GDLB
2020

GLOBAL
DATA
LITERACY
BENCHMARK
2020

DATA TO THE
PEOPLE

INTRODUCING THE GLOBAL DATA LITERACY BENCHMARK

We live in a time of bold digital transformation agendas, exponentially increasing volumes of data and a limited supply of talent with the skills to realise its potential. It is widely recognised that there is an urgent need for organisations to build and nurture data literacy across their workforces. For most organisations, however, knowing where to start when it comes to developing enterprise-wide data literacy has been somewhat of a mystery.

Just as literacy is our ability to read, write and comprehend language, data literacy is our ability to read, write and comprehend data. More than that, it's the ability to derive meaningful and useful information from data and to apply this to create better products, services and experiences.

Data literacy is not just the domain of a few teams across the organisation – all workers from the shop-floor to the C-suite will bring greater value to the business by better understanding how data is entwined in their everyday tasks, and being empowered to realise its full potential.

How then do we go about building enterprise-wide data literacy?

When we find ourselves lost and looking for direction, a trusty map becomes incredibly valuable. However, the map has no value until we locate our current position. We already know where we're trying to go, but how can we possibly find the right path to enterprise-wide data literacy if we can't pinpoint where we are right now?

We have never been able to draw a line in the sand to say, 'this is where we are today, this is our starting position'.

Until now.

This inaugural release of the Global Data Literacy Benchmark provides the first comprehensive measurement of data literacy at a competency level of more than 5,000 employees from around the globe. We've now drawn that line in the sand, across 5 regions, 14 industries and 9 core occupations. The first of its kind, the Global Data Literacy Benchmark provides an insight into the challenge – and opportunity – faced by all regions, industries and occupations.

Now that we've identified where we are on the map, charting our course can truly begin.

Jane Crofts
Founder and CEO
Data To The People

DATABILITIES®

Databilities® is the world's first, evidence-based data literacy competency framework. The framework outlines 15 core competencies across the dimensions of reading, writing and comprehension. Databilities® is recognised as the most comprehensive assessment tool of individual data literacy in the world. [1]

The competencies outlined in Databilities® are:

Reading
- Data Discovery
- Evaluating and Ensuring Quality of Data

Writing
- Data Collection
- Data Management and Organisation
- Data Manipulation
- Data Curation and Reuse
- Metadata Creation and Use
- Data Conversion (Format to Format)

Comprehension
- Data Analysis
- Data Interpretation (Understanding Data)
- Identifying Problems Using Data
- Data Visualisation
- Presenting Data (Verbally)
- Data Driven Decision Making
- Evaluating Decisions / Conclusions Based on Data

For each competency within the Databilities® framework, there are up to 6 levels of progression:

Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
At this level of competency, an individual can complete **simple tasks with instruction**.	At this level of competency, an individual can complete **simple tasks on their own, with guidance where needed**.	At this level of competency, an individual can complete **well defined tasks on their own**.	At this level of competency, an individual can complete **complex problems and tasks on their own**.	At this level of competency, an individual can **assist others** to complete **simple tasks and problems**.	At this level of competency, an individual can **teach and assist others** to **complete complex problems and tasks**.

[1] Statistics Canada. 2019. Data Literacy: What It Is and How to Measure It in the Public Service.
  Statistics Canada Catalogue No. 11-633-X – no. 022. Ottawa. Version updated August 2019.

MEASURING DATA LITERACY

Utilising the Databilities® framework, Data To The People commissioned research to measure the individual data literacy of more than 5,000 employed individuals across Australia, Canada, India, United Kingdom and United States of America. For each competency, participants were asked to select which of the progression statements best described them. Additional demographic information was also collected to enable findings by industry, occupation and level of qualification.

The first of its kind, this study will be revisited on an annual basis to monitor levels of data literacy across these regions.

