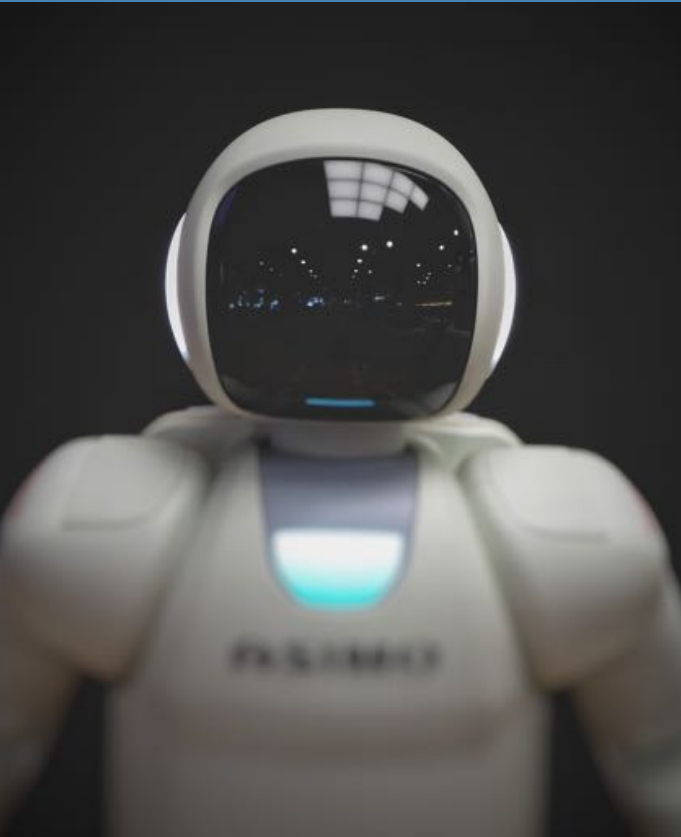


A photograph of a business meeting. In the foreground, a woman with short dark hair and large hoop earrings is looking at a laptop. A man in a suit is pointing at the laptop screen with a pen. The laptop displays a line graph with multiple data series. Other people are visible in the background, some holding documents.

Strategy in Practice: Analytics and AI

“Strategy in Practice” is a series dedicated to creating meaningful strategic discussions among senior leaders, with the aim of aligning around a common point of view on critical business issues.



CEO's state that Analytics and Artificial Intelligence (AI) are key drivers for their organizations.⁽¹⁾

And yet, the average tenure of a CAO is 2.6 years.⁽²⁾ More than 72% of CEOs say these initiatives have not yielded any results.⁽³⁾

Addressing the common culprits of data quality, governance, and 'quick wins' have not necessarily resulted in improved outcomes.

To create enduring impact, a core set of questions must be answered before investing in Analytics and AI initiatives.

1. Strategic Purpose

- What role do analytics and AI play in creating sustainable long-term value that is visible to external stakeholders?
- How will we recognize when we have achieved this purpose?

3. Trade Offs

- How do analytics and AI initiatives fit alongside other critical initiatives?
- Do we have a clear understanding of the trade-offs between investing in other value-drivers?

2. Aiming Point

- Do we have a clear direction of which stakeholders we are aiming results at ?
- Will those stakeholders be willing to pay a premium for the value created ?
- Have we prioritized some stakeholders over others?

4. Capability Gaps

- Are we clear about gaps in talent and infrastructure required to meet strategic and stakeholder objectives ?
- Are we pragmatic about our ability to fill those gaps?

Analytics and AI continue to grow in importance

Across industries and sectors, senior executives have been sending a very clear message very publicly: Analytics and Artificial Intelligence are top of mind for their executive teams and are considered key drivers for their organizations.⁽¹⁾

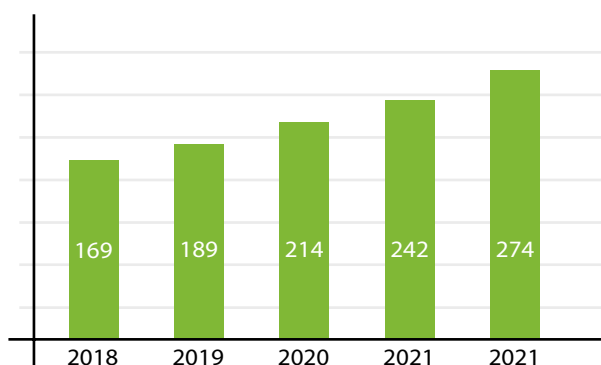


Table 1 – IDC Study released April 2019.
Annual global spend on data and analytics, in billions (\$).
US spend is approximately 60% of global spend.

