

Contributors	xiii	Leadership	178
Preface	xix	<i>Richard H. G. Field, Stephanie Buddie</i>	
Guide to the Handbook of Technology Management	xxiii	Virtual Organizations	189
Reviewers List	1103	<i>Satu Lähteenmäki, Eeli Saarinen, Iris Fischlmayr, Timo Lainema</i>	
Index	1117	Managing the Virtual Workforce	207

Volume 1: Core Concepts, Financial Tools and Techniques, Operations and Innovation Management

Part 1: Core Concepts

A Research Architecture for Technology Management Education <i>Michael K. Badawy</i>	3	Designing Workplaces to Support Creativity and Innovation <i>Sara L. Beckman, Peter Lawrence</i>	217
Digital Economy <i>Nirvikar Singh</i>	19	Service Oriented Architecture <i>Dawn G. Gregg, Mohamed Sidahmed</i>	231
Designing Sustainable Solutions: Frameworks and Tools for Considering Sustainability Issues in New Product Development <i>Sara L. Beckman, Nathan Shedroff</i>	37	IT Infrastructure Library (ITIL®) v3 <i>Sue Conger</i>	244
Decision Techniques for Managing Information Technology <i>Daniel Port, Tung Bui</i>	52	Human Resource Management <i>Richard J. Wagner</i>	257
Game Theory <i>Y. Narahari, Ramasuri Narayanam</i>	68	Human Resource Information Systems <i>G. Stephen Taylor</i>	267
Organizational Behavior <i>Michael Workman</i>	81	Virtual Work <i>John Gathegi, Michael Workman</i>	279
Organizational Management <i>William H. Bommer, Michael Workman</i>	94	Organizational Impacts of Information Technology <i>Balaji Parthasarathy, Ricardo Lage</i>	289
Organizational Psychology <i>Zinta S. Byrne</i>	106	IT Economics <i>James E. Goldman, Raymond A. Hansen, Victoria A. Famsworth</i>	299
Managing Organizational Change and Transformation <i>Dominie Garcia</i>	119	Technology Assessment and Acquisition <i>Tugnul U. Daim</i>	315
Knowledge Management <i>David Ellis, Ana Vasconcelos</i>	132	Technology Forecasting <i>Michael Verti, Irene J. Petrick</i>	333
Business Ethics <i>Archie B. Carroll</i>	144	Technology Transfer	345
Negotiation <i>Holly Schroth</i>	156	Strategic Management of Technology <i>Zafar Husain</i>	357
Strategic Planning <i>Kenneth L. Nichols, Stephanie Welcomer</i>	167	Competitive Strategies in Technology Management <i>Subhas Desa</i>	384
		Part 2: Financial Tools and Techniques	
		Financial Accounting <i>Virginia Cortijo, Ari Yezegel</i>	401
		Managerial Accounting <i>Leslie Kren</i>	414

