

# VAL IT Framework and ICT benefits

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**Abstract.** *A common dilemma facing enterprises today regardless of size, revenue, region, industry is how to get the business value of their ICT investments. This dilemma includes both selecting which investments to make and managing investment. The Val IT framework is a comprehensive and pragmatic framework that enables the creation of business value from IT-enabled investments. The purpose of the paper is to analyze VAL IT framework and its principles. It can be used as help to enterprises in the achieving of ICT benefits using set of VAL IT principles through its three domains (Value Governance, Portfolio management and Investments management). As a result of applying these principles, IT investments should be managed as a portfolio of investments including the full scope of activities for the business value achieving, and be managed through their full economic life cycle.*

**Keywords.** VAL IT framework, Value Governance, Portfolio management, Investments management, Enterprise value, VAL IT principles

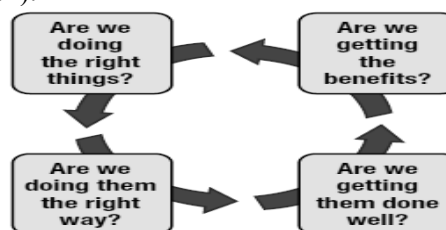
## 1 Introduction

The VAL IT framework is dedicated to helping enterprises optimize the realization of value from IT-enabled investments. This is done at an affordable cost, and with a known level of risk. It is designed to align with and complement COBIT (The Control Objectives for Information and related Technology). Main task of VAL IT framework is to bring value from large-scale investments. Reports had indicated that this is not an easy task. In 2002 Gartner survey indicated that 20 percent of all expenditures on IT are wasted [1]. Another study conducted by The Standish Group in 2006 found that only 35 percent of all IT projects succeeded [2]. WITSA (World IT Service Alliance) estimation predicts the total ICT investments to reach 4.000 billion \$

in 2010 [3] so we can see how much is important to have a framework which will reduce destruction of value related to IT investments. These examples highlight a key question: What does it take to secure IT results in positive business value?

VAL IT consists of a set of guiding principles which supports enterprise goal of creating a value from IT-enabled investments. There are also 20 processes conforming to those principles. These processes are further defined as a suite of key management practices. The purpose of the paper is to analyze the VAL IT framework and its practical use on the example of the Val IT Process PM2 - *Determine the availability and sources of funds.*

It is vital to understand the relationship between VAL IT framework and COBIT shown on Fig.1. There are four fundamental IT governance-related questions: the strategic question, the value question, the architecture question and the delivery question. VAL IT help executives to focus on the strategic question (“Are we doing the right things?”) and the value question (“Are we getting the benefits?”). On the other hand COBIT is considering the architecture question (“Are we doing them right way?”) and the delivery question (“Are we getting them done well?”).



**Figure 1. Relationship between VAL IT and COBIT [4]**

In the process of value creation COBIT is contributing through good practices for the IT function's means while VAL IT is contributing through good practices for the outcomes enabling enterprises to monitor, optimize and measure both financial and non-financial value.

## 2 Concept of Value

The very nature of value is complex and dynamic and differs for different types of enterprises. While in the commercial enterprises value is often view as the increase in the profit and can be measured, in the public sector value is more complex and is often non-financial nature. Basic concept of value is relaying on the relationship between created expectations of stakeholders and resources used to do so. VAL IT framework defines value as the total life-cycle benefits net of related costs, adjusted for risk and for the time value of money[7]. Applying the principles, processes and practices from the VAL IT, enterprises can achieve higher level of business value. This can be done because decision makers increase their understanding of the nature of value and how is created.

It is important to have a clear understanding that IT is not an end to itself but a method of unlocking positive business outcomes [11]. IT is not about implementing technology but in realizing business value through IT-enabled organizational change. Essential component of enterprise governance is ensuring that value is sustained or increased from IT-enabled investments. That is done by selecting investments wisely and managing them through their full economic life cycle. Reports from BTM institute confirm this theory [12]. Enterprises of which focus was on converging their business and technology had bigger revenue growth and net margins relative to their industry competitors. This brings us a clear and simple message: IT-enabled investments can bring us great business value but only with structured approach, right governance and full involvement of all management levels.

