



The
Analytic
Hospitality
Executive

Implementing **Data Analytics**
in **Hotels** and **Casinos**

KELLY A. McGUIRE

Foreword by Dexter E. Wood, Jr.

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The Analytic Hospitality Executive

*Implementing Data Analytics
in Hotels and Casinos*

Kelly A. McGuire, PhD

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To my favorite analytic hospitality executives

Contents

Foreword xiii

Acknowledgments xvii

About the Author xxi

Chapter 1	Building a Strategic Analytic Culture in Hospitality and Gaming	1
	Strategic Analytic Culture	3
	Moving Ahead and Staying Ahead with Prescriptive Decision Making	5
	Making It Happen	9
	Getting Started	13
	How This Book Can Help	15
	Notes	17
Chapter 2	Data Management for Hospitality and Gaming	19
	Data Management Challenge and Opportunity	21
	Data Storage	29
	Data Integration	34
	Data Quality	40
	Measuring the Benefits of Data Management	42
	Responsible Use of Data	43
	Conclusion	51
	Additional Resources	52
	Notes	52
Chapter 3	Data Visualization	53
	Why Are Visualizations So Important?	55
	Visualization Technology	56
	Data Handling	58
	Visualization Types	62
	Creating Powerful Visualizations	67
	Conclusion	79
	Additional Resources	80
	Notes	80

Chapter 4 From Reactive to Proactive Decision Making:

Advanced Analytics in Action 81

Reactive to Proactive Decision Making 83

Statistical Analysis 84

Forecasting 91

Predictive Analytics 96

Optimization 100

Machine Learning 103

Text Analytics 104

Making It Work—Analytics and Technology 111

Innovations in Solution Delivery 113

Real Time and Streaming 118

Conclusion 119

Additional Resources 119

Notes 120

Chapter 5 Analytics for Operations 123

Operations 125

Operations Data 128

Advanced Analytics for Operations 134

Workforce Planning and Optimization 140

Queues 146

The Impact of Queue Configuration 148

Managing Consumer Perceptions of the Wait 152

Benchmarking Operations Analytics Capabilities 156

Technology and People Investments 158

Conclusion 163

Additional Resources 166

Notes 166

Chapter 6 Analytics for Marketing 167

Marketing Data 169

Advanced Analytics for Marketing 177

Digital Intelligence 183

Benchmarking Marketing Analytics Capabilities 191

Technology and People Investments 196

Conclusion 199

Additional Resources 201

Notes 201

Chapter 7 Analytics for Sales 203

Sales Data 205

Advanced Analytics for Sales 210

Statistical Analysis 210

The Changing Landscape of Sales	212
Benchmarking Sales Analytics	214
Conclusion	218
Note	219
Chapter 8 Analytics for Revenue Management	221
Revenue Management: A History Lesson	223
Then Things Changed . . .	227
Revenue Management Data	229
Revenue Management Analytics	231
Benchmarking Revenue Management Analytics Capabilities	247
Technology and People Investments	249
Conclusion	252
Additional Resources	255
Notes	255
Chapter 9 Analytics for Performance Analysis	257
Data for Performance Analysis	259
Advanced Analytics for Performance Analysis	263
Benchmarking Performance Analytics Capabilities	267
Technology and People Investments	269
Conclusion	273
Additional Resources	273
Notes	274
Chapter 10 Analytics for Gaming	275
Gaming Data	278
Advanced Analytics for Gaming	281
Casino Floor Revenue Optimization	285
Fraud and Anti-Money Laundering	294
Benchmarking Gaming Analytics Capabilities	299
Technology and People Investments	300
Conclusion	303
Additional Resources	304
Notes	304
Chapter 11 Pulling It All Together: Building an Analytical Organization	307
Getting Started: Well-Defined, Small Projects for Maximum Impact	309
Organizing Your Analytics Department	316
The Build versus Buy Decision	324
Integrated Decision Making	327

Conclusion 337
Additional Resources 340
Notes 341

**Appendix 1 Case Study from Infor: Analytics Opportunities
in Operations 343**

**Appendix 2 Case Study from IDEaS: Meetings and Events
Revenue Management 349**

Appendix 3 Why Dynamic? 367

Appendix 4 Chapter Questions 377

References 385

Index 389

Foreword

Data, it has often been claimed over the past several years, is the new oil. I'm not convinced this is entirely true, but there are some curious similarities. Just as oil slumbered as an unappreciated resource until the late nineteenth century and then awakened wholesale changes to the world economy, data in many ways has the potential to do the same. But in contrast to oil that sat beneath the earth for thousands of years relatively undetected, data is flooding all around us in seemingly unmanageable variety and volume. Data is everywhere, but perplexingly the more we have of it, the more it becomes increasingly difficult to harness and exploit.

