

Andreas Luszczak

Using Microsoft Dynamics AX 2009

► With Online-Service



Andreas Luszczak

Using Microsoft Dynamics AX 2009

Andreas Luszczak

Using Microsoft Dynamics AX 2009

With 177 Figures



VIEWEG+
TEUBNER

Bibliographic information published by the Deutsche Nationalbibliothek
The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie;
detailed bibliographic data are available in the Internet at <http://dnb.d-nb.de>.

1st Edition 2010

All rights reserved

© Vieweg+Teubner | GWV Fachverlage GmbH, Wiesbaden 2010

Editorial Office: Christel Roß | Walburga Himmel

Vieweg+Teubner is part of the specialist publishing group Springer Science+Business Media.
www.viewegteubner.de



No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the copyright holder.

Registered and/or industrial names, trade names, trade descriptions etc. cited in this publication are part of the law for trade-mark protection and may not be used free in any form or by any means even if this is not specifically marked.

Cover design: KünkelLopka Medienentwicklung, Heidelberg

Printing company: MercedesDruck, Berlin

Printed on acid-free paper

Printed in Germany

ISBN 978-3-8348-0482-2

Preface

When looking for a business management solution supporting business processes in mid-sized and large companies, Microsoft Dynamics AX is likely to be your favorite. Because of its deep functional and technological integration, it is as well a good choice for universities teaching ERP systems.

Reading This Book

The primary purpose of this book is to provide you with a good knowledge of the standard application concept and functionality, which is required to run business processes in Microsoft Dynamics AX 2009. This book therefore is for you, if you are an end user, student or consultant, interested in learning how to use Dynamics AX.

Going beyond the operations on the user interface, you will also learn how the different parts of the application tie together. As a result, you will as well take advantage learning the end-to-end application concept, if you are a system administrator, developer, IT executive or experienced consultant not knowing the complete application already.

Actually working in an application is the best way to learn it. Therefore, the chapters of this book include exercises that build up on each other in a comprehensive case study. If you need support to solve the exercises, you may access a free download of sample solutions.

This book is the English version of the successful book “Grundkurs Microsoft Dynamics AX”, recommended by Microsoft in Germany. Based on the second edition of the German volume, it includes the core improvements of Dynamics AX in version AX 2009.

Since Dynamics AX is a very comprehensive business solution, it is not possible to cover all parts of the application in a single book. In order to provide a profound understanding of the core application, this book addresses the primary functionality in supply chain management (including trade, logistics and production) and finance management. It shows the application, but does not cover tasks in system administration and development.

Applicable Settings

In Dynamics AX, you may individually choose the language that applies to your user interface. Descriptions and illustrations in this book refer to the language “EN-US”. Whereas it is obvious, that the Dynamics AX client will display different labels when choosing languages like Spanish or Russian, you will also notice differences when selecting British English. As an example, the label for the field “Sales tax” is “VAT” in British English.

Multisite activation in Dynamics AX 2009 is another setting, which is important throughout the whole application. In this book, we generally apply the multisite functionality, as it is Dynamics AX standard when setting up a new company account. If your company does not activate the multisite functionality, skipping the dimension “Site” in the sentences of the book will apply the explanations to your situation.

Preface

Other sources of possible differences from your application to the descriptions in the book are applicable local features as well as specific modifications implemented in your Dynamics AX system.

In order to benefit from the explanations, it is useful to access a Dynamics AX application. A separate test application, where you may do the exercises, minimizes the risk to affect real company data.

The exercises and illustrations in this book are based on the sample company "Anso Technologies Ltd.". In order to ensure a clear understanding, this company shows a simple setup, limited to the functionality described. You may download the sample company, containing sample exercise solutions, as described below. Nevertheless, the tasks in the exercises are specified in a way, that you may choose a different test environment as well.

Available Support

In order to download the sample company as well as solutions of the exercises in this book, you may access the online service of the publisher or choose the following Web site:

<http://axbook.addyn.com>

In the download links, you may also find additional information and errata, if applicable.

If you have any comments or questions regarding the book or the related exercises, please contact me through the Web site mentioned above or via e-mail to *alu@addyn.com*.

You may also contact me, if you are interested in my training and consulting services, including areas of the Dynamics AX application not covered in the limited number of pages in this book.

