Enterprise Modeling

Janis Stirna • Anne Persson

Enterprise Modeling

Facilitating the Process and the People



Janis Stirna
Department of Computer and
Systems Sciences
Stockholm University
Kista, Sweden

Anne Persson School of Informatics University of Skövde Skövde, Sweden

ISBN 978-3-319-94856-0 ISBN 978-3-319-94857-7 (eBook) https://doi.org/10.1007/978-3-319-94857-7

Library of Congress Control Number: 2018949605

© Springer International Publishing AG, part of Springer Nature 2018

This work is subject to copyright. All rights are reserved by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

The publisher, the authors and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, express or implied, with respect to the material contained herein or for any errors or omissions that may have been made. The publisher remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

This Springer imprint is published by the registered company Springer Nature Switzerland AG The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

Preface

For a number of years now, methods, techniques, and practices for Enterprise Modeling (EM) have been a very important part of our professional lives. We strongly believe that modeling is a key technique for understanding, capturing, and communicating organizational knowledge, and we also believe that it is crucial for successfully mastering change and innovation processes in enterprises.

We have always taken great interest in the practical aspects of Enterprise Modeling, ever since we both started working on our doctoral theses on this subject more than 20 years ago. Since then, we have collected substantial experience and research-based knowledge on the dos and don'ts of EM in different contexts and on the conditions necessary for EM to reach its full potential. A large portion of our experiences and knowledge is collected in this book.

The idea for this book emerged from our observation that it takes considerable time to become a highly professional EM practitioner and that learning the dos and don'ts of the practice often is a matter of learning by committing costly mistakes yourself and/or being dependent on having a highly experienced mentor available, of which there is a shortage. Books on the topic of EM practice have not been available. We therefore decided to collect our experience and knowledge in this book.

This book would not have become a reality without the support of many people in our personal and professional environments.

First of all, we would like to thank all colleagues and friends who actively contributed to the development of the "For Enterprise Modeling" (4EM) method and its predecessor, Enterprise Knowledge Development (EKD), which include not only a modeling language but a process for Enterprise Modeling as well. Experience from working with those methods is the foundation that this book rests upon. Since the list of people would be very long with the imminent danger that we would forget someone, we just want to mention Prof. Emeritus Janis Bubenko Jr. at the Royal Institute of Technology (Sweden) who has inspired us greatly.

When it comes to the process of modeling, and in particular how to facilitate modeling sessions, we want to acknowledge Christer Nellborn, Hans Willars, and vi Preface

Björn Nilsson, who are good examples of truly professional EM practitioners. Thanks for sharing your knowledge and ideas with us!

This book complements the book on the 4EM method that we wrote together with our colleagues Prof. Kurt Sandkuhl at the University of Rostock (Germany) and Dr. Matthias Wißotzki at the University of Wismar (Germany). A special thanks goes to you.

Furthermore, we would like to thank our colleagues in Jönköping, Riga, Rostock, Skövde, Stockholm, and Valmiera who teach Enterprise Modeling and who contributed ideas, improvement proposals, and practices in many fruitful discussions and joint modeling sessions. You all know who you are!

Moreover, we would like to thank fellow researchers and practitioners that work in the area of Enterprise Modeling and in recent years have been part of forming an active community under the auspices of the IFIP Working Group 8.1 on Design and Evaluation of Information Systems and more specifically the Working Conference on the Practice of Enterprise Modeling (PoEM). Many ideas presented in this book have been put forward for discussion with our peers at these forums.

Kista, Sweden Skövde, Sweden May 2018 Janis Stirna Anne Persson

Contents

1	Introduction]
2	Background to Enterprise Modeling and to Related Elicitation Approaches	g
3	Typical Organizational Problems and How Participatory Enterprise Modeling Helps	33
4	An Example of an Enterprise Modeling Method: 4EM	51
5	The Process of Enterprise Modeling	65
6	Roles and Competences in an Enterprise Modeling Project	93
7	Types of Organizational Stakeholder Behaviors in Participatory Modeling and How to Deal with Them	113
8	Managing Situations and Related Contingencies in Facilitated Enterprise Modeling Sessions	129
9	Tools for Participatory Enterprise Modeling	149
10	Participatory Modeling in Relation to Other Modeling Frameworks and Languages	165
11	How to Become a Professional Enterprise Modeling Practitioner	183
12	Outlook on the Practice and Research of Participatory EM	191
Ind	lov	201