Business Intelligence Competency Centers

A Team Approach to Maximizing Competitive Advantage

> Gloria J. Miller Dagmar Bräutigam Stefanie V. Gerlach



Business Intelligence Competency Centers

Business Intelligence Competency Centers

A Team Approach to Maximizing Competitive Advantage

> Gloria J. Miller Dagmar Bräutigam Stefanie V. Gerlach



This book is printed on acid-free paper. ∞

Copyright © 2006 by SAS Institute, Inc., All rights reserved.

Published by John Wiley & Sons, Inc. Hoboken, New Jersey.

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 Section 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, Inc., 222 Rosewood Drive, Danvers, MA 01923, 978-750-8400, fax 978-646-8600, or on the web at www.copyright.com. Requests to the publisher for permission should be addressed to the Permissions Department, John Wiley & Sons, Inc., 111 River Street, Hoboken, NJ 07030, 201-748-6011, fax 201-748-6008, or online at http://www.wiley.com/go/permissions.

Limit of Liability/Disclaimer of Warranty: While the publisher and author have used their best efforts in preparing this book, they make no representations or warranties with respect to the accuracy or completeness of the contents of this book and specifically disclaim any implied warranties of merchantability or fitness for a particular purpose. No warranty may be created or extended by sales representatives or written sales materials. The advice and strategies contained herein may not be suitable for your situation. You should consult with a professional where appropriate. Neither the publisher nor author shall be liable for any loss of profit or any other commercial damages, including but not limited to special, incidental, consequential, or other damages.

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

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

For more information about Wiley products, visit our Web site at http://www.wiley.com.

Library of Congress Cataloging-in-Publication Data

Miller, Gloria J.

Business intelligence competency center: a team approach to maximizing competitive advantage / Gloria J. Miller, Dagmar Brautigam, Stefanie V. Gerlach.

p. cm.

Includes index.

ISBN-13: 978-0-470-04447-6 (cloth)

ISBN-10: 0-470-04447-0 (cloth)

1. Business intelligence—Management. 2. Knowledge management. 3. Strategic planning. I. Brautigam, Dagmar. II. Gerlach, Stefanie Virginia, 1969–. III. Title. HD38.7.M547 2006

658 4'72—dc22

2006003355

Printed in the United States of America

10 9 8 7 6 5 4 3 2 1

About the Authors



Gloria J. Miller, Vice President, Professional Services Division, SAS International, heads the international Professional Services Division at SAS, is the executive manager for the development of SAS Industry Intelligence Solutions, and is on the board of directors of SAS Global Services. Throughout her career of more than 18 years in the information technology industry, Miller has received accolades for her skills in the management and delivery of IT systems and programs and in software development and support.

She holds a master's degree in Business Administration from Bowie State University in Bowie, Maryland, and a Bachelor of Science degree from Augusta State University in Augusta, Georgia.



Dagmar Bräutigam, Professional Services Program Manager, SAS International, has led the development of the Business Intelligence Competency Center Program and the Information Evolution Assessment Service. Based in Heidelberg, Germany, she is responsible for creating, developing, and rolling out SAS' education and consulting programs and services for the SAS Europe, Middle East, and Africa and the Asia/Pacific regions. Bräutigam studied translation

sciences in Heidelberg, London, and Geneva, and holds a degree from Ruprecht-Karls-University of Heidelberg.



Dr. Stefanie V. Gerlach, Senior Program Consultant, SAS International, has extensive experience in developing training programs for project teams and end users. She is responsible for developing the Business Intelligence Competency Center initiative for SAS. She is responsible for creating, developing, and rolling out the Business Intelligence Competency Center Services for the SAS Europe, Middle East, and Africa and the Asia/Pacific regions. Gerlach has studied political science, history, and Protestant theology in Heidelberg and Paris, and holds a Ph.D. in

Political Science from Ruprecht-Karls-University of Heidelberg. Gerlach also codeveloped a manual that describes training methods and how to implement and manage computer training.

About the Contributors

The main authors would like to thank the following individuals for their invaluable contributions. Without them, this book would not have been possible.

The table below details the chapters they contributed to.

