IT-CMF

IT CAPABILITY MATURITY FRAMEWORK™

Executive Overview

IT Capability Maturity Framework

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Welcome to the
Innovation Value Institute

Many executives are struggling to optimize the way they manage and measure the business value of IT investments. In addition, there are many competing and conflicting demands such as security, compliance, innovation, business agility, and budget pressures that make the job of the CIO difficult.

Too often, these executives report that they lack adequate knowledge and the tools that will allow them to manage IT in a sustainable, coherent fashion while optimizing the value contribution to the business. There is a gaping hole waiting to be filled by a unifying, value-based management approach—an approach that focuses on both process and outcome, and that acts as a unifying lens for existing IT frameworks and for improving management practices where current knowledge or practices are often poor or non-existent.

This document presents an executive overview of the IT Capability Maturity Framework™ (IT-CMF™). The IT-CMF is a live document that we will continually update and improve using an open innovation approach. We are excited about the research agenda here at the Innovation Value Institute (IVI). This research will amalgamate leading academic theory with the best of corporate and public sector experience to foster innovation in the management and usage of IT to optimize business value. We intend to be a centre of excellence for IT Management and IT-driven business value and innovation through the development and use of our IT-CMF, which is at the heart of our research agenda. Please join us on the journey and help drive a structural change in the profession and industry with respect to how IT creates value.

Brian Donnellan and Martin Curley, Co-Directors

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Introducing the
IT Capability Maturity Framework

Since its creation in the 1980s to stimulate improvements in software development, the Capability Maturity Model has inspired reuse in many other areas of management. At the Innovation Value Institute™, we intend to refine and extend a framework originally developed by Martin Curley in his 2004 book, Managing IT for Business Value, and subsequently enhanced in his further research.

We call our model the Information Technology Capability Maturity Framework™ (IT-CMF™) to emphasize that it is similar to, but different from a classic Capability Maturity Model. The IT-CMF was developed based on the synthesis of leading academic research and industry practitioner experience using a design science research paradigm. It provides a generally reusable solution or design pattern that CIOs can use in their own specific context and environment to improve IT capability and value contribution. Curley has shared elements of the framework and empirically tested them in workshops with CIOs around the world.

The IT-CMF is an emerging blueprint of the key processes encapsulated in the IT capability of an organization. A core function of the IT-CMF is to act as an assessment tool and a management system with associated improvement roadmaps to help continuously improve, develop and manage the IT capability in support of optimized value delivery.

The top-down approach taken with the IT-CMF makes its major purposes and usage more clear to executives and line-of-business managers. The fine-grained detail of its *maturity levels*, *capabilities*, *characteristics*, and *critical capabilities* provides increasingly specific advice to IT professionals. Systematically improving the maturity of critical capabilities can improve the overall efficiency and effectiveness of the IT capability in delivering value to an organization. A detailed survey of 50 worldwide IT executives showed improved IT maturity to be a good predictor of improved value from the IT capability.

IVI will reference and, where possible, complement existing standards and best practice frameworks such as ITIL, CMMI, CoBIT, which are typically targeted at specific processes that enable the overall IT capability. We expect that the IT-CMF will also be of use in the field of services innovation.

At the top level, the IT-CMF comprises four key strategic areas of IT management, as shown in Figure 1. We call these broad strategic areas *macro-capabilities* in order to emphasize their complexity and their particular importance in managing IT for business value.

When the IT organization engine shown in Figure 1 is in operation, IT leaders set strategies for *managing IT like a business*. Like a business, IT has customers, products, and services; and aims to return business value on investments that are made in new and ongoing systems.

The result of a business-like strategy setting is a budget, and the next step in IT operations is *managing the IT budget*. Projects and ongoing operations must be funded and financed. In more sophisticated IT organizations, portfolios of IT projects and programmes are managed and monitored such that resources continue to be allocated within the budget and that they are in alignment with the company's overall strategies and objectives.

The budget fuels the mission of the IT organization, which is *managing the IT capability* of the organization. This macro-capability comprises the value-generating activities of an IT business. All businesses have some assets and a value chain which they use to generate value. Similarly, the IT capability consists of assets and an associated value chain. There are assets of several types to be managed, including infrastructure, people, relationships, and knowledge. For example, infrastructure assets require maintaining an agile and reliable infrastructure of networks, storage systems, shared processors, personal workstations, and software systems.

