Find out what mySAP ERP and Enterprise Services Architecture (ESA) can do for you!

# mysap<sup>m</sup> Erp

DUMIES

**ESA Edition** 

A Reference for the Rest of Us!®

FREE eTips at dummies.com®

Andreas Vogel lan Kimbell



Find out what mySAP ERP and Enterprise Services Architecture (ESA) can do for you!

## mySAP" ERP

DUMMIES

A Reference for the Rest of Us!

FREE eTips at dummies.com

Andreas Vogel Ian Kimbell **ESA Edition** 

# mySAP ERP For Dummies by Andreas Vogel and lan Kimbell



Wiley Publishing, Inc.

#### mySAP™ ERP For Dummies®

Published by
Wiley Publishing, Inc.
111 River Street
Hoboken, NJ 07030-5774
www.wiley.com

Copyright © 2005 by Wiley Publishing, Inc., Indianapolis, Indiana

Published by Wiley Publishing, Inc., Indianapolis, Indiana

Published simultaneously in Canada

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, scanning or otherwise, except as permitted under Sections 107 or 108 of the 1976 United States Copyright Act, without either the prior written permission of the Publisher, or authorization through payment of the appropriate per-copy fee to the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923, (978) 750-8400, fax (978) 646-8600. Requests to the Publisher for permission should be addressed to the Legal Department, Wiley Publishing, Inc., 10475 Crosspoint Blvd., Indianapolis, IN 46256, (317) 572-3447, fax (317)

572-4355, or online at <a href="http://www.wiley.com/go/permissions">http://www.wiley.com/go/permissions</a>.

Trademarks: Wiley, the Wiley Publishing logo, For Dummies, the Dummies Man logo, A Reference for the Rest of Us!, The Dummies Way, Dummies Daily, The Fun and Easy Way, Dummies.com, and related trade dress are trademarks or registered trademarks of John Wiley & Sons, Inc. and/or its affiliates in the United States and other countries, and may not be used without written permission. SAP, R/3, mySAP, mySAP.com, xApps, xApp, SAP NetWeaver, SAP ERP, and other SAP products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of SAP AG in Germany and in several other countries all over the world. All other trademarks are the property of their respective owners. Wiley Publishing, Inc., is not associated with any product or vendor mentioned in this book.

LIMIT OF LIABILITY/DISCLAIMER OF WARRANTY: The publisher and the author make no representations or warranties with respect to the accuracy or completeness of the contents of this work and specifically disclaim all warranties, including without limitation warranties of fitness for a particular purpose. No warranty may be created or extended by sales or promotional materials. The advice and strategies contained herein may not be suitable for every situation. This work is sold with the understanding that the publisher is not engaged in rendering legal, accounting,

or other professional services. If professional assistance is required, the services of a competent professional person should be sought. Neither the publisher nor the author shall be liable for damages arising herefrom. The fact that an organization or Website is referred to in this work as a citation and/or a potential source of further information does not mean that the author or the publisher endorses the information the organization or Website may provide or recommendations it may make. Further, readers should be aware that Internet Websites listed in this work may have changed or disappeared between when this work was written and when it is read.

For general information on our other products and services, please contact our Customer Care Department within the U.S. at 800-762-2974, outside the U.S. at 317-572-3993, or fax 317-572-4002.

For technical support, please visit www.wiley.com/techsupport.

Wiley also publishes its books in a variety of electronic formats. Some content that appears in print may not be available in electronic books.

Library of Congress Control Number: 2005927621

ISBN-13: 978-0-7645-9995-8

ISBN-10: 0-7645-9995-X

#### Manufactured in the United States of America

10 9 8 7 6 5 4 3 2 1

1B/RU/QZ/QV/IN



#### **About the Authors**

Andreas Vogel joined SAP in the Corporate Consulting Team/Office of the CEO in 2003, where he worked on various projects related to SAP strategy. In the beginning of 2005, Andreas joined the Solution Management Team for mySAP™ ERP, where he lead the effort to service-enable mySAP™ ERP. Andreas now serves as vice president of Field Support for mySAP ERP, where he is responsible for the introduction of mySAP ERP 2005 into the market.

