THE POWER OF DATA

MASTERING THE LANGUAGE OF THE DIGITAL ERA

DECEMBER 2021

PALO IT

QUINLAN & ASSOCIATES

CONTENTS

EXECUTIVE SUMMARY (1/2)

Industry Overview

- For many years, companies across the globe have sought to capitalise on the wonderous possibilities of data. Underpinned by technological innovation and rising digital adoption, businesses are actively exploring the boundaries of what their data can do, both for their customers and internal operations.
- As mentioned in our previous report, today's data explosion has created significant fears of missing out ("FOMO") amongst many senior executives. In response, corporate data investments have surged, with global data-specific technology spending reaching USD 474.7 billion in 2020 and projected to grow to USD 639 billion by 2024.
- However, we believe that many firms have gotten lost in the hype, neglecting the fundamentals of a data project in exchange for empty promises and wasted investments.

Key Takeaways

- The significant wastage in data-centric projects reflects two key problems: (1) most data is left unused, untapped, or unknown to a business (i.e. "dark data"); and (2) the cost of recovering and making flawed data (i.e. "imperfect data") ready for use is extremely high. In fact, dark data accounts for 55% of data expenditure wastage, costing companies USD 193 billion in 2020. However, this pales in comparison to the recovery costs of imperfect data.
- The fact is, only 3% of data within organisations are considered "perfect" and ready for processing. The remaining 97% requires some form of manipulation to make it ready for use, which expends 10x more effort (and cost) as opposed to vanilla maintenance costs. We estimate that the costs of making imperfect data usable amounted to USD 1.5 trillion in 2020 alone.
- Wastage stems from multiple areas, including a lack of understanding of a company's data value chain, mismatched technology and business needs, inadequate integration of siloed data systems, and failed transformation planning. However, the vast majority of this wastage is attributed to one basic theme: the lack of a defined organisational data strategy.

EXECUTIVE SUMMARY (2/2)

Data Strategy

- At its core, a sound data strategy consists of two complementary components: the (1) Business, Application, Information & Technology ("BAIT") framework and; (2) a robust change management strategy
- The BAIT framework outlines steps from project formulation to execution, together with key action items
- An effective change management strategy outlines appropriate policies and incentives to develop a data-centric culture that unifies and maximises data investments throughout the lifecycle of a data strategy project
- Both components can be scaled up or down, depending on the type of project: namely, strategic, tactical, or operational. The type of project is determined by considerations such as resources, time, or infrastructure required.
- These components rightly consume considerable airtime and focus. But there is one centrepiece that holds an entire data strategy project together that is often neglected: a fundamental business strategy.

Closing Takeaways

- It is our belief that most data strategy projects fail because data's place as an integral part of the larger business is often overlooked. So many executives have been caught up in the hype behind data that they shoehorn it into a company's operations without detailed analysis as to "why" they are doing so; or worse, do so simply to appease shareholders.
- At the end of the day, technology is guided by the business's objectives and likewise limited by it as well. A solid foundation in basic data operations must exist before data can be allowed to guide any business.
- Much like a language's primary purpose is to convey ideas and facilitate communication, it must first have a solid foundation of rules and structure before being able to evolve and guide the language as a whole over time. After all, data is the real lingua franca of business.

SECTION 1

INTRODUCTION – FOR DATA'S SAKE

INTRODUCTION (1/7) – WHY DATA IS IMPORTANT TO BUSINESS

Data-driven organisations are 19 times more likely to be profitable and six times more likely to retain clients

Data-driven Value Chain

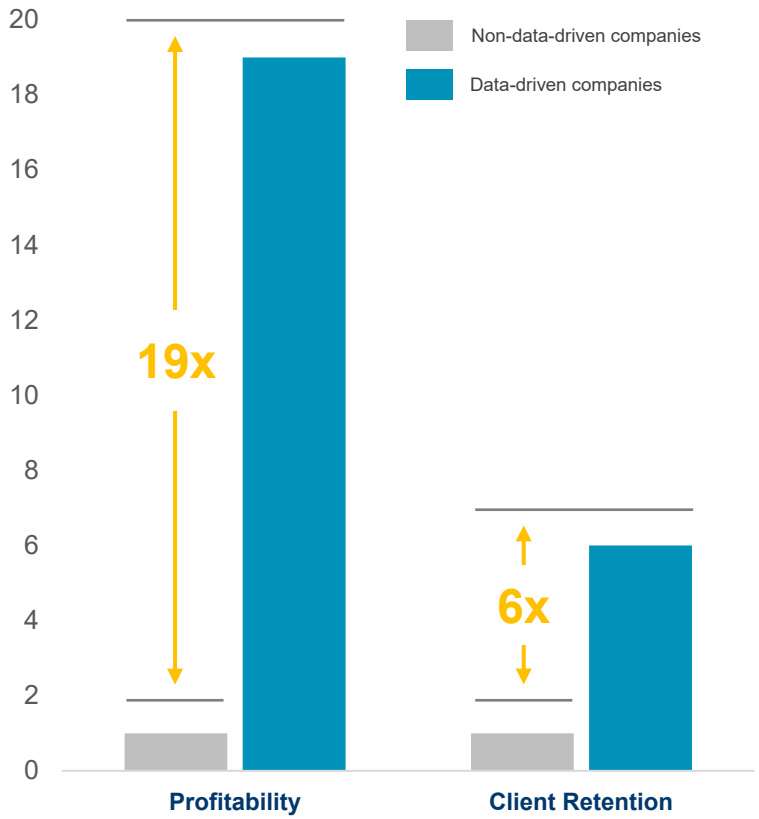
Amazon Value Chain

amazon

	Description
IDENTIFY	**Customer Historical Data** Amazon identifies customer's historical data, such as items searched, viewed, stored in a cart, final purchase, and etc.
DERIVE	**Customer Engagement Metrics** Based on information, such as how long the customer was on a certain page, Amazon derives engagement metrics on each customer
RUN	**Item-based Collaborative Filtering Engine** The insights generated feeds into an algorithm that provides customised and highly relevant product recommendations to customers
TARGET	**Data-driven Sales** Customers makes purchases based on their own interest (~65%) or recommended products by the data-driven algorithm (~35%)

Data-driven Outcomes

Illustrative



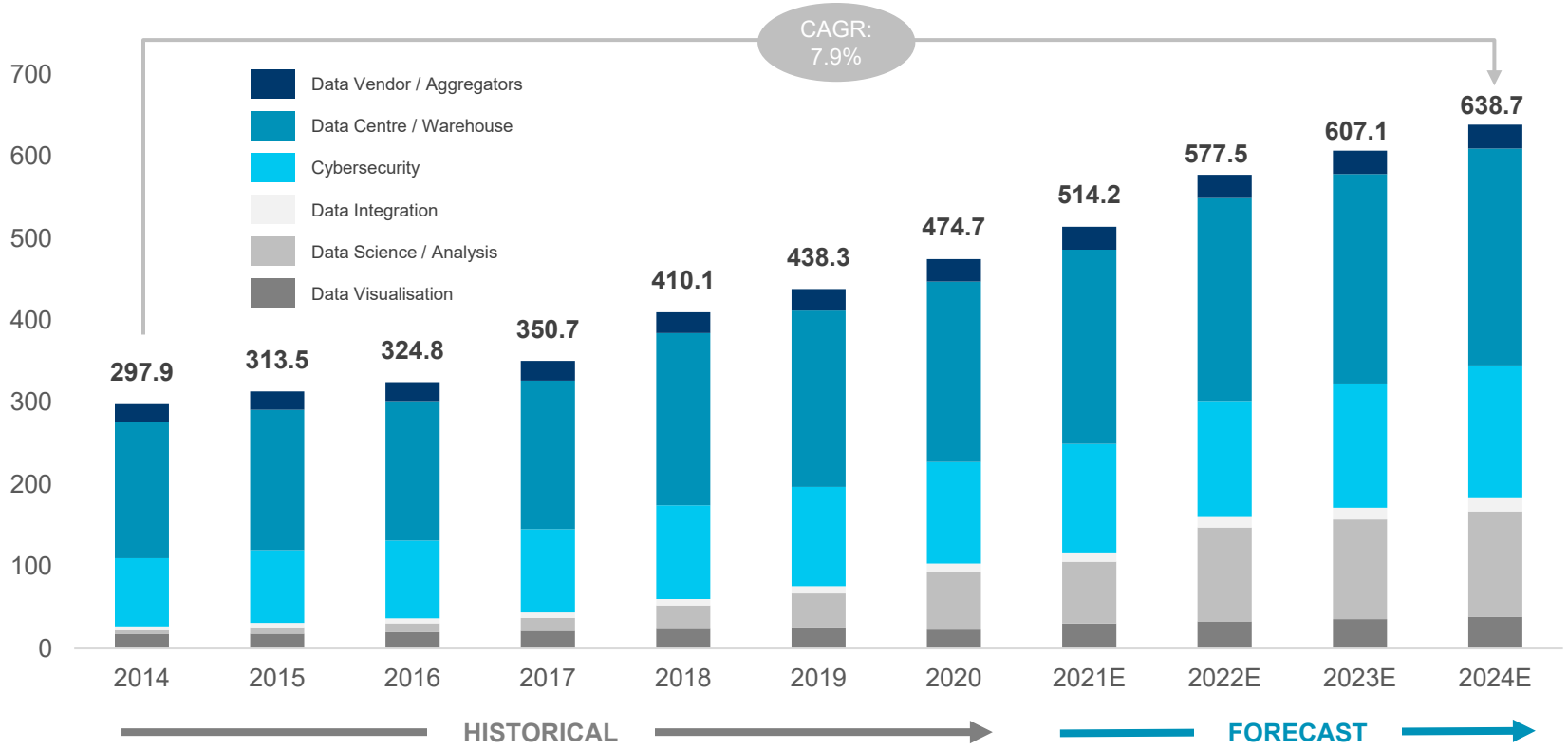
Source: Nanyang Technological University, Arizona State University, Millimetric.ai, Quinlan and Associates analysis

INTRODUCTION (2/7) – GLOBAL IT EXPENDITURE BREAKDOWN

We estimate that total data-related IT expenditure worldwide is expected to reach USD 639 billion by the end of 2024, growing at a CAGR of 7.9% from 2014

