

Successes and Failures of Knowledge Management

Edited by:

Jay Liebowitz

*Distinguished Chair of Applied Business and Finance
Harrisburg University of Science and Technology
Harrisburg, Pennsylvania*



AMSTERDAM • BOSTON • HEIDELBERG • LONDON
NEW YORK • OXFORD • PARIS • SAN DIEGO
SAN FRANCISCO • SINGAPORE • SYDNEY • TOKYO

Morgan Kaufmann is an imprint of Elsevier



Contents

Contributors	xv
Preface.....	xvii

CHAPTER 1 Parameters of Knowledge Management Success 1

C.W. Holsapple, S.-H Hsiao, J.-Y. Oh

Introduction.....	1
Foundation	3
Knowledge.....	4
Conduct of Knowledge Management	5
Superiority and the PAIR Model	6
Parameters.....	7
Conclusions.....	11
References.....	11

CHAPTER 2 Why are Companies Still Struggling to Implement Knowledge Management? Answers from 34 Experts in the Field 13

V. Ribière, F.A. Calabrese

Introduction.....	13
The State of Knowledge Management.....	13
Original Source Material Knowledge Base	15
Research Method	17
Key Findings	17
Data Analysis	17
Text Mining Analysis.....	20
Data Interpretation	23
Comparative Analysis with Previous Studies	28
Conclusions.....	31
Acknowledgments.....	33
References.....	33

CHAPTER 3 REAL Knowledge and the James Webb Space Telescope: Success and Failure Coexisting in NASA 35

E. Hoffman, J. Boyle, E. Rogers

Introduction.....	35
-------------------	----

NASA Knowledge Services Governance and Strategic Imperatives	37
Strategic Imperatives in the Modern Project Knowledge Environment	40
REAL (Rapid Engagement Through Accelerated Learning) Knowledge Model	43
Success and Failure Coexist: The James Webb Space Telescope	48
Pioneering Technology and Instrumentation	50
Expectations Versus Performance	52
Technology Readiness	53
Waiting for Assessments	54
JWST in Terms of REAL Knowledge	54
Conclusions	56
References	58
CHAPTER 4 Processes: Still the Poor Relation in the Knowledge Management Family?	59
<i>J.S. Edwards</i>	
Introduction	59
People, Processes, and Technology in Knowledge Management	60
Analyzing Examples of KM Failure and Success	62
Connections Between People and Business Processes	62
Connections Between People and Knowledge Processes	64
Connections Between Business Processes and Knowledge Processes	65
You Can't Win Them All!	66
Conclusions: Reflections on the Future	67
References	68
CHAPTER 5 KM Successes and Failures: Some Personal Reflections on Major Challenges	71
<i>A.K.P. Wensley</i>	
Introduction	71
Evolution of Knowledge Management	72
Problems with the Nature of Knowledge	72
Familiar Challenges in Knowledge Elicitation	73
Studies in the Nature of Expertise and Judgment	74
Challenges in Knowledge Representation	74
What We Know and do not Know	74
Problem of Big Data and Machine Learning	75
Knowledge, Knowledge Management, and Culture	75
Importance of Trust and the Sharing of Knowledge	77

Digital Asset Management.....	78
Importance of Forgetting	78
Support and Changing of Routines.....	79
Recapturing Knowledge.....	80
Value of Knowledge.....	81
Knowledge Processes	81
Conclusions.....	82
References.....	82

CHAPTER 6 Lessons Learned from Nearly 200 Cases of KM Journeys by Hong Kong and Asian Enterprises 83

E. Tsui

Introduction to the Nature of the Knowledge Management Initiative and its Specific Objectives.....	83
The Infrastructure—People, Systems, Hardware, Software, etc.—Required to Launch the Initiative	84
The Challenges that were Encountered, How They Developed, and How They were Overcome.....	86
How the Initiative was Received by the Users or Participants.....	88
The Efficiency, Effectiveness, or Competitive Advantage Outcomes that were Achieved and How They were Measured and Evaluated.....	91
Gap Between KM in the Books and in Practice	93
Knowledge Audit and Knowledge Strategy: Which One Comes First?.....	93
KM Journeys are Rarely Started from Scratch	94
Natural KM “Entry Points” in Organizations	94
KM Strategies Vary Among Multinational Corporations, Local Companies, and Small to Medium-Sized Businesses.....	94
Factors for Sustaining the use of Knowledge Management Systems that Differ from Factors that Affect Adoption	95
IC is Much Harder Than KM to Sell	95

CHAPTER 7 Knowledge Loss and Retention: the Paradoxical Role of IT 97

N. Levallet, Y.E. Chan

Introduction.....	97
Review of the Literature.....	98
Knowledge and the Knowledge-Based View.....	98
Knowledge Retention and Loss	99
Research Model	101
Research Methodology	101

Findings.....	103
GovSystem Overview	103
Bright Side of GovSystem: Effective Knowledge Acquisition and Retrieval	103
Dark Side of GovSystem: Knowledge Loss During Acquisition and Retrieval	104
Findings Summary.....	106
Discussion and Implications	106
Discussion.....	106
Implications	107
Conclusions.....	108
References.....	109

