Ongoing Implementation of a Configuration Management System (CMS)

Thane Price
Technical Lead / Product Manager

NLIT 2011

www.inl.gov

Idaho National Laboratory

# About ITSM Academy

- **Accredited Education**
  - ✓ Certified Process Design Engineer (CPDE)®
  - ✓ ITIL® Foundation
  - ✓ ITIL Capability (OSA|PPO|RCV|SOA)
  - ✓ ITIL Lifecycle (SS|SD|ST|SO|CSI)
  - ✓ ITIL Managing Across the Lifecycle (MALC)
  - ✓ ITIL Service Manager Bridge
  - ✓ ISO/IEC 20000 Foundation
  - ✓ MOF Foundation
- **Practical, Value-Add Workshops**
  - ✓ ITSM Leadership
  - ✓ ITIL, MOF, ISO 20K Overviews
  - ✓ Apollo 13, Visible Ops: The Class
  - ✓ And more!

- Since 2003 - *Tens of Thousands Trained and Certified*
- ITSM Professional Diplomas
  - ✓ Change/Support/SLM
- Public Classes throughout U.S.
- Corporate On-Site Classes
- Virtual Classes
- Courseware Licensing
  - ✓ Corporate & Partner (GEM)
- Alumni Program
- PMI Global Education Provider
- Federal Government (GSA) Contractor
- Certified Woman-Owned

Welcome!

The Challenge - Managing Complexity
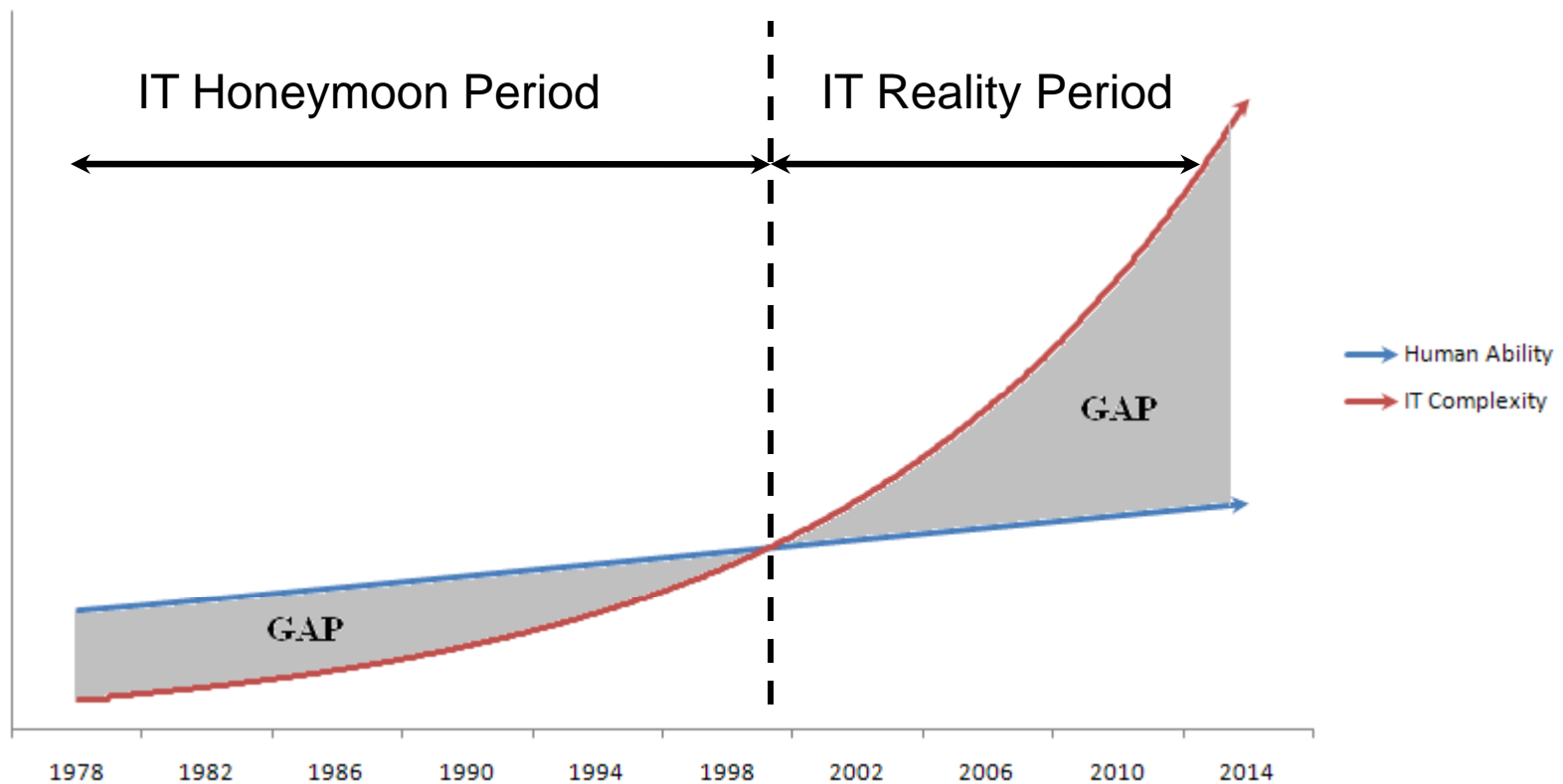
O'Donnell, G., & Casanova, C. (2009). *The CMDB Imperative*. Prentice Hall.

