Chapter 9

Process Assessment as a Means to Improve Quality in IT Services

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1. ABSTRACT

The main objective of this chapter is to present how a formal and standard process assessment - thanks to its repeatable approach and its comparable results - can be an invaluable contribution for improving the IT services in a continual way. This chapter introduces ISO/IEC 15504, the international standard for process assessment. As a generic process assessment framework, ISO/IEC 15504 can be used for determining the capability of processes of any domain. The authors of this chapter have applied this framework in the field of IT Service Management. Their works (described below) have enabled to develop the TIPA® methodology, based on ITIL® version 2. The chapter then discusses the impact that assessments can have on the quality of the assessed processes and, as a consequence, on the services supported by these processes. The chapter finishes by presenting an example of the results and the lessons learnt as perceived by adopters of TIPA.

2. INTRODUCTION

The IT Service Management (ITSM) frameworks lay a series of recommendations, good practices, or guidelines to be followed by IT organizations in order to improve the quality of their services.

Moreover, these frameworks rely on quality management principles (like the ISO 9000 principles supporting quality management systems) and on the formalization of the processes used for managing the IT infrastructure and services (i.e. processes described in the ISO/IEC 20000 standard). However, when trying to apply an IT
service management framework, IT managers and consultants are often challenged with the fact that they have a list of goals or requirements to be achieved but do not know how to achieve them. In other words, they know the ‘what to do’ but not the “how to do”. It is true that such means may change from organization to organization according to the business context. However for the consultant or manager trying to set up a service improvement project, it is important to have a methodological and systematic approach to reach the goals previously mentioned.

Three phases can be roughly identified when trying to apply an IT service management framework to an organization:

1. Knowing where the organization is with regards to the selected framework.
2. Setting up of the project to implement the changes that will bring the organization to work according to the selected framework, taking account the business context.
3. Implementing the previously mentioned project to achieve the targeted improvements.

Each phase mentioned above is dependent on the previous one. Thus, in order to succeed in the improvement project, the project has to be correctly defined, and in order to get the project correctly defined, we need to know accurately what processes need to be improved (i.e. what their current levels of maturity, and what the targets are). This chapter addresses phase 1 and the first steps of phase 2.

The purpose of this chapter is to allow readers to perform process assessment for ITSM frameworks like IT Infrastructure Library version 3 (ITIL® v3) and the ISO/IEC 20000 standard. We will also discuss how such assessments can influence the quality of IT services.

This chapter assumes that the best way to assure that ITSM assessments are impartial and repeatable is to perform them in accordance to international standards. In 2003, the ISO/IEC 15504 standard was revised and became a generic process assessment standard addressing effectively this issue. Public Research Center (known by its acronym in French language CRP) Henri Tudor has used this process assessment standard to build compliant process assessment models based on the ITSM best practices in order to develop a common approach for ITSM process assessment and improvement, as shown in section 3.

Initially based on ITIL v2, the AIDA research project (AIDA stands for Assessment and Improvement integrated Approach) broadened its scope in 2009 to support ITSM process assessments based on either the ISO/IEC 20000 standard or ITIL v3. Since then, AIDA was renamed TIPA®: Tudor’s ITSM Process Assessment, presented in section 4.

Section 5 discusses how the improvement cycle, set up from process assessment results, impacts the assessed organization regarding quality of service and customer satisfaction. It presents the impacts of such improvement cycle on the processes and on the metrics. Additionally it is discussed how to estimate the Return on Investment of such a project, which is always useful to justify when selling the idea and the results to the management of the organization.

Finally, the section 6 will show an example of an industry assessment that was conducted during the experimentation phase of the AIDA project, which gave birth to the TIPA methodology.

3. PRESENTATION OF THE ISO/IEC 15504 STANDARD

3.1 History: From SPICE to ISO/IEC 15504

The origins of process management come from the publication of Watts Humphrey’s book “Managing the Software Process” and the first assessment questionnaire by the Software Engineering Institute (SEI). In 1991, the International Organization for Standardization (ISO) raised an urgent need for