

The Value of Analytics in 2019

Investing in analytics can yield substantial returns, but only a small fraction of companies are extracting the full potential of their data.



Organizations across the globe are investing in analytics in the hope of gaining a competitive advantage in an intensifying market. However, spending more doesn't deliver value for the business. Without a well-defined strategy and strong leadership as well as supportive culture and governance, the right talent and skills, and the appropriate data ecosystems, companies cannot expect to capture the most value from their analytics.

To quote Canadian entrepreneur and angel investor Salim Ismail, "An exponential curve looks relatively flat until the inflection point." Having been a source of insight and impact for centuries, analytics is now ubiquitous. Although some might describe analytics as a nascent scientific domain, it may simply be that they don't see either the past or the rapidly approaching inflection point.

This year's Analytics Impact Index reveals that the leaders—just 6 percent of the companies we surveyed—generate as much as 83 percent more profits than the laggards. And this gap is widening.

In this evolving environment, C-suite executives are unsure about best practices and are wrestling with an array of questions. How does our analytics capability compare with our regional and global peers? What business areas see the most value? Is the organizational operating model designed to have maximum impact? Do we have the right talent? Are we investing enough and in the right areas? And most importantly, is the impact on the bottom line big enough to justify the required investment?

Although attempts have been made to answer these questions, most efforts have focused on an organization's maturity, especially regarding technology and infrastructure. There has been little research on the profit impact of analytics, which is of greater interest to businesses. With an eye on filling this void, Melbourne Business School and A.T. Kearney launched the Analytics Impact Index in 2018 to determine the potential impact on profitability and identify areas of opportunity.

Based on input from more than 350 companies across the world, the 2019 Analytics Impact Index pinpoints the bottom-line impact and the structural elements required to maximize returns. This year's study reveals that the leaders—just 6 percent of the companies we surveyed—generate as much as 83 percent more profits than the laggards. And this gap is widening. These leaders have clearly defined strategies with metrics that guide their analytics journey. Their strategies, along with leadership support, fuel and enable a more powerful impact across three dimensions: culture and governance, talent and skills, and the data ecosystem.

This year's Analytics Impact Index covers a more global sample of organizations than in 2018, most notably from the United States, Europe, the Middle East, and Africa. We also offer new insights into analytics investments, a view of returns for a variety of business areas, and a

deeper analysis of what creates a financial impact. In addition, we identify the essential structural elements and behaviors that organizations can adopt to move up the maturity curve to become analytics leaders.