The Take Away – What I want you to know

- How to bridge the complexity gap

    – How do CMDBs support a CMS

    – What VALUE comes from a CMS

        - What have we done so far to build our CMS

    – What makes up an SKMS

        - Our beginning analytics towards an SKMS

The Tools – IT Service Management (ITSM)

SKMS - Service Knowledge Management System   Knowledge
- ISMS - Information Security Management System
- SCD - Supplier Contract Database
- CMIS - Capacity Management Information System
- KEDB - Known Error Database
- ITSCMS - IT Service Continuity Management System

CMS – Configuration Management System   Information
- Request, Incident and Problem Management
- Change, Asset and Configuration Management
- Portfolio and Catalog Management
- Access Management
- DML – Definitive Media Library

CMDB – Configuration Management Database   Data
- CIs – Configuration items, relationships / attributes

The Goal - Knowledge
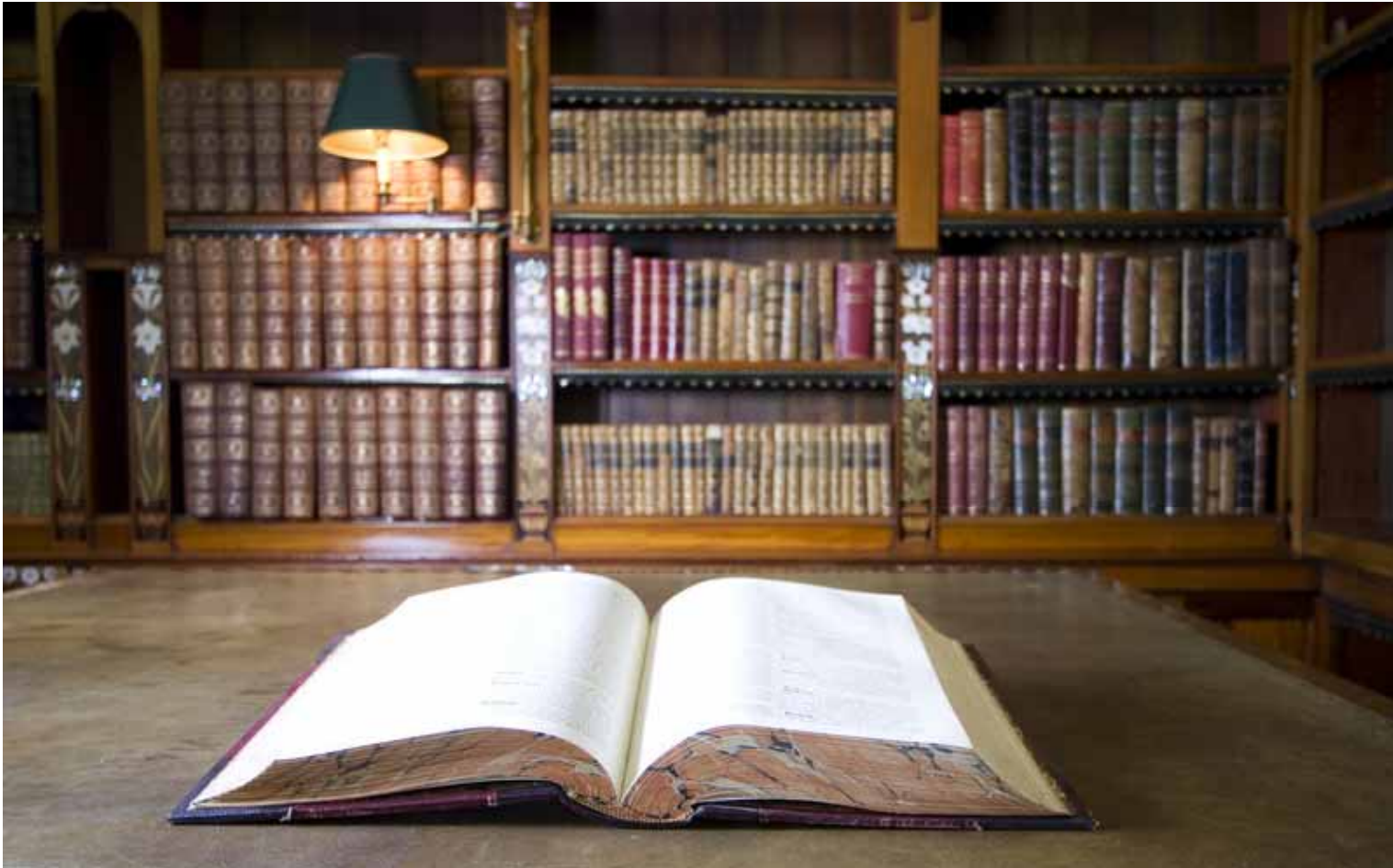
*"It's not what you know that gets you in trouble.
It's what you know that ain't so."* – Yogi Berra

The Focus - Business Value

- **More business opportunities through improved security**
  - Vulnerability management
  - Firewall rules
  - Variance tracking
  - Configuration item relationships
    - Currently maturing – highest priority

- **Measure end to end service levels and warranties**
  - Break services down to components
  - Rollup component availability to service
    - Currently availability only

- **Identify the costs for a service**
  - Service Level Agreement (SLA) costs
  - Budget by service
    - Currently minimal references to CMS not automated

The CMDBs – Where did we start

- Enterprise Architecture Repository
  - Manual data source
  - Relates applications to business functions – services
  - Relates applications to servers and software
- Network Information Center
  - Manual data source
  - Relates equipment to personnel
  - Relates equipment to network infrastructure
- LANDesk
  - Discovered data source
  - Relates servers/desktops to network connectivity
  - Relates servers/desktops to software