Organizations both big and small have no shortage of options when considering the investments in analytics. The problem is, even in an environment with a supportive executive team and ample budgets, developing a coherent strategy for what you are investing in and why, and how it fits with the rest of the organization's portfolio can be a daunting task.

Answering a core set of strategic questions can help Analytics leaders as they think about where to invest for the best return in analytics and AI – questions on your organization's strategic purpose, aiming point, trade-off considerations, and capability gaps.

Even with all of this focus and public attention, the investments executive teams are making in analytics are not delivering on expectations. More than 72% of CEOs say their analytics initiatives have not yielded the results they expected.⁽³⁾ With leaders requesting more and more investments in analytics, the pressure to deliver concrete results is putting increasing scrutiny on Chief Analytics Officers (CAOs). And this pressure has had a tangible impact – the average tenure of a CAO is just 2.6 years.⁽²⁾



Current playbook is not yielding results

Organizations are racing to develop competitive advantage by embedding data-rich and analytics-driven decision making in their culture. Leading edge companies are embedding analytics directly in their products. Investments in data and analytics continue to grow.⁽⁴⁾

But in a survey of C-level executives across many large organizations,⁽¹⁾ leaders' responses paint a

picture of stagnation and frustration with driving outcomes through analytics.

The survey was made up of 64 C-level technology and business executives representing large corporations, such as American Express, Ford Motor, General Electric, General Motors, and Johnson & Johnson.



72%

"we have yet to forge a data culture"



69%

"We have not created a data-driven organization"



53%

"we are not treating data as an asset"



52%

"We are not competing on data and analysis"

Despite many years of sustained effort and millions of dollars poured into data lakes and analytics tools, why do so many companies struggle with extracting value out of their investments?

The issue is that the playbook for analytics and AI has not changed. The typical approach employed by analytics executives involves some variation of the following:

Current state analysis – Conducted through interviews with various senior executives to identify issues and business opportunities.

Future state design – Involves a compilation of desires expressed in aforementioned interviews.

Gap assessment – An arbitrary 'maturity model' with well-placed Harvey balls indicating capabilities that need to be filled.

Roadmap – A series of analytics use-cases, each with well-articulated business results and promising ROIs.

Within a few weeks of appointing the new CAO, a clear plan and set of analytics initiatives are identified. Unfortunately, these plans typically come with an investment requirement of a few million dollars and a strong dependency on the CIO's ability to improve the data environment (which comes with its own investment requirement of millions of dollars).

“Within eight weeks, we identified four high-value use cases with 12-month ROIs. Guess how many got funded by the CEO? Zero”

- CAO of a \$4B company

C-suite must answer 4 questions to set direction and boundaries

CEOs constantly face a deluge of ideas on ways to improve their bottom lines – some employing emerging trends such as AI, Digital and Gig workers, and some employing tried-and-true traditional levers such as pricing, supply chain, marketing mix and traditional talent management. These leaders want to maximize their opportunity to create competitive advantage, but many of them lack the time or resources to appropriately evaluate the promise and peril of making trade-off decisions, especially with respect to emerging trends. As a result, they rely on the tried-and-true traditional levers or take risks on emerging trends based merely on instinct. These decisions are reflected directly in funding choices – the typical CAO's funding is significantly smaller than other C-suite leaders.

And yet most CEOs want to increase the amount they invest in emerging trends. When we talked to CEOs, they echo very similar sentiments:

“I am able to draw a straight line from my investments in product, sales, or service to financial results or competitive advantage. I'm not able to do that with Analytics & AI.”

These executives don't want to invest millions of dollars on hope and a prayer; as a result, all they are willing to do is test the waters.

