Enterprise Value: Governance of IT Investments

The Val IT Framework 2.0

Val IT™

BASED ON COBIT®



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The IT Governance Institute (ITGI™) (*www.itgi.org*) is a non-profit, independent research entity that provides guidance for the global business community on issues related to the governance of IT assets. ITGI was established by the non-profit membership association ISACA in 1998 to help ensure that IT delivers value and its risks are mitigated through alignment with enterprise objectives, IT resources are properly allocated, and IT performance is measured. ITGI developed *Control Objectives for Information and related Technology* (COBIT®) and Val IT™, and offers original research and case studies to help enterprise leaders and boards of directors fulfil their IT governance responsibilities and help IT professionals deliver value-adding services.

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TABLE OF CONTENTS

Foreword—A Brief Overview of ITGI's Val IT Initiative 6

1. Enterprise Value: The Critical Need for a Comprehensive, Practical Approach 7
The Elusive Value of IT 7
Transforming IT Into Clear Business Value 7
What It Takes to 'Get IT Right': A Few Crucial Insights 8
The Most Common Challenge: The Absence of a Structured Approach 8

2. What is the Val IT Framework? 9
A Brief Definition 9
Val IT and COBIT: A Synergistic Relationship 9
Understanding the Concept of 'Value' 10
A Wealth of Benefits 10

3. Key Terms, Principles and Domains 11
Val IT Terms: Establishing a Common Language 11
Val IT Guiding Principles: The Tenets That Underlie the Framework 11
Val IT Domains: Where the Principles Are Applied 12
A Special Note on Key Components of Investment Management 13

4. Val IT Processes 15
Val IT Domains and Processes 15
Value Governance (VG) 16
Portfolio Management (PM) 17
Investment Management (IM) 18
Val IT Management Guidelines 19
VG Maturity Model 21
PM Maturity Model 22
IM Maturity Model 23
The Relationship Between Val IT and COBIT 24

5. Detailed Val IT Processes and Key Management Practice Descriptions 27
Inputs and Outputs 27
Roles and Responsibilities 27
Goals and Metrics 29
Maturity Models 30
Value Governance 32
Portfolio Management 47
Investment Management 67

6. Functional Accountabilities and Responsibilities 93

7. References 107

Appendix A—Changes Between the First Edition and Val IT 2.0 109

Appendix B—Glossary 113

Other Publications 115

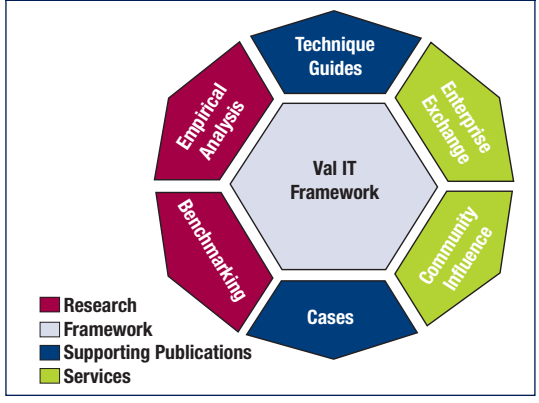
FOREWORD—A BRIEF OVERVIEW OF ITGI'S VAL IT INITIATIVE

This document forms part of the IT Governance Institute's (ITGI's) Val IT™ initiative, which is dedicated to helping enterprises optimise the realisation of value from IT investments.

Drawing on the collective experience of a global team of practitioners and academics, existing and emerging practices and methodologies, and a rapidly growing body of research, the initiative has developed the Val IT framework. This is a governance framework that consists of a set of guiding principles and a number of processes conforming to those principles that are further defined as a set of key management practices.

As the Val IT initiative continues to evolve, it will encompass a comprehensive set of research activities, publications, and auxiliary services supporting the core Val IT framework as illustrated in **figure 1**.

Figure 1—The Val IT Initiative



The Val IT framework is closely aligned with and complements ITGI's COBIT®,[1] which provides a comprehensive framework for the delivery of high-quality information technology-based (IT-based) services. While COBIT sets good practices for the *means* of contributing to the process of value creation, Val IT sets good practices for the *ends*, by providing enterprises with the structure they require to measure, monitor and optimise the realisation of business value from investment in IT.

Val IT complements COBIT from a business and financial perspective, and will help any business or IT professional with an interest in value delivery from IT.

As the core publication in the Val IT series, *Enterprise Value: Governance of IT Investments, The Val IT Framework 2.0* presents processes and key management practices for three domains:
- Value governance
- Portfolio management
- Investment management

This latest edition, version 2.0, extends the Val IT framework beyond new investments to include IT services, assets and other resources. It does this by identifying a broader range of operational portfolios that might be enhanced as a result of investments managed by Val IT, but which would be managed by COBIT, and by providing 'hooks' for the performance of those portfolios to be reported back to Val IT. It also aligns terminology with COBIT, and adds a management guidelines section, similar to COBIT, that provides a greater level of detail on the Val IT processes and key management practices, as well as maturity models for each Val IT domain.

The guidance and examples presented in this publication are applicable to all enterprises and address all aspects that should be contained in defining, evaluating, selecting and managing any IT investment. This guidance, however, is not intended to be prescriptive, and should be tailored to fit the enterprise's management approach. Small and medium-sized enterprises can adapt the templates and make them simpler to create and maintain, but in all cases the model adopted should cover business alignment, cost and benefits (financial and non-financial), and risks since these play a major role in every investment analysis for every enterprise.

This publication is available in two forms, an extract and a full version. The extract is intended for the reader who wants an overview of Val IT without the detail, and includes the first four chapters of the full document, which provide:
- An introduction to the challenge of value, and the need for a comprehensive and structured governance framework
- An introduction to the Val IT framework
- Key Val IT terms, principles and domains
- An overview of Val IT processes, including high-level management guidelines, maturity models and the relationship between Val IT and COBIT

The full document is intended for the reader who needs a detailed understanding of Val IT, and includes two additional chapters, which provide:
- Detailed Val IT process and key management practice descriptions, including detailed management guidelines and maturity models
- A breakdown of accountabilities and responsibilities for Val IT activities by function

Other documents in the series are available from the ISACA Bookstore, *www.isaca.org/bookstore*.

[1] IT Governance Institute, COBIT (*Control Objectives for Information and related Technology*) 4.1, USA, 2007

1. ENTERPRISE VALUE: THE CRITICAL NEED FOR A COMPREHENSIVE, PRACTICAL APPROACH

A common and critical dilemma confronting enterprises today—regardless of factors such as size, revenue, industry, region or business model—is how to ensure that they realise value from their large-scale investments in information technology (IT) and IT-enabled change. This involves both selecting which investments to make and managing the complex challenges involved in ensuring that these investments result in concrete enterprise value.

The Elusive Value of IT

In recent years, surveys have consistently revealed that 20 to 70 percent of large-scale investments in IT-enabled change are wasted, challenged or fail to bring a return to the enterprise (**figure 2**). In fact, one survey on measuring costs and value found that, in many enterprises, less than 8 percent of the IT budget is actually spent on initiatives that create value for the enterprise.[2]

Figure 2—How Much of the Investment in IT Is Wasted?

- A 2002 Gartner survey found that 20 percent of all expenditures on IT is wasted—a finding that represents, on a global basis, an annual destruction of value totaling about US $600 billion.[3]
- A 2004 IBM survey of Fortune 1000 CIOs found that, on average, CIOs believe that 40 percent of all IT spending brought no return to their organisations.[4]
- A 2006 study conducted by The Standish Group found that only 35 percent of all IT projects succeeded while the remainder (65 percent) were either challenged or failed.[5]

Headlines around the world corroborate these findings:

- Nike reportedly lost more than US $200 million through difficulties experienced in implementing its supply chain software.[6]
- Failures in IT-enabled logistics systems at MFI and Sainsbury in the UK led to multimillion-pound write-offs, profit warnings and share price erosion.[7]
- Tokyo Gas reported a US $46.6 million special loss due to cancellation of a large customer relationship management (CRM) project.[8]
- In the public sector, the UK Department for Work and Pensions apparently 'squandered' more than £2 billion by abandoning three major projects.[9]

Other enterprises reported to have suffered in a similar fashion include Hershey,[10] AMR and National Australia Bank. Examples of other public sector organisations reported to have encountered major losses of value related to IT investments include the US Internal Revenue Service (IRS) and Federal Bureau of Investigation (FBI) as well as the Australian Customs Service (whose Integrated Cargo Systems project choked ports and almost brought imports to a standstill)[11] and the Canadian government (the net cost of whose implementation of a gun registry is 500 times the original estimate, with IT representing over 25 percent of that cost).[12]

Transforming IT Into Clear Business Value

Many enterprises have been able to achieve dramatic results. For example, Southwest Airlines implemented a highly successful supply chain transformation which improved demand forecasting accuracy, reduced procurement costs and increased service levels while at the same time reducing costs. IBM reportedly saved US $12 billion over two years by linking disparate components of its supply chain and reducing inventory levels. Step by step, Great West Life created extensive IT synergies that led to a significant part of the financial success of its recent acquisitions, as expressed by its market value. And, in 2007 HSBC highlighted the importance of its global IT strategy in contributing to a 17 percent increase in profits, increasingly employing technology to create better products that can be delivered globally at lower cost while creating opportunities to meet more of its customers' financial needs.[13]

Clearly, IT-enabled investments[14] can bring huge benefits. Indeed, a study carried out within global financial services group ING[15] indicates that such investments offer the opportunity to deliver greater rates of return than almost any other conventional investment. This research, carried out in mid-2004, indicates that, in comparison to commercial real estate, publicly traded equities and sovereign bonds, the return on a well-balanced portfolio of IT-enabled investments can be significantly higher.

Taken together, these examples highlight a strategic question: What does it take to ensure that IT results in positive—and perhaps even transformational—business value?

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[2] Butler Group, 'Measuring IT Costs and Value', September 2005
[3] Huber, N.; 'Gartner: Firms Waste £351bn Each Year on Ill-conceived IT Projects?', *ComputerWeekly.com* (UK), 21 March 2002
[4] IBM Strategy and Change Survey of Fortune 1000 CIOs, as presented to SHARE in New York by Doug Watters, 17 August 2004
[5] Cook, R.; 'How to Spot a Failing Project', *CIO Magazine*, 17 July 2007
[6] Songini, M..; 'Nike Blames Financial Snag on Supply-chain Project', *Computerworld*, 27 February 2001
[7] *The Times*, 'MFI Mulls Supply Chain Suit', and business editor's commentary, 22 July 2005
[8] Tokyo Gas Co., Ltd., Annual Report 2007
[9] *The Guardian*, 'Not Fit for Purpose: £2bn Cost of Government's IT Blunders', 5 January 2008
[10] *The Wall Street Journal*, 'Hershey's Biggest Dud Is Its New Computer System', 29 October 1999
[11] *The Infonomics Governance Newsletter*, November 2005, *www.infonomics.com.au/ITGL2005Nov.htm*
[12] 2006 May Status Report of the Auditor General of Canada, The Canadian Press, 'Millions Wasted as Tories Eliminate Gun Registry Contract, Opposition Says', 8 November 2007
[13] HSBC 2007 Annual Report
[14] The term 'IT-enabled investments' is used throughout this document to refer to significant business investments in sustaining, growing or transforming the business with a critical IT component.
[15] ING Investor Relations, 'IT Investment and Shareholder Return', *ING Shareholder's Bulletin*, vol. 12, no. 2, May 2004, *www.seaquation.com*

In a survey conducted by Deloitte Consulting of directors and C-level executives from 35 organisations, only one respondent reported a comprehensive approach to measuring and managing IT value and performance.

R. NOLAN AND W. MCFARLAN, 'INFORMATION TECHNOLOGY AND THE BOARD OF DIRECTORS', *HARVARD BUSINESS REVIEW*, USA, OCTOBER 2005

What It Takes to 'Get IT Right': A Few Crucial Insights

One of the single most important factors to getting IT right is a clear understanding—on the part of both the board and executive management—that IT is not an end to itself but a means of enabling business outcomes. IT is no longer about implementing technology. It is about unlocking value through IT-enabled organisational change.

Just as important is a strategic, leadership-sponsored commitment to establishing a comprehensive IT governance capability. Ensuring that value is sustained or increased from IT-enabled investments is an essential component of enterprise governance. It involves selecting investments wisely and managing them throughout their full economic life cycle, including the initial investment and the resulting IT services and other IT assets or resources. In fact, a 2007 report from the BTM Institute[16] confirmed that enterprises focused on converging their business and technology disciplines exhibited superior revenue growth and net margins relative to their industry groups and exhibited consistently greater rates of return than those of their competitors.

The Most Common Challenge: The Absence of a Structured Approach

The message is clear. IT-enabled investments can bring huge rewards, but only with the right governance and management processes and full engagement from all management levels. Until now, organisational leaders have not had a clear way to consider investments involving IT or how to report on or monitor the potential success or failure of these investments.

What is the payoff from a structured approach? The findings of a number of research projects conducted by the Massachusetts Institute of Technology (MIT) Center for Information Systems Research (CISR) suggest that firms with focused strategies and above-average IT governance capabilities had more than 20 percent higher profits than other firms following the same strategies.

PETER WEILL AND JEANNE W. ROSS, IT GOVERNANCE, HOW TOP PERFORMERS MANAGE IT DECISIONS FOR SUPERIOR RESULTS, *HARVARD BUSINESS SCHOOL PRESS*, USA, 2004

Research confirms this. The results of a 2007 global survey of 750 IT and business executives and managers, performed by PricewaterhouseCoopers Belgium for ITGI, confirms that while executive recognition of the importance of IT is increasing, a significant number of organisational leaders are questioning IT's return on investment and believe there is substantial room for improvement in aligning IT governance with corporate governance, and aligning IT and business strategy.[17] However, other research executed at University of Antwerp Management School, ITAG Research Institute, reveals that important governance practices such as benefits management and reporting are perceived as being very difficult to implement.[18]

What has been missing for many years has been ready access to a structured approach—a comprehensive, proven, practice-based structured governance framework—that can provide boards and executive management teams with practical guidance in making IT investment decisions and using IT to create enterprise value.

[16] *Business Technology Convergence Index, The Role of Business Technology Convergence in Innovation and Adaptability and its Effect on Financial Performance*, BTM Institute, June 2007
[17] IT Governance Institute, *IT Governance Global Status Report—2008*, USA, 2008, *www.itgi.org*
[18] De Haes, Steven; Wim van Grembergen; 'Practices in IT Governance and Business/IT Alignment', *Information Systems Control Journal,* 2008

2. WHAT IS THE VAL IT FRAMEWORK?

To address this increasing demand for a practical IT investment and management framework, ITGI—working with other thought leaders in the global business and IT community—has undertaken the Val IT initiative.

Dedicated to helping enterprises optimise the realisation of value from IT-enabled investments at an affordable cost, and with a known and acceptable level of risk, the Val IT initiative includes research activities, publications, and complementary resources, as outlined in **figure 1**, supporting its principal centerpiece, the Val IT framework.

Effective IT governance is the single most important predictor of the value an organisation generates from IT.

PETER WEILL AND JEANNE W. ROSS, IT GOVERNANCE, HOW TOP PERFORMERS MANAGE IT DECISIONS FOR SUPERIOR RESULTS.

A Brief Definition

The Val IT framework is a comprehensive and pragmatic organising framework that enables the creation of business value from IT-enabled investments. Designed to align with and complement COBIT, Val IT integrates a set of practical and proven governance principles, processes, practices and supporting guidelines that help boards, executive management teams and other enterprise leaders optimise the realisation of value from IT investments.

Val IT provides direct support to executives at all management levels across both business and IT organisations—from the CEO and other leaders within the C-suite, to managers and administrators directly involved in the selection, procurement, development, implementation, deployment and benefits realisation processes.

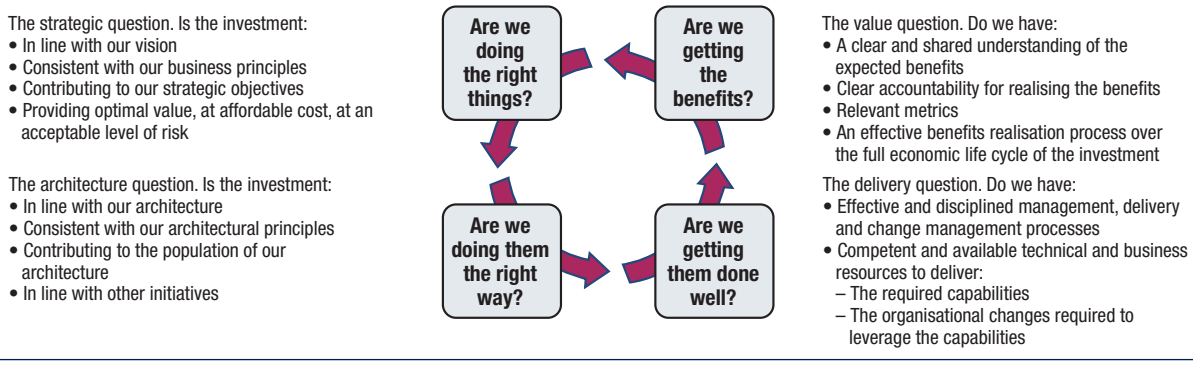
Used with considerable success by leading organisations for many years, the proven processes and practices within Val IT are presented—for the first time ever—as one single integrated governance framework that provides business and IT decision makers with a comprehensive, consistent, and coherent approach to creating concrete and measurable business value.

Val IT and COBIT: A Synergistic Relationship

With invaluable support from an internationally recognised set of experts in information governance, control, security and audit, ITGI has taken great care to design this framework to ensure that, taken together, Val IT and COBIT provide business and IT decision makers with a comprehensive framework for the creation of value from the delivery of high-quality IT-based services. Val IT both complements COBIT and is supported by it.

Understanding the relationship between these two frameworks is vital. Val IT takes the enterprise governance view. It helps executives focus on two of four fundamental IT governance-related questions (**figure 3**): 'Are we doing the right things?' (the strategic question) and 'Are we getting the benefits?' (the value question). COBIT, on the other hand, takes the IT view, helping executives focus on answering the questions 'Are we doing them the right way?' (the architecture question) and 'Are we getting them done well?' (the delivery question).[19]

Figure 3—'Four Ares'



As a comprehensive framework for the design and delivery of high-quality IT-based services, COBIT sets good practices for the IT function's *means* of contributing to the process of value creation. Val IT sets good practices for the *ends*—the *outcomes*—thereby enabling enterprises to measure, monitor and optimise value, both financial and non-financial, from IT-enabled investments. The consistency between methods and terminology used in Val IT and COBIT improves communications and the interrelationship between decision makers, the IT function, and the business functions accountable for delivering the planned value.

[19] Based on the 'Four Ares' as described by John Thorp in his book, *The Information Paradox—Realizing the Business Benefits of Information Technology,* written jointly with Fujitsu, first published in 1998 and revised in 2003, McGraw-Hill, Canada

Since value management, as it applies to IT or other investments, is an emerging discipline, the practices contained within Val IT will evolve over time—especially as experience with the discipline grows. The Val IT framework will be continually extended and improved based on the results of and experience with the framework and ongoing research.

Understanding the Concept of 'Value'

Within the Val IT framework, value is defined as the total life-cycle benefits net of related costs, adjusted for risk and (in the case of financial value) for the time value of money.

In many cases, however, value defies quantitative measurement. Value is complex, context-specific and dynamic. Value is indeed 'in the eye of the beholder'. The nature of value differs for different types of enterprises. While commercial enterprises are focusing much more than they have in the past on value of a non-financial nature, executives still tend to view value primarily in financial terms—often simply as the increase in profit to the enterprise that arises from the investment. For the public sector, or not-for-profit enterprises, value is more complex, and often, though not always, non-financial in nature. It can include achieving public policy outcomes, improvement in the quantity and quality of services provided to those whom the enterprise exists to serve (e.g., citizens for the public sector and beneficiaries of charities) and/or the net increase in income that is available to provide those services, either or both of which arise from the investment.

The concept of value relies on the relationship between meeting the expectations of stakeholders and the resources used to do so. Stakeholders may hold differing views of what represents value. The aim of value management is to optimise value by reconciling these differences and enabling an enterprise to:

- Clearly define and communicate its view of what constitutes value, and to whom
- Select and execute investments
- Manage its assets[20] and optimise value with an affordable use of resources and an acceptable level of risk[21]

ITGI regards value delivery as one of the five focus areas of IT governance. In addition to value delivery, the other four areas include strategic alignment, risk management, resource management and performance measurement. Value delivery depends on the other focus areas in that it requires strategic alignment, is enabled by risk management and resource management, and—together with the other areas—is monitored by performance measurement.

A Wealth of Benefits

Enterprises that apply the principles, processes and practices contained in Val IT can achieve a strategic set of benefits and create significantly higher levels of real business value. At a fundamental level, this framework helps decision makers increase their understanding of the nature of value and how it is created; gain transparency into costs, risk and benefits; and—as an extension of these—make more informed management decisions.

Val IT helps enterprises increase the probability of selecting investments with the highest potential to create value. Val IT also increases the likelihood of success executing the selected investments, both when IT services are being created or enhanced, and during the subsequent delivery and use of those services. The framework reduces costs and value leakage by helping ensure that decision makers stay focused on what they should be doing and take early corrective action on investments that are not delivering value in accordance with their expected potential. At the same time, the framework reduces the risk of failure, especially high-impact and highly visible failure. The framework also reduces the surprises associated with IT costs and delivery, and, in so doing, increases business value, reduces unnecessary costs, and increases the overall level of confidence in IT on the part of the board, executive management and other organisational leaders.

[20] In this context, 'asset' refers to anything that can be used by an enterprise to advance its objectives.
[21] Adapted from work done by The Institute of Value Management, *www.ivm.org.uk*

3. KEY TERMS, PRINCIPLES AND DOMAINS

Val IT Terms: Establishing a Common Language

Realising value from business change requires effective communication—a critical requirement difficult to achieve without the widespread acceptance of a consistent set of terminology. Unfortunately, in many cases, various parts of an enterprise tend to adopt different meanings for key words—and, in some situations, fail entirely to ascribe any meaning to other important terms and concepts. To provide consistency, **figure 4** defines a number of terms that are used in the Val IT framework. While an enterprise may choose to use different terms, or embrace different meanings, it is important to understand how the terms are used in this and other Val IT publications.

Figure 4—Definitions of Key Terms Used in the Val IT Initiative

Project—A structured set of activities concerned with delivering a defined capability (that is necessary but *not* sufficient to achieve a required business outcome) to the enterprise based on an agreed-upon schedule and budget

Programme—A structured grouping of inter-dependent projects that are both necessary and sufficient to achieve a desired business outcome and create value. These projects could involve, but are not limited to, changes in the nature of the business, business processes, the work performed by people, as well as the competencies required to carry out the work, enabling technology and organisational structure. The investment programme is the primary unit of investment within Val IT.

Portfolio—Groupings of 'objects of interest' (investment programmes, IT services, IT projects, other IT assets or resources) managed and monitored to optimise business value. The investment portfolio is of primary interest to Val IT. IT service, project, asset or other resource portfolios are of primary interest to COBIT.

Val IT Guiding Principles: The Tenets That Underlie the Framework

Val IT consists of a set of guiding principles and a number of processes conforming to those principles, which are further defined as a suite of key management practices. The relationship amongst these principles, processes and practices is set out in **figure 5**.

Figure 5—Relationship Amongst Val IT Principles, Processes and Practices

Val IT supports the enterprise goal of
creating optimal value from IT-enabled investments at an affordable cost, with an acceptable level of risk
and is guided by
a set of principles applied in value management processes
that are enabled by
key management practices
and are measured by
performance against goals and metrics

As summarised in **figure 6**, the Val IT principles are:

- **IT-enabled investments will be managed as a portfolio of investments.** Optimising investments requires the ability to evaluate and compare investments, objectively select those with the highest potential to create value, and manage all the investments to maximise value.
- **IT-enabled investments will include the full scope of activities required to achieve business value.** Realising value from IT-enabled investments requires more than delivering IT solutions and services—it also requires changes to some or all of the following: the nature of the business itself; business processes, skills and competencies; and organisation, all of which must be included in the business case for the investment.
- **IT-enabled investments will be managed through their full economic life cycle.** Business cases must be kept current from the initiation of an investment until any resulting service is retired. This principle recognises that there will always be some degree of uncertainty and that variability over time in costs, risks, benefits, strategy, and organisational and external changes must be taken into account in determining whether funding should be continued, increased, decreased or stopped.
- **Value delivery practices will recognise there are different categories of investments that will be evaluated and managed differently.** Such categories might be based on management discretion, magnitude of costs, types of risks, importance of benefits (e.g., achievement of regulatory compliance), types and extent of business change.
- **Value delivery practices will define and monitor key metrics and respond quickly to any changes or deviations.** Metrics must be established and regularly monitored for the performance of (1) the overall portfolio, (2) individual investments, including intermediate (or lead) metrics and end (or lag) metrics, (3) IT services, (4) IT assets and (5) other resources resulting from an investment, to ensure that value is created and continues to be created throughout the investment life cycle.
- **Value delivery practices will engage all stakeholders and assign appropriate accountability for the delivery of capabilities and the realisation of business benefits.** Both the IT function and the other parts of the business must be engaged and accountable—the IT function for IT capabilities, and the business for the business capabilities required to realise value.
- **Value delivery practices will be continually monitored, evaluated and improved.** As enterprises gain experience with Val IT practices, learnings can be applied so that the selection of investments and the management of them improve each year.

Figure 6—A Summary of Val IT Principles

IT-enabled investments will:
- Be managed as a *portfolio of investments*
- Include the *full scope of activities* required to achieve business value
- Be managed through their *full economic life cycle*

Value delivery practices will:
- Recognise there are *different categories of investments* that will be evaluated and managed differently
- Define and monitor *key metrics* and respond quickly to any changes or deviations
- Engage all stakeholders and assign *appropriate accountability* for the delivery of capabilities and the realisation of business benefits
- Be *continually monitored, evaluated and improved*

Val IT Domains: Where the Principles Are Applied

To fulfil the Val IT value management goal of enabling the enterprise to realise optimal value at an affordable cost with an acceptable level of risk from IT-enabled investments, the Val IT principles need to be applied within three domains:
- Value governance
- Portfolio management
- Investment management

Each domain comprises a number of processes and key management practices, which are introduced in chapter 4, Val IT Processes, and detailed in chapter 5, Detailed Val IT Processes and Key Management Practice Descriptions. These processes and key management practices have been distilled from the collective experience of the Val IT team and a broader team of global advisers, and drawn from existing and emerging practices, methodologies and research.

Value Governance

The goal of value governance (VG) is to ensure that value management practices are embedded in the enterprise, enabling it to secure optimal value from its IT-enabled investments throughout their full economic life cycle. An executive commitment to value governance helps enterprises:
- Establish the governance framework for value management in a manner that is fully integrated with overall enterprise governance
- Provide strategic direction for the investment decisions
- Define the characteristics of portfolios required to support new investments and resulting IT services, assets and other resources
- Improve value management on a continual basis, based on lessons learned

The Val IT framework defines the IT investment-related processes, key management practices and activities that need to occur within the context of overall enterprise governance. The framework specifically defines the relationship between the IT function and the other parts of the business, and between the IT function and those offices within the enterprise with governance responsibilities, such as those of the chief financial officer (CFO), chief executive officer (CEO) and the board. The activities of the IT function are covered by COBIT.

Portfolio Management

The goal of portfolio management (PM)—within the context of the Val IT framework—is to ensure that an enterprise secures optimal value across its portfolio of IT-enabled investments. An executive commitment to portfolio management helps enterprises:
- Establish and manage resource profiles
- Define investment thresholds
- Evaluate, prioritise, and select, defer, or reject new investments
- Manage and optimise the overall investment portfolio
- Monitor and report on portfolio performance

IT-enabled business investment programmes need to be managed as part of the overall portfolio of investments so that all of the enterprise's investments can be selected and managed on a common basis. The programmes in the portfolio must be clearly defined, evaluated, prioritised, selected, and managed actively throughout their full economic life cycles to optimise value for individual programmes and the overall portfolio. This includes optimising the allocation of the finite investment resources available to the enterprise, the management of risk, the early identification and correction of problems (including programme cancellation, if appropriate), and board-level investment portfolio oversight.

Portfolio management recognises the requirement for a balanced portfolio. It also recognises that there are different categories of investment with differing levels of complexity and degrees of freedom in allocating funds. Examples of such categories could include, but are not limited to, innovation, venture, growth, operational improvement, operational maintenance, and mandatory investments. Evaluation criteria with appropriate weightings should be established for each category within the portfolio of investments. The decision to include a programme in the portfolio is not a one-time commitment. The portfolio composed of potential and approved investments should be managed actively on a continuing basis and not considered just when approval is sought. Depending on the relative performance of active programmes and the opportunity offered by potential programmes within the portfolio—as well as changes to the internal and external business environment—the make-up of the portfolio may be adjusted by management.

Investment Management
The goal of investment management (IM) is to ensure that the enterprise's individual IT-enabled investments contribute to optimal value. When organisational leaders commit to investment management they improve their ability to:
- Identify business requirements
- Develop a clear understanding of candidate investment programmes
- Analyse alternative approaches to implementing the programmes
- Define each programme and document, and maintain a detailed business case for it, including the benefits' details, throughout the full economic life cycle of the investment
- Assign clear accountability and ownership, including those for benefits realisation
- Manage each programme through its full economic life cycle, including retirement
- Monitor and report on each programme's performance

A Special Note on Key Components of Investment Management

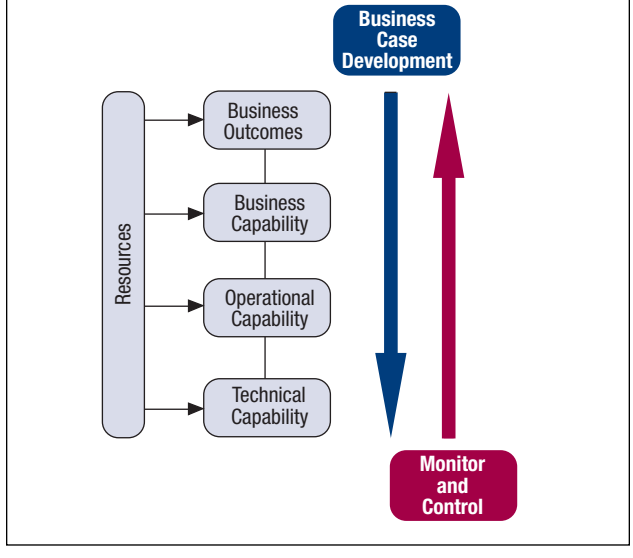
There are three key components of investment management. The first is the business case, which is essential to selecting the right investment programmes and managing them during their execution. The second is programme management, which governs all processes that support execution of the programmes. The third is benefits realisation—the set of tasks required to actively manage the realisation of programme benefits. Each of these components is described in greater detail in the following sections.

