

ACTIONABLE INTELLIGENCE

A GUIDE TO
DELIVERING BUSINESS RESULTS WITH

BIG DATA

FAST!

KEITH B. CARTER

with Contributions from
DONALD FARMER and CLIFFORD SIEGEL

WILEY

Further Praise for *Actionable Intelligence*

“BI starts with an attempt to ask the right business questions until the answers reach an actionable outcome. This book reminds us to begin with back to basics before we jump into developing what users ask for. Keith calls it ‘The Initial Answers.’ From my experience, within-memory technology and advance visualization, businesses may no longer have to ‘peel the onion’ or drill down to reach the Actionable BI. Bringing together the power of BI and the business knowledge of the users is the ideation process Keith describes in his book.”

—Elizabeth Lim, Vice President & CIO, Enterprise Information Management, STATS ChipPAC Ltd

“Big data is the buzzword these days; there is not a week passing through without an article, a blog, a discussion around this topic. There is no denying the fact that data, and if big even better, offer a big potential for business people. But is this enough? Surely not. . . . Through the book, Keith, Cliff, and Donald will guide you through this data jungle and enable you to unveil the full potential of your data for actionable intelligence. Do yourself a favour, read it!”

—Roxane Desmicht, Senior Director, Corporate Supply Chain, Infineon Technologies

“Only a few years ago, the ability to have access to data across a global enterprise was the challenge. Leaders struggled to make decisions in the absence of near time information. Fast forward to the present, and those same leaders are still challenged to make decisions—because there is too much data. Actionable Intelligence provides a road map to navigating the big-data space to provide decisions and, more importantly, results. Kudos to Keith Carter and team in sharing their career passion and lessons learned.”

—Edward DuBeau, Sr. Director, ERP, Zoetis

“This book, *Actionable Intelligence*, is a fantastic resource in shifting our energy from delivery of technology to delivery of insight and organizational outcomes. Whether new to BI or a seasoned veteran, *Actionable*

Intelligence provides a ‘how to,’ or reflective assessment, on how we as BI professionals add real value.”

—Stuart Ward, Platform Manager: Business Intelligence and Reporting, ANZ Bank

“Actionable intelligence represents the next frontier of innovation. Decision makers would be wise to empower their operations to harness effectively actionable intelligence to gain a competitive advantage. Actionable intelligence promises to level the playing field among profit-seeking enterprises, regardless of size. This book offers a glimpse into paradigm-shifting approaches that every business owner ignores at its peril.”

—Justin Swindells, Patent Attorney

“So much of the hype about Big Data has led organizations to expend large sums of money with relatively little return on their investment or to wallow in the slough of despair as they try to figure out all they want to know. This book from a highly experienced and skilled practitioner working within a global context cuts through all the nonsense with delineated action steps, sage advice, and insights from many different practical situations. Carter’s key point is that Big Data is ONLY useful when it provides actionable intelligence that informs decisions and guides responses. It grows by accretion as more and more insights are derived and delivered with impact across the organization. This book will be sheet music for the practiced eyes and ears of senior management and an open entrée for data practitioners within enterprises to become more central to core operations that increase competitiveness in complex global markets with their ever changing parameters and issues. Larger nonprofit and government agency leaders can also glean many useful insights from this volume. This is a must-read for 2014 and beyond for senior leaders, managers across the enterprise, and those leading work in applied data fields.”

—Dennis Cheek, Ph.D., Executive Director, National Creativity Network, USA, Co-Chair, Global Creativity United, and Visiting Professor, Innovation and Entrepreneurship, IESEG School of Management, France

Actionable Intelligence

*A Guide to Delivering
Business Results with Big
Data Fast!*

Keith B. Carter

with contributions

from Donald Farmer

and Clifford Siegel

WILEY

Cover image: Wiley
Cover design: Wiley

Copyright © 2014 by John Wiley & Sons, 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 for 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 publishes in a variety of print and electronic formats and by print-on-demand. Some material included with standard print versions of this book may not be included in e-books or in print-on-demand. If this book refers to media such as a CD or DVD that is not included in the version you purchased, you may download this material at <http://booksupport.wiley.com>. For more information about Wiley products, visit www.wiley.com.

Library of Congress Cataloging-in-Publication Data:

Carter, Keith B., 1973-

Actionable intelligence : a guide to delivering business results with big data fast! / Keith B. Carter with contributions from Donald Farmer and Clifford Siegel.

