# Enterprise Value: Governance of IT Investments

## Getting Started With Value Management

An Executive Primer Based on the
Val IT Framework 2.0

**Val IT™**
BASED ON COBIT®

**IT GOVERNANCE INSTITUTE®**
LEADING THE IT GOVERNANCE COMMUNITY

# GETTING STARTED WITH VALUE MANAGEMENT

**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 IT professionals deliver value-adding services.

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ITGI has designed and created *Enterprise Value: Governance of IT Investments, Getting Started With Value Management*. (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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# ACKNOWLEDGEMENTS

# TABLE OF CONTENTS

# 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 resulted in the development of 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 ITGI's COBIT®[1], which provides a comprehensive framework for the management and delivery of high-quality information technology-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 investments 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 2.0*, presents processes and key management practices for three domains:
• Value governance
• Portfolio management
• Investment management

This companion publication is intended to provide business and IT executives and organisational leaders with an easy-to-follow guide to getting a value management initiative started using the value management processes and practices contained in the Val IT framework.

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

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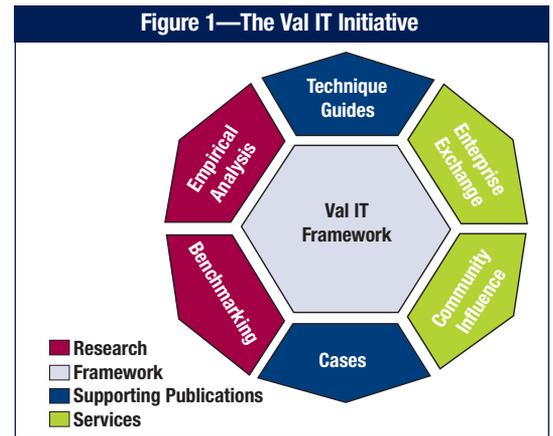
[1] IT Governance Institute, COBIT (*Control Objectives for Information and related Technology*) 4.1, USA, 2007

# 1. TAKING THE FIRST, PRAGMATIC STEPS TOWARD VALUE MANAGEMENT

It's probably one of the most common dilemmas confronted by enterprises today, regardless of factors such as size, revenue, industry, region or business model. The decision to make large-scale investments in information technology and IT-enabled change as well as the complex challenges in ensuring that these investments are efficiently transformed into concrete enterprise value need to be managed.

## IT's Value Often Proves Elusive

In far too many cases, this value simply is not realised. Just consider the evidence. In recent years, survey after survey has revealed that from 20 to 70 percent of large-scale investments in IT-enabled change is wasted, challenged or fails to bring a return to the enterprise. See **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 bring value for the enterprise.[2] Another survey of 124 financial executives revealed that almost 80 percent did not actively encourage value creation in their enterprise.[3]

| Figure 2—How Much of an Investment in IT Is Wasted? |
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| • 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.[4] |
| • 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.[5] |
| • 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.[6] |

Very few enterprises actively manage for value. Research carried out by the Cranfield School of Management suggests that less than 30 percent of the largest UK companies actually have a formal benefits management process.[7] Anecdotal evidence suggests that similar figures are to be found among European and US companies as well.

What does it take to 'get IT right'? One of the single most important factors is a clear understanding on the part of both the board and executive management that IT is not an end in itself, but a means of enabling business outcomes. IT is no longer about implementing technology. It is about unlocking IT-enabled organisational change. Just as important is a strategic, leadership-sponsored commitment to establishing a comprehensive IT governance capability.

## The Most Common Challenge:  The Absence of a Structured Approach

But together with other drivers of IT-enabled value, these two foundational elements—executive acknowledgement that IT is about enabling change and that IT governance is crucial to achieving this—are simply not enough. Until now, organisational leaders have not had a clear way to consider investments involving IT—or how to report on or monitor the potential success or failure of these investments.

What has been missing for many years has been ready access to a structured approach—a comprehensive structured framework based on proven practices—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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[2] Butler Group, 'Measuring IT Costs and Value', September 2005
[3] Deloitte, 'Driving Enterprise Value,' October 2004
[4] Gartner, 'The Elusive Business Value of IT', August 2002
[5] IBM Strategy and Change Survey of *Fortune* 1000 CIOs, as presented to SHARE in New York by Doug Watters, 17 August 2004
[6] Cook, R.; 'How to Spot a Failing IT Project', *CIO Magazine*, 17 July 2007
[7] Peppard, J.; J. Ward; *Unlocking Sustained Business Value From IT Investments*, Cranfield School of Management, UK, 2003

### ITGI's Val IT Framework: A Brief Definition

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 communities has undertaken the Val IT initiative.

Dedicated to helping enterprises optimise the realisation of value from IT investments at an affordable cost, and with a known and acceptable level of risk, the Val IT initiative includes research activities, publications and auxiliary services, as outlined in **figure 1**, supporting its principal centrepiece, the Val IT framework. In short, the Val IT framework is a comprehensive, credible and pragmatic organising framework—with practical guidelines, principles, processes and supporting practices that help boards, executive management and other organisational leaders maximise the realisation of value from IT investments.

Working in concert, these mutually supporting elements help executives understand and carry out the roles critical to managing IT investments, as well as the IT services and other IT assets or resources supporting or resulting from these investments. Val IT's processes and practices are proven; they have been under development and in continuous use across leading enterprises for many years.

### The Second Most Common Challenge: Understanding How to Begin

Val IT is relevant to all management levels across both the business and IT functions, from the CEO and the C-suite to those directly involved and responsible for the selection, procurement, development, implementation, deployment, and benefits realisation processes. But, while Val IT contains essential guidance for any executive interested in establishing a more effective approach to value management, executives are not always clear on exactly how to begin.

What executives and other organisational leaders need is practical advice on how to translate 'knowing' into 'doing', i.e., how to close the 'knowing-doing' gap.[8] This is especially true because no two enterprises are alike—and understanding how to design, implement and sustain effective value management practices involves enterprise-specific complexities that defy a one-size-fits-all approach.

### How This Guide Can Help

This publication is intended to provide business and IT executives and organisational leaders with an easy-to-follow guide on getting a value management initiative started.

• Chapter 2 describes the most common pain points signaling a need for better value management as well as the trigger events that so often compel business leaders to begin building such a capability.
• Chapter 3 outlines a typical 'future state'—what the common characteristics and outcomes of a value-driven enterprise look like.
• Chapter 4 provides a helpful set of instructions on how to conduct an assessment of the enterprise's current state.
• Chapter 5 explains how to launch the initiative by selecting from one of several proven approaches, and identifying the most applicable Val IT processes and practices based on the enterprise's particular pain points and objectives.
• Chapter 6 underlines some of the most critical elements in managing the organisational change that is required to sustain value over time.

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[8] *The Knowing-Doing Gap* is the title of a book by Stanford professors Jeffrey Pfeffer and Robert Sutton, published by Harvard Business School Press in 2000 (ISBN 978-1578511242). The authors wondered why companies spend billions of US dollars annually on training programmes and consultancy services, yet produce so few actual changes in management practice. Their investigation into why knowledge of what needs to be done frequently fails to result in action or behaviour consistent with that knowledge, identified common obstacles to action, such as fear and inertia, and they profiled successful companies that overcame the obstacles.

Introducing or improving value management practices in an enterprise is not an easy task, and will take time. It may require significant change in terms of executive thinking and action around decision making, value and accountability. Enterprises must balance achieving the longer-term vision with realising near-term value by taking an incremental approach within the context of the vision and an overall plan. This guide is focused on understanding where to begin and getting started. It does not attempt to map out all the steps associated with implementing a comprehensive value management programme; a companion implementation guide[9] provides more detailed guidance on developing such a comprehensive programme.

It should also be noted that, although this publication is focused on IT-enabled investments, its content is applicable to all types of investment in business change.

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[9] ITGI, *IT Governance Implementation Guide Using COBIT and Val IT, 2nd Edition*, USA, 2007

# 2. RECOGNISING PAIN POINTS, TRIGGER EVENTS AND OTHER SYMPTOMS OF NEED

## Six Typical Challenges in Creating Value

Creating IT-enabled value, by almost any measure, is not easy. In fact, most enterprises commonly exhibit one or more of the following symptoms:

- **Problems in delivering technical capabilities**—Often an enterprise's delivery processes and competencies within its IT function are not mature enough to effectively and efficiently deliver the technology capabilities needed to support business operations and enable business change. This challenge highlights the need to improve IT governance and management processes either before, or in conjunction with, the introduction of value management practices.

- **Limited or no understanding of IT expenditures**—Rarely do executives enjoy a sufficiently transparent view of IT expenditures and IT-enabled investments across all IT services, assets and other resources. Often, decision makers can only estimate how much they are investing, what benefits they are gaining for the expense, and what the full business rationale for the commitment might be. Expenditures are frequently sourced from many different unco-ordinated budgets, resulting in significant duplication and conflict in demand for resources.