The CMS – Context of service from end to end
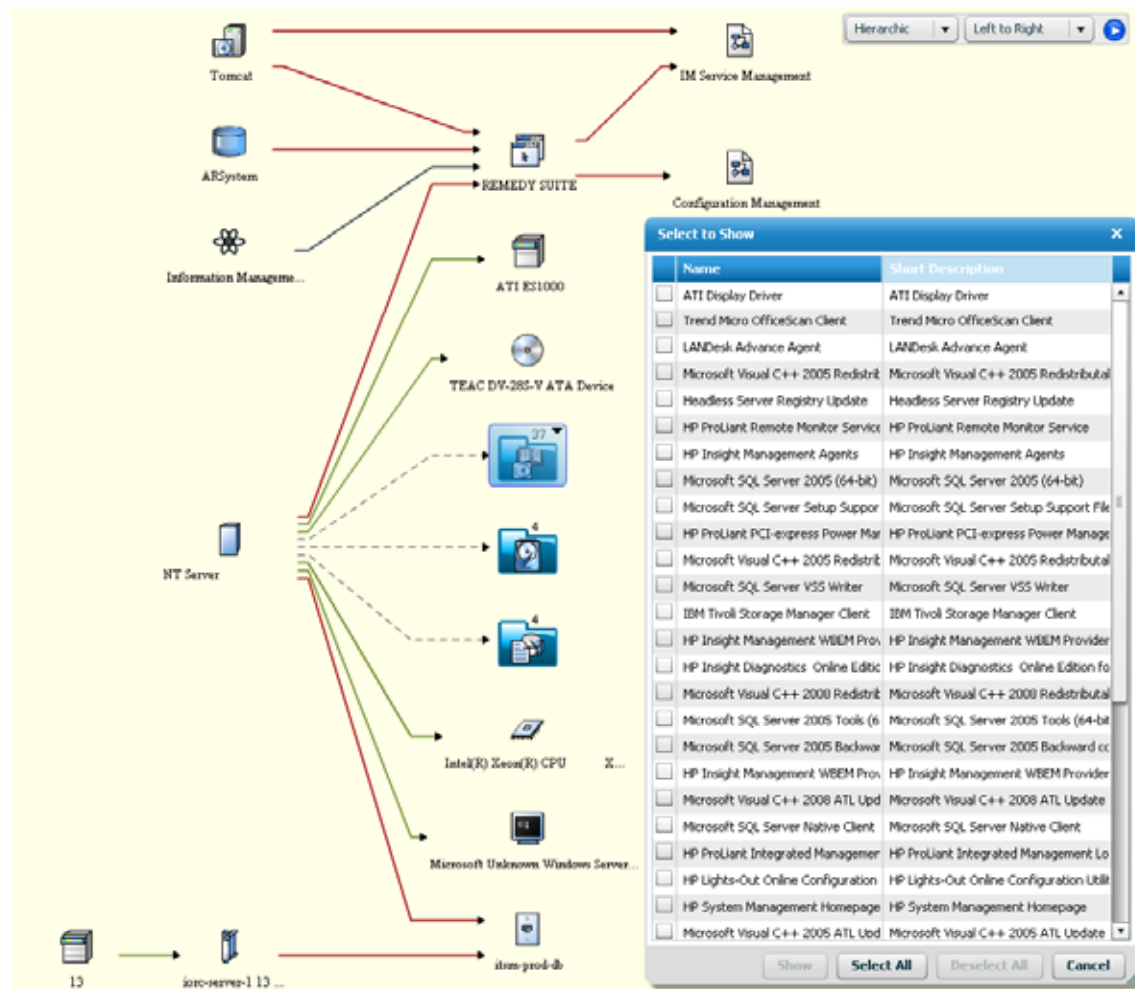
The CMS – A business service
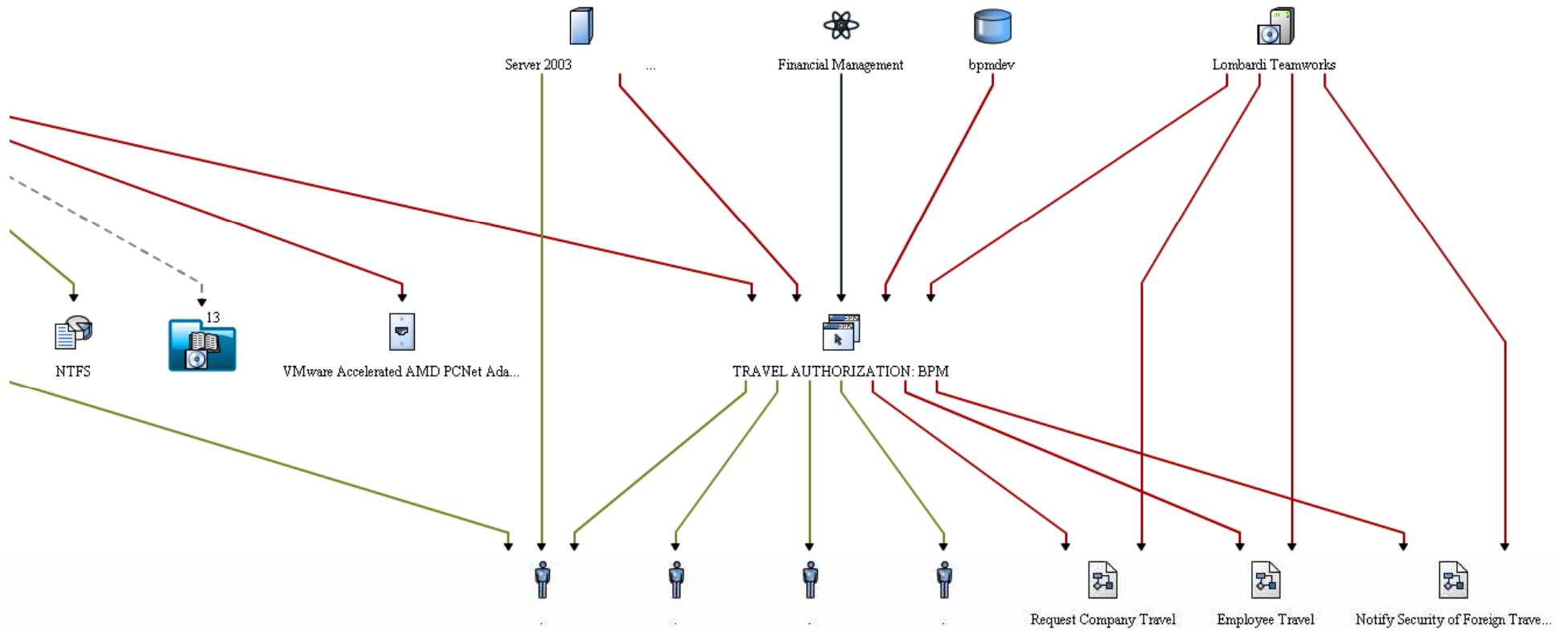
The CMS - Breaking it down
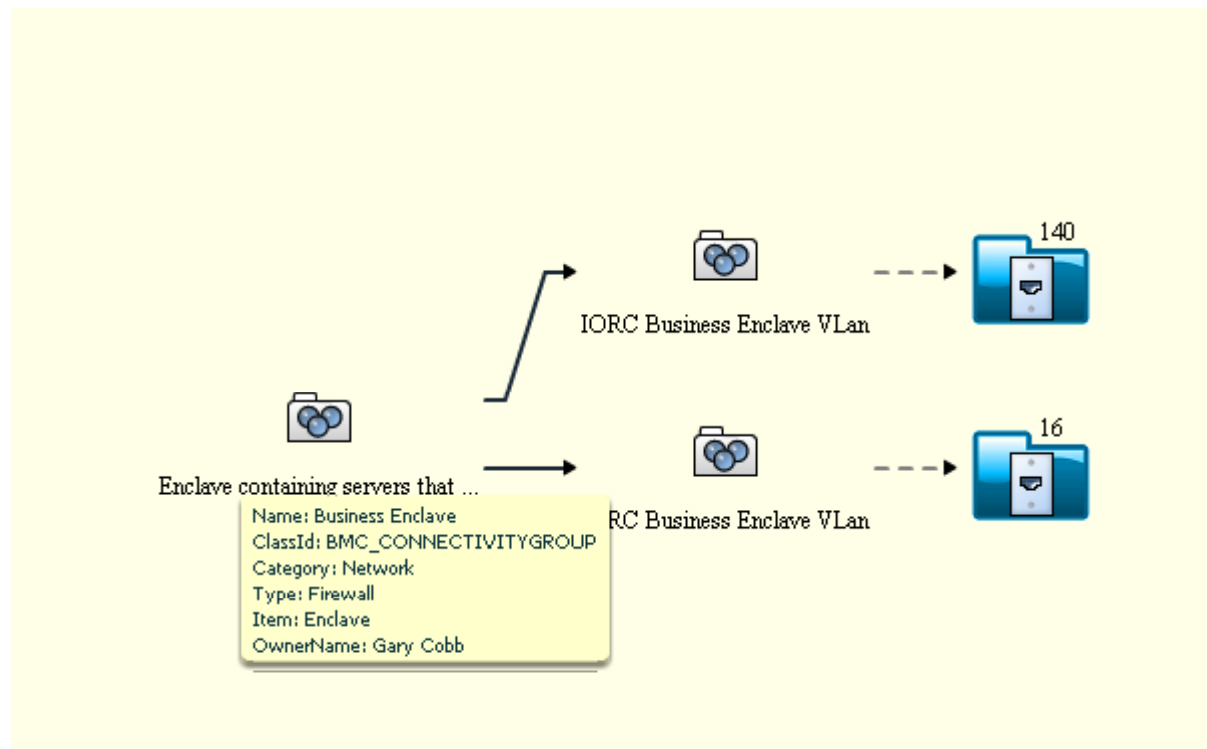
The CMS – Related Vulnerabilities
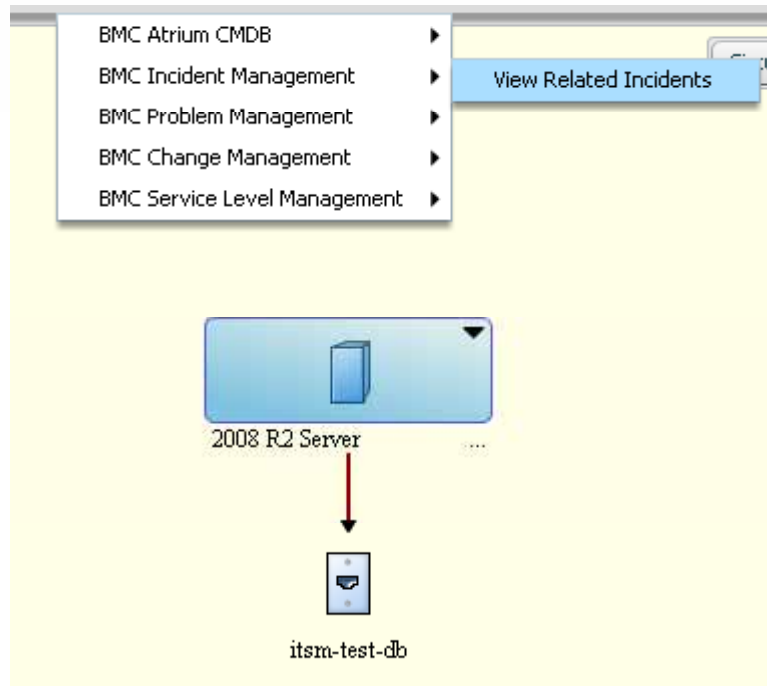
Incident ID	Summary	Incident Status	Priority	.	Customer Last ...	Customer First ...	Customer Company	Reported Date
