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Complex Strategic Choices

Applying Systemic Planning for Strategic Decision Making

Springer

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Preface

Complex Strategic Choices sets focus upon providing deliberate and methodical support for decision-makers engaged in strategic decision making. The book aims especially at shedding light on decision support under conditions that are uncertain and complex. In this respect systemic planning (SP) will be introduced as a new approach—the SP approach—to deal with future-oriented, often long-term, actions which can improve our capability of meeting present-day strategic challenges.

The book is aimed at people with an interest in new possibilities for supporting decision making. This group of people includes managers and corporate employees and also students and researchers of various kinds and for that matter all people seeking to come to grips with the challenge of what we may term deliberate, informed change. Known in some contexts as decision engineering (DE), the book will show that DE is embedded into and dependent on a plethora of knowledge types which range from applied mathematics known as operations research via economics and organisation theory to social science issues. However, throughout the book focus will be maintained on formulating a framework of practical advice. Stated quite simply, this practice framework will aim at supporting analysts and decision-makers in achieving better complex strategic decisions.

Normally a book is read in a linear way, which in this case means from Chap. 1 to Chap. 8. Such a reading of the book is based on the perception that it can be an advantage that the theory is in place when the new methodology is presented as a coherent process-and-methodology framework in Chaps. 7 and 8. However, it is my experience from teaching planning and appraisal courses at the Technical University of Denmark that theoretical issues appear to be more relevant and interesting if the students early on are at least partially convinced about their applicability and usefulness. Therefore it may be relevant for the reader of this book to reverse—or at least consider doing so—the order in which the chapters are read or to split up the reading into appropriate parts. Therefore if you as reader is curious to find out whether the book offers some interesting news, an option may be to read Chap. 7 on the case example first and then Chap. 8 which summarises the main findings and recommendations. Then you may continue with Chaps. 5 and 6 with their presentations of tools and methodology. Chapters 2–4 about the

grounding of the later practice are probably the most heavy-going and may therefore as suggested above be postponed and skipped in the first place. Chapter 1 is an introduction that, among other things, sets out the main themes treated in the book and gives an overview of the chapters. To facilitate the reading of the book and tie the individual chapters together, each chapter ends with a listing of the main points and findings of that chapter. Additional technical material is presented as two appendices.

The SP approach treated in the book has so far been tested on a number of cases which has shown its potential to those involved. I sincerely hope that *Complex Strategic Choices* will inspire and support readers in their dealing with upcoming complex planning problems and strategic decision making.

Virum, Denmark, October 2011 Steen Leleur

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Contents

Abbreviations

AHP	Analytic hierarchy process
AI	Artificial intelligence
BCR	Benefit-cost rate
BS	Brainstorming
CAD	Computer-aided design
CBA	Cost-benefit analysis
CDM	Customised decision model
CEA	Cost-effectiveness analysis
CEO	Chief executive officer
CF	Conference facilitator
CG	Certainty graph
CGE	Computable general equilibrium
CLG	Centre for Logistics and Goods Transport
COSIMA	Composite model for assessment
CPM	Critical path method
CSH	Critical systems heuristics
CSR	Corporate social responsibility
CST	Critical systems thinking
CV	Certainty value
DA	Decision analysis
DE	Decision engineering
DM	Decision-maker(s)
DSS	Decision support system
DTU	Technical University of Denmark
EIA	Environmental impact analysis
FA	Financial analysis
FRA	Feasibility risk assessment
FW	Futures workshop
FYB	First year benefits
GIS	Geographic information systems

IP	Interactive planning
IRR	Internal rate of return
ITS	Intelligent traffic service
MCA	Multi-criteria analysis
MCS	Monte Carlo simulation
MM	Mind mapping
MOE	Mode of enquiry
MP	Multiple perspectives
NPV	Net present value
OR	Operations research
PA	Preference analysis
RA	Risk analysis
RCF	Reference class forecasting
REMBRANDT	Ratio estimations in magnitudes or deci-bells to rate alternatives which are non-dominated
ROC	Rank order centroid
ROD	Rank order distribution
RSF	Reference scenario forecasting
SA	Scenario analysis
SC	Strategic cognition
SD	Systems dynamics
SIMDEC	Simulation and multi-criteria analysis for decision making
SMART	Simple multi-attribute rating technique
SMARTER	Simple multi-attribute rating technique exploiting ranks
SP	Systemic planning
SROI	Social return on investment
SSM	Soft systems methodology
STA	Stakeholder analysis
SW	Swing weights
SWOT	Strengths, weaknesses, opportunities and threats
TGB	Traffic Plan Greenland—Decision Tool (transl. from Danish)
TRR	Total rate of return
TSI	Total systems intervention
TV	Total value
UU	Unknown unknowns
VF	Value function
VTS	Vessel traffic service