

IT
Transformation
with SOA

*Trials, Techniques &
Tribulations*

BOOK Overview

Israel del Río

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israel.delrio@abstraction.com

Rationale for the Book

Information Technology is in the midst of a revolutionary revamp. Legacy information systems that were deployed throughout the last two decades are becoming depreciated financially and cannot flexibly incorporate the extraordinary technology advances brought forth by the emergence of the Internet. They are also less capable of keeping up with the speed of business. This is happening as industries are becoming more and more aware that technology is key to leveraging competitive strengths, and that the future belongs to those businesses that use technology—modern technology—more effectively. As a consequence, companies are being forced to consider major investments in modern technology in order to refresh the old with the new.

According to industry watchdogs like Aberdeen Group, Fortune 500 corporations, that include many banks and insurance companies, are sitting in over 500 Billion lines of Cobol. As recently as the year 2000, approximately 70% of all mission critical applications were running on legacy technologies, even though, as indicated by Gartner, systems using SOA (Service oriented Architecture) for mission critical purposes were ramping up from the current 50% to an expected 70% by the year 2010.

These statistics show that we are smack in the middle of an accelerated rate of technology transformation. The advent of IT practices and concepts such as Service Oriented Architecture (SOA), Software as a Service (SaaS), and Open Systems, combined with the globalization of the IT workforce have revolutionized the IT landscape. Whereas traditional IT processes were established over several decades to mirror a mainframe-centric view of data processing, new IT approaches can better mirror and support the business; but these new technologies are not as easy to implement due to their relative novelty and immaturity.

The question facing many corporations today is whether it makes sense to undertake a radical transformation or to simply continue the gradual, tactical satisfaction of business requirements via incremental upgrades. The answer is not always clear. Radical transformation requires organizational and financial commitments and, frankly, often represents substantial corporate risk. On the other hand, gradual improvements only ensure more years of inefficient IT operations. For some, technology makes more sense as a commodity, best to be outsourced. For others, the tipping point where it simply makes more sense to completely transform the technology base rather than upgrade it, has already been reached.

There are plenty of excellent books covering the various elements sustaining the technology transformation lifecycle, including books on CIO management practices, architecture and SOA books, books on project management, and books on IT organizational aspects. However, there is a need for a single book that brings all these fields together in a coherent and integrated fashion. “IT Transformation” is not intended to be a treatise on each of these subject matters. Rather it is a holistic narrative linking each of the disciplines while visiting each stage of the transformative project lifecycle. These stages include the definition of a framework for evaluating whether technology transformation should ever be undertaken while providing pragmatic recommendations to alleviate the trials and tribulations that, based on the author’s experience, are sure to plague large technology projects. I also

cover topics rarely covered before by books bridging the business/technology divide. For example, I discuss how to deal with office politics and how best to handle stagnant staff and uncooperative cultures. This type of awareness is necessary given the fact that the majority of complex projects fail not because of failures in the technologies they implement, but rather because of economic and human factors. Poor project execution resulting from disarticulated teams often lacking adequate skills, or from goals that are so ambitious as to be unrealistic, are but examples of elements that are often neglected in the long arduous road of complex projects.

Subject

I often wonder how the creators of large, generational projects such as the Great Wall of China or the Great Pyramids chose to initiate an effort they would probably never see finalized within their own lifetime. What inspired them? I suppose they had the ability to imagine the finished work as a way to transcend beyond the span of their own lives, and that as long as they knew the project would be completed, it little mattered to them that they would not be there to witness the culmination of their efforts. Deep down they knew the real reward was all about leaving a lasting legacy. Now, I am not suggesting that transformation projects are equivalent to building the Great Wall of China (even though many times they feel that way!), but compared to the fast-paced rhythm of business in the twenty-first century, nearly any project that requires a three or four year commitment could well become a generational effort in IT-years. The fact is that it is common to see transformation projects go through a series of managers and business owners. It is not unusual to see the team to finally deliver the solution to be a completely different team from the one that began the project. Projects like these demand holistic lifecycle tracking from start to finish.

