

Index

A

Accident Frequency Rate (AFR) 223
 Accident Severity Rate (ASR) 223
 adaptive immune system 249
 AMESim (Advanced Modelling Environment for Simulation) 132, 135
 Analytic Hierarchy Process (AHP) 275
 analytic network process (ANP) 275
 antibodies 247, 250, 253-254, 258-259, 261-262
 antigen 250
 Artificial Intelligence (AI) 264
 Artificial Neural Network (ANN) 69, 132-133, 196
 Augmented Dickey fuller test (ADF – test) 161
 autoregressive-moving average (ARMA) 159

B

balanced scorecard 113, 116, 126-127
 business architecture 47-48, 55, 107, 109
 Business Continuity Planning (BCP) 178
 Business Intelligence (BI) 59-60
 business model 32, 56, 87, 92-93, 96, 100, 112
 Business Process Management (BPM) 1, 3, 20
 Business Process Reengineering (BPR) 1-2, 93

C

Capability Maturity Model (CMM) 13, 23, 26
 capital expenditure (CAPEX) 35
 carbon control 58
 carbon economy 38, 44-45, 55, 57
 carbon emissions 1-4, 6, 13, 19-22, 29-31, 33, 40-41, 48-51, 53, 55-56, 58-59, 62-63, 78
 Carbon Emissions Management Software (CEMS) 6
 carbon footprint 1, 3, 10, 13-16, 18-21, 25, 48, 50-51, 55, 126, 227, 230
 case poverty 208
 change dimensions 184, 187
 change management 1, 4, 8, 172, 174, 179, 181-182, 187, 189

chaos 234
 chaotic system 234
 Cleaner Production (CP) 227
 cloud computing 18-19, 50, 52
 commercial waste 150, 156, 161, 164-165
 Common Rail System (CRS) 132, 137
 Community Carbon Footprint Model (CCFM) 3
 computer security 250-251, 254-255
 Connection Research 12-14, 22-26, 57
 Constant Returns to Scale (CRS) 279
 consumer price index (CPI) 160
 continuity dimensions 187
 corporate social responsibility 1
 course credit system 194-195, 198
 credit load 194
 credit units 194-195, 202
 Cumulative Grade Point Average (CGPA) 196, 202
 customer expectation 33
 Customer Relationship Management (CRM) 20

D

data center 12-14, 17-18, 25, 291
 Data Envelopment Analysis (DEA) 273, 277-278
 decision making units (DMU) 277
 decision tree 263-267, 272
 departmental computing 16-17
 Double Control Periods (DCP) 289, 295
 Dynamic Voltage/Frequency Scaling (DV/FS) 289

E

eco-balancing 226, 228-230
 Economic Order Quantity (EOQ) 70
 eco-tourism 232-242
 EDI message 123
 electronic diesel control (EDC) 138
 Electronic Product Environmental Assessment Tool (EPEAT) 15
 emission standards 132-133, 138, 149

Index

end user computing 16
energy consumption 3, 6, 11, 13, 16, 19, 21, 48-51,
53, 55-56, 63, 118, 122-124, 126, 152, 274,
276, 287, 290, 293, 299, 301
Energy Star 15
enterprise architecture (EA) 88
enterprise computing 17
enterprise engineering 87, 96, 108
Enterprise Resource Planning (ERP) 20, 100
environmental cost 118, 124, 126
environmental degradation 150-151, 154, 302-304,
307-310
Environmental Intelligence (EI) 59
 components 60
Environmental Kuznet Curve (EKC) 302
Environmentally Responsible Business Strategies
 (ERBS) 47-48
 drivers 49
 framework 49, 52
 policies and practices 50
 readiness 53-54
Environmental Management Accounting (EMA) 227
Environmental Management System (EMS) 38-39
environmental pollution 303
environmental standards 1, 4-6, 15
exhaust gas recirculation (EGR) 134
explicit knowledge 178

F

Financial Management Information Systems (FMIS)
 20
first-tier suppliers 120-122
fixed costs 36, 237
fuel injection system 133, 135-136, 142, 147

G

generalized least squares technique (GLS) 308
Global Financial Crisis 29, 31
Grade Point Average (GPA) 196
green business 1-5, 7-8, 10, 47-48, 52, 56-57
 characteristics 1, 4-5, 10
 process redesign 4, 6
 training programs 1, 4, 8, 40
green computing
 benchmarking 12
 catalysts 28
 equipment lifecycle 15
 framework 12
 importance 13
 legislation 30

marketing 31
monetization 35-36
portals 58, 63
green data 59
Green Enterprise Architecture (GEA) 58-59
green image 118, 124, 126
green initiatives 2-3, 6, 43
Gross Domestic Product (GDP) 307

H

Hamming distance 251
Health, Safety, and Environment Management Sys-
 tem (HSE-MS) 221
human capital 172, 215

