

Preface

Introduction

My introduction to technology came in 1984 at the Mitre Corporation where I was allowed to experiment with one of the first version of the SUN workstation. Later it would be called the “first networked computer” and I was part of an early team building software protocols and device drivers to make it work. Along with several members of my team, I went to BBN Communications.

BBN designed and built the foundation of the Internet, providing innovations such as sending the first e-mail and developing the first Internet router. During my tenure there, from 1984 to 1990 the Internet expanded from 1000 connected computers to 100,000, well on its way to reaching the 100 million computers connected today. During that time, BBN struggled to move the Internet out of the research environment to corporate America.

From there I went to several emerging software companies focused on document management, content management and business process automation. These businesses experienced the high growth and roller-coaster reality of the high technology world.

In these pursuits, I always tried to make customers happy. It was good business and made the job more fun, but this did not always happen. In many cases, the vision of what the technology could do was not realized. Customer projects always seemed to have technology and people problems. The people who understood each of these were rarely in the same room, and when they were, spoke different languages.

There was no question that when a technology company asks a customer to buy something, they were asking them to change a lot. It became clear that the

enterprise software industry required a perspective and set of tools that understood how the customer is changed, and build products that dealt with that change better. What seemed to be missing was a clear and simple framework to help understand the customer experience, one that helped to build software products compatible with organizations and humans.

In the industry, we had a failure to communicate. On the one hand, we had the hard science approach to building systems that developed from standard engineering practice. This “hard science” culture did not incorporate people and organizations into their methodologies.

On the other hand, we had soft science approaches with roots in social psychology, anthropology, general systems theory and socio-technical systems. These lacked sufficient engineering structure to build complex systems. People trained in these important disciplines seldom played a critical role in developing new products.

The gap between these two camps has existed and been debated for some time. But despite this debate and the extensive work in academia, a compelling case had yet to be made to practitioners in the technology business. These professionals make the critical product and business decisions, and yet do not have practical frameworks to merge the strength of the two perspectives. The good research work available was having little effect on the practice in the industry.

Let me be clear on my background. Although I spent some time in academia and had the pleasure to teach for a few years, I am at the core a practitioner. My work life has been spent more worried about schedules, budgets and revenue goals than about social-technical systems or the appropriate software development model.

The arguments made throughout this book draw from practical experience and the extensive research available on the topics covered here. My apologies up front for what may be viewed as a “light” treatment of some of this research work. The primary goal was to make this work as useable as possible. We are all biased by our experience, whether it is academic or corporate, and I will admit to my failings in this area.

I’ve always enjoyed working with bright technical and business teams, figuring out new technology for new markets. This book is the **tool kit for creating successful software applications that I’d always wished for**. I hope some of these experiences prove valuable to others.