Acknowledgements

Many people have been involved in finalizing this book, directly and indirectly, from the first edition in German to the English edition available by now. I want to thank all of them. In particular, I would like to mention Harald Paul, Hubert Grossinger, Peter Sturm, Ingo Maresch, Helga Zopf, Herbert Leberbauer and Keith Dunkinson. Thank you as well to the people of the AxPact World Alliance. An important contribution also comes from the publisher, in the beginning Günter Schulz, and later Sybille Thelen and Christel Anne Roß. Finally, my special thanks go to my family, Sonja, Felix and Caroline.

Andreas Luszczyk

Table of Contents

1	What is Microsoft Dynamics AX?	1
1.1	Axapta and the History of Dynamics AX.....	1
1.2	Dynamics AX 2009 Product Overview	2
1.3	Technology and System Architecture.....	4
1.4	Application Components	8
2	Getting Started: Navigation and Basic Setup	13
2.1	User Interface and Common Tasks	13
2.1.1	Logon and Authentication	13
2.1.2	User Interface	14
2.1.3	Navigation.....	21
2.1.4	Working with Records.....	25
2.1.5	Role Centers	31
2.1.6	Filter, Find and Sort.....	32
2.1.7	Printing and Reporting.....	39
2.1.8	Help System	44
2.1.9	Case Study Exercises.....	45
2.2	Advanced Options	46
2.2.1	User Options and Personalization.....	46
2.2.2	Record Information and Templates	49
2.2.3	Document Management	53
2.2.4	Alert Rules and Notifications.....	55
2.2.5	Case Study Exercises.....	57
2.3	Security and Information Access.....	57
2.3.1	User Groups and Permissions	58
2.3.2	Users and Employees.....	60
2.3.3	Security Domains.....	62
2.3.4	Case Study Exercise.....	63

Table of Contents

2.4 Organizational Structures.....	64
2.4.1 Organizational Units	64
2.4.2 Company Accounts	66
2.4.3 Virtual Company Accounts.....	69
2.4.4 Sites	70
2.4.5 Case Study Exercise.....	71
2.5 General Settings	71
2.5.1 Number Sequences	72
2.5.2 Currencies	74
2.5.3 Periods.....	75
2.5.4 Global Address Book.....	77
2.5.5 Other Settings	78
3 Purchasing	79
3.1 Business Processes in Purchasing.....	79
3.1.1 Basic Approach.....	79
3.1.2 At a Glance: Purchase Order Processing in Dynamics AX	82
3.2 Vendor Management.....	84
3.2.1 Vendor Records.....	84
3.2.2 Payment Terms and Cash Discount	87
3.2.3 Ledger Integration	90
3.2.4 Case Study Exercises	91
3.3 Item Management.....	92
3.3.1 Item Records in Purchasing.....	92
3.3.2 Purchase Price and Discount.....	94
3.3.3 Case Study Exercises	97
3.4 Purchase Orders.....	98
3.4.1 Basics of Purchase Order Processing.....	98
3.4.2 Planned Orders	100
3.4.3 Purchase Requisitions	103
3.4.4 Requests for Quote.....	105

3.4.5	Purchase Orders.....	108
3.4.6	Blanket Purchase Orders	114
3.4.7	Order Cancellation	115
3.4.8	Purchase Order Printing.....	116
3.4.9	Case Study Exercises.....	119
3.5	Item Receipt.....	121
3.5.1	Receipts List.....	121
3.5.2	Inventory Registration	122
3.5.3	Packing Slip Receipt.....	124
3.5.4	Partial Delivery, Over and Under Delivery	126
3.5.5	Order Status and Inquiries	128
3.5.6	Case Study Exercises.....	131
3.6	Invoice Receipt.....	132
3.6.1	Invoice Receipt Posting.....	133
3.6.2	Collective Invoice	135
3.6.3	Order Status and Inquiries	138
3.6.4	Case Study Exercises.....	140
3.7	Credit Notes and Item Returns.....	141
3.7.1	Crediting Item Returns	141
3.7.2	Other Ways of Crediting	143
3.7.3	Case Study Exercise.....	144
4	Sales and Distribution.....	145
4.1	Business Processes in Sales and Distribution	145
4.1.1	Basic Approach	145
4.1.2	At a Glance: Sales Order Processing in Dynamics AX	148
4.2	Customer Management	150
4.2.1	Basic Data and Comparison to Vendors Records.....	150
4.2.2	Case Study Exercises.....	153
4.3	Item Management.....	153
4.3.1	Item Records in Sales	153