- **Business abdication of decision making to the IT function**—When the roles, responsibilities and accountabilities of the IT function and other business functions are unclear, then the IT function tends to usurp the driver's seat, determining which IT-enabled business investments should be pursued, prioritising these business investments based on the IT function's limited insights, and inappropriately relieving the business of its responsibility in defining and defending the business rationale used to justify every single IT-enabled investment decision.

- **Communication gaps between the IT function and the business**—Close collaboration between the IT function and other business functions is crucial to value creation. When such a partnership is absent, communication suffers, inefficiencies mount, synergies fail to emerge, and the work environment tends to devolve into a culture of blame. In some cases, the IT function is relegated to the role of follower, instead of innovator, and is engaged in investment proposals too late in the decision making process to contribute significant value. In other cases, the IT function is blamed for not delivering value from IT-enabled investments—value that only other business functions, in partnership with the IT function, can deliver.

- **Questioning of the value of IT**—Ironically, while most enterprises continue to invest more and more in technology, many of their key executive decision makers continue to question whether value is actually realised from these investments. Frequently, the dominant focus is merely on managing IT costs rather than understanding, managing and leveraging IT's role in the process of creating concrete business value. As IT-enabled investments increasingly involve significant organisational change, the failure to shift focus from cost to value will continue to be a major constraint to realising value from these investments.

- **Major investment failure**—When IT projects stumble, the business costs can be enormous—and highly visible. Project cancellations can trigger unexpected ripples of impact across the business. Delays can cost millions. And budget overruns can starve other projects of crucial resources. Amongst the most common examples of IT investment failures are poorly planned enterprise resource planning (ERP) and customer relationship management (CRM) initiatives. In fact, Gartner estimates that these large-scale IT debacles represent the largest major cause of value leakage.[10] Exacerbating this issue is the fact that, in many cases, problems are ignored until it is far too late to take any corrective action.

## Trigger Events and Other Drivers of Change

In addition to these common symptoms, other business factors can signal or precipitate a fundamental shift in an enterprise's appetite to tackle the complexities inherent in embracing IT-enabled growth. One of the most common is a *change in funding*—both those caused by internal decision making (i.e., new allocations, budget cuts or expansions) as well as those precipitated externally (i.e., external regulatory changes, such as Sarbanes-Oxley).

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[10] Huber, N.; 'Gartner: Firms Waste £351bn Each Year on Ill-conceived IT Projects', *ComputerWeekly.com* (UK), 21 March 2002

Another typical trigger event is a *shift in the market or the economy*. It might be a competitor's new strategy, a drastic decline in a key stock market index, or the emergence of a revolutionary new business model that turns a given industry on its head and, seemingly overnight, launches a fledgling new company called Amazon.com, eBay, Google or Dell.

Common to each of these events is the need to change to survive—or face the risk that competitors will triumph; customers or supporters will take their business elsewhere; and legal, political or regulatory requirements will undermine profitability and growth. These are clear imperatives for the adoption of value management as a core management practice.

Some enterprises view these factors as obstacles, but a growing number of proactive enterprises and executives are embracing these realities as valuable rallying arguments best leveraged as a concrete, transparent and easy-to-understand platform for change. The enterprises see these same factors not as obstacles to growth, but as trigger events for a different, more rewarding kind of transformation. Making the case for change, however, requires helping stakeholders understand how to visualise a new future.

# 3. DEFINING THE CHARACTERISTICS OF THE IDEAL FUTURE STATE

It is much easier to lead hundreds—and perhaps thousands—of people in the same direction if everyone understands the desired outcome. The optimal or desired state for value creation involving IT could be typified by the characteristics briefly outlined as:

1. **Awareness and communications:**
   - The IT function is trusted because it generally delivers what it promises.
   - Value management is well understood and adopted as the prevailing culture of investment decision making at the C-suite level.
   - Decision makers understand and accept that value management practices, when in place, enhance competitive positioning and, when absent, erode it.

2. **Responsibility and accountability:**
   - Key staff identify attractive opportunities, investment decision makers pick and actively support the winners, and programme managers detect and deal with losers early.
   - Business functions drive investment decision making and benefit/resource balancing processes. Executive management becomes involved in these processes based, not on internal politics or executive whim, but on objective data.
   - The business case for each investment has a fully committed business sponsor from a specified business function.
   - Well-defined accountabilities exist for the business sponsor and programme[11] manager for each investment.
   - Collaboration—supported by clear roles, responsibilities and processes—helps avoid organisational gaps and overlaps by defining what the business requires and how IT will provide it.
   - Key issues such as investment criteria, pay-back periods and the selection of the individual investments to be funded are decided on at the executive and/or board level, supported by input from the heads of business functions and the CIO.
   - An investment and services board[12] is in place and meets on a regular basis, at least quarterly.

3. **Goal setting and measurement:**
   - The alignment of investments with corporate strategy is continuously monitored.
   - Returns from investments are more stable and increasingly predictable.
   - All IT expenditures contribute to the enterprise's strategy in a demonstrable and internally auditable manner. IT's role in the creation of value and IT costs are not sources of executive concern because they are transparent and predictable—and, therefore, manageable.
   - There is significant increase in the percentage of successful investments, as measured in terms of benefits realisation and contribution to value.
   - Regular investment programme and project reviews measure benefit realisation, strategic alignment, costs and risks. They also monitor progress toward value creation.
   - Management information and forecasts are consistent, relevant, accurate, timely and made available on a regular basis. Enterprise-wide IT maintenance costs are included amongst operating costs.
   - Key indicators have been established to assess the level of maturity of value management processes and practices.

4. **Policies, standards and procedures:**
   - The process of investment planning begins with consideration, not of existing resource constraints, but of business benefits targeted.
   - Value management is considered 'business-as-usual'—as part of day-to-day operations.
   - The inter-relationship between business benefits sought and the resources needed to achieve them is known and actively managed.

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[11] A programme (as distinct from a project) is a structured grouping of projects designed to produce *clearly identified business value*.
[12] For a description of the role of the investment and services board, and its accountabilities and responsibilities, refer to the Val IT Framework 2.0.

- All business case rationales are required to include cost-benefit justification based on the total cost of all changes required to realise the benefits, including changes to areas such as business models and processes, people skills and competencies, organisational structure, and technology.
- A clear distinction is made between one-time investment expenditures and ongoing operational costs; both are considered over the full economic life cycle of the investment.
- Investments are categorised to distinguish between mandatory and discretionary investments.
- Investment decisions are made using objective criteria that are measurable, verifiable and repeatable.
- The portfolio[13] of all business change investment programmes is continuously reviewed and updated, based on the needs of the enterprise as a whole, rather than on those of individual business functions in order to exploit synergies and avoid duplication of effort and double counting of business benefits.
- There is a formal process for retiring investment programmes when expected benefits have been realised, or when it is determined that no further benefits are achievable.

5. **Skills and expertise:**
   - Effective programme and project management processes are in place and are recognised as essential management practices for value creation.
   - Portfolio management practices and structures are applied across different investment types, including those that are and are not based on technology.

6. **Tools and automation:**
   - Standard tools are engaged across the enterprise to evaluate investments, detect exceptions, and identify positive trends, as well as to evaluate and communicate the performance of individual investments and the overall portfolio.

These characteristics are not intended to be taken as an exhaustive list of good practices for value management, but instead as an illustrative set of examples based on input received from executives, managers and senior professionals active in the value management domain.

While initially it may seem daunting to target the achievement of some or all of these value management practices, an increasing number of successful enterprises have actually committed themselves to such a culture change—and are achieving notable results from their efforts. Studies by Deloitte show that, amongst other internationally recognised businesses, Domino's Pizza, The Chicago Mercantile Exchange, Lloyd's TSB and Logitech all have embraced some aspects of value management and integrated these ideas into the way they do business. These enterprises have adopted value creation as a core management precept and are actively linking high-level strategy with day-to-day behaviour at all levels of the business.[14]

Once a clear vision of the future state has been communicated and acknowledged among decision makers and stakeholders, the focus should shift back to the present—to assessing the enterprise's current state.

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[13] A portfolio is a suite of business programmes managed to *optimise overall enterprise value*.
[14] *Adopting the Value Habit*, 2006 survey by Economic Intelligence Unit, produced in cooperation with Deloitte

# 4. ASSESSING THE ENTERPRISE'S CURRENT STATE

One of the best ways to assess the enterprise's readiness to undertake a value management programme is to evaluate the degree to which management is aware of the need for value management approaches based on the adoption of the following principles defined in the Val IT framework 2.0 and the extent of its commitment to implement them. These principles include the following:
• IT-enabled investments will be managed as a portfolio of investments.
• IT-enabled investments will include the full scope of activities required to achieve business value.
• IT-enabled investments will be managed through their full economic life cycle.
• Value delivery practices will recognise that there are different categories of investments that will be evaluated and managed differently.
• Value delivery practices will define and monitor key metrics, and respond quickly to any changes or deviations.
• Value delivery practices will engage all stakeholders and assign appropriate accountability for the delivery of capabilities and the realisation of business benefits.
• Value delivery practices will be continually monitored, evaluated and improved.

