Becoming a Data-Driven Enterprise: Does Your Organization Speak “Data”?

Prepared for Sacombank

Gartner Executive Programs

27 October 2023

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Becoming a Data-Driven Enterprise: Does Your Organization Speak “Data”?

- D&A Strategy and Operating Model
- Data-Driven Organization’s Characteristics
- What Is Data Literacy & Why It Is Important
- How To Structure a Data Literacy Program
- How to Measure and Ensure Success
- Recommendation on Data-Driven Organization Transformation

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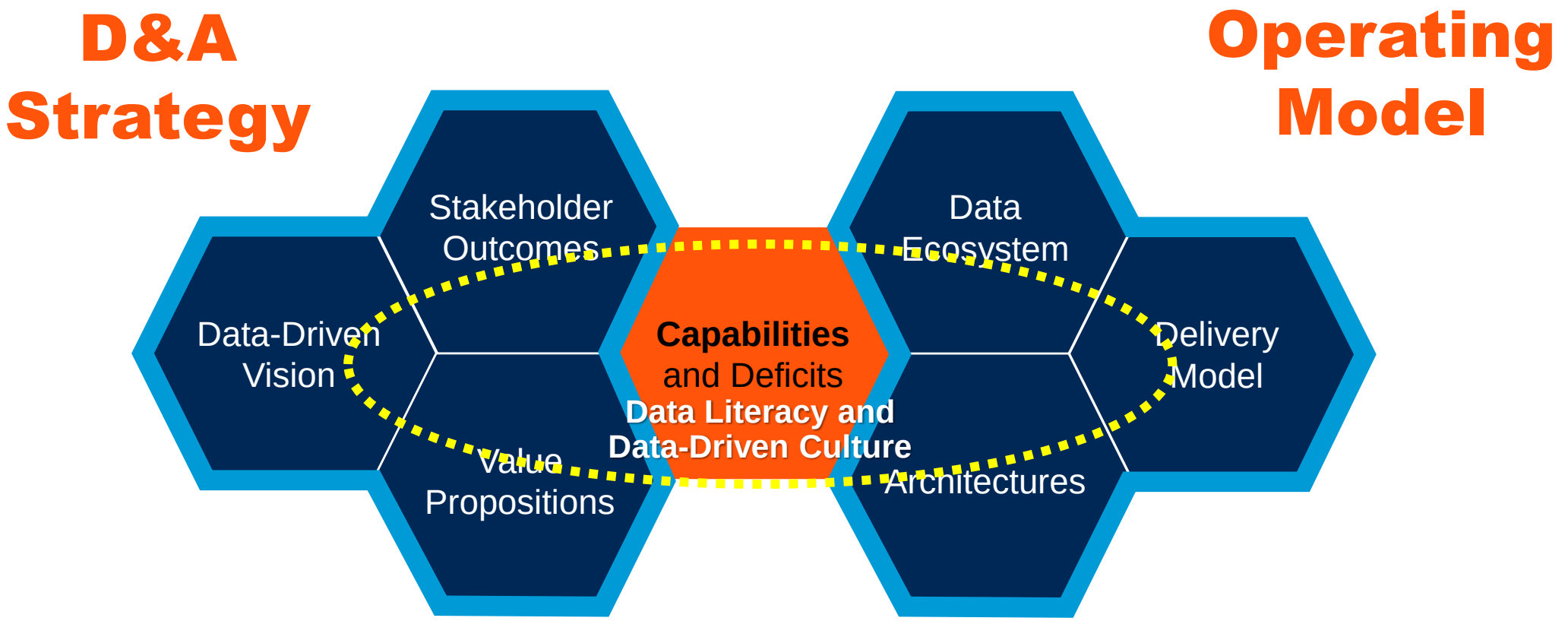
D&A Strategy and Operating Model

Data Literacy Cuts Across All Themes of the D&A Strategy and Operating Model Framework



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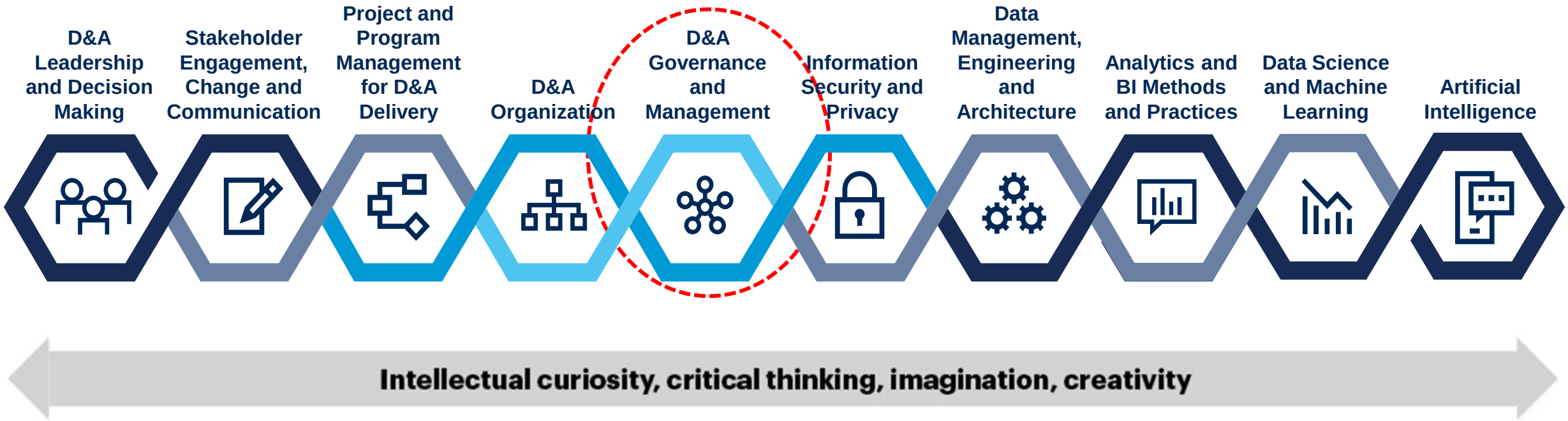
D&A Governance Is a Part of Data Literacy Capabilities and Competencies



