A Data Strategy for Becoming Data Driven

Nigel Turner

April 16, 2024

Van der Valk Hotel Utrecht

WHO WE ARE

Array PUBLICATIONS

DB/M DATABASE MAGAZINE

Software Release Magazine

AdeptEvents

DW&BI SUMMIT

BI·Platform.

RELEASE·

Werner Schoots

Founder Adept Events

BI-Platform.

- Launched in 2008 as online spin-off from Database Magazine (DB/M)
- Topics: Business Intelligence, Data Warehousing, Analytics, Data Management

News	*Job board*	*Selected Whitepapers*	*Events*
Articles	*Blogs*	*Video interviews*	*Cases*

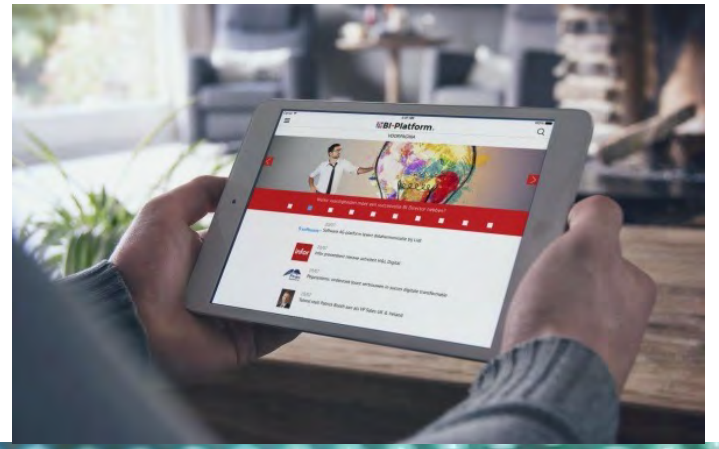
- We welcome your input: redactie@biplatform.nl

www.biplatform.nl & weekly newsletter

@BIplatform on & YouTube

Download the BI-Platform App

Join our LinkedIn Discussion Group



SEMINARS

All seminars and workshops are organised twice a year

Alec Sharp	Business-oriented Data Modelling Masterclass Working with Business Processes Masterclass
Rick van der Lans	Ontwerpen van een Nieuwe Data Architectuur
Lex Pierik	Datavisualisatie – Dashboards en Data Storytelling
Nigel Turner	Tackling Data Quality Problems (virtual half day session) A Data Strategy for Becoming Data Driven
Chris Bradley	Data Management Fundamentals
Lawrence Corr	Agile Data Warehouse Design & Dimensional Modeling
Multiple speakers	*Data Warehousing & BI Summit – Yearly conference in March/April*

RELEASE

- Launched in 1996 as Software Development spin-off from Database Magazine
- Topics: Software Engineering – Analysis, Design, Development, Testing and Deployment

News	*Job board*	*Selected Whitepapers*	*Events*
Articles	*Blogs*	*Video interviews*	*Cases*

- We welcome your input: redactie@release.nl

www.release.nl & weekly newsletter

@Release_nl on Twitter & YouTube

Download the Release App

Join our LinkedIn Discussion Group

SEMINARS

All seminars and workshops are organised twice a year

Alec Sharp	Working with Business Processes Masterclass
Christian Gijsels	Cursus Sparx Enterprise Architect 16 Generatieve AI in Business Analyse

IN-HOUSE

All seminars and workshops can be organized in-company.

Please contact Werner Schoots

☎+31 (0)172 742680 ✉ seminars@adeptevents.nl

ABOUT THIS EVENT

- Binder with proceedings and evaluation form
- Free Wifi available: Hotel Valk Business | ValkEvent

- Today's schedule

    - 09:30 start
    - 11:00 – 11:15 coffee/tea break
    - 12:30 – 13:15 lunch
    - 14:30 – 14:40 coffee/tea/soda break
    - 16:00 – 16:10 coffee/tea/soda break
    - 17:00 end

Your speaker – Nigel Turner

"A Data Strategy For Becoming Data Driven"

Workshop

Van der Valk Hotel, Utrecht
Tuesday 16 April 2024

Nigel Turner
Principal Consultant EMEA
Global Data Strategy

AdeptEvents

Global Data Strategy
The Business of Data

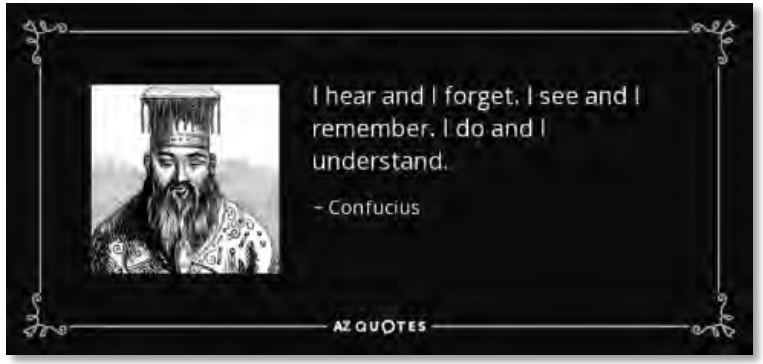
WORKSHOP AGENDA

- Data Strategy: Definition & Rationale
- Data Strategy: Where to Begin?
- The Four Step Data Strategy Approach:
  - Step 1 – Business Goals & Objectives Aligned to Data
  - Step 2 – Current State Capability Assessment
  - Step 3 – Proposed / Required Future State
  - Step 4 – Developing the Data Strategy Roadmap
- Implementing the Roadmap: the Need for Data Governance
- The Critical Importance of Change Management
- Key Messages and Conclusions

Aim for an Interactive Session

Everyone to do a quick introduction:
Name, Role, Organisation, Data Strategy Interest

What we'll be doing…



HANDS ON – A CHANCE TO PRACTISE

Building a Data Strategy

Rationale & Definitions

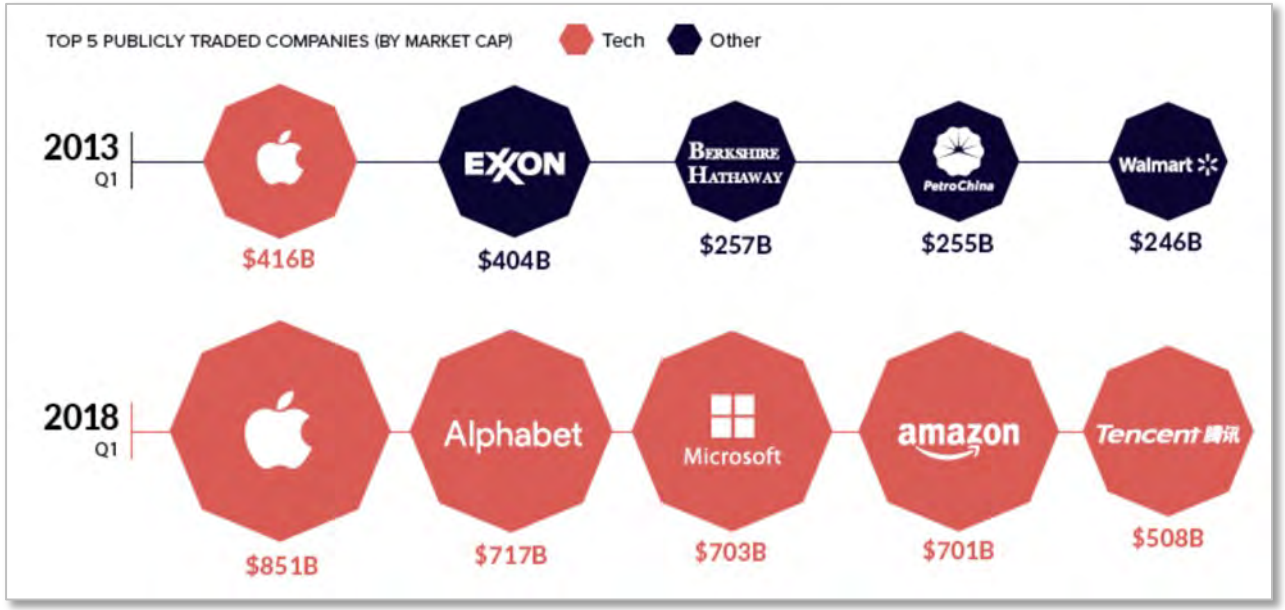
Data is Driving the Future of the Global Economy