Chapter 1 Eleanor Taylor	Chapter 7 John Davies Frank Leistner Britta Lerch	
Chapter 2 Pamela Prentice	Chapter 8 Achim Granzen	
Chapter 3 Hannu Ritvanen	Chapter 9 Hannu Ritvanen	
Chapter 4 Michael Nielsen		
Chapter 5 Hannu Ritvanen		
Chapter 6 Achim Granzen		



John Davies is a Senior Learning and Organizational Development Consultant for SAS International in Heidelberg, Germany. Davies directs Performance Management and Learning and Development initiatives for Professional Services in the SAS Europe, Middle East, and Africa region and consults on Change Management. He studied management and organizational development in the United Kingdom and Germany, and is a member of the Charted Institute of Personnel and Development.



Achim Granzen is a Senior Professional Services Specialist with SAS International Professional Services. In this role, Granzen ensures successful delivery and implementation of the SAS®9 architecture by providing training, conducting project planning and reviews, and creating methodologies and best practices for project estimation and implementation. Granzen holds a master's degree in Physics from Mercator University in Duisburg, Germany.



Frank Leistner is the Chief Knowledge Officer for SAS International. He leads worldwide SAS Knowledge Management initiatives, enabling SAS staff around the world to share knowledge and expertise about SAS products, methods, and processes for internal and external projects. With more than 12 years of experience in Knowledge Management, Leistner is a regularly invited speaker regarding Knowledge Management topics and is involved in a Harvard Round Table at the Harvard Learning Innovations Laboratory. Leistner holds a masters degree in

Computer Science from Technical University Carolo-Wilhelmina at Brunswick, Germany, and an M.S. degree in Computer Science from the State University of New York (SUNY) at Albany.



Britta Lerch is a Team Leader, Knowledge Office Operations, with SAS International. Her key area of responsibility focuses on Knowledge Management, including planning and designing SAS knowledge systems, supporting the systems, managing content, and assessing and measuring implementation of Knowledge Management systems and processes worldwide. Lerch holds a Masters degree in Mathematics (German Diploma) from Technical University, Darmstadt in Darmstadt, Germany.



Michael Nielsen is a Senior Consultant for SAS International. Based in Copenhagen, Denmark, Nielsen has played a key role in the development of the Information Evolution Model and the Information Evolution Assessment Service, working closely with industry analyst groups as well as internal and external thought leaders. He is responsible for creating, developing, and rolling out the Information Evolution Assessment Service for the SAS Europe,

Middle East, and Africa and the Asia/Pacific regions. Nielsen holds a degree in Economic and Information Science from the Aarhus School of Business, Aarhus, Denmark.



Pamela Prentice is a Senior Manager of Market Research for SAS. She directs efforts to gather and analyze information about software and technology markets to assist in the development of effective marketing strategies and sound business decisions. Prentice holds a degree in English from Jacksonville University, Jacksonville, Florida; an M.B.A in Marketing from the University of Mississippi; and is currently pursuing a Ph.D. in Marketing from the University of Mississippi.



Hannu Ritvanen is a Business Consultant with SAS, based in Oy, Finland. With over 20 years experience in using SAS, Ritvanen helps SAS customers develop successful strategies for their Business Intelligence implementation, including process definition and management, systems architecture design, and organizational management. Ritvanen holds an M.Sc. (Ecom). degree in Economics from the Swedish School of Economics and Business Administration and is currently pursuing a Ph.D. in Stake-

holder Dependency and Corporate Performance at the Swedish School of Economics and Business Administration in Helsinki, Finland.



Eleanor Taylor is a Senior Marketing Strategist with SAS. Taylor specializes in Business Intelligence, ensuring that SAS' Business Intelligence products and services meet the current and future needs for SAS customers. Taylor holds a degree in Sociology from Southern Illinois University in Carbondale, Illinois, and is currently pursuing a master's degree in Organizational Design from DePaul University in Chicago, Illinois.