THE CURIOUS, THE CONFIDENT AND THE COACHES

Using the 6 levels of progression outlined in the Databilities® framework, the Global Data Literacy Benchmark has identified 3 cohorts of employees:

- **Those who need direction – the Curious**
  When asked to select which statement best described them, the Curious selected Level 1, Level 2 or indicated that none of the progression statements described them.

- **Those who are independent – the Confident**
  When asked to select which level of competency best described them, the Confident selected Level 3 or Level 4.

- **Those who can guide others – the Coaches**
  When asked to select which level of competency best described them, the Coaches selected Level 5 or Level 6.

THE CURIOUS		THE CONFIDENT		THE COACHES	
Level 1	Level 2	Level 3	Level 4	Level 5	Level 6

WE NEED MORE COACHES

The study found there is a significant discrepancy between the number of people who can help or guide others – the Coaches – and the number of people who need help or direction – the Curious:

• Those who need help in one area or competency usually need help in all areas.

• Only 7% of respondents are Coaches and able to help others across all three data literacy domains; reading, writing and comprehension.

• More than 80% of people can't help others in any area.

• Fewer than 40% of people are Confident and able to work independently across all three data literacy domains.

• Typically, there are between 3 to 5 times as many Curious as there are Coaches.

What is becoming increasingly evident is that our approach to developing enterprise-wide data literacy cannot be a 'one size fits all' approach.

We need to develop three discrete – yet complementary – strategies to engage and encourage the Curious, the Confident and the Coaches in a manner that best reflects their current level of competency.

We need to:

• Identify opportunities to amplify the skills of the Coaches so they can reach more of the Curious and become an active part of the organisations' data literacy campaign.

• Support the Confident as they continue to hone their skills, and encourage them to stretch with the view to becoming future Coaches.

• Nurture the Curious by encouraging them to engage with data literacy concepts and creating opportunities for them to learn and seek guidance from their peers.

7%

employees able to help their peers *read*, *write* and *comprehend* data.

A REGIONAL PERSPECTIVE

The data literacy profile is very similar across countries, with all regions noting between 8-12% of participants as Coaches, between 40-44% of participants as Confident and between 45-51% as Curious.

• Australia and Canada have the greatest representation of Coaches, with 12% of respondents in this cohort.

• India and United States of America have the lowest representation of Coaches, with 8% of responses in this cohort.

• Around half of all respondents from Canada, India and United States of America are Curious, with United Kingdom and Australia having slightly lower levels of Curious respondents.

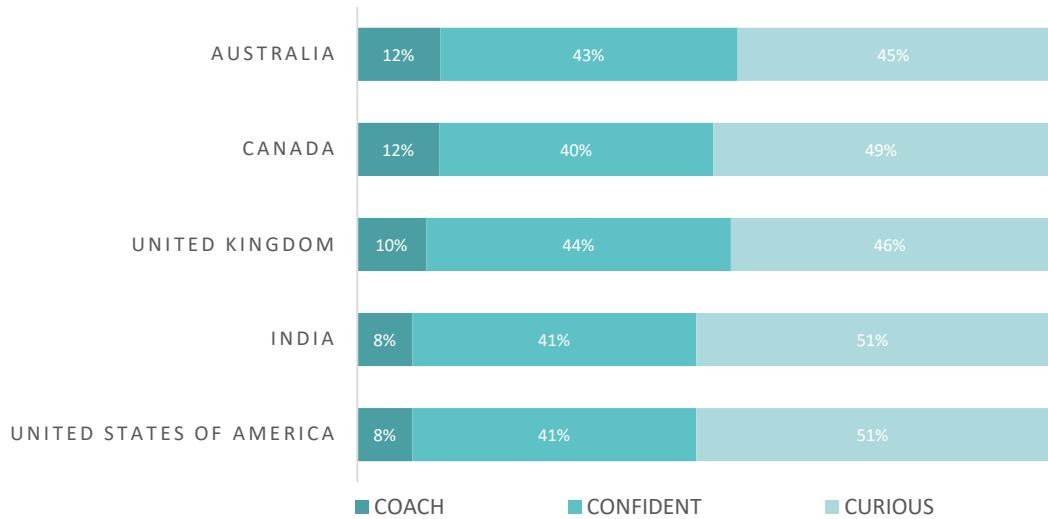| Country	COACH	CONFIDENT	CURIOUS
AUSTRALIA	12%	43%	45%
CANADA	12%	40%	49%
UNITED KINGDOM	10%	44%	46%
INDIA	8%	41%	51%
UNITED STATES OF AMERICA	8%	41%	51%