The Business Case
A comprehensive business case is critical to the outcome of the programme, yet few enterprises are adept at developing and documenting them. A 2006 Cranfield University School of Management study[22] found that while 96 percent of respondents did develop business cases for most investments involving IT, 69 percent were not satisfied with the effectiveness of the practice.

The business case contains a set of assumptions on how value will be created, assumptions that should be well tested to ensure that the expected outcomes are achieved. The business case should also be based on qualitative and quantitative indicators that substantiate these assumptions and provide decision makers with insight supporting future investment decisions. A companion volume to this publication, *Enterprise Value: Governance of IT Investments, The Business Case*, provides guidance to create complete and comprehensive business cases, with particular emphasis on the comprehensive assessment and appraisal of the potential value and risk, and the definition of key indicators, both financial (net present value, internal rate of return and payback period) and non-financial.

The business case consists of the major input resources as well as the three workstreams driving the outcome (see **figure 7**). These workstreams include delivering technical capabilities [e.g., a customer relationship management (CRM) application], operational capabilities (e.g., users have access to complete customer information) and business capabilities (e.g., information is used to support cross-selling). Each of these workstreams needs to be documented with data to support the investment decision and portfolio management processes: initiatives, costs, risks, assumptions, outcomes and metrics.

Figure 7—The Business Case



At a minimum, the business case should include the following:
- The business benefits targeted, their alignment with business strategy and who in the business functions will be responsible for securing them
- The business changes needed to create additional value
- The investments needed to make the business changes
- The investments required to change or add new IT services and infrastructure
- The ongoing IT and business costs of operating in the changed way
- The risks inherent in the above, including any constraints or dependencies
- Who will be accountable for the successful creation of optimal value
- How the investment and value creation will be monitored throughout the economic life cycle, and the metrics to be used

The business case should be developed from a strategic perspective—from the top down—starting with a clear understanding of the desired business outcomes and progressing to a detailed description of critical tasks and milestones as well as key roles and responsibilities.

The business case is not a static document supporting a one-time use; rather, it is a dynamic operational tool that must be continually updated to reflect the current view of the future so that the viability of the programme can be maintained.

[22] Ward, John; 'Delivering Value From Information Systems and Technology Investments: Learning From Success', *Forum*, the Monthly Newsletter of Information Systems Research Center, Cranfield School of Management, August 2006

Programme Management
Realising business value is not about acquiring technology, but about using IT in conjunction with associated changes in the nature of the business, business processes, individuals' work and competencies, and organisational structures. All changes, and the capabilities required to enable the changes, must be understood, defined, monitored and managed as a comprehensive programme of business change in which IT plays a necessary, but not solely sufficient, part. Effective programme management requires maintaining a constant focus on the desired business outcomes, the full scope of initiatives required to achieve the outcomes, the relationship between the initiatives and how they individually and collectively contribute to the outcomes, and any assumptions that are being made related to those contributions or to the outcomes themselves. This requires that the IT function and other parts of the business work closely together, each with clearly understood roles and responsibilities, and shared accountabilities.

Benefits Realisation
Benefits realisation is enormously important for several reasons. One is that not all benefits are equal. Val IT distinguishes between two types of benefits. The first are 'business benefits' which contribute directly to value, as defined earlier. The second are 'intermediate benefits' which do not directly create value, even though they might be beneficial for one or more groups of stakeholders. For example, improvements in specific types of customer service that do not contribute to increased profits would be considered intermediate benefits. Another reason is that benefits do not just happen and rarely happen according to plan. A focus on benefits realisation helps address these challenges by actively managing investments across their full economic life cycle—from proposal to profit or improved service performance. Benefits realisation ensures that intermediate benefits—such as improvements in customer service—contribute to business benefits—such as additional profits. Benefits realisation further ensures that the realisation of business benefits is unfolding at levels of return sufficient enough to merit the resources being expended to achieve the benefits. In the absence of effective benefits realisation, optimal value will not be created, or, worse, value may be eroded or destroyed.

Figure 8[23] lists some of the characteristics of organisations that realise IT-enabled value.

Figure 8—Characteristics of Organisations That Realise IT-Enabled Value

The positive impact of the Val IT processes and practices is supported by the Cranfield University School of Management study referenced earlier. This study identified a number of characteristics typical among initiatives that meet success in delivering value:
- Programmes are selected based not just on their desirability but also on the organisation's ability to deliver them.
- Having methodologies in place is less important than whether business managers and specialists use them.
- Robust and realistic business cases are used and, if possible, include benefits for all stakeholders.
- Benefits are managed over the entire investment life cycle through consistently applied practices and processes.
- Integrated planning addresses benefit delivery as well as organisational, process and technology changes.
- Business ownership and accountability are assigned for all benefits and changes targeted.
- Investments and their results—in terms of whether benefits are realised—are systematically monitored and reviewed.
- Lessons learned are consistently gleaned from both successful and unsuccessful programmes—and used to improve the planning and management of new ones.

[23] *Op. cit.,* Information Systems Research Centre, Cranfield University School of Management Study

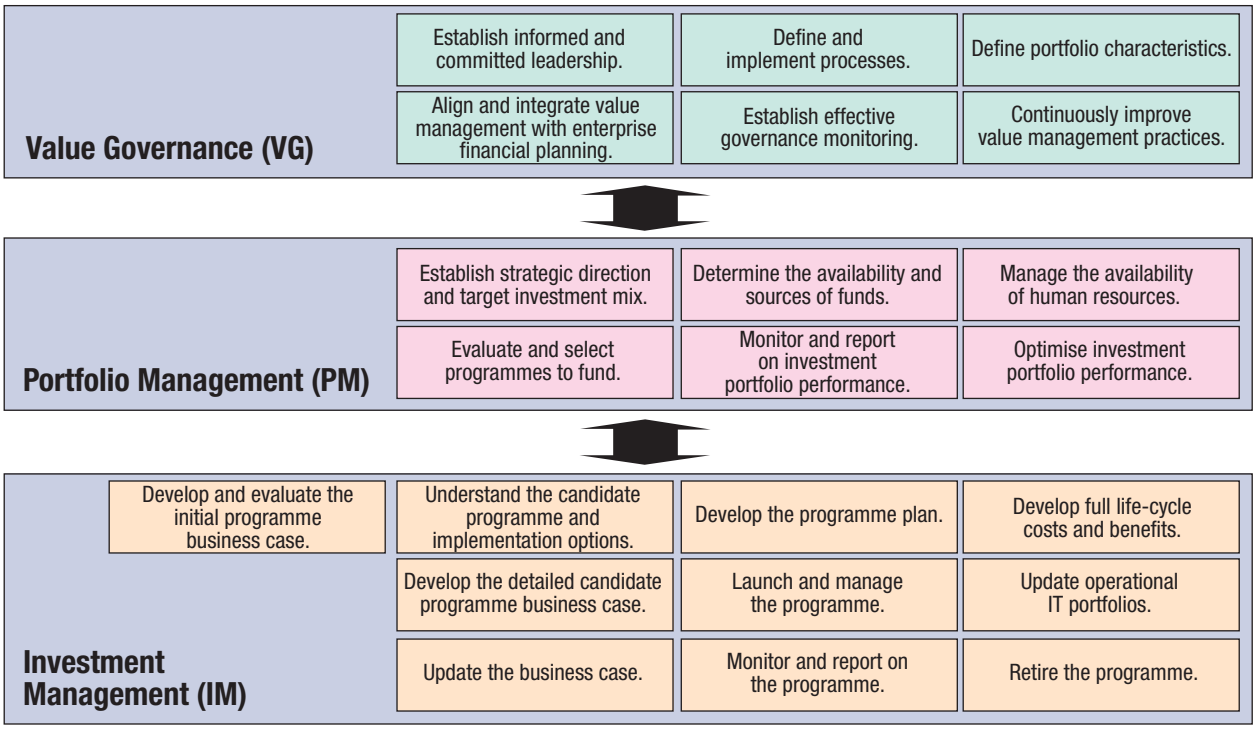
4. VAL IT PROCESSES

Processes are a collection of interacting activities undertaken in accordance with management practices. Processes take input from one or more sources (including other processes), manipulate the input, utilise resources according to the policies, and produce output (including output to other processes). Processes should have clear business reasons for existing, accountable owners, clear roles and responsibilities around the execution of each process, and the means to undertake and measure performance.

Val IT Domains and Processes

The Val IT domains and their processes are illustrated in **figure 9**.

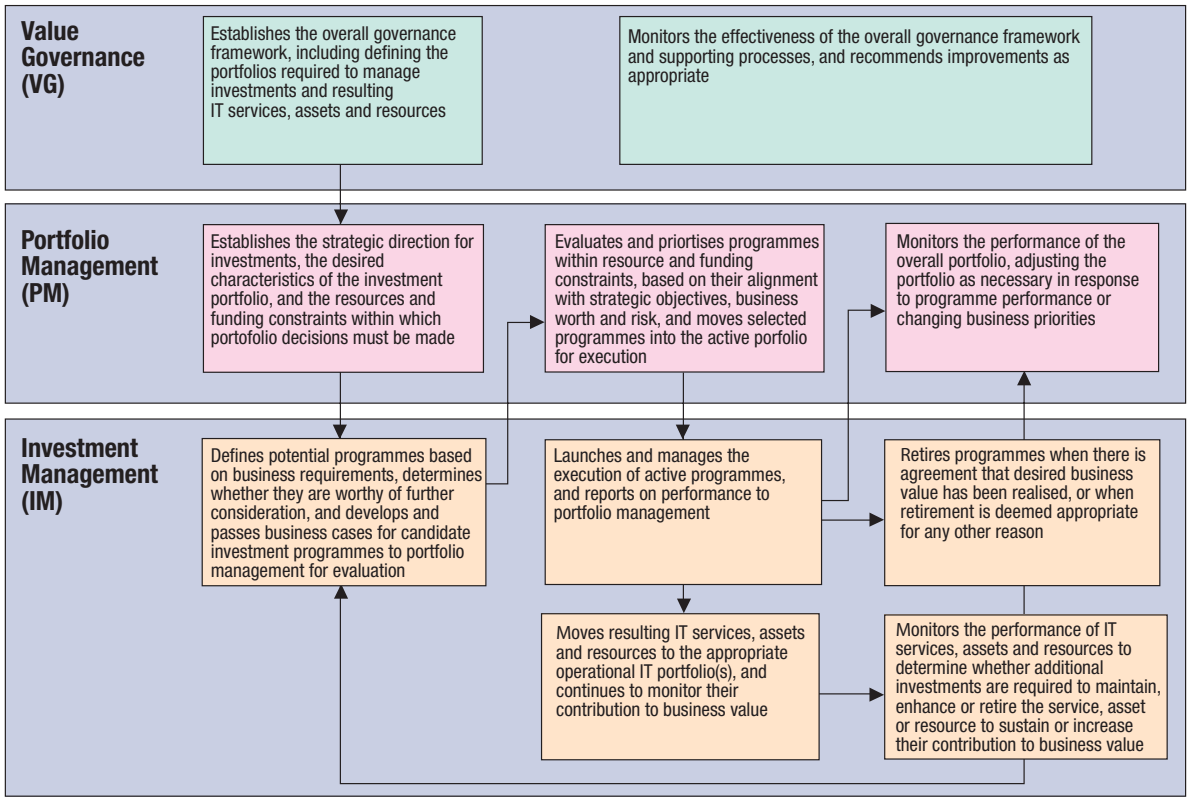
Figure 9—Val IT Domains and Processes



The relationship between the Val IT domains and their processes is described as follows and illustrated in **figure 10**. It should be noted that, although by necessity the domains and processes are presented in a sequence, it does not imply that each follows from its predecessor. While there is some logic to the sequence, many of the processes and the key management practices within them will and should be followed both in parallel and iteratively. Depending on the nature, scope, size and impact of an investment, certain processes may be repeated a number of times with a stage-gate review after each iteration. At a high level, the relationships amongst them are:

- Value governance establishes the overall governance framework, including defining the portfolios required to manage investments and resulting IT services, assets, and resources.
- Portfolio management establishes the strategic direction for investments, the desired characteristics of the investment portfolio, and the resource and funding constraints within which portfolio decisions must be made.
- Investment management defines potential programmes based on business requirements, determines whether they are worthy of further consideration, and develops and passes business cases for candidate investment programmes to portfolio management for evaluation.
- Portfolio management evaluates and prioritises programmes within resource and funding constraints, based on their alignment with strategic objectives, business worth (both financial and non-financial), and risk (both delivery risk and benefits risk), and moves selected programmes into the active portfolio for execution.
- Investment management launches and manages the execution of active programmes, and reports on performance to portfolio management.
- Portfolio management monitors the performance of the overall portfolio, adjusting the portfolio as necessary in response to programme performance or changing business priorities.
- Investment management moves resulting IT services, assets and resources to the appropriate operational IT portfolio(s) and continues to monitor their contribution to business value.
- Investment management retires programmes when there is agreement that desired business value has been realised, or when retirement is deemed appropriate for any other reason.
- Investment management monitors the performance of IT services, assets and resources to determine whether additional investments are required to maintain, enhance, or retire the service, asset, or resource to sustain or increase their contribution to business value.
- Value governance monitors the effectiveness of the overall governance framework and supporting processes, and recommends improvements as appropriate.

Figure 10—Relationship Between the Val IT Domains and Processes



The following provides a high-level description of each of the processes within each domain.

Value Governance (VG)

VG1 Establish informed and committed leadership.
Establish informed and committed leadership with a leadership forum and an effective CIO reporting line commensurate with the importance of IT to the enterprise. Develop a sound understanding of key elements of governance and clear insights into the enterprise strategy for IT. Ensure alignment and integration of business and IT.

VG2 Define and implement processes.
Define a governance framework for IT value management, including the supporting processes. Assess the quality and coverage of current processes to define the requirements of future processes so they provide necessary control and oversight, and enable active linkage amongst strategy, portfolios, programmes, and projects. Establish the necessary organisational structures and implement the processes with the associated roles, responsibilities and accountabilities.

VG3 Define portfolio characteristics.
Define the different types of portfolios. Define the categories within the portfolios, including their relative weight. Develop and communicate how these categories will be evaluated in a comparable and transparent manner. Define requirements for stage-gates and other reviews for each category.

VG4 Align and integrate value management with enterprise financial planning.
Review the current enterprise budgeting practices and identify—and subsequently implement—the changes necessary for implementing optimal value management financial planning practices to facilitate business case preparation, investment decision making and ongoing investment management.

VG5 Establish effective governance monitoring.
Identify the key goals and metrics of the value management processes to be monitored and the approaches, methods, techniques, and processes for capturing and reporting the measurement information. Establish how deviations or problems will be identified, and monitor and report on results of remedial actions.

VG6 Continuously improve value management practices.
Review lessons learned from value management. Plan, initiate and monitor the necessary changes to improve value governance, portfolio management and investment management processes.

Portfolio Management (PM)

PM1 Establish strategic direction and target investment mix.
Review and ensure clarity of the business strategy and identify and communicate opportunities for IT to influence or support the strategy. Define an appropriate investment mix based on rate of return, degree of risk and type of benefit for the programmes in the portfolio that implement the strategy. Adjust the business strategy where necessary, and translate it into the IT strategy and goals.

PM2 Determine the availability and sources of funds.
Determine potential sources of programme funds, the level of sourcing that can be achieved, and the methods needed for achieving it. Determine the implications of the funding source on the investment return expectations.

PM3 Manage the availability of human resources.
Create and maintain an inventory of business and IT human resources. Understand the current and future demand for human resources to support the IT-enabled investments and identify shortfalls and contention. Create and maintain tactical plans for HR management. Monitor and review the plans and the supporting organisational structures, and adjust where necessary.

PM4 Evaluate and select programmes to fund.
Evaluate programme business cases, assign a relative score, and make and communicate investment decisions based on the overall investment portfolio view and the individual scores. Subsequently, allocate funds; stage-gate the selected programmes; move them into the active investment portfolio and adjust business targets, forecasts and budgets accordingly.

PM5 Monitor and report on investment portfolio performance.
Provide a comprehensive and accurate view of the performance of the investment portfolio in a timely fashion to enable review, by the key stakeholders, of the enterprise's progress toward identified goals.

PM6 Optimise investment portfolio performance.
Regularly review investment portfolio performance and optimise for new opportunities, synergies and changed risks. After optimisation review against the business strategy and investment mix, and reprioritise the portfolio if needed.

Investment Management (IM)

IM1 Develop and evaluate the initial programme concept business case.
Recognise investment opportunities, classify each with respect to the investment portfolio categories and identify a business sponsor. Clarify expected business outcome(s), and provide a high-level view of all initiatives required to achieve the expected outcomes and how they would be measured. Provide an initial, high-level estimate of benefits and costs as well as the key assumptions and major risks, and obtain the appropriate sign-offs. Determine whether the opportunity merits further work to support development of a detailed business case, considering strategic alignment, benefits and expenditures, resource constraints, risks, and fit with the overall investment portfolio.

IM2 Understand the candidate programme and implementation options.
Involve all key stakeholders to develop and document a complete understanding of the expected business outcomes of the candidate programmes, how they will be measured, the full scope of initiatives required to achieve the outcomes, the risks involved and the impact on all aspects of the enterprise. Identify and assess alternative courses of action to achieve the desired business outcomes.

IM3 Develop the programme plan.
Define and document all projects required to achieve the programme's expected business outcomes. Specify the resource requirements and associated sourcing method. Provide a time plan that takes into account the interdependencies of multiple projects.

IM4 Develop full life-cycle costs and benefits.
Prepare a programme budget based on full economic life-cycle costs. List all intermediate and business benefits in a benefits register, and plan how they will be realised. Identify and document targets for key outcomes to be achieved, including the method for measuring and the approach for mitigating non-achievement. Submit budgets, costs, benefits and associated plans for review, refinement and sign-off.

IM5 Develop the detailed candidate programme business case.
Develop a complete and comprehensive business case for the programme, covering purpose, objectives, approach and scope, dependencies, risks, milestones, and the organisational change impact. Include a value assessment based on full economic life-cycle costs and benefits, expected rate of return, strategic alignment, and key assumptions. Also, provide a programme plan covering component project plans, a benefits realisation plan, the approach to risk and change management, and the programme governance structure. Assign clear accountability, authority and ownership for achieving the benefits, controlling the costs, managing the risks, and co-coordinating the activities and interdependencies of multiple projects. Obtain acceptance for the accountabilities.

IM6 Launch and manage the programme.
Plan, resource and commission the necessary projects required to achieve the programme outcomes. Plan resources for later periods, but fund only up to the next stage-gate review. Manage programme performance against key criteria, identify deviations from plan and take timely remedial action. Monitor individual project performance against its criteria, identify potential impacts on programme performance and take timely remedial action when required. Monitor benefits throughout the programme for ownership, actual achievement and potential over- or under-achievement, and report on benefit progress at the stage-gate reviews. Initiate timely action for significant deviations from plan as well as for problems.

IM7 Update operational IT portfolios.
Reflect changes that result from the investment programme in the relevant IT service, asset and resource portfolios.

IM8 Update the business case.
Update the programme's business case to reflect the current status whenever there is any change that affects the projected costs, benefits, opportunities or risks.

IM9 Monitor and report on the programme.
Monitor the performance of the overall programme and all its projects, and report to the appropriate boards and executive in a timely, complete and accurate fashion, covering the delivery of technical and business capabilities, the operational service delivery aspects, the impact on resources, and the business's achievement of benefits. Reporting may include performance against the programme plan in terms of schedule and budget, completeness and quality of functionality, the status of internal controls and risk mitigation, and the continuing acceptance of accountabilities for delivering intermediate and business benefits.

IM10 Retire the programme.
Bring the programme to an orderly closure and remove it from the active investment portfolio when there is agreement that the desired business value has been achieved or when it is clear it will not be achieved within the value criteria set for the programme.

Val IT Management Guidelines

Val IT provides management guidelines to help enterprises in setting up and managing value management processes in their environment. The guidelines provide answers to typical management questions such as:

- How do all the value management processes and activities interrelate?
- What are the key activities that need to be undertaken or improved?
- What roles and responsibilities are to be defined for successful value management processes?
- How do we measure and compare value management processes?
- What are the indicators of good performance?

For each Val IT process, the Val IT management guidelines include inputs and outputs, activity descriptions, with RACI (responsible, accountable, consulted and informed) charts, and goals and metrics at different levels.

A high-level summary of the management guidelines for each domain is included in **figures 11** and **12**. More detailed versions are included in chapter 5, together with a more detailed description of each of the elements of the management guidelines, including the roles in the activity and responsibility columns of **figure 12**.

A maturity model has also been defined for each of the three Val IT domains, providing an incremental measurement scale from 0 through 5. At level 0 the enterprise has not yet adopted even the most basic value management practices recommended by Val IT. At level 5 the enterprise leverages value management practices to quantify and optimise the value it is creating through business change investments and has the means to continue to improve the creation of value in the future. Clearly, levels 1 to 4 represent intermediate stages on the journey to creating optimal value.

High-level versions of the maturity models for each Val IT domain are provided in the next sections. (Note that the maturity model for the VG domain could also be considered an overall maturity model for Val IT.) More detailed versions, built around a set of attributes which are evolved in an increasing manner through the maturity levels, are included in chapter 5, together with a more detailed description of the maturity model.

Figure 11—High-level Management Guidelines

Domain	Domain Goal	Inputs	Outputs	Process Metrics	Domain Metric
Value Governance (VG)	To ensure that value management practices are embedded in the enterprise, enabling it to secure optimal value from its IT-enabled investments throughout their full economic life cycle	• Business strategy • Enterprise governance and control framework • Enterprise investment approach	• Leadership commitment • Value governance requirements with roles, responsibilities and accountabilities • Portfolio characteristics and investment categories	• Level of leadership agreement on value governance principles • Level of leadership engagement • Degree of implementation and compliance with value management processes	• Maturity of value management processes
Portfolio Management (PM)	To ensure that an enterprise secures optimal value across its portfolio of IT-enabled investments	• Business strategy • Portfolio characteristics and investment categories • Available budget and resources • Detailed business cases	• Approved investment programmes • Overall investment portfolio view • Portfolio performance reports	• Level of satisfaction with IT's contribution to business value • Percentage of IT expenditures that have direct traceability to business strategy • Percentage increase in portfolio value over time	• Percentage of forecast optimal value, that is secured across the enterprise's portfolio of IT-enabled investments
Investment Management (IM)	To ensure that the enterprise's IT-enabled investments contribute to optimal value	• Business strategy • Detailed business requirements • Portfolio characteristics and mix • Available resources	• Detailed business case, including full life-cycle costs and benefits • Programme plan including budget and resources • Programme performance reports • Updated IT operational portfolios	• Number of new ideas per investment category, and percentage that are developed into detailed business cases • Completeness and compliance of business cases (initial and updated) • Percentage of expected value realised	• Contribution of individual IT-enabled investments to optimal value

Figure 12—High-level Activities With Accountability and Responsibility		
Activity	**Accountability**	**Responsibility**
Value Governance		
Establish informed and committed leadership.	Board	CEO
Define and implement processes.	CEO	CFO and CIO
Define portfolio characteristics.	Board	CEO, CFO and CIO
Align and integrate value management with enterprise financial planning.	Board	CFO
Establish effective governance monitoring and implement lessons learned.	Board	Executive and business management
Portfolio Management		
Establish strategic direction and target investment mix.	Board and CIO	CEO, CFO and CIO
Determine availability and sources of funds.	CFO	CFO, CIO and business management
Manage the availability of human resources.	Business management	Programme manager and CIO
Evaluate and select programmes to fund.	Executive management	Investment and services board (ISB) and value management office (VMO)
Monitor and report on investment portfolio performance.	VMO	VMO
Optimise investment portfolio performance.	Executive management	ISB and business management
Investment Management		
Develop and evaluate initial programme concept business case.	Business sponsor	Business management
Understand the candidate programme and develop a programme plan.	Business sponsor	Programme manager
Develop full life-cycle costs and benefits.	Business sponsor	Programme manager
Develop the detailed candidate programme business case.	Business sponsor	Programme manager, CFO and CIO
Launch and manage the programme (through to programme retirement).	Programme manager	Business management and CIO
Update operational IT portfolios.	CIO	Programme manager and programme management office
Update the business case.	Business sponsor	Programme manager, CFO and CIO
Monitor and report on the programme.	Business sponsor	Programme manager

VG Maturity Model

0 Non-existent when

The enterprise sees the IT function as a supplier and a cost to be minimised. There is limited communication between the business and the IT function.

1 Initial when

The enterprise recognises that IT is both a cost and an investment. There is increasing communication between IT and the other business functions about the need to demonstrate return on IT investments. Accountabilities are not defined beyond the level of delivering technical capabilities. Reporting is budget- and cost-driven. Business cases are defined on a project-by-project basis and often are incomplete. Skills and tools exist on an individual, *ad hoc* basis.

2 Repeatable when

There is increasing awareness amongst business and IT management of the need for a more formalised governance framework. The business and IT functions are working more collaboratively on the need to demonstrate the return on IT-enabled investments. Some individuals take ownership for the realisation of benefits, but there is no formal commitment from the business. Business cases and investment status reports are required for most investments, and there is some limited reporting on benefits. On-the-job training is provided in business case development on an as-needed basis. Tools are increasingly used in response to *ad hoc* needs, but are not standardised across the enterprise.

3 Defined when

The business and IT functions understand the governance requirements to select and execute new investments, deliver the resulting IT services efficiently, and ensure optimal allocation of IT resources. Business cases, including benefits realisation plans, and status reporting are required for all investments. The IT function and business users share the accountability for implementing programmes, and for benefits realisation, but roles and responsibilities are unclear. Formal training plans exist but are not consistently executed. Tools are increasingly used to support comparable evaluation of investments, but are still not standardised across the enterprise.

4 Managed when

There is a shared commitment between the business and the IT function to optimise the contribution of individual IT investments and services to business value. Accountability for achieving the business benefits is clearly assigned to the business functions. Business cases are reviewed, updated and re-evaluated throughout the full life cycle of investments. Processes and skills exist to support investment decision making and value management, and to ensure that resource allocation is consistent with the priorities. Standard tools, integrated with other enterprise systems, are adopted and formal training plans are executed.

5 Optimised when

Value management is part of the corporate culture. The business and IT functions work in partnership to continually optimise and report on the portfolios of IT investments, and resulting services, assets, and other resources. Accountability for optimising business value from the overall portfolio is clearly assigned and monitored. Processes are continuously improved. External expertise is called on to benchmark and challenge investment assumptions. Tools provide comprehensive reporting, including succinct, all-around reviews of the performance of the portfolio, and include analytical capabilities.

PM Maturity Model

0 Non-existent when

There is no awareness that IT-enabled investments should be managed as a portfolio.

1 Initial when

Some business functions apply portfolio management practices in isolation within their scope of activities. Responsibilities and accountabilities for portfolio management are not defined. The IT function is accountable for use of IT resources. There is limited adoption of the programme view. Business cases may be needed, but are considered in isolation, and evaluation and selection of programmes are largely subjective and political. Simple financial metrics are applied on an individual basis. Skills and tools are available on an individual or *ad hoc* basis.

2 Repeatable when

There is increasing awareness of the need to manage IT-enabled investments as a portfolio. The programme view is broadly adopted, and business cases are needed for most programmes. Business cases are evaluated primarily on financial measures. IT and business management are involved in evaluating and selecting programmes but responsibilities and accountabilities are not always clear and depend on individuals. An investment life cycle is established and followed, but there is no consistent definition and tracking of benefits. Limited skills are available to support portfolio management. Training is *ad hoc*. A number of different tools exist.

3 Defined when

There is a general understanding of portfolio management practices. Business cases are required for all programmes. Accountabilities for development of business cases and the selection of investment programmes are established. Benefits are tracked and reported for most programmes, using basic measures of financial value, strategic alignment and risk. Policies and procedures exist but are not consistently applied. An inventory of resources and their utilisation is maintained. Some portfolio management skills exist within the IT and business functions. Training plans exist but are not consistently executed. A standard portfolio management system is used to aggregate programme information to support decision-making.

4 Managed when

Board and executive management are fully committed to portfolio management and regularly review performance of the portfolio. Portfolio management roles, responsibilities, accountabilities and supporting practices are applied consistently and integrated with the overall enterprise governance model. Programmes are categorised, and business cases are developed and maintained for all programmes. Programme selection is based on a formal review, selection and approval process, which is integrated with resource management. Advanced portfolio management expertise is available across the enterprise. Training plans are available, consistently executed and followed up. A standard portfolio management system is available and widely used.

5 Optimised when

Portfolio management practices are part of the corporate culture. The portfolio is continuously monitored and proactively adjusted to optimise its value. Accountability for the management and optimisation of the portfolio of investments is established and accepted. Individual performance is aligned with portfolio performance. Expertise in managing and reporting on overall investment and portfolio performance is available across the enterprise and supports decision making by executives. The standard portfolio measurement system includes ‘what if’ analyses to support re-evaluation and reprioritisation of the portfolio in response to changes to the internal or external business environment and ensure that the overall portfolio is achieving optimal value.

IM Maturity Model

0 Non-existent when

The enterprise sees IT as an end in itself and the focus is on delivery of technology. There is no recognition of the strategic need for a benefits focus or to establish clear linkage between technology investments and expected business benefits.

1 Initial when

There is some recognition of the need to improve the governance of technology investments but the focus is usually on costs of technology. IT holds the budgets and there is little business involvement in the investment management process. Investment processes are *ad hoc* and business cases are rarely required. Simple financial metrics may exist, primarily related to IT solution delivery costs. Skills and tools depend on individuals.

2 Repeatable when

There is increasing management awareness of the need to take a business value view of IT-enabled investments. The programme view is emerging, and there is increasing business involvement in defining major investment programmes, although responsibilities and accountabilities are not always clear. IT still holds the budgets. Business cases are required for some investments, but are not clearly defined or formalised. The primary focus is on costs but there is increasing rigour around benefits. Financial metrics exist for costs, benefits and risks, but there is no consistent or effective monitoring or management of benefits and risks. Limited skills and a number of different tools exist.

3 Defined when

Management understands the need to manage IT-enabled investments as programmes, and is increasingly aware of the importance of managing organisational change. IT and other business functions have clear responsibilities and accountabilities for the development of business cases to the enterprise standard for all programmes, and these include high-level financial and non-financial benefits, costs and risks. There is focus on clarity of business outcomes, identification of the full scope of initiatives required to achieve the outcomes, and risk. Benefits are tracked and reported using basic measures. Expertise and skills, supported by standards tools, exist both within IT and the business for supporting business case development.

4 Managed when

Board and executive management are committed to investment management. There are clear responsibilities and accountabilities for all stakeholders. Business cases are comprehensive and complete, including programme and benefits realisation plans, and are regularly updated. Robust metrics are established and monitored, using techniques such as dashboards and benefits registers, to ensure that planned benefits are achieved and sustained. Where necessary, programmes are revised or cancelled. Programme management skills are available across the enterprise. Standard programme/project planning tools are used to support the management of IT-enabled investments.