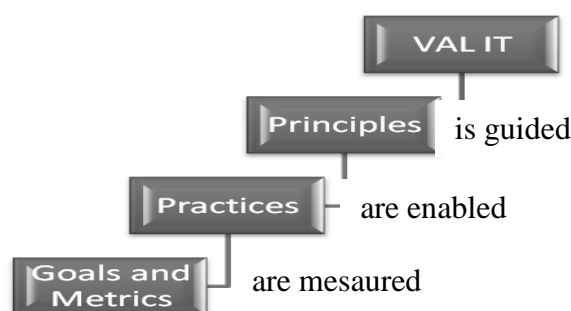
Creating IT-enabled value is not an easy task and enterprises can exhibit various symptoms. Typical challenges in creating value are *problems in delivering technical capabilities, limited or no understanding of IT expenditures, business abdication of decision making to the IT function, communication gaps between the IT*

*function and the business, questioning of the value of IT and major investments failure* [6].

## 3 VAL IT Framework (Key Terms, Principles and Domains)

VAL IT is the first framework that addresses demand for practical IT investment and management framework. It is realized through specific principles applied to certain domains. To achieve optimal results from this framework it is essential to establish a common language to have full understanding of specific terms and to have effective communication within enterprise. Most important terms to understand are [12]: **Project** – A structured set of activities concerned with delivering a defined capability (that is necessary but *not* sufficient to achieve a required business outcome) to the enterprise based on an agreed-upon schedule and budget. **Program** – A structured grouping of inter-dependent projects that are both necessary and sufficient to achieve a desired business outcome and create value. **Portfolio** – Groupings of object of interest (investment programs, IT services, IT projects, other IT assets or resources) managed and optimize business value.

VAL IT principles, processes and practices are all connected and have specific arrangement. VAL IT framework in general supports the enterprise goal of creating optimal value from IT-enabled investments. It is guided by a set of principles which are applied in processes of value management. These principles are enabled by a key management practices and are measured by performance against goals and metrics. This is shown on Fig.2.



**Figure 2. Relationship between VAL IT principles, practices and goals and metrics (source: Authors)**

### 3.1 VAL IT guiding principles

There are seven guiding principles [5]:

- **Investments in IT are to be managed as portfolio.** This requires evaluating and comparing investments and selecting those with the highest potential to create value. All investments should be managed to maximize the value.

- **Full scope of activities will be included in IT investments to achieve business value.** To realize value from IT-enabled investments it is not enough deliver quality IT solutions and services. Also it is required change of the nature of the business, change of skills and competencies, business process. This all must be included in business case for investments.

- **Investments in IT will be managed through their full economic life cycle.** Investments must be monitored from its initiation to until any resulting service is retired. There will always be some uncertainty over the cost and the risk of investments therefore they should be monitored through their full economic life cycle to know whether funding is to be increased or stopped.

- **Different categories of investments will be managed and evaluated differently.** Categories are created and based on costs, type of risks, importance and extent of business change.

- **Key metrics will be defined and monitor over time and to any change or deviation there will be quick response.** To ensure that value is created through whole economic life cycle metrics are established and monitor for performance. Key areas for monitoring are: individual investments, overall portfolio, IT assets, IT services and other resources resulting from an investment.

- **All stakeholders will be engaged and assigned appropriate accountability for the realization of business value.** All parts of business must be involved in change and have some accountability. IT functions must be accountable for IT capabilities and the business for the business capabilities all with one aim – creating of business value.

- **Practices involved in value delivery will be constantly monitored, evaluated and improved.** Experience gained with VAL IT will be applied so the investments process is improved each period.

### 3.2 VAL IT Domains

There are three domains in VAL IT framework: Value governance, Portfolio Management and Investments Management. Within these three domains principles are applied. Each domain has specific number of processes, goal, inputs, outputs and process metrics. Domains with their corresponding goals, processes and metrics are shown in Table 1.

