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Introduction

Data is everywhere — no matter where you go, and no matter what you do, someone is gathering data around you. The tools and techniques utilized to evaluate data have undoubtedly matured over the past decade or two. Less than a decade ago, for example, the lowly spreadsheet was considered an adequate tool to collect, measure, and calculate results — even for somewhat complex datasets. Not anymore! The modern organization accumulates data at such a rapid pace that more sophisticated approaches beyond spreadsheets have become the new normal. Some might even call the spreadsheet a dinosaur.

Welcome to the generation of business intelligence. And what does business intelligence require, you ask? Consider querying data sources, reporting, caching data, and visualizing data as being just the tip of the iceberg. Ask yourself this question: If you had to address your organization's needs, what would they be? Would taking structured, unstructured, and semistructured data and making sense of it be part of your organizational requirements? Perhaps developing robust business analytics outputs for executive consumption? Or, is the mandate from the leadership the delivery of complex reports, visualizations, dashboards, and key performance indicators? If you’re shaking your head right now and whispering all the above, you are not alone.

This is what enterprises today, large and small, expect. And with Microsoft Power BI, part of the Power Platform, you can deliver a highly sophisticated level of business intelligence to your organization, accomplishing each of these business objectives with little effort.

Power BI was initially conceived as part of the SQL Server Reporting Team back in 2010. Then, Power BI made its way into the Office 365 suite in September 2013 as an advanced analytics product. Power BI was built around Microsoft Excel core add-ins: Power Query, Power Pivot, and Power View. Along the way, Microsoft added a few artificial intelligence features, such as the Q&A Engine, enterprise-level data connectors, and security options via the Power BI Gateway. The product became so popular with the enterprise business community that, in July of 2015, Power BI was separated from the Office family, becoming its own product line. Finally, in late 2019, Power BI merged with other Microsoft products to form the Power Platform family, which consists of Power Apps (mobile), Power Automate (workflow), and Power BI (business intelligence).

Whether you're using Power BI as a stand-alone application to turn your data sources into interactive insights or integrating Power BI with applications such as Power Apps, SharePoint, or Dynamics 365, Power BI allows users to visualize and discover what is truly essential in their vast data resources. Users can share data at scale with ease. Depending on your role, you can create, view, or share data using the Power BI Desktop, the cloud-based Service, or the mobile app. The Power BI platform is designed to let users create, share, and consume business insights that effectively serve you and your team.

About This Book

This book is intended for anyone interested in business analytics, focusing as it does on the general platform capabilities across the Power BI platform. It doesn't matter whether you're a novice or a power user — you'll

definitely benefit from reading this book. I'm thinking especially of the following business roles:

- **Business analyst:** As a business analyst, you're tasked with many responsibilities. Maybe you're the requirements-gathering expert, the configuration guru, the designer, or even the quasi-developer. This book can be used as a resource for many of the critical tasks you may encounter in the field.
- **Data professional:** Data is complex — make no mistake about it. This book doesn't help you tackle the formulas behind the scenes or tell you how to construct and programmatically code many sophisticated reports, dashboards, visuals, and KPIs. It does, however, help you understand the foundational activities across the Power BI platform if this is your first foray into using Microsoft's business intelligence (BI) platform. You'll be able to quickly ingest data, conduct data analysis, and build relatively sophisticated reports after reading this book.
- **Developer:** This book isn't specifically for you, but you can find plenty of tips, tricks, and techniques you can learn throughout the book. Power BI is a collection of products that require users to understand several fundamental programming languages, including DAX and SQL. In this book, you can see that the surface is scratched ever so slightly in covering these topics. Take a look at the chapters on DAX in Part 4 if you want an introduction or a refresher.
- **IT professional:** Whether you're a cloud expert, systems engineer, or database professional or you fill another IT role, this book doesn't provide you with all the technical answers you're looking for. Instead, this is a starting point if you want to take a leap into the world of Microsoft enterprise business intelligence.

- **Manager or executive:** Often, the deliverables created in Power BI are built for managers and executives. Power BI has over 70 data connectors available for data extractions, report development, visualization support, and dashboard creation. Under your guidance, these deliverables are created by analysts, developers, and data professionals. Therefore, reading *Microsoft Power BI For Dummies* may help you better understand the art of the possible.

Foolish Assumptions

Power BI is a pretty big application, as you can probably already tell. Microsoft assumes that its interfaces are relatively simple for users to create reports and dashboards. Here's the truth: Some users find that it can be overwhelming, depending on which product you're using. Admittedly, lots of bells and whistles appear across each platform. As the author, I've written the book for users wanting to learn about those critical features across the three Power BI platforms: Desktop, Services, and Mobile. This book isn't intended to be a crash course for certification or a deep dive into administration or coding for Power BI. You can find specific books on the market for these purposes.

Throughout this book, though, I point you directly to the Microsoft Power BI website, when appropriate, where you can find resources to dig a bit deeper from time to time, on technical capabilities you may need to know about.

Because Power BI is made up of many components, I've made some assumptions about your configuration for this book as you follow along on the journey:

- **You have downloaded a copy of the Power BI Desktop.** Some things in life are free, and this is one of them. Microsoft actually provides the Desktop client to its users for free! The Desktop client is intended to build the enduser data models, reports, and dashboards for personal consumption. That's where it ends, though. You do need an online account to share and collaborate. About half the steps lists in this book can be completed using the Desktop client.
- **You have at least signed up for a Power BI Free Services account, but preferably have a Power BI Pro account**. If you want to share and collaborate with others, you need a Pro account. Otherwise, the Free online account will do for now. The purpose of the online companion is to distribute your outputs in read-only format, if you want. Suppose that you want others to edit and manipulate the data. In that case, there's no getting around paying for the Pro or Premium per User version. Also, the larger your dataset, the more likely you will want the upgrade.
- **You have access to the Internet**: This may sound a bit obvious. Even with the Desktop client, an Internet connection is required in order to access datasets from the Internet.
- **You have a meaningful dataset**: What does *meaningful* mean? I've created a sample dataset that can be downloaded for you from www.dummies.com to follow throughout the book. However, suppose that you want to use your own data. In that case, a meaningful dataset includes at least 300 to 400 records containing a minimum of five or six columns' worth of data.

Icons Used in This Book

Throughout *Microsoft Power BI For Dummies*, you see some icons along the way. Here’s what they mean:

Tips point out shortcuts or essential suggestions on doing things quicker, faster, and more efficiently in Power BI.

If you see the Remember icon, pay particular attention because these gotchas can make Power BI a bit difficult to understand. Don't worry, though — I'll help you find a workaround.

Technical Stuff is a way for you to consider exploring the inner workings of Power BI and perhaps how it integrates with other applications a bit more. That means there may be a configuration to a data source that has a nuance or an advanced reporting feature that may help shape your data a smidgen. These items are here to help you on a case-by-case basis.

This icon points to useful content available to you out there on the World Wide Web.