The Untapped Value of Analytics

A new global benchmarking study reveals that analytics leaders see 60 percent more profits than the laggards.

The growing availability of data combined with expanded connectivity and amplified computational power are creating an unprecedented opportunity for businesses to use analytics to improve their decision-making. As a result, companies around the world are spending billions of dollars a year to build their analytics capabilities, hoping to use smart technologies to tap into the power of data.

In an environment marked by tough competition and a data explosion, most C-suite executives are unaware of the best practices and are left wrestling with an array of questions. How does our analytics capability compare with our regional and global peers? Which business areas will see the most value? Is the organizational structure designed to maximize the impact, and do we have the right talent? Is the budget big enough? And most importantly, is there a sufficient impact on the bottom line to justify the required investments?

With this in mind, Melbourne Business School and A.T. Kearney have created the Analytics Impact Index to determine analytics' potential impact on a company's profitability and identify the areas that hold the largest opportunities for improvement. Based on our study of hundreds of companies around the world, the Index pinpoints the impact on the bottom line and the capabilities needed to extract the most value. Our research reveals that analytics leaders—only 8 percent of companies—see 60 percent more profits than laggards do.

Although most discussions about analytics are focused on technology and infrastructure, our study shows that leadership and the organizational culture have the potential to extract the most value. The leading organizations typically have a well-defined analytics strategy and a culture of data-driven decision-making that is embedded across the organization. However, companies that invest in data ecosystems without any strategic leadership could actually see a negative impact in the short to medium term.

The inaugural Analytics Impact Index provides a framework for measuring both the maturity and the impact of analytics. Forward-thinking companies can use the Index to identify the gaps and the potential opportunities—building the case for change. Over time, the Index can be used to gain a comprehensive view of a company's analytics capability as it evolves.

In this paper, we discuss the Analytics Impact Index and take an in-depth look at the stages of maturity, the potential financial impact, and the strategies companies can put in place to move up the maturity curve to become analytics leaders.

The Analytics Impact Index

Many companies are using analytics to try to uncover meaningful patterns in their data—applying disciplines such as statistics, optimization, simulation, visualization, and machine learning in an attempt to develop data-driven decision-making. The question is how effective are these initiatives? To answer this question, other researchers have focused on analytics maturity. For example, one study shows how marketing analytics can impact performance outcomes, and another resulted in a framework that encompasses all dimensions of a company's analytical maturity.[1] A.T. Kearney's first analytics assessment, the Leadership Excellence in Analytic Practices study, was launched in 2014 to evaluate the opportunities and challenges that companies face. However, it focused on a specific area of analytics and did not address the impact of analytics.
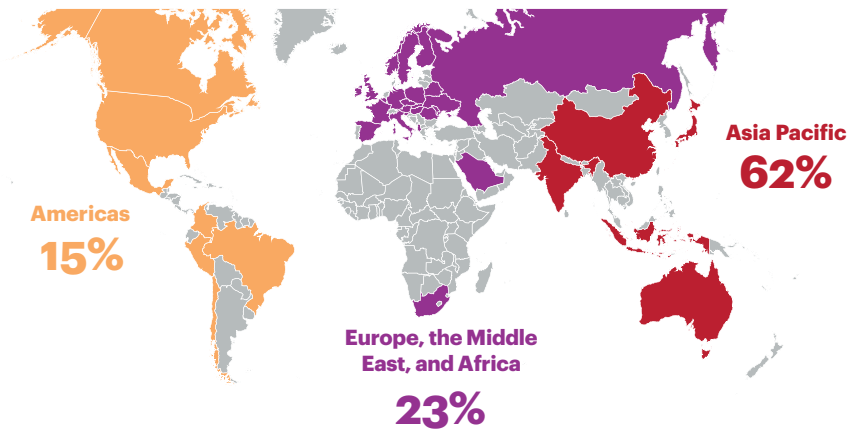
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[1] "Performance Implications of Deploying Marketing Analytics," International Journal of Research in Marketing, volume 30, issue 2, June 2013; "A Business Analytics Capability Framework," Australasian Journal of Information Systems, volume 19, 2015

Now, for the first time, the Analytics Impact Index gives organizations an understanding of the potential of analytics as well as the capabilities required to capture the most value. To create the Index, Melbourne Business School and A.T. Kearney surveyed more than 400 companies with a median revenue of $1 billion across 34 countries and a dozen industries—benchmarking both the value realized and the analytics capabilities within each organization (see figure 1). We then analyzed the financial impact.[2]

