

# Introduction

We are continually asked, “What does the acronym CHAOS mean?” Sorry, you’re not going to learn it here. Only a few people at The Standish Group, and any one of the 360 people who received and saved the T-shirts we gave out after they completed the first survey in 1994, know what the CHAOS letters represent. Many people have tried to guess. One person thought they stood for “Calling Hallelujah Always Offends Someone.”

The results of our CHAOS research are the most widely quoted statistics in the IT industry. Herein, The Standish Group presents nine years of research on why projects succeed or fail. This report details the results of over 40,000 completed IT projects, 400 plus workshops, focus groups and project group therapy sessions. The body of The Standish Group’s CHAOS research is the largest continuous research study conducted in the history of Information Technology.

There are so many research events that have occurred during these past nine years that it is both hard to remember them all and too numerous to list. In CHAOS Chronicles Version 3.0 we will highlight a selected few. Since we began our CHAOS research in 1994, every spring The Standish Group conducts focus

groups concentrating on the subject of project success and failure. These annual focus groups span six United States cities over a one-month period and approximately 60 CIOs from major corporations participate. We've also conducted four major surveys during those nine years. Now our surveys are online and we continually accumulate data on an ongoing basis.

Since 1995 we've hosted CHAOS University® with corporate sponsors. Each fall, approximately 60 CIOs from major companies throughout the world convene at this executive retreat. Here, we run five workshops with six groups of ten people. All six groups work on the same issues, and at the end of each workshop a spokesperson for each group presents the results. Included in the workshops are project case studies and subject presentations. Often times, workshop subjects are discussed well into the events of the evening.

Other CHAOS events include special workshops at other conferences, one-day workshops in the United States and Europe and the ever-popular "Project Group Therapy" sessions. A Project Group Therapy session focuses on an individual company's project. We conduct a focus group with the project's major stakeholders, users, executive sponsors, project managers and IT people.

All the data and information on project success and failure in this 19 chapter report is from our own primary research. No secondary research was used.

"Creating CHAOS" is the title of our first chapter. We begin it with the first CHAOS articles, explain how the initial research was conducted, and provide the first level of detail on why projects fail. This chapter was developed from three major sources: *Failure Is Its Own Reward* (1994), the CHAOS reports published from 1994 to 2002, and *FocusIT* (2001).

In Chapter II, titled "Cobb's Paradox", we delve deeper into the reasons for project failure. The major inputs for this chapter are: *Martin Cobb's* presentation at CHAOS University in 1995; *Unfinished Voyages* (1996); *The Swiss Stock Exchange's Unified Electronic Trading System* case study; *Beverly Healthcare Accounts Receivable System* case study; and a new case study of the *Atlantic*

*Blue Cross Mainframe Migration Project* published in a 2002 research note. The next 10 chapters will focus on the latest CHAOS success factors.

Chapter III covers the current, number one success factor, “User Involvement.” Here you will learn the right and wrong types of involvement and ways to make each work. Major inputs into this chapter include the *User Involvement* research note published in 1996, Ellen Hancock’s talk at CHAOS University 1995, *CHAOS: A Recipe for Success* (1999) and a report on *Collaboration Management* updated in 2002. We also look at: *Fidelity’s Vantage 20/20 Project* that was presented as a success story in 1995; the *Sydney Opera House* project; a case study on a project completed by *Corcordia University*; *Extreme CHAOS* (2001); and *FocusIT* 1996 and 1997.

Chapter IV details success factor number two – “Executive Management Support.” In this chapter you will learn how to get, keep and use it. Major inputs into this chapter include an overview of executive support published in 1996, a summary of the *Concorde Supersonic Aircraft Project* which was published as a “Case Corner” article in 2000 and *CHAOS: A Recipe for Success* (1999). Other inputs include: results from *FocusIT 2000*; *Extreme CHAOS* (2001); the Houston Chronicle’s Contact System case study presented at CHAOS University in 1997; and a case study on Chevron’s e-business project. You will also find a summary of the presentation Marty Joyce, former COO of Blue Cross/Blue Shield of Massachusetts, gave at CHAOS University in 1997, as well as a look at general eBusiness items.

