

Applying CMMI-SVC to Process Management



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Agenda



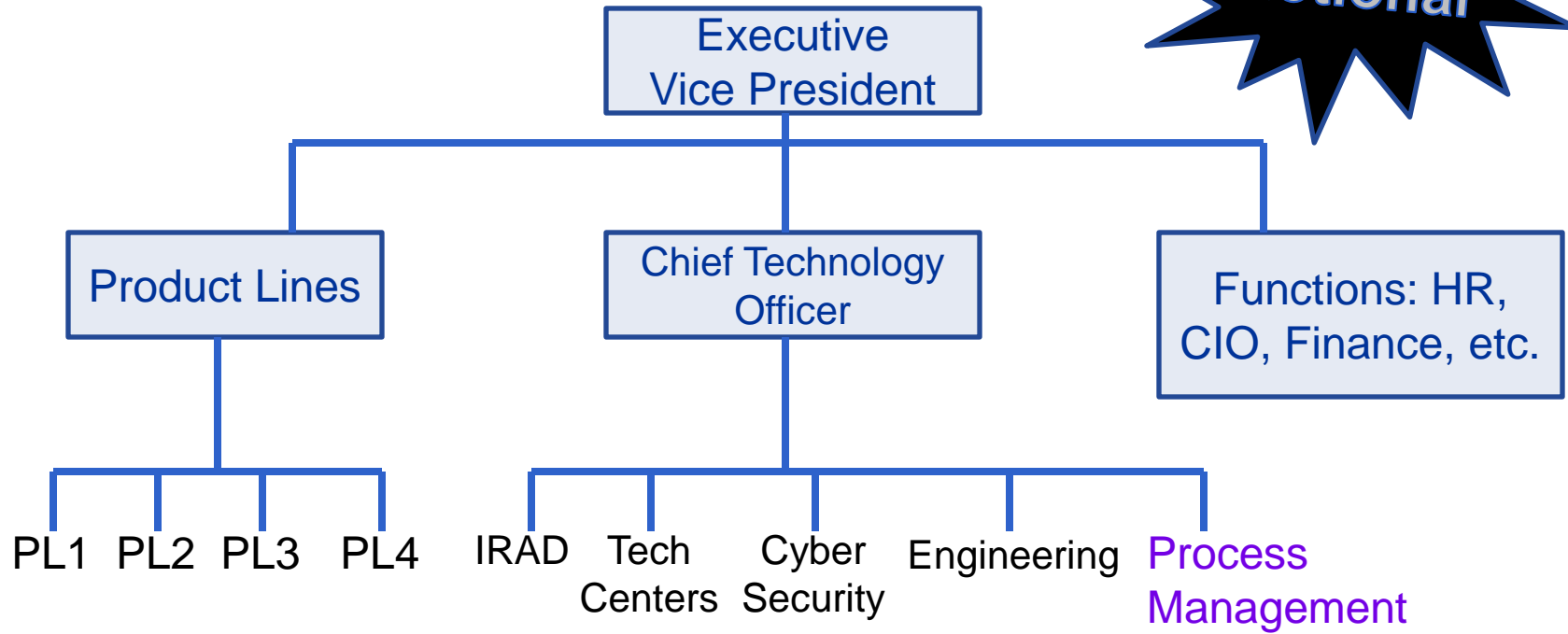
- **Process Management introduction**
- **Planning**
- **Implementation**
- **Results**
- **Plans ahead**

Process Management



- **Reports to the CTO/Engineering & Technology**
- **Responsible for:**
 - **Standards and model assessment, internal and external**
 - **CMMI, ISO, AS9100**
 - **Tools to support assessments: Common Audit Database, Program Profile Database, etc.**
 - **Best Practice Libraries, R&D process support, process collaboration with Product Lines, Policy board chair and facilitation**
 - **Performance Analytics tools and metrics**
 - **Lean/Six Sigma Operating Excellence**
- **Reorganized in 2010 to be more service and project focused**

