

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

Data Readiness: Business Impact for the Digital Era

September 2019

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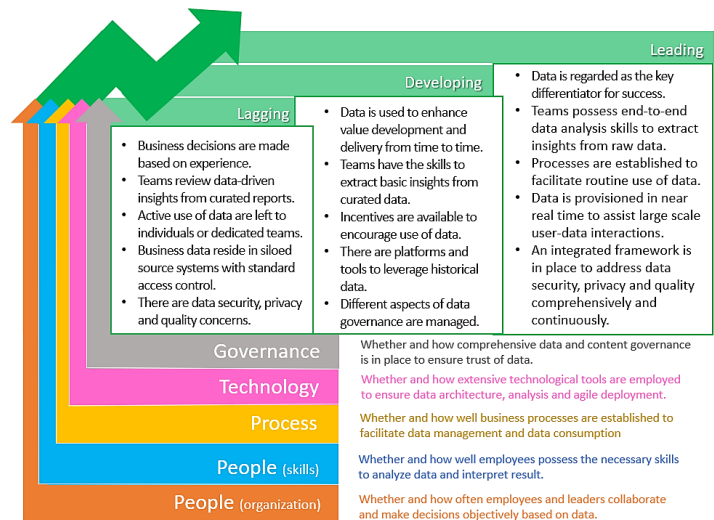
Executive Summary

There is no shortage of digital native superstars telling (and retelling) their stories of taking data-enabled businesses to the next level. But for the rest of us, working in organizations of hugely different types and sizes; as well as operating in different sectors and geographies, such stories can be misleading and even unhelpful. It is illusory to suggest that data technologies by themselves can work such wonders. Wiser executives realize that technology is just a part of the formula for data-driven change, and they must work with a range of levers to create sustainable business impact.

This Executive Insights report uses a Data Readiness Index (DRI) characterized by several dimensions — **people** (organization and skills), **process**, **technology**, and **governance** — to take a closer look at Asia Pacific organizations' readiness for data-driven change. This report highlights the following:

- » Organizations with higher data readiness produce 90% better business performance metrics¹ than those with lower scores.
- » **People**-related factors, whether organizational (e.g., data-driven decision making and collaboration) or individual (e.g., data skills) are the most important in affecting performance metrics.
- » In a top-down approach, people (organization) factors are consistently ranked highest as a component of the averaged DRI score — suggesting it to be the first and easiest lever to use for data readiness. For a bottom-up approach, people (skills) are also considerably higher than the average DRI score. This suggests organizations need to take a holistic approach to build data-driven organizations, to best harness data literacy and skills among employees for enterprise business impact.
- » **Though less significant than people-related factors**, **process**-related factors are also relatively prioritized to support the management, analysis and consumption of data in most organizations.
- » Organizations need to work on the two least performing factors: **governance** and **technology**, to encourage and sustain change. Their inherent complexity requires a tailored (rather than a one-size fits all) approach to drive data readiness in differing organizations.
- » Larger organizations tend to have higher DRI scores and are mainly differentiated by the process and **people**-related factors (especially skills).

FIGURE 1: *Data Readiness Index in a Glance*



Source: IDC, 2019

What Is Data Readiness and Why It Matters?

People approach data-related challenges very differently. Levels of data readiness inevitably differ across different business functions, companies, industries and geographies. However, all organizations, trying to harness data for sustainable business impact, need to understand their current digital readiness and apply the change levers appropriate for continuous improvement.

