

# The Learning Organisation

CAN CIOs HARNESS THE CURRENT ENTHUSIASM FOR ANALYTICS TO ENCOURAGE A CULTURE OF EVIDENCE-BASED DECISION MAKING?







## The trend for analytics

For the last couple of decades, savvy businesses have been using both Management Information and Business Intelligence (MI and BI) technologies to maintain better control over operations, and to make better business decisions.

More recently, new tools have emerged to help them make sense of the huge swathes of amorphous, unstructured data they can now access as a result of social media take-up, increased employee mobility, and further automation of manual processes.

Meanwhile, the leaders of large, private and public sector organisations are showing a resurgence of interest in the use of scientific methods to support strategy and policy. There's a chance that evidence-based decision making will become accepted as superior, and in consequence we'll see a decline in the number of decisions made in haste, or with undue bravado.

With so much current interest in analytics, CIOs can expect support from various quarters when they start to plot their organisation's course. But with all eyes on this subject, they have to make sure that their course is the right one.

# Approaches in analytics

Right now, we see four dominant approaches in analytics:

- Technological: analytics activity is stimulated by technology products, and emphasis is placed on what interesting data exists, and what interesting insights can now be gleaned.
- Scientific: an evolution of the technological approach, which seeks also to experiment over time, monitoring and comparing alternative outcomes.
- Informed: the emphasis is on seeking-out the questions, which would generate the greatest business benefit if answered with analytics.
- Learning: the most mature approach, which puts the right questions ahead of the most interesting insights, but also uses experimentation to create any necessary missing data.

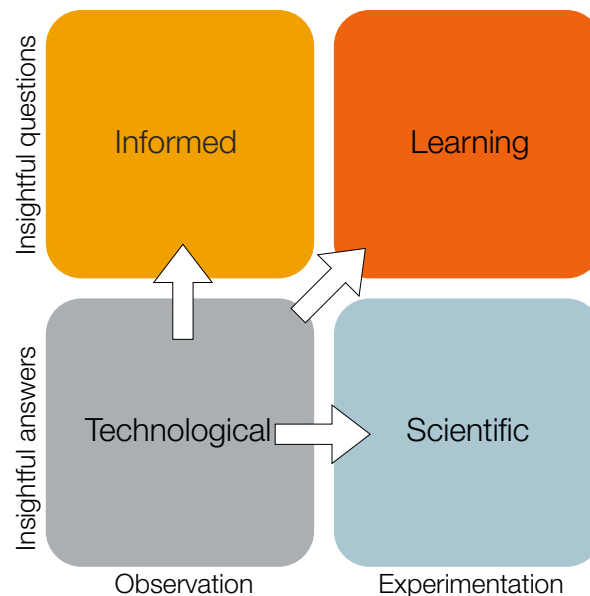


Exhibit 1 – Four dominant analytical approaches

The final “learning” approach is the one we’re the keenest to encourage, because it offers transformative CIOs the opportunity to lead the organisation into a culture of evidence-based executive decisions.

But the “technological” approach is still the one we see most frequently. IT departments have been attracted to the idea of using technologies like Hadoop and High-Performance Computing to blend their own historic corporate data with external social, demographic or geospatial data, clear in the expectation that business value must follow.

There have been some well-publicised success stories from the technological approach, but nowhere near enough to justify the hype. Organisations will see a more reliable return on investment by first seeking the business questions which most warrant the effort of analysis.

# The learning approach

Let's draw a clearer distinction between the approaches.

Imagine you're the CEO of a leading high-street retailer. Efficiency is high across your operation, but year-on-year sales fell by 20% last quarter, and you need to know why. So when your CIO jubilantly announces his latest "Big Data" discovery - that the attrition rate of warehouse workers has a seasonal trend - you may be a little nonplussed. The CIO is certainly offering insight, but it addresses no recognisable business problem.

Fortunately you can take a much more considered approach:

1. Begin to build support for data-driven decision making across the organisation.
2. Suspend any technological experimentation, which seeks to divert busy business teams, while you determine what questions you'd like analytics to answer.
3. Develop hypotheses about the causes of business problems, or about the likely merit of business opportunities, using robust modelling techniques such as benefits dependency networks.
4. Design experiments which blend evidence from diverse data sources (see exhibit 2) to prove or refute your hypotheses, either as a one-off exercise or repeatedly.

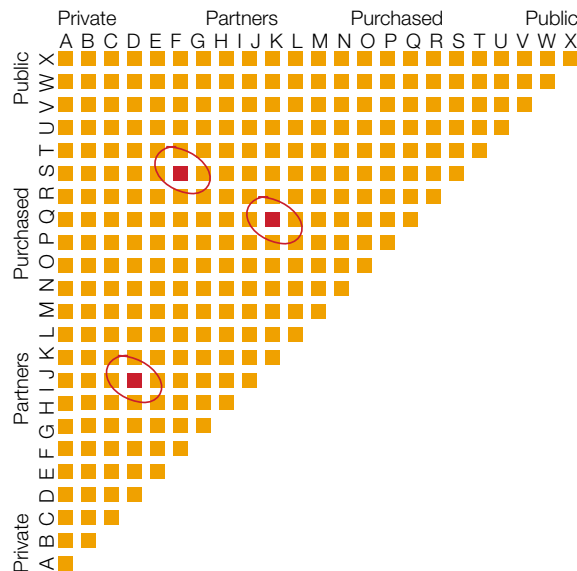


Exhibit 2 – Blending data to create insight

Internet-based "Big Data" sources should be considered, but not preferred. You may be pleasantly surprised to find everything you need inside existing corporate databases.

Whatever the source, you'll be working with data which is fit-for-purpose, instead of seeking the most unusual insights irrespective of need. And you'll be making much better use of your scarcest resources: senior executives and expensive data scientists.

The alternative is to allow analytics to go the same way as email, delivering irrelevant information to the wrong people, and demanding a new army of executive assistants be employed to separate the wheat from the chaff.

# Approaches in analytics

Once you've understood what's useful to the business, it's time to check the viability of answering the questions you've framed. Reach this point soon, because value is sometimes overwhelmed by costly complications which may take time to address, or may even prohibit further investment some areas. They include:

- collecting, cleansing and repairing data
- applying structure to unstructured data, and quantifying qualitative data
- commercial and regulatory sensitivities
- infrastructure cost from running complex algorithms on large data sets
- skills shortages
- attachment to the existing decision-making culture
- executives' loss-of-face if reports are at odds with their instincts.

There are usually solutions to these problems, but it sometimes takes creativity and experience to find them.

## Advice is at hand

CGI's CIO Advisory practice has addressed these challenges before.

We understand the marketplace of analytics tools and high-performance-computing suppliers, and the potential they present.

We're rational and uncompromising, so we uncover the real questions before seeking to answer them.

We offer creative possibilities to clients, but also have decades of deep engineering experience, so were early to recognise what can reasonably be achieved through the manipulation of data.

And when security concerns threaten the efficacy of your analytics efforts, you'll be comforted to know that our advisors are backed by the UK's largest team of CESG security specialists.

We're driven to help our clients realise an optimal portfolio of IT-enabled investments, where innovation helps to produce the greatest returns with the least risk. If you share that vision then please get in touch.

## Did you know?

CGI used analytics to improve the success rate of a recent telecom marketing campaign from 15% to 75%.

CGI provides the UK's Police National Database allowing forces to pool intelligence, and act upon it quicker.

CGI is the driving force behind the Data-to-Intelligence (D2I) program in Finland.

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