Return on Investment Analysis <i>Mark Jeffery</i>	434	Online Banking <i>Ronnie Phillips</i>	716
Capital Budgeting <i>Patricia A. Ryan</i>	449	The ICT Sector Across Countries: A Regulatory Perspective Using DEA and Malmquist Index <i>Somesh K. Mathur</i>	727
Asset Management <i>Vassilios Gargalas, John L. Teall</i>	459	Tax Considerations <i>Annette Nellen</i>	746
Project Management Accounting Using Activity-Based Costing Approach <i>Wen-Hsien Tsai</i>	469		
Engineering Economic Analysis <i>Olufemi A. Omitaomu</i>	489	Part 3: Operations and Innovation Management	
Economics of Technological Innovation <i>Steven Payson</i>	508	Operations Management Basics <i>Mike Tao Zhang, Shiming Deng</i>	759
Measuring the Value of Investments <i>Samuel C. Weaver</i>	522	Facility Design <i>Charlie Edmonson</i>	770
Corporate Finance <i>Jonathan E. Clarke</i>	540	Product and Service Design <i>Bill Hollins</i>	781
Cost of Capital <i>Thomas Hall</i>	549	Scheduling for Engineering and Technology Management <i>Paul Kauffmann</i>	793
Capital Structure <i>Charles Hickson</i>	559	Inventory Management <i>Shitao Yang</i>	808
Principles of Hedging <i>Ashok J. Robin</i>	570	Inventory and E-Commerce <i>Sridhar Seshadri, Dana Popescu</i>	821
Valuing High-Risk High-Return Technology Projects Using Real Options <i>Scott Mathews</i>	581	Just-in-Time and Lean <i>Aage U. Michelsen</i>	832
Project Financing <i>John D. Finnerty</i>	601	Technology Project Management <i>Joseph F. Norton</i>	844
Risk Analysis and Mitigation for High-Tech Projects <i>John E. Turner</i>	613	Enterprise Resource Planning <i>Zinovy Radovilsky</i>	872
Multinational Finance and Global Financial Market Integration <i>Kuntara Pukthuanthong</i>	623	Demand Forecasting <i>Stephen A. DeLurgio, Fred H. Hays, Carl D. Bhamé</i>	886
Converging Towards Global Accounting Standards <i>Shirley A. Hunter</i>	634	Aggregate Planning <i>Adriano O. Solis</i>	904
Financing Strategies and Venture Capital <i>Ashok J. Robin, Patricia Wollan</i>	652	Computer-Aided Manufacturing <i>Andrew Otieno</i>	926
Mergers and Acquisitions <i>Robert Boehner, William Evans, Ashok J. Robin</i>	663	Computer-Integrated Manufacturing <i>True T. Ngo</i>	939
International Credit Markets: Players, Financing Techniques, Instruments, and Regulation <i>Emilios Avgouleas</i>	675	New Product Development <i>Olivier Toubia</i>	953
Global Investment Management <i>Gautam Vora</i>	694	Reward: How to Foster a Technology-Innovation Culture within a Large Organization: What You Can Learn from Start-up Companies <i>Bruce Jacob</i>	964
		Innovation Management in Large Corporations <i>Robert C. Wolcott, Michael J. Lippitz</i>	978

Services Innovation: Assimilation, Differentiation, Inversion, and Integration	989	Supply Chain Strategies	120
<i>Faiz Gallouj</i>		<i>Britta Gammelgaard</i>	
Benchmarking Tools and Techniques	1001	Manufacturing in the Supply Chain	132
<i>Dotun Adebajo</i>		<i>Ramakrishna Govindu, Ratna Babu Chinnam, Alper Murat</i>	
Statistical Process Control	1015	Transportation and Logistics in Supply Chains	146
<i>Michael D. Whitt, Rodney G. Handy, Brandon Gosiengfiao</i>		<i>Gerard de Jong, Moshe Ben-Akiva</i>	
Manufacturing Systems Engineering	1028	Distribution and Warehousing in Supply Chains	159
<i>Keith M. Gardiner</i>		<i>Hongyan Li, Joern Meissner</i>	
Global Manufacturing: An Overview of Modern Collaborative Technologies and Product Architecture	1043	Site Selection in the Supply Chain	176
<i>Kyoung-Yun Kim, Leslie Monplaisir, Bimal Nepal</i>		<i>Yongjiang Shi, Chaipong Pongpanich</i>	
Human Factors and Ergonomics	1057	Metrics for Measuring Supply Chain Performance	194
<i>Robert W. Proctor, Kim-Phuong L. Vu</i>		<i>Heimo Losbichler, Farzad Mahmoodi</i>	
Job Design 2.0	1068	Supply Chain Management Technologies	206
<i>Lany A. Mallak, Charlie Rupert, Bryan W. Booker</i>		<i>David Simchi-Levi, Edith Simchi-Levi</i>	
Intelligent Manufacturing Systems	1081	RFID: Technical Considerations	220
<i>Yi Wang, Kesheng Wang</i>		<i>Stephen A. Weis</i>	
Factories of The Future	1092	RFID: Managerial Considerations	232
<i>David W. Russell</i>		<i>Adam Melski, Matthias Schumann</i>	
		Smart Cards	248
		<i>Konstantinos Markantonakis, Keith Mayes, Damien Sauveron, Michael Tunstall</i>	
		The Promise of the Real-Time Supply Chain	265
		<i>Etif Kongar, Surendra M. Gupta</i>	