Contents

Foreword		ΧV
Preface		xix
Acknowled	GMENTS	ххі
CHAPTER 1	Introduction Overview Business Intelligence as a Competitive Differentiator Business Intelligence Competency Center Summary	1 2 3 6 13
CHAPTER 2	Business Intelligence in the Organization Overview General Findings of the Survey Business Intelligence Competency Centers Summary	15 16 17 27 34
CHAPTER 3	Primary Functions of the Business Intelligence Competency Center Overview Functional Areas Inside the BICC Detailed Checklist for the Functional Areas in the BICC Related Functional Areas Summary	35 36 37 40 43
CHAPTER 4	Planning a Business Intelligence Competency Center: Using the Information Evolution Model Overview Four Critical Dimensions of the Information Evolution Model Five Levels of Maturity in the Information Evolution Model Defining the BI Strategy Summary	47 48 49 52 57

CHAPTER 5	Human Capital Overview Staffing the Business Intelligence Competency Center Summary	61 62 62 63
CHAPTER 6	Knowledge Processes Overview Knowledge Processes in the Business Intelligence Competency Center's Functional Areas Summary	75 76 77 85
CHAPTER 7	Culture Overview Organizational Setup and Funding Performance Metrics Knowledge Management Change Management Summary	87 89 90 93 100 104 116
CHAPTER 8	Infrastructure Overview Considerations from a BICC Perspective Business Intelligence Infrastructure Selection Criteria Road Map to Implementing a BI Infrastructure Summary	119 120 121 126 133 136
CHAPTER 9	Setting Up and Ensuring Ongoing Support Overview Setup Process in Detail Working with Software Vendors Summary	139 140 141 156 163
CHAPTER 10	Cases from the Field Insurance, South Africa: Mutual & Federal Defines Business Intelligence Strategy Public Administration, Italy: CSI-Piemonte Manages Growth with a Business Intelligence Competency Center Banking, Belgium: KBC Benefits from an SAS Business Intelligence Competency Center Banking, South Africa: Competency Center Drives Return on BI Investments at Nedbank Summary	165 166 167 168 170 171
CHAPTER 11	Ten Recommendations for a Highly Effective Business Intelligence Competency Center Have a Vision for Business Intelligence Create a Joint Venture Between Business and Information Technology	173 174
	1 cermology	174

	CONTENTS	XIII
	It's a Process, Not a Project	175
	Maintain Clear Vision, Concrete Objectives	175
	Integrate and Consolidate	175
	Practice Effective Change Management	176
	Carry Out Staff Induction, Training, Development	176
	Deliver Ongoing Value	176
	Ensure the Infrastructure's Depth and Breadth	177
	Use a Multidimensional Approach	177
APPENDIX A	List of Abbreviations	179
Appendix B	Additional Roles	181
INDEX		187

Foreword

he world of Business Intelligence (BI) is changing, and the ideas in this book can help organizations address the transition. Business Intelligence has been with us (under several different names) for several decades, and one could argue that it has always been useful. However, in the past it has also been somewhat "marginal"—addressed to important but somewhat esoteric business problems, and rarely visible either to senior executives or to external customers or business partners. There clearly have been exceptions to this pattern, but for the most part BI and its practitioners have dwelled in the "back rooms" of organizations.

For an increasing number of organizations today, however, this is no longer the case. Based on research supported by SAS and Intel, I have concluded that the leading edge of BI involves companies in which analytics are central to their strategy and competitive advantage. These firms and organizations have employed sophisticated analytics and fact-based decision making to drive and support competition based on one of several possible strategic capabilities. The retailers Wal-Mart and Amazon, for example, have used analytics to optimize supply chain management. Travel and entertainment firms such as Harrah's and Marriott have used analytics to support customer loyalty and revenue management. In the financial services industry, Capital One and Progressive have focused on the analysis-based pricing and marketing of their products. In professional sports, the Oakland A's, Boston Red Sox, and New England Patriots have employed analytical approaches to selecting and compensating human resources—their very expensive players.

In these organizations, analytics and BI have escaped the back room for the boardroom. They are highly visible capabilities that get mentioned in annual reports and analyst briefings. Companies do not become analytical competitors without the urging and close attention from the senior executive suite. These firms have reached the ultimate stage in the SAS "information evolution model" described in this book: They are not only optimizing their business processes, but also creating innovation in products, services, and business models.

Of course, the emergence of analytical competition raises the question of how companies can build the necessary analytical capabilities. As this book suggests, based on survey results of how BI is managed now, most organizations today do not even handle the back-office BI role well. And even those analytical competitors I have found in my research typically took many years to build their analytical muscle; a faster route to success is needed. But the changes required to compete on numbers are both broad and deep. Serious analytical competition requires more than the traditional BI tools of hardware, software, and data. Substantial changes in organizational culture, employee behaviors and skills, and managerial decision styles will also be required. Some group within analytically focused organizations must take on the task of facilitating the development of the required BI capabilities.