The third success factor, the “Experienced Project Manager” is the focus in Chapter V. Our research recognizes what defines a successful project manager and what key traits should be fostered. Major contributions include a 1996 CHAOS University talk by Doug Domin of the FBI, excerpts from *CHAOS: A Recipe for Success* (1999) and the *Ownership* research note published in 1997. In addition it includes excerpts from *Mentor Stability with Robbins-Gioia* (1999) and a presentation by David Bicknell, co-author of *Crash*, at CHAOS University in 1998. Case studies include Lloyd’s mainframe migration project

presented at CHAOS University in 1998, Peapod's grocery system and *PacifiCorp's Project Discovery*.

Chapter VI focuses on "Clear Business Objectives." This chapter defines what it means to have a clear vision and how to use objectives. Major inputs into the chapter include *Clear Vision and Objectives* published in 1997, a presentation by Tim Chou, President of Oracle.com at CHAOS University in 2000, and the Visiting Nurses mobile project presented at CHAOS University in 1997. Other inputs include: Ed Schaidler's talk on the value of IT at CHAOS University 1997; an overview of *Medaphis' Accounts Receivable* project presented at CHAOS University in 1995; a look at how web communications increase the likelihood of obtaining clear objectives; and a look at *Project PRWORA*.

Chapter VII covers Minimizing Scope. The Standish Group has stated that time is the enemy of all projects and scope equals time. Major inputs for this chapter include the *Small Project Milestones* research note published in 1997, *First USA Bank's Internet Banking System* project presented at CHAOS University in 2000 as well as a presentation by Bill Heil of Compaq Computer at CHAOS University in 1999. Also, part of this chapter is taken from the *All Dogs Go to Heaven* research note, updated in 2001, and includes an overview of IBM's 1996 Olympic project as well. Others include *NY State's OPTICS Project* and output from a workshop on acquiring critical vendors.

"Agile Requirements Process" is covered in Chapter VIII. The key word in this title is agile. Here we discuss what the balance between "Paralysis through Analysis" is and what happens to a project if user requirements are not specified. Major inputs into this chapter include the research summary *Clear Statement of Requirements* published in 1996, *Harvard's Non-Financial Database* project presented at CHAOS University 1998 and *Tobey Marzouk's Presentation* at CHAOS University in 1997. Additional input includes *Perils in Gas and Electricity* (1998) and the FBI's fingerprint automation project and a look at legacy systems.

In Chapter IX we look at standard software infrastructure, and provide its definition and explain why it is important and how to use it. Major inputs for this

chapter include: Bill Janeway's 1999 CHAOS University talk; the research note *Internet Goes Business Critical* (1997); Sprint's Enterprise Middleware Architecture project presented at CHAOS University in 1999; and *Harrah's Total Gold/WINET* project presented at the 1998 CHAOS University. A new input for 2003 is *IBM's Practitioner Support Network Project* and Ellen Hancock's talk at CHAOS University 2002 titled "Sins of Omission".

"Formal Methodology" is the topic of Chapter X. Formal project methodology and its worth are always hot discussions around CHAOS University. In this chapter we explore the return on investment of project management financing. Major inputs for this chapter include the Project Management Office study of 2001, The IRS' Tax Systems Modernization project, Daikin America's ERP Project and the *Proper Planning* research note of 1996. Other inputs include the UPS' Automated Tracking project presented at CHAOS University in 2000 and John Gioia's talk at CHAOS University in 1999 as well as a look at the veracity of vendors from a workshop at CHAOS University 2002.

Chapter XI covers the importance of "Reliable Estimates." If the measurement for success is based on cost and time, then having accurate estimates is essential to improving success rates. In this chapter we explore ways to create reliable estimates. Major inputs for this chapter include *CHAOS: A Recipe for Success* (1999), *Setting Realistic Expectations* (1996), *USL's Capital Mainframe Downsizing Project* presented at CHAOS University in 1996, Boston's Big Dig project, and *Integris' Regional Hospital Project*. In addition, you will find the presentation given by Sanjiv Ahuja of Bellcore at CHAOS University in 1995, a work in 2001 titled "Is Scrooge Your Boss?" and a 2002 paper titled "Project Failure Tolerance."