The IT organization intends that IT capability will provide business value. Measurements are needed to confirm that goals are met, which leads us to the final macro-capability: *managing IT for business value*. While in the past IT often reported response times and other technical operating measures, it is our contention that today's IT organization should develop and deploy measures of business value. What is important is whether an IT investment impacts the bottom line. Moreover, the IT organization needs to actively manage IT investments to ensure that value is realized.

The fundamental metric of business value is dollars, euros, or yuan, or in the case of public sector organizations, the quality of service that is efficiently delivered to customers, citizens, and stakeholders. The estimate may be based on improvements in inventory turns, growth in market share, or avoidance of costs due to IT efficiency and IT automation. But, at the end of the day, to understand IT's return on investment—that is, the business value contribution of IT—we will need to use a monetary metric or a public sector service outcome.

The cycle is complete, as Figure 1 on page 2 shows, when business value outcomes inform IT leaders, who then study the results, revise their business plans, and set new goals, objectives, strategies, and tactics.

It is the hallmark of a maturity model approach that excellence is achieved incrementally. As Table 1 shows, the IT-CMF is a blueprint for incremental improvement across the four macro-capabilities. There are five maturity levels, and the initial level is always *unmanaged*.

/// At the *initial level*, there is no strategy, no budget, no clear operating plan, and no measures of outcome in monetary or service terms. This level of maturity is often called *chaos*. The IT organization is six months behind schedule on important programmes, system outages are common, and line-of-business managers have no faith in IT.

/// At the *basic* level, the IT organization is starting to become organized. IT is a cost centre with, for example, a budget; and IT begins to deliver technology more reliably. The concept of tracking direct and indirect expenses emerges with a focus on total cost of ownership.

/// The *intermediate* level shows further improvements. Taking into account total cost of ownership, the IT organization formally begins considering the return on IT investments. A potential project requires a business case. IT operational expertise and efficiency begins to flourish, and the unit cost of delivering IT services begins to drop.

/// There is still room to grow and, at the *advanced* level, IT becomes an investment centre returning measured business value. IT services are delivered in partnership with IT's customers, who are their business colleagues in manufacturing, distribution, marketing, and finance.

/// The *optimizing* level describes ongoing year-on-year improvements to maintain and improve the business value contributions of IT. The successful IT organization finds itself in a virtuous circle as cost savings provide resources for innovative IT solutions which, in turn, improve business value contributions. IT's track record of delivering solutions that exhibit information or execution superiority over competing organizations means IT is recognized as a core competency and perhaps as an entrepreneurial value centre.

Table 1

IT Capability Maturity Framework

Maturity Levels	Macro-Capabilities			
	Managing IT like a Business	Managing the IT Budget	Managing the IT Capability	Managing IT for Business Value
Optimizing	Value centre	Budget amplification	Corporate core competency	Optimized value
Advanced	Investment centre	Expanded funding options	Strategic business partner	Options and portfolio management
Intermediate	Service centre	Systemic cost reduction	Technology expert	ROI and business case
Basic	Cost centre	Predictable performance	Technology supplier	Total cost of ownership
Initial	Unmanaged	Unmanaged	Unmanaged	Unmanaged

Source: Martin Curley (2007)

Mission of the Innovation Value Institute

With the IT-CMF revealed, we can expand on the Innovation Value Institute mission statement to say that the Institute's work is to build infrastructure that enables IT organizations to measure their maturity across four macro-capabilities and to identify exactly which process skills and competencies they should focus on next.

One implication of the IT-CMF is that growth is incremental. A second message emanating from the IT-CMF is that growth must be balanced across the four macro-capabilities. Imagine excellence in budgeting with no IT operational competence. A disaster. Similarly, the absence of business value assessment competence disables the strategizing needed to run IT like a business. Whilst IT organizations may be better at one or other of the macro-capabilities, most will find that they will be at about the same level across the four capabilities.

The IT-CMF in a Business Context

As the IT organization becomes more business-like, its leadership will find that they are no longer cost centre managers isolated from the rest of the company and the outside world. As Figure 2 illustrates, IT Capability is in the centre of the company's activities and shares responsibility for generating business value with the company's strategists and with the company's business operations managers.

Companies may aggressively posture IT as a key competitive weapon and a distinguishing feature of their products and services. IT could be on the short list of capabilities for which the company must excel in order to succeed. In other cases, IT may play a less significant or less visible role—and be an important but non-distinguishing feature. In these senses, IT posture is reflected in the relationship between business strategy and IT capability.