TABLE 1: *Defining the Dimensions and Developmental Bands of Data Readiness*

Dimensions	Descriptions	Band 1 (Leading) Characteristics	Band 2 (Developing) Characteristics	Band 3 (Lagging) Characteristics
People (Organization)	Whether and how often employees and leaders collaborate and make decisions objectively based on data.	Most business decisions are made based on data. Data is regarded as the key differentiator for success. Employees share work-related data and collaborate proactively within functional silos. The analytics tools, products, platforms or communities to support such activities are well utilized.	Some business decisions are made based on data. Data is used to enhance value development and delivery. Employees share work-related data and collaborate with each other mostly within functional silos. The analytics tools, platforms or communities to support such activities are under-utilized.	Most business decisions are made based on personal intuition and past experience. The value of data is provided as hindsight. Sharing and collaboration of work-related data are left to individuals, with standard communications in place.
People (Skills)	Whether and how well employees possess the necessary skills to analyze data and interpret the results of their analysis.	Teams possess end-to-end data analysis skills to extract insights from raw data, including advanced analytics. They also have the necessary domain knowledge and soft skills to visualize, engage with, and interpret findings according to business context.	Teams have the skills to extract basic insights from curated data. They have access to peers who have the necessary domain knowledge and soft skills to visualize, engage with, and interpret findings according to business context.	Teams focus on reviewing and understanding data-driven insights from curated reports and content. They struggle to relate data and analytics findings to business context.
Process	Whether and how well business processes are established to facilitate data management and data consumption.	There are established processes to facilitate teams' use of data to enhance work efficiency and continuously innovate. There are agile programs for continuous delivery of data initiatives, with a common set of success KPIs to onboard necessary stakeholders. There are data management roles in line of business (LoB) and analytics competence center to work with IT to ensure coherent execution of data programs.	The business incentivizes employees to use data to enhance their work. There is an organization-wide approach for project prioritization, resource allocation and reporting, but it does not have in place success KPIs for different stakeholders. Data management roles remain centralized within IT, and they follow established processes to work with business functions on data programs.	Enhancement of work efficiency and innovation is left to individuals or dedicated teams. Individual LoBs approach data and analytics projects and programs independently. Data management roles remain centralized within IT. Interactions with business functions is on an as-needed basis or left to individuals.
Technology	Whether and how extensively technological tools are employed to ensure effective data architecture, data analysis and agile deployment.	There is a flexibly and timely updated metadata layer to manage data residing in different source systems. Data can be provisioned to business users in real time, including both structured and unstructured data. There are tools to assist large scale user-data interactions by visualization, natural language understanding and analytics toolkits.	There is a metadata layer to manage data residing in different source systems. There are discovery platforms and tools, such as data warehouses, to handle data acquisition, federation, preparation and exploration. The data made accessible is mostly historical data. User-data interaction is considered an expertise provided by competence center.	Business data reside in different source systems, accesses are not coherent or updated enough to adapt to change. Only a subset of this data is accessible to business users, subject to a request-and-approval process. User-data interaction is unmanaged and left to individuals.
Governance	Whether and how comprehensively data and content governance are in place to ensure trust of data.	There is a tailored and integrated solution, policy and process framework in place to comprehensively and continuously address data security, privacy and quality in different departments. The data and content needed to run business is trusted.	There are solutions and policies in place to address different aspects of data governance such as security, privacy and quality. The data and content needed to run business is managed.	There are data security, privacy and quality concerns; solutions, policies and tools are implemented mostly when issues arise.

Source: IDC, 2019

IDC, in conjunction with Tableau, has developed the DRI to understand the pivotal role played by individuals and their communities in helping organizations holistically unlock the benefits of their data. Table 1 defines the five dimensions and three developmental bands – leading, developing, and lagging – that collectively reflect the maturity and extent of an organization's use of data. It explains how organizations can progress to higher levels based on IDC's Data Excellence Maturity Model².

We conducted a survey in the 2nd quarter of 2019, reaching executives of 707 organizations in seven markets – Australia, China, Hong Kong, India, Japan, Singapore and South Korea, benchmarking the DRI and probing its relation to various business outcomes. More on the research methodology can be found in the Appendix³.

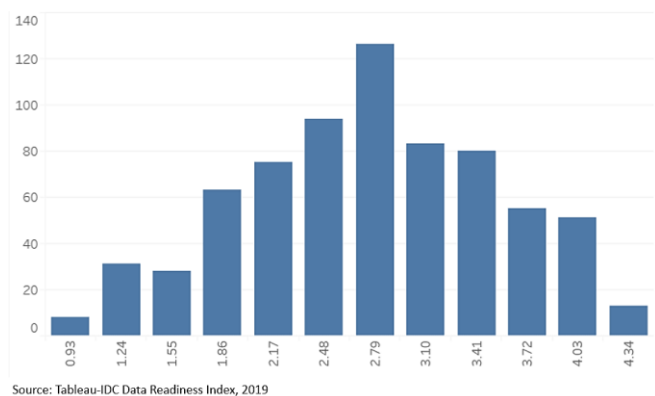
Overview of Key Findings regarding the Data Readiness Index

- » DRI score: Organizations in the leading band (DRI >3.6) perform consistently better than those in the lower bands.
- » The average score of all surveyed organizations is 2.9 (out of a possible 5). The majority of organizations are in developing band (score between 2-3.6).
- » Dimensions: The people dimension, both organization and skills, is the most critical in driving business impact.

