Relevant Websites

www.itgi.org	IT Governance Institute
www.isaca.org	Information Systems Audit and Control Assoc.
www.itil.co.uk	UK Office of Government Commerce
www.itsmf.com	IT Service Management Forum
www.sei.cmu.edu	Software Engineering Institute
www.ndia.org	National Defense Industrial Assoc.

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Dr. Bill Curtis

Bill Curtis is the Chief Process Officer of Borland Software Corp. Prior to its acquisition by Borland, he was the Co-founder and Chief Scientist of TeraQuest in Austin, Texas. He is a former Director of the Software Process Program in the Software Engineering Institute at Carnegie Mellon University. He is a co-author of the Capability Maturity Model for Software, and is the principal architect of the People CMM. Prior to joining the SEI, Dr. Curtis directed research on advanced user interface technologies and the software design process at MCC, developed a global software productivity and quality measurement system at ITT's Programming Technology Center, evaluated software development methods in GE Space Division, and taught statistics at the University of Washington.

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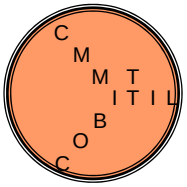
MAXIMIZE THE
BUSINESS VALUE
OF SOFTWARE

Integrating CMMI® with COBIT® and ITIL®

Dr. Bill Curtis
Chief Process Officer

Borland®

Agenda



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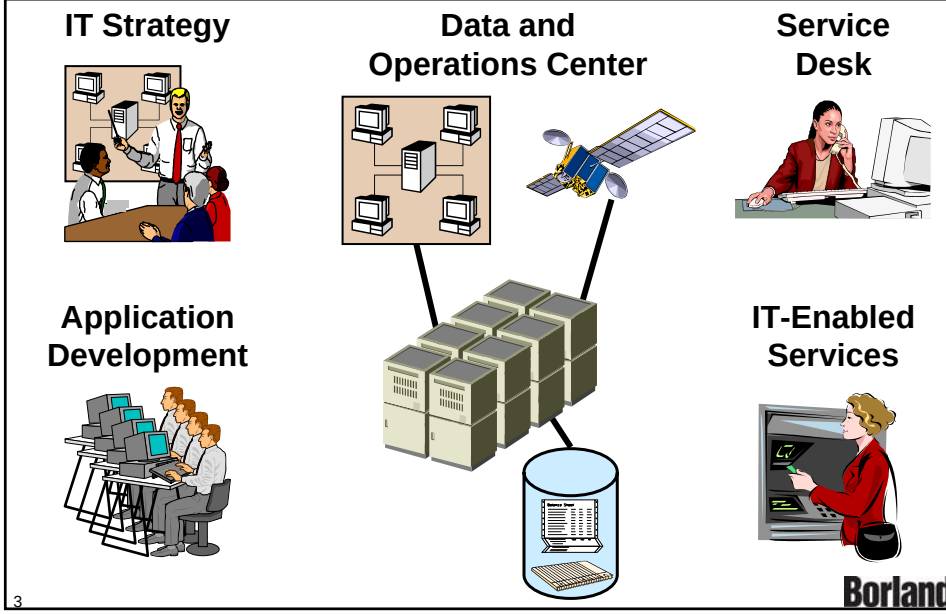
Section 1: The IT Space



The Standards

Standard	COBIT®	ITIL®	CMMI®
Parent Org.	IT Governance Institute®	OGC Office of Government Commerce	Carnegie Mellon Software Engineering Institute
Industry Sponsor Group	Information Systems Audit and Control Association®	itSMF	NDIA National Defense Industrial Association

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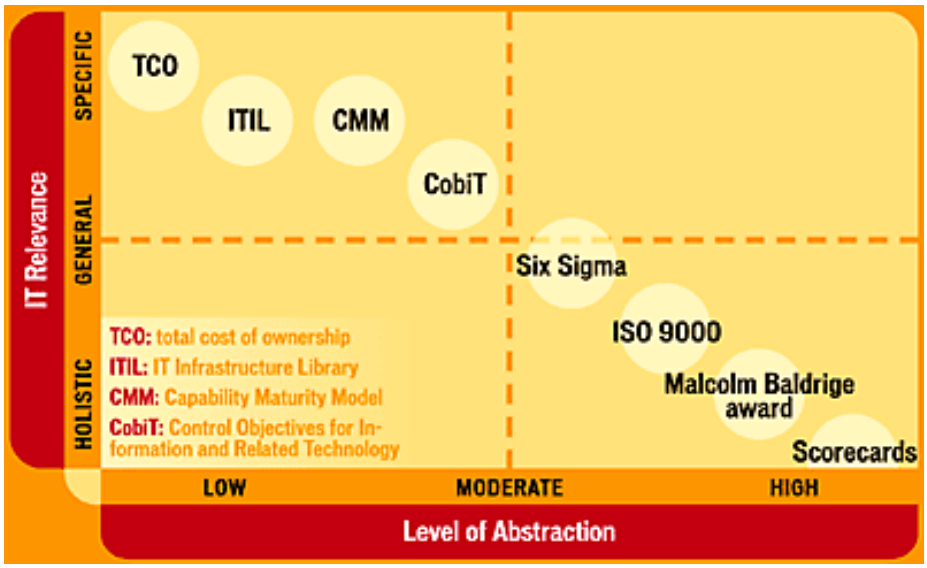
4

Gartner's Review of Models



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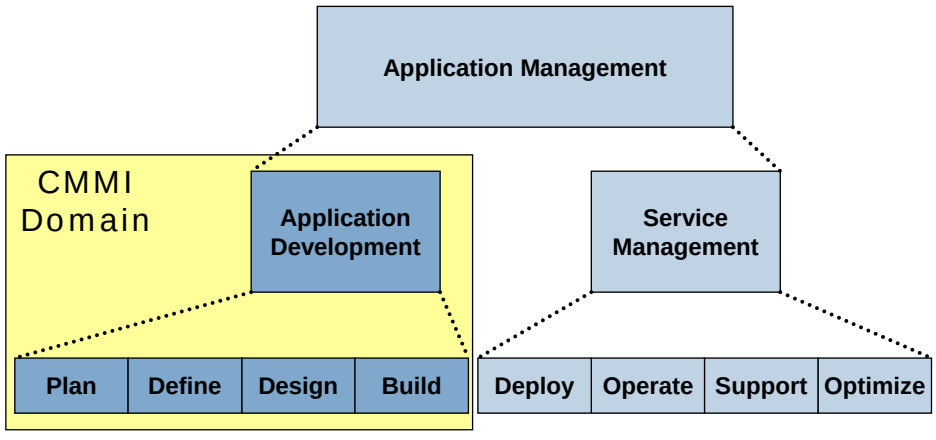
Application Management