1 online resource.

Includes bibliographical references and index.

Description based on print version record and CIP data provided by publisher; resource not viewed.

ISBN 978-1-118-92060-2 (ebk); ISBN 978-1-118-92065-7 (ebk);

ISBN 978-1-118-91523-3 1. Decision making. 2. Strategic planning. 3. Big data.

I. Title.

HD30.23

658.4'038028557—dc23

2014027154

Printed in the United States of America

10 9 8 7 6 5 4 3 2 1

*Dedicated to my late mom, Mary Kennedy Carter,
and my dad, Donald Wesley Carter Sr.
Their life and love is a source of constant inspiration.
This book is also dedicated
to you and people like you
who want to help others make better decisions.*

Contents

Preface	xi
Acknowledgments	xvii
Introduction	1
Chapter 1: Vision of Actionable Intelligence	5
The Challenge at Hand	7
The Big Data Lie	13
Actionable Intelligence: The Road and the Destination	14
Stages of Actionable Intelligence: Getting Ready for the Journey by Knowing Where You Are and Where to Go	22
Are You Ready to Take the First Step?	26
Summary and Considerations	29
Notes	29
Chapter 2: Discovery of the Business Situation (Business Discovery)	31
Government Intelligence	34

Ask the Questions	37
Answer the Questions: Business Discovery	38
Visual Consistency and the First Tool	42
Off to the Races	45
Summary and Considerations	45
Notes	45
Chapter 3: Creating a Foundation of Data	47
Building the Foundation	48
Benefits of Having the Right Data	49
The Data Challenge	50
Acquire Data in Four Consistent Steps	51
The Byproduct: Master Data Management	61
Data Management Issues in the Spotlight	63
The Data Supply Chain	65
Build the House	65
Summary and Considerations	67
Notes	68
Chapter 4: Visualization	69
Complete Circle	70
So Now, How Can You Do It?	74
The Way Ahead	77
Example of Iterative Visualization to Solve the Question “How Do I Get There Quickly, Safely, Efficiently:” Leveraging Global Positioning System Data	77
Effective Visualizations: Tell a Story to Your Mind	80
Noticing Visualization Pitfalls	80
Summary and Considerations	83
Notes	83
Chapter 5: The Initial Answers	85
Attempting to Regularly Capture Benefits, False Starts, and a Rhythm	87

	The Results of Actionable Intelligence Delivered	87
	The Power of Quotes	89
	Possibilities with Actionable Intelligence	89
	Almost Done?	98
	Summary and Considerations	99
	Note	99
Chapter 6:	Time for Change	101
	Collaborative Business Planning	103
	Linking Collaboration to Actionable Intelligence	106
	Summary and Considerations	110
Chapter 7:	Governance: Funding Intelligence, Protecting the Results	111
	An Actionable Intelligence Governance Methodology	112
	Intelligence Budgeting	121
	Remember the Key Points of the UPS Story	122
	Governing the Use of Actionable Intelligence and Establishing Data Security	125
	Summary and Considerations	133
	Notes	133
Chapter 8:	Sustaining Delivery of Actionable Intelligence	135
	Leading Intelligence	136
	Quick Wins to Build Trust	140
	Hiring Done Right for Big Data with Big Data	145
	Training	148
	Business Cultural Change	149
	Communication	155
	Knowledge Lock-In	157
	What's Next?	159
	Summary and Considerations	161
	Notes	161

Chapter 9: Tying It All Together	163
Clifford Siegel’s Journey at Lifetime Brands	163
Starting the Right Way	165
Finding the Right Pitch	166
Developing a Mission and Strategy for Intelligence Capabilities	167
TIE: The Intelligent Enterprise at STATS ChipPAC with Elizabeth Lim	170
The Recipe to Greatness	174
Summary and Considerations	179
Notes	180
Chapter 10: Next Frontiers	181
A Healthier Lifestyle with Actionable Intelligence	183
The Street-Smart Cabbies	184
The Amplified Customer Experience	186
Selling Better	187
Serve Me Better . . . But Don’t Intrude on My Private Life	188
Getting Started	189
The Starbucks Experience	190
Summary and Considerations	191
Notes	191
Chapter 11: Epilogue	193
Four Steps of Actionable Intelligence	195
About the Author	197
About the Contributors	199
Index	201

Preface

What's actionable intelligence?