VAL Domain	Domain goal	Processes	Process metrics
Value Governance (VG)	To ensure that value management practices are embedded in the enterprise, enabling it to secure optimal value from its IT-enabled investments through their full economic life cycle.	<b>VG1</b> Establish informed and comitted leadership <b>VG2</b> Define and implement processes <b>VG3</b> Define portfolio characteristics <b>VG4</b> Align and integrate value management with enterprise financial planning <b>VG5</b> Establish effective governance monitoring <b>VG6</b> Continuously improve value management practices	1) Level of leadership agreement on value governance principles 2) Level of leadership engagement 3) Degree of implementation and compliance with value management processes
Portfolio Management (PM)	To ensure that an enterprise secures optimal value across its portfolio of IT-enabled investments.	<b>PM1</b> Establish strategic direction and target investment mix <b>PM2</b> Determine the availability and sources of funds <b>PM3</b> Manage the availability of human resources <b>PM4</b> Evaluate and select programmes to fund <b>PM5</b> Monitor and report on investment portfolio performance <b>PM6</b> Optimise investment portfolio performance	1) Level of satisfaction with IT's contribution to business value 2) Percentage of IT expenditures that have direct traceability to business strategy 3) Percentage increase in portfolio value over time
Investment Management (IM)	To ensure that the enterprise's IT enabled investments contribute to optimal value	<b>IM1</b> Develop and evaluate the initial programme concept business case <b>IM2</b> Understand the candidate programme and implementation options <b>IM3</b> Develop the programme plan <b>IM4</b> Develop a full life-cycle costs and benefits <b>IM5</b> Develop the detailed candidate programm business case <b>IM6</b> Launch and manage the programme <b>IM7</b> Update operational IT portfolios <b>IM8</b> Update the business case <b>IM9</b> Monitor and report on the programme <b>IM10</b> Retire the program	1) Number of new ideas per investment category, and percentage that are developed into detailed business cases 2) completeness and compliance of business cases (initial and updated) 3) Percentage of expected value realised

Table 1. VAL IT Domains (source: Authors)

#### 3.2.1 Value Governance

The purpose of the Value Governance domain is to build in value management practices in the enterprise. This will secure maximum value from

IT-enabled investments. Commitment to value management practices helps enterprises to secure strategic directions for the investment decisions. Value governance will establish and fully integrate processes with the overall enterprise governance. Characteristic of portfolio will be defined to know whether to support new investments. Experience gained through time will be applied to improve value management.

### 3.2.2 Portfolio Management

The purpose of the Portfolio Management is that the IT-enabled investments in the portfolio provide the enterprise optimal business value [10]. Investments limits are defined and performance of the portfolio is monitored. Each individual investment is prioritized and evaluated. Reports on the portfolio performance are generated. To manage all enterprise's investment on common basis IT enabled investments must be included in overall portfolio of business investments. Portfolio management is about balancing overall portfolio. It needs to be recognized that there are different types of investments with different types of complexity and degree of freedom in allocation of funds. That means that evaluation criteria should be established for each type of investment. Including the program in the portfolio is not a one-time call. Portfolio should be managed actively and adjusted by the enterprises management.

### 3.2.3 Investment Management

The purpose of the Investment Management is to secure that all individual IT-enabled investments contribute in process of creating optimal business value. Three key components of Investment Management are: *business case, program management and benefits realization*. The task of business case is to select the right investment programs and manage them through their execution. Program management is managing with processes that support program execution. Benefits realization actively manages with the realization of program benefits through the specific set of task. Through the Investment Management enterprises identify their business requirements. Each program is documented and detailed business case is maintained for it. Clear understanding of nomination for investments programs is developed with assigned

accountability and ownership over the investment. Programs are monitored through their full economic life cycle (including retirement) and reports over the program performance are generated.

### 3.2.4 Relationship between the Val IT domains

Relationship between VAL IT domains is shown on Fig. 3.

