

VAL-IT INVESTMENT IN ICT ENABLE CHANGE - EMERGING STRATEGY FOR OPTIMIZING ICT BUSINESS VALUE

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Abstract: Investment in ICT is a risky decision that may erode the capital instead of adding value to shareholders wealth. Val-IT is an emerging IT governance framework that includes generally accepted guiding principles help management ensure that organizations realize optimal value from IT enabled business investments at an affordable cost with a known and acceptable level of risk. To optimize the value of ICT investment, the Val-IT principles are applied to management processes, including value governance, portfolio management and investment management. It also provides benchmarking capability and allows enterprises to exchange experiences on best practices for value management. This paper discuss the burning issue of IT business value and opportunities of application of Val-IT framework in Banking and Financial Services Sector Organizations in Sri Lanka.

1.0 INTRODUCTION

Information Technology is the defining tool of the emerging information economy. Information and Communication Technologies (ICT) promises to create new sources of value and redefine industry boundaries. But it also threatens to absorb millions of scarce investment dollars for ill-conceived ICT projects. Evaluating investments in corporate information systems isn't easy. The basic output of these systems is Information, but information is not valuable for its own sake. Information creates business value only if it leads decision-makers to take actions they would not otherwise have taken.

The creation of Business Value (BV) of ICT investment has been debated for several decades among the researchers. Empirically, the contribution of ICT to the firm performance has yielded contradictory and inconclusive findings, thus fueling the debate on the existence of Information paradox. The rapid pace and scope of IT-enabled change continues to create dilemmas for management. More and more information is being delivered by more and more technology, to the point where many people now feel that they are drowning in information or being forced to work with the wrong types of information. On the other hand an increasing amount of money is being spent on new technologies that will deliver even more information as time goes on. Yet, neither the information nor the technology dollars are being consistently translated into business value creating an Information Paradox, a phenomenon that has been drawing attention since the late 1980s.(The Information Paradox, Thorp, J.; Fujitsu, 2003)

There is a growing body of evidence that new and improved technology has not consistently produced business results over a period of several decades. The reality of Information Technology has not lived up to its the promises. The BV of ICT Investment is not transparent always even in the world class organizations in the context of diverse factors that influence in ICT value creation The success stories have revealed that many other complementary processes and practices need to be implemented in order to create and optimize the ICT business value. Realizing the issue and after extensive research study, ITGI (Information Technology Governance Institute) has developed the Val-IT framework and management practices that are empirically validated with transparent risks and benefits. This paper discusses the emerging Val-IT framework and practices of ICT business value management which can be successfully implemented in ICT intensive organizations especially in the Banking and Financial Service Sector Organizations in Sri Lanka.

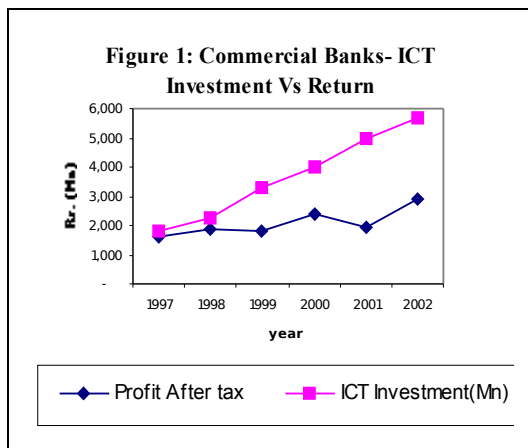
2.0 SRI LANKAN BANKING SECTOR EXPERIENCE

The ICT Investment is the single largest expenditure in most of the banking sector organizations in Sri Lanka and however the sector hasn't leverage the benefits as promised. The recent research study carried out in Banking and Financial Service sector organizations in Sri Lanka (T J Pathirage, PIM, 2005) has revealed that there is an increasing gap between ICT investment and the level of Performance in the industry (Figure 1). This is mainly due to the IT governance issues and fact that organizations have not recognized that they have invested in IT-enabled change with every ICT investment decision.

This indicates that the banking services industry does not generate adequate business value from their ICT investment (Timing impact on the return is far-reaching objective of the industry). A according the recent research findings some of the burning governance issues that had effected the ICT business value in banking and financial service sector organizations in Sri Lanka are;

- IT Governance issues at strategic management level.
- ICT /Business strategy alignment issues.