In speaking around the world on the topic of making better decisions using facts, I've found again and again that leaders from all industries yearn for more information. They want to be able to assess risks and opportunities quickly and efficiently. They want answers in enough time to be able to make a difference. They want to seize opportunities. They need intelligence that is on time and accurate. They want what I call "actionable intelligence."

A Vision of What Could Be: The Hospital Information System

As I was beginning my own journey into actionable intelligence, my mother had a stroke. Her stroke led me to understand the real need for intelligence in a transformative way.

It was a gray day in early 2010. I was on my way to my office at the Estée Lauder Companies, Inc. in Melville, New York, where I was working in a global role establishing an intelligence organization, running the

project management office (PMO) for supply chain, managing Sarbanes-Oxley and customs compliance, and implementing operational efficiencies throughout the business.

As I drove to the office, my head was filled with thoughts of supply chain intelligence. My thoughts were interrupted when my cell phone started ringing.

It was my father.

“Son, I’m at the hospital. Your mother fainted in the bathroom this morning and I couldn’t revive her.”

Silence. . . .

I asked, “Where are you? What hospital?”

“Please come to South Nassau Community Hospital,” he responded.

When I arrived at the hospital, my mother, Mary, was sitting up in bed, looking a bit weak.

The doctor told me, “Your mother had a stroke.”

She looked fine, but could only mouth words to us. She could not speak. Miraculously, she began to speak about 30 minutes later and was able to move her arm. We spent the rest of the day at the hospital, waiting and wondering.

At about 6:30 the next morning, as I was making my way out of my house, my cell phone rang. It was a nurse at the hospital.

“Mr. Carter, come quickly to the hospital,” he said. “Your mother had another stroke.”

I was numb.

I immediately called my dad and drove over to the hospital.

When I arrived at my mom’s bedside, she couldn’t speak, she couldn’t move the right side of her body or her left arm. As she was poked and prodded by the doctors, she didn’t visibly react to any pain.

Tears came to my eyes. Here was my mom—my hero for life—now with a contorted face and unable to speak or move.

I became greatly concerned. What efforts would be made to support my mother?

I asked for information—basic things, such as what we could expect medications to do to help my mother. The hospital staff responded coldly: “We are busy. Later we will try to give you the information.”

I pushed for more: “How did this second stroke happen? What do the MRI and X-rays look like?”

They responded, “We don’t have that information. Go to records downstairs.”

I did, but to see the records I had to stand in line and pay. I received the images on a disk in a format I couldn’t immediately view.

In fact, I ran into roadblocks that prevented me from gathering facts at every turn.

It was difficult to find doctors who would explain the situation, and nurses were at best impatient and often downright mean. (I would realize later that their frustration stemmed from being worked hard and lacking information themselves to respond to customers like me.)

The situation was beyond frustrating. I just couldn’t access information fast enough, and relatives from all over the country were asking me again and again, “What’s the status?” “How’s Mary?” “What medicines is she taking?” “How often?” “When?” “How much?” “With what?” “What are the side-effects?”

And so on and so on.

I became information central. I set up conference calls at specific times for my relatives to provide information so I wouldn’t have to call 50 people individually. However, these calls were very frustrating because I was stuck between a hospital that didn’t readily share updates about my mother and family members who wanted to be totally involved in her care. They were all concerned, and so was I. We wanted facts so we could understand and improve the situation.

Thankfully, an angel and dear family friend, Dr. Linda Huang, helped us move my mom to Columbia University Presbyterian Hospital (Columbia for short).

Each case of moving a patient from one hospital to another is different, but typically, the accepting physician reviews the case and assesses the risk versus the benefits of moving the patient. Thankfully, Linda, a graduate of Columbia Dentistry and assistant professor of the same, was able to make it happen.

Columbia was amazing! I drove there following the ambulance. When I arrived and saw my mother being taken care of, I immediately approached a doctor. He took the time to walk my father and me through her case.

I had been trying to understand the medications prescribed to my mother at the other hospital, but the nurses and doctors were always

too busy there. When I asked the doctors at Columbia, they said, “Wait one moment.” And, indeed, in just minutes, they presented a chart of medications. The chart explained the indications, contraindications, side effects, timing, and dosages of all the medications. Wow! Talk about instant information.