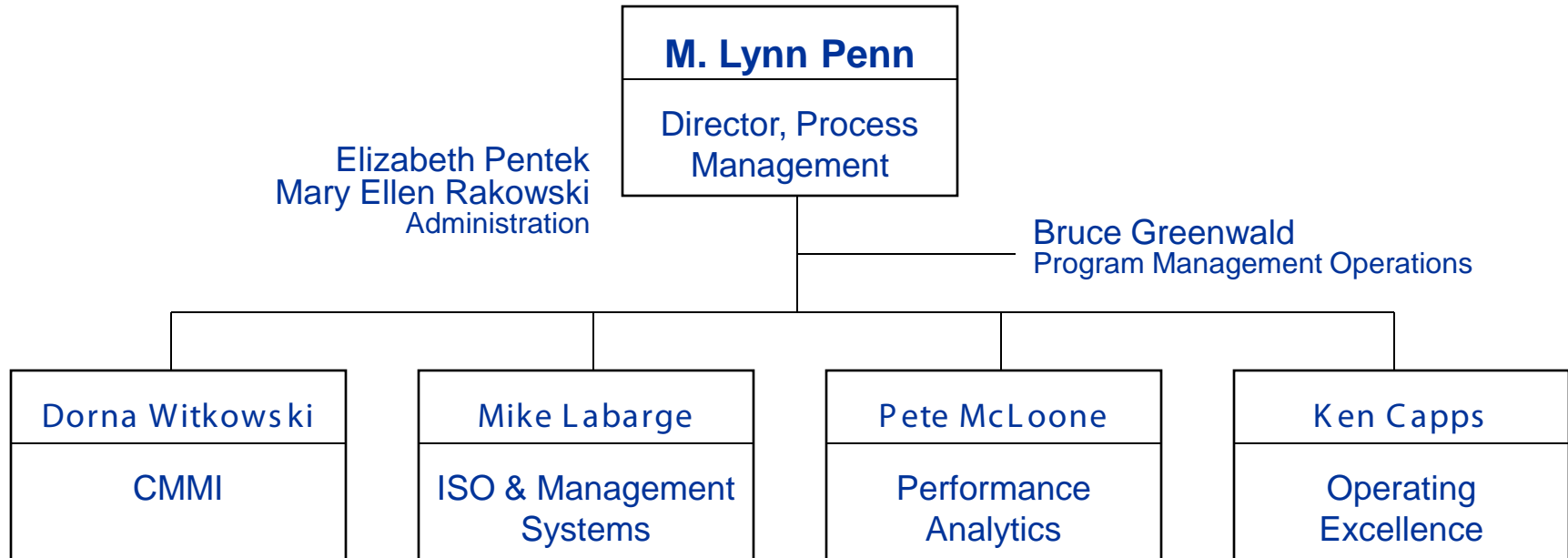
Company





Process Management Organization

July 26, 2010



**22
People**

Staff

- Dottie Acton*
- Mary Busby
- Jennifer Curtis
- Allen Eagles
- Gary English
- Paul Gehman
- Barbara Geshwind
- Marc Gewertz
- Greg Kerchner
- Len Mikolajczak
- Nicole Tucker*
- Dick Warren
- Suzanne Weisenberger
- Joan Weszka
- Bob Yates



Process Management Service Initiatives

- **CMMI:**
 - Provide training, consulting, SCAMPI B/C preparation and execution, SCAMPI A preparation and support
- **ISO and Management Systems:**
 - Provide training, consulting, internal auditing, process monitoring, supervision of ISO and AS9100 audits
- **Performance Analytics**
 - Establish baselines; perform benchmarking, monitoring, control, cost and schedule modeling, affordability and productivity, basis of estimates, predictive analytics
- **Operating Excellence – Lean/Six Sigma:**
 - Provide Lean/Six Sigma training, event facilitation, process improvement reporting, Product Line process improvement facilitation

In 2010 each initiative was required to create a project plan, a schedule, and a service catalog

Why use CMMI-SVC



- **To provide better service to our internal customers**
- **To become more disciplined**
- **To establish continuity**
- **To conform to what we expect from our programs**
- **To expand knowledge of problems and issues we might face from practitioners**

