Chapter XIII

Challenges of Complex Information Technology Projects:
The MAC Initiative

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Executive Summary

Although painstaking planning usually precedes all large IT development efforts, 80% of new systems are delivered late (if ever) and over budget, frequently with functionality falling short of contract. This case study provides a detailed account of an ill-fated initiative to centrally plan and procure, with the aim to homogenize requirements, an integrated applications suite for a number of British higher education institutions. It is argued that because systems are so deeply embedded in operations and

organization and, as you cannot possibly foresee and therefore plan for environmental discontinuities, high-risk, 'big-bang' approaches to information systems planning and development must be avoided. In this context the case illustrates the level of complexity that unpredictable change can bring to an information technology project that aims to establish the 'organizationally generic' and the destabilizing effects it has on the network of the project's stakeholders.

Organizational Background

Located on the western edge of London, Isambard University received its Royal Charter[1] in 1966 and since then enjoys a considerable reputation for research and teaching in the science and technology fields in which it specializes. Close connections with the public sector, industry and commerce characterize Isambard University. These links were built through a commitment to the thin sandwich[2] undergraduate degrees which made the University's graduates among the most employable in the country and, by its distinctive competence in applied and strategic research. As a direct result, Isambard University is popular with undergraduates, while its earnings from contract research per member of academic staff are significantly above the national average in most of the cost centers in which it is active.

In the beginning of the 1990s the Higher Education (HE) sector in the UK started to experience dramatic changes. The Secretary of State invited comment on the scale, purpose and structure of HE, and the Government made its views clear through the introduction of numerous policy changes affecting universities' funding, teaching and research. Those were followed by the merger of the Ministries of Education and Employment, and the move of the Office of Science and Technology to the Ministry of Trade and Industry, signifying an increased requirement for public spending on HE to have a demonstrable effect on employment and national economic growth. For example, in November 1995, a 7% overall reduction in universities funding for 1996 was announced, including a 31% fall in capital funding, meaning that over a six-year period the unit of funding for teaching each student would have had to be reduced by 28%. Direct financial support for students was also reduced. The previous students' allowance scheme was terminated, with the balance between student grants and loans moving even more deterministically towards

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