Figure 2 presents the DRI scores across 707 organizations. According to the designated banding method⁴, 141 of the surveyed organizations have reached the **leading band** (DRI>3.6), the majority of 469 organizations are positioned in the **developing band** (2<DRI<3.6), and the remaining 97 organizations are in the **lagging band** (DRI<2).

On a 1-5 scale, the averaged DRI score of all the surveyed organizations is 2.9, which is the absolute center based on the scoring system. This aligns with our analysts' intuition that although most organizations of the surveyed locations have reached the developing band of DRI, the scores do tend to skew toward the lower end.

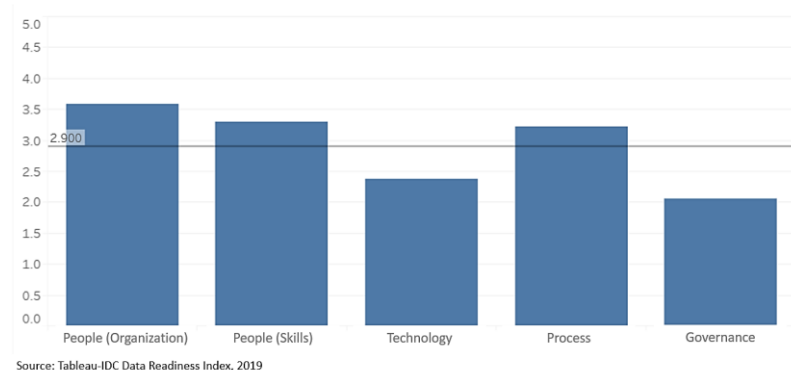
FIGURE 2: DRI Score Distribution



Dimension-wise, the average scores can be found in Figure 3. The **people (organization)** leads with an average score of 3.58, followed closely by the **people (skills)** at 3.29 and **process** at 3.22. The other two dimensions, **technology** and **governance**, received much lower scores of 2.37 and 2.05, respectively. Further scrutiny of these dimensional scores at lower levels of aggregation (markets, industries, etc.) shows mostly consistent relative rankings, with few exceptions.

- » Survey results provide a picture of the status quo in data-driven decision making. For example, **people (organization)** is the most widely developed among respondents. This high score reflects both its importance and its relative ease of implementation as compared with other dimensions. The second most developed dimension is **people (skills)**, closely followed by **process**, suggesting both people-related factors and the way employees analyze data (process) are perceived as important to driving business impact.

FIGURE 3: Averaged DRI Scores in Five Dimensions

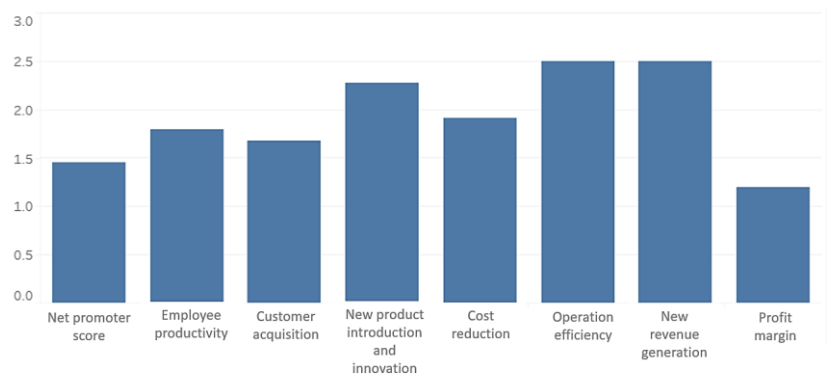


- » In contrast, **technology** and **governance** are less of a priority among the business leaders surveyed – presumably because these are perceived as less cost-effective levers to developing data readiness. Moreover, these dimensions are inherently complex. **Governance**, in particular, encompasses the management of change in people, process and technology. Although difficult, these are also opportunities for organizations, especially those which are already leading in the **people** dimensions, to make further productive investments.

The DRI is an equally-weighted sum of these five dimensions and summarizes how organizations currently approach data challenges. It provides a descriptive analysis of an organization's data readiness and its components. For more prescriptive insights, we investigated how DRI was related to business outcomes. Do organizations in higher DRI bands outperform those in lower bands? The DRI survey asks business leaders whether and how much improvement they have seen from their latest data and analytics initiatives over the past two years. Figure 4 shows the results across eight different key performance indicators (KPIs).

- » Organizations with good data readiness scores outperform others. More precisely, organizations in the leading band of DRI perform consistently better than those in lower bands. They experience improved outcomes across all eight types of KPIs as compared with those in lower bands. The improvement factors range from 1.2x to 2.5x, with an average of 1.9x (i.e., a +90% improvement).