I

ICT for development (ICT4D) 212
immune system 248
Information and communication technology (ICT)
 212
information assurance 250
information security 247, 250, 252, 254-255
Information Technology Association of America
 (ITAA) 222
Information Technology (IT) 177, 207, 210, 220,
 222
innate immune system 249
innovation 10, 40, 43, 89, 98-99, 105, 109, 116, 127,
 172-176, 179-180, 182-184, 187-192, 207, 238-
 246, 286, 314
 dimensions 174-175, 183
 management 172, 175-176, 179, 183-184, 187,
 190, 241, 243-244
 market based innovation 239
 technological innovation 239, 311
 types of 174
insular poverty 208
Intelligent Quotient (IQ) 200
Intrusion Prevention System (IPS) 248
In-Vehicle Monitoring Systems (IVMS) 221
invisible hand 237
ISO 9000 38-39
ISO 14000 38-39, 42-43
ISO 14001 38-46, 120-121
 compliance 38, 42
 components 39
 costs and benefits 40
 implementation 44
ISO 14064 5-6, 10

J

job shop 66-70, 74, 77-80

K

kinetic energy 274
 knowledge creation 238-241, 243, 245-246
 Knowledge Management System (KMS) 3
 Kolmogorov Complexity 251, 256

L

life cycle analysis 3-4, 10
 Linear Fractional Transformation (LFT) 134
 Loss Time Injury Frequency (LTIF) 223
 Lot-Sizing Problems (LSP) 227

M

machine learning 134, 149, 263-264, 267, 272
 makespan 66-67, 69-70, 72, 74-80, 84, 86
 Management Information System (MIS) 3
 Management of Change 172-173, 179
 Management of Continuity 172-173, 176
 management science 79, 91, 100-101, 189, 241-243, 245, 286
 Man-Hour worked (MHR) 223
 mapping 3, 47, 52-53, 71-72, 76-78, 138, 145, 180, 191, 241
 Material Requirements Planning (MRP) 69, 226
 mathematical induction 66, 68, 73, 81, 83
 Maven 314, 316
 multicriterion analysis (MCA) 275
 Multi Layer Perceptron (MLP) 133
 multiple criteria decision making (MCDM) 277
 Municipal Solid Waste (MSW) 279
 MYCIN 264

N

National Information Technology Development
 Agency (NITDA) 211-212, 218
 National Information Technology Policies (NITP)
 211-212
 neural network 69, 132-135, 137, 139-143, 146-148, 193-194, 196-199, 206
 Next Generation Networks (NGN) 214
 NigerScrab 311-317
 non-polynomial (NP) hard 66

O

operational costs (OPEX) 35
 outsourcing 17-19, 33, 63, 89, 115

P

Part-Period Balancing heuristic (PPB) 227
 Pascal 313
 performance measures 87, 116, 131
 personal computing 16-17
 planned opportunism 119
 Pollution Prevention Guidelines (PPG) 41
 Population Density (PODENS) 307
 potential energy 274
 power management 16-17, 54-55, 289-290, 300-301
 powers-of-two 66, 68-71, 73-79, 81-83, 86
 precedence constraints 66, 68, 72
 predictive controller design 132
 process mapping 47, 52-53
 Production Planning and Scheduling (PPS) 226
 proportional-integral-derivative (PID) 134

Q

Quackle 314
 quality of service (QoS) 291

R

recycling 15, 21-22, 121, 125, 150, 153, 155-156, 163, 165-166, 170, 235
 regression analysis (RA) 277
 renewable energy sources (RES) 279
 residential waste 150, 156
 re-usable packages 121, 123, 125-126, 130
 Road Traffic Accident (RTA) 223

S

scheduling 34, 66-72, 74-75, 77-80, 91, 101, 103, 112, 226, 289-290, 292, 300-301
 service-orientation 61
 Service Oriented Architecture (SOA) 59
 repositories 61
 SIMULA 313
 Simulink 141-143, 148
 single-level uncapacitated lot-sizing problem (SLULSP) 228
 single sourcing 118, 123, 125-126, 131

Index

small-to-medium sized enterprises (SMEs) 233
solid wastes generation
 Nigeria 150
Stochastic Frontier Analysis (SFA) 278
Structured System and Design methodology
 (SSADM) 265
successor constraints 66, 72
Supply Chain Council 87, 89, 92, 98-99, 111
supply chain hype cycle 104
supply chain management (SCM) 20, 91
 automotive 113
 green and lean 113-114, 116, 118-120, 123,
 125-127, 130-131
Supply Chain Management (SCM) 20, 91
sustainable management 47-48
SWOT (Strengths, Weaknesses, Opportunities, and
 Threats) 90

T

tacit knowledge 178
TechRadar 104, 108
teleworking 20
Total Cost of Ownership (TCO) 14, 26
Total Credit Point (TCP) 196
Total Credit Unit Earned (TCUE) 195
Total Credit Unit Registered (TCUR) 195
Total Primary Energy Supply (TPES) 282
turbine manufacturing 66-68, 70, 74, 77, 80

U

Unified Modeling Language (UML) 201
United Nations Development Programme (UNDP)
 207
Unit Injector System (UIS) 137
Unit Pump System (UPS) 137
user charges 150, 156-157

V

value chain 88, 92-94, 96, 99, 107, 127
value creation 3, 87, 105, 111
variable costs 36
variable geometry of the turbocharger (VGT) 134
Vary-On Vary-Off (VOVF) 289
virtualization 14, 55, 291
virtual machines (VM) 291
visible hand 237
Voice over Internet Protocol (VoIP) 214

W

Wagner-Whitin algorithm (WWA) 227
WAMP Server 200
waste management 39, 150, 152-157, 161, 166-167
Web Services (WS) 59
willingness to pay (WTP) 157
work break down structure (WBS) 74
work order 71-72, 75-77
World Wide Web (WWW) 78, 272