“Technology Transformation” will provide a down-to-earth perspective on what is needed to successfully transform the information systems of a company. No matter how well the target system is designed or how well the chosen methodologies are followed, in the end, success or failure is going to come down to people and how the often treacherous waters of office politics are managed, or to funding uncertainties, or to lack of focus caused by executive churn. Successful technology transformation is more than successful technology design; it is about understanding the reasons for change and the environment under which change is to take place.

My advice on how best to undertake a transformation journey is pragmatic and anecdotal, and it's based on actual experiences related to transformation; not on academic discourse. These experiences show that every successful project is about incorporating the right mix of business acumen, technical knowledge, implementation capability, and political awareness. My objective is to give the reader a practical perspective resulting from my hands-on experience in global industries. Although I don't assume that everything I say is necessarily applicable to the reader's particular case, the lessons learned can be transposed to make effective, general points that will benefit the reader in her respective endeavor.

A transformation project has a lifecycle of its own—a long one. This book is organized in sections that mirror this lifecycle:

1. **Making the Case for Transformation.** Regardless of the ongoing debate about whether business or technology is the true driver for change, the truth is, that in today's business environment, not much is going to happen if there is not a real (or at least perceived) business driver that can be used to cost-justify a technology initiative. Even, if the driver for transformation is a new technology, or a competition challenge, there is a fundamental need to frame the transformation exercise in terms of cost-benefit to obtain the necessary funding sponsorship.
2. **Planning and Strategy.** This step binds the business drivers to the high-level technology decisions. Key choices are made in this step, including the definition of strategy and phasing approach. It is at this stage that most key decisions are made by the CIO and CTO.
3. **Design of Technology Solution.** This is not a book about Service Oriented Architecture, but I do make the case that most sensible technology transformation projects today should follow SOA. Why? Well, I believe SOA enables technology transformation today in much the same way air travel has enabled globalization, or the Internet has enabled on-line shopping. If anything, following SOA as part of a technology transformation solution will help remove the need for yet another future technology transformation effort. If done properly, SOA should leave behind a new way to evolve the system so that future transformation can occur in a more graduated, graceful fashion. This section of the book is perhaps the most technically detailed and the reader is invited to skip it if the interest is on the execution of the project more than on the technical design.
4. **Execution: Putting Transformation to Work.** In this section I cover the organizational, management, and, also, political and cultural elements needed to ensure the successful execution of a project, including navigating the dangerous waters of migration.

Unique Book Features

- The book provides an integrated view of the entire technology transformation process; from evaluating the need for transformation, to identifying the necessary selling points for a business case, to defining the architecture and design of the solution, and to managing the project execution.
- The book takes a pragmatic, down-to-earth view towards the shepherding of complex transformation initiatives. It does so with the authority of someone who has been there, in actual Fortune 500 companies, handling this type of project.
- The book provides actual system design insights to properly implementing SOA, while avoiding the various SOA "gotchas" resulting from SOA's flexibility and potential inefficiencies.
- Hopefully, the book has enough humor in it to keep the subject matter interesting.
- The book goes beyond pure technology. It addresses the human factors that frequently cause projects to fail. How do you handle "old guard people" who resist change? How do you effectively retrain staff? How do you deal with the unavoidable office politics that accompanies large, visible projects?

Audience

This book is intended for IT executives, CIOs, CTOs, software development managers, Product Managers, Chief Architects, Project Managers, and technically-savvy business executives. Anyone responsible for software transformation activities, involving the application of emerging techniques such as SOA, and Business Process Management, should find this book interesting. The design section on SOA does require a background in computer technology, but this section can be skipped by those not interested in SOA details without demerit to the overall message and value of the book.

The audience is expected to gain the following from the book:

- Get an understanding of the criteria needed to decide whether technology transformation is needed.
- Gain a perspective of all the steps involved with technology transformation.
- See “through the eyes of some else” the trials and tribulations involved in this type of effort.
- Those technically oriented will appreciate the detailed complexity and mechanisms involved in a successful SOA deployment.
- Identify the areas of focus during the project phase, particularly the management of resources and office politics.

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