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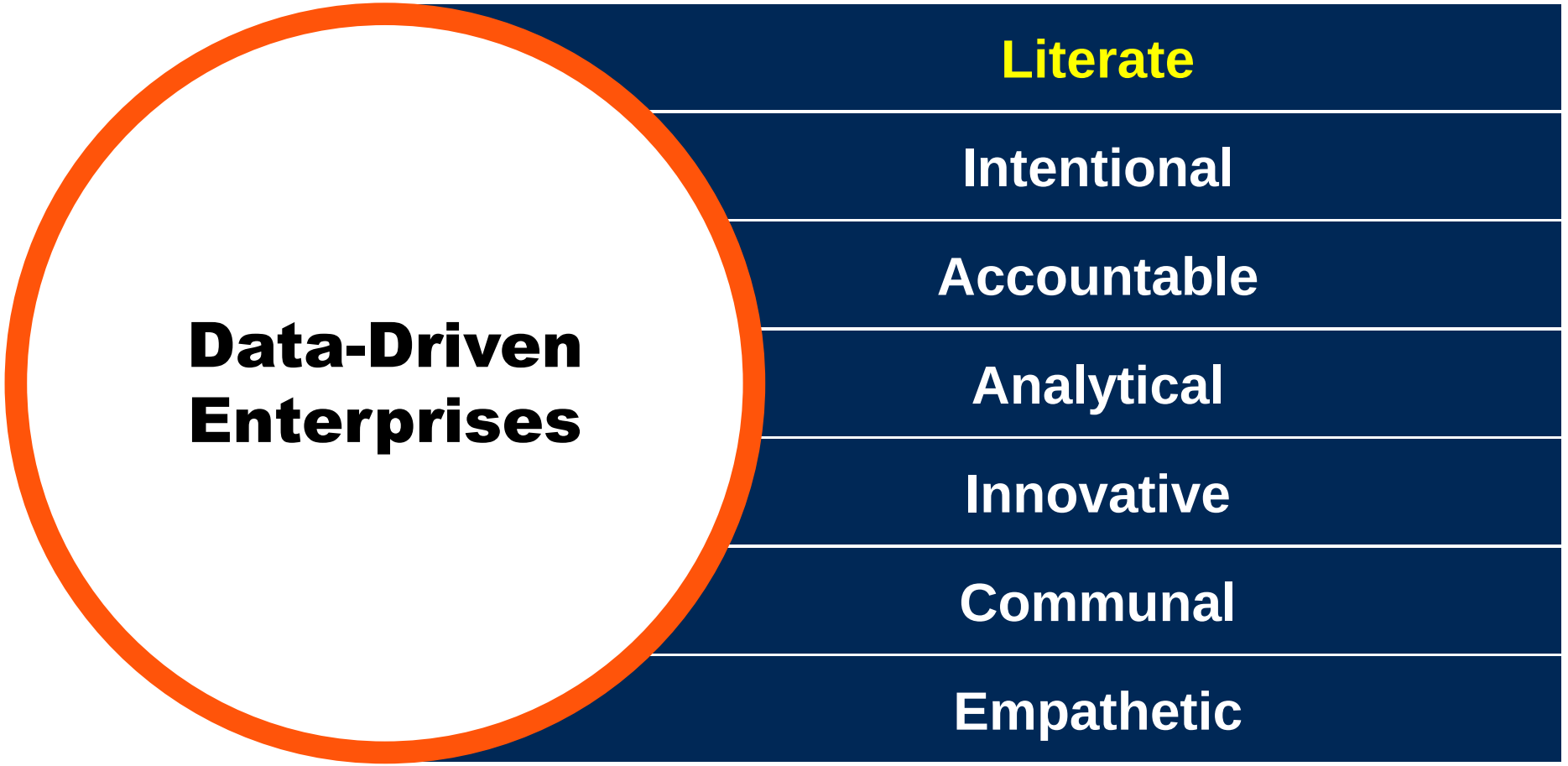
Data-Driven Organizations Think and Act Different



Source: Quick Answer: How to Create a Data-Driven Enterprise (G00754239)

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Do You and Your Team Speak "Data"?

***The ability to read, write and communicate data in context**, with an understanding of data sources and constructs, analytical methods and techniques applied, and the ability to describe the use-case application and resulting business value or outcome.*

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slido

Which D&A skills do you think Sacombank is currently doing well?

ⓘ Start presenting to display the poll results on this slide.

slido

Which Data-Driven culture and behaviors are well-established and working well currently in Sacombank?

ⓘ Start presenting to display the poll results on this slide.

slido

What is the most challenging barrier to scale and accelerate on becoming the Data-driven organization?

ⓘ Start presenting to display the poll results on this slide.

Sacombank Vision to 2026

- Charter Capital Over VND50,000B
- Striving to Reach 30M Customers
- Leading Retail Bank

Predicted Trends

Board of Data Governance Objective

Sacombank become customer-centric empathetic bank & make decision based on data

Skills

Data Literacy

- What Is Data Literacy & Why It Is Important
- How To Structure a Data Literacy Program
- How to Measure and Ensure Success

Wills

Data-Driven Culture

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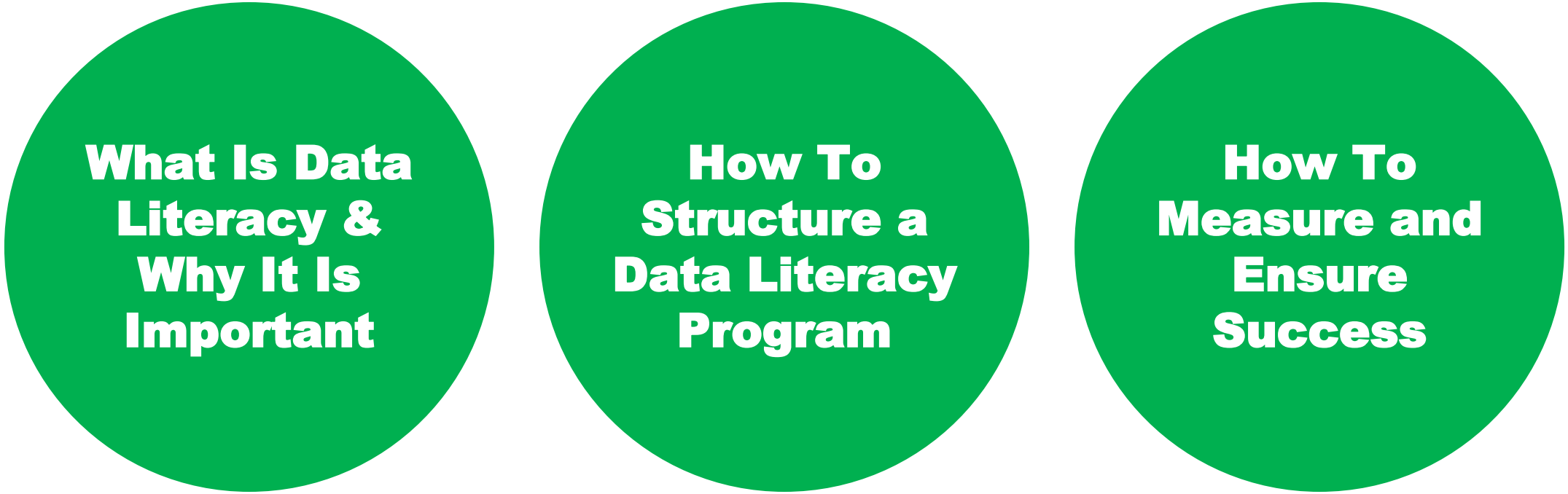
Agenda for Today's Workshop



