ENTERPRISE SYSTEMS FOR MANAGEMENT

Luvai F. Motiwalla

University of Massachusetts Lowell

and

Jeff Thompson

Oracle Consulting



CONTENTS

- 4	
Preface 13	
Acknowledgmen	
About the Autho	rs 21
Chapter 1	INTRODUCTION TO ENTERPRISE SYSTEMS FOR MANAGEMENT 23
	► CASE 1.1 Opening Case: Hershey's Enterprise 21 Project 2
	Preview 25
	Enterprise systems In Organizations 26
	Information Silos and Systems Integration 27
	Enterprise Resource Planning Systems 28
	What Is an ERP? 28
	Evolution of ERP 29
	Business Process and ERP 30
	ERP System Components 32
	ERP Architecture 33
	e-Business and ERP 36
	Benefits and Limitations of ERP 37
	ERP Implementation 39
	Business Process Management 39
	ERP Life Cycle 39
	ERP Implementation Strategies 40
	Software and Vendor Selection 41
	Operations and Post-Implementation 43
	People and Organization 43
	Project Management 43
	Role of Consultants 44
	Change Management 45
	Business Process Reengineering 45
	Global, Ethical, and Security Management 45
	ERP Vendors 46
	Key Vendors 47
	SAP 48

Software Extensions and Trends 49

Summary 51 • Exercises 53 • Review Questions 53 Discussion Questions 54

► CASE 1.2 Real-World Case: Rolls Royce's ERP Implementation 54

Chapter 2 SYSTEMS INTEGRATION 57

➤ CASE 2.1 Opening Case: Air Cargo's e-Enterprise System 58

Preview 59

Functional Silos 60

Horizontal Silos 60

Vertical Silos 61

Business Process and Silos 62

Evolution of Is in Organizations 64

IS Architectures 66

IS Functionalization 66

Systems Integration 68

Logical Vs. Physical SI 68

Steps in Integrating Systems 69

Benefits of System Integration 70

Limitations of System Integration 70

ERP and Systems Integration 71

ERP's Role in Logical Integration 71

ERP's Role in Physical Integration 72

Implications for Management 73

Summary 74 • Exercises 75 • Review Questions 75

Discussion Questions 76

► CASE 2.2 Real-World Case: Systems Integration at UPS Corp 76

Chapter 3 ENTERPRISE SYSTEMS ARCHITECTURE 79

► CASE 3.1 Opening Case: Nestlé's ERP Implementation 80

Preview 81

Why Study Enterprise System Architecture? 81

ERP Modules 82

Production Module 84

Purchasing Module 84

Inventory Management Module 84

Sales and Marketing Module 85

Finance Module 85

Human Resource Module 85

Miscellaneous Modules 85

Benefits of Key ERP Modules 85

ERP Architecture 87

Layered Architecture Example 87

Benefits and Limitations 93

Web Services Architectures 94

Service-Oriented Architectures 96

SOA and Web Services 99

Enterprise Content Management and SOA 99

Cloud Architecture 100

Implications for Management / 103

Summary 104 • Exercises 105 • Review Questions 105 Discussion Questions 106

► CASE 3.2 Real-World Cases: Wipro and MBH 106

Chapter 4 DEVELOPMENT LIFE CYCLE 110

► CASE 4.1 Opening Case: Of Men and Mice: An ERP Case Study 111

Preview 112

Systems Development Life Cycle 113

Traditional SDLC 113

Rapid SDLC Approaches 114

ERP Implementation Life Cycle 115

ERP Implementation Plan - 116

ERP Implementation Methodology 117

Traditional ERP Life Cycle 118

Rapid ERP Life Cycles 121

ERP Life Cycle Vs. SDLC 127

Project Management 129

Project Roles and Responsibilities 131

Implications for Management 132

Summary 135 • Exercises 135 • Review Questions 135 Discussion Questions 136

► CASE 4.2 Real-World Case: Two Short Cases: OilCO & ExploreCO 136

Appendix A 140

Appendix B 159

Chapter 5 IMPLEMENTATION STRATEGIES 161

► CASE 5.1 Opening Case: Aquatech International Corporation 162

Preview 163

