This book is about achieving organizational synergy in an era of business which is rapidly moving towards electronic collaboration. Times are gone when businesses had well defined boundaries and where they only competed against each other. Modern-day businesses are highly complex, with fuzzy boundaries and where collaboration is as significant as competition, if not more. The core driver of this collaborative business era is electronic and mobile communication. In this book we discuss technologies of collaboration, their challenges and risks, and also how they offer opportunities within and amongst collaborative businesses. Such discussion is based on research and practical experiences of the authors in enabling collaborative business environments within the information and communication technology (ICT) domain. The model of collaborative business presented in this book aims to bring together the business processes of multiple organizations in order to deliver unified service to a customer while transcending time, location, and technological boundaries. Thus, this book synergizes multiple organizations and their business processes to provide a unified view of collaborative business from a customer’s viewpoint. The impact of such collaboration on people (developer, user and customer), organizational structure and behavior, process of globalization, socio-cultural and change management are also investigated. The Internet has evolved through the increasingly complex areas of handling information, transaction, operation and collaboration. Acollaboration is initiated when two known organizations (a.k.a. business-to-business [B2B]) start transacting in the market. These collaborations
expand and thrive using the communications technologies and systems that are based on services oriented architecture (SOA). The collaborative issues discussed in this book are of tremendous significance when they are purely electronic and are undertaken in a dynamic manner through an “open market” interaction on the Internet. These collaborations involve even further challenges when organizations in need of collaboration are not known to each other but are only interacting through electronic transactions—leading to the concept of “dynamic” collaboration where physical proximity and personal knowledge of each other play lesser and lesser role in completing collaborative transactions.

The authors strongly believe that this book has significant new material to offer relative this new order in global collaborative business environment. Although the topic of collaboration has a rich literature base, such base is primarily aimed at discussing collaboration across two or more businesses that are known to each other and have financial, legal, social and even more often than not geographical commonality and proximity. This book provides clear definition of the next phase of this collaborative evolution of the Internet. The authors hope that the readers find this book a valuable and practical book in order to increase their knowledge and understanding of collaborative business.

**Scope**

The scope of this book is to discover the full potential and functionality of a service based approach (using the technologies of Web services/SOA) in order to provide a framework that will enable collaboration amongst multiple organizations. Furthermore, these collaborations are meant to be dynamic—that is, organizations get together to collaborate electronically for a specific purpose or business goal and, after that goal is consummated, they disperse. These organizations may not be necessarily known to each other. Furthermore, their geographical location would be of little interest in consuming transactions, and they would have diverse technical environments.

Later in the book, we propose the **collaborative business process engineering (CBPE)** model of business collaboration which incorporates an understanding of business processes that enable these multiple organizations to collaborate with each other electronically. Through the CBPE model discussed in this book, businesses can collaborate by discovering each other for the products and services that they offer across the Internet and consume each others’ offerings using Web services. This book can thus be described as a practical output of a detailed investigation into how Web services (WS) influence the business processes of a cluster or group of organizations. There is a need for the study of such processes that appear unified to the customer (end-user) but are in fact in the background, comprising numerous
organizations, their individual business processes and their diverse underlying technologies. Finally, this book also discusses the socio-cultural aspects of adoption of collaborative business as we believe that with the application of the aforementioned emerging technologies in businesses, the social aspects of the ensuing collaborations will become important – mainly because these social impacts are likely to be unique from previous understandings of social interactions in business.

Justification

The justification for this book is that it draws the attention of business to the possibilities afforded them by engaging in the new collaborative business environment that is growing due to electronic and mobile technologies. This book encourages business strategies that enable multiple organizations to get together rapidly and independent of their locations through Web portals and execute electronic business transactions. These Web portals enable all involved parties to interact with each other rapidly and globally. Thus, the justification for this work is as follows:

- Preparing the organization for the new collaborative environment in the business world.
- Preparing the organization to use ICT as a collaborative business strategy as against a competitive environment.
- Preparing the organization to change and upgrade their organizational infrastructure that would facilitate dynamic collaboration.
- Preparing the organization to have a forward-looking strategic vision that makes them ready for the collaborative business environment.
- Preparing the organization to up skill their people, and upgrade their processes, infrastructure and technology so as to enable electronic business collaboration.
- Preparing the organization to realize the important challenges and risks in adopting emerging collaboration technologies.

