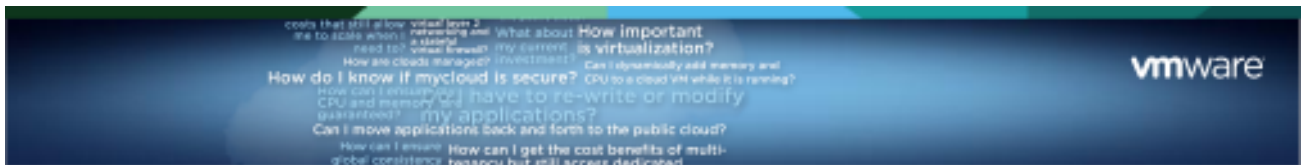


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## Five ways to stop your IT projects spiralling out of control and overbudget

One in six IT projects is a "black swan", Oxford Uni study finds - and here's how to spot one

By Natasha Lomas, 22 August 2011 16:26

### NEWS



One in six IT projects is a 'black swan' - where costs spiral out of controlCreative Commons: dicktay2000

A whopping one in six tech projects spirals out of control, one of the largest ever global studies of IT projects has found.

With budget overruns hitting an average of 200 per cent in real terms, the research found the IT sector is two to three times more likely to have projects where costs balloon than building and construction companies dealing with similarly large infrastructure schemes.

IT projects are also 20 times more likely to run out of control than standard risk management models predict - the researchers dub these ticking time-bombs 'black swans': "where rare, unexpected events of huge proportions occurred where the risks should have been more obvious from the start".

The study of 1,500 global IT projects was conducted by researchers at Oxford University for the Saïd Business School's BT Centre for Major Programme Management in collaboration with management consultants McKinsey.

The risk of tech projects going rogue is down to IT being harder to manage than other business disciplines, according to Bent Flyvbjerg, BT professor and founding chair of major programme management at Oxford University. "Our theory is this is because IT projects are less tangible, they are also more complex," he told silicon.com.

## The role of management perceptions

Historically, IT has suffered at the hands of senior management who did not understand its strategic importance, Flyvbjerg said, considering it mere utility and 'parking' responsibility for IT further down the organisation - explaining some of the risk attached to IT.

"Fortunately that is changing," he added. "Top management is becoming more and more aware quickly that IT is really important - it should not be managed at a low level in the organisation but at the top level. Top management [has] begun to realise that, in many cases, their whole business is dependent on IT."

The research also found the risk of a technology-induced tailspin is the same across public and private sector.

"They are equally bad," said Flyvbjerg. "The difference is that the public sector gets much more media attention because you have the Freedom of Information Act."

However, the risk of...

...bankruptcy because of an IT project is not spread equally: "We haven't found a public agency that went out of business because of an IT project - whereas we found several in the private sector," he added.

Previous research conducted into IT projects missed the prevalence of these destructive black swans by focusing on average cost overruns, according to Flyvbjerg - thereby ironing out the significant variation in the data.

"If you just look at the average performance [the black swans] are hidden - it looks OK, you have around a 30 per cent cost overrun," he said, adding: "[But] we realised it's not the average performance that matters, it's actually the deviation from the average. You have this very large group... where there's a bulk of projects - one out of six - that are completely out of control."

So how can managers avoid an IT project going rogue and turning into a black swan? According to Flyvbjerg, there are five key considerations to help CIOs keep IT projects under control.

### 1. Benchmark your project

Benchmarking an IT project is essential to ensure an organisation can assess whether the project is good or bad, Flyvbjerg noted - although the research found organisations frequently fail to benchmark tech projects.

Without benchmarking they have no way of knowing the average cost overrun or the variance, he told silicon.com.

"It's a statistical thing but it's actually the most important thing. Once organisations have taken that step they get into all the other stuff because they begin to understand what's going on."

### 2. De-bias the business case

The research found the business cases for the "vast majority" of IT projects are "highly biased", according to Flyvbjerg.

"Costs are underestimated, schedules are underestimated, and benefits are overestimated," he said. "If you have all these biases in the business case you're going to make the wrong decisions - that's simple. If you get misinformation in the business case instead of information you're going to make the wrong decisions," Flyvbjerg added.

Flyvbjerg and his team have developed tools to de-bias businesses cases, based on analysis of the empirical data gleaned from the study of 1,500 IT projects, which can correct biased schedules, costs and benefits.

### 3. Reduce complexity

Flyvbjerg said organisations often fall in the trap of trying to reinvent the wheel where IT is concerned - developing a new product rather than...

...taking something off the shelf.

"This is a very engineering-driven sector. The engineers want to have fun and it's not fun to sell something that is a standard, off-the-shelf product - it's much more fun to develop something new and flashy," he said.

"Standard products reduce complexity," Flyvbjerg added.

Another way to reduce complexity, and hopefully keep the black swans at bay, is to break IT projects down into manageable chunks - and use modular or agile approaches to IT project management, according to Flyvbjerg.



IT projects are more likely to go rogue if they take longer than 30 months - so watch the clock  
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#### 4. Reduce size

The key factor to consider in keeping a project from spinning out of control is its duration, according to Flyvbjerg. "We found that it's much more significant how long a project is compared to how much it costs," he said.

Limiting the length of a project so that it's done and dusted in less than 30 months can significantly reduce the risk of it going rogue, with projects that exceed this threshold open organisations to a greater degree of unpredictability.

"The bigger window you have on the future, the more you expose yourself," Flyvbjerg noted. "The more you reduce that window, the less risk you'll have."

"If you go beyond 30 months your risk of becoming an out of control IT project is much larger than if you can keep the implementation phase of the project under 30 months... When you're designing IT projects you should structure them into a modular way where each module is fairly independent of each other and can be implemented in less than 30 months," he added.

#### 5. Find a master builder

Avoiding a spectacular IT failure means finding a "master builder" to oversee your project - that is a person with a proven track record of being able to deliver an IT project on time, budget and with the promised benefits, said Flyvbjerg.

"There are too many people out there who haven't tried doing these things before and if you hire somebody like that, inexperienced, with no proven track record, well they're going to be cutting their teeth on your project and

that's expensive," he noted.

"You want to get the master builders instead, and the master builders know all the earlier stuff - they know how to benchmark, they know how to de-bias, they know how to reduce complexity, reduce size and use agile and modular systems and so on."

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