Contents

Preface ix

About the Contributing Authors xix

Chapter 1 Freedom with Fences: Robert Stephens Discusses CIO Leadership and IT Innovation 1

The CIO Leadership Paradox 1
The Fences 5
Rules and Innovative Augmentation 13
The CIO and Enterprise Culture 16
Radical Transparency 20
Proactive Risk Practices 23
The CIO and the Customer 26
The IT Organization 34
Notes 39

Chapter 2 Why Does IT Behave the Way It Does? 41

Making Sense of IT Business Management 41
Putting the Pieces Together 63
Changing the Way IT Behaves 86
Notes 97

Chapter 3 Cloud Computing and the New Economics of Business 99

A Combination of Technologies Create Cloud Computing 100
Some Working Definitions of Cloud Computing 101
Cloud Computing Has Three Component Layers 102
Implications of the Transition to Cloud Computing 104
A Business Strategy Based on Agility 108
Using the Cloud for Business Advantage 111
Business Applications with the Greatest Potential 112
Cloud Risk Considerations 115
Cloud Cost Considerations 118
Case Study: Selling “Designer Chocolates” 120
Desirable Characteristics of New IT Architecture 123
Public Clouds, Private Clouds, and Hybrid Clouds 124
Issues to Consider When Thinking about Private Clouds 128
The Cloud is a Platform for Managing Business Processes 131
Automate Routine Processes, Focus People on Handling Exceptions 134
Four Technologies Enable Responsive Business Processes 136
Notes 139

Chapter 4  Leading with Green: Expanding the CIO’s Role in Eco-Efficient Information Technology Adoption ............................................................141
What Is Green IT? 144
Who Cares about Green IT? 146
Green IT: A Quickly Maturing Management Discipline 147
Common Challenges Presented by Green 159
Role of Public Policy 165
Role of the CIO 167
Risks and Common Mistakes to Avoid 171
Summary 173
Notes 174
<table>
<thead>
<tr>
<th>Chapter 5</th>
<th>Sustainability, Technology, and Economic Pragmatism: A View into the Future</th>
<th>177</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustainability</td>
<td>177</td>
<td></td>
</tr>
<tr>
<td>Globalization, Decentralization, and Sustainability</td>
<td>179</td>
<td></td>
</tr>
<tr>
<td>Future Opportunities for Improving Global IT Sustainability</td>
<td>187</td>
<td></td>
</tr>
<tr>
<td>Mobility</td>
<td>203</td>
<td></td>
</tr>
<tr>
<td>Ubiquity: Pervasive Computing, Ubiquitous Sensors, and Ad Hoc Communications</td>
<td>212</td>
<td></td>
</tr>
<tr>
<td>Energy: Smart Buildings, Renewables, and Campus Sustainability</td>
<td>215</td>
<td></td>
</tr>
<tr>
<td>Physical Security and Information Assurance</td>
<td>217</td>
<td></td>
</tr>
<tr>
<td>Integrating Sustainability into Strategic Planning</td>
<td>220</td>
<td></td>
</tr>
<tr>
<td>The Future Lies before Us</td>
<td>232</td>
<td></td>
</tr>
<tr>
<td>Notes</td>
<td>233</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chapter 6</th>
<th>How to Measure and Manage Customer Value and Customer Profitability</th>
<th>237</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Rising Need to Focus on Customers</td>
<td>238</td>
<td></td>
</tr>
<tr>
<td>A Foundation for Customer Portfolio Management</td>
<td>245</td>
<td></td>
</tr>
<tr>
<td>Distinguishing High from Low Economic Customer Value</td>
<td>255</td>
<td></td>
</tr>
<tr>
<td>Measuring Customer Lifetime Value</td>
<td>262</td>
<td></td>
</tr>
<tr>
<td>Balancing Shareholder Value with Customer Value</td>
<td>269</td>
<td></td>
</tr>
<tr>
<td>The CFO and CIO Must Shift Emphasis</td>
<td>275</td>
<td></td>
</tr>
<tr>
<td>Appendix 6A: Activity-Based Costing is a Cost Reassignment Network</td>
<td>279</td>
<td></td>
</tr>
<tr>
<td>Notes</td>
<td>283</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chapter 7</th>
<th>Evolution of Networks into Networking</th>
<th>285</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evolution of Networks into Networking: Computational, Data, Business, and Personal</td>
<td>285</td>
<td></td>
</tr>
</tbody>
</table>

Advances in Computational and Data Networks  289
Advances in Storage and Data Networks  291
Business Impacts of Business Networking  295
Business Impacts of Social Networking  299
Virtual Worlds: Second Life  302
Democratization and Socialization of Information  306
The Wisdom of Crowds?  309
The New Reality  311
Adapting to the New Reality  315
Role of IS/IT in Adapting to the New Reality  317
Notes  320

About the Editor  327

Index  329