The Analytical Puzzle
Profitable Data Warehousing, Business Intelligence and Analytics

Do you enjoy completing puzzles? Perhaps one of the most challenging (yet rewarding) puzzles is delivering a successful data warehouse suitable for data mining and analytics. The Analytical Puzzle describes an unbiased, practical, and comprehensive approach to building a data warehouse which will lead to an increased level of business intelligence within your organization. New technologies continuously impact this approach and therefore this book explains how to leverage big data, cloud computing, data warehouse appliances, data mining, predictive analytics, data visualization and mobile devices.

Here are the main objectives for each of the book's 19 chapters:
- Chapter 1: Develop a foundational knowledge of data warehousing, business intelligence and analytics
- Chapter 2: Build the business case needed to sell your data warehousing project, and then produce a project plan that avoids common pitfalls
- Chapter 3: Elicit and organize business intelligence and data warehousing business requirements
- Chapter 4: Specify the technical architecture of the data warehousing system, including software and infrastructure components, technology stack, and non-functional requirements. Gain an understanding of cloud based data warehousing and data warehouse appliances
- Chapter 5: Learn about data attributes including metrics and key performance indicators (KPIs), the raw material of data warehousing and business intelligence
- Chapter 6: Learn about data modeling and how to apply design patterns for each part of the data warehouse
- Chapter 7: Speak the dimensional modeling language of measures, dimensions, facts, cubes, stars, and snowflakes
- Chapter 8: Organize a successful data governance program. Learn how to manage metadata for your data warehousing and business intelligence project
- Chapter 9: Identify useful data sources and implement a data quality program
- Chapter 10: Use database technology for your data warehousing project, and understand the impact of data warehouse appliances, big data, in memory databases, columnar databases and OnLine Analytical Processing (OLAP)
- Chapter 11: Apply data integration and understand the role data mapping, data cleansing, data transformation, and loading data play in a successful data warehouse
- Chapter 12: Use the business intelligence (BI) operations of slice, dice, drill down, roll up, and pivot to analyze and present data
- Chapter 13: Learn about descriptive and predictive statistics, and calculate mean, median, mode, variance and standard deviation
- Chapter 14: Harness analytical methods such as regression analysis, data mining, and statistics to make profitable decisions and anticipate the future
- Chapter 15: Appreciate the components and design patterns that compose a successful analytic application
- Chapter 16: Gain an understanding of the uses and benefits of scorecards and dashboards including support of mobile device users
- Chapter 17: Gain insight into applications of business intelligence that could profit your organization, including risk management, finance, marketing, government, healthcare, science and sports
- Chapter 18: Perform customer analytics to better understand and segment your customers
- Chapter 19: Test, roll out, and sustain the data warehouse