Completion of this self-assessment requires responses from key stakeholders within both the business and IT functions. They are—or should be—the ones directly involved in either overseeing or carrying out value management practices. Note that the self-assessment exercise can be undertaken simply by marking up the table in **figure 3**.

This quick assessment provides the enterprise and its stakeholders with initial insight into:
(1) Current levels of understanding, awareness and commitment to value management principles and practices
(2) The gap between these attitudes and practices, and the targeted future state characteristics outlined in chapter 3

Based upon this initial assessment, a more detailed maturity analysis can be initiated to define further the required value management practices. In order to support this effort, appendix A outlines a more comprehensive set of value management maturity models for the three value management domains defined in the Val IT framework 2.0:
• Value governance (VG)
• Portfolio management (PM)
• Investment management (IM)

Gap analysis is critical to establishing which key change steps must be undertaken to achieve the target state. For example, it helps to determine what the cultural, structural, functional and procedural gaps are, as well as whether, how and when a specific gap should be filled. Identifying cultural gaps requires special attention as these will take a great deal of time and continuous reinforcement to maintain after they are changed. Once gaps are categorised, the process of bringing together the business, IT and organisational needs in terms of value management can begin.

| Value Management Quick Assessment | Management is unaware of the need for the practice. | Management is aware and committed to adopt the practice. | Implementation of the practice has begun. | Implementation of the practice is well underway. | The practice is adopted and its achievement monitored. | The practice is embedded in the enterprise's way of working. |
|---|---|---|---|---|---|---|
| **Figure 3—Value Management Self-assessment** | | | | | | |
| | 0 | 1 | 2 | 3 | 4 | 5 |
| IT-enabled investments are managed as a portfolio of investments. | | | | | | |
| IT-enabled investments include the full scope of activities required to achieve business value. | | | | | | |
| IT-enabled investments are managed through their full economic life cycle. | | | | | | |
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| Value delivery practices are continually monitored, evaluated and improved. | | | | | | |

# 5. TAKING ACTION: HOW TO KICK-START THE INITIATIVE

Once the gap analysis has been completed, as described in chapter 4, the results provide the basis for identifying what is needed to evolve from the current to the future state, as described in chapter 3, and establishing the priorities for what needs to be improved. In determining these priorities, the symptoms (pain points or trigger events) identified in chapter 2, the value of the business benefits achievable, the extent of organisational change required, and the enterprise's track record in implementing change with this level of complexity must all be taken into consideration. Once the priorities are established, then the approach needs to be selected for achieving those improvements.

## Select the Best Approach
Each of the following approaches is linked to the symptoms and to the domains and processes defined by the Val IT framework. While differences between enterprises can be vast, experience has shown that there are only a limited number of distinct starting points.

### Approach 1: Build Awareness and Understanding of Value Management
**The challenge**—The need to create value is not adequately appreciated by key decision makers and stakeholders in the enterprise. Value does not just naturally 'emerge' from normal business plans or activities; it has to be actively created. The problem is that, while the concepts of value management have been around for decades, the notion of value creation and preservation through business change in modern enterprises is usually treated as an implied principle and not a conscious and pervasive tenet to guide behaviour.

**The symptoms**—There is no shared understanding of what constitutes value for the enterprise, what level of effort is required to realise it or how to measure value. As a result, opportunities to realise value are missed or fail in execution, and value is often eroded or destroyed.

**The solution**—Establish broad-based awareness of the need for value management; nurture understanding of what is involved in developing this capability; and build a strong internal executive and management commitment to improving and sustaining value creation over time.

**What should change**—Organisational and individual behaviour should change to take a broader enterprise-wide view and a more disciplined, value-driven approach to decision making.

**The benefits**—The benefits include ncreased understanding and acceptance of the need for IT and the other business functions to work together in partnership, supported by clear roles, responsibilities and accountabilities related to value management, leading to increased value realisation from IT-enabled investments.

### Approach 2: Implement or Improve Governance
**The challenge**—Processes, roles and responsibilities, and accountabilities related to realising value from IT-enabled investments need to be clearly defined and accepted.

**The symptoms**—The roles, responsibilities and accountabilities of IT and other business functions are unclear. Business decisions are made by the IT function; IT decisions are made by the business. A 'culture of blame' predominates, with persisting confusion relating to accountability, responsibility and sponsorship.

**The solution**—Establish a governance framework with clearly defined roles, responsibilities and accountabilities. Ensure that it is supported by strong and committed leadership, appropriate processes, organisational structures and information, and a well-aligned reward system.

**What should change**—Organisational and individual attitudes and behaviours should evolve toward a broader, more strategic enterprise perspective. Executives and managers should take a more disciplined, value-driven approach to decision making and accountability.

**The benefits**—More effective and efficient decision making leads to increased trust between the IT function and the rest of the business, and results in increased value realisation from IT-enabled investments.

## Approach 3: Undertake an Inventory of Investments

**The challenge**—Little, if any, visibility exists into the number, scope and cost of current and planned IT-enabled investments or the resources either allocated or needed to support these investments.

**The symptoms**—Overall expenditures on IT across the enterprise are not known, and often come from many different and unco-ordinated budgets, with significant duplication. There is extensive conflict in demand for resources.

**The solution**—Establish portfolios of proposed and active investments, IT services, assets, and other resources, and apply portfolio management disciplines to their management.

**What should change**—Organisational and individual attitudes and behaviours should change to take a broader enterprise view and embrace greater transparency. The appropriate processes and practices must be in place to support this.

**The benefits**—There is an increased understanding of exactly what sums of money are being spent on which investments, in which areas of the business and by whom. There is also better identification of opportunities to increase value through improved allocation of funds, reductions in overall enterprise cost by eliminating redundancies, more effective use of resources, and reduction in risk from better understanding of the 'health' of portfolios.

## Approach 4: Clarify the Value of Individual Investments

**The challenge**—There is no consistently applied process for determining the value of potential or current investments (where value is total life-cycle benefits net of total life-cycle costs adjusted for risk and, in the case of financial value, the time value of money).

**The symptoms**—There is persistent questioning of whether IT investments have generated value. Business cases for IT-enabled investments are non-existent or poorly prepared and are usually considered merely an administrative checklist required to secure funding. Little, if any, pre-investment information exists on costs or analytical rigour defining benefits or value. There are few or no metrics to enable monitoring of what, if any, value is to be or has been created. It is assumed that technology, or the IT function, will 'magically' deliver value.

**The solution**—Establish a process to develop and update comprehensive and consistently prepared business cases for IT-enabled investments, including all of the activities required to create value. The business case should be developed through a top-down approach, starting with a clear articulation of the desired business outcomes and progressing to a description of what actions need to be accomplished by whom. These business cases should be updated and used as an operational tool throughout the complete economic life cycle of the investment.

**What should change**—Organisational and individual attitudes and behaviours should change to put more effort into the planning of investments and the development and regular updating of business cases.

**The benefits**—A more objective assessment of business cases enables 'apples to apples' comparisons across different types of investments. There are better opportunities to weigh individual investments based on their relative value against other investments available and a stronger track record in selecting the best. There is less uncertainty and risk that the value projected will not be realised.

**Approach 5:  Conduct Investment Evaluation, Prioritisation and Selection**

**The challenge**—There is no consistently applied process for objectively evaluating the relative value of all proposed and current IT-enabled investments—especially with respect to prioritisating and selecting those investments with the highest potential value and enabling their ongoing evaluation.

**The symptoms**—Most investment decisions are subjective. Many are often highly political. Once a decision is made to proceed with an investment, it is rarely revisited (usually only when a crisis has occurred). Poorly performing investments are rarely remediated or cancelled early enough to mitigate losses and, if cancelled, are regarded as failures for which someone should be held accountable.

**The solution**—Implement portfolio management disciplines to categorise IT-enabled business investments. Establish and rigorously apply criteria to support consistent and comparable evaluation of the investments throughout their full economic life cycle.

**What should change**—Organisational and individual attitudes and behaviours should change to take a broader enterprise view and embrace greater transparency.

**The benefits**—There is increased opportunity to create value through selecting investments with the greatest potential to deliver value. This is followed by active management of those investments and early cancellation of investments when it is apparent value cannot be realised.

Appendix C provides more detail on the five approaches.

## The Val IT Framework

The eight possible pain points or trigger events have been considered. The five potential approaches have been examined. It is now time to identify applicable processes and practices that the enterprise can adopt to improve value management.

The Val IT framework has assembled and integrated useful guidance and proven processes and practices for the governance, selection and management of IT-enabled investments. Val IT describes the inter-related processes that need to be in place if enterprises are to secure optimal value from their investments. Based on the seven principles outlined in chapter 4, Val IT is organised into the three domains also mentioned in chapter 4:  Value Governance, Portfolio Management and Investment Management. These domains are now described in greater detail, together with a set of processes that can be used to plan a value management improvement initiative.

