Technology is just one part of the formula for data-driven change, and organisations must work with a range of levers to create sustainable business impact. How ready are Australian organisations for the digital era?

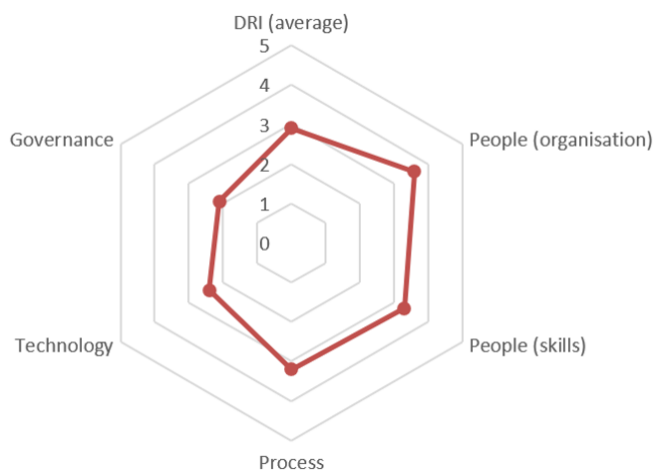# Data Readiness: Business Impact for the Digital Era – Australian Highlights

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Executive Summary

In September 2019, IDC released an Executive Insights report that discusses data-driven practices in Asia Pacific (AP) for both large and small organisations, as represented by the Data Readiness Index (DRI). The index is characterised by five dimensions — people (organisation), people (skills), process, technology and governance. It is calculated based on a survey conducted in June 2019, reaching out to 707 organisations in seven markets — Australia, China, Hong Kong, India, Japan, Singapore and South Korea.

Figure 1: **Asia Pacific DRI Score Summary**

Source: Tableau-IDC Data Readiness Index, 2019

AP organisations have an averaged DRI score of 2.9 (out of 5) and our findings suggest that organisations with higher DRI scores produce 90% better business performance metrics than those with lower scores. On the individual dimension level, the scores depicted in Figure 1, people-related dimensions (organisation and skills) score higher than the other three dimensions, suggesting that people factors are the first and easiest to leverage to improve data readiness.

In this report, we will highlight Australia-specific data points drawn from the regional survey and insights based on key discussions with local organisations.

Data Highlights for Australian Organisations

Highest average DRI score in the region. Australia has the highest average DRI score (3.54 out of 5) across the regional markets surveyed. Nearly half of the organisations surveyed are regional DRI leaders (DRI>3.6), whilst in other markets this statistic barely reaches 20%. A summary of DRI scores, in Australia and regionally across the five individual dimensions, is illustrated in Figure 2.

Leading in three dimensions. Australian organisations score best in three dimensions: **people (organisation)** at 4.4, **process** at 4.1, and **technology** at 2.9; whereas the regional averages are 3.6, 3.2 and 2.4, respectively. For the other two dimensions, **people (skills)** ranks second across the region at 4.0) and **governance** at 2.4 — both are slightly behind the scores in Singapore.

Figure 2: **DRI Score Summary: Asia Pacific versus Australia**

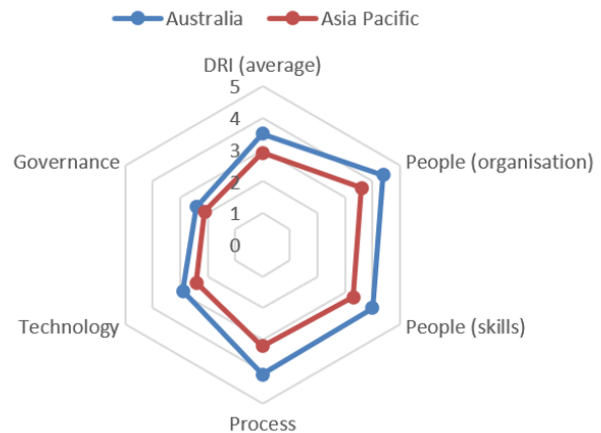Source: Tableau-IDC Data Readiness Index, 2019