Through workshops with a number of CEOs, Chief Analytics Officers and Chief Data Officers, we have identified four key questions, that when answered thoughtfully, can enable CEOs to make confident investments in analytics.

Question 1

What is the role of analytics and AI in creating long term competitive advantage?

When making a case for investments in analytics, CAOs and Consulting Firms tend to highlight disruptors from other industries – Uber, Airbnb, Amazon – who have upended industries through breakthrough technologies and emerging trends. CEOs recognize that these extraordinary disruptors are just that – extraordinary and infrequent. Experienced CEOs understand that competitive advantage comes from careful study of the customer's future needs and deep understanding of the attributes of the company that can successfully meet those needs.

In order to articulate the role of analytics in creating long term competitive advantage, the CAO must be able to answer these questions:

- On what basis of competition do we win today? How will that change in five years?
- How will we create visible value to our customers and other stakeholders?
- What role will analytics and AI play in delivering this value?

For example, one company may choose product innovation as the source of advantage, while another may choose customer service, while yet another may choose cost competitiveness. Typically, it is a combination of attributes that companies choose to differentiate themselves. Understanding these attributes is critical to then defining how analytics drives or supports them. For example, embedding analytics within a product would be an effective strategy for a company that wishes to create competitive advantage primarily through product innovation. But it may not be an effective strategy for a company that wishes to compete on the lowest cost.



Question 2

Who are the most important stakeholders? And will they pay us for the value we create?

Most companies have a good understanding of their target market. Sometimes, they have a clear understanding of their suppliers. But rarely do they have a complete view of all their stakeholders and the impact of those stakeholders in value creation. Some additional stakeholders may include regulatory agencies, distribution channel partners, supply-side intermediaries such as group purchasing organizations (GPOs), manufacturers, or after-sales-service partners.

Depending on the choices made in question 1, companies may choose to aim analytics solutions at different stakeholders. In the example of creating competitive advantage through product innovation, one may choose to target two different sets of stakeholders:

- Share customer analytics with OEM manufacturers to create new products (or)
- Partner with a technology company to embed analytics into existing products.

The C-suite may pick one of these choices (based on answering questions 3 and 4 in the following pages). However, the analytics solutions and associated people, process and technology capabilities vary significantly based on the choice made.

CAO must be able to collaborate with other C-suite leaders to gain common agreement on the stakeholders that analytics will impact the most. CAO must work closely with the primary custodian of the stakeholder relationship to unearth value that will be visible to the stakeholder.



Question 3

How do analytics and AI fit alongside other value-drivers?

CEOs are constantly evaluating choices. Even cash-rich CEOs recognize the limits of management attention and the ability to execute. Making the right set of choices is one the most difficult and important parts of a CEO's job. The CIO argues that blockchain will transform their company. The CMO argues that digital transformation will determine winners and losers. The CHRO argues that workforce transformation is the key to success. To a large extent, they are all correct. But what will the company choose to place management attention on? And how much? Experienced CEOs also know that gaining alignment in these answers among these leaders is critical to successful execution.

The CAO must be able to articulate what combination of traditional value drivers (product, pricing, unit cost, distribution, talent, etc.) and

emerging opportunities (analytics/AI, digital capabilities, gig workers, etc.) will be employed to create the company's unique value proposition.

This articulation is often done through one-on-one discussions and 'back-room' deals. We find those to be short-term and ineffective. An effective method is to create a structured discussion among the senior leaders focused not on the solution, but on the underlying beliefs and assumptions that inform the selection of a particular solution. When done correctly, we see fierce debate followed by "Aha!" moments of clarity and understanding. For example, the CIO might begin to understand how embedding analytics within the product can create competitive advantage more effectively than applying blockchain to mundane transactions.



Question 4

Do we understand the capability gaps and how we can successfully fill them?

When faced with exciting opportunities, leaders tend to focus on only the most visible capability gaps and rush to fill them. The most common focus areas are data science expertise, data quality, data lakes, and so on. But capability gaps extend well beyond analytics areas to consumers of analytics and operators of the value drivers identified in questions 1, 2 and 3.

