

Contents

Preface		xiii
Acknowledgments		xvii
Chapter 1	The Evolution and Future of Corporate Business Structures	1
	Example of a New Corporate Organization Structure	3
	Model of a Responsive Organization	5
	A Cybernetic Economy	7
	Cybernetics Is about Control and Communication	9
	Profit Potential of Self-Adjusting Feedback Loops	11
	Viable Systems Model: A Framework for Business Agility	14
	A Cloud-Based Model for Business Organizations	19
	Notes	22
Chapter 2	The New Economics of Business	23
	Moving to a Variable Cost Operating Model	24
	Information Technology Finally Becomes a Utility	27
	Variable Cost IT Operations Enable Business Agility	30
	A Combination of Technologies Creates Cloud Computing	34
	Implications of the Transition to Cloud Computing	38
	Notes	41

x Contents

Chapter 3	Key Technologies Used in Cloud Computing	43
	Cloud Computing Defined	44
	Software-as-a-Service	47
	Server Virtualization	49
	Service-Oriented Architecture	52
	Open Source Software	54
	Web Development and Mashups	58
	Blending It All Together	60
	Notes	61
Chapter 4	Data Security and Service Reliability	63
	Will Your Cloud Service Provider Be Here Next Year?	63
	What to Look for in a Good Service Provider	65
	Elements of Good Data Security Policy	66
	Cyber Threats and Perimeter Security in Cloud Computing	69
	Encryption: The Next Frontier of Data Security	72
	Contracts, Service-Level Agreements, and Guarantees	73
	Negotiating Service and Pricing	77
	Performance Penalties and Restitution Clauses	79
	Notes	80
Chapter 5	Moving to the Cloud: When and Where	83
	A Business Strategy Based on Agility	84
	Using the Cloud for Business Advantage	87
	Business Applications with the Greatest Potential	89
	Risk Considerations with the Cloud	91
	Cloud Cost Considerations	94
	Case Study: Selling “Designer Chocolates”	96
	Notes	99
Chapter 6	The Transition from Managing Technology to Managing Business Processes	101
	The Fixed Cost of Maintaining Large Data Centers Is Being Challenged	102

	Contents	xi
	Public, Private, and Hybrid Clouds	103
	Issues to Consider with Private Clouds	107
	The Cloud Is a Platform for Managing Business Processes	109
	Automate Routine Processes and Focus People on Handling Exceptions	113
	Four Technologies that Enable Responsive Business Processes	115
	Notes	117
Chapter 7	The New Role of Information Technology	119
	Is Traditional IT Irrelevant?	119
	A Tumultuous Ride for the Chief Information Officer	121
	The End of IT as We Know It	122
	Changes in IT and Business Unit Staffing	123
	Evolution of the Traditional Corporate IT Department	124
	Agile IT Professionals Using Cloud Technology will be Embedded in Business Operating Units	125
	Cloud Computing Separates Data Center Operations from System Development	127
	Do We Need Enterprise Technology Architects, or Business Architects?	128
	Companies Are Investing in New Business Process Design	129
	A Renewed Focus on Using Technology for Profit and Competitive Advantage	132
	Notes	135
Chapter 8	Five Profit Enablers Driving Business to the Cloud	137
	Harvard Medical School	137
	Golden Gate University	140
	Silicon Valley Education Foundation	143
	Beachbody.com	147
	Five Profit Enablers Driving Business to the Cloud . . . and Away from Corporate Data Centers	148
	Notes	152

xii Contents

Chapter 9	The Business Impact of Cloud Computing	153
	New Economic Engines for Growth	153
	Time to Get Agile and Reinvent Traditional Business Operations	155
	Get Ready, Get Set, Go: Success in a Real-Time Economy	157
	Interconnected, Adaptable, and Specialized	159
	Collaboration Is Now More Profitable than Control	163
	Necessity Makes Radical the New Normal	165
	The Recovering Complexaholic	169
	Notes	170
Chapter 10	Global Implications of the Cloud	171
	Real-Time Global Collaboration	171
	Serious Games	173
	Cloud-Based Collaboration Enables a New Way of Working: The Dynamics of Swarming	176
	Real-Time Visibility Could Make Us a Whole Lot Smarter	180
	New Realities and New Opportunities	183
	Notes	188
	About the Authors	191
	Index	193