Quick Overview of CMMI-SVC Specific Process Areas



- **Service Delivery (SD)** – Deliver services in accordance with service agreements
- **Capacity and Availability Management (CAM)** – Ensure effective service system performance and ensure that resources are provided and used effectively to support service requirements
- **Incident Resolution and Prevention (IRP)** – Ensure timely and effective resolution of service incidents and prevention of service incidents as appropriate
- **Service System Transition (SST)** – Deploy new or significantly changed service system components while managing their effect on ongoing service delivery
- **Service Continuity (SCON)** – Establish and Maintain plans to ensure continuity of services during and following any significant disruption of normal operations
- **Service System Development (SSD)** – Analyze, design, develop, integrate, verify and validate service systems, including service system components, to satisfy existing or anticipated service agreements
- **Strategic Service Management (STSM)** – Establish and maintain standard services in concert with strategic needs and plans

Planning the CMMI-SVC Gap Analysis



- **Scope:**

- **Within Process Management – only our 4 major initiatives and management**
 - **Did not cover tools and other services**
- **Within the model – only looked at the specific practices of the Service PAs**
 - **Including the addition, Service System Development**

Planning the CMMI-SVC Gap Analysis



- *Sequence of Process Areas to review:*
 - **Phase 1: Service Delivery, Incident Resolution (and Prevention), Service Continuity**
 - We focused on process areas where evidence was available
 - **Phase 2: Service System Development, Strategic Service Management**
 - As the year progressed, there was time to show evidence of strategy and development of new or modified services
 - **Phase 3: Capacity and Availability Management, Incident (Resolution and) Prevention, Service System Transition**
 - Most challenging for a small service group

Planning the CMMI-SVC Gap Analysis



- **Method** – work product focus
 - Study the CMMI-SVC Process Area
 - Consider Specific Practice Work Products in the model
 - Look at *Process Management Work Products*
 - That will meet the intent
 - Interview Project Leads to identify gaps
 - Map the collected data to the Specific Practices
 - Publish the gap analysis, assign actions and work to closure
 - Track completion of action plans

Implementation of the Plan



Sample interpretation of work products and gap analysis

Service Delivery SP 2.1 Establish the Service Delivery Approach

Model has example work products:

- Service delivery approach
- Contact and roster lists
- Service request criteria
- Internal and external status reporting

Initially, looked for *Process Management work products*:

- Documented service approach
- Contact and team member lists
- Customer and senior management status reports

Implementation of the Plan



Sample interpretation (continued)

Actual work products found:

- Service delivery approach provided in project plan
[Service Delivery sample from Project Plan](#): Product Lines, Programs, or Senior Management may request the services identified in the Service Catalog. The CMMI project will provide staffing for the requested service and establish an agreement with the requester with respect to funding, timeframe of the service, work products to be provided with the service, and expectation of the results of the service.
- Contact list; Team member list
- Internal status reports



Implementation:

- **Along the way, we met some resistance...**
 - **Critical milestones such as ISO Audits, Executive Directives, and Corporate Milestones interfered with implementation**
 - **“Don’t bother me I’m too busy with this ISO Audit.”**
 - **Limited staff delayed resolution of actions**
 - **“I don’t have time to do this, one of my 2 staff members was reassigned and I’m behind in my schedule.”**
 - **“With only 2 and ½ people I don’t think my project meets the definition of a service as referenced in the model!”**
 - **Perceptions**
 - **“I don’t need to test continuity, I have everything on our web site.”**

Now we’re prepared for programs!!



Implementation: ...and acceptance

- **Showed project leaders why certain activities identified in the service-specific process areas can actually benefit them, their project, and their customers**
 - **Examples:**
 - **Tested continuity plans, with reported results**
 - **Incidents tracked and workarounds determined; future analysis planned**
 - **Guidebook on developing / revising a service**

Results



- **Interpretation of the model**
 - Implementing the model didn't require fancy tools, spreadsheets, etc.
 - We held a brainstorming session to define “Incidents” for our service initiatives
- **Methodology**
 - We adjusted our methodology along the way
 - Changed planned sequence of PAs after phase 1
 - In later phases, spent more time on pre-interview discovery to look for evidence already available
 - Adjusted methods when we found true systemic gaps for SSD and IRP

Results



- **Gap Analysis – systemic problems**
 - **No documented approach to developing a new service**
 - **No documented continuity plans**
 - **Incidents not defined**
 - **Incident tracking not defined**
 - **No formal service level agreements to set expectations**

Results



- Developed and published service catalogs for each project area and the other services we offer