Source: ITIL: Application Management (2002, p.7)

6

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Section 2: COBIT

COBIT:

- Control OBjectives for Information and related Technology
- 3rd edition—July 2000

Sponsorship:

- Open standard of IT Governance Institute
- Published by ISACA – The Information Systems Audit and Control Association & Foundation
- Certified Information Systems Auditor certification – 23,000+ auditors

Focus:

- IT Governance - How does executive management fulfill its responsibilities with respect to IT?
- Audit of IT operations

Source: COBIT Management Guidelines (2000)

7

Approach to Using COBIT

Manage IT-related business risks:

- base use on business objectives in the COBIT Framework
- select IT processes and controls appropriate for the organization from the COBIT Control Objectives
- operate from the organization business plan
- assess procedures and results with COBIT Audit Guidelines
- assess status of the organization, identify critical success factors, measure performance with the COBIT Management Guidelines

To develop a sound set of processes:

- choose Control Objectives that fit the business objectives
- identify industry models that provide guidance for supporting processes (CMMI, People CMM, ITIL, …)

8

COBIT Architecture

34 Information Technology control objectives:

- 11 planning and organization
- 6 acquisition and implementation
- 13 delivery and support
- 4 monitoring

318 detailed control objectives & audit guidelines:

- 3-30 detailed control objectives per process

Each IT process is supported by:

- 8-10 Critical Success Factors
- 5-7 Key Goal Indicators
- 6-8 Key Performance Indicators

9 Source: COBIT Management Guidelines (2000)

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Evaluating COBIT Processes

Critical Success Factors:

- Management's key issues to control and actions to take
- Focused on implementing and controlling the right processes

Key Goal Indicators:

- Indicators of whether an IT process has achieved its goals
- Focused on monitoring achievement of goals

Key Performance Indicators:

- Measures of how well an IT process is performing
- Focused on monitoring performance to predict goal achievement

10 Source: COBIT Management Guidelines (2000)

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Architectural Comparison

COBIT	CMMI
Control objectives	Process Areas
Detailed control objectives	Practices
Critical success factors	Practice level goals
Key goal indicators	Measures in Directing Implementation
Key performance indicators	Measures in Directing Implementation

Architectural comparison is suggestive of relationships, but the mapping between these elements is not exact.

Font sizes indicate relative scope of the element between models.

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COBIT's Maturity Model

Level 5 Optimised	Processes refined to level of best practice Automation integrates workflow
Level 4 Managed	Process compliance monitored & measured Constant improvement, some automation
Level 3 Defined	Standard, documented procedures based on existing practice with no process assurance
Level 2 Repeatable	Similar procedures followed by people performing the same task, but no training
Level 1 Initial	Ad hoc processes developed case by case Recognition of issues to be addressed
Level 0 Non-existent	Complete lack of recognizable processes No recognition of issues to be addressed

Source: COBIT Management Guidelines (2000)

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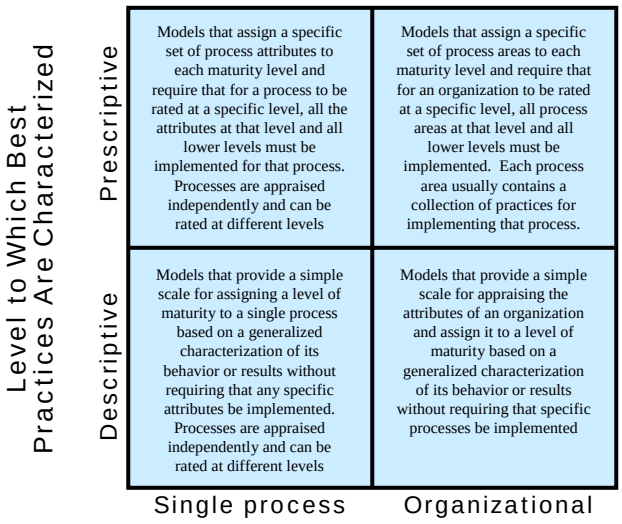
Maturity Model Types



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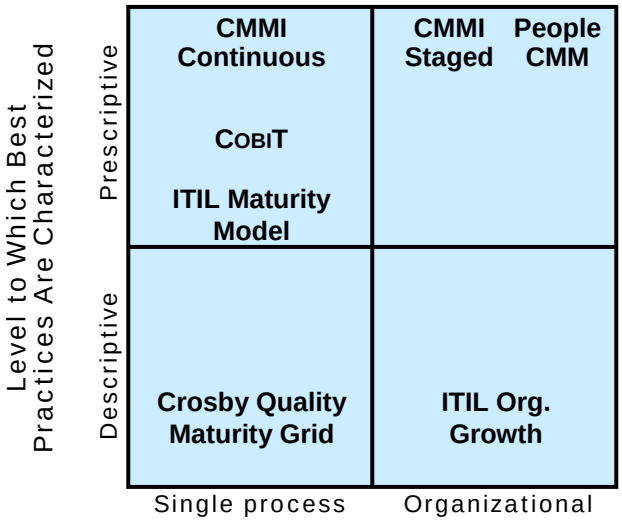
Maturity Model Types



