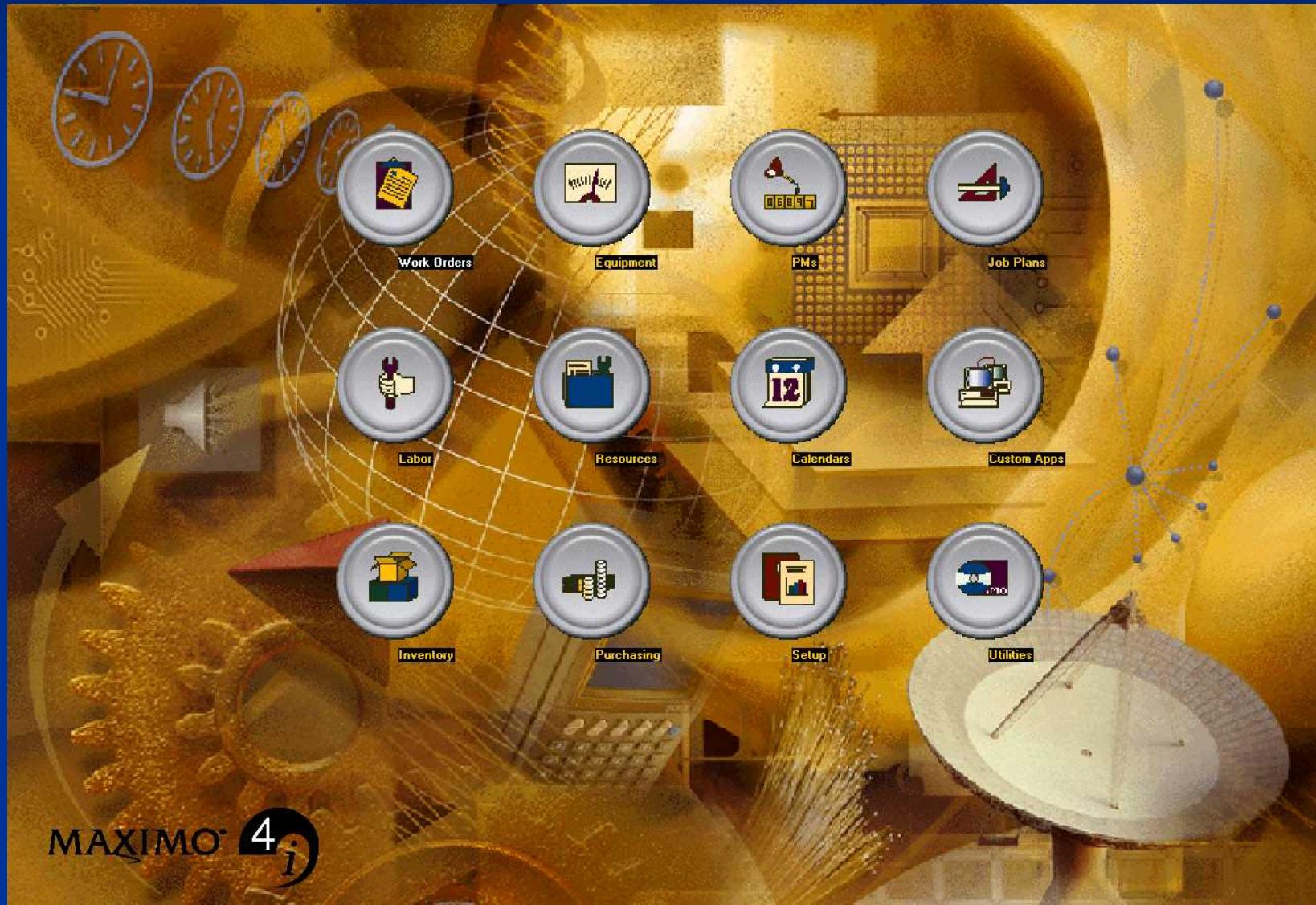
- Nuclear Weapons
- Defense Systems and Assessments
- Energy, Resources, and Nonproliferation
- Homeland Security and Defense