Before joining SAP, Andreas held various research, technology, and business positions around the world, among them principal research scientist at the DSTC (Brisbane, Australia), chief scientist at Borland (San Mateo, CA), and CTO and cofounder of Mspect Inc. (Sunnyvale, CA).

Andreas holds MSc and PhD degrees in computer science from Humboldt University, Berlin, Germany. Andreas previously published three books on CORBA and Enterprise Java Beans with Wiley.

Ian Kimbell joined SAP in the marketing organization in February 1998, where he held several positions in industry and solution marketing, which culminated in developing the SAP Solution Maps and marketing mySAP.com®. Ian then spent a two-year assignment in the SAP Chairman's office as a board assistant before moving on to development as VP for mySAP ERP

Strategy and Business Development for mySAP ERP 2004. He has now returned to marketing and is vice president of Solution Marketing for mySAP ERP.

Before joining SAP, Ian held various international IT and marketing positions during his 11-year tenure with DuPont.

Ian has become well known at the SAPPHIRE conferences in recent years, where he has regularly appeared in the keynote presentations, demonstrating the mySAP Business Suite.

Ian holds two business degrees, including a British Bachelor of Arts with honors in European Business and a German Diplom Betriebswirt.

## Authors' Acknowledgments

We would like to thank SAP's executive management team, Shai Agassi, Jim Hagemann Snabe, Peter Kirschbauer, Peter Graf, Archim Heimann, Stefan Schaffer, and Thomas Baur, for their support and sponsorship of this book.

Many thanks to the following individuals who tirelessly reached into their depths of knowledge in their specific areas of expertise and contributed to this book: Amit Chatterjee, Catherine Courreges, Bob Cummings, Ralf Dehos, Frank Eck, Steffi Eger, Stefan Elfner, Claudius Fischer, Markus Fischer, Joachim Foerderer, Amy Funderburk, David Grasso, Matthias Haendly, Christian Hastedt-Marckwardt, Markus Kuppe, Karolin Laicher, Jürgen Lindner, Salvatore Lombardo, David Ludlow, Thomas Mattern, Doris Moellgaard, Gordon Mühl, Angeline Ng, Tatjana Nikolic, Tsafrir Oranski, Boris Otto, Gunther Piller, Klaus Pohl, Michael Rademacher, Ingo Rothley, Janet Salmon, Christof Schmoll, Horst Schnörer, Tim Steinmayr, Jeff Stiles, Jeremiah Stone, Ralf Strassner, Kaj van de Loo, Karin Weis, Jens Weitzel, Harry West, and Jeff Word.

A special mention goes to contributing authors Andreas Frank (for his work on analytics) and Hanif Ismail (for his contribution on composite applications). We would like to extend our special appreciation to Tesha Harvey, for all her support during the writing of this book: We couldn't have done it without you, Tesha.

We appreciate the hard work and focused effort that was put in by the Wiley project team. Thanks to Katie Feltman for keeping us in line with the tight deadlines and ensuring this book was published.

Finally, this book would not exist without the tireless support and patience of Nancy Stevenson. Thank you, Nancy.

#### **Publisher's Acknowledgments**

We're proud of this book; please send us your comments through our online registration form located at <a href="https://www.dummies.com/register/">www.dummies.com/register/</a>.

Some of the people who helped bring this book to market include the following:

Acquisitions, Editorial, and Media Development

**Project Editor:** Linda Morris

**Acquisitions Editor:** Katie Feltman

**Copy Editor:** Linda Morris

Editorial Manager: Jodi Jensen

Media Development Supervisor: Richard Graves

**Editorial Assistant:** Amanda Foxworth

**Cartoons:** Rich Tennant (<u>www.the5thwave.com</u>)

**Composition Services** 

**Project Coordinator:** Maridee Ennis

**Layout and Graphics:** Joyce Haughey, Stephanie D. Jumper, Barbara Moore, Shelley Norris, Barry Offringa,

Heather Ryan, Ron Terry, Julie Trippetti

**Proofreaders:** Laura Albert, John Edwards, Leeann Harney, Joe Niesen, Carl Pierce

**Indexer:** TECHBOOKS Production Services

#### Publishing and Editorial for Technology Dummies

**Richard Swadley,** Vice President and Executive Group Publisher

**Andy Cummings,** Vice President and Publisher

Mary Bednarek, Executive Acquisitions Director

Mary C. Corder, Editorial Director

#### **Publishing for Consumer Dummies**

Diane Graves Steele, Vice President and Publisher

Joyce Pepple, Acquisitions Director

#### **Composition Services**

Gerry Fahey, Vice President of Production Services

**Debbie Stailey, Director of Composition Services** 

#### **Contents**

#### Title

#### **Introduction**

Why Buy This Book?

