

bITa monitor

bITa Center

To have effective «Business – IT Alignment», requires for IT to be itself aligned. IT alignment means that IT is managed in a consistent way with a single management framework and that all work and activities performed in IT are aligned with one another under that framework, to enable IT to provide a unified front to the business it serves. The majority of IT functions today do not have an overall management framework. At best they have individual frameworks for parts of IT: a software development framework, a project management framework or a service management framework

The objective of bITa monitor is to provide invaluable information to corporations and organisations with an urgent and persistent need to understand where they sit in relationship to the best-known "standards" and "best practices" of today.

Reviewing the scope and structure of relevant frameworks and the consistencies and inconsistencies of the frameworks within them from a process and information viewpoint:

- The IT Strategy and Planning Domain Frameworks**
Dealing with Business and IT Strategy, Business and IT Architectures, Business and IT Change and Operational Planning and Budgeting and Control
- The IT Development and Implementation Frameworks**
Including project frameworks like PRINCE2, PMBOK and DSDM, software life cycle frameworks like ASL, infrastructure life cycle frameworks, etc...
- The IT Service Management Frameworks**
Including service planning and control, service delivery and service support frameworks around ITIL and MOF
- The IT Support and Enabling Area**
Including HR, Asset, Finance, Work and Knowledge Management processes and frameworks

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"IT alignment" and "Business IT alignment" are the targets of the bITa Europe 2003 Conference with numerous workshops, key notes, seminars and a number of parallel session roundtables.
bITa Europe Conference 2003, 10-14 March, Sophia Antipolis, Nice, France.
For more information, please visit www.bit-a-europe.com

Opening statement

By Herman van Bolhuis, Director, bITa Center

The bITa monitor will be essential reading for senior IT executives and professionals, the individuals responsible for most of the innovation and change in today's IT management environment. Our coverage provides a forward-thinking, analytical look at the companies and industries using and implementing the relevant domains and frameworks. The bITa monitor provides its readers with independent comprehensive review and analysis of the (converging) domains and frameworks. As a field based research newsletter focussing on the sets of relationships among strategies, frameworks and structures, the bITa monitor wants to become a trusted source of insight and perspective in the world of IT management.

While it is true that only a few countries have had a leadership role in the development and spread of IT related domains and frameworks over the last decade, we think IT management is a global business - and that's how we will cover it. To bring you the best in this field, we have made a strong commitment to building a network of pros in Europe and the U.S. covering all relevant domains and frameworks. This network of highly competent professionals will be focussed on gathering monthly data on implementation and change. So we can tell our readers what's first, what's new, and - most importantly - what matters and why.

With the growing number of models and frameworks that cover various domains of IT Management the coherence between these domains seems to disappear. Effective IT (Service) Management can only be achieved when both the cohesion of processes within a domain and the coupling of processes across domains are understood.

Here are seven stories about IT Alignment, Business IT Alignment and some frameworks. Delivered by industry experts and qualified consultants, this issue is an effective way to improve your knowledge, understanding, and practice of the relevant domain, framework or method.

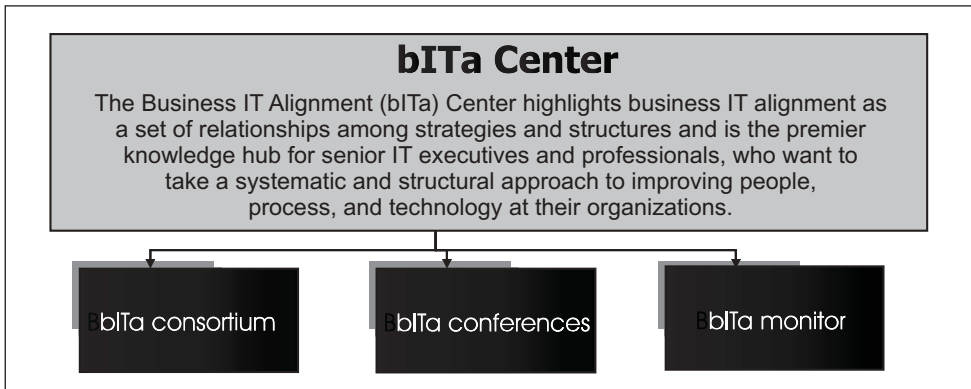
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IT Management Needs	Target Deliverables
List of Overall Control and Domain Frameworks	Overall list
Basic Framework analysis	Basic Analysis of Framework for scope, commonality and conflicts
Framework Governance groups Overall Glossary of terms that should be used across all frameworks	- Who are they - Who are they for - Can they be influenced to converge
Agree Unifying Disciplines that are common to different domain frameworks	Cross linked to each framework glossary
Conflicting concepts and scope with different and same domain frameworks	Examples - Configuration Management - Risk Management - Issue Management - Change Management
Overall Control Management Forum	Overview
Overall framework definition of the domains	To manage convergence of control & domain frameworks
Standard way of looking at processes and work flows	- Strategy, Development, Operation, Support, Enable - Strategic Level, Tactical Level, Operational Level, Support - Planning & Organisation, Acquire & Implement, Deliver & Support, Monitor
Standard high level process model	Apply to each framework
Customer View of IT Process Model	Link all the frameworks at a process level
Interfaces between frameworks	Touch points - alignment points
Summary of each Control and Domain Framework	Example Project Management - Service & Infrastructure Management - SM Standards & Guidelines - SM Checklists at PM Stage Gates
Analysis of Frameworks	Define for each framework: - Purpose - Scope - Ownership - Management Disciplines - Processes, Life Cycles & Work Flows - Governance Groups e.g. ITSMF and OGC - Qualifications, who provides - Relationship to parallel frameworks - Relationship to vertical frameworks
Missing Frameworks - examples	Where they overlap the overall IT management framework and each other - Business & IT Strategy - Business & IT Change Plan - Business & IT Operational Plan - Business & IT Architectures - Business & IT Multidisciplinary Project Management - Business & IT Portfolio Management - Infrastructure Life Cycle Management

The IT management needs and the deliverables to be provided are also the subject of continuous research by bITa Consortium

bITa Center as the driving force!

The Business IT Alignment (bITa) Center will act as a focal point and knowledge hub that highlights IT Alignment and Business-IT Alignment as a set of relationships among strategies, frameworks and structures and is determined to become the premier European knowledge provider for senior IT executives and professionals, who want to take a systematic and structural approach to IT Alignment and Business IT Alignment.



They will be provided insight into identifying areas that help or hinder alignment. The bITa Center can help them develop views of their organization's strengths and weaknesses and focus on the functional integration of strategies and structures. And the bITa Center will also help consultants get a view of relative strengths, both within each domain of the strategic alignment model and the interplay among the frameworks and domains, that will be key to the state of IT Alignment and Business IT Alignment in their clients' organisation. With the growing number of models and frameworks that cover various domains of IT Management the coherence between these domains seems to disappear. There are numerous models that focus on the tight relationship between processes within a certain domain. There are also models that cover several domains, but they are often too high level to have significant added value. Effective IT (Service) Management can only be achieved when both the cohesion of processes within a domain and the coupling of processes across domains are understood. (www.bit-center.com)

bITa Consortium

The bITa Consortium provides a quarterly research and benchmarking activity that we call "bITa Overview". These research studies compile detailed information on how corporations are currently implementing models, domains and frameworks. We will compile the information and rapidly feed it back to the Consortium members for in-depth dialogue, conversation and benchmarking.

bITa conferences

In addition, we will be meeting at several occasions in person at the conferences (the first one from 10-14 March 2003 in Sophia Antipolis, Nice France), organised by the bITa Center. The conferences are highly interactive and encourage participation through exercises and case studies. These activities allow delegates to practice and to consolidate the concepts that will be discussed during the lectured sessions of the programmes. Pre-conference workshops serve as an introduction to the two-and-a-half day conference. (www.bit-europe.com)

bITa monitor

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bITa monitor covers IT Alignment and Business IT Alignment, with particular emphasis on the scope and structure of relevant frameworks and the consistencies and inconsistencies of the frameworks within them.

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Correspondents

To bring you the best in this field, we have made a strong commitment to building a network of pros in Europe, the U.S. or elsewhere, covering all relevant domains and frameworks. This network of highly competent professionals will be focussed on gathering monthly data on implementation and change. In some countries we are looking for correspondents. So we encourage experts, consultants and other qualified persons to become one of our correspondents regarding a particular domain or framework. Please e-mail to hvb@bita-center.com.

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Who's running your business ?

By Aidan Lawes

Today's modern world requires enterprises to cope with rapid and continuous change, in order to satisfy the ever-increasing demands of their customers. At the same time, they are faced with a more challenging environment within which they operate – whether from globalisation, rapidly changing demographic factors, the pressure to deliver shareholder value or to meet ever more stringent regulatory controls. While this impacts the whole of the enterprise, nowhere are the pressures more visible than in IT.

For most enterprises, IT is at the very heart of everything they do – in some cases IT is the business. In the Internet age, every little failing of a technology-enabled system is immediately visible to the customer – and potentially comes straight off the bottom line. Strong anecdotal evidence, supported by some empirical findings, indicates that 80% of customers using a web-site will walk away – never to return – if they are dissatisfied with the site's functionality, usability, security, availability or performance. And you'll never know who they are or why they went!

Over the years, IT has a poor record of delivering what's required. Solutions are frequently late, over budget or simply don't match the expectations of the business. This has increasingly led to enterprises looking for alternatives – including outsourcing. But while this may be the right solution, if the decision isn't made for the right reasons, it is unlikely that the enterprise will reap the benefits it is seeking. Handing a problem to someone else is rarely successful. Why should they be any more successful than you were?

IT organisations need to rethink the way they approach the delivery of IT services. Even if we aren't talking high-tech Internet solutions, people need to understand in business terms the role that technology plays and thus the impact of any deficiency or failure of that technology.

The functionality and usability of any solution is primarily the responsibility of the development teams. And most organisations pay a great deal of attention to managing this aspect of an investment program – Gartner quotes figures of

80% of the effort (time, resources, etc).

Ultimately, it doesn't matter if you've developed the slickest business application in the world. If it isn't accessible when and where it's needed and performing to the level required, then it's worthless. The reality is that most of the cost of any IT investment is incurred during the "live running" phase (Gartner again suggests 80%) – and of course the real killer is that 100% of any value provided to the enterprise comes at this stage.

Many IT organisations are failing to deliver the business value sought by the enterprise simply because they don't approach the operational arena with the right mind-set. Frequently the emphasis is inward looking – on managing the technology – rather than business focused – on providing service. This managing of service provision is what we refer to when we talk about Service Management.

In reality, enterprises are engaged in delivering end-to-end services, some components of which happen to be technology-enabled. Both business and IT management need to understand much better what they each need to contribute in order to ensure that the service to the customer is delivered efficiently and effectively.

Whatever service is being delivered, there are some fundamental facts that have to be recognised and dealt with: the consumers of the service will have expectations of what they are to receive; resources will be needed to meet the expectations; we need to know what and where those resources are, who uses them and how they are inter-related;

they will need to be managed to meet fluctuating demands; nothing will remain the same, changes will be required; no matter how hard we try, something will (probably) go wrong.

What we need is a holistic solution addressing the complete lifecycle and takes into account people, process and technology. We need the right (for our enterprise) processes, executed by properly skilled and knowledgeable staff, supported by the appropriate tools to ensure that we can deliver exactly what the enterprise requires within the constraints of what it can afford. This means that enterprises must learn to focus on value not just on cost. The most expensive solution can be deemed acceptable as long as the value returned outweighs the cost of providing it, while conversely a relatively cheap solution can result in a net loss.

Bringing these concepts into the IT world merely highlights the fact that IT Service Management isn't really an optional extra – it is fundamental to delivering successful, quality IT-enabled solutions.

Let's take some examples:
Meaningful service level agreements (SLAs) lay out unequivocally the service targets that are to be achieved – in business terms not techno-babble. The enterprise performs business activities such as selling insurance, printing and despatching invoices or paying the workforce. If the IT service supporting any of these activities isn't available for any reason, the people trying to use it don't care whether the network has failed, the server has crashed or the application is faulty. They just know that they can't do their job and that it impacts the enterprise in some measurable financial manner – lost sales opportunities, delays in receiving revenue or a disgruntled workforce.

When things go wrong, incident management activities enable us to respond appropriately to restore service. But having a true proactive problem management function that analyses trends and seeks out root causes of potential or actual failures and prevents them from occurring or recurring returns a direct benefit to the business through reduced outages.

There is an old adage that the only constant is change. A strong and effective change management function ensures that the right changes are implemented in the right way at the right time. No more vicious circle of poor changes causing problems leading to more changes, etc. And the business pay-off? Perhaps it's bringing a new service/product to market ahead of the competition with a commensurate financial advantage.

Imagine a new service is planned. Early involvement of the capacity management function means resource shortfalls are identified well in advance, investments can be planned and incorporated into budget cycles and favourable terms negotiated. When needed, the right resources are there and ready.

These are just some examples. In reality, the Service Management processes are totally integrated – feeding off each other, supporting each other and all contributing to ongoing service improvement plans.

Many IT organisations will claim that they have such processes and mechanisms in place, but in reality most of them don't – their solutions are frequently disjointed, inconsistent and/or incomplete. Often the focus is still technology-biased – silo structures based upon technologies (server, network, desktop, etc) – rather than customer and service-focused.

Making the necessary changes in order to improve matters isn't a trivial undertaking. Typically, you will be trying to engender a culture change, shaking people out of their comfort zones and



Aidan Lawes, Chief Executive Officer, itSMF UK & International

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Prior to taking up this full-time role in 1999, Aidan was a volunteer member of the management board of itSMF with particular focus on the organisation of the annual conference and exhibition. He has been involved with the itSMF movement from its earliest days.

He has a quarter century of experience in the IT industry, with over 19 years spent working for ICL as a consultant/trainer. In this role, he worked in many countries worldwide, in a wide range of industry segments. Aidan has been actively involved in Service Management matters for the past 13 years, was one of the earliest holders of the ISEB Managers Certificate in IT Service Management and was responsible for ICL Training becoming an accredited training organisation. As a consultant, he worked on a number of internal ICL service management change programmes as well as on major customer implementations.

He has contributed to many of the publications in ITIL and other ITSM publications, is one of the authors of the BSI standard (BS15000) and chairs the committee developing the formal certification scheme for this. He is a regular speaker at a variety of fora worldwide and author of articles for a range of publications. He can be reached at service@itsmf.com.

asking them to modify their behaviour. Organisational change of this kind is challenging and requires commitment and investment – and not just from the IT people. The business side also needs to develop its understanding of what's required and perhaps modify their behaviour – effective communication is one of the keys to success and that requires both parties to be working together

If the prospect of further investment in the IT sphere causes raised eyebrows in the enterprise, remember to focus on value. Or perhaps the enterprise should ask itself, what is the cost of not doing

it properly? Quantify the cost of those lost orders, the extra overtime, the rework, the time spent handling complaints, the waste of staff time as they do things they're neither trained nor paid to do.

In recent years, many organisations have successfully implemented effective service management solutions and are reporting significant returns on the investment – not just by reducing costs, but by delivering significantly higher value. Most of these organisations have based their solutions on the advice and guidance contained within ITIL (produ-

ced by the UK Office of Government Commerce [OGC], but contributed to by many individuals from enterprises all around the world) and now embodied in the British Standard BS15000.

Following the philosophy behind these publications helps enterprises to realign their focus, to ensure that everyone within the enterprise is working towards the common goal and that the IT solutions that are developed truly do meet the business requirements.

Register now!

bITa - Europe Conference 2003

10-14 March 2003

Sophia Antipolis, Nice, France



bITa
Europe 2003

The Business IT Alignment Conference highlights the relationships among the most important domains, frameworks & models

IT Service Management

ITIL ITService CMM MOF

Project Management

Prince2 PMBOK/PMI DSDM

Business Processes/Applications

CMMI ASL ISPL bITa

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Effective IT Management

low coupling between and high cohesion within IT domains

Jolanda Meijers and Mark van der Velden

With the growing number of models and frameworks that cover various domains of IT management the coherence between those domains seems to disappear. There are numerous models that focus on the tight relationship between processes within a certain domain. There are also models that cover several domains, but they are often too high level to have significant added value. Effective IT Service Management can only be achieved when both the cohesion of processes within a domain and the coupling of processes across domains are understood. An effective service manager does not need to be an expert in service management processes. Instead, an effective service manager is able to drive the IT organization from a business perspective. In order to do so, a rigorous understanding of the coherence between the various domains is essential.