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Agenda

What Is Data Literacy & Why It Is Important

How To Structure a Data Literacy Program

How To Measure and Ensure Success

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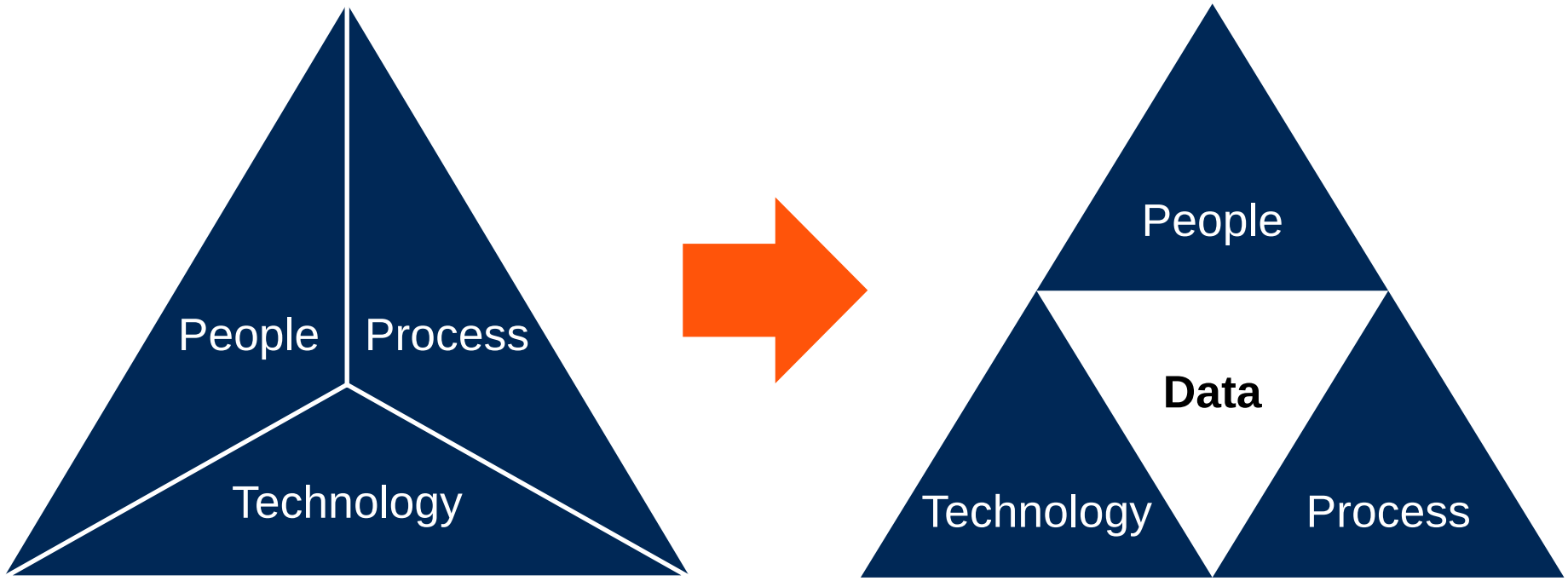
Defining Data Literacy: The New Core Capability of Digital Society



Gartner formally defines ***Data Literacy*** as: **The ability to read, write and communicate data in context,** with an understanding of data sources and constructs, analytical methods and techniques applied, and the ability to describe the use-case application and resulting business value or outcome.

Informally … **do you "speak data?"**

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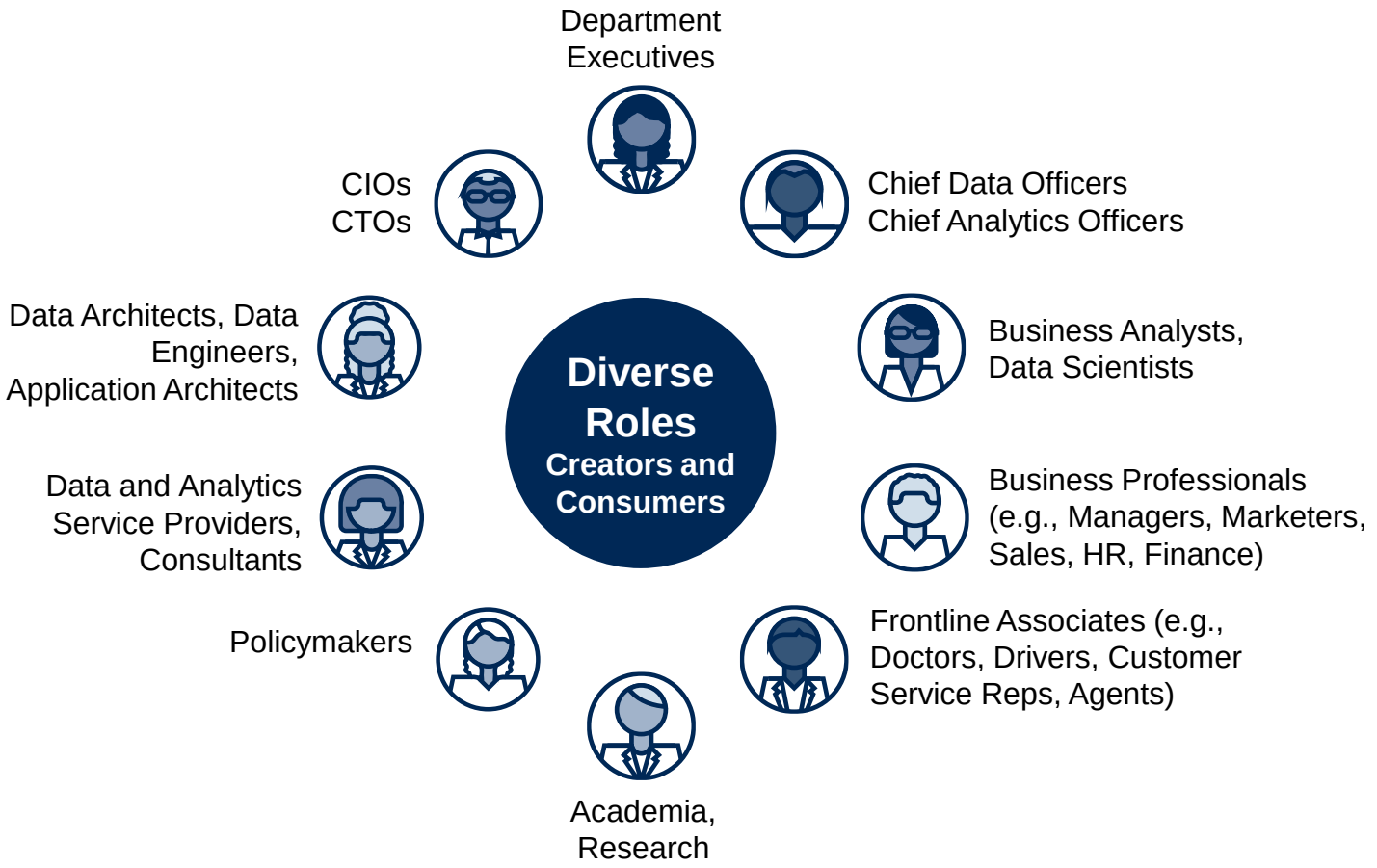
Because… We Don’t Speak a Common Language

Diverse Backgrounds:

- Veterans vs. Rookies
- Data vs. Analytics Backgrounds
- Industry Vertical Experience
- Business Domain Experience
- Scope of Experience:
  - Local vs. Global
  - Business Unit vs. Enterprise



While diversity is desired and healthy, it naturally creates communication challenges.

Creating a Shared Language is Fundamental.

Source: Tool: Enable Data Literacy Through Stakeholder Analysis and Linking to Business Outcomes (G00720223)

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Data Literacy Is the Ability to …

- Understand Data Concepts and Interpret Data
- Understand Analytics Methods and Limitations
- Describe Applicable Use Cases and Resulting Impact

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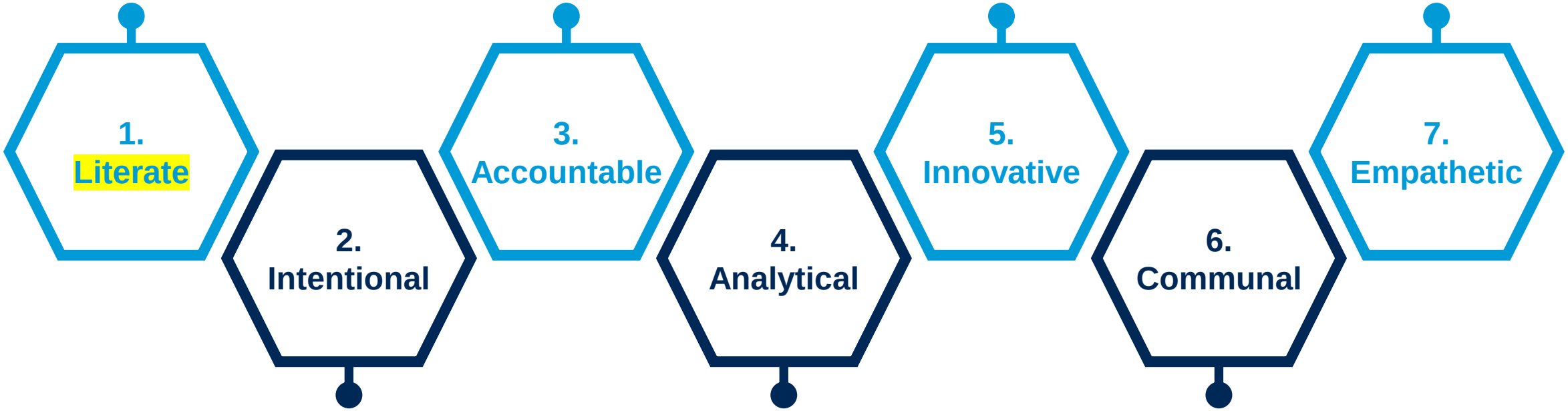
Data-Driven Organizations Think and Act Different: Successful Data-Driven Organizations Cultivate Seven Key Characteristics