///AdeptEvents

- "For most of the history of business, the world's leading companies have been industrially-focused…
- …But today's business reality is very different. We live in a world of bytes – and for the first time technology and commerce have collided in a way that **makes data far more valuable than physical, tangible objects**.
- The best place to see this is in how the market values businesses." [1]

Product Focus

Data Focus

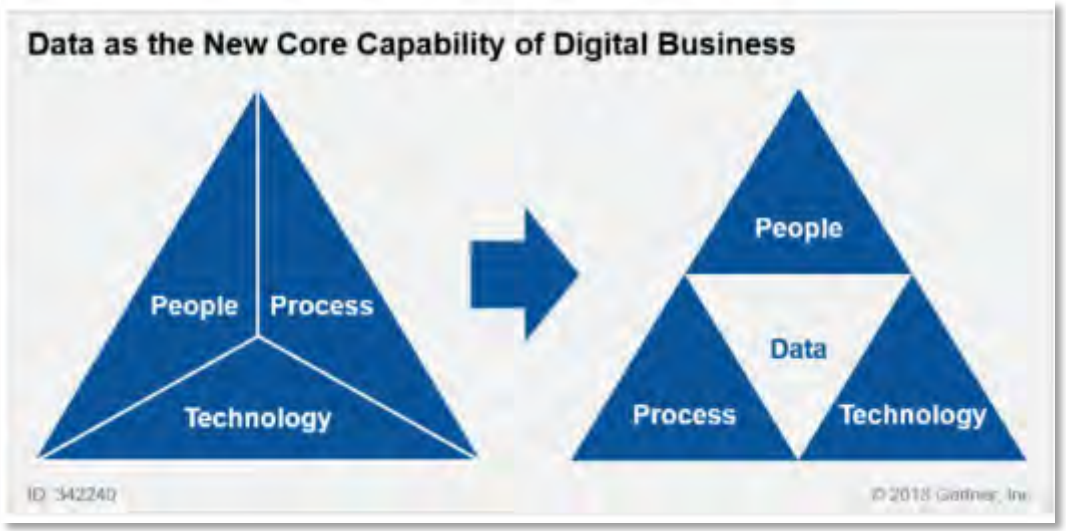


[1] Oct 15, 2018, World Economic Forum, "These are the 8 major forces shaping the future of the global economy"

WORLD ECONOMIC FORUM

The World Economic Forum sees today's economy as driven by Data, not Goods & Services

Gartner's View – the data driven, digital business



- To manage its people, a digital company needs a **HR Strategy** to steer recruitment, skills & people retention

- To manage its IT, needs an **IT Strategy** to ensure its technology investment supports its business aspirations

- To manage its processes, needs a **Process Strategy** to drive the design, deployment & management of its automated and manual processes

- To manage its data, needs a **Data Strategy** to develop & improve its data assets to underpin its People, Process & Technology strategies

Business Optimisation vs. Business Transformation

Digital Transformation is transforming business

Business Optimisation

Becoming a Data-Driven Company

- Improving Efficiency
  - Reduce Redundancy
  - Eliminate Manual Effort
- Growing Revenue
  - Improved Marketing Campaigns
  - Data-driven Product Development
- Etc.

How do we do what we do *better*?

Business Transformation

Becoming a Data Company

- New Business Models
  - Data is the product
  - Monetisation of information
- Digital Transformation
  - New Business Models
  - Data is the Business
- Etc.

How do we do something *different*?

DISCUSSION

What problems or opportunities are changing or driving an increased focus on data in your organisation / industry?

Why the need for a Data Strategy?

"If you don't know where you are going, you'll end up someplace else."
YOGI BERRA, US BASEBALL PLAYER

"By failing to prepare, you are preparing to fail."
BENJAMIN FRANKLIN, US FOUNDING FATHER

"Give me six hours to chop down a tree and I will spend the first four sharpening the axe"
ABRAHAM LINCOLN, US PRESIDENT

"Strategy is a fancy word for coming up with a long term plan and putting it into action"
ELLIE PIDOT, VP STRATEGY, MEDTREONIC

Further good reasons for a Data Strategy – data volumes

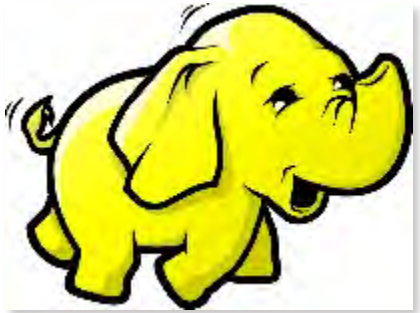
2.5 QUINTILLION
GRAINS OF SAND
ON EARTH

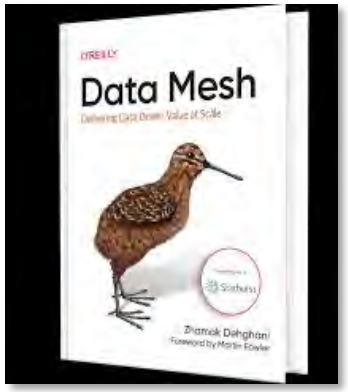
7.5 QUINTILLION
BYTES OF NEW DATA
CREATED EVERY DAY

90% OF ALL DATA HAS BEEN
CREATED IN THE LAST 2 YEARS

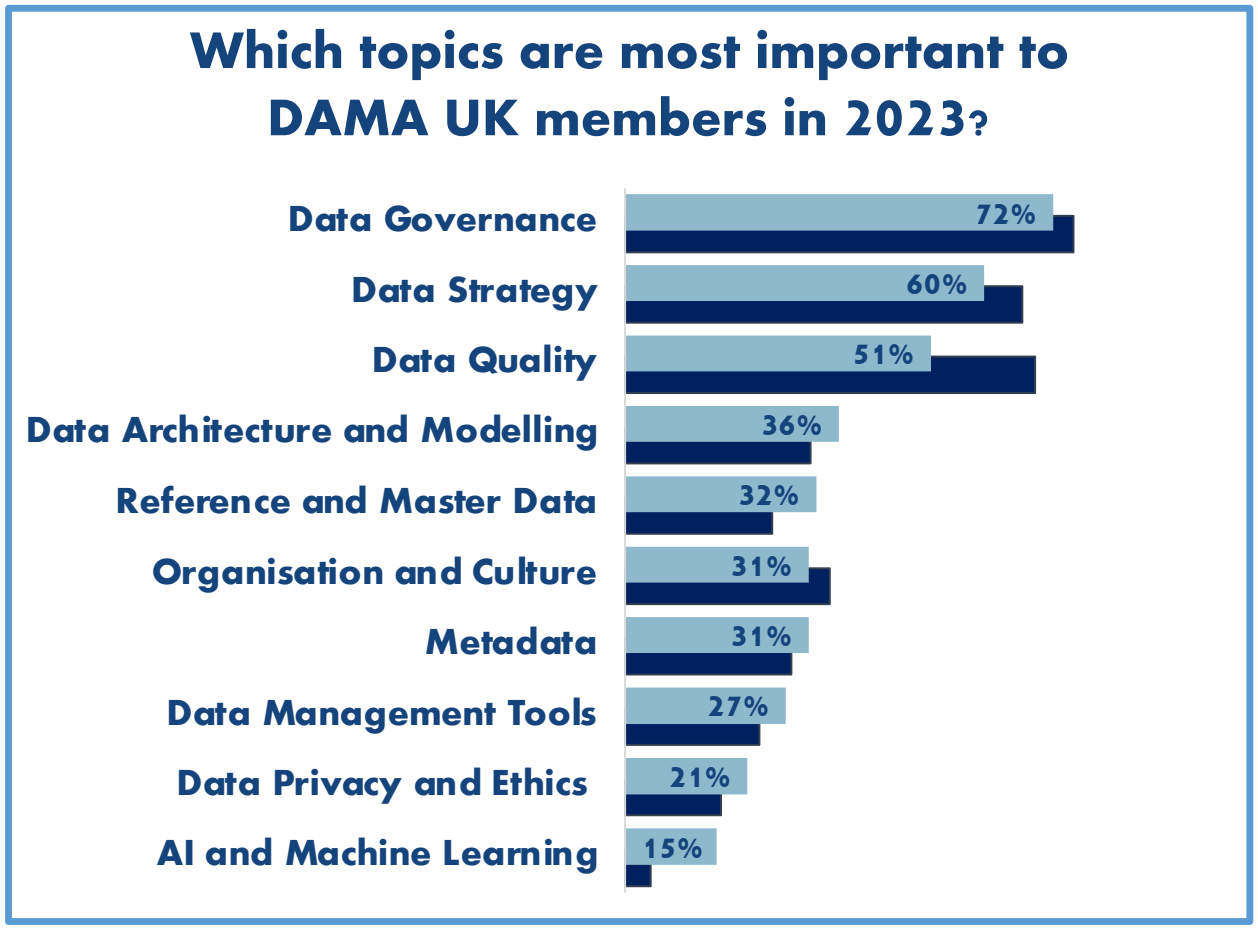
AVERAGE BUSINESS DATA
VOLUMES DOUBLE EVERY
1.2 YEARS