The dependency of business processes on IT is still increasing. A lot of companies are following an (e-)business strategy that will lead to selective business process outsourcing within a couple of years. As a result the number of technologies being used and the interrelationships between business departments and IT departments become much more complex. Worse, IT systems will become even stronger mixes of homemade and third party products than they are today. The increasing amount of theory and knowledge about IT (Service) Management has led to numerous models and frameworks.

Will these models and frameworks help to understand the complexity of tomorrow's business? Most models focus on a particular aspect of IT service management. Models that cover all aspects are often too high level to have significant added value. It seems that with the increasing knowledge about specific domains, the coupling between the domains does not get the attention it deserves. In other words, there are numerous detailed models that describe the cohesion between processes within

a domain, but the coupling between domains is either ignored or remains vague.

This article first summarizes some important IT domains and their most relevant characteristics. It then provides an overview of the consequences of those differences, followed by a discussion about the relationships between the domains. Finally, an overview of widely used models and frameworks is given. This provides a first step in understanding the interrelationships between the domains and which models to apply in specific situations.

Service Management is often divided into the domains of functional management, technical management and application management (Figure 1). These domains together with the domain of Development Management are shortly described in the following paragraphs.

Service Management

Functional management

Functional management is responsible for the requirements and continuity of information systems from a business

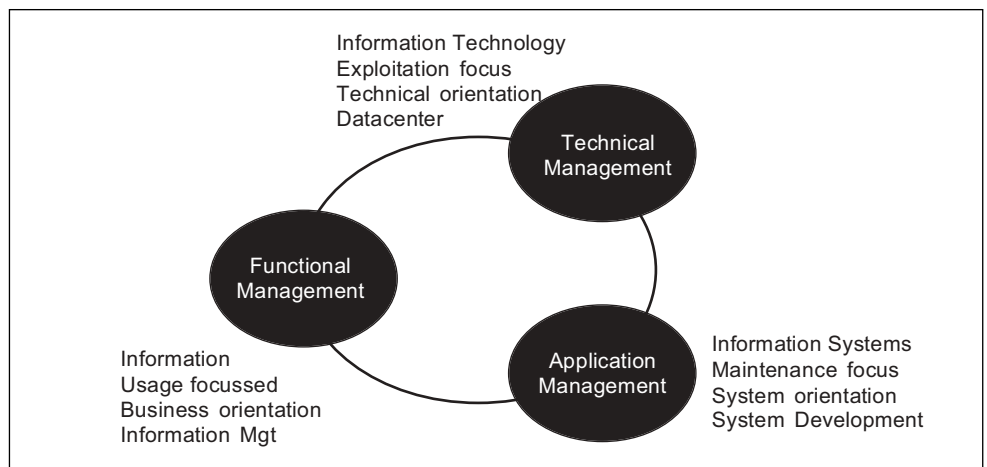


Figure 1: Service Management Domains

perspective. Functional management is often positioned as the 'owner' of information systems, and as 'customer' of both technical and application management. It is the responsibility of functional management to make sure that applications support business processes as smoothly as possible. As such, functional managers have an important role in application selection, maintenance and development, and represent the client side of service level management.

Technical management

Technical management is responsible for the maintenance and availability of the technical infrastructure (network, servers, operating systems, telephone switching systems, etcetera). Technical management also covers the installation, availability and continuity of generic applications such as e-mail and word processing, as well as development tools and monitoring tools.

Application management

The maintenance of information systems is the responsibility of application management. As such, application management has to solve defects and handle change requests in such a way that the availability, continuity and inte-

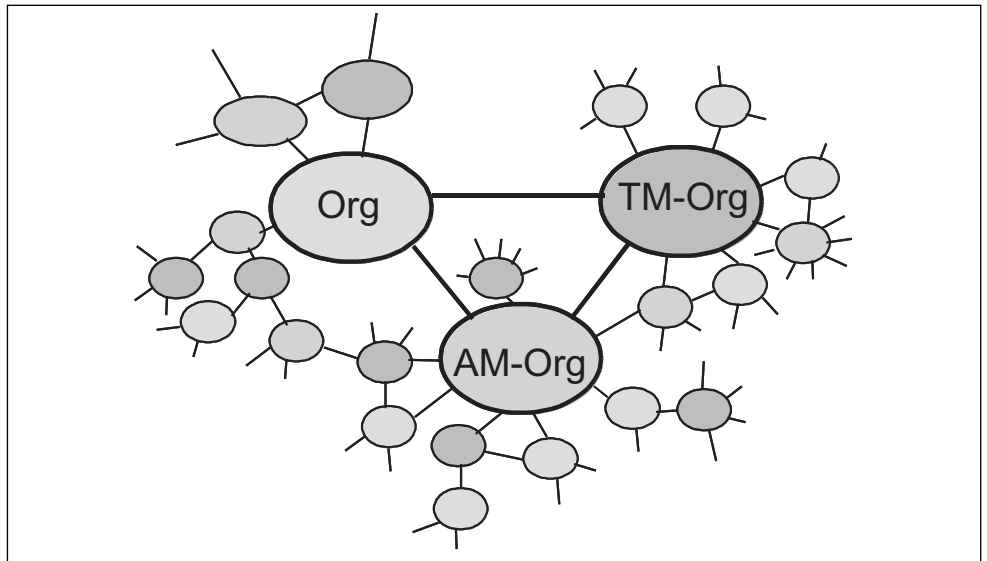


Figure 2: Complex relationships between organizational units

grity of the system (including data sets) is not compromised during the full life-cycle of the system.

Development Management

Application development is the domain of Development Management. It covers the processes Business Modeling, Requirements Development, Systems Architecture & Design, Build & Assembly, Verification & Validation and Deployment. This is the area of software developers creating, maintaining and

enhancing systems such as payroll and order entry applications. Customization of Off-The-Shelf applications (such as software for Enterprise Resource Planning) is also part of the development management domain.

Existing models and frameworks often focus on a particular domain. Examples are ITIL and IPW that focus on technical management, ASL for application management, FBM that describes functional management processes and DSDM for software development. These separate models exist because of the differences in 'objects' being managed and the necessity of having tight interrelationships between processes within that domain. In practice the domains are often allocated to different organizational units.

Separation of concerns

As explained above the focus area of functional management is 'functional requirements'; the requirements are derived from a business perspective on



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Studied educational sciences (pedagogic) at the Dutch Rijks Universiteit Leiden and followed successfully the study Management Consultant at the Vrije Universiteit Amsterdam. From 1988 until 1995 Jolanda worked as policy maker, projectmanager and line manager for Koninklijke PTT Nederland. She joined Quint Wellington Redwood in 1995 as senior consultant and was responsible for projects on organizational change, process improvement, Smart Buyer and several projects in the area of Human Resource Management. She can be reached at j.meijers@quintgroup.com.

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IT. Because investments in IT are often justified by Return of Investments in the business, total cost of ownership is also important in this domain.

Application management deals with the maintainability and the quality of the application.

Technical management deals with the availability, continuity and performance of the services being provided.

Development management is focussed on continuous innovation of applications. Development managers are concerned about the technical lifecycle of their products and how new technologies can help design new business processes.

Systems managers talk about networks and operating systems, while software engineers talk about programming languages and database systems.

N-to-M relationships

A lot of organizations have chosen not to handle all domains by themselves. Smaller companies often have off-the-shelf software and therefore do not manage applications themselves. A systems manager often deals with products from several suppliers and maintains

them for more than one client organization because of economy of scale. Application managers (for example the supplier of an Enterprise Resource Planning solution) deliver packages for many different platforms, to different organizations with sometimes multiple system management departments. Functional managers have to deal with multiple suppliers for the various applications in use (Figure 2).

Location

Within most organizations the various domains are allocated to different organizational units. Examples include the allocation of functional management to a department Information Management and the allocation of technical management to a department Systems Management. It can be argued that domains are allocated to different departments because of the other differences mentioned in this paragraph.

Diversity provides stability

Organizations constantly change. Think of outsourcing, centralization or decentralization and mergers. Having allocated the various domains to different units provides the benefit that most

often only one of these domains is affected by an organizational change. In this way the diversity limits the scope (and therefore the impact) of the change.

Separation of responsibilities

As stated above, functional management operates as 'client', while both technical management and systems management operate as 'supplier'. This separation stimulates a clear discussion between a business view and a technical view on IT. Without this separation technical managers often state what the business needs, because of their superior knowledge of existing technical possibilities and limitations.

Coherence between domains

Having emphasized the differences between the domains it is now time to emphasize their coherence. In practice there are all kinds of technical, organizational and process relationships.

The technical relationships are probably the most obvious: the components being the primary object of concern of the various domains are dependent of each other; an application runs on a certain piece of hardware. Technical relationships are beyond the scope of this article, and are therefore not explored in more detail.

The various domains also have a common goal: supporting the business in the most optimal way. As such, they operate in the same environment which makes it clear that their processes are (and should be) interrelated. Hence, employees from the departments involved should work together. Finding a solution for a problem often needs cooperation between application engineers and technical engineers.



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Studied Computer Science at Twente University, The Netherlands. During his first years as a software developer for ICT Automation he became interested in the area of Software Process Improvement. He was responsible for software process improvement at the DLO-Staring Centre (a large Dutch research organization), and later within Baan Technology Research. After being manager of the department Development Services of Baan Common Technologies, he joined Quint Wellington Redwood in 2001 where he became senior consultant in the area of development management. He was member of the first board of the Dutch Software Process Improvement Foundation (SPIDER). He can be reached at m.van.der.velden@quintgroup.com

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Process Relationships

Development Management and Service Management

System development organizations create new applications. They often have a strong focus on innovation, especially from a technical perspective (think of methods like Object Orientation and technology innovations like Java and .Net).

The work within this domain is almost entirely organized into projects staffed with employees from various departments. Projects vary in size, but can be quite large, in which case the project result can have a significant impact on the organization.

It is still not very common to design and implement new applications with maintenance in mind ('design for serviceability')¹⁾ resulting in numerous problems when an application goes into production. In order to prevent such problems it would be helpful if both development engineers and service engineers work together from the start of a project. The

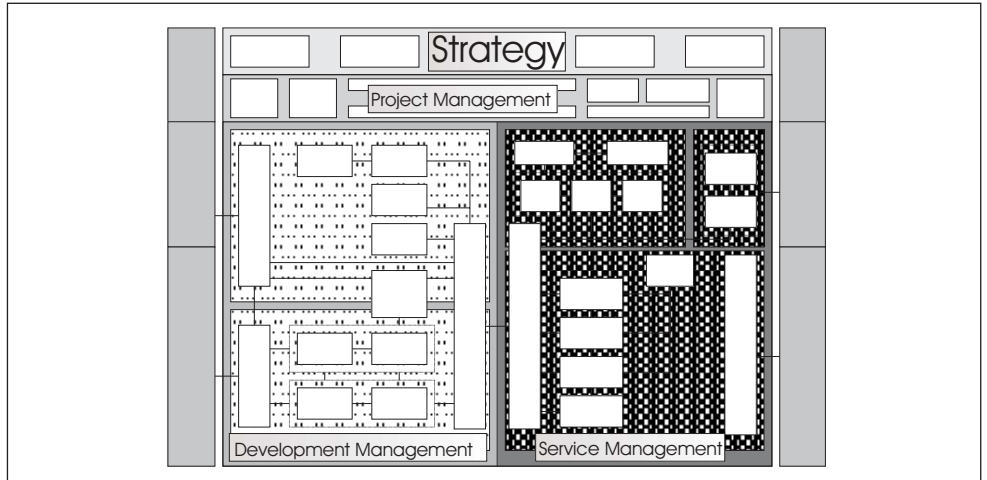


Figure 3: IPW(tm) Development Mgt & Service Mgt

service engineers can provide serviceability requirements and can start designing the service management organization and infrastructure. The software engineers can provide insight into the impact of technological choices on the infrastructure.

Unfortunately, organizations that have experimented with such a model often find that it is not very effective. Software engineers complain that servi-

ce engineers are not interested during project start-up meetings. Service engineers complain that the topics that are of relevance are only discussed when it is too late. It is clear that both parties do not understand well enough what the topics are that they should talk about together and what to talk about alone. Having a clear understanding of the cohesion between processes within a domain and the coupling of processes between the domains is essential to stimulate the right conversation about the right topics (IPW™-DM-SM covers this issue, Figure 3).

It is interesting to see that both application management (maintenance) and development management (new applications) are often allocated to the same organizational unit. Having these two areas of concern in one unit provides well-known resource allocation problems. However, separating them (which can be done by creating a separate 'support' organization) results in huge configuration management problems, for instance when the support department makes bug-fixes that should also appear

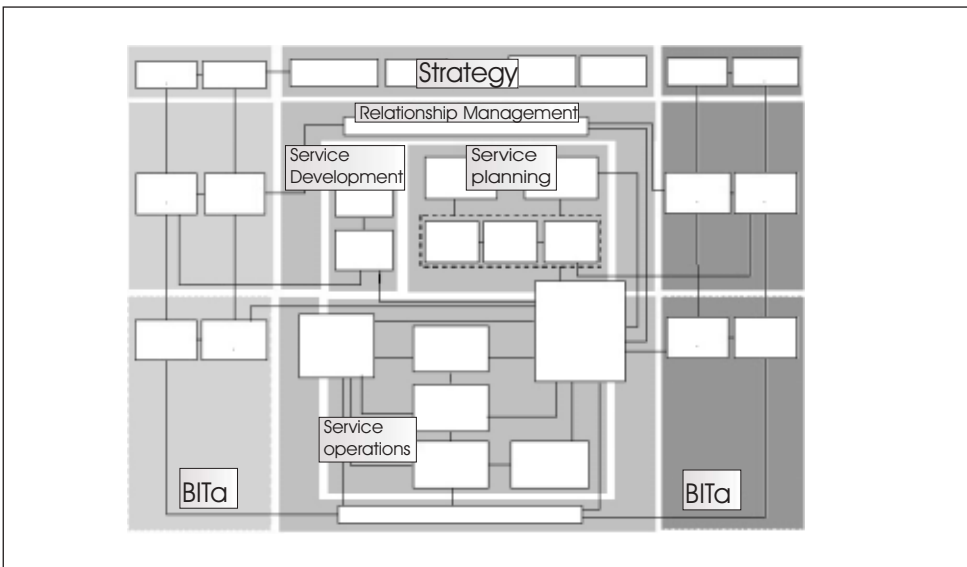


Figure 4: IPW(tm) bITa

within new major releases created by the development department.

Technical, application and functional management

Although the service management domains are separate areas of concern, and therefore often allocated to different organizational units, there are several topics that require intensive interaction. Some examples:

- Service call-handling;
- Handling change requests (requirements analysis, impact analysis, testing and deployment);
- Working together in order to achieve service levels as documented in a Service Level Agreement;
- IT Strategy.

The IPW™-bITa model covers the interrelationships between the processes within and across the domains (Figure 4). There is an important difference between Figure 1 and Figure 4. In Figure 1 the domains are drawn as black boxes, showing that there are three service management domains and that there is some kind of interface between them. The figure is useless when it comes to process implementation or optimization because the interfaces are not made explicit. In Figure 4 however, all relevant processes are drawn, together with their most important relationships. The domains follow naturally from the clustering of interface relationships between processes. The information that flows between processes across domains is described in the same way as those between processes within a domain. The difference is that across domains the number of process interfaces is less than within a domain. For the processes that are relevant in the areas of development

Dependencies Proces	Customer-Supplier (One-Way)	Working together (Two-Way)
Daily operation	Process descriptions Procedures/Work instructions Tools	
Service call handling	Process descriptions Procedures/Work instructions Tools	Ad hoc meetings
Handling change requests	Process descriptions Procedures/Work instructions Tools	Structural meetings
Requirements Management (for large projects)	Process descriptions Tools	Project team
Overall coordination/Service Level Management		Service team
Strategic Business Alignment		Service team

Table 1: Processes and types of dependencies

management and service management Figure 3 has the same structure as Figure 4.