Source: Quick Answer: How to Create a Data-Driven Enterprise (G00754239)

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	Literate	Intentional	Accountable
D&A proficiency	Evaluated	Managed	Lead
Data literacy program	Educated	Monetized	Governed
Practiced behavior	Substantiated	Measured	Responsible
Evaluated during hiring process	Recruited	Operationalized	

Analytical	Innovative	Communal	Empathetic
Objective	Experimental	Shared	Respectful
Insightful	Inventive	Collaborative	Introspective
Factual	Nimble	Engaged	Contextual
Curious		Democratized	Humanistic

Source: Quick Answer: How to Create a Data-Driven Enterprise (G00754239)

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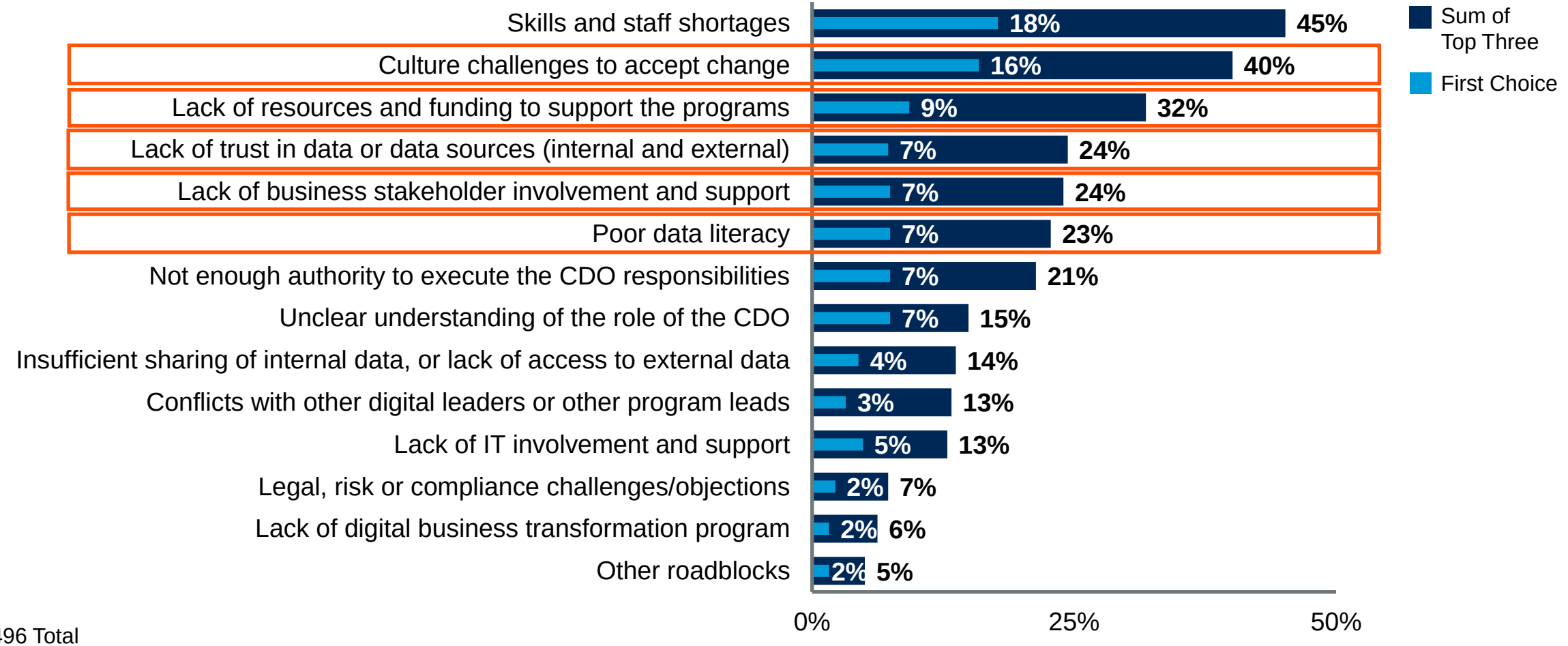
Poor Data Literacy is one the most important roadblocks to the success of the D&A initiatives

Percentage of Respondents



n = 496 Total

Q. Which of the following are the most important roadblocks to the success of your Data and Analytics initiatives?

Source: 2021 Gartner P-21016b CDO Survey

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Exercise 1

Your Current State of Data Literacy

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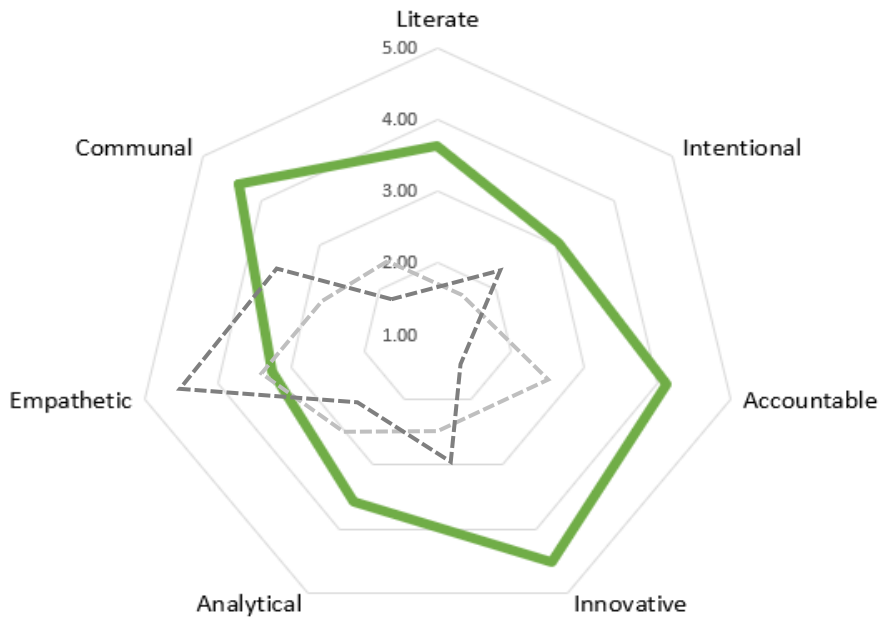
Start Here: Know What You Want to Change

Data Driven Enterprise Assessment Results

Ambition		
	Aspiration:	Business Innovation
	Priority Capability:	Data-Driven Products and Services
	Journey Status:	Just Getting Started

Attribute	Score
Literate	4
Intentional	3
Accountable	4
Innovative	5
Analytical	4
Empathetic	3
Communal	4



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Exercise 1.1: Data Literacy: Individual Assessment