5 Optimised when

Board and executive management are proactive in regularly reviewing programme performance. Executive management assigns accountability for managing full economic life-cycle costs, financial and non-financial benefits, and risks. Financial and non-financial benefits, costs and risks of investment programmes are continuously monitored and adjusted to optimise their value over their full economic life cycle, up to and including retirement. When business cases are updated to reflect changes in requirements or programme performance, management re-evaluates the business case to determine whether it should still be pursued. Investment management processes and skills are continuously improved based on lessons learned. Tools are integrated with enterprise systems.

The Relationship Between Val IT and CobiT

Val IT provides an enterprise-level perspective on the creation of business value. CobiT complements Val IT by focusing on the IT function's role in working with the other business functions to deliver and manage IT capabilities to be used to create value from IT-enabled business change. Specifically, the primary focus of Val IT domains is on delivering business value through:

- Establishing governance practices that provide for clear and active linkage between the enterprise strategy, the portfolio of IT-enabled investment programmes that execute the strategy, and the portfolios of resulting IT services, assets and other resources (VG)
- Managing the overall investment portfolio to optimise value to the enterprise (PM)
- Managing the results of individual investment programmes, including business, process, people, technology and organisational change enabled by the business and IT projects that make up the programmes (IM)

The primary focus of CobiT domains is on delivering the technology capabilities, services, assets and other resources the business functions need to implement and sustain business change through:

- Planning and organising the enterprise IT processes and IT resources (PO)
- Acquiring and implementing, through a portfolio of technology projects, the technology capabilities, services, assets and other resources that are required to support the business change programmes and the ongoing operation of the enterprise (AI)
- Delivering and supporting, on a day-to-day basis, those technology capabilities, along with portfolios of existing services, systems and supporting infrastructure (DS)
- Monitoring and evaluating portfolios of IT services, assets and other resources to ensure that they continue to enable the business to create optimal value and to identify and initiate any improvements in IT that could increase value creation through further potential investment programmes (ME)

The CobiT and Val IT frameworks support the needs of enterprises to address the enterprise governance of IT, as part of overall enterprise governance. ITGI defines enterprise governance of IT as:

> *The set of responsibilities—as well as the leadership and organisational structures and processes—exercised by the board of directors and executive management to ensure that IT creates value for the enterprise. An integral part of overall enterprise governance, enterprise governance of IT ensures that IT sustains and extends the enterprise's evolving objectives and strategies.*

Enterprise governance of IT has been subdivided into five focus areas, as shown in **figure 13**, which may also be applicable for enterprise governance.

Figure 13—Enterprise Governance of IT Focus Areas



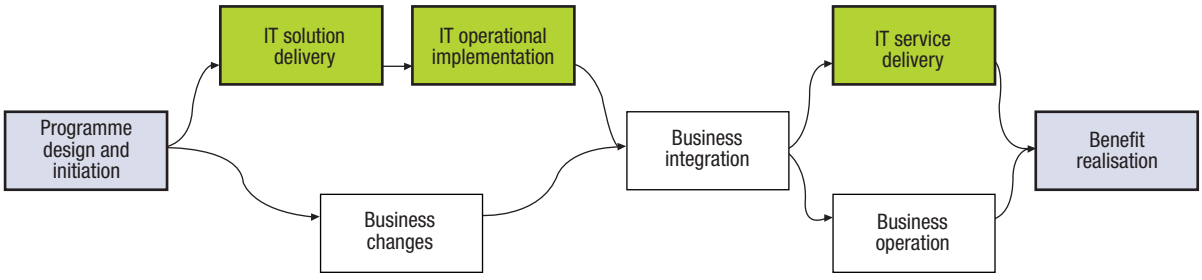
- **Strategic alignment** focuses on ensuring the linkage of business and IT plans; defining, maintaining and validating the IT value proposition; and aligning IT operations with enterprise operations.
- **Value delivery** is about executing the value proposition throughout the delivery cycle, ensuring that IT delivers the promised benefits against the strategy, concentrating on optimising costs and proving the intrinsic value of IT.
- **Resource management** is about the optimal investment in, and the proper management of, critical IT resources: applications, information, infrastructure and people. Key issues relate to the optimisation of knowledge and infrastructure.
- **Risk management** requires risk awareness by senior corporate officers, a clear understanding of the enterprise's appetite for risk, understanding of compliance requirements, transparency about the significant risks to the enterprise and embedding of risk management responsibilities into the organisation.
- **Performance measurement** tracks and monitors strategy implementation, project completion, resource usage, process performance and service delivery, using, for example, balanced scorecards that translate strategy into action to achieve goals measurable beyond conventional accounting.

Enterprise governance, including enterprise governance of IT, ultimately deals with delivering value while managing risk. This requires resources that need managing and performance measurement to provide assurance that the strategic direction is being executed. The strategic direction focus further requires that the business and IT be aligned to provide guarantees that the strategy is executed as intended.

Until the development of Val IT, CobiT was the only framework dealing with IT governance. However, CobiT provides the IT governance framework from the point of view of the IT function even though, in recent years, it has recorded management practices that straddle the IT and business areas and started recognising the need for practices beyond IT. Val IT now provides a framework that responds to that recognition and need, and is the first framework to support the enterprise point of view of IT governance, with a focus on value. It is expected that a risk management framework will also emerge to complete the picture.

IT-enabled change typically requires multiple sets of sequential and parallel initiatives, as shown in **figure 14**, from programme design through benefit realisation to value creation. Val IT provides the framework for the investment and ongoing value management aspects of all these initiatives and a framework for the execution of programme design and initiation and benefit realisation. CobiT provides the framework for the execution of the IT-related aspects of programmes, including IT solution delivery, IT operational implementation and IT service delivery.

Figure 14—Sequence of Initiatives



The execution of the business-related initiatives of business change delivery, integration and operation are outside the scope of IT governance (i.e., COBIT), but are within the scope of enterprise governance of IT (i.e., Val IT).

The links between COBIT and Val IT are enabled by portfolio mechanisms and investment management, and provided in the IT processes that deal with strategy and portfolios (PO1), investment and budgets (PO5), solution delivery (PO10), service management (DS1) and performance reporting (ME1).

Comparing how COBIT and Val IT focus on governance, processes and portfolios further helps to understand the relationship between the two frameworks as shown in **figure 15**.

Figure 15—Comparison of Val IT With COBIT

	Governance Focus	Process Focus	Portfolio Focus
Val IT	Enterprise governance of IT	• Programme design and initiation • Benefit realisation • Investment and ongoing value management aspects of all processes	• Manage the investment portfolio • Provide the overall view of portfolio performance
COBIT	IT governance	• IT solution delivery • IT operational implementation • IT service delivery	• Manage the IT project portfolio in support of investment programmes • Manage the IT service, asset and other resource portfolios • Provide information on the performance of the IT service, asset and other resource portfolios

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5. DETAILED VAL IT PROCESSES AND KEY MANAGEMENT PRACTICE DESCRIPTIONS

This section provides more detail on the processes within each of the three Val IT domains. It includes descriptions of the key management practices and management guidelines for each process, as well as a more comprehensive maturity model with detailed attributes for each domain.

Management practices are characteristics needed for processes to be successful. While the Val IT key management practices are comprehensive and detailed, they should not be considered a methodology. They provide a framework that enterprises can use to assess their current practices, determine where there are areas for improvement and guide initiatives to make that improvement. Each enterprise needs to consider its own policies, risk appetite and environment before selecting the management practices that best apply to that enterprise.

The Val IT management guidelines provide a means to help enterprises set up and manage value management processes and practices in their environment. For each Val IT process they provide:
- Inputs and outputs
- Roles and responsibilities
- Goals and metrics

Inputs and Outputs

The Val IT processes are presented sequentially in the Val IT framework, but it is clear that the Val IT processes are interrelated in a more complex way. To demonstrate how Val IT processes relate and depend on each other, inputs and outputs are defined at the level of each individual process.

Inputs provide an insight into what a process needs to receive from other processes to be successful. For each process, a set of inputs is defined (e.g., reports, programme plans), including the source process. Processes also generate specific outputs to be delivered to other processes. The inputs and outputs section not only addresses interrelationships between Val IT processes, but also covers typical connections to the IT processes defined in COBIT and inputs and outputs related to other business processes. Processes outside both Val IT and COBIT are indicated with an asterisk, as shown in **figure 16**.

Figure 16—Example of Inputs and Outputs (IM1)

From	Inputs
*	High-level business requirements
PM1	Appropriate investment mix
IM1	Initial business case
COBIT PO1	IT services portfolio
COBIT PO5	IT cost-benefit estimates
COBIT PO9	Risk assesment

* Input from/output to outside Val IT and COBIT

Outputs	To
Initial business case	IM2, COBIT PO1, PO5, AI1
Initial business case approval	IM3, IM4, IM6, COBIT PO1, PO10, AI1

It should be noted that these inputs and outputs should not be regarded as an exhaustive list. They include only the most evident and important links, and additional links could be defined depending on a particular enterprise's environment and process framework.

Roles and Responsibilities

For each Val IT process, a responsible, accountable, consulted and informed (RACI) chart is provided, as shown in **figure 17**. The RACI chart decomposes the process into a set of key activities, indicating for each of these activities who should be responsible, accountable, consulted and informed.

The activities in the RACI chart are derived from Val IT's key management practices, but are mostly defined at a more detailed level of granularity. For each of the defined activities, responsibilities and accountabilities are defined for typical roles, as shown in **figure 18**.

Note the following regarding **figure 18**:
- The enterprise's head of HR has been included for managing availability of (business and IT) human resources (PM3).
- The chief operating officer (COO) has not been specifically included since the role of the position varies widely and could fulfil the functions of CIO, business sponsor and/or business unit executive, all of which are included in **figure 18**.
- None of the managers reporting to the CIO is included since it is assumed they are all represented by the CIO, as their activities would be covered by COBIT. This is not intended in any way to diminish the critical contribution of these roles but rather to simplify the RACI chart and avoid unnecessary duplication with COBIT. The roles to be fulfilled by those reporting to the CIO may be determined by using the input and output charts to move from Val IT to the relevant part of COBIT where they are described.
- The project management office (PMO) has been left in the RACI charts, even though a number of them might be within the IT function. Project management officers also will be needed in business functions to co-ordinate business projects. This is to allow for the distinction in roles between project and programme management.

• Where the term 'office' is used, it might not connote separate groups of people but each of the roles is needed. In smaller enterprises one or more of these roles might be undertaken by one person or a single organisational entity.

Figure 17—Example RACI Chart (IM1)

RACI Chart / Activities	Board	CEO	CARS	Investment and Services Board	Value Management Office	CFO	CIO	Business Sponsor	Programme Manager	Programme Management Office	Business Management	Project Management Office
Create an environment that fosters and welcomes new ideas and acknowledges their champions.	R	A/R					R				R	
Suggest new opportunities.	R	A/R	R	R	R	R	R				R	
Capture opportunities for investment programmes to create value in support of the business strategy or to address operational or compliance issues.	C	C	C		R	C	R				A/R	
Categorise the opportunity. Clarify expected business outcome(s) and identify, at a high level, business, process, people, technology and organisational initiatives required to achieve the expected outcomes.		C			R	C	C				A/R	
Determine which opportunities to pursue further or examine in more depth, and identify and assign a business sponsor for each opportunity to be pursued.		C		C	C	C	C			C	A/R	C
Describe the business outcome(s) to which the potential programme will contribute, the nature of the programme's contribution, and how the contribution would be measured.					C	C	C	A	R		R	
Identify high-level initiatives that might be required to achieve these outcomes.					C		C	A	R		R	
Estimate the high-level benefits, both financial and non-financial, and the costs for the full economic life cycle of the programme.					C	C	C	A	R		R	
State any key assumptions and identify key risks, along with their potential impact on current and future business operations, and mitigation strategies.			C		C		R	A	R		R	
Document the initial programme concept business case with information obtained.					C			A	R			
Review and evaluate the initial programme concept business case.					C	C	C	A	R	R	R	
Determine whether the programme should proceed to full programme definition and evaluation.					C	C	C	A	R	R	R	
Obtain CIO approval and sign-off on the technical aspects of the initial programme concept business case.					I		R	A	R			
Obtain business sponsor approval and sign-off on overall initial programme concept business case.					I			A	R			

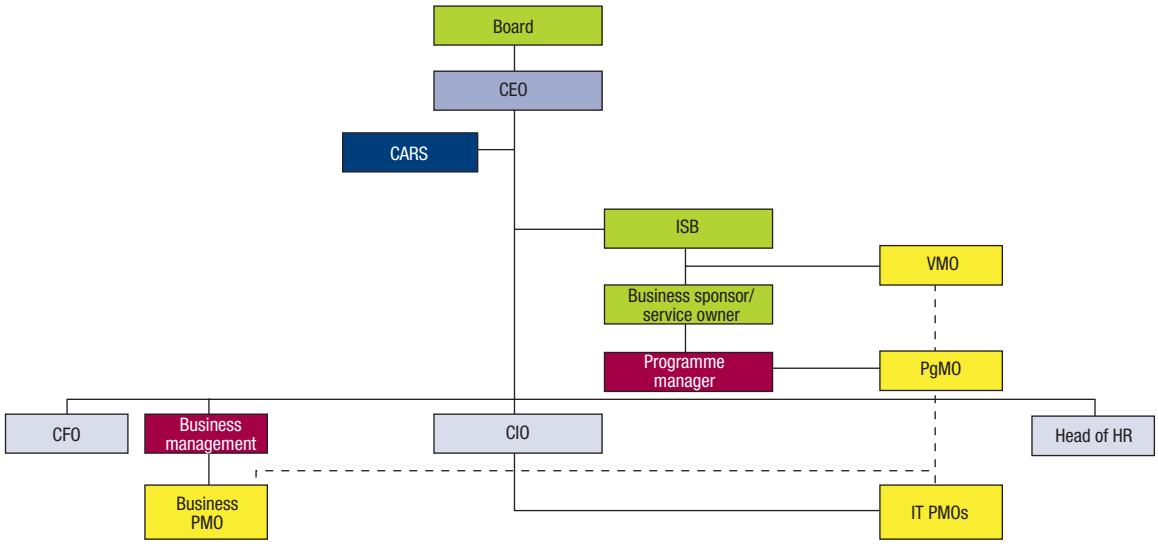
A **RACI** chart identifies who is **R**esponsible, **A**ccountable, **C**onsulted and/or **I**nformed.

Figure 18—Role Definitions

Role	Suggested definition
Board	The group of the most senior executives and/or non-executives of the enterprise, who are accountable for the governance of the enterprise and have overall control of its resources
Business sponsor (including service owner)	The individual accountable for delivering benefits and value to the enterprise from an IT-enabled business investment programme
Business unit executives/ managers	Business individuals with roles with respect to a programme
Compliance, audit, risk and security (CARS)	The function(s) in the enterprise responsible for compliance, audit, risk and security
Chief executive officer (CEO)	The highest ranking officer, who is in charge of the total management of the enterprise
Chief financial officer (CFO)	The most senior official of the enterprise, who is accountable for financial planning, record keeping, investor relations and financial risks
Chief information officer (CIO)	The most senior official of the enterprise, who is accountable for IT advocacy; aligning IT and business strategies; and planning, resourcing and managing the delivery of IT services and information, and the deployment of associated human resources
Investment and services board (ISB)	A management structure primarily accountable for managing the enterprise's portfolio of investment programmes and existing/current services and, thus, managing the level of overall funding to provide the necessary balance between enterprise-wide and specific line-of-business needs
Head of human resources (HR)	The most senior official of an enterprise who is accountable for planning and policies with respect to all human resources in that enterprise
Programme manager	The individual responsible for the achievement of the programme's objectives
Programme management office (PgMO)	The function responsible for supporting programme managers and gathering, assessing and reporting information about the conduct of their programmes and constituent projects
Project management office (PMO)	The function for supporting project managers; defining and propagating standardised methodologies; and gathering, assessing and reporting information about the conduct of their projects
Value management office (VMO)	The function that acts as the secretariat for the ISB in managing investment and service portfolios, including assessing and advising on investment opportunities and business cases, value governance/management methods and controls, and reporting on progress in sustaining and creating value from investments and services

Figure 19, while not intended to represent an organisational chart/structure, shows the interrelationships amongst the roles defined previously. Note the inclusion of PMOs under both IT and business functions, and the head of HR, who is needed in PM3.

Figure 19—Interrelationships



For each of those roles, the following definitions apply to the designations in terms of responsible, accountable, consulted and informed:
- Responsible (R)—Those who must ensure that the activities are completed successfully
- Accountable (A)—Those who have the authority to approve the execution and/or accept the outcome of an activity
- Consulted (C)—Those whose opinions are sought on an activity (two-way communication)
- Informed (I)—Those who are kept current on the progress of an activity (one-way communication)

The assignment of R, A, C, and I designations is likely to vary somewhat amongst enterprises, depending on their history, the personalities involved, politics, etc. The Val IT management guidelines illustrate possible assignments, although enterprises might adopt others. What is most important is that someone with the appropriate authority has an A and someone an R for every activity.

Certain assumptions were made when completing the RACI charts in Val IT. These were:
- The CIO does not report through any other CxO, such as the CFO or COO, but rather directly to the CEO. If this is not the case, then clearly the RACI designations might be different.
- The CIO has all subordinate IT management roles reporting to him/her and so can control and answer for all of them. All positions reporting to the CIO are considered in COBIT and not in Val IT.
- The CIO might be the business sponsor for any programme that concerns only IT matters, e.g., replacing one supplier with a cheaper one without any effect on functionality or performance.
- Business cases need sign-off by only the business sponsor and the CIO. The CFO signs off as a member of the ISB.
- The VMO operates as a support function and does not have the authority to approve or reject proposed investments.

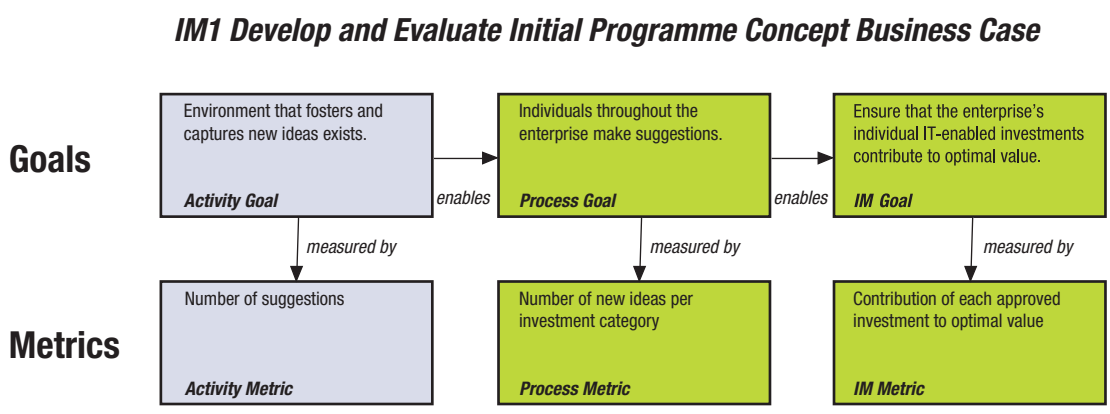
Goals and Metrics

For each of the processes, Val IT defines goals and metrics at three levels:
- Domain (i.e., for each of VG, PM and IM) goals and metrics that define what the business expects from each Val IT domain and how to measure it
- Process goals and metrics that define what the Val IT process must deliver to support its domain's objectives and how to measure it
- Activity goals and metrics that establish what needs to happen inside each process to achieve its required performance and how to measure it

Goals are defined top-down in that the domain goals are set by the nature of the enterprise and what it has to achieve to deliver optimal value. Domain goals are achieved by one or the interaction of a number of processes. Therefore, domain goals help define the different process goals. In turn, each process goal requires a number of activities, thereby establishing the activity goals. Metrics are defined as actual (lag indicators) or potential (lead indicators) outcome measures. Lag indicators provide a measure of what has actually been done or achieved, while lead indicators can be measured before the outcome is met, and provide an early indication of whether the higher-level goals are likely to be met. Lag indicators at a specific goal level, e.g., at the activity level, might become lead indicators or those achievements might become enablers for a higher-level goal, e.g., at the process level.

It should be noted that the cascade of goals and metrics presented in Val IT as shown in **figure 20**, differs from the cascade presented in COBIT. COBIT's cascade runs from IT goals to process goals to activity goals while Val IT's cascade runs from Val IT domain goals (instead of IT goals) to process and activity goals. The level of IT goals is not retained in Val IT since IT goals are seen as intermediate outcomes on the journey to creating value from IT-enabled investments. By addressing Val IT domain goals (VG, PM, IM), the focus is on the ultimate goal of creating business value rather than on delivering the intermediate outcomes and benefits defined in COBIT's IT and business goals.

Figure 20—Example of Cascade of Goals and Metrics (IM1)



In support of Val IT's overall goal of enabling the enterprise to secure optimal value from IT-enabled business investments at an affordable cost with an acceptable level of risk, the Val IT domain goals, as defined and referenced in each of the Val IT processes, are:
- Value governance goal—To ensure that value management practices are embedded in the enterprise, enabling it to secure optimal value from its IT-enabled investments throughout their full economic life cycle
- Portfolio management goal—To ensure that optimal value is secured by the enterprise across its portfolio of IT-enabled investments
- Investment management goal—To ensure that the enterprise's individual IT-enabled investments contribute to optimal value

The overall metric for Val IT is the value that is delivered at an affordable cost with an acceptable level of risk. For each of the Val IT domain goals, unique corresponding outcome metrics are defined:
- Value governance—The maturity level of the value management practices in the enterprise
- Portfolio management—The percentage of forecast optimal value secured across the enterprise's portfolio of IT-enabled investments
- Investment management—The contribution of individual IT-enabled investments to optimal value

The process goals and metrics are derived from the process key management practices. Note that in the figures that follow in this chapter there is not a one-to-one correspondence between the goals and metrics and the activities because many overlap or would give rise to needless repetition if they were laid out in that way. It is worth considering all goals and metrics within each key management practice to set actual goals and metrics for each activity.

Maturity Models

Boards and executive management need to consider how effective their enterprises are at creating value and should be able to answer these related questions:
- What are our peers doing to create value, and how are we placed in relation to them?
- What are proven good practices in value creation, and how are we placed with regard to these practices?
- Based on these comparisons, are we doing enough?
- How do we identify what we need to do to reach the level of value creation sought, especially with respect to investments in business change involving IT?

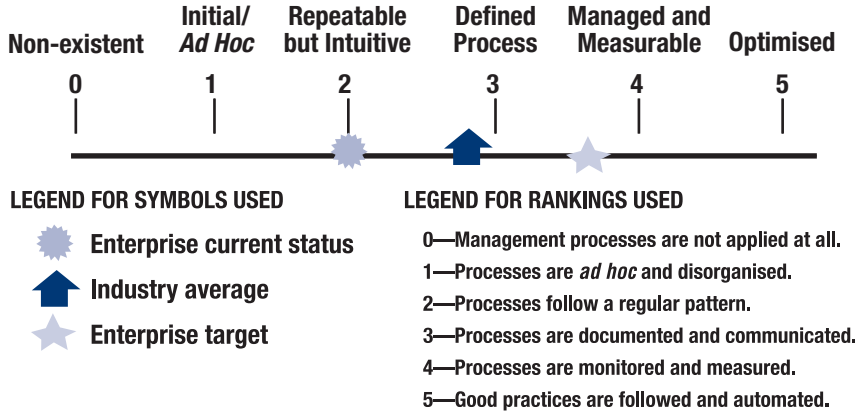
It can be difficult to obtain meaningful answers to these questions. Management is constantly looking for benchmarking and self-assessment tools in response to the need to know what to do to achieve the best results. One such tool is maturity modelling, which can enable the enterprise to evaluate itself from a level of having non-existent or unstructured processes to one where the enterprise has adopted and optimised its use of good practices. When modelling maturity, it is useful to identify a limited number of levels. A larger number would render the system difficult to use and suggest a precision that is not justifiable because, in general, the purpose is to identify where issues are and how to set priorities for improvements.

The Val IT maturity levels are designed as profiles of processes that an enterprise would identify as symptoms or descriptions of its current and possible future states. Each enterprise will recognise that many of its processes are at different maturity levels—for example, some processes might be at level 1, some at level 3 and others at level 4. This shows that the maturity models are designed to enable management to focus on key areas needing attention rather than on trying to get all processes stabilised at one level before moving to the next.

Using the Val IT maturity models, management can identify:
- The actual performance of the enterprise—Where the enterprise is today
- The enterprise's target for improvement—Where the enterprise wants to be

To make the results easily usable in management briefings, where they are to be presented as a means to support the case for future plans to improve value creation, a graphic presentation method might need to be provided (**figure 21**).

Figure 21—A Maturity Scale Can Improve Planning[25]



A maturity model has been defined for each of the three Val IT domains, providing an incremental measurement scale from 0 through 5. At level 0, the enterprise has not yet adopted even the most basic value management practices recommended by Val IT. At level 5, the enterprise is able to quantify the value it is creating through business change investments, whether or not they involve IT, and has the means to continue to improve the creation of value in the future. Clearly, levels 1 to 4 represent intermediate stages on the journey to creating optimal value.

The maturity models in this chapter are a more detailed refinement of those presented in chapter 4 and include the following attributes, each of which evolve through the levels:
- Awareness and communication
- Responsibility and accountability
- Goal setting and measurement
- Policies, standards and procedures
- Skills and expertise
- Tools and automation

The maturity model scales will help management understand where shortcomings exist and set targets for where they need to be. The most appropriate maturity level for an enterprise will be influenced by the enterprise's business objectives, the operating environment and industry practices. Specifically, the level of value management maturity with respect to IT-enabled investments will depend on the enterprise's dependence on IT, its technological sophistication and, most important, the future role its executive and management foresee for information technology.

The remainder of this chapter provides, for each of the three Val IT domains, detailed descriptions of the key management practices within each process, management guidelines for the process and maturity models for each domain.

[25] IT Governance Institute, COBIT 4.1, *loc.cit.*

Value Governance

VG1 Establish informed and committed leadership.
- VG1.1 Develop an understanding of the significance of IT and the role of governance.
- VG1.2 Establish effective reporting lines.
- VG1.3 Establish a leadership forum.
- VG1.4 Define value for the enterprise.
- VG1.5 Ensure alignment and integration of business and IT strategies with key business goals.

VG2 Define and implement processes.
- VG2.1 Define the value governance framework.
- VG2.2 Assess the quality and coverage of current processes.
- VG2.3 Identify and prioritise process requirements.
- VG2.4 Define and document the processes.
- VG2.5 Establish, implement and communicate roles, responsibilities and accountabilities.
- VG2.6 Establish organisational structures.

VG3 Define portfolio characteristics.
- VG3.1 Define portfolio types.
- VG3.2 Define categories (within portfolios).
- VG3.3 Develop and communicate evaluation criteria (for each category).
- VG3.4 Assign weightings to criteria.
- VG3.5 Define requirements for stage-gates and other reviews (for each category).

VG4 Align and integrate value management with enterprise financial planning.
- VG4.1 Review current enterprise budgeting practices.
- VG4.2 Determine value management financial planning practice requirements.
- VG4.3 Identify changes required.
- VG4.4 Implement optimal financial planning practices for value management.

VG5 Establish effective governance monitoring.
- VG5.1 Identify key metrics.
- VG5.2 Define information capture processes and approaches.
- VG5.3 Define reporting methods and techniques.
- VG5.4 Identify and monitor performance improvement actions.

VG6 Continuously improve value management practices.
- VG6.1 Implement lessons learned.

DETAILED KEY MANAGEMENT PRACTICES

VG1 Establish informed and committed leadership.

VG1.1 Develop an understanding of the significance of IT and the role of governance.
All executives should have a sound understanding of strategic IT issues, such as dependence on IT, and technology insights and capabilities, so there is a common and agreed-upon understanding amongst IT, the other business functions and the executives regarding the actual and potential significance of IT for the enterprise's strategy. Enterprise leadership should have an understanding of the key elements of governance required for the reliable, secure and cost-effective delivery of optimal value from the use of existing and new IT services, assets and resources.

VG1.2 Establish effective reporting lines.
Establish effective reporting lines that allow the CIO to engage the enterprise leadership as the advocate of the significance of IT for the enterprise. The reporting line of the CIO should be commensurate with the importance of IT to the enterprise.

VG1.3 Establish a leadership forum.
Establish a leadership forum to help the leadership understand and regularly discuss the opportunities that could arise from business change enabled by current, new or emerging technologies, and to understand their responsibilities in optimising the value created from those opportunities.

VG1.4 Define value for the enterprise.
Ensure that there is a clear and shared understanding of what constitutes value for the enterprise, and ensure that it is communicated throughout the enterprise.

VG1.5 Ensure alignment and integration of business and IT strategies with key business goals.
The business and IT strategies should be integrated, clearly linking enterprise, business and IT goals, and should be broadly communicated and regularly reviewed.

MANAGEMENT GUIDELINES

VG1 Establish informed and committed leadership.

From	Inputs
*	Business strategy
COBIT PO1	IT strategy

* Input from/output to outside Val IT and COBIT

Outputs	To
Business organisational and governance requirements	*
Lessons learned	VG6
Leadership commitment	IM5
IT strategy feedback	COBIT PO1
IT organisational and governance requirements	COBIT PO4, ME4

* Input from/output to outside Val IT and COBIT

RACI Chart

Activities	Board	CEO	CARS	Investment and Services Board	Value Management Office	CFO	CIO	Business Sponsor	Programme Manager	Programme Management Office	Business Management	Project Management Office
Develop an understanding by the enterprise leadership of key elements of governance required for reliable, secure and cost-effective delivery of existing and new IT services, assets and resources.	A	R	C	R		I	R					
Establish an effective reporting line to allow the CIO to engage the enterprise leadership as an advocate of the business significance of IT.	A	R	I	C			R					
Establish a forum to help enterprise leadership understand opportunities for business change enabled by current, new or emerging technologies, and to understand their responsibilities for value to be realised from those opportunities.	C	R		C			A/R					
Define, agree upon and communicate the meaning of value for the enterprise.	A	R		R		R	C					
Ensure the alignment and integration of business and IT strategies with key enterprise goals.	A	R		I		C	R					

A **RACI** chart identifies who is **R**esponsible, **A**ccountable, **C**onsulted and/or **I**nformed.

Goals and Metrics

Activity Goals	Process Goals	VG Goal
• Executive and senior management understand their roles in securing optimal value from IT-enabled investments. • The CIO's reporting line is commensurate with the significance of IT to the enterprise. • The role, business significance and contribution of current and future IT capabilities are clearly understood by enterprise leadership. • The meaning of value has been clearly defined and communicated widely. • Business and IT strategies and goals are aligned.	• Enterprise leadership is engaged in governance of IT so the enterprise can make informed decisions, resulting in optimal value from its IT-enabled investments. • There is transparency and understanding of the interrelationship amongst value, business and IT strategies, policies, benefits, costs, risks, and service levels.	• Ensure that value management practices are embedded in the enterprise, enabling it to secure optimal value from its IT-enabled investments throughout their full economic life cycle.