Organizational relationships & organizing cooperation

Cooperation between employees within the same domain is already difficult to achieve, having employees from different domains working together is even harder. An example is already given above with companies experimenting with cooperation between development engineers and service engineers within large software developing projects. Apart from the cultural differences, it is important to understand what working methods should be chosen in what situations in order to achieve the needed level of cooperation.

The first factor that should be taken into

account is the complexity of the process relationships. Service Call Handling is less complex than Service Level Management. Another factor to understand is whether involved parties have a customer-supplier relationship (basically a one-way dependency) or are mutual dependent on each other (a two-way dependency).

For less complex one-way relationships process descriptions are necessary, but not enough. Procedures and work instructions are very helpful. Tools can aid not only in registration but also in handling the workflow between such processes (like assigning a call to a particular employee).

Ad hoc meetings might be necessary to evaluate process execution and might aid in finding ways to improve the effi-

Domain	Model	Comment
Focus on the coherence between domains		
	Integraal IPW	A management model covering Business, IT and Supplier relationships at the strategic, tactical and operational level.
	IPW Stadia Model	Overview of all strategic, tactical and operational processes within an IT organization. ITIL: based, and as such often (mis-) perceived as a model for technical management.
	IPW-DM-SM	Model that explicitly addresses the coupling between development management processes and service management processes. Based on ITIL, CMM(I) and PRINCE2.
	BII (Beheer van Interne Informatievoorziening) Dutch	High level overview of the relationships between business processes, information management and service management.
	CobiT (Control Objectives for information and related technologies)	Covers IT management related to business processes. Provides audit guidelines and an implementation toolkit.
	IMM (het IT Management Model) Dutch	Complex model covering all aspects of information management.
	ISM (Integrated Service Management model)	Defines generic processes that cover all aspects of IT service management.
	IIM2 (Informatie Infrastructuur Management) Dutch	Process and component based method for development and production and exploitation of information infrastructures.
	EBS (Een Beheer Stappenplan) Dutch	This model distinguishes application management, technical management and functional management, but is focussed on the differences.
Focus on specific domains		
<i>Functional Management</i>	FBM (Functioneel Beheer Model) Dutch	Method and terminology focussed on functional management.
<i>Application Management</i>	ASL (Application Services Library)	Framework and best practices for application management.
	ITPM (IT process model Light)	This model distinguishes application management and technical management, but is focussed on the differences.
<i>Technical Management</i>	ITIL (IT Infrastructure Library)	Model focussed on managing IT Infrastructures.
	KPMG Groeifasen model	Model focussed on technical management.
	HP IT Service Management Reference model	Although a process for Business IT Alignment is added, the model is focussed on managing IT Infrastructures.
	ITPM (IT process model Light)	This model distinguishes application management and technical management, but is focussed on the differences.
	KWINTES	Focussed solely on Service Level Management.
	EMF (Enterprise Management Framework)	Focussed on technical management.
<i>Application Development</i>	DSDM (Dynamic Systems Development Method)	Method covering all aspects of application development. Based on the concept of Rapid Application Development.
	RUP (Rationals Unified Process)	Method covering all aspects of application development. Based on the concept of incremental delivery.
Organizational Maturity Models		
	INK management-model Dutch	Maturity model covering all elements of an organization at a very high level.
	Software CMM	This model identifies 5 maturity levels that identify how well an organization is capable of doing application development.
	CMMi (Capability Maturity Model Integrated)	General organization maturity model framework. Currently focused on software and systems development.
	IT Service CMM	Based on the maturity model concept of Software CMM this model rates IT service organizations.

Table 2 : Selection of various models and frameworks and their usage area

ciency and effectiveness. If the situation becomes more complex, structural meetings might be necessary. Handling change requests might be considered such a situation.

Model overview

In Table 2, a selection of existing models and frameworks is presented as a guidance to select the right model for the right problem area. Both (Bon, 2000) and (Bon, 2002) provide extensive material for further reading.

Conclusion

In the world of software engineering it is common practice to evaluate an application design using the concepts of coupling, cohesion and separation of concern. Applications are designed in such a way that components covering the same area of concern are grouped together (as an example: GUI components are separated from business logic). The resulting design should comply with what is called the principle of 'low coupling, high cohesion': there should be tight relationships between elements within an area of concern, and less tight relationships between elements across areas of concern. If that is not achieved, the areas of concern are probably not well chosen. Modern information systems consist of numerous (third party) components glued together (a trend accelerated by web-applications and component based development). Together with the pressure to shorten the time-to-market of new applications, this forces departments to work together much closer than before. With too much emphasis on the processes within a domain there is a risk of frustration and inefficiency because the process interfaces across domains are

not well designed. Using the concept of low coupling and high cohesion for process design will help to create effective processes with the right level of detail across domains to make working together efficient and meaningful. Finally, understanding the domains and their relationships will aid in selecting the right model in the right situation.

¹⁾ Compare this with companies producing airplanes. They include "serviceability" into their product specifications right from the beginning. Having short service times between flights is essential for being financially successful

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Maturity Model: Blueprints for e-Volution

...applying frameworks and models to the change process

By Jan Duffy

*"...strategy formation is concerned with the realization of change. In a world of changing technologies, transforming economies, shifting demographics, reforming governments, fluctuating consumer preferences, and dynamic competition, making strategy means making organizations change. In such a turbulent environment, an organization's mission might remain unaltered for a long period of time, but its objectives and behavior will repeatedly need to change. For strategists, it is not an issue of whether organizations must change, but of where, how and in what direction they must change."*¹⁾

As deWit and Meyer suggest, the business environment continues to undergo an evolution from a simple to a more complex form. But, unlike many other evolutionary events, the changes have been (and continue to be) at times rapid, even abrupt. Deciding when to adopt a new business model and what it might look like; choosing the most appropriate technologies and deciding when and how to implement them; and last but not least deciding what organizational changes are needed to support other changes are very difficult decisions.

As Figure 1 suggests, the strategic lifecycle is fundamental to business, it is this that drives much of the change that we are required to manage. The decision-making that supports the formulation of associated strategies and tactics involves all layers and all functions of an enterprise, as does the development of plans and implementation needed to fulfill the objectives that are established. To maximize the potential for the change to produce positive results, one needs

to appreciate the transformational stages, key interdependencies and interrelationships and the impact they could have independently or in combination on eventual outcomes. This requires a thorough understanding of all of the factors—human, technological, process, organizational and financial—that are involved in the change cycle. It is also important to quickly recognize where you are, what the next stage might look like, how big the gap is between current and next and also between current and desired. This last point is critical, too often we assume that the next stage is the ultimate, i.e., desired stage and most times this is not true, there are multiple stages involved in the change process.

Frameworks and Models

Whether change is deliberate or emergent its implementation is taxing and often disruptive. It doesn't happen in the same way every time and it is unlikely (perhaps even undesirable) that all of the components of a change process will occur simultaneously. Immaturity in

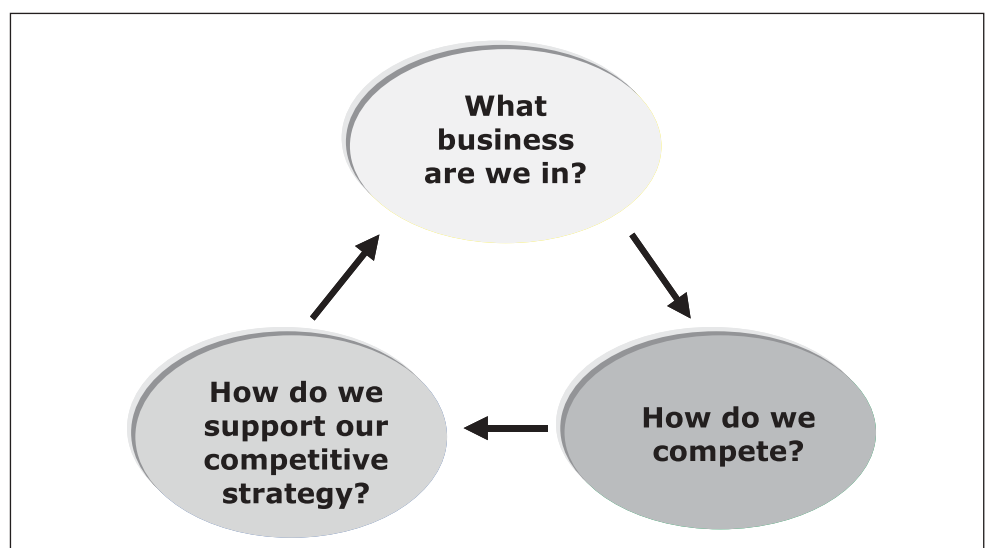


Figure 1: The Lifecycle of Strategy

one area can affect success in another area (even though the latter is potentially at a higher maturity level.) In order to understand fully the cause and effect of change, an organization must be able to view it from a holistic perspective.

To provide some logic and a framework to support this complex task of continuous adaptation, IDC has developed a series of Self Assessment Maturity Models (SAMM). Each model is focused on the change associated with achieving excellence in managing key strategic business issues—things that keep executives awake at night. The first three models address the following issues:

- eBusiness Operations
- Business IT Alignment
- IT Value, Metrics and Measurement

The models were developed based on the premise that a true partnership between IT and non-IT executives is fundamental to success in the 21st century organization. They recognize that information technology and business objectives are interdependent, and therefore, separation of “best known practice” into IT and non-IT categories would generally be counter-productive. Each model is designed to reflect the characteristics of a business as it moves through four stages of implementing or introducing significant change associated with a specific key business issue.

As shown in Figure 2, SAMM is structured around a series of Key Success Drivers, Key Performance Indicators, and Contributing Factors. Each Contributing Factor is designed to address a specific strategic question to be answered by the organization in a self-assessment process. This result is then validated through a rigorous process of questioning using a

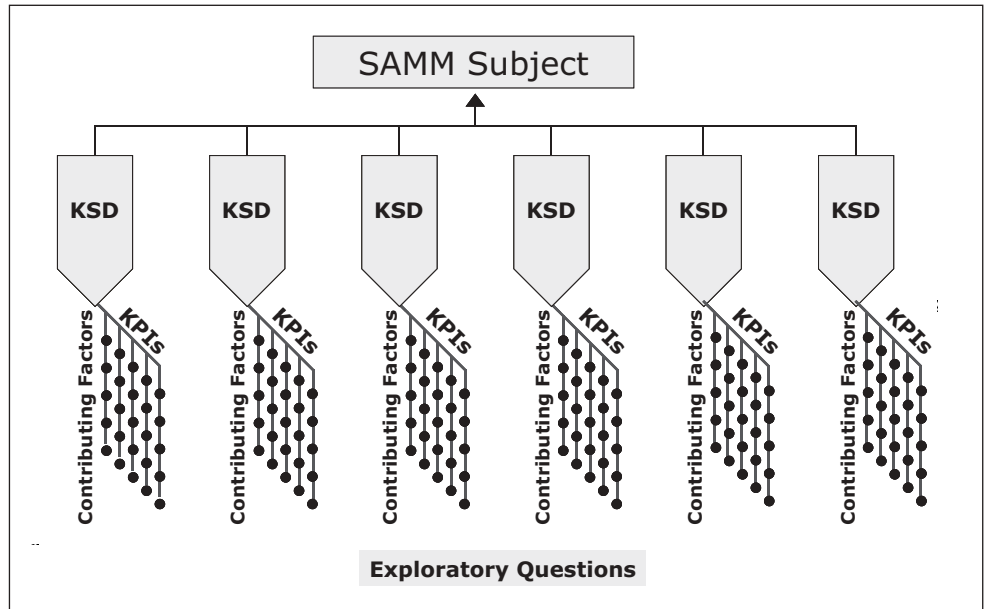


Figure 2: SAMM Structure

web-based tool. The ultimate result is plotted to a series of radar charts and matrix tables that are subsequently used as the foundation for the preparation of an action plan designed to move the organization through the change process in a structured and logical way.

Key Success Drivers

In every organization there are combinations of people, processes and technologies that represent the key contributors to value. Achieving positive or high yield results from them is fundamental to success. For the purposes of

clarity and to facilitate examination across multiple models, IDC’s SAMM organizes Key Success Drivers (KSDs) into six standard categories considered to be critical contributors to the success of any organization. These are shown in Figure 3 and their significance is described in the following paragraphs.

The six KSDs are interdependent, but each one has its own requirements and potential short and long term implications. Together, they represent a holistic view of the factors most critical to success. Individually, they can mean the

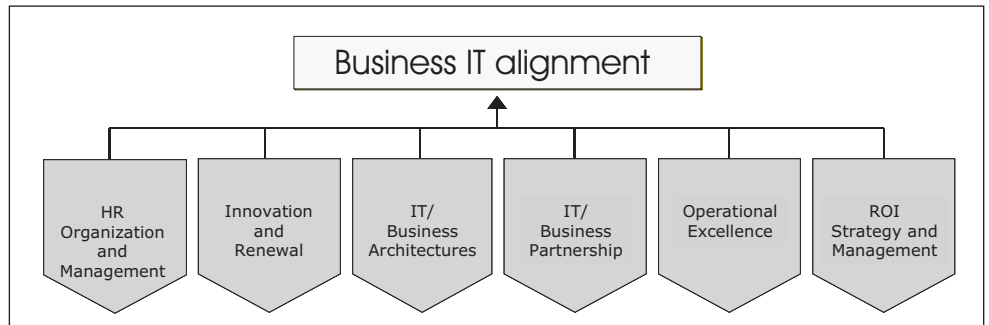


Figure 3: Key Success Driver Categories

success or failure of an organization's efforts to execute its business strategies. To a significant extent, successful execution is bound by the availability of resources and capabilities in each of the categories. These limitations can constrain an organization's ability to move forward.

HR Organization and Management

In [an] environment in which innovation, responsiveness, flexibility, and learning [are] vital sources of competitive advantage, a management context driven by compliance, control, contract, and constraint [is] more a liability than an asset ²⁾. In times of turbulence, the key differentiation in top performing companies is often their ability to attract, retain and manage an excellent workforce. An enterprise-wide (perhaps even inter-enterprise) view of HR management and practices provides an excellent insight into overall human resource capabilities, potential and of course limitations.

For example, an organization that is striving towards Business IT Alignment must ensure that commitment to the concept is strong enough to allow the political and associated challenges to be

overcome. A few of the key questions that must be addressed include:

- Do the CIO and other executives have the authority needed and are the policies in place to ensure that all of their resources collaborate (work together without competition) to achieve the organization's strategic goals?
- Do the measurement systems focus on strategic processes and do they recognize the pace of change and the tight linkage of IT and business?
- Do decision making processes reflect the combined need for speed and access to the "best brains" regardless of whether they reside in IT or non-IT units?

The ability for an organization to compare itself with the characteristics of various levels of maturity increases the potential for recognizing strengths and weaknesses. As Figure 4 demonstrates, the matrix nature of the framework supports rapid recognition of the cause and effect across multiple KSDs, KPIs, and Contributing Factors. In the longer term, because the Key Success Drivers are consistent across all models, the matrix can be used to review cause and effect of various elements across mul-

iple models.

The results depicted in Figure 4 suggest that this organization, although enthusiastic about the eBusiness initiative and the potential need for new business practices, is paying scant attention to the associated organizational and human issues associated. If the matrix were taken one step further and the results of the HR Management and Organization KSD were considered together with the results of the Operational Excellence KSD, it may well indicate that the low level of maturity reached in Employee Development has a significant bearing on the ability of the organization to achieve an acceptable level of productivity.

Innovation and Renewal Strategy

The elapsed time between an impending shift in any one of the many external market drivers and the time to respond is very short. Businesses that cannot adapt quickly will be displaced without warning by more perceptive and responsive organizations. New, often previously unheard of, competitors can and in many cases will emerge to offer equal or better value to customers. New ways of delivering products are no longer unusual, and revolutionary new business models (most often dependent on technology) set new standards and success metrics in established (or brand new) markets.