	Assessment Questions	Response	Totals
General	1. I have identified data literacy as a core skill set and can define its business value for my organization in the modern workplace.	0 1 2 3 4	
	2. I can "speak data" and cite examples of data-driven decisions within my organization.	0 1 2 3 4	
	3. I understand the business value of data scientists, data engineers and business analysts and the importance of meeting them frequently and productively.	0 1 2 3 4	
	4. I can identify myself as a specialist (in data management, data science, information governance and my organization's business domains) or generalist (who can translate and work across the specialties within my organization).	0 1 2 3 4	
	5. I am empowered by my HR department to develop specific skills related to data literacy and can articulate its contribution to my personal development.	0 1 2 3 4	
Business/Value	6. I understand how data adds value to business decisions, participate in formally measuring the value of data and analytics investments, and can cite examples of measurable outcomes powered by data and analytics.	0 1 2 3 4	
	7. I have confidence in our data management professionals to have strong business acumen and their ability to articulate our strategy, business process areas, key metrics and business analytics.	0 1 2 3 4	
	8. I regularly participate in meetings where we commonly share and discuss data, metrics, analytics and the decisions they support, and processes and outcomes they improve.	0 1 2 3 4	
	9. In my role I am empowered to innovate with data, design new data-enabled products and processes, and explore new business models, including monetisation (e.g., selling of data).	0 1 2 3 4	
	10. I can describe how my organization fits within a business ecosystem, naming examples of our partners, customers and providers.	0 1 2 3 4	
Data	11. I understand that information is a strategic asset, and can each explain three examples of how it is, or is not, treated or accounted for as such.	0 1 2 3 4	
	12. I am able to have a conversation with our data & analytics professionals and understand the differences of a data warehouse, data mart, data lake and data hub.	0 1 2 3 4	
	13. I have a good understanding of data quality, master data management, application data management, information governance/stewardship and metadata management principles, and can explain the basic value of each with examples in terms that matter.	0 1 2 3 4	
	14. I can name five data sources (either external or internal) that are relevant to our business now but were not prevalent 10 years ago.	0 1 2 3 4	
	15. I regularly leverage data-discovery capabilities and tools to accelerate exploration, ingestion and management of new data.	0 1 2 3 4	
Analytics	16. I understand modern technologies such as augmented analytics, can explain the difference between predictive and prescriptive analytics, and can give an example of each.	0 1 2 3 4	
	17. I commonly use data visualisation and storytelling techniques and can confidently stand up and tell a story with data and visualisation.	0 1 2 3 4	
	18. I can explain the following terms confidently: mean, median, mode and standard deviation.	0 1 2 3 4	
	19. I understand how natural-language processing (NLP) and natural-language generation (NLG) are applied, and can describe use cases of each technique.	0 1 2 3 4	
	20. I understand machine learning (ML) and artificial intelligence (AI) capabilities, and can each describe 3 use cases of ML/AI relevant to my organization.	0 1 2 3 4	
Culture	21. I understand change is required in the modern workplace and how I need to change to embrace the concept of data literacy.	0 1 2 3 4	
	22. In addition to classroom based training, I am active in helping others learn and develop e.g., through social learning, on the job coaching, mentoring etc.	0 1 2 3 4	
	23. In addition to classroom based training, my colleagues are active in helping me and others learn and develop e.g., through social learning, on the job coaching, mentoring etc.	0 1 2 3 4	
	24. I feel I actively promote and encourage social learning, on the job coaching and mentoring within my organization.	0 1 2 3 4	
	25. I am given freedom to be experimental in my ways of working and empowered to learn from mistakes.	0 1 2 3 4	

0 = Strongly Disagree, 1 = Disagree, 2 = Neutral, 3 = Agree, 4 = Strongly Agree.

TOTAL:

Exercise 1.2: Individual Data Literacy Assessment

ASSESSMENT INFORMATION

Individual Name: _____

Survey Completed by: _____

Date Taken: _____

ASSESSMENT RESULTS

Section Score — General:	_____**/20**
Section Score — Value/Business:	_____**/20**
Section Score — Information:	_____**/20**
Section Score — Analytics:	_____**/20**
Section Score — Culture:	_____**/20**
TOTAL DATA LITERACY SCORE:	_____**/100**

ADDITIONAL NOTES

Add any additional findings, observations or insights gained during the assessment process.

_____

_____

_____

_____

_____

_____

_____

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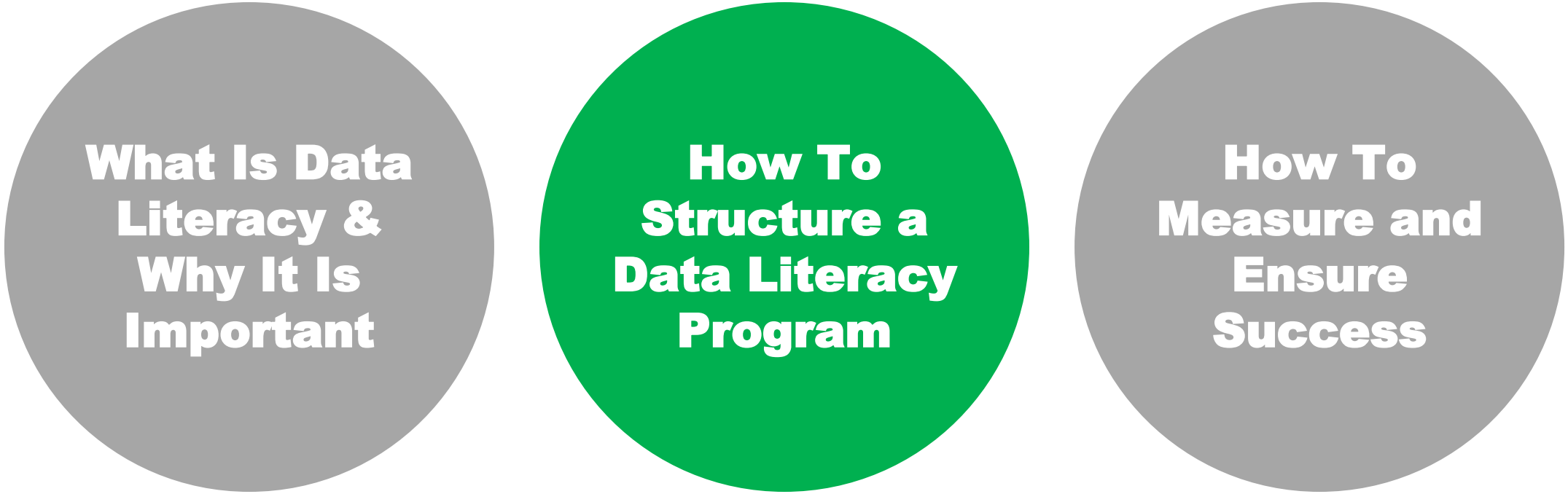