Data-specific Technology Spend

2014 – 2024 Estimates



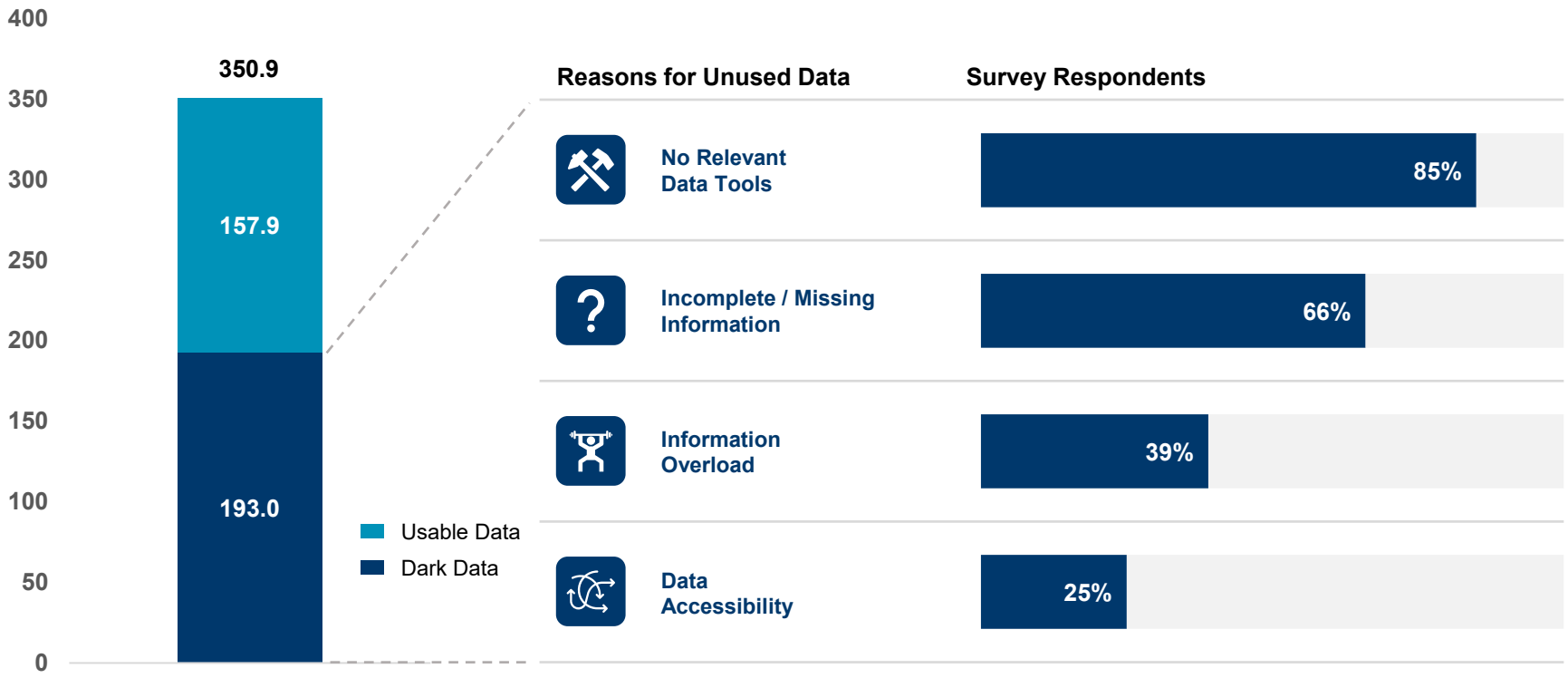
Source: Fortune Business Insights, Gartner, Market and Markets, Quinlan and Associates analysis

INTRODUCTION (3/7) – DARK DATA

"Dark data" is unused, unknown and untapped data; we estimate dark data cost organisations USD 193 billion in 2020 alone

Unproductive Investment from Dark Data

Global, USD billion, 2020

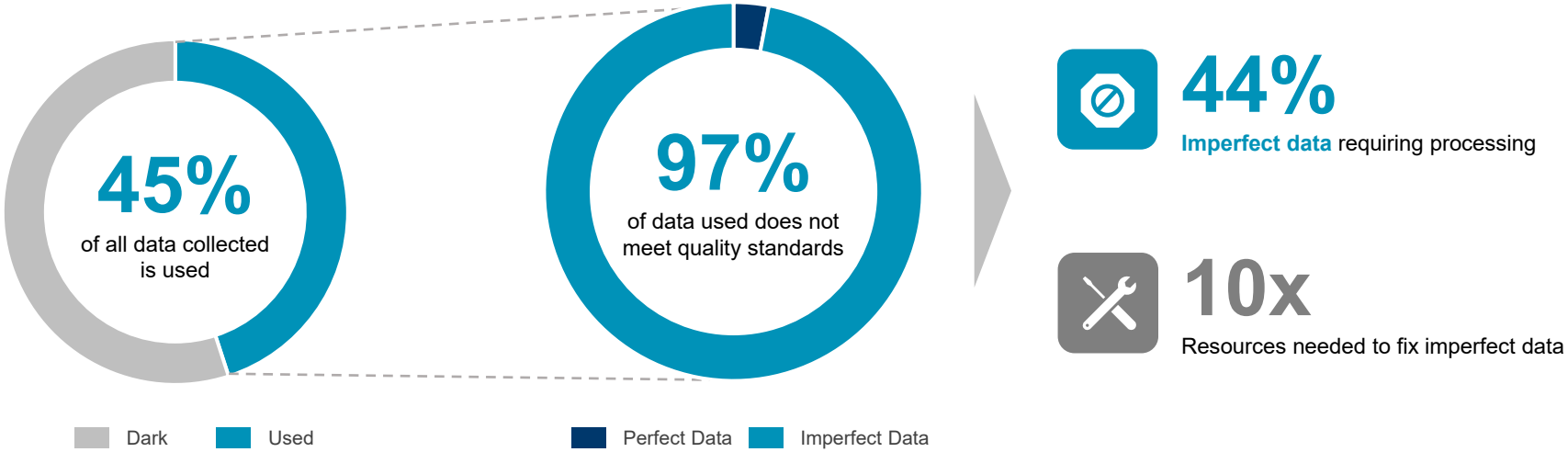


Source: Datumize, TRUE Global Intelligence, Market and Markets, HBR, Quinlan and Associates analysis

INTRODUCTION (4/7) – RECOVERY COST

Non-dark data is largely imperfect and subject to recovery, which costs 10x more than vanilla maintenance costs; we estimate this cost businesses USD 1.5 trillion in 2020 alone

Recovery Costs from Imperfect Data
Global, USD, 2020



	Imperfect Data	Loss (USD)	Multiplier	Total (USD)
Recovery Costs from Imperfect Data (2020)	**44%**	**153bn**	**10x**	**1.5 Trillion**

Source: Harvard Business Review, Quinlan and Associates analysis

INTRODUCTION (5/7) – RECOVERY COST

Businesses typically look to utilise data to achieve four main business goals; inadequate strategic data planning contributes significantly to the cost of imperfect data in organisations

Recovery Costs from Imperfect Data

Global, USD, 2020

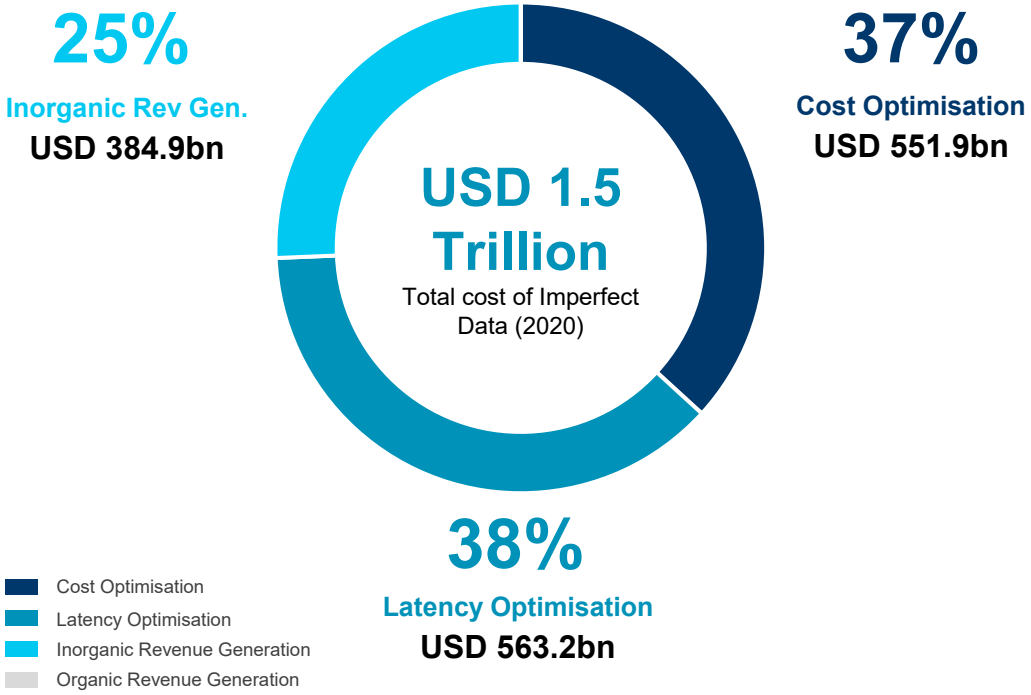
Business Goals

Cost Optimisation
Reduce company expenses relating to manpower, time, and effort regarding data usage within an organisation

Latency Optimisation
Facilitate faster decision-making by streamlining the data collection and insight generation process to reduce time to business decisions

Inorganic Revenue Generation
Create and validate a business strategy via the support of a data system, which comes before organic revenue generation

Organic Revenue Generation[1]
Robust data collected upon attainment of an ideal data system and value chain ultimately informs business strategy



