
CONTENTS

Preface	v
Author Profile	xxiii
Chapter 1: Analysis and Framework to EIS	1
♣ Quick look at chapter themes	2
♣ Learning objectives	3
♣ Case study: Ericsson's EIS: knowledge to bring people together, automatically with autonomy	4
♣ Sketch of EIS	6
♣ Introduction	6
1.1 Information and Systems	7
1.1.1 Purpose of Information Systems	9
1.1.2 Types of Information Systems	10
1.2 How EIS Differs from Conventional Packages	12
1.3 EIS is an Integrated Application	14
1.4 Concept of EIS	15
1.4.1 Common EIS Features	17
1.4.2 Customers Expectation of EIS Packages	17
1.5 EIS Characteristics	18
1.6 EIS Research	20
1.7 Conclusion	22
☆ Keywords	23
☆ Terminology Review	24

☆	Competency Review	24
☆	Check Your Progress	25
☆	Suggested Reading	26
Chapter 2: Enterprise System Development and Deployment		29
♣	Quick look at chapter themes	30
♣	Learning objectives	31
♣	Case study: The State of South Carolina EIS	32
♣	Sketch of EIS development	35
♣	Introduction	35
	2.1 The Manufacturing Roots of ERP	36
	2.2 Stages	38
	2.3 Historical Background	40
	2.4 Evolution of ERP	42
	2.5 Material Requirements Planning (MRP-I)	44
	2.6 Manufacturing Resource Planning (MRP-II)	47
	2.7 ERP and ERP Modules	49
	2.7.1 Relative Module Use	53
	2.7.2 Customization Issues	56
	2.8 Comparative Coverage Between MRP, ERP, EIS	56
	2.9 EIS as per the Gartner View	60
	2.10 Conclusion	60
☆	Keywords	62
☆	Terminology Review	63
☆	Competency Review	63
☆	Suggested Reading	64
Chapter 3: Implementation Life Cycle		67
♣	Quick look at chapter themes	68
♣	Learning objectives	69
♣	Case study: Logistics Modernization: Lessons learned from the army's largest ERP implementation	70

♣	Sketch of EIS implementation life cycle	75
♣	Introduction	78
	3.1 Impact of EIS Projects	80
	3.2 Guidelines for EIS Implementation	82
	3.3 Implementation Strategies	84
	3.3.1 Implementation Issues	86
	3.3.2 Understanding EIS	89
	3.3.3 Implementation Methodologies	92
	3.3.4 Post-Implementation Depression	94
	3.4 Advantages and Disadvantages of Alternative EIS Development Methods	96
	3.5 EIS Proposal Evaluation	98
	3.6 Managing Risk on EIS Projects	101
	3.7 Conclusion	103
☆	Keywords	104
☆	Terminology Review	105
☆	Competency Review	107
☆	Suggested Reading	108
Chapter 4: Enterprise System Selection and Project Planning		111
♣	Quick look at chapter themes	112
♣	Learning objectives	112
♣	Case study: Wm. Bolthouse Farms	114
♣	Sketch of EIS budgeting	117
♣	Introduction	118
	4.1 EIS Project Management	119
	4.2 EIS/ERP Proposal Evaluation	123
	4.3 Project Evaluation Techniques	126
	4.3.1 Cost-Benefit Example	127
	4.3.2 Net Present Value Calculation	128
	4.3.3 Return on Investment	129
	4.3.4 Payback	129
	4.3.5 Other Factors	131
	4.4 EIS ROI Issues	131
	4.5 Total Cost of Ownership	132

4.6	Alternative Evaluation	135
4.6.1	Value Analysis	135
4.6.2	Multiple Objectives	139
4.6.3	Multiple Criteria Analysis	140
4.7	Conclusion	145
☆	Keywords	146
☆	Terminology Review	147
☆	Check Your Progress	150
☆	Competency Review	152
☆	Suggested Reading	153
Chapter 5:	Business Process Reengineering and Best Practices	155
♣	Quick look at chapter themes	156
♣	Learning objectives	157
♣	Case study: Northwards Housing — Business Process Re-engineering	158
♣	Sketch of BPR	159
♣	Introduction	160
5.1	All About the Business and Its Processes	161
5.1.1	Business Processes	161
5.1.2	Typical Business Processes	165
5.1.3	Reengineering	168
5.1.4	Business Process Reengineering	170
5.1.5	Business Process Management	179
5.1.6	BPR with Respect to EIS	179
5.2	Best Practices in EIS	180
5.3	Reengineering Options	181
5.3.1	Clean Slate Reengineering	182
5.3.2	Technology-Enabled Reengineering	182
5.4	General Benefits from Using EIS	184
5.5	PR/BPM Software	186
5.6	Conclusion	187
☆	Keywords	189
☆	Terminology Review	190
☆	Competency Review	193