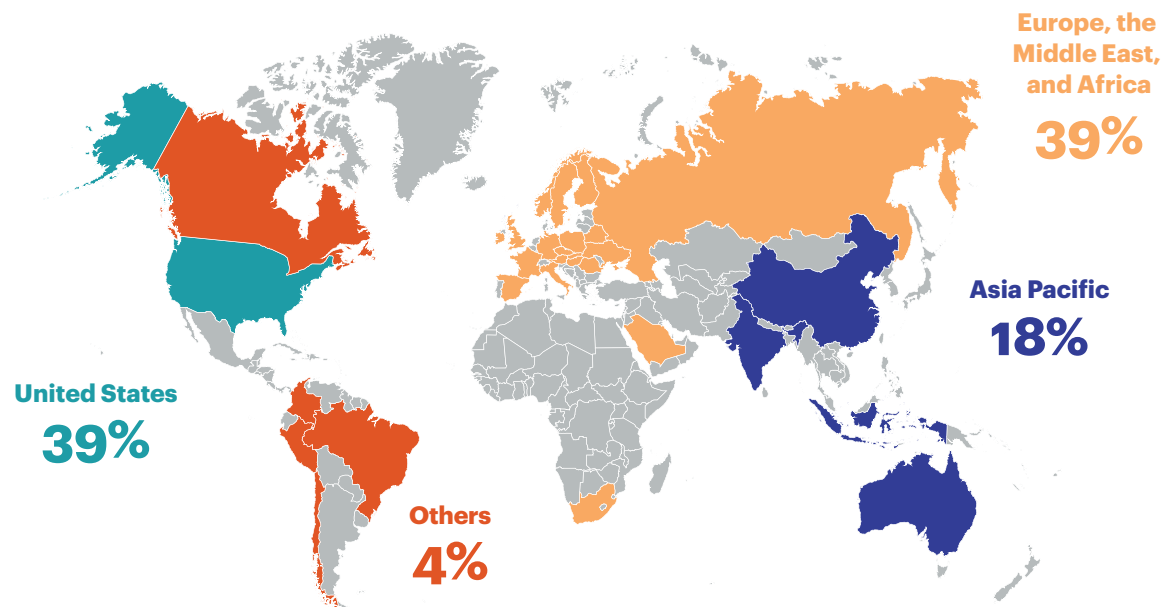
The Analytics Impact Index

Building on last year’s successful launch, the 2019 Analytics Impact Index gives organizations a better understanding of the potential of analytics as well as the capabilities required to capture maximum value. To create the Index, Melbourne Business School and A.T. Kearney surveyed more than 350 companies from 46 countries and 27 industries with a median revenue of US \$745 million (see figure 1) The Index compares organizations on two factors: **maturity** of the analytics operating model and **impact** of analytics on the organization’s profitability.

Figure 1

The Analytics Impact Index covers a diverse range of companies

2019 Analytics Impact Index



 <p>Industry coverage 27 industries</p> <p>Top three: Technology: 14% Consumer goods and services: 13% Banking and finance: (8%)</p>	 <p>Executives More than 350 respondents</p> <p>C-suite: 43% Directors/VPs: 33% Managers: 18% Other: 6%</p>	 <p>Company size Median annual revenue: \$745 million USD</p> <p>Revenue range: \$11 million to \$113 billion</p>
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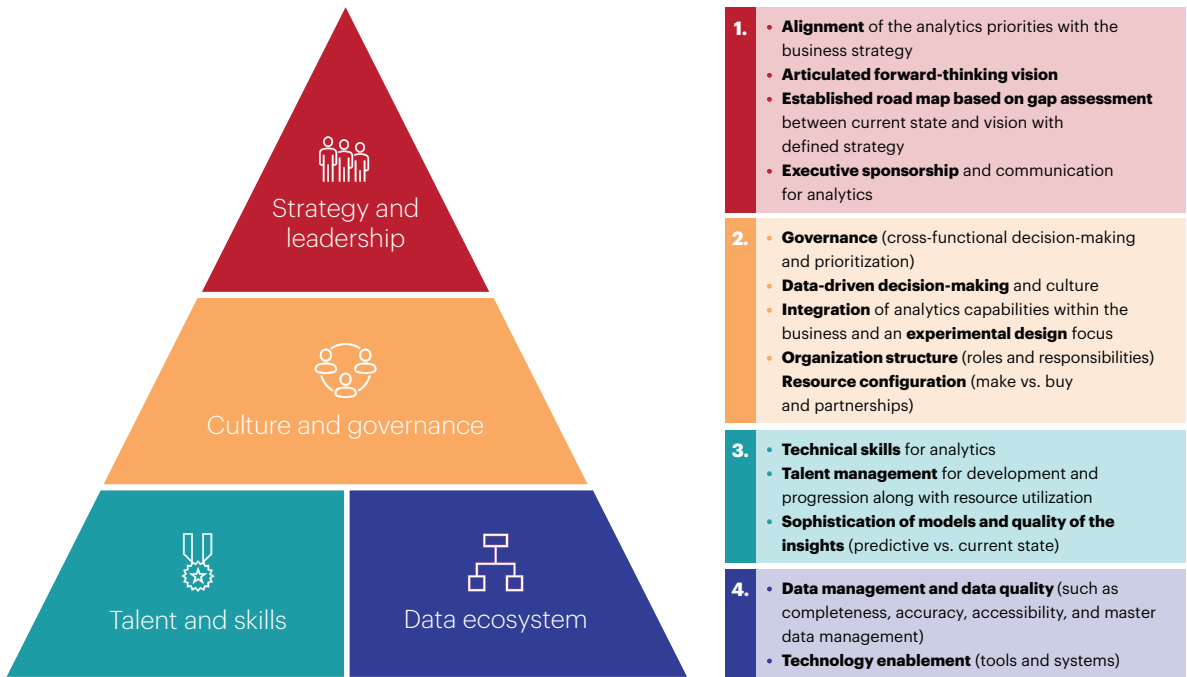
Note: Average revenue is \$6.8 billion.

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

Maturity is assessed along four dimensions (see figure 2):

Figure 2
Analytics maturity is measured in four dimensions

Maturity Assessment Framework



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

Strategy and leadership. This looks at the company’s strategic direction for analytics and who within the company is driving it.

Culture and governance. This covers the operating structure and processes that are in place to support analytics along with the company’s general attitude toward analytics and analytics change management.

Strategy and leadership looks at the direction for analytics and who within the company is driving it.

Talent and skills. This measures the human aspect of analytics, from recruiting the right people with the right skills to retaining, developing, rewarding, and using them effectively.

