

seven FACTORS

in the Failure of Large-Scale IT-based Systems

The Standish Report consistently shows a high failure rate for large-scale information technology-based systems, with the rate increasing as the systems get larger. These failures are not simply technology failures, but have a great deal to do with the interaction between the people and the computer system. Here are seven areas to watch.

1. Bad ideas

Bad ideas include: automating the past, technology for technology's sake, or project savings based on what is needed to sell the project. Examine proposed projects carefully to make sure the business will be better off if the project succeeds.

2. Corporate immune systems

Good information systems projects will change the way work is done. This will lead to subtle undermining of the project by people who are affected and don't want to change. Involve end users. Understand as well as possible the cultural implications of a project and deal creatively with the people issues of the project from the start.

3. Lack of shared ownership (between business elements and IT)

Too many information systems projects are either run by the IT department without business involvement, or by the business without strong leadership from IT. The best of these projects change the way the company does business. Shared ownership from the beginning, dealing with the business and technology issues, is a requirement. These are not just IT projects.

4. Poor requirements process

It used to be that requirements for a computer system were gathered, prioritized, and then implemented. This is tough enough with multiple stakeholders. When using commercial off-the-shelf software for a large-scale system, it is critical that the software be used as-is, thus there must be compromise between the requirements and the available capability.

5. Lack of systems thinking

A new information system can offer great benefit to a particular department or process, but it usually interacts with other departments or processes. These interactions can produce surprising and costly "unintended consequences." Never start a project without spending time trying to think through possible unintended consequences.

6. Fundamental complexity

Complex information systems are made more complex by the changing underlying technology, the changing versions of software, and the high likelihood that once the system is implemented it will need to be changed to do new business processes. Avoid unnecessary complexity in features; keep it as simple as possible. Look for modular solution strategies.

7. Project management weakness

Managing any large-scale project is difficult. In addition to the first six challenges, a large-scale information system generally has multiple stakeholders with conflicting demands. Managing such a project requires relentless focus on the end objective, and the authority to make tough compromises.