

Strategic Management of Research Organizations

William A. Barletta

Department of Physics
Massachusetts Institute of Technology

Faculty of Economics
Ljubljana University



CRC Press

Taylor & Francis Group

Boca Raton London New York

CRC Press is an imprint of the
Taylor & Francis Group, an **informa** business

Contents

<i>Foreword</i>	ix
<i>Acknowledgments</i>	xiii
<i>Author</i>	xv
1 Perspectives and Networks	1
The Enterprise Planning Perspective	1
Operational Networks	5
2 Measures of the Research Manager	9
ELM Space	9
Leading Creative Employees	12
Managing Organizational Change	16
3 The Research Environment	19
What is Research?	19
Trends in Research Funding	21
The R&D Life Cycle	22
Your World as an R&D Manager	23
4 Strategy, Forecasting, and Technological Risk	27
Characteristics of a Business Strategy	27
Enterprise Risk Management	29
Technological Forecasting	31
5 Introduction to Strategic Planning	37
Preparing to Craft the Content of the Plan	37
Phase 1—Gathering and Assessing Information	38
Corporate Strategies and Positioning	42
Crafting the Plan Document	44
Resource Planning for Implementation	46
Information Systems	48
6 Financial Management	49
Basic Accounting Definitions	50
Tools for Financial Management	52

Costs as a Decision-Making Tool	55
A Manager's Responsibility	56
7 The Business Plan	59
Business Opportunity	61
You Have a Great Idea, but How Do You Plan to Make Money?	63
Writing the Business Plan	64
Why Do Plans Fail?	67
8 Management Communication Skills	69
Technical Writing	69
General Comments about Style	70
Major Formal Writing Projects—The CDR	72
Management of Meetings	76
Negotiations (in Brief)	77
Investigation for Managers	80
The Manager as Judge	80
9 Marketing Scientific Organizations	83
Marketing for Sales: Identifying a Product Line	83
Marketing for Sales: Positioning Products	86
Strategic Marketing	88
10 Research Ethics	91
Ethical Issues of Scientific Research	93
Conflicts of Interest	96
Institutional Ethics	96
11 Workforce Management	99
Building Your Workforce Strategically	99
Hiring the Best	101
Succession Planning	103
Salary Management	106
12 Managing Operating Risks	111
Controlling Risks during Execution	111
13 Structures and Governance	117
Organizational Structures	118
Institutional Governance	122

14 Technology-Transfer Case Study	125
KYMA Case Study	126
Keys for Lasting Success of Technology Transfer	128
Strategic Partners and Allies	129
15 Recommended Resources	131
<i>Index</i>	135