Abstract – This article explain terms of IT Service management and IT Governance. The information technology as an industry is steadily maturing thus becoming standardized and integrated in all aspects of business operations. Different standards, methodologies and best practice enable standardization of information technology. One of the most common methodologies of IT management in organizations is ITIL (Information Technology Infrastructure Library). ITIL is changing the traditional role and a concept of IT, which is no longer limited only to software and hardware, but nowadays also comprehends a business value. More precisely, in this article we will present and explain why it is necessary to know the IT Governance and IT Service Management.

I. INTRODUCTION

IT Governance (Information Technology Governance) is a subset discipline of Corporate Governance focused on information technology (IT) systems and their performance and risk management. The rising interest in IT governance is partly due to compliance initiatives, for instance Sarbanes-Oxley in the USA and Basel II in Europe, but more so because of the need for greater accountability for decision-making around the use of IT in the best interest of all stakeholders.

A characteristic theme of IT governance discussions is that the IT capability is directly related to the investment choices taken by top management that have long term consequences for various stakeholders. The traditional involvement of board-level executives in IT issues was to defer all key decisions to the company's IT professionals. IT governance implies a system in which all stakeholders, including the board, executive management, customers, and staff have clear accountability for their respective responsibilities in the decision-making processes affecting IT. This prevents IT or business leaders from independently making decisions about IT without retaining responsibility for their actions and the impact they have on supporting the achievement of strategic objectives.

II. IT GOVERNANCE

The discipline of IT governance first emerged in 1993 as a derivative of corporate governance and deals primarily with the connection between strategic objectives and IT management of an organization. It highlights the importance of IT related matters in contemporary organizations and states that strategic IT decisions should be owned by the corporate board, rather than by the chief information officer or other IT managers.

The primary goals for information technology governance are to (1) assure that the investments in IT generate business value, and (2) mitigate the risks that are associated with IT. This can be done by implementing an organizational structure with well-defined roles for the responsibility of information, business processes, applications, infrastructure, etc. Accountability is the key concern of IT governance.

After the widely reported collapse of Enron in 2000 and the alleged problems within Arthur Andersen and WorldCom, the duties and responsibilities of auditors and the boards of directors for public and privately held corporations were questioned. As a response to this, and to attempt to prevent similar problems from happening again, the US Sarbanes Oxley Act was written to stress the importance of business control and auditing. Although not directly related to IT governance, Sarbanes Oxley and Basel-II in Europe have influenced the development of information technology governance since the early 2000s.

There are narrower and broader definitions of IT governance:

- IT governance is the responsibility of executives and the board of directors, and consists of the leadership, organizational structures and processes that ensure that the enterprise’s IT sustains and extends the organization’s strategies and objectives [1].
- IT governance: Specifying the decision rights and accountability framework to encourage desirable behaviour in the use of IT [2].
- IT governance is the strategic alignment of IT with the business such that maximum business value is achieved though the development and maintenance of effective IT control and accountability, performance management, and risk management [3].
- Van Grembergen and De Haes focus on enterprise governance of IT and define this as "an integral part of corporate governance and addresses the definition and implementation of processes, structures and relational mechanisms in the
organization that enable both business and IT people to execute their responsibilities in support of business/IT alignment and the creation of business value from IT enabled investments" [4].

The AS 8015-2005 is standard for corporate governance of information and communication technology was published in 2005 by Standards Australia. The standard provides principles, a model and vocabulary as a basic framework for implementing effective corporate governance of ICT within any organisation.

- "The system by which the current and future use of ICT is directed and controlled. It involves evaluating and directing the plans for the use of ICT to support the organisation and monitoring this use to achieve plans. It includes the strategy and policies for using ICT within an organisation." [5]

During the past decades, several frameworks that support implementation of IT governance have been created. Cobit is a framework based on best practice, focusing on the processes of the IT organization and how their performance can be assessed and monitored.

The IT Infrastructure Library (ITIL) provides useful best practice in the field of service management and service delivery, but does not cover the strategic impact of IT and the relation between IT and the business. The information security standard ISO/IEC 27002 (ex ISO/IEC 17799) is often mentioned together with IT governance. The common denominator here is IT risks management, separation of concerns and segregation of duties. Weill and Ross [2] has developed a framework for IT governance evaluation based on just a few questions and framework has been used to map top-level assignment for IT responsibilities in 250 enterprises worldwide but cannot be used for in-depth assessments of IT governance [6].

