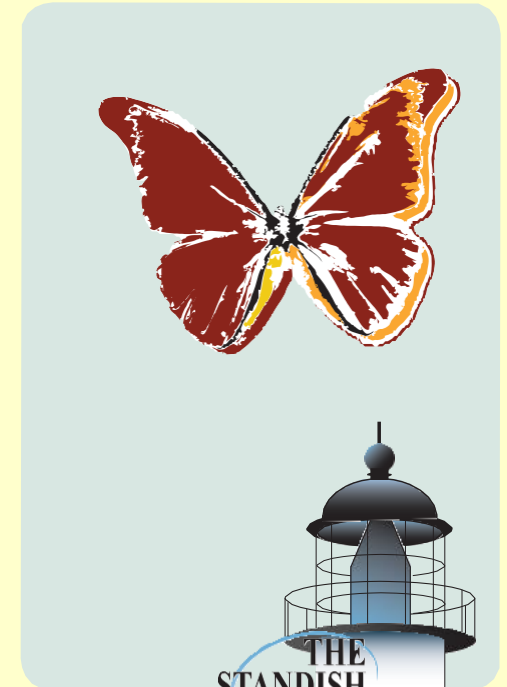
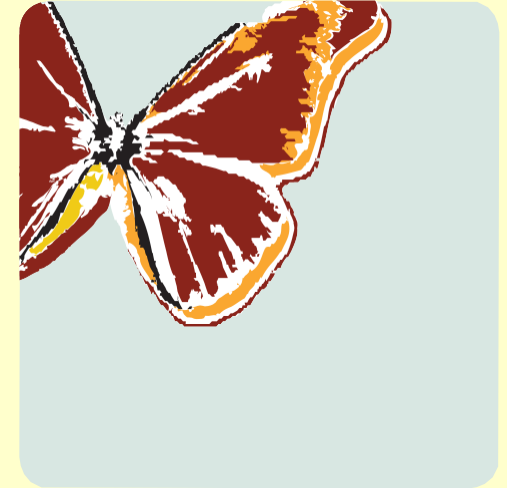


# CHAOS MANIFESTO 2013

## Think Big, Act Small

Collecting data on real-life  
IT projects and software  
development projects  
since 1985



<http://blog.standishgroup.com/>

# The Standish Group & the Chaos Database

Collecting information on real-life IT environments and software development projects since 1985.

Analysts and advisors, not data collectors.

1. Each piece of data and every project is reviewed thoroughly by an analyst before it goes in the database.
2. Use standard and nonstandard list of questions to determine the accuracy of the data before it goes into the database.
3. Nothing is taken at face value and everything is questioned.

# Chaos Demographics

- CHAOS results provide a *global* view of project statistics.
- For each reporting period:
  - 60% of the projects are U.S. based
  - 25% are European, and the remaining
  - 15% represent the rest of the world
- A little more than half of the companies are considered Fortune 100-type companies:
  - 30% would be considered midrange
  - 20% are in the small-range category
- Represent a diverse number of vertical industries and organizations.
- Participants are made up of a variety of CIOs, VPs, directors, and PMO project managers.

# Project Resolution

## Successful

Delivered on time, within budget estimate, with required features and functions

## Failed

Cancelled prior to completion or delivered and never used

## Challenged

Late, over budget, and/or with less than the required features and functions

	2004	2006	2008	2010	2012
Successful	29%	35%	32%	37%	39%
Failed	18%	19%	24%	21%	18%
Challenged	53%	46%	44%	42%	43%

## Increase in success due to...

- Looking at the entire project environment of processes, methods, skills, costs, tools, decisions, optimization, internal and external influences, and team chemistry.
- Advances in the understanding of the skills needed to be a good executive sponsor.
- Increases in project management as a profession and trained project management professionals can be tied directly to increases in success rates.
- An increase in the number of smaller projects and *agile* projects.
- A decrease in *water fall* projects.

Success has come with an increase in project overhead, along with a reduction in value and innovation.