Volume 2: Supply Chain Management, Marketing and Advertising, and Global Management

Part 1: Supply Chain Management

Value Chain Analysis	1
<i>Keivan Zokaei</i>	
Supply Chain Management	16
<i>Gerard J. Burke¹, Asoo J. Vakharia²</i>	
Developing and Maintaining Supply Chain Relationships	28
<i>Nick Rich, Matthias Holweg</i>	
Managing the Flow of Information and Materials across the Supply Chain	40
<i>Matthias Holweg, Nick Rich</i>	
Electronic Procurement	53
<i>Zinovy Radovitsky</i>	
Global Logistics and International Supply Chain Management	68
<i>Charles McMillan</i>	
Internet-Enabled Supply Chains	89
<i>Quan Z. Sheng, Jhon P. T. Mo, Li Jiang</i>	
Customer Service in Supply Chain Management	103
<i>Suman Mallik</i>	

Part 2: Marketing and Advertising

Consumer Behavior in the Realm of Technology	277
<i>Tripat Gill, Gad Saad</i>	
Consumer Marketing of High-Technology Products	290
<i>Yeqing Bao, David Berkowitz, Brent M. Wren</i>	
The Role of Storytelling in Designing User Experience: The Underpinnings of Brand ¹	305
<i>Sara L. Beckman, Michael Barry</i>	
Business-to-Business Marketing	317
<i>Ralph Oliva</i>	
Making Sense of Collaboration, Web 2.0, and Virtual Worlds in the Enterprise	331
<i>Cindy Gordon</i>	
Marketing Strategy Analysis	352
<i>Yoram "Jerry" Wind</i>	
Marketing Research	367
<i>Peter Lenk</i>	
Online Pricing Strategies: Insights and Challenges	381
<i>Xin Wang</i>	