☆	Check Your Progress	194
☆	Suggested Reading	195
Chapter 6:	System Architecture	199
♣	Quick look at chapter themes	200
♣	Learning objectives	200
♣	Case study: Falafel Software Delivers Complex ERP System with TestComplete and Visual Studio	202
♣	Sketch of EIS system architecture	205
	6.1 EIS as an Information System Project	207
	6.2 IS/IT Project Management Results	209
	6.3 System Architecture and EIS	211
	6.4 Open Source EIS	212
	6.5 Systems Design Aspects of EIS	217
	6.5.1 The Waterfall Model	217
	6.5.2 Prototyping	220
	6.5.3 The Spiral Model	220
	6.5.4 Other Options for Systems Development	222
	6.6 External EIS Operation and Support	223
	6.7 Organizing for Implementation	225
	6.8 Aventis Pharma Hellas Case	229
	6.9 Conclusion	230
☆	Keywords	234
☆	Terminology Review	235
☆	Competency Review	236
☆	Check Your Progress	237
☆	Suggested Reading	239
Chapter 7:	System Installation	241
♣	Quick look at chapter themes	242
♣	Learning objectives	243
♣	Case study: Enterprise system installation throughout the One Vodafone initiative	243

♣	Sketch of EIS initiation	245
♣	Introduction	246
	7.1 EIS Installation Cost	247
	7.1.1 Installation Cost	248
	7.1.2 EIS Installation Process	248
	7.1.3 Options for Installing EIS	248
	7.2 Evaluating an EIS	250
	7.3 Critical Success Factors in EIS	250
	7.3.1 User Involvement	251
	7.3.2 Phenomenon of User Failure	252
	7.3.3 Ten Categories of EIS Implementation Failures	253
	7.3.4 Management Commitment	255
	7.4 Implementation Strategy Options	257
	7.4.1 Control Strategy	257
	7.4.2 Technical Platform	259
	7.4.3 Execution of EIS Systems	259
	7.5 Levels of IS/IT Project Failure	261
	7.5.1 Major Categories of Project System Failure	261
	7.5.2 EIS Implementation Failure	263
	7.5.3 Technological Determinism	264
	7.5.4 Supplier/Consultant-Driven	265
	7.5.5 Outdated Relationships and Capabilities	265
	7.6 Break Downs of EIS	265
	7.7 Features of Successful EIS Implementation	273
	7.8 Strategies to Attain Success	274
	7.9 Conclusion	275
☆	Keywords	277
☆	Terminology Review	278
☆	Competency Review	279
☆	Suggested Reading	280

Chapter 8: User Training	285
♣ Quick look at chapter themes	286
♣ Learning objectives	286
♣ Case study: Lancashire County Council	287
♣ Sketch of EIS initiation	290
♣ Introduction	291
8.1 About User's Training	293
8.1.1 The Need for a Training Programme	294
8.2 The Magnitude of Training	295
8.2.1 Training in Functional Areas	296
8.2.2 Training in Technical Areas	296
8.3 Training Example	297
8.3.1 Training Problems	298
8.3.2 Training Media	300
8.3.3 Training Plan	302
8.4 Conclusion	303
☆ Keywords	304
☆ Terminology Review	304
☆ Competency Review	305
☆ Suggested Reading	306
Chapter 9: System Maintenance	309
♣ Quick look at chapter themes	310
♣ Learning objectives	310
♣ Case study: Tofan Grup, Romania — The Shift to Systems Integration	311
9.1 Classification of EIS/ERP Maintenance Activities	314
9.2 EIS/ERP System Migration	316
9.3 EIS/ERP Upgrades	317
9.4 Critical Success Factors	320
9.5 Conclusion	324
☆ Keywords	326
☆ Terminology Review	327
☆ Suggested Reading	328

Chapter 10: Business Intelligence Systems and EIS	331
♣ Quick look at chapter themes	332
♣ Learning objectives	334
♣ Case study: National Scorecard Transforms	335
How Best Buy Does Business	
♣ Sketch of BI Relevance to EIS	338
♣ Introduction	339
10.1 All about BI	341
10.1.1 What is Business Intelligence?	342
10.1.2 Business Intelligence System	345
Architecture	
10.1.3 Business Intelligence Vendors	346
10.2 Data Storage Systems	353
10.2.1 Data Warehousing	354
10.2.2 Data Marts	356
10.2.3 On-Line Analytic Processing	360
10.2.4 Data Quality	361
10.2.5 Data Integrity	363
10.2.6 Matching	365
10.3 Data Mining Overview	368
10.3.1 Typical Benefits of Data Mining	370
10.3.2 Business Data Mining Applications	372
10.4 Difference between Data Warehouse	373
and Business Intelligence	
10.5 Customer Relationship Management	374
10.5.1 Credit Card Management	376
10.5.2 Insurance	378
10.5.3 Telecommunications	378
10.5.4 Telemarketing	379
10.5.5 Human Resource Management	380
10.5.6 Data Mining Tools	380
10.5.7 Real Practice	381
10.5.8 Caveats	382
10.6 Online Analytical Processing	382
10.7 Questions and Answers Relevant to BI	383
10.8 All about ITeS	384
10.9 Conclusion	390