# Sandia Facilities Facts (Albuquerque Site)

- 952 Buildings housing nearly 12,000 people
- 6.2 Million gross square feet
- 46,000 Facilities maintenance work orders per year
- 25,000 additional service requests
- 37,000 Assets managed through Maximo
- 30,000 Items in inventory
- 520 Facilities employees

# Maximo 4.1.1



# Scope of the Upgrade

- Web-based technology
- Report conversion from SQR to Actuate
- Integration of help desk functions
- Integration of mobile application
- Screen Configurations
- Implementation of Workflows

# Maximo 6.2.1 Start Center

Welcome, Shelley Whitener

Go To [My Reports](#) [Start Center](#) [Profile](#) [Sign Out](#) [Help](#)

Facilities Service Desk True Planner

[Update Start Center](#)

**Quick Insert**

- [New Service Request](#)

**GOTO Service Desk**

- [Service Requests](#)

**Helpful Links**

- [Change Password](#)

**Closed SRs to be Workflowed**

Service Request	Status	Status Date
0000000000031591	CLOSED	2/10/99 8:44 AM
0000000000061127	CLOSED	10/15/99 1:51 AM
0000000000061848	CLOSED	10/25/99 11:05 AM
0000000000062263	CLOSED	11/12/99 12:35 AM
0000000000062284	CLOSED	11/22/99 4:24 AM
0000000000063279	CLOSED	11/30/99 10:39 AM
0000000000063388	CLOSED	12/3/99 12:00 AM
0000000000064607	CLOSED	12/6/99 4:39 AM
0000000000063159	CLOSED	12/7/99 12:00 AM
0000000000064368	CLOSED	12/7/99 12:20 PM

[Set Graph Options](#) [1 to 10 of 77423](#) [Next Page >>](#)

**Bulletin Board (0)** There are currently no bulletin board messages to view.

[Update Start Center](#)

**Inbox / Assignments (0)**

Description	STARTDATE	Route
No Assignments found for Shelley Whitener		

**NEW SERVICE REQUESTS** [Filter](#) [Help](#)

Service Request	Summary	Reported Date	Status

[...No rows to display...](#)

**KPI Graph**

Last Run: 8/30/07 9:55 AM

Status	KPI	Actual	Target	Variance
<span style="color: green;">■</span>	New Service Requests	0	5	-5



**Canceled SRs to be Workflowed**

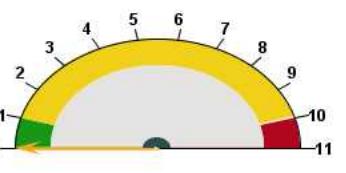
Service Request	Status	Status Date
0000000000061038	CANCELED	10/6/99 5:40 AM
0000000000061459	CANCELED	10/15/99 12:27 PM
0000000000061385	CANCELED	10/19/99 11:40 PM
0000000000062342	CANCELED	11/2/99 12:14 PM
0000000000060951	CANCELED	11/2/99 1:57 PM
0000000000061476	CANCELED	11/2/99 5:38 PM
0000000000061058	CANCELED	11/3/99 11:20 AM
0000000000061133	CANCELED	11/4/99 12:40 AM
0000000000062621	CANCELED	11/8/99 5:26 PM
0000000000062031	CANCELED	11/8/99 5:32 PM

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**New SRs 1 day old**

Last Run: 8/30/07 9:56 AM

Status	KPI	Actual	Target	Variance
<span style="color: green;">■</span>	New Service Requests 24hrs old	0	0	0