Activity Metrics	Process Metrics	VG Metric
• Percentage of board and enterprise leadership meeting time spent on IT-enabled investments • Percentage of the CIO's time spent on business strategic planning • Frequency of CIO reporting to or attending executive board meetings at which IT's contribution to enterprise goals is discussed • Frequency of reviewing, communicating and reinforcing what constitutes value throughout the enterprise	• The degree of agreement which exists amongst the enterprise leadership on the value governance principles to be applied in the enterprise • Frequency of meetings with enterprise leadership involvement where IT's contribution to value is discussed • Number of enterprise leadership members attending meetings where IT's contribution to value is discussed • Frequency with which value, value governance, and business and IT alignment are part of overall internal communications	• The maturity level of the value management processes in the enterprise

DETAILED KEY MANAGEMENT PRACTICES

VG2 Define and implement processes.

VG2.1 Define the value governance framework.
Establish an appropriate governance framework that is consistent with the overall enterprise governance environment and generally accepted governance and control principles. The framework should provide for unambiguous accountabilities and practices to avoid a breakdown in internal control and oversight.

VG2.2 Assess the quality and coverage of current processes.
Assess the quality and coverage of current processes against the governance framework. Consider the current accountabilities and practices in the context of past performance and against what is required to achieve the necessary oversight and controls, and identify areas for process improvements and the extent of the improvements needed.

VG2.3 Identify and prioritise process requirements.
The processes should include planning and prioritising current and future work within the overall financial planning and human (business and IT) and other resource planning, securing and allocating funds and resources consistent with the priorities, stage-gating of investment programmes, monitoring and communicating performance, taking appropriate remedial action, and realising benefits so optimal value is secured from the investment portfolio and from all IT services, assets and resources.

VG2.4 Define and document the processes.
Define and document the processes, including goals and metrics. Define, implement and consistently follow processes that provide for clear and active linkage amongst the enterprise strategy; the portfolios of investment programmes; the IT services, assets and resources that execute the strategy; the individual investment programmes; and the business and IT projects that make up the programmes. Agree on clearly defined process goals and metrics, and define related activity goals and metrics.

VG2.5 Establish, implement and communicate roles, responsibilities and accountabilities.
Establish, implement and communicate roles, responsibilities and accountabilities for all personnel in the enterprise in relation to the portfolios of business investment programmes; individual investment programmes; and IT services, assets and resources to allow sufficient authority to exercise the roles and responsibilities assigned. These roles should include: investment decision making, programme sponsorship, programme management, project management, service delivery and associated support roles. Accountability for all roles, including for achieving the business benefits, delivering required capabilities and controlling the expenditures, should be clearly assigned and monitored. Accountabilities should be accepted explicitly by those to whom they are assigned, and their performance should be assessed accordingly.

VG2.6 Establish organisational structures.
Establish appropriate boards, committees and support structures including, but not limited to, one or more ISB(s), an IT strategy committee, an IT planning or steering committee, and an IT architecture board. Establish and maintain an optimal co-ordination, communication and liaison structure between the IT function and other stakeholders, such as other business functions, users (which might include business customers), corporate functions, suppliers, outsourcers, *et al.*

MANAGEMENT GUIDELINES

VG2 Define and implement processes.

From	Inputs
*	Business strategy
*	Business process framework
*	Business roles and responsibilities
*	Business governance and control framework
VG4	Value management budgeting requirements
COBIT PO4	IT process framework
COBIT PO7	IT roles and responsibilities

* Input from/output to outside Val IT and COBIT

Outputs	To
Governance procedures, techniques and tools	*
Business process requirements	*
Business organisational and governance requirements	*
Value management processes	VG4
Lessons learned	VG6
Business roles, responsibilities and accountabilities	IM5
IT organisational and governance requirements	COBIT PO4, ME4
Feedback on IT organisation and roles and responsibilities	COBIT PO4, PO7

* Input from/output to outside Val IT and COBIT

RACI Chart

Activities	Board	CEO	CARS	Investment and Services Board	Value Management Office	CFO	CIO	Business Sponsor	Programme Manager	Programme Management Office	Business Management	Project Management Office
Define an overall governance framework.	A	R	C	C		R	R					
Assess the quality and coverage of current processes against the governance framework.	I	A	C	C	R	R	R			C	C	
Identify and prioritise process requirements.	C	A/R	C	C	R	R	R			C	C	
Define and document processes, including goals and metrics.	I	A	C	R	R	R	R		C	C	C	C
Establish, implement and communicate roles and responsibilities, and assign and confirm clear accountabilities for all critical value governance roles.	A	R		I	I	C	C				I	
Establish boards, committees and support structures.	I	A	C	R	R	C	C		R	R	C	R
Establish and maintain an optimal co-ordination, communication and liaison structure between the IT function and other stakeholders.	I	A	C	R	R	R	R		R	R	R	R

A **RACI** chart identifies who is **R**esponsible, **A**ccountable, **C**onsulted and/or **I**nformed.

Goals and Metrics

Activity Goals	Process Goals	VG Goal
• There is an agreed-upon and documented governance framework. • Understanding of the current and future state of processes exists. • Key roles and responsibilities are identified, defined and assigned. • Clear and unambiguous ownership and accepted accountabilities for critical governance roles exist. • Appropriate boards and committees are established with appropriate agendas, and appointed members meet as planned.	• Key stakeholders undertake their roles in accordance with their responsibilities and accountabilities within the appropriate bodies and committees. • Value governance processes are implemented and monitored.	• Ensure that value management practices are embedded in the enterprise, enabling it to secure optimal value from its IT-enabled investments throughout their full economic life cycle.

Activity Metrics	Process Metrics	VG Metric
• The time that has elapsed since the last review of governance framework documents • Percentage of current value governance processes that have been assessed for improvements • Number of value governance processes that have been documented with clear roles, responsibilities and accountabilities • Percentage of agendas that are dealt with at board and committee meetings	• Percentage of target value governance processes that are implemented • Number of incidences of non-compliance with value governance processes • Degree to which enterprise leadership is satisfied with value governance processes • Number of value governance processes that are unclear or have ambiguous accountabilities • Frequency with which appointed executives (rather than substitutes) attend board and committee meetings	• The maturity level of the value management processes in the enterprise

DETAILED KEY MANAGEMENT PRACTICES

VG3 Define portfolio characteristics.

VG3.1 Define portfolio types.
Define portfolio types, recognising that the enterprise has a number of different types of portfolios about which decisions need to be made. Each type of portfolio should be managed and funded according to what it contains. Val IT is primarily concerned with the portfolio of IT-enabled investments, while COBIT is primarily concerned with portfolios of IT projects, services, assets and resources.

VG3.2 Define categories (within portfolios).
The governance processes must recognise that each type of portfolio might need to be further sub-divided into categories, according to the characteristics of its contents, with each category needing different levels of evaluation, approaches to decision making and funding. For example, the Val IT investment portfolio could be categorised in this manner:
- Mandatory
- Continuity or sustaining
- Discretionary
  - Strategic (to create new products/services and enter new markets)
  - Transformational (to gain competitive advantage or major innovation)
  - Transactional (to process transactions more efficiently)

VG3.3 Develop and communicate evaluation criteria (for each category).
For each category within a portfolio, evaluation criteria must be in place to support fair, transparent, repeatable and comparable evaluation. For example, the Val IT investment portfolio evaluation criteria should include, at a minimum, alignment with the enterprise's strategic objectives; business worth, both financial and non-financial; and risk, both delivery risk (the risk of not delivering a capability) and benefits risk (the risk of not realising the expected benefit from the capability). In the case of an IT service portfolio, evaluation criteria might include: business process alignment (extent of usage, number of users, frequency of use, and benefits to users); effectiveness in terms of usability, availability and responsiveness; and efficiency in terms of cost, redundancy and technical health.

VG3.4 Assign weightings to criteria.
For each category within a portfolio, the criteria should be weighted to allow an overall relative score to be derived for evaluation purposes.

VG3.5 Define requirements for stage-gates and other reviews (for each category).
Define requirements for stage-gates and other reviews for portfolio categories. For example, specify the criteria against which business sponsors of active investments are to undertake stage-gate reviews so they can be co-ordinated with portfolio reviews by the ISB, when they are to occur, and also specify their objectives and who is to attend them. Criteria should include the significance of the investment to the enterprise, associated risks, programme schedules, the timing of the availability of further information that might affect funding plans and the delivery of key capabilities and benefits. For the IT services, assets and resources portfolios, criteria and regular reviews should be specified to assess their ongoing contribution to value.

MANAGEMENT GUIDELINES

VG3 Define portfolio characteristics.

From	Inputs
*	Business strategy
*	Business investment approach
COBIT PO1	IT strategic plan
	IT project portfolio
	IT services portfolio

Outputs	To
Lessons learned	VG6
Investment evaluation criteria	PM4
Portfolio types and investment categories	PM4, COBIT PO1, PO5

* Input from/output to outside Val IT and COBIT

RACI Chart

Activities	Board	CEO	CARS	Investment and Services Board	Value Management Office	CFO	CIO	Business Sponsor	Programme Manager	Programme Management Office	Business Management	Project Management Office
Define the types of portfolios for the enterprise.	A	R		R		C	C					
Define categories within the portfolios.	A	R		R	C	C	C				C	
Develop and communicate evaluation criteria by categories.	A	R		R	C	C	C				C	
Assign weightings to the criteria by category to enable evaluation.	A	R		R	R	C	C				C	
Define requirements and establish stage-gates for investment portfolio categories.	A	R		R	C	C	C				C	
Define requirements for and establish regular reviews of contribution to value of other portfolios.	A	R		R	C	C	C				C	

A **RACI** chart identifies who is **R**esponsible, **A**ccountable, **C**onsulted and/or **I**nformed.

Goals and Metrics

Activity Goals	Process Goals	VG Goal
• Types of portfolios, with their characteristics, have been defined. • Criteria exist for evaluating the investment portfolio and other portfolios based on categories within portfolios. • The basis for evaluating investments and contributions to value is consistent and well understood. • There is informed and efficient decision making about investments and the contents of other portfolios. • Requirements have been defined for stage-gate reviews for investments and the contribution to value of other portfolios.	• Portfolios are used for supporting management decisions about contributions to value. • There is an appropriate and consistent level of analysis for the investment portfolio and all other portfolios. • The relative value of investments and contribution to value of other portfolios can be determined. • A mechanism is in place for undertaking stage-gate reviews for investments and reviews of the contribution to the value of other portfolios.	• Ensure that value management practices are embedded in the enterprise, enabling it to secure optimal value from its IT-enabled investments throughout their full economic life cycle.

Activity Metrics	Process Metrics	VG Metric
• Level of satisfaction the executive has with the usefulness of the types of portfolios and their categories established for decision making • Level of satisfaction the executive has with the evaluation framework • Time since the last update of stage-gate review criteria • Time since the last update of requirements for reviewing the contribution to the value of other portfolios	• Number of distinct portfolios, with their categories, defined • Number of investment decisions that are made not using the portfolio framework • Number of executive overrides of decisions based on results of portfolio framework analysis • Trends in time required to make investment decisions • Number of investments that are wrongly categorised • Number of investment stage-gate reviews and reviews of the content of other portfolios that do not meet their review criteria	• The maturity level of the value management processes in the enterprise

DETAILED KEY MANAGEMENT PRACTICES

VG4 Align and integrate value management with enterprise financial planning.

VG4.1 Review current enterprise budgeting practices.
Examine the practices used to set budgets, including their sub-divisions, allocations for programmes (investments) and business operations (costs), the periods over which they are set, frequency of reporting and review, levels of sign-off and cross-charging provisions. Consider whether business cases are sufficiently comprehensive and complete.

VG4.2 Determine value management financial planning practice requirements.
Consider the implications for the enterprise of differentiating investments from costs, funding investments out of alignment with budgeting periods, budgets being held by programme business sponsors and operating controls based on future value creation rather than year-to-date spending, etc. Specify what business cases need to include.

VG4.3 Identify changes required.
Compare the financial planning practices needed for value management with current budgeting practices and identify changes needed. Consider how IT and the IT function are to be funded in the future. Assess the current and planned future spending on IT-enabled investments to prioritise the financial planning process practice changes. Draw up standard formats for business cases and guidelines for their use.

VG4.4 Implement optimal financial planning practices for value management.
Establish practices for financial planning with respect to IT-enabled investments so as to facilitate business case preparation, investment decision making, investment management and the creation of optimal value. Monitor compliance and take remedial action when needed. Regularly review financial planning practices to ensure their alignment with optimal value creation.

MANAGEMENT GUIDELINES

VG4 Align and integrate value management with enterprise financial planning.

From	Inputs
*	Enterprise budgeting methods
VG2	Value management processes

* Input from/output to outside Val IT and COBIT

Outputs	To
Lessons learned	VG6
Value management budgeting requirements	VG2, COBIT PO1, PO5

RACI Chart

Activities	Board	CEO	CARS	Investment and Services Board	Value Management Office	CFO	CIO	Business Sponsor	Programme Manager	Programme Management Office	Business Management	Project Management Office
Understand the enterprise's current budgeting practices.		C		R		A/R	R				C	
Determine the financial planning practices needed for value management.	C	C		R		A/R	R				C	
Determine optimal financial planning practices, over what periods and who should be the budget holders for different types of expenditures.	C	C				A/R					C	
Determine optimal IT funding practices.	C	C				A/R	R					
Identify changes needed.	I	C		C		A/R						
Implement financial planning changes.		C		C		A/R	R				R	
Define the structure, content and use of business cases.		C		R		A/R	C					
Regularly review financial planning and budgeting practices.		C				A/R						

A **RACI** chart identifies who is **R**esponsible, **A**ccountable, **C**onsulted and/or **I**nformed.

Goals and Metrics

Activity Goals	Process Goals	VG Goal
• Current budgeting practices, together with their impact on the creation of optimal value, are understood. • Financial planning practices appropriate to creating optimal value from investments in business change are adopted. • All relevant parties understand the purpose and use of business cases. • Financial planning practices are kept under review to ensure that they continue to enable optimal value to be created from IT-enabled investments.	• Financial planning practices appropriate to creating optimal value are identified, implemented and monitored. • Complete and comprehensive business cases are developed.	• Ensure that value management practices are embedded in the enterprise, enabling it to secure optimal value from its IT-enabled investments throughout their full economic life cycle.

Activity Metrics	Process Metrics	VG Metric
• Frequency of reviews of the financial planning practices and their linkage to the creation of optimal value • Percentage of business cases that comply with financial planning practices that enable optimal value to be created	• Number of incidences that occur due to financial planning practices in use that inhibit creation of optimal value • Number of incidences that occur due to actual or attempted circumvention of financial planning practices	• The maturity level of the value management processes in the enterprise

DETAILED KEY MANAGEMENT PRACTICES

VG5 Establish effective governance monitoring.

VG5.1 Identify key metrics.
Define a balanced set of performance objectives, metrics, targets and benchmarks. Metrics should cover activity and outcome measures, including lead and lag indicators for outcomes, as well as an appropriate balance of financial and non-financial measures. They should be reviewed and agreed to with the IT and other business functions, and other relevant stakeholders.

VG5.2 Define information capture processes and approaches.
Processes should be established to collect relevant, timely, complete, credible and accurate data to report on progress against targets. The monitoring process should deploy a method that provides a succinct, high-level, all-around view of portfolio, programme and IT (technical and operational capabilities) performance, and that supports decision making, the execution of decisions, and monitoring to track that expected results are being achieved. The method should fit within the overall enterprise monitoring system.

VG5.3 Define reporting methods and techniques.
Relevant portfolio, programme and IT (technological and functional) performance should be reported to the board and executive management in a timely and accurate manner. Management reports should be provided for senior management's review of the enterprise's progress toward identified goals. Status reports should include the extent to which planned objectives have been achieved, deliverables obtained, performance targets met and risks mitigated. Reporting should be integrated amongst IT and other business functions so interrelationships are clear.

VG5.4 Identify and monitor performance improvement actions.
Upon review of reports, appropriate management action should be initiated and controlled.

MANAGEMENT GUIDELINES

VG5 Establish effective governance monitoring.

From	Inputs
*	Enterprise monitoring system
COBIT ME1	Performance input to IT planning

* Input from/output to outside Val IT and COBIT

Outputs	To
Lessons learned	VG6
Approved business metrics	PM5
Business reporting requirements	
Feedback on IT reporting requirements for investment performance	COBIT ME1, ME4

RACI Chart

Activities	Board	CEO	CARS	Investment and Services Board	Value Management Office	CFO	CIO	Business Sponsor	Programme Manager	Programme Management Office	Business Management	Project Management Office
	Roles											
Identify key measurements to be monitored.	A	R	C	C	I	R	R				C	
Define processes and approaches to capture information.		A		C	R	C	R				C	
Define methods and techniques for reporting performance.	C	A		C	R	C	R				C	
Identify and monitor performance improvement actions.		C	I	A	R	C	C				C	

A **RACI** chart identifies who is **R**esponsible, **A**ccountable, **C**onsulted and/or **I**nformed.

Goals and Metrics

Activity Goals	Process Goals	VG Goal
• Key performance information is available. • Timely and accurate reporting takes place. • Appropriate management action based on reporting takes place.	• Monitoring approach for value governance is defined. • Measurable objectives are set for value governance processes. • Management information processes are defined for appropriate decision making against predefined metrics. • Proactive steering takes place based on regular reviews.	• Ensure that value management practices are embedded in the enterprise, enabling it to secure optimal value from its IT-enabled investments throughout their full economic life cycle.

Activity Metrics	Process Metrics	VG Metric
• Percentage of reports produced for the appropriate recipients that are relevant, current, complete, credible and accurate • Percentage of objectives that are covered by reports	• Number of incidents of non-compliance with the monitoring framework • Number of actions taken as a result of performance reporting • Number of problems identified outside the measurement processes • Percentage of value governance processes that have measurable objectives	• The maturity level of the value management processes in the enterprise

DETAILED KEY MANAGEMENT PRACTICES

VG6 Continuously improve value management practices.

VG6.1 Implement lessons learned.
Lessons learned from value management should be regularly reviewed and necessary changes should be planned, implemented and monitored to improve value governance, portfolio management and investment management processes and practices so as to continuously improve value management practices and the optimisation of value.

MANAGEMENT GUIDELINES

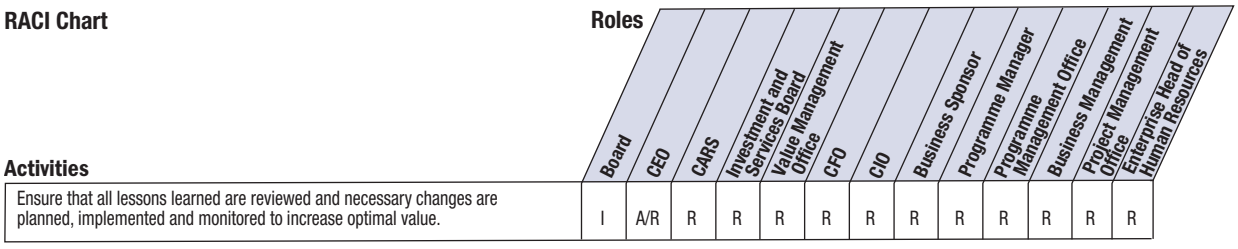
VG6 Continuously improve value management practices.

From	Inputs
VG1 to VG5, PM1 to PM6, IM1 to IM10	Lessons learned

Outputs	To
Business change communications	*
Business change management plans	*

* Input from/output to outside Val IT and COBIT

RACI Chart



A **RACI** chart identifies who is **R**esponsible, **A**ccountable, **C**onsulted and/or **I**nformed.

Goals and Metrics

Activity Goal	Process Goal	VG Goal
• Lessons are documented and applied to improving processes and practices.	• Value governance, portfolio management, and investment management processes and practices are continuously improved.	• Ensure that value management practices are embedded in the enterprise, enabling it to secure optimal value from its IT-enabled investments throughout their full economic life cycle.

Activity Metric	Process Metric	VG Metric
• Number of improvement initiatives that are successfully implemented	• Rate at which optimal value creation increases over time through the improvement in processes and practices	• The maturity level of the value management processes in the enterprise

Figure 22—VG Maturity Model						
	Awareness and Communication	**Responsibility and Accountability**	**Goal Setting and Measurement**	**Policies, Standards and Procedures**	**Skills and Expertise**	**Tools and Automation**
0	The enterprise sees the IT function as a supplier and a cost to be minimised. There is limited communication between IT and the other business functions.					
1	The enterprise recognises that IT is both a cost and an investment with the potential to contribute to business value. Within the context of individual initiatives, there is increasing communication between IT and the other business functions about the need to demonstrate a return on investments involving IT.	IT is accountable for and focused on delivering IT capabilities and maintaining and ensuring continuity of IT services. No accountability is established for benefits realisation.	Reporting, if any, is budget-driven, focused on cost and includes comparisons of current expenditures for major new investments vs. available IT budgets.	No formal process exists to justify investments involving IT using business cases. Business cases are *ad hoc* and exist on a project-by-project basis. Business cases that do exist are often incomplete and inconsistent, and rarely revisited once approved.	Required skills are not actively developed. They exist on an *ad hoc* basis.	Tools exist and are used on an individual *ad hoc* basis.
2	There is increasing awareness amongst business and IT management of the importance of IT and the need for a more formalised governance framework. IT and other business functions are communicating and working more collaboratively on need to demonstrate return on investments involving IT.	The IT function is accountable for and focused on delivering IT capabilities and services as agreed on with the business. Some individuals take ownership for benefit realisation without formal commitment from the business.	Investment status reports exist and include current expenditures for new investments, and compare them to budgets allocated for each investment. There is some limited reporting of benefits.	Processes exist to manage individual major IT-enabled business investments and IT services. Business cases are required for most investments. Business cases include some discussion of linkage to value but the focus is still primarily on costs.	Minimum skill requirements for developing complete and comparable business cases have been identified. Formal or on-the-job training is provided on an as-needed basis, with no formal training plans.	Tools exist and are increasingly used, but with no standardisation across the enterprise and generally in response to an *ad hoc* need.
3	The enterprise understands the governance requirements to select and execute new investments, deliver resulting IT services efficiently, and ensure alignment of IT resources. These requirements are communicated to appropriate personnel.	IT and business users share accountability for implementing programmes within various investment categories. There is increasing accountability for benefits realisation but roles and responsibilities are unclear.	Investment status reports include current expenditures for new investments and compare them to budgets allocated for each investment and each business area. The reports also include comparisons of realised to expected benefits.	Processes exist to establish different categories of investments, including, but not limited to, mandatory, continuity or sustaining, and discretionary investments, and to support fair, transparent, repeatable and comparable evaluation of investments. Business cases are required for all investments and include benefits realisation plans.	Skills are available to identify and normalise the relative value of investments within and across investment categories. A formal training plan exists to maintain skills, but it is not consistently executed.	Standard tool allows for evaluating new investments in terms of benefits, costs and risks. The tool provides basic comparability between investments.

Figure 22—VG Maturity Model (*cont.*)

	Awareness and Communication	Responsibility and Accountability	Goal Setting and Measurement	Policies, Standards and Procedures	Skills and Expertise	Tools and Automation
4	There is a shared commitment between IT and the other business functions to the leadership, process, information and organisational structures required to optimise contribution of individual IT investments and services to business value. Business and IT management have communicated their commitment to evaluate return on all investments.	Accountabilities for achieving business benefits of individual investments, delivering required capabilities and controlling the costs of delivery are clearly assigned, acknowledged and monitored. Business sponsors are held accountable for the realisation of business benefits from investments involving IT.	The executive establishes portfolio mix objectives in line with the strategic direction of the enterprise. For each category of investment, evaluation criteria are in place to support fair, transparent, repeatable and comparable evaluation. Investment status reports include the extent to which planned objectives have been achieved, deliverables obtained, performance targets met and risks mitigated.	Processes provide for clear and active linkage amongst the enterprise strategy, the portfolio of investment programmes that execute the strategy, individual investment programmes, and the business and IT projects that make up the programmes. The processes include: planning and budgeting, prioritisation of planned and current work within overall budget, resource allocation consistent with the priorities, stage-gating of investment programmes, benefits management, monitoring and communicating performance, and taking appropriate remedial action. Business cases are reviewed, updated and re-evaluated throughout the life of the investment, and the appropriate decisions are made to continue, change or cancel programmes.	Skills are available and organised adequately to support investment decision making, value management, programme sponsorship, programme management, project management and associated support roles. A formal training plan exists and is executed to maintain skills and expertise.	Standard tools are available and utilised to evaluate investments and communicate investment and portfolio performance. These tools are integrated with other enterprise systems, e.g., portfolio and project management tools, and financial planning and budgeting tools.
5	The IT function and other business functions continually work in partnership to optimise the portfolios of investments involving IT, IT services, assets and other resources to achieve business objectives and increase business value. Awareness of the need to demonstrate the creation of optimal value is part of the corporate culture. Management communicates its expectations of value in relation to expenditures and business benefits.	Accountabilities for optimising the value from the portfolios of investments, IT services, assets and other resources are clearly assigned, accepted and monitored.	Performance objectives, measures, targets and comparisons are available and are based on timely and accurate data to report on progress against targets. The monitoring process deploys a method that provides a succinct, all-around view of the portfolio. Exceptions are noted globally and consistently by management, and root cause analysis is applied, and corrective steps are taken.	Processes continually monitor the performance of individual programmes and the overall portfolio to ensure that optimal value is created from the portfolio of investments and all IT services, assets and other resources. The processes themselves are continually improved based on lessons learned and industry experience.	Appropriate boards, committees and support structures, including, but not limited to, an investment decision body, an IT planning or steering committee, an IT architecture board, and value, programme and project management support functions have staff with the required skills and expertise. External expertise is called on to benchmark and challenge investment assumptions.	Standard tools are utilised across the enterprise to evaluate investments, detect exceptions, identify positive and negative trends, and evaluate and communicate overall portfolio performance. These tools provide comprehensive reporting, including 'what if' analyses of potential changes to the investment portfolio.

Portfolio Management

PM1 Establish strategic direction and target investment mix.
- PM1.1 Review and ensure clarity of the business strategy and goals.
- PM1.2 Identify opportunities for IT to influence and support the business strategy.
- PM1.3 Define an appropriate investment mix.
- PM1.4 Translate the business strategy and goals into IT strategy and goals.

PM2 Determine the availability and sources of funds.
- PM2.1 Determine overall investment funds.

PM3 Manage the availability of human resources.
- PM3.1 Create and maintain an inventory of business human resources.
- PM3.2 Understand the current and future demand (for business human resources).
- PM3.3 Identify shortfalls (between current and future business human resource demand).
- PM3.4 Create and maintain tactical plans (for business human resources).
- PM3.5 Monitor, review and adjust (business function allocation and staffing).
- PM3.6 Create and maintain an inventory of IT human resources.
- PM3.7 Understand the current and future demand (for IT human resources).
- PM3.8 Identify shortfalls (between current and future IT human resource demand).
- PM3.9 Create and maintain tactical plans (for IT human resources).
- PM3.10 Monitor, review and adjust (IT function allocation and staffing).

PM4 Evaluate and select programmes to fund.
- PM4.1 Evaluate and assign relative scores to programme business cases.
- PM4.2 Create an overall investment portfolio view.
- PM4.3 Make and communicate investment decisions.
- PM4.4 Specify stage-gates and allocate funds to selected programmes.
- PM4.5 Adjust business targets, forecasts and budgets.

PM5 Monitor and report on investment portfolio performance.
- PM5.1 Monitor and report on investment portfolio performance.

PM6 Optimise investment portfolio performance.
- PM6.1 Optimise investment portfolio performance.
- PM6.2 Reprioritise the investment portfolio.

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DETAILED KEY MANAGEMENT PRACTICES

PM1 Establish strategic direction and target investment mix.

PM1.1. Review and ensure clarity of the business strategy and goals.
Make sure the business direction to which IT-enabled investments should be aligned, including the business vision, business principles, strategic goals and objectives, and priorities, is understood.

PM1.2 Identify opportunities for IT to influence and support the business strategy.
Make sure there is a common and agreed-upon understanding between IT and the other business functions regarding the potential opportunities for IT to influence and support the business strategy. Ensure that these are broadly communicated.

PM1.3 Define an appropriate investment mix.
The allocation of funds for IT-enabled investments must be aligned with the strategic direction of the enterprise. The investment mix must achieve the right balance on a number of dimensions which could include, but are not limited to, an appropriate balance of short- and long-term returns, financial and non-financial benefits, and high-risk vs. low-risk investments.

PM1.4 Translate the business strategy and goals into IT strategy and goals.
Identify the broad categories of information systems, applications, data, IT services, infrastructure, IT assets, resources, skills, practices, controls and relationships needed to underpin the business strategy. Document and agree upon an IT strategy and goals, taking into account the interrelationships between the business strategy and the IT services, assets and other resources, and identifying and leveraging synergies that can be achieved.

MANAGEMENT GUIDELINES

PM1 Establish strategic direction and target investment mix.

From	Inputs
*	Business strategy
COBIT PO1	IT strategy

Outputs	To
Appropriate investment mix	PM4, IM1
IT strategy and goals feedback	COBIT PO1

* Input from/output to outside Val IT and COBIT

RACI Chart

Activities	Board	CEO	CARS	Investment and Services Board	Value Management Office	CFO	CIO	Business Sponsor	Programme Manager	Programme Management Office	Business Management	Project Management Office
	Roles											
Review and, where necessary, clarify the business strategy and implications for IT.	A	R				C	R				R	
Identify and communicate opportunities for IT to influence the business strategy.	C	R				C	A/R				R	
Identify and communicate opportunities for IT to support the business strategy.	C	R				C	A/R				R	
Define, based on the business strategy, the appropriate investment mix.	A	R	C	C	I	R	C				C	
Translate business strategy and goals into the IT strategy and goals.		C		C	I	C	A/R				C	

A **RACI** chart identifies who is **R**esponsible, **A**ccountable, **C**onsulted and/or **I**nformed.

Goals and Metrics

Activity Goals	Process Goals	PM Goal
• Business and IT management agree about the contribution of IT to business objectives. • The investment mix has been agreed upon. • The business strategy has been translated into the IT strategy and goals.	• Appropriate engagement of executive, business and IT management exists in aligning business and IT strategies. • The investment mix reflects the business strategy. • Business and IT strategies are aligned.	• Ensure that optimal value is secured by the enterprise across its portfolio of IT-enabled investments.

Activity Metrics	Process Metrics	PM Metric
• Time that IT management spends contributing to the business strategy • Time that business management spends contributing to IT strategy • Time delay between when the business strategy is updated and IT strategy is updated accordingly	• Degree to which business management is satisfied with IT's contribution to the business strategy • Extent to which business management accepts responsibilities related to IT strategy • Percentage of IT expenditures that have direct traceability to the business strategy	• Percentage of forecast optimal value secured across the enterprise's portfolio of IT-enabled investments

DETAILED KEY MANAGEMENT PRACTICES

PM2 Determine the availability and sources of funds.

PM2.1 Determine overall investment funds.

