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# Moving up the analytics maturity ladder-potential to dollars

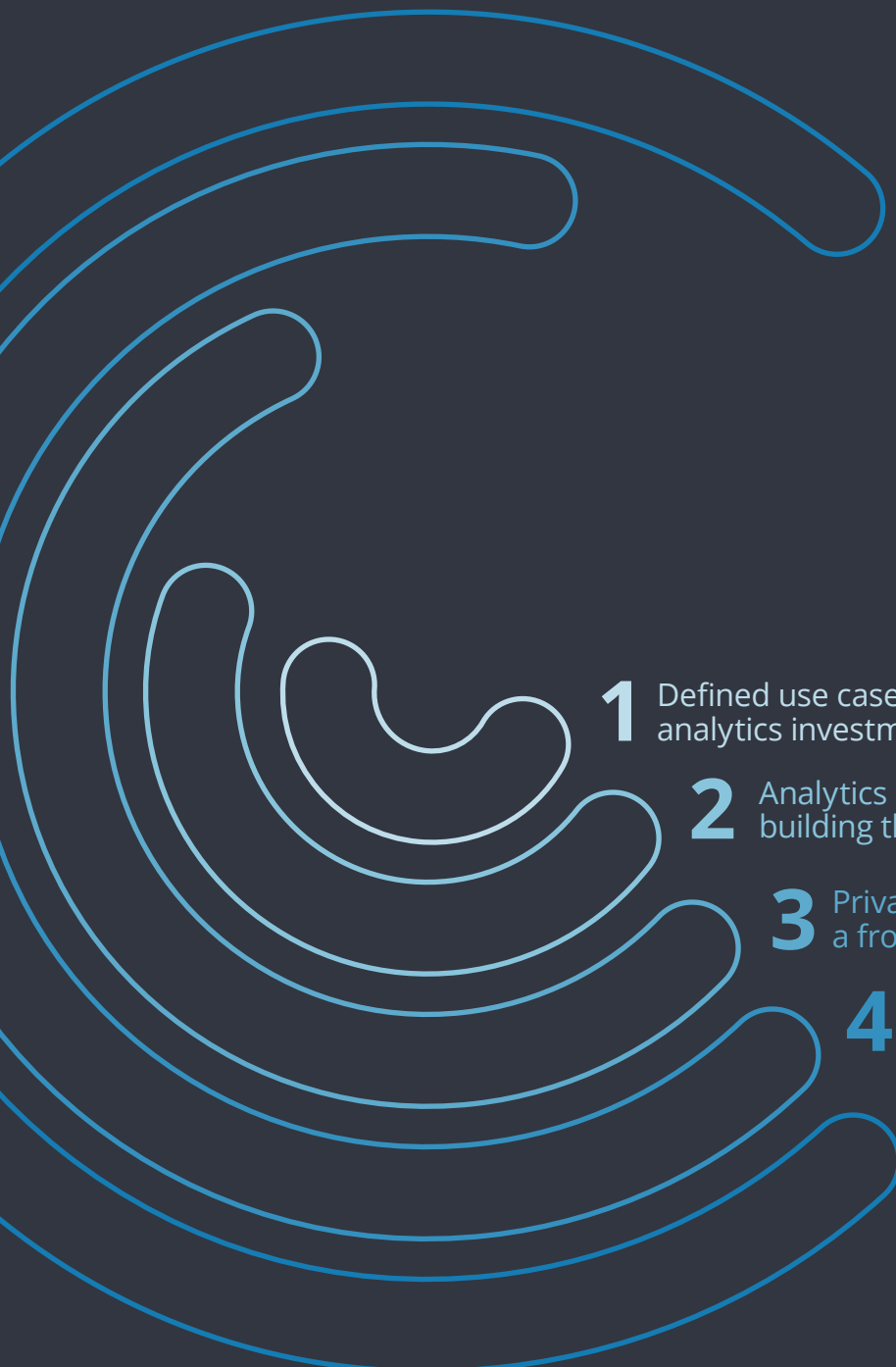
Given the breathtaking pace of progress in advanced analytics functionality, it's no surprise that organizations of all sizes and all sectors are rapidly embracing the potential inherent in insight driven decision-making. In their efforts to become more mature insight driven organizations, they are making significant technology investments and exploring a range of exponential technologies, such as artificial intelligence and cognitive computing.

Yet the race to succeed in this space must be tempered by an ongoing focus on the fundamentals. Organizations that fail to set the stage—by designing defined analytics use cases, building the right analytics capabilities and adopting governance frameworks for the ethical use of data—

will fail to realize their anticipated returns on investment. On the flip side, organizations that take the time to lay an effective foundation will gain the ability to mature at an exponential pace by leveraging their past learnings to inform their future actions.

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To help you find this balance, Deloitte has identified **five key analytics trends organizations** should track—and consider applying—in the year ahead.

