

Contents

Foreword xi

Introduction xiii

- What Is the Scope of Business Analytics? Information Systems—Not Technical Solutions xvii
- Purpose and Audience xix
- Organization of Chapters xxiii
- Why the Term *Business Analytics*? xxiv

Chapter 1 The Business Analytics Model 1

- Overview of the Business Analytics Model 2
- Strategy Creation 4
- Business Processes and Information Use 4
- Types of Reporting and Analytical Processes 5
- Data Warehouse 5
- Data Sources: IT Operations and Development 5
- Deployment of the Business Analytics Model 6
- Case Study: How to Make an Information Strategy for a Radio Station 6
- Summary 13

Chapter 2 Business Analytics at the Strategic Level 17

- Link between Strategy and the Deployment of Business Analytics 19
- Strategy and Business Analytics: Four Scenarios 20
- Scenario 1: No Formal Link between Strategy and Business Analytics 22
- Scenario 2: Business Analytics Supports Strategy at a Functional Level 24
- Scenario 3: Dialogue between the Strategy and the Business Analytics Functions 28
- Scenario 4: Information as a Strategic Resource 30
- Which Information Do We Prioritize? 32
- The Product and Innovation Perspective 34
- Customer Relations Perspective 38
- The Operational Excellence Perspective 42
- Summary 44

viii ► CONTENTS

Chapter 3 Development and Deployment of Information at the Functional Level 47

- Case Study: A Trip to the Summerhouse 50
 - Specification of Requirements 51
 - Technical Support 52
 - Off We Go to the Summerhouse 53
 - Lead and Lag Information 54
 - More about Lead and Lag Information 57
- Establishing Business Processes with the Rockart Model 59
- Example: Establishing New Business Processes with the
Rockart Model 61
 - Level 1: Identifying the Objectives 62
 - Level 2: Identifying an Operational Strategy 62
 - Level 3: Identifying the Critical Success Factors 64
 - Level 4: Identifying Lead and Lag Information 66
- Optimizing Existing Business Processes 72
- Example: Deploying Performance Management
to Optimize Existing Processes 73
 - Concept of Performance Management 74
- Which Process Should We Start With? 78
 - Customer Relationship Management Activities 80
 - Campaign Management 84
 - Product Development 85
 - Web Log Analyses 86
 - Pricing 89
 - Human Resource Development 91
 - Corporate Performance Management 93
 - Finance 94
 - Inventory Management 95
 - Supply Chain Management 95
 - Lean 97
- A Catalogue of Ideas with Key Performance Indicators
for the Company's Different Functions 99
- Summary 101

Chapter 4 Business Analytics at the Analytical Level 103

- Data, Information, and Knowledge 106
- Analyst's Role in the Business Analytics Model 107
- Three Requirements the Analyst Must Meet 109
 - Business Competencies 110
 - Tool Kit Must Be in Order (Method Competencies) 111
 - Technical Understanding (Data Competencies) 112
- Required Competencies for the Analyst 113

CONTENTS ◀ ix

Analytical Methods (Information Domains)	113
How to Select the Analytical Method	114
The Three Imperatives	116
Descriptive Statistical Methods, Lists, and Reports	122
Hypothesis-Driven Methods	129
Tests with Several Input Variables	130
Data Mining with Target Variables	133
Data Mining Algorithms	139
Explorative Methods	140
Data Reduction	141
Cluster Analysis	141
Cross-Sell Models	142
Up-Sell Models	143
Business Requirements	143
Definition of the Overall Problem	144
Definition of Delivery	144
Definition of Content	145
Summary	147
Chapter 5 Business Analytics at the Data Warehouse Level	149
Why a Data Warehouse?	151
Architecture and Processes in a Data Warehouse	154
Selection of Certain Columns To Be Loaded	156
Staging Area and Operational Data Stores	158
Causes and Effects of Poor Data Quality	159
The Data Warehouse: Functions, Components, and Examples	162
Alternative Ways of Storing Data	170
Business Analytics Portal: Functions and Examples	171
Tips and Techniques in Data Warehousing	175
Master Data Management	175
Service-Oriented Architecture	176
How Should Data Be Accessed?	177
Access to Business Analytics Portals	178
Access to Data Mart Areas	180
Access to Data Warehouse Areas	181
Access to Source Systems	182
Summary	183
Chapter 6 The Company's Collection of Source Data	185
What Are Source Systems, and What Can They Be Used For?	187
Which Information Is Best to Use for Which Task?	192

X ► CONTENTS

When There Is More Than One Way to Get the Job Done 194
 When the Quality of Source Data Fails 197
 Summary 198

**Chapter 7 Structuring of a Business Analytics
 Competency Center 199**

What Is a Business Analytics Competency Center? 201
 Why Set Up a Business Analytics Competency Center? 202
 Tasks and Competencies 203
 Establishing an Information Wheel 203
 Creating Synergies between Information Wheels 205
 Educating Users 207
 Prioritizing New Business Analytics Initiatives 208
 Competencies 208
 Centralized or Decentralized Organization 208
 Strategy and Performance 210
 When the Analysts Report to the IT Department 213
 When Should a Business Analytics Competency Center
 Be Established? 215
 Applying the Analytical Factory Approach 217
 Summary 219

**Chapter 8 Assessment and Prioritization of Business
 Analytics Projects 221**

Is It a Strategic Project or Not? 222
 Uncovering the Value Creation of the Project 224
 When Projects Run Over Several Years 230
 When the Uncertainty Is Too Big 232
 The Descriptive Part of the Cost/Benefit Analysis
 for the Business Case 233
 The Cost/Benefit Analysis Used for the Business Case 235
 Projects as Part of the Bigger Picture 235
 Case Study on How to Make a Information
 Strategy Roadmap 240
 Summary 243

Chapter 9 Business Analytics in the Future 247

About the Authors 255

Index 257