The duality of product development and support drives a need for the development and application of new ideas to (i) products and services intended for external consumption and (ii) to business operations. Oftentimes, the entire focus of innovation and renewal is on external products. It is important to



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Strategic Business Issue: eBusiness Operations						
			Maturity Levels			
KSD	KPIs	Contributing Factors	1	2	3	4
HR management & organisation	Attracting/ Retaining Right People	•Competency Definition •Culture and Empowerment •Employee Development •Retention •Job Satisfaction				•
				•		
				•		
				•		
				•		
	Environment	•Executive Influence on eBusiness •Perspective and Wisdom •Values •Commitment •Measurement	•			
				•		
			•			
				•		
				•		
	Executive Leadership	•Focus •Enthusiasm •Ability •Judgment •Balance				•
				•		•
				•		
				•		
				•		
	HR Policies and Practices	•Recruiting •Assimilation •HR Admin and Systems •Motivation •Metrics				•
				•		
				•		
			•		•	
Organizational Effectiveness	•Agility, flexibility, adaptability •Capabilities •Management systems •Decision processes •Policies and standards		•			
				•		
				•		
			•			
				•		

Figure 4: Matrix Summary of Maturity Assessment Process

take stock on a regular basis of how innovative the organization is and what processes it has in place to ensure that its knowledge and capabilities remain evergreen.

Business and Information Technology Architectures

An organization is a system that operates within a larger system, the evolving economy or marketplace. Each component of the overall system is inter-related to other components in some way and each has the potential to impact all others.

Business Architecture represents all entities involved in an organization's extended business environment (e.g., customers, channels, suppliers, competitors, markets, etc.), how they inter-relate and which business processes support them. The IT Architecture encompasses

the information and information resource requirements, applications that support work activities, and technologies (hardware, networks, software) needed to support the Business Architecture.

Business/IT Partnership

In recent years, the structure of an organization has moved away from the simple hierarchical, vertically integrated model towards something that is closer to a web in its form. Power is more decentralized and the relationships among organizational entities are often poorly defined. Less dictatorial and more practical, these new organizational structures depend extensively on forming partnerships (internal and external) that can satisfy stakeholder needs.

IDC research has identified a dramatic change in the role of the IT organization across all industries, shifting from a

strict service and support function to a full strategic business partner within the organization³⁾. Technology is critical to business success and this co-dependency drives the need for the IT and non-IT executive to pursue a win/win relationship. This requires both parties to fully understand and commit to shared goals and objectives that go beyond the traditional, more parochial interests of individual business units.

Operational Excellence

It is difficult for an organization to adapt to ever-changing external forces and still maintain high productivity and excellent quality while focusing on reducing costs and increasing revenue.

Achieving operational excellence requires a high performance organization—one that recognizes the high value of learning, agility, partnerships and leadership and one that can respond to the demands of the marketplace in a reasonable timeframe while delivering superior value. Key processes must continually break new ground in terms of speed, quality and cost if they are to achieve this objective⁴⁾.

Moving business processes

to digital networks eliminates much of the transactional friction and resistance (e.g., delays, hand-offs, rework etc.) inherent in physical or manual processing. This presents a dramatic opportunity to reduce costs, decrease the elapsed time in every process and minimize errors—essentially, to change the way business is done.

However, this requires an organization to be centered, for everyone to be moving in a single direction and in today's world that direction is towards the customer.

ROI Strategy and Management

Conventional wisdom has dictated the use of the same corporate valuation metrics for many years. But, as the economy continues to evolve and is increasingly defined by intangibles, it is difficult to rely entirely on traditional financial tools to measure progress. There is no doubt that cash flow and liquidity is the financial lifeblood of any organization, providing the fuel for day-to-day operations. But, economic emphasis has changed. Growth in the commercial use of the Internet has effectively reduced the operational cost of many transactions to zero.

There is renewed pressure for the CIO to articulate the value that IT contributes to the "bottom line". Because IT is now business and business is now IT, it is almost impossible to pull the two apart either functionally or financially. Consequently, trying to isolate IT costs and benefits is very complex and requires the development of a new and innovative set of metrics and processes.

Key Performance Indicators (KPIs)

"You cannot measure what is not defined. You also cannot tell whether you have improved something if you have not measured its performance." Performance is represented by the achievement of progress towards the desired (improved) state. Because each step is a composite of many contributing factors, the result cannot be assessed by a single measure. Piecing together the many types and levels of information is similar to assembling a jigsaw puzzle, all of the pieces need to be "on the table", and then assembled in the correct pattern.

Key Performance Indicators focus on the unique attributes critical to success in

each Strategic Business Issue and "flesh out" the KSDs. It is expected that they will change over time, particularly as economic conditions change. Figure 5 identifies one of the five potential KPIs associated with each of the six KSDs of Business IT Alignment.

is a series of key questions that must be asked in order to determine an organization's level of maturity in achieving IT investment that is strongly linked to driving value. These questions are designed specifically to determine how an organization is positioned to achieve the

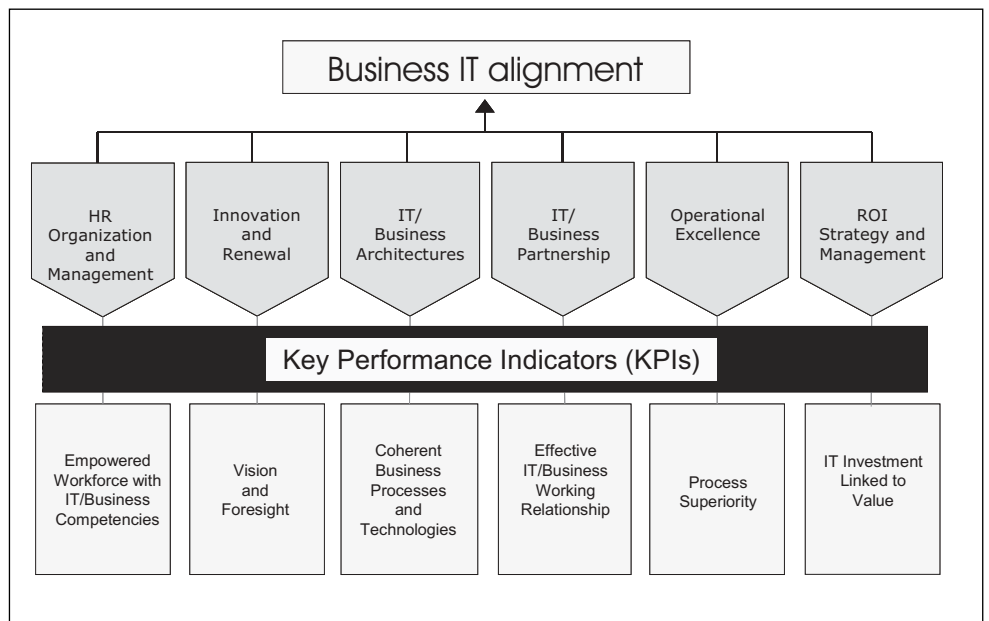


Figure 5: Key Performance Indicators

Contributing Factors

The four phases of development or growth suggested in the Maturity Models consider multiple contributing factors and therefore provide a useful point of reference against which an organization's progress can be gauged. To a trained eye, even partially completed pictures can tell a great deal about performance⁶⁾.

For each KPI there are five Contributing Factors. Each of these is designed to address a specific and critical question, thus providing one of many checks and balances in the assessment and analytical process. As shown in Figure 6, there

contributing factors identified by IDC.

Maturity Level Characteristics

In order to make progress in the journey to the desired fourth generation or "best known practice" an organization must undergo significant change. The results of IDC's SAMM provide a snapshot in time of the result(s) that can be expected at each significant stage along the way.

For example, if we assume that in today's business environment the successful organization is « e » positive—success will depend to a significant extent on the elimination of all visible lines between the management and use

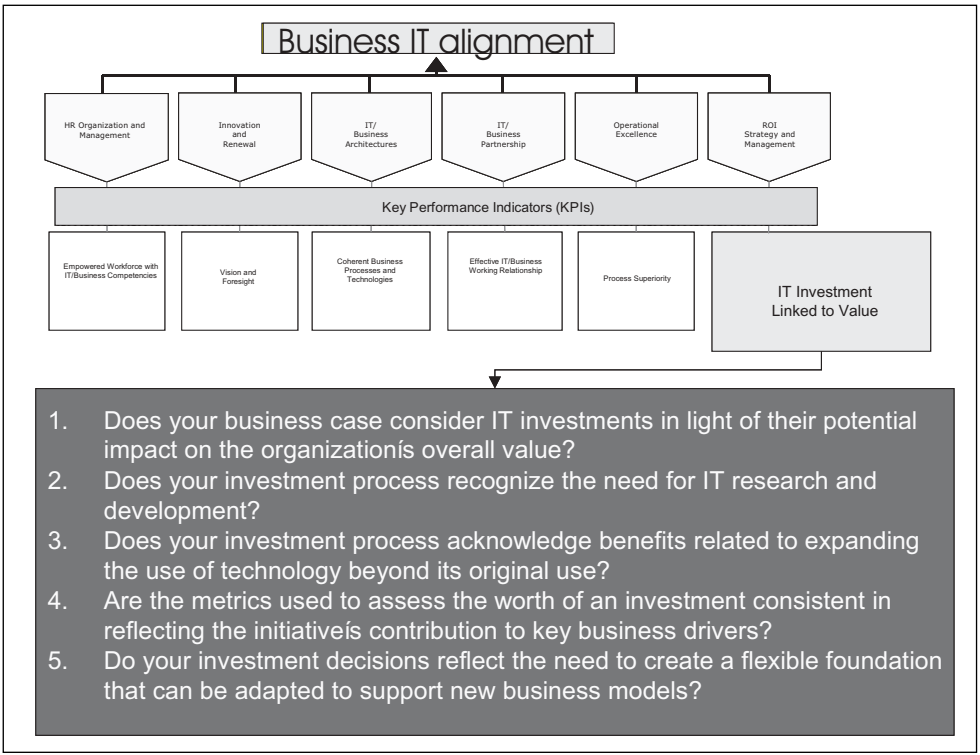


Figure 6: Key Questions

of technology and business process management and execution. For maximum effectiveness, the strategies, operations and performance measures of all business units (IT and non-IT) must therefore be aligned and linked with one another.

Achievement of Business IT Alignment is measured based on an organization's increased ability to succeed through conscious and deliberate integration of IT and non-IT people, processes and technologies. As shown in Figure 7, as an organization develops its Business IT Alignment capabilities it progresses along a continuum that has four levels of maturity or stages in the transformation:

Maturity Level 1

Uneasy Alliance

There is a fundamental disconnect be-

tween the technology executive and the rest of corporate management. IT responds to business demands with little input to how the technology can contribute to value. IT is viewed prima-

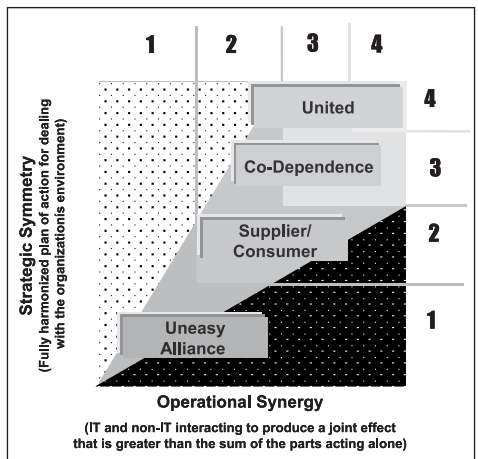


Figure 7: Business IT Alignment Maturity Level Characteristics

rily as operational –something to make the company more efficient. Business units have minimal interaction with IT and prefer to hold the IT organization accountable for the success and/or failure of any IT related project.

Maturity Level 2

Supplier/Consumer Relationship

IT is still not viewed as a strategic tool and IT executives are unlikely to be involved in developing corporate strategy. If IT has a strategic plan it is developed in response to the corporate strategy rather than in conjunction with it. IT is probably viewed as a cost center.

Maturity Level 3

Co-dependence / Grudging Respect

The business is dependent on IT and there are early signs of recognition that it is a strategic tool. CIOs have become much more knowledgeable about cross-functional business processes because of ERP, CRM, etc. The Internet and ebusiness have forced early IT/Business alignment. CEO's begin to recognize that IT is a competitive tool.

Maturity Level 4

United we succeed, divided we fail.

IT and business are inextricably entwined. Business executives have less time to prove they can deliver. Business cannot continue without IT and IT has little real value if it is not to support the corporate strategy. There is only a single strategy and it incorporates both IT and business. Regardless of the business model, IT and business move in lockstep. Because SAMM has multiple dimensions it is possible to view progress from many angles. The standard model of four generations enables an organization to consider its progress across all of the Key Success Drivers associated with a

particular compelling business issue, providing a rich insight into the cause and effect of the change process.

As the competitive and economic environment changes, the characteristics demonstrated at each stage will also change. IDC's models are under constant review to ensure that they reflect the best thinking of the day.

Conclusion

The value of SAMM lies in its use as an analysis and positioning tool. The framework and carefully developed set of criteria are invaluable to organizations with an urgent and persistent need to understand where they sit in relationship to the «best-known practices» of today. The models are designed to help organizations to recognize when and why they should move forward and provide them with an insight into what action they need to take in order to advance.

SAMM helps to crystallize the indicators of corporate value. They also provide insight into duplication or non-existence of specific competencies. This information is very useful as input to investment decisions and to general assessment of an organization's strengths and weaknesses.

Because all of the models address a common set of six key success drivers it is possible for an organization to develop an understanding of where interdependencies are hindering or encouraging growth; to identify and leverage common elements; and also to compare progress in one business initiative with another.

¹⁾ Bob de Wit, Ron Meyer, *Strategy: Process, Content, Context*, International Thomson Business Press, 1998, p. 237

²⁾ Christopher A. Bartlett and Sumantra Gohoshal, "Rebuilding Behavioral Context: Turn Process Reengineering into People Rejuvenation," *Sloan Management Review*, Fall 1995, 15

³⁾ Mary Hartman and Thomas Murphy, "The Evolving IT Organization: What Lies Ahead?", *International Data Corporation*, June 1999

⁴⁾ Jeremy Hope and Tony Hope, *Competing in the Third Wave*, Harvard Business School Press, Boston MA, 1997, 141.

⁵⁾ Paul A. Strassman, "The Information Payoff", *Collier Macmillan Canada, Inc.*, 1985, 100.

⁶⁾ Derek F. Abell, "Managing with Dual Strategies" *Maxwell Macmillan Canada, Inc.*, 1993, 175.

SAMM facilitates realistic responses to the following key questions:

- How can you learn from your own and others' experiences, how will you know when we are on the right track?
- How will you manage technology change and cultural change at the same time?
- Are you moving too slowly? Are you trying to move too quickly? Would it be better for you to take a step back and regroup?
- Why aren't you getting the returns you expected on the last major change initiative?
- Where should your immediate focus be? What key business drivers should you address first?
- What are the «best known practices» in areas that are fundamental to success? How much effort is required for you to implement «best known practice»?
- As a strategic player, how can you make sure your views are heard? What are the ground rules for a meaningful relationship between IT and non-IT executives?
- What do you need to do to ensure that you and your organization can execute effectively in the evolving economy?

Jan Duffy will present a workshop on SAMM on Thursday 13th March 2003 during the bITa Europe 2003 Conference in Sophia Antipolis, Nice, France. See for details the website www.bit-a-europe.com

Application Services Library (ASL) and CMM

On maturity in application and IT services

By Machteld Meijer

In the nineteen eighties Software CMM was introduced as a tool to measure and improve the maturity of a software engineering organisation. In the nineties ITIL was developed for the management of technical infrastructures. In the last few years, application management received more and more attention. ASL, the Application Services Library, was introduced. ASL consists of a process model and a library of best practices. Based on the ASL process model a maturity model has been developed. A few years ago a maturity model, based on Software CMM, was developed for IT Services, e.g. IT Service CMM. Since Software CMM, ASL and IT Service CMM are all used in the field of application services it is useful to know when which tool is the best tool for an organisation to use. With that purpose they are compared in this article.

The quality of software development has drawn much attention for a number of decades. Maturity models like the Capability Maturity Model and system development methods like SDM, DSDM and Yourdon have received a lot of, deserved, attention. By means of these methods software development can be carried out in a much more professional way, leading to more predictable software development projects. However, in the last few years it appeared that much more expenses are involved with exploitation, maintenance and enhancement of software than with the original development. Therefore, IT Service Management became more and more important.

