

## Performance and Scalability Issues — Significant source of project failures?

---

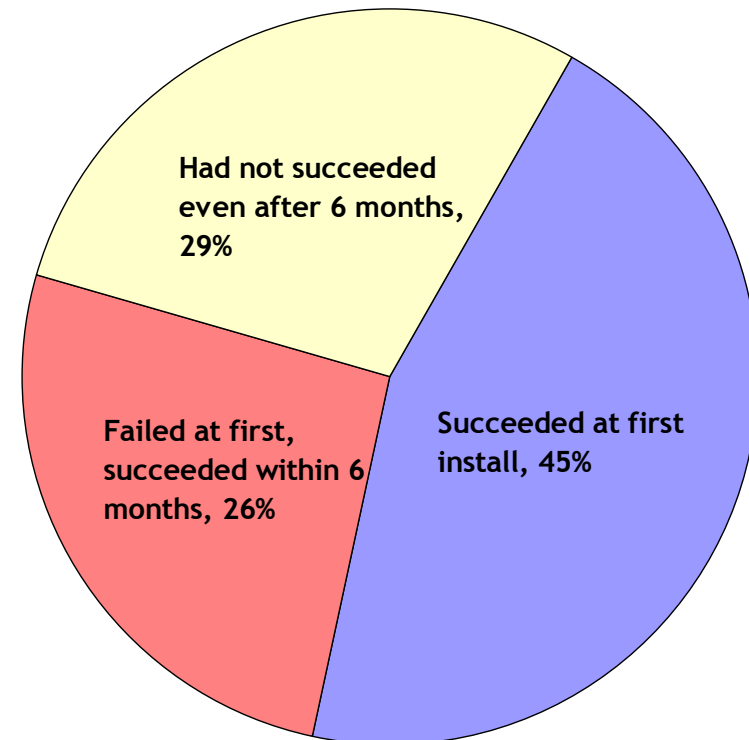
October, 2008

# Summary of IT Projects

- Goal:
  - Understand the impact of performance and scalability issues on Software Projects
  
- Method:
  - Survey a number of relevant member groups in LinkedIn
    - Received 20 responses, describing a total of 104 projects
  
- Findings
  - Summary results for 104 projects shown on the next page
  - Each respondent provided detailed information on one project
    - An analysis of 20 projects is presented
  - Of the 20 projects, 6 represented large (> \$1M) projects.
    - The responses for these 6 large project are presented

# Summary of all projects

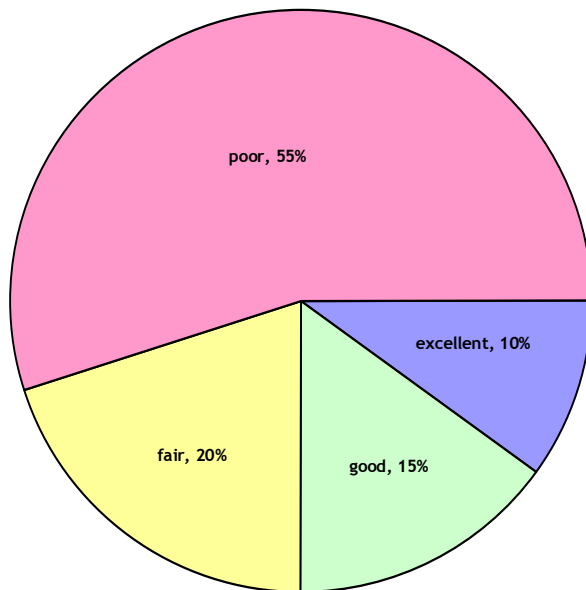
- 55% of the projects did not meet their goals at first install
- 29% of the projects had not succeeded even after 6 months
- (26% of the projects were rectified within 6 months)
- Secondary Conclusion<sup>†</sup>: Larger projects are more likely to miss their goals and take longer to rectify
  - In dollar-weighted terms, the failure rates were 67% and 48% respectively



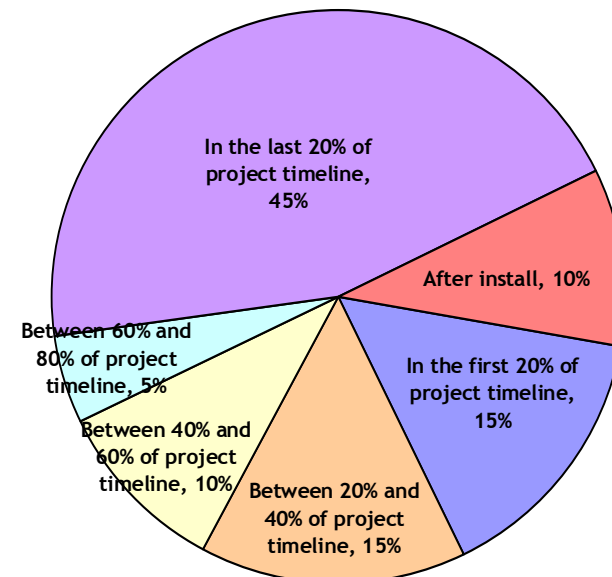
- † This conclusion is inferential: it is based on the (reasonable) assumption that the project a respondent provided details for was representative of all projects they worked on.