Figure 1
The Analytics Impact Index covers a broad range of companies

2018 Analytics Impact Index

Americas
15%

Asia Pacific
62%

Europe, the Middle East, and Africa
23%

Industry coverage	Executives	Company size
12 industries	More than 400 respondents	Median revenue: $1 billion
Top three: Consumer goods and services: 21% Technology: 14% Healthcare: 14%	C-suite: 43% Directors: 17% Managers: 28%	Revenue range: $1.5 million to $247 billion

Sources: Melbourne Business School; A.T. Kearney analysis

The Analytics Impact Index highlights the difference in a company's profitability based on two factors: **maturity** in terms of the analytics operating model and the **impact** of analytics as a proportion of total profits. Our study reveals that only 8 percent of companies are extracting the full potential of analytics after calculating the level of analytics maturity (see figure 2 on page 3).[3]

Firms across the four stages of maturity have varying analytics capabilities:

Laggards. Analytics is limited to descriptive analysis of the data, and generally backward-looking reporting on performance. These companies do not yet have a clearly defined analytics strategy and lack the culture needed to move forward.

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[2] This research and analysis were carried out between January and July 2018.

[3] Because this study is in its first year, these inferences are largely correlational rather than causal. However, as we obtain longitudinal data with periodic surveys, we hope to determine causation from various factors.

Figure 2
Four stages of analytics maturity

Analytics stages of excellence

10% — Laggards

46% — Followers

36% — Explorers
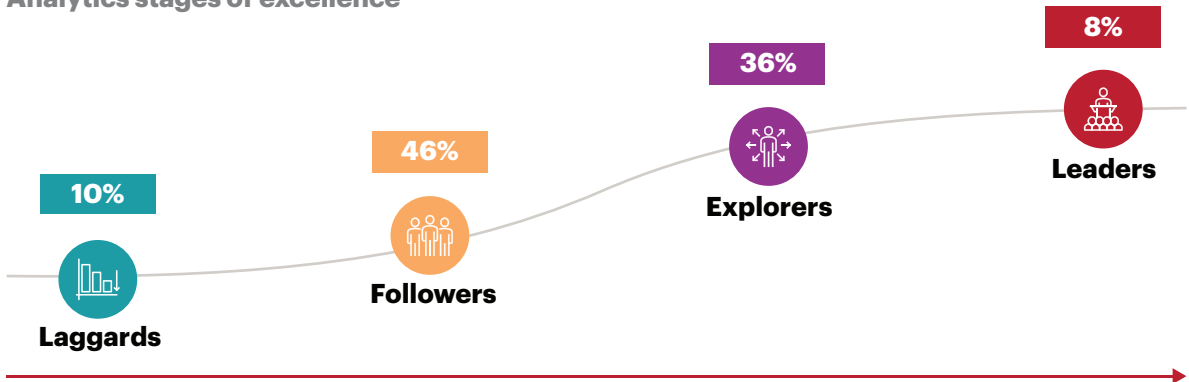
8% — Leaders

Followers. Analytics is used to diagnose what drives business outcomes, especially cost and revenue. However, analytics is not used strategically to optimize business decisions, and there is no broad analytics culture driven by top management.

Explorers. Analytics is used to optimize business performance by diagnosing and predicting business outcomes. Although there is an analytics strategy, the analytics culture is not well-developed across the organization.

Leaders. The biggest difference between leaders and laggards is the C-suite commitment, the strategic alignment between the business and the analytics strategy, and the right culture. Leaders integrate analytics into all decisions to generate foresight about relevant trends and fuel successful business outcomes. Real-time analytics help drive innovation and create a competitive advantage.

To assess a firm's analytics maturity, we use a framework of four dimensions (see figure 3).

Figure 3
Analytics maturity can be measured in four dimensions

Strategy and leadership

Culture and governance

Talent and skills

Data ecosystem

Strategy and leadership. This dimension, which is the domain of the leaders, looks at who within the company is driving analytics and in what direction the company is headed—from understanding the required elements to creating a road map that aligns with the overall business strategy to drive value.

Culture and governance. This dimension is about the operating structure and processes and the company's general attitude toward analytics. Are the right organization structure and governing bodies in place? Can the company implement change? Is the organization analytics-driven?