Within the field of IT Service Management we can distinguish three forms: The first one is functional management, which is carried out within the user organisation. Business IT alignment on the one hand and daily support of end users on the other hand are important activities in functional management. The second one

management, computer operations, incident management and change management. IT Infrastructure Library (ITIL) is a well-known and comprehensive documentation of best practice for this part of IT Service Management. The third field is application management, which comprises the maintenance, enhancement and renovation of application software, its management and its future. ITIL did not pay much attention to application management, whereas the importance and the costs of application management compared to infrastructure management increased. Indeed software maintenance is the most important contributory factor to system life-cycle costs. Enhancement, maintenance and support of an application can amount to between 50% - 67% of the overall life-cycle costs. Another fact was that thinking about the future support of the business by applications always started too late. With these reasons in mind ASL was developed. In the same period IT Service CMM was deve-

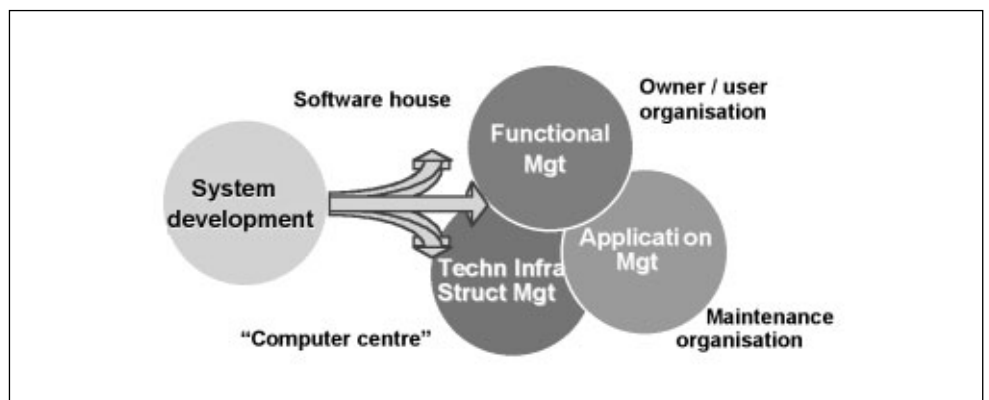


Figure 1: IT Service Management fields

is technical infrastructure management. It is carried out in e.g. computer centres and network companies. Important processes in this field are service level

management, with which IT Service Management processes can be improved. In this article ASL and CMM are described shortly, followed by a comparison of

Term	Description
Application management	The contracted responsibility for the management and execution of all activities related to the maintenance and evolution of existing applications, within well defined service levels.
Enhancement	The result of a request for change in functional or non-functional requirements that were not specified originally for the existing application.
Maintenance	The co-ordinated activities that enable an existing system to be sustained, operated and used, according to agreed rules and procedures.
Operation	The technical operating of an application in for instance a computer centre during the use of the system
Renovation	Considerable changes made to an existing application in order to extend its life cycle

Table 1: Some relevant definitions

the methods; in a number of examples ITIL is mentioned as well, because many people like to learn more about the relationship of other methods with ITIL.

Application Services Library (ASL)

ASL, the Application Services Library, is a framework and a collection of best practices for application management. PinkRocade developed it, but it is a public domain standard now. The purpose of the framework is to be able to describe application management in its depth as well as its breadth, so that rea-

ders can appreciate the activity domains and the aspects, which are of interest to them or require management attention. It may also be used to facilitate awareness and understanding. The framework supports three perspectives (levels of management), i.e. strategy, management (control of all the activities) and operations. A second criterion for the choice of clusters in the framework implies the distinction whether a process is supporting a service function or an application function.

Application management is defined as:

the contracted responsibility for the management and execution of all activities related to the maintenance and evolution of existing applications, within well defined service levels. In other words: the management of the maintenance, the enhancement and the renovation of applications in a business-economically-sound manner with an eye to the future. The key principle here is to support the business processes using information systems for the life cycle of the business processes.

The operational level recognises two clusters of processes:

'Maintenance' of applications: processes that ensure the optimum availability of the applications currently being used to support the business process with a minimum of resources and disruption in the operation.

'Enhancement/renovation' of applications: processes that adapt applications to new wishes and requirements in response to changes to the organisation and its environment. The necessary adjustments are made to the software, the data model and the documentation.

The management level comprises the overall management processes. These processes provide for the collective control of the operational processes for 'services' on the one hand and 'applications' on the other. Planning and control, service levels, costs and quality are the management issues that are addressed. Both strategy and operations supply the management processes. The future and day-to-day reality are thus secured in these processes.

The directive, strategic level also distinguishes two clusters of processes, based on the subdivision into the 'service



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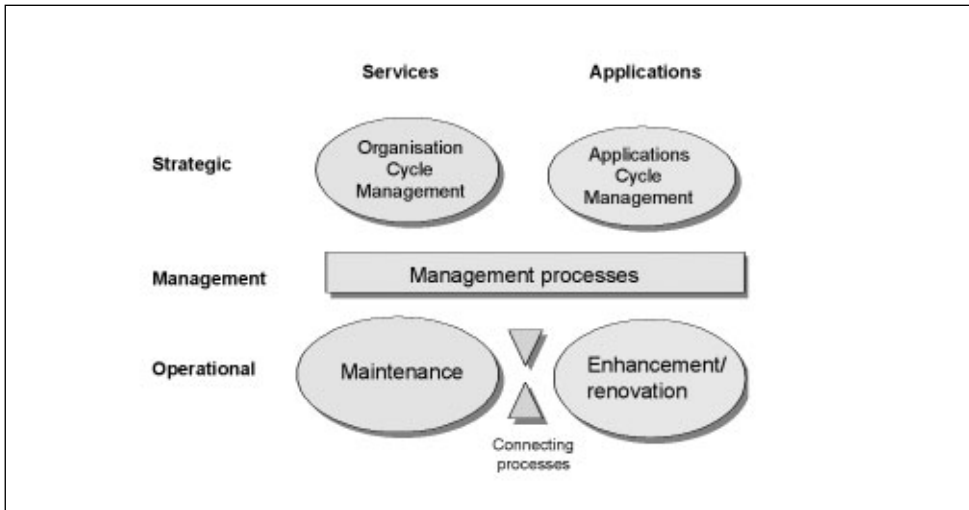


Figure 2: ASL framework

angle' and the 'application angle'. In these days of making services and service providers more flexible, the service provider of today (for both operational services and systems enhancement) is not necessarily the service provider fore-

ver. There are countless reasons why another service provider could also perform these tasks. Competition between service providers regarding the services being supplied is increasing. Separating the two angles makes it possible to

make an individual choice for each area. The clusters of strategic processes at this level are:

Organisation Cycle Management (OCM): processes that are aimed at developing a future vision of the IT service organisation and translating that vision into a policy for its renewal.

Applications Cycle Management (ACM): processes that serve to shape a long-term strategy for the various applications that fit within the entirety of an organisation's information provision in relation to the organisation's long-term policy.

CMM and IT Service CMM

The Software Engineering Institute of the Carnegie Mellon University developed the Capability Maturity Model for Software. It describes the principles and practices underlying software process-maturity and is intended to help software organisations improve the maturity of their software processes.

On the basis of Software CMM V1.1 the "Vrije Universiteit" of Amsterdam has developed the IT Service CMM [3]. Where Software CMM is aimed at software development, IT Service CMM is aimed at service provision. The IT Service CMM describes the maturity of the IT service provider for services like operating and managing information systems, managing network infrastructures, supporting end-users and managing office automation. IT Service CMM enables suppliers and customers in assessing the maturity of IT service providers and supports the IT service providers in improving their maturity. The goals correspond with those of the Software CMM, only the scope differs.

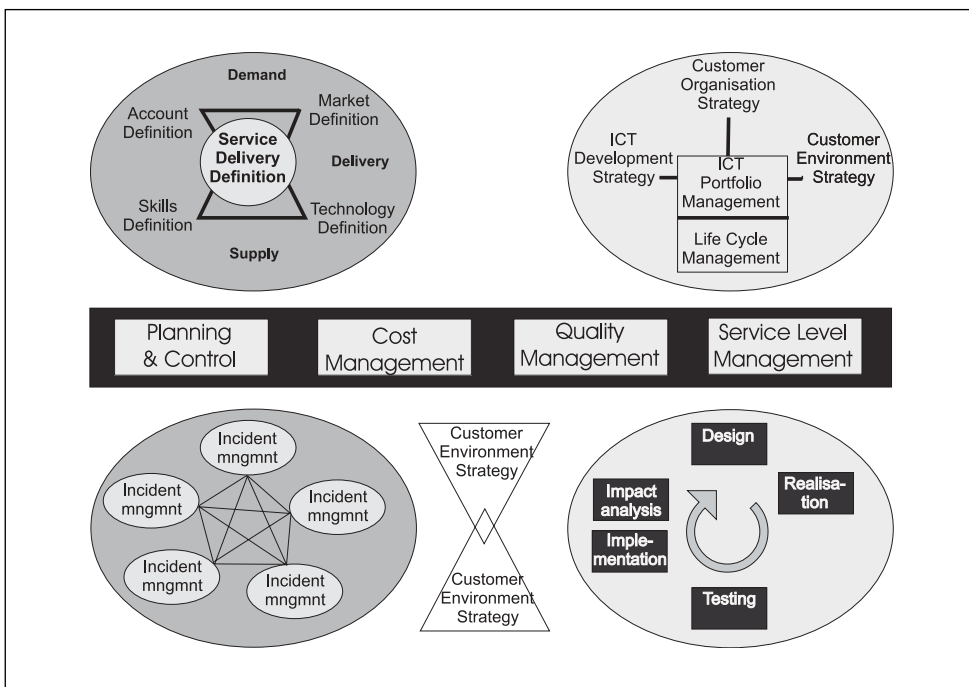


Figure 3: The ASL processes

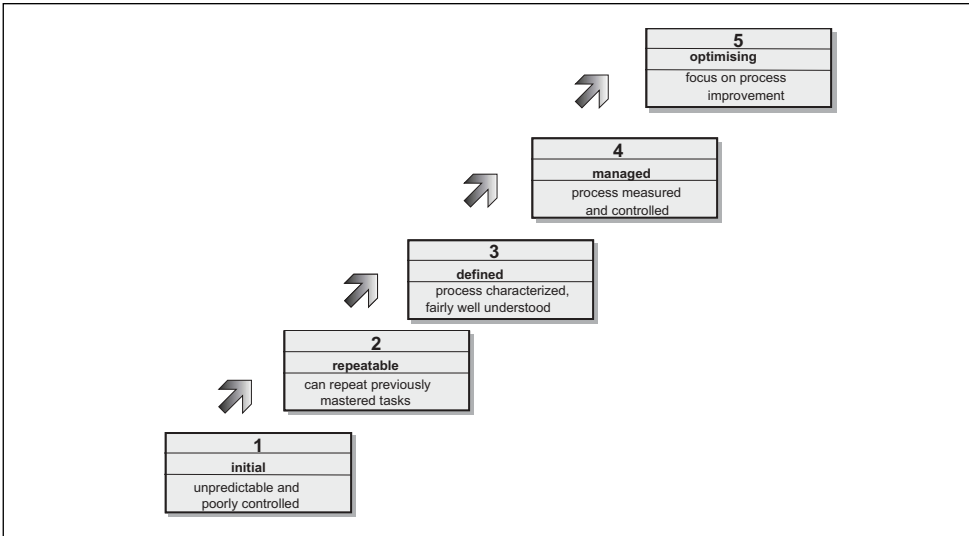


Figure 4: Maturity levels in CMM

Software CMM and IT Service CMM are both maturity models. CMM is organised into five maturity levels, which are shown in Figure 4.

Predictability, effectiveness, and control of an organisation's processes are believed to improve as the organisation moves up these five levels.

Except for Level 1, each maturity level is decomposed into several key process areas (KPA) that indicate the areas an organisation should focus on to improve its software process. To act on a certain maturity level, an organisation must have implemented all the process areas on that level and on the lower levels. A KPA consists of a number of goals (usually three or four) and a number of abilities (key practices). Each key practice maps to one or more goals; each goal and its associated practices can be considered as a "sub process area", goals and sub process areas support rating key process areas and maturity levels.

The key process areas at Level 2 focus on

the software project's concerns related to establishing basic project management controls. Those at Level 3 address both project and organisational issues, as the organisation establishes an infrastructure that institutionalises effective software engineering and management process across all projects. The key process areas at Level 4 focus on establishing a quantitative understanding of both the software process and the soft-

ware work products being built. The ones at Level 5 cover the issues that both the organisation and the projects must address to implement continual, measurable software process improvement.

Each key process area is described in terms of the key practices that contribute to satisfying its goals. The key practices describe the infrastructure and activities that contribute most to the effective implementation and institutionalisation of the key process area.

A comparison of the ASL processes and the CMM KPA's

When the processes of ASL and the key process areas of Software CMM and IT Service CMM are compared, see Table 2, the differences in focus of the three models are to be seen easily.

It is pretty obvious that CMM has overlap with the enhancement and renovation processes of ASL, whereas IT Service CMM has a correlation with the continuous maintenance processes. However, ASL goes more deeply into the operational processes than CMM does. In both standards only one operational KPA,

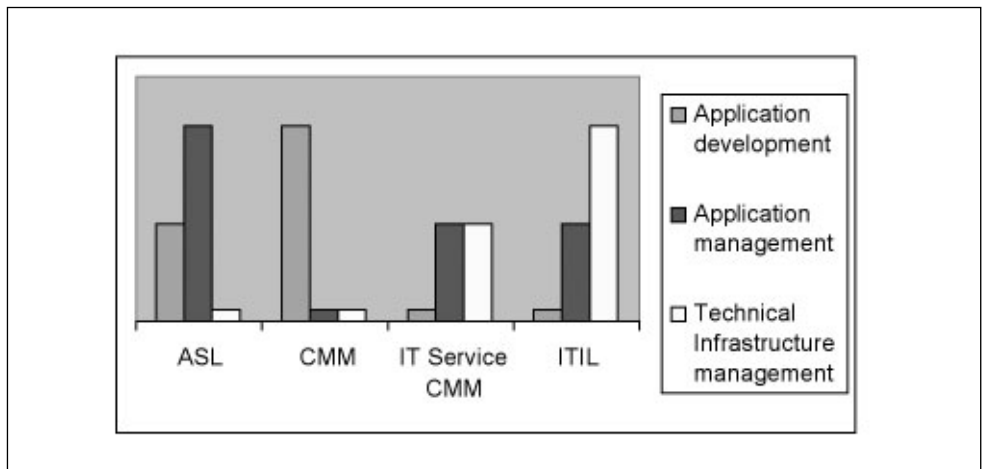


Figure 5a: Relative scope of the individual methods

ASL	IT Service CMM	Software CMM
OCM		
Account Definition		
Market Definition		
Technology Definition	technology change management 5	technology change management 5
Skills Definition	(resource management 3)	
Service Delivery Definition	organisation service definition 3	organisation process definition 3
	organisation process definition 3	organisation process focus 3
ACM		
Customer Organisation strategy		
Customer environment strategy		
IT developments strategy		
IT portfolio management		
Life cycle management		
Management processes		
Service Level Management	service commitment management 2	
	service tracking and oversight 2	
	service subcontract management 2	
	(integrated service management 3)	
Quality Management	service quality assurance 2	software quality assurance 2
	service quality management 4	software quality management 4
	integrated service management 3	peer reviews 3
	quantitative process management 4	quantitative process management 4
	process change management 5	software subcontract management 2
	training program 3	process change management 5
(problem management)	problem management 3	training program 3
	problem prevention 5	defect prevention 5
	intergroup co-ordination 3	intergroup co-ordination 3
Planning & Control	service delivery planning 2	software project planning 2
	(service tracking and oversight 2)	software project tracking and oversight 2
	resource management 3	integrated software management 3
Cost Management	(quantitative process management 4)	
Operational processes		
Incident Management	event management 2	
Availability Management	service delivery 3	
Continuity management		
Capacity Management		
Configuration Management	configuration management 2	software configuration management 2
Software Control & Distribution		
Change Management		requirements management 2
Impact analysis		
Design		software product engineering 3
Realisation		
Testing		
Implementation		

Table 2: Process comparison ASL and CMM

software product engineering and service delivery, respectively, cover the operational processes of ASL.

