



EXECUTIVE BRIEF

Turning Data into Business Advantage

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Author: Graeme Muller

This Ecosystem Research executive brief reviews how some local businesses are taking advantage of Big Data to take cost out of their business or generate new revenue opportunities.

Combining insights from the recent “Turning Data into Business Advantage” executive breakfast co-hosted by Ecosystem Research & Optimization, and from research conducted by Ecosystem, this paper presents a local view to a global paradigm.

EXECUTIVE SUMMARY

Regardless of whether it is big data or simply the sheer quantity data, the increase in information available for businesses to improve decision making is driving companies to evolve their understanding and approach. The best data management solution will depend on the type of business problem that needs to be solved; this is why the approach to the development and deployment of a solution is as important as the technologies used. Despite the hype, in the New Zealand market we are seeing the beginnings of normalisation of the concept of big data. This is being led with changes in business practices and the development of solid local expertise. The following key points have been observed:

- According to our research, 72% of large enterprises in New Zealand now have a specific ‘big data’ or data management strategy in place.
- Furthermore, 28% of these large enterprises have the responsibility for data management sitting with a non-IT executive role and a further 24% having the responsibility spread across both the CIO and other business executives.
- Better integration and aggregation of internal and external data is creating opportunities to increase revenues, improve efficiencies and even create new business models.
- There are now examples of New Zealand companies generating millions of dollars of savings or adding new revenues by harnessing data more effectively.
- There is no silver bullet, however best of breed models for extracting value from data all appear to begin with a clear strategy, driven by business needs and supported by a process that includes an iterative approach and strong change management.

A TIME OF EVOLUTION

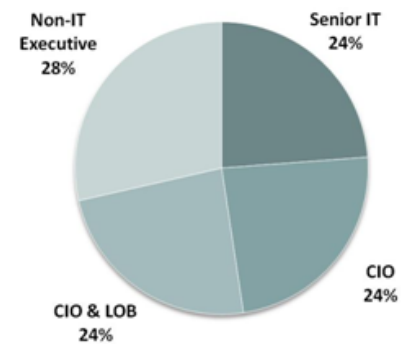
For a number of years we have been hearing about the four major technology trends that are changing the world we live in and the way we do business – cloud, mobile, social and big data. Recent research has shown that these technology forces are converging and mutually reinforcing each other, and in doing so are increasing the rate of data growth. Add forecasted acceleration of data from the “internet of things” and we can expect big data to remain at the forefront for almost all large businesses.

When senior executives from 20 of New Zealand’s largest organisations recently gathered to share ideas on how to create business advantage from big data we found that over 70% of large enterprise now have a specific big data or data management strategy in place.

There has also been a noticeable shift in the ownership of data management in companies with 28% now having the responsibility for data sitting with a non-IT executive role, and a further 24% having the responsibility spread across both IT and business.

The increased importance of information to businesses means information management must be radically improved and become an investment area. New Zealand businesses appear to be ready and willing to experiment.

Figure 1: Who owns big data?



IS THE KIWI DATA EVOLUTION HERE?

Many large New Zealand organisations are entering planning stages of big data projects, looking for growth opportunities and savings through clever use of their data.

Senior business and technology executives from Air New Zealand, ANZ Bank, ASB Bank, Auckland Airport, Counties Manukau DHB, Fonterra, Foodstuffs, Genesis Energy, Kiwibank, Kordia, Lumley, Mighty River Power, NZ Lotteries, Sky City, Sovereign, The Warehouse, Waitemata DHB and 2 Degrees recently gathered to discuss driving business advantage from data and shared their experiences and views on the state of play in the New Zealand market.

Technology is currently available now to meet most organisations data needs yet they are still struggling to work out which direction to take to gain the best value. Most of these organisations are already working their data to some level, but all are looking to learn from other’s experiences. Four significant themes emerged from the presentations and discussions;

- The importance of leadership and strategy – business led for success
- Getting or growing the right skills and capabilities – teams and individuals
- Test, learn and improve – an iterative approach
- Accept failure and be prepared to change as there is no “right” answer and the data may expose completely new opportunities

Being open to adaptation and change during a big data project requires radically new thinking. As a major New Zealand bank found, just because you think you know the answer doesn’t mean you have the right question.