Further good reasons for a Data Strategy – complexity and divergence





The Importance of Data Strategy in the UK: Recent DAMA UK Members' Survey



Top 10 Data Management Priorities 2023

KEY:

2023

2022

Source:
DAMA UK Members Survey
June 2023

Overview of the Data Strategy Approach : Key Questions

ANALYSE CURRENT STATE

What are the organisation's current business goals and objectives?

What are the current data strengths and what weaknesses prevent or impede its ability to deliver its goals?

"The future starts today, not tomorrow"

Pope John Paul II

DESIGN FUTURE STATE

What does the business aspire to do in the future that it does not / cannot do today?

What new data capabilities would it need to support this?

Where to begin? Developing a Data Strategy

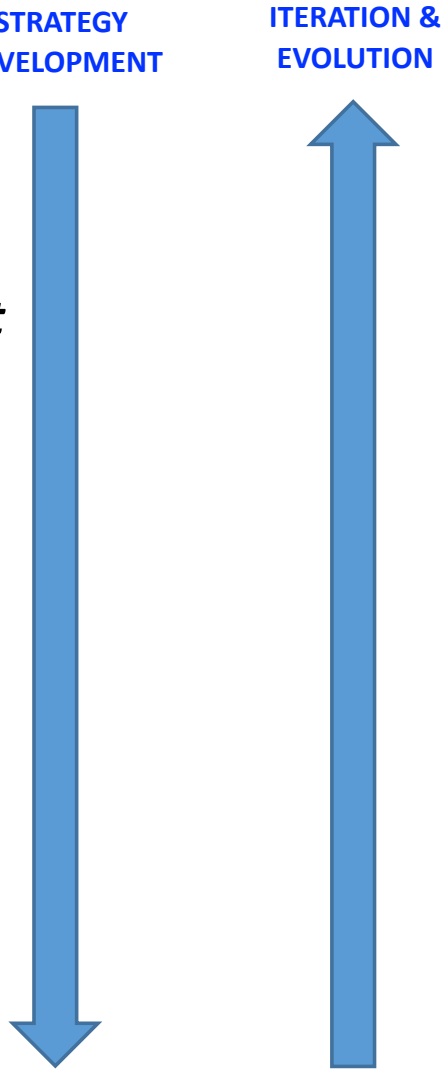
///AdeptEvents

STEP 1 — Business Goals & Strategy — ***Identify Business Goals & Objectives Aligned to Data***

STEP 2 — Current State Assessment — ***Understand Current Data Maturity & Environment***

STEP 3 — Proposed Future State — ***Propose Future State Capabilities, Processes & Organisational Structure***

STEP 4 — Implementation Roadmap — ***Prioritise Efforts & Identify "Quick Wins"***