There is no doubt that the future success of an organization is based upon the way it adapts the new technologies in its business undertaking – including new hardware, software and telecommunication technologies that enable it to remain competitive in the market. The success of the organizations also depends upon the way they use their resources, work within the constraints and collaborate with each other. Business collaboration provides organizations with better opportunities to provide customer relationship management (CRM), supply chain management (SCM) and enterprise resource planning (ERP) systems. These are some of the significant discussions in this book and that justify the publication of this work.
READERS

This book is aimed at the followed audiences:

a. Strategic decision-makers in industry who are involved in the process of improving their business operations and services through adoption of technology through or for the purpose of collaboration. This book will provide the decision-makers in business with a robust approach to collaboration that will encompass business as well as technological considerations. The strategies outlined in this book will equip business decision-makers to play a proactive role in adopting communications technologies in their business processes. Furthermore, discussions in this book on socio-cultural aspects of communications technologies including customer demographics, usability, change management, security and privacy concerns, project management as well as user training should be of immense interest to these audiences from industry as also the action points towards the end of the chapters, and the case study chapters towards the end.

b. Academics involved in teaching courses/subjects that relate to “business strategies”, “collaborative business”, “mobile technologies for business” and so on, will find this book spot-on. Each chapter is organized with key points, introduction, detailed discussions and action points. The action points, apart from being of value to practitioners, can also be used for discussions and interactions within the classroom environment. These action points can be developed into corresponding exercises that can be worked out by students to consolidate their grasp of the chapter/topic. Thus, this book has an appeal even for classroom teaching for final year students in information and communication technologies. Subjects (units) taught include: business strategies, mobile information systems, advance topics in e-business, IT project management, and business process reengineering, to name but a few.

c. Researchers and higher degree students that are involved in understanding, delving deeper and finding new knowledge within the area of collaborative businesses and mobile technologies. Higher degree students including masters and PhD students, as well as academic researchers and teachers, will find the “research base” of this book quite attractive. Most chapters have a research base and is based on a significant literature review encompassing a number of books, articles and websites cited as well as intensive research (both quantitative and qualitative) conducted by the authors.
CONTENTS

We have based this book on extensive research conducted by the authors over more than three years, informed by a detailed qualitative study using a number of cases dealing with collaboration across multiple organizations. Furthermore, we have brought into play the well-known pedagogy of “student-centered learning” to facilitate the use of this book for higher degree courses as well as for its use in industry. The book contains twelve chapters, each neatly laid out to make it convenient for the readers to select the topics discussed. Furthermore, the book contains a detailed preface, discussing the reasoning for the book including the need for collaboration; detailed references, and bibliography at the end; a comprehensive index; a section describing the meanings of acronyms and keywords; and an exhaustive case study. As far as individual chapters are concerned, each chapter has the following structure:

- Chapter key points; introduction; main discussion of the chapter; action points; end notes and references.

How to use the book (Chapter Summaries)