- Disregarding the risks that threaten the success of the IT projects.
- Assuming technology is the answer to existing problems without fully understanding what performance value it adds.



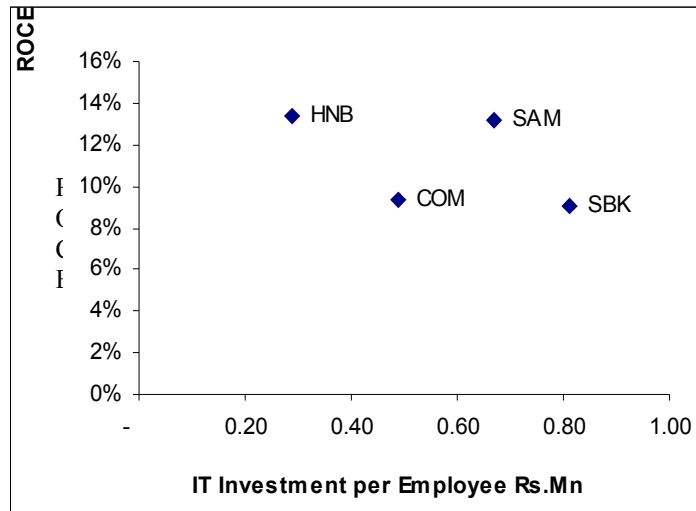
Source: MBA Research PIM,, 2005

- Failure to ensure joint ownership and accountability for IT project results between line managers and IT professionals.
- Making IT investment decisions piecemeal rather than within the context of the whole organization.
- Failing to recognize the central importance and challenge of investing in IT infrastructure.
- Failing to recognize the critical need for top class IT project management skills, systems development methods, and project-level controls.
- Failing to regularly measure actual cost and benefit results, compare against estimates, and act accordingly.
- Believing that IT problems are primarily attributable to technical deficiencies rather than poor management, bad processes, and managerial relationship breakdowns.
- Issues of service levels of ICT Departments.
- Poor quality assurance and change management.
- IT projects not meeting the desired objectives.

In Year 2006, both HNB (Hatton National Bank) and SAM (Sampath Bank) are in the top of the list in earning higher ROCE at 13.3% on ICT investment and however HNB invested only 0.25 where and SAM invested 0.65 per employee to earn the same return. On the lower side, although COM and SBK has earned almost identical ROCE, COM (Commercial Bank) earn 10% ROCE with lesser (0.45) ICT investment while SBK (Seylan Bank) has invested extensively higher amount (0.80) per employee to earn similar ROCE (**refer figure 2**). This demonstrates that competitive banks have shown

Different level of efficiencies in creating ICT business value in terms of returns.

Figure 2: ICT Investment Vs ROCE



Source: Annual Reports of Banks

3. THE NEED OF VAL-IT

The amount of money that organizations spend on ICT keeps increasing, yet they continue to ask, "What are we getting for this money invested?." While there are many organization generating value form investing IT, many other organizations are questioning weather business value realized is commensurate with the level of Investment. While the organization is investing in a great deal of technology, value does not come from technology itself. Value comes from how IT is managed and used. **Organizations must recognize that they are not investing in ICT, they are investing in ICT enabled change.**

The organizations that understand this phenomenon and do it well are leaders in their field. Those that do not or poorly lag, suffer significant losses and risk oblivion. In 2002, Gartner Group estimated that organizations waste US \$600 billion a year on ill-conceived IT projects and that includes only "sunk" cost, not unrealized value. The industry research findings of ICT Projects successes are not encouraging at all as 51% projects are challenged and 15% have failed (Standish Group's Chaos Chronicles 2004). A 2004 IBM survey of *Fortune* 1000 CIOs,4 in which CIOs reported that, on average, 40 percent of all IT spending brought no return to their organizations.