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Three Building Blocks

Target Roles

Learning Objectives

Proficiency Levels

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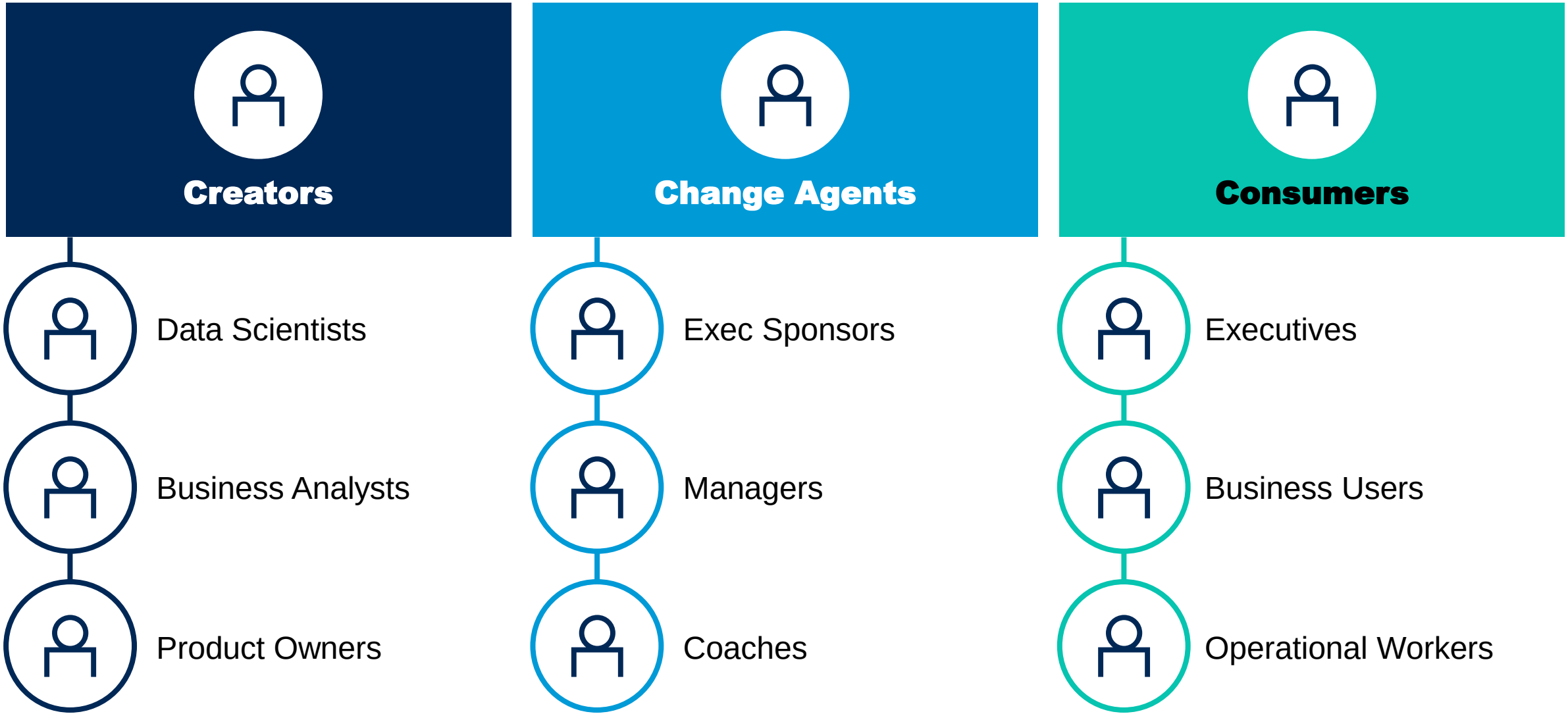
Key Data and Analytics Roles



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Three Building Blocks

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Data Literacy Learning Objectives

Data Concepts

- Data Acquisition
- Data Harmonization
- Data Governance

Analytics Methods

- BI Methods and Practices
- Statistics
- Artificial Intelligence and Machine Learning

Business Outcome

- Strategic Vision and Business Objectives
- Insights Interpretation and Decision Intelligence
- Engagement and Communications

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Three Building Blocks

Target Roles

Learning Objectives

Proficiency Levels

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Define Required Proficiency Levels

1	2	3	4
Aware	**Competent**	**Practitioner**	**Expert**
Understands the definition of a capability and its purpose	Can clearly explain the scope, span of capability and its role in context of D&A vision	Leverages the capability in daily activities	Coaches and instructs based on in-depth domain knowledge

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Exercise 2

Assess Your Proficiency Level

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Topic Proficiency Level for Different Roles

Aware Competent Practitioner Expert

Data Concepts

Data Acquisition

Data Harmonization

Data Governance

Analytics Methods

BI Methods and Practices

Statistics

Artificial Intelligence and Machine Learning

Business Outcome

Strategic Vision and Business Objectives

Insights Interpretation and Decision Intelligence

Engagement and Communications

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- Aware
- Competent
- Practitioner
- Expert

Data Literacy Training: Data Scientist

Aware Competent Practitioner Expert

Data Concepts	Analytics Methods	Business Outcome
Data Acquisition	BI Methods and Practices	Strategic Vision and Business Objectives
Data Harmonization	Statistics	Insights Interpretation and Decision Intelligence
Data Governance	Artificial Intelligence and Machine Learning	Engagement and Communications

Data Literacy Training: Executive Sponsor

Aware Competent Practitioner Expert

Data Concepts	Analytics Methods	Business Outcome
Data Acquisition	BI Methods and Practices	Strategic Vision and Business Objectives
Data Harmonization	Statistics	Insights Interpretation and Decision Intelligence
Data Governance	Artificial Intelligence and Machine Learning	Engagement and Communications

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Data Literacy Training: Product Owner

Aware Competent Practitioner Expert

Data Concepts	Analytics Methods	Business Outcome
Data Acquisition	BI Methods and Practices	Strategic Vision and Business Objectives
Data Harmonization	Statistics	Insights Interpretation and Decision Intelligence
Data Governance	Artificial Intelligence and Machine Learning	Engagement and Communications

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Exercise 2: Assess Your Proficiency Level

Aware Competent Practitioner Expert

Data Concepts

- Data Acquisition
- Data Harmonization
- Data Governance

Analytics Methods

- BI Methods and Practices
- Statistics
- Artificial Intelligence and Machine Learning

Business Outcome

- Strategic Vision and Business Objectives
- Insights Interpretation and Decision Intelligence
- Engagement and Communications

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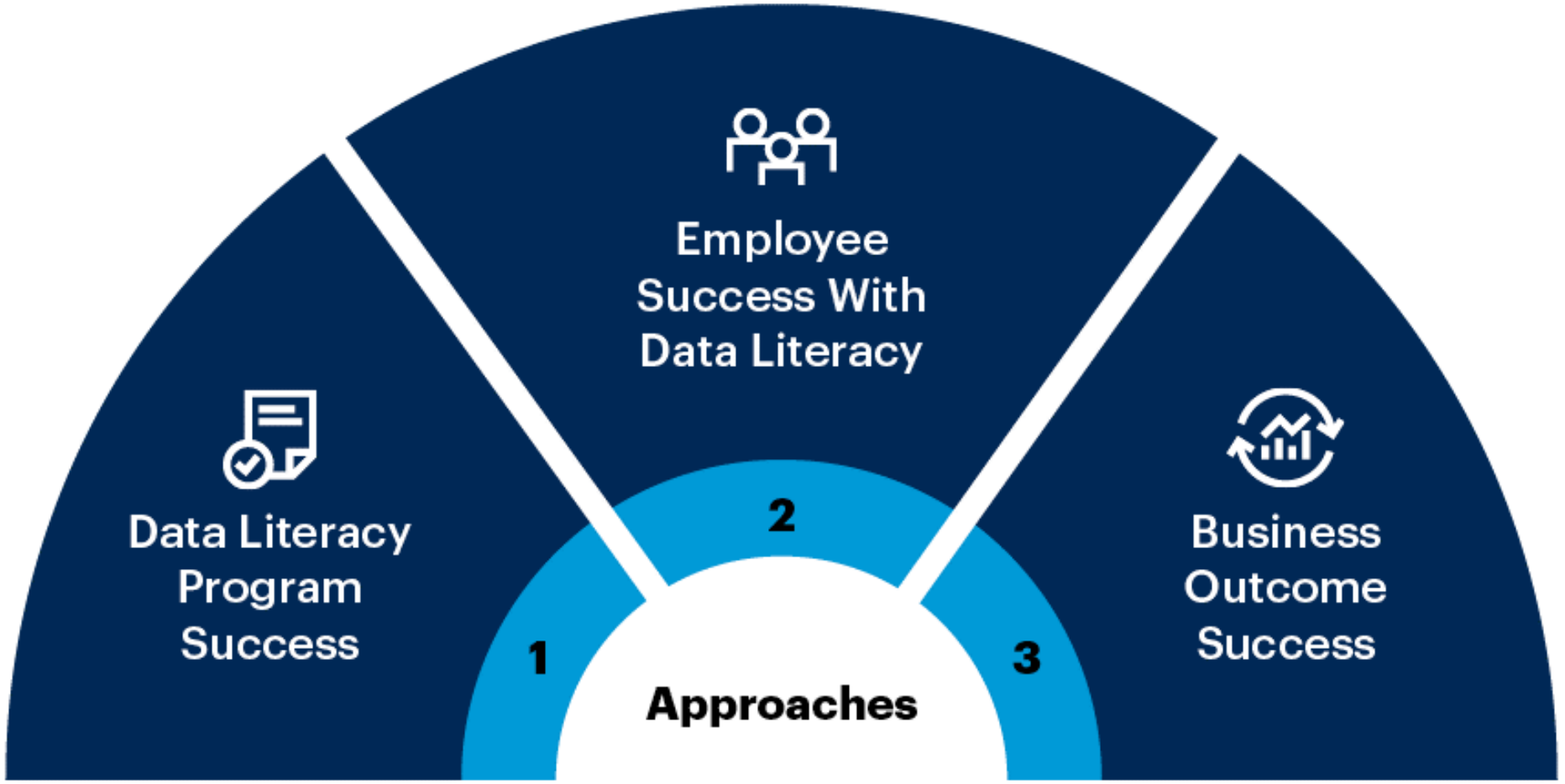
Approaches to Measure the Efficacy of Data Literacy Initiatives