III. IT SERVICE MANAGEMENT

IT service management (ITSM or IT services) is a discipline for managing information technology (IT) systems, philosophically centred on the customer's perspective of IT contribution to the business. ITSM stands in deliberate contrast to technology-centred approaches to IT management and business interaction. No one author, organization, or vendor owns the term 'IT service management' and the origins of the phrase are unclear. The following represents a characteristic statement from the ITSM literature:

- "Providers of IT services can no longer afford to focus on technology and their internal organization, they now have to consider the quality of the services they provide and focus on the relationship with customers". [7]

ITSM is process-focused and in this sense have ties and common interests with process improvement movement (e.g., TQM, Six Sigma, Business Process Management and CMMI) frameworks and methodologies. The discipline is not concerned with the details of how to use a particular vendor's product, or necessarily with the technical details of the systems under management. Instead, it focuses upon providing a framework to structure IT-related activities and the interactions of IT technical personnel with business customers and users.

ITSM is generally concerned with the "back office" or operational concerns of information technology management (sometimes known as operations architecture), and not with technology development. For example, the process of writing computer software for sale, or designing a microprocessor would not be the focus of the discipline, but the computer systems used by marketing and business development staff in software and hardware companies would be. Many non-technology companies, such as those in the financial, retail, and travel industries, have significant information technology systems which are not exposed to customers.

In this respect, ITSM can be seen as analogous to an enterprise resource planning (ERP) discipline for IT although its historical roots in IT operations may limit its applicability across other major IT activities, such as IT portfolio management and software engineering.

IV. ITIL

The UK Government recognized very early on the significance of IT best practices to Government and, for many years, has developed best practices to guide the use of IT in Government departments. These practices have now become common standards around the world in private and public sectors. ITIL was developed more than 15 years ago to document best practice for IT service management, with that best practice being determined through the involvement of industry experts, consultants and practitioners.

ITIL is based on defining best practice processes for IT service management and support, rather than on defining a broad-based control framework. It focuses on the method and defines a more comprehensive set of processes. Additionally, ITIL provides a business and strategic context for IT decision making and for the first time describes continual service improvement as the key activity which drives maintenance of value delivery to customers.

IT service management is concerned with planning, sourcing, designing, implementing, operating, supporting and improving IT services that are appropriate to business needs. ITIL provides a comprehensive, consistent and coherent best practice framework for IT service management and related processes, promoting a high-quality approach for achieving business effectiveness and efficiency in IT service management. ITIL is intended to underpin but not dictate the business processes of an organization. The role of the ITIL framework is to describe approaches, functions, roles and processes, upon which organizations may base their own practices and to give guidance at the lowest level that is applicable generally.

Below that level, and to implement ITIL in an organization, specific knowledge of its business processes is required to drive ITIL for optimum effectiveness. In ITIL V3, the most significant development has been the
move from a process-based framework to a more comprehensive structure reflecting the life cycle of IT services. In this new context, the key processes have been updated, but more significantly, ITIL now describes IT service management functions, activities and organizational structure; strategic and sourcing concerns; and integration with the business, ITIL V3.

Five volumes comprise the ITIL v3, published in May 2007 [8]:
- ITIL Service Strategy
- ITIL Service Design
- ITIL Service Transition
- ITIL Service Operation
- ITIL Continual Service Improvement

V. WHY IS IT GOVERNANCE NECESSARY

IT governance is needed to ensure that the investments in IT generate value reward and mitigate IT associated risks, avoiding failure. IT is central to organisational success – effective and efficient delivery of services and goods – especially when the IT is designed to bring about change in an organisation. This change process, commonly referred to as "business transformation," is now the prime enabler of new business models both in the private and public sectors. Business transformation offers many rewards, but it also has the potential for many risks, which may disrupt operations and have unintended consequences. The dilemma becomes how to balance risk and rewards when using IT to enable organisational change.

Despite efforts of the software industry to identify and adopt best practices in the development of IT projects, there is still a high rate of failure and missed objectives. Most IT projects do not meet the organisation’s objectives

A key best practice is implementing an organisational structure, including an effective governance framework, with well-defined roles and responsibilities for IT stakeholders including IS auditors. Such a framework ensures that IT investments are aligned and delivered in accordance with corporate objectives and strategies; without this framework, IT projects are more susceptible to failure. But many organisations fail to consider the importance of IT governance. They take on IT projects without fully understanding what the organisation’s requirements are for the project and how this project links to the organisation’s objectives.

Identifying organisational objectives for IT is another key best practice for IT governance. Historically, senior managers saw IT projects from the limited perspective of input and output objectives. This inefficient and ineffective perspective stemmed directly from these managers’ lack of technical experience to deal with the complexity of such projects. In addition, these managers were unjustly blamed for the vast inefficiencies caused by the organisation’s failure to integrate the objectives of IT projects with the overall objectives of the organisation.