Data ecosystem. This relates to the technological infrastructure and data management framework that is in place to enable analytics, including developing and implementing architectures, policies, practices, and procedures to manage the company’s full data life-cycle requirements.

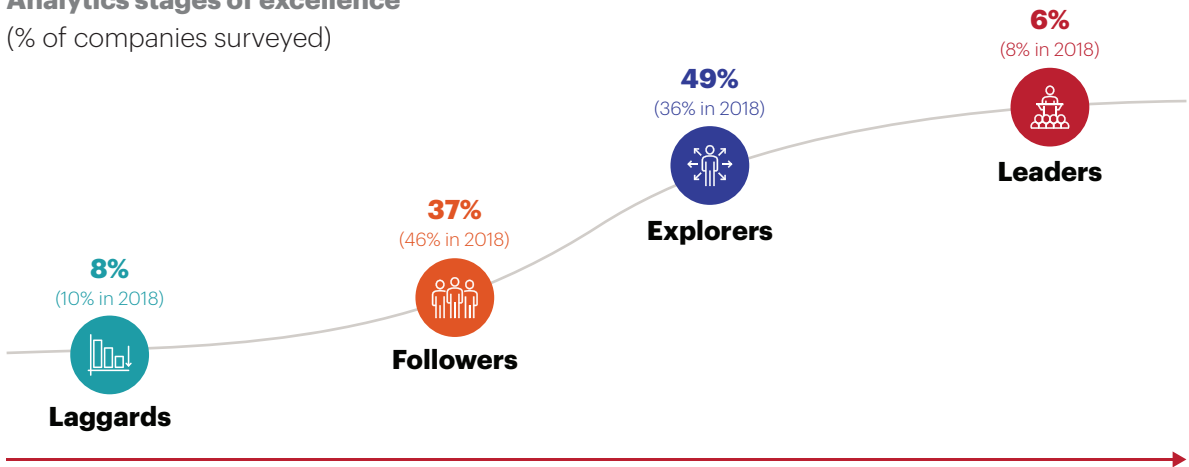
Organizations can be grouped into four stages of maturity based on their analytics capabilities (see figure 3):

Figure 3

Companies can be categorized in four stages of analytics maturity

Analytics stages of excellence

(% of companies surveyed)



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

Laggards. Analytics is limited to descriptive analyses of data, comprised largely of backward-looking reporting of performance. These organizations do not have a clear analytics strategy and lack the culture needed to move forward.

Only 6 percent of the organizations surveyed are extracting the full potential of analytics.

Followers. Analytics, largely inferential modelling, is used to diagnose what drives business outcomes and helps manage costs. It is not used to inform strategic business decisions, and there is an absence of an analytics culture championed by top management.

Explorers. Analytics is used to optimize business performance by diagnosing drivers and predicting outcomes. Although some analytics strategy is in place, a culture of data-driven decision-making is not well-developed across the organization.

Leaders. Leaders are characterized by a C-suite commitment to analytics, a clearly defined analytics strategy that aligns with the overall business strategy, and a pervasive culture of data-driven decision-making. Real-time analytics is used to drive innovation and create a competitive advantage across all areas of the business.

