Consulting

A big deal: how big data and analytics can drive value in the Australian retail industry

A big deal:
How big data and analytics can drive value in the Australian retail industry

Data and data analysts are priceless but underutilised assets in Australia's retail industry.

For many years, the retail industry has collected volumes of data from a range of systems to provide reports to senior managers and executives. However, retail businesses are not fully exploiting the wealth of information at their disposal – known as 'big data' – to gain an edge over their competitors.

At some retailers, the reports data analysts prepare do not change how the company thinks and acts. The findings reinforce rather than challenge the status quo.

By freeing their analysts to use big data to create meaningful reports, retailers can turn challenges into opportunities and access new markets and geographies.

What is big data?

So what is big data? According to Gartner, it is the unprecedented volume, velocity and variety of information being produced today.

In the retail context, big data goes beyond internal information produced from sales or production channels, or customer information linked to loyalty schemes. It also spans digital data ranging from website statistics to information generated by social media channels like Twitter and Facebook. This information can be aggregated and analysed to give retail managers the insights to make the right decisions for their business.

With large networks capturing more and more information across several channels in real time, there are powerful insights awaiting discovery that can be acted upon for those with the right people, tools and approach.

Build on your existing investments

Some retailers may be surprised to learn that their big data capabilities are already well advanced. Most businesses in this industry have already invested in analytics technology; however, few of them are seeing bottom-line benefits.

The reason is that retailers often fail to predict the upside of big data projects before embarking on them, making it hard to measure improvements. For example, many retailers fail to measure the incremental value that data warehouse investments deliver.