To be successful an organisation should consider all of the following factors, which lead to best practices: high level framework, independent assurance, performance management reporting, resource management, risk management, strategic alignment, and value delivery [9]:

- **High-level framework** – including defining leadership, processes, roles and responsibilities, information requirements, and organisational structures – ensures the IT investment is aligned with the overall strategies of the organisation, maximising the application of available IT opportunities.
- **Independent assurance**, in the form of internal or external audits (or reviews), can provide timely feedback about compliance of IT with the organisation’s policies, standards, procedures, and overall objectives. These audits must be performed in an unbiased and objective manner, so that managers are provided with a fair assessment of the IT project being audited.
- **Resource management**, through regular assessments, ensures that IT has sufficient, competent, and efficient resources to meet the organisation’s demands.
- **Risk management** embedded in the responsibilities of the organisation, ensures that the organisation and IT regularly assess and report IT related risks and organisational impact. Exposures of any problems are followed up, with special attention paid to any potential negative effects on the overall objectives of the organisation.
- **Strategic alignment** – a shared understanding between the organisation’s management and the IT department, enables the board and senior management to understand strategic IT issues. IT strategy demonstrates the organisation’s technology insights and capabilities and ensures that the IT investment is aligned with the overall strategies of the organisation, maximising the use of available IT opportunities.
- **Value delivery** demonstrates the benefits that can be achieved from each IT investment. Such investment should always provide value to the organisation and be driven by the needs of the investing entity.
• **Performance management reporting**, including accurate, timely, and relevant portfolio, programme, and IT project reports to senior management, provides a thorough review of the progress being made towards the identified objectives of the IT project. Through this review, the organisation can assess IT performance in terms of which deliverables have been obtained, and what shortfalls need to be addressed. Performance metrics is a good way to get some of the data needed for performance.

VI. IMPORTANCE OF PERFORMANCE METRICS FOR IT GOVERNANCE

Performance metrics is the basis for sound and rigorous IT governance. In order for an organisation to have good governance, it must be able to see where true value is being added to its IT projects. Having a well-defined set of performance metrics provides management with the means to measure success and determine what areas need to be focused on in order to improve the effectiveness and efficiency of IT projects. Without performance metrics to back one up, it would be difficult to gauge the progress that IT projects are making towards achieving IT objectives. The benefits of performance metrics include [10]:

- Improvement in the quality of IT services over time;
- Reduction in IT risks over time;
- Enhanced delivery; and
- Reduction in costs of delivering IT services over time.

There are two types of performance metrics, (1) development metrics that are used to measure the performance of IT projects in development and (2) services metrics that are used to measure the success of on-going or repetitive IT services.

For development performance metrics, a prescribed set of measurements are used to track project development and allow an organisation to measure the progress of a project at all stages of the life cycle. For service metrics, generally, IT service costs are assigned to the programme based on a measure of the IT services activity used by the programme.

One would never be able to list all the different metrics used to measure IT effectively, but the following metrics are common to most organisations and, depending on when and where one collects the data, can be used for both project development and services:

- **IT costs by category and by activity**. The organisation can see the amount invested in each activity and determine the value added by the financial investment involved.
- **IT staff numbers and costs analysed by activity**. The organisation can measure the value added of each activity compared with the amount of resources committed.
- **Outsourcing ratios**. The organisation can determine the effectiveness of its own staff and allow them to gauge their reliance on external resources.
- **IT related operational risk incidents (number and value)**. The organisation can measure how well risk is being handled by identifying risks, their mitigation, and the cost of failing to mitigate them; these measurements should then be brought to the attention of management.

Other examples of some common metrics include full time versus contract IT staff, workstation costs, IT related operational risk incidents (number and value), IT security incidents (number and value), various metrics for IT projects, and IT investment management capability maturity model (CMM) level (current and projected).

VII. CONCLUSIONS

Critical element important for the survival and success of the organization is effectively IT management and IT Governance. Present IT infrastructure management is transforming into IT service management and IT Governance. In summary, IT is an integral part of the public sector programme delivery. IT governance is an integral part of corporate governance, ensures that IT goals are met and IT risks are mitigated such that IT delivers value to sustain and grow the organisation.

A characteristic theme of IT governance discussions is that the IT capability is directly related to the investment choices taken by top management that have long term consequences for various stakeholders. The traditional involvement of board-level executives in IT issues was to defer all key decisions to the company's IT professionals. IT governance implies a system in which all stakeholders, including the board, executive management, customers, and staff have clear accountability for their respective responsibilities in the decision making processes affecting IT. This prevents IT or business leaders from independently making decisions about IT without retaining responsibility for their actions and the impact they have on supporting the achievement of strategic objectives.

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