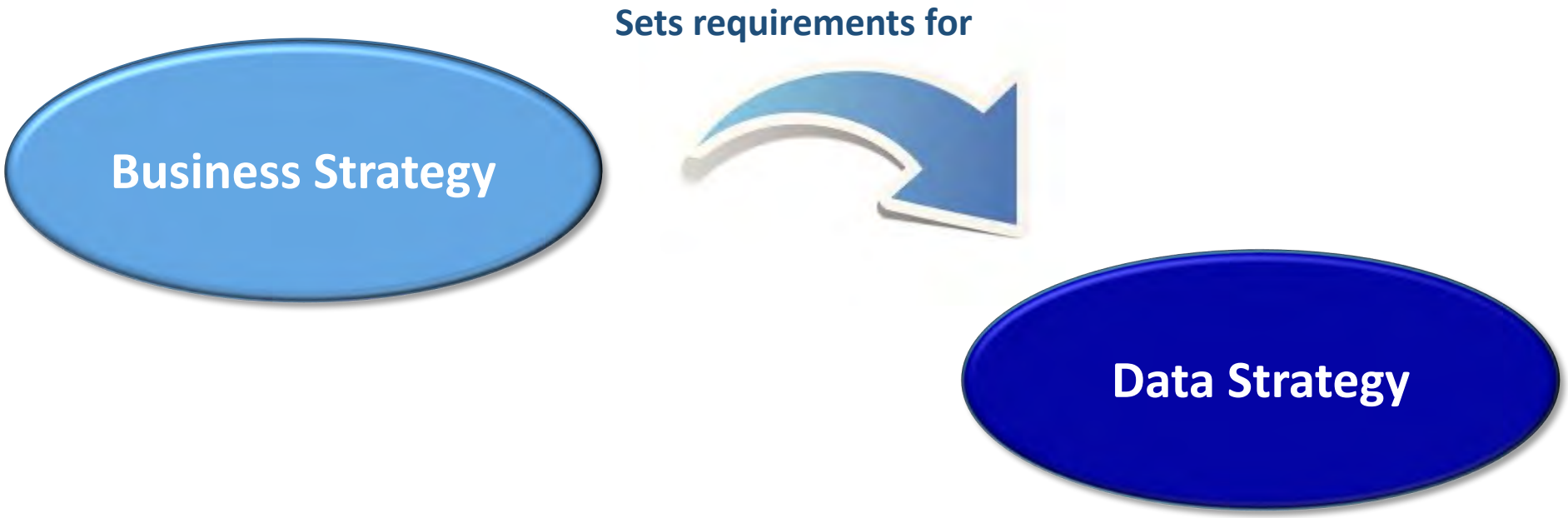
Basic definitions

Business & Data Strategies

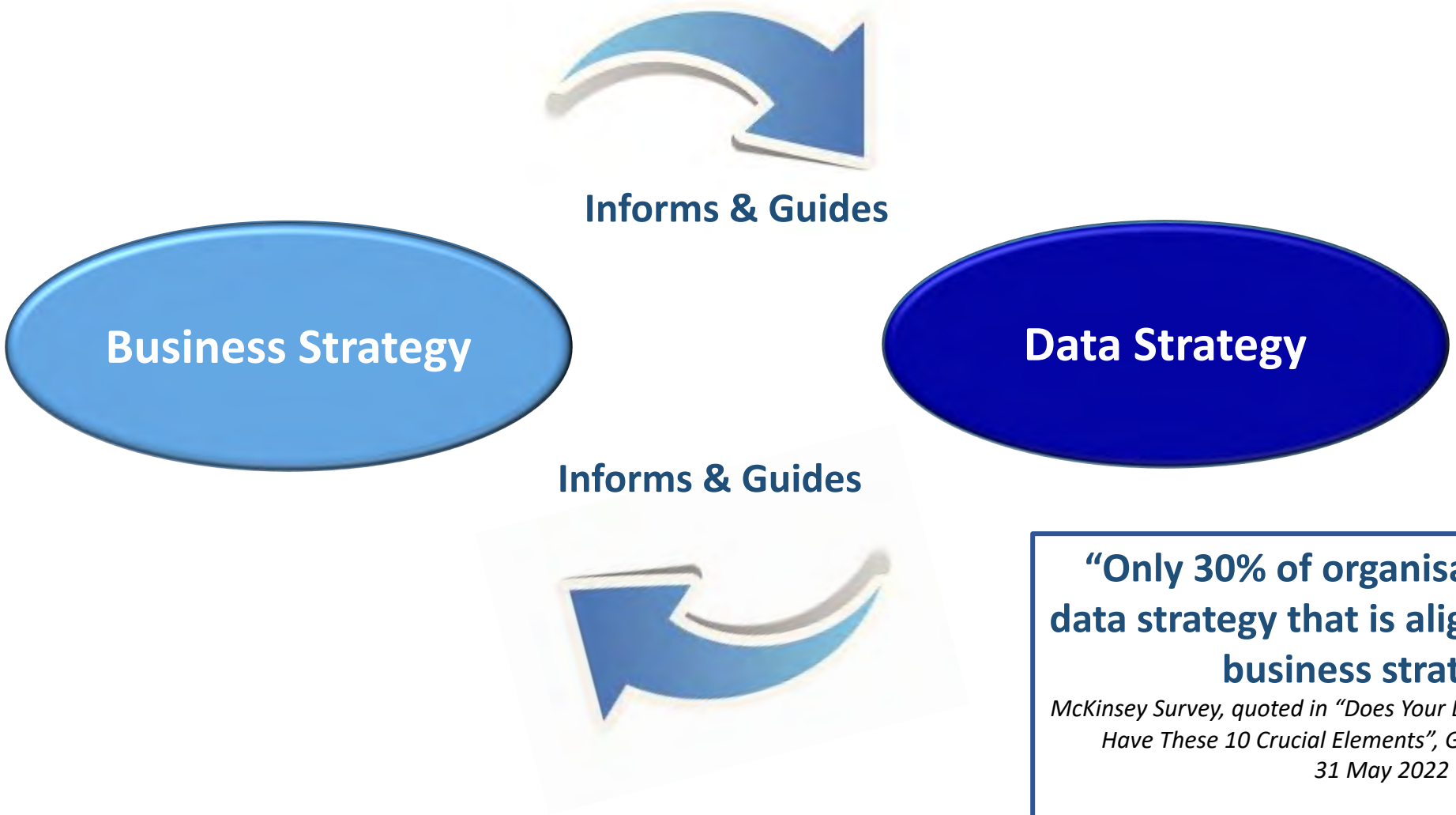
A BUSINESS STRATEGY is a medium to long term business plan which details the aims & objectives of a business and how it means to achieve them

A DATA STRATEGY is a medium to long term plan for the ***improvement, management & exploitation of data across a business***, and how it is to be achieved

The traditional relationship between Business & Data Strategy



The digital, data driven enterprise – equal partners



"Only 30% of organisations have a data strategy that is aligned with their business strategy"

McKinsey Survey, quoted in "Does Your Data & Analytics Strategy Have These 10 Crucial Elements", Ganes Kesari, Forbes, 31 May 2022

The role of the data professional in the data driven business

- In the current environment of data driven business, data professionals have an opportunity to have a seat at the table:
  - Finding new opportunities to leverage data for business benefit
  - Creating efficiencies & business process optimisation
  - Integrating data from disparate sources for new business insights
  - Supporting organisational change

What a data strategy is NOT

… or 8 certain ways to make sure it fails

Encompass all corporate data & information

Owned and actioned by the IT Department

A technology shopping list

Led and developed exclusively by middle managers

A general strategy, reused from elsewhere

A set of noble principles & aspirations

Long term, with no immediate benefits

Set in stone and never changed

What a data strategy IS

… or 8 certain ways to ensure it succeeds

Closely focused on the key data that the organisation depends on

Actively owned by senior business executives

Unique to the specific organisation

Holistic, encompassing People, Process & Technology

Developed & maintained collaboratively across business & IT

An action roadmap, with milestones & deliverables

Include ‘ quick wins’ but keep sight of the longer term goals

Evolutionary & dynamic, adapting to the changing needs of the organisation

Where to begin?

Building a Data Strategy

Where to begin? Developing a Data Strategy

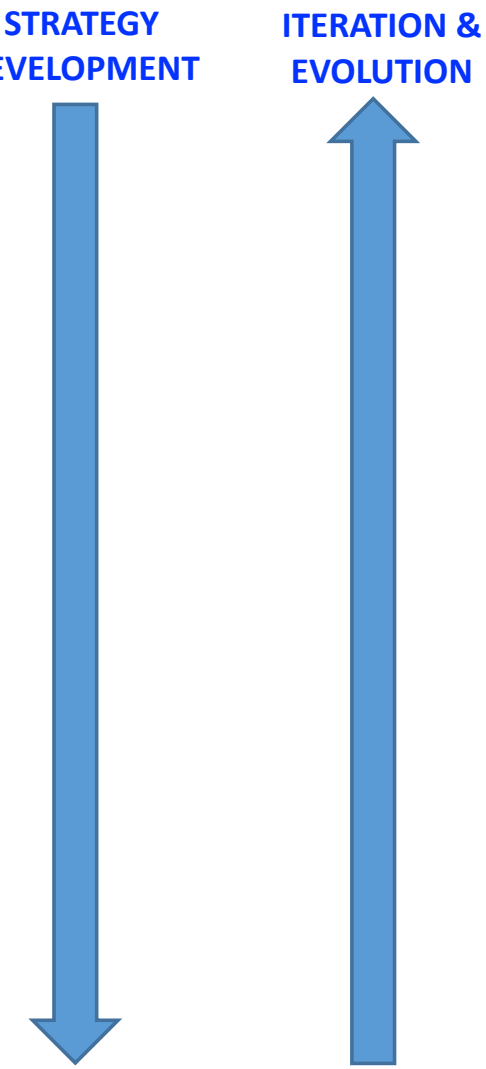
///AdeptEvents

STEP 1 — Business Goals & Strategy — ***Identify Business Goals & Objectives Aligned to Data***

STEP 2 — Current State Assessment — ***Understand Current Maturity & Environment***

STEP 3 — Proposed Future State — ***Propose Future State Capabilities, Processes & Organisational Structure***

STEP 4 — Implementation Roadmap — ***Prioritise Efforts & Identify "Quick Wins"***



Building a Data Strategy
STEP 1

Identify Business Goals & Objectives Aligned to Data

Capturing business goals and drivers - research

///AdeptEvents

- Look at company websites & documents (external and internal) to highlight:
  - Current Mission & Vision
  - Strategic business aims and goals
  - Current challenges – external and internal
- Consider how these depend on data and its effective management
  - For example, a business goal to **'Increase our revenues from our top 10% revenue generating customers'**
  - Data questions:
    - Can we identify our top 10% revenue generating customers?
    - What data issues may stop us doing that (data quality, data duplication, missing data etc.)
    - What are the implications if we can't?