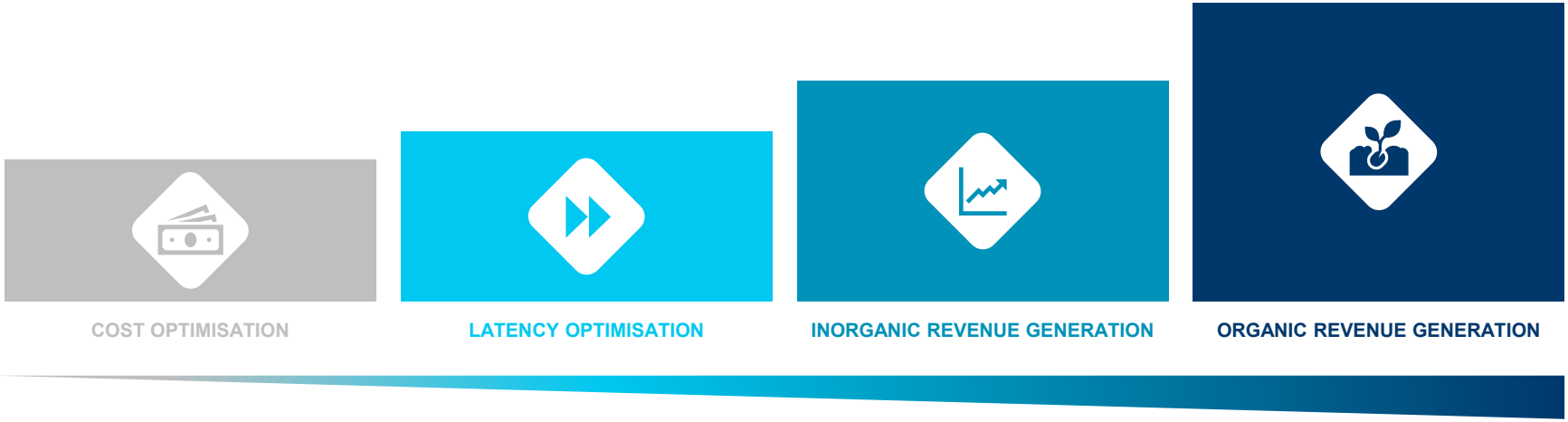
1. Companies with organic revenue generation by proper considerations for the data value chain are unlikely to have significant wastage from investments in data projects
Source: NewVantage Partners, Capgemini, Harvey Nash, Quinlan & Associates analysis

INTRODUCTION (6/7) – COMMON BUSINESS GOALS

Business goals can be further separated into two main categories: (1) internal goals; and (2) external goals

Types of Business Goals for Data

Illustrative



Internal

Internal goal involving the optimisation of data operations to reduce associated financial costs

- Reduce operating costs in terms of manpower and time spent on bad data processing

A goal of utilising data to generate valuable insights to guide solid decision-making of companies

- Reduce time spent on and provide valuable insights into business decisions

External

A goal achieved by several companies to test and realise their vision by tapping into a data system

- Validate a business strategy and realise the revenue potential associated with it

A long-term goal attained by a few firms when data is pulled extensively that it informs business strategy

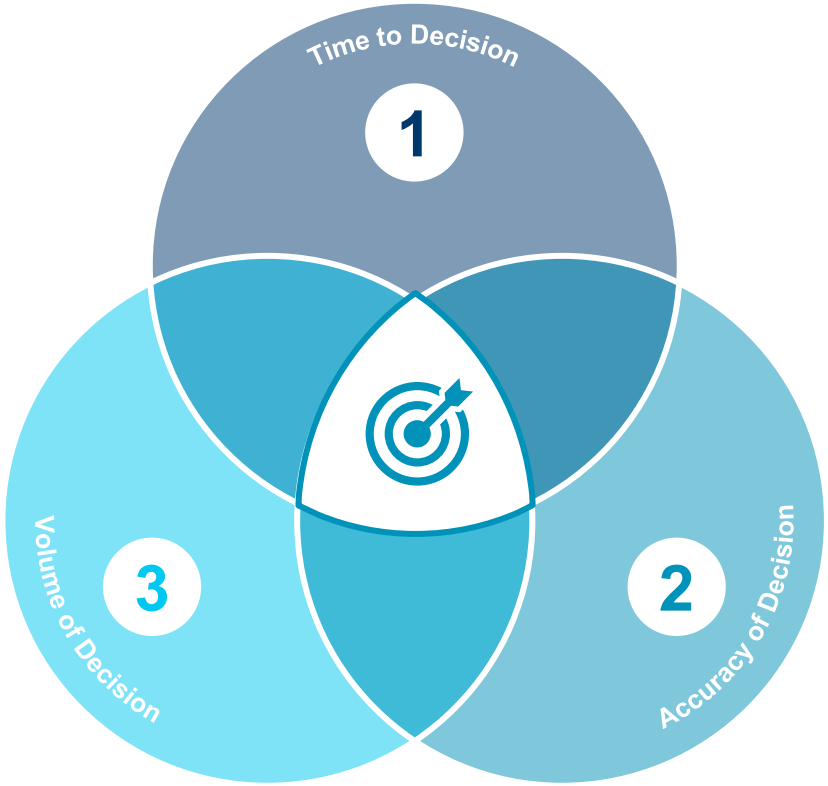
- Gain novel insights into new opportunities cannot be attained by manual processing

Source: Quinlan & Associates analysis

INTRODUCTION (7/7) – DIMENSIONS

Given the significant investment wastage, there are 3 dimensions that firms should consider when deciding what level of data investment is necessary

Dimensions for Data-driven Decisions
Illustrative



1 Time to Decision
Speed at which a company requires information in order to make a business decision

2 Accuracy of Decision
Extent of data precision that is necessary to ensure that the business decision is made effectively and efficiently

3 Volume of Decision
Frequency of data collection per decision or volume of data points needed per decision

Source: Quinlan & Associates analysis

SECTION 2

DATA STRATEGY OVERVIEW

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DATA STRATEGY OVERVIEW (1/2) – END-TO-END PROJECT LAYOUT

There are several tools that companies can use to determine the size and scope of a data strategy project while bringing lasting adoption of data to an organisation

Data Strategy Overview

Illustrative

CLASSIFY… FOLLOW …

PROJECT CONSIDERATIONS

Impact to Business
Based on the overall impact of the data solution and stated goals of the firm

Resources
Based on financial feasibility and manpower to accomplish projects

Time
Based on how mission critical systems are and if downtime is acceptable

Infrastructure
Based on the salvageability of existing systems and operations

PROJECT TYPES

Strategic
Large-scale projects that steer an entire business

Tactical
Projects that aim to fulfil higher strategic goals

Operational
Projects that are looking to optimise existing processes

PROJECT APPROACHES

BAIT FRAMEWORK
(Project Perspective)

A framework within a data strategy project that outlines steps from formulation to execution, with details and components

CHANGE MANAGEMENT STRATEGY
(Impact Perspective)

A unifying strategy that ties together appropriate policies and incentives to develop a data-centric culture

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DATA STRATEGY OVERVIEW (2/2) – PROJECT APPLICABILITY

The size and scope of a project determines how much of the BAIT framework and change management strategy are applicable

Classifications & Relevant Components

Illustrative

	BAIT FRAMEWORK				CHANGE MANAGEMENT	
	Business Identify the objectives and limitations that will shape future steps	**Applications** Translate business requirements and convert them into technical specs	**Information** Design schematics on data models, quality and platform designs	**Technology** Enabling the previous stages' requirements through technology	**Culture** Crafting a data-centric culture with incentives and frameworks	**Governance** Creation of clear communications strategy to champion change
STRATEGIC PROJECTS	✓	✓	✓	✓	✓	✓
TACTICAL PROJECTS	×	✓	✓	✓	-	-
OPERATIONAL PROJECTS	×	✓	✓	✓	-	-

✓ Applicable - Dependent × Inapplicable

SECTION 3

DATA STRATEGY – BAIT (BUSINESS)

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BAIT FRAMEWORK / BUSINESS (1/5) – ABC FRAMEWORK

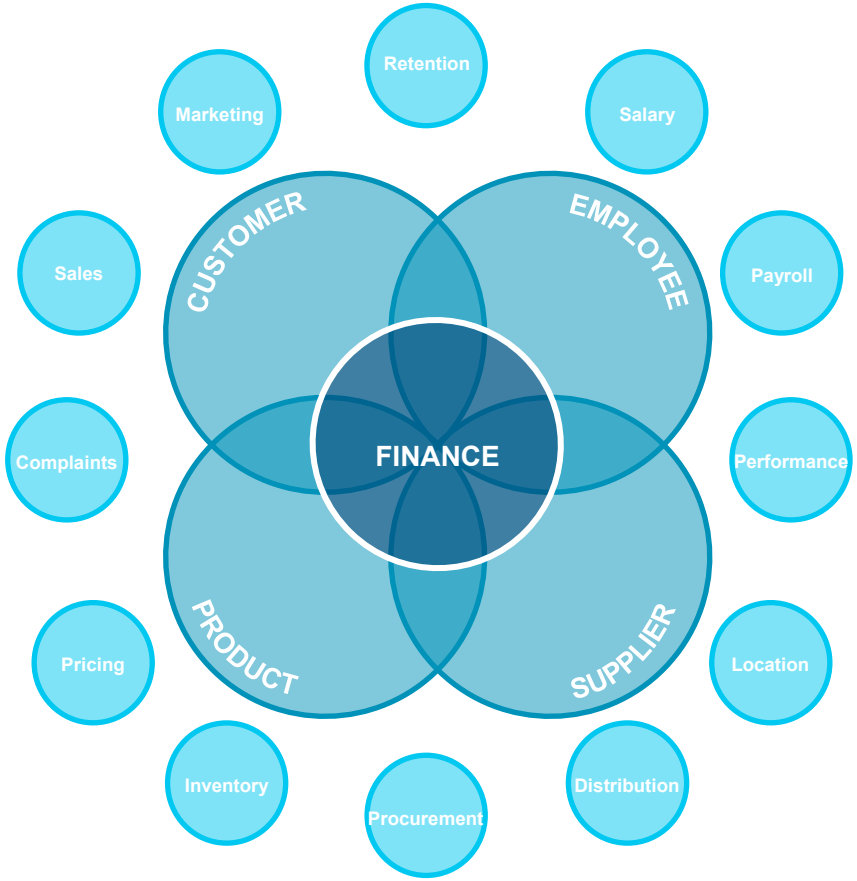
A robust business strategy shapes the entire direction of a data project, beginning with a high level assessment of business segments through the ABC framework

Business Considerations	Description	Scope
AMBITIONS	**Objective:** Identify business ambitions and high-level objectives for the company **Implication:** Determines the direction of data strategy project through workshopping	Wide
BY-LAWS	**Objective:** Imposes regulatory limits on ambitions and objectives to avoid legal consequences **Implication:** Determines legal constraints through evaluating international and local laws	
COSTS	**Objective:** Imposes feasibility limits on ambitions via benchmarking available resources **Implication:** Determines the investment constraints by ballparking cost of implementation	Narrow

Source: Quinlan & Associates

BAIT FRAMEWORK / BUSINESS (2/5) – DATA DOMAINS

After outlining the business objectives and limitations, companies need to understand which data domain(s) within a business is relevant to its respective objectives