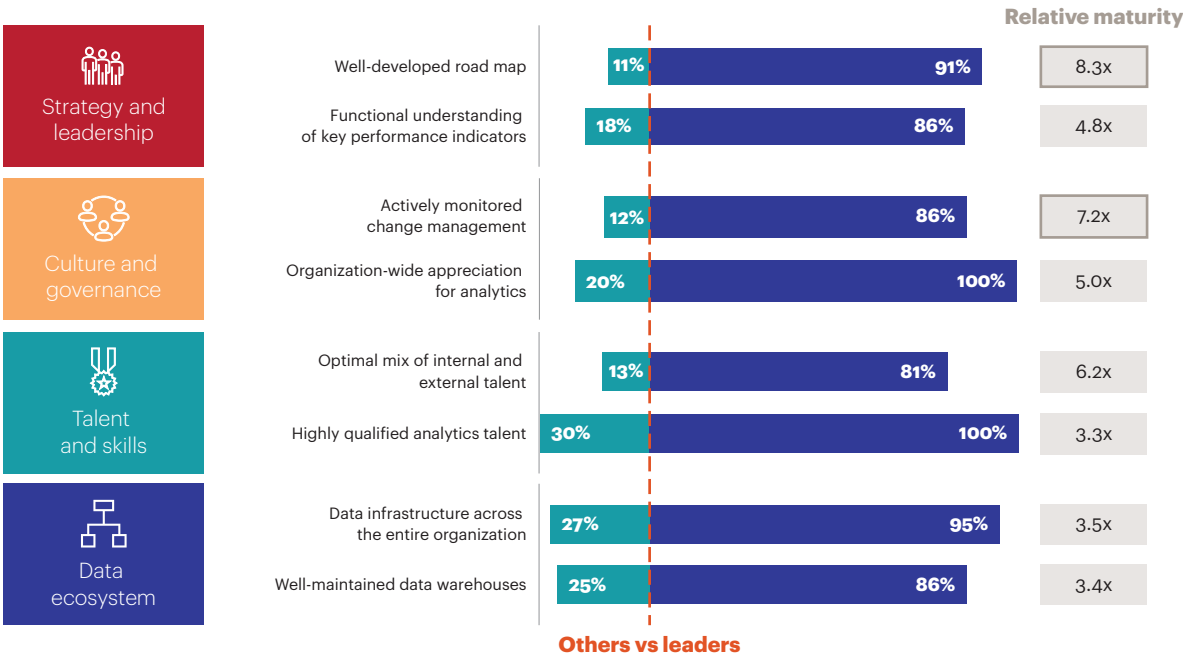
Our study reveals that only 6 percent of organizations surveyed—down from 8 percent in 2018—are extracting the full potential of analytics after calculating the level of analytics maturity.

Structural Differentiators Between Analytics Leaders and Others

Strategy and leadership

Leaders differentiate themselves with a clear analytics strategy that is aligned with the overall business strategy. Ninety-one percent have a well-developed analytics road map—a stark contrast with the 11 percent of companies across all other maturity levels (see figure 4). Leaders also have a more comprehensive understanding of the mechanics behind the key performance indicators that they are tracking. Australia’s financial services company Suncorp offers a good example of an analytics leader (see sidebar: Creating an Analytics-Focused Organization with Suncorp on page 6).

Figure 4
Leaders differentiate themselves across four dimensions



Note: Relative maturity is the ratio of leaders to others (for example: 8.3x = 91% / 11%).
Sources: Melbourne Business School; A.T. Kearney analysis

Culture and governance

Leaders have a strong culture of data-driven decision-making, demonstrating an organization-wide appreciation for and understanding of the benefits of analytics. The prevalence of such a culture correlates strongly with executive sponsorship and support for analytics-related R&D, especially when hypothesis testing through experiments is encouraged.

Creating an Analytics-Focused Organization with Suncorp

Suncorp, one of Australia's top 20 publicly listed companies, uses analytics to create insights for the insurance arm of its business. With an embedded analytics culture and a strategic vision that is driven by top leaders, this financial services company is at the forefront of analytics-based decision-making.

Interview with Michael Gassmann, head of pricing and analytics

How has Suncorp's analytics strategy developed over time?

From the beginning, our analytics function had a clear strategy driven by a compelling vision. Over time, we have refined that strategy to ensure that analytics remain relevant and create a competitive advantage. When we first formed our analytics team, the focus of our strategy was on creating a compelling value proposition. We gained buy-in by working together to develop the strategy and then sharing it with the rest of the company in a variety of formats. Over time, the strategy has morphed to suit the company's needs and encompass the dynamic vision of analytics, including how we can gain a competitive advantage and what that means for our customers. Our strategy guides all of analytics initiatives, with all stakeholders—from myself to our junior analysts—referring back to our strategy during every project.

How do you keep your analytics employees engaged?

We focus on four areas:

- **Offer leadership.** Employees want to feel that their leaders

care about them by giving them interesting opportunities and valuable feedback.

- **Enable the workforce.** We aim to remove barriers and provide the tools that our analytics team needs to do their job.
- **Make great jobs.** We have eliminated generic roles and instead provide unique jobs that suit each employee's working style.
- **Advocate for analytics.** We want all of our analytics employees to be positive role models and avoid creating a negative workplace culture.

How does Suncorp make analytics investment decisions?

Our analytics team and our data ecosystem are structured so that we can quickly quantify the value of any proof of concept. When we purchase systems and software, we want to try them before buying. For example, we may negotiate with a supplier to have a one-year trial so we can build projects and then gather feedback to make a decision about whether or not we should invest. Our goal is to focus on what the analytics function actually needs, which may mean buying technology off the shelf or using open-source software if it generates value for the organization.

How does Suncorp encourage its analytics staff to improve their skills?