If organizations are to realize the full potential of IT-enabled change, effective IT governance must be an integral part of the organization's overall enterprise governance. In their recent book, *IT Governance*, Peter Weill and Jeanne Ross claim, based on a survey of 250 enterprises worldwide, that **'Effective IT Governance is the single most important predictor of the value an organization generates from IT' and 'firms with focused strategies and above average IT Governance had more than 20% higher profits than other firms following the same strategies.'**

The ITGI IT governance global statues report, 2008 further revealed that the greatest obstacles/constraints are related to lack of knowledge about IT governance practices and unknown outcome of IT investment management practices in terms of ICT value creation.

4.0. WHAT IS VAL-IT ?

Val IT is a governance framework including generally accepted guiding principles and supporting processes related to the evaluation and selection of IT-enabled business investments, and benefit realization and delivery of value from those investments. The Val IT framework is based on the COBIT framework. To obtain a return on investment, the Val IT principles are applied to management processes including value governance, portfolio management and investment management. The Val IT framework will be supported by publications and operations tools and provides guidance to:

- Define the relationship between IT and the business and those functions in the organization with governance responsibilities;
- Manage an organization’s portfolio of IT-enabled business investments; and
- Maximize the quality of business cases for IT-enabled business investments with particular emphasis on the definition of key financial indicators, the qualification of “soft” benefits and the comprehensive appraisal of the downside risk
- Val IT addresses assumptions, costs, risks and outcomes related to a balanced portfolio of IT-enabled business investments. IT also provides benchmarking capability and allows enterprises to exchange experiences on best practices for value management.

The Val-IT initiatives of ITGI are intended to respond to the need for organizations to optimize the realization of value from ICT investments. Whereas COBIT is a framework to assist with the delivery of high quality ICT services, VAL-IT is a framework that provides the “means to monitor and optimize the realization of business value from ICT investments. Val-IT (what should we be doing) and COBIT (how should we do it) are complementary - value delivery (shareholder value). It helps organizations realize optimal value from IT-enabled business investments, at an affordable cost, with a known and acceptable level of risk.” The series of publication “*Enterprise Value: Governance of IT Investments*,” contains three publications:

- The Val IT Framework 2.0
- Getting Started With Value Management
- The Business Case

4.1 GOALS AND OBJECTIVES OF VAL-IT

The goal of Val-IT is to enable organizations to manage their investments in ICT such that they deliver optimal value to the enterprise at an affordable cost and with an acceptable level of risk by:

- Identifying and clearly defining strategically aligned investment opportunities with clearly defined business outcomes
- Evaluating, prioritizing and selecting investments based upon their potential risk-adjusted value in the context of the organization's strategic objectives
- Managing the execution of investments through their full economic life cycle such that they deliver the optimal value

While the initial focus of Val-IT is on new, IT-enabled investments, subsequent releases will expand the scope to include all IT services and resources.