## Continual improvement efforts...

- The use of project health checks, **retrospectives**, dashboards, and tracking systems provides for an early warning system so corrective actions can be taken.
- More than 90% of organizations perform some type of **project postmortems** or **closeout retrospectives**.
- Most organizations are finding that these end-of-project reviews are helpful for improving their next project and their general project practices.

## But ...

- Very few organizations capture this information in standard electronic format, and many times the information is lost or forgotten.
- It is one of the reasons for organizations show initial project improvement, but then backslide into old bad habits.
- *Eternal vigilance* is the price of success.

# Executive Sponsor – the “owner” of the project

- The single most important advancement to improve project success rates is the increase in competency of the executive sponsor.
- This person has the full weight and responsibility for the success or failure of the project squarely on his or her shoulders.
- The role of an executive sponsor is not so much chief executive officer, but more “**chief enabling officer.**”
- As **chief enabling officer**, the executive sponsor’s job is to make sure he or she provides the **support**, **resources**, and **guidance** to allow the project team to be successful.



# Project overruns and features ...

Percent of projects not completed “on time”

Percent of projects that exceeded initial “cost” estimates

Percent of “features and functions” delivered

	2004	2006	2008	2010	2012
Time	84%	72%	79%	71%	74%
Cost	56%	47%	54%	46%	59%
Features	64%	68%	67%	74%	69%

# Focus on high value features... analysis of data suggests the following:

## Value associated features:

- 20% of features are used often
- 50% of features are hardly ever or never used
- 30% where features and functions get used sometimes or infrequently

## **The task of requirements gathering, selecting, and implementing is the most difficult in developing custom applications**

- Focusing on the 20% of the features that provide 80% of the value maximizes the investment in software development *and* improves overall user satisfaction

# Large versus Small Projects

- Few **Large** projects perform well to the project management constraints of cost, time, and scope.
- **Large** projects have virtually no chance of coming in on time, on budget, and within scope.
- **Small** projects have more than a 70% chance of success
- Compared to **small projects**, **large projects** have *twice the chance* of being late, over budget, and missing critical features
- A **large project** is roughly 10 times more likely to fail outright, meaning it will be cancelled or will not be used because it outlived its useful life prior to implementation.

# Conclusions...

- Reducing scope and breaking up large projects are difficult tasks.
- However, the rewards and benefits are quickly evident when the organization starts to receive value early in the project cycle.
- No need for large projects... any IT project can be broken into a series of small projects that could also be done in parallel if necessary.  
This means delivering concrete and usable results
- Small projects deliver a valuable result that is actually used to create a return on investment.

# 10 Factors of Success for Small Projects

- Top 5 focus on small project skills and provide the greatest benefit
- The top 3 account for 50% of the points with all 5 accounting for 75%

	<b>Points</b>
Executive management support	20
User involvement	15
Optimization	15
Skilled resources	13
Project management expertise	12
Agile process	10
Clear business objectives	6
Emotional maturity	5
Execution	3
Tools and infrastructure	1
	100

## Executive Management Support (20 pts.)

- Responsible for the success and failure of the project.
- Enthusiasm about the success of the small project is a prerequisite.
- It's the support that is mandatory... as well as the executive sponsor taking responsibility for the outcome.
- Minimizes the money spent on negotiating the project with emphasis on doing the project.

## User Involvement (15 pts.)

- Research clearly shows that projects without user involvement perform poorly.
- Focus is on real user needs... **not** representatives espousing “real” user needs.
- A project team tuned into users’ needs can understand their real problems... which has a major positive effect on a successful outcome.

### **Research:**

As a group, project managers have only moderate skills to manage users and their expectations.

Executive sponsors lack the skills to understand users and to encourage their participation

# Optimization (15 pts.)

- Small labor content and fast delivery.
- Size and complexity trumps the remaining factors in the list.
- Prioritize each feature/function ...
- Optimal team size – **6**
  - Specialized for the project
  - Exceptional (the best)
  - Assortment (diversity of experiences that fit the project)
  - Love (team loves what they do & are excited about the projects they do)
- Standish Group findings:
  - Organizations that got the greatest value from their projects used an **AGILE** approach.
  - For most projects, 20% of the features provide 80% of the value ...  
Reduces scope... increases value while lowering the cost.