FIGURE 1: DATA LITERACY PROFILES BY COUNTRY

AN INDUSTRY PERSPECTIVE

Data literacy varies widely by industry, with significant differences between industries when it comes to the proportion of Curious, with Finance & Insurance (37%), and Public Administration & Defence (38%) showing lower levels of Curious compared to their Accommodation & Food Service Activities (63%) and Transport & Storage (58%) counterparts.

Significant differences also exist between industries when it comes to the proportion of Coaches, with Professional, Scientific & Technical (17%) and Finance & Insurance (13%) having significantly higher proportion of Coaches than their Agriculture, Forestry & Fishing (2%) and Electricity & Gas (3%) counterparts.

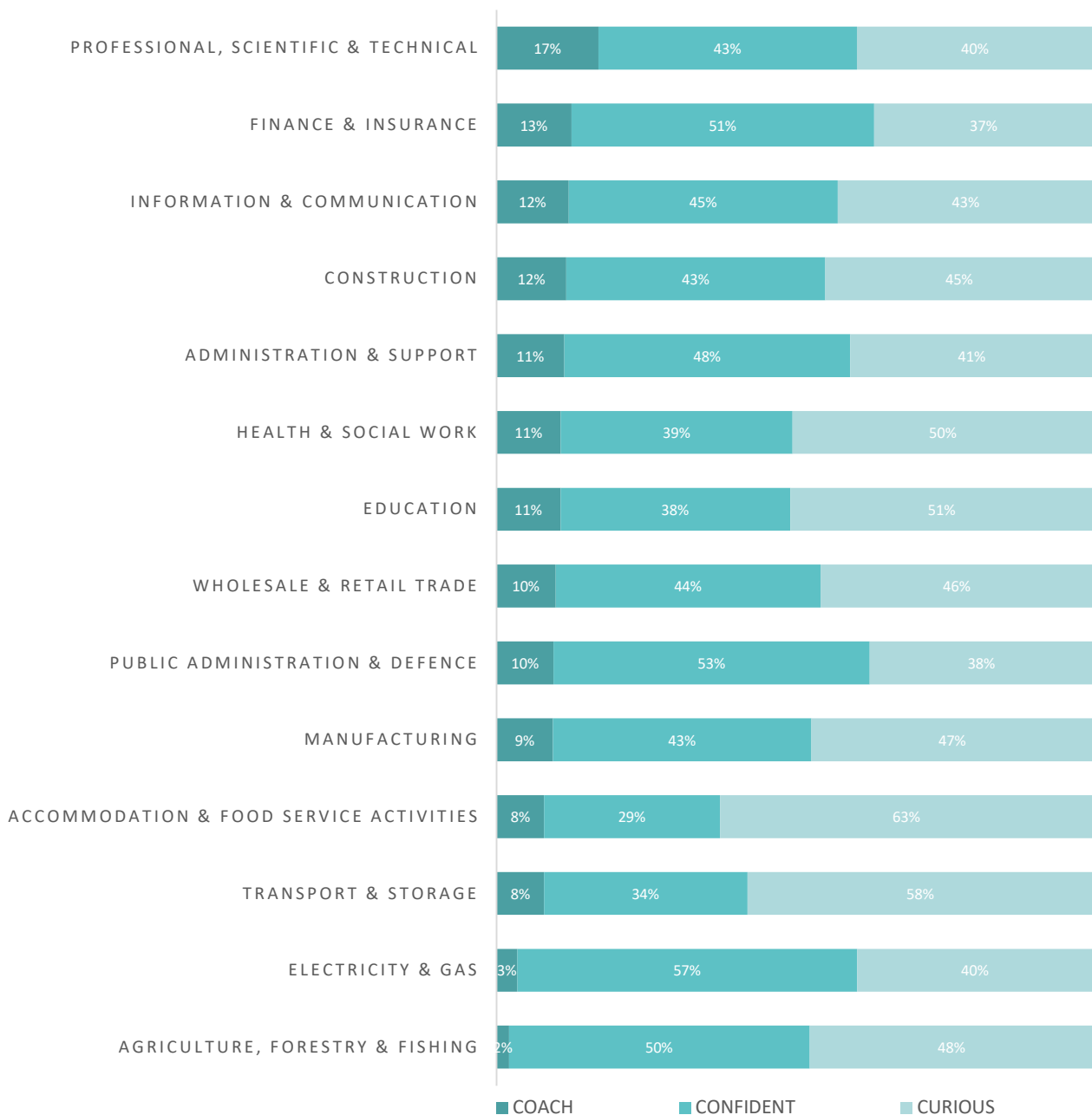| Industry	COACH	CONFIDENT	CURIOUS
PROFESSIONAL, SCIENTIFIC & TECHNICAL	17%	43%	40%
FINANCE & INSURANCE	13%	51%	37%
INFORMATION & COMMUNICATION	12%	45%	43%
CONSTRUCTION	12%	43%	45%
ADMINISTRATION & SUPPORT	11%	48%	41%
HEALTH & SOCIAL WORK	11%	39%	50%
EDUCATION	11%	38%	51%
WHOLESALE & RETAIL TRADE	10%	44%	46%
PUBLIC ADMINISTRATION & DEFENCE	10%	53%	38%
MANUFACTURING	9%	43%	47%
ACCOMMODATION & FOOD SERVICE ACTIVITIES	8%	29%	63%
TRANSPORT & STORAGE	8%	34%	58%
ELECTRICITY & GAS	3%	57%	40%
AGRICULTURE, FORESTRY & FISHING	2%	50%	48%