### The Value Governance Domain

The goal of value governance 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 by:
• Establishing the governance framework for value management, integrated with overall enterprise governance
• Providing strategic direction for the investment decisions
• Defining the characteristics of portfolios required to support new investments, resulting IT services, assets and other resources
• Improving value management on a continual basis, based on lessons learned

The following processes are included in the Value Governance (VG) domain:
• VG1 *Establish informed and committed leadership*
• VG2 *Define and implement processes*
• VG3 *Define portfolio characteristics*
• VG4 *Align and integrate value management with enterprise financial planning*
• VG5 *Establish effective governance monitoring*
• VG6 *Continuously improve value management practices*

**The Portfolio Management Domain**
The goal of portfolio management, within the context of the Val IT framework, is to ensure that an enterprise secures optimal value across its portfolio of IT-enabled investments by:
• Establishing and managing resource profiles
• Defining investment thresholds
• Evaluating, prioritising, and selecting, deferring, or rejecting new investments
• Managing and optimising the overall investment portfolio
• Monitoring and reporting on portfolio performance

The following processes are included in the Portfolio Management (PM) domain:
• PM1 *Establish strategic direction and target investment mix*
• PM2 *Determine the availability and sources of funds*
• PM3 *Manage the availability of human resources*
• PM4 *Evaluate and select programmes to fund*
• PM5 *Monitor and report on investment portfolio performance*
• PM6 *Optimise investment portfolio performance*

**The Investment Management Domain**
The goal of investment management is to ensure that the enterprise's individual IT-enabled investments contribute to optimal value by:
• Identifying business requirements
• Developing a clear understanding of candidate investment programmes
• Analysing alternative approaches to implementing the programmes
• Defining each programme, and documenting and maintaining a detailed business case for it, including the benefits' details, throughout the full economic life cycle of the investment
• Assigning clear accountability and ownership, including those for benefits realisation
• Managing each programme through its full economic life cycle, including retirement
• Monitoring and reporting on each programme's performance

The following processes are included in the Investment Management (IM) domain:
• IM1 *Develop and evaluate the initial programme concept business case*
• IM2 *Understand the candidate programme and implementation options*
• IM3 *Develop the programme plan*
• IM4 *Develop full life-cycle costs and benefits*
• IM5 *Develop the detailed candidate programme business case*
• IM6 *Launch and manage the programme*
• IM7 *Update operational IT portfolios*
• IM8 *Update the business case*
• IM9 *Monitor and report on the programme*
• IM10 *Retire the programme*

Descriptions for each of the processes are provided in appendix B. For further details on the Val IT framework, reference should be made to the actual framework document, available from ITGI[15].

It is now necessary to begin to pull all of these elements together. **Figure 4** provides a visual representation of the linkage amongst the pain points or trigger events, the approaches described previously, and the relevant processes in Val IT. Note that where multiple approaches are identified for a pain point or trigger event, one or more is identified as being primary, i.e., having the greatest impact and therefore needing greater attention, and others may be identified as supporting, i.e., contributing, but to a lesser degree than the primary approach(es). **Figure 4** helps enterprises identify specific areas of their operation (represented by the Val IT processes) where deficiencies might represent the root causes of their most persistent challenges. At this stage, readers might wish to examine the more detailed descriptions (see appendix B) of those Val IT processes and compare the descriptions with what actually happens in their enterprise today.

| | | 1. Build awareness and understanding of value management. | 2. Implement or improve governance. | 3. Undertake an inventory of investments. | 4. Clarify the value of individual investments. | 5. Conduct investment evaluation, prioritisation and selection. | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **No.** | **Pain Points** | | | | | | **Primary domain** | **VG** | **PM** | **IM** |
| 1 | Problems in delivering technical capabilities | See CobiT (AI1-7, DS1-13) | | | | | | | | |
| 2 | Limited or no understanding of IT expenditures | | | P | | | **PM** | VG1, VG2, VG3 | PM1, PM2, PM3, PM4 | IM1, IM2, IM3, IM4, IM5 |
| 3 | Business abdication of decision making to the IT function | P | P | S | | | **VG** | VG1, VG2, VG3, VG4, VG5, VG6 | PM1, PM2, PM3 | |
| 4 | Communication gaps between the IT function and the business | S | P | | | | **VG** | VG1, VG2, VG3, VG4, VG5, VG6 | PM3 | |
| 5 | Questioning of the value of IT | S | | | P | | **VG, IM** | VG1 | | IM3, IM4, IM5, IM6, IM8, IM9, IM10 |
| 6 | Major investment failure | | | | P | | **IM** | | | IM3, IM4, IM5, IM6, IM8, IM9, IM10 |
| | **Trigger events** | | | | | | | | | |
| 7 | Changing in funding | | | P | | P | **PM** | VG1, VG2, VG3 | PM1, PM2, PM3, PM4 | IM1, IM2, IM3, IM4, IM5 |
| 8 | Shift in the market or the economy | | P | P | | S | **VG, PM** | VG1, VG2, VG3, VG4, VG5, VG6 | PM1, PM2, PM3, PM4 | IM1, IM2, IM3, IM4, IM5 |

**Figure 4—Approach to Addressing Pain Points**

P=Primary approach, S=Supporting approach.

The following is a summary of the Val IT processes that should be used in addressing the various pain points or trigger events:

1. Problems in delivering technical capabilities:
   • Applicable approach:
     – Reference should be made to the COBIT framework[16]
   • Primary domains:
     – COBIT Acquire and Implement (AI)
     – COBIT Deliver and Support (DS)
   • Relevant process:
     – COBIT AI1 to 7
     – COBIT DS1 to 13

2. Limited or no understanding of IT expenditures:
   • Applicable approaches:
     – Undertake an inventory of investments
   • Primary domain:
     – Portfolio Management (PM)
   • Relevant processes:
     – VG1 *Establish informed and committed leadership*
     – VG2 *Define and implement processes*
     – VG3 *Define portfolio characteristics*
     – PM1 *Establish strategic direction and target investment mix*
     – PM2 *Determine the availability and sources of funds*
     – PM3 *Manage the availability of human resources*
     – PM4 *Evaluate and select programmes to fund*
     – IM1 *Develop and evaluate the initial programme concept business case*
     – IM2 *Understand the candidate programme and implementation options*
     – IM3 *Develop the programme plan*
     – IM4 *Develop full life-cycle costs and benefits*
     – IM5 *Develop the detailed candidate programme business case*

3. Business abdication of decision making to IT:
   • Applicable approaches:
     – Build awareness and understanding of value management
     – Implement or improve governance
     – Undertake an inventory of investments
   • Primary domain:
     – Value Governance (VG)
   • Relevant processes:
     – VG1 *Establish informed and committed leadership*
     – VG2 *Define and implement processes*
     – VG3 *Define portfolio characteristics*
     – VG4 *Align and integrate value management with enterprise financial planning*
     – VG5 *Establish effective governance monitoring*
     – VG6 *Continuously improve value management practices*
     – PM1 *Establish strategic direction and target investment mix*

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

    – PM2 *Determine the availability and sources of funds*
    – PM3 *Manage the availability of human resources*

4. Communication gaps between the IT function and the business:
    • Applicable approaches:
      – Build awareness and understanding of value management
      – Implement or improve governance
    • Primary domain:
      – Value Governance (VG)
    • Relevant processes:
      – VG1 *Establish informed and committed leadership*
      – VG2 *Define and implement processes*
      – VG3 *Define portfolio characteristics*
      – VG4 *Align and integrate value management with enterprise financial planning*
      – VG5 *Establish effective governance monitoring*
      – VG6 *Continuously improve value management practices*
      – PM3 *Manage the availability of human resources*

5. Questioning of the value of IT:
    • Applicable approaches:
      – Build awareness and understanding of value management
      – Clarify the value of individual investments
    • Primary domains:
      – Value Governance (VG)
      – Investment Management (IM)
    • Relevant processes:
      – VG1 *Establish informed and committed leadership*
      – IM3 *Develop the programme plan*
      – IM4 *Develop full life-cycle costs and benefits*
      – IM5 *Develop the detailed candidate programme business case*
      – IM6 *Launch and manage the programme*
      – IM8 *Update the business case*
      – IM9 *Monitor and report on the programme*
      – IM10 *Retire the programme*

6. Major investment failure:
    • Applicable approach:
      – Clarify the value of individual investments
    • Primary domain:
      – Investment Management (IM)
    • Relevant processes:
      – IM3 *Develop the programme plan*
      – IM4 *Develop full life-cycle costs and benefits*
      – IM5 *Develop the detailed candidate programme business case*
      – IM6 *Launch and manage the programme*
      – IM8 *Update the business case*
      – IM9 *Monitor and report on the programme*
      – IM10 *Retire the programme*

7. Change in funding:
- Applicable approaches:
  - Undertake an inventory of investments
  - Conduct investment evaluation, prioritisation, and selection
- Primary domain:
  - Portfolio Management (PM)
- Relevant processes:
  - VG1 *Establish informed and committed leadership*
  - VG2 *Define and implement processes*
  - VG3 *Define portfolio characteristics*
  - PM1 *Establish strategic direction and target investment mix*
  - PM2 *Determine the availability and sources of funds*
  - PM3 *Manage the availability of human resources*
  - PM4 *Evaluate and select programmes to fund*
  - IM1 *Develop and evaluate the initial programme concept business case*
  - IM2 *Understand the candidate programme and implementation options*
  - IM3 *Develop the programme plan*
  - IM4 *Develop full life-cycle costs and benefits*
  - IM5 *Develop the detailed candidate programme business case*