One of the biggest investments Suncorp makes is in its people. Because we have a unique model that promotes end-to-end ownership of analytics projects, our analytics team members are

encouraged to understand our IT function, have sharp technical skills, and develop a business acumen to solve organizational and customer problems. We tailor jobs to suit each employee's working style, and we constantly seek feedback about their professional development goals to provide the skills and tools they need. This investment in our people has helped create a culture of analytics excellence.

What are the unique features of the way your analytics team is structured?

Our analytics function is integrated into the business, not a separate center of excellence. This not only uses our team more effectively but also encourages organizational buy-in. Our analytics function also has a governance team that acts as the oil that makes the system work by helping to define the scope and intent of a project and keeping the team accountable with project management.

What makes you excited as an analytics leader?

We focus on what the future of pricing analytics will look like, and we have an ongoing project that is constantly pushing those boundaries. As a company, we are focused on building our analytics capability to improve the quality of our insights with advanced algorithms and machine learning. We are also reducing our system complexity by automating and simplifying processes to allow the business to focus on activities that add more value.

Talent and skills

Leaders have access to highly skilled analytics talent through hiring and developing internal talent, balanced with the use of external partners. Furthermore, when analytics training is provided across the organization, not just within the analytics function, it fosters a wider appreciation and understanding of analytics, which impacts the analytics culture.

All organizations surveyed struggle to retain analytics talent. However, those that have a clear, long-term analytics strategy that resonates with the team along with adequate funding and that optimally use their talent minimized analytics staff churn. In addition, guidance from leadership and a well-developed data ecosystem are important drivers of high-quality, practical insights, which increases the likelihood of impact from this dimension.

Data ecosystem

Ninety-five percent of leaders have data infrastructure that sits across the organization with well-maintained data warehouses. In the absence of adequate data management, the ecosystem can have a negative impact on profitability.

Leaders say they record high-quality, trustable data at sufficient granularity that feeds into the analytics function. Further, they have a deep understanding of the provenance and lineage of the data as well as data-generating processes. Although the data ecosystem has the smallest net impact on profitability, it does drive value to analytics talent. This is not surprising considering the ecosystem's role as an enabler of high-quality insights and the investment required to stand up the requisite infrastructure.

The Financial Impact of Analytics

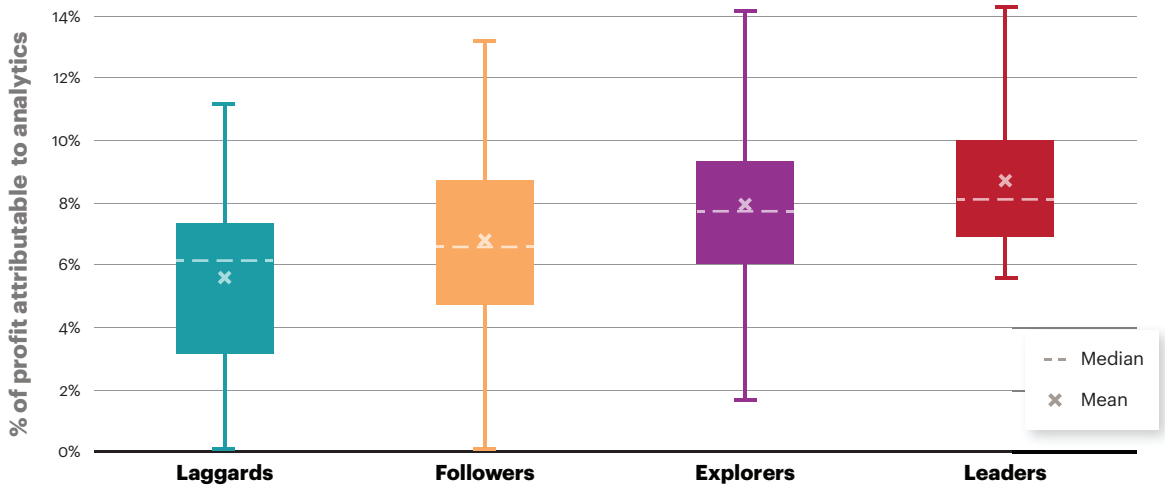
The Analytics Impact Index calculates the impact as the proportion of the organization's profit that is attributable to analytics. This is determined by modelling the profitability across all organizations after controlling for factors such as geographic region, industry, size, and intrinsic company factors such as the previous year's profitability.

Ninety-five percent of leaders have data infrastructure that sits across the organization.