Capturing & analysing data problems & opportunities

- Identify the primary data stakeholders (Include both Business & IT)
- Set up 1-1 interviews, group interviews or workshops to highlight:
  - How are you currently using or managing data in your role?
  - What's working well?
  - What needs to be improved and why?
  - What future data needs do you have and what opportunities can be taken with better (use of) data?
  - What are the current costs / lost opportunities of current data shortcomings? (Quantify in financial terms if possible)
  - What is your One Wish for data?
- It's important to speak to a wide range of roles across the organisation:
  - Senior Executives
  - Management roles (Business & IT)
  - Front line roles (Business & IT)

Stakeholder Analysis

- Stakeholders are key to the success or failure of your data strategy. Like data assets, they should be analysed and managed.
  - They are the **"Who"** in the Zachman Framework
- A number of tools and techniques exist to help manage stakeholders

- **Stakeholder matrix:** Listing of key stakeholders with their roles, contact information, location, etc.
- **Interest/Influence matrix:** Rank stakeholders by level of interest vs. amount of influence they hold.
- **Interest matrix:** Identify key interest areas and map their importance to each stakeholders or stakeholder group.
- **Interview schedule & key questions:** Plan the interview schedule to respect stakeholders' time. Identify key questions ahead of the meeting.
- **Preferred communication styles:** Identify the styles of communication preferred by stakeholders & their communication styles (email, face to face meeting, coffee, introvert/extrovert, etc.)
- **Communication Plan**: Develop a phased communication plan including feedback, reporting, metrics, etc.

Example Stakeholder Matrix

///AdeptEvents

Stakeholder Matrix

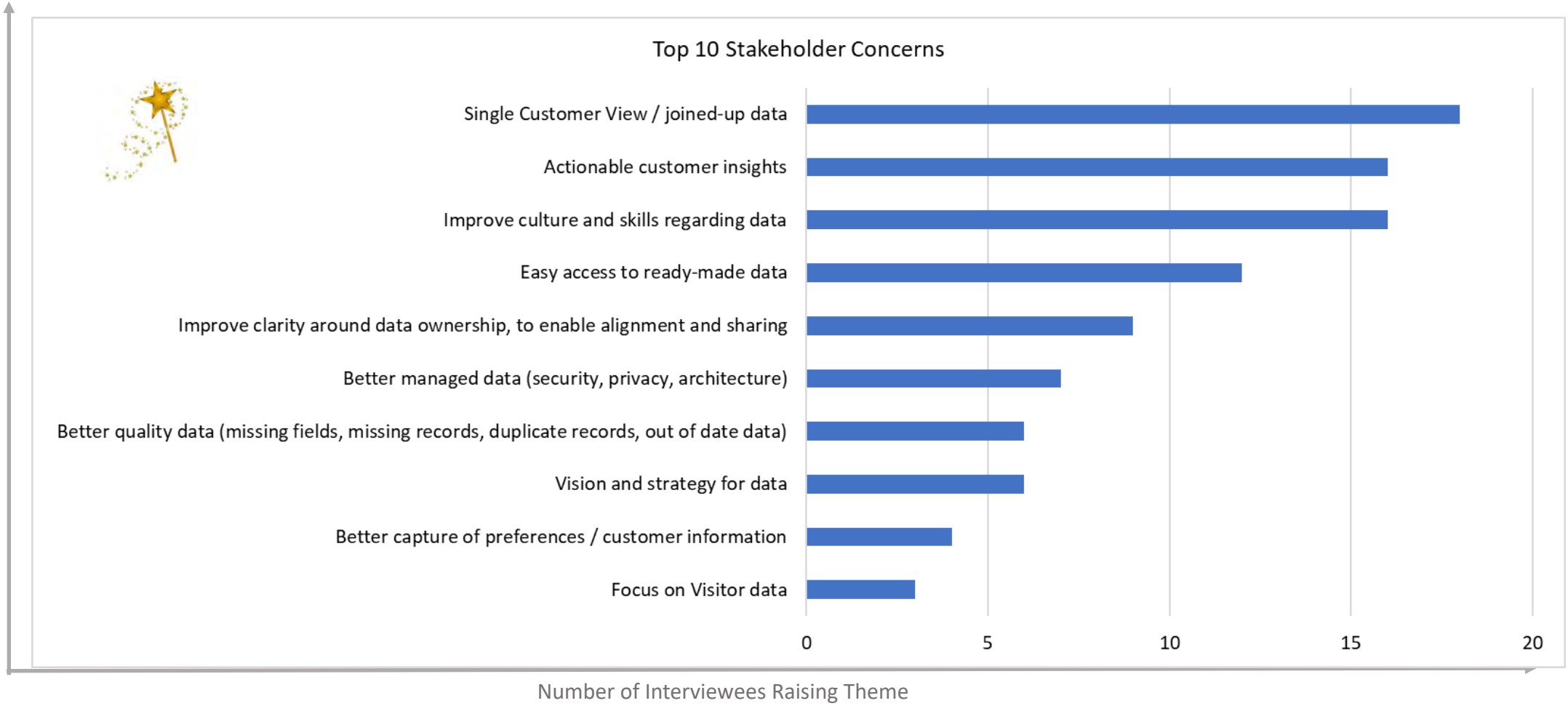
Stakeholder Name / Group	Job Title/Role	Location	Involvement				Role on Project	Influence	Impacted	Phone	Email
			R	A	C	I		H / M / L	H / M / L		
EXECUTIVE REVIEW											
Mary Smith	CIO	Plano, TX	X			X	Executive Sponsor	H	H	+1 (214) 555-1212	mary.smith@thisco.com
Robert Quantiles	CFO	New York, NY			X	X	Executive Chamption for Finance data	H	H	+1 (212) 555-1212	robert.quantiles@thisco.com
STEERING GROUP											
Stuart Ling	Director of Enterprise Architecture	San Francisco, CA	X	X			Core working group	H	H	+1 (415) 555-1212	stuart.ling@thisco.com
Ian Wordingham	Director of Data Strategy	London, UK	X	X			Core working group	H	H	+44 (020) 1234 1234	ian.wordingham@thisco.com
Melissa Smith	Strategic Consultant	Edinburgh, UK			X		Core working group	H	L	+44 131 123 1234	melissa.smith@thisco.com
DATA ARCHITECTURE											
Eric Wong	Data Architect	Plano, TX			X	X	Recommendations & input on data architecture	M	H	+1 (214) 555-1212	eric.wong@thisco.com
Wendy Collington	Data Architect	San Francisco, CA			X	X	Recommendations & input on data architecture	M	H	+1 (415) 555-1212	wendy.collington@thisco.com
Myles Stuart	DBA	Plano, TX				X	Historical input on legacy systems	L	M	+1 (214) 555-1212	myles.stuart@thisco.com
ETC - Other IT Groups listed											
FINANCE											
Lisa Winston	Director of Finance	New York, NY			X	X	Input into US finance needs for data	H	H	+1 (214) 555-1212	lisa.winston@thisco.com
Timothy Preston	EMEA Finance Lead	London, UK			X	X	Input into EMEA finance needs for data	H	H	+44 (020) 1234 1234	timothy.preston@thisco.com
Juan Morales	Latin America Finance Lead	Santiago, CL			X	X	Input into LATAM finance needs for data	H	H	+56 2 12345678	juan.morales@thisco.com
ETC - Other Business Groups listed											