4.2 VAL- IT PRINCIPLES

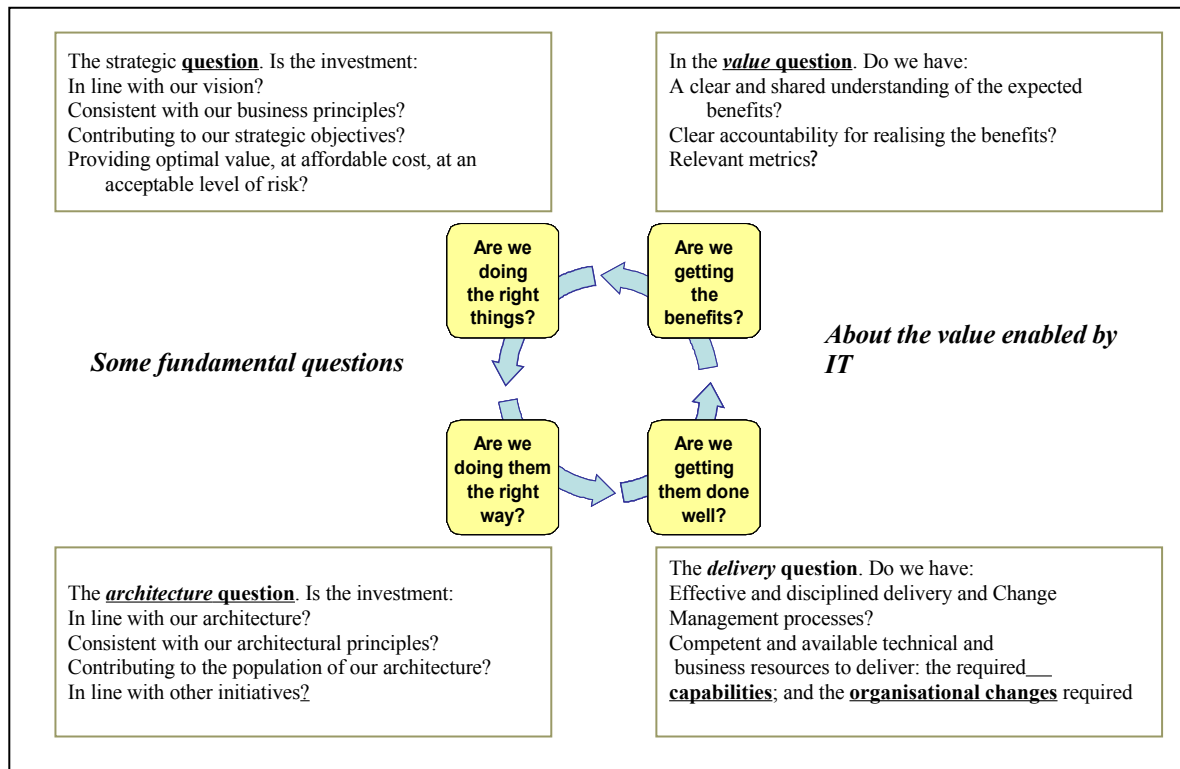
- a. IT-enabled investments should be managed as a **portfolio of investments**.
- b. IT-enabled investments should include the **full scope of activities** that are required to achieve business value.
- c. IT-enabled investments should be managed through their **full economic life cycle**.
- d. Value delivery practices should recognize that there are **different categories of investments** that will be evaluated and managed differently.
- e. Value delivery practices should define and monitor **key metrics** and will respond quickly to any changes or deviations.
- f. Value delivery practices should engage all stakeholders and assign **appropriate accountability** for the delivery of capabilities and the realization of business benefits.
- g. Value delivery practices should be **continually monitored, evaluated and improved**.

4.3 THE KEY ELEMENTS OF VAL-IT

Val-IT is built on the foundation of the "four ares": (Figure 3)

- a. Are we doing the right things?
- b. Are we doing them the right way?
- c. Are we getting them done well?
- d. Are we getting the benefits?

Figure 3: Key Element of VAL-IT



Source: IT Governance Institute

Val-IT is guided by a number of principles:

- a. IT-enabled investments will include the full scope of activities that are required to achieve business value.
- b. IT-enabled investments will be managed through their full economic life cycle.
- c. Value delivery practices will recognize that there are different categories of investments that will be evaluated and managed differently.
- d. Value delivery practices will define and monitor key metrics and will respond quickly to any changes or deviations.
- e. Value delivery practices will engage all stakeholders and assign appropriate accountability for the delivery of capabilities and the realization of business benefits.
- f. Value delivery practices will be continually monitored, valued and improved.

4.4 THE VAL IT FRAMEWORK AND PROCESSES

To obtain return on investment, the Val IT principles should be applied by the stakeholders of the IT-enabled investments in the following three processes (Figure 4) :

- a. Value governance (VG)
- b. Portfolio management (PM)
- c. Investment management (IM)

a. Value governance (VG)

The goal of **value governance** is to optimize the value of an organization's IT-enabled investments by:

