



CMMI, ITIL & ISO 20000 A Mutually Supportive Relationship

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Agenda



- CMMI-SVC and ISO 20000
- CMMI-SVC and ITIL
- The Mutual Relationship
- Appraising Security: Information Security and ISO27001

Context Setting



- How many of you know already about ISO 20000?
- How many of you know already about ITIL?
- Is anybody working with ITIL or ISO 20000?
- Is anybody already working with a combination of ITIL/ISO20K and CMMI?



CMMI-SVC and ISO 20000

How Does CMMI-SVC fit with
ISO 20000?

CMMI and ISO20000



- ISO 20000 is a standard for the requirements of an IT service management system. It can complement CMMI for Services, or vice versa.
- But ISO 20000 does not provide a way to measure improvement ...
- Since CMMI can provide a framework to support implementing improvement, some organisations have used a tailored version of CMMI-DEV (prior to CMMI-SVC release) within their service teams to interpret ISO 20000.

Mapping ISO 20000 Clauses to CMMI-SVC



ISO 20000 Clauses		CMMI-ISO20000 Coverage
Index	Title	
3	Requirements for a Management System	
3.1	Management Responsibility	
3.2	Documentation Requirements	
3.3	Competence, awareness and training	
4	Planning & Implementing Service Management	
4.1	Plan Service Management	
4.2	Implement Service Management and provide services	
4.3	Monitoring, measuring and reviewing	
4.4	Continual Improvement	
5	Planning and Implementing new or changed services	
6	Service Delivery Process	
6.1	Service Level Management	
6.2	Service Reporting	
6.3	Service Continuity & Availability Management	
6.4	Budgeting and Accounting for IT Services	
6.5	Capacity Management	
6.6	Information Security Management	
7	Relationship Processes	
7.2	Business Relationship Management	
7.3	Supplier Management	
8	Resolution Processes	
8.2	Incident Management	
8.3	Problem Management	
9	Control Processes	
9.1	Configuration Management	
9.2	Change Management	
10	Release Process	
10.1	Release Management Process	

CMMI-SVC provides almost complete coverage of ISO 20000 clauses

How Much CMMI-SVC Do I Need for ISO 20000?

MATURITY LEVEL	PROCESS AREAS						
5- OPTIMISING	Organisational Innovation & Deployment	Causal Analysis & Resolution					
4- QUANTITATIVELY MANAGED	Organisational Process Performance	Quantitative Project Management					
3- DEFINED	Organisational Process Focus	Organisation Process Definition	Organisational Training	Integrated Project Management	Risk Management	Decision Analysis & Resolution	
	Strategic Service Management	Capacity & Availability Management	Incident Resolution & Prevention	Service System Transition	Service Continuity	Service System Development *	
2- MANAGED	Requirements Management	Project Planning	Project Monitoring & Control	Supplier Agreement Management	Measurement & Analysis	Process & Product QA	Configuration Management
	Service Delivery						

* Optional addition

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7

If I Do ISO 20000, How Much CMMI-SVC Do I Get?

MATURITY LEVEL	PROCESS AREAS						
5- OPTIMISING	Organisational Innovation & Deployment	Causal Analysis & Resolution					
4- QUANTITATIVELY MANAGED	Organisational Process Performance	Quantitative Project Management					
3- DEFINED	Organisational Process Focus	Organisation Process Definition	Organisational Training	Integrated Project Management	Risk Management	Decision Analysis & Resolution	
	Strategic Service Management	Capacity & Availability Management	Incident Resolution & Prevention	Service System Transition	Service Continuity	Service System Development *	
2- MANAGED	Requirements Management	Project Planning	Project Monitoring & Control	Supplier Agreement Management	Measurement & Analysis	Process & Product QA	Configuration Management
	Service Delivery						

ISO20000 partially implements CMMI processes. The differences are significant.

* Optional addition

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8

ML2 Process Area Overlap – Can we Re-Use DEV Work?



 = Overlap between Same Process Areas in CMMI-DEV & CMMI-SVC



- The answer is most assuredly – YES!
- Only 1 Process Area has any practice differences
 - PP has 1 additional practice
 - In all other cases the practices are the same in both models.
- So why are they not all complete overlap?
 - The minor gaps include:
 - Internal references now point to Services PAs
 - Orienting implementation for a services environment may require slightly different approaches to be used

Table Discussions



- In what circumstances can a “standards approach” (i.e. Using a standard like ISO 20000) help in your process improvement programme?