Service Catalogues

Catalogue	Point of Contact	Related Links
CMMI	Dorna Witekowski 610-354-2422	SCAMPI A Trained Employees CMMI FAQs Available Tools for CMMI Reviews Links to Certifications and ADSs
ISO & Management Systems	Mike LaBarge 610-354-5077	Obtaining Copies of Standards SAE ASS100C FAQs
Performance/Analytics	Pete McLoone 610-354-6936	
LM21 Operating Excellence	Ken Capps 856-486-5115	
Other Services	See Catalogue	

IS&GS Process Management: ISO Related Services [ISO 9001; SAE AS9100; ISO 20000; ISO 27001]

Training:	Internal Audits:	Certifications:
Specification Training: (1.5 hr to 4 hr) <ul style="list-style-type: none"> • ISO 9001 • ISO 20000 • SAE AS9100 • ISO 27001 • Auditor Training Custom Training: including <ul style="list-style-type: none"> • Specifications & Standards • IS&GS Certifications Cyber Security: Audits & Guidance: [CALIPER]	Planning; Scheduling; Executing: Internal Program Audits Internal Functional Audits Facilitation (with External Auditors) Process Monitoring Coordination	Planning; Scheduling; Executing: Initial Certifications Surveillance Audits Re-Certifications Facilitation (w/ External Auditors) <div style="border: 2px solid yellow; padding: 2px; display: inline-block;">Maintains IS&GS ISO Certifications</div>
Miscellaneous ISO Services and Contacts		

IS&GS Process Management: CMMI® Related Services [CMMI-DEV®, CMMI-SVC®]

Training:	Consulting:	Appraisals:
SEI Model Training: <ul style="list-style-type: none"> • Introduction to CMMI-DEV® (1 day) • Introduction to CMMI-SVC® (1 day) • CMMI-SVC® Supplement (1 day) Custom Training: <ul style="list-style-type: none"> • SCAMPI™ A Participants Training • CMMI V1.3 Upgrades • Overview of High Maturity 	Proposals SCAMPI A Preparation PMDP Modules SEI Projects Product Line and Program Consulting	SCAMPI / Class C SCAMPI / Class B Continuous Appraisal Method (CAM) Custom Appraisals General Contractor for SCAMPI A

IS&GS Process Management: Other Initiatives [Tools and Services]

Tools:	Services:
Common Audit Database Program Profile Database Best Practice Library/Int'l Best Practice Library	Business Process Requirements Board (BPRB) Process Support for Advanced Technology Office Product Line Support Records Management

Services and Products

- Engineering/Services Analytics SoE
 - Baselines and Benchmarking
 - Monitoring and Control
 - Cost and Schedule Modeling/Basis of Estimates
 - Predictive Analytics

IS&GS Process Management LM21 Operating Excellence Service Catalogue

05/04/2010

Training:	Mentoring/Consulting:	Facilitating:	Communication/Reporting:	Deployment Infrastructure/Coordination:
Black Belt Green Belt Lean Leader Apollo RCA TKO	Certification: - Black Belt - Green Belt SIA Mentoring: - Black Belt - Green Belt - Champion Sponsor Program Excellence Plans Resource List Proposals Overview of LM21 OE	SIA: - Value Stream Map - VSM - PPK - PDK - Kaizen - Apollo RCA - TKO - Project Program Excellence Plans	QBAR (Quarterly Business Area Review) Executive LM21 Event Summary & Status Process Mgmt MOR	LM21 OE POC to Corporate MBB Nominations LRP LM21 OE Tab OE Excellence Plan Corp SIAs of the Month Selection