## Skilled Resources (13 pts.)

- Projects are made up of people, and success depends on them.
- Competency relates to being well-qualified... capability relates to having the skills necessary to perform the work to complete the project within specified times and schedules.
- Also... having the ability to demonstrate these qualities to provide confidence among project participants.
- Small teams (**6**) are recommended.

# What's needed for "Skilled Resources"

- **Competency** (skills match project's requirements)
- **Motivation** (sense of accomplishment... )
- **Togetherness**
  - XP process developers work in pairs... helps create and spread expertise
  - Need to evaluate periodically how well team members are working together
- **Training** (skill development) & Mentoring
- **Chemistry** (starts with each member knowing their role and responsibility)
- **Remove Toxic members** (deadly effect on team productivity)

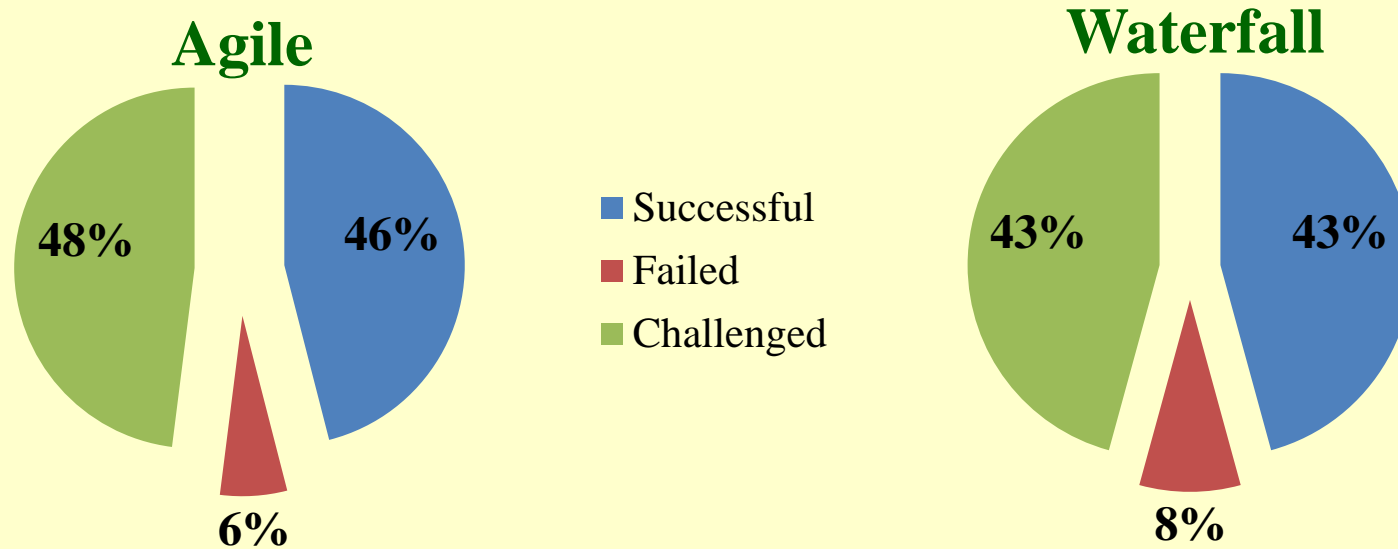
## Project Management Expertise (12 pts.)

- Essential to controlling the progression of small projects  
... and the collaboration of stakeholders and team members
- Handling multiple small projects should not be a burden.
- Suggestion... moving the project manager function inside small projects.
- “...caution ... centralized governments like the US and the United Kingdom ... have dismal project track records yet high levels of project management competency.”

# Agile Process (10 pts.)

- “... perceived as the universal remedy for software development project failure.”
- Process makes it easier to do small projects.
- “Stepping stones are key drivers for the success of the agile and iterative software development process.”
- Agile process... directly addresses user involvement, executive support, and the other success factors.