Understand the current availability and commitment of funds, the current approved spending and the actual spent to date. Identify options for obtaining additional funds for IT-enabled investments, internally and from external sources. Determine the implications of the funding source on the investment return expectations.

MANAGEMENT GUIDELINES

PM2 Determine the availability and sources of funds.

From	Inputs
*	Available budget
*	Allocated budget
PM4	Approved investment programmes
PM5	Portfolio performance reports
PM6	Updated overall portfolio view
COBIT PO5	IT budget
	Cost/benefit reports

* Input from/output to outside Val IT and COBIT

Outputs	To
Portfolio budget	*, PM4, PM6
Portfolio budget–used to set and define the IT portfolio budget	COBIT PO1, PO5

* Input from/output to outside Val IT and COBIT

RACI Chart

Activities	Board	CEO	CARS	Investment and Services Board	Value Management Office	CFO	CIO	Business Sponsor	Programme Manager	Programme Management Office	Business Management	Project Management Office
Maintain current and accurate views of funds available, committed, approved to spend, and spent to date.				I	R	A	C			I	C	
Identify and investigate additional sources of funds.	C	R		C	C	A/R	R				R	

A **RACI** chart identifies who is **R**esponsible, **A**ccountable, **C**onsulted and/or **I**nformed.

Goals and Metrics

Activity Goals	Process Goal	PM Goal
• The current status and the projected status of investment funds are understood. • Additional sources of investment funds are identified. • There is regular review of the investment funds needed and their use.	• There is transparency and understanding of the investment funds available and their use.	• Ensure that optimal value is secured by the enterprise across its portfolio of IT-enabled investments.

Activity Metrics	Process Metrics	PM Metric
• Frequency and completeness with which reviews are undertaken • The number of investigations that take place into other sources of investment funds	• The quantity of investment funds available for use and the amount allocated but not yet used • Quantity of investment funds that could be available from other sources	• Percentage of forecast optimal value secured across the enterprise's portfolio of IT-enabled investments

DETAILED KEY MANAGEMENT PRACTICES

PM3 Manage the availability of human resources.

PM3.1 Create and maintain an inventory of business human resources.
Create and maintain an inventory of business human resources currently available to the enterprise, their competencies, their current and committed assignments, and their utilisation. Identify and pay special attention to key business personnel who are currently available but are in short supply and might be needed.

PM3.2 Understand the current and future demand (for business human resources).
Understand the current and future demand for business human resources based on the current investment portfolio and a forward view of the investment portfolio. Identify and pay special attention to key business personnel who are in short supply and who might be needed, especially those personnel who undertake day-to-day functions who might also be needed for undertaking additional work on investment programmes.

PM3.3 Identify shortfalls (between current and future business human resource demand).
Identify shortfalls between the current and future business human resource demand and current and planned business human resource supply. Especially consider conflicts in demands between the needs of investment programmes and day-to-day workloads. Develop high-level sourcing strategies and plans to address the shortfall and any surpluses.

PM3.4 Create and maintain tactical plans (for business human resources).
Create and maintain tactical plans for business human resources required to support the investment portfolio. These tactical plans should describe the human resources required; how resources will be reassigned, acquired or developed; backfill; and succession plans.

PM3.5 Monitor, review and adjust (business function allocation and staffing).
Monitor, review and adjust business function staffing allocation and requirements for investment programmes and day-to-day functions, and review sourcing strategies so as to meet expected business objectives and respond to changing circumstances.

PM3.6 Create and maintain an inventory of IT human resources.
Create and maintain an inventory of IT human resources currently available to the enterprise, their competencies, their current and committed assignments and their utilisation. Identify and pay special attention to key IT personnel who are currently available but are in short supply and might be needed.

PM3.7 Understand the current and future demand (for IT human resources).
Understand the current and future demand for IT human resources based on a current and a forward view of the investment portfolio. Identify and pay special attention to key IT personnel who are in short supply and who might be needed, especially those personnel who undertake day-to-day functions who might also be needed for undertaking additional work on investment programmes.

PM3.8 Identify shortfalls (between current and future IT human resource demand).
Identify shortfalls between the current and future IT human resource demand and current and planned IT human resource supply. Especially consider conflicts in demands between the needs of investment programmes and day-to-day workloads. Develop high-level sourcing strategies and plans to address the shortfall and any surpluses.

PM3.9 Create and maintain tactical plans (for IT human resources).
Create and maintain tactical plans for IT human resources required to support the investment portfolio and the IT strategic plan. These tactical plans should describe the human resources required; how resources will be reassigned, acquired or developed; backfill; and succession plans.

PM3.10 Monitor, review and adjust (IT function and staffing).
Monitor, review and adjust the IT function staffing allocation and requirements for investment programmes and ongoing operations, and review sourcing strategies to meet expected business objectives and respond to changing circumstances.

MANAGEMENT GUIDELINES

PM3 Manage the availability of human resources.

From	Inputs
*	Business HR supply
*	Business HR demand
PM5	Portfolio performance reports
COBIT PO1, PO7	IT supply and demand

* Input from/output to outside Val IT and COBIT

Outputs	To
Tactical HR plans	*, IM3
Tactical IT HR plans	COBIT PO1, PO7

* Input from/output to outside Val IT and COBIT

RACI Chart

Activities	Board	CEO	CARS	Investment and Services Board	Value Management Office	CFO	CIO	Business Sponsor	Programme Manager	Programme Management Office	Business Management	Project Management Office	Enterprise's Head of Human Resources
BUSINESS HUMAN RESOURCES													
Create and maintain an inventory of current business human resources and their competencies.					C	C			C	C	A	C	R
Determine the current and committed assignment of business human resources.					C	C		C	C	C	A	C	R
Obtain market information about the supply of critical business human resources.					C						A		R
Determine the current and future demand for business human resources.					C				C	R	R	C	A
Identify and pay special attention to key business personnel who are in short supply on the market with specialised knowledge that will be needed.					C				C	R	R	C	A
Perform a gap analysis between the current and future business human resource demand and supply, paying particular attention to conflicting demands.					A			C	C	R	R	C	R
Develop strategies to address any business human resources shortfall or surplus.		C			R	C		I			A		R
Create and maintain a business tactical resourcing plan.									R	R	R	R	A
Periodically review the business organisational structure.		A	C	C	C	C	C		C	C	R		R
Adjust business staffing requirements, tactical sourcing plans and sourcing strategies.					C	C	C	I			A/R		R
IT HUMAN RESOURCES													
Create and maintain an inventory of current IT human resources and their competencies.					C	C	A		C	C		C	R
Determine the current and committed assignment of IT human resources.					C		A		C	C		C	R
Obtain market information about the supply of critical IT human resources.					C		A						R
Determine the current and future demand for IT human resources.					C		A/R		C	R		C	C
Identify and pay special attention to key IT personnel who are in short supply on the market with specialised knowledge that will be needed.					C		A		C	R		C	C
Perform a gap analysis between the current and future IT human resource demand and supply, paying particular attention to conflicting demands.					A		C		C	R		C	C
Develop strategies to address any IT human resources shortfall or surplus.		C			C		A						R
Create and maintain an IT tactical resourcing plan.							A		R	R		R	R
Periodically review the IT function organisational structure (assumes CIO on the same level as CFO).		C	C				A		C	C	C		R
Adjust IT staffing requirements, tactical sourcing plans and sourcing strategies.					C		A				C		R

A **RACI** chart identifies who is **R**esponsible, **A**ccountable, **C**onsulted and/or **I**nformed.

Goals and Metrics

Activity Goals	Process Goals	PM Goal
• An inventory of human resources is maintained so the human resources currently available to the enterprise are understood. • A forecast of future human resource requirements is maintained so the human resources needed by the enterprise in the future are understood. • A gap analysis is maintained, identifying human resources shortfalls and surpluses. • Market awareness of quantity and quality of skills potentially available to the enterprise is maintained so market trends, and specifically shortages, are identified. • Strategies are formulated to address needs and surpluses. • Optimal tactical resourcing plans are created, maintained and implemented. • Organisational structures are optimised.	• Human resources management enables the programmes that contribute optimal value to the enterprise to be undertaken. • Dependency on key staff is understood and resulting constraints are minimised. • Utilisation of human resources is continuously optimised and balanced across the needs of the investment portfolio and business as usual.	• Ensure that optimal value is secured by the enterprise across its portfolio of IT-enabled investments.

Activity Metrics	Process Metrics	PM Metric
• Percentage of currently available human resources accurately recorded in inventory • Frequency at which future requirements are reviewed • Frequency at which gap analyses are performed • Percentage of skills shortages for which multiple sources are known • Number of defined sourcing requirements determined from gap analyses that are satisfied as required • Number of requirements requested on short notice other than to provide emergency cover • Number of requirements sourced that are not used fully • Frequency at which strategic sourcing plans are reviewed • Percentage of tactical plans that achieve their objectives and percentage of success of others • Frequency of reviews of organisational structures	• Reduction in optimal value caused by human resource shortfalls (could be caused by delays in allocating/hiring and/or people are not of the standard required) • Satisfaction of programme and project managers with the people who are allocated to or hired for investment programmes • Percentage of human resource time allocated to investment programmes that is wasted • Number of positions with backfill and succession plans • Waste of recruitment costs, salaries, etc., arising from inappropriate sourcing	• Percentage of forecast optimal value secured across enterprise's portfolio of IT-enabled investments

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DETAILED KEY MANAGEMENT PRACTICES

PM4 Evaluate and select programmes to fund.

PM4.1 Evaluate and assign relative scores to programme business cases.
Perform detailed assessments of the programme business cases evaluating strategic alignment; business benefits, both financial and non-financial; risks, including delivery risks and benefits risks; and availability of resources. Assign a relative score to each programme based on evaluation criteria and their weightings for the category of investment applicable to each programme.

PM4.2 Create an overall investment portfolio view.
Assess the impact on the overall investment portfolio of adding each candidate programme. Determine the impact on the investment portfolio mix. Identify any changes that might be required to other programmes in the investment portfolio as a result of adding each programme, and assess the impact and viability of those changes.

PM4.3 Make and communicate investment decisions.
Determine which of the candidate programmes should be selected and moved to the active investment portfolio. If any programme is not selected, determine whether it should be held for consideration at a later date, held and provided with some 'seed' funding to determine if the business case can be improved or eliminated from further consideration. Communicate the decisions to the business sponsors.

PM4.4 Specify stage-gates and allocate funds to selected programmes.
Determine the required stage-gates for each individual programme's full economic life cycle. Plan to re-examine business case requirements at each stage-gate. Allocate and reserve total programme funding, release funding to the next stage-gate and identify funding requirements between subsequent stage-gates. Move the programme into the active investment portfolio.

PM4.5 Adjust business targets, forecasts and budgets.
Adjust the business targets, forecasts, budgets and, if required, related controls to reflect the expenditures to be incurred and business benefits to be realised by programmes in the active investment portfolio. Incorporate programme expenditures into chargeback mechanisms.

MANAGEMENT GUIDELINES

PM4 Evaluate and select programmes to fund.

From	Inputs
VG3	Portfolio profiles and investment categories
	Investment evaluation criteria
PM1	Appropiate investment mix
PM2	Portfolio budget
PM3	Available resources
PM5	Portfolio performance reports
PM6	Updated portfolio view
IM5	Detailed business case
IM8	Updated business case
IM10	Programme retirement

Outputs	To
Overall portfolio view	PM6
Approved investment programmes	PM2, PM6, IM6, IM7
Investment portfolio view	COBIT PO1, PO5
Approved investment programmes	COBIT PO1, PO5

RACI Chart

Activities	Board	CEO	CARS	Investment and Services Board	Value Management Office	CFO	CIO	Business Sponsor	Programme Manager	Programme Management Office	Business Management	Project Management Office
Review and evaluate the programme business case for readiness for submission to the ISB.				C	A/R		I	R		R		
Assign a relative score to programme business case.				C	A/R		I	C		C		
Assess the impact on the overall portfolio of adding a candidate programme. Determine the impact on the portfolio investment mix.				A/R	R	C	I	C		C		
Identify any changes that might be required to other programmes in the portfolio as a result of adding this programme. Assess the impact and viability of those changes.		I		C	A/R	R	R	C		C		
Review the business case and evaluate relative scoring. Determine if programme should be selected.				A/R	R	C	C	C	C			
Determine disposition of candidate programme if not selected, or of other active programmes impacted by the selection of the candidate programme.				A/R	R	C	C	C	C			
Communicate decision(s) to the business sponsor(s).				A	R		I	I	I	I	I	
Determine the required stage-gates for each individual programme's full economic life cycle.				A	R		C	R	R	I		
Confirm the business case requirements at each stage-gate.				A	R		C	R	R	I		
Commit total programme funding and release funding to next stage-gate.				A	I	R	R	R	I	I		
Move the selected programmes into the active portfolio.				I	A/R	I	I	I	I	I		
Adjust business targets, forecasts and budgets.	C	A		R	C	R	R	R			R	
Charge active programme expenditures to the relevant business functions.					C	A	R	R	C		R	

Roles

A **RACI** chart identifies who is **R**esponsible, **A**ccountable, **C**onsulted and/or **I**nformed.

Goals and Metrics

Activity Goals	Process Goals	PM Goal
• Potential contribution of each programme to optimal value is determined. • Impact on the portfolio of each candidate programme is determined. • Programmes to be funded and initiated are selected. • Further actions on programmes that are not selected have been determined. • Stage-gates are established for all active programmes. • Business targets, forecasts and budgets are adjusted as a consequence of each active programme. • All active programme expenditures are charged back to the business functions for which they are incurred.	• Portfolio of active programmes is aligned with business strategy. • Programmes that create optimal value are selected. • Review mechanisms are in place for each stage-gate. • Responsibility is established for all expenditures and business benefits.	• Ensure that optimal value is secured by the enterprise across its portfolio of IT-enabled investments.

Activity Metrics	Process Metrics	PM Metric
• Number of programme business cases considered • Degree of satisfaction that business sponsors have with the evaluation of business cases • Percentage of programme business cases approved for funding with the potential value contribution and investment needs of each • Percentage of programme business cases held for later consideration • The total of expenditures in approved business cases that are not allocated to specific business functions • Number and cost of programmes approved for which their contribution to optimal value is not quantified	• Value that is to be created from approved programmes is compared to the investment funds needed by them • Contribution that approved business cases potentially make to optimal value • Degree of satisfaction that executive has with the decision-making process • Number and value of programmes not selected	• Percentage of forecast optimal value secured across enterprise's portfolio of IT-enabled investments

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DETAILED KEY MANAGEMENT PRACTICES

PM5 Monitor and report on investment portfolio performance.

PM5.1 Monitor and report on investment portfolio performance.

Provide a succinct, all-around view of the performance of the investment portfolio to the ISB(s) and executive management in a timely and accurate fashion, and in a way that fits within the overall enterprise monitoring system. Management reports should be provided for senior management's review of the enterprise's progress toward identified goals, stating what still needs to be spent and accomplished over what time frames. Status reports should include the extent to which planned objectives have been achieved, risks mitigated, capabilities created, deliverables obtained, and performance targets met.

MANAGEMENT GUIDELINES

PM5 Monitor and report on investment portfolio performance.

From	Inputs
VG5	Business reporting requirements
	Approved business metrics
IM9	Programme performance reports

Outputs	To
Portfolio performance reports	PM2, PM3, PM4

RACI Chart

Activities	Roles: Board	CEO	CARS	Investment and Services Board	Value Management Office	CFO	CIO	Business Sponsor	Programme Manager	Programme Management Office	Business Management	Project Management Office
Identify and collect required portfolio performance information.				C	A/R	C	C	C	C	C	C	
Create high-level views of performance.				C	A/R							
Report performance.	I	I		R	A/R	I	I		I		I	

A **RACI** chart identifies who is **R**esponsible, **A**ccountable, **C**onsulted and/or **I**nformed.

Goals and Metrics

Activity Goals	Process Goals	PM Goal
• There is active monitoring of the performance of the overall investment portfolio. • Relevant performance information is provided. • Deviations are identified for management action.	• There are transparency and understanding by stakeholders of performance against objectives. • Early actions can be identified to control deviations.	• Ensure that optimal value is secured by the enterprise across its portfolio of IT-enabled investments.

Activity Metrics	Process Metrics	PM Metric
• Frequency with which accurate, on-time and complete reports are provided • Number of deviations identified outside reporting process	• Degree to which those receiving reports are satisfied with the reports • Number of improvements made to the portfolio monitoring and reporting approach	• Percentage of forecast optimal value secured across enterprise's portfolio of IT-enabled investments

DETAILED KEY MANAGEMENT PRACTICES

PM6 Optimise investment portfolio performance.

PM6.1 Optimise investment portfolio performance.
Review the portfolio on a regular basis to identify and exploit synergies, eliminate duplications between programmes, and identify and mitigate risks.

PM6.2 Reprioritise the investment portfolio.
When changes occur to the internal or external business environment or when programme business cases are updated to reflect changes in requirements or programme performance, re-evaluate and reprioritise the portfolio to ensure that the portfolio is aligned with the business strategy and the target mix of investments is maintained so the portfolio is optimising overall value. This may require programmes to be changed, deferred or retired, and new programmes to be initiated.

MANAGEMENT GUIDELINES

PM6 Optimise investment portfolio performance.

From	Inputs
PM2	Portfolio view
PM4	Overall portfolio budget
	Approved investment programmes
IM8	Updated business case
IM10	Programme closure

Outputs	To
Updated portfolio view	PM2, PM4
Portfolio performance reports	COBIT PO5, ME1, ME4
Updated portfolio view	COBIT PO1, PO5

RACI Chart

Activities	Board	CEO	CARS	Investment and Services Board	Value Management Office	CFO	CIO	Business Sponsor	Programme Manager	Programme Management Office	Business Management	Project Management Office
Review the portfolio on a regular basis, when changes occur to the internal or external business environment, or when programme business cases are updated.	C	C		A/R	R	C	C	C	C			
Identify changes to the internal or external business environment and to programme business cases.			C	A	R	C	C	R	R	R	R	
Identify opportunities to exploit synergies between programmes and mitigate risks.			C	A	R	C	C	R	C	C		
Identify the adjustments required in response to the changes or opportunities identified.		C	C	A/R	R	C	C	C	C			
Re-evaluate and reprioritise the portfolio to ensure that the portfolio is aligned with the business strategy and the target mix of investments is maintained so the portfolio is achieving optimal value.				A/R	R	C	C			C	C	
Determine which adjustments to make and initiate required action.				A/R	R		R	R	C	C		
Communicate portfolio adjustments, how programmes will be affected and required new initiatives.	I	I		A	R	I	I	I	I	I	I	

A **RACI** chart identifies who is **R**esponsible, **A**ccountable, **C**onsulted and/or **I**nformed.

Goals and Metrics

Activity Goals	Process Goals	PM Goal
• There is proactive management of the overall portfolio to ensure that optimal value is created. • The ISB is aware of additional potential opportunities for creating value from investments in business change. • Synergies are leveraged and risks reduced within the portfolio.	• Investments that contribute to optimal value are funded. • A pool of potential investments that create value is established in case funding becomes available. • Early action is taken to address reductions in value to be created and exploit opportunities.	• Ensure that optimal value is secured by the enterprise across its portfolio of IT-enabled investments.

Activity Metrics	Process Metrics	PM Metric
• Frequency with which accurate, complete and timely reports on the performance of active programmes are assessed • Number of actions taken to improve optimal value and the extra potential value they create • Time lag between the need for corrective action being identified and when it is undertaken • Potential value of candidate programmes awaiting funding	• Increase over time of the optimal value to be created from the portfolio • Amount of investment spent on programmes that are later cancelled	• Percentage of forecast optimal value secured across the enterprise's portfolio of IT-enabled investments

Figure 23—PM Maturity Model

	Awareness and Communication	Responsibility and Accountability	Goal Setting and Measurement	Policies, Standards and Procedures	Skills and Expertise	Tools and Automation
0	There is no awareness that IT-enabled investments should be managed as a portfolio.					
1	There is some recognition on an individual basis of the need to manage IT-enabled investments as a portfolio. Some business functions manage programmes as a portfolio in isolation, within their scope of activities.	Responsibility and accountability for investment portfolio management are unknown and not defined. IT management is accountable for the use of IT resources. The need for business involvement in IT-enabled investments is recognised but actual involvement is limited.	Some simple financial metrics are applied on an individual basis. There is no consistent nor effective management and tracking of benefits.	Investment portfolio management policies, procedures and standards are undefined. IT-enabled investments are identified as such but there is limited adoption of the programme view. Business cases may be needed but, where they exist, they are considered in isolation. Evaluation and selection of programmes are largely subjective and political. No portfolio view is maintained of programmes.	Skills required to execute investment portfolio management activities effectively are not defined and depend on the individual. Training needs are not identified.	*Ad hoc* tools are acquired/ developed by individuals and used on an individual basis.
2	Management is aware of the need to manage IT-enabled business programmes as a portfolio. Corporate communication on portfolio management is limited.	Roles and responsibilities for investment portfolio management are known but depend on individuals. No roles and responsibilities have been documented. IT and business management is involved in approving major investment programmes although the responsibilities and accountabilities are not always clear.	More sophisticated financial metrics exist, but are not applied consistently across the enterprise. There are no consistent nor effective management and tracking of benefits.	Investment portfolio management practices are based on individual expertise. The programme view is widely adopted. Business cases are needed for most programmes. Business cases are evaluated primarily on financial measures. An investment approval life cycle is established and followed.	Minimum skill requirements are defined to execute investment portfolio management activities. One or more individuals have basic portfolio management expertise, usually limited to business case development. *Ad hoc* training is provided to respond to needs.	A number of individually acquired/ developed tools exist and are tailored when needed. Different tools or versions of tools are used by different groups.
3	There is a general understanding of portfolio management practices. There is structured corporate communication on managing IT-enabled business programmes as a portfolio.	A limited number of roles and responsibilities are formalised. IT and other business functions have clear responsibilities for the development of the business cases. The IT function and business management are involved in evaluating, assigning priorities and selecting IT-enabled investment programmes. Accountability for approval of business cases and the selection of investment programmes is established.	Goals and metrics are formalised and documented. Benefits are tracked and reported, using basic measures of financial value, alignment, risk and initiative health. Individual performance management is not aligned with these goals or metrics.	Policies and procedures exist for evaluating and selecting IT-enabled business programmes and for the management of a investment portfolio. Procedures and policies are not applied consistently. Business cases are required for all programmes. The entire portfolio is captured. Management establishes an inventory of resources and estimates their utilisation for the portfolio of investment programmes. The enterprise stage-gates selected programmes.	Investment portfolio management skills are defined and documented. Some portfolio management expertise is available within IT and other business functions for the development and evaluation of business cases for programmes, including the identification of benefits, costs and risks. Formal training plans exist but are not consistently executed.	The standard portfolio management system is used centrally to aggregate programme information to support decision making.

Figure 23—PM Maturity Model (*cont.*)

	Awareness and Communication	Responsibility and Accountability	Goal Setting and Measurement	Policies, Standards and Procedures	Skills and Expertise	Tools and Automation
4	The board and executive management are fully and visibly committed to portfolio management and regularly review performance of the investment portfolio.	Investment portfolio management ownership, roles and responsibilities are well defined, documented and implemented. Portfolio management takes place in a structured way, integrated with the overall enterprise governance model. Accountability for the update of business cases and accomplishing their objectives is defined. All stakeholders who need to be informed, have responsibilities or are accountable are identified and involved.	Robust metrics of financial and non-financial value, alignment, risk and health are established. Investment portfolio composition and health are an integral part of the information available to executive management. The overall funding available for the portfolio, current commitment of that funding, current approved spending, and the actual spending to date are regularly reviewed.	Investment portfolio management procedures and policies are enforced and applied consistently. Programmes are categorised. Business cases are developed and maintained for all programmes. A formal review, selection and approval process is in place. Programme selection is integrated with resource management. The enterprise stage-gates all programmes. Portfolio management is proactively used as means of aligning the portfolio to the business strategy, through a cyclical investment process.	Advanced investment portfolio management practices are available in the enterprise. Expertise is available across enterprise for the development, evaluation and maintenance of business cases and determination of the relative value based on full economic life cycle financial and non-financial benefits, costs and risks. Training plans on portfolio management are available, executed and followed up.	A standard portfolio management system is available and fully implemented to evaluate, prioritise and manage programmes and to communicate and report on programme and portfolio performance.
5	Portfolio management practices are part of corporate culture. The board and executive management proactively seek to optimise performance of the portfolio through a regular review process. Portfolio objectives and portfolio mix are evaluated to establish successful trends in line with the business strategy.	Accountability for the management and optimisation of the investment portfolio is defined. Individual performance management is aligned with good portfolio management practices and key performance indicators (KPIs).	When changes occur to internal or external business environment, or when programme business cases are updated to reflect changes in requirements or programme performance, executive and business management has information required to re-evaluate and reprioritise the investment portfolio to ensure that the portfolio is aligned with the business strategy and a target mix of investments is maintained so the overall portfolio is achieving optimal value.	Feedback and continuous improvement exists. The investment portfolio is continuously monitored and adjusted to optimise its value. Portfolio management is no longer tied to business and budget cycles. Dynamic portfolio management is the accepted process.	Expertise in managing and reporting on overall investment and portfolio performance is available across the enterprise and supports decision making by executives. Skills are evaluated at regular times and continuous improvement of skills is promoted and planned for. Available expertise is shared through knowledge management systems.	Standard portfolio management system is available to evaluate and manage programmes; evaluate and manage overall portfolio performance, including 'what if' analyses of changes to the portfolio; and communicate and report on overall portfolio performance against the business strategy.

Investment Management

IM1 Develop and evaluate the initial programme concept business case.
- IM1.1 Recognise investment opportunities.
- IM1.2 Develop the initial programme concept business case.
- IM1.3 Evaluate the initial programme concept business case.

IM2 Understand the candidate programme and implementation options.
- IM2.1 Develop a clear and complete understanding of the candidate programme.
- IM2.2 Perform analysis of the alternatives.

IM3 Develop the programme plan.
- IM3.1 Develop the programme plan.

IM4 Develop full life-cycle costs and benefits.
- IM4.1 Identify full life-cycle costs and benefits.
- IM4.2 Develop a benefits realisation plan.
- IM4.3 Perform appropriate reviews and obtain sign-offs.

IM5 Develop the detailed candidate programme business case.
- IM5.1 Develop the detailed programme business case.
- IM5.2 Assign clear accountability and ownership.
- IM5.3 Perform appropriate reviews and obtain sign-offs.

IM6 Launch and manage the programme.
- IM6.1 Plan projects, and resource and launch the programme.
- IM6.2 Manage the programme.
- IM6.3 Track and manage benefits.

IM7 Update operational IT portfolios.
- IM7.1 Update operational IT portfolios.

IM8 Update the business case.
- IM8.1 Update the business case.

IM9 Monitor and report on the programme.
- IM9.1 Monitor and report on programme (solution delivery) performance.
- IM9.2 Monitor and report on business (benefit/outcome) performance.
- IM9.3 Monitor and report on operational (service delivery) performance.

IM10 Retire the programme.
- IM10.1 Retire the programme.

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DETAILED KEY MANAGEMENT PRACTICES

IM1 Develop and evaluate the initial programme concept business case.

IM1.1 Recognise investment opportunities.
Recognise investment opportunities to create value in support of the business strategy and to address operational and compliance issues. Classify each opportunity with respect to the investment portfolio categories. Clarify expected business outcome(s) and identify, at a high level, business, process, people, technology and organisational initiatives required to achieve the expected outcomes. These requirements must be owned by business managers acting as business sponsors for the overall opportunity, including the necessary IT projects.

IM1.2 Develop the initial programme concept business case.
Develop the initial programme concept business case to describe the business outcome(s) to which the potential programme will contribute, the nature of the programme's contribution and how that contribution will be measured. High-level benefits, both financial and non-financial, and expenditures for the full economic life cycle of the programme should be estimated. Key assumptions should be stated and key risks should be identified, along with their potential impact and mitigation strategies.

IM1.3 Evaluate the initial programme concept business case.
Perform an initial triage of the programme concept business case looking at strategic alignment; benefits, both financial and non-financial; expenditures required; resources needed and contention for them; risks; and fit with the overall investment portfolio. Determine whether the programme concept has sufficient potential to justify proceeding to full programme definition and evaluation. If the decision is to proceed, the CIO should sign off on the technical aspects of the programme, and the business sponsor should approve and sign off on the initial programme concept business case.

MANAGEMENT GUIDELINES

IM1 Develop and evaluate the initial programme concept business case.

From	Inputs
*	High-level business requirements
PM1	Appropriate investment mix
IM1	Initial business case
COBIT PO1	IT services portfolio
COBIT PO5	IT cost-benefit estimates
COBIT PO9	Risk assesment

* Input from/output to outside Val IT and COBIT

Outputs	To
Initial business case	IM2, COBIT PO1, PO5, AI1
Initial business case approval	IM3, IM4, IM6, COBIT PO1, PO10, AI1

RACI Chart

Activities	Board	CEO	CARS	Investment and Services Board	Value Management Office	CFO	CIO	Business Sponsor	Programme Manager	Programme Management Office	Business Management	Project Management Office
Create an environment that fosters and welcomes new ideas and acknowledges their champions.	R	A/R					R				R	
Suggest new opportunities.	R	A/R	R	R	R	R	R				R	
Capture opportunities for investment programmes to create value in support of the business strategy or to address operational or compliance issues.	C	C	C		R	C	R				A/R	
Categorise the opportunity. Clarify expected business outcome(s) and identify, at a high level, business, process, people, technology and organisational initiatives required to achieve the expected outcomes.		C			R	C	C				A/R	
Determine which opportunities to pursue further or examine in more depth, and identify and assign a business sponsor for each opportunity to be pursued.		C		C	C	C	C			C	A/R	C
Describe the business outcome(s) to which the potential programme will contribute, the nature of the programme's contribution, and how the contribution would be measured.					C	C	C	A	R		R	
Identify high-level initiatives that might be required to achieve these outcomes.					C		C	A	R		R	
Estimate the high-level benefits, both financial and non-financial, and the costs for the full economic life cycle of the programme.					C	C	C	A	R		R	
State any key assumptions and identify key risks, along with their potential impact on current and future business operations, and mitigation strategies.			C		C		R	A	R		R	
Document the initial programme concept business case with information obtained.					C			A	R			
Review and evaluate the initial programme concept business case.					C	C	C	A	R	R	R	
Determine whether the programme should proceed to full programme definition and evaluation.					C	C	C	A	R	R	R	
Obtain CIO approval and sign-off on the technical aspects of the initial programme concept business case.					I		R	A	R			
Obtain business sponsor approval and sign-off on overall initial programme concept business case.					I			A	R			

A **RACI** chart identifies who is **R**esponsible, **A**ccountable, **C**onsulted and/or **I**nformed.