IT adds value through two primary mechanisms: ensuring business continuity and enabling business change. Existing IT solutions primarily enable business continuity to support value generation from existing business operations, whilst new IT investments are likely to be targeted to deliver business change that creates new value through improved business efficiency or effectiveness.

We define IT capability as *the focused strategic deployment of IT resources and competencies in support of the organization's goals.* As such, IT capability is a bridge between the company's business strategy and its business operations. In essence, IT capability is what IT can do for the business. IT must be precisely aligned with and tightly coupled to both of these business functions in order to provide business value. For example, when the company's strategy highlights high quality customer care, the IT organization needs to provide solid support to the business organization for customer care systems.

The entire company is embedded in a business context which is often turbulent. Market conditions, regulatory responsibilities, and competition are examples of elements in the business context. Changes in these elements affect overall business strategy most sharply. Many of these changes quickly have an impact on IT's strategy. An agile IT organization that is capable of shifting focus is, therefore, of critical importance to the company as a whole.

For example, when a hot market emerges in the manufacturing sector, a company's focus may well be to increase output at any cost, with the goal of attaining mindshare and marketshare for a new product. When a market shifts to price competition, as is especially common in more mature markets, the company must produce cost-effective output. Seasonal markets will affect the company's capacity requirements. World events can also create and destroy markets or change customer requirements and appetites.

In financial market terms, the posture of the organization with respect to IT can be either bullish, bearish, or neutral at different points in time. There will be some times when only the most critical IT systems will be affordable and other times when the IT organization will be asked to deploy capacity rapidly.

Our concern with business context underscores a fundamental characteristic of the IT-CMF. As IT capabilities improve, IT will transform itself into a central part of most companies' businesses. To do so will require improved IT maturity, as described in Table 1 on page 4. This transformation will also require leaders who have a greater degree of situational awareness—ongoing knowledge of the business context in which the company is embedded—whilst also having the technical acumen to know where technology can be applied in order to provide competitive advantage.

Figure 2

IT Capability in Context

Business Context

Business Strategy ↔ IT Capability ↔ Business Operations

Business Value
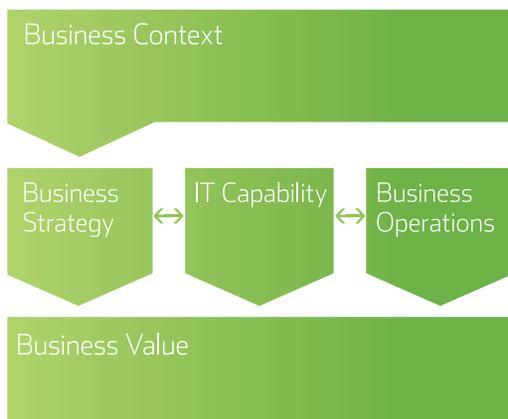
Key Capabilities
Marking Increasing IT Maturity

We are half way along a path which leads to the research that the Innovation Value Institute is undertaking. At this juncture, let us consider where we have been and where we are going.

Where We Have Been

The IT-CMF comprises four key capabilities. These four macro-capabilities work together to manage IT capability and deliver business value. We know what the four capabilities are and how they interoperate in a high-level, control loop fashion—with IT budget being a primary input that fuels the IT capability to deliver value, and with overall control provided through managing IT like a business. We identified the levels of maturity using a single, summarized term for each of the levels in each of the macro-capabilities. For example, *Expanded Funding Options* describes the advanced level for the macrocapability called *Managing the IT Budget*.

Where We Are Going

As we drill down, the next category of question is 'What competencies are needed to achieve excellence in the four macro-capabilities?' For our example, *Expanded Funding Options*, exactly which capabilities and characteristics are needed to achieve this level of maturity when managing the budget? The answers to questions of this nature take our thinking about the IT-CMF to a finer grain size.

Finer, but not fine enough. Our final discussion will break down the macro-capabilities into critical capabilities—that is, a specific set of repeatable integrated activities that leverage behaviour, actions, methods, and metrics needed to deliver specific outcomes in support of value creation. This strategy provides us with specified descriptions of what the IT organization needs to know and do.

The research of the Innovation Value Institute comprises systematic exploration of ways to improve these critical capabilities. Broadly stated, the research agenda will answer the question, 'How can IT organizations perform each of these critical capabilities well, better, and best, in support of value creation?'