CMMI-SVC and ITIL

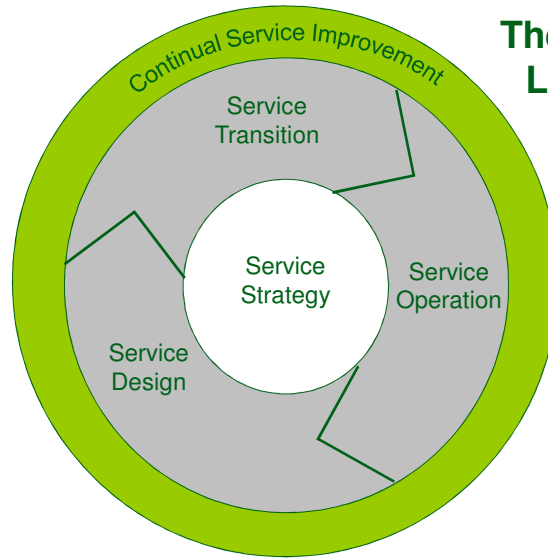
How Does CMMI-SVC fit with ITIL?

ITIL v3



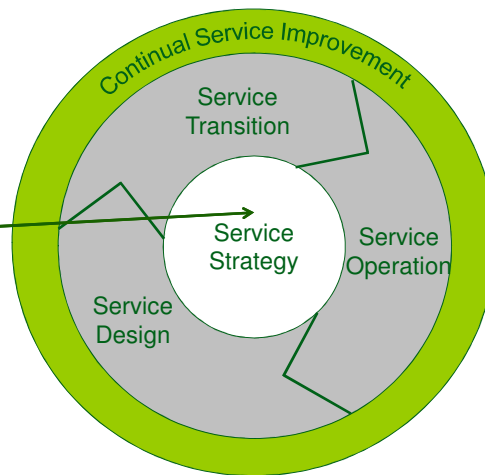
- IT Infrastructure Library
- ITIL v3 consists of 5 volumes:
 - Service Strategy
 - Service Design
 - Service Transition
 - Service Operation
 - Continual Service Improvement
- Each volume provides guidance on “**how to**” implement specifically IT Service Management.

The Service Lifecycle



ITIL v3 – Service Strategy

- “..provides guidance on how to design, develop and implement service management not only as an organisational capability but also as a *strategic asset*.”
- Defines Services as being “a means of delivering value to customers, by facilitating outcomes customers want to achieve without the ownership of specific costs and risks”
- This volume focuses on
 - Understanding the marketplace
 - Understanding what the value creation is for a service
 - How to design, develop, transition the service components, within the context of the organisation’s strategy.
 - **Financial Management**



CMMI-SVC and Financial Management



- Financial Management is not strictly *absent* from the CMMI
- It appears in:
 - PP SP1.1 – Establish the Project Strategy
 - PP SP1.5 – Estimate Effort and Cost
 - PP SP2.1 – Establish the Budget and Schedule
 - PMC SP1.1 – It is one of the planning parameters most *frequently* monitored.
 - All GP2.3 instances – Provide Resource
- But the level of detail and prominence in ITIL is possibly higher
- Level of issue - Low

Table Discussions

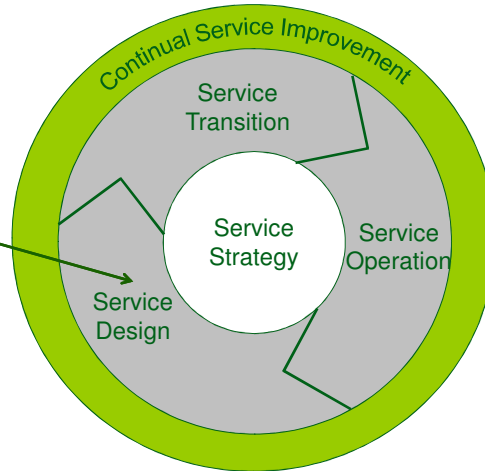


- How might you adapt or augment the CMMI material to address Financial Management?