Domain Types & Descriptions

A data domain is a function within a business that can encompass multiple business units in the pursuit of specific commercial use case

E.g. “Customer” could include data ranging from sales data, online presence, complaints, loyalty information, marketing, financial history

Master Domain

Finance is considered the master domain as it is the key indicator of any business and all other domains reference or revert to it

Primary Domains

A primary domain encompasses a major business function or multiple assets which small secondary domains reference

Secondary Domains

Relevant data retrieved from a specific business unit or data system which collectively makes up a primary domain

Source: PALO IT, Quinlan & Associates

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BAIT FRAMEWORK / BUSINESS (3/5) – STATE ANALYSIS

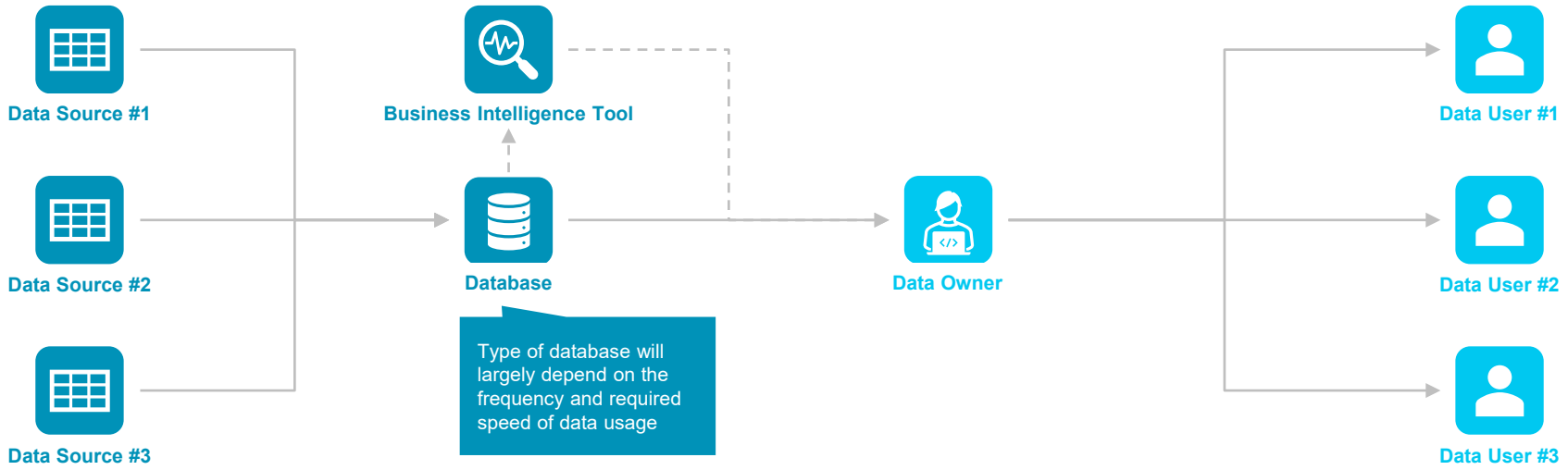
After identifying core business objectives, obstacles, and mapping affected domains, a current and future state analysis should be conducted, covering four key components

State Analysis Components

Illustrative

PURPOSE

The direct relation of data being used to fulfil the business objective, including processes and infrastructure



DATA FREQUENCY & TECHNOLOGY STACK

Data collection and processing requirements that affects the possibilities of future designs of technology

DATA OWNER & STAKEHOLDERS

The stakeholders and owners of data systems including new system owners and responsibilities

Source: PALO IT, Quinlan & Associates

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BAIT FRAMEWORK / BUSINESS (4/5) – GAP ANALYSIS

Once the two states are identified, a capability gap analysis can be conducted to provide a high-level roadmap for the data project

Gap Analysis

Illustrative

	Technology	Talent
Gap to be explored	• Based on future and current designs provided • Critical functions are prioritised	• Based on talent requirements needed for high-level future state blueprint
Example	• Need for real-time data pulls and processing require a future-state database application • Migrating from on premises to cloud solutions	• Need for a new domain owner which would manage future-state customer systems • Selected internally or hired externally

Source: PALO IT, Quinlan & Associates

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BAIT FRAMEWORK / BUSINESS (5/5) – SUMMARY

The Business stage's primary purpose is to define a holistic business strategy with a complete set of requirements that data systems must align to (and enable) downstream

Summary

List of desired Business stage outcomes

This stage shapes the entire direction of a data strategy project and defines key goals and obstacles. It also sets the foundations for downstream technical requirements

1 **Business Strategy**
Well-defined strategy which includes ambitions, limitations and data's place in a business

2 **List of Data Domains**
A complete list of affected data domains relating to the business's strategy

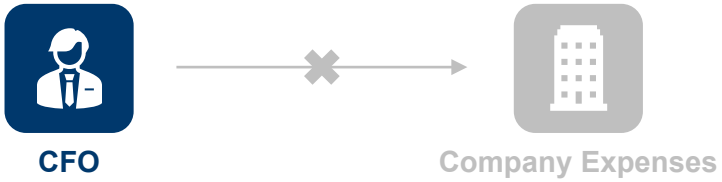
3 **Business Requirements**
Requirements which should be fulfilled by a future state data system

4 **Future State Roles & Responsibilities**
A list of roles and responsibilities which would be required to enable a new system

5 **List of Capability Gaps**
Talent and technological gaps identified which would impede implementation and usage

Sample Case Study

Illustrative



We have created a sample case study to demonstrate actions and outcomes for a company; a CFO currently cannot effectively track spend or return on investments from a single dashboard

$ **Business Strategy – Resource Allocation**
Finance sits at the centre of any company, understanding how resources are allocated is critical for tactical planning

? **List of Capability Gaps**
Baseline capabilities necessary to create a real-time financial monitoring dashboard is fleshed out

Source: PALO IT, Quinlan & Associates

SECTION 4

DATA STRATEGY – BAIT (APPLICATION)

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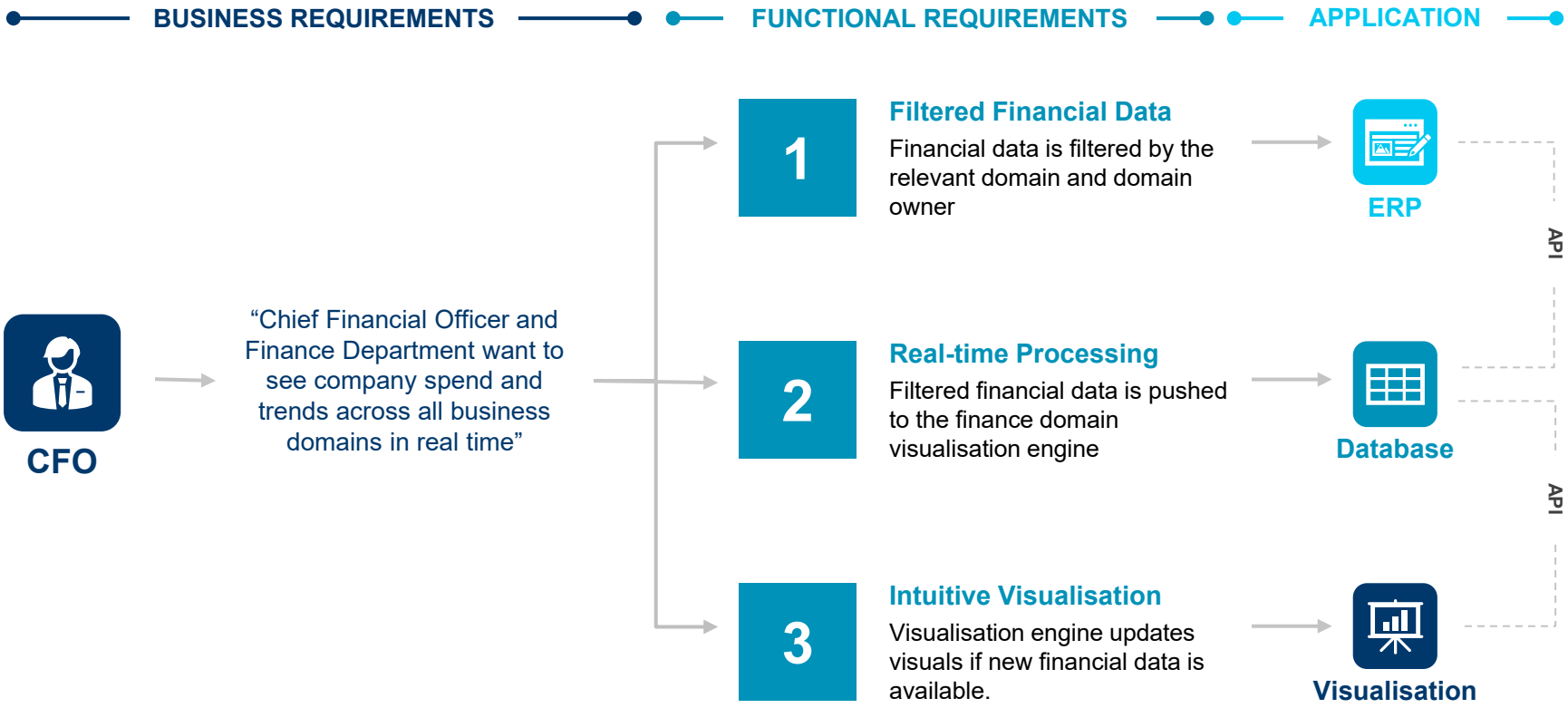
BAIT FRAMEWORK / APPLICATION (1/5) – REQUIREMENTS

Specialists need to translate business objectives, gaps, and requirements into functional requirements that are fulfilled by corresponding applications

