

Contents

Acknowledgments	V
Preface: All yours	VII
Part I: Heading Towards Customer Centric Enterprises	1
An Introduction	
1 The Customer Centric Enterprise	3
An integrative overview on this book	
<i>Mitchell M. Tseng and Frank T. Piller</i>	
Part II: Mass Customization and Personalization	17
Key Strategies for Customer Centric Enterprises	
2 Examination of Mass Customization Through Field Evidence	19
<i>Bart MacCarthy, Philip G. Brabazon and Johanna Bramham</i>	
3 The Many Faces of Personalization	35
An integrative economic overview of mass customization and personalization	
<i>Kai Riemer and Carsten Totz</i>	
4 Economic Evaluation of Mini-Plants for Mass Customization	51
A decentralized setting of customer-centric production units	
<i>Ralf Reichwald, Frank T. Piller, Stephan Jaeger and Stefan Zanner</i>	
5 Customer Driven Manufacturing Versus Mass Customization	71
Comparing system design principles for mass customization and customer driven manufacturing	
<i>Klaus-Dieter Thoben</i>	
6 User Modeling and Personalization	85
Experiences in German industry and public administration	
<i>Thomas Franke and Peter Mertens</i>	
7 Art Customization	109
Individualization and personalization are characteristics of art	
<i>Jochen Gros</i>	

Part III: Customer Centric Design and Development	121
Developing product families for customization and efficient manufacturing	
8 Product Families for Mass Customization	123
Understanding the architecture	
<i>Xuehong Du, Mitchell M. Tseng and Jianxin Jiao</i>	
9 Common Platform Architecture	163
Identification for a set of similar products	
<i>Zahed Siddique and David W. Rosen</i>	
10 Reconfigurable Models and Product Templates.....	183
Means of increasing productivity in the product development process	
<i>Jordan J. Cox, Gregory M. Roach and Shawn S. Teare</i>	
11 Case-Based Reasoning	209
Rapid cost estimation of mass-customized products	
<i>Naken Wongvasu, Sagar V. Kamarthi and Ibrahim Zeid</i>	
12 Using TRIZ to Overcome Mass Customization Contradictions	231
<i>Darrell L. Mann and Ellen Domb</i>	
Part IV: Interfacing and Integrating the Customer	243
Getting customers involved and optimally informed	
13 Web-Based Do-It-Yourself Product Design	247
<i>Halimahtun M. Khalid and Martin G. Helander</i>	
14 Modeling Consumer Behavior in the Customization Process.....	267
<i>Sri Hartati Kurniawan, Mitchell M. Tseng and Richard H. Y. So</i>	
15 Usability of Design by Customer Websites.....	283
<i>Oon Yin Bee and Halimahtun M. Khalid</i>	
16 Applications of Kansei Engineering to Personalization	301
Practical ways to include consumer expectations into personalization and customization concepts	
<i>Rosa Porcar, M. Such, E. Alcántara, Ana Cruz García and A. Page</i>	
17 Knowledge Based Product Configuration.....	315
A documentation tool for configuration projects	
<i>Lars Hvam and Martin Malis</i>	
18 The Customer at the Final Frontier of Mass Customization..	329
<i>Carsten Svensson and Thomas Jensen</i>	

Part V: Customer Centric Manufacturing	347
Process design, production planning and control for achieving near mass production efficiency	
19 Flexibility and Reconfigurability for Mass Customization	349
An analytical approach	
<i>Alessandro Urbani, Lorenzo Molinari-Tosatti, Roberto Bosani and Fabrizio Pierpaoli</i>	
20 Distributed Demand Flow Customization	361
<i>Alexander Tsigkas, Erik de Jongh, Agis Papantoniou and Vassilis Loumos</i>	
21 Segmented Adaptive Production Control	381
Enabling mass customization manufacturing	
<i>Jens R. Lopitzsch and Hans-Peter Wiendahl</i>	
22 Challenges of Mass Customization Manufacturing	395
<i>Michael Schenk and Ralph Seelmann-Eggebert</i>	
23 Modularization in Danish Industry	411
<i>Poul Kyvsgaard Hansen, Thomas Jensen and Niels Henrik Mortensen</i>	
24 A Framework for Selecting a Best-Fit Mass Customization Strategy	429
The MC Data Acquisition Framework approach	
<i>Claudia Mchunu, Aruna de Alwis and Janet Efstathiou</i>	
Part VI: Applying Mass Customization to the Fashion Industry	447
Building a customer centric value chain for apparel and footwear customization	
25 Towards the Extended User Oriented Shoe Enterprise	451
Enabling information technologies for process management of mass customization using the example of the footwear industry	
<i>Hans-Jörg Bullinger, Frank Wagner, Mehmet Kürümlüoğlu and Andreas Bröcker</i>	
26 Implementing a Mass Customized Clothing Service	465
A strategy model for implementing a mass customized clothing service in a High Street store	
<i>Celia P. A. Taylor, Ray J. Harwood, Jane L. Wyatt and Michael J. Rouse</i>	
27 Individualized Avatars and Personalized Customer Consulting	477
A platform for fashion shopping	
<i>Thorsten Gurzki, Henning Hinderer and Uwe Rotter</i>	
28 Footwear Fit Categorization	491
<i>Ameersing Luximon, Ravindra S. Goonetilleke and Kwok-L Tsui</i>	

29 Virtual Reality and CAD/CAM for Customized Shoe Manufacturing..... 501
How virtual reality and CAD/CAM enable custom shoe manufacturing in mass markets
Marco Sacco, Giampaolo P. Viganò and Ian Paris

Part VII: New Directions 517
Future challenges for building the customer centric enterprise

30 New Directions for Mass Customization 519
Setting an agenda for future research and practice in mass customization, personalization, and customer integration
Frank T. Piller and Mitchell M. Tseng