As a result, management teams do not see the improvement and refuse to sanction further investments in these or other projects that support big data initiatives.
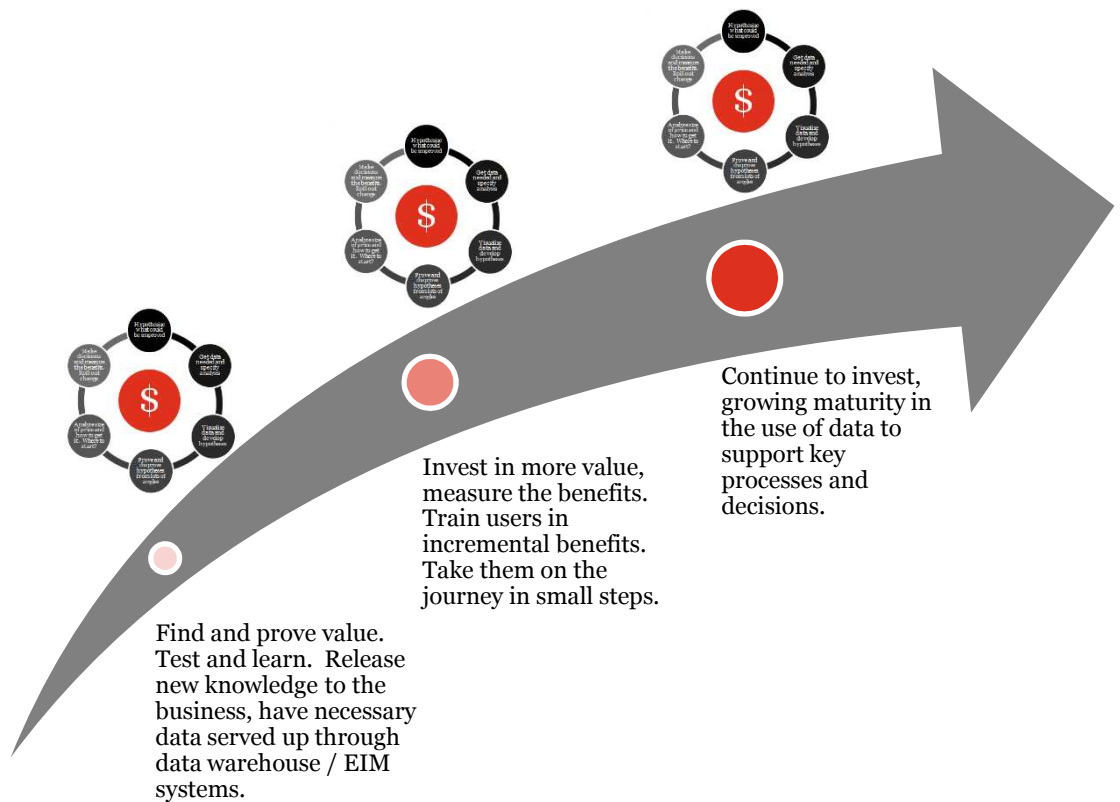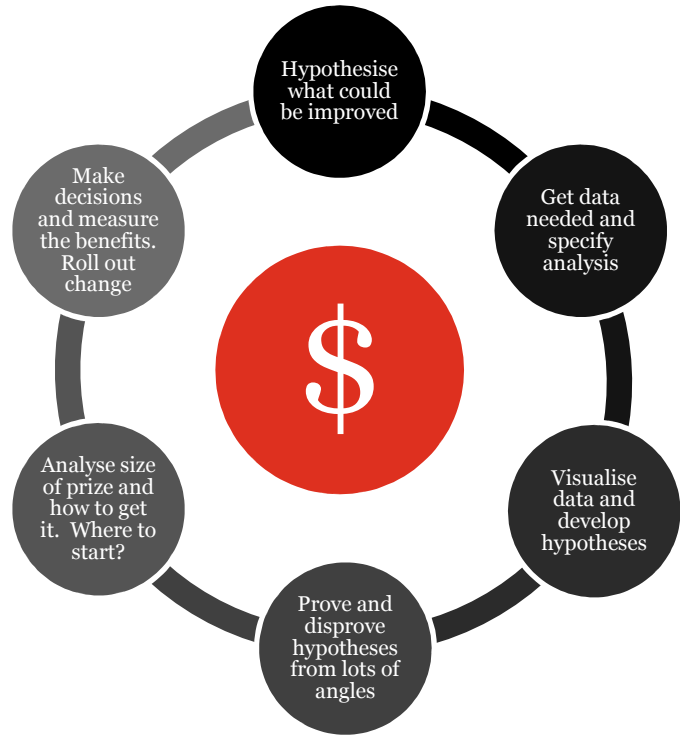
Another issue for retailers is that data projects can feel expensive when driven by the IT function rather than business teams. Without viewing these initiatives through a commercial lens, a business can find benefits hard to predict, realise and measure. The old adage applies throughout – you get exactly what you measure. Nothing more, nothing less.

Businesses may also decide to gain a big data capability without understanding how to prioritise its development, deployment and use. This leads to 'big bang' releases of systems and tools, an approach that doesn't usually take into account the way decisions are made or who makes them. This drives low utilisation, reduced ROI and reinforces the barrier between IT and the business. This approach also impedes organisations' ability to measure benefits and achieve investment returns.

A big deal: How big data and analytics can drive value in the Australian retail industry

To avoid these pitfalls, retail businesses need to avoid this 'big bang' approach to big data. Instead, they should take incremental steps to realise additional measurable value from existing assets, before releasing further tranches of investment to deliver even more value. This investment approach echoes the venture capital model of seed, measure, embed, grow – and repeat.

The Value Discovery process focuses on immediate opportunities data can uncover and rolling out new information incrementally, avoiding the issues that a 'big bang' approach usually create. This creates self-funding EIM execution.

Hypothesise what could be improved

Get data needed and specify analysis

Visualise data and develop hypotheses

Prove and disprove hypotheses from lots of angles

Analyse size of prize and how to get it. Where to start?

Make decisions and measure the benefits. Roll out change

$

Find and prove value. Test and learn. Release new knowledge to the business, have necessary data served up through data warehouse / EIM systems.