8. Shift in the market or the economy:
- Applicable approaches:
  - Implement or improve governance
  - Undertake an inventory of investments
  - Conduct investment evaluation, prioritisation, and selection
- Primary domains:
  - Value Governance (VG)
  - Portfolio Management (PM)
- Relevant processes:
  - VG1 *Establish informed and committed leadership*
  - VG2 *Define and implement processes*
  - VG3 *Define portfolio characteristics*
  - VG4 *Align and integrate value management with enterprise financial planning*
  - VG5 *Establish effective governance monitoring*
  - VG6 *Continuously improve value management practices*
  - PM1 *Establish strategic direction and target investment mix*
  - PM2 *Determine the availability and sources of funds*
  - PM3 *Manage the availability of human resources*
  - PM4 *Evaluate and select programmes to fund*
  - IM1 *Develop and evaluate the initial programme concept business case*
  - IM2 *Understand the candidate programme and implementation options*
  - IM3 *Develop the programme plan*
  - IM4 *Develop full life-cycle costs and benefits*
  - IM5 *Develop the detailed candidate programme business case*

# 6. MANAGING AND SUSTAINING VALUE OVER TIME

At its core, any initiative to implement or improve value management is about change. Not that change itself is a new idea. Over the past 15 years, programmes to improve corporate performance through change have become almost commonplace. But success in addressing change typically eludes enterprises for one principal reason: most fail to persuade groups and individuals to change the way they think and behave.

## Help the Enterprise Embrace a Culture of Change

The capacity for change in an enterprise can be dramatically increased by engaging a well-defined and disciplined change management strategy. Such a strategy depends upon a number of critical success factors. One is strong and visible executive championship. Another is a vision for value management that is realistic and helps ensure that the journey to its realisation can be completed. Yet another is adequate resources. After all, change almost always requires an investment of 'time and treasure'—in the form of expertise, funding and infrastructure, for example—over and above the normal costs of conducting ongoing business operations. Also crucial is an approach flexible enough to address the opportunities and risks associated with a wide range of circumstances.

At a minimum, the change management strategy should address the following four dimensions[17]:
- **Linkage**—This critical element ensures that people, processes and technology are appropriately integrated to contribute to the desired outcome.
- **Reach**—This critical element ensures clear identification of exactly who will be impacted—and to what extent.
- **People**—This critical element ensures that the role people play in enabling change is acknowledged and leveraged.
- **Time**—This critical element ensures that time—not just in terms of when mid-term and end-state objectives are met but also how time-sensitive dependencies across deliverables are addressed—is factored in at every level and stage of planning.

To help the enterprise embrace a 'culture of change', well-proven tools such as the Results Chain™ technique[18] described in appendix C are available. (Appendix C also contains examples of Results Chains™ for each of the five approaches described in chapter 5.)

## Pay Particular Attention to Communication

Another critical element of any change management strategy is communication. To be effective, a change-related communications plan should address the following four elements defined by William Bridges in his book, *Managing Transitions*[19]:
- **Purpose**—Answer the questions: Why are we doing this and why do we need to change? People resist change even more when they do not understand why it is so imperative.
- **Picture**—Answer the question: What will it look like when we get there? Consider replacing over-used marketing slogans such as 'We will be the number one widget maker in the world' with frank, vivid and real descriptions of what it will be like to collaborate, perform and succeed in the future work environment.
- **Plan**—Answer the questions: How will we get there? Does management really know what it is doing? Is there a complete and comprehensive plan to manage all this change? People need to see the bigger picture.
- **Part**—Answer the question: What is my part in this, both in getting there and after we arrive? Bring it home for every individual.

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[17] Adapted from *The Information Paradox—Realizing the Business Benefits of Information Technology*, John Thorp jointly with Fujitsu, first published by McGraw-Hill in 1998 and revised in 2003, Canada
[18] Results Chain™ is a proprietary technique of Fujitsu Consulting, and the term and descriptions of the technique are provided here with permission of Fujitsu Consulting.
[19] Bridges, W.; *Managing Transitions: Making the Most of Change*, Addison-Wesley, USA, 1991

While all four of these elements are important, the last one—What is my part?—is typically the most challenging. In addressing this, ensure careful attention to the alignment of each individual's goals with those of the enterprise. Make sure that not only is the question 'What is in it for me?' answered, but also, and perhaps even more important, take the time to understand and acknowledge what benefits, rights, privileges or freedoms key stakeholder groups believe they are losing. Resistance to change, whether calculated or unconscious, is a common challenge when working with individuals and groups. Naturally, people question why change is necessary and wonder whether it will hurt them (it is 'loss' that most people fear most of all from change) or how they can gain an advantage from it. Be prepared to address this.

Beware of disparaging the past. It is one of the easiest ways to provoke resistance. This tactic makes people defensive and compels many to shift blame elsewhere or implicate others. Criticism of past efforts, whether implied or explicit, rarely serves a useful purpose. Instead, it is far more likely to undermine an individual's pride, confidence and self-respect. Focus instead on the objectives and challenges ahead, and the rewards that targeted changes are expected to deliver.

Also, take pains not to overlook the reward system. Provide incentives for change. Define how achievements will be measured and link these objectives to outcomes within the scope of each individual's responsibility and reach.

## Make Value Management Part of the Corporate Culture

Work to establish value management as part of the corporate culture, aligned with the enterprise's overall governance framework and management practices. The characteristics of such an approach are:

• A clearly manifested will and intent on the part of the enterprise, its executives and its people to continuously improve the focus of investment management practices on value
• Strong, visible leadership and a clear mandate from the highest levels of the enterprise to provide the sponsorship and resources necessary to 'see the programme through' properly
• A heightened sense of awareness at the highest levels of the enterprise to uphold and promote good corporate governance principles and practices
• Appropriate structures, mechanisms, processes and procedures to uphold and support the adoption of value management for both strategic and tactical investment initiatives, which include, for example, comprehensive and complete business cases, portfolio and programme management, and benefit realisation
• Clearly defined and enforced accountabilities, up and down the chain of command, supporting value management practices
• The use of business performance-oriented metrics and measurement as a basis for decision making and planning—a forward-looking outlook and bias toward value creation and sustainability

## Accelerate the Transition from 'Knowing' to 'Doing'

One of the best ways to embed and sustain a culture of change is to place an emphasis on action—on engagement and involvement at every level of the enterprise. Amongst the most important results emerging from a landmark four-year study published by the Harvard Business School Press[20], is that knowledge is much more likely to be acquired from 'learning by doing' rather than from 'learning by reading' or 'learning by listening'. This strongly suggests that an iterative-step journey toward value management will yield, for each individual, a discrete set of opportunities for learning that, taken together across an organisation of people, will form the stepping stones toward cultural transformation and the achievement of real and sustainable change.

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[20] Pfeffer, J.; R. Sutton; *The Knowing-Doing Gap: How Smart Companies Turn Knowledge Into Action*, Harvard Business School Press, 2000, USA

# APPENDIX A—VALUE MANAGEMENT MATURITY MODELS

A maturity model for value management can be applied to identify the level at which an enterprise's practices lie and to set target levels for achievement. To that end, the following models outline the characteristics along a five-point scale (0 being lowest and 5 being highest) for the three domains in value management: Value Governance, Portfolio Management and Investment Management. (Note that the maturity model for the VG domain could also be considered an overall maturity model for value management.)

## 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

The 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.

More detailed maturity models, with specific attributes to which the characteristics apply, can be found in the core publication in the Val IT series, *Enterprise Value:  Governance of IT Investments, The Val IT Framework 2.0*. These attributes are:
• Awareness and communication
• Responsibility and accountability
• Goal setting and measurement
• Policies, standards and procedures
• Skills and expertise
• Tools and automation

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# APPENDIX B—A DETAILED DESCRIPTION OF THE VAL IT DOMAINS AND PROCESSES

## 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-ordinating 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, assets and resources 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.

# APPENDIX C—STARTING THE VALUE MANAGEMENT JOURNEY: APPLYING RESULTS CHAIN™ THINKING TO THE FIVE APPROACHES TO GETTING STARTED

This appendix provides further practical detail as to how to start the value management journey, focusing on the five approaches discussed in chapter 5.

Despite the best of intentions, getting started in value management can be a hazardous journey if some of the basic pre-requisites to such an undertaking are not covered. At the outset, it is good practice to map the landscape in the form of a road map diagram that cognitively models what needs to take place—the different inter-related initiatives/projects, how they are linked, and the pre-requisite elements and assumptions—well before actually starting on any programme of activity. Doing so provides clarity on the journey ahead, and helps in gaining the vital buy-in and the necessary commitments and resources, especially financial, to embark on the actual journey.

