ENTERPRISE VALUE: GOVERNANCE OF IT INVESTMENTS

The Val IT Framework 2.0 Extract

Val IT™
BASED ON COBIT®

IT GOVERNANCE INSTITUTE®
LEADING THE IT GOVERNANCE COMMUNITY

IT Governance Institute®

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.

Disclaimer

ITGI has designed and created *Enterprise Value: Governance of IT Investments, The Val IT Framework 2.0 Extract* (the 'Work'), primarily as an educational resource for those seeking to understand Val IT. ITGI makes no claim that use of any of the Work will assure a successful outcome. The Work should not be considered inclusive of all proper information procedures and tests or exclusive of other information procedures and tests that are reasonably directed to obtaining the same results. In determining the propriety of any specific information procedure or test, enterprise leaders and IT governance, management and assurance professionals should apply their own professional judgement to the specific control circumstances presented by the particular systems or information technology environment.

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TABLE OF CONTENTS

TABLE OF CONTENTS

Chapters 5 and 6 are not included in this extract.

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**.

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.

Figure 1—The Val IT Initiative

As the core publication in the Val IT series, *Enterprise Value: Governance of IT Investments, The Val IT Framework* 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.

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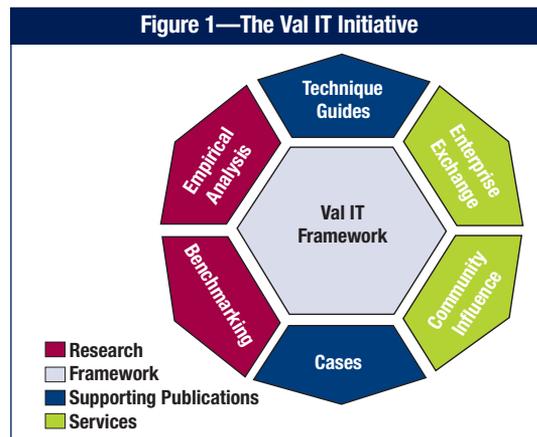
[1] IT Governance Institute, COBIT (*Control Objectives for Information and related Technology*) 4.1, USA, 2007

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. 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]

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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

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?

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.

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

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[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*

[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

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

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.

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.

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[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.

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]

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.

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[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

Figure 3—'Four Ares'

The strategic question. Is the investment:
- In line with our vision
- Consistent with our business principles
- Contributing to our strategic objectives
- Providing optimal value, at affordable cost, at an acceptable level of risk

The architecture question. Is the investment:
- In line with our architecture
- Consistent with our architectural principles
- Contributing to the population of our architecture
- In line with other initiatives

Are we doing the right things? → **Are we getting the benefits?**

Are we doing them the right way? → **Are we getting them done well?**
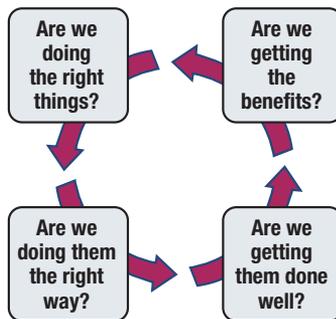
The value question. Do we have:
- A clear and shared understanding of the expected benefits
- Clear accountability for realising the benefits
- Relevant metrics
- An effective benefits realisation process over the full economic life cycle of the investment

The delivery question. Do we have:
- Effective and disciplined management, delivery and change management processes
- Competent and available technical and business resources to deliver:
  – The required capabilities
  – The organisational changes required to leverage the capabilities

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.

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]

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[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*

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.

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

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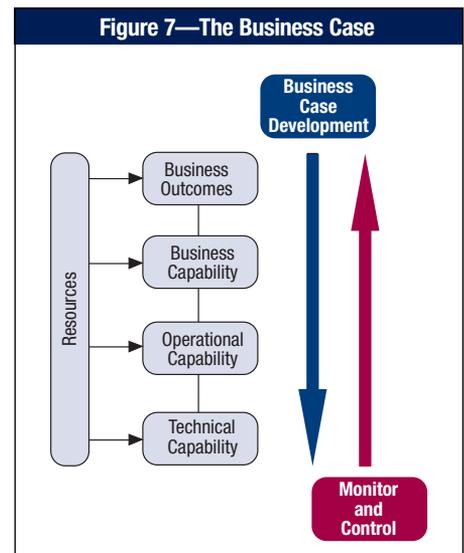
[22] Ward, John; 'Delivering Value From Information Systems and Technology Investments: Learning From Success', *Forum*, the Monthly Newsletter of Information Systems Research Center, Cranfield School of Management, August 2006

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.