Inspect Table 2 and Table 3 on page 8, and Table 4 and Table 5 on page 9 to gain an understanding of the characteristics that are defined in terms of capability and outcome maturity within the four IT-CMF macro-capabilities. These characteristics, along with the capabilities of the IT-CMF, enrich our understanding of the maturity levels and set the stage for the following discussion of critical capabilities.

Table 2

Managing IT
like a Business

Maturity Level	Key Capabilities and Characteristics
Value Centre	- IT is a value centre and publishes value statements regularly - IT and business values are highly aligned - The IT organization uses balanced score cards to drive continuous improvement - The IT organization is strongly entrepreneurial
Investment Centre	- IT is focused on service and usage excellence - IT customer and supplier relationship management are excellent - Funding mechanisms are flexible - IT uses dynamic resource allocation
Service Centre	- IT is oriented to customers and service - Chargeback and cost accounting systems are in place - Service delivery and management practices are implemented
Cost Centre	- IT is a cost centre - Asset and cost centre systems are in place - IT is focused exclusively on technology and process - Some IT processes have been documented
Unmanaged	- There is no IT strategy - There are no defined IT processes

Table 3

Managing the
IT Budget

Maturity Level	Key Capabilities and Characteristics
Budget Amplification	- A stable IT budget supports the growth demands of the company - Budget allocations are balanced across appropriate portfolios that are based on value performance - IT intensity is actively managed and compared against other key corporate spending categories - Budget is driven by long-term organisztion and business roadmaps
Expanded Funding Options	- IT has attracted multiple sources of funding - Cost savings are shifted to strategic investments or to the bottom line - The IT budget is in compliance with governance and with IT usage principles - The IT budget is aligned with long-term business value
Systematic Cost Reduction	- Systematic cost reduction processes are in place - IT unit costs are trended and reduced annually - A dynamic baseline IT budget approach is in place
Predictable Financial Performance	- A defined IT budget exists - IT tracks performance against periodic financial and spending plans - Variance between actual and planned spend remains within a specified control limit
Unmanaged	- Financial performance is erratic - The IT budget has no clear owner - IT spend is invisible and fragmented - IT funding is not aligned with long-term business value

Table 4

Managing the
IT Capability

Maturity Level	Key Capabilities and Characteristics
Strategic Core Competency	- IT enables information and/or execution superiority over competition
	- A steady stream of solutions provides competitive advantage
	- IT is recognized as a differentiating core competency
Strategic Business Partner	- IT leadership is integrated with business leadership
	- IT delivers solutions that provide value in specific business areas
	- IT delivers key competitive capabilities in targeted areas
	- IT leaders understand the business and proactively propose solutions to key opportunities and problems
Technical Expert	- IT has a track record for delivering quality services that are reliable
	- The IT organization is sought out as a source of technical expertise
	- IT provides a reliable utility IT service that is benchmarked on performance and cost
Utility or Technology Supplier	- There is growing respect for the IT organization
	- The company views IT purely as a cost centre
	- IT is a cost to be continuously reduced
Unmanaged	- Users purchase and maintain IT systems
	- There is no formal IT presence
	- There is no integration of IT systems

Table 5

Managing IT for
Business Value

Maturity Level	Key Capabilities and Characteristics
Optimized Investment Return	- IT performs sophisticated investment and portfolio analysis in order to optimize investments and spend
	- Returns from IT-enabled investments are equal to or greater than returns from other investment types in the company
	- Historical data enables accurate predictions of the value of future investments
Portfolio and Options Management	- IT has a proactive portfolio management programme
	- IT uses an options management approach to pick and manage speculative IT investments
	- IT weighs risk and value-at-risk as key components of business cases
Simple Return-on-Investment and Business Case Disciplines	- There is a disciplined use and review of business cases
	- IT has in place either investment governance or a business value programme
	- IT uses multi-metric analysis of business cases to determine best quality investments
Total Cost of Ownership	- IT computes total cost of ownership for major assets
	- IT tracks total cost of ownership regularly to ensure there is continuous cost reduction
	- IT computes total cost of ownership for the full life cycle
Unmanaged	- Decisions are based on cost, not value
	- There is no comprehension or measure of the value IT provides
	- Total cost of ownership is rampantly escalating