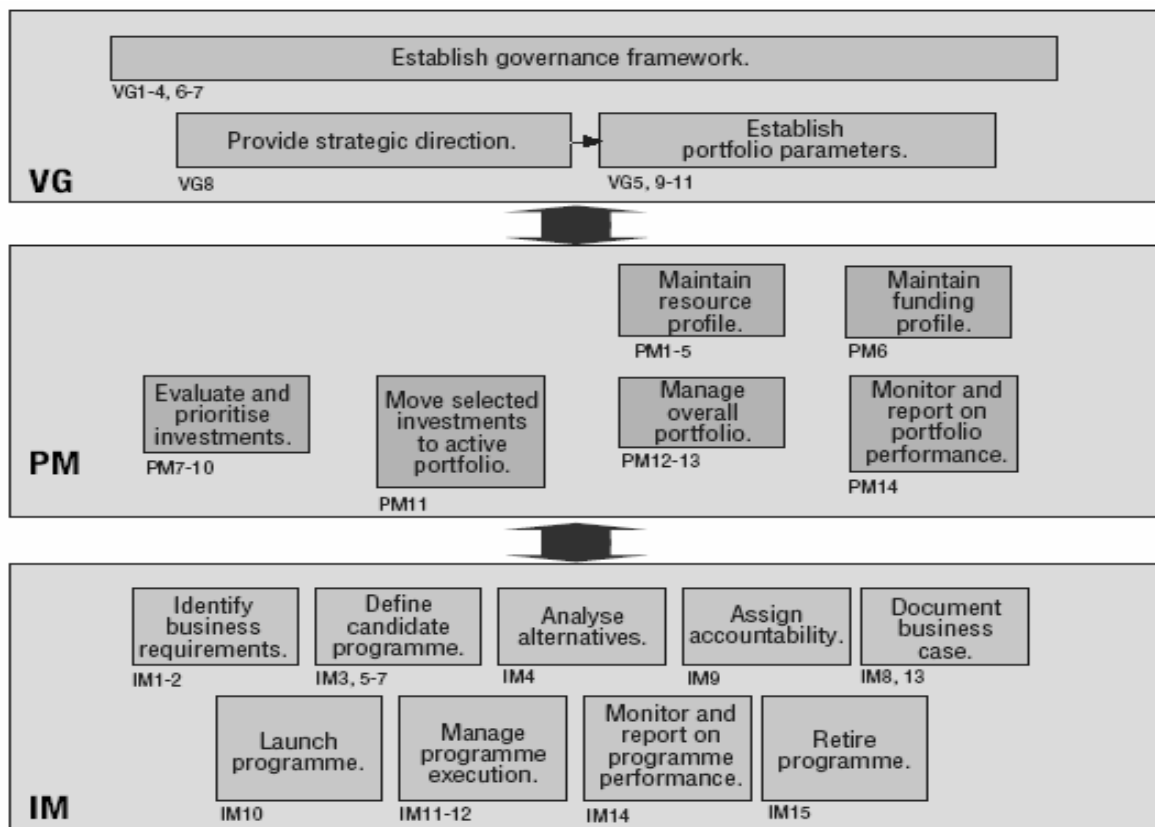
- Establishing the governance, monitoring and control framework
- Providing strategic direction for the investments.
- Defining the investment portfolio characteristics

b. Portfolio management (PM)

The goal of **portfolio management** is to ensure that an organization's overall portfolio of IT-enabled investments is aligned with and contributing optimal value to the organization's Strategic objectives by:

Establishing and managing resource profiles and investment thresholds.

Figure: 4 –VAL-IT Framework Processes



- Evaluating, prioritizing, and selecting, deferring or rejecting new investments.
- Managing the overall portfolio, and monitoring and reporting on overall portfolio performance.

c. Investment management (IM)

The goal of **investment management** is to ensure that an organization's individual IT-enabled investments deliver optimal value at an affordable cost, with a known and acceptable level of risk, by:

- Developing a clear understanding of candidate investments.
- Defining the investments as programs that include all the business, process, people, technology and organizational change projects that are necessary and sufficient to deliver the desired business outcomes
- Documenting a detailed business case, including total life cycle cost and benefit details
- Assigning clear accountability and ownership
- Managing the program through its full economic life cycle, and monitoring and reporting on program performance.

Each of the Val IT processes is enabled by a number of key management practices, which are discussed in Para 4.6- Val IT Processes and Key Management Practices. These management practices have been developed based on the collective experience of the Val IT team and a broader team of global advisors, and draw from existing and emerging practices, methodologies and research.. They provide a framework that organizations can use to assess their current practices, determine where there are areas for improvement and guide initiatives to make that improvement.