**Foolish Assumptions** 

**How This Book Is Organized** 

Icons Used in This Book

#### Part I: mySAP ERP in a Services-Enabled World

#### Chapter 1: ERP: Yesterday, Today, and Tomorrow

Just What Is ERP?

A Brief History of ERP

What Early ERP Did Right

Where ERP Had Room to Grow

The New ERP: mySAP ERP at Your Service

Service-Enabled: The Foundation of Flexible ERP Today

Exploring the Benefits of Enterprise Services

Enterprise Services Provide Building Blocks

Where Does ERP Fit In?

#### **Chapter 2: Differentiating Yourself with ERP**

Start by Being Business Model-Driven

<u>Differentiating versus Standard Processes</u>

**Bringing in Innovation** 

Meeting the Two Challenges of Innovation

#### <u>Chapter 3: Raising the Bar on Productivity</u>

<u>Upping Your Usability</u>

<u>Integrating with Applications You Use Every Day</u>

How Roles Make Life Easier

<u>Self-Service for Productivity</u>

<u>Preconfigured Business Scenarios</u>

Gaining Productivity through Industry-Specific Scenarios

**Sharing and Outsourcing** 

Making Things Run Smoothly with Automation

#### **Chapter 4: Gaining Business Insight**

Tapping into the Potential of Analytics

**Empowering Business People** 

Tallying Up the Analytics You Get in mySAP ERP

**Analytics in Action** 

#### <u>Chapter 5: Keeping IT Flexible</u>

Creating a Common Language for IT and Business

How IT Works in a Service-Enabled World

<u>Using Abstraction to Hide Complexity</u>

Summing Up the IT Service-Enabled World

## <u>Part II : Getting Under the Hood: The Underlying Technology</u>

#### Chapter 6: Meet SAP NetWeaver

So, What Exactly Is SAP NetWeaver?

Orchestrating a Technology Symphony

Giving SAP NetWeaver the Once-Over

**Making Users Productive** 

**Unifying Data** 

**Managing Business Information** 

<u>Customizing Development</u>

**Unified Lifecycle Management** 

**Governing Applications** 

**Consolidating All Your Systems** 

Service-Oriented Architecture Design and Deployment

**Guided Procedures: Focus on Activity** 

<u>Designing Processes and Managing Solutions: SAP Solution Manager</u>

What Can SAP NetWeaver Do for You?

**Technology and Data: The Great Equalizers** 

SAP NetWeaver Enables Business Process Evolution

## <u>Chapter 7: Bringing Services to Life with SAP NetWeaver</u>

Working with Services

A Web Service Description Language Primer

**Modeling with Enterprise Services** 

ESA Is Open to Working with Other Tools

#### Chapter 8: SAP NetWeaver Up and Running

Figuring Out ESA Run-Time Architecture

Business and Technical Protocols: Synchronous versus Asynchronous

Getting a Handle on the Transactional Behavior of Services

**Simplifying Sessions** 

**Seamless Security** 

<u>Taking a Closer Look at Web-Service Run-Time Architecture</u>

**Discovering XI Run-Time Architecture** 

#### Chapter 9: Composites: Extending mySAP ERP

What Are Composites?

The Nature of Composites

<u>Fitting Together Composite Applications</u>

SAP xApps: Delivering on the Innovation Promise

A Case in Point: SAP xApp Cost and Quotation Management

The Composite Team

What Can You Do Today with Composites?