Results



- Established incident and request logs

A	B	C	D	E	F	G	H
Date	Request	Requestor	Type	Status	Respon	Time	
6/2/2010	Request for updated CMMI Proposal writup	Chris Conway	Research		C	5 min	
6/2/2010	Request to follow up on CMMI ratings in UK	Lynn Penn	Research	.25 hour	C	15 min	
6/2/2010	question on site CMMI rating	Rhonda Hammond	Quick Email		C	6 min	
6/3/2010	Phone call asking about ITIL class	Jessy Calonje	Research	.25 hour	C	15 min	
6/3/2010	Request for copy of IS&GS-Defense ADS	Lynn Penn	Quick Email		C	5 min	
6/3/2010	Charge for CMMI class	Patrick Diskin	Quick Email		C	10 min	
6/6/2010	FDOC request to review OT process assets	Bernice Mays	Consulting	1 hour	C	60 min	
6/17/2010	Request for posting SEI analysis of ROI	Lynn Penn	Research	.25 hour	C	15 min	
6/17/2010	Request to withdraw SEI analysis of ROI	Joan Weszka	Quick Email		C	5 min	
6/17/2010	FDOC request to review PP/PMC/IPM assets	Bernice Mays	Consulting	1.5 hours	C	90 min	
6/22/2010	Request for information on VoC						
6/29/2010	Question about Denver CMMI class						
		ISO Related					
		Ad Hoc					
		activities					
		Date of					
		Request					
			Task Description		Who's working it:		Approx effort:
7/7/2010	Request to review FDOC CM process assets	1					
7/9/2010	Request for lessons learned or strategies on v						
7/12/2010	Request to review FDOC MA process assets	2					
	Info on our process for tracking authorization						
7/16/2010	status	33	ISO Certification queries		GME - MS		1
7/16/2010	Question about being able to end a class by 5p	34	ISO Sponsorship for LM Support on Hubble Space Telescope		GME - MS		1
	Question about whether an initiative was a g	35	AS9100 REV C LEAD AUDITOR TRAINING planning for Bruce and Gary		GME - MS		2
7/19/2010	example for OID	36	OASIS S:N ratio		GME - MS		3
7/19/2010	Request for CMMI charts for Affordability task	37	thinking about CAPs for CARs		GME - MS		2
7/19/2010	Request for Services Strategy charts	38	Security measurement input		GME - MS		1
7/20/2010	Request to resend CMMI cost data	39	SOE-0023a and SOE-0090 support		GME - MS		2
7/22/2010	Request of review Engineering process	40	Marcus McInnis strategy writeup support		GME - MS		2
7/22/2010	Request to review audit processes	41	QE Steering Panel Working Session		GME - MS		0.5
		42	CCSI - Cyber Security Team Monthly Review		GME - CS		3
		43	27001 for aero		GME - CS		2
		44	27001 for space		GME - CS		1
		45	Follow up on CD from John Thompson		GME - CS		2
		46	ISO 27001 and 2010 Program list		GME - CS		3
		47	LM VTIS - CIPP-IT Certification on Privacy - 877-771-7176 pc 163436		GME - CS		1
		48	~ monthly update to action item / to do list for Lynn		GME - stuff		2
		49	checking on blackberry version and exploit non-issues		GME - stuff		0.5
		50	ICE Presentation (Immigration, Customs and Export) by Special Agent		GME - stuff		0.8
		51	email beat down		GME - stuff		20
		52	LM Symantec Webinar Today		GME - stuff		1
		53	San Diego Wildfire support for BC/DR		GME - stuff		1
		54	Services Strategy and Repository meeting		GME - stuff		0.5
		55	Standard Meeting for Company Points of Contact		GME - stuff		1
		56	Memorial dav		GME - stuff		9



- **Established continuity plans and tested the plan**

Service Continuity Plan for CMMI Project	Service Continuity Test – March 2010
<p>The essential functions of the CMMI Project include performing as team member as planning and performing SCAMPI/Class B's and C's. These are the functions customer's schedules and may impact their business goals.</p> <p>The essential resources of the CMMI Project are the staff performing the essential tools they use in performing these functions.</p> <p>All pertinent files and information will be stored on the Process Management folder</p> <ul style="list-style-type: none">• Exceptions are Risk Management files and MOR files which are stored in Management Unity site in other standard folders.• This should include all work-in-progress files for planned work• Unity sites are backed up on a daily basis by Enterprise Business Systems <p>The CMMI Project Lead's back-up is the Director, Process Management.</p> <ul style="list-style-type: none">• On a periodic basis, the CMMI Project Lead will ensure the Director knows of all current activity. This can be done at weekly face-to-face Monthly Operating Reviews, and through emails. <p>The back-up for CMMI Project staff doing planned projects for the CMMI Project Lead.</p> <ul style="list-style-type: none">• On a periodic basis (nominally weekly), CMMI Project staff will ensure the Lead knows the status of all activity, as well as points of contact for	<p>Test #1: CMMI Project Lead Backup</p> <p>Test conducted 3/7/10 – 3/11/10; black text is the test from the Service Continuity Plan; Aqua text is the result of the test.</p> <p><i>Preparation:</i></p> <ul style="list-style-type: none">• Identify 2 customers to participate in test<ul style="list-style-type: none">o Marcia Miller and Lloyd Brown from IS&GS-Defense supported the test• Identify 1 internal CMMI staff member to participate in test<ul style="list-style-type: none">o Barbara Geshwind supported the test• Tell Director, Process Management of test to be done<ul style="list-style-type: none">o Director, Process Management was told the week before the test that it would be done• CMMI Project Lead sets Out of Office message to have customers contact Director, Process Management for CMMI questions or activities<ul style="list-style-type: none">o Out of office message set on Email and Voice Mail• Contact customers and request that they email or call with questions on CMMI<ul style="list-style-type: none">o Customers contacted• Contact internal CMMI Staff member and request that he/she email or call with question on tasks<ul style="list-style-type: none">o Internal staff member contacted