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

Value Governance (VG)
- Establish informed and committed leadership.
- Define and implement processes.
- Define portfolio characteristics.
- Align and integrate value management with enterprise financial planning.
- Establish effective governance monitoring.
- Continuously improve value management practices.

Portfolio Management (PM)
- Establish strategic direction and target investment mix.
- Determine the availability and sources of funds.
- Manage the availability of human resources.
- Evaluate and select programmes to fund.
- Monitor and report on investment portfolio performance.
- Optimise investment portfolio performance.

Investment Management (IM)
- Develop and evaluate the initial programme business case.
- Understand the candidate programme and implementation options.
- Develop the programme plan.
- Develop full life-cycle costs and benefits.
- Develop the detailed candidate programme business case.
- Launch and manage the programme.
- Update operational IT portfolios.
- Update the business case.
- Monitor and report on the programme.
- Retire the programme.

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.

Figure 10—Relationship Between the Val IT Domains and Processes

Value Governance (VG)

Establishes the overall governance framework, including defining the portfolios required to manage investments and resulting IT services, assets and resources

Monitors the effectiveness of the overall governance framework and supporting processes, and recommends improvements as appropriate

Portfolio Management (PM)

Establishes the strategic direction for investments, the desired characteristics of the investment portfolio, and the resources and funding constraints within which portofolio decisions must be made

Evaluates and priortises programmes within resource and funding constraints, based on their alignment with strategic objectives, business worth and risk, and moves selected programmes into the active porfolio for execution

Monitors the performance of the overall portfolio, adjusting the portfolio as necessary in response to programme performance or changing business priorities

Investment Management (IM)

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

Launches and manages the execution of active programmes, and reports on performance to portfolio management

Retires programmes when there is agreement that desired business value has been realised, or when retirement is deemed appropriate for any other reason

Moves resulting IT services, assets and resources to the appropriate operational IT portfolio(s), and continues to monitor their contribution to business value

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

- 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.

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 or 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**.

Figure 11—High-level Management Guidelines					
Domain	**Domain Goal**	**Inputs**	**Outputs**	**Process Metrics**	**Domain Metric**
Value Governance (VG)	To ensure that value management practices areembedded 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

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.

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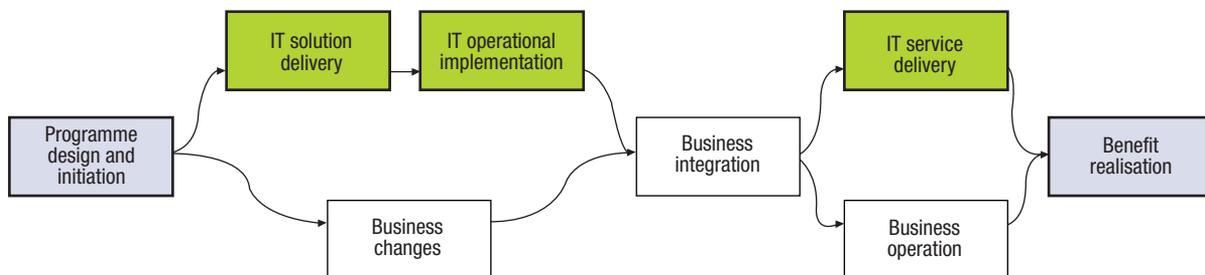
The execution of the business-related initiatives of business change delivery, integration and operation are outside the scope of IT governance (i.e., COBIT), but are within the scope of enterprise governance of IT (i.e., Val IT).

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

Chapters 5 and 6 are not included in this extract.

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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 1.0**
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 1.0**
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 1.0**
IM Investment Management	
IM1 Develop 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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