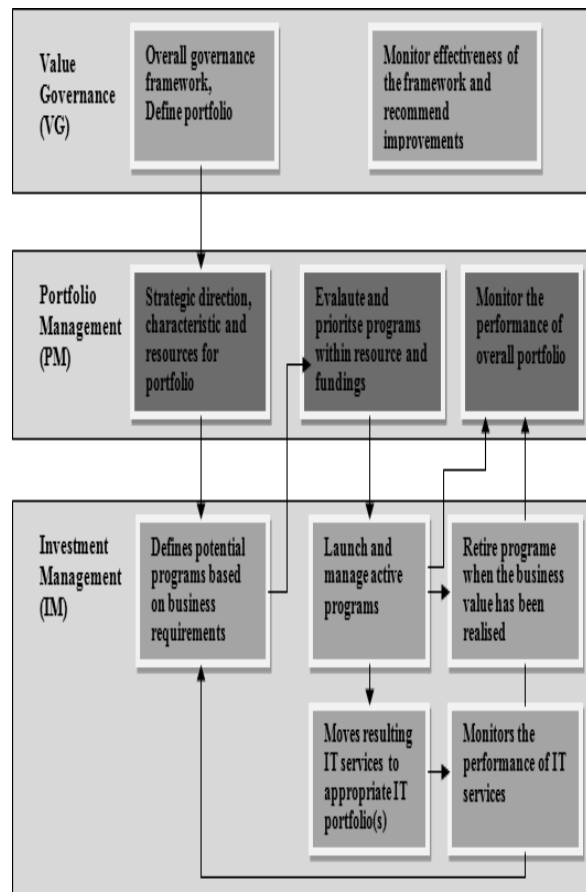


Figure 3. Relationship between VAL IT Domains (source: Authors)

**Value Governance** establishes the overall governance framework. This includes defining the portfolio of investments and resulting IT services, assets and resources. Another task of Value Governance is to monitor overall framework and recommend appropriate improvements.

**Portfolio Management** defines desired characteristic of portfolio, allocation of funds, restrictions within decisions must be made and available resources. Based on the alignment with strategic objectives Portfolio Management

evaluates and prioritize program and monitors overall performance of the portfolio.

**Investment Management** defines potential programs based on business requirements. IM is also in charge with launching and managing the execution of active programs. When there is agreement that desired business value is created IM retires program. Contribution of resulting IT services to business value is continuously monitored. Performance of the IT service is monitored to determine whether to fund or retire the service.

### 3.2.5 Maturity model

For each of the three domains a maturity model has been defined. Incremental measurement scale is provided. There are 5 levels: *0-Non-existent, 1-Initial, 2-Repeatable, 3-Defined, 4-Managed and 5-Optimised*. At level 0 the most basic value management practices are not implemented. At level 5 enterprises can quantify the value created through business change and are using gained experience to constantly improve value creation. The purpose of this model is to identify where problems are and how to set priorities for improvements. Levels are designed as profiles of processes so enterprises can identify its current state and possible future states. In each enterprise many processes will be at different level – for example some processes might be at level 2, some at level 4. This shows that models are design to allow management to focus on key areas rather than trying to get all processes at one level. Using Val IT maturity models management can identify where the enterprise is today and where the enterprise wants to be.

## 4 Using Val IT framework on the example of the VAL IT PM2 process

This section provides practical description of the Val IT PM2 process - **Determine the availability and sources of funds (shown in Table 1)**. For this process inputs and outputs are provided together with roles and responsibilities and goals and metrics.

Inputs are an insight into process needs and they are required to the process and its ability to function properly. Each process has specific outputs that delivers to other processes.

Every process has a responsible, accountable, consulted (RACI) and informed person. Process

is decomposed to activities and for each activity is indicated who should be responsible, accountable, consulted and informed. For each of these roles definition are given[8]:

- Responsible (R) – those who must ensure that the activities are completed successfully.
- Accountable (A) – those who have the authority to approve the execution and/or accept the outcome of an activity.
- Consulted (C) – those whose opinions are sought on activity (two-way communication).
- Informed (I) – those who are kept current on the progress of an activity (one-way communication).