Goals and Metrics

Activity Goals	Process Goals	IM Goal
• An environment that fosters and captures new ideas exists. • A process and responsibilities for submission and categorisation of new ideas exist and are used. • Champions of new ideas that are adopted are rewarded. • Outlines of potential business initiatives and their outcomes are identified. • High-level benefits and costs are identified for potential investment. • Significant risks, and assumptions and mitigation plans are documented. • High-level technical and business feasibility reviews take place. • Decision is made as to whether programme is to proceed to full programme definition.	• Individuals throughout the enterprise suggest new investment opportunities. • Ideas are collected, understood and categorised correctly for the investment portfolio. • Good ideas are selected efficiently and expediently for further study. • Good ideas are assigned business sponsors. • Documented initial concept business cases with outcomes, benefits, assumptions, costs and risks are prepared. • The content of initial programme concept business cases enables efficient and expedient decision making on whether to develop detailed business cases. • Attention is focused on investment programmes with high potential to create value.	• Ensure that the enterprise's individual IT-enabled investments contribute to optimal value.

Activity Metrics	Process Metrics	IM Metric
• Number of suggestions • Percentage of champions rewarded • Consistency and compliance of assessments and assumptions with enterprise's processes and practices • Elapsed time between approval to prepare initial programme concept business case and sign-offs being obtained • Age and backlog of non-processed ideas • Number of programme concept business cases considered • Degree of agreement on which programme concept business cases should proceed to full programme definition • Number of sign-offs obtained	• Percentage of ideas accepted to be developed into initial programme concept business cases • Number of new ideas per investment category • Number of ideas trying to bypass enterprise's processes and practices • Number and percentage of sign-offs obtained without resubmission • Number and percentage of programme concept business cases that continue to full business case development	• Contribution of individual IT-enabled investments to optimal value

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DETAILED KEY MANAGEMENT PRACTICES

IM2 Understand the candidate programme and implementation options.

IM2.1 Develop a clear and complete understanding of the candidate programme.

Utilise appropriate methods and techniques, involving all key stakeholders, to develop and document a complete and shared understanding of the expected business outcomes (both intermediate, or lead, and end, or lag, outcomes) of the candidate programmes, how they will be measured, and the full scope of initiatives required to achieve the expected outcomes. These initiatives should include all changes required to the nature of the enterprise's business, business processes, people skills and competencies, enabling technology and organisational structure. The nature of each initiative's contribution, how that contribution will be measured and all key assumptions should be identified. Relevant metrics or similar indicators to monitor the validity of these assumptions should be identified. Key risks, to both the successful completion of individual initiatives and the achievement of the desired outcomes, should also be identified and, where possible, mitigating actions should be included.

IM2.2 Perform analysis of the alternatives.

Identify alternative courses of action to achieve the desired business outcomes. Assess the relative benefits, costs, risks and timing for each identified course of action. Select the course of action that has the highest potential rate of return and value, at affordable cost with an acceptable level of risk. Document the criteria (which must be common for all options) for selecting and the rationale for recommending the selected course of action. Business management should assess the current and future business impact of the alternative courses of action, and the IT function should assess the technical impact.

MANAGEMENT GUIDELINES

IM2 Understand the candidate programme and implementation options.

From	Inputs
IM1	Initial business case approval
	Initial business cases

Outputs	To
Complete understanding of candidate programmes including alternative courses of action	IM3, IM4, IM5, COBIT PO1, PO10, AI1

RACI Chart

Activities	Board	CEO	CARS	Investment and Services Board	Value Management Office	CFO	CIO	Business Sponsor	Programme Manager	Programme Management Office	Business Management	Project Management Office
	Roles											
Develop and document a complete and shared understanding of the expected business outcomes of the candidate programme, how they will be measured, and the full scope of initiatives required to achieve expected outcomes.					C	C	C	A	R	C	C	
Identify any changes required to the nature of the enterprise's business, business processes, people skills and competencies, enabling technology and organisation structure.		C			C	C	C	A	R	C	C	
Identify the nature of the initiative's contribution, how that contribution will be measured, and all key assumptions and relevant metrics or similar indicators to monitor validity of these assumptions.					C	C	C	A	R	C	C	
Identify key risks, both to the successful completion of individual initiatives and to achievement of the desired outcomes.			C		C	C	C	A	R	C	C	
Identify alternative courses of action to achieve the desired business outcomes.					C	C	C	A	R	C	C	
Assess the business impact of alternative courses of action.						C	C	A	R	C	C	
Assess the technical impact of alternative courses of action.							R	A	R			
Assess the relative benefits, costs, risks and timing for each identified course of action.			C		C	C	C	A	R	C	C	
Select the course of action that has the highest potential value, at an affordable cost with an acceptable level of risk.					C	C	C	A	R	C		
Document the rationale for recommending the selected course of action.								A	R	C		

A **RACI** chart identifies who is **R**esponsible, **A**ccountable, **C**onsulted and/or **I**nformed.

Goals and Metrics

Activity Goals	Process Goals	IM Goal
• Key stakeholders are consulted. • Key programme metrics are defined. • Multiple courses of action are considered to determine the best.	• All necessary inputs for developing realistic detailed business cases are obtained. • Clear, detailed understanding is developed of the potential programme. • All potential programmes clearly identify their full benefits, costs and risks. • The course of action resulting in optimal value is defined.	• Ensure that the enterprise's individual IT-enabled investments contribute to optimal value.

Activity Metrics	Process Metric	IM Metric
• Percentage of key stakeholders supporting the assumptions made and outcomes planned • Number of objectively measurable key performance metrics identified • Number of courses of action considered	• Degree of satisfaction of key stakeholders with the approach used	• Contribution of individual IT-enabled investments to optimal value

DETAILED KEY MANAGEMENT PRACTICES

IM3 Develop the programme plan.

IM3.1 Develop the programme plan.

Define and document all projects, including those that are needed to bring about changes to the business; its image, products and services; business processes; people skills and numbers; relationships with stakeholders, customers, suppliers and others; technology needs; and organisational restructuring projects that are required to achieve the programme's expected business outcomes. Specify required resources, including project managers and project teams as well as business resources. Specify funding, timing and interdependencies of multiple projects. Specify the basis for acquiring and assigning competent staff members and/or contractors to the projects.

MANAGEMENT GUIDELINES

IM3 Develop the programme plan.

From	Inputs
*	Detailed business requirements
VG1	Leadership commitment
VG2	Business roles, responsibilities and accountabilities
PM3	Tactical HR plans
IM1	Initial business case approval
IM2	Complete understanding of candidate programmes including alternative courses of action

Outputs	To
Programme plan	IM4, IM5, COBIT PO1, PO7, PO10
Assigned roles and responsibilities	IM6

* Input from/output to outside Val IT and COBIT

RACI Chart

Activities	Board	CEO	CARS	Investment and Services Board	Value Management Office	CFO	CIO	Business Sponsor	Programme Manager	Programme Management Office	Business Management	Project Management Office
Define and document all projects, including business, business process, people, technology and organisational projects, required to achieve the programme's expected business outcomes.					C		C	A	R	C	C	C
Specify required resources, including project managers, project teams as well as business resources where applicable.					C		C	A	R	C	C	C
Specify funding, timing and interdependencies of multiple projects.					C	C	C	A	R	C	C	C
Specify basis for acquiring and assigning competent staff members and/or contractors to projects.					C		C	A	R	C	C	C

A **RACI** chart identifies who is **R**esponsible, **A**ccountable, **C**onsulted and/or **I**nformed.

Goals and Metrics

Activity Goals	Process Goals	IM Goal
• All key stakeholders are consulted. • The potential programme is decomposed into projects within the programme plan. • The accuracy of forecasts of costs, risks and outcomes of projects has a confidence level sufficient to support the business case.	• All necessary inputs to developing complete and comprehensive business cases are obtained. • All tasks and requirements needed to create value from the programme are identified. • A comprehensive programme plan is prepared. • There is a high likelihood that the business benefits will be realised by the programme and the costs and risks controlled.	• Ensure that the enterprise's individual IT-enabled investments contribute to optimal value.

Activity Metrics	Process Metrics	IM Metric
• Percentage of stakeholders who acknowledge that the programme assumptions are realistic • Percentage of stakeholders who acknowledge that the programme is viable	• Percentage of identified business benefits that can be quantified reliably • Percentage of costs that can be quantified reliably • Percentage of risks that can be assessed and quantified reliably	• Contribution of individual IT-enabled investments to optimal value

DETAILED KEY MANAGEMENT PRACTICES

IM4 Develop full life-cycle costs and benefits.

IM4.1 Identify full life-cycle costs and benefits.
Prepare a programme budget that reflects the full economic life-cycle costs and the associated financial and non-financial benefits.

IM4.2 Develop a benefits realisation plan.
For each key outcome, identify and document the current baseline and target performance to be achieved; the method for measuring each key outcome; identified and accepted accountability for achieving the outcome; the expected delivery schedule; and the monitoring process, which should include a detailed benefits register, along with an explanation of the risks that may threaten the achievement of each key outcome and how those risks will be mitigated.

IM4.3 Perform appropriate reviews and obtain sign-offs.
Consult all stakeholders and obtain their agreement on the costs and benefits for which they will accept responsibility. Aggregate the findings and check for consistency and coherence. Submit costs, benefits and the benefits realisation plan for review, refinement and sign-off by the business sponsor.

MANAGEMENT GUIDELINES

IM4 Develop full life-cycle costs and benefits.

From	Inputs
*	Detailed business requirements
IM2	Complete understanding of candidate programmes including alternative courses of action
IM3	Programme plan
COBIT PO5	IT cost-benefit estimates

Outputs	To
Full economic life-cycle costs and benefits	IM5, COBIT PO1

* Input from/output to outside Val IT and COBIT

RACI Chart

Activities	Board	CEO	CARS	Investment and Services Board	Value Management Office	CFO	CIO	Business Sponsor	Programme Manager	Programme Management Office	Business Management	Project Management Office
Identify and document the current baseline and target performance to be achieved for each key outcome.					C	C	C	A	R	C	C	
Determine the method for measuring each key outcome.					C	C	C	A	R	C	C	
Identify accountabilities for achieving outcomes, the expected delivery schedule, and the monitoring process, including a detailed benefits register.					C	C	C	A	R	C	C	
Identify risks that may threaten the achievement of each key outcome and how those risks will be mitigated.			C		C	C	C	A	R	C	C	
Prepare a programme budget that reflects the full economic life-cycle costs and financial and non-financial benefits.						C	C	A	R	R	C	
Submit a budget and benefits realisation plan for review, refinement, approval and sign off by business sponsor.						C	C	A	R	R	C	

A **RACI** chart identifies who is **R**esponsible, **A**ccountable, **C**onsulted and/or **I**nformed.

Goals and Metrics

Activity Goals	Process Goals	IM Goal
• Business benefits to be delivered, including how they will be measured, are defined. • All costs to be incurred to secure the business benefits are identified. • All known risks to securing the business benefits are identified. • The business sponsor has accepted accountability for the full budget and business benefits.	• Full understanding exists of how business benefits will be realised and who will realise them. • Full understanding of costs to be incurred exists. • Full understanding of risks to be mitigated and/or managed exists. • There is a high likelihood that the business benefits will be realised by the programme and the costs and risks controlled.	• Ensure that the enterprise's IT-enabled investments contribute to optimal value.

Activity Metrics	Process Metrics	IM Metric
• Percentage of business benefits that are specific, measurable, achievable, relevant and time-bound (SMART) • Percentage of business benefits with viable plans to realise the benefits • Percentage of business benefits with acknowledged owners • Percentage of business benefits that exceed the cost to secure the benefits • Business sponsor approval of the budget and benefits realisation plan	• Percentage of identified business benefits that can be quantified reliably • Percentage of costs that can be quantified reliably • Percentage of risks that can be assessed and quantified reliably • Levels of confidence of business sponsor in business benefits to be realised, risks to be managed and costs to be incurred	• Contribution of individual individual IT-enabled investments to optimal value

DETAILED KEY MANAGEMENT PRACTICES

IM5 Develop the detailed candidate programme business case.

IM5.1 Develop the detailed programme business case.
Develop a complete and comprehensive business case for the programme (see the Val IT business case guide[26]). The business case should include an executive summary; a description of the programme's purpose, objectives, approach and scope; programme dependencies, risks and milestones; organisational change impact of the programme; a relative value assessment; and a programme plan. The programme value assessment should include full economic life-cycle costs and benefits, both financial and non-financial; the value to be created and the envisaged rate of return; strategic alignment; delivery and benefits risks; programme relative score as assessed by the business sponsor; and key assumptions. The programme plan should include component project plans, a benefits realisation plan, the approach to risk and change management, and the programme governance structure and controls.

IM5.2 Assign clear accountability and ownership.
Accountability for achieving the benefits, controlling the costs, managing the risks, and co-coordinating the activities and interdependencies of multiple projects should be clearly and unambiguously assigned and monitored. Where accountability is assigned, such accountability must be accepted; there must be a clear mandate and scope, and the person accountable must have sufficient authority and latitude to act, requisite competence, commensurate resources, clear lines of accountability, an understanding of rights and obligations, and relevant performance measures.

IM5.3 Perform appropriate reviews and obtain sign-offs.
When the business case has been completed and accountability and ownership have been accepted, the CIO should approve the technical aspects of the programme. The business sponsor should approve the business case and submit it to the ISB.

[26] IT Governance Institute, *Enterprise Value: Governance of IT Investment: The Business Case*, USA, 2006

MANAGEMENT GUIDELINES

IM5 Develop the detailed candidate programme business case.

From	Inputs
VG1	Leadership commitment
VG2	Business roles, responsibilities and accountabilities
IM1	Initial business case approval
IM2	Complete understanding of candidate programmes, including alternative courses of action
IM3	Programme plan
IM4	Full economic life-cycle cost and benefits
IM8	Updated business case

To	Outputs
Detailed business cases	PM4, IM6, IM7, IM8, IM10, COBIT PO5, PO10, AI1

RACI Chart

Activities	Board	CEO	CARS	Investment and Services Board	Value Management Office	CFO	CIO	Business Sponsor	Programme Manager	Programme Management Office	Business Management	Project Management Office
Confirm that all elements of the business case have been prepared in the appropriate format, and are consistent and complete, and take appropriate actions when more information is required.					R			A	R	R		
Document a business case for the programme.						C	C	A	R	R		
Undertake the final reasonability review focusing on benefits, costs and risks, and assess the programme relative score.			C		C			A	R			
Confirm appropriateness of the accountabilities assigned.		C			R	R	R	A	R		R	C
Confirm the full understanding and acceptance of owners of the accountabilities.		C			R	R	R	A	R	R		R
Secure technical and business sign-offs.		C	C			C	R	A	R		C	

A **RACI** chart identifies who is **R**esponsible, **A**ccountable, **C**onsulted and/or **I**nformed.

Goals and Metrics

Activity Goals	Process Goals	IM Goal
• All necessary activities and expenditures are documented. • All activities and business benefits are owned and each owner acknowledges ownership. • The business case has been documented in a form defined by the ISB. • All necessary and appropriate sign-offs are obtained.	• All necessary inputs to developing a realistic, detailed business case are obtained. • All key stakeholders are engaged and understand the full implications of the programme. • The potential programme clearly identifies its full benefits, costs and risks. • There is a high likelihood that the business benefits will be realised by the programme and the costs and risks controlled. • The business case is presented in a format that enables the ISB to make complete and consistent comparisons amongst potential programmes.	• Ensure that the enterprise's individual IT-enabled investments contribute to optimal value.

Activity Metrics	Process Metrics	IM Metric
• Level of confidence with the inputs • Level of confidence with assumptions and estimating methods • Degree of understanding of those with accountabilities • Number of iterations to obtain sign-offs	• Number of key inputs not obtained and their significance • Number of key stakeholders not consulted • Number of key accountabilities not accepted • Number of non-compliance issues with the format required by ISB • Obtaining all necessary sign-offs.	• Contribution of individual IT-enabled investments to optimal value

DETAILED KEY MANAGEMENT PRACTICES

IM6 Launch and manage the programme.

IM6.1 Plan projects, and resource and launch the programme.
Plan, resource and commission the necessary projects required to achieve the programme results, taking into account that funding is approved only up to the next stage-gate review, but resources also need to be identified and allocated for later periods.

IM6.2 Manage the programme.
Manage programme performance against key criteria (e.g., scope, schedule, quality, benefits realisation, costs and risks), identify deviations from the plan and take timely remedial action when required. Monitor individual project performance related to delivery of the expected capabilities, schedule, benefits realisation, costs and risks to identify potential impacts on programme performance, and take timely remedial action when required. In accordance with stage-gate review criteria, prepare for and undertake stage-gate reviews to report on the progress of the programme to the ISB and to be able to make the case for funding up to the following stage-gate review.

IM6.3 Track and manage benefits.
Undertake a benefits realisation process throughout the programme to ensure that planned benefits always have owners and are achieved, sustained and optimised. Benefits delivery should be monitored and reported at the stage-gate reviews. The performance against targets should be regularly reviewed and root cause analysis performed for deviations from the plan. Remedial action to address the underlying causes should be initiated and controlled.

MANAGEMENT GUIDELINES

IM6 Launch and manage the programme.

From	Inputs
PM4	Approved investment programmes
IM5	Detailed business cases
IM3	Assigned roles and responsibilities
COBIT PO10	Programme plan and resources

Outputs	To
Programme plan and resources	IM9, COBIT PO1, PO5, PO10

RACI Chart

Activities	Board	CEO	CARS	Investment and Services Board	Value Management Office	CFO	CIO	Business Sponsor	Programme Manager	Programme Management Office	Business Management	Project Management Office
	Roles											
Plan, resource and commission the necessary projects required to achieve the programme results.					I	C	C	C	A	R	R	R
Launch the programme.					I			R	A	R	R	R
Continuously manage programme performance against key criteria (e.g., scope, schedule, quality, cost and risk), identify deviations from plan and take timely remedial action when required.			C		I	I	C	C	A	R	C	C
Continuously monitor individual project performance related to delivery of expected capability, schedule, costs and risks to identify potential impacts on programme performance, and take timely remedial action when required.			C				C	C	A	R	C	R
Operate the benefit monitoring process to track benefits delivery.								R	A	R	R	C
Continuously monitor and report on benefit delivery.					I			A	R	R	R	C
Review performance against targets regularly. Perform root cause analysis for deviations from plan. Initiate remedial action to address the deviations from plan.					I		C	C	A	R	R	C
Identify opportunities for extra benefits realisation.					I		C	A	R	R	R	C
Prepare for, undertake and report on stage-gate reviews.				I	I	C	R	A/R	R	C	R	

A **RACI** chart identifies who is **R**esponsible, **A**ccountable, **C**onsulted and/or **I**nformed.

Goals and Metrics

Activity Goals	Process Goals	IM Goal
• Necessary projects are documented for launch. • Necessary projects are resourced for launch. • Programme performance information is captured and aggregated into management reports. • The significance of deviations is understood and deviations are rectified. • The programme is delivering business benefits. • Stage-gate reviews are conducted to assess the programme's contribution to optimal value and inform the ISB.	• Successful launch of the programme and its projects takes place as planned. • Proactive management of the programme takes place. • The programme delivers its planned capabilities and outcomes. • Opportunities are taken to optimise business benefits. • The ISB is kept apprised of programme performance.	• Ensure that the enterprise's individual IT-enabled investments contribute to optimal value.

Activity Metrics	Process Metrics	IM Metric
• Percentage of management reports on projects and programme performance complete and on time • Correlation between actual and planned programme performance • Time lag between identification of deviations and their rectification • Percentage of stage-gate reviews undertaken on schedule in accordance with stage-gate criteria • Satisfaction of the ISB with stage-gate reviews	• Value and rate of return delivered by the programme compared with those in the approved business case • Resources spent on programme management and benefits realisation compared with those in the approved business case • Satisfaction of business sponsor regarding programme management and outcomes • Number of new value initiatives undertaken as part of the programme and their additional value contribution	• Contribution of individual IT-enabled investments to optimal value

DETAILED KEY MANAGEMENT PRACTICES

IM7 Update operational IT portfolios.

IM7.1 Update operational IT portfolios.

Update the contents of all IT portfolios affected by investment programmes. These could include, but are not limited to, portfolios of IT projects, IT services, IT applications, IT assets and other IT resources.

MANAGEMENT GUIDELINES

IM7 Update operational IT portfolios.

From	Inputs
PM4	Approved investment programmes
IM5	Detailed business cases
IM8	Updated business case

Outputs	To
Update operational portfolios	*, COBIT PO1, PO5
Project portfolios	COBIT PO10
Service portfolios	COBIT DS1

* Input from/output to outside Val IT and COBIT

RACI Chart

Activities	Board	CEO	CARS	Investment and Services Board	Value Management Office	CFO	CIO	Business Sponsor	Programme Manager	Programme Management Office	Business Management	Project Management Office
Update the contents of all IT portfolios affected by the investment programme. These could include, but are not limited to, portfolios of IT projects, IT services, IT applications, IT assets and other IT resources.							A		R	R		R

A **RACI** chart identifies who is **R**esponsible, **A**ccountable, **C**onsulted and/or **I**nformed.

Goals and Metrics

Activity Goals	Process Goals	IM Goal
• All affected portfolios are current.	• The contribution to value of IT services, assets and other resources resulting from IT-enabled investments continues to be monitored and managed. • Requirements for additional investment to sustain/improve the contribution of IT services, assets and other resources are identified.	• Ensure that the enterprise's individual IT-enabled investments contribute to optimal value.

Activity Metrics	Process Metrics	IM Metric
• Elapsed time before each portfolio is updated	• Acknowledged contribution to value of IT services, assets or resources • Number of IT services, assets or resources whose contribution to value is not monitored or managed • Number of new investments identified to sustain/improve the contribution of IT services, assets or resources to value	• Contribution of individual IT-enabled investments to optimal value

DETAILED KEY MANAGEMENT PRACTICES

IM8 Update the business case.

IM8.1 Update the business case.

Update the business case throughout the full economic life cycle of the programme to reflect the current status of the programme. This should be done in preparation for stage-gate reviews, or whenever there is any material change that affects the projected costs and/or benefits of the programme, including when assumptions or risks change due to changes to business strategy, the way the enterprise functions or is organised, or to the external environment.

MANAGEMENT GUIDELINES

IM8 Update the business case.

From	Inputs
IM5	Detailed business case
IM9	Programme performance reports
COBIT PO1	Updated IT portfolio information

Outputs	To
Updated business cases	PM4, PM6, IM5, IM7, COBIT PO5, PO10, AI1

RACI Chart

Activities	Board	CEO	CARS	Investment and Services Board	Value Management Office	CFO	CIO	Business Sponsor	Programme Manager	Programme Management Office	Business Management	Project Management Office
Update the business case to reflect the current status of the programme.					I	C	C	A	R	R	C	C

A **RACI** chart identifies who is **R**esponsible, **A**ccountable, **C**onsulted and/or **I**nformed.

Goals and Metrics

Activity Goals	Process Goals	IM Goal
• All documentation needed for managing the programme is kept current. • There are regular reviews of the performance of the programme and what it has still to achieve. • The business sponsor is regularly consulted.	• Full and ongoing understanding exists of the programme's potential to deliver optimal value. • The business case is kept current to reflect changes to benefits, costs and risks. • Updated business cases are ready for stage-gate reviews.	• Ensure that the enterprise's individual IT-enabled investments contribute to optimal value.

Activity Metrics	Process Metrics	IM Metric
• Time since the last update of programme management documentation • Frequency of programme review meetings • Frequency of review meetings with the business sponsor	• Completeness of updated business cases • Satisfaction of the business sponsor with updated business case documentation • Degree of compliance of the updated business case with ISB's requirements at stage-gate reviews	• Contribution of individual IT-enabled investments to optimal value

DETAILED KEY MANAGEMENT PRACTICES

IM9 Monitor and report on the programme.

IM9.1 Monitor and report on programme (solution delivery) performance.
Monitor the performance of the overall programme, and the projects within the programme, including the business and the IT functions' contributions to the projects, and report to the ISB and the executives in a timely, complete and accurate fashion. Reporting may include performance against the programme plan in terms of schedule, funding, completeness and quality of functionality, user satisfaction, and the status of business and IT function internal controls, including the continuing acceptance of accountabilities for delivering capabilities.

IM9.2 Monitor and report on business (benefit/outcome) performance.
Throughout the full economic life cycle of the investment, monitor performance against the business and IT strategies and goals, and report to the ISB and the executives in a timely, complete and accurate fashion. Reporting may include tracking business changes being implemented, benefits realisation against the benefits realisation plan as documented in the benefits register, and the status of internal controls for benefits realisation.

IM9.3 Monitor and report on operational (service delivery) performance.
Monitor IT services, assets and resources created or changed as a result of the investment programme, and when they are becoming and have become operational, and report to the ISB and the executives in a timely, complete and accurate fashion. Reporting should include performance against service levels, with specific focus on sustained service delivery and contribution to value, and the status of business and IT function internal controls for delivering capabilities effectively and efficiently.

MANAGEMENT GUIDELINES

IM9 Monitor and report on the programme.

From	Inputs
IM6	Programme plans and resources
COBIT PO10	Project performance reports
COBIT ME1	IT performance reports

Outputs	To
Programme performance reports	PM4, IM8, IM10
Feedback on programme performance in relation to IT strategy	COBIT PO1

RACI Chart

Activities	Board	CEO	CARS	Investment and Services Board	Value Management Office	CFO	CIO	Business Sponsor	Programme Manager	Programme Management Office	Business Management	Project Management Office
	Roles											
Monitor solution, benefits, service delivery and overall programme performance on an ongoing basis in a timely and accurate fashion.			C		C	C	R	A	R	R	C	C
Report solution delivery performance to the ISB and executives in a timely and accurate fashion.				I	R		R	A	R	C	C	C
Report benefits realisation performance to the ISB and executives in a timely and accurate fashion.				I	R	C	C	A/R	R	C	R	
Report service delivery performance to the ISB and executives in a timely and accurate fashion.				I	R		R	A	R	C	C	

A **RACI** chart identifies who is **R**esponsible, **A**ccountable, **C**onsulted and/or **I**nformed.

Goals and Metrics

Activity Goals	Process Goals	IM Goal
• The programme is monitored effectively. • Reports and briefings are given to the ISB and the executives, based on performance of solution, benefits and service delivery.	• Full understanding exists by the ISB and the executives of the programme's performance and its potential to deliver value, its expenditures and risks. • The ISB and the executives are confident that the programme will deliver its planned value contribution.	• Ensure that the enterprise's individual IT-enabled investments contribute to optimal value.

Activity Metrics	Process Metrics	IM Metric
• Frequency with which solution, benefits and service delivery monitoring information is gathered and its currency and completeness • Time lag that occurs between gathering information and reporting to the ISB and the executives	• Time delay that occurs between regular reports being due (and *ad hoc* reports being requested) and the reports being provided • Degree of satisfaction of the ISB and the executives with the information provided for and at the reviews • Number of issues raised at the reviews	• Contribution of individual IT-enabled investments to optimal value

DETAILED KEY MANAGEMENT PRACTICES

IM10 Retire the programme.

IM10.1 Retire the programme.

Retire the programme from the active investment portfolio when all the projects within the programme have been completed and there is agreement that the desired business value has been or has a high potential of being realised. Ensure that the programme is brought to an orderly closure, including formal approval of retirement by the ISB and the business sponsor. Review and document lessons learned. Once the programme is retired, it should be removed from the active investment portfolio. Programme retirement recognises that the major activities planned to create value have been completed, but benefits monitoring, realisation and optimisation will still need to be monitored and managed until the full value of the programme is realised and the changes have become 'business as usual'. Even at that stage, when the programme results in an ongoing service or other assets or resources, accountability and processes should be put in place to ensure that the enterprise continues to optimise business value from the service, asset or resources. Additional investments may be required at some future time to ensure that this occurs.

MANAGEMENT GUIDELINES

IM10 Retire the programme.

From	Inputs
IM5	Detailed business case
IM6	Updated business case
IM9	Programme performance reports

Outputs	To
Programme retirement	PM4, PM6, COBIT PO1, PO5

RACI Chart

Activities	Board	CEO	CARS	Investment and Services Board	Value Management Office	CFO	CIO	Business Sponsor	Programme Manager	Programme Management Office	Business Management	Project Management Office
	Roles											
Monitor the programme for eligibility for retirement.			C		C	C	C	A	R	C	C	
Undertake pre-retirement review to determine or confirm the value created by the programme, and any potential future value still to be realised.				I	C	C	R	A	R		R	
Obtain formal approval of retirement when there is agreement that the desired business value has been or will be realised.				A	C	C	C	R	R	R	C	
Review and document lessons learned.					C	C	R	A	R		R	
Ensure that the programme is brought to an orderly closure.					I		C	A	R	R	R	
Remove retired programme from the active portfolio.				I	A/R	I	I	I	R	I	I	
Establish accountability and processes for continuing to optimise business value from ongoing services or other assets arising from the programme.				A	R	R	R	R	R	R	R	

A **RACI** chart identifies who is **R**esponsible, **A**ccountable, **C**onsulted and/or **I**nformed.

Goals and Metrics

Activity Goals	Process Goals	IM Goal
• The programme is regularly assessed to determine when it should be retired. • A plan exists for retiring a programme and/or keeping it under observation beyond nominal retirement. • Responsibilities for roles continuing beyond the programme are identified. • Orderly retirement of programme is achieved. • The value created by the programme is understood. • Lessons learned are documented.	• The programme is retired at point that creates optimal value. • The programme is retired in an organised and structured manner. • Further material investment in the programme ceases. • Management of the continuing benefits realisation, services, assets and resources arising from the programme is assigned to and accepted by operational business functions.	• Ensure that the enterprise's individual IT-enabled investments contribute to optimal value.