Source: How to Measure the Value of Data Literacy (G00727537)

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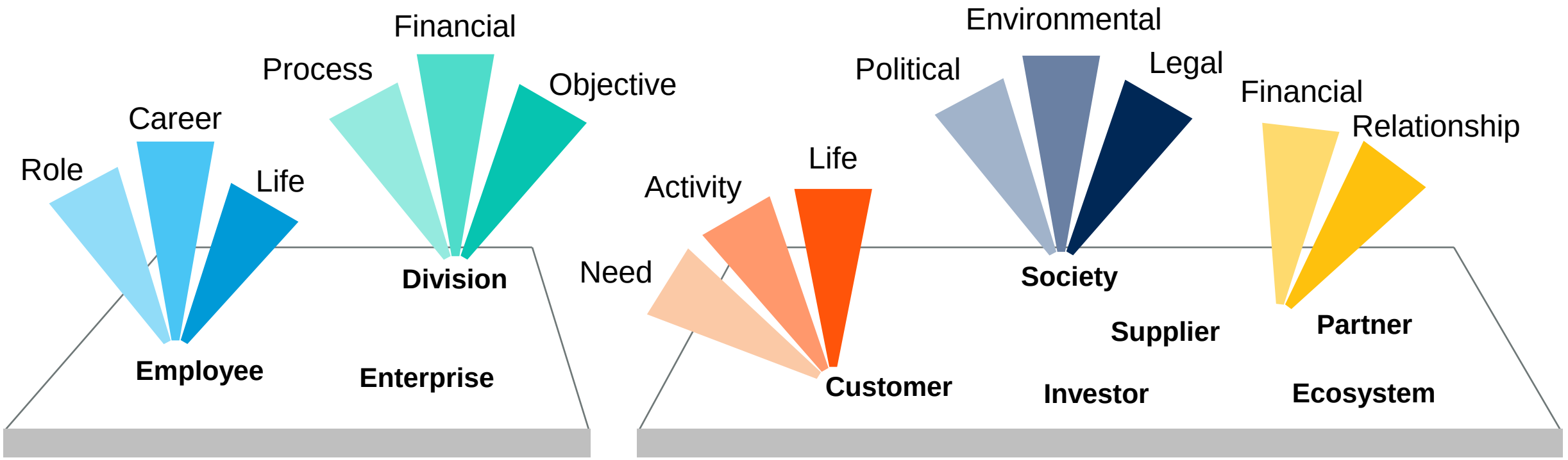
Emphasize Measurable Stakeholder Outcomes



Internal Stakeholders ("Business Value")

External Stakeholders ("Stakeholder Value")

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What Does Good Data Literacy Look Like?

In General	For Consumers (of Data and Analytics Solutions)	For Creators (of Data and Analytics Solutions)
• **Policy is based on data —** not on dogma or belief. • There is a clear **data literacy executive champion —** an active, visible, sponsor, or set of champions. • **Politicians and executive team "speak data"** with ease and **model the behavior** actively. • **Data is not viewed as a byproduct.** Reporting and analytics are not an afterthought. • There is **a formal data literacy strategy, program and plan in place,** aligned and in conjunction with HR. • To support sharing a common language, the following are in place: **a business glossary, data catalog and data dictionary.** • Performance management and **hiring practices include data literacy** explicitly. • **Data is trusted and understood. Meetings are highly effective** in how data, metrics and analytics are used. • **The phrase "what does the data tell us?" is commonly heard!**	Awareness and **understanding of foundation concepts including, but not limited to:** • The **ability to describe a business scenario, outcome or use case** based on data, metrics and analysis used to make a decision. • **Asking good questions.** • **The scientific method** (hypothesis testing, experiments). • **Distinction between correlation and causality.** • Different measures of central tendency, averages (**mean, median, mode,** standard deviation); • The value of **data as an asset.** • **Basic data constructs, types, sources.** • The power of **blending data types and sources** to drive innovation and derive insights. • The nature of **data privacy, security, ethics, bias and risk.** • Adoption and productivity of **self-service business intelligence.** • Comfort and ease in **picking the right chart.** • Active, engaged **data storytelling.** • **Variety of analytical techniques** (descriptive, diagnostic, predictive, and prescriptive).	• **Those who enter data understand why data quality matters,** and the key role they play. • **Data scientists, data engineers and business analysts share a common language,** and interact frequently and productively. • Data scientists and analytics **professionals can explain the essence of varying data management approaches.** • **Data discovery and augmented analytics capabilities** and tools are in place and actively leveraged with ease for exploration. • **Analytics are embedded into the business workflow** opportunistically. • **Data visualization and storytelling** techniques are commonly used. • **Machine learning and artificial intelligence capabilities are commonly understood** across data and analytics professionals and use cases of ML/AI can be readily described. • **Professional development programs are in place to attract, develop, manage and retain top talent** in data engineering, data science, AI disciplines. • **Certification processes** are either in place or under development for key roles and skills.

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What Might Poor Data Literacy Look Like?