ERP Components 163 Hardware 163 Software 164 People Resources 165 **ERP and Virtualization 166** Third-Party Products 170 What Are They and Why Are They Needed? 170 Impacts of Integration with ERP 170 Support 170 Overcoming Third-Party Integration Issues 171 Middleware 171 Database Requirements 171 Understanding Transactional and Reporting Needs 171 Selecting the Database 172 Staffing and Database Administration 172 **ERP Implementation Organization and Approaches** 172 Governance 172 Implementation Methodology 176 What Is a Vanilla Implementation? 177 Why Would You Consider a Vanilla Implementation? 177 When Should You Consider Modifying an ERP? 177 Benefits and Drawbacks 178 ERP Implementation Examples 178 Platform Issues 179 Servers 180 Network 180 Security 180 Disaster Recovery and Business Continuity 180 Implications for Management 180 Summary 181 • Exercises 182 • Review Questions 182 Discussion Questions 182 ► CASE 5.2 Real-World Case: United States Army 183 Chapter 6 SOFTWARE AND VENDOR SELECTION ► CASE 6.1 Opening Case: Oracle Wins Out Over SAP at Welch's 190. Preview 191 Vendor Research 191

Matching User Requirements to Features 195

Request for Bids 196

Vendor Analysis and Elimination 196

Contract Management and License Agreements 197

Implications for Management 198

Summary 198 • Exercises 199 • Review Questions 199 Discussion Questions 199

► CASE 6.2 Real-World-Case: Enterprise Solutions for Fruit and Vegetable

Beverage Manufacturing 199

Appendix A 204
Appendix B 207

Chapter 7 OPERATIONS AND POSTIMPLEMENTATION 212

► CASE 7.1 Opening Case: Hugger-Mugger ERP Implementation 213

Preview 213

Go-Live Readiness 215

ERP Training 217

Stabilization 219

Postproduction Support 221

Knowledge Transfer 223

Implications for Management 225

Summary 225 • Exercises 226 • Review Questions 226 Discussion Questions 226

► CASE 7.2 Real-World Case: Hewlett-Packard SAP Implementation 227

Appendix A 229

Chapter 8 PROGRAM AND PROJECT MANAGEMENT 247

► CASE 8.1 Opening Case: ABC Manufacturing: A Hypothetical Case in Unresolved Issues 248

Preview 249

Project Team 250

Module Experts and Subject Matter Experts 252

Project Leadership 253

Critical Success Factors 255

Decision-Making Process 255

Project Scope 255

Teamwork 256

Change Management 257

Implementation Team and Executive Team 257

Managing Scope Creep 258

Implications for Management 258

Summary 259 • Exercises 260 • Review Questions 260 Discussion Questions 260

► CASE 8.2 Real-World Case: Human Resource Implementation at the Institute 261

Appendix A 263

Chapter 9 ORGANIZATIONAL CHANGE AND BUSINESS PROCESS REENGINEERING 264

► CASE 9.1 Opening Case: FoxMeyer Drugs 265

Preview 266

Reason for Change 266

Organizational Commitment 267

Change Management 268

Business Process Change 269

Business Process Reengineering 269

BPR Methodology 270

Current BPR Tools 272

Business Process Management 272

Difference between BPR and BPM 273

Best Practices of BPM 274

BPM Software Vendors 275

Core Business Processes 275

Order-to-Cash BPM Solution from Dell Services 276

Optimizing Business Processes 278

Benefits of Implementing BPM 279

Other Examples of Success Stories 280

Role of ERP 280

Implications for Management 282

Summary 282 • Exercises 283 • Review Questions 283
Discussion Questions 283

► CASE 9.2 Real-World Case: Nike ERP Implementation 283

Appendix A 286

Chapter 10 GLOBAL, ETHICS, AND SECURITY MANAGEMENT 288

► CASE 10.1 Opening Case: Outsourcing at FERC 289

Preview 289

Outsourcing 290

What Is Outsourcing? 290

Outsourcing Drawbacks 292

Implications for Management 346

Summary 347 • Exercises 348 • Review Questions 348 Discussion Questions 348

► CASE 11.2 Real-World Cases: Zara and the Limited Brands 349

Appendix A 352

Chapter 12 CUSTOMER RELATIONSHIP MANAGEMENT 353

► CASE 12.1 Opening Case: Walt Disney's CRM Strategy 354

Preview 355

What Is CRM? 356

CRM Evolution 356

CRM Today 358

Types of CRM 359

Customer Relationship Processes 360

CRM Delivery Processes 360

CRM Support Processes 361

CRM Analysis Processes 361

CRM Technology 362

CRM Components 362

CRM Packages and Vendors 364

CRM Architecture 364

On-Demand CRM 365

CRM Life Cycle 367

Implications for Management 369

Summary 370 • Exercises 371 • Review Questions 371 Discussion Questions 371

► CASE 12.2 Real-World Case: Plexipave: A Failed CRM Implementation 371

Index 375