Activity Metrics	Process Metrics	IM Metric
• Frequency of reviews to assess eligibility to retire the programme • Time elapsed since the last review of eligibility for retirement • Value created by programme and, if applicable, still to be created	• Relationship between value creation and retirement date • Number of issues remaining to be resolved after retirement	• Contribution of individual IT-enabled investments to optimal value

Figure 24—IM Maturity Model

	Awareness and Communication	Responsibility and Accountability	Goal Setting and Measurement	Policies, Standards and Procedures	Skills and Expertise	Tools and Automation
0	The enterprise sees IT as an end in itself and the focus is on delivery of technology. There is no recognition of the strategic need for a benefits focus or to establish clear linkage between technology investments and expected business benefits.					
1	There is some recognition of the need to improve the governance of technology investments but the driver is usually cost and the focus is still primarily on the technology.	The IT function holds the budgets. Consideration of business stakeholders is limited/non-existent, and there is little business involvement. IT may influence decisions with a desire for 'better technology'. The focus is on what has to be done to get the money.	Simple financial metrics may exist, primarily related to IT solution delivery costs. There is no consistent or effective management and tracking of total costs, benefits and risks.	Processes are *ad hoc*. Business cases are rarely required and then not produced to any defined standard. Cost and benefit definitions are weak.	Skills exist within the IT function for estimating usage of IT resources for completing planned investments. Skills do not exist for estimating benefits and what needs to be spent on both IT and non-IT to realise the benefits in IT-enabled investments. No formal training occurs.	One-off tools exist and are used on an individual *ad hoc* basis to plan and track investments.
2	There is increasing management awareness that IT is a business enabler and of the need to take a business value view of IT-enabled investments.	IT function still holds the budgets but there is increasing business involvement in defining major investment programmes although responsibilities and accountabilities are not always clear and causes of failure often are not appropriately attributed.	Financial metrics exist for costs, and business benefits and risks are considered. There is no consistent nor effective monitoring nor management of benefits and risks.	Intuitive processes emerge for development of business cases, but are not clearly defined nor formalised. Business cases are not required for all investments. The primary focus is on costs but there is increasing rigour around benefits. A programme view is emerging but not universally accepted.	Skills exist, largely within the IT function, for estimating expenditures, business outcomes and benefits resulting from new IT-enabled investments.	A number of one-off tools exist and are increasingly customised, and different tools are used by different groups.
3	Management understands necessity of managing IT-enabled investments as programmes. There is an increasing awareness of importance of management of organisational change rather than the technology involved.	The IT and other business functions have clear responsibilities for development of business cases. Accountability for approval of business cases is established. Executive management is kept informed of business cases for investment programmes. Executive management may not follow established processes.	Benefits are tracked and reported, using basic measures of financial value, alignment, risk and programme health. Non-financial measures are being developed. Root cause analysis is applied occasionally. The focus is on benefits realisation rather than value maximisation.	Standards exist for development of business cases, including high-level benefits, both financial and non-financial, costs, and risks. Well-defined business cases are required for all investment programmes. The focus is on clarity of business outcomes, identification of the full scope of initiatives required to achieve outcomes, and risk, including organisational capacity to manage and absorb change. There is limited review/update of business cases after programme approval.	Programme management expertise is developing but limited. Expertise and skills exist within both IT and other business functions for assessing and estimating tangible and intangible benefits as well as for assessing business and technology risks. Technical, business process and project management expertise are available to develop different courses of action for achieving a business outcome.	Standard modelling tools are being adopted to support business case development by developing and documenting a programme road map, including defining outcomes and identifying initiatives, their contributions, and any assumptions being made.

Figure 24—IM Maturity Model (*cont.*)						
	Awareness and Communication	**Responsibility and Accountability**	**Goal Setting and Measurement**	**Policies, Standards and Procedures**	**Skills and Expertise**	**Tools and Automation**
4	The board and executive management are committed to investment management, insisting on clear accountability for organisational change, realising benefits, controlling costs, managing the risks and for managing all IT-enabled investment programme activities.	There are clear roles and responsibilities for all key stakeholders. The business is accountable for benefits realisation. The IT function is accountable for delivering the technology capability. The board is appropriately assigning responsibilities to executive management for managing programmes and accomplishing expected benefits.	Robust metrics of financial value, strategic alignment, risk and programme health are established. Overall funding available for the programme, current commitment of that funding, current approved spending, actual spending to date, and what still needs to be spent are regularly reviewed. A benefit monitoring process is in place to ensure that planned benefits are achieved, sustained and optimised.	Business cases are comprehensive and complete. Business cases, including programme and benefits realisation plans, are regularly updated to reflect current status and reviewed/re-evaluated at pre-defined stage-gates. Where necessary, programmes are revised or cancelled.	Skills are available across the enterprise for managing programmes and evaluating resulting benefits.	Programme/project planning tools are used to automate and monitor management of IT-enabled investments. Dashboards and benefits registers are available for regularly tracking programme performance, including costs, benefits and risks.
5	The board and executive management are proactive in regularly reviewing programme performance during the economic life cycle of all investments, within the context of the enterprise's overall portfolio of IT-enabled investments, and initiating remedial action as required.	Executive management assigns accountability for managing full economic life-cycle costs, and financial and non-financial benefits. These responsibilities effectively cascade through the enterprise. Continuous improvement processes are applied to all measurement processes and metrics.	Full economic life-cycle costs and financial and non-financial benefits are monitored. When changes occur to the internal or external business environment, or when programme business cases are updated to reflect changes in requirements or programme performance, management re-evaluates the business case for the programme to determine if it should still be pursued.	Feedback and continuous improvement exist. The programme is continuously monitored and adjusted to optimise its value over the full economic life cycle, up to and including retirement. Investment management processes are improved based on lessons learned.	Expertise is available to assess and report consistently on programme performance, both individually and as part of the overall investment portfolio, in line with expected benefits during the full economic life cycle. Skills are continuously improved to meet enterprise goals.	Investment management tools are integrated with other enterprise tools to clearly communicate programme contribution to the business strategy.

6. FUNCTIONAL ACCOUNTABILITIES AND RESPONSIBILITIES

This chapter takes the RACI designations in the management guidelines and consolidates them by roles. It identifies for each role the tasks for which they are accountable (A), accountable and responsible (A/R), or responsible (R). Although only accountabilities and responsibilities are shown in the figures, there will also be many other activities where those involved in the roles will need to be consulted or informed.

As mentioned in the introduction to the management guidelines in chapter 5, the assignment of A and R designations is likely to vary somewhat amongst enterprises depending on their history, the personalities involved, politics, etc. This chapter illustrates possible assignments, although enterprises might adopt others. They are intended to provide a starting point to review the current situation, and to initiate dialogue around roles and responsibilities. What is most important is that, for every activity, someone with the appropriate authority has an A or R.

Note that within Val IT, the process PM3 *Manage the availability of human resources* includes key management practices and activities for both business and IT resources. For clarity in **figures 25** through **37**, two different headings are used to identify where business or IT resources are referenced: PM3 *Manage the availability of business human resources* and PM3 *Manage the availability of IT human resources*.

Figure 25—The Board RACI Designations Categorised by Accountabilities and Responsibilities

Activity	RACI
VG1 Establish informed and committed leadership.	
Develop an understanding by the enterprise leadership of key elements of governance required for reliable, secure and cost-effective delivery of existing and new IT services, assets and resources.	A
Establish an effective reporting line to allow the CIO to engage the enterprise leadership as an advocate of the business significance of IT.	A
Define, agree upon and communicate the meaning of value for the enterprise.	A
Ensure the alignment and integration of business and IT strategies with key enterprise goals.	A
VG2 Define and implement processes.	
Define an overall governance framework.	A
Establish, implement and communicate roles and responsibilities, and assign and confirm clear accountabilities for all critical value governance roles.	A
VG3 Define portfolio characteristics.	
Define an types of portfolios for the enterprise.	A
Define categories within the portfolios.	A
Develop and communicate evaluation criteria by categories.	A
Assign weightings to the criteria by category to enable evaluation.	A
Define requirements and establish stage-gates for investment portfolio categories.	A
Define requirements for and establish regular reviews of contribution to value of other portfolios.	A
VG5 Establish effective governance monitoring.	
Identify key measurements to be monitored.	A
PM1 Establish strategic direction and target investment mix.	
Review and, where necessary, clarify the business strategy and implications for IT.	A
Define, based on the business strategy, the appropriate investment mix.	A
IM1 Develop and evaluate the initial programme concept business case.	
Create an environment that fosters and welcomes new ideas and acknowledges their champions.	R
Suggest new opportunities.	R

Figure 26—The CEO RACI Designations Categorised by Accountabilities and Responsibilities

Activity	RACI
VG1 Establish informed and committed leadership.	
Develop an understanding by the enterprise leadership of key elements of governance required for reliable, secure and cost-effective delivery of existing and new IT services, assets and resources.	R
Establish an effective reporting line to allow the CIO to engage the enterprise leadership as an advocate of the business significance of IT.	R
Establish a forum to help enterprise leadership understand opportunities for business change enabled by current, new or emerging technologies, and to understand their responsibilities for value to be realised from those opportunities.	R
Define, agree upon and communicate the meaning of value for the enterprise.	R
Ensure the alignment and integration of business and IT strategies with key enterprise goals.	R
VG2 Define and implement processes.	
Define an overall governance framework.	R
Assess the quality and coverage of current processes against the governance framework.	A
Identify and prioritise process requirements.	A/R
Define and document processes, including goals and metrics.	A
Establish, implement and communicate roles and responsibilities, and assign and confirm clear accountabilities for all critical value governance roles.	R

Figure 26—The CEO RACI Designations Categorised by Accountabilities and Responsibilities (*cont.*)	
Activity	**RACI**
VG2 Define and implement processes. (*cont.*)	
Establish boards, committees and support structures.	A
Establish and maintain an optimal co-ordination, communication and liaison structure between the IT function and other stakeholders.	A
VG3 Define portfolio characteristics.	
Define the types of portfolios for the enterprise.	R
Define categories within the portfolios.	R
Develop and communicate evaluation criteria by categories.	R
Assign weightings to the criteria by category to enable evaluation.	R
Define requirements and establish stage-gates for investment portfolio categories.	R
Define requirements for and establish regular reviews of contribution to value of other portfolios.	R
VG5 Establish effective governance monitoring.	
Identify key measurements to be monitored.	R
Define processes and approaches to capture information.	A
Define methods and techniques for reporting performance.	A
VG6 Continuously improve value management practices.	
Ensure that all lessons learned are reviewed and necessary changes are planned, implemented and monitored to increase optimal value.	A/R
PM1 Establish strategic direction and target investment mix.	
Review and, where necessary, clarify the business strategy and implications for IT.	R
Identify and communicate opportunities for IT to influence the business strategy.	R
Identify and communicate opportunities for IT to support the business strategy.	R
Define, based on the business strategy, the appropriate investment mix.	R
PM2 Determine the availability and sources of funds.	
Identify and investigate additional sources of funds.	R
PM3 Manage the availability of business human resources.	
Periodically review the business organisational structure.	A
PM4 Evaluate and select programmes to fund.	
Adjust business targets, forecasts and budgets.	A
IM1 Develop and evaluate the initial programme concept business case.	
Create an environment that fosters and welcomes new ideas and acknowledges their champions.	A/R
Suggest new opportunities.	A/R

Figure 27—The CARS RACI Designations Categorised by Accountabilities and Responsibilities	
Activity	**RACI**
VG6 Continuously improve value management practices.	
Ensure that all lessons learned are reviewed and necessary changes are planned, implemented and monitored to increase optimal value.	R
IM1 Develop and evaluate the initial programme concept business case.	
Suggest new opportunities.	R

Figure 28—The ISB RACI Designations Categorised by Accountabilities and Responsibilities	
Activity	**RACI**
VG1 Establish informed and committed leadership.	
Develop an understanding by the enterprise leadership of key elements of governance required for reliable, secure and cost-effective delivery of existing and new IT services, assets and resources.	R
Define, agree upon and communicate the meaning of value for the enterprise.	R
VG2 Define and implement processes.	
Define and document processes, including goals and metrics.	R
Establish boards, committees and support structures.	R
Establish and maintain an optimal co-ordination, communication and liaison structure between the IT function and other stakeholders.	R
VG3 Define portfolio characteristics.	
Define the types of portfolios for the enterprise.	R
Define categories within the portfolios.	R
Develop and communicate evaluation criteria by categories.	R
Assign weightings to the criteria by category to enable evaluation.	R
Define requirements and establish stage-gates for investment portfolio categories.	R
Define requirements for and establish regular reviews of contribution to value of other portfolios.	R

Figure 28—The ISB RACI Designations Categorised by Accountabilities and Responsibilities (*cont.*)	
Activity	**RACI**
VG4 Align and integrate value management with enterprise financial planning.	
Understand the enterprise's current budgeting practices.	R
Determine the financial planning practices needed for value management.	R
Define the structure, content and use of business cases.	R
VG5 Establish effective governance monitoring.	
Identify and monitor performance improvement actions.	A
VG6 Continuously improve value management practices.	
Ensure that all lessons learned are reviewed and necessary changes are planned, implemented and monitored to increase optimal value.	R
PM4 Evaluate and select programmes to fund.	
Assess the impact on the overall portfolio of adding a candidate programme. Determine the impact on the portfolio investment mix.	A/R
Review the business case and evaluate relative scoring. Determine if programme should be selected.	A/R
Determine disposition of candidate programme if not selected, or of other active programmes impacted by the selection of the candidate programme.	A/R
Communicate decision(s) to the business sponsor(s).	A
Determine the required stage-gates for each individual programme's full economic life cycle.	A
Confirm the business case requirements at each stage-gate.	A
Commit total programme funding and release funding to next stage-gate.	A
Adjust business targets, forecasts and budgets.	R
PM5 Monitor and report on investment portfolio performance.	
Report performance.	R
PM6 Optimise the investment portfolio performance.	
Review the portfolio on a regular basis, when changes occur to the internal or external business environment, or when programme business cases are updated.	A/R
Identify changes to the internal or external business environment and to programme business cases.	A
Identify opportunities to exploit synergies between programmes and mitigate risks.	A
Identify the adjustments required in response to the changes or opportunities identified.	A/R
Re-evaluate and reprioritise the portfolio to ensure that the portfolio is aligned with the business strategy and the target mix of investments is maintained so the portfolio is achieving optimal value.	A/R
Determine which adjustments to make and initiate required action.	A/R
Communicate portfolio adjustments, how programmes will be affected and required new initiatives.	A
IM1 Develop and evaluate the initial programme concept business case.	
Suggest new opportunities.	R
IM10 Retire the programme.	
Obtain formal approval of retirement when there is agreement that desired business value has been or will be realised.	A
Establish accountability and processes for continuing to optimise business value from ongoing services or other assets arising from the programme.	A

Figure 29—The VMO RACI Designations Categorised by Accountabilities and Responsibilities	
Activity	**RACI**
VG2 Define and implement processes.	
Assess the quality and coverage of current processes against the governance framework.	R
Identify and prioritise process requirements.	R
Define and document processes, including goals and metrics.	R
Establish boards, committees and support structures.	R
Establish and maintain an optimal co-ordination, communication and liaison structure between the IT function and other stakeholders.	R
VG3 Define portfolio characteristics.	
Assign weightings to the criteria by category to enable evaluation.	R
VG5 Establish effective governance monitoring.	
Define processes and approaches to capture information.	R
Define methods and techniques for reporting performance.	R
Identify and monitor performance improvement actions.	R
VG6 Continuously improve value management practices.	
Ensure that all lessons learned are reviewed and necessary changes are planned, implemented and monitored to increase optimal value.	R
PM2 Determine the availability and sources of funds.	
Maintain current and accurate views of funds available, committed, approved to spend, and spent to date.	R

Figure 29—The VMO RACI Designations Categorised by Accountabilities and Responsibilities (*cont.*)	
Activity	**RACI**
PM3 Manage the availability of business human resources.	
Perform a gap analysis between the current and future business human resource demand and supply, paying particular attention to conflicting demands.	A
Develop strategies to address any business human resources shortfall or surplus.	R
PM3 Manage the availability of IT human resources.	
Perform a gap analysis between the current and future IT human resource demand and supply, paying particular attention to conflicting demands.	A
PM4 Evaluate and select programmes to fund.	
Review and evaluate the programme business case for readiness for submission to the ISB.	A/R
Assign a relative score to programme business case.	A/R
Assess the impact on the overall portfolio of adding a candidate programme. Determine the impact on the portfolio investment mix.	R
Identify any changes that might be required to other programmes in the portfolio as a result of adding this programme. Assess the impact and viability of those changes.	A/R
Review the business case and evaluate relative scoring. Determine if programme should be selected.	R
Determine disposition of candidate programme if not selected, or of other active programmes impacted by the selection of the candidate programme.	R
Communicate decision(s) to the business sponsor(s).	R
Determine the required stage-gates for each individual programme's full economic life cycle.	R
Confirm the business case requirements at each stage-gate.	R
Move the selected programmes into the active portfolio.	A/R
PM5 Monitor and report on investment portfolio performance.	
Identify and collect required portfolio performance information.	A/R
Create high-level views of performance.	A/R
Report performance.	A/R
PM6 Optimise investment portfolio performance.	
Review the portfolio on a regular basis, when changes occur to the internal or external business environment, or when programme business cases are updated.	R
Identify changes to the internal or external business environment and to programme business cases.	R
Identify opportunities to exploit synergies between programmes and mitigate risks.	R
Identify the adjustments required in response to the changes or opportunities identified.	R
Re-evaluate and reprioritise the portfolio to ensure that the portfolio is aligned with the business strategy and the target mix of investments is maintained so the portfolio is achieving optimal value.	R
Determine which adjustments to make and initiate required action.	R
Communicate portfolio adjustments, how programmes will be affected and required new initiatives.	R
IM1 Develop and evaluate the initial programme concept business case.	
Suggest new opportunities.	R
Capture opportunities for investment programmes to create value in support of the business strategy or to address operational or compliance issues.	R
Categorise the opportunity. Clarify expected business outcome(s) and identify, at a high level, business, process, people, technology and organisational initiatives required to achieve the expected outcomes.	R
IM5 Develop the detailed candidate programme business case.	
Confirm that all elements of the business case have been prepared in the appropriate format, and are consistent and complete, and take appropriate actions when more information is required.	R
Confirm appropriateness of the accountabilities assigned.	R
Confirm the full understanding and acceptance of owners of the accountabilities.	R
IM9 Monitor and report on the programme.	
Report solution delivery performance to the ISB and executives in a timely and accurate fashion.	R
Report benefits realisation performance to the ISB and executives in a timely and accurate fashion.	R
Report service delivery performance to the ISB and executives in a timely and accurate fashion.	R
IM10 Retire the programme.	
Remove retired programme from the active portfolio.	A/R
Establish accountability and processes for continuing to optimise business value from ongoing services or other assets arising from the programme.	R

Figure 30—The CFO RACI Designations Categorised by Accountabilities and Responsibilities	
Activity	**RACI**
VG1 Establish informed and committed leadership.	
Define, agree upon and communicate the meaning of value for the enterprise.	R
VG2 Define and implement processes.	
Define an overall governance framework.	R
Assess the quality and coverage of current processes against the governance framework.	R
Identify and prioritise process requirements.	R
Define and document processes, including goals and metrics.	R
Establish and maintain an optimal co-ordination, communication and liaison structure between the IT function and other stakeholders.	R
VG4 Align and integrate value management with enterprise financial planning.	
Understand the enterprise's current budgeting practices.	A/R
Determine the financial planning practices needed for value management.	A/R
Determine optimal financial planning practices, over what periods and who should be the budget holders for different types of expenditures.	A/R
Determine optimal IT funding practices.	A/R
Identify changes needed.	A/R
Implement financial planning changes.	A/R
Define the structure, content and use of business cases.	A/R
Regularly review financial planning and budgeting practices.	A/R
VG5 Establish effective governance monitoring.	
Identify key measurements to be monitored.	R
VG6 Continuously improve value management practices.	
Ensure that all lessons learned are reviewed and necessary changes are planned, implemented and monitored to increase optimal value.	R
PM1 Establish strategic direction and target investment mix.	
Define, based on the business strategy, the appropriate investment mix.	R
PM2 Determine the availability and sources of funds.	
Maintain current and accurate views of funds available, committed, approved to spend, and spent to date.	A
Identify and investigate additional sources of funds.	A/R
PM4 Evaluate and select programmes to fund.	
Identify any changes that might be required to other programmes in the portfolio as a result of adding this programme. Assess the impact and viability of those changes.	R
Commit total programme funding and release funding to next stage-gate.	R
Adjust business targets, forecasts and budgets.	R
Charge active programme expenditures to the relevant business functions.	A
IM1 Develop and evaluate the initial programme concept business case.	
Suggest new opportunities.	R
IM5 Develop the detailed candidate programme business case.	
Confirm appropriateness of the accountabilities assigned.	R
Confirm the full understanding and acceptance of owners of the accountabilities.	R
IM10 Retire the programme.	
Establish accountability and processes for continuing to optimise business value from ongoing services or other assets arising from the programme.	R

Figure 31—The CIO RACI Designations Categorised by Accountabilities and Responsibilities	
Activity	**RACI**
VG1 Establish informed and committed leadership.	
Develop an understanding by the enterprise leadership of key elements of governance required for reliable, secure and cost-effective delivery of existing and new IT services, assets and resources.	R
Establish an effective reporting line to allow the CIO to engage the enterprise leadership as an advocate of the business significance of IT.	R
Establish a forum to help enterprise leadership understand opportunities for business change enabled by current, new or emerging technologies, and to understand their responsibilities for value to be realised from those opportunities.	A/R
Ensure the alignment and integration of business and IT strategies with key enterprise goals.	R
VG2 Define and implement processes.	
Define an overall governance framework.	R
Assess the quality and coverage of current processes against the governance framework.	R
Identify and prioritise process requirements.	R
Define and document processes, including goals and metrics.	R
Establish and maintain an optimal co-ordination, communication and liaison structure between the IT function and other stakeholders.	R

Figure 31—The CIO RACI Designations Categorised by Accountabilities and Responsibilities (*cont.*)	
Activity	**RACI**
VG4 Align and integrate value management with enterprise financial planning.	
Understand the enterprise's current budgeting practices.	R
Determine the financial planning practices needed for value management.	R
Determine optimal IT funding practices.	R
Implement financial planning changes.	R
VG5 Establish effective governance monitoring.	
Identify key measurements to be monitored.	R
Define processes and approaches to capture information.	R
Define methods and techniques for reporting performance.	R
VG6 Continuously improve value management practices.	
Ensure that all lessons learned are reviewed and necessary changes are planned, implemented and monitored to increase optimal value.	R
PM1 Establish strategic direction and target investment mix.	
Review and, where necessary, clarify the business strategy and implications for IT.	R
Identify and communicate opportunities for IT to influence the business strategy.	A/R
Identify and communicate opportunities for IT to support the business strategy.	A/R
Translate the business strategy and goals into the IT strategy and goals.	A/R
PM2 Determine the availability and sources of funds.	
Identify and investigate additional sources of funds.	R
PM3 Manage the availability of IT human resources.	
Create and maintain an inventory of current IT human resources and their competencies.	A
Determine the current and committed assignment of IT human resources.	A
Obtain market information about the supply of critical IT human resources.	A
Determine the current and future demand for IT human resources.	A/R
Identify and pay special attention to key IT personnel who are in short supply on the market with specialised knowledge that will be needed.	A
Develop strategies to address any IT human resources shortfall or surplus.	A
Create and maintain an IT tactical resourcing plan.	A
Periodically review the IT function organisational structure (assumes CIO on the same level as CFO).	A
Adjust IT staffing requirements, tactical sourcing plans and sourcing strategies.	A
PM4 Evaluate and select programmes to fund.	
Identify any changes that might be required to other programmes in the portfolio as a result of adding this programme. Assess the impact and viability of those changes.	R
Commit total programme funding and release funding to next stage-gate.	R
Adjust business targets, forecasts and budgets.	R
Charge active programme expenditures to the relevant business functions.	R
PM6 Optimise investment portfolio performance.	
Determine which adjustments to make and initiate required action.	R
IM1 Develop and evaluate the initial programme concept business case.	
Create an environment that fosters and welcomes new ideas and acknowledges their champions.	R
Suggest new opportunities.	R
Capture opportunities for investment programmes to create value in support of the business strategy or to address operational or compliance issues.	R
State any key assumptions and identify key risks, along with their potential impact on current and future business operations, and mitigation strategies.	R
Obtain CIO approval and sign-off on the technical aspects of the initial programme concept business case.	R
IM2 Understand the candidate programme and implementation options.	
Assess the technical impact of the alternative courses of action.	R
IM5 Develop the detailed candidate programme business case.	
Confirm appropriateness of the accountabilities assigned.	R
Confirm the full understanding and acceptance of owners of the accountabilities.	R
Secure technical and business sign-offs.	R
IM6 Launch and manage the programme.	
Prepare for, undertake and report on stage-gate reviews.	R
IM7 Update operational IT portfolios.	
Update the contents of all IT portfolios affected by the investment programme. These could include, but are not limited to, portfolios of IT projects, IT services, IT applications, IT assets and other IT resources.	A

Figure 31—The CIO RACI Designations Categorised by Accountabilities and Responsibilities (*cont.*)	
Activity	**RACI**
IM9 Monitor and report on the programme.	
Monitor solution, benefits, service delivery and overall programme performance on an ongoing basis in a timely and accurate fashion.	R
Report solution delivery performance to the ISB and executives in a timely and accurate fashion.	R
Report service delivery performance to the ISB and executives in a timely and accurate fashion.	R
IM10 Retire the programme.	
Undertake pre-retirement review to determine or confirm the value created by the programme, and any potential future value still to be realised.	R
Review and document lessons learned.	R
Establish accountability and processes for continuing to optimise business value from ongoing services or other assets arising from the programme.	R

Figure 32—The Business Sponsor RACI Designations Categorised by Accountabilities and Responsibilities	
Activity	**RACI**
VG6 Continuously improve value management practices.	
Ensure that all lessons learned are reviewed and necessary changes are planned, implemented and monitored to increase optimal value.	R
PM4 Evaluate and select programmes to fund.	
Review and evaluate the programme business case for readiness for submission to the ISB.	R
Determine the required stage-gates for each individual programme's full economic life cycle.	R
Confirm the business case requirements at each stage-gate.	R
Commit total programme funding and release funding to next stage-gate.	R
Adjust business targets, forecasts and budgets.	R
Charge active programme expenditures to the relevant business functions.	R
PM6 Optimise investment portfolio performance.	
Identify changes to the internal or external business environment and in programme business cases.	R
Identify opportunities to exploit synergies between programmes and mitigate risks.	R
Determine which adjustments to make and initiate required action.	R
IM1 Develop and evaluate the initial programme concept business case.	
Describe the business outcome(s) to which the potential programme will contribute, the nature of the programme's contribution, and how the contribution would be measured.	A
Identify high-level initiatives that might be required to achieve these outcomes.	A
Estimate the high-level benefits, both financial and non-financial, and the costs for the full economic life cycle of the programme.	A
State any key assumptions and identify key risks, along with their potential impact on current and future business operations, and mitigation strategies.	A
Document the initial programme concept business case with information obtained.	A
Review and evaluate the initial programme concept business case.	A
Determine whether the programme should proceed to full programme definition and evaluation.	A
Obtain CIO approval and sign-off on the technical aspects of the initial programme concept business case.	A
Obtain business sponsor approval and sign-off on overall initial programme concept business case.	A
IM2 Understand the candidate programme and implementation options.	
Develop and document a complete and shared understanding of the expected business outcomes of the candidate programme, how they will be measured, and the full scope of initiatives required to achieve expected outcomes.	A
Identify any changes required to the nature of the enterprise's business, business processes, people skills and competencies, enabling technology, and organisation structure.	A
Identify the nature of the initiative's contribution, how that contribution will be measured, and all key assumptions and relevant metrics or similar indicators to monitor validity of these assumptions.	A
Identify key risks, both to successful completion of individual initiatives and to achievement of the desired outcomes.	A
Identify alternative courses of action to achieve the desired business outcomes.	A
Assess the business impact of alternative courses of action.	A
Assess the technical impact of alternative courses of action.	A
Assess the relative benefits, costs, risks and timing for each identified course of action.	A
Select the course of action that has the highest potential value, at an affordable cost with an acceptable level of risk.	A
Document the rationale for recommending the selected course of action.	A

Figure 32—The Business Sponsor RACI Designations Categorised by Accountabilities and Responsibilities (*cont.*)	
Activity	**RACI**
IM3 Develop the programme plan.	
Define and document all projects, including business, business process, people, technology and organisational projects, required to achieve the programme's expected business outcomes.	A
Specify required resources, including project managers and project teams as well as business resources where applicable.	A
Specify the funding, timing and interdependencies of multiple projects.	A
Specify basis for acquiring and assigning competent staff members and/or contractors to projects.	A
IM4 Develop full life-cycle costs and benefits.	
Identify and document the current baseline and target performance to be achieved for each key outcome.	A
Determine the method for measuring each key outcome.	A
Identify accountabilities for achieving outcomes, the expected delivery schedule, and the monitoring process, including a detailed benefits register.	A
Identify risks that may threaten the achievement of each key outcome and how those risks will be mitigated.	A
Prepare a programme budget that reflects the full economic life-cycle costs and financial and non-financial benefits.	A
Submit a budget and benefits realisation plan for review, refinement, approval and sign off by business sponsor.	A
IM5 Develop the detailed candidate programme business case.	
Confirm that all elements of the business case have been prepared in the appropriate format, and are consistent and complete, and take appropriate actions when more information is required.	A
Document a business case for the programme.	A
Undertake the final reasonability review focusing on benefits, costs and risks, and assess the programme relative score.	A
Confirm appropriateness of the accountabilities assigned.	A
Confirm the full understanding and acceptance of owners of the accountabilities.	A
Secure technical and business sign-offs.	A
IM6 Launch and manage the programme.	
Launch the programme.	R
Operate the benefit monitoring process to track benefits delivery.	R
Continuously monitor and report on benefit delivery.	A
Identify opportunities for extra benefits realisation.	A
Prepare for, undertake and report on stage-gate reviews.	A/R
IM8 Update the business case.	
Update the business case to reflect the current status of the programme.	A
IM9 Monitor and report on the programme.	
Monitor solution, benefits, service delivery and overall programme performance on an ongoing basis in a timely and accurate fashion.	A
Report solution delivery performance to the ISB and executives in a timely and accurate fashion.	A
Report benefits realisation performance to the ISB and executives in a timely and accurate fashion.	A/R
Report service delivery performance to the ISB and executives in a timely and accurate fashion.	A
IM10 Retire the programme.	
Monitor the programme for eligibility for retirement.	A
Undertake pre-retirement review to determine or confirm the value created by the programme, and any potential future value still to be realised.	A
Obtain formal approval of retirement when there is agreement that desired business value has been or will be realised.	R
Review and document lessons learned.	A
Ensure that the programme is brought to an orderly closure.	A
Establish accountability and processes for continuing to optimise business value from ongoing services or other assets arising from the programme.	R

