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MASS CUSTOMIZATION: CHALLENGES AND SOLUTIONS

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PREFACE

Mass customization is one of the most important competitive strategies in the current economy. Its primary objective is to maximize customer satisfaction by providing tailor-made solutions with near mass production efficiency. Some researchers even postulated that mass customization is the single way to competitiveness in today's dynamic business environment. In effect, mass customization has proved to be very successful in certain business fields. Companies that succeeded to reap the benefits of the strategy by joining mass production and make-to-order capabilities could secure a competitive advantage and outpace their competitors. However, the failure of some implementation projects made it obvious that mass customization is still challenging and requires further research support from academia and industry. Especially, new scientific methods and tools are required to mitigate the difficulties encountered when putting the strategy into practice.

The contributions in this book represent leading edge papers and recent advances in mass customization. The results reported in the chapters not only contribute to the support of a successful implementation of mass customization but also stimulate further research and scientific work in the field. Throughout the chapters, the broadness and complexity of the field is shown. It becomes very obvious that mass customization challenges can only be mitigated if a joint effort of various disciplines such as business administration, computer science and engineering can be achieved.

The origins of this book lie in the International Mass Customization Meeting 2005 (IMCM'05) held by June 2005 at the University Klagenfurt, Austria where researchers from many scientific disciplines and practitioners acting in various industrial fields had the opportunity to present their researches and to discuss many issues related to mass customization. IMCM'05 has provided a platform for original research in the area and for the exchange of ideas and problem solving approaches across various fields. From the 39 blind-reviewed papers accepted for presentation at the conference, only 11 chapters have been selected for this book. The selection process of the best chapters was extremely difficult owing to the high quality of papers accepted for presentation. Furthermore, the authors of the selected papers were asked to revise and extend their papers so as to make the chapters accessible to a larger audience. Therefore, the book can be useful not only for researchers but also for practitioners and graduate students in operations management, management science, business administration and computer science. An additional chapter has been written in order to intro-

duce mass customization by providing a literature review and discussing the state-of-the-art of the concept.

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