Figure 3

Critical Capabilities
of the IT-CMF

Managing IT like a Business

AA	Accounting and Allocation
BP	Business Planning
BPM	Business Process Management
CFP	Capacity Forecasting and Planning
DSM	Demand and Supply Management
IM	Innovation Management
ITG	IT Leadership and Governance
ODP	Organization Design and Planning
RM	Risk Management
SAI	Service Analytics and Intelligence
SRC	Sourcing
SP	Strategic Planning
SICT	Sustainable Information and Communication Technology

Managing the IT Budget

BGM	Budget Management
BOP	Budget Oversight and Performance Analysis
FF	Funding and Financing
PPP	Portfolio Planning and Prioritization

Managing the IT Capability

CAM	Capability Assessment and Management
EAM	Enterprise Architecture Management
KAM	Knowledge Asset Management
PAM	People Asset Management
PPM	Programme and Project Management
RAM	Relationship Asset Management
RDE	Research, Development, and Engineering
SRP	Service Provisioning
SD	Solutions Delivery
SUM	Supplier Management
TIM	Technical Infrastructure Management
UED	User Experience Design
UTM	User Training Management

Managing IT for Business Value

BAR	Benefits Assessment and Realization
PM	Portfolio Management
TCO	Total Cost of Ownership

Critical Capabilities
Underpinning the IT-CMF

For the IT-CMF, critical capabilities are the key activities and procedures that must be defined and mastered to enable an IT organization to plan and deliver IT solutions, and to measure the business value consequences of its initiatives and daily activities.

There is a range of different perspectives with respect to the IT-CMF's critical capabilities in particular, and to the IT-CMF in general.

/// For the stakeholders and the board of directors, IT is no longer a function of finance. Investors and directors are well aware that a keen IT strategy is a necessary enabler of enterprise success. While the board and investors will not expend effort in unnecessary overanalysis of the IT strategy, they will most certainly monitor the outcomes of IT strategy—namely the business value derived from IT.

/// For the MD or CEO, IT capabilities emerged over three decades ago as both an opportunity and a risk. Across a wide spectrum of businesses, IT capability has a demonstrated ability to move markets, differentiate products, and change entire industry landscapes. While the MD may not care to know about each critical capability, he or she would want to be assured that IT is maturing and that best-known practices are in place.

/// For the CIO, the challenge is to take on board-level responsibilities and participate in all facets of the company's activities. To succeed, the CIO must both cultivate a mature, efficient, and innovative IT organization and participate in company-wide business decision-making. The CIO must also provide leadership as the IT organization becomes a hybrid of both technical and business expertise.

/// For IT senior leadership, critical capabilities highlight the importance of top-level guidance. Portfolio management, for example, is a step up from project-by-project decisions. While it may have inherent difficulties, Portfolio Management recognises the value of IT. It has always been true that IT has collections of initiatives and activities. Similarly, IT's senior leaders will need to speak the language of business while continuing to provide technology oversight to projects and programmes.

/// For the IT line manager, critical capabilities immediately lead to critical skill sets. IT line managers need to assemble teams that know what to do and how to do it. The depth of necessary skills can be daunting, and the scope of skill requirements is ever-broadening. On the other hand, career paths are vastly better marked with an explicit and clear list of critical capabilities to master.

Examine Table 6 on page 12 for an overview of the IT-CMF's critical capabilities. These are the processes that enable capabilities and determine the characteristics of the four macro-capabilities. Study Table 7 on page 13, Table 8 and Table 9 on page 14, and Table 10 on page 15 to understand the critical capabilities in greater detail.

Table 6	Macrocapability	Critical Capability
Critical Capabilities for the IT-CMF	Managing IT like a Business	- Accounting and Allocation
		- Business Planning
		- Business Process Management
		- Capacity Forecasting and Planning
		- Demand and Supply Management
		- Innovation Management
		- IT Leadership and Governance
		- Organization Design and Planning
		- Risk Management
		- Service Analytics and Intelligence
		- Sourcing
		- Strategic Planning
		- Sustainable ICT
	Managing the IT Budget	- Budget Management
		- Budget Oversight and Performance Analysis
		- Funding and Financing
		- Portfolio Planning and Prioritization
	Managing the IT Capability	- Capability Assessment and Management
		- Enterprise Architecture Management
		- Knowledge Asset Management
		- People Asset Management
		- Programme and Project Management
		- Relationship Asset Management
		- Research, Development, and Engineering
		- Service Provisioning
		- Solutions Delivery
		- Supplier Management
		- Technical Infrastructure Management
		- User Experience Design
		- User Training Management
	Managing IT for Business Value	- Benefits Assessment and Realization
		- Portfolio Management
		- Total Cost of Ownership