Figure 33—The Programme Manager RACI Designations Categorised by Accountabilities and Responsibilities	
Activity	**RACI**
VG2 Define and implement processes.	
Establish boards, committees and support structures.	R
Establish and maintain an optimal co-ordination, communication and liaison structure between the IT function and other stakeholders.	R
VG6 Continuously improve value management practices.	
Ensure that all lessons learned are reviewed and necessary changes are planned, implemented and monitored to increase optimal value.	R
PM3 Manage the availability of business human resources.	
Create and maintain a business tactical resourcing plan.	R
PM3 Manage the availability of IT human resources.	
Create and maintain an IT tactical resourcing plan.	R
PM4 Evaluate and select programmes to fund.	
Determine the required stage-gates for each individual programme's full economic life cycle.	R
Confirm the business case requirements at each stage-gate.	R
PM6 Optimise investment portfolio performance.	
Identify changes to the internal or external business environment and to programme business cases.	R
IM1 Develop and evaluate the initial programme concept business case.	
Describe the business outcome(s) to which the potential programme will contribute, the nature of the programme's contribution, and how the contribution would be measured.	R
Identify high-level initiatives that might be required to achieve these outcomes.	R
Estimate the high-level benefits, both financial and non-financial, and the costs for the full economic life cycle of the programme.	R
State any key assumptions and identify key risks, along with their potential impact on current and future business operations, and mitigation strategies.	R
Document the initial programme concept business case with information obtained.	R
Review and evaluate the initial programme concept business case.	R
Determine whether the programme should proceed to full programme definition and evaluation.	R
Obtain CIO approval and sign-off on the technical aspects of the initial programme concept business case.	R
Obtain business sponsor approval and sign-off on overall initial programme concept business case.	R
IM2 Understand the candidate programme and implementation options.	
Develop and document a complete and shared understanding of the expected business outcomes of the candidate programme, how they will be measured, and the full scope of initiatives required to achieve expected outcomes.	R
Identify any changes required to the nature of the enterprise's business, business processes, people skills and competencies, enabling technology, and organisation structure.	R
Identify the nature of the initiative's contribution, how that contribution will be measured, and all key assumptions and relevant metrics or similar indicators to monitor validity of these assumptions.	R
Identify key risks, both to successful completion of individual initiatives and to achievement of the desired outcomes.	R
Identify alternative courses of action to achieve the desired business outcomes.	R
Assess the business impact of alternative courses of action.	R
Assess the technical impact of alternative courses of action.	R
Assess the relative benefits, costs, risks and timing for each identified course of action.	R
Select the course of action that has the highest potential value, at an affordable cost with an acceptable level of risk.	R
Document the rationale for recommending the selected course of action.	R
IM3 Develop the programme plan.	
Define and document all projects, including business, business process, people, technology and organisational projects, required to achieve the programme's expected business outcomes.	R
Specify required resources, including project managers and project teams as well as business resources where applicable.	R
Specify the funding, timing and interdependencies of multiple projects.	R
Specify basis for acquiring and assigning competent staff members and/or contractors to projects.	R
IM4 Develop full life-cycle costs and benefits.	
Identify and document the current baseline and target performance to be achieved for each key outcome.	R
Determine the method for measuring each key outcome.	R
Identify accountabilities for achieving outcomes, the expected delivery schedule, and the monitoring process, including a detailed benefits register.	R
Identify risks that may threaten the achievement of each key outcome and how those risks will be mitigated.	R
Prepare a programme budget that reflects the full economic life-cycle costs and financial and non-financial benefits.	R
Submit a budget and benefits realisation plan for review, refinement, approval and sign off by business sponsor.	R
IM5 Develop the detailed candidate programme business case.	
Confirm that all elements of the business case have been prepared in the appropriate format, and are consistent and complete, and take appropriate actions when more information is required.	R
Document a business case for the programme.	R
Undertake the final reasonability review focusing on benefits, costs and risks, and assess the programme relative score.	R
Confirm appropriateness of the accountabilities assigned.	R

Figure 33—The Programme Manager RACI Designations Categorised by Accountabilities and Responsibilities (*cont.*)	
Activity	**RACI**
IM5 Develop the detailed candidate programme business case. (*cont.*)	
Confirm the full understanding and acceptance of owners of the accountabilities.	R
Secure technical and business sign-offs.	R
IM6 Launch and manage the programme.	
Plan, resource and commission the necessary projects required to achieve programme results.	A
Launch the programme.	A
Continuously manage programme performance against key criteria (e.g., scope, schedule, quality, cost and risk), identify deviations from plan and take timely remedial action when required.	A
Continuously monitor individual project performance related to the delivery of expected capability, schedule, costs and risks to identify potential impacts on programme performance, and take timely remedial action when required.	A
Operate the benefit monitoring process to track benefits delivery.	A
Continuously monitor and report on benefit delivery.	R
Review performance against targets regularly. Perform root cause analysis for deviations from plan. Initiate remedial action to address the deviations from plan.	A
Identify opportunities for extra benefits realisation	R
Prepare for, undertake and report on stage-gate reviews.	R
IM7 Update operational IT portfolios.	
Update the contents of all IT portfolios affected by the investment programme. These could include, but are not limited to, portfolios of IT projects, IT services, IT applications, IT assets and other IT resources.	R
IM8 Update the business case.	
Update the business case to reflect the current status of the programme.	R
IM9 Monitor and report on the programme.	
Monitor solution, benefits, service delivery and overall programme performance on an ongoing basis in a timely and accurate fashion.	R
Report solution delivery performance to the ISB and executives in a timely and accurate fashion	R
Report benefits realisation performance to the ISB and executives in a timely and accurate fashion.	R
Report service delivery performance to the ISB and executives in a timely and accurate fashion.	R
IM10 Retire the programme.	
Monitor the programme for eligibility for retirement.	R
Undertake pre-retirement review to determine or confirm the value created by the programme, and any potential future value still to be realised.	R
Obtain formal approval of retirement when there is agreement that desired business value has been or will be realised.	R
Review and document lessons learned.	R
Ensure that the programme is brought to an orderly closure.	R
Remove retired programme from the active portfolio.	R
Establish accountability and processes for continuing to optimise business value from ongoing services or other assets arising from the programme.	R

Figure 34—The PgMO RACI Designations Categorised by Accountabilities and Responsibilities	
Activity	**RACI**
VG2 Define and implement processes.	
Establish boards, committees and support structures.	R
Establish and maintain an optimal co-ordination, communication and liaison structure between the IT function and other stakeholders.	R
VG6 Continuously improve value management practices.	
Ensure that all lessons learned are reviewed and necessary changes are planned, implemented and monitored to increase optimal value.	R
PM3 Manage the availability of business human resources.	
Determine the current and future demand for business human resources.	R
Identify and pay special attention to key business personnel who are in short supply on the market with specialised knowledge that will be needed.	R
Perform a gap analysis between the current and future business human resource demand and supply, paying particular attention to conflicting demands.	R
Create and maintain a business tactical resourcing plan.	R
PM3 Manage the availability of IT human resources.	
Determine the current and future demand for IT human resources.	R
Identify and pay special attention to key IT personnel who are in short supply on the market with specialised knowledge that will be needed.	R
Perform a gap analysis between the current and future IT human resource demand and supply, paying particular attention to conflicting demands.	R
Create and maintain an IT tactical resourcing plan.	R
PM4 Evaluate and select programmes to fund.	
Review and evaluate the programme business case for readiness for submission to the ISB.	R
PM6 Optimise investment portfolio performance.	
Identify changes to the internal or external business environment and in programme business cases.	R
IM1 Develop and evaluate the initial programme concept business case.	
Review and evaluate the initial programme concept business case.	R
Determine whether the programme should proceed to full programme definition and evaluation.	R

Figure 34—The PgMO RACI Designations Categorised by Accountabilities and Responsibilities (*cont.*)	
Activity	**RACI**
IM4 Develop full life-cycle costs and benefits.	
Prepare a programme budget that reflects the full economic life-cycle costs and financial and non-financial benefits.	R
Submit a budget and benefits realisation plan for review, refinement, approval and sign off by business sponsor.	R
IM5 Develop the detailed candidate programme business case.	
Confirm that all elements of the business case have been prepared in the appropriate format, and are consistent and complete, and take appropriate actions when more information is required.	R
Document a business case for the programme.	R
Confirm the full understanding and acceptance of owners of the accountabilities.	R
IM6 Launch and manage the programme.	
Plan, resource and commission the necessary projects required to achieve programme results.	R
Launch the programme.	R
Continuously manage programme performance against key criteria (e.g., scope, schedule, quality, cost and risk), identify deviations from plan and take timely remedial action when required.	R
Continuously monitor individual project performance related to the delivery of expected capability, schedule, costs and risks to identify potential impacts on programme performance, and take timely remedial action when required.	R
Operate the benefit monitoring process to track benefits delivery.	R
Continuously monitor and report on benefit delivery.	R
Review performance against targets regularly. Perform root cause analysis for deviations from plan. Initiate remedial action to address the deviations from plan.	R
Identify opportunities for extra benefits realisation.	R
IM7 Update operational IT portfolios.	
Update the contents of all IT portfolios affected by the investment programme. These could include, but are not limited to, portfolios of IT projects, IT services, IT applications, IT assets and other IT resources.	R
IM8 Update the business case.	
Update the business case to reflect the current status of the programme.	R
IM9 Monitor and report on the programme.	
Monitor solution, benefits, service delivery and overall programme performance on an ongoing basis in a timely and accurate fashion.	R
IM10 Retire the programme.	
Obtain formal approval of retirement when there is agreement that desired business value has been or will be realised.	R
Ensure that the programme is brought to an orderly closure.	R
Establish accountability and processes for continuing to optimise business value from ongoing services or other assets arising from the programme.	R

Figure 35—The Business Management RACI Designations Categorised by Accountabilities and Responsibilities	
Activity	**RACI**
VG2 Define and implement processes.	
Establish and maintain an optimal co-ordination, communication and liaison structure between the IT function and other stakeholders.	R
VG4 Align and integrate value management with enterprise financial planning.	
Implement financial planning changes.	R
VG6 Continuously improve value management practices.	
Ensure that all lessons learned are reviewed and necessary changes are planned, implemented and monitored to increase optimal value.	R
PM1 Establish strategic direction and target investment mix.	
Review and, where necessary, clarify the business strategy and implications for IT.	R
Identify and communicate opportunities for IT to influence the business strategy.	R
Identify and communicate opportunities for IT to support the business strategy.	R
PM2 Determine the availability and sources of funds.	
Identify and investigate additional sources of funds.	R
PM3 Manage the availability of business human resources.	
Create and maintain an inventory of current business human resources and their competencies.	A
Determine the current and committed assignment of business human resources.	A
Obtain market information about the supply of critical business human resources.	A
Determine the current and future demand for business human resources.	R
Identify and pay special attention to key business personnel who are in short supply on the market with specialised knowledge that will be needed.	R
Perform a gap analysis between the current and future business human resource demand and supply, paying particular attention to conflicting demands.	R
Develop strategies to address any business human resources shortfall or surplus.	A
Create and maintain a business tactical resourcing plan.	R

Figure 35—The Business Management RACI Designations Categorised by Accountabilities and Responsibilities (*cont.*)	
Activity	**RACI**
PM3 Manage the availability of business human resources. *(cont.)*	
Periodically review the business organisational structure.	R
Adjust business staffing requirements, tactical sourcing plans and sourcing strategies.	A/R
PM4 Evaluate and select programmes to fund.	
Adjust business targets, forecasts and budgets.	R
Charge active programme expenditures to the relevant business functions.	R
PM6 Optimise investment portfolio performance.	
Identify changes to the internal or external business environment and to programme business cases.	R
IM1 Develop and evaluate the initial programme concept business case.	
Create an environment that fosters and welcomes new ideas and acknowledges their champions.	R
Suggest new opportunities.	R
Capture opportunities for investment programmes to create value in support of the business strategy or to address operational or compliance issues.	A/R
Categorise the opportunity. Clarify expected business outcome(s) and identify, at a high level, business, process, people, technology and organisational initiatives required to achieve the expected outcomes.	A/R
Determine which opportunities to pursue further or examine in more depth and identify and assign a business sponsor for each opportunity to be pursued.	A/R
Describe the business outcome(s) to which the potential programme will contribute, the nature of the programme's contribution, and how the contribution would be measured.	R
Identify high-level initiatives that might be required to achieve these outcomes.	R
Estimate the high-level benefits, both financial and non-financial, and the costs for the full economic life cycle of the programme.	R
State any key assumptions and identify key risks, along with their potential impact on current and future business operations, and mitigation strategies.	R
Review and evaluate the initial programme concept business case.	R
Determine whether the programme should proceed to full programme definition and evaluation.	R
IM5 Develop the detailed candidate programme business case.	
Confirm appropriateness of the accountabilities assigned.	R
IM6 Launch and manage the programme.	
Plan, resource and commission the necessary projects required to achieve programme results.	R
Launch the programme.	R
Operate the benefit monitoring process to track benefits delivery.	R
Continuously monitor and report on benefit delivery.	R
Review performance against targets regularly. Perform root cause analysis for deviations from plan. Initiate remedial action to address the deviations from plan.	R
Identify opportunities for extra benefits realisation.	R
Prepare for, undertake and report on stage-gate reviews.	R
IM9 Monitor and report on the programme.	
Report benefits realisation performance to the ISB and executives in a timely and accurate fashion.	R
IM10 Retire the programme.	
Undertake pre-retirement review to determine or confirm the value created by the programme, and any potential future value still to be realised.	R
Review and document lessons learned.	R
Ensure that the programme is brought to an orderly closure.	R
Establish accountability and processes for continuing to optimise business value from ongoing services or other assets arising from the programme.	R

Figure 36—The PMO RACI Designations Categorised by Accountabilities and Responsibilities	
Activity	**RACI**
VG2 Define and implement processes.	
Establish boards, committees and support structures.	R
Establish and maintain an optimal co-ordination, communication and liaison structure between the IT function and other stakeholders.	R
VG6 Continuously improve value management practices.	
Ensure that all lessons learned are reviewed and necessary changes are planned, implemented and monitored to increase optimal value.	R
PM3 Manage the availability of business human resources.	
Create and maintain a business tactical resourcing plan.	R
PM3 Manage the availability of IT human resources.	
Create and maintain an IT tactical resourcing plan.	R
IM5 Develop the detailed candidate programme business case.	
Confirm the full understanding and acceptance of owners of accountabilities.	R
IM6 Launch and manage the programme.	
Plan, resource and commission the necessary projects required to achieve programme results.	R
Launch the programme.	R
Continuously monitor individual project performance related to the delivery of expected capability, schedule, costs and risks to identify potential impacts on programme performance, and take timely remedial action when required.	R
IM7 Update operational IT portfolios.	
Update the contents of all IT portfolios affected by the investment programme. These could include, but are not limited to, portfolios of IT projects, IT services, IT applications, IT assets and other IT resources.	R

Figure 37—The Enterprise Head of HR RACI Designations Categorised by Accountabilities and Responsibilities	
Activity	**RACI**
VG6 Continuously improve value management practices.	
Ensure that all lessons learned are reviewed and necessary changes are planned, implemented and monitored to increase optimal value.	R
PM3 Manage the availability of business human resources.	
Create and maintain an inventory of current business human resources and their competencies.	R
Determine the current and committed assignment of business human resources.	R
Obtain market information about the supply of critical business human resources.	R
Determine the current and future demand for business human resources.	A
Identify and pay special attention to key business personnel who are in short supply on the market with specialised knowledge that will be needed.	A
Perform a gap analysis between the current and future business human resource demand and supply, paying particular attention to conflicting demands.	R
Develop strategies to address any business human resources shortfall or surplus.	R
Create and maintain a business tactical resourcing plan.	A
Periodically review the business organisational structure.	R
Adjust business staffing requirements, tactical sourcing plans and sourcing strategies.	R
PM3 Manage the availability of IT human resources.	
Create and maintain an inventory of current IT human resources and their competencies.	R
Determine the current and committed assignment of IT human resources.	R
Obtain market information about the supply of critical IT human resources.	R
Develop strategies to address any IT human resources shortfall or surplus.	R
Create and maintain an IT tactical resourcing plan.	R
Periodically review the IT function organisational structure (assumes CIO on the same level as CFO).	R
Adjust IT staffing requirements, tactical sourcing plans and sourcing strategies.	R

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APPENDIX A—CHANGES BETWEEN THE FIRST EDITION AND VAL IT 2.0

Framework-Level Changes

The major changes to the Val IT framework as a result of the Val IT 2.0 update are as follows:

- The original Val IT processes: VG, PM and IM are now called 'domains' to be more consistent with COBIT.
- Maturity models—both high-level models and detailed, attribute-level models have been provided for each of the three Val IT domains.
- The VG processes have been restructured and extended to include a broader range of portfolios, such as IT services, assets, and other resources that might be added to as a result of investments managed by Val IT, but that would be managed by COBIT, with performance of those portfolios being reported back to Val IT.
- The PM processes now include key management practices specifically related to the investment portfolio.
- The IM processes now include more explicit links to COBIT related to populating and monitoring the performance of IT operational portfolios.
- A limited number of processes contain only one key management practice. These processes are: VG6, PM2, PM5, IM3, IM7, IM8 and IM10. This occurs because the process is:
  - An activity that is or should be generic to all processes (VG6)
  - A significant activity where most of the work is outside the scope of Val IT (PM2)
  - A reflection of performance monitoring being kept as a process within both the PM and IM domains in support of effective governance monitoring (VG5, PM5)
  - A major activity, the execution of which requires a methodology that is beyond the scope of the Val IT framework (IM3)
  - A key link to COBIT, establishing the linkage to IT operational portfolios, including IT services, assets and other resources (IM7)
  - An activity that is rarely carried out today and requires emphasis (IM8, IM10)

Key Management Practices

As a result of the framework-level changes, the updating of the Val IT framework has significantly changed many key management practices within it. These changes include:

- There are a number of new key management practices. These relate primarily to:
  - Enterprises better defining value
  - More emphasis on the opportunity for IT to influence business strategy
  - Defining, populating and monitoring a broader range of portfolios
  - More explicit alignment with enterprise financial planning practices
  - More explicit linkage to business targets, forecasts and budgets
  - More focus on business human resources
  - Distinguishing between solution delivery, service delivery and benefits realisation performance
- A number of original related Val IT key management practices have been consolidated or aggregated into processes
- Some complex original Val IT key management practices have been split into more discrete components

Figures 38 to **40** show the cross-references between the new and old key management practices.

Management Guidelines

Management guidelines for each Val IT process, similar to the COBIT management guidelines first introduced in COBIT 3rd Edition, have been added. These include: inputs and outputs to illustrate what processes need from others and what the processes typically deliver; activities and associated roles and responsibilities; and goals and metrics, which are based on a consistent cascade of Val IT domain goals, process goals and activity goals. There are some differences between the format of the Val IT goals and metrics and those in COBIT 4.1—these, and the reasons for the differences, are described in the introduction to Goals and Metrics in chapter 5.

Figure 38—Mapping of Val IT Key Management Practices—Version 2.0 to Original Version	
Val IT 2.0	**Original Val IT**
VG Value Governance	
VG1 Establish informed and committed leadership.	
VG1.1 Develop an understanding of the significance of IT and the role of governance.	VG1
VG1.2 Establish effective reporting lines.	VG1
VG1.3 Establish a leadership forum.	VG1
VG1.4 Define value for the enterprise.	New
VG1.5 Ensure alignment and integration of business and IT strategies with key business goals.	VG1
VG2 Define and implement processes.	
VG2.1 Define the value governance framework.	New
VG2.2 Assess the quality and coverage of current processes.	VG2
VG2.3 Identify and prioritise process requirements.	VG2
VG2.4 Define and document the processes.	VG2
VG2.5 Establish, implement and communicate roles, responsibilities and accountabilities.	VG2
VG2.6 Establish organisational structures.	VG2
VG3 Define portfolio characteristics.	
VG3.1 Define portfolio types.	New
VG3.2 Define categories (within portfolios).	VG9
VG3.3 Develop and communicate evaluation criteria (for each category).	VG11
VG3.4 Assign weightings to criteria.	VG11
VG3.5 Define requirements for stage-gates and other reviews (for each category).	PM11
VG4 Align and integrate value management with enterprise financial planning.	
VG4.1 Review current enterprise budgeting practices.	PM6
VG4.2 Determine value management financial planning practice requirements.	New
VG4.3 Identify changes required.	New
VG4.4 Implement optimal financial planning practices for value management.	New
VG5 Establish effective governance monitoring.	
VG5.1 Identify key metrics.	VG5
VG5.2 Define information capture processes and approaches.	VG5
VG5.3 Define reporting methods and techniques.	VG6
VG5.4 Identify and monitor performance improvement actions.	New
VG6 Continuously improve value management practices.	
VG6.1 Implement lessons learned.	New

Figure 38—Mapping of Val IT Key Management Practices—Version 2.0 to Original Version (*cont.*)	
Val IT 2.0	**Original Val IT**
PM Portfolio Management	
PM1 Establish strategic direction and target investment mix.	
PM1.1 Review and ensure clarity of the business strategy and goals.	VG8
PM1.2 Identify opportunities for IT to influence and support the business strategy.	New
PM1.3 Define an appropriate investment mix.	VG10
PM1.4 Translate the business strategy and goals into IT strategy and goals.	VG1
PM2 Determine the availability and sources of funds.	
PM2.1 Determine overall investment funds.	PM6
PM3 Manage the availability of human resources.	
PM3.1 Create and maintain an inventory of business human resources.	New
PM3.2 Understand the current and future demand (for business human resources).	PM2
PM3.3 Identify shortfalls (between current and future business human resource demand).	PM3
PM3.4 Create and maintain tactical plans (for business human resources).	PM4
PM3.5 Monitor, review and adjust (business function allocation and staffing).	PM5
PM3.6 Create and maintain an inventory of IT human resources.	PM1
PM3.7 Understand the current and future demand (for IT human resources).	PM2
PM3.8 Identify shortfalls (between current and future IT human resource demand).	PM3
PM3.9 Create and maintain tactical plans (for IT human resources).	PM4
PM3.10 Monitor, review and adjust (IT function allocation and staffing).	PM5
PM4 Evaluate and select programmes to fund.	
PM4.1 Evaluate and assign relative scores to programme business cases.	PM8
PM4.2 Create an overall investment portfolio view.	PM9
PM4.3 Make and communicate investment decisions.	PM10
PM4.4 Specify stage-gates and allocate funds to selected programmes.	PM11
PM4.5 Adjust business targets, forecasts and budgets.	New
PM5 Monitor and report on investment portfolio performance.	
PM5.1 Monitor and report on investment portfolio performance.	PM14
PM6 Optimise investment portfolio performance.	
PM6.1 Optimise investment portfolio performance.	PM12
PM6.2 Reprioritise the investment portfolio.	PM13

Figure 38—Mapping of Val IT Key Management Practices—Version 2.0 to Original Version (*cont.*)

Val IT 2.0	Original Val IT
IM Investment Management	
IM1Develop and evaluate the initial programme concept business case.	
IM1.1 Recognise investment opportunities.	IM1
IM1.2 Develop the initial programme concept business case.	IM2
IM1.3 Evaluate the initial programme concept business case.	PM7
IM2 Understand the candidate programme and implementation options.	
IM2.1 Develop a clear and complete understanding of the candidate programme.	IM3
IM2.2 Perform analysis of alternatives.	IM4
IM3 Develop the programme plan.	
IM3.1 Develop the programme plan.	IM5
IM4 Develop full life-cycle costs and benefits.	
IM4.1 Identify full life-cycle costs and benefits.	IM7
IM4.2 Develop a benefits realisation plan.	IM6
IM4.3 Perform appropriate reviews and obtain sign-offs.	IM7
IM5 Develop the detailed candidate programme business case.	
IM5.1 Develop the detailed programme business case.	IM8
IM5.2 Assign clear accountability and ownership.	IM9
IM5.3 Perform appropriate reviews and obtain sign-offs.	IM8
IM6 Launch and manage the programme.	
IM6.1 Plan projects, and resource and launch the programme.	IM10
IM6.2 Manage the programme.	IM11
IM6.3 Track and manage benefits.	IM12
IM7 Update operational IT portfolios.	
IM7.1 Update operational IT portfolios.	New
IM8 Update the business case.	
IM8.1 Update the business case.	IM13
IM9 Monitor and report on the programme.	
IM9.1 Monitor and report on programme (solution delivery) performance.	IM14
IM9.2 Monitor and report on business (benefit/outcome) performance.	New
IM9.3 Monitor and report on operational (service delivery) performance.	New
IM10 Retire the programme.	
IM10.1 Retire the programme.	IM15

APPENDIX B—GLOSSARY

Architecture: Description of the fundamental underlying design of the components of the business system, or of one element of the business system (e.g., technology), the relationships amongst them, and the manner in which they support the enterprise's objectives

Benchmarking: A systematic approach to comparing an enterprise's performance against peers and competitors in an effort to learn the best ways of conducting business (e.g., benchmarking of quality, logistical efficiency and various other metrics)

Benefit: An outcome whose nature and value (expressed in various ways) are considered advantageous by an enterprise

Benefits register: A repository for recording and reporting actual performance of the agreed benefit measures for the expected outcomes of an investment programme

Board: The group of the most senior executives and/or non-executives of the enterprise who are accountable for the governance of the enterprise and have overall control of its resources

Business benefit: An outcome that is expected to or does directly increase value.

Business case: Documentation of the rationale for making a business investment, used to both support a business decision on whether to proceed with the investment and as an operational tool to support management of the investment through its full economic life cycle

Business process: An inter-related set of cross-functional activities or events that result in the delivery of a specific product or service to a customer

Business sponsor: The individual accountable for delivering benefits and value from an IT-enabled business investment programme to the enterprise

Business unit executives/managers: Business individuals with roles with respect to a programme

Capability: An aptitude, competency or resource that an enterprise may possess or require at an enterprise, business function, or individual level that has the potential or is required to contribute to a business outcome and to creating value

CARS: The function(s) in the enterprise responsible for compliance, audit, risk and security

Change management: A holistic and proactive approach to managing the transition from a current to a desired organisational state, focusing specifically on the critical human or 'soft' elements of change. It includes activities such as culture change (values, beliefs and attitudes), development of reward systems (measures and appropriate incentives), organisational design, stakeholder management, human resources policies and procedures, executive coaching, change leadership training, team building, and communications planning and execution.

Chargeback: The allocation of investments and costs to the units within an enterprise for which they are incurred

Chief executive officer (CEO): The highest-ranking officer who is in charge of the total management of the enterprise

Chief financial officer (CFO): The most senior official of the enterprise who is accountable for financial planning, record keeping, investor relations and financial risks

Chief information officer (CIO): The most senior official of the enterprise who is accountable for IT advocacy; aligning IT and business strategies; and planning, resourcing and managing the delivery of IT services, information, and the deployment of associated human resources

Control Objectives for Information and related Technology **(COBIT)**: A complete, internationally accepted process framework for IT that supports business and IT executives and management in their definition and achievement of business goals and related IT goals by providing a comprehensive IT governance, management, control and assurance model. COBIT describes IT processes and associated control objectives, management guidelines (activities, accountabilities, responsibilities and performance metrics) and maturity models. COBIT supports enterprise management in the development, implementation, continuous improvement and monitoring of good IT-related practices.

Discount rate: An interest rate used to calculate a present value that might or might not include the time value of money, tax effects, risks or other factors

Full economic life cycle: The period of time during which material business benefits are expected to arise from and/or material expenditures (including investments, running and retirement costs) are expected to be incurred by an investment programme

Head of human resources (HR): The most senior official of an enterprise who is accountable for planning and policies with respect to all human resources in that enterprise

Hurdle rate: The minimum rate of return sought for investments in a particular category, above which an investment might make sense financially and below which it might not

Intermediate benefits: Benefits that are not business benefits but might lead to business benefits. Examples include leveraging assets, improving customer services, speeding up deliveries, earlier invoicing, improving employee morale, better management information, greater business agility, and enhancing brand image.

Investment and services board (ISB): A management structure primarily accountable for managing the enterprise's portfolios of investment programmes and existing/current services and, in so doing, managing the level of overall funding to provide the necessary balance between enterprise-wide and specific line-of-business needs

Investment category: A particular sub-division of the investment portfolio, e.g., mandatory, sustaining or discretionary

Investment portfolio: The collection of investments being considered and/or being made

Internal rate of return (IRR): The discount rate that equates cash inflows with cash outflows. When discounted at the IRR, the present value of the cash outflow will equal the present value of the cash inflow. The IRR and net present value (NPV) are measures of the expected profitability of an investment programme.

IT application: Electronic functionality that constitutes parts of business processes undertaken by or with the assistance of IT

IT service: The day-to-day provision of IT applications and support for their use, including help desk, equipment supply and moves, and security authorisations

Mandatory investments: Those investments an enterprise considers necessary to avoid regulatory or legislative non-compliance or contractual infringement

Modeling: Developing a simplified representation of a system or phenomenon. Such representations may be static or dynamic, in which case behaviour of the system or phenomenon under different conditions can be simulated.

Net present value (NPV): A method used for representing a series of cash inflows and cash outflows over a period of time by a single number, taking into account interest rates and risks. NPV is calculated by applying a discount rate to the series of cash outflows (investments and operational costs) and cash inflows (cost savings and revenues) that are expected to occur during the life cycle of the investment.

Optimal value: The maximum value that can be realised from the investment funds available to an enterprise

Payback period: The length of time needed to recoup the original investment

Portfolio: Groupings of 'objects of interest' (investment programmes, IT services, IT projects, other IT assets or resources) managed and monitored to optimise business value (The investment portfolio is of primary interest to Val IT. IT service, project, asset or other resource portfolios are of primary interest to COBIT.)

Programme: A structured grouping of interdependent projects that are both necessary and sufficient to achieve a desired business outcome and create value. These projects could include, but are not limited to, changes in the nature of the business; business processes; the work performed by people, as well as the competencies required to carry out the work; enabling technology; and organisational structure. (The investment programme is the primary unit of investment within Val IT.)

Programme management office (PgMO): The function responsible for supporting programme managers, and gathering, assessing and reporting information about the conduct of their programmes and constituent projects

Programme manager: The individual responsible for the achievement of the programme's objectives

Project: A structured set of activities concerned with delivering a defined capability (that is necessary but NOT sufficient to achieve a required business outcome) to the enterprise based on an agreed schedule and budget

Project management office (PMO): The function for supporting project managers, including the definition and propagation of standardised methodologies and gathering, assessing and reporting information about the conduct of their projects

Rate of return: The interest rate at which cash inflows equal cash outflows using the net present value (NPV) calculation. Also known as internal rate of return (IRR).

Return on investment (ROI): A measure of operating performance and efficiency, computed in its simplest form by dividing net income (or net business benefits) by the total investment over the period being considered

Scorecard: A coherent set of performance measures organised into categories according to the interests of the management of the enterprise (The balanced scorecard, developed by Robert S. Kaplan and David P. Norton, is a well known implementation of the scorecard concept. It organises measures into four categories: traditional financial measures, customer, internal business process, and learning and growth perspectives.)

Stage-gate: A point in time when a programme is reviewed, and a decision is made to commit expenditures to the next set of activities on a programme or project, to stop the work altogether, or to put a hold on execution of further work

Val IT: The standard framework for enterprises to select and manage IT-related business investments and IT assets by means of investment programmes such that they deliver the optimal value to the enterprise

Value: The relative worth or importance of an investment for an enterprise, as perceived by its key stakeholders, expressed as total life-cycle benefits net of related costs, adjusted for risk and (in the case of financial value) the time value of money (For a broader discussion of value, see the section titled 'Understanding the Concept of "Value" in chapter 2.)

Value management office (VMO): The function that acts as the secretariat for the investment and services board (ISB) in managing investment and service portfolios, including assessing and advising on investment opportunities and business cases, value governance/management methods and controls, and reporting on progress in sustaining and creating value from investments and services

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- *Stepping Through the IS Audit, 2nd Edition*, 2004

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- *Board Briefing on IT Governance, 2nd Edition*, 2003
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COBIT and Related Publications:

- *COBIT® 4.1*, 2007
- *COBIT® Control Practices, Guidance to Achieve Control Objectives for Successful IT Governance, 2nd Edition*, 2007
- *COBIT® Security Baseline™, 2nd Edition*, 2007
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- *Enterprise Value: Governance of IT Investments, Getting Started With Value Management*, 2008
- *Enterprise Value: Governance of IT Investments, The Business Case*, 2006
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