RACI *:
R: Responsible
A: Accountable
C: Consulted
I: Informed

Data Issues & Opportunities Log: Suggested Template

ID	Short Name	Brief Description	Impact of the Problem / Potential Opportunity (Business & IT)	Raised By
1	**Customer Data Duplication**	Both in the CRM platform and the Customer Data Warehouse there are known customer record duplications, mainly caused by marketing and salespeople not being able or willing to search for an existing customer record. One estimate is that up to 25% of CRM customer records are duplicates. Data Warehouse duplication unknown.	• Multiple marketing communications sent to the same customer, causing brand damage • Inability to evaluate total customer lifetime revenue value • Impossible to derive a single view of a customer • Risks contravening GDPR if customer submits Data Subject Access Request (DSAR) and all data not returned • Resolving this problem would accelerate MDM ambitions and enable better targeted 1-1 customer marketing	• Bob Mills (Marketing Manager) • Anna Ford (CRM Technical Architect) • George May (Senior Sales Rep)
2	**Product Data Inconsistencies**	Product data is held and processed in several different platforms and systems. Each system has its own set of product reference codes. Many inconsistencies have been caused by the company making several acquisitions over recent years. No attempt has yet been made to standardise codes despite wide awareness that this causes problems for the business.	• Product codes need to be manually amended and rekeyed when input into other systems. At preset it is estimated that around 3 person years are spent each year on this task. • The above process is subject to error and the incorrect codes are often input to systems. This can lead to the wrong product being dispatched, leading to customer complaints and rework.	• Rachel Smith (Product Manager) • Akhtar Abdul (IT Support) • Betty Willis (Dispatch Coordinator) • Arya Patel (Finance)
3	**Poor Data Training of Data Entry People**	Data entry people are distributed throughout the company in many different siloed parts of the organisation. This has led to many data entry people being unaware of where data they enter is used across the business, other than within their own immediate functional areas.	• Often data is not fit for purpose when processed by downstream business units, especially dispatch and finance functions. • This requires these units to contact data entry teams to try to resolve data errors, and this impacts the productivity of both data entry teams and downstream functions. • In general, awareness of the importance of accurate and complete data entry is low.	• Sara Braun (HR Director) • Fred Sarat (Sales Manager) • Rachel Smith (Product Manager) • Arya Patel (Finance)

Example: What is your One Wish related to data?
Top Themes: All Stakeholders



AnyCo faces some challenges due to its operating model of multiple businesses, and this came through strongly in the themes such as "Single Customer View / joined-up data" and "Improve clarity around data ownership, to enable alignment and sharing"

Total stakeholders interviewed = 63

See Appendix for list of Stakeholders, and details on Departmental findings

Issue Matrix

- An Issue Matrix lists:
  - Key Themes & Issues around data
  - Which teams are interested in each issue / theme
- Creates a “heat map” of priorities

Key Issues & Themes	Leadership	Sales	Finance	Marketing	Support	R&D	HR	Legal	Compliance
Improved Customer Information	X	X	X	X	X	X	X	X	X
No Cross-Domain Integration view (Sales, Marketing, Support, etc.)	X	X	X	X	X	X	X	X	X
Inconsistent Definitions of Key Business Terms	X	X	X	X	X			X	X
Inconsistent Summarisation/Timing (e.g. Monthly view)	X	X	X						
External data integration needed				X	X				
Faster Time-to-Market for New Applications	X	X		X		X			
Lack of standards creating quality issues & rework					X	X			
Siloes of information slow development across teams	X	X		X	X	X	X		
Increase Efficiency & Reduce Costs									
System Redundancy	X	X	X	X	X	X			
Staff spend extra hours looking for information	X	X	X	X	X	X	X	X	X
Rework needed due to incorrect definitions			X		X	X			
Etc.									

Legal Rider

This case study is based upon a purely fictional hotel business

Any resemblances to real hotel chains are unintentional and purely coincidental

Case Study:
Global Destinations & Spas (GDS) Hotel Chain

///AdeptEvents

- The Global Destinations & Spas (GDS) Hotel Group is a hotel, casino, spa and nightclub chain.
- The hotel has grown rapidly through aggressive acquisition and now has 30,500 employees.
- Although the GDS Group has remained profitable, increasing competition from other chains & new accommodation services (e.g. Airbnb), and the rapid rise of online gambling, have been gradually eroding its profit margins over the last five years.
- There is a low level of confidence in the accuracy of financial reports and the CFO is nervous about the financial and regulatory implications of this.
- A new CEO was appointed six months ago. Her brief is to increase the profitability of the Group and assure its future.

ACTIVITY: Read the case study and then consider who would be the key stakeholders

Legal Disclaimer: This case study is based upon a purely fictional hotel business. Any resemblances to real hotel chains are unintentional and purely coincidental .

Activity – Stakeholders

Who are the Key Stakeholders for the Hotel Chain?

For the key business initiatives you identified, who are the key stakeholders you need to speak with?

Include at least:

- 1 or more high-level managers or executives
- 1 or more operational staff members from “the field”
- 1 or more potential external stakeholders

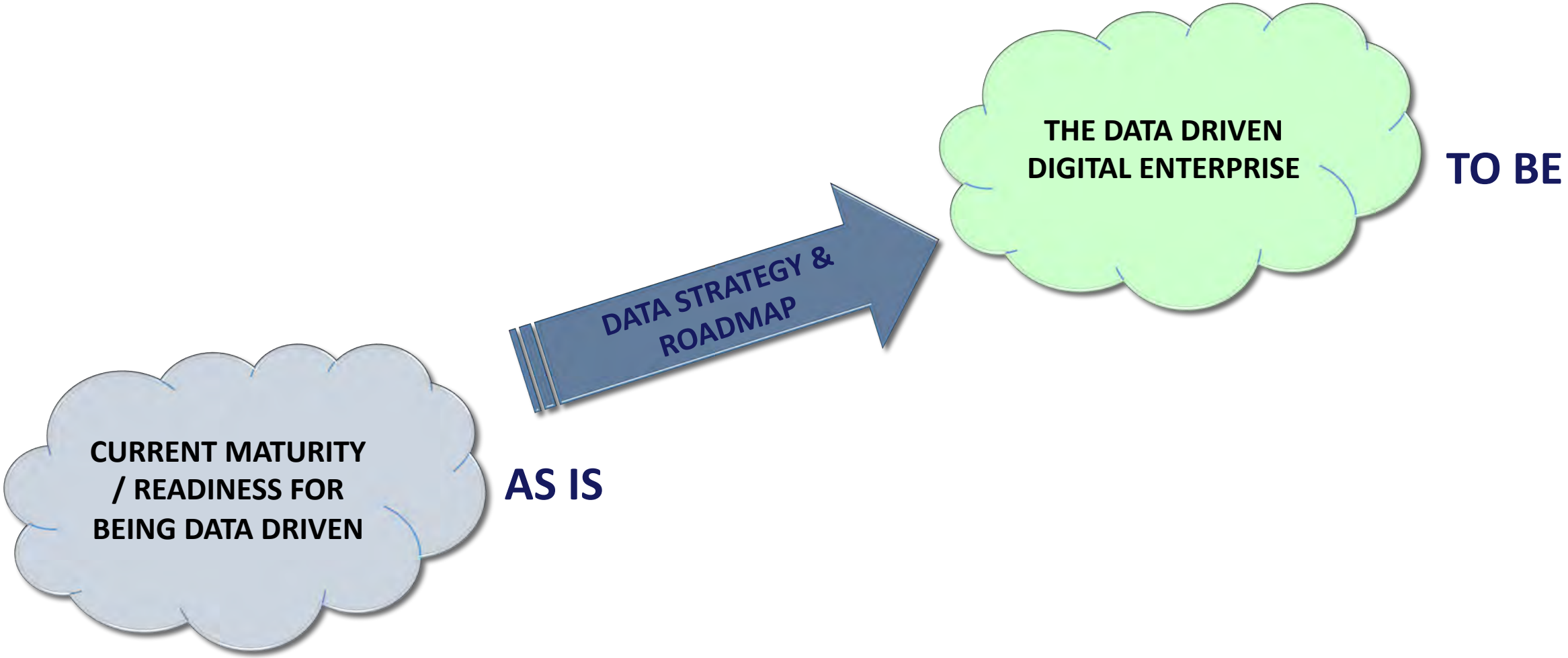
Key Stakeholders by Role/Title

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Building a Data Strategy
STEP 2

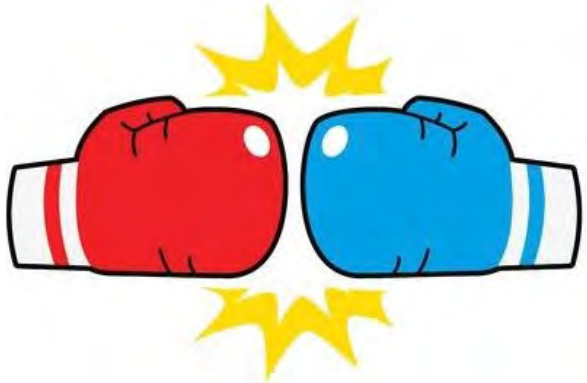
Understand Current Data Maturity & Environment

Maturity baseline – plotting your data strategy



Discussion: “Offence” vs. “Defence”

Which style of data management fits your organisation?