Marketing Services <i>Donna J. Hill</i>	393	Outsourcing and Offshoring in a Globalizing World: A Review of Trends and Perspectives <i>Ashok Bardhan</i>	678
Organizing the Sales Force <i>Felicia G. Lassk, Jay Prakash Mulki</i>	407	Globalization and Corporate Partnering <i>Jonathan Doh, Kevin D. Clark, Patrick G. Maggitti</i>	690
Technology Marketing <i>Jakki J. Mohr, Stanley F. Slater, Sanjit Sengupta</i>	421	Governance for Technology Sourcing in the Global Context <i>Anju Seth, Mahka Moeen</i>	704
Marketing Plans for an E-Commerce Project <i>Main Roldan</i>	435	Designing and Forming Global Teams <i>Gloria Barczak</i>	713
Marketing Communication Strategies <i>Judy Strauss</i>	449	Performance Management in Distributed and Global Product Development Processes <i>Nitin R. Joglekar, Stephen R. Rosenthal, Paulo J. Gomes</i>	723
Relationship Marketing and CRM <i>Paurav Shukla</i>	462	Global Account Management <i>Noel Capon</i>	735
Personalization Technologies <i>Roland T. Rust, Ke Na, Michel Wedel, Tuck Siong Chung</i>	473	International Accounting and the Global Economy <i>Robert K. Larson, Sara York Kenny</i>	745
Wireless Marketing <i>Pamela M. H. Kwok</i>	483	International Technology Management and National Culture <i>Kathryn Aten, Luciana Nardon</i>	757
Online Public Relations <i>Kirk Hallahan</i>	497	Asian Culture and Management <i>Professor Christopher Selvarajah</i>	770
The Globalization of Marketing <i>Masaaki Kotabe</i>	518	The Globalization of Asian Firms <i>Li Xue Cunningham, Chris Rowley, Irene Hon-fun Poon</i>	792
Global Marketing Research <i>C. Samuel Craig, Susan P. Douglas</i>	530	Strategic Management in the Asia Pacific <i>Usha C. V. Haley</i>	802
Data Mining <i>Gary M. Weiss, Brian D. Davison</i>	542	Human Resource Management in Asia <i>Ying Zhu, Chris Rowley, Malcolm Warner</i>	814
Data Warehouse Systems <i>David L. Olson, Sang-Heui Lee</i>	556	Cultural Intelligence and the Global Information Technology Workforce <i>Christine Koh, Damien Joseph, Soon Ang</i>	828
Online Analytical Processing <i>Joseph Morabito, Edward A. Stohr</i>	567	Technology and Educational Challenges in a Globalizing World—A Case Study of India <i>Rafiq Dossani, Murali Patibandla</i>	845
Part 3: Global Management			
Global Diffusion of the Internet <i>Mr Kshetri, Nikhilesh Dholakia, Ruby Roy Dholakia</i>	585		
Global Issues of the Internet <i>William R. Gillis, Colleen Taugher</i>	602		
Global Business Drivers <i>Cynthia A. Kroll</i>	612		
The Global Workforce <i>Jody Spiro</i>	629		
The Global Manager <i>Douglas Allen</i>	641		
Globalization and Information Management Strategy: Cross-Cultural Perspectives <i>Maris G. Martinsons, Robert M. Davison</i>	653		
Global Information Systems <i>Rosann Webb Collins</i>	665		
Volume 3: Management Support Systems, Electronic Commerce, Legal and Security Considerations			
Part 1: Telecommunications and Networking, and Management Support Systems			
		Local Area Networks <i>Wayne C. Summers</i>	1
		Wide Area and Metropolitan Area Networks <i>Lynn A. DeNoia</i>	21

Home Networking: Technologies and Management	37
<i>Sherali Zeodally, Naveen Chilamkurti</i>	
VoIP: Fundamentals and Managerial Issues	56
<i>Sherali Zeadally, Hesham El-sayed, Farhan Siddiqui</i>	
Distributed Intelligent Networks	78
<i>G. N. Prezerakos, N. D. Tselikas, S. Venieris</i>	
Cellular Networks	96
<i>Jiang Xie, Xiaoyuan Gu</i>	
Wireless Wide Area Network Technologies and Implementations	112
<i>Anthony H. Smith, Raymond A. Hansen</i>	
Client/Server Computing	128
<i>Daniel McFarland, Darren B. Nicholson</i>	
Grid Computing Fundamentals	142
<i>Mark Baker</i>	
Cluster Computing Fundamentals	159
<i>Hong Ong, Mark Baker</i>	
Peer-to-Peer Systems	173
<i>Yu-Kwong Kwok</i>	
Network Management	206
<i>Jian Ren, Tongtong Li</i>	
Database Fundamentals	224
<i>Byunggu Yu</i>	
Distributed Databases	242
<i>David Coquil, Harald Kosch, Lionel Brunie</i>	
Groupware	257
<i>Robert Slagter</i>	
Geographic Information Systems	271
<i>Haluk Cetin</i>	
Fuzzy Logic	291
<i>Zejin Ding, Yan-Qing Zhang</i>	
Robotics	306
<i>Christopher A. Kitts</i>	
Expert Systems	320
<i>Efrem G. Mallach</i>	
Artificial Neural Networks	331
<i>Richard M. Golden</i>	
Natural Language Processing	347
<i>Hossein Bidgoli</i>	
Intelligent Agents	360
<i>Gerhard Weiss, Lars Braubach, Paolo Giorgini</i>	
Managing the Evolution of Nanotechnology	373
<i>Michael E. Gorman, James E. Groves, Ahson Wardak</i>	
Quantum Computing	384
<i>Eleanor Rieffel</i>	