Two thirds of the ca 20 KPA's of Software CMM or IT Service CMM pay attention to subjects that are covered in only three of the (26) ASL processes: service level management, planning and control and (especially) quality management.

The externally focussed strategic processes of ASL, in the Applications Cycle Management cluster, are not covered by CMM, the Organisation Cycle Processes only partly. Business IT alignment is an important purpose of the ACM-cluster. BITA is addressed very well in ASL but only slightly in CMM (for instance in requirements management).

The conclusion from this comparison is, that the CMM KPA's focus especially on the management level of ASL and address these processes more deeply than ASL does.

Further comparison of ASL and CMM

Software CMM and IT Service CMM are strongly based upon the determination of the maturity of an organisation for system development or IT service management, respectively. Maturity levels and assessments are the foundation for both methods.

ASL is first of all a process model and a collection of best practices. Based on ASL as a spin-off a self-assessment and a scan have been developed. They are used to find the possible improvements for an application management organisation. The criteria that determine a maturity level are based upon CMM, INK/EFQM and an ITIL maturity scan.

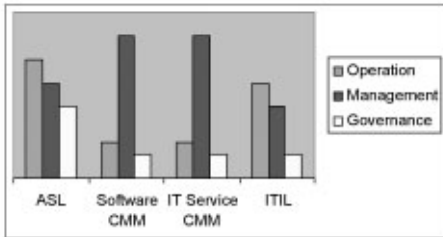


Figure 5b:
Relative focus of the individual methods

Scope

ASL is aimed at an organisation where applications are maintained and renovated; therefore both IT service management and (modified) system development processes take place. ASL also covers the management of the operational processes and the policy with regard to the future of the applications on the one hand, and the IT services on the other.

IT Service CMM is aimed at IT service processes within all types of IT service organisations and therefore applicable in a wider range of service organisations, including infrastructure management and functional management, and even totally different service organisations. It is rather generic and does not really go into the daily practice of application management.

Software CMM is aimed at organisations where information systems are designed and built (newly built systems or project based extensive renovation).

The new ITIL-series contains a book on Application Management, however this does not cover the entire field of application management, as ASL does.

CMM is mainly focussed on the management processes (mostly quality rela-

ted), and much less on the operational and strategic level.

ASL is focussed both internally as externally (towards the customers). The original Software CMM is almost totally focussed internally. IT Service CMM pays more attention to customer related objects.

Maturity models

In the ASL-self assessment the maturity of each process is determined individually; in the end report this leads to the total maturity of the organisation. The CMM-assessments are aimed at the total maturity of the organisation and based on the presence of performed key process areas. In the recent CMMI this is called the staged approach. CMMI also recognises a continuous approach in which the maturity of each process area can be measured. This continuous approach, however, does not completely match the ASL method.

If someone wants to get a view of the maturity of a system development organisation Software CMM is the appropriate method. To get a quick picture of the maturity of the management processes of an IT service organisation, the IT Service Management assessment is a very useful instrument, especially to reach level two or three. An application management organisation that wants more detailed clues on how to improve on operational or strategic level can best use ASL.

Availability

ASL as well as the CMM's are methods about which much information can be found in the public domain. The CMM assessments are partly public, the ASL assessments not yet.

Conclusion

If someone wants to improve a system development organisation Software CMM is the most useful method. For improving the management processes of an IT service organisation the IT Service Management assessment is a very useful instrument, especially to reach level two or three. ITIL is most suitable for technical infrastructure management. For application management organisations that want more detailed clues on how to improve on operational or strategic level, ASL is the best instrument. Of all the methods mentioned, ASL gives most attention to business IT alignment.

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IT Service CMM in a nutshell

By Frank Niessink

This article presents the IT Service Capability Maturity Model. The IT Service CMM is a maturity growth model aimed at IT service providers. IT services are services that enable the customer to effectively and efficiently use its information technology in support of its business processes. Examples of IT services are information system operations, network management, user support, and software maintenance. The IT Service CMM captures the maturity with which IT services are provided in five maturity levels.

The IT Service CMM has three goals:

1. IT service providers and their customers can use the IT Service CMM to determine the maturity of IT service providers.
2. IT service providers can use the IT Service CMM to improve their IT service capability.
3. The IT Service CMM fosters discussion on what it means to be a mature IT service provider.

The first two goals are aimed at the application of the IT Service CMM by individual IT service providers and customer. The third goal is aimed at the wider IT Service Management discipline. Since the model is publicly available and free, it is hoped to contribute to the discussion on what it means to be a mature IT service provider.

The IT Service CMM is a maturity growth model, consisting of five maturity levels. Each maturity level describes a stage in the maturity of an IT service provider. The lowest level is level one, the initial level. Organisations at level one are characterised by working in an ad hoc manner and by unpredictable performance. If IT services are delivered successfully, it is because of individual heroism. Organisations at level two, the repeatable level, deliver services with a repeatable quality. That is, they can repeat earlier successful performances in similar circumstances. The third level, the defined level, is aimed at standardisation of services. Organisations at level three employ standard processes to deliver standard services and have implemented organisation-wide processes to train employees and manage resources and problems. The fourth level, the managed level, is aimed at attaining

quantitative control over the IT service processes. Level five, the optimising level, is aimed at continuous process improvement.

Each maturity level (except for level one) contains a number of key process areas. To reach a certain maturity level, each of the key process areas of that level and lower levels has to be implemented by the IT service organisation. A key process area is considered implemented if each of the goals of the key process area is reached.

A key process area hence consists of goals (usually between two and four) and of activities, called key practices. An organisation that implements all activities from a certain key process area is expected to also reach the goals of that key process area. The IT Service CMM distinguishes between five kinds of practices, called common features:

- **Commitment to Perform:** activities aimed at ensuring organisational and management commitment to the key process area activities, for example by means of establishing certain organisational policies.
- **Ability to Perform:** activities aimed at enabling the key process area, for example by means of sufficient budgets and training.
- **Activities Performed:** the activities needed to get the job done, for example planning a service or dealing with service requests.
- **Measurement and Analysis:** activities aimed at determining the status of the key process area. For example, measuring time spent on different activities or how long it takes to deal with incidents.

- **Verifying Implementation:** activities aimed at verification of the implementation of the key process area. For example, it is important that the activities are reviewed by senior management from time to time.

Together, these five common features ensure that the goals of the key process area are reached.

IT Service CMM content

Now I would like to discuss the key process areas of each of the IT Service CMM maturity levels. Emphasis is on level two and three because level four and five have not been specified in full detail yet. Level one is the initial level and does not contain any key process areas. Organisations that have not implemented any key process areas therefore reside on level one.

Level two is aimed at implementing a number of basic capabilities that every IT service providers needs, and that are needed for every IT service: managing and evaluating service commitments, planning service delivery, managing subcontractors, etc.

After an organisation has established this basis, level three aims at standardising the services and service processes.

By describing the services in a service catalog and by developing standard processes for those standard services, the organisation can standardise and unify its performance. On level four, the standard processes are managed quantitatively to reduce process variance. Level five finally, is aimed at changing and improving processes and technology in a controlled manner and at preventing problems.

History and background

Between 1995 and 1999, two research projects were carried out in the Netherlands by three Dutch companies and three Dutch universities. The companies involved were Cap Gemini, Twijnstra Gudde and the Dutch Tax and Customs Administration Computer Centre. The universities involved were the technical universities of Delft and Eindhoven and the Vrije Universiteit. Both projects were sponsored by the Dutch ministry of economic affairs. The goal of these projects (called 'Concrete Kit' and 'Kwintes') was to develop methods and techniques for improving IT services. During both projects a number of case studies was carried out to investigate certain methods and techniques. In some organisations a certain technique would perform well, in others it would not. This led us to the hypothesis that some IT service providers were more mature than other IT service providers.

During the 'Kwintes' project, an effort was started to describe the maturity of IT service providers. As a basis the Software Capability Maturity Model was chosen. The Software CMM describes the maturity of software development and maintenance organisations, but has a generic structure that could be reused to develop an IT Service Capability Maturity Model.

During the 'Kwintes' project, a group of experts on IT Service Management and on the Software CMM developed a first sketch of the IT Service CMM and a detailed specification of the level two key process areas. This result has been published as a Vrije Universiteit technical report.

September 2000, a follow-up project was started, dubbed DOCIS (Development of an Open Content IT Service Maturity Model), specifically aimed at further specifying level three of the IT Service CMM. First, this project was coordinated by the Vrije Universiteit, from January 2001 on by SERC (Software Engineering Research Centre). The DOCIS project is an open project, in the sense that participants join the project on a voluntary basis and that all project information is available through the IT Service CMM website. The end result of the DOCIS project is a new version of the IT Service CMM that includes level three. A draft version is currently available from the website.

Participation in DOCIS is open for anyone with an interest in contributing to the further development of the IT Service CMM. Refer to the website for more information on how to join.

Level two: repeatable services

An organisation at level two of the IT Service CMM is able to repeat earlier performance. The organisation is able to deliver services with the same quality as in earlier situations, as long as the situations are similar. This repeatability is reached by implementing seven key process areas:

- **Service Commitment Management.** The purpose of this key process area is to ensure that service commitments are based on the current and future IT service needs of the customer.
- **Service Delivery Planning.** The key process area Service Delivery Planning ensures that the service delivery planning is developed in accordance with the service commitments and that internal commitments are secured.
- **Service Tracking and Oversight.** During service delivery, performance is monitored to enable corrective actions before the service commitments are breached. In addition, the tracking forms the basis for service reports to the customer.
- **Service Subcontract Management.** Parts of the service that are subcon-

Both IT service providers and customers of IT services can use the IT Service CMM to determine the maturity of IT service providers. IT service providers can use the model to improve their maturity. The IT Service CMM is publicly available and freely downloadable from the IT Service CMM website:

<http://www.itservicecmm.org/>.

tracted to third parties are managed and controlled.

- **Configuration Management.** The information technology subject to the IT service is identified and controlled.
- **Event Management.** This key process area is aimed at managing events that occur during service delivery. Events can be incidents, such as unavailable servers, or service requests from end-users. Both types of events need to be handled in time in order to meet the service commitments.
- **Service Quality Assurance.** An independent quality assurance group provides insight for senior management into the processes used and workproducts produced...

Level three: standardised services

Level three is aimed at organisation-wide standardisation of the service provision.

By using standard services and processes, the performance of the IT service provider can be improved in a sustainable way. Hence, the key process areas of level three provide for standardisation and organisation-wide coordination:

- **Organisation Service Definition:** a service catalog is developed that describes the services, in terms of customer benefits, that the service provider can deliver.
- **Organisation Process Definition:** the organisation describes the processes used to deliver the services, described in the service catalog. Service catalog and standard service processes are of course improved as a result of practical experience.
- **Organisation Process Focus:** this key process area is aimed at implementing the standard processes and assessing the performance of the processes in practice.
- **Integrated Service Management:** this key process area is aimed at tailoring the standard service processes to specific service commitments for a specific customer so that the tailored process can be used to manage and deliver services to the customer.
- **Service Delivery:** the tailored service processes are performed to deliver the services.



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- **Training Program:** based on the standard processes, a training program is developed. Employees are trained to fulfill their roles in the standard process.
- **Intergroup Coordination:** delivering services requires different groups and disciplines to coordinate their work. This key process area makes sure communication between different groups is facilitated.
- **Problem Management:** incidents and service requests that are registered as part of the Event Management key process area are analysed to identify and solve underlying problems in the information technology.
- **Resource Management:** required resources for delivering different services to different customers are coordinated across the organisation.

Level four: managed services

Level four is aimed at attaining quantitative control of the service processes and service delivery. By gathering and using measurement data, the quality of the delivered services can be controlled and improved. Currently, the IT Service CMM contains two key process areas on level four:

- **Quantitative Process Management:** aimed at quantitative control of the performance and costs of the service delivery.
- **Service Quality Management:** aimed at gaining qualitative insight in the quality of the service delivery and reaching specific quality goals.

Level five: continuous improvement

A level five organisation is able to chan-

ge processes in a controlled manner to improve the quality of processes and service delivery. Process changes are initiated by improvement goals, new technology or problems that need to be prevented. Level five currently consists of three key process areas:

- **Process Change Management:** this key process area is focused on improving and changing processes in the organisation to improve service quality and productivity.
- **Technology Change Management:** new technologies are identified, assessed, and implemented in the organisation in a controlled manner.
- **Problem Prevention:** the root-cause of problems is identified and removed to prevent problems from happening again.

Applying the IT Service CMM

As said above, both customers of IT services as well as providers of IT services can use the IT Service CMM. Customers can assess IT service providers with the IT Service CMM to gain insight in the maturity of their (potential) suppliers. IT service providers can use assessments to determine their current maturity and identify areas for improvement. Because the IT Service CMM has been based on the Software CMM, the assessment approaches that exist for the Software CMM can also be used for IT Service CMM assessments. The main adaptation that needs to be made is to replace the Software CMM questionnaire with an IT Service CMM questionnaire.

Three types of assessments are distinguished:

1. **Self-assessments:** the IT service provider investigates its own processes as a

starting point for process improvement. Often, self-assessments are part of a process improvement programme, part of which is to perform self-assessments on a regular basis to identify improvement actions and monitor progress.

2. **Second-party assessments,** also called capability determination. In this case, a customer determines the service delivery capability of (potential) suppliers.

3. **Third-party assessments.** In this case, an independent third party assessor evaluates the maturity of an IT service provider.

When applying the IT Service CMM, and this goes for other maturity models as well, it is important to realise that it is just a means to an end. It is never wise to set reaching a specific maturity level as improvement goal. Improvement should be initiated by business drivers and depending on the specific business goals, the IT Service CMM may provide an instrument to support process improvement.

Conclusion

The IT Service CMM, though a model under development, is already suitable for determining the maturity of IT service providers and for improving the maturity of IT service providers. Both customers and IT service providers can apply the model by means of assessment to determine current maturity and identify opportunities for improvement.

If this overview has wetted your appetite to further study the model, or to contribute the development of the model, please visit the IT Service CMM website (<http://www.itservicecmm.org>). The complete model can be downloaded, and other material concerning the appli-

cation and development of the model is available as well.

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<http://www.sei.cmu.edu/cmm>

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ITIL, a key factor for successful outsourcing

By Alain Wind

In a recent article published in the magazine "CIO Stratégies et Technologie" ¹⁾, three CIOs describe the initial motivations of outsourcing as follows: "We very often note a combination of a minimum of three justifications. First, cost control, a praiseworthy objective as anticipation and transparency concern both CIOs and CEOs. Then, willingness to focus on their core business for reasons of competition and of resources allocation (financial, human but also technological). Last, internal process industrialisation : outsourcing, on this point, requires formalism, anticipation and day-to-day steering with suppliers".

The industrialisation of IT processes is the main contribution of the ITIL repository.

We shall begin by studying the ITIL contributions to structuring and professionalizing the IT organisation of a company:

- Reminder of the concepts linked to processes and interest
- Process identification
- Process structure
- Links between processes and operational modes
- Procedures and organisation

In a second stage, we shall analyse the ITIL contributions to outsourcing:

- Selection of a common repository
- Setting up the desired commitment through Service Level Agreements
- Formalisation of the Customer-Supplier relation with a precise outsourced perimeter

ITIL brings the IT organisation a global and comprehensive vision of IT operations. This process-oriented vision structures the relations between the

clients/users and the IT organisation.

a) Reminder of the concept of processes and interest

A process is a simple concept : it is a "measurable input / added value / measurable output" line which is performed across the organisation in order to fulfil a specific goal. Defining a process enhances future repetitive operations.

As shown in Figure 1, a process is defined by :

- An application domain
- Input and suppliers
- Output and customers
- An operating mode (the succession of tasks, roles and rules)
- A expected performance
- Implied resources (people, facilities, hardware and software, data, procedures).

It is important that each process has an owner, responsible for the definition (and updating) of the process.