This is particularly true in the hospitality industry where our culture has been historically high touch and low tech. Yet, every hour of every day hotels, restaurants, and casinos generate millions of data points as customers interact with reservation systems, loyalty programs, credit card exchanges, point of sale systems, and simply check in and out of hotels. Although the traditional success of most hospitality companies has largely been due to their ability to use customer service, facilities, and location as differentiators, this is no longer enough.

Today, our service-driven industry has become extremely competitive in almost every way conceivable. For small and large companies alike, there has never been a time with more focus on performance—financial performance, stock price, customer loyalty, market share, you name it. The competitive landscape has quickly transitioned to finding a way to best use data to drive strategy and performance.

As a hospitality industry executive and consultant for almost 30 years, I have witnessed this transition firsthand and I can appreciate what a challenging journey it has been and continues to be for many of us. Although I have enjoyed some success over the years helping to drive the adoption of data-driven decision making and performance enhancement during my time with Pricewaterhousecoopers, Host Hotels & Resorts, and now Hilton Worldwide, I really wish Kelly McGuire could have helped me out and published *The Analytic Hospitality*

Executive 25 years earlier. As you will soon realize when reading her book, Kelly serves up a brilliant recipe for understanding all of the key principals in a readable and business-faced format. If you are thinking about becoming a better analytic hospitality executive, then this is your guidebook.

I first met Kelly when I joined the advisory board for the Center for Hospitality Research at Cornell University's School of Hotel Administration. We are both alumni; she with a master's degree and a PhD, and I with an undergrad degree many years earlier. What impressed me about Kelly when we first met was that I immediately recognized her as an "hotelier." Not solely an academic mind, she had that rare combination of technical intelligence matched with a keen appreciation for the business of hospitality. It's actually easy to see how she came up with *The Analytic Hospitality Executive* because that is who she is. I know her to be an analytics evangelist who is passionate about helping the hospitality and travel industries realize the value of data-driven decision making.

In this book, Kelly McGuire masterfully articulates the keys for successfully building a strategic analytical culture in your hospitality organization. She will emphasize the absolute necessity for senior executive-level buy-in and support. Additionally, she will stress the need for an organizational commitment to fact-based decision making and the allocation of the right business resources. Not just dollars allocated to technology, but the dedication of the business to transition to an actionable data-driven decision-making process. The days of devoting 80 to 90 percent of resources to data collection and validation need to come to an end.

There is no message that resonates more strongly from Kelly's book than that it's all about the data. If you learn nothing else from this book and the real-life stories depicted within, please take one word of advice from those of us who have walked the path. Start with the data.

As Kelly explains in this book, data is often not the sexy part of analytics. The potentially rich data trapped in fragmented legacy systems like those prevalent in the hospitality industry are plagued with challenges. The possible solutions often lack clear ownership and funding as other priorities jump to the front of the line. In my view, this is always shortsighted as getting the data right is perhaps the most important building block for success.

Much like my golf game, it's always more appealing to find a shortcut. Hard work and practice are no fun for most of us. Every year there is new driver technology that promises to let us all hit it right down the middle and 50 yards further. Why take lessons and practice when you can just buy new technology? Of course that strategy continues to disappoint in lowering my handicap.

Similarly, many executives are often too eager to embrace the popular new technology and the vernacular of the day. Lately, big data seems to be the magic term that gets everyone excited. As Kelly will explain, today's big data is tomorrow's small data. It's not just science; there is a lot of art as well. Being too quick to buy a shortcut solution and rush to fancy dashboards without focusing on the underlying data and organizational alignment almost always lead to failure.

In my experience, and as Kelly describes in this book, data is the key to the successful creation of a strategic analytical culture. It's the business taking ownership and demanding a "single source of truth." It's the commitment to establishing a common business language and what Kelly describes as a sound and sustainable data management strategy.