ITIL v3 – Service Design



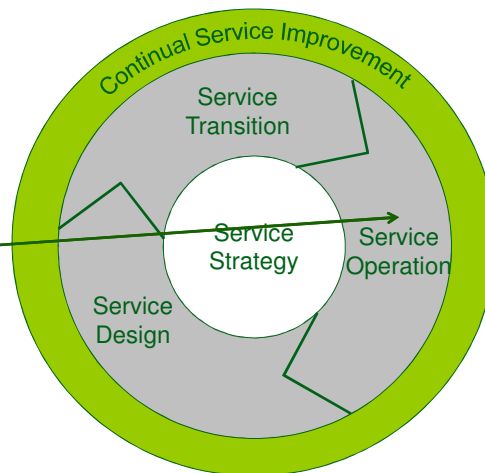
- “..provides guidance for the design and development of services and service management processes.”
- Uses the definition of a service as delivering valued outcomes
- Details the principles of how to go about doing Service Design
- Includes within the design process:
 - Service Catalogue Management
 - Service Level Management
 - Capacity Management
 - Availability Management
 - IT Service Continuity Management
 - Information Security Management
 - Supplier Management



ITIL v3 – Service Transition



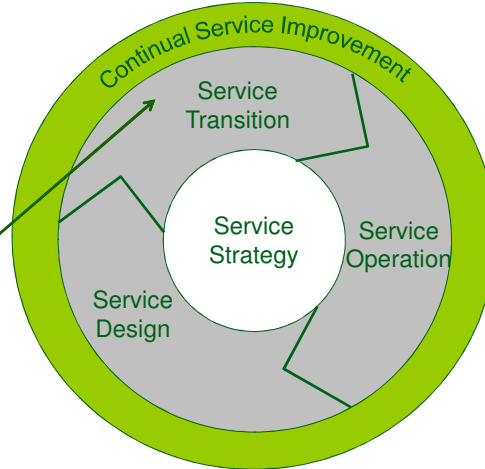
- “..provides guidance for the development and improvement of capabilities for transitioning new and changed services into operations.”
- Processes covered within Service Transition include:
 - Transition Planning and Support
 - Change Management
 - Service Asset and Configuration Management
 - Release and Deployment Management
 - Service Validation and Testing
 - Evaluation (i.e. how to determine the performance of a service change)
 - Knowledge Management (i.e. making sure that the right knowledge and data is available to make good management decisions)
- Some of the processes outlined in this volume also occur in other service lifecycle phases



ITIL v3 – Service Operation

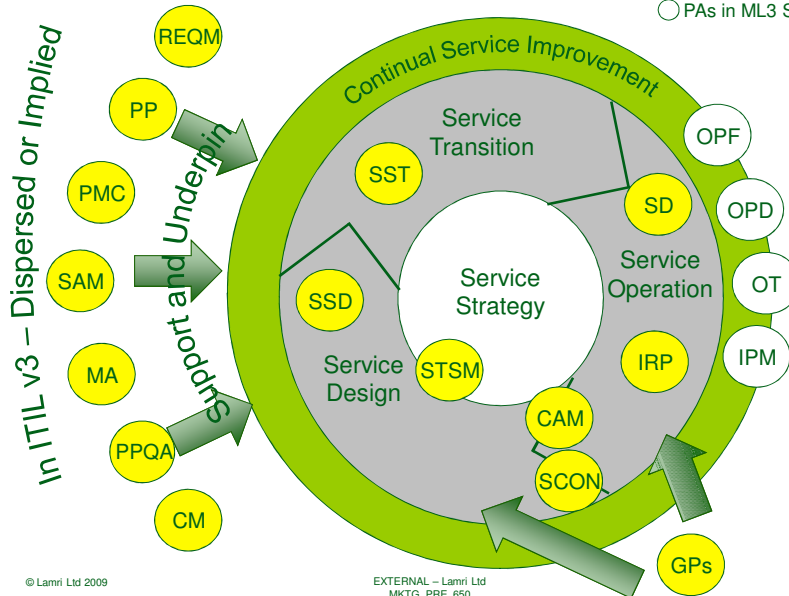


- “..embodies practices in the management of Service Operations.”
- Key Service Operation Processes covered include:
 - Event Management
 - Incident Management
 - Problem Management
 - Request Fulfilment
 - Access Management
- This volume also examines the “functions” that are needed to execute Service Operations. These include:
 - Service Desk
 - Technical Management
 - IT Operations Management
 - Operations Control & Facilities Management
 - Application Management



Simplistic CMMI-SVC Mapping to ITIL V3

● PAs in ISO 20K Scope
○ PAs in ML3 Scope



CMMI-SVC and ITIL v3



- The structure and content of ITIL v3 is emphatically “Library” in nature
 - 5 Volumes
 - Lots of “How To” information
 - Talks about a “maturity approach” but little structure
- CMMI-SVC
 - Single Volume
 - Details “What To” implement
 - CMMI provides a route-map for developing maturity

Example “What to Do” – “How to Do” Relationship: CMMI-SVC



- CAM
 - “The purpose of Capacity and Availability Management (CAM) is to ensure effective service system performance and ensure that resources are provided and used effectively to support service requirements.”
 - SP1.1 – Establish and maintain a strategy for capacity and availability management.
 - SP 1.2 – Select measures and analytic techniques to be used in managing the capacity and availability of the service system.
- In developing a capacity management strategy, what things are important?
- In measuring my capacity what sort of things should I be looking at?