Working with defined processes enables an organisation to improve delivery, control and management of services. It

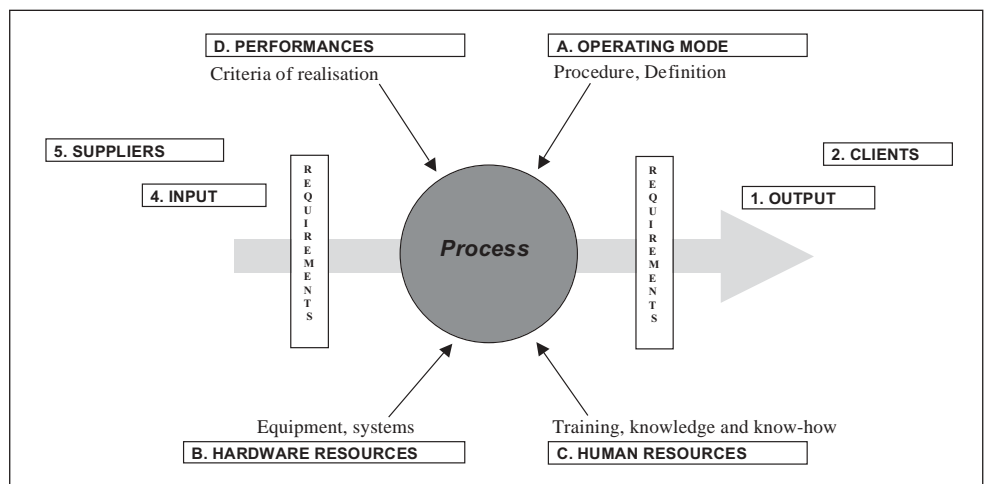


Figure 1: Defining the process

becomes easier to internally determine goals, take actions and measure the results but it also becomes easier to benchmark activities to organisations using the same process model.

Therefore, process modelling enables the IT organisation to be more effective in:

- Getting a global and technology-independent vision of the value added by IT to the company
- Creating a shared (by users, IT and suppliers) repository and glossary of terms
- Capitalising on, and evaluating, the company know-how and knowledge
- Performing audits based on the repository
- Putting at stake the existing state for continuous improvement.

b) Process identification

One of the main benefits of the ITIL reference is to provide a comprehensive list of IT service delivery and control processes, together with the interrelations between processes. This repository, based on best practices, gives IT directors a global vision of their own business, that is a guide to an outsourcing approach.

c) Vision of the IT services

ITIL defines an IT service as a set of functions performed for the end-user by the IT; a service generally relies on various elements – hardware, software, networks, cabling system – which form the IT infrastructure.

ITIL consists of a set of books consolidated in six domains, each one covering a specific aspect of the IT service management life-cycle:

Business Perspective,
dedicated to customer policy, organisa-

tion (IT operations and management, roles and responsibilities, relations with third-party suppliers) and business IT alignment.

Service Delivery,
covering service management (service level management, availability, capacity, contingency plan, cost control).

Support Service,
consisting of the functions which enable the IT infrastructure to be an effective provider of IT services (management of configurations, incidents, problems and changes)

ICT Infrastructure Management,
consisting of the technical functions (operations, automation, maintenance, installation). It covers systems, networks and workstations.

Applications Management,
dedicated to software development and including comprising the relationship management between development and IT service (software support, testing, ...)

Planning to Implement Service Management,
providing general guidelines to implement the ITIL framework.

The ITIL core consists of two domains, Service Delivery and Support Service, the processes of which are briefly described in Table 1.

Process structure

The process of IT service management structure enables IT directors :

- To determine their IT service offerings
- To build service management strategy
- To define and to set up an organisation able to deliver these services and to cover all IT issues.

Following is a list of the processes of the two main ITIL domains: Service Delivery and Support Service.

Service Delivery – « customer relations »
Resource management (capacities): ensuring the optimal use of IT together with the meeting of the SLAs' performance goal. (Service level agreement)
Financial management: determining and controlling IT costs thus enabling the charging of IT services to business units.
Time management: ensuring the meeting of the SLAs' availability goal.
Service level management: agreeing on and controlling the IT service levels between the IT organisation and its internal or external customers (Service Level Agreements or SLAs).
IT service continuity management: defining, setting up and controlling continuity procedures and planning after an incident or a disaster.

Service Support – « Service Desk »
Incident (and minor change) management: ensuring the continuity of the service levels. Day-to-day interface between the IT organisation and its customers. Following up and resolving incidents.
Problem management: Minimising disruption of the service levels by pinpointing and analysing the causes of (repetitive) incidents.
Configuration management: managing and controlling IT infrastructure components
Change management: efficiently handling changes linked to the IT infrastructure components
Release management: managing the life-cycle of running software modules (tests, versioning, distribution and installation).

Table 1 ITIL: Short description of core processes

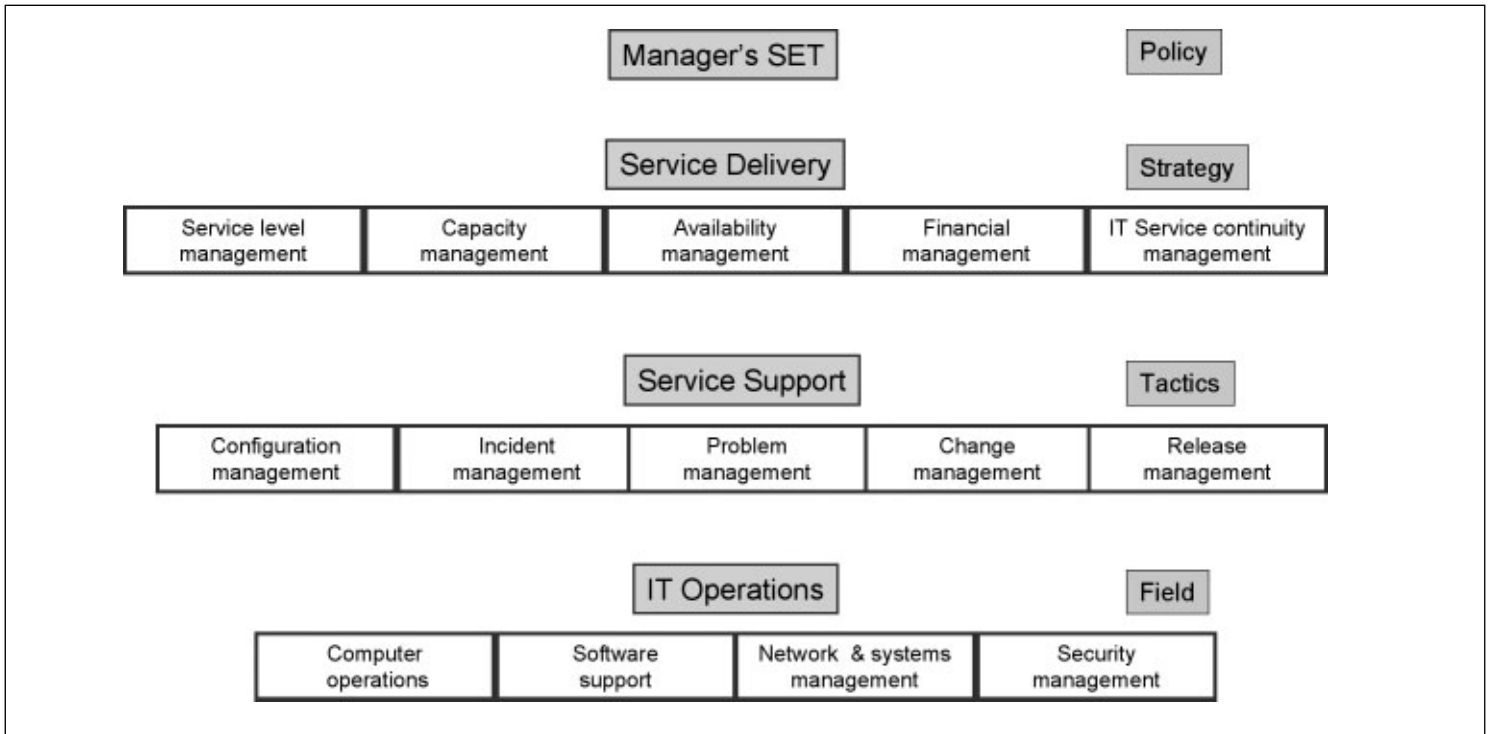


Figure 2: Process structure

See Figure 2 for this structure.

The underlying objective is double :

- To enable the business organisation to better define their requirements in terms of service level, performance, availability, resilience and cost
- To assist the IT organisation in service management, based on the same set of criteria.

Links between processes and operational mode

One of the main contributions of the ITIL referential is the description of the relationship between processes. We shall take the example of the chain of processes within Service Support (Figure 3).

The first service to provide consists of the inventory and management of all

the IT components. The objective is to provide a logical model of IT infrastructure by identifying, recording, updating and verifying the release of every existing configuration item. This represents the Configuration Management process which is responsible for the correct management of the database called CMDB (Configuration Management DataBase).

The Service Desk is the only interface which receives calls from the user organisation. It relies on the CMDB to improve its customer service (identification of all the configuration items related to the caller) and its specific problem management.

When treating a call corresponding to an incident, the Service Desk launches and manages the Incident Management which should provide an immediate in



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Since 1988, Alain Wind has worked in commercial functions and a regional director for an IT company. He also has founded a start-up company with software products for urban transportation.

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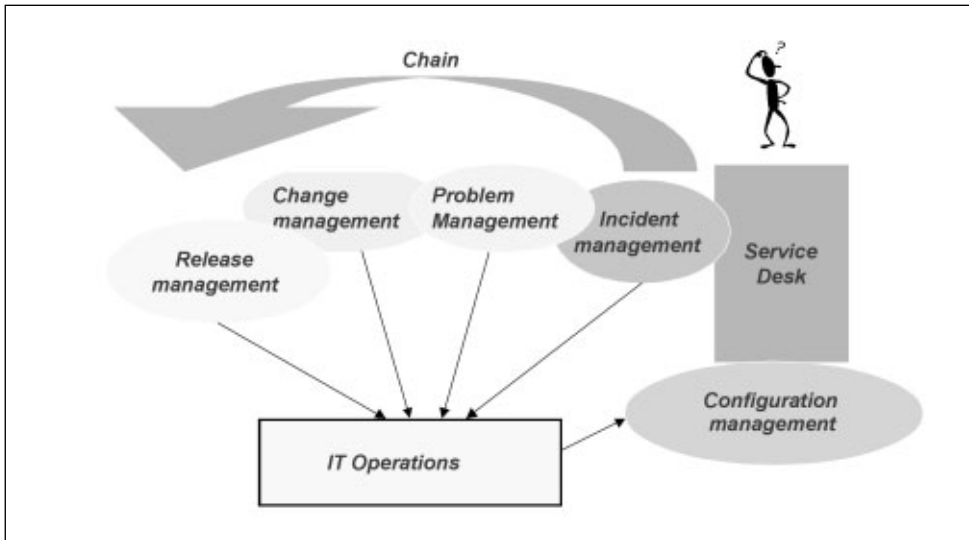


Figure 3: The chain of processes within Service Support

order to minimise service disruption. Occasionally, the Service Desk faces a repetitive incident or one incident with a large impact (for instance, a series of network incidents disrupting numerous users). In such a case, the incident is a problem and the Service Desk launches the Problem Management process.

This process is under the responsibility of a different group in the IT organisation. It has the following objectives :

- Identification and resolution of problems from the data supplied by the Service Desk
- Management of recorded errors (recorded problems whose solutions are not yet implemented, i.e. due to change management of the related configuration item)
- Setting up needed Requests For Change or RFC.

During this last step, the Change Management process is launched. Its objective is to implement the authorised changes of the IT infrastructure in an effective manner and to minimise the

impact on the agreed service level in the Service Level Agreements (SLA).

Change management strongly relies on the Release Management process which is responsible for only tested and authorised software versions being introduced into the IT environment.

This example clearly shows the chain of implied processes and the need for a precise definition of the perimeter and responsibilities for every process.

Processes and organisation

The diagram in Figure 4 depicts the different processes within an IT organisation. This diagram shows both the objectives and the principles of the approach proposed by OSIATIS to its customers in order to provide benefits such as:

- Delivered IT services meeting user/customer needs,
- Ability to measure and compare the delivered services against the objectives set up in the SLAs
- Management and control of the impact of incidents or service downtime

- Identification and control of IT service costs
- Definition and setting up of OLAs (Operational Level Agreement) between groups of the IT organisation or with third-party suppliers.

Outsourcing with ITIL

It is obvious that an outsourcing process must include a Request For Proposal.

In the article quoted in the introduction, the magazine CIO lists the 10 key questions to include in a Request For Proposal.

- Restate the objectives and constraints of the project
- Define the outsourcing perimeter (for instance, workstations, networks, mainframes, applications, web sites, ...)
- Specify the requested provision of services (user support, operations, maintenance, ...)
- Specify the commitments to results (such as the requested availability ratio, ...)
- List the customer obligations (specifications, respect time limits, ...)
- List the supplier obligations (such as, customer staff integration, insurance, reversibility, ...)
- List the shared obligations
- Detail the contract phases (from start to the end)
- Include security and data confidentiality conditions
- Determine the contractual obligations (for example, contract duration, force majeure, prices, invoice procedures, ...).

Perimeter issues are of crucial importance both for service provision and for service levels. In ITIL language, the formulation is as follows :

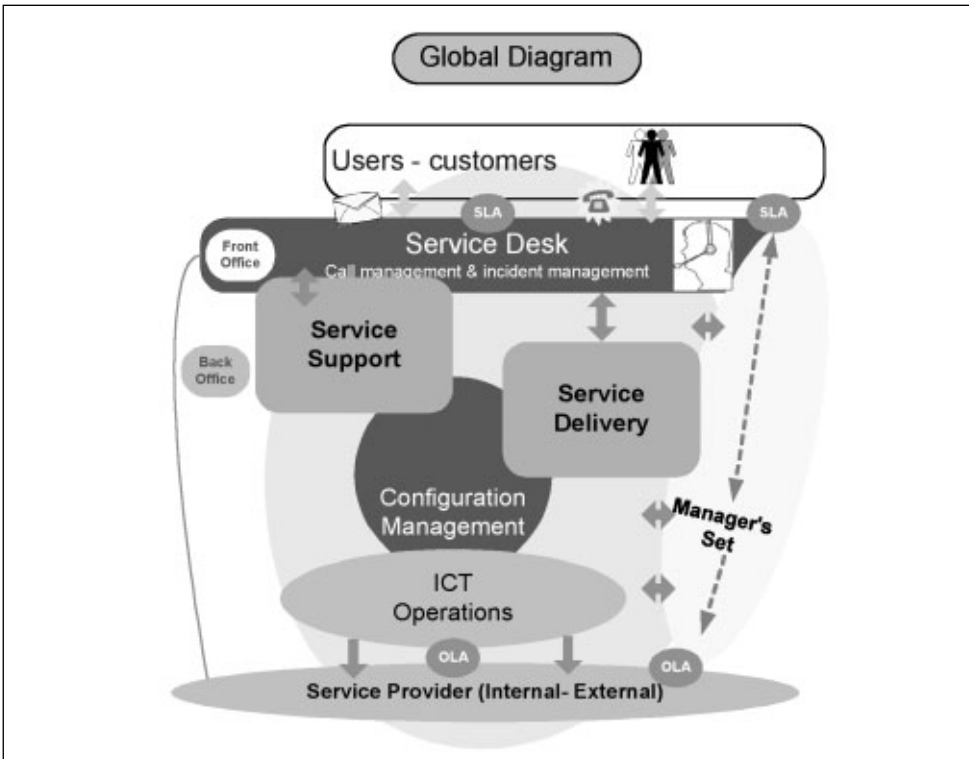


Figure 4: The different processes within an IT organisation

- What are the configuration items (technical perimeter)?
- What are the requested services and therefore the outsourced processes?
- What are the requested Service Level Agreements (SLA)?

In terms of approach, the IT Director must take into account :

- The choice of a reference shared by all
- The negotiation and formalising of service levels through SLAs
- The selection and formalisation of the outsourced processes and technical perimeter together with the interfaces with what will remain internally managed (customer / supplier relationship).

