Chapter 8
Quality Assurance of the Collaborative Web Based System

Knowledge must come through action; you can have no test which is not fanciful, save by trial.

Sophocles (496 BC - 406 BC)

CHAPTER KEY POINTS

- Presents the importance of quality management and quality assurance in the context of collaborative business.
- Argues for applying the principles of quality assurance to the information architecture (especially service oriented architecture) for collaborative business.
- Discusses the importance of quality assurance and quality control (testing) for the ***collaborative web based system (CWBS)***
- Discusses the testing strategy and processes in solution space of ***CWBS***.
- Outlines the details of test data that should be prepared and used in the testing of ***CWBS***.
- Discusses the execution of tests and collation of results.

INTRODUCTION

This chapter discusses the important issues related to quality management, quality assurance and testing of information systems that are used by collaborative business. The discussion thus far in this book has been in the area of collaborative business models, technologies for collaboration and their effect on business organization. Each of these areas of collaborative business can be, and should be, subjected to quality assurance and testing. This chapter discusses how these important aspects of quality can be applied to a collaborative business. The overall strategic approach to quality, which starts with quality management, is also explained. This chapter further discusses the testing strategy, testing processes and the test data required in the solution space of **CWBS.** The practical checklists approach to enhance the quality of software model created in Chapter 6 using the Business Process Modeling Notation (BPMN) goes a long way in ensuring a smooth transition of the business to a collaborative business.

QUALITY DIMENSIONS IN COLLABORATIVE SYSTEMS

The entire quality domain, as applicable to collaborative systems, can be made up of three significant dimensions: the management, the assurance and the control aspect of quality. These quality dimensions, as shown in Figure 1, range from being strategic (more abstract) to tactical (more concrete).

Quality Management (QM) provides the strategic basis for quality for the transition of the business to collaborative business. Quality management starts during the planning stages of the overall transition project and it can bring in both technical and management aspects of quality in the project. For example, from a management perspective, the concepts in Lean systems (Littlefield, 2008) and Six-sigma (Pyzdek, 2003) provide important value in ensuring that the collaborative business processes are modeled and executed with minimum or no wastages. From a technical perspective, there are opportunities to bring in capability maturity models (www.sei.cmu.edu) and related process issues in improving the technical quality of the services and applications used in the project. Documenting and studying the validity of organization-wide policies and procedures that can be implemented internally, and policies from external organization are all a part of this strategic approach to quality.

Quality assurance (QA) is more specifically focused on the collaborative processes, their modeling, the quality of the models themselves and ensuring the prevention of errors from a technical angle. The capability maturity model, mentioned above, can be implemented in assuring the quality of the collaborative system. QA

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