To depict that road map, the Results Chain™ technique illustrates graphically, for each of the five approaches, the:
• Scope of the initiatives (including those identified as key management practices from the Val IT framework) recommended to be undertaken to introduce value management
• Contribution (or linkage) of those specific initiatives to the change and then 'end' outcomes that address the pain points discussed in chapter 2

## An Overview of the Results Chain™ Technique

### An Introduction
The Results Chain™ technique is used globally by many organisations to graphically represent as a road map the shared understanding of the change journey for an investment. This section provides an overview to assist the reader to understand and use the illustrative results chains for each of the five approaches. Additional information on the Results Chain™ technique is contained in *The Information Paradox*, by John Thorp and Fujitsu Consulting.

### Fundamentals
Fujitsu Consulting defines a Results Chain™ as 'a comprehensive reasoning whereby outcomes can be associated with one or many initiatives that specify what is required to realise these outcomes in a given organisational context' and the 'Results Chain™ Diagram is the graphical representation of a Results Chain™: an integrated network of initiatives, outcomes, contributions and assumptions'[21].

The Results Chain™ technique is based on the idea that a line of reasoning can provide a basis for associating a range of outcomes with investments. The Results Chain™ diagram or model is the representation of a shared understanding of how outcomes will be achieved in a particular context—an understanding shared by those responsible for achieving the outcomes. In this sense, a Results Chain™ is a cognitive map, or 'mind map', as shown in **figure 5**.

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[21] Fujitsu Macroscope™ used with the permission of Fuijitsu Consulting.
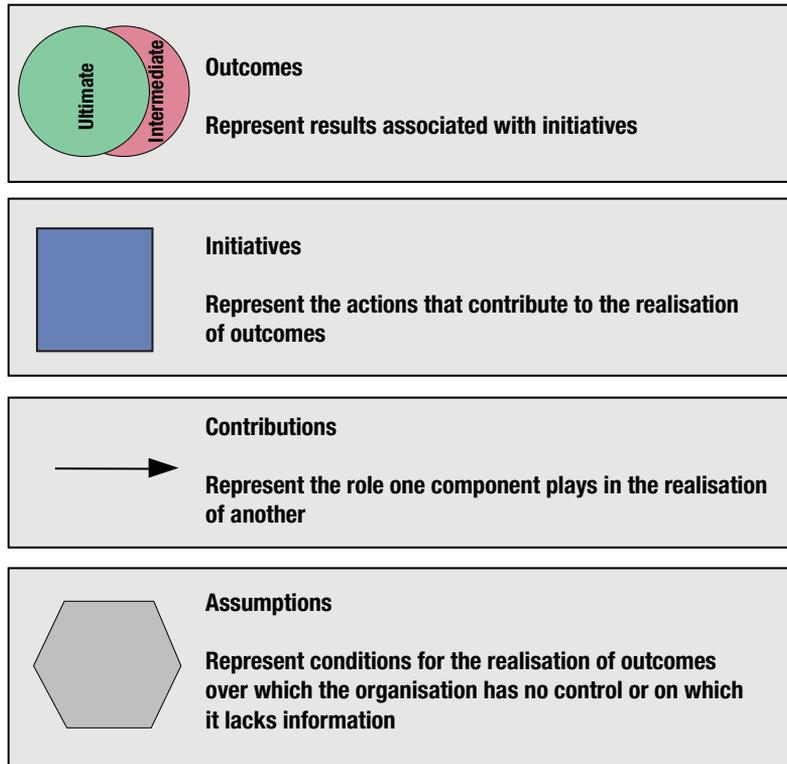
Figure 5—Results Chain™ Map
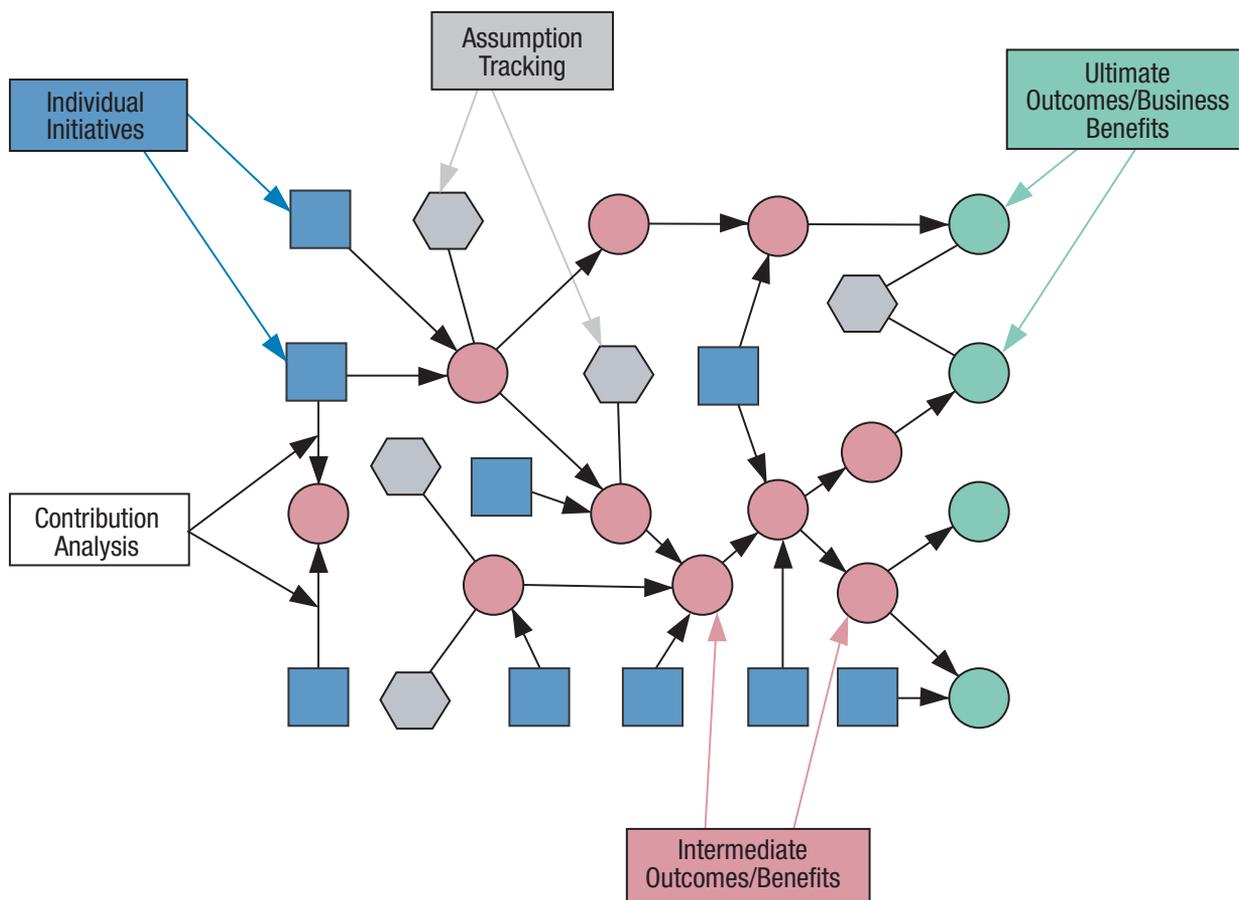
## Results Chain™ Components

A Results Chain™ is composed of only four types of components: outcomes, initiatives, contributions and assumptions, as shown in **figure 6**.

1. **Outcomes**—The results sought, including either intermediate outcomes in the chain (outcomes or intermediate benefits that are necessary but not sufficient to achieve the business benefits) or ultimate outcomes (the business benefits to be harvested). An outcome is represented by a circle.
2. **Initiatives**—The actions that contribute to one or more outcomes. An initiative is a project—where money is spent. An initiative is represented by a square.
3. **Contributions**—The roles played by elements of the Results Chain™, either initiatives or intermediate outcomes, in contributing to other initiatives or outcomes. A contribution is represented by an arrow between initiatives and outcomes.
4. **Assumptions**—An indication of uncertainty about a component in a Results Chain™. An assumption is represented by a hexagon. Assumptions represent risks that must be managed or mitigated, e.g., by undertaking another initiative.

## Figure 6—Results Chain™ Component

**Outcomes**

Represent results associated with initiatives

**Initiatives**

Represent the actions that contribute to the realisation of outcomes

**Contributions**

Represent the role one component plays in the realisation of another

**Assumptions**

Represent conditions for the realisation of outcomes over which the organisation has no control or on which it lacks information

**Approach 1:  Build Awareness and Understanding of Value Management**

1. **Purpose**—The purpose of encouraging business and IT executives to raise their awareness and understanding of value management is to obtain acceptance of their responsibility for value governance. This should lead to executives taking action to provide:
   • Commitment to the establishment and sustainment of value management
   • Funding and resources to make value management successfully established and sustainable

   With that understanding and acceptance, pain points 3, 4 and 5 can be addressed.
2. **Changes needed**—Change will be necessary as business and IT executives adopt new paradigms and behaviour regarding IT and governance, specifically:
   • Understanding the role that business executives need to play in the business governance of IT
   • Understanding the role that IT plays in enabling business change
   • Acceptance of the focus on business outcomes and value (not just delivery and cost)
3. **Actions needed**—Actions (and relevant references to Val IT framework processes) are to:
   • Undertake a communications programme with executives regarding value management (VG1)
   • Identify the sponsors and champions to drive value management (VG1)
   • Define the vision for the enterprise to introduce value management (VG1)

4. **Illustrative Results Chain™ for this approach**—**Figure 7** portrays how the previously mentioned actions address awareness, and understanding of value management will bring about commitment and acceptance by executives, and thus the buy-in and funding to enable the successful introduction of value management and its sustainment.