#### Part III: Implementing Change

## <u>Chapter 10: Knowing What to Expect: Covering Costs and Managing Change</u>

The Financial Bottom Line of mySAP ERP

**Exploring Costs with a TCO Model** 

Making a Plan with Value-Based Services

<u>Tackling the Change Management Challenge</u>

#### <u>Chapter 11: Building an ERP Roadmap</u>

Zeroing in on Business Goals

**Understanding Your Industry** 

<u>Finding a Roadmap</u>

Getting the Most Out of SAP Solution Manager

#### Chapter 12: Following ERP into the Future

The SAP Roadmap for ESA and ERP

How mySAP ERP Will Change Going Forward

#### <u>Part IV : The Part of Tens</u>

## <u>Chapter 13: Top Ten Ways to Make People More Productive</u>

<u>Using Both Generic and User-Specific Roles</u>

Work Lists

**Active Alerts** 

**Mobile Scenarios** 

Voice Technology

**Embedded Analytics** 

RFID Technology

Form-Based Processing

**Guided Procedures** 

**Easier User Interfaces** 

#### Chapter 14: Top Ten Ways to Enable Innovation

Creating the Framework for Innovation

<u>Composing Service-Based Applications Strategically</u>

Offering Services to Others

<u>Using Services from Others</u>

<u>Using Model-Driven Development Tools</u>

Connecting Analytics to the World

Working with Composite Processes

**<u>Utilizing Composite Applications</u>** 

Collaborating and Sharing Knowledge

**Deploying Hardware Efficiently** 

#### **Chapter 15: Top Ten ERP Resources**

Your SAP Account Rep

ESA Adoption Help

<u>User Groups</u>

**ERP Events** 

Web Sites

**Publications** 

SAP Partners and the Ramp-Up Program

SAP Developer Network

Solution Manager

**Industry Solutions** 

#### **Glossary**

### Introduction

E nterprise resource planning (ERP) and the world of enterprise computing in general are undergoing a quiet revolution. With the introduction of enterprise services, businesses now have more of an opportunity to differentiate themselves, adapt to change quickly, and provide a common language for IT and business people to communicate — and do it while reducing the overall costs associated with their IT systems.

mySAP ERP, beginning with mySAP ERP 2004, heralded the start of this new service-enabled functionality. Building on top of the traditional features of SAP® R/3®, this new generation of ERP software helps businesses do things they could never do before — at lower cost.

In this book, we help you understand this brave new world, and how it can benefit your enterprise today and in years to come.

### Why Buy This Book?

To be part of the ERP revolution, you have to understand more than mySAP ERP's features. You have to explore the world of Enterprise Services Architecture, or ESA, and discover how services work and how mySAP ERP embraces them. You need a basic understanding of the underlying technology, SAP NetWeaver, to see how

flexibly you can work with out-of-the-box and custom business processes. And you need all of this in plain English that you can understand. That's where this book comes in.

For Dummies books all share a common goal: to avoid complexity like the plague and make topics easy to understand. Throughout this book, we explain concepts, both technical and nontechnical, simply with examples that make mySAP ERP accessible even to the non-IT people among us. When we throw out a technical term, we define it in a way you can understand, and we provide great tools like the Cheat Sheet (that yellow card at the front of the book that you can tear out and use as a handy reference), a glossary of terms, and easy-to-digest Part of Tens chapters that give you ten quick hits of information apiece.

We even include information about things like building an ERP Roadmap with tidbits like TCO and ROI to help you justify the move to mySAP ERP to your powers-thatbe. This alone could be well worth the price of the book!

### **Foolish Assumptions**

This book assumes that you are somebody who works in the corporate world (large or small) and has some basic understanding of business methods and business technology. But we don't assume that you know a thing about SAP or mySAP ERP. Although some of you may be from the world of IT, others aren't, so we try to explain technology in simple terms.

From the very first chapter, we introduce you to basic concepts that you need to understand the world of mySAP ERP and services. But if you already have a handle on the basics, you can easily jump to a later chapter and dive right in. (We also provide cross references to send you back to the relevant chapter for a refresher course.)

## How This Book Is Organized

*mySAP ERP For Dummies* is organized so that you can quickly find, read, and understand the information that you want. It's also organized so that if you have some experience with ERP, you can skip some chapters and just jump to the parts that interest you.

Don't feel that you have to read this book from cover to cover. We provide handy cross references so if you skip over something important in rushing to a later chapter you know where to go to bone up on it.

The chapters in this book are divided into parts that help you find the information that you're looking for quickly and easily.