Data ecosystem. This dimension, which tends to be the focus for laggards, is about having the right technological infrastructure and data management framework. We define data management as the development and execution of architectures, policies, practices, and procedures that properly manage a company's full data life-cycle needs.

Talent and skills. This dimension is about recruiting the right people with the right skills and retaining, developing, rewarding, and using them effectively. It also measures the level of sophistication of the analytics models and the quality of the insights.

What we found is that companies at the lowest stage of maturity—the laggards—had 60 percent lower profits than the leaders (see figure 4). Evolving from laggard to follower can be a long process that requires making large investments into the necessary resources and infrastructure. For followers, it is difficult to feel the momentum because so much potential remains untapped and many investments have yet to deliver significant returns. However, as companies move along the maturity curve and into explorer territory, they begin to capture significant benefits and very quickly start seeing the value of analytics. But what does this mean for leaders? Are they extracting the full potential of analytics with nowhere to improve? Our research indicates the leaders are redefining the boundaries of analytics—creating their own path and widening the gap from the laggards.

Next, we take a closer look at the two factors that make up the Index: maturity and impact.

Figure 4
Laggards can see significant gains in profits if they embrace analytics

Potential increase in profits
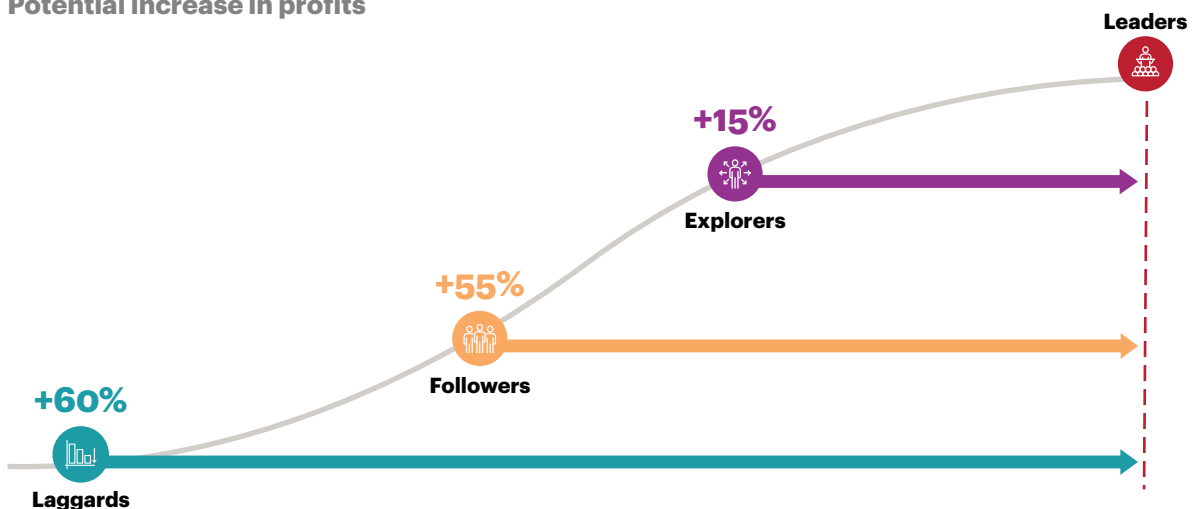
Note: Potential refers to the increase in profit if a company were to increase its maturity to level 4 at the current point in time.
Sources: Melbourne Business School; A.T. Kearney analysis

An In-Depth Look at Analytics Maturity

Measuring analytics maturity provides a benchmark against industry and regional leaders and sheds light on the areas where a company can improve.

Strategy and leadership

Only 33 percent of laggards have a clearly defined analytics strategy compared with 86 percent of the leaders. Unlike explorers and leaders, the laggards and followers appear to be struggling to establish a road map and understand the elements needed to reach their vision. Although better than laggards and followers, explorers and leaders struggle the most with tracking key performance indicators and monitoring their successes compared with any of the other dimensions. Although some of the laggards and followers do have executive-level sponsorship, they are not championing analytics as effectively as explorers and leaders (see figure 5). Considering that 67 percent of laggards do not have a strategy, it is no surprise that 58 percent do not have a clearly defined data leader.