Figure 7—Approach 1:  Build Awareness and Understanding of Value Management
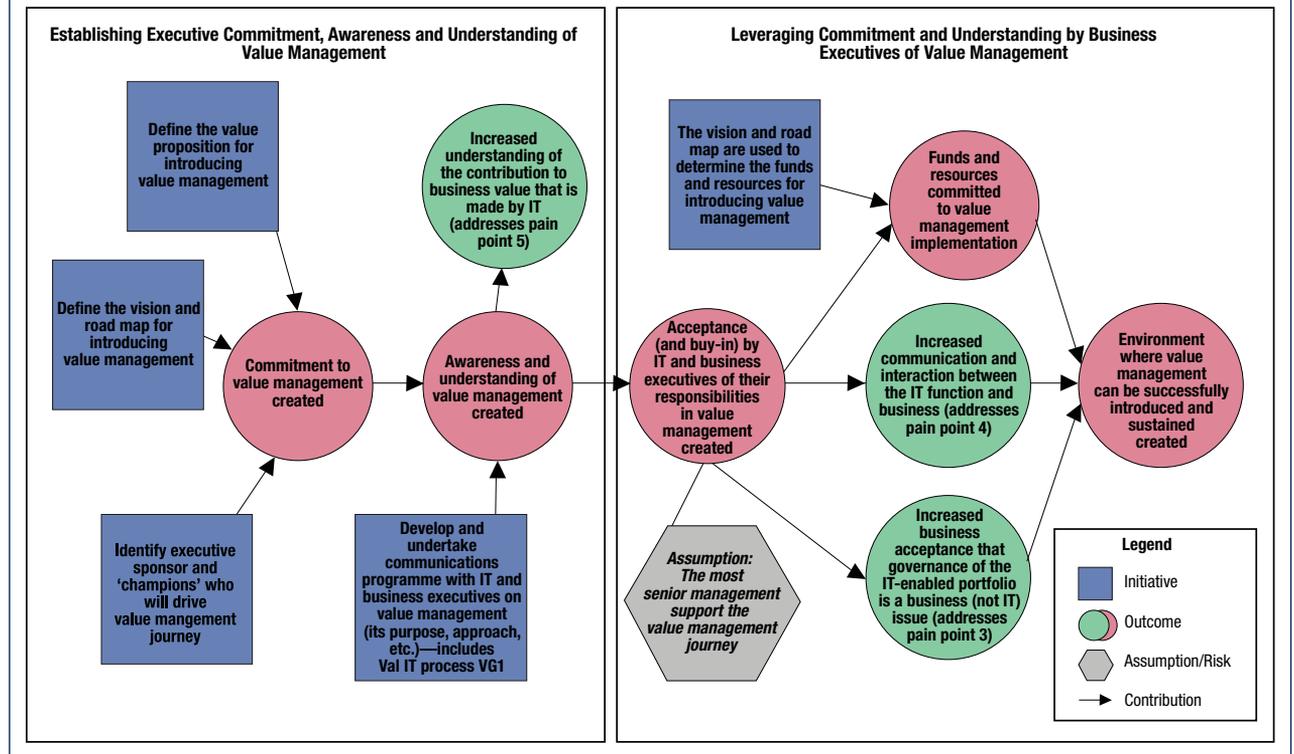
## Approach 2:  Implement or Improve Value Governance
1. **Purpose**—The purpose of setting up or improving value governance is to help executives make better informed, and thus more effective, portfolio investment decisions. With better value governance, pain points 3, 4 and 8 can be addressed.
2. **Changes needed**—Change will be necessary for business and IT executives to adopt new paradigms and behaviours about IT and governance, specifically:
   • Engagement with and acceptance by executives of their responsibility for establishing and sustaining value governance
   • Understanding the key role that business executives need to play in the business governance of IT
   • Identifying the need for business and IT to work together seamlessly
3. **Actions needed**—Actions (and relevant references to Val IT framework processes) are to:
   • Establish informed and committed leadership (VG1)
   • Define and implement a value management framework (VG2, VG3, VG5, VG6)
   • Align value management with enterprise financial planning (VG4)
4. **Illustrative Results Chain™ for this approach**—**Figure 8** portrays how the previously mentioned actions to implement/improve value governance lead to more effective governance and therefore better quality investment decisions.

Figure 8—Approach 2:  Implement or Improve Governance
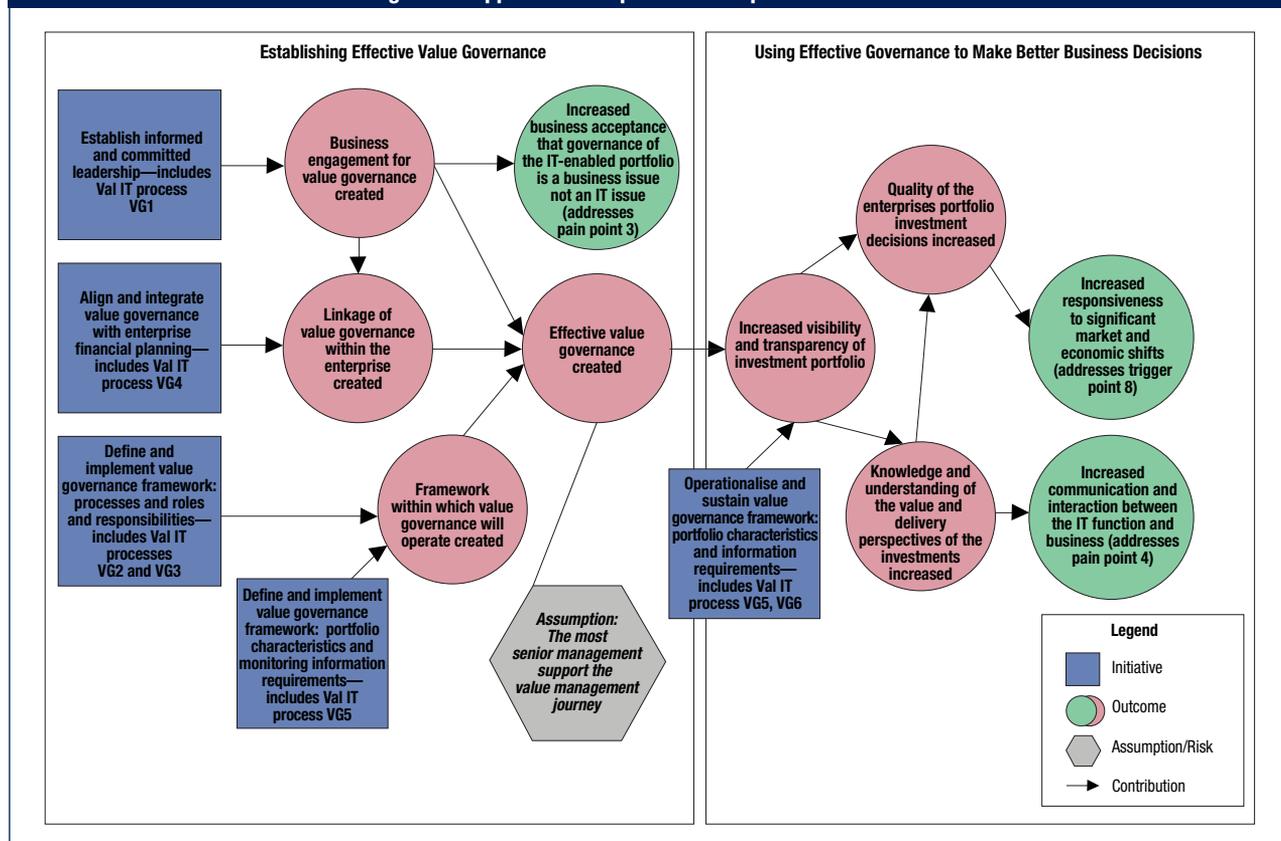


**Approaches 3 and 5:  Undertake an Inventory of Investments; Conduct Investment Evaluation, Prioritisation and Selection**

1. **Purpose**—To understand from a value perspective what comprises the portfolio of investments (approach 3), and then to prioritise and make recommendations for selection (approach 5). These approaches can be undertaken separately, though logically:  to prioritise, it is necessary to undertake an inventory. With that understanding and a prioritised list, pain points 2, 3, 7 and 8 can be addressed.