Requirement Mapping to Applications

Illustrative



Source: PALO IT, Quinlan & Associates

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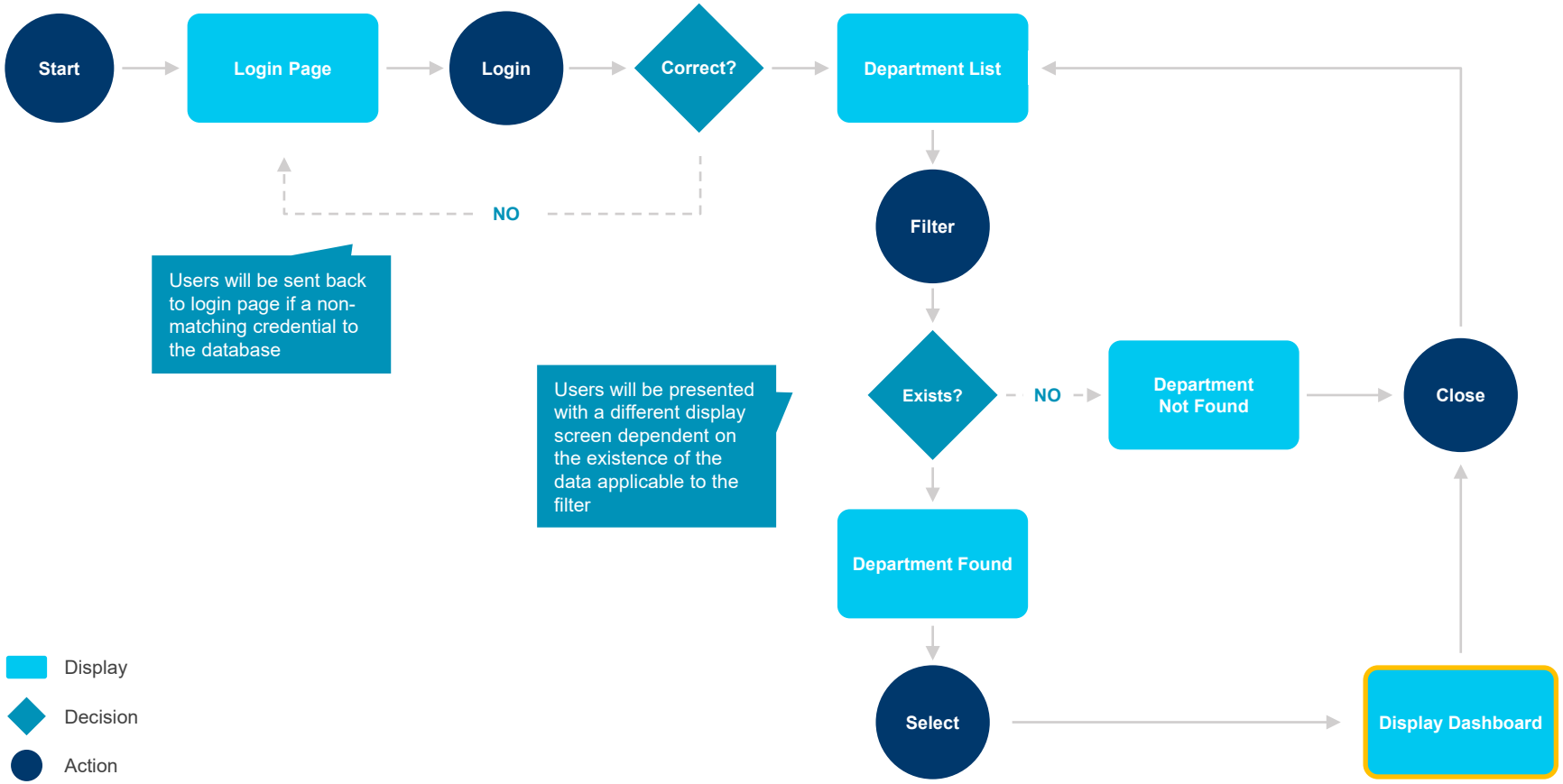
BAIT FRAMEWORK / APPLICATION (2/5) – FLOW MAPPING

Mapping how an end-user interacts with the application is necessary to ensure the application selected operates in a systematic and desirable way

User Flow Map

Illustrative



Source: PALO IT, Quinlan & Associates

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BAIT FRAMEWORK / APPLICATION (3/5) – KEY CONSIDERATIONS

Any leftover gaps in applications should be shored up; potential solutions to gaps need to undergo a cost-benefit analysis in determining whether to buy or build potential solutions

Buy / Build Considerations

Criteria and descriptions

	1 BUY	2 BUILD
	Direct Purchase / Subscription	**In-House Development**
DESCRIPTION	A purchase or subscription of a pre-existing application or service from a third party which could be modified to fit the project's needs and requirements	A complete end-to-end customised development process of an application which is completed in-house, tailored to a project's specific needs and requirements

CRITERIA	DESCRIPTION
Affordability	• Extent of one-off or ongoing financial costs required to maintain the application
Flexibility	• Level of difficulty in adjusting components of the application to suit the company's future needs
Personalisation	• Availability of customisation options to create specific features in the application according to the company's needs
Scalability	• Ability, ease, and level of cost-efficiency to expand the capacity of the application
Time-to-Market	• Estimated length of time it takes for the application to be offered readily to users

Source: PALO IT, Quinlan & Associates

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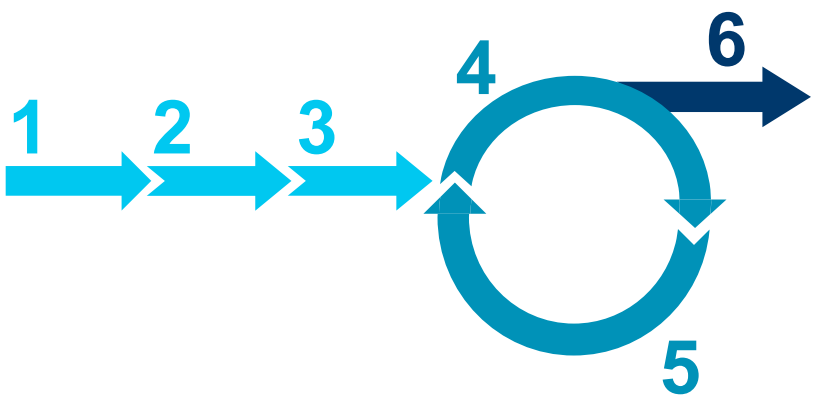
BAIT FRAMEWORK / APPLICATION (4/5) – DEVELOPMENT PROCESS

Feedback from an end-user is critical in selecting a final application; creating a Minimum Viable Product or getting 3rd party demonstrations are a vital part of the selection process

MVPs & Application Selection Process

Illustrative



Initiation

Map out business requirements that will determine core functional requirements of the MVP

Development

Decide on building in-house vs. seeking a 3rd party provider to build an application and test it out to end users for evaluation

Implementation

Integrate the product into either planned or existing data architecture upon approval of final application

1	**Determine Value Proposition**	Determining the exact value that would be derived from a new application
2	**Map User Flow**	Designing high-level user interaction flow from front to back processes
3	**Prioritise MVP Features**	Prioritizing functionalities of the MVP with high-dependency systems first
4	**Build / Explore**	Building out core functionalities / Exploring 3rd party application providers
5	**Review & Repeat**	Consolidating user feedback and incorporating it, repeat steps 4 and 5
6	**Launch & Integrate**	Set aside the approved final application of product for subsequent integration

*Specialists should have completed 'Initiation' by the Business Stage of BAIT, saving time and manpower

Source: PALO IT, Quinlan & Associates

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BAIT FRAMEWORK / APPLICATION (5/5) – SUMMARY

The Application stage's primary purpose is to solidify a list of necessary applications and connect business needs with technical enablement downstream

Summary

List of desired Application stage outcomes

This stage should prioritise features and functionalities in the pursuit of the business strategy and inform downstream requirements and limitations

1 Mapped Requirements

Business requirements translated to functional requirements and supporting applications

2 List of Applications & Integration Timeline

A complete list of user-approved applications with integration timelines

3 List of Technical Capabilities

List of technical capabilities of each application and underlying dependencies

Sample Case Study

Illustrative

To fulfil the business's objective of monitoring finances, a real-time financial monitoring dashboard application would need to be created. This implies several technical capabilities needed downstream

Technical Capabilities Required

- Ability to ad-hoc query upon a data lake
- Event processing on financial transactions from multiple data sources
- High-reliability data validation

Source: PALO IT, Quinlan & Associates

SECTION 5

DATA STRATEGY – BAIT (INFORMATION)

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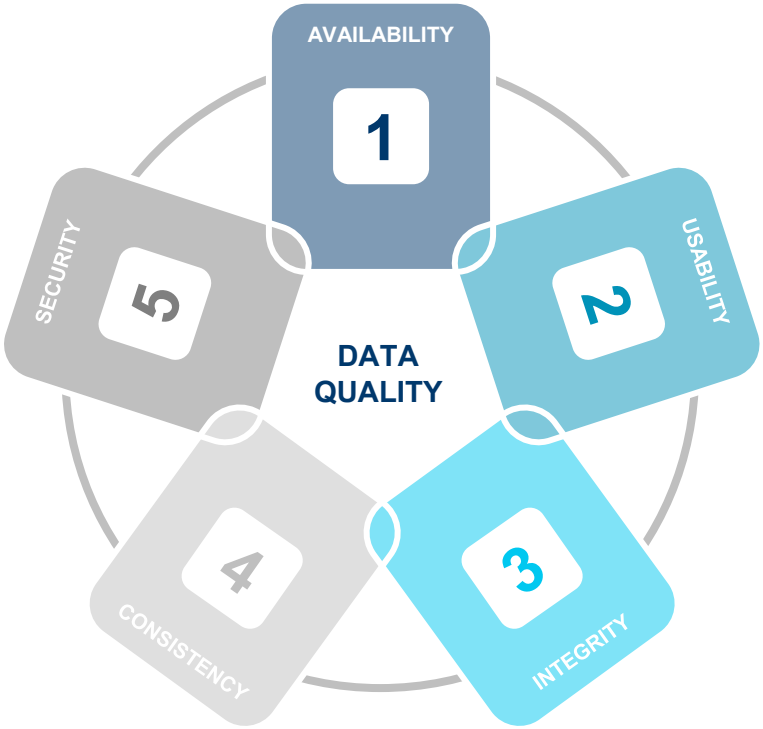
BAIT FRAMEWORK / INFORMATION (1/4) – KEY INDICATORS

Data quality is the benchmark for how advanced a company is in its data journey; this is a key metric used to measure data maturity and the ability to generate trusted data

Indicators of Data Quality

Illustrative



1 AVAILABILITY
Extent of data accessibility in terms of timeliness and reliability

2 USABILITY
Data readiness in terms of presentation and comprehensiveness in offering insights

3 INTEGRITY
Accuracy of data with no incorrect figures to provide precise representations

4 CONSISTENCY
Content of underlying datasets are the same across multiple connected systems

5 SECURITY
Data is protected from unauthorised access and corruption

Source: PALO IT, Quinlan & Associates

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BAIT FRAMEWORK / INFORMATION (2/4) – MATURITY STAGE

Data maturity stages identify the key activities and areas of expertise required for an organisation to transition to desired levels