FIGURE 4: **Amplification of Business Outcomes (DRI leading vs DRI lagging)**



Source: Tableau-IDC Data Readiness Index, 2019

- » Leading organizations are particularly adept at new revenue generation, operational efficiency and new product introduction and innovation. The amplification effect from laggards to leading DRI bands is greater for "operation efficiency" and "new revenue generation" than the other KPI categories, such as profit margin. This is probably because of the myriad potential intervening factors that may come to play in composite KPIs such as profit margins.

This analysis clearly shows the business value of data readiness. To drill down into the individual dimensions and how each contributes to performance separately, we looked at bands based on individual dimensions rather than aggregated DRI bands and asked how raising individual dimension scores to those in leading bands (for these dimensions) change the average amplification factor associated with business outcomes. For each dimension, we derive amplification factors for organizations improving from each of the five lower score bands⁵ to the highest score band. This provides a quantitative measure of how improving an individual lever improves general performance. This is obviously dependent on the choice of lever but also on the initial level of the dimension.

- » **People (organization)** and **technology** are the two dimensions experiencing the greatest most immediate benefits, as well as the largest change in their impact when organizations' DRI scores increase to higher categories. For organizations with a DRI score of less than 1.6, the **people (organization)** produces the biggest amplification impact, which drops sharply when DRI scores go beyond 2.0, thereafter (DRI scores of 2.0 to 2.8) the technology lever produces the largest amplification effect. This suggests that for organizations new to the Data Readiness journey, they are best advised to start with top down organizational leadership initiatives. Thereafter technological change becomes the biggest enabler to data readiness.
- » The other three dimensions, **process**, **people (skills)**, and **governance** produce steadily lesser impacts; and their impact shows fewer variations when organizations' DRI scores progress from the lower band to the middle band.

To summarize, the two most effective levers for organizations with DRI scores lower than 1.6 are **people** (organization) and **technology**. **Technology** and **people** (skills) are for organizations with DRI scores around 2.0; and **technology** and **process** are for organizations with DRI scores larger than 2.4. Also note that **technology** is the most consistently effective lever of them all — including whether and how extensive technological tools are employed to ensure data architecture, data analysis and agile deployment.

Detailed Findings – Data Readiness Patterns

In this section, we describe DRI trends and patterns by markets, industries, business functions and company type. These cover aggregated DRI scores, individual dimension scores, best reported outcomes because of their latest data and analytics initiatives, and respondents' past and future investments.

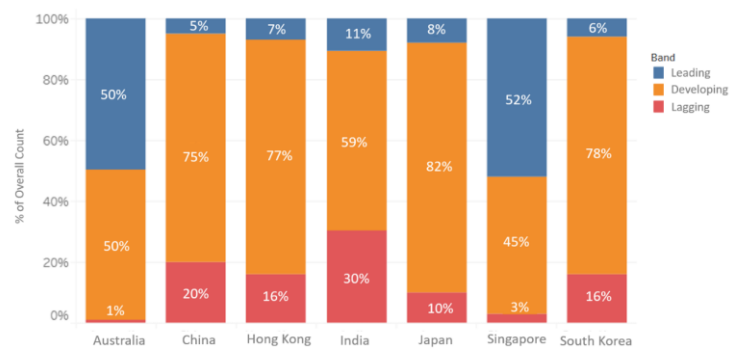
Note: Numbers in this section may not be exact due to rounding.

Data Readiness by Market

Data readiness inevitably reflects local cultures – patterns of values, expectations and behaviors that vary greatly across Asia Pacific (AP) - Asia and Australia. In this section, we specifically look at survey results across Hong Kong, Singapore, China, South Korea, Japan, India and Australia.

Australia and Singapore have the largest number of organizations in the leading DRI band (blue). India has the most organizations in the lagging band (red).