A New Zealand retail bank recently invested in a proof of value project combining internal data about customers with external data about their mortgage holding with other banks with the aim of improving out bound mortgage sales. They had strong executive support and a strategy with a clear aim. They pulled the best together from across the organisation and spent 6 months developing data structure. Eventually they also invested in external expertise who took just 2 weeks to do the same work. When they went live they started slowly and continued to tune

**DATA PROJECT
“CONTRIBUTES” TO
5.7% GROWTH**

the system to keep improving the outcome. Within a couple of months a large increase in successful conversion calls was occurring. However there was very little increase in mortgage business from these clients who had confirmed a desire to convert. What the project uncovered was issues with the loan onboarding process which had nothing to do with the data at all. Fixing this, and decreasing churn ultimately provided an overall growth in lending to the half year of 5.7%.

Old techniques are no longer adequate as we enter this new age of data; dramatically different approaches are needed – and fresh new thinking is essential to achieve desired results.

HOW TO CREATE VALUE FROM DATA

New thinking about data is opening doors to exciting new opportunities. Innovative tools and capabilities in data management now allow the seamless integration of structured and unstructured data, both internal and external. Implementing the right management procedures and structure within your dataset can provide considerable value to a business by exposing opportunities for increasing efficiency and driving down costs; by developing new opportunities for revenue growth; or even new business models.

1. Increase Revenue

Increasing product awareness – something as simple as better connection, integration and graduation of currently available raw data into analytical insights can shine a spotlight on potentially new potential product areas to develop.

A large local directory company was able to create \$7.5 million of additional revenue within 18 months by combining customer survey data and website usage statistics with their existing sales dataset. By combining three disparate sets of data in a clever way they were able to identify an opportunity to create a new product line and a new pricing mechanism that quickly led to substantial ongoing revenue improvement.

**\$7.5 MILLION
OF NEW REVENUE
WITHIN 18 MONTHS**

Increasing market awareness – by introducing additional external datasets, such as census information, market research, location data and social data, to your own internal information can provide much deeper and richer knowledge about your customers.

In the New Zealand health sector a regional health network that supports a number of PHO's, GP practices, hospitals and a district health board has been able to increase its understanding of its 780,000 potential patients, enabling it to better target service offerings. Although they knew the ethnicity, age, gender and decile rating of enrolled patients they needed to understand the total health burden in the region to provide the best possible service offerings for their customers. By aggregating Health Board and PHO data with external data feeds from hospitals, GP practices and Statistics New Zealand's census data they can now better understand their 'customer' base, such as what percentage chance do 10 year old Maori children in a particular town have of contracting diabetes. With this information they can now proactively provide improved services.

2. Improve Efficiency

Improving business processes – analytical algorithms can be designed to unlock hidden insights and identify opportunities for process improvements in administrative hubs and call centres.

Using algorithms to analyse integrated sales and marketing data and call center logs enabled a large New Zealand directory company to better understand the impact of marketing campaigns on the call center. They were then able to create more concise marketing campaigns that improved call center productivity by 75% and decreased the number of calls required to close a sale from 7 to 4.

**75% IMPROVEMENT
IN CALL CENTER
PRODUCTIVITY**

Improving inventory management – combining unstructured and structured data from various business systems can provide a new understanding of what is needed where and when.

One of New Zealand's largest retailers combines data from customer count systems with transaction systems to create conversion trends which are further integrated with inventory and labour data to identify where more or less product or labour is required at certain times to maximise sales volumes while minimising cost.

Improving energy efficiency – internal data from meters and sensors across production lines or assets combined with external sources such as weather statistics can be used to decrease energy costs.

A global tech company has reported a saving of \$1.5 million from its energy usage at its head office by collecting information from disparate building systems such as air conditioning, lighting, in room sensors and power monitors, combined via an algorithm to improve automation of building environment control.

**\$1.5 MILLION
REDUCTION IN ANNUAL
ENERGY USAGE**

Improving efficiencies in logistics – the combination of external data sources such as traffic information with data available from sensors and devices is allowing companies to drive savings from route management and improvements in logistics.

