

The Design of IT Services



Manuel Mora

Autonomous University of Aguascalientes, Mexico

Jorge Marx Gomez

University of Oldenburg, Germany

Mahesh Raisinghani

Texas Woman's University, USA

Ovsei Gelman

Universidad Nacional Autonoma de Mexico, Mexico

INTRODUCTION

The modern concept of *service* has been defined as “*the application of competences for the benefit of another, meaning that service is a kind of action, performance, or promise that's exchanged for value between provider and client*” (Spohrer et al., 2007, pp. 72). This concept of *service* is highly relevant for worldwide economy due to service sectors (e.g., financial, healthcare, education, assurance, legal, engineering, and accounting among others) constitute over 70% of the total gross economic value on average per nation in OECD (IfM and IBM, 2008). This worldwide service economy has fostered the development of a Service Approach paradigm which has permeated to the Informatics discipline (Rai & Sambamurthy, 2006) through the IT Service Management (ITSM) approach. ITSM is defined as *a management system of organizational resources and capabilities for providing value to organizational customers through IT services* (van Bon et al., 2007). ITSM has become a relevant organizational theme for IT areas in large and mid-sized organizations because it is expected that its adequate utilization, jointly with other IT frameworks/schemes of processes, delivers a more efficient and effective IT management, and ultimately a better organizational value (Gallup et al., 2009).

For this aim, the most important posited ITSM process frameworks are: ISO/IEC 20000 (ISO, 2005; 2010), ITIL v3 (van Bon et al., 2007), CMMI-SVC (SEI, 2010), ITUP® (EMA, 2006; IBM, 2010), and MOF® 4.0 (Microsoft, 2008). Table 1 reports the

purpose of each process framework, an outline of phases and indicates which of them are involved with the design of IT services. Table 1 is useful to acquire a 30-mille view regarding these schemes. An ITSM practitioner can rapidly to make sense on the inherent complexity to learn and deploy any selected ITSM process framework. Thus, given that successful ITSM implementations require adequate training and staff awareness (Pollard & Cater-Steel, 2009) besides other critical success factors, potential ITSM implementers need firstly to identify the core structure and characteristics of these ITSM frameworks, in order to realize a correct selection of the most suitable for your organization. Hence, it could be expected that the selection of any ITSM process framework is indifferent. However, while they share a similar generic aim and an outline of phases and activities, they have also particular issues. The nomenclature, phase-activity structure, and granularity level used for their description are lately non-standardized (Dougmore, 2006).

In this article, we present to readers a review and comparison of IT service design processes reported in the five main aforementioned ITSM process frameworks. We do not pursue to present a detailed explanation of a particular IT service design process. Rather, our purpose is to make available a quick-guide on these IT service designs processes to ITSM professionals. Potential ITSM professionals interested in learning and implementing one of them, are referred to the specific ITSM process framework official documents. We believe that this overall review is required and provides knowledge value to ITSM professionals

Table 1. ITSM process models

ITSM Model	Purposes	Phases	IT Service Design Concerns ?
ISO/IEC 20000	<ul style="list-style-type: none"> “... enables service providers to understand how to enhance the quality of service delivered to their customers, both internal and external.” “...deliver the best possible service to meet a customer’s business needs within agreed resource levels, i.e. service that is professional, cost-effective and with the risks which are understood and managed.” 	1. Service Management System General Processes	
		2. Design and Transition of New/Changed Services Processes	YES
		3. Service Delivery Processes	
		4. Control Processes	
		5. Resolution Processes	
		6. Relationships Process	
ITIL v3	<ul style="list-style-type: none"> “... to provide services to business customers that are fit for purpose, stable and so reliable that the business views them as a trusted utility.” “...is to ensure that the IT services are aligned to the business needs and actively support them.” to provide“...a set of specialized organizational capabilities for providing value to customers in the form of services.” 	1. Service Strategy	
		2. Service Design	YES
		3. Service Transition	
		4. Service Operation	
		5. Continual Service Improvement	
CMMI-SVC	<ul style="list-style-type: none"> “... provides guidance for applying CMMI best practices in a service provider organization. Best practices in the model focus on activities for providing quality services to customers and end users.” “... covers the activities required to establish, deliver, and manage services.” 	1. Project and Work Management	
		2. Support	
		3. Process Management	
		4. Service Establishment and Delivery	YES
ITUP	<ul style="list-style-type: none"> “...providing information technology (IT) services from a customer’s perspective.” “management of IT services and infrastructure with the same kinds of quality control that enterprises strive to use for all business processes.” 	1. Governance and Management System	
		2. IT Customer Relationships	
		3. IT Direction	
		4. Realization	YES
		5. IT Transition	
		6. IT Operations	
		7. IT Resilience	
		8. IT Administration	
MOF 4.0	<ul style="list-style-type: none"> “...to provide guidance to IT organizations to help them create, operate, and support IT services while ensuring that the investment in IT delivers expected business value at an acceptable level of risk..” “to create an environment where business and IT can work together toward operational maturity, using a proactive model that defines processes and standard procedures to gain efficiency and effectiveness.” 	1. Plan	
		2. Deliver	YES
		3. Operate	
		4. Manage	

because organizes vast and complex information in few pages. In summary this article must be considered an initial introduction to the IT service design processes reported in the main five ITSM process frameworks.

BACKGROUND

The concepts of service and IT service have been defined in different modes by the most recognized ITSM process frameworks (ITIL v3, ISO/IEC 20000,

8 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

www.igi-global.com/chapter/the-design-of-it-services/112843

Related Content

Modeling Uncertainty with Interval Valued Fuzzy Numbers: Case Study in Risk Assessment

Palash Dutta (2018). *International Journal of Information Technologies and Systems Approach* (pp. 1-17).

www.irma-international.org/article/modeling-uncertainty-with-interval-valued-fuzzy-numbers/204600

An Analytics Architecture for Procurement

Sherif Barrad, Stéphane Gagnon and Raul Valverde (2020). *International Journal of Information Technologies and Systems Approach* (pp. 73-98).

www.irma-international.org/article/an-analytics-architecture-for-procurement/252829

Advanced Recommender Systems

Young Park (2018). *Encyclopedia of Information Science and Technology, Fourth Edition* (pp. 1735-1745).

www.irma-international.org/chapter/advanced-recommender-systems/183890

The Prospect of Post-Adoption Satisfaction and the Digital Gender Divide

Daniel Adjinand Hannah Muat (2019). *Gender Gaps and the Social Inclusion Movement in ICT* (pp. 192-211).

www.irma-international.org/chapter/the-prospect-of-post-adoption-satisfaction-and-the-digital-gender-divide/218445

Indicators of Information and Communication Technology

Gulnara Abdrakhmanova, Leonid Gokhberg and Alexander Sokolov (2018). *Encyclopedia of Information Science and Technology, Fourth Edition* (pp. 4704-4714).

www.irma-international.org/chapter/indicators-of-information-and-communication-technology/184176