Figure 5

In leading organizations, analytics has a C-suite presence

Who leads the data and analytics team?
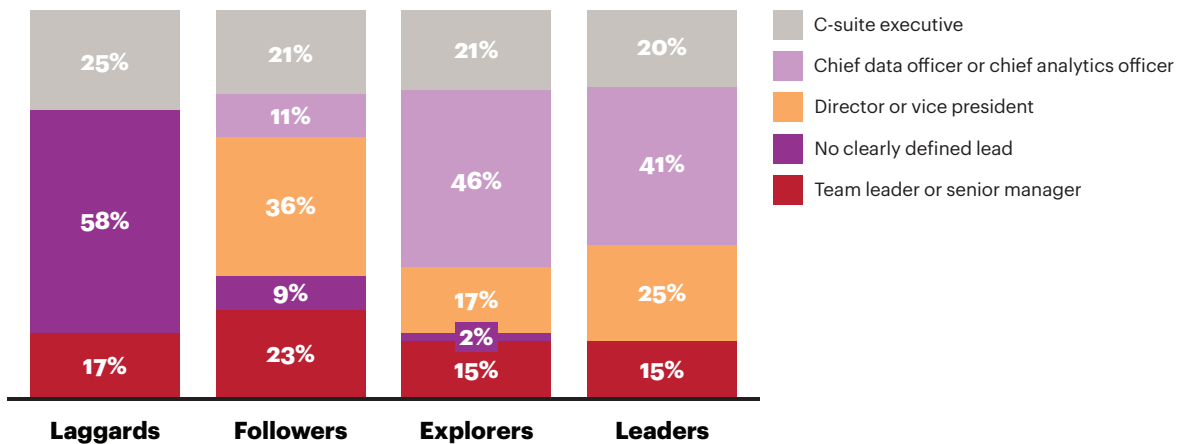
Note: Numbers may not resolve because of rounding.
Sources: Melbourne Business School; A.T. Kearney analysis
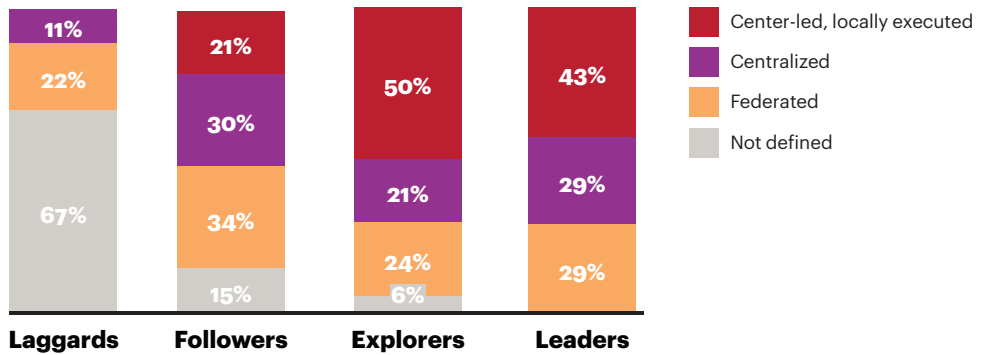
Culture and governance

All leaders have a defined analytics organization, which is not the case for the other stages. In fact, 67 percent of laggards and 15 percent of followers have no defined structure (see figure 6 on page 6). Most explorers and leaders have some form of central data and analytics organization.

Across all stages, creating an analytics culture and aligning teams around a common goal is a major struggle, but the main difference between the laggards and the leaders is how willing they are to take a risk by experimenting—testing the boundaries and looking for ways to extract value in targeted areas. Rather than taking calculated risks in high-potential areas, the laggards wait for others to explore uncharted territory.

Figure 6
Firms that struggle with analytics lack a central analytics organization

Analytics organization structure

Model	Center-led, locally executed	Centralized	Federated
Model	Business unit Analytics	Business unit Analytics	Business unit Analytics
Strategy definition and execution	Globally defined and locally implemented	Globally defined and globally implemented	Locally defined and locally implemented
Ownership	Global big data and analytics organization for oversight	Global big data and analytics organization with full ownership	Local big data and analytics organization
Decision-making	Coordination across business units	Enterprisewide coordination	Business unit level only

Sources: Melbourne Business School; A.T. Kearney analysis

Talents and skills

Leaders balance the hiring and development of internal talent with the use of external partners. With skilled in-house talent, leaders create and maintain the analytics culture more effectively than laggards and better manage their external partners. Interestingly, leaders and explorers show the most sophistication around deploying analytics to increase the number of customers whereas laggards and followers focus on sophistication around sales. Furthermore, unlike explorers and leaders, laggards and followers do not offer company-wide analytics training because they rely on their partners for their analytics capability.