Source: Martin Curley (2007)

Table 7

Critical
Capabilities for
Managing IT
like a Business

Critical Capability	Purpose and Results
Accounting and Allocation AA	- The policies, processes and tools used for calculating and distributing the costs of IT. - A range of methods such as chargeback, transfer pricing, and allocation may be used to manage the cost of IT services and to influence the demand for IT services within an organization.
Business Planning BP	- Define and anticipate the company's demands for IT capabilities and services. - Business planning identifies key objectives and areas for IT investments.
Business Process Management BPM	- Document and manage the IT organization's work flows and business processes. - Management of processes and work flows can substantially improve IT efficiency.
Capacity Forecasting and Planning CFP	- Anticipate the shifting needs for IT capabilities and plan to deliver them in a timely fashion. - Capacity planning provides the company with the right amount of IT resources, sometimes more and sometimes less, to meet shifting needs.
Demand and Supply Management DSM	- Achieve a balance between supply and demand for IT services which is both efficient and sufficient. - Cost-effective and business-proficient IT systems are delivered at an optimal cost.
Innovation Management IM	- Creating, identifying, funding and measuring IT-based innovations in order to generate business value. - Companies systematically monitor their environment, adapt with new solutions, and prosper.
IT Leadership and Governance ITG	- Provides the decision rights and accountability framework to encourage behaviours that lead to the achievement of the organization's IT business value goals. - Top performing companies show 20% better performance when governance is aligned with enterprise goals.
Organization Design and Planning ODP	- Review and reorganize as necessary the alignment between the IT organization and company needs. - Stable organizations are increasingly rare in the dynamic world of today's business.
Risk Management RM	- Analyse threats and their potential impacts, and develop strategies to mitigate those threats. - Business continuity is ensured by systematically mitigating IT operational risk.
Service Analytics and Intelligence SAI	- IT performance monitoring, modelling, and analysis to establish a clear understanding of the relationship between business processes and the underlying IT infrastructure and processes – in order to sustain and optimize the delivery of IT services for business value. - The IT organization leverages this knowledge as an integral component for efficient operations and effective planning.
Sourcing SRC	- Identifying and forming supply agreements with vendors and internal providers. - Sourcing results in placing some enterprise activities outside the company, that is, outsourcing.
Strategic Planning SP	- Sets the vision, mission and objectives for the IT organization in line with the company's overall strategies. - Business and IT strategy is aligned to ensure an effective translation of plans into IT capability requirements and business value.
Sustainable ICT SICT	- Align IT processes and practices with the core principles of sustainability, i.e. reduce, reuse, recycle. - Adoption of IT-enabled business processes can deliver positive sustainability benefits across the enterprise and beyond.

Source: Martin Curley (2007)

Critical Capability	Purpose and Results
Budget Management BGM	- Active, ongoing review and adjustment of the IT spending plan to systematically ensure that allocated budgets are being spent effectively and are within budget parameters and the governance model. - Careful budgeting leads to continuous unit cost reduction for IT services.
Budget Oversight and Performance Analysis BOP	- Periodic offline review of IT spending versus IT plan, which provides a stimulus for re-profiling or reprioritization of budgets. - Oversight certifies that the budget targets are being met and variance analysis improves forecasts in the future.
Funding and Financing FF	- Determine the scale, scope and sources of funding for IT, and assign financial resources to IT activities. - Find a balance between capital expenses and operating expenses to optimize total cost of ownership.
Portfolio Planning and Prioritization PPP	- Allocate the IT budget to projects and activities based on factors such as risk management. - Historical returns data informs portfolio planning to improve the investment mix.