For example, a non-profit company realized that most of its business leaders were unable to apply analytical insights because they lacked sufficient understanding of core business processes. A company that chose their suppliers as the aiming point for analytics realized they needed to create new jobs and processes internally to interface with those suppliers. Another company needed completely new people, process, and technology infrastructure to manage data sharing policies in order to embed their analytics in other companies' products and services.

In order to fully understand the capability gaps, one must describe the future state in much greater level of detail than is typically done. A good description typically consists of the following:

- Clear articulation of future state, including not only 'what we have achieved' when we get there, but also 'how we operate'
- Detailed description of assumptions and beliefs that led to the selection of this future state
- Critical operating elements and descriptions of desired state of these elements
- Articulation of capability gaps that need to be filled as part of execution roadmap

In addition, it must describe how investment decisions are made on an ongoing basis. How are results measured? How are corrective actions identified? How are changes in the external environment monitored? (customers, competitors, suppliers, etc.) How are those changes reflected in the chosen strategy?



Conclusion

What works for one organization doesn't necessarily work for another. Companies must first choose the dominant purpose of their data and analytics investments. Senior executives must agree and align on that purpose. Strategy purists call for choosing "what not to do," but we find that in practice, senior executives struggle to take options off the table. A middle ground is to make small investments to keep these secondary options open, but to invest heavily in the primary needs. Once those key choices are made, a sustained focus along all four dimensions – structure, culture, talent and technology – is essential to being successful.

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3. <https://hbr.org/2019/02/companies-are-failing-in-their-efforts-to-become-data-driven>
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Accelerators

Even though each company's situation is unique, a set of frameworks can help accelerate the design and implementation that is best suited for the company. First Quadrant Advisory deploys the following assets and accelerators as appropriate.



Trade-off Evaluation Tables

Over 260 combinations of strategy options and associated choices, enabling rapid but comprehensive evaluation.

A screenshot of a resource allocation modeler showing a table with columns for 'Area', 'Resource', 'Cost', 'Value', and 'Total'. The table lists various resources and their associated costs and values across different areas.

Area	Resource	Cost	Value	Total
1	1	100.00	100.00	200.00
1	2	100.00	100.00	200.00
1	3	100.00	100.00	200.00
1	4	100.00	100.00	200.00
1	5	100.00	100.00	200.00
1	6	100.00	100.00	200.00
1	7	100.00	100.00	200.00
1	8	100.00	100.00	200.00
1	9	100.00	100.00	200.00
1	10	100.00	100.00	200.00
1	11	100.00	100.00	200.00
1	12	100.00	100.00	200.00
1	13	100.00	100.00	200.00
1	14	100.00	100.00	200.00
1	15	100.00	100.00	200.00
1	16	100.00	100.00	200.00
1	17	100.00	100.00	200.00
1	18	100.00	100.00	200.00
1	19	100.00	100.00	200.00
1	20	100.00	100.00	200.00
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1	92	100.00	100.00	200.00
1	93	100.00	100.00	200.00
1	94	100.00	100.00	200.00
1	95	100.00	100.00	200.00
1	96	100.00	100.00	200.00
1	97	100.00	100.00	200.00
1	98	100.00	100.00	200.00
1	99	100.00	100.00	200.00
1	100	100.00	100.00	200.00

Resource Allocation Modeler

Detailed financial model enables scenario planning based on allocating financial and people resources across functions.



Future-Blueprints

Templates for future-state include critical operating elements of each future as well as capability gaps that need to be filled as part of execution roadmap.



Industry and Functional Maps

Multi-layered taxonomy of business processes that allows client teams to evaluate interactions and trade-offs.



Decisioning Tools

Methods and templates provide structure for rapid but thoughtful decisioning approaches.



Market Analysis Packages

Standard benchmarks and competitive information that serves as input to decision making.

First Quadrant Advisory

First Quadrant is a strategy and performance advisory firm built on deep operational expertise. We have been both Clients as well as Consultants. As a result, we bring unique perspectives on issues that senior leaders face. Through distinctive methodologies, tools and accelerators, we help clients build strategies that are sound, executable and enduring.

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