	Description	Key Activities	Area of Expertise: Business	Area of Expertise: Technology
	Stage 4: Governed Run the business backed by robust data governance to gain competitive advantages	• Quality Automation and Enforcement • Compliance Certification • Disruptive Innovation	✓	✓
	Stage 3: Proactive Focus on enhancing business decisions by establishing data as an asset	• Data Platform Design • Organisation-wide Data Training	✓	✓
	Stage 2: Reactive Establish data governance with corresponding guidelines and systems	• Data Catalogue • Information System Integration • Data Stewardship Planning	✓	✓
	Stage 1: Aware Recognise the need for data governance driven by business requirements	• Data Modeling • Metadata Management • Information System Inventory	✓	✓
	Stage 0: Unaware Have no organisational understanding on the importance of data governance	• Strategic Alignment (Objectives, Key Outcomes, Market Landscape) • Business and Data Domain Analysis	✓	✗

✓ Applicable ✗ Inapplicable

Source: PALO IT, Quinlan & Associates

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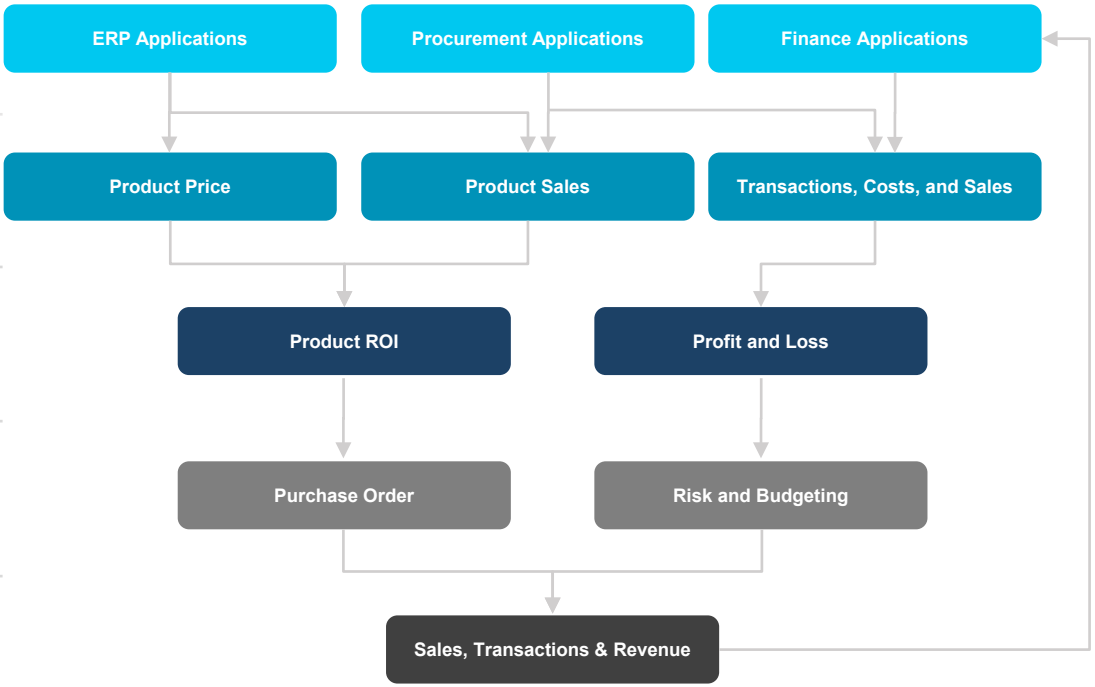
BAIT FRAMEWORK / INFORMATION (3/4) – DATA FLOW

As a company journeys through the maturity stages, trust in data is decentralised across all staff; empowering every employee to make data-driven decisions and outcomes

Trusted Data in an Organisation

Illustrative data to outcome flow chart

	Descriptions	Example
DATA	Collect unorganised information in its pure form that are retrieved directly from various platforms	• 1, 1000 • 4, 2000
INFORMATION	Label data to determine their connections and group them into relevant categories	• 1 Unit = USD 1,000 • 4 Units = USD 2,000
KNOWLEDGE	Interpret data in a meaningful and practical manner to assess potential opportunities	• 4 Units at USD 2,000 = 1 Unit at USD 500
DECISION	Make inferences upon acquiring knowledge in order to guide business decisions	• Purchase 4 units for USD 2,000
OUTCOME	Impact of the decision towards company performance is realised and recorded in the finance app	• USD 2,000 saved in procurement costs • Could be inputted as profit or additional budget



Source: PALO IT, Quinlan & Associates

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BAIT FRAMEWORK / INFORMATION (4/4) – SUMMARY

The Information stage's primary purpose is to create the foundations for a data system that is trusted by all employees

Summary

List of desired Information stage outcomes

This stage should create several outcomes; all of which is to maximise an organisation's data investment and yield significant returns if executed correctly

1 Data Models & Metadata Rules

Identification of a common set of features and attributes for data communication

2 Data Catalogue

A searchable inventory of all data assets within an organisation

3 Data Platform Design

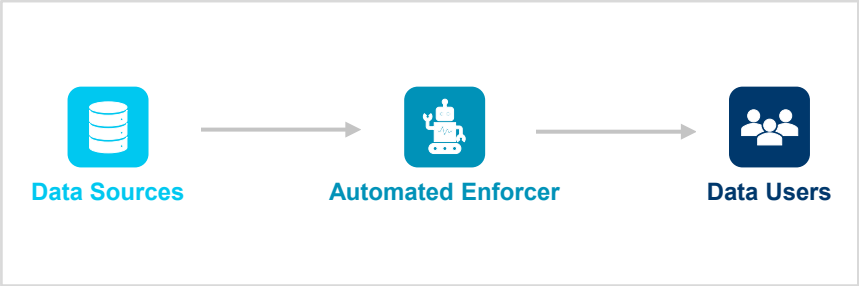
Complete mapping of all applications and systems required to meet key capabilities

4 Organisation-wide Data Training

Training for both man and machine to ensure all systems work together to produce trusted data

Sample Case Study

Illustrative



Assuming the company makes strides to become a fully governed organisation, data would be readily available for every authorised employee and trusted by end-users

Trusted Data

If data is well curated and processed, the CFO & finance department can trust the data shown on the dashboard

Quality Automation & Enforcement

Automated data stewardship and curation processes with minimal human input; reducing input error

Disruptive Innovation

AI can flourish and detect spending trends or inefficient resource allocation across the company on the dashboard

Source: PALO IT, Quinlan & Associates

SECTION 6

DATA STRATEGY – BAIT (TECHNOLOGY)

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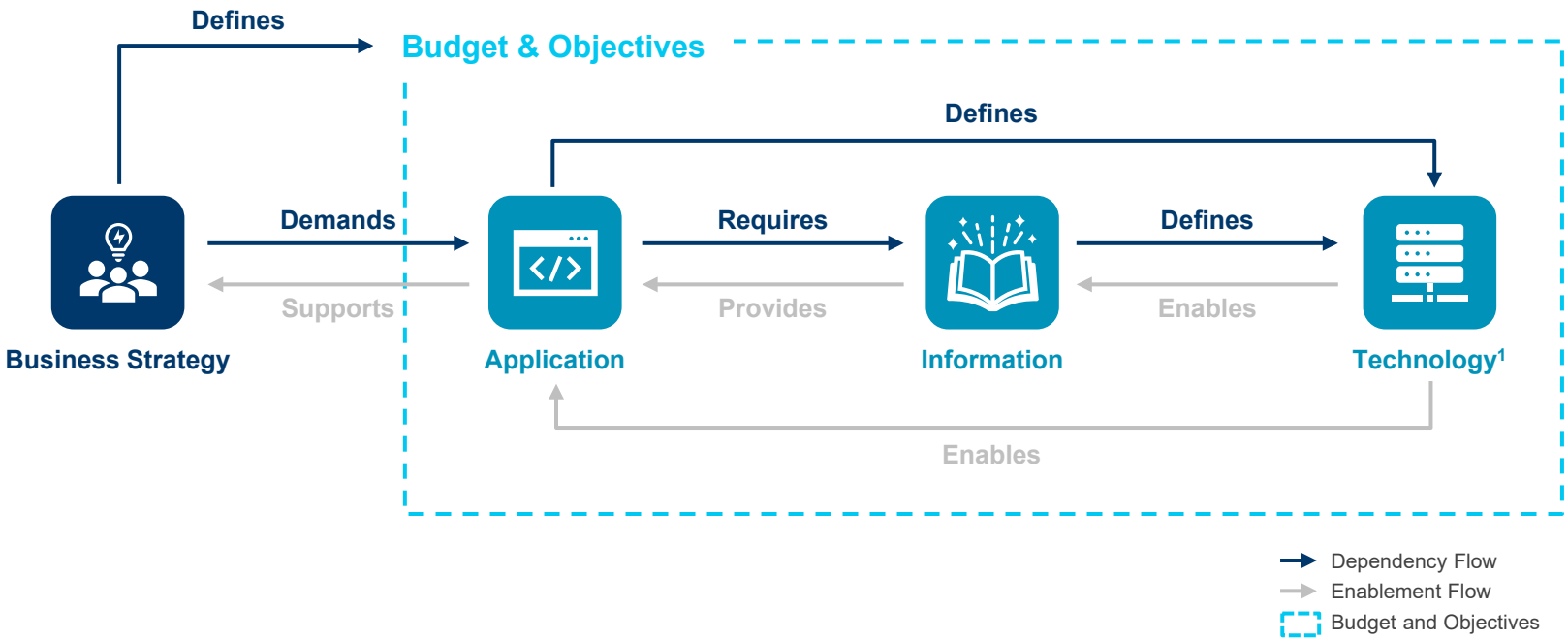
BAIT FRAMEWORK / TECHNOLOGY (1/4) – BAIT DEPENDENCIES

At the Technology stage, IT specialists design and built an optimised tech infrastructure to support all prior stages within budgetary and operational limitations set by the business

