## Index

### A
- Ackoff Collaboratory for Advancement of the Systems Approach (ACASA) 1
- Adaptive Rationality 8-9, 11, 13, 20-22
- agile spreadsheet development (ASD) 74
- Alternatives Analysis Stage 125, 130, 132-135
- ATHENA Interoperability Framework (AIF) 108

### B
- Bid Down 260
- bottom-up flow 126, 129-130, 136
- Bounded Rationality 5, 8-9, 11, 13, 15-17, 20-24
- Business Process Alignment 32, 34-35, 39, 97
- business process model (CIM) 93

### C
- CATWOE 173
- causal loop diagram (CLD) 43, 45
- CIM - See business process model.
- commercial-off-the-shelf (COTS) software 25
- Communications Infrastructure 55
- CONCURTASKTREE approach 112
- Content Service Providers (CSPs) 238
- Critical Realism 29, 139-142, 148-152, 195
- Critical Success Factors 25-26, 29, 32, 34-35, 37-38, 89
- Cryptographic Primitives 273-275, 283
- Cybernetics 1, 4, 52-54, 182

### D
- denial of service (DoS) 259
- Descriptive agents 5-6

### E
- Dispersion Modeled Transport Calculation (DMTC) 63
- Electrical and Systems Engineering (ESE) 4
- Enterprise Architecture (EA) 122
- Enterprise Service Bus 184-186, 189, 191, 195-196
- Environmental Impact Assessment 55
- Environmental Informatics 55, 154
- eSafety 226-229, 232-236
- European Spatial Data Infrastructure (ESDI) 156

### F
- Facade Modules 191
- Feasibility Stage 125, 130-135
- Federal Enterprise Architecture Framework (FEAF) 123
- feedback loop 11, 21
- Fuzzy Biclustering 212, 214-215, 217, 219-223

### G
- Geovisual Analytics 154
- Getaway GPRS Support Node (GGSN) 259
- Gross Domestic Product (GDP) 40, 43

### H
- Her Majesty Revenue and Customs (HMRC) 239
- Holism 30, 38, 168

### I
- implementation independent models (PIMs) 93
- incremental model 10
- Integration Definition for Function Modeling (IDEF0) 94
International Standards Organization (ISO) 72
Internet Information Server (IIS) 219
Interoperability 58, 106-109, 119, 155, 159-160, 163, 198-202, 204, 207
Interoperability Data Acquisition Platform (IDAP) 238
IP Multimedia Subsystem (IMS) 257, 269-270
IT Project Management (ITPM) 25

L
Lakatosian epistemology 8, 17, 19-20
Lakatosian falsification principle 9, 13, 17
Learning Scenario Implementation 204
Likert rankings 35
Location-Based Services (LBS) 273
Location Information Preference Authority (LIPA) 278
LOM metadata 203-204

M
Man in the Middle (MitM) 257
Mean Absolute Error (MAE) 220-221
Media Resource Function Processor (MRFP) 259
Middle-Range Theory 139, 147
Millennials 230
MobileEnterprise Architecture (MEA) 122
Model Driven Engineering (MDE) 91

O
Open Knowledge Initiative (OKI) 197
Open Services Interface Definition (OSID) 197
Organizational Complexity 1
Organizational Dynamics 29, 32, 34-35, 37

P
Page Clustering 212-214, 221, 224
PIMs - See implementation independent models.
Platform independence 199
platform specific models (PSM) 93
Points of Interest (POI) 158
Popperian theories 9
Private Information Retrieval (PIR) 237, 239, 284
process failure mode effect analysis (PFMEA) 36
Project Management Practices 26, 34-35
pseudonymity 281

Q
Query coordination policies 117

R
radionuclides 60
Rational Actors 5
re-INVITE 259, 262-263
Remote Monitoring of Nuclear Power Plants 55, 62-65
Remote Sensing 56, 273
Research and Development (R&D) 40-45, 51-52
Return of Investments (RoI) 155
Risk Management 35, 55, 60, 63, 65-66, 83
Role Based Access Control (RBAC) 111
Root Mean Square (RMSE) 220
Rough Biclustering 212, 214-215, 218-219, 221-223

S
semi-distributed approach 282
SERQUAL 70
Service Oriented Architecture (SOA) 91, 185-186, 199
Service-Oriented Business Applications (SOBA) 92
SERVQUAL 70-72, 82, 89
Small-N Studies 139-140, 148
social systems methodology (SSM) 172
Socio-Technical Systems 1, 4
Soft Systems Methodology 2, 27-29, 38, 173, 181
software development life cycles (SDLC) 8, 67
software engineering (SE) 8-9, 14
spiral model 10, 23, 84
Symmetric PIR (SPIR) 237, 240, 285
System Design and Architecture Alignment 34-35
systems analysis and design (SAD) 75
Systems Science and Engineering (SSE) 4
Systems Social Science (SSS) 3
Systems Theory 1, 39, 182

T
Technical Wrappers 191, 193
the Open Group Architecture Framework (TOGAF) 123
top-down flow 126, 129
Tracking Values 167
Trustguide project 228-229
Index

U
User Clustering 212-214

V
Virtual Reality Mark-up Language (VRML) 156

W
waterfall model 9-10, 67

Web-Based Applications 157
Web Map Service (WMS) 158
Web Mining 212-213, 223
Web Services Composite Application Framework (WS-CAF) 93, 105
Web Usage Mining 212-213
WoS publications 40