FIGURE 2: DATA LITERACY PROFILES BY INDUSTRY

AN OCCUPATION PERSPECTIVE

Managers and Professionals are the most highly data literate occupations, with the highest level of Coaches at 14% and 13% respectively. However, whilst Managers and Professionals are the most likely of all occupations to be able to help others; over 40% of them still need direction, with 42% of respondents within the Curious cohort.

Industries with more than half of their employees needing assistance include Elementary Occupations (60%), Craft & Related Trades Workers (57%), Services & Sales Workers (54%) and Clerical Support Workers (50%).
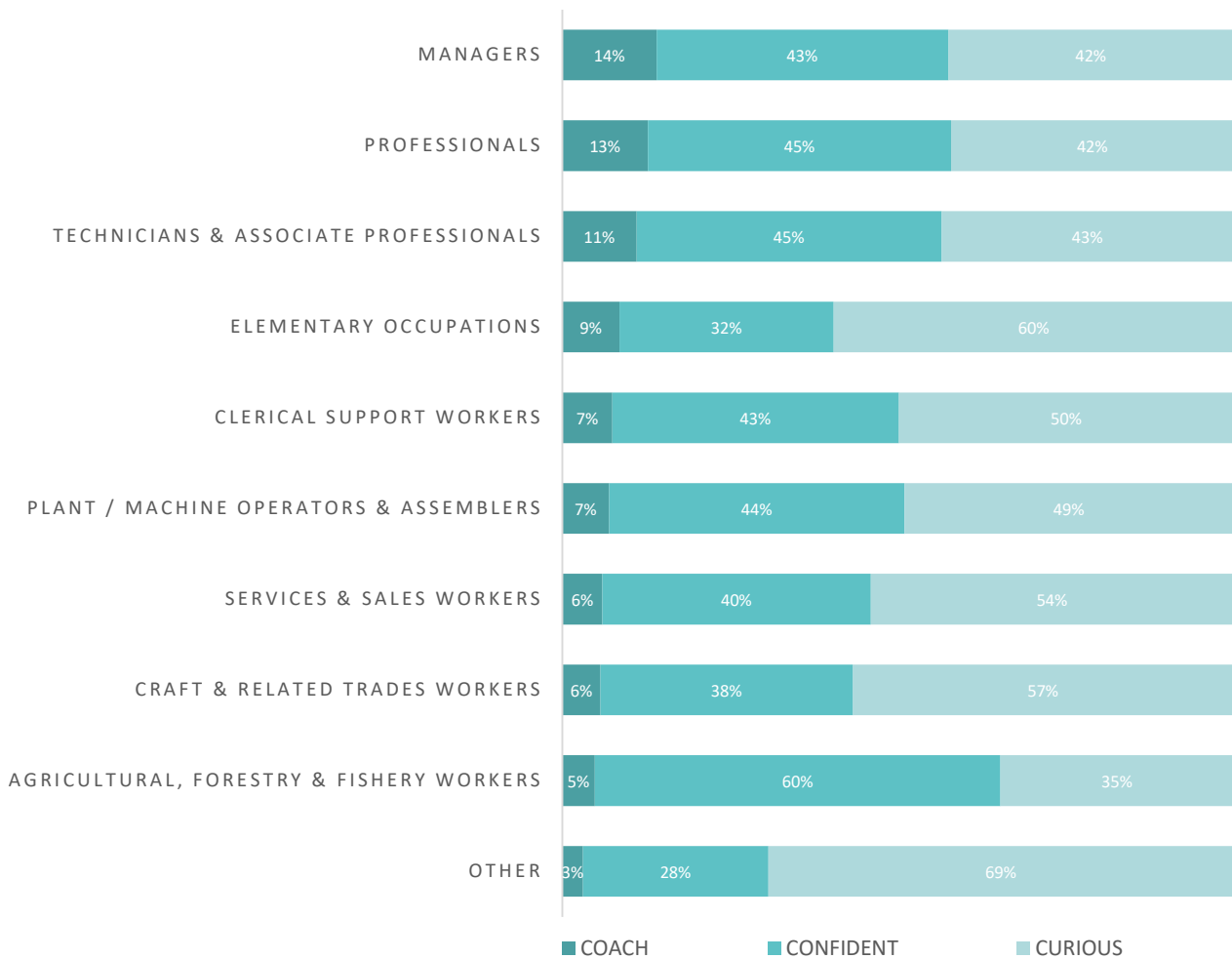

FIGURE 3: DATA LITERACY PROFILES BY OCCUPATION

48%

employees needing
help to *read*, *write* and
comprehend data.

A DOMAIN PERSPECTIVE

Of the three data literacy domains, reading is the area where respondents feel most
comfortable, with higher proportions of Coaches (14%) and Confident (43%) when
compared to the writing and comprehension domains.

