



# Turning Data into Actionable Insight

Nick Millman, Managing Director for Big Data & Analytics Delivery in Europe, Africa and Latin America at Accenture, tells Dawn Murden how organisations are using design-thinking and AI to drive data-led decision making



### What trends are you currently seeing in data and analytics?

One big trend is the greater use of artificial intelligence. We're seeing an uptick in how businesses can improve what they're doing through AI.

There is also a trend of applying more design-thinking to the way that data and analytics are served up. Better technology capability means businesses are able to give people more graphic and visual ways of identifying the information they need.

Using the principles of user experience design, visualisations help people pinpoint what they need, rather than giving lots of information to analyse.

### What problems does the design-thinking method solve?

The way that organisations historically used data and analytics was to provide either reports, or a cube of data that a good analyst would be able to drill into to find insights.

Now, the pace of change and rising customer expectations mean it's a risk to ask users to spend a significant amount of time searching for nuggets of information.

It's much better to take a user-centric approach and think about the insights that individuals need in order to perform better in their role.

By presenting data in an easily accessible picture or graph, decision-makers can grasp what needs to be done with minimal effort or technical training.

*“Put the key intelligence front and centre, making it obvious to the user”*

As well as boosting speed for individual users, it also drives value for the organisation by enhancing and accelerating the adoption of data driven decisions across the workforce.

This means fewer actions will be taken solely on gut-feel; instead human judgment will be augmented with hard, verifiable insight.

### What skills are required for this approach?

Businesses need a multi-skilled team with expertise in analytics, visualisation technologies, the user experience and people-centric design.

That spread of skills will allow them to think holistically about how to present data – whether it be on a smartphone, tablet or PC – in a way that catches the user's eye.

The other key factor in effective visualisation is a delivery approach based on agile techniques – leveraging

the delivery models that would typically be used to build an e-commerce website, for example.

The benefits of adopting agile delivery models include faster times to release a new product, and far greater responsiveness than is possible with traditional 'waterfall' release cycles.

These are important capabilities to establish, as speedy insight is a key driver of competitive advantage.

### How are companies combining AI and data capabilities?

Firstly, there is the more routine 'intelligent process automation', which takes away some of the repetitive manual tasks that humans have to do today – such as producing regular transactional reports. >

#### CASE STUDY: THAMES WATER

The utility company was an early-mover in the intelligent use of real-time data to monitor its assets in 2014. Thames Water has now deployed advanced analytics that enable it to anticipate and respond, close to real-time, when faced with adverse events and critical situations, such as a water outage.

A number of algorithms and visualisations process that information in order to provide alerts to the operational management, helping them do preventative maintenance or react swiftly when incidents occur.



The second area is 'enhanced interactions', whereby businesses use virtual agents or chat bots. These combine AI and data to better serve the customer 24/7.

Then there is 'enhanced judgement', which involves using machine intelligence to apply human-like judgement to analyse data.

One common area of application is video analytics. For example, from a retail perspective, companies can analyse videos to understand the movement and behavioural patterns of consumers within their stores.

Another example is in the area of public Safety. In that case, existing video camera feeds at key locations can be monitored by machine intelligence to improve detection threats or incidents, and therefore provide better levels of protection for the public.

#### CASE STUDY: WOODSIDE

The Australian oil and gas company is using [predictive analytics](#) for maintenance and process-control in its production operations. Algorithms can track trends and predict downturns in productivity, highlight missed value opportunities and even warn users of impending risks, such as equipment damage.

There is a big focus on health and safety issues – clearly they operate in a potentially dangerous environment and avoiding risks to people and the plant, as well as any kind of shutdown that could have a huge revenue impact, is very important.

*“Applying machine learning techniques to join the dots in the data can uncover hidden value”*

Finally, the last area is around unlocking the value of dark data through machine learning techniques

#### What do you classify as dark data?

Dark data refers to the information that organisations are not analysing. This might be due to limitations in the ingestion or storage of information, but quite often organisations are not able to piece together, or maximise the value of, disparate sets of internal and external data.

This is where machine learning can be applied to join the dots and uncover hidden value.

For example, a typical organisation will have the systems in place to track a lot of the transactional activity they shared with a customer, but they may not team that with external data to generate a more complete 360-degree view of that individual and their preferences.

Machine learning can be applied to this data profile to understand the likely response of an individual consumer to a specific product or service proposition.

The advances in technology that enable these predictive models to run at such scale and granularity, combined with the capacity to self-learn from the outcomes, is a real game changer for how analytics can be applied to selling products and services.

Design thinking and AI are not just relevant for consumer industries or functions. There is huge potential for all organisations to embrace these methods and become a 'Digital Enterprise' – one that can, for example, more accurately forecast inventory required or minimise the impact of operational issues through more predictive maintenance. ■



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Nick works with organisations to harness the value of data and analytics to improve business outcomes.

During the course of his 22-year career with Accenture, Nick has accumulated broad experience in this field, including strategy and architecture formulation, business case development, requirements definition, technology selection, technology delivery and deployment.

He speaks at industry events and makes contributions to media articles on a regular basis.

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