# Detailed analysis of 20 projects

- Quality of Requirements a factor
  - 75% of the projects reported poor or fair quality in their requirements

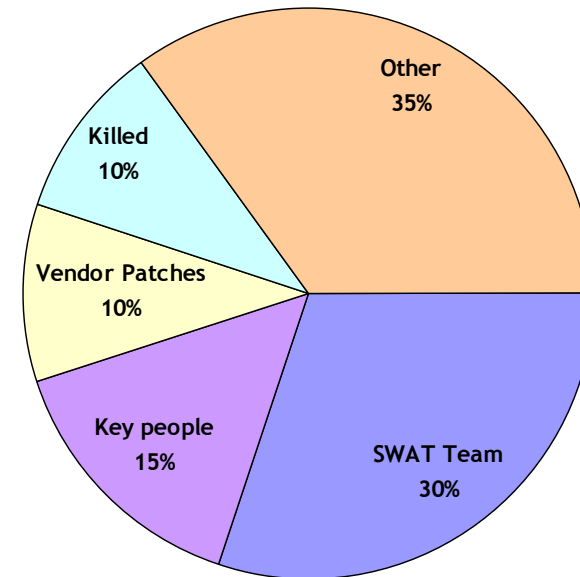


- Stage of Problem Discovery
  - For 45% of the projects, problems were found just prior to install
  - For 10% of the projects, problems were found after the install



# Detailed analysis of 20 projects, pg 2

- A SWAT team to fix problems was the most common response
  - Working nights and weekends to solve the problems
  - Making changes, rerunning tests
  - Some teams worked out a process of making rapid changes and rerunning tests
  
- Reliance on key people with a deep technical knowledge
  
- Vendor products had to be patched
  
- Other strategies included
  - Code refactoring,
  - Additional hardware,
  - Requirement clarification (to accept what had been developed)



- In 10% of the cases, the projects were killed,
  - One was based on a vendor product and was killed in favor of internal development
  - One was internally developed and was killed in favor of a vendor product

# Detailed responses for large projects

- The survey responses for the 6 largest projects (cost > \$1M) are shown below

Rqmnt Quality	Discovery	Cost	Disposition	Industry
fair	In the last 20% of project timeline	\$1M- \$5M	Move off of the vendor product and develop one in-house.	Management Consulting Services
poor	In the last 20% of project timeline	\$1M- \$5M	Clarification of the actual requirements for ad-hoc queries. Note that this was a non-technical, business decision.	Computer Software
good	In the last 20% of project timeline	\$1M- \$5M	Patches from the vendor	Computer/IT Services
good	In the last 20% of project timeline	\$15M- \$30M	Actually listening to the performance management team and taking our recommendations into consideration.	Computer/IT Services
poor	Between 60% and 80% of project timeline	> \$30M	An intensive and expensive multi-vendor triage effort	Computer/IT Services
poor	After install	> \$30M	It remains unsolved - the usage of the platform remains limited	Financial Services

# Survey Methods

- The survey was sent out to 4 LinkedIn groups:
  - Chief Information Officer (CIO) Network (8 responses (0.2% response))
  - Boston Tech Professionals Network (2 responses (0.3%))
  - Performance Specialists Network (9 responses (1.5%))
  - Computer Measurement Group (1 response (1.1%))
  - Methodology note:
    - The survey response rates appear low until one considers the medium: questions to these LinkedIn groups typically yield small response rates - *about 1/2 what we experienced*. The first two groups are more diverse in their membership in terms of their interests than the last 2, resulting in lower response rates.
    - The higher response rate for this survey was accomplished by sending weekly reminders to the groups.
  
- The survey results were collected between 10/10/08 and 10/24/08.
  
- Survey questions may be seen by taking the survey
  - Survey available at <http://tinyurl.com/qntarch-srv0>
  - The current phase of the survey is closed.
  - The next phase of the survey will be open till year-end, 2008.