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- 1** Defined use cases inform analytics investments
  - 2** Analytics success hinges on building the right capabilities
  - 3** Privacy and security becomes a front office function
  - 4** Artificial intelligence gets practical
  - 5** Behavioural economics delivers analytic insight





### The maturity barrier

In a bid to keep pace with the massive transformation introduced by the digital age, organizations have made truly enormous investments to bolster their analytics capabilities—from building high-end technology infrastructures to organizing their masses of structured and unstructured data. Too often, however, organizations face difficulty extracting an effective return on these investments. This is leading to a measure of second guessing. Although companies understand the imperative of promoting a culture of data-driven decision-making, they are struggling to justify the business benefits of moving up the analytics maturity ladder.



### Linking investments to impacts

This is spurring the imperative to more effectively link analytics investments to measurable financial statement impacts. Rather than assuming data analytics capabilities will generate amorphous benefits as a matter of course, there is an emerging trend to deliberately design analytics use cases that demonstrate an impact on defined key performance indicators (KPIs)—which, in turn, ultimately drive improvements in organizational P&L, balance sheets and/or cash flow statements. In essence, organizations need the capability to clearly connect their analytics investments to specific business outcomes—such as new customer acquisition, growth in current customer value or retention, improved customer interaction efficiency, enhanced corporate productivity, accelerated product development, streamlined supply chains and the like.



### Balancing risk and reward

Without effective frameworks to measure the impact of their analytics use cases, some organizations have begun to question the wisdom of making ongoing investments in data and technology. This is a mistake. In today's disruptive business environment, organizations simply cannot afford to fall behind in their ability to generate and leverage the insights promised by data analytics. By linking analytics investments to measurable outcomes, however, organizations can more clearly articulate the value derived from each analytics use case, positioning them to make more risk-intelligent investment decisions.





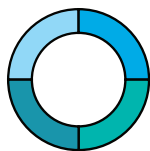
### Why the human dimension matters

On the path towards becoming an insight driven organization (IDO)—one that turns analytics into a core capability by promoting a culture of data-driven decision-making—there is a growing trend for companies to make a conscious commitment to build advanced analytics capabilities. In addition to devising real-life use cases that

link to defined business goals, this involves creating “purple teams”—those that combine technically-savvy people (red skills) with seasoned business communicators and change agents (blue skills). Organizations must also be willing to revisit their human capital models.

## Focusing on four levers

When it comes to building analytics capabilities, there are four key levers to pull:



### An iterative approach

In building analytics capabilities, organizations must understand that the process is not linear and incremental. Instead, it is iterative and requires ongoing attention. As organizations refine their approach to leadership, operating models, talent and culture, they leverage their previous learnings—enabling them to reap the rewards of earlier thoughtful decisions, generate increased value and accelerate their wins as they move through each level of analytics maturity.



#### Leadership

Pick transformation-savvy executive sponsors who are capable of leading by example and who hail from key business functions that are driving growth and profitability—do not appoint a sponsor who runs a cost centre, they will not have the credibility or followership to drive the mindset and cultural change required.



#### Operating model

Make the best use of your scarce analytics talent. At early stages of maturity, either centralize scattered talent into a hub or centre of excellence (COE) or empower your most advanced pocket of analytics capability to lead and champion analytics.



#### Talent and capability development

In their bid to attract and retain analytics talent, organizations must take a two-pronged approach—co-creating internally with the business to build “purple teams” and externally with partners to fast track returns and avoid years of investment.



#### Culture and change management

Culturally, insight driven organizations must be strategic by demonstrating a willingness to challenge business norms, and tactically bold by devising practical use cases rather than conducting science experiments.

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## Trend 3

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Privacy & security  
becomes a front  
office function



### Law vs. ethics

As the internet of things becomes mainstream, organizations have access to a growing array of data culled not only from online and mobile transactions but from non-traditional sources, such as sensors in drones, wearables and countless smart devices. The laws protecting how this information can be used, however, may not be keeping pace with customer expectations. According to a recent Deloitte survey on the ethical use of data, customers do not spend a lot of time thinking about how their data is being used. In fact, most people lack awareness about their privacy rights. In Canada, that translates into a potentially unwarranted level of trust in large institutions, such as governments and banks. Despite this stance, however, Canadians have definite opinions on what constitutes a misuse of data—with 90% saying they would sever their relationship with companies that use data unethically. Notably, organizations don't have to breach the law to cross that line.



### Paying the price

It's been amply demonstrated that the cost of acquiring a new client is considerably higher than the cost of retaining an existing client. Organizations that lose clients as a result of an ethical breach consequently face significant financial repercussions. The challenge is pinning down what constitutes an unethical use of data—particularly as ethics vary within different jurisdictions and across disparate cultures and political climates. In North America, for instance, the average consumer is comfortable providing more personal data to organizations in exchange for receiving a defined benefit, such as product discounts or coupons. The same is not true in Germany or Japan. To stay ahead of this curve, leading organizations have set up nerve centres to monitor shifting consumer sentiment on a global basis.