Data ecosystem

Leaders use real-time data and sophisticated tools, programs, and platforms while laggards tend to invest more in data ecosystems. Leaders' greatest strength is in maintaining their data warehouse, which lays the foundation for optimal analytics. On average, leaders make their data much more accessible across the organization than laggards do. Our study also shows that technology without direction can have a negative impact on profitability, especially in the short term.

The Financial Impact of Analytics

To measure the financial impact of analytics, the Index calculates the proportion of profit that is attributable to analytics while indicating the maximum improvement opportunity. The impact is determined by assessing the profitability difference across firms, controlling for factors such as geography, industry, company size, and inherent company factors.

Not surprisingly, a higher stage of maturity is associated with a greater financial impact—and the impact is exponential (see figure 7). There is a slight decrease in the average impact for followers, potentially because of the lag in results after the initial investment in analytics. The variability in the upper end of impact is much larger at a higher stage of maturity because of the wealth of opportunities that analytics brings once the foundation has been established. Overall, extracting the most value starts off slow through the first two phases but has the potential to create exponential growth.

Figure 7

More mature companies see a greater financial impact from analytics
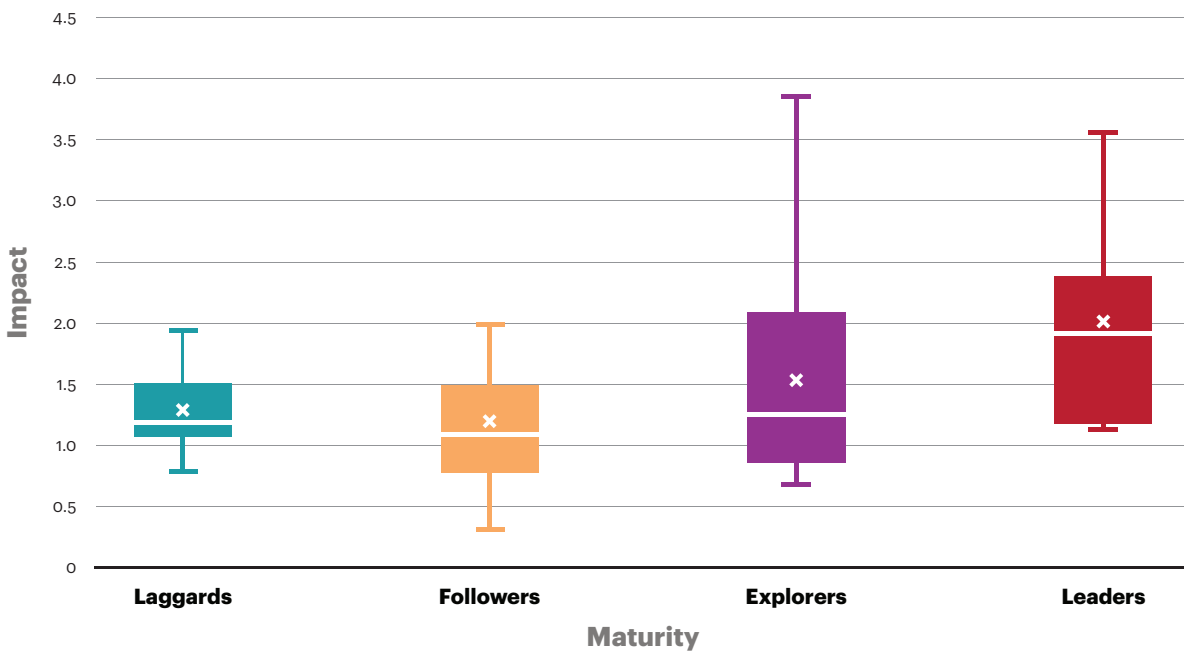
Note: The Analytics Impact Index measures maturity on a scale of 0 to 4.