Showing 1 - 9 of 9								
INC000000193834	SecurityVuln NES-49272: itsm-test-db (1...	Resolved	Medium	..	Nessus	Archer	Idaho National Laboratory	2/3/2011 5:12:30 PM
INC000000212241	SecurityVuln NES-0000: ITSM-DEV-DB (...	Assigned	Medium	..	Mora	Angelina	Idaho National Laboratory	4/27/2011 10:12:20 AM
INC000000212277	SecurityVuln NES-0000: ITSM-DEV-DB (...	Assigned	Medium	..	Mora	Angelina	Idaho National Laboratory	4/27/2011 11:27:37 AM
INC000000212278	SecurityVuln NES-0000: ITSM-DEV-DB (...	Assigned	Medium	..	Mora	Angelina	Idaho National Laboratory	4/27/2011 11:32:39 AM
INC000000212325	SecurityVuln NES-0000: ITSM-DEV-DB (...	In Progress	Medium	..	Mora	Angelina	Idaho National Laboratory	4/27/2011 2:18:35 PM
INC000000212334	SecurityVuln NES-0000: ITSM-DEV-DB (...	Assigned	Medium	..	Mora	Angelina	Idaho National Laboratory	4/27/2011 2:30:04 PM
INC000000212339	SecurityVuln NES-0000: ITSM-DEV-DB (...	Resolved	Medium	..	Mora	Angelina	Idaho National Laboratory	4/27/2011 2:37:14 PM
INC000000212341	SecurityVuln NES-0000: ITSM-DEV-DB (...	Resolved	Medium	..	Mora	Angelina	Idaho National Laboratory	4/27/2011 2:40:33 PM
INC000000212344	SecurityVuln NES-0000: ITSM-DEV-DB (...	Resolved	Medium	..	Mora	Angelina	Idaho National Laboratory	4/27/2011 2:44:03 PM