BAIT Dependencies & Enablers

Illustrative



1. Includes hardware and software

Source: PALO IT, Quinlan & Associates

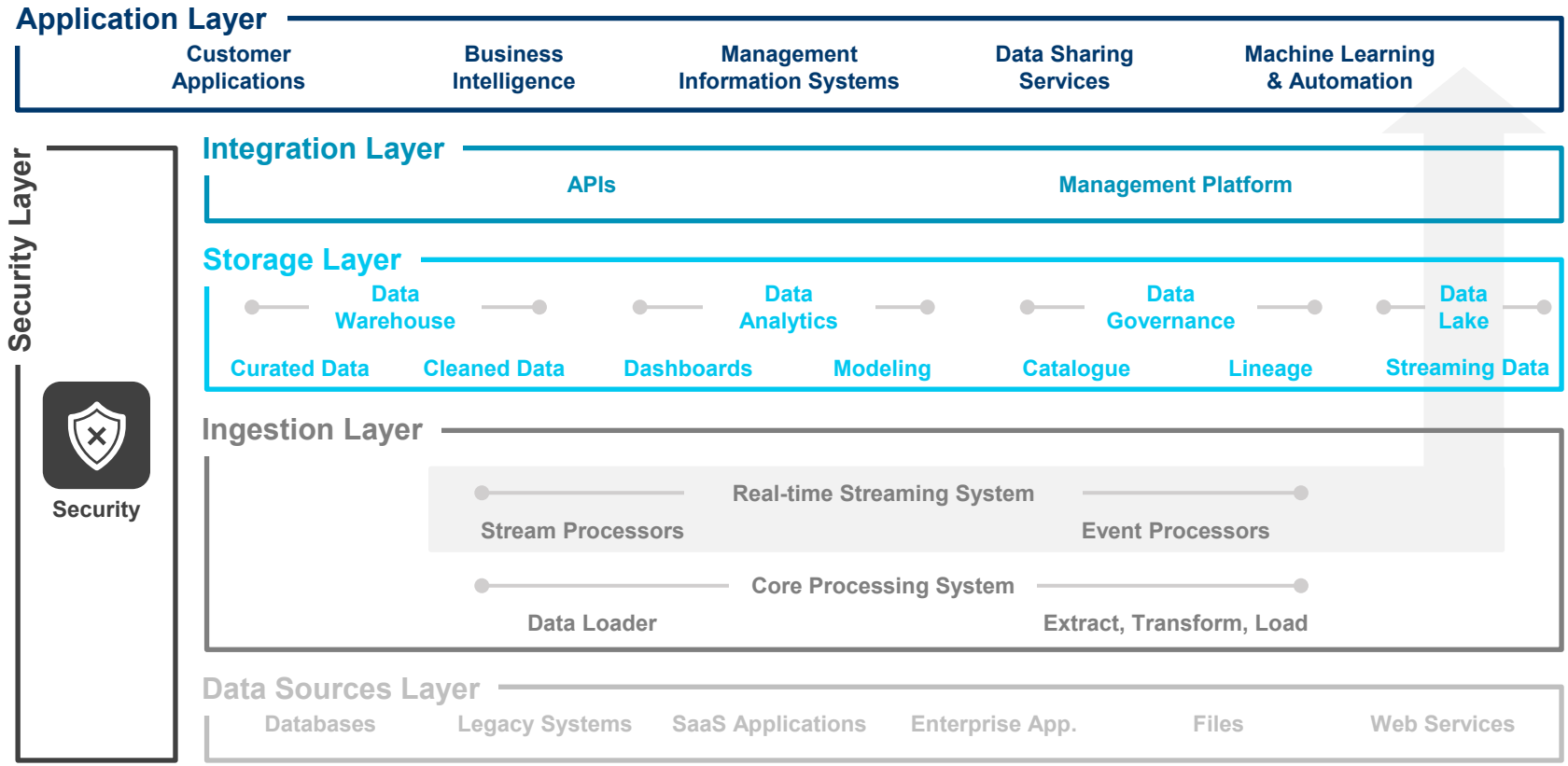
PALO IT QUINLAN & ASSOCIATES

BAIT FRAMEWORK / TECHNOLOGY (2/4) – ARCHITECTURE DESIGN

Data platform architecture represents the final blueprint that reflects an entire organisation's structural data needs and requirements

Data Platform Architecture Diagram

Illustrative



Source: PALO IT, Quinlan & Associates

PALO IT QUINLAN & ASSOCIATES

BAIT FRAMEWORK / TECHNOLOGY (3/4) – SECURITY TRIAD

Technology also includes security service selections; service efficacy should be measured in terms of the security triad (i.e. confidentiality, integrity, and availability)

CONFIDENTIALITY

The ability of a system to protect sensitive information from exposure to unauthorised users

INTEGRITY

The ability to validate and protect data from undesirable or unexpected modifications either at rest or in transit

AVAILABILITY

The system's ability to protect itself so that authorised users have timely and reliable access to data

Core Security Services

Examples

Identity and Access Management ("IAM")

Centralised systems of user creation, authentication, authorisation and controls to ensure confidentiality

Encryption and Certificates Management

Tools to secure data and prevent tampering with certificates acting as proof of this security; to maintain data integrity

Load Balancing and Failover Systems

Technical design patterns used to assure the availability of information when a platform is under pressure

Security Incident and Event Management ("SIEM")

SIEM systems are used to predict and respond to cyber threats and security incidents

Source: PALO IT, Quinlan & Associates

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BAIT FRAMEWORK / TECHNOLOGY (4/4) – SUMMARY

The technology layer's primary purpose is to fulfil technical requirements of a business use case within the budget set by the business

Summary

List of desired Technology stage outcomes

This stage should generate all the necessary tools and connections to enable all the requirements of the previous stages

1 Data Platform Architecture

Blueprint which reflects the entire structure of an organisation's data needs and requirements

2 List of Procurement Decisions

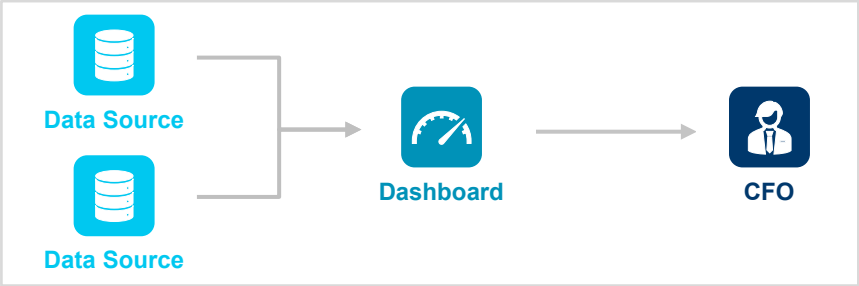
Complete list of technologies and services to be procured in line with budgetary limitations

3 Integration of all Systems

Final linkages which would support all required data operations for desired use cases

Sample Case Study

Illustrative



Upon completion, the CFO should be able to view the financial monitoring dashboard with actionable insights across the organisation in real-time

Adequately Selected Technologies

Systems and services necessary for the dashboard would be procured that meet requirements and within budget

Seamless Execution of Dashboard

Final dashboard would be available for use to authorised users with minimal obstacles

Source: PALO IT, Quinlan & Associates

SECTION 7

CHANGE MANAGEMENT STRATEGIES

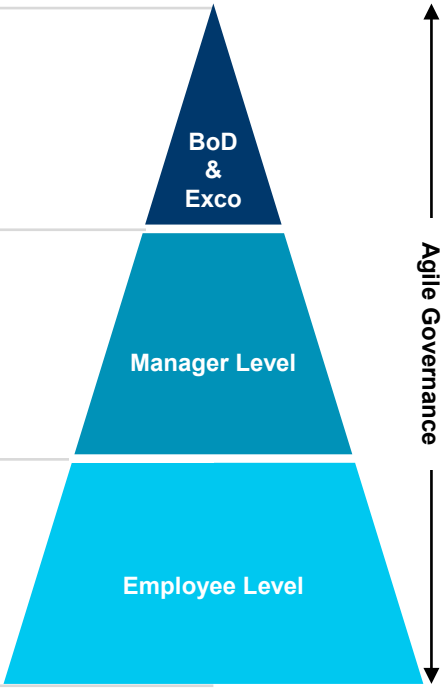
CHANGE MANAGEMENT STRATEGY (1/2)

Data strategy projects reach their full potential when an organisation adopts a data-centric culture; company culture is forged through a robust cultural governance framework

Cultural Governance Framework

Holistic Illustration

Board & Executive Team's Responsibilities	Top-down (Call for Organisational-level Change) Order	Description	Bottom-up (Call for Execution-level Change) Order	Description
Comm. Strategy Establish communication strategy to set the tone from the top and receive proposals from the bottom	1	Distribute executive-level communications whenever there is a change on the data ordinance	3	Review the proposal and assess the relevance of the data to be sourced externally
Framework Document the data governance framework to help managers implement the data ordinance	2	Communicate new or adjusted data governance framework to respective departments	2	Evaluate the reported data needs and submit a data procurement proposal to the executive-level
Incentive Provide correct incentives to change behaviour of employees executing the data-related practices	3	Adjust the old data-related practice to new practice specified in the data ordinance	1	Identify and escalate to the manager-level on key gaps of data sets during daily operations



Source: Quinlan & Associates

CHANGE MANAGEMENT STRATEGY (2/2)

The four components of a cultural governance framework include: (1) Communications Strategy; (2) Actionable Frameworks; (3) Incentive Schemes; and (4) Agile Governance

Breakdown of Components

Descriptions

Components	Descriptions	Key Stakeholders			
		BoD[1]	Exco[2]	Managers	Employees
Communications Strategy	• Contains both top-down organisational-level change and bottom-up business execution level change • Bi-directional communication is necessary for kickstarting change but ensuring the ground-level goals are met respectively	✓	✓	✓	✓
Actionable Framework	• Organisation-level communication is kept generic without operational directions but contain key goals and KPIs • Mid-level managers repurpose operating procedures to reflect changes imposed by the management team	✗	✓	✓	✗
Incentive Scheme	• Key tool to drive change, especially amongst execution-level employees • Suitable incentives, matched to data metrics, should be tailored to different levels and functions of employees in the business	✓	✓	✓	✗
Agile Governance	• Fast changing international and local regulations creates significant challenges and possible financial penalties • Businesses must remain agile to these changes and update their governance policies to match the most stringent regulations	✓	✓	✓	✗

✓ Applicable ✗ Inapplicable

1. Board of Directors, 2. Executive Committee / C-Suite Management

Source: Quinlan & Associates

SECTION 8

REAL-WORLD CASE STUDY

REAL-WORLD CASE STUDY (1/3) – CONTEXT

A Global Luxury Retail ("GLR") brand was facing changing consumer spending patterns, low digital presence, and a worldwide pandemic