In General	For Consumers (of Data and Analytics Solutions)	For Creators (of Data and Analytics Solutions)
• **Business and IT executives thinking that they have agreement, but are referring to two completely different things.** Example: a business executive saying that we need a data catalog (to be able to easily locate an index of datasets and sources), and an IT executive saying it is already in place with the metadata repository that was implemented (which includes the creation of the data dictionary).	• **Cherry-picking data to justify a decision** that's already been taken, rather than examining the data to inform what decision should be taken.	• **Relying on internal structured data because it is familiar and easy to access,** rather than exploring all relevant internal and external data sources and types.
• **Talking about information as "our greatest corporate asset"** or as "the new oil" **without actually treating it like an enterprise asset or** employing techniques to train employees to protect and leverage that asset.	• **Not clarifying or challenging assumptions.**	• **Data hoarding** by individuals and departments who don't recognize the value they are limiting in how others could use the data. Not treating information as an enterprise asset.
• **Lack of common understanding of basic terms such as *personal data* or *personally identifiable data.***	• **Saying "give me all the data and I will figure out what to do with it later."**	• A **fixation on hindsight-oriented analytics** and "pretty pie charts" instead of high-value diagnostic, predictive and prescriptive analytics.
• Decreasing budgets annually for report and dashboard development although requests for always increase (Also **not vetting the actual usage and value of reports).**	• **Making decisions because available data is available.**	• **Failure to consider a variety of ways to quantify the value of information internally and externally** (*infonomics*). Being narrowly focused on local usage scenarios.
• Failure to consider the data/analytics **competencies of new hires** in any position.	• **Using the wrong average** (mean vs. median) or not understanding the concept of a weighted average.	• **Lack of professional development and certification programs** for data and analytics professionals.
• **Failure to explicitly measure information's potential** and actual contribution to business value (infonomics), possibly due to not understanding how to articulate business impact.	• **Never hearing the phrase "What does the data tell us?"**	
	• Asking for a report because **"that's the way we've always done it."**	
	• Not identifying and adjusting **for inherent or implicit biases.**	
	• Using the **wrong type of chart** for a dataset (e.g., a pie chart for time series data).	
	• **Data and conclusions represented in a way that does not provide adequate context, clarification of assumptions,** and/or discerning interrogation by the viewer. E.g., **fake news.**	

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Exercise 3

Build Your Own Case for Change

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What Does Good Data Literacy Look Like?

In General

- Decision-making based on **data driven insights.**
- Executive team **"speaks data"** with ease and **models the behavior** actively.
- The phrase **"what does the data tell us?"** is commonly heard!
- Data freely **shared** across the organization.

For Creators

- **Analytics and BI** tools are in place and actively leveraged with ease for exploration.
- **Data visualization and storytelling** techniques are commonly used.
- Understand the importance of **data quality** and **data management practices**
- **Certification processes.** are either in place or under development for key roles and skills.
- Investigating **advanced analytics capabilities** such as graph and AI.

For Consumers

- Can **trust** the data and insights
- Asking good questions informed by **data.**

Awareness and **understanding of foundation concepts such as:**

- Distinction between **correlation and causality.**
- Common measures: **mean, median, mode, std deviation.**
- Basic **data constructs, types, sources.**
- Comfort and ease in **using the right chart.**
- **Data storytelling** to communicate insights
- Sources of potential **bias.**

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What Might Poor Data Literacy Look Like?

In General

- **Decision-making** primarily based on **experience or gut instinct.**
- **Data siloed and not shared** between business groups.
- **Analytics and BI tools** only available to **business analysts.**
- **Dashboards and reports** only shared with **executives and managers.**

For Creators

- Only using **structured data** because it is familiar and easier to access.
- Fixation on **hindsight-oriented analytics** such as reports instead of higher-value diagnostic, predictive and prescriptive analytics.
- Using **legacy** analytics and BI tools that lack more **modern augmented capabilities.**
- Not understanding the role and context of the **consumers** that will be using the insights.

For Consumers

- Saying **"give me all the data and I will figure out what to do with it later."**
- **Cherry-picking data** to justify a decision.
- Using the **wrong type of chart** for a dataset.
- **Misinterpreting** the insights
- **Not clarifying or challenging assumptions.**
- Asking for a report because **"that's the way we've always done it."**
- Not identifying and adjusting **for inherent or implicit biases.**

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Exercise 3: Building Your Own Case for Change: Why Data Literacy Now?

1. Where do you see signs of **good** data literacy today? Examples?
2. Where do you see signs of **poor** data literacy today? Examples?
3. Fast forward 12 months … What would enhance data literacy look like? Top priorities?
4. How do you personally feel about growing your own data literacy, or your team's data literacy?

1. _____
2. _____
3. _____
4. _____

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With Data Literacy, You Are Ready for Constantly Changing Conditions

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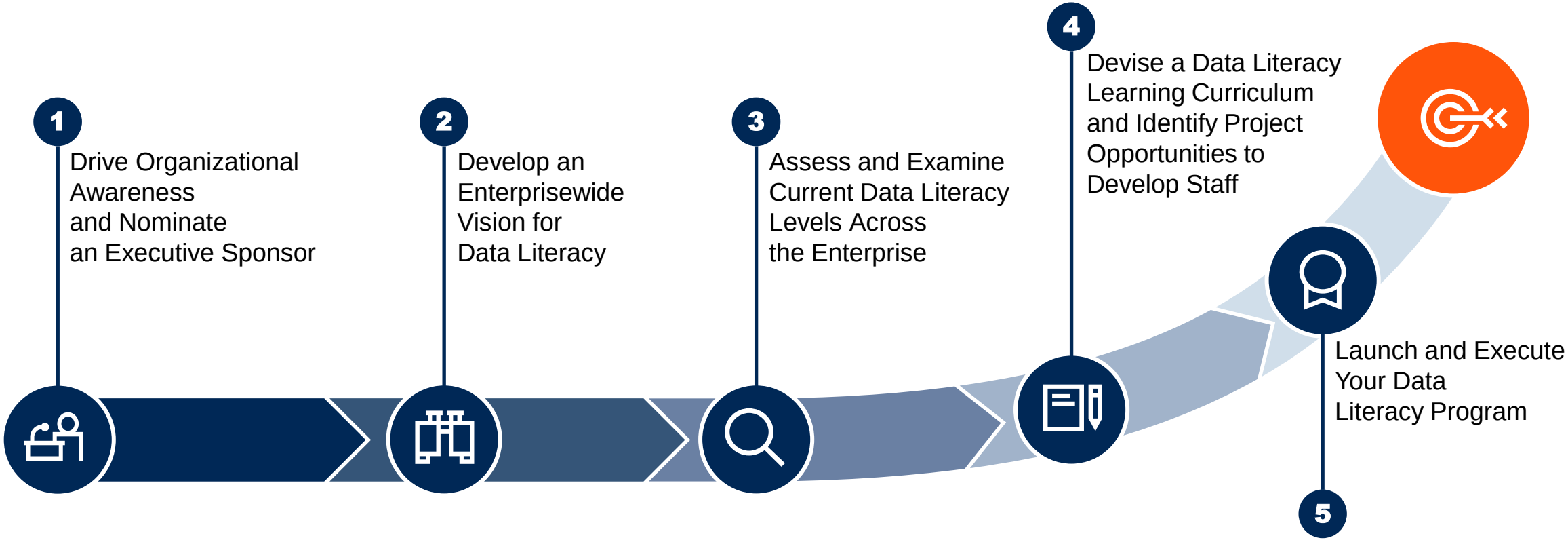
Roadmap for Data-Driven Organization Transformation



- **Reward those who drive value from data.**
- **Build internal competitions and initiatives for new sources of value derived from data.**
- **Bring in external speakers to continually fuel the fire for data literacy.**
- **Do not become "data obsessed"!**

Source: Roadmap for Data Literacy and Data-Driven Business Transformation: A Gartner Trend Insight Report (G00729278)

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Recommended Gartner Research

- **Roadmap for Data Literacy and Data-Driven Business Transformation: A Gartner Trend Insight Report**
  Alan D. Duncan (G00729278)
- **Drive Business Outcomes by Measuring the Value of Data Literacy**
  Alan D. Duncan (G00761792)
- **How to Design an Effective Data and Analytics Training Program to Improve Data Literacy**
  Melody Chien and Alan D. Duncan (G00733498)
- **Tool: Data Literacy Personas**
  Alan D. Duncan, Aron Clarke and Jessica Rudzinski (G00728451)
- **Toolkit: Data Literacy Individual Assessment**
  Alan D. Duncan, Donna Medeiros and Aron Clarke (G00720221)

Access to Gartner research is subject to entitlement. For information, please contact your Gartner representative.

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