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# Implementing Automated Testing

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## EXECUTIVE SUMMARY

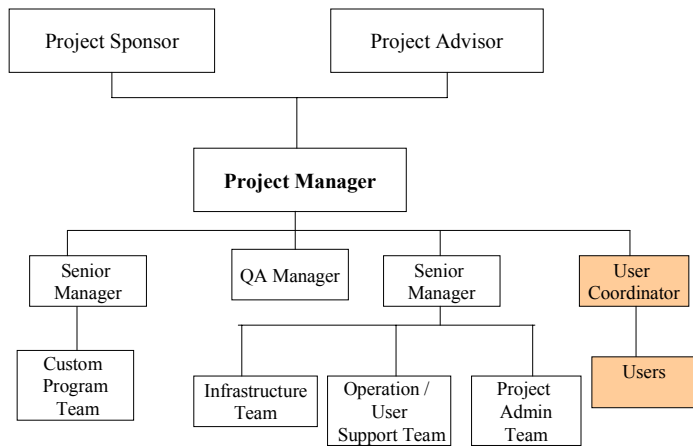
This study concerns a project that was conducted in an IT organization to implement automated testing. The goal of the project was to use test tools to automate user acceptance testing so that the testing cycle can be reduced and testing effort lowered. We shall review the progress of the project from its conception to its completion. We shall focus on what can go wrong and identify the key factors that contribute to the “near failure” of the project. We shall learn that the success and failure of a project depends heavily on technical and non-technical problems. The case study illustrates challenges related to adoption of software tools.

## BACKGROUND

For purpose of confidentiality, the company discussed here will be anonymously referred to as “ITX Company.”

ITX Company is an organization in charge of monitoring the retirement funds set up by various organizations in Hong Kong. In early 1999, ITX Company started a project to computerize its business operations. The *Information Management System (IMS)* includes functionalities for approval of various provident fund providers, enforcement of enrollment of members and organizations, and management-type functions like enquiries, complaints, reports, and statistics.

Figure 1: Organizational Structure



The organizational structure of ITX Company is shown in *Figure 1*. Its IT department consists of 25 staff, whose main duties include maintenance of the in-house computer system and automation of various office functions. The *project sponsor* of IMS was the managing director of the company. *Advisors* of the project included three directors of ITX Company. The *project manager* was the director of IT. She is supported by two senior managers. The *quality assurance (QA) manager* reports directly to the IT director on all matters related to project and process quality. He would recommend development practices and tools to the IT team.

Another department, the customer service department, consists of 40 staff, who will use IMS to run their daily operations. These users are mainly clerical staff, without any technical knowledge of software development or IT. This department is headed by the *user coordinator*.

IMS development was outsourced to a well-known international consultancy firm (contractor). The effort required for this system was planned to be 60 person-years, spanning more than 20 months. The system would be released in two phases, as shown in *Table 1*. Most key functions would be delivered in phase 1.

Table 1: Development Plan

Phase	Key Functions	Completion Date
1	<i>Approval of funds and schemes</i> <i>Enrollment enforcement</i> <i>Compliance enforcement</i> <i>Enquiries and complaints</i> <i>Reports and statistics</i> <i>Records maintenance</i> <i>System administration</i>	June 2000
2	<i>Public access</i> Enhancement of <i>Approval</i> function Enhancement of <i>Enrollment enforcement</i> function Enhancement of <i>Records maintenance</i> function	March 2001

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