The CMS – Related Changes

The CMS – Network Firewall Rule Request

The CMS - Tracking and approving firewall rules

The CMS – Desktop Variance Request

The SKMS – Vulnerability Analytics

Business Enclave

Vulnerability Incident Resolution Trend by Month
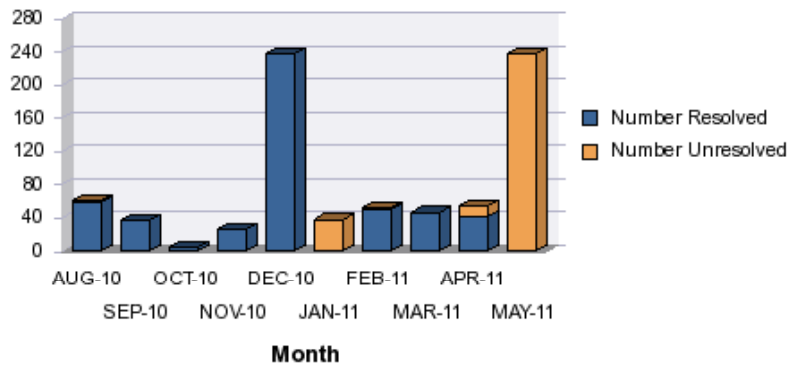
Percent Remediated Within Agreed Time

Outstanding Vulnerabilities Without Deviation

The SKMS – Measuring Availability

Business Process Automation
SLA Metrics Met or Missed by Month

Jun 01, 2010 - May 31, 2011

Company: Idaho National Laboratory

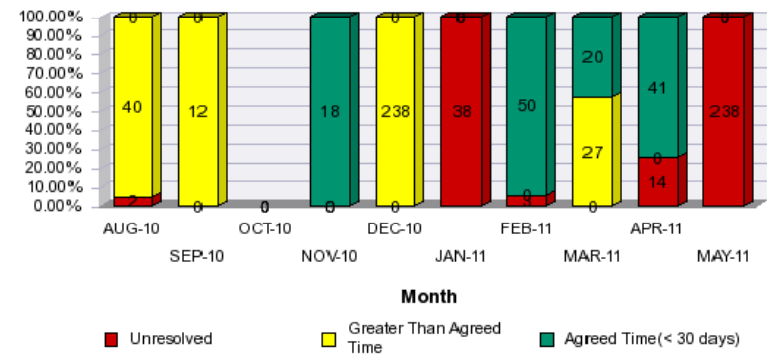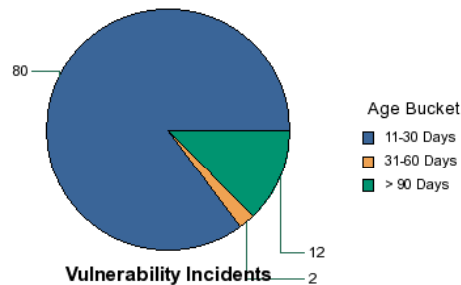|	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY
Threshold 99% Platinum Services	98.77	67.07	96.61	100	100	100	100	100	99.83	100	99.83	99.48
Threshold 98% Gold Services	98.97	99.56	94.31	99.91	99.64	100	97.22	98.06	99.77	99.63	99.23	99.7
Threshold 96% Silver Services	98.75	96.93	99.77	98.78	97.01	100	99.79	97.42	99.95	99.5	99.23	100

