



Critical success factors (CSFs) for information technology governance (ITG)



Zyad Alreemy^{a,c,*}, Victor Chang^b, Robert Walters^a, Gary Wills^a

^a School of Electronics and Computer Science, University of Southampton, Southampton, UK

^b Suzhou Business School, Xi'an Jiaotong Liverpool University, Suzhou, China

^c King Abdulaziz City for Science and Technology (KACST), Riyadh, Saudi Arabia

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ABSTRACT

With the rapid evolution of Information Technology (IT) applications and practices across the organization, appropriate IT Governance (ITG) has become essential to an organization's success. As IT is associated with risk and value opportunities, a comprehensive, high-level system is required in each organization to minimise the associated risks and optimize value. This requirement triggered the emergence of ITG. Many researchers have addressed this field; however, the role played by critical success factors (CSFs) in the successful implementation of ITG has not yet received adequate attention. This gap in the research motivated the present study, with the main aim of defining the CSFs needed for the successful implementation of ITG. CSFs were studied and extracted from the literature review and then analysed, categorised, and synthesized to create the Success Factors for IT Governance Framework.

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1. Introduction

Contemporary developments in the field of information technology (IT) and emergence of new concepts and philosophies in terms of political and economics require continuous development in the efficiency and effectiveness of IT (Abu-Musa, 2009). Long-term success requires a strong connection between business and IT in organizations, to maximise benefits and reduce the uncertainties of IT projects (Grembergen, 2004). Therefore, IT governance (ITG) has become imperative for business organizations to meet the challenges presented by the business environment. In the competitive global world, information technologies impart a competitive advantage to multinational organizations that employ technologies to aid in increasing effectiveness, economising time and diminishing expenditures (Calder, 2005). To achieve the objectives of the technologies incorporated within the government sector, information technology governance has emerged to oversee the emerging technologies (Pardo, 2009; Wilkin & Riddett, 2008).

The optimal performance of corporations' information technology permits the organization to achieve its strategic goals and

allows it to accomplish a competitive advantage. Information technology governance (ITG) is the structure that permits compatibility among the strategic goals of the corporation and the intentions that will aid the corporation realise a satisfactory stage of risk. ITG encompasses the guidelines, actions, functions and tasks of the employees of the organization. Hence it assists any organization in controlling and realising benefits from IT practices and investments.

The term 'information technology governance' (ITG) derives from the 'corporate governance' (governance), which emerged after several financial scandals at the global level in large corporations, in both the US and Europe (Calder, 2005).

'At its most basic definition, IT governance is the process by which decisions are made around IT investments' (Symons, 2005). IT governance as defined in Calder and Moir (2009) is a matter of optimising the use of IT investments through strong collaboration and communication between the business and IT's leaders and their strategies. Therefore, it can be said that IT Governance is the processes that guide and control investments, decisions and practices relating to IT within the organization in order to achieve the desired objectives.

2. Methodology

This section describes the methodology used to conduct the work described in this paper. In order to achieve the desired objectives of ITG, there are some important factors that will ease the

* Corresponding author at: School of Electronics and Computer Science, University of Southampton, Southampton, UK.

E-mail addresses: zsa1g12@soton.ac.uk, zreemy@gmail.com (Z. Alreemy), ic.victor.chang@gmail.com (V. Chang), rjw1@soton.ac.uk (R. Walters), gbw@soton.ac.uk (G. Wills).

implementation if they are considered but could hinder it if they are not. These factors are called the critical success factors (CSFs). If they are not performed well, it is unlikely that the mission, objectives or goals of a business or project will be achieved (Pollard & Cater-Steel, 2009). So from this definition of CSFs, it can be seen that they are not detailed practical steps to implement a system, rather they are assistant factors that support the successful implementation of systems.

The literature review is the initial source of the main factors which been collected from many well-known standards and frameworks of ITG, and from related studies about Critical factors of ITG. The extract of the literature is formed in the initial framework (iSFITG). iSFITG has gone through filtering, developing and formulation phases to create SFITG. In order to achieve the paper's aim and to identify these factors, the researcher analyses:

1. Relevant standards and frameworks to identify the best solution for implementing ITG and to highlight all factors required for successful implementation.
2. Related studies, focusing mainly on ITG implementation and CSFs.
3. Other ITG studies in order to gain an understanding of ITG implementation processes and related factors.

Information and references were sourced from books, journal papers, reports, conferences and scientific websites. These sources are used as the basis for the different factors and categories in the proposed framework.