Not surprisingly, a higher level of maturity is associated with a greater financial impact from analytics (see figure 5 on page 8). The trend appears to demonstrate characteristics of diminishing returns in the percentage impact on analytics profits as organizations mature, which may be a consequence of having exhausted quick wins early in their transformation. However, forward-thinking decision-makers persist and grow their organization's analytics maturity, looking beyond percentages and at the uplift in dollars instead. Leaders also exhibit the least variance in returns, perhaps as a result of a sound analytics foundation established earlier on their analytics journey.

Figure 5

More mature companies see a greater financial impact from analytics



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

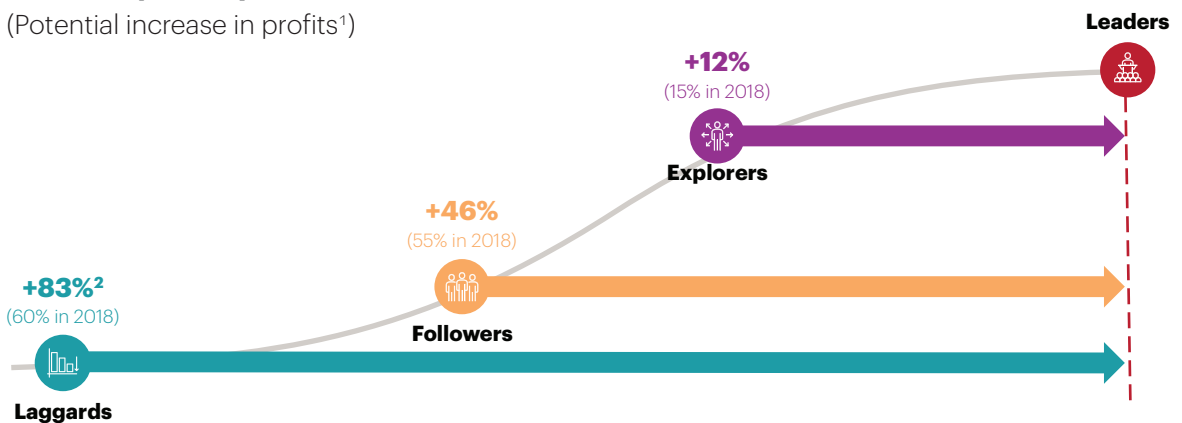
Laggards stand to increase their overall profit by as much as 83 percent if they increase their analytics maturity to the level of a leader, holding all other variables equal (see figure 6). The gap has widened since last year, suggesting that the leaders are continuing to break new ground. The potential overall profit uplift for followers and explorers, if they become analytics leaders, remains largely unchanged. Improving analytics maturity at these stages to unlock profits is by no means a straightforward process. Large investments in terms of time and resources are often required to increase analytics profits and improve maturity across the four dimensions.

Figure 6

Significant gains can be achieved with analytics maturity

2019 Analytics Impact Index

(Potential increase in profits¹)



¹Potential profit uplift refers to average increase in overall profit if a company were to increase its analytics maturity to the level of a leader, holding all other variables constant.

²This analysis is correlational and does not imply causality.

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

Maximizing Analytics Profits

Analytics investments cover not only personnel and data infrastructure, but also experiments, not all of which deliver high-impact outcomes. Given the vast array of available options, executives constantly wrestle with budgetary decisions: Where and how much should the company invest? Is it better to distribute the budget across all business areas and risk being spread too thin? Or is it better to be targeted and invest in a few key business areas?

Short-term returns are more pronounced for supply-side areas such as finance and operations than for demand-side areas such as marketing and new business models.

In the short term, investing in financial analytics yields the greatest return. Relative returns plummet across other business areas, with investments in operations being second-most attractive, generating nearly 60 percent less in the short term (see figure 7). This may be the result of a combination of lower immediate impact and the higher investment required. The reduction in relative short-term returns reported are also indicative of the difficulty in attributing to analytics the profits from business areas such as new business models. Furthermore, short-term returns are more pronounced for supply-side areas such as finance and operations than for demand-side areas such as marketing and new business models.

