
Table of Contents

Chapter 1

| | |
|---|----------|
| Why Quality Information and Knowledge? | 1 |
| Two Propositions | 3 |
| Create Knowledge with Quality Information | 4 |
| Book Organization | 6 |

Chapter 2

| | |
|--|-----------|
| Manage Information as a Product | 9 |
| Social and Business Impacts | 10 |
| <i>Social Impacts</i> | <i>10</i> |
| <i>Business Impacts</i> | <i>11</i> |
| Customer Service | 11 |
| Management Support | 12 |
| Bottom Line | 12 |
| Fundamental Concepts | 13 |
| <i>Information versus Data</i> | <i>13</i> |
| <i>From Product to Information Manufacturing</i> | <i>13</i> |
| <i>Information Manufacturing Systems</i> | <i>14</i> |
| <i>The Information System Development Cycle</i> | <i>15</i> |
| <i>The Total Data Quality Management (TDQM) Cycle</i> | <i>16</i> |
| <i>Dimensions of Information Quality</i> | <i>16</i> |
| The Information Product Manager | 17 |
| <i>Managing Information as a Product – The Four Principles</i> | <i>19</i> |
| <i>Managing Information as a Byproduct Will Not Work</i> | <i>21</i> |
| What Is Managed? | 21 |

| | |
|---|----|
| How Is It Managed? | 22 |
| Why Is It Managed? | 23 |
| What Is Success? | 24 |
| Who Manages It? | 24 |
| <i>Appoint the Information Product Manager</i> | 25 |
| <i>The De Facto Information Product Manager</i> | 25 |
| Information Product Manager's Responsibilities | 26 |
| Establish an Information Quality Program | 27 |
| Conclusion | 29 |

Chapter 3

| | |
|--|-----------|
| Define Information Quality | 33 |
| The Information System Perspective | 34 |
| <i>Data Deficiency</i> | 36 |
| <i>Design Deficiencies</i> | 37 |
| <i>Operation Deficiencies</i> | 39 |
| <i>Some Implications of Information Systems Design</i> | 41 |
| The Information Consumer Perspective | 42 |
| <i>Fitness for Use</i> | 43 |
| <i>Dimensions of IQ</i> | 43 |
| <i>Define IQ in Organizational Context</i> | 44 |
| Method | 44 |
| Intrinsic IQ Pattern | 48 |
| Problem Analysis and Solutions | 49 |
| Accessibility IQ Pattern | 50 |
| Contextual IQ Pattern | 52 |
| Implications for IS Professionals | 54 |
| Conclusion | 56 |

Chapter 4

| | |
|---|-----------|
| Measure, Analyze, and Improve IQ | 59 |
| Measure IQ | 60 |
| <i>Subjective IQ Metrics</i> | 61 |

| | |
|---|----|
| Dimensional IQ Assessment | 61 |
| IQ Knowledge Assessment | 62 |
| <i>Objective, Application-Independent Metrics</i> | 63 |
| <i>Application-Dependent IQ Metrics</i> | 64 |
| Analyze IQ | 67 |
| <i>IQ Assessment (IQA)</i> | 67 |
| Survey Results Analysis: A Case Study | 69 |
| <i>Integrity Analyzer™</i> | 72 |
| Data Integrity | 74 |
| Frequency Checks | 80 |
| Improve IQ | 81 |
| Conclusion | 83 |
| Appendix: IQA Survey | 85 |

C h a p t e r 5

| | |
|--|-----------|
| Create Organizational Knowledge | 91 |
| Organizational Alzheimer's Disease | 92 |
| Information and Experience Are Knowledge Sources | 93 |
| <i>Information Contains Knowledge</i> | 93 |
| <i>Experience Manifests Knowledge</i> | 94 |
| What Is Organizational Knowledge? | 95 |
| <i>Organizational Knowledge in Three Modes</i> | 95 |
| <i>Assess Organizational Knowledge</i> | 96 |
| Why Create Organizational Knowledge? | 97 |
| How to Create Organizational Knowledge | 98 |
| Eyewear Company Revisited | 100 |
| Conclusion | 102 |
| Appendix: IQK Survey | 103 |

C h a p t e r 6

| | |
|-----------------------------------|------------|
| Manage Knowledge as Assets | 111 |
| Power of Collective Knowledge | 112 |
| What Is Knowledge Management? | 113 |

| | |
|---|-----|
| Why Knowledge Management? | 114 |
| How to Manage Knowledge Assets | 114 |
| <i>Platform for Knowledge Management</i> | 116 |
| Ten Strategies for Knowledge Management | 117 |
| 1. <i>Establish a Knowledge Management Methodology</i> | 117 |
| 2. <i>Designate a Pointperson</i> | 118 |
| 3. <i>Empower Knowledge Workers</i> | 118 |
| 4. <i>Manage Customer-Centric Knowledge</i> | 119 |
| 5. <i>Manage Core Competencies</i> | 121 |
| 6. <i>Foster Collaboration and Innovation</i> | 125 |
| 7. <i>Learn from Best Practices</i> | 127 |
| 8. <i>Extend Knowledge Sourcing</i> | 127 |
| 9. <i>Interconnect Communities of Expertise</i> | 128 |
| Competency Networks | 129 |
| 10. <i>Report the Measured Value of Knowledge Asset</i> | 129 |
| Conclusion | 130 |