There are three types of goals and metrics, each for its corresponding level. At domain level, goals and metrics define what business expects from each Val IT domain. On the process level metrics and goals supports the domain objective and define what process must deliver. Activity goals and metrics define what needs to happen inside each process and how to measure that.

### 4.1 Detailed key management practices of the PM2 process

**PM2.1 Determine overall investment funds:** it is essential to understand current approved spending, availability and commitment of funds and the actual spend to date. Options should be identify to obtain additional funding for IT-enabled investments, internally or from external sources. Implication of the funding source on the investment return must be determined.

### 4.2 Inputs and Outputs of the PM2

List of inputs and outputs for process PM2 is shown in Table 2.

From	Inputs
*	Available budget
*	Allocated budget
PM4	Approved investment programmes
PM5	Portfolio performance report
PM6	Updated overall portfolio view
COBIT P05	IT budget
	Cost/benefit reports
To	Outputs
*, PM4, PM6	Portfolio budget
COBIT P01, P05	Portfolio budget-used to set and define the IT portfolio budget

**Table 2. Inputs for process PM2 [4]**

To be successful process needs to receive data from other process, shown as inputs in Table 2. Process PM2 generates specific outputs which are delivered to other process.

### 4.3 RACI chart of the PM2 process

For process PM2, a responsible, accountable, consulted and informed (RACI) chart is provide, as is shown in Figure 4.

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

Figure 4. RACI chart for process PM2

From the RACI chart it is visible that for the first activity responsibility lies on Value Management Office alone while for the second activity responsibility lies both on CEO and Business Management. It is important to mention that this assignment is just a recommendation. In real enterprise assignments are likely to vary.

### 4.4 Goals and Metrics for VAL IT PM domain

As previously described, there are three types of goals and metrics, each for its corresponding level. In the case of the PM domain, it is shown and presented in Table 3.

VAL IT Domain:		VALIT Process:		VAL IT Activities:	
Portfolio Management (PM)		Determine the availability and sources of funds (PM2)		- Maintain current and accurate views of funds available, committed, approved to spend, and spent to date. - Identify and investigate additional sources of funds.	
Goals	Metrics	Goals	Metrics	Goals	Metrics
<ul style="list-style-type: none"> <li>Ensure that optimal value is secured by the enterprise across its portfolio of IT-enabled investments.</li> </ul>	<ul style="list-style-type: none"> <li>Percentage of forecast optimal value secured across the enterprise's portfolio of IT-enabled investments.</li> </ul>	<ul style="list-style-type: none"> <li>There is transparency and understanding of the investment funds available and their use.</li> </ul>	<ul style="list-style-type: none"> <li>The quantity of investment funds available for use and the amount allocated but not yet used</li> <li>Quantity of investment funds that could be available from other sources</li> <li>Finally domain goal also must be considered.</li> </ul>	<ul style="list-style-type: none"> <li>The current status and the projected status of investment funds are understood.</li> <li>Additional sources of investment funds are identified.</li> <li>There is regular review of the investment funds needed and their use.</li> </ul>	<ul style="list-style-type: none"> <li>Frequency and completeness with which reviews are undertaken</li> <li>The number of investigations that take place into other sources of investment funds.</li> </ul>

Table 3. Goals and metrics for the PM2 process (source:Authors)

## 5 Conclusion

In this paper, it is highlighted the importance of the Val IT framework in process of creating business value from IT investments. Many researches indicate that large percent of large-scale investments in IT are wasted. Val IT gives an answer to the question: What does it take to ensure that IT results in positive business value? Through its three domains and number of principles it enables us to effectively govern our IT investments, recognize different categories of investments and assign responsibility.

Maturity models are given so that the enterprises can easily see where they are now and enable management to focus on key areas needing attention. It is important to realize that this set of practical principles, processes and practices are proven and used with considerable success by leading organization for many years.

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