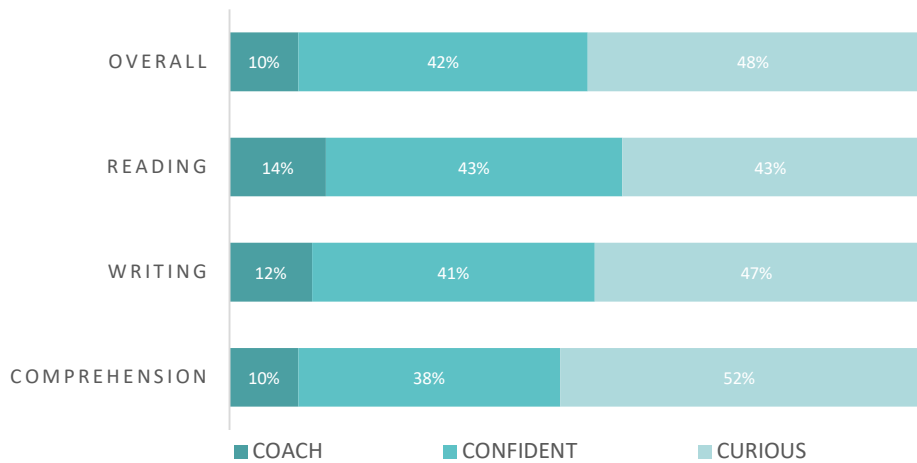|	COACH	CONFIDENT	CURIOUS
OVERALL	10%	42%	48%
READING	14%	43%	43%
WRITING	12%	41%	47%
COMPREHENSION	10%	38%	52%

FIGURE 4: DATA LITERACY PROFILES BY DOMAIN

A COMPETENCY PERSPECTIVE

At an individual competency level, Data Discovery (18%) and Data Collection (17%) had