Invest in more value, measure the benefits. Train users in incremental benefits. Take them on the journey in small steps.

Continue to invest, growing maturity in the use of data to support key processes and decisions.

A big deal: How big data and analytics can drive value in the Australian retail industry

Start with the end game

To begin determining the objectives of their big data and analytics projects, retail executives should start with the challenges they face now.

These include the migration of sales from bricks and mortar to the web, managing large transaction volumes, running effective loyalty schemes, and supporting large and complicated product ranges.

By using big data to obtain insights into customers' needs and wants, fuel innovation, improve productivity and foster talent, retail businesses can turn these challenges into competitive advantages.

For example, a retail business that builds a database of loyalty program participants and combines this information with unstructured data such as emails, videos and documents can build a very complete picture of its most regular customers. It can use this picture to build and personalise offers and campaigns, and launch them at times most likely to yield success.

But before it starts on this journey there are likely to be several other opportunities in existing internal data that can be brought to bear through better analytics. To get the most from external data, and to drive better customer insights, retailers need to be able to merge and mash this unstructured data with their existing data. This isn't just about financial data either – think property, operations, marketing, merchandise, pricing, HR and logistics data brought together in a way that allows the business to literally see the causes and drivers of business performance in a game-changing way.

So, how can an organisation leverage its data and data analysts to extract the insights that can underpin these initiatives? The answer lies in value. Baby steps (measured, celebrated).

Introducing value

Earlier, we introduced the volume, velocity and variety of information. There is a fourth 'v' – value. Value is a retailer's Holy Grail, and it should direct each and every step they take on their big data journeys if they want to beat the competition.

Most retailers experience the graveyard of information, reports and processes. Many executives in this sector succumb to the temptation to review every piece of information, or lack faith in their ability to identify nuggets of value in the data they can tap into. This can lead to more and more reports, with little focus on which key data is needed to run the business – and which tactical data can be leveraged from time to time to take advantage of a particular seasonal, competitive or event-based nuance.

In addition, justifying investments in big data at a time when budgets are under pressure can be very difficult.

This is where data analysts – and the value they add – come into the picture. They can deliver the insights and opportunities for a retailer to take the lead in a market, product or service.

However, in many organisations, analysts are too bogged down in producing mundane or repetitive reports to add this value. Isn't there a structure that protects analysts from business as usual processes and allows them to focus on the value-add?

Analysis paralysis

Analysts, listen up! The numbers captured, stored, cleansed and served to your retail business aren't there for decoration. You really do have a chance to change things.

At its most interesting, your job lies in discovery and asking questions. You can turn insights into opportunities and convince management of the value in making changes. You can advise your business of what to do and what steps to take to succeed.

Analysts who do not apply this value-based philosophy now will miss the opportunities of big data later. Businesses that don't support their analysts can expect more humdrum reports, reduced budgets for tools, data and training and analytics operating as a cost centre, rather than a profit centre.

Most reports are produced today without anyone really being interested in the potential of the information they contain. They're just produced as a safety net – many organisational teams use them to defend their own interests and decisions. Very rarely will someone question the value of the report to a retailer or suggest analytics be aligned across departments to help the business gain a competitive edge.

How should retail analysts add value to the business and what are the best ways of organising and empowering them? The answer lies in the data, as we see in the following example.

A big deal: How big data and analytics can drive value in the Australian retail industry

Predicting the unknown and knowing what to measure

Recently, a retail analytics team reviewed the sales of a perishable product. While the exercise was complex, the fundamental problem was that sales were declining and losses were rising.

Hypotheses about the problem abounded, ranging from oversupply to undersupply, marketing the wrong range to clearance processes. The team's theories covered supply quality, availability, price, weather and competition.

In fact all of these problems were occurring and every hypothesis about the problem was influencing supply and demand.

Following extensive debate, the team asked the question: "If we were to change something to improve availability and profitability, what should we do first and what will it be worth?"