Figure 7

Analytics investments yield short-term returns in some areas

	Finance	Operations	Health, safety, and environment	New business models	Sales and marketing
Examples	<ul style="list-style-type: none"> Profitability analytics Cash flow analytics Risk analytics 	<ul style="list-style-type: none"> Predictive maintenance Fulfillment analytics Scheduling optimization 	<ul style="list-style-type: none"> Safety predictive analytics Waste minimization 	<ul style="list-style-type: none"> Identification of market trends Data partnerships 	<ul style="list-style-type: none"> Customer acquisition Churn modelling Pricing
Relative return factor	1.00	0.42	0.13	0.08	0.02

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

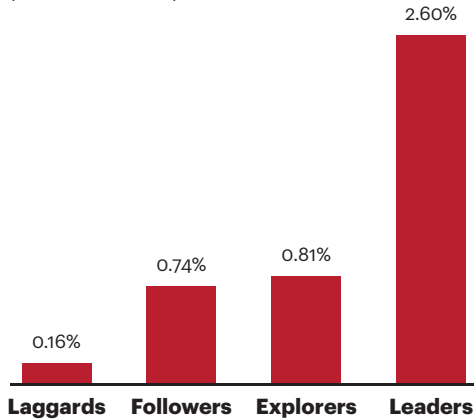
Respondents were asked to identify their investment priority for 13 business areas as well as whether they considered it to be an area of strength. The intersection of these reveals that companies that invest in an area of strength generate up to 10 percent more profits. This result may be explained by the business area being sufficiently developed to leverage analytics

effectively. Leaders invest as much as 2.6 percent of their revenue in analytics—up to 16 times more than laggard companies. And yet, the median payback period on their investment is the fastest across maturity groups at 12 months, shared with explorers (see figure 8).

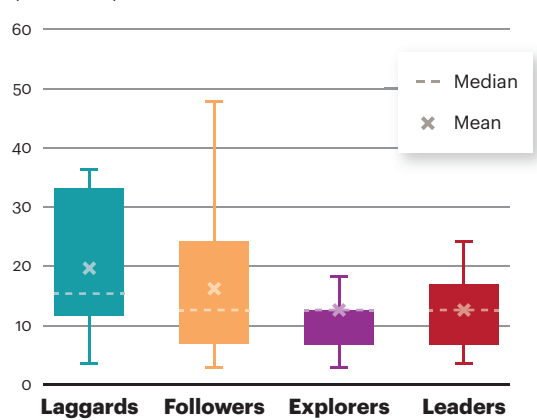
Figure 8

Leaders invest much more in analytics and recoup their investments faster

Analytics investment
(% of revenue)



Payback period
(months)



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

Our study separates companies into two groups:

Targeted investment strategy. Companies in this category invest much more in a few business areas compared with other organizations, indicated by a low-to-medium mean priority score with high variance and a high maximum. A high variance in priority scores implies that these companies were making choices on areas of prioritization—the essence of strategy.

Nearly 75 percent of companies have a targeted strategy and, on average, generate 11 percent more profit from analytics than other organizations.

Other investment strategy. These companies, which do not follow a targeted investment strategy, are characterized by low variance in the priority scores across business areas. Typically, they either have no analytics investment strategy or they follow a conscious strategy of distributing investment across all business areas.

Nearly 75 percent of companies have a targeted strategy and, on average, generate 11 percent more profit from analytics than other organizations. And when analytics investments are

aligned with the overall business strategy and there is a targeted investment strategy, the company generates an average of 24 percent more analytics profits (see figure 9).

Figure 9

The most analytics profits are seen when analytics investments are selective and aligned with an overall business strategy



Notes: Analytics profit is the proportion of profit directly attributable to analytics. Targeted strategy is inferred when companies have low-medium mean priority with high max and high variance.
Sources: Melbourne Business School; A.T. Kearney analysis

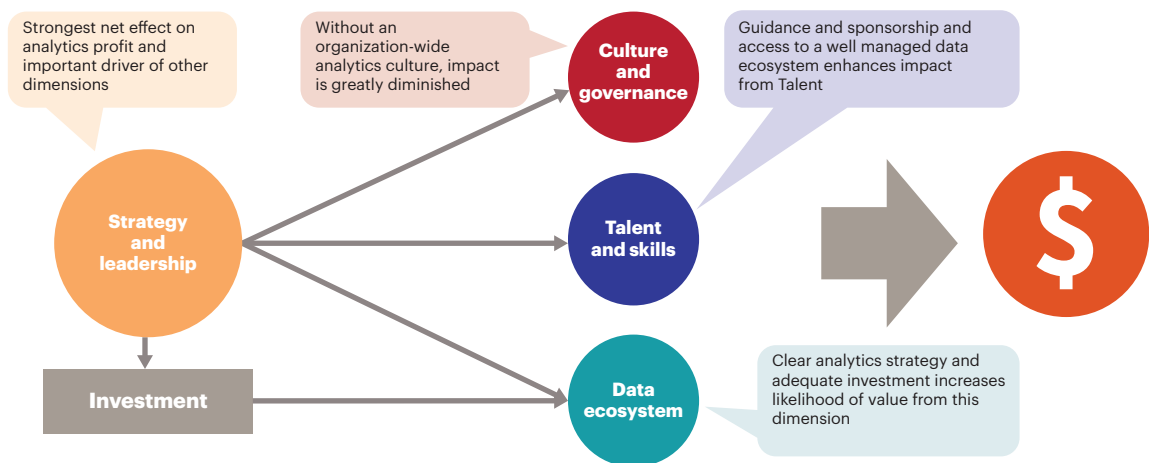
Escalating Analytics Maturity

Having an effective analytics strategy and leadership has the largest net effect on analytics performance and is an important driver of the other three dimensions of maturity (see figure 10).