FIGURE 5: DRI Bands by Markets



Source: Tableau-IDC Data Readiness Index, 2019

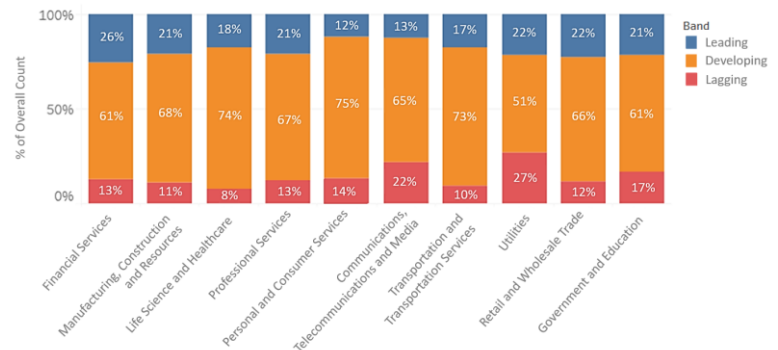
- » **Australia** has the highest average DRI score (3.54) across the region. Australian organizations score best in AP across the dimension of **people** (organization) at 4.4, process at 4.1 and technology at 2.9. Collectively, we note that organizations (like those in Australia) with data-supported decisions, extensive collaboration and communications tend to have more established **processes** for data management and data consumption; and are well on their way to employ the right tools to ensure and deploy an effective data architecture and analysis. For example, the organization with the highest data readiness (highest DRI) also experienced the greatest improvement (+28%) in KPIs such as net promoter score (NPS), employee productivity (+27%) and cost reduction (+27%). This suggests that Australian companies with a strong focus on data analytics have produced actionable insights and thereby encouraged repeated investments. Consistent with the research findings above, Australian companies (20%) have historically invested most in **people** (organization) but moving forward expect to shift their focus to **governance** and **process** (16%).
- » **Singapore** has an average DRI score (3.52) similar to that of Australia. Organizations in Singapore are regional leaders on the dimensions of **people** (skills) at 4.1 and **governance** at 2.4. Regionally, they perceive themselves as having very strong reserves of talent and as being the most demanding in data privacy and data trust. Leading Singapore organizations (those with highest DRI) experienced the greatest improvement in KPIs such as NPS (+35%), employee productivity (+30%) and operation efficiency (+27%). Historical and planned data-related investment in Singapore is similar to that in Australia. Australia and Singapore share many cultural themes, although Australia's strength in analytics is partially offset by the emphasis on **people** (skills) and **governance** in Singapore.

- » **Japan** is behind Singapore with an average DRI score of 2.74. However, there are significantly fewer Japanese organizations in the band of DRI leaders and as a group, Japanese companies are more similar. They ranked third in the region in terms of **people** (skills) at 3.2 and **technology** at 2.3. When asked about the past and future focus of their data initiatives, 30-34% of organizations choose either **governance**, **process** or **technology** that suggests a consistent tendency to deemphasize their investment in **people**-related dimensions. Leading organizations have seen the greatest improvement in terms of new revenue contribution (+25%) that shows the importance of monetization-related business outcomes and again deemphasizing more insight and innovation-driven factors typically associated with **people**-related dimensions. This may also reflect the aging of the Japanese workforce, a disincentive to major **people**-related investments.
- » **South Korea** ranks fourth in the region with an average DRI score of 2.69. Organizations in South Korea ranked third in both **people** (organization) at 3.37 and **process** at 3.05. While their past investment focused on **people** (organization) at 10%, their planned future investment leans more to **technology** (13%). This coincides with our findings that **people** (organization) is the best lever for organizations of lower DRI scores and technology is the best for organizations of midrange DRI scores. Organizations in South Korea are fast-tracking their efforts to strengthen their data readiness and experience the benefits that this should bring to their businesses.
- » **Hong Kong** ranks fifth in the region with an average DRI score of 2.67. Among the five more economically developed areas in AP, Hong Kong ranks the lowest in three dimensions: **people** (organization) at 3.27, **technology** at 2.18 and **process** at 2.91. **Governance** and **people** (skills) are relatively better positioned ranking third and fourth, respectively. For both their past and future investments, governance and process at 16% were ranked as the highest priorities. Note that this may reflect the huge importance of financial services in Hong Kong, an industry where governance and process are critical. High-performing organizations are also more reserved in reporting business improvements from their data and analytics initiatives, with the largest impact seen in the category of new products introduction and innovation (a +10% improvement). To summarize, Hong Kong's data readiness is similar to that of Japan, with **people** factors receiving less attention. A possible explanation is that while demographics may drive these behaviors in Japan, high job mobility and economic uncertainty may be the critical factors in Hong Kong.
- » **China** ranks sixth among the market aggregates, scoring an average DRI of 2.64. As a fast-growing economy, its organizations perform well in several dimensions, notably with a **people** (organization) score of 3.32 higher than that of Hong Kong and Japan. China also scored 2.99 for **people** (skills) and 1.92 for **governance** — both higher than South Korea. Coming from a low base, Chinese organizations have historically prioritized **technology** investments (14%) but future plans focus on **governance** (17%). China represents a pro-data, pro-innovation approach to data readiness with the attitude of "**people** and **technology** first, and **governance** trying to catch-up."
- » **India** ranks seventh among the market aggregates, with an average score of 2.51. The country has the largest percentage (31%) of organizations in the lagging band. Consistently, Indian organizations score the lowest across all five dimensions; suggesting improvements are required on all fronts. Despite this, they are the most positive and the most optimistic in reporting the observed and expected business outcomes of their data and analytics initiatives. Outcome categories such as new product introduction and innovation, operation efficiency and profit margin see reported improvement of +30-35%. This is significantly higher than any other countries, but this may reflect low baselines or overoptimism rather than absolute improvements. Their historical and planned future investments both focus on **people** (organization), which we have suggested is indeed the right lever to pull for organizations primarily in the lowest band of DRI. India also represents a data readiness pattern of "leadership first and foremost, and expectations to be managed." This should hardly be surprising given the vast scale and diversity of the country, and its businesses.