With the right approach and mix of people and tools, the team could unpick the problem and start predicting the impact of each factor.

The analysts discovered some valuable dynamics. For example, the AFL Australian Rules Football grand final affected sales of this particular product line. Then the team started unpicking the variances over seasons, price, preparation and production, and came up with a plan to rectify the problem.

Using this plan, the organisation identified which actions in which stores would have the biggest financial impact, helping them align their rollout plan with measurable financial benefits.

By measuring the impact of these actions, the team could focus on the right measures of success and benchmark ongoing performance to ensure it continued. Defining the ongoing metrics also enabled the organisation to minimise the information that needed to be repeatedly produced and prepared for the business. The team also defined the information lifecycle and applied a 'value lens'.

What does the information 'look like' – do you use averages or can you spot the outsider? Ask more questions of your data through better visualisation.
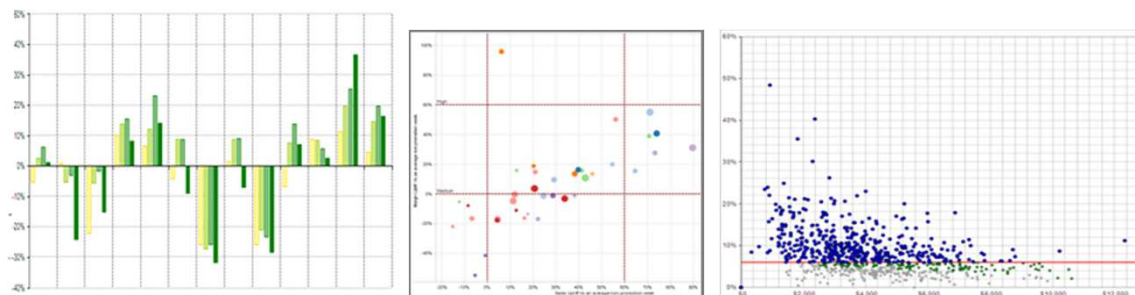
A big deal: How big data and analytics can drive value in the Australian retail industry

The opportunities for retailers are considerable. Organisations prepared to invest in the right analytics capability can improve earnings before interest and taxes by as much as 20 percent.

To achieve these results, retail businesses must create a data-driven culture that incorporates a willingness to measure success and learn from mistakes.

Retailers prepared to support their analysts with the right skills and tools to turn data into sound decisions can be sure of presenting fantastic opportunities to the business. They should also foster creativity and innovation from the analysts who are working to identify what data may be telling them.

To keep this analysis within commercial bounds, retailers should adopt a commercial framework that ensures work only continues if there is a high prospect of achieving a valuable insight.

What does a data-driven retailer look like?

These approaches are making some headway within the retail sector – but only in pockets within individual functions of businesses.

The traditional analytics support function looks like the fragmented model in the diagram below. This is the result of organic growth driven by individual sponsors who need information.

This approach leads to pockets of excellence, but often a lack of organisation-wide innovation where it matters. It also lends itself to disruption by other priorities such as month-end reporting and process-related tasks.

The trick to accelerating the evolution of a function from the diagram on the right to the one on the left is a strong business case.