- The dimensional score for **people (organisation)** reaches the leading band* — It suggests most business decisions in many organisations are evidence-based or made with reference to data. In such organisations, data is regarded as the key differentiator for success and employees share work-related data to collaborate proactively within, or even across functional silos.
- The dimensional score for **process** also reaches the leading band* — A majority of organisations have established processes to facilitate the use of data to enhance work efficiency and continuously innovate, with a common set of key performance indicators (KPIs) to onboard stakeholders. Organisations have data management roles in line of business (LoBs) and analytics competence centers to work with IT to ensure coherent execution of data programs.
- The dimension score for **technology** reaches the developing band* —These organisations have employed tools, such as data warehouses, to manage data residing in different source systems to handle data acquisition, federation, preparation and exploration. Such federated data is mostly historical structured data, updated in batches from siloed transactional systems.

Starting a virtuous cycle. In line with their high DRI scores, the survey indicates Australian organisations reap significant business improvements across a wide range of KPIs from their most recent data analytics initiatives. The averaged KPI improvement is about +22%, compared with the regional average of about +17%. This percentage increment understates the absolute improvement as organisations typically start from higher baselines compared to other markets. Organisations in the leading DRI band have seen even greater improvement in their KPIs. For example, net promoter score (NPS) is reported to have improved by +28%, employee productivity by +27%, costs reduction by +27%, new revenue generation by +26% and new product introduction and innovation increased by +25%.

We see that Australian organisations are increasingly developing a virtuous cycle of innovation in data and analytics as KPI improvements encourage continued investment in data and analytics which in turn drive further improvements. Historically, 20% of companies have invested the most in **people (organisation)**-related initiatives. Moving forward, this is expected to shift and increasingly prioritise **governance- and process**-related initiatives by 16%; whilst those planning to make future investments in people (organisation) falls somewhat to 12%. This suggests that Australian companies will work more to safeguard data initiatives and sustain innovation.

Company type matters. At the AP level, public-listed MNCs report highest scores in all five dimensions when compared to other organisation types including state-owned local companies, local private companies and private MNCs. Interestingly in Australia, public-listed MNCs tend to report lower scores (3.5 vs ~4.0) in people (skills) and a lower level in technology (2.5 vs ~2.9) than other organisation types. The disparity is clearer amongst organisations in the developing band of DRI. This suggests a higher level of confidence, competency and competitiveness in this market.

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*The banding score has an absolute range of 1 to 5, with 5 representing the most established data readiness and 1 representing the least. The banding is based on the absolute center score of 3 with actual bandwidth adjusted according to the sample distribution. The lower cut-off score for band 1 (leading) is 3.6, the lower cut-off score for band 2 (developing) is 2.0.

IDC Point of View

This section leverages insights gathered from key discussions with a group of Australian organisations, loosely organised around the DRI dimensions.

People Factors

Pragmatic top-down approach. We note that Australian companies consistently demonstrate a top-down vision for the use of data and analytics to support their digital transformation. However, as is typical in markets with high labour costs, people-related factors are becoming the primary focus as technology starts to almost take care of itself. Moreover, employees are unlikely to accept top-down visions at face value. There is a strong culture of pragmatism, sometime even skepticism — do organisation leaders "walk the talk" about data? Is the data really credible?

The double-edged sword of skills. Another aspect of people-related factors are data-related skills or literacy — the ability of individual employees to understand, interpret, communicate and act upon complex data and analytics. Australia, as a market, scored higher in this dimension. It should be noted that such data literacy goes beyond any particular individual analytic skill. With so much effort put into training, developing, maintaining and celebrating data literacy, one must ask how well can these skilled employees accommodate the ambiguity and uncertainty in a business world that is perpetually changing? Are they more tempted to rely on tried and tested approaches that have served in the past – for example, by using spreadsheet tools rather than more powerful visualisation or machine learning? For Australian companies, where an environment of relative job security may lead to limited incentives to stretch, new challenging approaches may appear too problematic. This is especially relevant in the world of analytics and agile innovations, where the end is often undefined.