# Agile versus Waterfall **Small** Projects



Success rates using modern languages, methods and tools from 2003 to 2012

# Success Points for small Agile Projects

1. **Iterative** (conversations, development with test, and deployment)
2. **Steppingstones** (small but significant deliverable )
3. **Time boxing** (small time frames)
4. **Elastic** (consensus through conversation... a team effort)
5. **Interaction** (among team members and user community)
6. **Agile style** (standardize – not ad hoc)
7. **Rapid feedback** (quickness and velocity... vital)
8. **Retrospective** (time to look back, assess... improve)
9. **Merciless pruning** (cut duplication & low value features and functions)
10. **Pipeline** (completion comprised of a “train” of iterations)

## Clear Business Objectives (6 pts.)

- Alignment with the organization's goals and strategy  
... the organization is the client/sponsor.
- Requires a concise vision, problem statement and statement of work...  
... key factor is being concise and highly focused.  
Explain the small project in 10 words or less
- Managing the trade-off between too much governance and complete autonomy is the challenge.

# Emotional Maturity (5 pts.)

- Projects get resolved within the development “ecosystem” ...

Healthy ecosystem produces more successful projects

- Emotional maturity is having the skills:
  - to be self-aware
  - to be socially aware
  - to be self-managed
  - to manage relationships



# Success Points for Emotional Maturity

1. **Over ambition** (focus on high value items only)
2. **Arrogance** (“unwarranted, overbearing pride evidenced by a superior manner toward superiors, peers and inferiors”)
3. **Ignorance** (create environment that facilitates clear & concise communication and education)
4. **Abstinence** (do only what is necessary – meetings often are not)
5. **Fraudulence** (management should provide ethical guidance... ingrained in the corporate culture)
6. **Community** (common purpose and objective)
7. **Honor** (fight the right fight... to improve)
8. **Awareness** (communicate the right information to the right levels)
9. **Objective** (no spin, no slant... report what is)
10. **Superior** (Starbucks’ principles for success)
  - Make it your own
  - Everything matters
  - Surprise and delight
  - Embrace resistance
  - Leave your mark

## Execution (3 pts.)

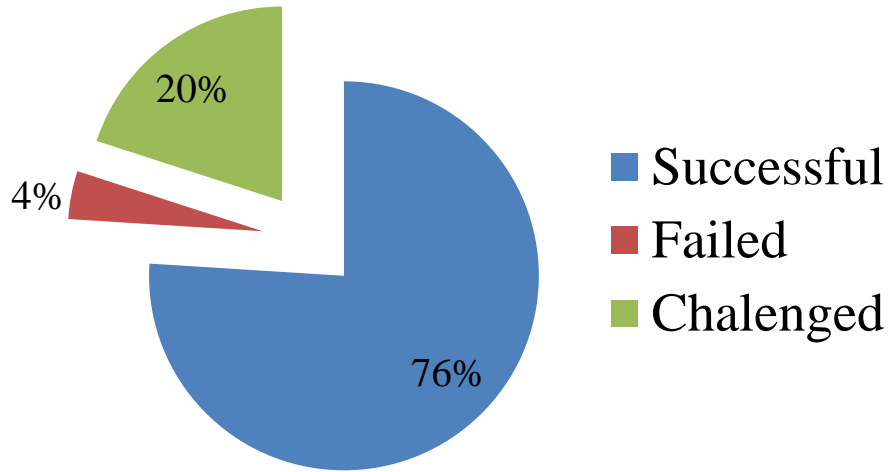
- The process that governs and controls the project... focus is on financial controls and procedures.  
... takes the project to completion based upon a plan.
- “Expectations must be clear and explicit... and clearly state how the team is being measured.”

## Tools and Infrastructure (1 pt.)

- Tools can help... but also hurt.
- Cannot rely too much on tools for the project's success.
- “The most important items... are a standard infrastructure and development process.  
... look for ways to standardize and reduce the number of options.”