☆	Keywords	391
☆	Terminology Review	393
☆	Competency Review	394
☆	Suggested Reading	396
Chapter 11: EIS and Supply Chains		399
♣	Quick look at chapter themes	400
♣	Learning objectives	401
♣	Case study: Wipro with SAP AG: Equipping Sanyo to meet fluctuating consumer demand	402
♣	Sketch of EIS in SCM	405
♣	Introduction	405
	11.1 Concept of Supply Chain Management	406
	11.1.1 SCM Streams	408
	11.2 Supply Chains are Alliances	409
	11.3 Advantages of Supply Chains	411
	11.4 Advanced Planning Systems	414
	11.5 On-Line Market Places	416
	11.5.1 Examples of On-Line Marketplaces	416
	11.6 Lean Manufacturing	418
	11.6.1 Role of Lean in EIS	421
	11.7 Key Trends in Supply Chain Management	423
	11.7.1 Research on EIS/ERP Integration with SCM	424
	11.8 Magnitude of EIS in SCM	426
	11.8.1 Web-Enabled EIS/ERP and Its Impact on SCM	427
	11.8.2 EIS vs SCM	428
	11.8.3 Product Life Cycle Management (PLM)	429
	11.9 Future Research	430
	11.10 Conclusion	434
☆	Keywords	435
☆	Terminology Review	436
☆	Competency Review	439
☆	Suggested Reading	441

Chapter 12: Advanced Technology	445
♣ Quick look at chapter themes	446
♣ Learning objectives	446
♣ Case study: Avago Technologies Overhauls EIS at Record Speed and on Budget with Oracle Enterprise System Software	447
♣ Sketch of Advanced Technology	452
♣ Introduction	454
12.1 Open Architecture and EIS/ERP Bolt-Ons	456
12.1.1 Example of an Optimization Bolt-On	459
12.2 Middleware	461
12.2.1 Middleware Definition and Features	462
12.2.2 Middleware as an Enabling Engine	463
12.2.3 Middleware Enhancement	464
12.3 Security and EIS	467
12.3.1 Security Threats by Type	467
12.3.2 Adoption of Different Types of Security	470
12.4 Conclusion	470
☆ Keywords	471
☆ Terminology Review	472
☆ Competency Review	473
☆ Suggested Reading	473
 Chapter 13: Future and Contemporary Trends in EIS	 475
♣ Quick look at chapter themes	476
♣ Learning objectives	476
♣ Case study: Analyzing Microsoft ERP's success in American Bible Society	477
♣ Sketch of EIS initiation	479
♣ Introduction	480
13.1 Futuristic Trends In EIS	480
13.1.1 Requirement-Oriented Applications (Tailored)	481

13.1.2	Expenditure Trends	482
13.1.3	Reduction In Implementation Time	482
13.2	Next Generation of Enterprise Software	483
13.3	Money Resource Planning [MRP-III]	487
13.3.1	Prospective View of an Enterprise System	488
13.4	Conclusion	491
☆	Keywords	492
☆	Terminology Review	493
☆	Competency Review	493
☆	Suggested Reading	496
Chapter 14:	Vendor Profiles: Market Share and Product Variation	497
♣	Quick look at chapter themes	498
♣	Learning objectives	499
♣	Case study: Oracle to MS SQL Server Migration	499
♣	Sketch of EIS vendors	503
♣	Introduction	504
14.1	Market Stake of Vendors	507
14.1.1	Market Share of Leading Vendors Over Time	510
14.1.2	Overview of ERP Vendors	512
14.2	Service-Oriented Architecture (SOA)	513
14.2.1	SOA Relevance to EIS Vendors	515
14.3	SAP (System Application and Products)	517
14.3.1	SAP's Products	517
14.3.2	SAP's Market Share	520
14.4	ORACLE	522
14.4.1	Oracle Control Features	523
14.5	PEOPLESOFT	524
14.6	J.D. EDWARDS	526
14.7	LAWSON	527
14.8	BaaN	528
14.9	SAGE	529
14.10	QaD	532
14.11	Microsoft Dynamics	533

14.12 Rumors about EIS/ERP Bidding	535
14.13 Suggestions to an ERP Vendor	535
14.14 A Broader Definition of EIS Vendors	537
14.14.1 Second-Tier Vendors	538
14.14.2 EIS Vendors in American and Indian Perspectives	538
14.15 Conclusion	539
☆ Keywords	540
☆ Terminology Review	541
☆ Competency Review	543
☆ Suggested Reading	546
Appendix A: Careers in EIS	549
Appendix B: Frequently Asked Questions	565
Index	573