70% OF IT PROJECTS FAIL
Who came up with these magical numbers

- The CHAOS reports
  - Published by Standish Group
  - Approximately 370 companies surveyed
    - 8,400 applications

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</thead>
<tbody>
<tr>
<td>Successful</td>
<td>16%</td>
<td>27%</td>
<td>26%</td>
<td>28%</td>
<td>34%</td>
<td>29%</td>
<td>35%</td>
<td>32%</td>
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<tr>
<td>Challenged</td>
<td>53%</td>
<td>33%</td>
<td>46%</td>
<td>49%</td>
<td>51%</td>
<td>53%</td>
<td>46%</td>
<td>44%</td>
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<tr>
<td>Failed</td>
<td>31%</td>
<td>40%</td>
<td>28%</td>
<td>23%</td>
<td>15%</td>
<td>18%</td>
<td>19%</td>
<td>24%</td>
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What does “failure” mean?

- Standish Group definitions
  - SUCCESS = completed on time, budget, and all features
  - CHALLENGED = completed over time, budget, or reduced features
  - FAILURE = project was cancelled

- Commonly translated to
  - All projects - SUCCESSES = FAILURES
Today’s Topic

- From project kickoff to project completion
- Out of scope
  - Estimation (prediction) process before project
  - Maintenance & user acceptance post deployment
“You can’t control something you can’t measure.”

- Tom DeMarco wrote *Structured Analysis and System Specification* in 1979
- One of the first widely accepted methodologies
- Metrics, metrics, metrics
A time when US manufacturers started taming supply chains and improving product quality
The Industry of Project Management

- Methodologies
  - From the rigid and monolithic
  - To the flexible and iterative
- Tools
  - Version Control, scheduling, spreadsheets, IDEs
- Paradigms
  - OO, procedural, process-oriented
• Continuous update releases
• 100% utilization of project staff
• Any delay in upstream releases will have cascading impacts
• Feedback from R3 gets incorporated in R10
• 18 months later if each period is 3 months
In 2001, Tom DeMarco publishes *Slack, Getting Past Burnout, Busywork, and the Myth of Total Efficiency*

- Recanted total control of projects
- Projects are endeavors by organizations to do something that has never been done before with the resources assigned to the endeavor.
- Project completion date is based on a probability of all the components being ready and working together.
- Theory – Deployment date is a normally distributed probability
- Reality – Deployment date is a geometrically distributed probability
2001, Fooled by Randomness: The Hidden Role of Chance in Life and in the Markets by Nassim Nicholas Taleb

Followed by The Black Swan: The Impact of the Highly Improbable in 2007

David Hume (1748) An Enquiry concerning Human Understanding discussed miracles
Miracles & Black Swans Happen Here
Project risks identified by project managers

- 10 to 20 of the most blatant and obvious
- Project risks are also a geometric distribution
- First 20 account for 95% of the risk and are controlled for
20 of 73 data points = 95%
DBA’s car breaks down on deployment day (0.933%)
The Usual Suspects

- Project failures are often labeled with the broad brush of
  - “office politics”
  - “fickle customers”
  - Changing requirements/priorities
  - Scope creep
- Market Forces
Change the criteria for failure
- SUCCESS = Business Benefit ($) / Project Cost ($)
- Non-binary
Acceptance of failure

- DARPA learns from all projects
  - “The problem isn’t when you try and fail. The problem is when you fail to try.”
- Similar to the way evolution works
- Good ideas are propagated forward
Solutions?

- Wait
  - Implement when confidence is very high
  - Not a competitive strategy
  - Examples today would be email, LANs, etc.
Experience, experience, experience

- A reduction (not elimination) of surprise
- A better understanding of how to deal with a black swan
- Difficult to find the right match in hiring process
- Flexibility
THANK YOU