Data Readiness by Industry

We look at data readiness dimensions across 10 major industries in AP: financial services and insurance (FSI), professional services (PS), communications, media and telecommunications (CMT), utilities, retail and wholesale (RW), transportation, manufacturing, construction and resources (MCR), life science and healthcare (LSH), personal and consumer services (PCS), and government and education (GE). FSI and PS have the most organizations in the leading band and have higher average DRI scores of 3.01 and 2.97, respectively. At the other extreme, CMT and utilities have DRI scores of 2.70 and 2.77, respectively.

FIGURE 6: **DRI Bands by Industry**



Source: Tableau-IDC Data Readiness Index, 2019

- » **Leaders of individual dimensions:** Organizations in FSI are best in **people** (organization) at 3.79 and **governance** at 2.21; PS are best in **people** (skills) at 3.48. RW and LSH co-lead in **technology** at 2.46, and transportation industry leads in **process** at 3.41. These findings are well aligned with these sectors' distinctive traits — for example, PS tend to attract the best talents of data proficiency, FSI sector has a regulatory commitment to governance, RW and LSH tend to adopt the most advanced technologies for selected use cases, and transportation business is heavily process and procedure driven. **Laggards in individual dimensions:** Utilities have the lowest score for **people** (skills) at 3.05 and **technology** at 2.16. CMT scores the lowest in the other three dimensions: **people** (organization) at 3.33, **process** at 2.89 and **governance** at 1.85. In fact, for utilities, the dimensional DRI scores are either the lowest or second lowest with the only exception of **governance**. Clearly, the Utilities sector needs to catch up as its data readiness is not yet conducive to data-led innovations. CMT is more problematic, lying in the middle band; although organizations in CMT consume many digital products and services, most executives (35%) make their decisions based on personal intuition and past experience rather than data.
- » **Other distinctive data-ready patterns:** MCR score three dimensions of **people** (organization) at 3.63, **technology** at 2.43 and **process** at 3.26 reaching the third or the fourth place in the industry aggregates of DRI score. MCR organizations generate their best improvements from data/analytics initiatives in employee productivity (+25%); and not surprisingly, its data readiness is driven by the need for *repeatability* in operations. For GE, organizations have the second lowest score in **people** (organization) at 3.37, third lowest in **people** (skills) at 3.13, and second lowest in **process** at 3.15. Clearly, GE data readiness requires significant improvements in terms of **people** and **process** aspects. When asked on future investment, the most voted choice is **technology** (16%), suggesting that a more comprehensive and holistic understanding of data readiness is missing. For PCS organizations, scores are the second lowest with **technology** at 2.29 and **governance** at 1.96, while the **people** (skills) dimension at 3.35 is actually comfortably above average. Despite relatively good data skill levels, only 24% of executives in PCS use data tools in their daily work, the lowest across industries – hence its data readiness calls out for more awareness and practice.

Data Readiness by Business Function

We also analyzed organizations based on the business function of the executive respondent. This allowed us to evaluate data readiness initiatives across sales, marketing, finance, human resources, operations, IT and executive management. We note major differences by business unit — sales, finance and IT and executives have typically entered the leading band of DRI, suggesting these functional areas champion their organizations' data efforts.