A common vision of IT service provisioning

Quality Management is widely used in

both France and in other European countries. Its main objective is to provide company staff a common and global vision of the enterprise. Thus everyone throughout the organisation is aware of the interrelations between the various services provided and is in a position to internally initiate Customer / supplier approaches.

In the same way, the ITIL repository is surely the fastest and most comprehensive way to implement a common repository related to IT service provision. Furthermore its process foundations make ITIL easily compliant with a Quality Management System or a re-engineering project.

The IT Director willing to outsource part of IT service provision must implement such a repository. The repository is a good way to streamline the approach,

giving every player guidance and helping the IT Director keep control.

From OSIATIS' experience, ITIL is the only existing repository which meets the following requirements:

- non-proprietary and open
- based on best practices, consolidating experience of various IT professionals
- comprehensive
- independent of technologies
- practical, modular and easily deployable with a step-by-step approach
- in the public domain.

On top of these qualities, the presence of a very active user group (itSMF) is the best guarantee of both the permanence and the evolution of ITIL.

Thus ITIL is surely the best tool box for professionalizing IT and preparing the possible outsourcing of some activities.

Setting up Service Level Agreements

As a "service company", the IT organisation must first answer the questions : who are my customers, and what is my service offering?

This is real market analysis and is brand new for almost all IT organisations.

Tackling this issue is not easy for IT Directors, and ITIL is effective help : it provides an "on the shelf" tool box for designing and formalising true Service Level Agreements.

Furthermore, ITIL gives the IT Director the 5 levers he needs to manage the service levels, negotiated with and delivered to its customers :

- Service Level Management
- Availability Management
- Capacity Management
- Financial Management

- IT Service Continuity Management.

The Service Level Agreements, set up for customers, are the basis of the request statement for the outsourced activities. The only tricky point could be the global coherence when having multiple suppliers.

Selection of the outsourced perimeter

The last, but not the least, step consists of the selection of the process to be outsourced. In order to be effective, one must respect the following principles:

- Clearly define the process owners. One cannot (unless strict commitments to results from the supplier are not required) split a process in parts and distribute the corresponding responsibilities either to the IT organisation or the supplier. A precise and comprehensive process helps to define perimeters responsibilities.
- When processes are strongly interrelated, do not separate them. For instance, Change Management and Release Management must have the same person responsible.
- Depending on the maturity of the process, it is possible to delegate certain levels (i.e. Tactics and Operations) and keep onboard the Policy and Strategy levels.

Thus, before making the selection of processes and services, the possible processes must match the following features:

- Have a clear perimeter corresponding to the SLAs
- Be managed with simple indicators
- Have defined and formalised interfaces
- Correspond to clear business objectives (business lines and organisation)

- Be combined with a set-up method (or transition)
- Be combined with a method for (technical and financial) performance improvement.

Processes and services selection must integrate the company business requirements and therefore participate in Business IT alignment.

An example : Service Desk outsourcing
From OSIATIS' experience, the Service Desk and the Incident Management process are preferably the two steps to outsourcing.

In fact, they represent the following advantages:

- Their domains (Help Desk, Support, Maintenance) are well identified and mature.
- They are generally not well recognised and valued and, subsequently, it is difficult to propose career advancement to their staff.
- Their domains are well equipped with methods and tools.
- Their perimeter is identified and easy to formalise in a Service Level Agreement.
- They are managed through simple and known indicators.
- They have easy-to-implement interfaces with the rest of the IT organisation and with their customers.
- They are combined with a continuous improvement method.

In addition, professionalizing a Service Desk brings immediate impact:

- Because the Service Desk is the IT service contact with users, it bears the image of all the IT services.
- Because the Service Desk performs the reporting and the management of

many IT services, it bears the performance.

- Because The Service Desk guarantees the quality, it requires the processes to improvement.

Thus, the Service Desk and its management are together non strategic for the Company business, and fully strategic for quality of service and professionalism of everyone.

In conclusion, from an IT Director's perspective, the Service Desk possesses all the ingredients to be an outsourced service.

¹⁾ Article entitled « L'INFOGERANCE, CERCLE VERTUEUX POUR LE CIO » (outsourcing, a virtuous circle for the CIO) published in CIO Stratégie et Technologie n°2, September 2002.

- Jean-Luc PIEDANNA, IT Director responsible for distributed networks at Natexis Banques Populaires

- Roland SIRE, CIO of UCB

- Jean-Gabriel PADOVANI, Assistant Managing Director of VIVARTE

DSDM: A project delivery framework that is focussed on aligning business and IT

By Barry Fazackerley

Every business looks to IT to develop and support products and services, which will both increase efficiency and help them gain elusive competitive advantage. However, many IT projects fail to deliver the necessary solutions on time, within budget or most importantly provide the functionality needed by the business. Many projects have difficulty understanding and defining business requirements quickly enough and fail to cope with the inevitable rapid change in those requirements. In addition, too little use is made of the people who understand business processes best i.e. the people who use them day-by-day.

In 1994 IT professionals from large and small organisations in a wide variety of industries worked together to develop what is now known as DSDM (Dynamic Systems Development Method). The DSDM framework is a project delivery framework that is truly focused on the need of the business: DSDM projects deliver high quality solutions to budget within tight business driven timescales. Everything in the published framework has resulted from practical experience and successful application by the membership of the DSDM Consortium (the body responsible for managing the framework).

DSDM has primarily been used as an approach for IT projects; however, it is appropriate to business change projects and programmes. The DSDM framework provides an ideal basis for an holistic development and implementation process, which encompasses people (e.g. organisation, staff, skills and capabilities), the technology that supports them (e.g. IT, office automation and communications) and the processes that bind them all together (in line with the business strategy).

Project Failure

Many development projects fail to meet the expectations of the end users. Such project failures can be classified into one of five basic types:

1. The solution fails to meet the business requirements for which it was developed and so it is either abandoned or expensive adaptive maintenance is undertaken.
2. There are performance shortcomings in the solution system, which make it inadequate for the users' needs. Again, it is either abandoned or amended incur-

ring extra costs.

3. There are errors appear in the developed solution causing unexpected problems.
4. Users reject the imposition of the solution, for political reasons, lack of involvement in its development or lack of commitment to it.
5. Solutions are initially accepted but over time become impossible to maintain and so pass into disuse.

DSDM aims to prevent all these types of project failure. DSDM provides a framework for projects that encompasses all aspects for successful delivery: people, process and technology - with the emphasis on people, since more projects fail because of some people-based problem than for any other reason.

Underlying Principles of DSDM

The framework is based around nine Underlying Principles that enable projects to deliver what the organisation needs when it needs it.

Management tools and techniques in DSDM projects

Every project will have the need for management techniques to control the process, such as good project planning, risk management, quality management. Since DSDM projects are flexible in their development activities, all aspects of their management need to be equally flexible, while maintaining a level of control that ensures successful delivery of the required business solution.

MoScow prioritisation

Delivering on a guaranteed date (without working overtime) means that what was originally envisaged for an

I.	Active user involvement is imperative. DSDM is a user-centred approach. If users are not closely involved throughout the project lifecycle, delays will occur as decisions are made and users may feel that the final solution is imposed by the developers and/or their own management.
II.	DSDM teams must be empowered to make decisions. DSDM teams consist of both developers and users. They must be able to make decisions as requirements are refined and possibly changed.
III.	The focus is on frequent delivery of products. A product-based approach is more flexible than an activity-based one. The work of a DSDM team is concentrated on products that can be delivered in an agreed period of time. This enables the team to select the best approach to achieving the products required in the time available. By keeping each period of time short, the team can easily decide which activities are necessary and sufficient to achieve the right products. (Note: Products include interim development products, not just delivered solutions).
IV.	Fitness for business purpose is the essential criterion for acceptance of deliverables. The focus of DSDM is on delivering the necessary functionality at the required time. Traditionally the focus has been on satisfying the contents of a requirements document and conforming to previous deliverables, even though the requirements are often inaccurate, the previous deliverables may be flawed and the business needs may have changed since the start of the project.
V.	Iterative and incremental development is necessary to converge on an accurate business solution DSDM allows incremental growth. Therefore the developers can make full use of feedback from the users. Moreover partial solutions can be delivered to satisfy immediate business needs.
VI.	All changes during development are reversible To control the evolution of all products (documents, software, test products, etc.), everything must be in a known state at all times. This means that configuration management must be all-pervasive. Backtracking is a feature of DSDM. However in some circumstances it may be easier to reconstruct than to backtrack. This depends on the nature of the change and the environment in which it was made.
VII.	Requirements are baselined at a high level. Baselining high-level requirements means "freezing" and agreeing the purpose and scope of the system at a level that allows for detailed investigation of what the requirements imply.
VIII.	Testing is integrated throughout the lifecycle Testing is not treated as a separate activity. As the system is developed incrementally, it is also tested and reviewed by both developers and users incrementally to ensure that the development is moving forward not only in the right business direction but is technically sound.
IX.	A collaborative and co-operative approach between all stakeholders is essential. The nature of DSDM projects means that low-level requirements are not necessarily fixed when the developers are originally approached to carry out the work. Hence the short-term direction that a project takes must be quickly decided without recourse to restrictive change control procedures. The stakeholders include not only the business and development staff within the project, but also other staff such as Service Delivery or resource managers.

Table 1: The nine underlying Principles of DSDM

individual delivery may have to be left out. However it is important that essential work is done and that only less critical work is omitted. The method of ensuring that this is true is clear priori-

tisation of the requirements.

The simple MoSCoW rules are used to achieve this.

- Must have for requirements that are fundamental to the solution. Without

them the solution will be unworkable and useless. The Must Haves define the minimum usable subset. A DSDM project guarantees to satisfy all the minimum usable subset.

- Should have for important requirements for which there is a workaround in the short term and which would normally be classed as mandatory in less time-constrained development, but the solution will be useful and usable without them.
- Could have for requirements that can more easily be left out of the increment under development.
- Want to have but Won't have this time for those valuable requirements that can wait till later development takes place; in other words, the Waiting List.

Timeboxing

Timeboxing is a very important aspect of DSDM projects. Without timeboxing, project teams can lose their focus and run out of control. Timeboxing is a process by which defined objectives are reached at a pre-determined and immovable date through continuous prioritisation and flexing of requirements using the MoSCoW rules.

Timeboxing can be used at various levels within the project:

- fixing the project end-date and the overall business objectives to be achieved by that date
- fixing the end date for each increment within the project, the set of business and technical requirements to be satisfied by that date are defined
- fixing the end time for a workshop, meeting or review encouraging the participants work to the predefined and prioritised objectives.

Project Management

In DSDM, users and developers collaborate to produce a system that both meets the business need and is maintainable. This requires a change of style for those project managers, who are used to controlling their developers tightly. They can be made very uncomfortable by the user/developer consensus approach taken in DSDM projects. Indeed enabling the day-to-day activities in a DSDM project can be challenging for any project manager.

DSDM projects take a wide variety of forms from IT systems development through to business process design. An IT system development may be a bespoke system created from scratch or it may involve the implementation of an existing package. The project may be done in-house or by a software supplier. The DSDM project may be stand alone or embedded in a larger development, which may in turn be managed by traditional methods or by DSDM.

Project Planning

The purpose of planning in DSDM, as in traditional approaches, is to ensure the success of the project. However, in DSDM, planning is not just an activity that takes place at the beginning of the

project: it continues throughout the lifecycle.

Rather than having detailed plans for the whole project at the start, DSDM project plans evolve with more and more detail as the project progresses, as requirements are progressively refined and as lessons are learnt. However, it will be an unusual organisation that does not have standards or requirements for the production of overall project plans.

A traditional project manager will normally focus on agreeing a detailed « contract » with customers about the totality of the system to be delivered along with the costs and timescales. In a DSDM project, the Project Manager is focused on setting up a collaborative relationship with the customers, bringing them fully into the make-up of the team.

In the traditional project, the manager is concerned with understanding the requirements in complete detail so that the right level of resources can be secured and an estimate of the completion time can be made. In the DSDM project, the manager is concerned with agreeing with the users the process by which the business requirements will be met. The

initial plans are created in sufficient detail to establish the main parameters of the project and with the firm expectation that the customers will change the plan during the course of the project as they gain a deeper understanding of their needs.

Risk Management

Most procurers of IT systems are concerned with two risks. These are that the system will not meet the needs of the business and that the project will overrun on time and/or cost. DSDM is designed to counteract both of these risks. Systems that meet the needs of the business are delivered through the incremental and iterative approach with its continuous feedback from users. Cost and time overruns are avoided by the use of timeboxes.

Some risks that arise in traditional development also arise in DSDM projects. For example, the use of leading edge technologies can give rise to major benefits in capability and in performance. But they can also carry risks associated with their immaturity. A DSDM approach by its nature helps mitigate the risks of using new technologies. Prototypes can be used to test performance and stability issues. The incremental DSDM approach can test out new technologies on a limited scale before rolling them out fully.

This does not mean that managing a DSDM project is a risk-free activity. In the main the risks arise from not complying with one or more of the underlying principles of DSDM followed by a failure to implement risk mitigation activities to allow for the non-compliance.



Barry Fazackerley is Chairman of the DSDM Consortium (International) www.dsdm.org and Principal Consultant at Xansa

Xansa is a company which transforms the business capability of its clients and operates in the UK, USA, continental Europe, India and Asia Pacific www.xansa.com Barry has been involved with DSDM since its inception in 1994. He has been a member of the DSDM Board of Directors since 1998 and was elected chairman in 2001. He is an accredited DSDM Practitioner, Trainer, Examiner and IAF Certified Professional Facilitator and Assessor. He has had many papers published on various Application Development topics including DSDM, JAD and Offshore Development. He has spoken at several leading conferences representing DSDM and is a strong supporter and signatory of the Agile Alliance. Furthermore he has been a key architect in strengthening DSDM's profile as an agile approach. Within Xansa, Barry has implemented DSDM for major organisations in Europe and North America transforming the organisations' delivery capability. He is a member of the UK Institute of Directors.

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Quality Management

From the point of view of a user, the "quality" of the solution will often be defined in terms of the way in which it provides the capability and support required by the user. This can be termed the "fitness for purpose" of the system. Given that one of the DSDM principles is that fitness for business purpose is the essential criterion for acceptance of deliverables, it should be expected that DSDM will serve to provide high quality solution. In other words, quality will be built in to the system, facilitated by the DSDM process.

Many techniques recommended by DSDM are used to ensure the quality of the project's products:

- Facilitated workshops ensure that the requirements are properly considered at the outset
- Continuous and focused user involvement helps to ensure that all parties understand each others - needs and viewpoints
- Reviews serve to ensure (and record) that the solution meets the needs of the business
- Thorough testing validates the delivered solution against its requirements
- Configuration Management and Change Control serve to ensure that quality, once built in to the system, is preserved.

In some environments, quality-related activities are seen as onerous because they are perceived as adding bureaucracy and overheads. These quality activities are embedded in the DSDM process and much more likely to be completed.

Conclusion

DSDM keeps a firm focus on satisfying the business needs rather IT's perception

of them. It has been proven on thousands of projects that by using DSDM the final solution is more likely to meet the real business requirements. So DSDM is very much about being focused on aligning business and IT to ensure that the solution delivers real business benefit.

NEXT ISSUE



John Gibert, director, Southcourt

Over the last eighteen years John Gibert has provided consultancy, implementation, education and managed services to clients in all industry sectors in the UK. In the next issue John will review the scope and structure of the domains. He will coordinate the analysts and collation of information to be provided during the bITa Europe Conference 2003, 10-14 March, Sophia Antipolis, Nice. He can be reached at j.gibert@btopenworld.com.

Also articles on:

- Microsoft Operations Framework (MOF) is a collection of best practices, principles and models developed by Microsoft Corporation. This article provides readers with information about MOF's three key elements : process, team and risk models
- Ongoing competence and career development. The article deals with the skills gap, which is not just about the quantity of skilled people needed within IT alignment, but their quality
- Alexandre Levinson takes you through the developments in Russia, where especially in the last two years the introduction of various frameworks has been significant
- IT architecture as a pre-condition for successful IT Alignment and Business IT Alignment. Described will be a collection of tightly integrated tools to perform network event and performance management services
- More and more there is a requirement for IT to implement full IT Service Management. The article introduces a whole host of new technology

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SPECIAL OFFER TILL 31st March 2003

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