

## Preface

The level of debate and confusion in many areas of our lives makes many things hard to see, yet also makes one thing perfectly clear. The intensity of debate and confusion are proof in themselves that big changes are under way. We have arrived at what has been variously called a “tipping point” or an “inflection point” or a “perfect storm.”

Tried-and-true formulas and business models from the last 50 years no longer deliver the results they once did, and it is still far too soon to see the exact nature of the new formulas and business models that will replace them. Yet, again, this makes one thing quite clear. For the foreseeable future, organizations need to learn to thrive in environments of continuous change. Change itself will be a constant fact of our lives.

Therefore, if change is the one predictable thing in a world where so much else is so unpredictable, companies optimized to deal with change will certainly be more successful than companies not optimized to deal with change. That is why successful response to change is the new business imperative, and the practices and technologies that bring it about are the basis for sustainable prosperity in this century.

Cloud computing arises from the combination of technologies that have been developing over the last several decades. And the ongoing rapid evolution of cloud technology is driven by the pressing needs of organizations to cope with change in their markets and change in their financial situations. In a time where information and communication technology is now mission critical to every facet of business operations and where safe bets are hard to find, it is safer to explore new markets and new ventures on a pay-as-you-go basis instead of investing a large sum of money up front and hoping the investment pays off.

Cloud computing makes this possible. It can be quickly rolled out; it can be quickly scaled up to handle increased volumes if business takes off; and it can be just as quickly discontinued or scaled back to cut costs if business does not take off. This variable cost operating model allows companies to replace capital expenses with operating expenses, and that is critical to any organization operating in high-change, unpredictable environments. Cloud computing enables companies to best align operating expenses with revenue and protect their cash flow and operating profits.

In addition to its financial impact, cloud computing also affects how companies structure their organizations, how they manage and coordinate their daily operations, and how they engage and motivate their people and their business partners. In this book we explore each of these areas and show how they interact with each other. To further illustrate key points we draw on our own personal experience in business and technology and we use case studies and insights from industry thought leaders and practitioners.

This book is divided into three parts. The first two chapters provide a basis for understanding and discussing the changes we are going through. They discuss new organization structures companies are adopting and new economic realities that companies need to address. The next six chapters define cloud technology and describe strategies, tactics, and lessons learned that companies can use to adopt cloud computing and to put it to effective and profitable use. The last two chapters expand upon the information in the previous chapters and offer insights into successful business practices and operating models as well as thoughts about the global, cultural, and societal impact of cloud computing.

We have worked hard to make this book accessible to a broad audience of readers from business, technical, and academic backgrounds. As best we could, we balanced the need for a comprehensive framework to understand cloud computing and its business impact with the need for a simple and direct discussion of the key points without delving so deeply into specific details that we lose the interest of a large number of our readers. Our intention is to give you a body of knowledge and insights that enables you to engage in a thoughtful and spirited conversation with others about how to navigate the profound changes that are reshaping the way we use technology and the way we conduct business.

We would love to hear from you regarding questions, comments, or issues you have about the book and the ideas we put forth. Please feel free to contact us; our email addresses are shown below.

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# CHAPTER 1

## The Evolution and Future of Corporate Business Structures

In 1991, Ronald Coase won the Nobel Prize in economics after a lifetime of influence that began with the 1937 publication of his renowned paper entitled “The Nature of the Firm.” In this paper, Coase asked (and then answered) the lofty question of why corporations form in a free market economy. Coase’s point was simple: If there really are free and efficient markets, then a corporation can get any service it wants from a free market of independent contractors. Despite this free market, however, he cited the range of additional costs related to searching for, contracting, coordinating, and eventually paying for these services. And he showed how these costs ultimately made it more expensive to secure services in the open market versus bringing them in-house.

Coase went on to say you could measure the size of a firm by the number of contractual relations it creates, and by the number managed internally versus externally. As a result of the added expense related to external relationships, he showed how companies could then bring more and more of their contractual relationships inside in order to gain efficiencies and lower their transaction costs. This approach is what drove the creation of big, vertically integrated corporations in the twentieth century. That was the world according to Coase in 1937.

Today, a company is still motivated to bring more and more of its transactions in-house, but only until the cost savings gained are offset by other costs. Those other costs come in the form of