2. **Changes needed**—Change will be necessary for business and IT executives to adopt new paradigms and behaviours about prioritisation and selection of investments, specifically:
   • Acceptance of an enterprise view of the portfolio of investments
   • Acceptance of the rigour around value information, and the concept of transparency of the portfolio

3. **Actions needed**—Actions (and relevant references to Val IT framework processes) are to:
   • Establish the value governance framework (VG1, VG2, VG3)
   • Establish the portfolio management framework  (PM1, PM2, PM3)
   • Undertake portfolio scoring and assessment (IM1, IM2, IM3, IM4, IM5)
   • Evaluate, prioritise and select investments (PM4)

4. **Illustrative Results Chain™ for these approaches**—**Figure 9** portrays how the previously mentioned actions to undertake an inventory and to conduct prioritisation and selection result in creating a recommended list of investments, a process that then enables the enterprise to select objectively the investments with the highest potential to create value.

**Figure 9—Approaches 3 and 5: Undertake an Inventory of Investments; Conduct Investment Evaluation, Prioritisation and Selection**
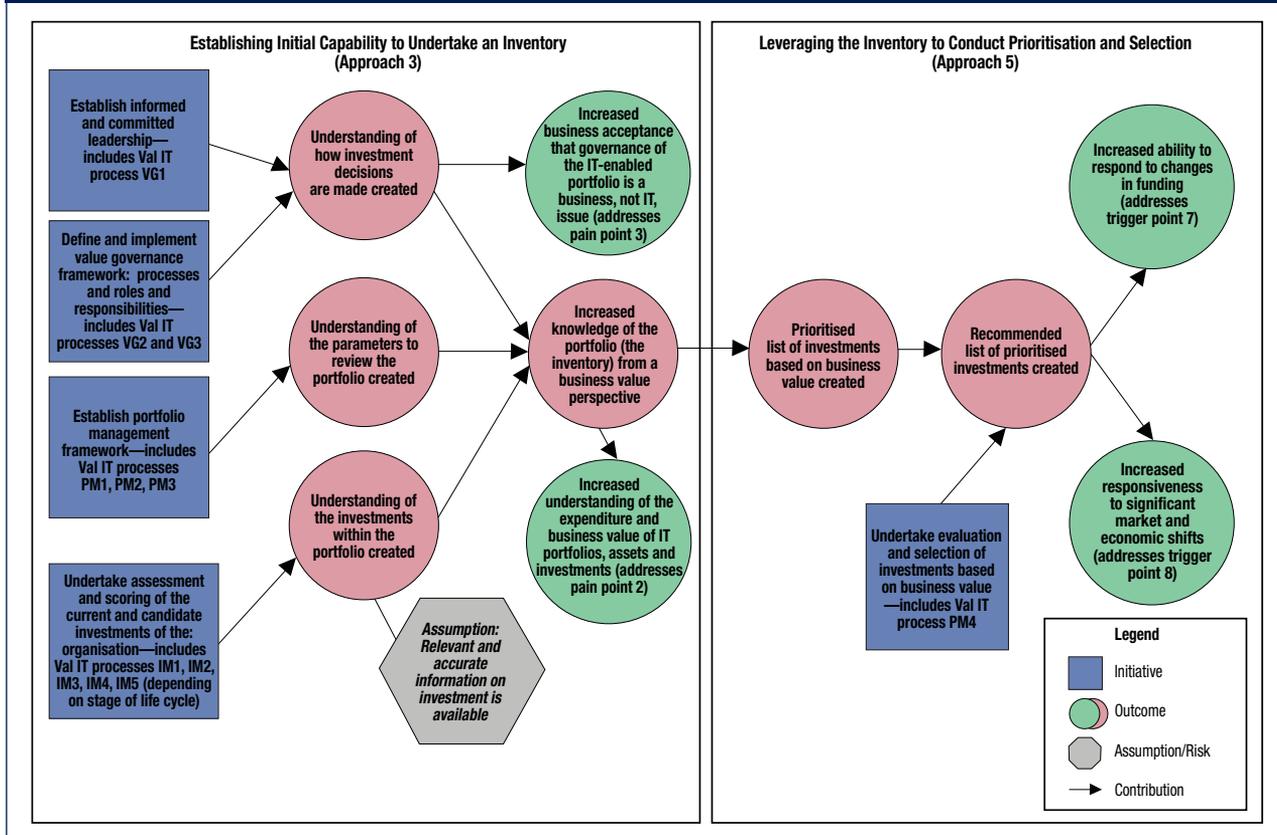


## Approach 4: Clarify the Value of Individual Investments

1. **Purpose**—To establish increased understanding by the executive of the business value anticipated from individual investments. Better understanding will bring opportunities to sense and respond to deviations in delivery or value that may avoid investment failure. With that understanding, pain points 5 and 6 can be addressed.
2. **Changes needed**—Change will be necessary for business and IT executives to adopt new paradigms and behaviours about IT-enabled investments, specifically:
   • Recognition of the need to focus on and understand the business value of investments
   • Acceptance of the rigour of maintaining business cases during the full economic life cycle of each investment
3. **Actions needed**—Actions (and relevant references to Val IT framework processes) are to:
   • Understand the benefits, costs, plans, etc., for candidate programmes (IM3, IM4, IM5)
   • Understand the status of benefits from and the business case for 'in flight' programmes (IM5, IM6, IM8, IM9, IM10)

4. **Illustrative Results Chain™ for this approach**—**Figure 10** portrays how the increased knowledge and understanding of the business value of individual investments leads to decreased risk and the opportunity to take timely corrective action, which reduces risk of investment failure.



Figure 10—Approach 4: Clarify the Value of Individual Investments
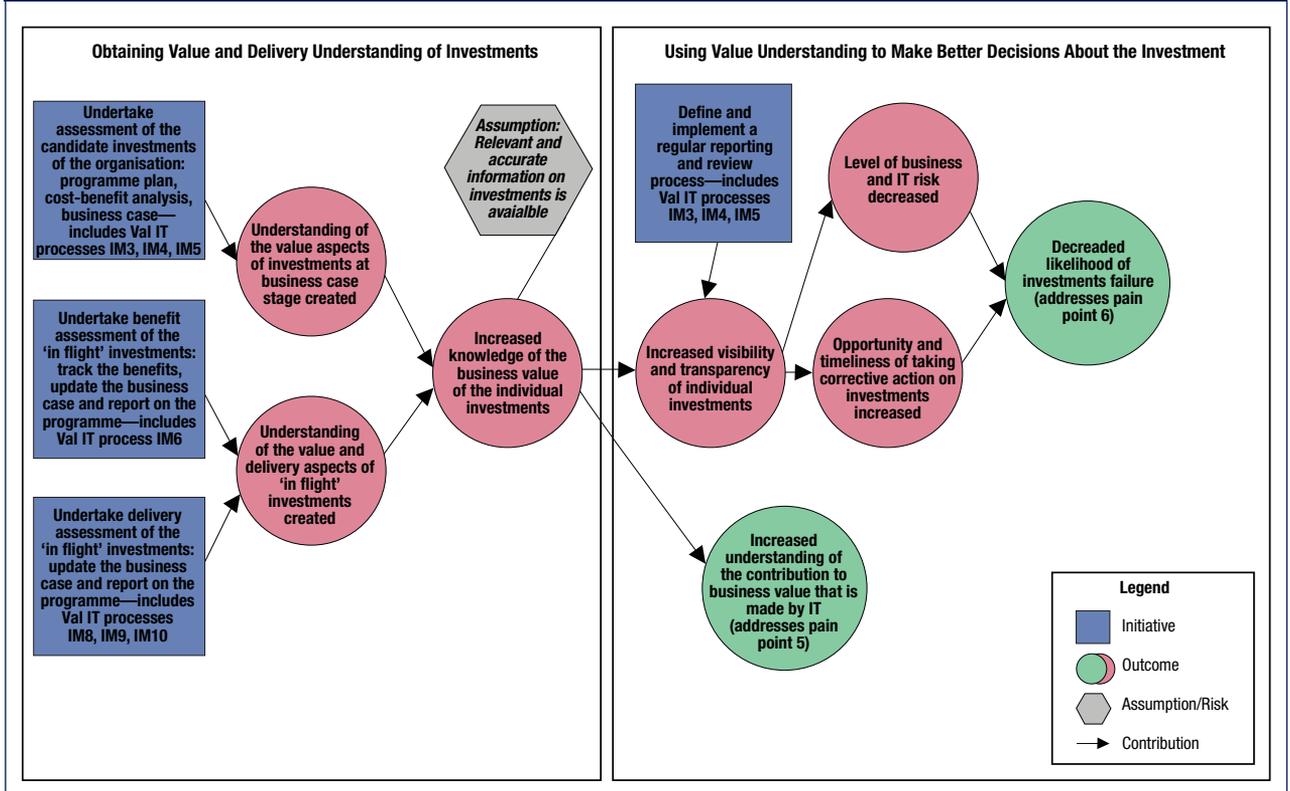
# OTHER PUBLICATIONS

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• *Board Briefing on IT Governance, 2ⁿᵈ Edition*, 2003
• *IT Governance Global Status Report 2008*

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• *Enterprise Value:  Governance of IT Investments, The Val IT Framework 2.0 Extract*, 2008
• *Enterprise Value:  Governance of IT Investments, The Business Case*, 2006
• *Enterprise Value:  Governance of IT Investments, The ING Case Study*, 2006

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