

Index

- Adaptive case management (ACM), 117
- Aircraft maintenance industry, 159–162
- Airline company, reliability management in, 153–159
- American Productivity and Quality Center (APQC), 181, 182
- Ant-hacking, 19
- Artificial intelligence (AI), 1, 22, 112–113
- Asset management department (AMD), 85
- Asset-oriented approach, 10–11
- Balanced scorecard method (BSC method), 48
- Business support system (BSS), 172
- Capability center. (*see* Center of excellence (CoE))
- Casualty Actuarial Society model (CAS model), 16
- Center of excellence (CoE), 149, 150, 197
 - benefits of, 152–153
 - grouping, 151
 - implementation, 151
 - list of expert, 152
- Civil Aviation Department (CAD), 159
- Claim, evidence, and reasoning model (CER model), 34
- Codification, 42–43, 89, 97, 105, 108, 117, 127
- Codified knowledge, 42–43
- Collective sense making, 118, 120
- Committee of Sponsoring Organizations of Treadway Commission (COSO), 16
- Communities of practices (CoP), 114, 149
- Competency center. (*see* Center of excellence (CoE))
- Computer Science Corporation (CSC), 11
- Concept list, 171
- Construct elicitation, 111–112
- Corporate amnesia, 125, 127, 141–145
- Corporate performance
 - measurement, 181
 - assessing innovation performance, 190–191
 - global MIKE, 194–195
 - good practices, 196–198
 - IC practice-driven innovation, 192–194
 - innovative knowledge enterprise, 188
 - KMMM implementation, 182–188
 - MAKE survey, 188–190
 - measurement models, 181–182
- Customer capital (CC), 45
- Customer liaison team (CLT), 172
- Cybersecurity, 19
- Cyberspace, 22
- Data→information→knowledge→wisdom model (DIKW model), 4
- Data–information–knowledge model (DIK model), 3–4
- Defensive reasoning process, 141–145
- Document analysis, 112
- Double-loop learning, 133–134, 136–138, 146
- Element elicitation, 111
- Enterprise risk management (ERM), 15, 16
- European Commission (EC), 45

- Evaluation approach, 17
- Evaluative inquiry (EI), 172, 176
- Evidence reasoning (ER), 34
- Exploitative organizational learning (EOL), 130

- Financial asset management, 41
- Financial risk, 1, 16–17
- First-person research, 119
- Future Potential (FP), 66

- Global innovation index (GII), 191
- Goal related method, 111
- Google Career Certificate, 23

- Hacking, 19, 34, 57
- Hazard risk, 16
- High reliability organizations (HROs), 162
- Higher-level learning.
(*see* Double-loop learning)
- Human capital (HC), 42, 153 (*see also* Intellectual capital (IC))

- Individual learning, 129, 145
 - learning organization *vs.*, 128–132
- Industrial technology, 78, 82, 97–100
- Industry 4.0, 1
- Information management (IM), 3
- Information Solutions Network (ISN), 114
- Information technology (IT), 2, 11, 16, 18, 72, 105, 114, 181–182, 194
- Institutionalizing process, 145
- Intangible assets, 41, 48, 60–63, 66, 85, 191
- Integrating process, 145
- Intellectual asset (IA), 44
- Intellectual capital (IC), 42, 71, 108, 125, 153, 181
 - accounting, 60–68
 - balance sheet, 62
 - management reference model, 44–48
 - risk, 54–59
 - from workflow perspective, 62
- Intellectual capital Charting (ICC), 42, 48
 - assessment of IC elements, 51–52
 - compilation of IC strategic map, 52–54
 - elicitation of IC elements, 49–51
 - IC indicators, 50
- Intellectual property (IP), 19, 41
- Intellectual property rights (IPRs), 60
- Internalization, 6, 106–107
- Interpreting process, 145
- Intuiting, interpreting, integrating, institutionalizing process (4I process), 145
- Intuiting process, 145

- Key result areas (KRAs), 182
- Knowledge, 3, 5–7, 41
 - discovery, 105–108
 - fountain, 97, 101
 - inventory, 72, 74, 82, 86, 89–94
 - leakage risk, 18, 25, 29
 - loss risk, 20–21, 25–26, 29, 89, 97
 - mapping, 72, 96–97, 113, 118
 - obsolescence risk, 21–23, 25, 27, 29
 - shortage risk, 23–24
 - typology of, 7–10
 - workers, 95–96
- Knowledge assets, 1, 21, 54, 71, 73–74, 112
 - balance sheet, 56
 - identification, 42–44
- Knowledge audit (KA), 71
 - analysis of audit results, 95–100
 - audit design, 73
 - audit recommendations, 100–103
 - design of STOCKS survey forms, 75–78
 - framework of, 72
 - knowledge inventory, 89–94
 - power utility company, 84–86
 - process prioritization, 75
 - project execution and implementation, 86–89
 - selection of audit process, 75
 - STOCKS approach, 74