Offence

- Focused on Creating Opportunity
  - Improving Profitability
  - Increasing Revenue
  - Improving Customer Satisfaction
  - Competitive Advantage

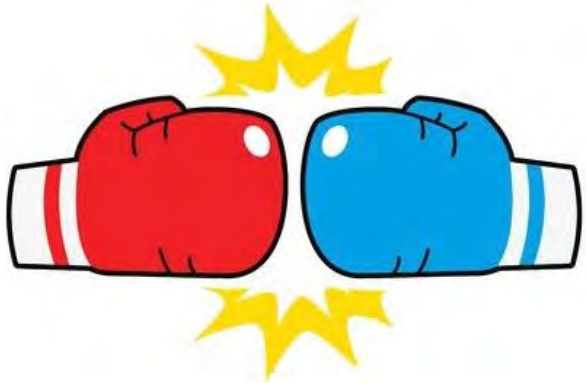
Defence

- Focused on Reducing Risk
  - Compliance & Regulation
  - Avoiding Audits or Fines
  - Fraud Detection
  - Security & Privacy

Discussion: On which end of the spectrum is your organisation?

Discussion: "Offence" vs. "Defence"

Which style of data management would fit the Hotel Group?



Offence

- Focused on Creating Opportunity
  - Improving Profitability
  - Increasing Revenue
  - Improving Customer Satisfaction
  - Competitive Advantage

Defence

- Focused on Reducing Risk
  - Compliance & Regulation
  - Avoiding Audits or Fines
  - Fraud Detection
  - Security & Privacy

Discussion: On which end of the spectrum is the Hotel Group?

Motivation Model: What is it?

- One page diagram, used to clarify and communicate the rationale for, and the main priorities of a Data Strategy

Top half highlights the business need for better data and new data

Bottom half summarises the primary focus, goals and objectives of the Data Strategy

- Consider how the Drivers depend on data and effective data management and highlight current weaknesses raised in interviews etc.
- Motivation Model overall can be the basis of a 2 minute 'elevator pitch' – see later

Motivation Model: How to Develop It

Mission & **Vision** can be identified from business strategies, annual reports etc.

Internal & **External Drivers** are the forces which are driving the need for change, including better data management. Can be derived from stakeholder interviews and documents e.g. Annual Report

External Drivers are the forces which are in the environment of the organisation and so cannot be directly controlled

Internal Drivers are the forces which are within the control of the organisation and reflect business challenges & initiatives

Top half of model (Business needs) can be completed after the end of the Vision stage of the framework

Bottom half of the model (Data Strategy goals) can be completed after Current & Future State analysis is complete (see later)

Real (Anonymised) Motivation Model

ACME MISSION

To champion better work and working lives by improving practices in people and organisation development, for the benefit of individuals, businesses and society

ACME VISION

To define and represent the international benchmark for excellence in people and organisation management and development

External Drivers

- Hub for Professional Connections
- Digitisation of Products & Services
- Create a Collaborative Ecosystem
- Brand & Reputation
- Customer & Company Experience
- Relevant & Timely Communication
- Regulatory & Legal Compliance
- Competitive Landscape

Internal Drivers

- Coherent Customer View: Individual & B2B
- Enhance Customer Insight
- Increase Customer Satisfaction / NPS
- Create & Leverage Partnerships
- Faster Time to Market
- Exploit Intellectual Property
- Increase Surplus
- Efficiency & Cost Minimisation

Strategy

- Develop a Data Strategy aligned with Business Strategy
- Identify high priority data issues and problems
- Review and join up ongoing data improvement initiatives
- Ensure focus & resources align with business priorities
- Make the case for investment in data and supporting IT

Accountability

- Define clear roles & responsibilities for both business & IT staff
- Set up cross-business governance to lead and implement change
- Make data fit for purpose through better data quality
- Manage master data to enable a coherent customer view

Architecture

- Develop an Architecture for the business of today and tomorrow
- Define & document supporting data models
- Develop and implement an IT Strategy to support the Data Strategy
- Manage architecture as a key business / IT function

Innovation

- Gain greater insight on the ACME market & ecosystem
- Better use and exploit data to gain new insights through BI & analytics
- Use data to drive & develop new products & services
- Share data with partners and others to enhance knowledge

Culture

- Communicate the goals and achievements of the Data Strategy to all
- Enhance digital skills of staff by organic development and recruitment
- Train all staff in data management best practices
- Encourage active participation in data improvement

Business Motivation for Global Destinations & Spas

- Revisit the Hotel Case Study:

1. What is the Group's stated Mission & Vision?
2. What are the top Internal & External Drivers? (Try to find at least 5 of each)

See next slides for templates (see also workbook)

Activity – Business Motivation & Drivers

///AdeptEvents

HOTEL GROUP MISSION:	HOTEL GROUP VISION:

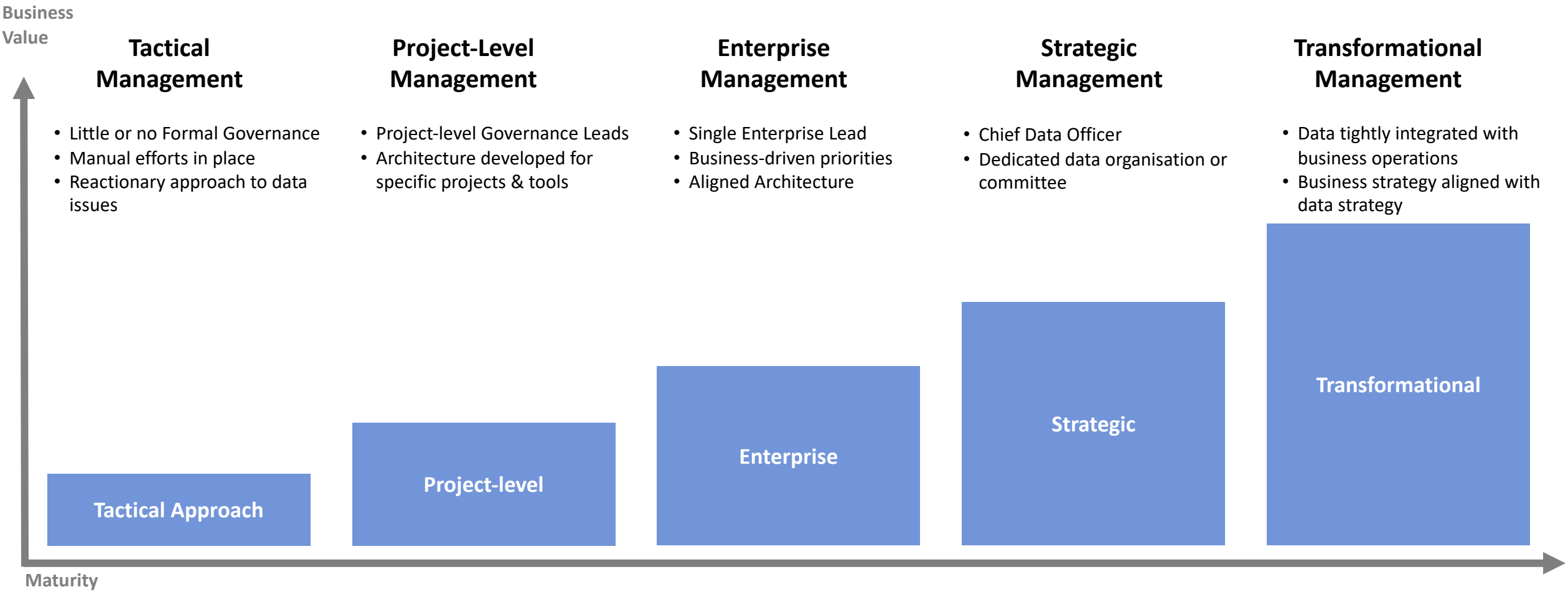
EXTERNAL DRIVERS

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

INTERNAL DRIVERS

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

Data Management is an Evolution



- Little or no Formal Governance
- Manual efforts in place
- Reactionary approach to data issues