Example “What to Do” – “How to Do” Relationship: ITIL – Service Design Processes



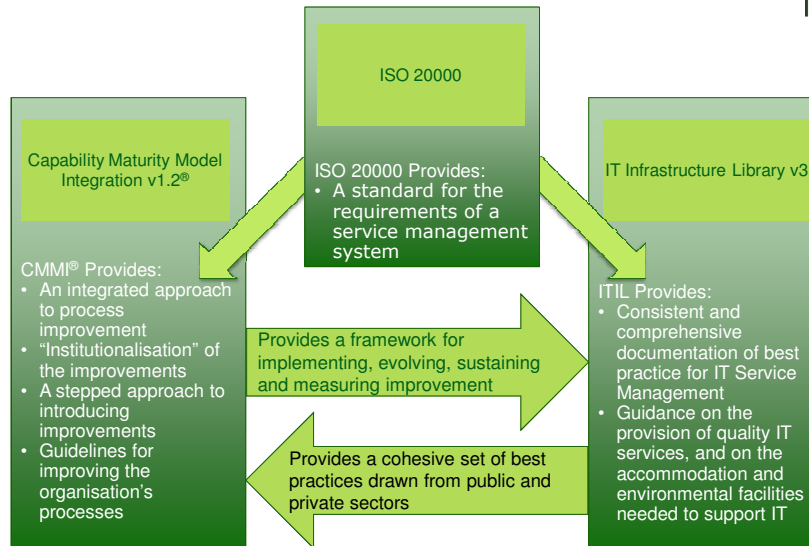
- **Component Capacity Management**
 - “The main objective of Component Capacity Management (CCM) is to identify and understand the performance, capacity and utilization of each of the individual components within the technology use to support the IT services including the infrastructure, environment, data and applications.”
- **Service Capacity Management**
 - “The main objective of the Service Capacity Management sub-process is to identify and understand the IT services, their use of resource, peaks and troughs, and to ensure they meet their SLA targets.”
- **Business Capacity Management**
 - “The main objective of the Business Capacity Management sub-process is to ensure that the future business requirements (customer outcomes) for IT services are considered and understood, and that sufficient IT capacity to support any new or changed services is planned and implemented within an appropriate timescale.”



The Mutual Relationship

CMMI-SVC & ITIL & ISO 20000

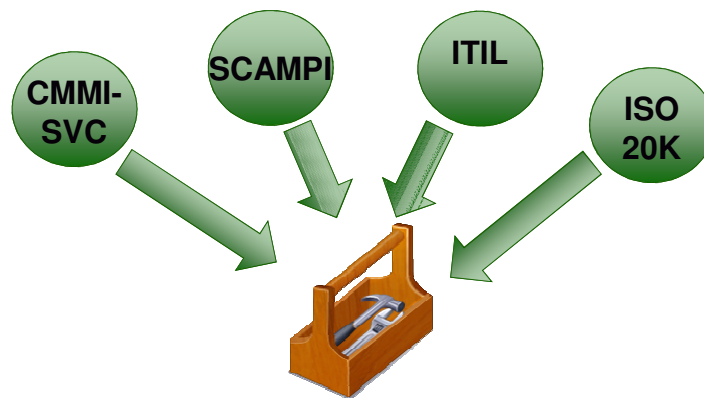
CMMI[®] Services is complementary to ITIL & ISO 20K



Appraisals

- Of the three approaches CMMI has the clearest definition of an improvement path
 - Evolution is built into the model
 - Clear criteria associated with evolutionary stages
- SCAMPI Appraisals – strongly support the evolutionary journey
 - Rigorous method
 - Objective evidence-based approach
 - Focus on business need
 - Done by the organisation, for the organisation

Process Improvement Toolbox



All these can be used together for process improvement to achieve business goals

The Missing Piece - Information Security



- ISO 20000 & ITIL both cover Information Security
- CMMI-SVC does not
- Challenge:
 - Is there a way that we can harness the power of CMMI and SCAMPI to address Information Security?
 - Could we include coverage of information security in a SCAMPI appraisal that covered CMMI-SVC as well?
 - What reference framework could we use with appraising Information Security?

In conclusion



- CMMI-SVC, ITIL & ISO20000 all complement each other.
- CMMI-SVC provides a strong “evolutionary” pathway.
- The only significant gap is *Information Security*.



Q&A