the greatest proportion of Coaches, with Data Analysis (11%) and Data Visualisation (12%) having the least. Data visualisation also had the greatest proportion of Curious (64%) indicating this competency poses the most significant challenge for respondents.
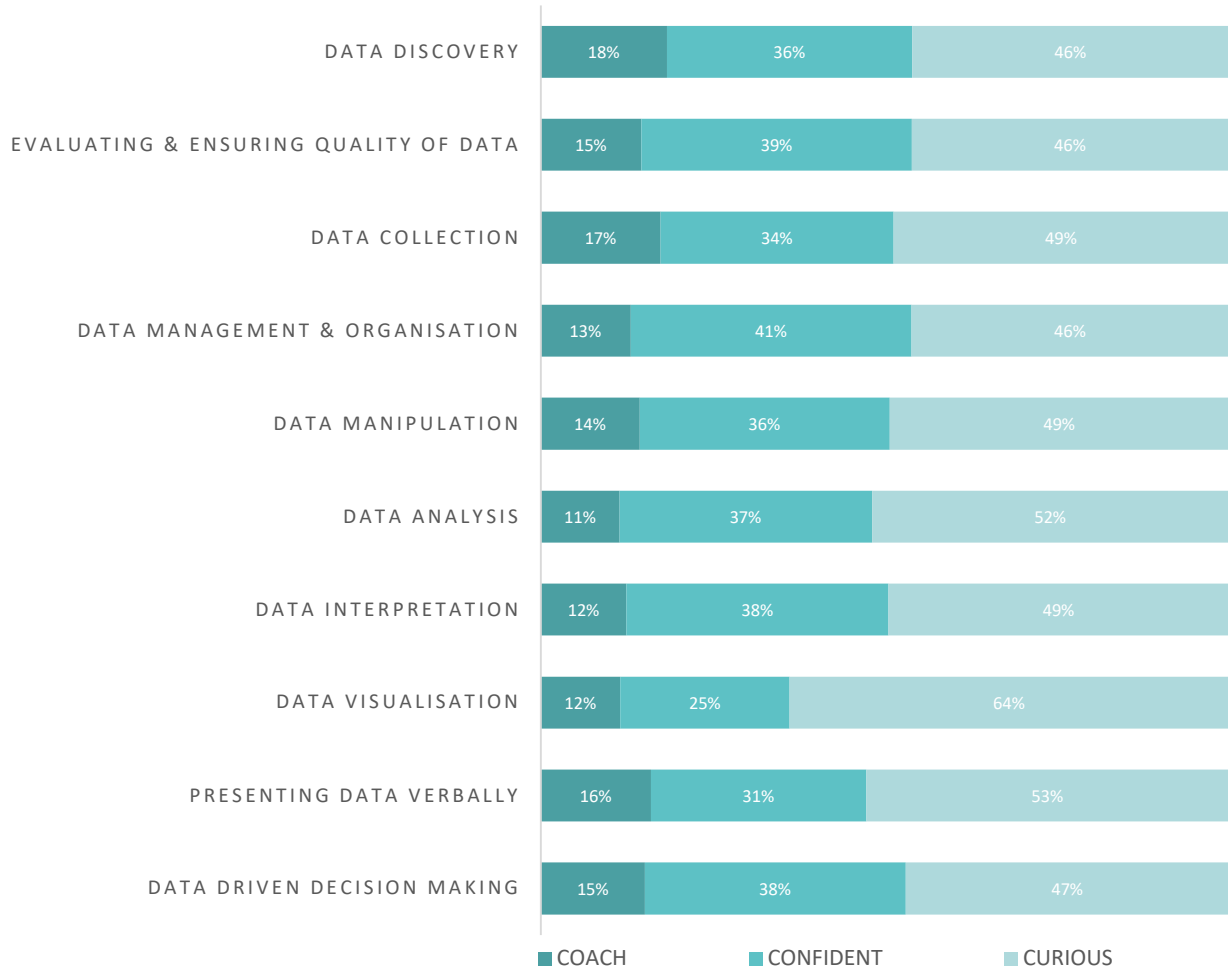