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter 1</td>
<td>Fundamentals of Collaborative Business</td>
</tr>
<tr>
<td>Chapter 2</td>
<td>Emerging Technologies for Business Collaboration</td>
</tr>
<tr>
<td>Chapter 3</td>
<td>Global Collaborative Business</td>
</tr>
<tr>
<td>Chapter 4</td>
<td>Collaborative Business Process Engineering (CBPE) Model</td>
</tr>
<tr>
<td>Chapter 5</td>
<td>Advanced Technologies and Architecture in the Proposed Collaborative Businesses</td>
</tr>
<tr>
<td>Chapter 6</td>
<td>Collaborative Web Based System (CWBS)</td>
</tr>
<tr>
<td>Chapter 7</td>
<td>Organizational Structure and Technology Adaptation</td>
</tr>
<tr>
<td>Chapter 8</td>
<td>Quality Assurance of the CWBS</td>
</tr>
<tr>
<td>Chapter 9</td>
<td>Socio-Cultural Factors and Collaboration</td>
</tr>
<tr>
<td>Chapter 10</td>
<td>Change Management in Collaboration</td>
</tr>
<tr>
<td>Chapter 11</td>
<td>Case Study 1: A Security Service Organization (Medium-sized Organization)</td>
</tr>
<tr>
<td>Chapter 12</td>
<td>Case Study 2: An Energy Provider Organization (Large Organization)</td>
</tr>
</tbody>
</table>

WORKSHOP

The “practical” aspects of collaboration and the extension of this collaboration across multiple organizations are discussed in this book have also been presented in seminars and conferences. As a result, we now have sufficient material included here to form the basis of a one day workshop. The following is a generic outline
of such a one day seminar that can be optionally extended to a two-day workshop for a more comprehensive hands-on discussion on collaborations in business. For the academic community, each chapter in this book can correspond potentially to a 3-hour lecture topic, with Chapters I, II and III used earlier in the semester to establish the Collaborative Business Process Engineering (CBPE) models introduced in Chapter IV.

<table>
<thead>
<tr>
<th>Day</th>
<th>Session</th>
<th>Presentation &amp; Discussion Workshop Topic</th>
<th>Relevant</th>
<th>Comments</th>
</tr>
</thead>
</table>
| 1   | 8:30 – 10:00 | Business Collaborations: Advantages and Challenges | Ch I | • Static versus dynamic collaboration.  
• Outlining the value to global collaborations. |
| 1   | 10:30 – 12:00 | Collaboration and Technologies; Proposed Model for Collaboration (CBPE) | Ch II, III & IV | • E-collaboration through open market/portal.  
• Technologies supporting collaboration.  
• Global issues of collaboration.  
• Proposed model of collaboration. |
| 1   | 1:30 – 2:30 | Technology Acceptance & Organizational Structure | Ch VI & VII | • Implementation of the proposed model.  
• Organizational issues while adapting new technologies.  
• Change to organizational structure as a result of collaboration. |
| 1   | 2:30 – 3:30 | Quality Assurance, Socio-Cultural and Change Management | Ch VIII, IX & X | • Testing and quality assurance.  
• Mistrust and social perspectives.  
• Change management due to collaboration. |
| 1   | 3:30 – 5:00 | Case studies | Ch XI & XII | • Practical appreciation of CBPE by working out a case study |

**LANGUAGE**

The authors firmly believe in gender-neutral language. *Person* is therefore used wherever possible. However, in order to maintain the simplicity of reading *he* has been used freely, interspersed with *she*. Terms like *user* and *manager* represent roles and not people. Therefore, these terms don’t tie down real people who may transit through many roles in a lifetime, or even in a job. Furthermore, individuals often play more than one role at a given time – like *consultant, academic* and *analyst*. As a result, the semantics behind the theory and examples may change depending on the role one is playing, and should be kept in mind as one peruses this book. *We* throughout the text primarily refer to the reader and the authors. Occasionally,
we refer to the general IT community of which the authors and most readers are members. We also refer to the teams in which the authors have worked.

**COMMENTS AND CRITICISM**

Comments about and criticisms of this work are welcome. The authors will be thankful to you, the esteemed readers, for your comments. These comments and criticisms expected from our readers will surely add to the overall knowledge available on the subject. We offer our *a priori* gratitude to all readers and critics.

*Bhuvan Unhelkar*
*Aabass Ghanbary*
*Houman Younessi*

(Feb, 2009. Sydney, Australia; Hartford, USA)