This can be demonstrated through key successes in projects and diligent measurement of the value that they add to the retailer.
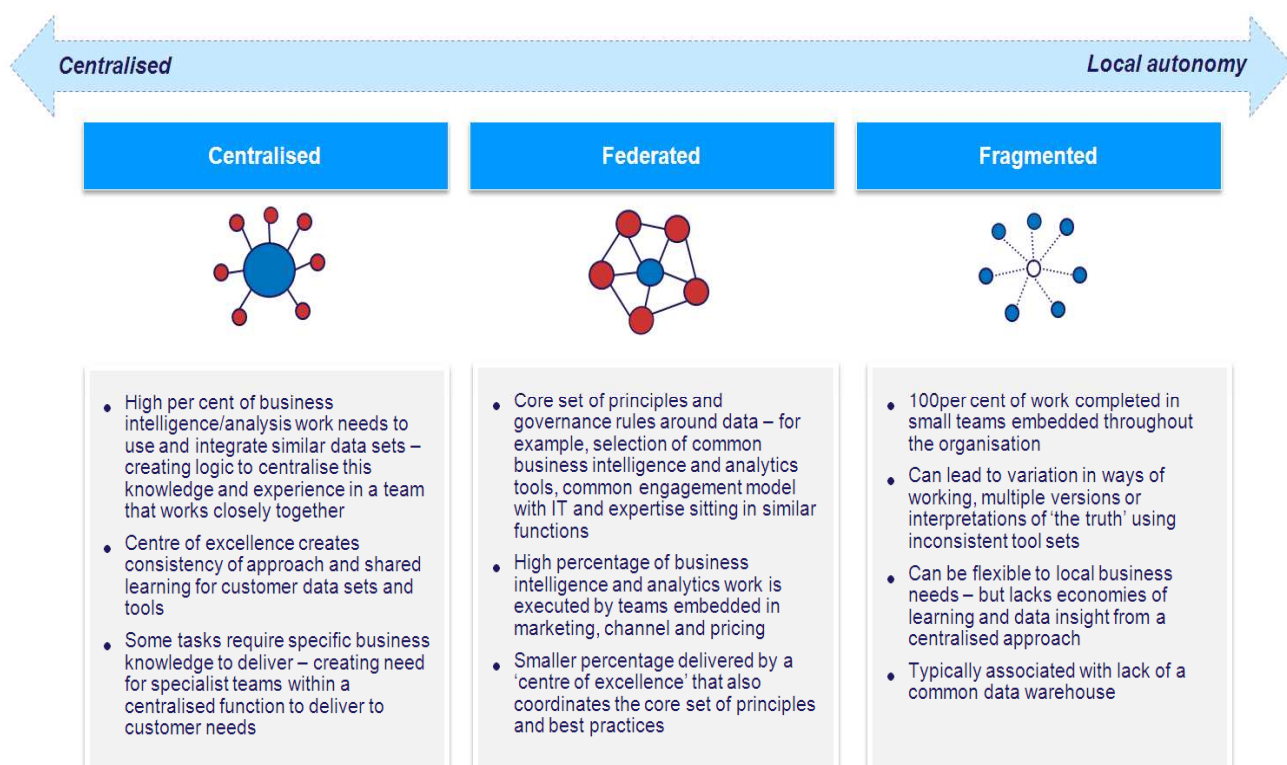
A retailer can organise its analytics team as a profit centre, not a cost centre. This reflects its role in driving strategic projects that address key organisation-wide issues.

Unfortunately, the advent of the big data era means the gap between current approaches to analytics in retail and the opportunities available exposes most businesses in this sector to sizeable competitive risks.

In particular, online retailers are moving ahead in using analytics when compared to their bricks and mortar competitors. Companies such as Amazon, Sportsgirl and Appliances Online are using every click to understand more about their channel.

For traditional retailers, competing means understanding what they need to know, how to measure it and starting to pilot and use systems that provide the necessary information.

The analytics organisation takes many forms – what does yours look like and can you measure the value it adds?

Centralised	Federated	Fragmented
• High per cent of business intelligence/analysis work needs to use and integrate similar data sets – creating logic to centralise this knowledge and experience in a team that works closely together • Centre of excellence creates consistency of approach and shared learning for customer data sets and tools • Some tasks require specific business knowledge to deliver – creating need for specialist teams within a centralised function to deliver to customer needs	• Core set of principles and governance rules around data – for example, selection of common business intelligence and analytics tools, common engagement model with IT and expertise sitting in similar functions • High percentage of business intelligence and analytics work is executed by teams embedded in marketing, channel and pricing • Smaller percentage delivered by a 'centre of excellence' that also coordinates the core set of principles and best practices	• 100per cent of work completed in small teams embedded throughout the organisation • Can lead to variation in ways of working, multiple versions or interpretations of 'the truth' using inconsistent tool sets • Can be flexible to local business needs – but lacks economies of learning and data insight from a centralised approach • Typically associated with lack of a common data warehouse

A big deal: How big data and analytics can drive value in the Australian retail industry

Measure the driver, not the result

Once you know why you're seeing what you're seeing, work out what you really need to measure.

