

COTS Acquisition: Getting a Good Contract

Shadia Elgazzar, Anatol Kark, Erik Putrycz, and Mark Vigder

National Research Council of Canada,
Institute for Information Technology, Ottawa, Canada K1A 0R6
{Shadia.Elgazzar, Anatol.Kark, Erik.Putrycz,
Mark.Vigder}@nrc.ca

Abstract. Organizations that are acquiring a COTS based system must adapt many of their acquisition process activities that are traditionally used for acquiring non-COTS based systems. Much of this adaptation becomes quite difficult within government environments where the process is often constrained by government rules and regulations. This paper provides an experience report on COTS based acquisition for a government agency during the early stages of the process. The impact on requirements engineering and the steps for developing the Request For Proposal (RFP) and evaluating the proposals are outlined. The parties involved in the acquisition process are identified, and their relationship within a project governance structure are discussed. The final discussion provides some guidance as to how the early stages of the acquisition process should be adapted to minimize risk through the project.

1 Introduction

Acquisition agencies responsible for acquiring software systems typically use a process that involves creating a Request for Proposal (RFP), distributing the request to potential developers, and receiving the resulting proposals. Once the proposals have been received, the acquisition agency can evaluate the proposals according to a predetermined set of criteria and award a contract to the winning bidder.

Many of the activities of this process are similar whether the system being acquired is completely custom-built or a COTS-based system. However, when the organization is specifically targeting a COTS-based solution, there are differences in the approach that must be used.

This paper provides an experience report on an acquisition process with which we are currently involved and which is targeted towards a COTS-based acquisition. The activities described in this paper are those involved in developing the RFP. In particular, this paper will describe the overall strategy used to develop the RFP, including the requirements, and show the impact of targeting a COTS-based system.

The authors intend to monitor the project progress and report on the upcoming results.

2 Background

The acquisition discussed in this paper is a major government acquisition for a complex information processing system which will serve about 600 000 accounts accessed by different stakeholders.

Given the complexity of the business rules involved in the system, a COTS-based solution is more flexible (in terms of support, maintenance) than a custom-build solution.

The system consists of

- Several core functions relating to legislation, contracts, privacy and security; and
- Support functions: users services, users communications, periodic reporting, employer services and sponsor services.

Prior to issuing the RFP, a study has been commissioned to explore alternatives for modernizing the applications. The study considered modernizing and enhancing the existing systems or replacing them with a COTS product. The alternatives were evaluated against a large set of criteria (implementation and operation costs, business and technical risks, time, service and several types of impacts). The resulting evaluation indicated a preference to replace the legacy system based mainly on cost and service.

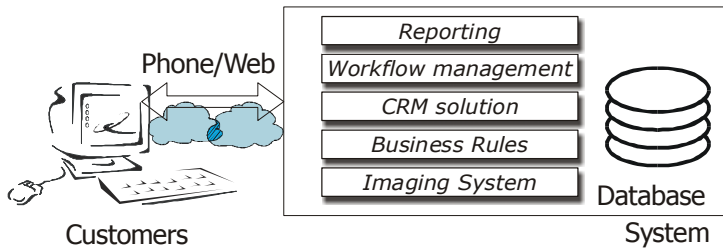


Fig. 1. Description of the system architecture

The new system will consist of one or several COTS products that need to cover these main requirements (Figure 1):

- A large set of business rules (with many exceptions and special processing)
- Imaging functions to transform physical media to digital format and permit storage and retrieval, integrity, and annotation of images.
- Workflow functions: to track physical and electronic files;
- Reporting functions; and
- Customer-Relationship Management functions for communications between the stakeholders involved.

Most of these COTS products are “database-centric” and rely on existing databases for storing and accessing all data. As a consequence, many technical requirements