4.5 HOW IS VAL-IT RELEVANT TO IT GOVERNANCE?.

ITGI regards value delivery as one of the five focus areas of IT governance; alongside Strategic Alignment, Performance Management, Resource Management and Risk Management which are inter linked (**Figure 5**). Indeed, it could be argued that unless success is achieved in the other four domains, achieving value delivery will remain elusive.

Figure: 5 -IT Governance Framework Processes



Source: IT Governance Institute

Effective governance starts with leadership, commitment and support from the top. However, such leadership, while critical, is not enough. Val-IT supports the leadership by providing clear and consistently applied processes; a clear understanding of executive, business and IT roles and responsibilities; relevant information

To maximize the return on IT-enabled investments, the preparation of formalized, consistent business cases, use of hurdle rates, attention to portfolio management and program management, and application of metrics such as internal rate of return, net present value and payback period, are essential.

Val-IT provides a one-stop, credible and codified source, providing the overall governance framework and supporting processes to do this. Further, in doing so, Val-IT fosters a close partnership between IT and the business, with clear and unambiguous accountabilities and measurements, another key requirement for effective governance.

Control Objectives for Information and related Technology (COBIT) provides a comprehensive framework for the management and delivery of high-quality information technology-based services; its primary focus has traditionally been on the delivery of IT services through the effective and efficient management of IT assets. It sets best practices for the means of contributing to the process of value creation.

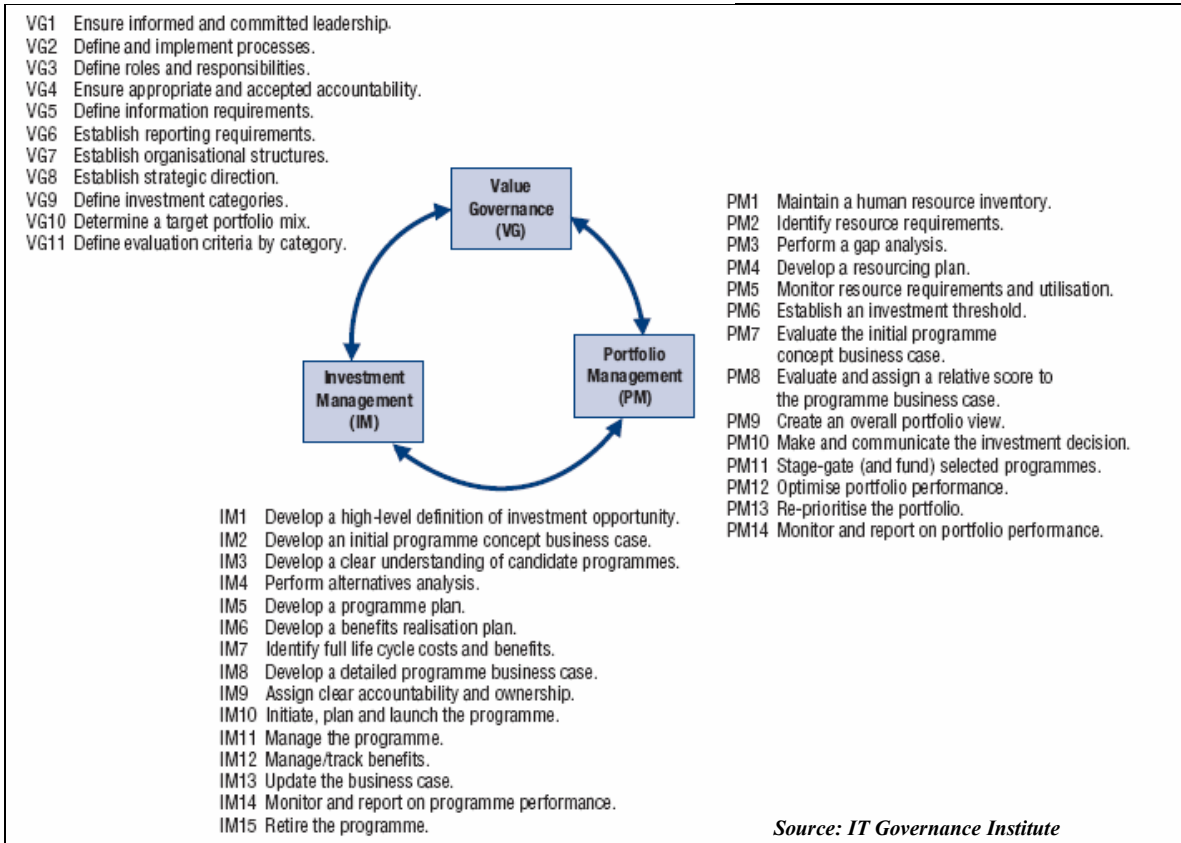
Val IT is based on COBIT, provide best practices for unambiguously measuring, monitoring and maximizing the financial returns from investment in IT.