It was amazing; the hospital staff had time to spend with me and had all the information they needed at their fingertips.

Later, I would ask the doctors more questions—specifically, about the MRI that I never saw at the previous hospital. You will recall that the previous hospital gave us a CD that could be viewed only using specific hospital software—and cost me time and money to receive.

The Columbia doctor took me over to a workstation in the hallway. These workstations were located throughout the hospital. He logged in, entered my mother’s information, and immediately brought up all her records. He showed me the MRI on the spot, and calmly and respectfully showed me the infarction (dead part of the brain) and explained its impact.

I didn’t have to go to a separate records department. I didn’t have to wait in line. I didn’t have to pay. And, importantly, I could immediately view and understand the information. Why? Because the information was at the doctor’s fingertips. And, he took time to explain everything to me in a way that had meaning.

The hospital information system was so powerful at Columbia that anytime I wanted information I could simply ask and it was given. Staff could just as easily access information.

I was very impressed, and my family was pleased with the understanding that this new flow of information enabled. The level of care at Columbia was remarkably more engaging and patient-oriented—all because of information.

It was this hospital experience that propelled me toward a journey to actionable intelligence capabilities: instant access to forward-looking information on everyone’s desktops.

Benefits of Actionable Intelligence

As a business leader or a business function lead, you have customers. Don’t you want to be able to find information about a specific request from a customer immediately? Just as Columbia University Presbyterian

Hospital has thousands of patients, you might have thousands of orders. The ability to find the right information for a customer at the right moment—and to be able to immediately explain the information—earns you so much trust and faith, it is impossible to measure the benefit.

Without the kind of hospital information system that Columbia University Presbyterian has, when someone asks a question you likely have to say, “Let me call you back,” then research the information, which possibly involves e-mailing other people. (Hopefully, they will send a response.) This is an issue because people are impatient and very busy. The reason they are asking your business a question is because they want to know the information right now, not 30 minutes later and certainly not days later.

Think about the soft benefits of having answers at your fingertips:

- You don’t have to take as much time to answer the customer.
- The customer has more confidence in your ability to deliver.
- Expectations can be set quickly.

The hard benefits:

- When you share the information, you can react to the customer’s request and achieve hard benefits right away by adjusting the order if they need more or less.
- More broadly, all plans can be adjusted to take into account all the known information at all times, leading to real savings and increased efficiency at a relatively small cost.

For a concrete example of what actionable intelligence can do, consider this quote from a product director in a large fast-moving consumer goods company.

We’ve been carefully tracking an important product launch, worth \$55.6 million in the next 12 months. The actionable intelligence tool showed me the global forecast has increased by 160,000 pieces globally for the next six months in the last four weeks alone, a \$10 million increase. This information enables us to stay ahead of the demand increases and proactively coordinate a response, reducing costs and ensuring we don’t go out of stock and avoiding airfreight.

See the difference? Speed and results! Readily available information for decisions enables proactive actions and creates heroes like this product director.

Actionable intelligence capabilities can result in massive benefits for you, your coworkers, your boss, your customers—basically, everybody related to the company. Let this book be the guide on your journey, and you may soon find yourself the next actionable intelligence hero.

Now please join me for a good walk on the journey to delivering actionable intelligence.

How to Use This Book

The book is written as a guide for sharing best practices, emphasizing key points, and defending effective intelligence methodologies. Business managers can use it to work with IT and say, “Look here! We can work together like this.” I also expect IT to be able to use it to run to senior management and say, “Hey! We can be really good partners with you on delivering sales.”

When stuck on how to visualize data or tell a story, pull out this book and follow the ideation methodology.

At the end of each chapter is a section called “Summary and Considerations.”

There you will find:

- A Point to Ponder
- A Quote to Remember
- A Question to Consider

To evolve the concept of actionable intelligence, I encourage you to share your thoughts, ideas, and experiences. You can do so on my website: www.keithbcarter.com.

Acknowledgments

Big hugs and thanks to my wonderful wife, Stella, and our boys, Emmanuel and Luke, who were all very supportive as I wrote this book. My boys listened to it as a bedtime story.

With great thanks to my friends, mentors, and family, who have changed my life in small and big ways.