In this amazing book, Kelly McGuire will provide a tool kit to help all of us navigate the path to a strategic analytical culture in our organizations. She understands the challenges hospitality companies are facing in these highly competitive times. Strategically leveraging data has never been more important. We all need to be better analytic hospitality executives. In that regard, this book is essential.

Dexter E. Wood, Jr.
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Hilton Worldwide
#hotelieforlife

Acknowledgments

The experience of writing this book was very different from writing the first one. Of course, changing jobs and moving right in the middle of the process definitely influenced that. Having this project did add a little bit of stress, but it also helped me through the transition. It was a constant that reminded me of my passions and interests, as I was figuring out what to do with my extra furniture or trying to find a new dry cleaner. Of course, now that it's ready to be published, I suddenly have fewer excuses for not unpacking those last few boxes. . . . As with my first effort, the best thing about the process was that it gave me an excuse to reach out and reconnect with people who inspire me, and who I so very much enjoy speaking with. There is a fantastic community of dedicated analytic hospitality executives out there, and I am humbled and privileged to be a part of it.

I must start out by once again thanking the team at SAS that helped me through this book so soon after the first. My development editor, Brenna Leath, and my marketing support, Cindy Puryear, in particular, have made this process both easy and fun. Thanks for being responsive, even after I left the fold.

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you for authoring the foreword and the case study in Chapter 2, but more important for believing in the value of data analytics, for believing in this project, and for believing in me. And speaking of Big Red Analytic Hospitality Executives, I very much appreciate the genuine enthusiasm and passion that Dave Roberts has for analytics and for revenue management. He has been a great inspiration and a great advocate. Thank you, Dave, for your tireless pursuit of the importance of analytics in hospitality! I also appreciate the support and inspiration from Ted Teng, a consummate #hotelieforlife, whose dedication to advancing the industry and the people in it has been an inspiration to us all.

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Speaking of analytic hospitality executives, two more of my favorites should be personally recognized for their support of me and my efforts. Thank you, Mark Lomanno and Tom Buoy, for sharing your critical and thoughtful perspectives with me and letting me run with them, for your passion for the industry, and for the time you have spent making me and others better at what we do. I also appreciate the encouragement and advice from Gary Cokins, another prolific SAS author, and from Michele Sarkisian, whose passion for all things hospitality is both remarkable and contagious.

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keeping the community together, and of course, Bob Gilbert, who is such a great advocate for our industry.

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I learned so much while I was at SAS. This book would not be what it is without that experience. I miss my colleagues and teammates very much. I thought of you often as I was finishing this book. I also want to thank my new team at Wyndham for being so welcoming, so much fun, and, well, so just plain excellent at what you do! Every analytic hospitality executive should be so lucky to have a team like you!

I was extremely humbled by the response to my first book. It is an honor to be a part of this community and to contribute to moving it forward. It has been such a pleasure to present the original research that Breffni Noone and I have worked on to the community and talk through those complicated issues with you. It has been a joy to hear your reactions to the blog that I coauthored with Natalie Osborn, and it has been just genuine fun to stand up in front of you to challenge our thinking and try to make us better. The biggest thank you goes to all of you who have read my work, shared it with your colleagues, assigned it to your students, and talked to me about it. Keep up the great work. We will get there, together.

About the Author

Kelly A. McGuire, PhD is senior vice president, revenue management and direct marketing for MGM Resorts International, where she is responsible for driving profitable room revenue for MGM Resorts International's Las Vegas resorts. Prior to this role, she was Vice President, Advanced Analytics for Wyndham Destination Network. She led a team of data scientists and developers who build custom analytic solutions for Wyndham Vacation Rental's companies and the RCI time-share exchange. Prior to joining Wyndham, she led SAS's Hospitality and Travel Global Practice, setting the global analytics strategy for these industries, and supporting engagements around the world.

CHAPTER **1**

**Building a
Strategic Analytic
Culture in
Hospitality and
Gaming**

I believe in intuitions and inspirations. . . . I sometimes feel that I am right. I do not know that I am.