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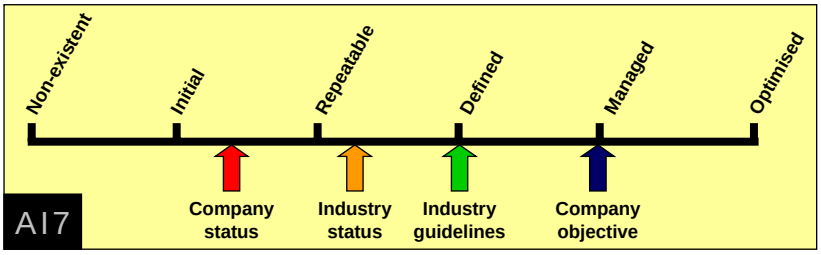
COBIT Maturity Evaluations

Maturity comparisons for each IT process:

- Status of organization's current process
- Status of best in class industry process
- Status of current industry standard guidelines
- Strategic objective for organizational improvement



15 Source: COBIT Management Guidelines (2000)

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COBIT-MM vs. CMMs

Not mapped to CMM's view of maturity:

- Level 2 uses local procedures
- Level 3 compliance is not left to individuals
- Level 4 measurement focused on compliance not stability or predictability
- Weak focus on continual improvement
- COBIT-MM is evolving and will include an assessment method

COBIT uses the continuous approach

- Process focus, not organizational focus
- No roadmap for implementation

Confuses process maturity and auditability

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Planning & Organization—1

COBIT	Process Maturity Framework
PO1—Define a strategic IT plan—align IT opportunities with business requirements and ensure accomplishment	CMMI—no clear referent *Level 3 issue*
PO2—Define the information architecture—optimize the organization and integration of information systems	CMMI—no clear referent *Level 3 issue*
PO3—Determine technological direction—exploit current and emerging technology to achieve business strategy	CMMI—no clear referent *Level 3 issue*
PO4—Define the IT organization and relationships—deliver the right IT services	CMMI L3—OEI *Level 3 issue*

Source: COBIT Management Guidelines (2000)

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Planning & Organization—2

COBIT	Process Maturity Framework
PO5—Manage the IT investment—ensure funding and control of financial resources	CMMI—no clear referent *Level 3 issue*
PO6—Communicate management aims and directions—ensure user awareness of directions	CMMI GP2.1—Policy *Level 2 issue*
PO7—Manage human resources—sustain a motivated, competent workforce & ensure individual contributions	People CMM CMMI—OT *Level 3 issue*
PO8—Ensure compliance with external requirements—meet legal, regulatory, and contractual obligations	CMMI L2—REQM, PPQA CMMI L3—RD, VAL

18 Source: COBIT Management Guidelines (2000)

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Planning & Organization—3

COBIT	Process Maturity Framework
PO9—Assess risks—support management decisions and reduce threats	CMMI L2—PP CMMI L3—RSKM
PO10—Manage projects—set priorities and deliver on time and within budget	CMMI L2—REQM, PP, PMC CMMI L3—IPM, RSKM
PO11—Manage quality—meet IT customer requirements	CMMI L2—REQM CMMI L3—RD, TS, VER, VAL

19 Source: COBIT Management Guidelines (2000)

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Acquisition & Implementation—1

COBIT	Process Maturity Framework
AI1—Identify automated solutions—ensure effective, efficient approach to satisfy user requirements	CMMI L2—REQM, SAM CMMI L3—RD, TS, RM, DAR, ISM
AI2—Acquire and maintain application software—provide automated functions to support business processes	CMMI L2—SAM CMMI L3—RD, TS, VA, IPM, ISM
AI3—Acquire and maintain technology infrastructure—provide appropriate platforms to support business applications	CMMI L2—CM CMMI L3—RD, TS
AI4—Develop and maintain procedures—ensure proper use of applications and technical solutions deployed	CMMI L3—RD, TS

20 Source: COBIT Management Guidelines (2000)

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Acquisition & Implementation—2

COBIT	Process Maturity Framework
AI5—Install and accredit systems—confirm that solution is fit for intended purpose	CMMI L3—VER, VAL
AI6—Manage changes—minimize disruption, unauthorized changes, and errors	CMMI L2—REQM, CM

21 Source: COBIT Management Guidelines (2000)

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Delivery and Support—1

COBIT	Process Maturity Framework
DS1—Define and manage service levels—establish a common understanding of the level of service required	CMMI L2—REQM, PP, PMC CMMI L3—IPM
DS2—Manage third party services—ensure that third party responsibilities are defined and met	CMMI L2—SAM CMMI L3—ISM
DS3—Manage performance and capacity—ensure that adequate capacity is available and used to best effect	CMMI L3—RD, TS
DS4—Ensure continuous service—make IT services available and minimize business impact in case of disruption	CMMI—no clear referent *Level 2&3 issue*

22 Source: COBIT Management Guidelines (2000)

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Delivery and Support—2

COBIT	Process Maturity Framework
DS5—Ensure system security—safeguard information against unauthorized use, disclosure, modification, damage, or loss	CMMI—no clear referent *Level 2&3 issue*
DS6—Identify and allocate costs—ensure awareness of costs attributable to IT services	CMMI—no clear referent *Level 3 issue*
DS7—Educate and train users—ensure users make effective use of technology and are aware of responsibilities	People CMM CMMI L3—OT
DS8—Assist and advise customers—ensure problems experienced by users are resolved	CMMI—no clear referent *Level 3 issue*

23 Source: COBIT Management Guidelines (2000)

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Delivery and Support—3

COBIT	Process Maturity Framework
DS9—Manage the configuration—prevent unauthorized alteration, verify existence, provide change mgt.	CMMI L2—CM
DS10—Manage problems and incidents—ensure problems and incidents are resolved and causes investigated	CMMI—no clear referent *Level 3 issue*
DS11—Manage data—ensure data remains complete, accurate, and valid during input, update, and storage	CMMI L2—PP, PMC
DS12—Manage facilities—provide physical environment that protects people and equipment against hazards	People CMM—WE

24 Source: COBIT Management Guidelines (2000)

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Delivery and Support—4

COBIT	Process Maturity Framework
DS13—Manage operations—ensure IT support functions are performed regularly in an orderly fashion	CMMI—no clear referent *Level 3 issue*