**CHAPTER 8 Knowledge and Knowledge-Related Assets:
Design for Optimal Application and Impact..... 113**

G.S. Erickson, H.N. Rothberg

Introduction.....	113
Background: Knowledge Management.....	114
Rethinking the DIKW Hierarchy	115
Competitive Intelligence Systems.....	116
The Knowledge-Related Hierarchy and the Disciplines.....	118
Big Data and Business Analytics	119
Discussion: What is KM Missing?.....	121
Conclusions.....	124
References.....	125

**CHAPTER 9 Knowledge Management Success and Failure:
the Tale of Two Cases 129**

S. Larson

Introduction.....	129
Case Study 1: Language, Culture, and Leaders: a Case Study of the Challenges of Installing a Knowledge Management System in a Tax Firm	130
Business Setting.....	130
Business Problem.....	131
Goals of the KM System.....	131
Proposed Solution.....	131
Implementing the KM System.....	132
Challenges.....	132
Results and Conclusion.....	133

Case Study 2: Building a Better Knowledge
 Management and Customer Service System..... 134
 Introduction..... 134
 Business Setting..... 134
 Business Problem..... 135
 Goals 135
 System Implementation 135
 Help Desk Ticket System..... 136
 KM System 137
 Incentive Program..... 137
 Results and Conclusion..... 137
 References..... 139

**CHAPTER 10 Social Knowledge: Organizational Currencies
 in the New Knowledge Economy 141**

K.E. Russell, R. La Londe, F. Walters
 The Odometer Reading: Evolution of Social Knowledge
 Management..... 141
 Conversations Build Communities 141
 More Than an Idea, it’s a Practice..... 142
 An Evolutionary Road 143
 Managing Social Knowledge: People, Process, Technology,
 and the Human Experience 144
 Showing Value with SKM (Putting Miles on the Odometer)..... 144
 Merging Into Traffic: Trusting the Rules of the Road
 in the New Social Economy..... 145
 A Generational Shift 146
 The Emerging Social (Knowledge) Economy 146
 What has Worked? Where to Start? 147
 Acknowledgment 150

**CHAPTER 11 Knowledge Management and Analytical
 Modeling for Transformational Leadership
 Profiles in a Multinational Company 151**

T. Ha-Vikström, J. Takala
 Introduction..... 151
 Theoretical Framework 152
 Transformational Leadership Model 152
 Sand Cone Model 153
 Analytic Hierarchy Process (AHP)..... 156

Research Environment and Methods	156
Transformational Leadership Index (TLI)	157
Results	157
Transformational Leadership Profiles	157
Total Leadership Index—Reexamination	158
Discussion	162
Conclusions	164
References	165
Appendix 1	168
Appendix 2	169
Appendix 3	170
Appendix 4	171
Appendix 5	172
Appendix 6	173

CHAPTER 12 Success and Failure in Improvement of Knowledge Delivery to Customers Using Chatbot—Result of a Case Study in a Polish SME 175

B. Filipczyk, J. Gotuchowski, J. Paliszkievicz, A. Janas

Introduction	175
The Needs and Difficulties in Management of Knowledge Delivery to Customers in the Selected SME	176
Improvements of Knowledge Bases and Delivery Processes Using Chatbots	178
The Improvements of Knowledge Delivery to Customers in Janas Company	179
Results of Improvements of Knowledge Delivery to Customers Using SAGA	180
Discussion	183
Conclusions and Directions for Future Research	185
References	187

CHAPTER 13 Don't Neglect the Foundation: How Organizations can Build Their Knowledge Architecture and Processes for Long-Term Sustainability 191

S. Earley

Diverse, Fast-Changing Information Sources	191
Knowledge That Serves the Customer	192
Incorrect Architecture Reduces Organizational Agility	192
Architectural Problems Across the Information Ecosystem	194
Foundational Architecture as a Project Rather Than a Program	194
Parochial View of the Application	195

Balancing Centralized Versus Distributed Control	195
Passing on Data and Content Quality Issues.....	195
Cutting Corners or Checking the Boxes	196
Incorrect Development and Application of Use Cases and Scenarios	196
Lack of Understanding of User Types and the Needs of Users	197
Lack of Appreciation of the Value of Unstructured Information	197
Lack of Meaningful Metrics or Interpretation to Tie Business Value to Information	197
Lack of Maturity in Enterprise Architecture, User Experience, and Governance	198
Ownership and Sponsorship	199
Short-Term Objectives with Long-Term Vision.....	199
Goals of Procurement Versus Needs of the Program.....	199
Focus on the Outcome Value, not the Cost of the Engagement	200
Socialization	200
Summary	200

CHAPTER 14 Semantic Technologies for Enhancing Knowledge Management Systems 203

V. Sugumaran

Introduction.....	203
Background.....	204
Knowledge Management	204
Intelligent Agents.....	205
XML and Knowledge Management	205
Semantic Technologies	206
RDF—Resource Description Framework.....	206
RDF Schema.....	206
Ontology	207
Web Services.....	207
Semantic Technologies–Based Knowledge Management Environment.....	208
Internal Components.....	209
External Components.....	210
Summary	211
Acknowledgment	211
References.....	212

Subject Index	215
---------------------	-----