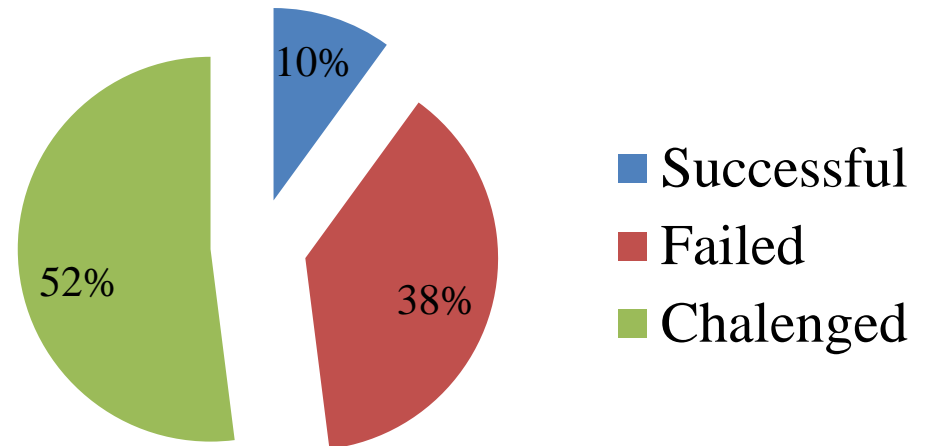
**2012**

**Small Projects**



**Small Projects** (less than \$1 million in labor content)  
**Large Projects** (more than \$10 million in labor content)

**Large Projects**



# Breaking Large Project into Small Projects

## SACWIS

### Statewide Automated Child Welfare Information System

- Goal: to serve the needs of children
- Basic requirement

“Access accurate and detailed information related to cases more easily and in a timely manner”

- 50 states, 50 projects
- Projects ranged from just over \$1 million to well over \$200 million

# Example – Florida SACWIS

## **Start: 1990**

- Planned Completion: 1998
- Original Cost estimate: \$32 million
- Final Cost: more than \$230 million
- Go Live Date: **summer 2005**
- 109 people on project team
- 3 IBM consultants ran the project (project management, project architect and project analyst)  
Salary: \$1.8 million per year

# Example – Minnesota SACWIS

## Start: 1999

- 8 people on project team
- Created a standard infrastructure for collecting data
- Relied on user involvement to minimize requirements, focusing on what was essential
- No consultants used
- Used vendors when additional skills were needed
- Phase 1 completed in 7 months
- Phase 2 completed by **mid 2000**
- Cost to state: \$1.1 million

Note: Florida's project had a much larger scope and spent \$230 more than Minnesota (each basically performed the same function)

# Another example

**FBI** and the *Virtual Case File* system

Pulled plug in 2005 after 6 years and \$170 million spent

FBI restarted the project – as *Sentinel*

- After 4 years: 15% complete with 400 people at cost of \$405 million

Then...

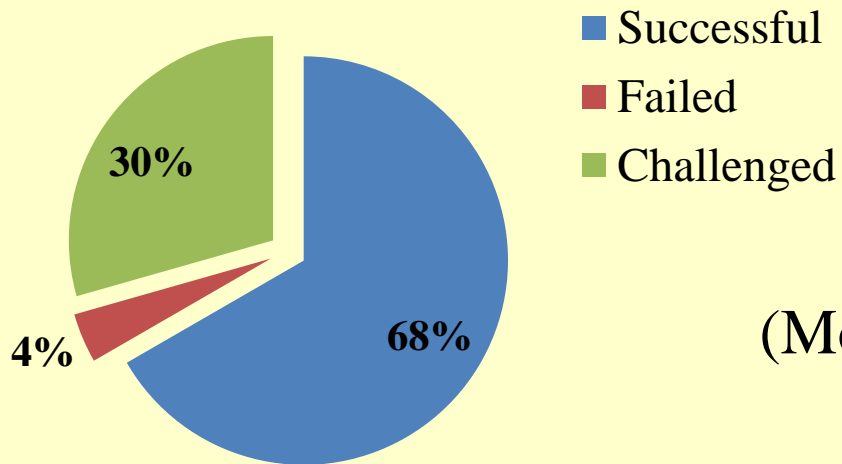
- Small team of 15 engineers finished the remaining 85% in less than one year  
Used an AGILE process of small iterations...



# Banking Industry Projects

## Small Project

(less the \$1 million in labor costs)



## Large Project

(More than \$10 million in labor costs)