25 Source: COBIT Management Guidelines (2000)

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Monitoring—1

COBIT	Process Maturity Framework
M1—Monitor the processes—ensure achievement of performance objectives set for IT processes	CMMI L2—PMC
M2—Assess internal control adequacy—ensure achievement of internal control objectives for IT processes	CMMI L2—PMC CMMI L3—IPM
M3—Obtain independent assurance—increase confidence and trust among IT, customers, and suppliers	CMMI L2—PPQA
M4—Provide for an independent audit—ensure proper use of applications and technical solutions deployed	CMMI L2—PPQA

26 Source: COBIT Management Guidelines (2000)

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CMMI-COBIT Coverage

COBIT	CMMI
Planning and Organization	**CMMI provides light support for achieving organization-wide objectives, but better support for objectives with greater project focus such as requirements, risks, quality, and project mgt.**
Acquisition and Implementation	**CMMI provides excellent coverage for achieving acquisition and implementation objectives**
Delivery and Support	**CMMI's management processes can be translated to support the management of service levels, third parties, capacity, problems, and data; however continuous operation and user support services are not well covered in CMMI**
Monitoring	**CMMI provides for monitoring functions at the project level, but does not involve audit controls at the organizational level**

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CMMI-COBIT Summary

CMMI and COBIT have different objectives:

- COBIT focuses on governance of all IT functions
- CMMI focuses on improving application development processes

CMMI and COBIT are complementary:

- Use COBIT to appraise overall management of IT
- Use CMMI to appraise the maturity of application development

Use CMMI to guide the implementation of control processes for:

- acquisition and implementation processes
- project management processes
- some delivery and support processes

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Section 3: ITIL

ITIL—**Information Technology Infrastructure Library**

- Guide for cost-effective use of UK public sector IT resources
- Requirements for IT service management
- Collection of best practices in IT
- Vendor independent

Supporting organizations:

- © UK Office of Government Commerce
- Published by The Stationary Office (London)
- itSMF—IT Service Management Forum—intro book
- EXIN, ISEB—professional certifications in ITIL

ITIL® The key to Managing IT services

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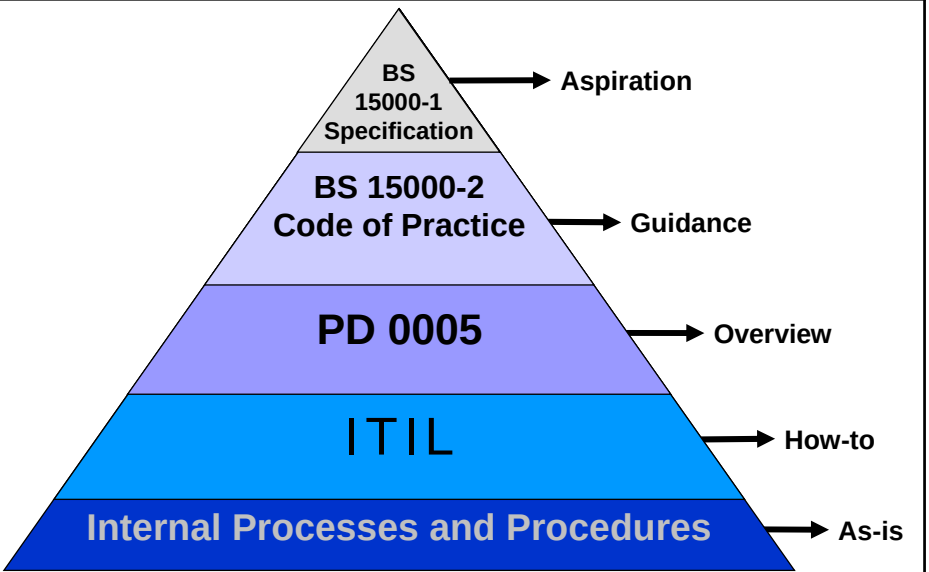
ITIL & BS 15000



Source: PD 0015 (2000)

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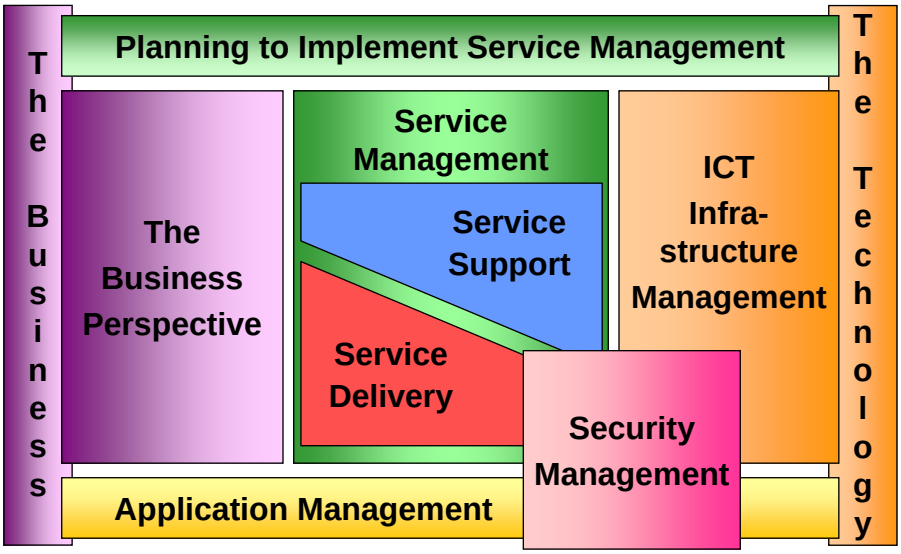
ITIL Publication Framework



Source: ITIL: Planning to Implement Service Management (2002, p.4)

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ITIL Topic Areas—1

Service Delivery:

- Service level management
- Financial management for IT services
- Capacity management
- IT service continuity management
- Availability management

Service Support:

- Service desk
- Incident management
- Problem management
- Change management
- Release management
- Configuration management

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ITIL Topic Areas—2

ICT Infrastructure Management:

- Design and planning
- Deployment
- Operations
- Technical support

Applications Management:

- Managing business value
- Aligning delivery strategy with business drivers
- Application management lifecycle
- Organizing roles and functions
- Control methods and techniques

