

Table of contents

Brief contents/Overview of tools	5
Application areas of each tool	8
1 Introduction to the concept and application of this book	20
1.1 Structure of this book	20
1.2 How to use the book	20
1.3 The target audience of this book	21
1.4 The scope of this book	22
1.5 Skills and competencies for your personal development	22
1.6 Clarification on methodologies, models, tools and techniques	24
2 Problem solving approach and application	26
2.1 Problem solving	26
2.1.1 Different problem solving processes and approaches	27
2.1.2 The problem solving process used in this book	28
2.1.3 Mental thinking levels during problem solving	32
2.1.4 The author's assumptions	33
2.1.5 Macro logic project cycle – micro logic problem solving cycle	35
2.2 Categories of tools	37
2.3 How to select the right tool	42
2.3.1 Overview of tools (A)	43
2.3.2 Where 'in' the problem solving process am I? (B)	44
2.3.3 Checklist for problem solving processes to identify required tool (C)	44
2.3.4 What is the right category? (D)	44
2.3.5 How to compile the shopping list (scenario for workshop, E)	44
3 Diagnosis	47
3.1 Definition of a situation/problem	47
3.1.1 Problem definition	50
3.1.2 Problem tree	56
3.1.3 Reverse the problem	60
3.1.4 Hypotheses	61
3.1.5 Hypothesis tree	63

3.1.6	Competing hypothesis (N)	66
3.1.7	Issue tree	67
3.1.8	Influence matrix	70
3.1.9	Fishbone or Cause-effect tool	72
3.1.10	Black box	74
3.1.11	IS – IS NOT	77
3.1.12	Stakeholder analysis	79
3.1.13	Stakeholder map	84
3.1.14	Stakeholder expectation management	87
3.1.15	Stakeholder influence matrix	89
3.1.16	Stakeholder accordion	91
3.1.17	Stakeholder swapping	93
3.1.18	Context diagram tool	95
3.1.19	Silo view tool	99
3.1.20	Helicoptering	101
3.1.21	Mind map	102
3.2	Information gathering	104
3.2.1	Information gathering plan	110
3.2.2	Interview (unstructured)	111
3.2.3	Tripod (mixed)	113
3.2.4	Octagon	114
3.2.5	Focus groups (unstructured)	115
3.2.6	Questionnaire (structured)	117
3.2.7	Survey/field study – dipstick	119
3.2.8	Direct observation (DIO = day in the life of)	121
3.2.9	Delphi or expert panel	123
3.2.10	Desk research/database research	123
3.2.11	5 Whys	125
3.2.12	Climate assessment (structured)	125
3.3	Creativity	129
3.3.1	Brainstorming	130
3.3.2	Cardstorming tool	132
3.3.3	6-3-5 tool	134
3.3.4	Nyaka (defect analysis)	135
3.3.5	Bionic	136
3.3.6	Attribute listing	137
3.3.7	Morphological matrix	138
3.3.8	Merlin technique/Osborn checklist	139
3.3.9	Lotus blossom	143
3.3.10	Irritating words	144
3.3.11	Mental provocation	146
3.3.12	Introduction to alternative creativity tools	147
3.4	Information consolidation	148
3.4.1	Consolidation of qualitative and quantitative information	148
3.4.2	Pareto (80:20)	150

3.4.3	ABC tool	153
3.4.4	Information matrix	155
3.4.5	Card sorting	157
3.4.6	Affinity diagram tool	158
3.4.7	Venn diagram	160
3.4.8	Force field	162
4	Goals and objectives setting	165
4.1	Goal-setting criteria	166
4.2	Objectives tree	167
4.3	Goal hierarchy	169
4.4	Charter	172
4.5	Goal catalogue	174
4.6	SMART goals	176
4.7	Goal grid	178
4.8	Well-defined outcomes	179
4.9	3 P statements	181
4.10	SNAP	182
5	Analysis	185
5.1	Organisational analysis	188
5.1.1	Organisational structure	190
5.1.2	Diamond grading tool	195
5.1.3	Org structure versus process	196
5.1.4	Span of control	198
5.1.5	Organisational assessment	200
5.1.6	Powergram	201
5.2	Technical analysis (system, process, data, technology)	204
5.2.1	Architectural decomposition view	204
5.2.2	Logical data relationship	206
5.2.3	Functional decomposition	208
5.2.4	Process analysis	209
5.2.5	Entity relationship diagram	213
5.2.6	Technology and systems landscape	215
5.2.7	Requirements catalogue	217
5.2.8	Logical and functional system modelling	219
5.3	Strategic analysis	221
5.3.1	Value chain analysis	222
5.3.2	Critical success factor (CSF)	226
5.3.3	SWOT and TOWS	230
5.3.4	Life cycle	237
5.3.5	5 Forces	242
5.3.6	Competitor analysis	246

5.3.7	Environmental analysis (PEST)	250
5.3.8	Strategic market group	252
5.3.9	Customer segmentation	256
5.3.10	Strategic development	259
5.3.11	Business matrix	260
5.3.12	Product/market mix	264
5.3.13	Strategic development options	268
5.3.14	Strategy matrix	273
6	Decision making (incl. evaluation, prioritisation)	276
6.1	Introduction to decision making	277
6.1.1	Decision making process steps	279
6.1.2	Selection table for decision making tools	279
6.2	Decision tree	281
6.3	Perspectives ³	283
6.4	Argument balance	284
6.5	Polarities tool	286
6.6	Swap sorting tool	287
6.7	Pair ranking	288
6.8	Nominal group tool	290
6.9	100 Points	291
6.10	Utility analysis	292
6.11	Cartesian coordinates	294
6.12	Cross of beliefs	296
6.13	Vroom Yetton	297
6.14	Risk analysis	299
6.15	Prioritisation matrices	305
7	Project management tools	310
7.1	Project management – activities, processes and tools	311
7.1.1	Key project management activities and tools	311
7.1.2	Brief glossary of key project management terms	311
7.1.3	Warning sign of project risks	316
7.2	Project contract	318
7.3	LogFrame	321
7.4	Project roadmap/programme	327
7.5	Work breakdown structure	329
7.6	Gantt chart	333
7.7	Project work plan	334
7.8	Project environment analysis	335
7.9	Project structure	337
7.10	Project management roles and responsibilities	339

7.11	Project communication plan	342
7.12	Accountability matrix (CIDA)	346
7.13	Stakeholder communication	348
7.14	Workshop guideline	350
7.15	Expectation review tool	352
7.16	Booz ball evaluation	353
7.17	Six thinking hats	354
7.18	Action steps and reviews	355
7.19	Project management skills radar	357
8	Annex A – Check Questions	360
8.1	Check questions for a project start	360
8.2	Check questions to review ideas and qualitative information	361
8.3	Check questions to define the current situation – diagnostic	361
8.4	Check questions to define goals and objectives	362
8.5	Check questions during an analysis	363
8.6	Check questions during decision making	364
8.7	Check questions for the project initiation phase	365
9	Annex B – Scenarios and tool lists	366
9.1	Author's top 10 tools	366
9.2	Scenario: Good practice for project and problem definition	366
9.3	Project planning and definition	368
9.4	Strategic analysis	369
9.5	Org analysis and org design	370
9.6	Organisational restructuring	371
9.7	Feasibility study	371
9.8	System development	372
9.9	Strategy workshop	373
9.10	Business process improvements	374
	Bibliography	375
	Application areas of each tool (in alphabetic order)	379