- » **Sales and operations:** Both have an averaged DRI score of around 3.0. Across all functions, sales report the highest scores of **people** (organization) at 3.73 and **process** at 3.48. Operations have the second highest scores in both **people** (organization) at 3.71 and **process** at 3.45. The two functions are similar on the DRI chart; they are more advanced in using data to guide and support their work and see greater need to deliver committed numbers.
- » **IT and executive management:** Both have an averaged DRI score around 2.9. Not surprisingly, IT has the best score of both **technology** (2.69) and **governance** (2.13) across functions, and executive management has the second best score in **technology** (2.68). Compared with other functional areas, they are more technologically empowered. IT sees the best outcome in NPS (28%), and executive management sees the best outcome in new product introduction and innovation (30%). However, the use of data tools in executive management's daily work is only 36%, lower than the functional average at 38%. When asked about past and future investment focuses, most executive management vote on **governance** and **process** (40%). Comparing this with the earlier findings, these may not be the data readiness levers to create the most impact for the enterprise as a whole.
- » **Finance, marketing and human resource:** Finance, HR and marketing have an averaged DRI score around 2.8. Finance managers use data tools the most (46%) in their daily work, while marketing managers use data tools the least (24%). Marketing is, however, the most positive of the observed business outcomes — reporting +35% improvement in employee productivity and +37% improvement in operation efficiency. It is also good to note that finance has the lowest score of **technology** (2.09), implying a greater need to be empowered with a revamped technology stack. HR has the lowest score of **process** at 3.11, which calls for more established processes to manage and consume data. Moreover, marketing has the lowest scores of **people** (organization) at 3.47, **people** (skills) at 3.11 and **governance** at 1.96, representing a pro-innovation yet less sustainable level of data readiness.

Data Readiness by Organization

On the company type and company size levels, larger organizations have higher DRI scores in all five dimensions than the smaller ones. Public-listed MNCs also have higher DRI scores in all dimensions than their private or local counterparts.

- » When organizations become larger, more diversified and need to operate in more locations to become more transparent to various stakeholders, they tend to have higher DRI scores. It is clear that data readiness is highly relevant to the expansion and scaling of organizations, but the causation is hard to determine – are larger organizations more likely to make DRI investments, or is it the investments in data readiness that lead to enterprise scale?
- » When comparing DRI of various organization types, the greatest gaps in smaller/privately held organizations are found in **people** (skills) and **process** dimensions. It means bigger organizations are more consistent in setting up processes and hiring talents with the necessary data skills.

Summary highlights:

- » **By market:** Australian organizations have the highest averaged DRI score in the market aggregates.
- » **By industry:** Financial services insurance (FSI) and Professional services (PS) have the highest averaged DRI scores in the industry aggregates.
- » **By business function:** Sales and Operations are more advanced in using data to guide and support their work.
- » **By organization:** Larger organizations tend to have higher DRI scores, driven primarily by **process** and **people** (skills) dimensions.

Essential Guidance – Identify and Pull the Right Levers

We can summarize our results in terms of five common traits of data readiness. Organizations are recommended to assess and evaluate their own data readiness using these common traits to quantify by means of DRI, to map out their strengths and areas of improvement and to identify which levers — **people, process, technology** and **governance** should be prioritized to produce result most effectively.

Table 2 provides contextualized suggestions to help organizations progress their data practices toward higher level of repeatability, innovation and intelligence.

TABLE 2: **Recommendations for Organizations of Different Data-Readiness Traits**

Data-Readiness Traits	Market Examples	Industry Examples	DRI Band	IDC Recommendations
Clear strength in people, process and governance	Australia; Singapore	Financial services and insurance; professional services	Leading	<ul style="list-style-type: none"> » Use the technology lever to review data architecture, adopt cloud native tools for agile deployment and interactive insight discovery, and take the businesses to the next level. » Adopt an integrated model[®] for data governance to encourage and safeguard innovation.
Technology and governance in consistent focus; undervaluing people-related dimensions (especially organization)	Japan; Hong Kong	Government and education; utilities; life science & healthcare	Lagging to developing	<ul style="list-style-type: none"> » Look into data readiness more comprehensively and start prioritizing investments in people-related dimensions (organization and skills). » Establish, improve or revamp processes to maximize value generation of technological investment.
Better in people (organization), technology and process	South Korea	Manufacturing, construction & resource; transportation	Developing	<ul style="list-style-type: none"> » Leverage technology to fast track changes and amplify business outcomes. » Adopt an integrated model[®] for data governance to encourage and safeguard innovation.
People (skills) and/or technology first, governance to play the catch-up	China	Retail and wholesale; personal and consumer services	Developing and lagging	<ul style="list-style-type: none"> » Prioritize people (organization) and process levers; they are needed for organizations to scale to bigger sizes and more locations. » Review and strengthen governance to ensure sustainability.
Improvement required on all fronts, manage stakeholders' expectations	India	Communication, media and telecommunication	Lagging	<ul style="list-style-type: none"> » Start with the people (organization) lever to encourage and ensure leadership team walk the talk. » Understand data readiness as a collective approach when organizations face data challenges; and it requires attention on all five dimensions.