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ITIL Topic Areas—3

Planning to Implement Service Mgt

Security Management

Software Asset Management

The Business Perspective

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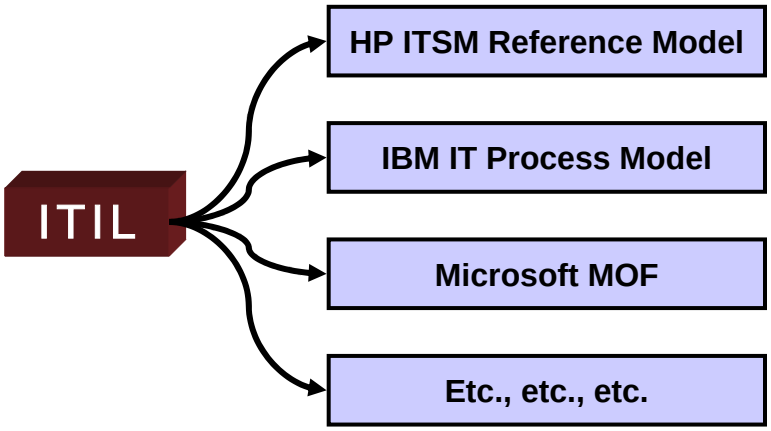
ITIL-Related Models



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The ITIL Processes

ITIL Process	CMMI PA
Configuration Management	Configuration Management
Change Management	Configuration Management
Release Management	Configuration Management
Incident Management	
Problem Management	Verification, Causal Analysis & Res.
Service Desk	
Service Level Management	
Capacity Management	
Financial Mgt. for IT Services	
Customer Relationship Management	
ICT Infrastructure Management	
Application Management	RM, TS, PI, VE, VA, ISM
Security Management	
Environmental Infrastructure	
Project Management	PP, PMC, SAM, ISM, SAM

Source: ITIL: Service Support (2002, p.11-16)

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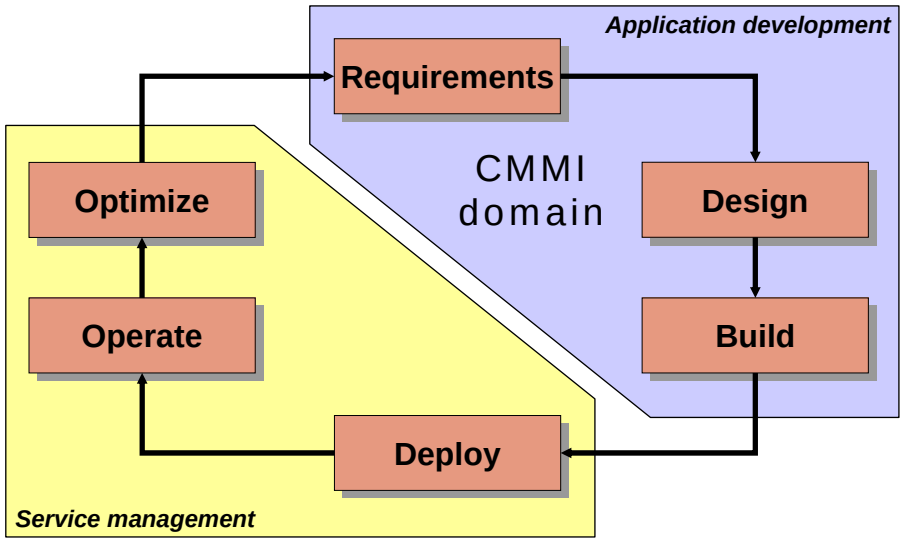
Application Mgt. Lifecycle



37 Source: ITIL: Application Management (2002, p.7)

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ITIL-AM: Requirements

ITIL Application Management	CMMI
Functional requirements **Non-functional requirements** **Usability requirements** **Change cases** **Testing requirements** **Requirements management checklist** **Organization of the requirements team**	**RM-Manage requirements:** • Obtain understanding of requirements • Obtain commitment to requirements • Manage requirements changes • Maintain bi-directional traceability • Identify inconsistencies between project work and requirements **RD-Develop customer requirements** • Elicit needs • Develop the customer requirements **RD-Develop product requirements** • Establish product & product-component reqts. • Allocate product-component reqts. • Identify interface requirements **RD-Analyze and validate requirements** • Establish operational concepts & scenarios • Establish definition of required functionality • Analyze requirements • Analyze requirements to achieve balance • Validate reqts with comprehensive models

38 Source: ITIL: Application Management (2002), CMMI (2003)

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ITIL-AM: Design

ITIL Application Management	CMMI
Design for non-functional requirements/manageability **Risk-driven scheduling** **Managing tradeoffs** **Application-independent design guidelines and application frameworks** **Design management checklist** **Problems with design guidelines** **Testing the requirements** **Organization of the design team**	**TS-Select product component solutions** • Develop detailed alternatives and selection criteria • Evolve operational concepts & scenarios • Select product component solutions **TS-Develop the design** • Design the product or product component solution • Establish a technical data package • Design interfaces using criteria • Perform make, buy, or reuse analyses **TS-Implement the product design** • Implement the design • Develop product support documentation

39 Source: ITIL: Application Management (2002)), CMMI (2003)

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ITIL-AM: Build—1

ITIL Application Management	CMMI
Consistent coding conventions **Application-independent building guidelines** **Operability testing** **Build management checklist** **Organization of the build team**	**PI-Prepare for product integration** • Determine integration sequence • Establish the integration environment • Establish integration procedures and criteria **PI-Ensure interface compatibility** • Review interface description for completeness • Manage interfaces **PI-Assemble product deliver product** • confirm readiness for integration • Assemble product components • Evaluate assembled components • Package and deliver the product or component

40 Source: ITIL: Application Management (2002)), CMMI (2003)

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ITIL-AM: Build—2

ITIL Application Management	CMMI
Consistent coding conventions **Application-independent building guidelines** **Operability testing** **Build management checklist** **Organization of the build team**	**VE-Prepare for verification** • Select work products for verification • Establish the verification environment • Establish verification procedures and criteria **VE-Perform peer reviews** • Prepare for peer reviews • Conduct peer reviews • Analyze peer review data **VE-Analyze selected work products** • Perform verification • Analyze verification results and identify corrective action