Source: Martin Curley (2007)

Critical Capability	Purpose and Results
Capability Assessment and Management CAM	- Create the support, reliability, repeatability, and effectiveness to assess the IT capability. - Assessment roadmaps are defined and put forward for realization to improve the organization's capability.
Enterprise Architecture Management EAM	- Provide the necessary models and practices for defining, planning and managing the business and IT capabilities by developing the business, data, application, and technical architecture of IT systems. - Achieve effectiveness and agility with technical standardization and system integration.
Knowledge Asset Management KAM	- Promote a collaborative culture and define practices and actions to guide employees in harnessing knowledge assets as part of their work. - By identifying, capturing, classifying, maintaining and sharing knowledge assets, value is leveraged throughout the organization.
People Asset Management PAM	- Manage and train personnel to be successful contributors to the IT organization. - Create a culture where IT is customer-focused in order to provide the company with business value.
Programme and Project Management PPM	- Cultivate the ability to manage programmes and projects to be on time, on budget, and on target. - The costs of schedule overruns are avoided and the quality of IT solutions is matched to customer needs.
Relationship Asset Management RAM	- Enhance the relationship between the IT organization and the company's business units. - IT will share in the risks and rewards associated with the overall business of the company.
Research, Development, and Engineering RDE	- Formally investigate new information technologies and the opportunities they provide. - IT R&D can deliver prototypes of innovative IT systems, white papers, or patent filings.
Service Provisioning SRP	- Provide reliable IT services to support the company's objectives and strategies. - Data centres, help desks, and service solutions are in position to support IT's customers.

Table 9 cont'd

Critical Capability	Purpose and Results
Solutions Delivery SD	- Deploy systems and solutions that efficiently address the company's IT requirements and opportunities. - IT solutions are delivered with the cost, schedule, functionality, and quality the company needs.
Supplier Management SUM	- Encourage cooperative relationships with contractors to create shared value. - Achieve more value from the company's primary supply base.
Technical Infrastructure Management TIM	- Optimize IT infrastructure (including client, network, storage, and server) to support the business - Provide an on-demand capability, which is efficient and reliable, as a platform for delivering IT services.
User Experience Design UED	- Create solutions that increase both business productivity and satisfaction of end users. - Usefulness and ease of use are the hallmarks of a successful IT solution.
User Training Management UTM	- Maximize user proficiency and ensure users acquire the right skills at the right time. - Business value is maximized when excellent IT solutions are put to maximum usage.

Source: Martin Curley (2007)

Table 10

Critical Capabilities for Managing IT for Business Value

Critical Capability	Purpose and Results
Benefits Assessment and Realization BAR	- Establish a common business value vocabulary, and a measurement and valuation methodology to express the potential business value returns and to document the actual business value returns. - Construct high-quality business cases and manage the realization of actual benefits versus original forecasts to ensure organizations achieve business value delivery.
Portfolio Management PM	- Regularly examine the mix of IT projects and the allocation of resources among them. - Ensure that all proposed investments are executed within their set parameters and remain in line with business objectives.
Total Cost of Ownership TCO	- Track and control direct and indirect costs associated with IT infrastructure and systems. - Total cost of ownership better informs the budgeting and portfolio management processes.

Source: Martin Curley (2007)

References

Agarwal, R, and
Sambamurthy, V. 2002.
*Principles and Models for Organizing the IT
Function*, MIS Quarterly Executive, Volume
1 (1), March: 1-16.

Alter, A. 2003.
*Do You Have Any Faith In Your ROI
Numbers?* www.cioinsight.com, March 17.

Alter, A. 2006.
The Bitter Truth About ROI.
www.cioinsight.com, August 4.

Andreessen, M. 2002.
Sidestepping The New IT Crisis.
Tech News/CNET.com, December.

Barney, JB. 1991.
*Firm Resources and Sustained Competitive
Advantage*. Journal of Management,
17;1: 99-120.

Christensen, CM. 1997.
*The Inventor's Dilemma:
When New Technologies Cause
Great Firms to Fail*. Boston, MA:
Harvard Business School Press.

Covey, SR. 1989.
*The Seven Habits of Highly Effective
People*. Simon and Schuster.

Crosby, PB. 1979.
*Quality is free: The Art of Making
Quality Certain*. McGraw Hill.

Curley, M. 2007.
*Introducing the IT Capability Maturity
Framework*. Proceedings of the
International Conference on Enterprise
Information Systems, Portugal, June.

Curley, M. 2006.
The IT Transformation at Intel.
MISQE, December.

Curley, M. 2006.
*A Value Based IT Capability Maturity
Framework*. Intel EMEA Academic
Forum, Ireland.

Curley, M. 2006.
IT Innovation, A New Era. Proceedings
of the International Conference of
Computational Science, Reading, UK.

Curley, M. 2004.
*Managing Information Technology
for Business Value.* Intel Press.

Curley, M. 2006.
The IT transformation at Intel.
MIS Quarterly Executive, Volume 5,
Issue 4 (1), December: 109 - 122.

de Geus, A. 1997.
*The Living Company: Habits of Survival in
a Turbulent Business Environment*. Harvard
Business School Press.