—Albert Einstein

Hospitality executives struggle to find the balance between delivering a guest experience that fosters loyalty and repeat business, and delivering on their revenue and profit responsibilities to stakeholders, shareholders, or franchisees. If you invest too much in the guest experience, you could impact profits, but if you focus on too many cost-cutting measures to drive profits, you can negatively impact the guest experience.

Decisions made in one department of a hotel can have impacts across the organization. For example, without a good understanding of food cost, a marketing program providing restaurant discounts could affect profitability. Without understanding check-in and checkout patterns, a labor-savings initiative might create long lines at the front desk, impacting the guest experience. Today, your service mistakes are broadcast through social channels and review sites as they happen. The competition is no longer just the hotel next door, but it is also third-party distribution channels and alternative lodging providers like AirBnB, all waiting in the wings to win your guests from you. On top of all that, recent merger and acquisition activity is creating scale never before seen in this industry, and global economic conditions continue to be unstable.

When the stakes are this high, you need something to help shore up that balance between delivering an excellent guest experience and meeting profit obligations. Analytics can be that thing. Tarandeep Singh, Senior Director, Revenue Performance and Analytics, Asia, Middle East, and Africa says, “Analytics is like GPS—it helps you be on track, and even pings you when you go off.” Fostering a culture of fact-based decision making ensures that the organization can find the right direction, understand the trade-offs, hedge against risk, know the next best action, and stand the best chance to be competitive in an increasingly crowded marketplace.

Einstein reminds us in his quote at the beginning of this chapter that there is still room for intuition and inspiration in this vision. Your

intuition can be backed up by the data, getting you closer to “knowing” you are right. Inspiration for the right action can come from what the numbers tell you. Intuition and inspiration are even more powerful when paired with curiosity and questioning. David Schmitt, former director of Interactive Marketing Operations and Analytics for IHG, says in his blog, “The questions from the business are our North Star, the guidance and direction that provide clarity to analytics efforts.”¹

The goal is to cultivate a culture of asking good questions and letting the data provide the answers. There are so many examples today of companies who have successfully, and sometimes famously, derived insight from their data assets through analytics, which helped to create a huge competitive advantage or some remarkable innovation. This could be you. Let’s talk about the characteristics of a strategic analytic culture first, and then I will tell you how this book can help you to build a strategic analytic culture in your own organization and set yourself up for success through analytics.

STRATEGIC ANALYTIC CULTURE

So, what does a strategic analytic culture (SAC) look like? Figure 1.1 outlines the interrelated components of a SAC.

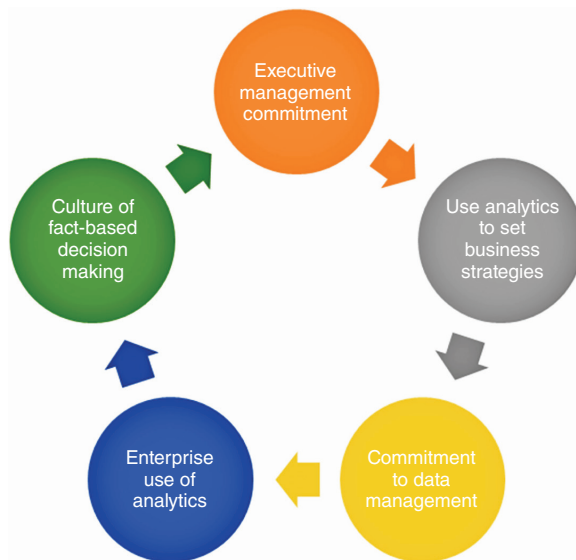


Figure 1.1 Strategic Analytic Culture Framework

A strategic analytic culture starts and ends with **executive management commitment**. This level of support is required to make the necessary investments in people, process, and technology, as well as to ensure the alignment among departments that is critical to enterprise-level thinking.

The executive management team uses **analytics to set business strategy**. Rather than being guided by individual intuition or aspiration, the data and analytics offer a fact-based pathway toward the strategy, which is based on market conditions, customer characteristics, and the company's operating circumstances.