Figure 10

Strategy & Leadership has highest net impact on analytics profit also driving other dimensions

Relationship between maturity dimensions^{1,2}



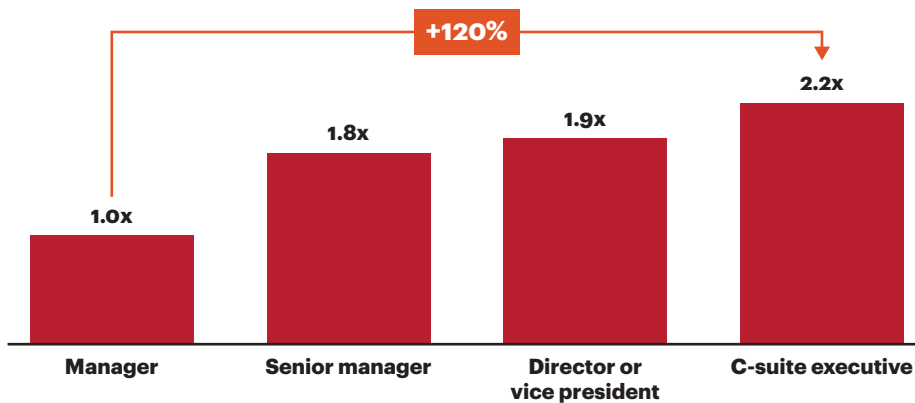
¹ Size of bubble indicates net impact on profit, direction of arrow indicated dependence
² Effect is estimated using simultaneous equation systems. The model is identified from exogenous variables not shown
Source: Melbourne Business School and A. T. Kearney

Furthermore, analytics teams led by C-suite executives generate more than twice as much profit as teams led by managers (see figure 11). The distance from senior executives may result in analytics practitioners losing sight of the big picture and focusing on areas of lower priority and less impact. Additionally, crucial insights and recommendations require buy-in at every level: at senior levels to ensure they are approved and at lower levels to be implemented. Without C-suite representation and sponsorship, both the amount and pace of benefit realization is slowed.

Figure 11

Analytics teams create more value when led by someone in the C-suite

Average relative profit dependent on the position of the analytics leader



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

The Path Forward

Becoming an analytics leader is a lengthy process. In fact, it can take years to advance even a single step, depending on the beginning stage of maturity. This journey requires executive sponsorship and a long-term vision for analytics to create a culture of data-driven decision-making. Without high-quality data, the data infrastructure does more harm than good, but a robust ecosystem with mechanisms and processes for data management can be an effective enabler of high-quality insights. This in turn drives an organization-wide appreciation and adoption of analytics.

Done right, investing in analytics can yield substantial returns. However, when selecting an investment strategy and the potential business areas and initiatives, organizations must consider their current analytics maturity along with the appetite for risk.

The Analytics Impact Index provides a comprehensive view of where organizations are in their analytics journey and ways to extract more value from data-driven decision-making. A year-on-year comparison will help organizations gain a robust understanding of their maturity, strengths, and areas with maximum opportunity for improvement in addition to helping estimate the returns from their analytics investments over time. As the Index continues to grow, it will provide a view of analytics' effectiveness for a variety of industries and regions, how long it takes to progress from one stage of maturity to the next, and the focus areas and actions that can accelerate that evolution.

The Analytics Impact Index survey will remain open throughout 2019. If you would like to understand your position relative to your peers, visit the Analytics Impact Index website at analyticsimpactindex.mbs.edu.

Authors



Enrico Rizzon, partner, Melbourne
enrico.rizzon@atkearney.com



Ujwal Kayande, professor of marketing
and director of the Melbourne Business
School Centre for Business Analytics
u.kayande@mbs.edu

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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 with corporations, start-ups, governments, and not-for-profits in Australia and around the world. The school's Centre of 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, Downer, Energy Australia, National Australia Bank, SAS Institute, SEEK, Spotless, 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 350 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.