A global courier is saving in excess of \$5.3 million a year on fuel alone by using a new route guidance system that combines and analyses data from vehicle systems, external traffic information, driver's handheld devices and customers systems in order to automatically generate the most efficient route.

3. Change Your Business Models

As business processes become digitalised the means by which customers and partners interact with many organisations is via application programming interfaces (APIs). As more companies promote APIs online these interfaces are fueling innovation, extending products and creating ways to reach new customers.

Creating new channels to customers – for businesses with a vast amount of data, exposing it via APIs and allowing partners to innovate with your information can lead to un-thought of channels to new customers.

Expedia, a global leader in travel bookings whose business exploded when they opened up access to their databases and business processes via APIs and created an affiliate network. Today they now have over 10,000 partners who pull booking systems, photo libraries, search tools or user reviews in piecemeal ways to create or support their own businesses, providing 90% of Expedia's \$2 billion in revenues.

**\$1.8 BILLION
NEW REVENUES BY
EXPOSING APIs**

Creating completely new businesses – APIs open up access to data like never before and companies are finding ways to create new business opportunities through unique combinations of APIs and their data.

Need-a-Part, a New Zealand ecommerce site that provides parts for small appliances to customers all over the world is built on APIs from big electronics brands for sourcing stock; from New Zealand Post for address finder, rate finder and parcel tracking information; and from Google maps for location information. With the entire dataset integrated and exposed online, customers can find their own parts direct from the manufacturers systems, order them via the postal system and co-ordinate the delivery at a time that suits.

FINDING THE RIGHT APPROACH

In order to drive these fresh opportunities to improve efficiencies or create new revenues many organisations are now looking to the myriad of new technologies that can support big data analysis.

But what exactly should business users look for when it comes to data analysis? This depends entirely on the type of business problem they are trying to solve.

Expertise and experience can make the difference between success and failure. An experienced partner should have a strong framework to guide the process and experience with multiple customers. There is no single correct solution and big data has the potential to create a disruptive opportunity so knowledge gained in one sector may be translated into a temporary competitive advantage in another sector. This is why the approach to the development and deployment of a solution is as important as the technologies used.

There are four crucial considerations in assessing or developing an approach for a big data project:

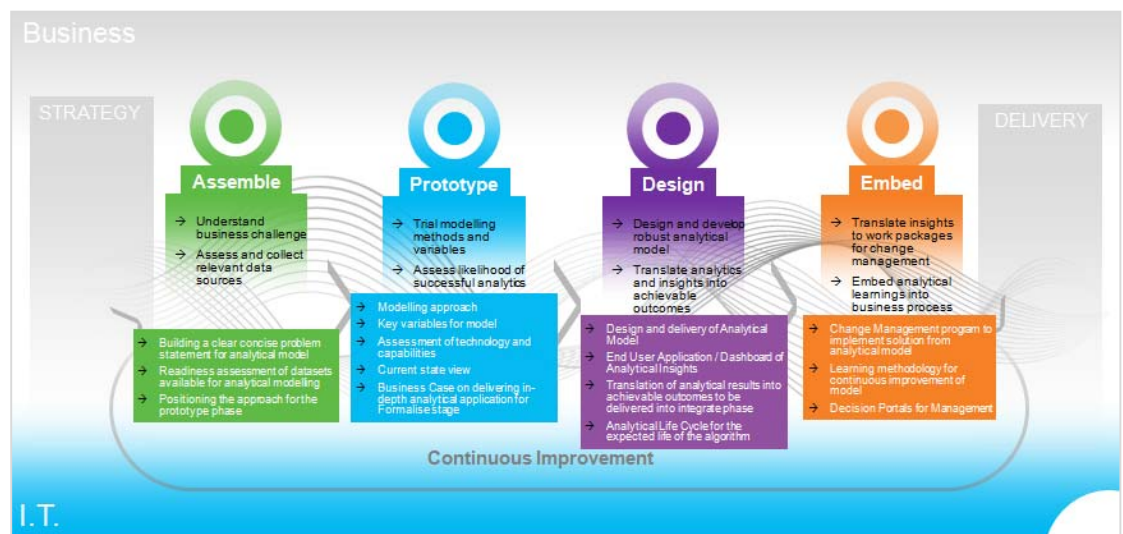
- ✓ As can be seen by the evolution of responsibility for data in large organisations, big data projects need to be driven from a business perspective and yet still closely aligned with IT. Business strategy should drive data strategy.
- ✓ Every company should have a clear data strategy and policies that take into account both transactional and non-transactional data. An adept partner will help organisations to focus beyond known questions and to discover trends that could help managers consider decisions and opportunities they would never have contemplated before.
- ✓ Pulling together the right skills for the job is also essential. With a growing shortage of skills in the data specialist space, connecting with a trusted partner is paramount. In house skills in data warehousing do not immediately convert to analytics but they can be trained in time.