That is where the primary subject of this book—the Business Intelligence Competency Center, or BICC—comes in. There is no better candidate organization to ensure that the requisite BI tools are available, to educate and train managers and users on analytical techniques and decision making, and to work with executives to ensure that BI supports the company's business strategy. Of course, BICCs can be useful even if BI plays only a support role in how a company competes. But creating such a center—whether it is called a BICC or something else—is absolutely critical when a company is attempting to make analytics a strategic weapon.

Here I won't go into the details on how to organize a BICC or the specific functions that should be included in one. The rest of this book has plenty of useful content of that sort. My point here is only to point out the essential role of the BICC in analytical competition and to alert readers to the highest and best use of this new organizational entity. Establishing a BICC is a good idea if you are doing any sort of Business Intelligence. However, if you use a BICC only to support a back-office BI approach, your organization is leaving a lot on the table, and it may be difficult to get the

needed resources from senior management to embed BI into the organization's most strategic processes and capabilities. The most successful and strongly supported BICCs will be those that enable a new wave of analytical competition. In these environments, the return on investment in the BICC will be the growth and profitability of the entire enterprise. It would be competitively foolhardy not to endow such an important institution with all the support and resources it requires for a long and fruitful life span.

Tom Davenport

Preface

Purpose

This book advises organizations on how to set up and run Business Intelligence Competency Centers (BICCs). The book was developed to provide an overview of the BICC concept and its benefits and to give recommendations for BICC setup and maintenance.

Who Should Read This Book

This book has been written for anyone interested in the concept of BICCs and in how to plan, set up, and run them. The suggested audience includes the potential executive sponsor, information technology management, the business units that will be supported by the BICC, as well as the team of individuals tasked with the work of setting up the BICC and the individuals actually manning the BICC.

Depending on your role and interest, you might want to focus on specific sections in this book. The table below contains recommendations about which chapters will be of most interest to you.

The BICC Book Web Site

This book contains some checklists, job role descriptions, and other tools that you might find useful to have in electronic format. You can download these items from the SAS Web site. Note that the Web site is protected; you will need to use this login information:

URL: www.sas.com/bicc/book

User Name: bicc Password: moreinfo

Note also that you must enter both user name and password in lowercase.

	Executive Sponsor	IT Management	Business Representative	BICC Setup Team and BICC Staff
Chapter 1 Introduction	Х	Х	Х	X
Chapter 2 Business Intelligence in the Organization	X		Х	X
Chapter 3 Primary Functions of the BICC	X	X		X
Chapter 4 Planning a BICC: Using the Information Evolution Model	X	X	X	X
Chapter 5 Human Capital				X
Chapter 6 Knowledge Processes				X
Chapter 7 Culture	Χ	X	Х	X
Chapter 8 Infrastructure		Χ		Χ
Chapter 9 Setting Up and Ensuring Ongoing Support		X		X
Chapter 10 Cases from the Field	X		X	X
Chapter 11 Ten Recommendations for a Highly Effective BICC	X	X	X	X

<u>Acknowledgments</u>

The authors would like to thank the SAS customers who shared their BICC experiences: CSI-Piemonte, KBC, Mutual & Federal, and Nedbank.

A considerable number of people were involved in the creation of this book. In addition to acknowledging the contributions from SAS offices worldwide, the authors would like to extend special thanks to Peter Bennett (SAS International), Bruce Bond-Myatt (SAS South Africa), Werner Bundschuh (SAS International), Ana López Echevarria (SAS International), Paul Higgins (SAS International), Steven Ing (SAS Asia/Pacific), Norbert Seibel (SAS Germany), and Victoria Vaca Núnez (SAS International) for their invaluable comments and constructive input during the review process, as well as to David Lambert, Kerstin Lambert, and Nicole Trick (all of SAS International) for their research work.

Thanks also to Bettina Baumhauer and Stephanie Pauler (both of SAS International) for their assistance with the graphics, and to Alec Bews, Eric van Gendt, and Gracy Poelman (all of SAS Belgium), to Veronica Hodgson and Hanlie Myburg (both of SAS South Africa), and to Augusta Longhi (SAS Italy) for their help with the case studies.

This book would not have been possible without the continuous support and hard work from the production team, which included Caroline Brickley, Patrice Cherry, Monica McClain, and Julie Platt (all of SAS Americas) and Jeremy Collin (SAS International).