Source: IDC, 2019

Conclusion

The study shows data readiness drives business performance and **people** factors are typically the most important levers for change. **People** (organization and skills) usually outperform average DRI scores; and this suggests that many organizations have come to realize its importance and that future improvements in data readiness need to consider other levers holistically to best harness their individuals' skills for greater business impact. For organizations that have gone beyond **people**-related factors, we suggest they improve their laggard-performing factors (**technology** and **governance**) as these encourage and sustain data-driven change. Of course, this is not a "one-size-fit-all" model for data readiness and, instead, we identify some common traits that are useful in the context of different locations, industries, and functional areas. Organizations can refer to the contextualized recommendations and tailor-make their very own data initiatives to transform and compete in the digital era — where organizations will have data from all their operations and activities fused seamlessly, enabling a virtuous cycle of self-learning and self-improvement based on real-time decision making and autonomous systems. Collectively, this data and the processes and technologies associated with it will become the intelligent core⁷ — the heart of a platform that enables and sustains the digitally transformed organizations of the future.

The journey to data readiness and data excellence is long, but the rewards are great for those that make the necessary investments along the path. Enjoy the journey!

Appendix

Index	Description
1	The business performance metrics refers to percentage of improvement of the following performance metrics: net promotor score, new customer acquisition, new product introduction and innovation, operation efficiency, cost reduction, profit margin, new revenue generation, and employee productivity.
2	<p>The IDC's Data Excellence Maturity Model characterizes five maturity stages as organizations invest in the establishment of organizational capabilities focused on leveraging data. More about this topic can be found in published report – <i>IDC MaturityScope: Data Excellence 1.0</i> (IDC #US44840819, February 2019).</p> <p>FIGURE 7: IDC MaturityScope: Data Excellence – Stage Overview</p> <p>The diagram illustrates the five stages of data maturity as a horizontal sequence of five numbered circles (1 to 5) connected by arrows. Below each circle is a stage name, a descriptive title, and a brief text box:</p> <ul style="list-style-type: none"> 1 AD HOC: Data Silos. Information is siloed. Data quality and integration issues constrain usage to limited domains. Risks are unknown. 2 OPPORTUNISTIC: Data Warehouse and Analytics. Transactional data is managed. Data warehousing provides basic analytics and reporting. Security is assessed. Data hub and data lake are established. 3 REPEATABLE: Architected Data Framework. Architected data framework includes internal and external sources, structured and unstructured data, intelligence, and security. It also includes IoT device monitoring. 4 MANAGED: Integrated Data Platform. Comprehensive data platform provides universal access, self-service, analytics, anomaly and fraud detection, and predictive analytics and recommenders. 5 OPTIMIZED: Intelligent Core. Comprehensive intelligent core includes universal access to data and advanced analytics to support high-frequency and streaming decision and autonomic systems.
3	<p>Research Methodology: The survey includes 17 questions in 3 categories: (1) organization's data leveraging approaches, (2) business performances organizations have experienced and expected, and (3) their past and future investment focuses. The study focuses on answering of the following questions:</p> <ul style="list-style-type: none"> • How to characterize and quantify data readiness? • Does data readiness drive better business performance? • What are the contextual factors for data readiness to drive performance? • Which levers (dimensions) of DRI should be prioritized to create bigger impact?
4	The banding (scoring) method is tied with the key characteristics of DRI as explained in Table 1. The 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.
5	The five categories of relatively low DRI scores are: organizations scored 1.2 or lower, organizations scored 1.6 or lower, organizations scored 2.0 or lower, organizations scored 2.4 or lower, organizations scored 2.8 or lower.
6	The integrated model of data governance refers to the IT-LoB convergence, where systems investment decisions are made through central programs or a center of excellence. Such programs and CoEs operate by structured guidelines to protect data asset, encompass changes in people, process and technology, and provide permissions needed for a hybrid environment to exist and to be sustainable.
7	IDC defines the intelligent core as the heart of the digital transformation platform. It is where the algorithms, code, and the models that enable organizations to glean the insights and actions from the data live. More about this topic can be found in <i>DX Platform: A Framework for the Intelligent Core</i> (IDC #US43384517, January 2018).

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