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Information technology service management models applied to medium and small organizations: A systematic literature review

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ABSTRACT

(ANTECEDENT) The main responsibility of the Information Technology Service Management (ITSM) as an organization is to provide services in high level quality. That implies that the services will be an appropriate service and it will ensure continuity. In this context, the organization needs to adopt the best practices in service management to be more efficient and competitive. Some ITSM models collect the best practices of recognized organizations. These models are mainly applied by large organizations. (OBJECTIVE) The objective of this study is to gather experiences in the application of ITSM models in small organizations. (METHODS) To achieve this objective a systematic literature review was performed. (RESULTS) We found primary studies applied to IT areas from some large and medium companies but there is a few in small companies' context. (CONCLUSION) During the SLR we have identified some improvements and difficulties in many organizations, we have founded when applying ITSM models. The principal difficulty was the lack of knowledge of its personnel and consultants have, for adopting a model. On the other hand, companies who succeeded in the application of an ITSM model, had founded some benefits, such as processes improvement, higher user satisfaction, and service cost and time reduction.

Contents

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Table 1
Process commons between ISO/IEC 20000, ITIL®2011 and COBIT®5 [35].

ISO/IEC 20000	ITIL®2011	COBIT®5
Configuration management	Configuration management and service assets	DS9 manages the configuration
Change management	Change management	AI6 manages changes
Delivery management	Release and deployment management	AI7 installs and accredits solutions and changes
	Service validation and testing	
	Change evaluation	
Incident management	Incident management	DS8 manages service desk and incidents
	Request management	
Problem management	Problem management	DS10 manages problems
Capacity management	Capacity management	DS3 manages performance and capacity
	Demand management	
IT service continuity management	IT service continuity management	DS4 ensures continuity of service
Availability management	Availability management	DS3 manages performance and capacity
Service level management	Service level management	DS1 defines and manages service levels
Business relationship management	Services catalog management	DS2 manages third-party services
Supplier management	Supplier management	
Budgeting and accounting for IT services	Financial management for IT services	PO5 manages the IT investment
		DS6 identifies and allocates costs
Information security management	Information security management	DS5 ensures systems security

1. Introduction

Since the last decades – since the early 80s to the present – the use of Information Technology (IT) became the most important support for business, regardless of the company size or sector it belongs [1].

In pursuit of return on investment and the use of IT in business, the measurement of the services provides managers with strategic information to make a decision [11]. The mass use of IT systems and the increasing reliance of enterprises on these systems, result in the need for greater quality, reliability and safety. Large organizations created internal complex structures for operations and some activities were outsourced. On the other hand, small and medium organizations cannot maintain a similar infrastructure because it's expensive.

In recent years, opportunities for IT providers have grown. In this context, small and medium enterprises (SMEs) become an important element to offer IT services [42], the same situation happens in very small organization (e.g., IT area).

There are many definitions of the size of enterprises. A very small organization and a very small entity "is defined as a company, unit, area, department or project up to 25 people" [17]. In addition to this, the European Union is defined as a small business, including a software company, that has "less than 20 employees" and the medium-sized software company count is "between 20 and 100 employees" [40].

Some studies of service management in SMEs mention that there is a gap between the knowledge of ITSM frameworks and their implementation [12] [23] [30]. Kuller's study mentions that 52% of European SMEs know ITSM frameworks but only 10% applies a model. For some authors [12] [15] [23] [29] [30] the main problems are: the complexity of the models and the lack of knowledge and guidelines for the adoption of models.

The ITSM claims to align IT efforts with business needs and manage provision of IT services with effectiveness [5]. In recent years, process models for ITSM and their application in organizations have grown significantly. There are several models and standards that represent the best practices for ITSM, like the IT Infrastructure Library® (ITIL®2011)

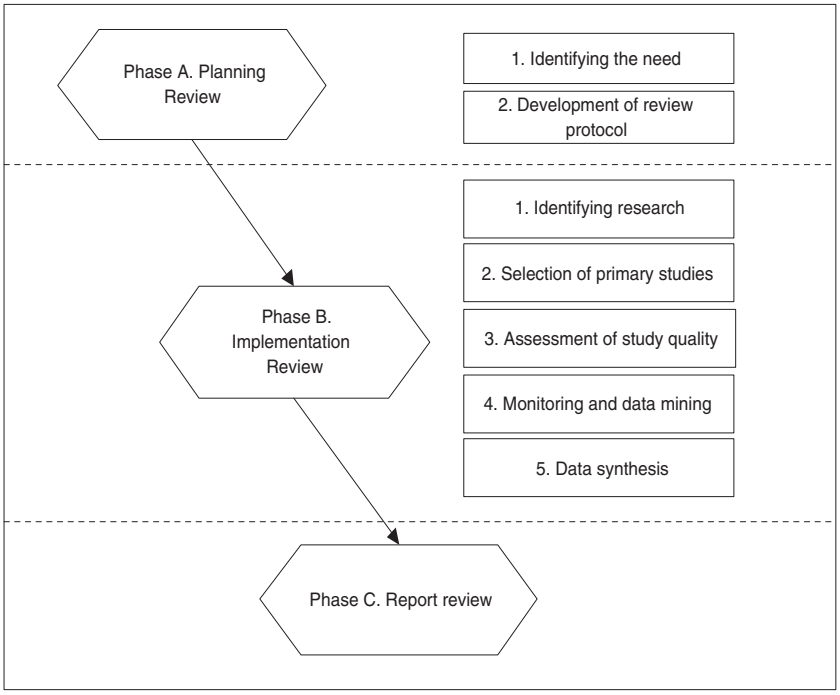

Fig. 1. Stages of systematic literature review, Kitchenham, adapted from [22].