Technology and Governance Factors

Shadows and silos. The IT department is typically the guardian of data and the final arbiter of tools used in the organisation. In most Australian companies, the availability and quality of technology is rarely a major issue because people costs are more significant than technology costs. It is the people-related factors that determine the success of any technology deployment. The IT department's decisions are often based on the lowest common multiple of competing LoB requirements and IT constraints. Not surprisingly, LoB and other functions often get frustrated by the limited support and end up developing "shadow IT" capabilities with particular data analytics tools. The danger here is not only the additional cost and added complexity of myriad silo solutions but, more importantly, the inability to draw on data across the organisation. Ironically, this is often precisely where the greatest business benefits are to be extracted from data.

Growing tension. In the new era of cloud and containers, an enterprise data architecture with containerised microservices is quickly becoming a de facto standard. This said, siloed solutions are still prevalent in many Australian organisations. Navigating the Scylla and Charybdis of top-down IT-driven change versus bottom-up silo-based solutions is hard enough, and is made worse by a new emerging tension. Increasingly, IT DevOps are charged with the development, deployment and management of APIs to support business functions and innovation initiatives with customers and partners. This creates a schism between IT developers and business analysts /data scientists. Those performing analytical and data science experiments on disparate datasets are often unconcerned about escalating challenges in the governance, deployment and maintenance work of IT.

From strategy to execution. One answer to this tension is to explicitly acknowledge it within a formal organisation data strategy that is aligned with business strategy. It requires the appointment of senior stakeholders to enforce the execution. Local organisations have some variant of the Chief Data Officer (CDO) role, particularly those in heavily regulated industries such as banking or healthcare — although little agreement exists on the role's precise mandate, other than a common theme in the commitment to support data integrity, data governance and data quality at the organisation level. Apart from these attributes, the organisation data strategy should also outline the roles and KPIs that support execution and reconcile differences in objectives between IT and the LoB. Without them, any data readiness or analytics initiative is unlikely to succeed in the longer term.

Process Factors

Process for effective collaboration. In contrast with the centralised CDO role, businesses analytics and data science practices are beginning to decentralise — pushed to "citizen data scientists" in functional or LoB teams. Two factors drive this – improving visualization and analytics tools and the realisation here is that different functions and LoB have very different analytical and model requirements based on fast-moving and business-oriented use cases, and so they cannot wait for the formal signoff and development by a centralised organisation. Where a standardized approach is essential (as in meta data management) or where skills are scarce (as in machine learning or deep learning), some form of organisational centre of excellence is often formed. We note that where skills are the binding constraint, this may be a temporary phenomenon disappearing as skills and easier-to-use tools and model development/deployment platforms become widespread, particularly in mature markets such as Australia. This too has its issues. With different departments looking at different subsets and versions of certain data sources, this creates overlaps, redundancies, and even conflicts. Furthermore, few organisations truly manage or understand their data assets holistically. This is a prerequisite as organizations digitally transform and analyse data from various organisational systems over the entire customer journey. In short, whilst the fashion for centralisation/decentralisation may come and go, the real issue is how organisational structures are augmented (or not) by business processes that reinforce collaboration and reconcile differences within and amongst functions across the organisation.

Conclusion

It is a cliché to say data is the new oil. But arguably it's even more important than that. Unlike a physical asset, data can jumpstart a virtuous cycle of innovation, increasing its value exponentially. The more data one has, the greater the insights one can derive; the more value provided by those insights, the larger the number of customers and partners supporting this data ecosystem, enabling still more data to be captured. On a worldwide level, such a virtuous cycle of data-driven business is already achieved by a handful of hyper-scaled digital natives — few of which, we note, hail from Australia. IDC believes that there is still some way to go for organisations to improve their data readiness. The future belongs to organisations that can build or leverage data platforms and ecosystems to create, share, amplify and sustain business value.

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