In 2012, a retailer needed to assess the impact on sales of an operating process change rolled out to half of their stores.

The organisation started by breaking the problem down into small parts. First, were sales impacted by the change? They had increased by about 2 percent in affected stores.

The team then asked more questions about the variation in sales uplift and its cause. For example, was the change sticky, or did it decline after the initial rise? Which stores in which areas experienced the greatest change?

The results were eye-opening and changed the way the business thought about enterprise information.

There were three key metrics relating to delivery time, management tenure and labour contract type that correlated strongly with sales uplift for the program.

This meant that the operations team could start to predict changes in the effectiveness of the program just by measuring these metrics. The retailer split the stores it was about to roll the change out to into three groups: those classed as ready for the change, where all three metrics were predicting high success; those that needed some work to affect the three metrics; and the remainder, which needed significant work to be 'change ready'.

By adopting a rolling approach to change, the retailer was able to achieve success across all three groups, and achieved benefits of about $40 million per year. The company also had the financial link to their operational data to measure the readiness of the business and its ability to adopt the change.

Employing data in these types of ways gives organisations a competitive advantage. Organising and supporting analysts to deliver and own these benefits makes a big difference.

The modern analytics capability needs its day in the sun – it needs budget, encouragement, ownership and sponsorship at its most senior echelons. When it comes to value, hypothesise, predict, prove and nurture it. Most importantly, measure it. The numbers will speak for themselves.

For more information, please contact:

John Studley
Partner
+ 61 3 8603 3770
john.w.studley@au.pwc.com

Tim Clover
Director
+61 3 8603 5211
tim.clover@au.pwc.com

www.pwc.com.au/industry/retail-consumer

Retail & Consumer contacts:

Stuart Harker
Australian Retail & Consumer Goods Consulting Leader
Global Retail & Consumer Goods Advisory Leader
+61 3 8603 3380
+61 418 339 231
stuart.harker@au.pwc.com

Australia:

John Riccio
National Digital Change Leader
+61 3 8603 4968
+ 61 419 275 097
john.riccio@au.pwc.com

Paddy Carney Partner Assurance +61 2 8266 7312 **paddy.carney@au.pwc.com**	**Lisa Harker** Partner Assurance +61 3 8603 2147 **lisa.harker@au.pwc.com**	*New Zealand:* **Julian Prior** Partner +64 9 355 8591 **julian.m.prior@nz.pwc.com**
Peter Konidaris Partner Specialist Taxes and National Business to Consumer Leader +61 3 8603 1168 **peter.konidaris@au.pwc.com**	**Suzi Russell** Partner Specialist Tax +61 2 8266 1057 **suzi.russell@au.pwc.com**	**Sarah Saville** Partner Corporate Tax +61 2 8266 8665 **sarah.saville@au.pwc.com**
Daniel Rosenberg Partner Private Clients +61 3 8603 3886 **daniel.rosenberg@au.pwc.com**	**Kate Warwick** Partner Advisory + 61 3 8603 3289 **kate.warwick@au.pwc.com**	

If you have any feedback for us, or if there are any topics or issues you would like to see in upcoming editions, please contact:

Stuart Harker
+ 61 3 8603 3380
+ 61 418 339 231
stuart.harker@au.pwc.com

Andrea Marffy
R&C Industry Manager
+ 61 3 8603 3245
andrea.marffy@au.pwc.com

pwc