	COACH	CONFIDENT	CURIOUS
DATA DISCOVERY	18%	36%	46%
EVALUATING & ENSURING QUALITY OF DATA	15%	39%	46%
DATA COLLECTION	17%	34%	49%
DATA MANAGEMENT & ORGANISATION	13%	41%	46%
DATA MANIPULATION	14%	36%	49%
DATA ANALYSIS	11%	37%	52%
DATA INTERPRETATION	12%	38%	49%
DATA VISUALISATION	12%	25%	64%
PRESENTING DATA VERBALLY	16%	31%	53%
DATA DRIVEN DECISION MAKING	15%	38%	47%

FIGURE 5: DATA LITERACY PROFILES BY COMPETENCY

12%

employees able to help their peers *interpret data*.

WHAT DOES THIS ALL MEAN?

Data literacy varies widely by industry and occupation, but follows a standard profile across regions. Whilst there is no one-size fits all solution, the benchmark exists to allow organisations to understand the landscape they operate in, identify their position on the map and chart their path to enterprise-wide data literacy.

The key takeaway of the 2020 Global Data Literacy Benchmark is there are many people who need help, but not enough people to support them.

Our Coaches play a critical role in the overall level of data literacy within our organisations. We need to find meaningful opportunities to amplify their skills and provide channels for them to inspire and encourage the rest of the organisation to engage in – and contribute to – enterprise-wide data literacy.

Organisations need to also identify and invest in those who sit somewhere in the middle, the Confident, to strengthen their skills and build their confidence as they evolve into Coaches over time.

We also need to encourage the Curious by creating opportunities for them to participate in relevant, well structured data functions. Creating opportunities for the Curious to develop practical data literacy skills as part of their existing day-to-day tasks and activities is key to encouraging their interest and growth.

WHERE TO FROM HERE?

From today onwards, any organisation from any industry will be able to compare themselves to a global benchmark of data literacy competency levels and understand the landscape in which they operate.

Data To The People is committed to completing this study on an annual basis to monitor levels of data literacy across the globe, to provide organisations with an accurate understanding of their competitive environment.

From here, it is truly up to each and every single organisation to chart their course: from their individual starting point to their intended destination. It is impractical and unnecessary for every individual within an organisation to be Coaches, but by empowering those who are Curious and sharing the skills of the Confident, it is possible to uplift the team as a whole and look towards a brighter, more data-driven future.

DATA TO THE PEOPLE

ABOUT US

Data To The People are recognised global experts and industry leaders in building and nurturing data literacy.   We equip leaders and organisations with the tools to assess individual and organisational data literacy, and design bespoke programs for them to improve the data competency of their workforce.

We deliver a research-backed, scalable approach to data literacy, assisting organisations to measure, map and develop data literacy across their entire workforce.