Results



- **Established service agreements and received feedback from customers**

CMMI Project Service Agreement	
Requestor:	Click here to enter text.
Description of Activity:	Click here to enter text.
Timeframe:	Click here to enter text.
Work Products to be provided:	Click here to enter text.
Requestor's responsibilities:	Click here to enter text.
Expected Results:	Click here to enter text.
Funding:	Click here to enter text.
CMMI Project Staff:	Click here to enter text.
Date Approved by Requestor and CMMI Project:	Click here to enter text.

CMMI Project Service Agreement – Feedback on Results	
(To be completed after service provided)	
Please send this information to your Process Management Product Line Point of Contact, the CMMI Project Manager, or the Director of Process Management:	
<ul style="list-style-type: none">• Process Management Product Line Points of Contact: Civil (paul.r.gehman@lmco.com), Defense (dorna.witkowski@lmco.com), Security (mary.busby@lmco.com), Global (gary.english@lmco.com), RSO (Richard.h.warren@lmco.com), El Group (michael.w.labarge@lmco.com)• CMMI Project Manager: dorna.witkowski@lmco.com• Director, Process Management: mary.lynn.penn@lmco.com	
Response provided by: Click here to enter text.	
<i>Please indicate your satisfaction with the provided service by selecting a value 1 through 5 where 1 is not satisfied and 5 is completely satisfied. Please feel free to elaborate by entering comments. To complete the section below, "unprotect" the document by going to the "Developer" tab, Protect Document, and remove the check before "Restrict Formatting and Editing" OR request an unrestricted copy from dorna.witkowski@lmco.com.</i>	
Satisfaction with overall service provided:	
1 2 3 4 5	Comments:
Satisfaction with the agreed-upon work products:	
1 2 3 4 5	Comments:
Satisfaction with the agreed-upon results:	
1 2 3 4 5	Comments:
Satisfaction with meeting the timeframe:	
1 2 3 4 5	Comments:

Results



- **Also:**
 - **Wrote guidance for developing services**
 - **Working on a service strategy for our entire business area**
 - **A service sample repository**
 - **Maps of service components to models and standards**

What was easy to implement



- **SD – Service Delivery**
 - Providing our services in a more professional and organized manner
- **The IR of IRP – Incident Resolution**
 - Identifying and resolving incidents
- **SCON – Service Continuity**
 - Establishing and testing continuity plans
- **SST – Service System Transition**
 - Providing a new service in an orderly, controlled manner

What was easy to implement (cont.)



- **STSM – Strategic Service Management**
 - Establishing plans, service catalogs and levels of service
- **SSD – Service System Development**
 - Although we didn't have anything documented initially, following a standard method of developing new or modified services will provide a more disciplined and thorough method that we can easily follow

What is hard to implement



- **CAM – Capacity and Availability Management**
 - Although we know and can manage our capacity and availability, a “Service System Representation” is very difficult for a small people-related organization
- **The P of IRP – Incident Prevention**
 - Because incidents are rare and there is usually no commonality between them, it is difficult to establish prevention mechanisms

Plans



- **Expand to Core Process Areas in 2011**
- **No plans for a SCAMPI B/C at this time as we are still working to close gaps**
- **Use the experience gained for future adoption across the business area**

Questions