**New SRs > 48hrs old**

Last Run: 8/27/07 11:26 AM

Status	KPI	Actual	Target	Variance

# Our Approach to the Upgrade

- **Create cross-functional Project Team**
- **Integrate process improvements with upgrade**
- Utilize Lean Six Sigma tools
- Incorporate stand-alone databases
- Add new applications (Service Desk, Self Service)
- Partner with vendor for consulting, support, and training
- Minimize customizations
- Use Maximo terminology instead of our own
- **Create framework for future expansion/  
incorporation**

# Project Team

- Functional Lead – Maintenance Engineer
- Technical Lead – Maximo Developer/SME
- Key Maximo Users – 2 Maintenance Planners
- Technical Support Team – 4 Maximo Developers
- Key Stakeholders:
  - Warehouse Supervisor
  - Maintenance Manager
  - Planning Supervisor
- Ad-hoc Consulting Support (IBM)

# Project Plan

- Wrote project plan with 8 objectives
- Developed budget for project
- Divided team into 8 sub teams aligned with the objectives
- Involved additional users on sub teams
- Held monthly project team meetings
- Established and tracked schedule in Microsoft Project
- Reported progress to management steering team

# Project Plan Objectives

1. Mobile Maximo Conversion
2. Full Mobile Maximo Evaluation Plan
3. Sites Project Request System (SPRS) to Maximo
4. Workflow
5. Maximo-driven Process Upgrades
6. Maximo-facilitated Process Improvements
7. Training
8. Continuous Improvement/Sustainment

# Process Improvements

- Standardization of workflow
- Clarification of roles & responsibilities
- Improvement of communication
- Process consolidation (Maximo Service Desk)
- Implementation of weekly scheduling
- Enhancement of feedback/improve cycle
- Expansion of mobile technology

# Technology Improvements

- Maximo Service Desk replaced two in-house systems (SPRS and e-Services)
- Maximo Enterprise Adaptor provides greater integration opportunities
- Workflow allows easier path to standardization without sacrificing flexibility
- Web-based applications
- Start Centers = personalized and user friendly

# Vendor Partnership

- Emphasized “partnership” instead of typical vendor/customer relationship
- Detailed scope for consulting support with guidance and concurrence from vendor
- Vendor-led formal training for IT team and key users
- Demo database
- Vendor demonstrations of new applications and processes

***ESTABLISHED EARLY IN PROJECT AND  
MAINTAINED THROUGHOUT THE  
PROJECT!***

# Where We Are Now

- Behind schedule but still moving
- Why?
  - Delays and problems with upgrade scripts
  - Delays in consulting due to contract/procurement negotiations
  - Upgrade errors / beta test syndrome
  - Functional & performance deficiencies in mobile inventory application
- Go-live scheduled for October 2007
- Process improvement rollout to coincide with upgrade

# Where We Are Going

- Continuous Improvement Plans
  - Incorporate additional stand-alone databases
  - Interface with other systems (VFAFacility)
  - Upgrade and incorporate California site
  - Further develop personalized Start Centers
  - Develop role-based KPIs for Start Centers
  - Create additional reports
  - Implement Qualifications module
  - Implement Mobile Work Manager
  - Implement Failure Classifications / Failure Codes

# Key Accomplishments

- Project Charter & Plan
- Cross-functional Project Team
- Partnership with Vendor
- Process Improvements
- Development Database (= well prepared users)
- User-lead training: “Embracing the Change”
- Management Support from Start to Finish

# Lessons Learned

- Understand impacts of software changes on work **processes...listen to the users & process owners.**
- Make sure your vendor knows your **goals and schedule.**
- **Reassess** goals against schedule & **adjust** when appropriate.
- Realize that **organizational change and technology change** from your vendor can impact your project.
  - Have a single point of contact at the vendor.
  - Manage the change appropriately – be realistic.

# Lessons Learned

- When implementing new technologies/applications, build **extra time** into the schedule...you WILL need it!
- Request additional support from your vendor and make them part of your strategy and planning
- **Communicate** up, down, and across.
- **Plan** thoroughly, but stay **flexible**.
- **Train** early and often.