41 Source: ITIL: Application Management (2002)), CMMI (2003)

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ITIL-AM: Deploy

ITIL Application Management	CMMI
Planning the deployment	
Approving the deployment	
Distributing applications	
Pilot deployments	
Deployment management checklists	
Organization of the deployment team	

42 Source: ITIL: Application Management (2002)

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ITIL-AM: Operate

ITIL Application Management	CMMI
Day-to-day maintenance activities to maintain service levels	
Application state	
Benefits of an application	
Operations management checklist	
Organization of the operations team	

43 **Source: ITIL: Application Management (2002)**

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ITIL-AM: Optimize

ITIL Application Management	CMMI
Application review process	
Optimization management checklist	
Organization of the optimization team	

44 **Source: ITIL: Application Management (2002)**

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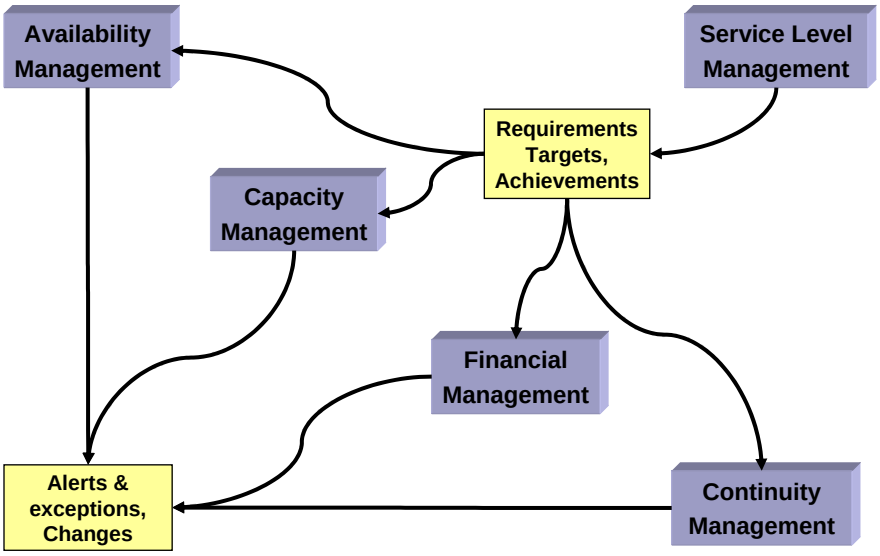
Service Delivery Processes



45 Source: ITIL: Planning to Implement Service Management (2002, p.7)

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ITIL-SD: Service Level Mgt.

ITIL Service Delivery	CMMI
Planning service delivery	PP
Service catalogue	
Service level requirements	REQM, RD
Service level agreement	PP SG 3
Operational level agreements	PP SG 3
Monitor and report service delivery	PMC
Service improvement program	OPF, OID

46 Source: ITIL: Service Delivery (2001)

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ITIL-SD: Financial Mgt.

ITIL Service Delivery	CMMI
Budgeting	
IT accounting system	
IT charging system	
Planning IT financial mgt	
Implementing IT financial mgt	
Financial operation and reporting	
Managing variances	

47 Source: ITIL: Service Delivery (2001)

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ITIL-SD: Capacity Mgt.

ITIL Service Delivery	CMMI
Business capacity management	
Service capacity management	
Resource capacity management	
Monitoring	**PMC SG1**
Analysis	**OPP**
Tuning	**OPP, OID**
Implementation	
Demand management	
Modeling	**QPM**
Application sizing	
Capacity planning	

48 Source: ITIL: Service Delivery (2001)

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ITIL-SD: Continuity Mgt.—1

ITIL Service Delivery	CMMI
Initiate business continuity mgt.	
Business impact analysis	
Risk assessment	RSKM
Business continuity strategy	
Org. and implementation planning	PP
Implement standby arrangements	
Develop recovery plans	PP
Implement risk reduction measures	RSKM
Develop procedures	OPD, TS
Initial testing	VER

49 Source: ITIL: Service Delivery (2001)

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ITIL-SD: Continuity Mgt.—2

ITIL Service Delivery	CMMI
Education and awareness	OT
Review and audit	VER, PPQA
Tuning	
Change management	CM
Training	OT
Assurance	VAL, PPQA

50 Source: ITIL: Service Delivery (2001)

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ITIL-SD: Availability Mgt.

ITIL Service Delivery	CMMI
Availability requirements	REQM, RD
Failure impact analysis	CAR
Availability targets	REQM
Availability measures and reporting	MA
Monitoring and trend analysis	PMC SG1
Availability problem detection	PMC SG2
Availability problem prevention	PMC SG2
Availability planning	PP

51 Source: ITIL: Service Delivery (2001)

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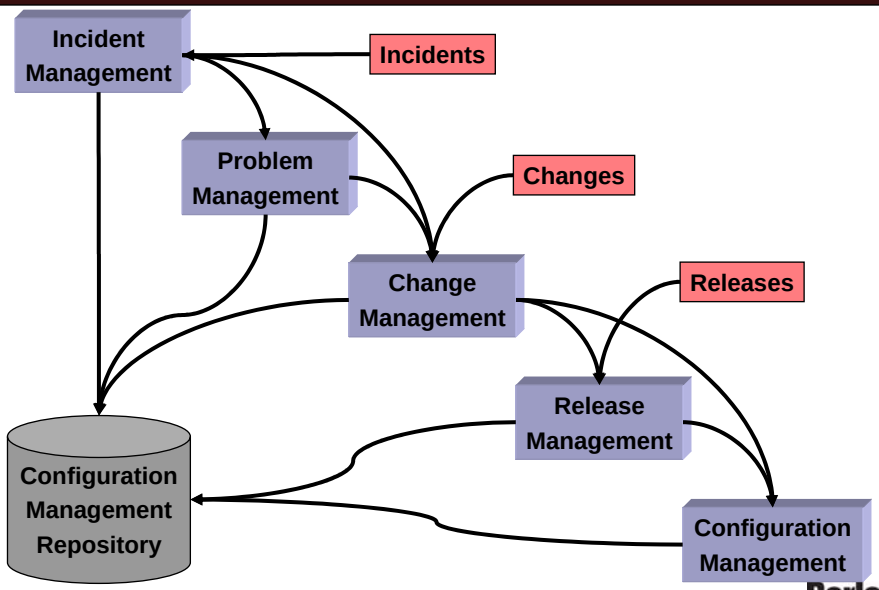
Service Support Processes



52 Source: ITIL: Planning to Implement Service Management (2002, p.6)

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ITIL-SS: Incident Mgt.