This paper is divided into 5 sections the core investigation took place in the following sections. Section 3, where the CSFs review of the standards, frameworks and other related studies are presented. Section 4, where the contribution and efforts are explained and the solution framework are presented. Section 5, summarising the paper and where the recommendations for further works are obtainable.

3. Background

ITG is primarily responsible for optimising the use of IT resources and managing the risks of IT projects and practices. In addition, ITG can provide good solutions for all organizations, whether they are government or private, to optimize IT's investments and practices and balance the associated risks.

There are many studies about ITG (e.g., Calder & Moir, 2009; Calder, 2005; Willson & Pollard, 2009), and some reports from leading enterprises in ITG such as by ITGI and ISACA. However, these studies are not at the same level of ITG importance in some aspects such Critical Success Factors (CSFs).

It is clear that to implement successful ITG, adoption of different standards and frameworks is required based on organization size and requirements, as mentioned in the previous section. These standards and frameworks aim to guide the implementation of some components of ITG based on scope and attention. There are some important factors that encourage the success of the implementation of ITG and give good indications of that success. 'IT-governance-related success factors must be entrenched and adhered to in order to do away with inadequate governance effectiveness, which has negative consequences for the IT contribution to public service delivery' (Nfuka & Rusu, 2011). Some of these ITG standards and frameworks have mentioned such factors implicitly using different names and meanings such as enablers or challenges. However, they are not providing a comprehensive framework for measuring the success of overall ITG implementation. COBIT 5 introduced CSFs for the ITG processes but they cannot be used as CSFs for the entire ITG implementation. ISO 38500 introduced six principles, which pro-

vide a strong base for the implementation of ITG, but they are not CSFs. Therefore, it can be said that this study will enrich the studies targeting CSFs of ITG implementation. The summarised factors will be grouped in a framework under different categories and will be called Success Factors for IT Governance (SFITG).

The main study's aim is to investigate and identify the factors that encourage the successful implementation of ITG which will be called Critical Success Factors (CSFs) in this paper. IT Governance is a broad topic and an umbrella for many IT components; therefore, many studies have been conducted to address ITG in general and these components in particular. Recently, ITG has become essential for organizations to optimize the use of IT projects and minimise risk, which requires more studies on different aspects of ITG. Before showing the results, a brief description of the related standards and frameworks of ITG will be presented.

3.1. ITG standards and best practices

ITG is broad topic including various components, drivers and outcomes such as risk management, project management and performance management. Each component has specific scope and elements, and thus has its own standards or frameworks (see Fig. 2-1). However, recently ISACA released the COBIT 5 framework, which 'provides a comprehensive framework that assists enterprises in achieving their objectives for the governance and management of enterprise IT' (ISACA, 2012). In addition, 'ISO 38500 is the first international standard explicitly addressed the governance of ICT' (Calder & Moir, 2009). The next section will give an overview of COBIT and ISO 38500.

3.1.1. The control objectives for information and related technology (COBIT)

'The Information Systems Audit and Control Association (ISACA) has produced COBIT, a widely used good practice framework for auditing IT Governance by controlling the information, IT and related risks' (Calder & Moir, 2009). It is a framework that helps the organization to achieve its business and IT goals by governing IT practices and processes (ISACA, 2012).

COBIT 5 is based on five main principles: Meeting stakeholder needs, covering the enterprise end-to-end, applying a single, integrated framework, enabling a holistic approach and separating governance from management. It defines seven categories of enablers: Principles, policies and frameworks; Processes; Organisational structures; Culture, ethics and behaviour; Information; Services, infrastructure and applications and People, skills and competencies

COBIT5 also introduces success factors at the process level rather than at the governance level. These success factors are presented to ease the challenges that are faced during the implementation phases. However, these CSFs will be used as the basis of the solution framework. Additionally, COBIT5 presents Process Capability Assessment Model (PAM), which will indicate the status of the processes, the second enabler. "By consequence, process assessments will not provide the full picture on the state of governance of an enterprise. For that, the other enablers need to be assessed as well" (ISACA, 2012).

3.1.2. ISO/IEC 38500: 2012 standard

ISO/IEC 38500:2008 is the standard for corporate governance of information technology, is an advisory standard that provides a framework of principles for senior management and the Board of Directors to use while evaluating, directing and monitoring the use of IT in their organizations (Chaudhuri, 2011). ISO 38500 can be appropriate for any enterprise regardless to its size or scope (Sylvester, 2011).

ISO 38500 provides broad guidance on the role of a governing body; it encourages organizations to use appropriate standards for

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