"Skilled Staff" is the subject of Chapter XII. In this chapter we explore the importance of maintaining a skilled staff throughout the life of the project. Major inputs into this chapter include the 1996 research reports *Competent Staff* and *Hard Working, Focused Staff*, The IRS' EFTPS system presented at CHAOS University in 1996 and Ellen Hancock's talk at CHAOS University in 1998. Other

input includes *Schucker's Secrets to Success* talk at the 2001 CHAOS University, and the Keynote presentation that same year from Mike Foley.

Chapter XIII reviews effective tools and how to use them. In this section we explore project management, requirements and quality assurance tools. Major contributions to this chapter include 1999's *CHAOS: A Recipe for Success*, *MCI WorldCom's SHERIFF Project* presented at CHAOS University in 2000, *Andersen's Project Eagle* presented in 1996 and a talk in 1997 by Bank of America's CIO, Phil Schaadt. Other input includes CHAOS 2000's Keynote, Mike Hennell, on inspection and a case study of *Mizuho Group's Wire Transfer Project*.

Chapter XIV is focused strictly on using consultants. The major input for this chapter is from the 1997 *Perils of DePack* report.

Chapter XV is on "Performance-Based Contracts" and was split off from chapter XIV. Since major projects are often contracted to consultants, we've made this an important part of our research. Major inputs into this chapter include the research from a Touch of CHAOS and CHAOS University workshops (2000), and a research note titled "GPRA: Governing by Results" (2000). Other new input is from case studies including the *Reynolds Local Server Edition Project*, *Michigan's Online Scholarships Project* and from the 2002 class, the winner for the "worst project." Also included are: *Federal Funding Failures: A SACWIS Story* and from December 2001, Peter Ludlow's talk on "Crypto Anarchy, Cyberstates, and Pirate Utopias."

Chapter XVI is an in-depth review of the Software Engineering Institute's Capability Maturity Model (CMM®). We look at how this process improvement method works and some of the tools and techniques developed through this program.

Chapter XVII is a look at "Agile Methods" of development. Here, we also spell out the major features of our Microproject Style, formally called Microproject Methodology. Major inputs include case studies from BNA's Phoenix project presented at CHAOS University in 1998, *Darkest Day Project* and Valais Online

Project. Also included are the Keynote from 2002, Kent Beck on Extreme Programming, and a short opinion of Scrum and other agile methodologies.

Chapter XVIII is a look at “ROI.” Major inputs include Herb Cohen’s keynote at CHAOS University 2002, a research note on inspection savings, and a research note titled “Radical CENTS.” Case studies included are Worldcom’s Wholesales project, a collection of projects from the 2001 Project Leadership Award, and OSA’s core educational project.

In Chapter XIX, “CHAOS Conclusion,” we summarize the results of our 2002 CHAOS research.

This is version 3.0 of the CHAOS Chronicles. The first version was a collection of individual reports, many of which are listed as inputs for each of the chapters. Some of the reports were simply copied and moved into the chapter with only minor changes, while others were rewritten. Some of the newer reports were written with this collection in mind, while others were adapted. And a great deal of the report was written solely for this publication. Version 2.0 was published in 2001 and for the first time appeared in “book form.” It contained only a few charts. Version 3 focuses on providing numerous charts for facilitation in getting to the data, adding more case studies, and making it easier to use in general.

It should also be noted that different Standish advisors wrote many of the reports over the nine years of CHAOS research. Each author has his or her own style. It was our attempt to even out these styles and provide a continuous word flow to aid the reader and make reading more enjoyable. There are some rough spots, but we hope to smooth these areas out over time.

Since this is version 3.0 of the CHAOS Chronicles you can expect version 4.0 and beyond. As a tourist once asked an old salt, “Have you lived on Cape Cod all your life?” His reply was, “Not yet!” The CHAOS Chronicles is a living document and will continue to be changed and enhanced as long as the CHAOS research lives.

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