The analytics-driven CFO
Using advanced predictive analytics to drive financial success

2 of 5

The key to success for the analytics-driven CFO
There is no doubt that information management has suffered from lack of action off the back of insights generated. That is, there is a technical capability in place to generate insight but then a gap from there to action and ultimately value creation.

Companies have disproportionately focused and invested in the technical aspects of big data and analytics. This includes things such as new technology and tools, data quality and advanced analytics skillsets. These are all critically important to the “production” of analytics. But this is only half of the equation. These capabilities are necessary but insufficient for realizing value.

The key to success for the analytics-driven CFO

The value of an idea lies in the using of it.
— Thomas A. Edison, American Inventor

The human element of analytics

Organizations must not only have the technical capability to deliver insights, but they must also have aligned their culture to using those insights to inform action. The insights must result in a human changing their behaviour - a process, a decision - for value to be realised. This is where the real return on investment is felt.

If there is a gap between delivering insights and taking action, the analytics will not affect change. It’s as important to invest in the change as it is to invest in the technology to generate the insight.

A recent EY-Forbes Insights survey of 564 executives in large global enterprises found most still do not have an effective analytics strategy and continue to struggle with change management issues in delivering analytics-driven results (read the full report here)

Figure 2: Both the consumption and production of analytics are critical to creating real value
Cyber Security Use Case

In the world of cyber security for example, we use advanced analytics to predict anomalous behaviour on MAC addresses (the unique 16 digit hard-coded firmware address that exists inside every device) and apply alert mechanisms on suspicious behaviour that the analysis identifies as a potential attack. Understanding normal behavior will help organizations quickly identify anomalous activity. We call this the ‘kill chain’ and it is a standard behavioural pattern within any organization (based on MAC address interaction). Of course, it remains that someone must still act on the alert for effective change to occur.

From a CFO’s perspective, cyber is a danger area on a grand scale. At the top level, this can include attacks to influence and shape trade relations and pricing models internationally. A recent example includes attacks on logistics systems, accessing stock levels to influence commercial price negotiations. At the front line, it could be leaks to market on company performance before official shareholder briefings. With increasingly sophisticated hackers, many recent attacks have involved siphoning funds electronically. As well as reputational risk, these attacks could invite greater regulatory scrutiny, which in turn increases costs.

### Figure 3: The cyber ‘kill chain’ shows the MAC address interaction patterns that are most likely to be an attack

#### Background research
- Initial attack
- Establish foothold
- Enable persistence
- Enterprise recon
- Move laterally
- Escalate privilege
- Gather & encrypt data
- Steal data

> Social media
> Email logs
> Browsing history
> Computer logs

> Browsing history
> Email logs
> Computer logs
> User access logs
> Anti-virus alert logs

> Computer logs
> User access logs
> Computer logs
> IP address look-up logs
> User access logs
> Anti-virus alert logs

> Computer logs
> IP address look-up logs
> Routed network traffic

> User access logs
> IP address look-up logs
> NetFlow

> User access logs
> Computer logs

> Computer logs
> IP address look-up logs
> NetFlow
> Browsing history
> Email Logs

> File transfer logs
> Browsing history
> Email logs
> IP address look-up logs

Finance Use Case

In the CFO’s world, advanced analytics techniques can be used to identify patterns in standard routines, such as applying tax codes or business rules to transactions. This provides much greater transactional integrity and gives a highly granular view of how/what has been entered into systems. Identifying accurate asset codes for depreciation purposes is also an advantage of predictive analytics. This can severely impact cash flow. We’ve run analysis for many organizations and we are yet to see a set of complete, accurately-coded assets. In most cases an uplift of millions in cash flow position may have been possible by correctly using advanced analytics techniques.

Realizing the strong connection between insight and human action is key to success with analytics, and this is especially true in finance.

1. **Align your culture to fact-based decision making.**
2. **Embed analytics at all levels of your organization and ensure your people know how to use the insights.**
3. **Reward those that use analytic insights for better outcomes.**
The analytics driven CFO

1. Getting value from data and analytics
2. The key to success for the analytics-driven CFO
3. Barriers to becoming an analytics-driven CFO
4. Three steps to becoming an analytics-driven CFO
5. Driving change to an analytics-driven culture

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