Chapter 7

| | |
|---|------------|
| Create Customized Solutions | 133 |
| Defining Intellectual Capital, Intellectual Asset, and Solution | 134 |
| <i>Intellectual Capital</i> | 134 |
| <i>Intellectual Asset and Solution</i> | 135 |
| Harvesting and Hardening Assets for Reuse | 136 |
| Knowledge Asset Reuse Process | 136 |
| <i>Intellectual Capital from Project Information</i> | 137 |
| <i>Customized Solutions from Customer Knowledge</i> | 138 |
| Knowledge Asset Development Process | 139 |
| <i>Competency Leader</i> | 140 |
| <i>Asset Manager</i> | 140 |
| <i>Knowledge Architect</i> | 140 |
| <i>Asset Publisher</i> | 140 |
| <i>Asset Broker</i> | 140 |
| Enterprise Knowledge Structure | 141 |

| | |
|---|-----|
| <i>Requirements for Asset Identification</i> | 142 |
| <i>Selection Criteria for Asset Hunting</i> | 142 |
| 1. Business Value | 142 |
| 2. Functionality | 142 |
| 3. Complexity | 143 |
| 4. Reuseability | 143 |
| 5. Documentation and Support | 143 |
| 6. Business and Technology Risk | 143 |
| Life Cycle Management | 144 |
| <i>Quality of Intellectual Capital</i> | 144 |
| <i>Levels of Life Cycle</i> | 144 |
| From Data to Knowledge | 146 |
| <i>Data and Knowledge Mining</i> | 147 |
| <i>Knowledge Cockpit</i> | 148 |
| Customer Information | 149 |
| Market Information | 149 |
| Business Experiences | 149 |
| <i>Data Warehouses</i> | 149 |
| <i>Network Agents as Knowledge Intermediaries</i> | 150 |
| <i>Network Agents in Electronic Commerce</i> | 151 |
| Verification Driven Agent | 151 |
| Discovery-Driven Agent | 152 |
| <i>Text Mining</i> | 153 |
| Information Filtering | 153 |
| Collaborative Filtering | 153 |
| Conclusion | 153 |

Chapter 8

| | |
|--|------------|
| Network Knowledge Infrastructure | 157 |
| Corporate Knowledge Infrastructure | 158 |
| Knowledge Architecture for the Extended Enterprise | 158 |
| Design Requirements | 160 |

| | |
|---|-----|
| The Internet, Intranets, and Extranets | 161 |
| <i>Intranets for Knowledge Sharing and Collaboration</i> | 162 |
| ICM AssetWeb | 162 |
| <i>Competency Networks</i> | 164 |
| <i>Best Practice</i> | 164 |
| <i>Navigator</i> | 165 |
| <i>Idea Generation and Team Collaboration</i> | 165 |
| <i>Issue-Based Structured Collaboration</i> | 165 |
| Shared Central Repository | 167 |
| Capture Team Dialog and Issue Resolution | 167 |
| Managing Team's Knowledge | 167 |
| <i>Extranets for Customer Care Management</i> | 168 |
| Net Car Dealerships | 168 |
| <i>Groupware for Collaboration</i> | 169 |
| <i>The Internet and Intranets for Networked Communication</i> | 170 |
| Security | 171 |
| Conclusion | 172 |

Chapter 9

| | |
|--|------------|
| Prosper in the Digital Economy | 175 |
| Knowledge-based Economy | 176 |
| Competitive Drivers | 177 |
| <i>Innovation</i> | 178 |
| <i>Responsiveness</i> | 178 |
| <i>Productivity</i> | 179 |
| <i>Competency</i> | 179 |
| Competing for Intellectual Influence | 180 |
| <i>Helping Customers to Win</i> | 180 |
| <i>Empowering Knowledge Workers to Execute</i> | 181 |
| <i>Configuring Business Partners to Team</i> | 181 |
| <i>A Web-based Advisor</i> | 182 |

Table of Contents

xi

| | |
|---|------------|
| Transforming the Future of Life | 183 |
| <i>Networked Life</i> | 183 |
| <i>Knowledge Sharing and Mining</i> | 183 |
| <i>Being Virtual rather than Physical</i> | 185 |
| Conclusion | 185 |
| Information Quality Bibliography | 187 |
| Knowledge Management Bibliography | 195 |
| Glossary | 203 |
| Index | 207 |