Val-IT complements COBIT from a business and financial perspective, and adds best practices for optimizing the realization of business value from IT-enabled business investments. COBIT processes provide the foundation to implement the Val-IT tools and techniques. In doing so, it clearly identifies the accountabilities of executive, business and IT management. Also Investments in technology is no longer under the primary control of ICT departments and the chief information officer (CIO). The power is shifting out into the business functions- to the leaders in sales, marketing, procurement, customer service, logistics, and human resources.

4.6 KEY VAL-IT MANAGEMENT PRACTICES

Management practices are characteristics of successful processes. Each enterprise needs to consider its own policies, risk appetite and environment before selecting the management practices that best apply to the Enterprise Key Val-IT management practices are provided hereunder for the three key processes: (Each of these management processes is enabled by a number of key management practices, which are described in detail in the Val-IT framework publication).

Figure 7 Val-IT Management Practices



i. Value Governance-(VG)-11 key management practices

- VG1-Ensure informed and committed leadership (strategy awareness, IT linkage)
- VG2-Define and implement processes (planning & budgeting, resource allocation, benefits management)
- VG4-Ensure appropriate accountability
- VG6-Establish reporting requirements (targets and metrics)
- VG9- Define investment categories (mandatory, sustaining or continuity, or discretionary)
- VG10 - Determine a target portfolio mix
- VG11- Define evaluation criteria (risk level, financial and non-financial, etc.)

ii. Portfolio Management-(PM)-14 key management Practices (Figure 7)

- PM1-PM4 - Maintain HR inventory, Define Requirements, Perform Gap Analysis, Develop a Plan
- PM6 - Establish an investment threshold (overall budget and current spend)
- PM8 - Evaluate & assign a score to the business case
- PM9 - Create an overall portfolio view (impact assessment of new business case)
- PM14-Monitor & report on portfolio performance (to senior management and the board)

iii. Investment Management- IM)-15 key management practices

- IM2- Develop an initial business case (benefits and assumptions)
- IM4 - Perform alternatives analysis
(other ways to deliver the outcomes)
- IM6 - Develop a benefits realization plan (metrics and targets)
- IM7 - Identify full life cycle costs and benefits
- IM8 - Develop a detailed program business case
- IM9-Assign accountability and ownership
- IM12- Manage/ track benefits
- IM14- Monitor and report on program performance
- IM15- Retire the program (formal approval by sponsor)

A complete suit of management practices is shown in Figure 7

As per the recent report of ITGI, industry experience shows that good IT governance practices are not built overnight - the process involves selecting the most appropriate elements, tailoring them as needed and applying them to the specific needs of the organization. Implementation of the Val-IT principles, processes and practices is itself an organizational change program and must be managed as such. This involves understanding what needs to be done today, identifying the pain points of your organization. These practices will require a culture of change in many organizations for effective implementation.

The Val-IT framework has been supported by publications and operational tools. In the near future, a Val-IT implementation guide will be developed, which will expand on these activities,

Providing more guidance on assessing the organization's current situation, getting started and moving up the Capability Maturity Model (CMM) scale.

4.7 BUSINESS CASE DEVELOPMENT

The seeds of success or failure are sown in the Business Case of IT investments. However, most organizations generally are not good at developing and documenting comprehensive and comparable business cases. The business case contains a set of beliefs and assumptions on how value can be created. In order to ensure that the expected outcomes are achieved, these beliefs and assumptions need to be well tested. **Qualitative and quantitative** indicators enable validation of the business case and provide insight for future investment decisions. The organization must develop key indicators, both financial (net present value, internal rate of return and

payback period) and non-financial, and the comprehensive assessment and appraisal of the downside risk of their ICT investment.