Part 2: Electronic Commerce

The Internet	395
<i>Hossein Bidgoli</i>	
Business Plans for Electronic Commerce Projects	407
<i>Feng Li</i>	
Electronic Commerce	415
<i>Hong-Mei Chen</i>	
Click-and-Brick Electronic Commerce	427
<i>Atina Chircu</i>	
Business-to-Business Electronic Commerce	438
<i>Nory B. Jones, Herbert Remidez</i>	
Electronic Payment Systems	448
<i>Indrajit Ray</i>	
Web Search Technologies for Text Documents	466
<i>Weiyi Meng, Clement Yu</i>	
E-Marketplaces	482
<i>Gilliean Lee</i>	
Collaborative Commerce	494
<i>Rodney J. Heisterberg</i>	
Wireless Internet	510
<i>Abbas Jamalipour</i>	
Business-to-Consumer Web Business Models	525
<i>Diane M. Hamilton</i>	
Mobile Commerce: Technical Considerations	534
<i>Vijay Atluri, Heechang Shin</i>	
Mobile Commerce Business Models*	547
<i>Yufei Yuan</i>	
Application Service Providers and IT Outsourcing	562
<i>Bandula Jayatilaka</i>	
Web Services	578
<i>Rene F. Reitsma</i>	
Information Quality in Internet and e-Business Environments	593
<i>Larry P. English</i>	
Auctions in Electronic Commerce	612
<i>Y. Narahari, Sujit Gujar</i>	
Web Hosting	626
<i>J. Richard Stevens</i>	
Web Intelligence	639
<i>Juan D. Velásquez, Victor L. Rebolledo</i>	
E-commerce Vulnerabilities	674
<i>Sviatoslav Braynov</i>	

Part 3: Legal and Security Considerations

Cybercrime and the U.S. Criminal Justice System <i>Susan W. Brenner</i>	693	Social Engineering <i>Benjamin Bock, Edgar R. Weippi</i>	856
Cyberlaw <i>Kurt H. Knudsen</i>	704	Software Piracy <i>Robert K. Moniot</i>	885
International Cyberlaw <i>Susanna Frederick Fischer</i>	717	Digital Identity <i>Abhilasha Bhargav-Spantzel</i>	896
International Intellectual Property Law for Technology Management <i>Daniel J. Gervais</i>	727	Identity Management <i>John Linn</i>	909
The Key Role of Standardization on Technology Development, Transfer, Diffusion, and Management <i>John W. Bagby</i>	738	Digital Evidence <i>Philip Craiger</i>	921
Legal, Social, and Ethical Issues of the Internet <i>Kenneth Einar Himma</i>	753	Digital Rights Management Technology <i>Renato Iannella</i>	931
Copyright Law <i>Irvette Tempelman-van Hunen, Aernout Schmidt</i>	777	Information Security Management <i>Edwin E. Lewis, Jr.</i>	940
The Digital Millennium Copyright Act <i>Seth Finkelstein</i>	797	Enterprise Security Architecture <i>Jian Ren and Tongtong Li</i>	957
Patent Law <i>Gerald Bluhm</i>	811	Implementing a Security Awareness Program <i>K. Rudolph, John Ippolito</i>	974
Trademark Law <i>Lars S. Smith</i>	823	Digital Signatures and Electronic Signatures <i>Stephen Tate, Raymond R. Panko</i>	994
Online Technology Contracts <i>Gail E. Evans</i>	842	Computer Security Incident Response Teams (CSIRTs) <i>Raymond R. Panko</i>	1004
		Guidelines for a Security Program <i>Hossein Bidgoli</i>	1011
		Business Continuity, Operational Risk, and Disaster Recovery Management <i>Marco Cremonini, Pierangela Samarati</i>	1020