ITIL Service Support	CMMI
Incident detection and recording	
Classification and initial support	
Investigation and diagnosis	
Resolution and recovery	
Incident closure	
Ownership, monitoring, tracking, and communication	

 Source: ITIL: Service Support (2000)

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ITIL-SS: Problem Mgt.

ITIL Service Support	CMMI
Problem identification and recording	
Problem classification	**CAR SP1.1**
Problem investigation and diagnosis	**VER SP3.2, CAR SP1.2**
Error identification and recording	**VER SP3.2**
Error assessment	**VER SP3.2**
Error resolution recording	**VER SP3.2**
Error closure	**VER SP3.2**
Problem/error resolution recording	

 Source: ITIL: Service Support (2000)

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ITIL-SS: Configuration Mgt.

ITIL Service Support	CMMI
Configuration management planning	CM GP2.2
Configuration identification	CM SP1.1
Control of configuration items	CM SP1.2, SP2.2
Configuration status accounting	CM SP3.1
Configuration verification and audit	CM SP3.2
CMDB backups, archives, and housekeeping	CM SP1.2
Configuration management service	

55 Source: ITIL: Service Support (2000)

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ITIL-SS: Change Mgt.—1

ITIL Service Support	CMMI
Planning the implementing of operational processes	CM GP2.2
Change logging and filtering	CM SP2.1
Allocation of priorities	CM SP2.1
Change categorization	CM SP2.1
Change Advisory Board meetings	CM SP2.2
Impact and resource assessment	CM SP2.1
Change approval	CM SP2.2
Change scheduling	CM SP2.2
Change building, testing, and implementation	CM SP2.2

56 Source: ITIL: Service Support (2000)

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ITIL-SS: Change Mgt.—2

ITIL Service Support	CMMI
Urgent change scheduling	CM SP2.2
Urgent change building, testing, and implementation	CM SP2.2
Change review	CM SP2.2
Reviewing the change management process for efficiency & effectiveness	CM GP2.8, GP2.9, P2.10
Roles and responsibilities	CM GP2.4

57 Source: ITIL: Service Support (2000)

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ITIL-SS: Release Mgt.

ITIL Service Support	CMMI
Release planning	CM GP2.2
Designing, building, and configuring a release	CM SP1.3
Release acceptance	VE SP3.1
Rollout planning	CM GP2.2
Communication, preparation, and training	
Distribution and installation	

58 Source: ITIL: Service Support (2000)

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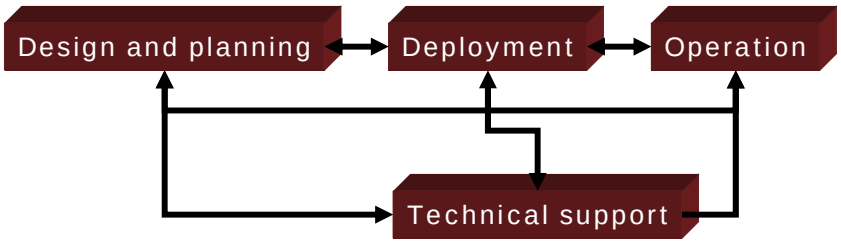
ICT Infrastructure Mgt.



59 Source: ITIL: ICT Infrastructure Management (2002, p.9)

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ITIL-ICT: Design & Planning

ITIL ICT Infrastructure Mgt.	CMMI
Strategic management	
Review current position	
Define desired state	
Design and implement a plan	
Review progress of the plan	

Source: ITIL: ICT Infrastructure Management (2002)

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ITIL-ICT: Deployment

ITIL ICT Infrastructure Mgt.	CMMI
Design phase	**TS**
Working environments	**IPM**
Build phase	**TS**
Acceptance testing	**VER**
Rollout phase	
Handover	

61 **Source: ITIL: ICT Infrastructure Management (2002)**

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ITIL-ICT: Operation

ITIL ICT Infrastructure Mgt.	CMMI
Manage ICT infrastructure events	
Operational control and management	
Workload, output, resilience testing management, & schedules	
Storage mgt., backup, &recovery	
ICT operational security	
Manage support operating processes	
Proactive operational mgt. processes	

62 **Source: ITIL: ICT Infrastructure Management (2002)**

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ITIL-ICT: Technical Support

ITIL ICT Infrastructure Mgt.	CMMI
Research and development	
Supplier management	**SAM, ISM**
Document management	**PP SG 2**

63 **Source: ITIL: ICT Infrastructure Management (2002)**

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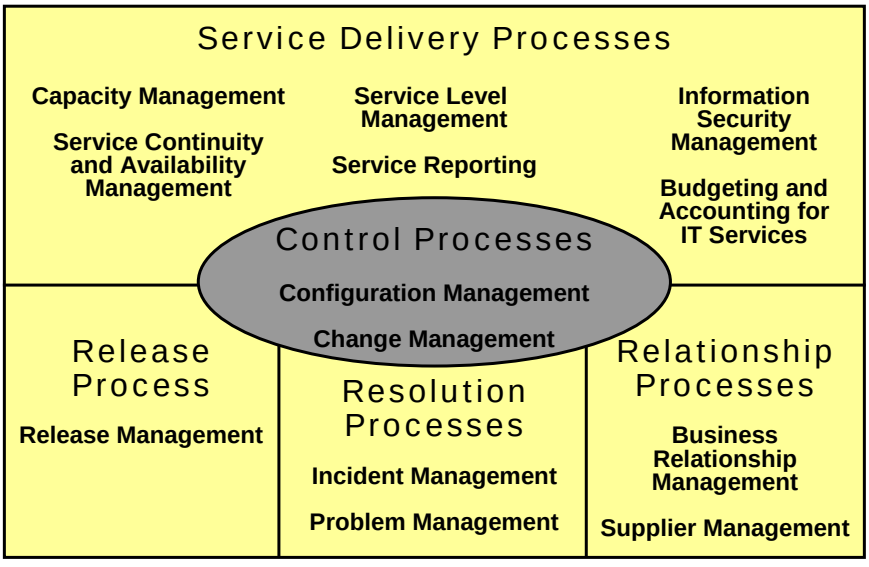
BS 15000 Processes



