Top issue for CIO's in 2016 - Turn Data into Business Intelligence

By: George Rafael

THE MESSAGE IS CLEAR

"The 2016 Gartner annual report for the Business Intelligence and Analytics market carries a greater significance because it reflects a transformational shift to modern analytics."

Gartner, January 2016

"Technology has increased our ability to consume data like never before. What technology doesn't help with is our ability to synthesize new data. Careful, thought provoking analysis is in competition with the desire to get into an unloved stock or sector before the masses drive prices up."

Richardson GMP, February 2016

From industry think tanks to what drives market forces, these statements speak volumes about the first in the top 10 CIO "must haves" to respond to the demands of business.

THE FOUNDATION IS BUILT

For the last two decades most enterprises have been investing heavily in ERP and ERP-like solutions. They now have the ability to efficiently and reliably process the basic transactions required for business operations. In many cases, this has resulted in cost savings resulting from consolidation of business process, single capture of information and a reliable store for corporate data. The big ROI promised, however, has not materialized.

There are also an increasing number of tools and technology on the market that claim to address this issue. But in order to meet the need, there are prerequisites that need to be considered.
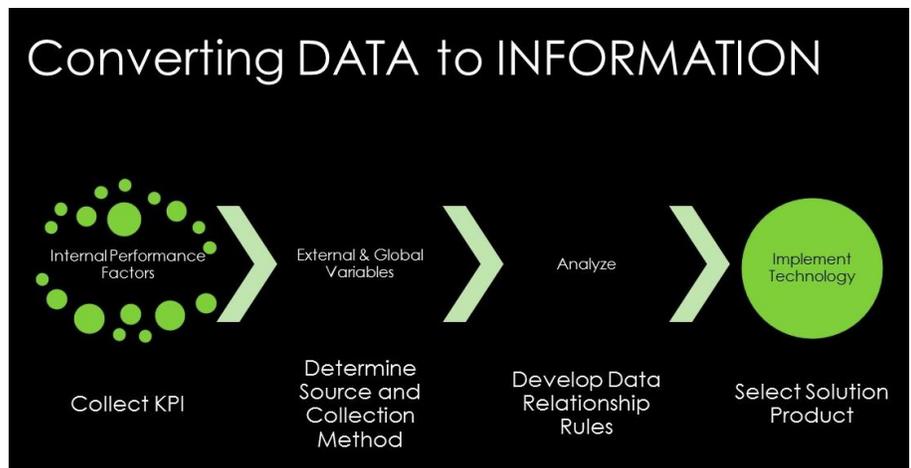
WHAT DRIVES THE INITIAL STEPS

The word data is used intentionally. Yes, it accurately portrays what has happened, but so does the rearview mirror in an automobile. Because this data is not information until it is put to use to create strategic and operational advantage.

A second driver for business is how the information internal to the enterprise relates to external forces and events. This is referenced in the opening paragraph of this paper from Richardson GMP. Also, the internal system may be able to select the cheapest choice of carrier for a shipment that must arrive in Houston by next week, but it cannot account for the snowstorm forecast in Denver. Correlation between global economic and external events to internal history and forecasts is what separates successful and nimble enterprises from the losers.

Third, the value of "big data". There is free availability these days of the stores created by massive data collection engines accessible on the web such as Google, Wikipedia just to name a few. This has largely replaced conventional research processes that used to be done by analysts and librarians. Did I mention "free"?

ADDRESSING THE NEED

So now we know where to begin. The data is there!

Converting DATA to INFORMATION

Internal Performance Factors → External & Global Variables → Analyze → Implement Technology

Collect KPI | Determine Source and Collection Method | Develop Data Relationship Rules | Select Solution Product

Step 1 – Define key internal performance factors

Transaction systems organize data for the efficient processing of transactions. Also, the purpose of use is repetitive and the system has been designed to respond in seconds to manipulating only the data required for a single purpose.

While there are reports and queries, the questions they serve are fixed and pre-determined.

What is required is the ability to organize and aggregate the data in terms of key performance measures and indicators that are <u>specific to the business</u> and its main value chain. Consider that all main value chains operate across the enterprise and not in organizational siloes.

Step 2 – Identify key external influencing factors

Most businesses are subject to external and world economic events. Depending on the business, it could be anything from customer buying patterns to currency exchange, commodity price forecasts, geopolitical and weather events just to name a few.

What is needed once these are identified is determine the best source of data. Consider that in many cases these will be new and innovative, thus professional help will be needed to confirm value and method of acquisition.

Step 3- Develop new analysis paradigm

Now we know what <u>data</u> needs to be converted to <u>information</u> and where to get it. In order to face forward rather than looking at the past a major shift is required. This is where the true value of compute power kicks in. The advances of AI-like capability as it is applied to big data has created a capability for <u>Predictive Analytics</u>.

Predictive analytics is an area of data mining that deals with <u>extracting information</u> from data and using it to predict <u>trends</u> and behavior patterns. Often the unknown event of interest is in the future, but predictive analytics can be applied to any type of unknown whether it be in the past, present or future.

The core of predictive analytics relies on capturing relationships between <u>explanatory variables</u> and the predicted variables from past occurrences, and exploiting them to predict the unknown outcome. Predictive analytics is often defined as predicting at a more detailed level of granularity, i.e., generating predictive scores (probabilities) for each individual organizational element. This distinguishes it from forecasting.

Wikipedia

WHAT'S NEXT?

Some of the steps identified to this point are new and innovative. Get expert help and guidance so that internal thought constraints do not limit the strategic advantage that may be missed.

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In this paper also there is no reference to software packages, hardware, and cloud computing or other pieces of technology. These are available in a variety of flavors and profess a variety of claims and advantages. Leadership amongst these also changes almost daily. So early selection is likely premature.

Selecting technology and tools is the last step and should not be considered until due consideration is given to and execution of the steps in this paper. Doing so could result in getting a new car without a driver and a destination.

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