



## Chapter XIV

# A Case of Information Systems Pre-Implementation Failure: Pitfalls of Overlooking the Key Stakeholders' Interests

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### EXECUTIVE SUMMARY

*This case study examines an often overlooked context of information system failures, that of pre-implementation failure. It focuses on an Information Systems Development (ISD) project at a large public university that failed even before implementation could get under way. Specifically, it describes the vendor selection process of a proposed computerized maintenance management system. While the managers in charge of the project took great care to avoid commonly discussed types of information systems failures by emphasizing user involvement and trying to select the best possible system they could afford, non-functional requirements, procedures as outlined in the RFP, and the roles of relevant but relatively "hidden" decision makers during the pre-implementation stage of the project were overlooked. This led to the termination of the project after an appeal was lodged by a software vendor whose product had not been selected for implementation.*

## ORGANIZATIONAL BACKGROUND

UMaint is the maintenance department of a large public university (BigU<sup>1</sup>) in the northwest of the United States. Currently, about 18,000 students are enrolled at BigU, a large proportion of whom reside on-campus. This makes BigU's main campus one of the largest residential campuses in the Pacific Northwest. In addition to the student body, about 7,000 faculty and staff work on campus.

UMaint's employees are responsible for the maintenance of BigU, the campus area of which encompasses more than 400 buildings and over 1,930 acres of land. In a typical year, UMaint handles approximately 60,000 service calls, and schedules and completes 70,000 preventive maintenance projects for 69,000 pieces of equipment.

The primary departments of UMaint are Architectural, Engineering, and Construction Services, Utility Services, Custodial Services, and Maintenance Services. These departments are supported by UMaint's Administrative Services. Architectural, Engineering, and Construction Services are involved in all new construction projects as well as all modifications to existing facilities. The Utility Services department operates the university's power plant and is responsible for providing utilities such as steam, electricity, and water. Custodial Services, UMaint's largest department, handles the custodial work for all buildings and public areas on campus. Maintenance Services is divided into environmental operations, life safety and electronics, plant maintenance and repair, and operations, and is responsible for the upkeep of the university's buildings and facilities.

The Administrative Services department encompasses units such as operational accounting, personnel and payroll, storeroom, plant services (including motor pool, heavy equipment, trucking and waste, and incinerator operations), and management information systems. This department handles all supporting activities needed to coordinate and facilitate UMaint's primary activities. Overall, more than 450 employees work for UMaint in order to support the university's operations. Please refer to Appendix A for the organizational chart of UMaint.

## SETTING THE STAGE

The major challenges faced by UMaint arose from the state's tight budget situation and increased competition from outside service suppliers. In order to deal with these challenges, UMaint had to constantly strive to reduce costs and streamline operations. One major obstacle to providing services efficiently and effectively, as is the case in many universities and even business organizations, was UMaint's outdated information systems infrastructure.

This infrastructure consisted primarily of an outdated mainframe, in which the applications were written in Natural and the databases were hosted in ADABAS. Administrative functions were conducted using form-based systems that had been developed in-house. Over the years, the systems had grown with the needs of UMaint. In the absence of an information systems (IS) department that was internal (or dedicated) to the needs of UMaint, the growth of the systems in this area has been rather uncontrolled, leading to a variety of different applications, the majority of which were incompatible with one another. In order to perform accounting, inventory management,

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