### A business imperative

This trend will only accelerate as organizations work to avoid impairing the customer experience—and suffering the associated financial and reputational damage. On the path towards becoming an insight driven organization, privacy and security will become a front office function rather than a compliance issue. Organizations will need to adopt policies, processes and governance structures to manage how data is being stored and used. They will need to build a culture of privacy, security and ethical data use into the fabric of the organization, and ensure it informs product and service design, employee behaviours and corporate values. Ultimately, the drive towards digitization can only succeed if consumers trust organizations to treat their personal information with respect.

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Trend 4

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# Artificial intelligence gets practical



### In search of meaning

With no established definitions in the marketplace, it's difficult for organizations to understand the differences between a range of advanced analytics functions. Terms like artificial intelligence (AI), cognitive, machine learning and natural language processing are often used almost interchangeably, and the definitional fuzziness is becoming an impediment for organizations interested

in understanding their real-world applications. To resolve this challenge, it's helpful to think of AI as an umbrella term that encompasses multiple capabilities. What's revolutionary is that the capacity now exists to combine these technologies into new—and ever more ground-breaking—permutations.



### Real-world applications

While AI and cognitive technologies may be perceived as an idealized vision of the future, these technologies are starting to create value, when focused on more defined and practical tasks. For instance, using cognitive technology, digital agents—which can understand, reason and learn—emulate human interactions. These digital agents can conduct full conversations using natural language, understand a caller's intent, complete a wide range of transactions (from customer service and resolving IT issues to providing back-office support) and learn from each interaction to improve future interactions. In addition to delivering consistent service levels, these cognitive agents are fully trained, always on and enable organizations to retain—and build on—their institutional knowledge.

Cognitive technologies also excel at analyzing literally millions of data sets, including those that reside in unstructured data—such as photographs, diagnostic images or PDF files. Bringing a level of computational power humans simply can't match, these technologies can take over a wide range of repetitive, high-volume tasks—to streamline, accelerate and automate complex analytical processes. For its part, machine learning can analyze usage patterns to deliver specific outcomes. Examples include mapping software that can track driving behaviours and make recommendations on how to avoid traffic, or smart thermostats that adjust temperatures based on past usage patterns.



### Defining the benefits

As advanced analytics capabilities evolve, the competitive advantage they offer expands apace. To reap this advantage, however, organizations must develop actual use cases and define the anticipated benefits associated with their adoption. At the same time, concerns remain—particularly around their potential to spark major job losses. What's important to understand is that most of these technologies augment human talent, rather than replacing

it. Their introduction also heralds the creation of entirely new job categories that are likely to attract a new generation of workers. As with any revolution, its full impact has yet to be felt. One thing, however, seems clear: artificial intelligence will ultimately profoundly alter the ways in which organizations work, deliver projects and operate at a foundational level and organizations that fail to keep pace risk being left behind.

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Trend 5

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Behavioural  
economics delivers  
analytic insight



### **Irrational and biased**

The trend towards delivering one-to-one, personalized customer experiences is not new—but organizational ability to deliver on this elusive goal is gaining a boost through the application of behavioural economics. In traditional economics, people were once assumed to make complex decisions rationally and without bias. Over the past few decades, however, it has become clear that people regularly deviate from the rational model in their decision-making and, in fact, exhibit systematic behavioural biases. Organizations that understand these biases are better equipped to solve the “last mile” problem of deciding how to act based on the insight machine learning provides. For instance, behavioural economics will play a key role for organizations interested in tailoring communications to their customers’ mindset or iterating rapidly to understand the best timing and type of intervention.



### **Nudging outcomes**

Although the use of behavioural economics remains nascent in Canada, it is already being applied in the US and the UK. Tax collectors have used it to change the way they communicate with citizens in a bid to increase tax remittance and compliance. Similarly, by changing the way in which they structure their product offerings, organizations that sell complex financial products have been able to shift certain customer buying habits and responses. Notably, the way in which organizations design their offers or present choices has a meaningful impact on a transaction’s ultimate outcome. In fact, it is often possible to see major behavioural responses by making only small architectural alterations. Many of these small interventions—or nudges—have already been tested and used to help organizations achieve a variety of objectives, from delivering tailored marketing messages to reducing drop-off in the customer purchase journey.



### **A mindful approach**

Although behavioural economics has already had a transformative effect in how analytic insights are actioned, organizations must be careful in how they use this approach. On the one hand, customer expectations continue to spiral, which requires organizations to become more sophisticated in their bid to provide more immediate, convenient and personalized service experiences. On the flip side, organizations may find themselves suffering severe reputational—and even financial—damage if customers feel they are being manipulated in their decision-making processes. As such, it is imperative to adopt strong governance practices around the way in which behavioural economics are used and applied.

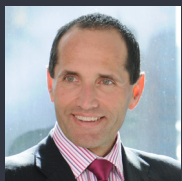






To discuss how emerging analytics trends may affect your organization, contact: [deloitteanalytics@deloitte.ca](mailto:deloitteanalytics@deloitte.ca)

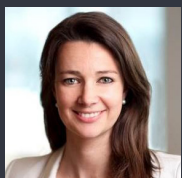
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