Application service availability is measured as the percentage of time the application is performing without interruption. This is 24 hours per day 365 days per year less 4 hours per month for planned maintenance. This is an average of 726 hours of availability per month.
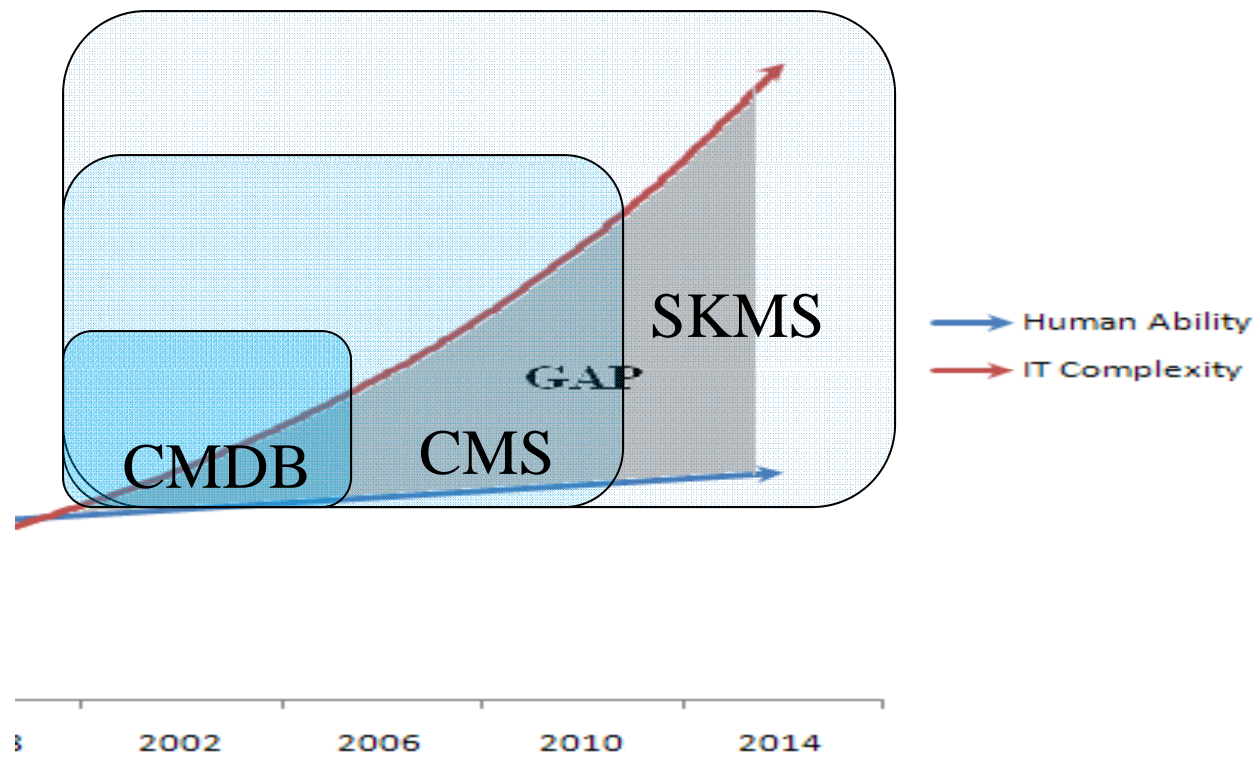
The Present – Add capability

- Add discovered data sources
  - Proteus
  - Active Directory
  - MAC and ARP Tables
- Acquire funding – CMDB Librarian
- Work to add value to or replace IT applications
  - Patchman
  - NIC
  - Enterprise Architecture
  - TRACCS
  - ECL

The Future - Improvements

- Add Links to the Definitive Media Library – Source Control

- Track financial and timesheet information

- Enable automated auditing of software licenses

- Enable automated change requests based on maintenance schedules

- Improve ITIL process maturity

The Point – Overcome the gap

Questions

Thane.price@inl.gov