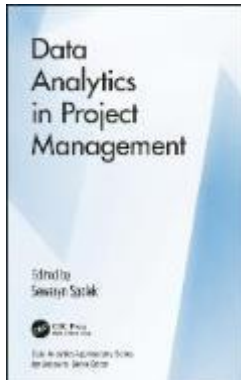


## PM WORLD BOOK REVIEW



Book Title: ***Data Analytics in Project Management***

Edited by **Seweryn Spalek**

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Reviewer: **Richard Gower, PMP**

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### Introduction

Companies are managing increasing number of projects and these projects are generating extremely large amounts of data. *Data Analytics in Project Management* blends together the techniques and processes of data analysis with those of project management, providing value and insight for project managers, members of the project management office, and students of data analytics.

### Overview of Book's Structure

This book is a collection of 15 to 20-page essays related to both data analytics and project management and does a good job of introducing data analytics to those responsible for managing projects. The editor has done an excellent job of finding a collection of authors each well qualified in their individual areas and minimizing the overlap of topics between chapters. Each chapter is separate and can be read independent of other chapters.

The book starts with a look at why we should use data analytics with project management (spoiler alert: it yields superior project outcomes) and discusses combining business data analytics with project management metrics and identifies the value that data analytics provides to the key players in an organization. The different types of data analytics are presented, and the authors describe a future of analytics tracking trillions of data points in real time and using Artificial Intelligence to devise appropriate strategies.

The book continues with a look at the risks associated with data analytics projects and then moves to a discussion on the analytical challenges of the modern PMO. The concept of project knowledge management highlights the importance for companies to properly manage the information from the many projects and portfolios and demonstrates the role of the PMO as a multilevel data analysis center. The chapter on

data analytics and project portfolio management describes the different levels of analysis and suggests a five-step methodology for conducting analytics.

Subsequent chapters explain Earned Value Management, discuss how to manage the challenges of big data in the project environment, provide an overview of IT solutions of data analytics in project management, and look at the approaches to mining data for better decision making. The book finishes up looking at data analytics in agile project management and the alignment of agile software development principles and CRISP-DM, a model that describes the stages used to tackle data mining problems, and the challenges of combining data analytics with Scrum.

## Highlights

The book presents several different perspectives of data analytics within the framework of project management and the individual chapters provide the reader with a good introduction to both data analytics and project management. The topics are presented with an assumption that the reader has little or no background in each subject and the chapters build on the basics with examples and references to other books and papers for further information.

The book provides a good background into how data analytics has progressed over time, defines the differences between descriptive, predictive and prescriptive data analytics, and lists how each can be used. It stresses how informed decisions are important, that the right decisions aid in successful outcomes, whereas poor decisions can send project teams in the wrong decision or allow the continuation of unjustified projects. It also discusses the different causes of bad decisions and provides a strategy for improving decision making. There are also very good discussions on the impact of big data on projects and data analysis.

The section on Earned Value Management is one of the best I have read with a very easy-to-follow explanation of earned value and the various calculations together with how to set up for EVM on a project, the progress measurement methods and potential pitfalls. As the authors point out, the biggest mistake is not setting up the project correctly to begin with; EVM is seldom successful as an afterthought.

The chapter discussing project portfolio management provides practical tools for identifying the projects that are more desirable to work on and identifying the types of projects to avoid. One such tool is the bubble chart that allows comparison between data in more than two dimensions. An example of the bubble chart compares the value and risk of each project together with the estimated project costs.

## Highlights: What I liked!

I enjoyed the easy reading style of the different authors and being able to easily read a chapter in a single sitting. The introductory style allowed me to quickly get up to speed on the different topics and there were nuggets to be learned even with the topics I have extensive experience in. As a project manager with experience in data analytics it was interesting to see how the authors weaved the two topics together.

Several of the chapters, particularly the discussion of Agile and Scrum with data analytics were thought provoking and allowed me to mentally explore different ways that I can use data analytics within my own work environment. The description of data analytics and the associated processes provide a solid base to a reader being introduced to data analytics.

### **Who might benefit from the Book?**

This book will be useful to readers with different backgrounds and skills:

- Project managers interested in an introduction to data analytics,
- Members of the PMO to understand the role data analytics can play in managing the organization's project portfolio,
- Managers interested in the state of data analytics and project management,
- Data analysts who are becoming involved with the analytical side of project management,
- Supporting material to an introductory course in data analytics and project management.

### **Conclusion**

This book provides information for different types of readers.

The experienced project manager can benefit in three key areas from the book. First, they will learn some of the basics of data analysis including the types of analytics, the risk associated with data analytics projects, and the challenges and approaches to data analytics. Secondly the project manager can see how data analytics can be applied to project management, the project management office, project portfolio management and agile methodologies. Thirdly the project manager can understand how to apply earned value management to determine the performance of a project.

The data analyst will gain an understanding of the challenges of applying data analytics to project management.

The book did an excellent job of introducing the challenges of data analytics in project management and the areas that it can provide value. I would have liked to have seen some more examples of how to apply the data analytics principles presented in the book to the management of projects. However, the book provides a good background to data analytics and would be a good accompaniment to a course on project management and data analysis.

For more about this book, go to: <https://www.crcpress.com/Data-Analytics-in-Project-Management/Spalek/p/book/9781138307285>

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## About the Reviewer



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**Richard Gower, PMP** has worked in the software industry for over 30 years, specializing in software development, business intelligence and data analytics. His experience includes software development, business analysis, project management, and product development. He is a Project Management Professional and has a M.S in Data Analytics from the University of Texas San Antonio (UTSA). He is currently the VP of Technology for E.J. Ward.

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