4.8 PROGRAMME MANAGEMENT

IT alone does not deliver business value. It is only when IT is implemented in conjunction with associated changes in the business, business processes, individuals' work and competencies, and necessary organizational changes that value is realized. All of the changes that are required must be understood, defined and managed as a programme of IT-enabled change. There must be clarity of the desired business outcomes, the full scope of initiatives required to achieve the outcomes, the relationship between the initiatives and how they individually and collectively contribute to the outcomes, and any assumptions that are being made related to those contributions or to the outcomes themselves. This requires the IT function and the other parts of the business to work closely together with clearly understood roles and responsibilities and shared accountabilities.

4.9. BENEFITS REALIZATION

Benefits realization does not just happen, and they rarely happen according to plan. Benefits do not automatically start flowing with the implementation of ICT projects. If value is to be created, it is essential that investment programmes and the benefits expected from the programmes be actively managed through their full economic life cycle 'from concept to cash'. The organizations traditionally are very bad at this, but if it is not done, effective governance

Cannot be achieved, value will be eroded and the business will not learn and improve its business case and portfolio management processes.

4.10 HOW WILL VAL-IT BENEFIT ORGANIZATIONS?

Effective application of the principles, processes and practices contained in Val-IT will enable organizations to:

- Increase the understanding and
- transparency of cost, benefits and risks, making for better-informed management decisions
- Increase the probability of selecting those investments that have the potential to generate the highest return
- Increase the likelihood of success of executing selected investments such that they achieve or exceed their potential return
- Reduce costs by not doing things they should not be doing, and taking early corrective action, or terminating investments that are not delivering to their expected potential
- Reduce the risk of failure, especially high-impact failure
- Reduce the surprises relative to ICT cost and delivery and, in doing so, increase business value, reduce unnecessary costs and increase the overall level of confidence in IT

5. CONCLUSIONS

ICT is a change agent and in order to optimize the ICT business value, organization need to understand that they are investing in IT enable change instead of Information Technology. The Val-IT provides a governance formwork that helps organization to align their ICT investment with the business and to create optimum business value. It is the responsibility of the board, and the senior executives to ensure that shareholder and stakeholder returns are optimized through effective use of the resources and opportunities available. This responsibility includes IT-enabled business investments and resources where costs, the visibility of success or failure, and the risks of value destruction all are high, but the potential for significant value creation is apparent. Balancing risk and return has to be prominent in the process.

Executive must realize that every peace of information generated by IT has relevance to effective decision making at all levels in he organization in the paradox. It is important that while "core" ICT competencies must continue to be strengthened, a more integrated approach to ICT and enterprise governance also be implemented. Val-IT, together with COBIT, enables such an approach by ensuring that investments are aligned with the enterprise's strategic objectives, that a complete and comprehensive business case is developed, that there is appropriate accountability and relevant metrics, and that the business case is managed through the full economic life cycle of the investment. The intelligent and disciplined implementation of the best practices contained within COBIT and Val-IT will make a significant contribution to enterprises realizing value from their IT-enabled business investments.

REFERENCE:

1. Thorp, J.; Fujitsu; *The Information Paradox*, McGraw Hill, 1998, with a revised edition published in 2003
2. Weill, P.; J.W. Ross; *IT Governance: How Top Performers Manage IT Decisions Right for Superior Results*, Harvard Business School Press, 2000
3. Gartner, “*The Elusive Business Value of IT*,” August 2002.
4. *Enterprise Value: Governance of IT Investments, The Business Case*, available at www.itgi.org.
5. *Enterprise Value: Governance of IT Investments, the Val-IT Framework*, available at <http://www.itgi.org/>.
6. *IT Governance Global Status Report, 2008*
7. *Enterprise Value: Governance of IT Investments, the ING Case Study*, available at www.itgi.org.
8. T J Pathirage, *IT Investment: ICT Investment: IT/Business Alignment of Banking and Financial sector organizations in Sri Lanka*’, MBA Research, PIM, 2004.
9. *Paradox Lost? Firm-Level Evidence on Return on Information system Spending*, Erik Brynjofsson and Lorin Hitt, 2002