Sources: Melbourne Business School; A.T. Kearney analytics

So which dimensions are most important when it comes to using analytics to improve profits? **Strategy and leadership** have the strongest positive association with profits. Having the right **talent and skills** and organization structure are also essential. **Culture and governance** are crucial to successfully deploying analytics, while the **data ecosystem** investment can actually be wasted in the absence of leadership, strategy, and culture. Companies that spend too much money on their data ecosystem without any strategic leadership tend to have lower profits than companies that have leaders who guide the use of technology. About a third of companies that are investing an above-average amount in their data ecosystem lack a leadership team.

Leaders excel in all four dimensions:

Strategy and leadership. Leaders have a well-developed road map that tracks the most important key performance indicators, and they have a clearly defined analytics strategy that is aligned with the overall business strategy.

Culture and governance. Leaders excel at informing their decision-making not with intuition but with data analytics. They regularly conduct experiments to test hypotheses, and they empower all business users to use analytics tools to generate the data insights.

Data ecosystem. Leaders have the right data available, and they have effective data

Creating a Leading Edge with SEEK

SEEK, a global leader in online employment marketplaces, uses analytics to match job opportunities with the ideal candidates. The company began with a marketing and sales bias that learned to leverage analytics to create and capture value. Today, it is comprised of a diverse group of employment, education, and volunteer businesses reaching just under 3 billion people around the world.

Interview with Antony Ugoni, director of global matching and analytics

What makes SEEK an analytics leader?

I would love to say it's a story simply about AI capabilities and lots of "smart" analysts, but it's not. It's about leadership and having a clear and transparent business strategy that we are all marching toward—and being clear on the role and focus of analytics in its delivery. Getting the data ecosystem in place has been a bit of a journey, but ensuring that people are working on the right things and that when we deliver an analytics product, we are monitoring it and enhancing it—that all comes about because we know why we exist as a function. We have clarity about why the organization needs us and what the light at the end of the tunnel is. Without that, you get a bunch of smart, well-intended people flying solo, working on pet projects, not business problems or needs.

How does SEEK handle strategy and leadership?

SEEK has spent a lot of time mapping the environments we are in and understanding the needs of the market. As a result, we have a clearly defined strategy and road map. There are many important leadership roles in any business, and fortunately for us we have our CEO and Co-Founder Andrew Bassat clearly understanding the role analytics has as a core enabler of the business strategy, as do our Executive Team. There is also widespread recognition throughout the organization about the importance of data and the opportunity that lies therein to help candidates find great roles and help hirers find great candidates. This leadership and advocacy give us the freedom to focus on building and iterating our AI products. It is also important that the AI team report to an individual with sufficient seniority who is also a respected practitioner in the discipline. This role falls to me, and I am responsible for internalizing the business strategy and ensuring that it

translates well enough to my team so their AI solutions hit the mark. Without senior advocacy and widespread understanding of the ability of data and analytics, unlocking value and efficiency for marketplace traction and sustainability of the function are very hard to come by.

What about governance?

The governance of our AI projects is largely centered on value-based decisions and allocations. I work closely with two peers, an engineering director and a marketplace strategy director, who report to the director of AI platform services. The marketplace strategy director's role is to make a call about the value of the analytics projects and ensure they are focused in the right direction. My role is like of a babel fish: I'm a translator between strategy and analytics—making sure the two are aligned.

How do you create an analytics culture?

We ensure that the analytics community is part of the whole

management standards and policies. They capture information at the granularity level that is appropriate to the problem.

Talent and skills. Leaders have training programs for employees to attain advanced analytics capabilities. They have real-time, dynamic, and prescriptive pricing and cost models, and they have more analytics staff per capita.

The job-search website SEEK, created in 1997 as an online version of print employment classifieds, is a good example of an analytics leader (see sidebar: Creating a Leading Edge with SEEK).

business. It is essential to get the context of the company and see the real problems. This gives our data scientists context and fast-tracks them into the broader context of the business. We also recruit on both capability and fit. Analysts must be able to see and frame their analytics in the context of the business problem or need, and they need to be inclusive and humble as this drives the culture needed for business engagement.

What are your value creators?

When my team is introduced, I don't want them to be called the "smarter people". Everyone is good at their discipline. But when you start saying "these are the really smart people," it can become a veiled compliment, and there is a danger that it could create a divide between my team and the wider business. What I want is for my team to be seen as the people who create a lot of value.

How do you experiment?