- STOCKS framework, 73–74
- STOCKS workshop, 78–79, 82–84
- Knowledge elicitation (KE), 108
 - application of narratives, 113–116
 - ASHEN elements, 115
 - design of audit methodology, 118–119
 - direct KE methods, 109–111
 - Gas Utility company, 119–124
 - indirect KE methods, 111–113
 - SBP, 116–117
 - UBP, 116, 117–118
- Knowledge management (KM),
 - 1, 2–7, 71, 105, 149, 181
 - business value of, 12
 - CoE, 150–153
 - core skills of, 10–14
 - definitions, 11
 - dynamic taxonomy, 168–171
 - implementation, 149
 - near miss in aircraft maintenance industry, 159–162
 - near miss in hospitals, 162–168
 - reliability management in airline company, 153–159
 - strategy in SME, 172–179
 - typology of knowledge, 7–10
- Knowledge management audit (KMA), 71
- Knowledge management capability
 - assessment tool (KMCAT), 181
- Knowledge management maturity
 - model (KMMM), 181, 182
 - analysis model, 186
 - assessment procedure, 186
 - benefits, 188
 - implementation, 186–188
 - implementation at Siemens AG, 182, 184
 - of Infosys, 183
 - initial and updated, 185
- Knowledge management system (KMS), 12, 21, 39
- Knowledge representation (KR), 7, 73, 112, 118–119
- Knowledge risk, 18
 - assessment of knowledge risk factors, 24
 - case study of, 35–39
 - knowledge leakage risk, 18–19
 - knowledge loss risk, 20–21
 - knowledge obsolescence risk, 21–23
 - knowledge shortage risk, 23–24
 - level 1 assessment, 25–33
 - level 2 assessment, 34–35
 - organizational productivity, 21
 - VPN, 19
- Knowledge-based business support system (KBSS), 176, 177, 178
- Learning, 6, 7, 24
 - corporate amnesia, 141–145
 - double-loop, 133–134
 - gaps in organizational learning, 145–146
 - individual learning vs., 128–132
 - intrinsic barriers to, 132–133
 - organization, 126, 128
 - organizational defense routines, 138–139
 - organizational forgetting, 139–141
 - single-loop, 133–134
 - theory of action, 135–137
- List related method, 111
- Lotusair, 154, 158
- Market capitalization methods (MCM), 48
- Memory decay, 21, 105, 139–140
- Mental knowledge processes, 8
- Mental model, 8–9, 127, 130, 132, 133, 135, 155, 158
- Most Admirable/Admired Knowledge Enterprise (MAKE), 34, 181
- Most Innovative Knowledge Enterprise (MIKE), 181
- National Aeronautics and Space Agency (NASA), 142

- Near miss, 159, 164
 - in aircraft maintenance industry, 159–162
 - in hospitals, 162–168
 - incidents, 168
 - reporting system, 165
- Nongovernmental organizations (NGOs), 190
- Operation risk, 16
- Organisation for Economic Co-operation and Development (OECD), 191
- Organizational amnesia (OA), 144
- Organizational defense routines, 138–139
- Organizational forgetting, 139–141
- Organizational learning (*see* Learning—organization)
- Organizational memory, 127, 129, 139–141, 143
- Organizational productivity, 21
- Physical assets, 41
- Practical knowledge, 3
- Premature convergence, 117
- Private virtual network (VPN), 19
- Process-oriented approach, 10–11
- Prototyping, 111
- Qualitative risk assessment, 17
- Reflective organizational learning (ROL), 130
- Relational capital (RC), 42, 153. (*see also* Intellectual capital (IC))
- Reliability management in airline company, 153–159
- Research and development (R&D), 22
- Return on assets (ROA), 48
- Risk, 15–17
 - analysis, IC, 57
 - calculation from likelihood, 30
 - factors, 15–16, 57–58
 - identification, 17
 - meanings of scores, 29
- Risk management (RM), 15–17
- Role of practitioner (RP), 118
- Role playing, 111
- Rule-based approach, 171
- Sense-making methodology, 49
- Siemens AG, KMMM
 - implementation in, 182–188
- Siemens knowledge management framework (SKMF), 182, 184
- Single-loop learning, 130, 133–134
- Small and medium-sized enterprise (SME), 42, 108, 149
 - KM strategy in, 172–179
- Software Engineering Institute (SEI), 182
- Space-based OA, 144–145
- SPICE Asia-Link Program, 45
- Stakeholder analysis, 95
- Strategic alliance (SA), 64
- Strategic risk, 16
- Strategic tools to capture critical knowledge and skills (STOCKS), 72–73
 - form, 75, 77, 78, 80
 - template of STOCKS schema, 81
- Structural capital (SC), 42, 153. (*see also* Intellectual capital (IC))
- Structured business process (SBP), 116–117
- Tangible assets. (*see* Physical assets)
- Teachback, 111
- Technology mapping, 98–99
- Theory of action, 135–137
- Third-person approach, 119
- Time-based OA, 144
- Unlearning, 141
- Unstructured business process (UBP), 116, 117–118