



MSS
International

Risk and Migrations - A White Paper

Background

Risks in IT systems and projects are more important in today's environment than ever. You only have to look at a few headlines, "RBS systems hit by second major outage in a year" to understand this. And while not all risks are quantifiable in their effects we are aware that the consequences of failure can be very expensive.

"The problems proved costly for the company: RBS set aside a total of £175m to compensate customers impacted by the outage").

This shows that there are risks in doing nothing just as there are risks in moving forward into newer technology. The doing nothing option is often actually a drifting backwards option as the pool of the brightest IT staff skilled in the older technologies diminishes through natural attrition.

MSS is very aware of risk in IT projects and aims to reduce this to an absolute minimum in all projects we undertake.



Technology Choices

It used to be said that the mainframe was the safest, most robust means of carrying on business and immune from the problems of commodity servers. The outages referred to above occurred in the mainframe IT systems of one of the biggest banks in the UK.

An object view of technology choice would take account of available skills to operate and maintain the systems, the points of failure that can be eliminated in the hardware and networking, the redundancy that can be built in to the solution. MSS would always advise configuration of a replacement hardware/software platform with these issues in mind and the optimum level of redundancy built in. Our migration software is compatible with all major technology in this area, e.g. virtualization, load balancing and clustering.

In terms of a target software system, this is primarily a matter for our customers but, with risk in mind, we would lean toward small steps. In a recent project, the final target for a Cobol migration was to be Java. However, because of the scale of the migration (very large, very complex), it was decided to move first to MicroFocus Cobol.



Vendors

MSS has performed many large and complicated migrations and is happy to offer references from any of these. Alternative migration partners, hardware and software vendors should be chosen on the same basis considering local support availability, history of supplying similar solutions and risk-awareness. Ideally POC/ benchmark activity would be conducted with all of the contenders to determine the best.



Project risks

In setting up a migration project MSS would always consider risk from the first moment. During the planning and preparation phase a risk register is always established. There may be particular risks for an individual project – for example to do with the local availability of specialist support. There will usually be common risks such as the performance of the chosen replacement hardware platform.

The risk register will be maintained throughout the project and will be a regular item on oversight, e.g. steering committee, meetings. The risks can be simply represented by a matrix (usually an Excel spreadsheet) with columns representing risk, likelihood of occurrence, impact and mitigation. Each can be given a status, for example a background color of red amber or green, based on the current evaluation of how well controlled the risk is.

An example risk matrix might include the following:

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Risk	Probability of Occurring	Impact if Occurs	Mitigation
Unacceptable performance of online system	Low	Online response time SLA's will not be met	Renegotiate SLA's; improve network latency; tune Oracle database access
Unable to identify all the configuration items within the scope of the project	Low	Functionality unavailable	Verify that the customer has good source control and configuration management procedure
Scope creep - Introduce new or untested functionality into the migration scope	Medium	Project deadlines not met/extended	Strict governance and change control
Insufficient test cases are available to provide a sufficient level of confidence	High	Project deadlines not met/extended	Use transaction capture and replay to exercise the online system more fully

Cont.

Risk	Probability of Occurring	Impact if Occurs	Mitigation
The window for cutover is too small.	Medium	Cut-over failure	Use incremental database population and catch up in a short time, e.g. last audit trail file
Lack of testing resources extends the testing timeframe	Medium	Project deadlines not met/extended	Thorough planning at the early stages and a testing pilot exercise