Experimentation is a big focus at SEEK. To avoid confirmation bias, we have a separate and independent team dedicated to running experiments. Their job is to design experiments,

understand the effect size and sample size, run the investigation, and report the results. In the absence of experimentation and control groups, the best-case scenario is that you are leaving value on the table, and the worst case is that your well-intentioned project is eroding value. You won't be able to see these effects without appropriate study design.

Tell us about your in-house talent and skills.

At SEEK, we have some incredibly interesting problems to solve and exciting data to solve these with. We endeavor to have options for career paths, whether that means leadership or a more technical contribution. Historically, organizations and individuals struggled with providing these paths because seniority and promotion were only viewed through the perspective of people leadership and movement towards general management. We make it very clear that this is not the only way to progress your career at SEEK, as we equally value a progression through deeper technical capability and the resulting thought leadership in this space. Because of demand volatility, we do use contractors to fill gaps, but we haven't

outsourced any large projects of analytics work. To build skills and drive innovation, SEEK also hosts two hackathons a year: three days for each Hackathon when the whole team gets to work on something cool that peaks their interest. Some of these projects have gone on to become customer-facing products, thus helping SEEK to continually innovate its offer.

What is your data ecosystem like?

We have been developing our own data ecosystem and making sure the data is fit for analytics. Depending on the function, data is available in real time or in an overnight batch. Data maturity is not measured by the ubiquitous availability of real time data, but by having the right data and temporal format needed to support the business. Furthermore, the team has many tools available to use and the flexibility to propose new solutions should another tool be a better fit for the problem they are solving.

# Charting a Way Forward with Data

Mining the full value of analytics will require more than a financial investment. Analytics "is about building a pervasive analytics culture with a clear vision, strong capability, and C-suite support to leverage data-enabled insights that fundamentally improve the competitive position of firms," according to the authors of Australia 2034: Luckier by Design 2034.[4]

Becoming an analytics leader is a lengthy process that, depending on the beginning stage of maturity, can take two to five years just to advance one stage. C-suite and board ownership is essential for a long-term investment in analytics and thinking beyond the short- to medium-term priorities. The leaders embed analytics into their DNA to fuel data-driven decision-making throughout their organizations. Because this is not a static proposition but one that requires continuous and improvements, velocity is crucial.

This Analytics Impact Index provides a comprehensive look at ways to extract more value from analytics. As this study continues, a year-on-year comparison will help companies gain a solid understanding of their analytics maturity, including areas with the most potential as well as those with the biggest opportunities for improvement. In 2019, we will introduce the second-order impact on profit growth. As the Index continues over the years, it will show how analytics affects a variety of industries over time, how long it takes to achieve each stage of maturity, and what could be done to accelerate that evolution.

The Index survey will remain open throughout 2018. If you would like to understand your current standing compared with the analytics leaders, visit the Analytics Impact Index website at analyticsimpactindex.mbs.edu.

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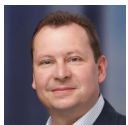
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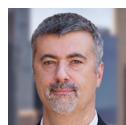**Vikrant Chaudhary,** principal, Melbourne
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[4] Peter Munroe and Nigel Andrade, Australia 2034: Luckier by Design, LID Publishing, March 2015

*AT**Kearney***

About A.T. Kearney

A.T. Kearney is a leading global management consulting firm with offices in more than 40 countries. Since 1926, we have been trusted advisors to the world's foremost organizations. A.T. Kearney is a partner-owned firm, committed to helping clients achieve immediate impact and growing advantage on their most mission-critical issues. For more information, visit www.atkearney.com.

About Melbourne Business School

Melbourne Business School has a proud history of advancing quality business education in Australia. The school is home to Australia's first MBA program, launched in 1963, and the first postgraduate analytics program to have a central business focus: the Master of Business Analytics, which was established in 2015. The school's global community of alumni are influential leaders, making a difference to corporations, start-ups, governments, and not-for-profits in Australia and around the world. The school's Centre for Business Analytics was created in partnership with leading consumers, producers, and gatherers of data to transform decision-making with data and analytics. The Centre's partners include ANZ Bank, A.T. Kearney, BP, Coles, Downer, NAB, SAS Institute, SEEK, and Suncorp. These business connections create unique access to how decision-makers are using data to solve their challenges. Melbourne Business School would like to thank the more than 400 organizations around the world that provided valuable insights as part of this study To learn more about the Centre for Business Analytics, please visit cfba.mbs.edu.