A special thanks to Jessica Foong, Wen Wei Zhao, and Mike Van Den Eijden for their special work.

I thank God for granting me the experiences in actionable intelligence so I can share them with you in this book.

A special thanks goes to Debra Donston-Miller, who helped sand off the rough edges from this book.

I would also like to mention the following people who contributed to the book in their own special way:

Yuri Aguiar
Ed Dubeau
Dennis Cheek
Haley Garner
Rayna Fagen

Naveed Husain

Jason Schogel

Ser Aik

Jason Mayberg

Naveed Husain

Mike Saliter

Hideki Sakai

Rocky Russell

Helena May

Teresa Kennedy

The SCI team

And IT people around the world!

Introduction

My hope is that readers come away from this book with the realization that they can improve the lives of others by giving them the answers they need to make better decisions faster and easier.

When team members have usable information at their fingertips, they can:

- Answer questions faster, with little or no effort needed to collect the data.
- Make better use of their time, planning improved outcomes.
- Make improvements for the future, instead of dwelling on past failures.

If actionable intelligence sounds a lot like business intelligence, it's no wonder.

Using this book as a guide, you can play a part in making a positive impact on your colleagues by achieving the dream that business intelligence (BI) has promised since the term was first coined way back in 1858.

BI tools are the same across industries, whether you are helping a business, government, or nonprofit. BI concepts can also be helpful for individuals who want to make revolutionary change.

While they are very different in the end, both BI and actionable intelligence start with a question.

When a new question is raised, time is of the essence; the intelligence organization needs to respond quickly. However, due to the rigidity of the system and lack of focus in the organization or the governance methodology, it can be difficult to make the changes necessary to arrive at a complete decision.

For example, analysis might be performed in Excel, because a business user requires additional factors or information. The results will likely be presented in PowerPoint—with static data points that are as limited in usability as when the project began.

For years, the smartest minds in BI have struggled with how to deliver forward-looking answers to improve outcomes. Vendors and consultants have recommended how to leverage “regular” data—and now big data.

The promise is a single source of truth. *If* we can get all the data into one place, with no data duplication, only *then* will we be able to visualize the data and reach information nirvana.

Actually, a single source of truth may actually introduce risk. The answers look so perfect and precise that they tempt people into making decisions that should really require more thought and additional data enrichment from various sources.

For the past 15 years, dedicated, hard-working teams have churned out BI reports but missed the mark on the original vision of business intelligence.

I offer an alternative approach to achieving incredible results from business intelligence:

- Live and work with purpose to improve the lives of others by giving them the answers they need to make better decisions faster and more easily.
- Deliver sustainable improvements in agility, impact, cost savings, improved quality, excellent customer service, and more.
- Build a team of passionate and purpose-driven organization members to identify the burning platform(s) and share a vision of “what good looks like.”
- Work with these “doers” and start delivering iterative answers. Cut out the “talkers.”

- Build the benefits case with quick wins.
- Watch out for cultural and political challenges that get in the way of sharing data, sharing intelligence, and sharing success and recognition.
- Allow for mistakes.
- Be open to changing course, vision, and focus, if needed.
- Do whatever it takes to deliver results.

I also challenge you to think about whether your organization has capabilities to:

- View forward-looking metrics answering: What will our business performance look like in the future according to our plans?
- Answer a customer's questions about their orders without e-mailing others for information.
- Instantly understand the impact of a catastrophe on the business.
- Regularly validate the data quality (timeliness and accuracy) on a visible dashboard.
- Run strategy meetings with the data needed to make fact-based decisions without stressing out your organization by requiring them to cobble data together into Excel.

If your company can do all of these things, it is far ahead of most, according to a *Harvard Business Review* study of Fortune 1000 companies and large government agencies (“Who’s Really Using Big Data” by Paul Barth and Randy Bean, September 12, 2012).

The study stated that:

- Only 15 percent of respondents ranked their access to data today as adequate or world-class.
- Only 21 percent of respondents ranked their intelligence capabilities as adequate or world-class.
- Only 17 percent of respondents ranked their ability to use data and intelligence to transform their business as more than adequate or world-class.

I have seen the same thing in my own studies here in Singapore. During the Big Data World Conference September 2013, Dr. Jussi Keppo and I ran a big data clinic in which we encouraged conference participants to write down their key learnings, strategic business questions, and capability gaps.