The foundation of any analytics program is an organization-wide **commitment to data management**. Data management programs include:

- Data governance to provide data definitions and guidelines for storing and accessing information
- Data integration to ensure that data from disparate systems is matched and consolidated
- Data quality programs to ensure data is cleansed before being used in analytics
- Data storage infrastructure that facilitates access for analytics and reporting

An all-encompassing data management strategy facilitates **enterprise use of analytics**. Most organizations have isolated pockets of analytic capability, whether it be in revenue management, marketing, or finance. Enterprise use of analytics brings these siloed departments together, ensuring that decision making is not done in isolation.

Mark Lomanno, partner and senior advisor for Kalabri Labs, in an interview in the blog *The Analytic Hospitality Executive*, said that the role of analytics is becoming increasingly centralized in hospitality. "Traditionally the role of analytics has been more in the financial metrics measurement category, to some degree in the operations category, and in the marketing category; however, in the future all those will come together," Mark said. He predicted that over time, online hotel reviews and comments in social media will replace traditional guest satisfaction measures as the primary gauge of customer satisfaction, and that

companies will be able to start predicting occupancy and rates by the quality and nature of the hotel's consumer comments and reviews. "This will force operations and marketing to work very closely together to react very quickly to what the consumer is saying," Mark said.

Mark's prediction points to the need to break down silos, improve communication, and synchronize decision making. When the entire enterprise is aligned around analytics, it creates a **culture of fact-based decision making**. You've probably heard the saying "In God we trust, all others must bring data."² Companies with a SAC back up all of their decisions with data and analytics, rather than instinct and internal influence. This doesn't mean that you stifle creativity. It means that creative thought is supported by an analysis to back up conclusions or reinforce decision making. In fact, strategic use of analytics can help organizations become more creative and more agile when it uncovers insights that were not apparent on the surface.

Ted Teng, President and CEO at The Leading Hotels of the World provided this perspective in a video interview for SAS and the Cornell Center for Hospitality Research: "We are an industry of emotional decisions. We badly need analytics and good data for us to make the right decisions." Ted explained that the hospitality market has completely changed and industry operators can no longer rely on how they did things 20 years ago. "There's a lot of talk about big data out there. I am happy with just small data—some data—that allows us to make better decisions that are based on facts rather than based on our emotions."

Where is your organization in this cycle? Are you getting stuck at executive commitment? Perhaps it's been too difficult to build a data management infrastructure? Is analytic competency still residing in pockets across the organization? This book is designed to help you achieve the SAC vision from the ground up, or from the top down if you are fortunate enough to have that kind of power and influence!

MOVING AHEAD AND STAYING AHEAD WITH PRESCRIPTIVE DECISION MAKING³

Most hospitality organizations today recognize the need for data-driven decision making, and they are making strides in that direction, or at least planning for it. In marketing, managers want to understand the

customer better to improve targeting and value calculations. Operations knows that demand forecasting can support better staffing and ordering decisions, and finance recognizes that performance analysis drives opportunities for efficiencies and strategic growth. As organizations embrace data, analytics, and visualizations, they evolve from “gut-feel” reactive decision makers to more proactive, forward-looking decision makers.

I believe that hotels and casinos are at a turning point in data and analytics. Most hospitality companies have implemented some level of data management and business intelligence, or at least are on the path. Many hotels and casinos have made investments in predictive analytics solutions for revenue management or marketing. All organizations have at least some desire to provide access to the right information at the right time to the right resources to make the right decisions. If organizations successfully build out their data and analytic infrastructures, they will be part of the way there. If they are able to successfully leverage the analytic results across their organizations, they will get ahead and stay ahead.

Analytic solutions are simply decision support tools. They must be used by managers who have the experience to interpret the results and take the appropriate actions. Revenue management systems, for example, drive revenue because the revenue manager can interpret the price and availability recommendations and implement them as part of a broader pricing strategy. The jobs of the revenue management system and the revenue manager are not the same. A hotel cannot simply hook up the revenue management recommendations to the selling system and walk away. At the same time, a revenue manager can't process the millions of pieces of information required to understand market opportunity by hand. However, a great revenue management system managed by a business-savvy revenue manager is a winning combination.

An executive from a large hotel brand told me that one of the driving factors for their business analytics investments is to get better information into the hands of their senior executives faster. “Imagine how much more effective smart and charismatic leaders would be in an investment negotiation or even an internal meeting if they had instant access to performance metrics, to support whatever questions they happen to get asked,” he told me. “We have great, highly