Dedrick, J, Gurbaxani, V,
and Kraemer, KL. 2002.
*Information technology and economic
performance: a critical review of the
empirical evidence*. University of California,
Irvine, Center for Research in IT and
Organizations (CRITO), November.

Earl MJ, and Sampler, JL. 1998.
*Market Management to Transform the IT
Organization*. MIT Sloan Management
Review, Summer.

Eckert, A. 2002.
Maximizing ROI Through User Proficiency.
Insiders View, SAS.com, June.

Gurbaxani, V, and Kemerer, CF. 1990.
*An Agency Theory View of the
Management of Information Systems*.
Proceedings of the International
Conference on Information Systems,
279-288.

Humphrey, W. 1989.
Managing the Software Process.
Software Engineering Institute.

Kohli, R, and Deveraj. 2004.
*Realizing the Business Value
of IT Investments: An Organizational
Process*. MIS Quarterly Executive,
Volume 3 (1), March.

Marchand, DA. 2004.
*Reaping the Business Value of IT:
Focus on Usage, Not Just Deployment,
To Optimize Payback*. IMD publication
No. 114, November.

Markus, ML, and Soh, C. 1995.
*How IT Creates Value, a Process Theory
Synthesis*. Proceedings of the 16th
International Conference of Information
Systems, Amsterdam, The Netherlands.

Markus, ML, and Soh, C. 1993.
*Banking on Information Technology:
Converting IT Spending Into Firm
Performance*. In RD Banker, RJ Kauffman
and MA Mahmood (Editors), Strategic
Information Technology Management:
Perspectives on Organizational growth
and Competitive Advantage. Harrisburg,
Pennsylvania: Idea Group Publishing,
pp 405-444.

Mooney, JG, Gurbaxani, V,
and Kraemer, K. 1995.
*A Process Oriented Framework for
Assessing the Business Value of
Information Technology*.
CRITO paper, UC Irvine.

Paulk, MC, Curtis, B,
Chrissis, MB, and Weber, C. 1993.
*Capability Maturity Model for Software,
Version 1.1*. Software Engineering Institute,
CMU/SEI-93-TR-24, DTIC Number
ADA263403, February.

Peppard, J, and Ward, J. 2004.
*Beyond Strategic Information Systems:
Towards An IS Capability*. The Journal
of Strategic Information Systems,
July, pp 167-194.

Ross, JW, Beath, CM,
and Goodhue, DL. 1996.
*Developing Longterm Competitiveness
Through Information Technology Assets*.
Sloan Management Review, Vol. 38, Fall.

Ross, JW, Weill, P, and
Robertson, DC. 2006.
*Enterprise Architecture as Strategy:
Creating a Foundation for Business
Execution*. Harvard Business School Press.

Salman, R, and Younis, N. 2005.
*Lessons to Management from the Control
Loop Phenomenon*. Transactions on
Engineering, Computing and Technology.

Sambamurthy, V,
and Zmud, RW. 1994.
*It Management Competency Assessment:
A Tool For Creating Business Value
Through IT*. Working Paper, Financial
Executives Research Foundation.

Sward, D. 2006.
Measuring IT for Business Value.
Intel Press.

Tallon, P, et al. 2000.
*Executives' Perspectives on the Business
Value of Information Technology.
A Process-Oriented Approach*. Journal
of Management Information Systems.

Venkatraman, N. 1997.
*Beyond Outsourcing: Managing IT
Resources as a Value Center*. MIT Sloan
Management Review, Spring.

Weill, P. 1992.
*The Relationship between Investment
in Information Technology and Firm
Performance: A Study of the Value
Manufacturing Sector*. Information
Systems Review, Volume 3, Number 4,
pp 307-333.

Weill, P. 2004.
*Don't Just Lead, Govern. How Top-
performing Firms Govern IT*. MIS Quarterly
Executive, Volume 3 (1), March.

Weill, P, and Ross, J. 2004.
*How Top Performers Manage IT Decisions
Rights for Superior Results*. Harvard
Business School Press.

Weill, P, and Ross, J. 2004.
IT Governance in One Page.
MIT CISR Working Paper #349.

Weill, P, and Woodham. 2002.
*Don't Just Lead, Govern: Implementing
Effective IT Governance*. MIT Sloan CISR
Working Paper #326, April.

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