INDEX

Academia, 6
Academic institutions
  changing model, 1–3, 5
  characteristics of, 3–5
  demographic change, 5
  digital intellectual, 3–4
  future of, 5–8
  leadership, 8–10
  market forces, 5
  post-Cold War world, 5
  social contract, 4
  theage of knowledge, 5
  universities, 4
Academic leaders, 8–10
  academic institutions, 128–129
  characteristics of, 10–11
  effectiveness, 12–13
  higher educational institutions, 122–123
  Lean Six Sigma (LSS), 121–122
  motivation, 12–13
  project ideas, 123–124
  staff resources, 126–127
  structuring of project teams, 125–126
  style of project delivery, 123–124
  success communication, 127–128
  sustainability, 128–129
  techniques, 124–125
  traditional leaders, 12

Big Data, 20

Capability maturity model, 85
Cochrane collaboration, 26
Commercialisation, 6
Commercial Quality, 18–19
Continuous improvement (CI), 76–77, 100–101

Design of experiments (DoE), 26, 28, 124
  academic leadership, 34–35
  analysing phase, 38–40
  case studies, 30–31
  conducting phase, 35–38
  continuous improvement, 34–35
  design phase, 32–35
  lean six sigma, 34–35
  maturity model, 34–35
  planning phase, 31–32
  structuring, 28
  Taguchi techniques, 39–40
  Total Quality Management (TQM), 34–35
  traditional literature review analysis, 38–39
  validation exercise, 37–38
Digital intellectual output, 3–4
DMAIC projects, 104, 124

Facebook, 5–6
Ford Motor Company, 15–16

Global education, 3
Goal driven approach, 12–13
Google, 5–6
Gordon State College, USA, 71

Higher educational institution (HEI), 3, 121–123
Honeywell, 18

Individual performance, 24
Industry income, 46
International outlook, 46
ivy league, 2

Knowledge, 3–4
  economy, 9–10

Leadership, 8–10
Leadership maturity models, 77–79
  case studies, 99, 101, 105, 108, 110
  factors and characteristics, 106
  linking levels, 106
  model creating, 105–108
  model testing, 108–112
  stages, 98–99
Lean manufacturing, 16
Lean Six Sigma (LSS), 6–8
  academic institutions, 128–129
  academic leaders, 121–122
  birth of, 19
  Ford, 15–16
  future, 20
  higher educational institutions, 122–123
  launch of, 17–19
  lean manufacturing, 16
  maturity models, 82–84
  Model T chassis, 16
  project ideas, 123–124
  Six Sigma organisation, 17
  staff resources, 126–127
  structuring of project teams, 125–126
  style of project delivery, 123–124
  success communication, 127–128
  sustainability, 128–129
  techniques, 124–125
  Toyota Production System, 15
Learning management systems (LMS), 5–6
Low maturity, 76

MAIC, 18–19
Main Effects plot, 39–40
Master Black Belts, 46, 67
Mastering deployment, 98–99
Maturity models, 37–38, 40
  capability maturity model, 85
  continuous improvement (CI), 76–77
  economic growth model, 75
  high maturity, 76
  leadership maturity models, 77–79
  Lean Six Sigma maturity models, 82–84
  levels of, 83
  linearity of, 94
  low maturity, 76
  multi-dimension process improvement maturity model, 81
  process improvement maturity models, 80–82
  review of, 86–93
  scenarios of, 94
  target audience of maturity, 94
  testing, 95
  type of, 85
  use of, 75–77
Miami University, USA, 71
Model T, 16
Motivation, 12–13
Motorola, 18
  roadmap for, 18
Multi-dimension process improvement maturity model, 81

National University of Singapore, 71

Operational excellence methodologies, UK higher education sector
  criteria, 45–46
  initial questionnaire research, 49
  Lean Six Sigma, 71–72

Master Black Belts, 46, 67
quantitative research, 47–48
research, 51–54
rest of the world perspective *vs.*, 51–54
surveys, 47–48, 54, 68
Organisation mission, 24
OSaR model, 102

Parents knowledge, 5–6
Plan Do Check Act model, 103
Planning phase, 30
Post-Cold War world, 5
Process improvement maturity models, 80–82
Process Improvement Unit (PIU), 104

Qualitative research, 99
Quantitative research, 47–48

Red brick, 2
Repetition, 27
Resource Grab, 12–13

Second World War, 18
Six Sigma
launch of, 17–19
organisation, 17
Social contract, 4
Spinouts, 5–6
Stimulate debate, 101
Systematic literature review
Cochrane Collaboration, 26
design of experiments (DoE). *See* Design of experiments (DoE).
Taguchi, Genichi, 29–30

Taguchi Orthogonal Arrays, 27–28
Target audience of maturity, 94
Theage of knowledge, 5
Toyota Motor Company, 16, 24–25
Traditional leaders, 12
Traditional management language, 9–10
Traditional shop practices, 15–16
Twinning programmes, 3

Unit productivity, 24
University of Central Florida, USA, 71–72
University of North Carolina, USA, 71

Valdosta State University, Georgia, 71

Walter Shewhart, 17–18
World class universities, 8–9