Table of Contents

4.3.2	Sales Price and Discount	154
4.3.3	Case Study Exercises	159
4.4	Sales Orders	159
4.4.1	Basics of Sales Order Processing.....	159
4.4.2	Order Registration	161
4.4.3	Pricing.....	165
4.4.4	Miscellaneous Charges.....	167
4.4.5	Order Confirmation.....	169
4.4.6	Case Study Exercises	169
4.5	Distribution.....	170
4.5.1	Picking List	173
4.5.2	Output Order and Shipment	174
4.5.3	Packing Slip	176
4.5.4	Case Study Exercises	178
4.6	Invoicing	179
4.6.1	Invoicing Sales Orders	179
4.6.2	Free Text Invoices	181
4.6.3	Credit Notes and Item Returns	183
4.6.4	Case Study Exercises	185
4.7	Direct Delivery	187
4.7.1	Processing Direct Deliveries.....	187
4.7.2	Case Study Exercise	188
5	Manufacturing.....	189
5.1	Business Processes in Manufacturing	189
5.1.1	Basic Approach.....	189
5.1.2	At a Glance: Production Order Processing in Dynamics AX.....	192
5.1.3	Multisite Functionality in the Production Module.....	194
5.2	Items and Bills of Materials	194
5.2.1	Item Records in Manufacturing	195
5.2.2	Bills of Materials (BOM).....	196

5.2.3	Case Study Exercises.....	202
5.3	Work Centers and Routes.....	203
5.3.1	Production Units.....	203
5.3.2	Work Center Groups.....	204
5.3.3	Works Centers.....	206
5.3.4	Routes and Operations	208
5.3.5	Case Study Exercises.....	213
5.4	Production Orders.....	214
5.4.1	Basics of Production Order Processing.....	215
5.4.2	Order Registration.....	218
5.4.3	Estimation.....	220
5.4.4	Scheduling.....	221
5.4.5	Releasing.....	222
5.4.6	Starting.....	222
5.4.7	Case Study Exercises.....	223
5.5	Production Journal Transactions.....	224
5.5.1	Picking List.....	225
5.5.2	Working Time Registration.....	227
5.5.3	Case Study Exercises.....	228
5.6	Reporting as Finished and Ending Production	228
5.6.1	Reporting as Finished	228
5.6.2	Ending and Costing.....	230
5.6.3	Case Study Exercise.....	231
6	Operations Planning	233
6.1	Business Processes in Operations Planning.....	233
6.1.1	Basic Approach	233
6.1.2	At a Glance: Master Planning in Dynamics AX	234
6.2	Forecasting	235
6.2.1	Basics of Forecasting	235
6.2.2	Forecast Settings	236

Table of Contents

6.2.3	Forecasts and Forecast Scheduling	238
6.2.4	Case Study Exercises	240
6.3	Master Planning	241
6.3.1	Basics of Master Planning	241
6.3.2	Master Planning Setup	243
6.3.3	Item Coverage and Item Settings	245
6.3.4	Master Scheduling and Planned Orders	248
6.3.5	Case Study Exercises	252
7	Inventory Management	253
7.1	Principles of Inventory Transactions	253
7.1.1	Basic Approach	253
7.1.2	At a Glance: Inventory Journal Transactions in Dynamics AX	256
7.2	Item Management	258
7.2.1	Item Records	258
7.2.2	Inventory Dimension Groups	261
7.2.3	Inventory Model Groups	264
7.2.4	Cost Price Settings	267
7.2.5	Transactions Inquiry	268
7.2.6	Quantity on Hand	271
7.2.7	Case Study Exercises	273
7.3	Inventory Valuation	274
7.3.1	Valuation Method	275
7.3.2	Inventory Closing and Adjustment	278
7.3.3	Case Study Exercises	279
7.4	Business Processes in Inventory	280
7.4.1	Inventory Structures and Parameters	280
7.4.2	Journal Transactions	283
7.4.3	Inventory Counting	286
7.4.4	Quarantine	287
7.4.5	Case Study Exercises	289