Our proprietary Databilities® framework means we're uniquely placed to help organisations understand how they measure up against competitors, other businesses in the region and different occupations.

Data To The People is proud to provide organisations with specific benchmarks and assessment tools that are relevant and useful to them.

For more information and to discuss how we can support you, contact us at info@datatothepeople.org or visit www.datatothepeople.org.

INDUSTRY BENCHMARKS

Agriculture, Forestry and Fishing
Includes crop and animal production, hunting and related service activities, forestry and logging, fishing and aquaculture. 3,500+ data points.

Manufacturing
Includes manufacture of food products, beverages, tobacco products, textiles, wearing apparel, leather products, wood products, paper products, printing and reproduction of recorded media, chemical products, pharmaceuticals, medicinal products, rubber and plastic products, non-metallic mineral products, basic metals, fabricated metal products, computer, electronic and optical products, electrical equipment, machinery and equipment, motor vehicles, trailers and semi-trailers, other transport equipment, repair and installation of machinery and equipment. 13,500+ data points.

Electricity and Gas
Includes electricity, gas, steam and air conditioning supply. 3,500+ data points.

Construction
Includes construction of buildings, civil engineering, specialised construction activities. 6,500+ data points.

Wholesale and Retail Trade
Includes wholesale and retail trade, and repair of motor vehicles and motorcycles. 6,500+ data points.

Transport and Storage
Includes land transport and transport via pipelines, water transport, air transport, warehousing and support activities for transportation, postal and courier activities. 3,000+ data points.

Accommodation and Food Service Activities
Includes accommodation and food and beverage service activities. 4,000+ data points.

Information and Communication
Includes publishing activities, motion picture, video and television programme production, sound recording and music publishing activities, programming and broadcasting activities, telecommunications, computer programming, consultancy and related activities, information service activities. 11,500+ data points.

Finance and Insurance
Includes financial service activities, insurance, reinsurance and pension funding, activities auxiliary to financial service and insurance activities. 7,500+ data points.

Professional, Scientific and Technical Activities
Includes science and engineering professionals, health professionals, teaching professionals, business and administration professionals, information and communication technology professionals, legal, social and cultural professionals. 8,000+ data points.

Administrative and Support Service Activities
Includes rental and leasing activities, employment activities, travel agency, tour operator, reservation service and related activities, security and investigation activities, services to buildings and landscape activities, office administration, office support and other business support activities. 5,500+ data points.

Public Administration and Defence
Includes public administration and defence. 3,500+ data points.

Education
Includes primary, secondary and tertiary education. 9,500+ data points.

Health and Social Work
Includes provision of health and social work activities. Activities include health care provided by trained medical professionals in hospitals and other facilities, other residential care activities that still involve a degree of health care activities, and social work activities without any involvement of health care professionals. 9,500+ data points.

OCCUPATION BENCHMARKS

Managers
   Includes chief executives, senior officials and legislators, administrative and commercial managers, production and specialised services managers, hospitality, retail and other services managers. 31,500+ data points.

Professionals, Technicians and Associate Professionals
   Includes science and engineering professionals, health professionals, teaching professionals, business and administration professionals, information and communication technology professionals, legal, social and cultural professionals. 29,500+ data points.

Clerical Support Workers
   Includes general and keyboard clerks, customer services clerks, numerical and material recording clerks, other clerical support workers. 14,500+ data points.

Services and Sales Workers
   Includes personal services workers, sales workers, personal care workers, protective services workers. 13,500+ data points.

Technicians and Associate Professionals
   Includes science and engineering associate professionals, health associates, business and administration, legal, social, cultural and related associate professionals, and information and communications technicians. 10,000+ data points.

REGIONAL BENCHMARKS

Australia
   25,000+ data points.

United Kingdom
   25,500+ data points.

Canada
   25,000+ data points.

United States of America
   25,000+ data points.

India
   25,000+ data points.