Integration of Service Management with CMMI® and SPICE

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Agenda

- IT Service Management standards
- ITIL – IT Infrastructure Library
- ISO/IEC 20000
- ISO/IEC 15504 – Spice
- CMMI-SVC ®
- Conclusion
- Questions
ITIL in a Nutshell (OGC 2005)

- IT Infrastructure Library (ITIL) was developed by UK’s Office of Government Commerce (OGC) to provide a set of comprehensive and cohesive set of templates and best practices for core IT operational processes.
- Defines quality as “matched to business needs and user requirements as these evolve”
- Core of ITIL comprises: 6 service support processes + 5 service delivery processes.
Core ITIL Components v.2

- Problem Management
- Incident Management
- Release Management
- Change Management
- Availability Management
- IT Continuity Management
- Capacity Management
- Financial Management
- Service Desk (Customer-facing support group)
- Service Level Management

Service Support
OPERATIONAL LEVEL

Business focused

Client/user focused

Service Delivery
TACTICAL LEVEL

Service Desk
Non-linear process

Continual Service Improvement
Activities are Embedded in the Service Lifecycle
OGC, ITIL, itSMF, training providers, exam institutes

* from July 2007, exam institutes licensed through APM Group
Demand for training – worldwide Exin
Demand for ITIL qualified staff

seek.com.au

- 771 Australian jobs requesting ITIL skills posted within the last 30 days
- Help desk/support, project management, business analysis, software engineering, networking, and training
- May 2004: Seek listed 25 jobs with ITIL skills

Service Delivery Processes
- Capacity Management
- Service Continuity & Availability Management
- Service Level Management
- Service Reporting

Control Processes
- Configuration Management
- Change Management

Resolution Processes
- Incident Management
- Problem Management

Release Processes
- Release Management

Relationship Processes
- Business Relationship Management
- Supplier Management

Information Security Management
- Budgeting & Accounting for IT Services
Organisations in ISO/IEC 20000 certification

ISO/IEC 20000

ISO

International Organization for Standardization

Conformity Assessment Body (CAB)

audit

National Accreditation Bodies

accredit

accredit

UKAS

JAS-ANZ
AIDA = ITIL + ISO 15504 (AIDA Project 2005)

- Assessment and Improvement integrated Approach (AIDA) - Beatrix Barafort and her team at the Henri Tudor Research Institute in Luxembourg
- Developed SPICE-compliant PRM and PAM based on ITIL
- Includes Primary Life Cycle process descriptions
  - Service Support Group
    - Incident management, problem management, configuration management, change management, release management
  - Service Delivery Group
    - Service level management, IT finance management, capacity management, IT service continuity management, availability management
ISO/IEC 20000 + ISO/IEC 15504

- New work item proposals - June 2007
  - JTC 1/SC7 WG25
  - ISO/IEC 15504-8: an exemplar process assessment model for IT service management
  - ISO/IEC 20000-4: process reference model
CMMI + ITIL (Kopcho 2006)

- Capgemini case study/presentation
- Mapped ITIL process to CMMI
- ‘With CMMI describing our process framework (the "what") and ITIL as the basis of our best practices (the "how"), we were able to:
  - Achieve CMMI Maturity Level 2 just nine months after the initiation of the improvement program
  - Address the needs of developers, support staff, and managers within the same broad lifecycle framework
  - Lay the groundwork for accelerated future process improvement and service delivery optimization’
CMMI Constellations (Hollenbach & Buteau 2006)

- **CMMI-DEV** provides guidance for measuring, monitoring and managing development processes.
- **CMMI-SVC** provides guidance for delivering services within organizations and to external customers.
- **CMMI-ACQ** provides guidance for enabling informed and decisive acquisition leadership.

16 Foundation Process Areas, common to all.
CMMI-SVC Process Areas (Hollenbach & Buteau 2006)

Service PAs

Shared PAs (SAM)

Service Addition PAs

Service Modifications:
- 21 amplifications in 7 PAs
- 5 added references
- 1 modified PA (REQM)
  - 1 specific goal
  - 2 specific practices

CMMI-SVC: 22 PAs + 3 Optional PAs
Constellations and process areas (Malzahn 2007-8)

CMMI Model Foundation

Shared CMMI process areas
(CAR, CM, DAR, IPM, M&A, OID, OPD, OPF, OPP, OT, PMC, PP, PPQA, QPM, REQM, RSKM)

Acquisition
CMMI-ACQ

Acquisition Management (AM)
Acquisition Requirements Development (ARM)
Acquisition Technical Solution (ATS)
Acquisition Validation (AVAL)
Acquisition Verification (AVER)
Solicitation and Supplier Agreement Development (SSAD)

Development
CMMI-DEV

Product Integration (PI)
Requirements Development (RD)
Technical Solution (TS)
Validation (VAL)
Verification (VER)
Supplier Agreement Management (SAM)

Service
CMMI-SVC

Capacity and Availability Management (CAM)
Incident and Request Management (IRM)
Organizational Service Management (OSM)
Problem Management (PRM)
Service Continuity Management (SCON)
Service Delivery (SD)
Service System Development (SS)
Service Transition (ST)
Supplier Agreement Management (SAM)
CMMI for Services categories

- Process management
  - Organisational service management*
- Project management
  - Capacity and availability management
  - Service continuity*
- Service establishment & delivery
  - Incident and request management
  - Service delivery
  - Service system development*
  - Service transition
- Support
  - Problem management
Decision: CMMI SVC or ISO/IEC 20000?

- ITIL has strong support in Australia and Europe and adoption is growing in the USA
  - Fostered by IT Service Management Forum – itSMF
  - Demand for ITIL skills is growing - evidenced by job specs and increased training for individuals
  - Mature in terms of training courses, documentation and support tools
- ISO/IEC 20000 will shift the emphasis from certification of individuals (ITIL) to organisation audit and certification
- As an international standard, ISO/IEC 20000 is easily accessible to organisations, consultants, …
## Comparison ITIL/CMMI Adoption (Cater-Steel et al.)

### Survey results: itSMF National Conference

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Decision: CMMI SVC or ISO/IEC 20000?

- CMMI-DEV process assets can be reused in adopting CMMI-SVC
- Substantial overlap between CMMI-SVC process areas and ISO/IEC 20000 processes
- CMMI-SCV will be supported by SEI Partners (SEI 2007)
  - 226 Partners offer Introduction to CMMI
  - 248 Partners offer SCAMPI appraisal services
  - 54,460 Introduction to CMMI courses since 2000
- CMMI-SVC initial draft distributed March 2007 for comment. Scheduled for release ??
References


References


- For Aileen’ publications: [http://eprints.usq.edu.au/](http://eprints.usq.edu.au/)