8 Finance Administration.....	291
8.1 Principles of Ledger Transactions.....	291
8.1.1 Basic Approach.....	291
8.1.2 At a glance: Ledger Journal Transactions in Dynamics AX.....	292
8.2 Setting up Finance.....	293
8.2.1 Chart of Accounts.....	293
8.2.2 Customer, Vendor and Bank Accounts.....	295
8.2.3 System accounts.....	296
8.2.4 Financial Dimensions.....	297
8.2.5 VAT / Sales Tax Settings.....	298
8.2.6 Case Study Exercises.....	301
8.3 Business Processes in Finance.....	301
8.3.1 Basics Setup for Journal Transactions.....	301
8.3.2 General Journals.....	303
8.3.3 Invoices.....	307
8.3.4 Payments.....	310
8.3.5 Reversing Transactions.....	314
8.3.6 Case Study Exercises.....	315
8.4 Ledger Integration.....	316
8.4.1 Basics of Ledger Integration.....	317
8.4.2 Ledger Integration in Inventory.....	317
8.4.3 Ledger Integration in Production.....	320
Appendix.....	323
Appendix A: Setup of the Test/Learning Company.....	323
Appendix B: Setup Checklist.....	323
Basic Setup.....	324
Master Data and Further Essential Setup.....	328
Appendix C: Icons and Shortcut Keys.....	331
Bibliography.....	333
Index.....	335

1 What is Microsoft Dynamics AX?

Dynamics AX is Microsoft's core business management solution, designed to meet the requirements of mid-sized companies and multinational organizations. Based on state of the art architecture and deep integration, Dynamics AX shows comprehensive functionality while ensuring high usability at the same time.

With version AX 2009, Dynamics AX shows additional modules and improved functionality in numerous areas. Main innovations include the new user interface with role centers to support a role tailored user experience on the one hand, and the multisite foundation to support company structures with subsidiaries and sites within a legal entity on the other hand.

1.1 Axapta and the History of Dynamics AX

Dynamics AX in its origin has been developed under the name *Axapta* by Damgaard A/S, a Danish software company. The first version released to market has been published in March 1998. At that time, the founders of Damgaard – Erik and Preben Damgaard – have already had more than ten years of experience designing ERP systems. Among others, they have been co-founders of PC&C, where they joined the development of *Navision* (now Dynamics NAV).

Axapta

Version 1.0 of Axapta has been available in Denmark and the USA only. Version 1.5, published in October 1998, included support for several European countries. Releasing version 2.0 in July 1999 and version 3.0 in October 2002, the development of Axapta continuously increased the application functionality as well as the support of additional countries. Until releasing Axapta under the new brand Dynamics AX in version 4.0, improvements have been deployed in a number of service packs.

After signing a merger agreement in November 2000, Damgaard A/S united with their rival Navision A/S, a successor of PC&C. Finally, Microsoft acquired Navision-Damgaard in May 2002 accepting their main products, Navision and Axapta, as the core business solutions of Microsoft. Whereas Navision focuses on small companies in technological and functional respect, Axapta is the product for mid-sized and large companies.

Company history

When releasing version 4.0 in June 2006, Microsoft rebranded Axapta to Dynamics AX. Microsoft Dynamics AX 4.0 differs from previous versions not only by functional enhancements but also by a new user interface, showing a complete redesign with a Microsoft Office-like look and feel.

Dynamics AX

AX 2009

Dynamics AX 2009 has been published in June 2008. Including role centers, workflow functionality and a user interface matching with the current versions of Microsoft Windows and Microsoft Office, Dynamics AX 2009 shows a familiar and intuitive user experience even further improved. Enhanced functionality, including the multisite foundation and additional modules, provides an end-to-end support for the requirements of global organizations.

1.2 Dynamics AX 2009 Product Overview

Microsoft Dynamics AX is an adaptable business management solution, which is easy to adapt and nevertheless applies to installations of multinational companies. Another characteristic is the deep integration to Microsoft technologies and applications like Microsoft SQL Server, SharePoint Services and BizTalk Server.

User interface

Most people are familiar to Dynamics AX from the very first start, since the user interface is already known from Microsoft Windows and Microsoft Office products. The intuitive user experience helps to start working in Dynamics AX easily and efficiently, supported by a tight integration to other Microsoft software. Role centers grant an easy and fast overview of information required by the individual employee.

Functionality

The end-to-end support of business processes in supply chain management (SCM) and customer relationship management (CRM) allows integrating external business partners like customers and vendors on the one hand as well as internal departments and subsidiaries on the other hand.

Multi-language, multi-country and multi-currency support together with the option to manage several sites within one company make it possible to manage complex global organizations in a common database.



Figure 1.1: Business processes covered by Dynamics AX (Source: Microsoft)