#### Part I: mySAP ERP in a Services-Enabled World

We start right off in Chapter 1 with a lot of the basic concepts you need to understand mySAP ERP, such as ERP itself, Service-Oriented Architecture, Enterprise Services Architecture, and more. Chapters 2 through 5 give you the lowdown on four key ways that mySAP ERP benefits your business: by providing the framework for differentiating your business, upping the productivity and efficiency of your people, providing business insight through stellar analytics, and giving your IT people the tools to be flexible and put technology to work to support your business strategy.

## Part II: Getting Under the Hood: The Underlying Technology

mySAP ERP has a ton of functionality, but it all rests on top of a technology platform called SAP NetWeaver. To understand the full potential of mySAP ERP, you need a bit of a grounding in SAP NetWeaver. The chapters in this part introduce you to SAP NetWeaver, tell you how you use it to design and run applications, and show you how SAP NetWeaver works with services. Finally, you explore the world of composite applications, where you can orchestrate functionality from several applications to make technology support your business processes.

#### **Part III: Implementing Change**

If you read the book from cover to cover, by the time you get to this point in the book, you will probably have gained a great deal of knowledge about the benefits of mySAP ERP. Armed with this knowledge, you'll probably be eager to find out how to get the thing up and running. Chapter 10 explores some up-front prep in the form of calculating your total cost of ownership, as well as preparing your organization for change. Chapter 11 lays out a roadmap for implementing mySAP ERP, including several useful programs and tools to make it relatively painless. Finally, Chapter 12 is where we pull out our crystal ball (with a little help from the folks at SAP) to tell you where SAP and mySAP ERP are headed in the future. This helps you understand how your investment today locks you into further advances tomorrow.

#### Part IV: The Part of Tens

This part contains three chapters in the ever-popular topten list format. This is where you discover ten great ways to make your employees more productive using mySAP ERP, ten approaches to help you differentiate yourself and innovate in a services-enabled environment, and ten resources that can help you get going with mySAP ERP.

#### **Icons Used in This Book**

We're a visual society, inundated with images from bigscreen movies and computer games, so this book uses little picture icons to visually point out information that's handy to know.



The Tip icon indicates information that may help save you time or aggravation. These icons tend to point out to you interesting little factoids that could prove very useful as you conquer the world of ERP.



Oops! The world can be a dangerous place, and the world of ERP has its own little pitfalls. Warnings alert you to areas where you could make a misstep that could cost you money or result in frustration.



Remember icons are gentle reminders about important ideas or facts that you should keep in mind while finding out all about mySAP ERP. We also use these icons to note where in the book a subject is introduced or covered in more detail.



Geek alert! This little icon points out a definition of a word or a description of a process that wanders over into the realm of the high-tech. These tidbits are informative but not crucial: Feel free to skip these paragraphs if you like.

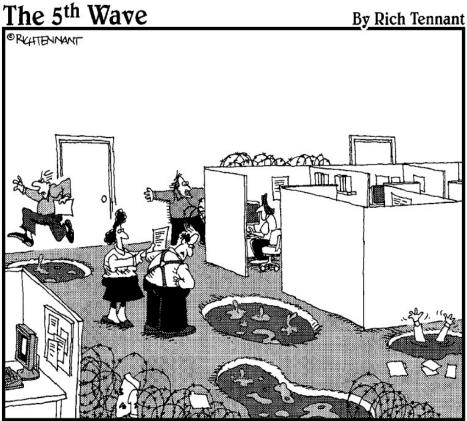


This icon is a special kind of tip that points out ways in which mySAP ERP or its underlying technology can save you money or speed your return on investment.



We use this little icon to alert you whenever we mention a big advance that's introduced by mySAP ERP.

# Part I mySAP ERP in a Services-Enabled World



'Okay, maybe a decent ERP initiative will improve our business performance, but I still think these sulphur pools and twines of barbed wire in the hallways are slowing us up in some ways."

#### In this part . . .

I n this part, you pick up a lot of the basic concepts that you need to be familiar with in order to understand

mySAP ERP, such as ERP itself, service-oriented architecture, Enterprise Services Architecture, and more. Then we explain four important ways that mySAP ERP benefits your business: by providing the framework for differentiating your business, upping the productivity and efficiency of your people, providing business insight through great analytics, and giving your IT people flexible tools to put technology to work in support of your business strategy.