64 **Source: BS 15000-2: Service Management (2003)**

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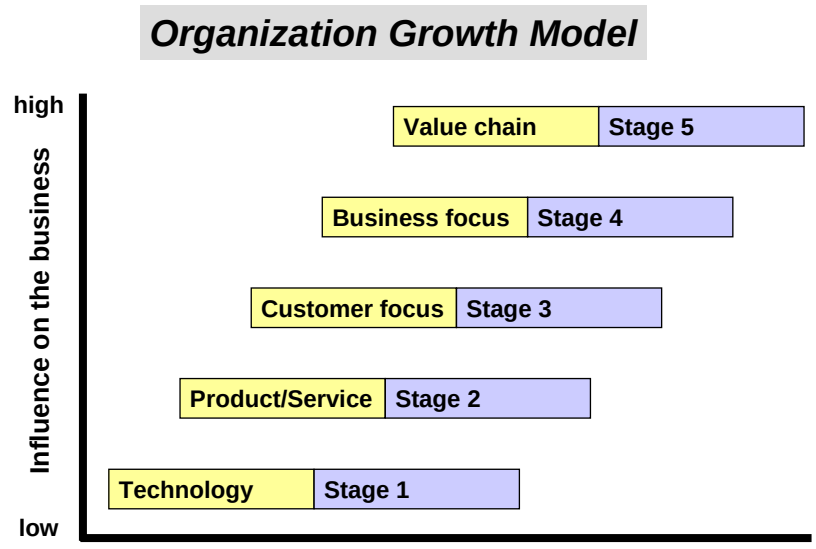
Maturity of IT Organizations



65 Source: ITIL: Planning to Implement Service Management (2002, p.27)

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ITIL's Maturity Model

Level	Characterization
1 Initial	Little process management activity. Loosely defined processes and procedures, totally reactive, irregular unplanned activities
2 Repeat-able	Process activities are uncoordinated, without direction, focused on process effectiveness. Defined processes and procedures, largely reactive
3 Defined	Documented process with process owner, but no formal recognition of its role in IT. Clearly defined and occasionally proactive
4 Managed	Process fully accepted in IT, with targets based on business goals. Proactive and integrated with other IT service management processes
5 Optimized	Process has strategic objectives that are institutionalized, self-contained improvements creating a pre-emptive capability.

66 Source: ITIL: Planning to Implement Service Management (2002, p.187-190)

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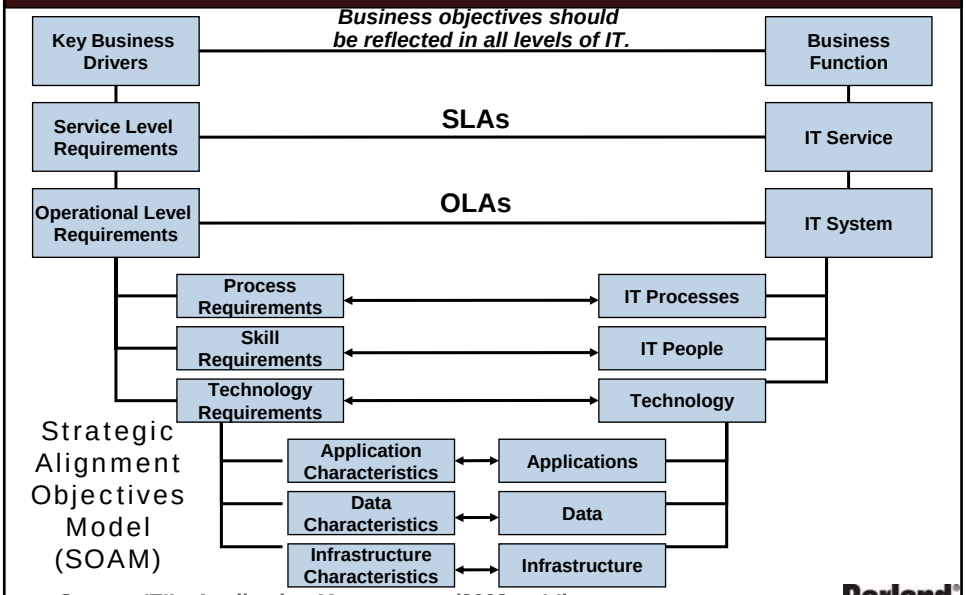
IT-Business Alignment



Source: ITIL: Application Management (2002, p.14)

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Rethinking Issues by Level

Project level configuration management issues in CMMI space may become organizational issues in IT

CM	CMMI	IT
Content	System components, documentation, tools, environment, etc.	Service components *(system components, service processes, forms, training, etc.)*
Control	Under local control *(project)*	Not under local control *(different functional units)*
Level	Level 2 - project	Level 2 – local unit Level 3 – service-wide
New issue		Transaction integrity

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Using ITIL and CMMI

ITIL and CMMI best apply to different parts of the IT organization:

- Use CMMI in application development
- Use CMMI in ICT Infrastructure projects
- Use ITIL in IT operations and services

The problem—service level application activities:

- Option 1—treat each modification/enhancement as a project—CMMI (may require translation)
- Option 2—treat the service level agreement as a project—CMMI (requires translation)
- Option 3—treat the service level agreement as a service—ITIL

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Summary

CMMI, COBIT, and ITIL (BS 15000) provide complementary models for different IT functions:

- Use CMMI and ITIL to implement practices that support COBIT control objectives
- Apply CMMI or ITIL to appropriate parts of the IT organization
- Select appraisal/certification methods based on appropriateness of fit to the IT processes to be assessed

Draw from all standards when designing and implementing processes to ensure a more complete and robust implementation

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