ABSTRACT

An IT service design process is considered to be a fundamental piece of the seven key international IT Service Management (ITSM) processes frameworks (ITIL v2, ITIL v3 (and ITIL v2011), ISO 20000-4, CobIT 4.0, CMMI-SVC, MOF 4.0, and ITUP). Nevertheless, the availability of IT service design processes, few—if any—descriptive-comparative studies among them have been reported. Thus, in this paper (Part I), we address this knowledge gap. An extensive descriptive-comparative review of seven IT service design processes in aforementioned frameworks is reported. Fundamental concepts (viz., design as noun, design as verb, service, service system, IT service, IT service system, and IT service architecture design) are analyzed by using a Systems Approach. Our findings indicate that the frameworks ITIL v2, ISO/IEC 20000 and Cobit 4.0 are using weak systemic concepts, while the frameworks ITIL v3, CMMI-SVC, ITUP and MOF 4.0 are more foundationally congruent with the new service systems view. Implications for ITSM theory and practice are discussed.

Keywords: CMMI-SVC, Cobit 4.0, ISO/IEC 20000, IT Service Design, ITIL V2, ITIL V3, ITSM Processes Frameworks, ITUP, MOF 4.0, Systems Services

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INTRODUCTION

IT Service Management (ITSM) can be defined as a management system of organizational resources and capabilities for providing value to organizational customers through IT services (van Bon et al., 2007). IT Service Management has become a relevant organizational theme for IT areas in large and mid-sized organizations because it is expected that its utilization, jointly with other IT schemes of processes, deliver a more efficient and effective IT management, and ultimately a better organizational value (Johnson et al., 2007; Gallup et al., 2009).

While studies on ITSM impacts are relatively scarce (Hochstein et al., 2005; Cater-Steel & Toleman, 2006; Potgetier et al., 2006; Cater-Steel et al., 2009), the few available studies share evidences of benefits. In Hochstein et al. (2005) the findings of six cases conducted in large European companies (5) and a governmental setting (1) are reported. In all of them, the overall assessment is of positive impacts categorized as follows: a better client/service orientation with positive impacts on the quality of IT services respectively, a better efficiency of IT processes, and a better visibility of IT processes (transparency and comparability documentary issues). Cater-Steel and Toleman (2006) also reports the following positive impacts of ITSM (found in 5 cases of Australian companies): a more consistent and documented service management process (less negative surprises or omissions), less conflictive SLAs negotiations (smoother), more precise predictions of IT infrastructure warranty issues, and a better manager of incidents, changes and testing tasks. Potgetier et al. (2006) also support the notion of ITSM implementation benefits from a single case. In Cater-Steel et al.'s (2009) survey of 65 Australian corporations identified the following key benefits: an improved customer satisfaction, an improved response and resolution time, an improved IT service continuity, a clear identification of roles/responsibilities, a reduction in cost/incident, and an improved IT employee productivity.

However, in order to be realized such benefits, IT practitioners – and organizations must first select, learn, and deploy correctly an ITSM processes framework (Pollard & Cater-Steel, 2009). At present, the main seven ITSM processes frameworks are: ISO/IEC 20000 (ISO, 2005; 2010), ITIL v2 (van Bon et al., 2005), ITIL v3 (Cartlidge, 2007; van Von et al., 2007), CobIT 4.0 (ITGI, 2005), CMMI-SVC (SEI, 2010), ITUP® (EMA, 2006; Ganek & Kloeckner, 2007; IBM, 2010), and MOF® 4.0 (Microsoft, 2008). However, no single approach has achieved a generalized acceptance, which is not surprising, as there are a multitude of other contextual and situational factors that influence the choice of process and process management decisions (Clarke & O’Connor, 2012). Furthermore there have been attempts to develop a mechanism for relating process decisions and industrial contexts (Jeners et al., 2013).

Given a similar aim of these ITSM processes frameworks, it could be expected that the selection of any of them is indifferent. Nevertheless, these ITSM processes frameworks use a particular nomenclature, a particular conceptual descriptive granularity level for their descriptions, and they are non-standardized (Dougmore, 2006). Thus, ITSM implementers need to identify the core structure and characteristics of such ITSM processes frameworks at first, in order to realize a correct selection of the most suitable framework for their organization.

In this research, we are interested in the specific process of IT service design. Few, if any, descriptive-comparative studies on IT service design processes have been reported in the literature. Furthermore, we consider that for ITSM practitioners, another usual ITSM phases (Strategy, Transition, Operation, and Continual Improvement) are most known in IT settings. IT strategic methods have been used for decades in organizations. IT transition and IT operations (with or without a service approach) are also a kind of strong expertise available from a practical perspective in IT areas, and continual improvement processes areas based on well-
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