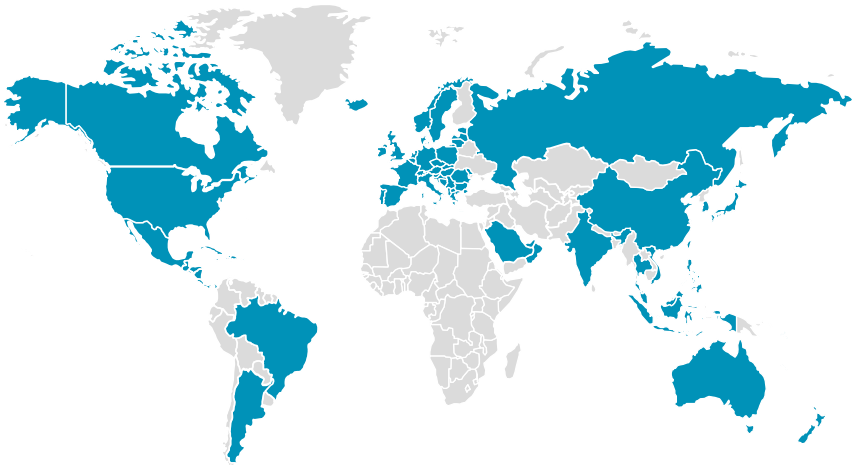
Global Luxury Retail Brand
Illustrative

CONTEXT

1 **Changing Consumer Patterns**
Consumers worldwide were increasingly shifting towards digital-first behaviors and a preference for online engagement

2 **Lagging Product Launches**
Time-to-market latency of the products on digital platforms were too slow, feedback cycle on products was also considered too slow

3 **COVID-19 Pandemic**
The pandemic pushed customers away from physical stores and demanded digital experiences which were equivalent to physical experiences



	Description
Global Customer Base	GLR has a global customer base that comprises of low volume but high value targets; driven by high brand loyalty
Fantastic Physical Experiences	Historically focused on physical retail store experiences at prime locations across the world; typically containing autonomous hubs

Source: PALO IT, Quinlan & Associates

REAL-WORLD CASE STUDY (2/3) – ACTIONABLES

GLR committed to change and called for a full transformation encompassing every aspect of a complete data strategy project

GLR Actionables
List of project actionables

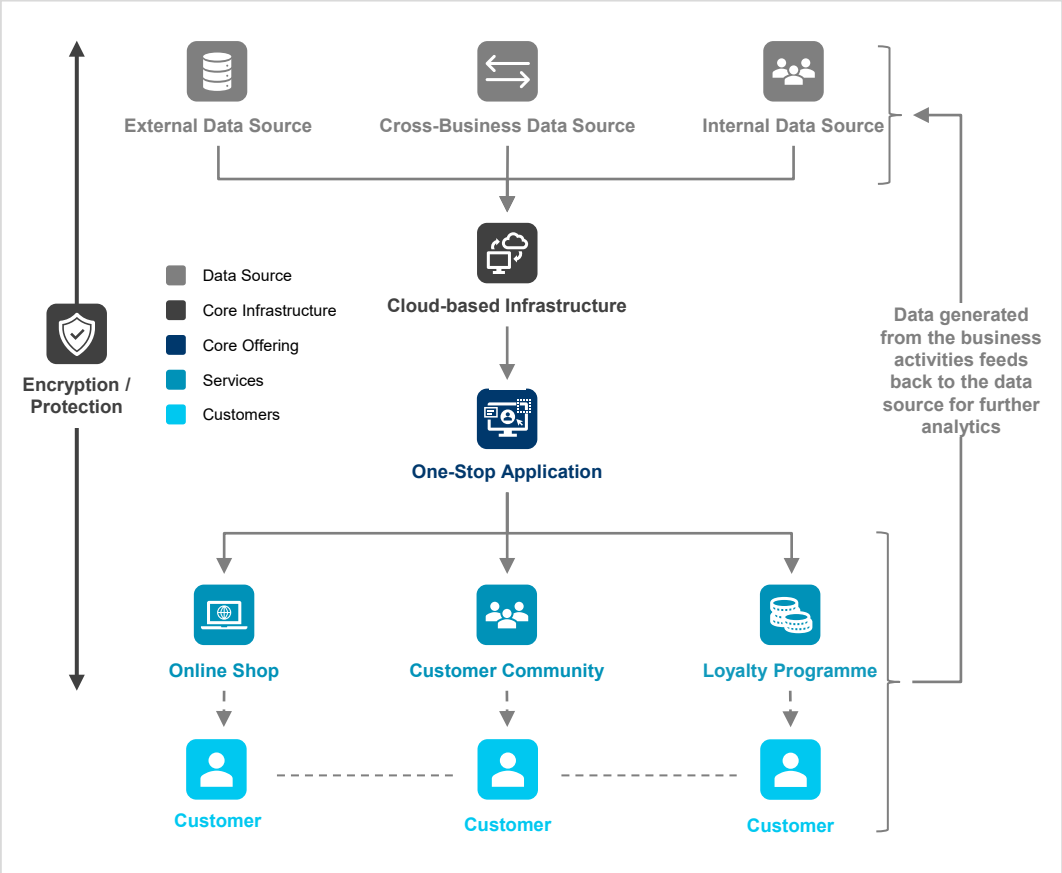
ACTIONABLES

1 **Global Strategy Alignment**
Enablement committee unified regional offices under one business strategy underpinned by data

2 **Integrate Data Systems**
Data domains and systems were reidentified and streamlined under a single cloud data platform

3 **Enhance Data Capabilities**
Standardised interpretation of data and consumption created new analytics capabilities

End Result Ecosystem
Illustrative



Source: PALO IT, Quinlan & Associates

REAL-WORLD CASE STUDY (3/3) – OUTCOMES

Meaningful infrastructural and operational developments have brought about several key benefits for GLR

GLR Outcomes

Descriptions

OUTCOMES

1 **Data-driven Decision Optimisation**
Executives can monitor performance and plan local strategies around generated trusted data

2 **Resource Optimisation**
Increased supply chain visibility protected the business from supply shortages

3 **Increased Revenue Generation**
Data platform identified cross-sell opportunities and laid the groundwork for advanced analytics

Business Goal	Description	Outcome
Time Optimisation	• Domains were integrated onto a single platform; gained ability to monitor performance across global offices quickly	Generate data-driven decisions **quarterly**, up from **semi-annually**
Cost Optimisation	• Streamlining of applications reduced launch times for new products and insulated GLR from supply chain issues	Shortened time-to-market for products from **1 year** to **1 month**
Inorganic Revenue Generation	• Centralisation of internal customer data allowed GLR to identify cross-sell opportunities and optimal pricing	Increased global travel retail cross-sell revenue by **35%**
Organic Revenue Generation	• Third party integration greatly improved visibility into market trends. Laying the foundations for new revenue streams	**Creating new revenue streams** and **future-proofing company**

Source: PALO IT, Quinlan & Associates

SECTION 9

HOW CAN WE HELP?

HOW CAN WE HELP (1/2) – QUINLAN & ASSOCIATES

Quinlan & Associates has extensive experience in corporate strategy development, business model design, and implementation planning in the data strategy space

Service Offerings

Descriptions

1	**Data-led Corporate Strategy Development**	• Review existing or future business strategies and map business objectives and processes for adequate data utilisation • Perform in-depth market research and competitive landscape analysis into possible edges a company could gain as part of a data strategy project • Conduct detailed feasibility analysis around business ambitions and objectives • Develop go-to-market strategies around new data products or services, including product design, pricing, and customer segmentation analysis
2	**Data & Business Strategy Preparation**	• Define the current and future state of an organisation's data systems based on its business objectives • Perform a capability or gap analysis based on the current and future state of the business • Review operating models and internal operations that would inform business domains and gaps in data usage
3	**Business Data Solutions Design**	• Map business requirements to functional requirements and applications for data integration • Conduct a buy / build analysis for applications selected, in line with your budgetary needs • Conduct detailed vendor evaluation / benchmarking
4	**Governance, Culture & Regulatory Analysis**	• Evaluate the data maturity of your business, create data metrics, and develop pathways to full data maturity • Analyse the data culture of the organisation, including the development of comprehensive data governance and cultural policies, including employee training requirements • Review regulatory data positioning and advise on adaptations to organisational compliance frameworks, based on the company's operating jurisdiction(s)
5	**Corporate Training**	• Provide world-class employee training workshops (on areas including specific compliance topics and broader cultural change programmes), focusing on turning concepts into action, and committing actions to practice • Engage managers and executives in dedicated coaching programmes, creating actionable plans for them to inspirate and champion good data business conduct within their teams, divisions and across the entire organisation • Assess business performance improvements attributable to mindset and behaviour changes from training and coaching efforts, and further fine-tune the programmes.

HOW CAN WE HELP (2/2) – PALO IT

PALO IT provides end-to-end data offerings throughout different corporate data lifecycle stages through its diverse project experience across different industries

Service Offerings

Descriptions

1	**Kickstarting a Data Journey**	• Technical assessment of existing data governance and architecture in place (if any) • Technical visioning workshops to create technical transformation backlogs and possible timelines for execution
2	**Data Assessment**	• Technical Architecture assessment • Data Governance assessment (security, metadata management, data quality and ownership)
3	**Data Platform Creation**	• Creation of a scalable, secure, and resilient platform which can handle high volumes, velocity, and variety of data • An automated infrastructure setup (on-premises or public cloud) • Integration of corporate responsibilities such as ESG Data Management and Reporting at scale
4	**Data Ingestion & Processing for Data Analytics**	• Creation of a holistic data pipeline from multiple sources • Illuminate data recommendations through business intelligence, machine learning and artificial intelligence deployment

ABOUT US

QUINLAN
&ASSOCIATES

Quinlan & Associates is a leading independent strategy consulting firm specialising in the financial services industry.

We are the first firm to offer end-to-end strategy consulting services. From strategy formulation to execution, to ongoing reporting, communications, and employee training, we translate cutting-edge advice into commercially executable solutions.

With our team of top-tier financial services and strategy consulting professionals and our global network of alliance partners, we give you the most up-to-date industry insights from around the world, putting you an essential step ahead of your competitors.

Quinlan & Associates. Strategy with a Difference.

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PALO IT

PALO IT is a global technology consultancy dedicated to helping organisations embrace tech as a force for good.

We work with clients to rapidly launch products and services, create new business models, and enable information systems for a data-driven future.

We are committed to helping businesses transform to better our world. We are proud to be a World Economic Forum New Champion and the first B Corp-certified innovation and tech company in Hong Kong.

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