- ✓ Finally, as there is no 'right' answer the process should take an iterative approach, with planning, analysis & design, prototyping & testing, production & deployment stages and includes a continuous improvement approach.

Optimation, a locally New Zealand owned and operated IT service provider with more than two decades of experience supporting some of the country's largest government departments and commercial organisations, has specialists working in the big data space in a number of organisations including one of New Zealand's major retail banks.

Optimation have developed a framework for enterprise analytics projects (as shown in Figure 2). Leveraging their experience in complex technology project management and custom solution builds; they have published an approach they use, that while relatively simplistic in its steps, captures the critical elements required for success in such a project.

Figure 2: Enterprise Analytics – An Optimation Approach



The strength of this methodology is the recognition of data projects fundamentally being driven by business and as such the project management approach begins with strategy and the assembling of an understanding of the business challenge and how this relates to data.

A prototype stage allows for the trial modelling of methods and variables and ultimately for business casing. Building in a further business casing stage, backed up with prototype data can strengthen business resolve for the scale of investment that may be needed to maximise the big data opportunity.

The design stage translates the analytics and insight into achievable business outcomes. An essential inclusion in this stage is a consideration of the expected life cycle of the analytical algorithm.

Optimation have included the critical element of change management within their methodology as the fourth and final stage prior to delivery. Designing a great process using the right tools is really only the first step. Embedding the process into a business in a healthy way can be as challenging as the technology itself. This stage also includes learning methodologies for continuous improvement allowing an organisation to dynamically adjust as new information comes to hand from the analysis of the data.

Overall the simplicity of the Optimation approach to enterprise analytics projects is probably its key strength. That coupled with their experience, allows them to take a business focused approach with an understanding of all the important considerations required for project success.

CONCLUSION

Technology is currently accessible and through better integration and aggregation of internal and external data companies are finding ways to create insights that are driving increased revenues and improved efficiencies.

There are now examples of New Zealand companies generating millions of dollars of savings or new revenues by harnessing data more efficiently. It is also evident that most large companies are on the cusp of further investment in this space.

There is no silver bullet or one size fits all approach, however best of breed data management begins with a clear strategy, is driven by business needs not IT and is supported by a process that includes an iterative approach and strong change management.

optimization

As a thriving New Zealand-owned business, it is Optimation's mission to help other Kiwi companies succeed by harnessing the potential of people and technology to deliver unrivalled value for our customers.

Optimation operates in the application layer, designing, building and integrating business processes and systems across the application lifecycle. Our end-to-end outcomes focus brings together strategy, people, processes, and platforms to create unrivalled value for our clients.

Optimation offers the full spectrum of professional services across design-build-run, within an embedded practice structure that delivers best-in-class capability and IP backed by mature processes, methodologies and governance.

This is complemented by the ability to tailor your engagement, from resource augmentation through to complete project responsibility, to provide scalability, agility, value, and increase speed to market. This ensures flexible access to the right skills at the right time, while also enabling you to retain vital business knowledge in-house.

ABOUT ECOSYSTEM

Ecosystem is a research, advisory and engagement firm focused on bringing customers and suppliers closer together through more efficient means of information exchange and engagement.

We continually engage with local business ecosystems via research, communities and events. Then we use our local knowledge and relationships to help make your transactions more efficient and successful.

Using a research based approach we support technology buyers with development of their strategy, assessments of their options, and benchmarks of their peers; and we support technology sellers to better understand their customers so they can present the right information to the right people at the right time.

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Ecosystem Advisory Limited | 51 Apollo Drive, Auckland 0632 | New Zealand | +64 21 0252 0767 ph | www.ecosystem.co.nz

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