## Rudolf Grünig · Richard Kühn

## Successful Decision-making

A Systematic Approach to Complex Problems

Second Edition

Translated from German by Anthony Clark and Claire O'Dea



## **Contents**

rre	race			V			
Brie	ef con	tents		vii			
Coi	ntents			ix			
List	of fig	ures		xiii			
	_						
Intr	oduoti	ion		4			
11 111	oduct	011		1			
_				/_			
Par			on problems and decision-making procedures				
1	Decision problems						
	1.1		ecision problem				
	1.2	-	of solving decision problems				
	1.3	Types	of decision problems	10			
2	Goal and problem-finding systems as requirements for						
	the discovery of decision problems						
	2.1	The fu	inctions of goal and problem-finding systems				
		in the discovery of decision problems					
	2.2		systems				
		2.2.1	Goal systems as combinations of single				
			goals	ື້ 18			
		2.2.2	Approaches to classifying goal systems				
	2.3	Proble	em-finding systems				
3	Rational decisions						
	3.1						
			dures as a framework for rational decisions	29			
	3.2		equirements of a rational decision process				
	3.3		Support for rational decision making from				
	0.0	management science					
4.	Deci		aking procedures				
т.	4.1	Decision-making procedures  Decision-making procedure defined					
	4.2		The different types of decision-making procedures				
	4.2	4.2.1	• • • • • • • • • • • • • • • • • • • •	42			
		4.2.1	procedures and their values	40			
		4.2.2					
		4.2.2	A comparison of heuristic and analytic	43			
		4.2.3	decision-making procedures	11			
			decision-making procedures	44			

		4.2.4	Examples of the different types of decision-			
			making procedures	48		
Part		_	eral heuristic decision-making procedure			
5	Overview of the decision-making procedure					
	5.1		alue of a general heuristic decision-making			
		•	dure			
	5.2		roposed sequence of tasks			
	5.3		f explanation of the tasks	63		
	5.4	The basis of the general heuristic decision-making				
		•	dure			
6	Discovering and analyzing the decision problem					
	6.1		vering the decision problem			
	6.2	-	zing the decision problem			
		6.2.1	General considerations for problem analysis and naming	77		
		6.2.2	Establishing the decision situation			
		6.2.3	Determining the causes of the problem and	1 3		
		0.2.0	naming the sub-problems	83		
		6.2.4	Determining the problem structure			
7	Developing and evaluating options					
	7.1		oping options			
		7.1.1	General considerations for developing			
			options	91		
		7.1.2	Techniques for the development of options			
	7.2		ng the decision criteria			
	7.3	Drawing up possible scenarios1				
	7.4	The configuration of the decision problem as result				
			os 3, 4 and 5			
_	7.5		nining the consequences of the options	109		
8	Establishing the overall consequences of the options and					
		king the final decision				
	8.1 8.2		al considerationsiew of the decision maxims and their	115		
	0.2		ability	110		
	8.3		on maxims for overcoming polyvalence			
	U.S	8.3.1	Utility value maxim			
		8.3.2	•			
	8.4		ion maxims for overcoming risk			

		8.4.1 Expectation value maxim	130			
		8.4.2 Utility expectation value maxim	131			
		8.4.3 Problems with the application of the				
		decision maxims for overcoming risk	138			
	8.5	Decision maxims for overcoming uncertainty	138			
	8.6	Using decision maxims in combination to overcome				
		polyvalence and risk or polyvalence and				
		uncertainty				
	8.7	Evaluation of the decision maxims	146			
9	A case study illustrating the application of the procedure					
	9.1	The situation	149			
	9.2	Discovering and analyzing the problem				
		9.2.1 Discovering the problem	151			
		9.2.2 Analyzing the problem	152			
		9.2.3 Summary of analysis				
	9.3	Developing and evaluating options	161			
		9.3.1 Developing options				
		9.3.2 Evaluating options	165			
	9.4	Making the decision	170			
		-				
Par	t Three	e: Special issues and approaches to resolving them	171			
10		sion sequences				
10		•				
		Using decision trees to represent decision	173			
	10.2	sequences	17/			
	10.2	Choosing the best option in a decision sequence				
		Case study with a decision sequence				
11						
1 1	11.1	formation procurement decisions18  1.1 Information procurement as a decision at the meta-				
	11.1	level	105			
	11.2		103			
	11.2	procurement	106			
40	0-11-					
12		ective decisions	197			
	12.1	Collective decisions and their growing importance/	407			
	40.0	in companies				
	12.2	, , , , , , , , , , , , , , , , , , , ,				
		12.2.1 Group goal systems				
		12.2.2 Group decision behaviour				
	123	Rules for making collective decisions	205			

1		Differing individual orders of preference as starting point	205
1	2.3.2	Requirements for forming a collective order of preference	
1	2.3.3	Classic rules for the formation of a collective order of preference or for determining the option preferred by the	• •
		collective	209
1		More complex procedures for the formation of the collective order of preference	211
Final remar	ks		219
Glossarv			221
Bibliography	y		235