- Project-level Governance Leads
- Architecture developed for specific projects & tools

- Single Enterprise Lead
- Business-driven priorities
- Aligned Architecture

- Chief Data Officer
- Dedicated data organisation or committee

- Data tightly integrated with business operations
- Business strategy aligned with data strategy

Level 1: Performed
Data is not seen as a strategic asset. Created for tactical documentation needs only

Level 2: Managed
Data is seen as a requirement for the implementation of individual projects

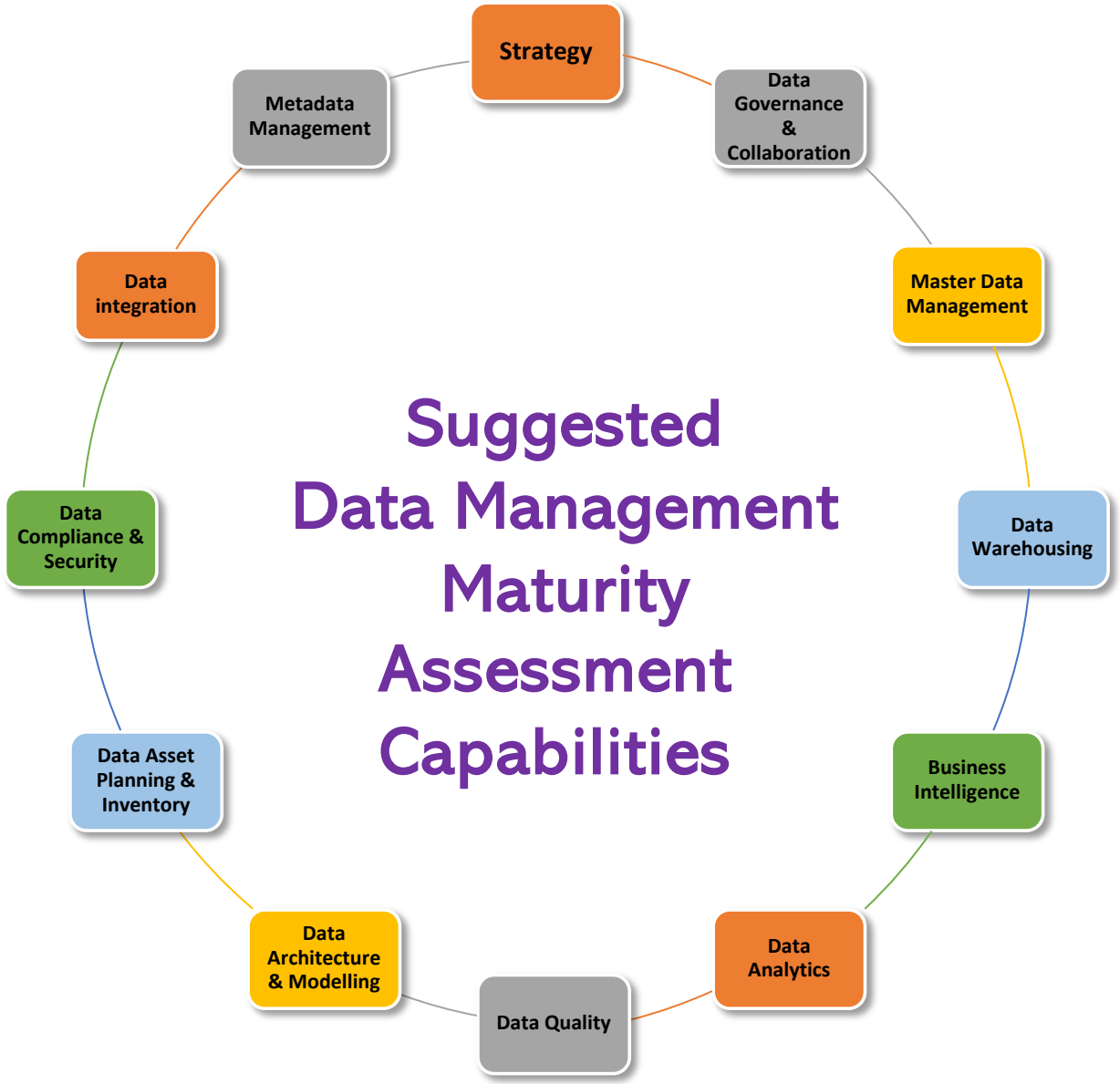
Level 3: Defined
Data is seen as an enterprise asset that can be reused across the organisation

Level 4: Measured
Data is seen as critical to business performance and as an asset that helps create and grow business value

Level 5: Optimised
Data is seen as mission-critical for business performance, and a source for competitive advantage in a dynamic and competitive marketplace

* From Global Data Strategy's Maturity Assessment Methodology, adapted from CMMI, DMBOK, and industry experience with Global Fortune 100 Companies

Performing a Current & Future State Assessment



Performing a Current & Future State Assessment: Capabilities

///AdeptEvents

DATA MANAGEMENT CAPABILITY	EXAMPLE TOPICS ANALYSED
Data Strategy	Alignment of data to business strategy; budgets & resources; communication
Data Governance	Accountability; stewardship; data issue management; critical data identification
Master Data Management	Master & reference data storage & processing; matching rules; hierarchies; CDEs
Data Warehousing	DW capability; performance & scalability; documentation; design methodologies
Business Intelligence	Provision of user reports; tooling; self-service; semantic layer; visualisation
Data Analytics	Operational v predictive; use of data science, AI/ML; social media; geographic data
Data Quality	Measurement & KPIs; root cause analysis; tooling; enrichment; data entry validation
Data Architecture & Modelling	Models; data standards; process / data mapping; system architecture; documentation
Data Asset Planning & Inventory	Location & documentation of data assets; data lifecycle management; data retention
Data Compliance & Security	Legal & regulatory compliance processes; privacy tagging; access & security controls
Data Integration	Batch v real time capability; APIs ; common business logic; platforms & tools
Metadata Management	Business data glossary, dictionaries & catalogs; data lineage; maintenance processes

Data Management Maturity Assessment

Defining "As Is" and "To Be" maturity levels

///AdeptEvents

Detailed Questionnaire for Each Capability Area **"Heat Map" of Problem Areas**

	Current State	Future State
Strategy	2.8	4.3
We have a Data Strategy for maximizing the use of data within our organization	3	5
Our Data Strategy is aligned to our Business Strategy.	3	5
We have executive and/or senior-level business support and sponsorship for our strategy	2	4
We have published a plan to achieve our Data Strategy that includes organization support, process, and IT.	4	4
We have organizations and budgets in place to support our Data Strategy and Plan.	3	4
Our Data Strategy is published and well understood across lines of business and technology groups.	2	4
Data Governance	3.0	5.0
We have a standard, auditable process for resolving data governance issues, such as change management, priority management, conflict resolution, etc.	3	5
We have data stewards who manage key data used across functional groups. They have clearly defined and well understood roles and responsibilities.	4	5
We have identified business-critical data elements and define & store them in a commonly-accessible format.	4	5
All of our people understand the importance of data to the organization and their personal responsibilities for managing it.	3	5
We have a data communications strategy to ensure data policies and standards are reinforced across our organization.	3	5
Data related objectives and responsibilities are formally included in job descriptions and/or personal objectives.	1	5
Our data governance process has a senior business and IT sponsorship and stakeholder buy-in across the functional leaders.	3	5
Master Data Management	4	5
Etc....continue for each capability area	1	4

Summary of Strengths, Weakness & Target Maturity

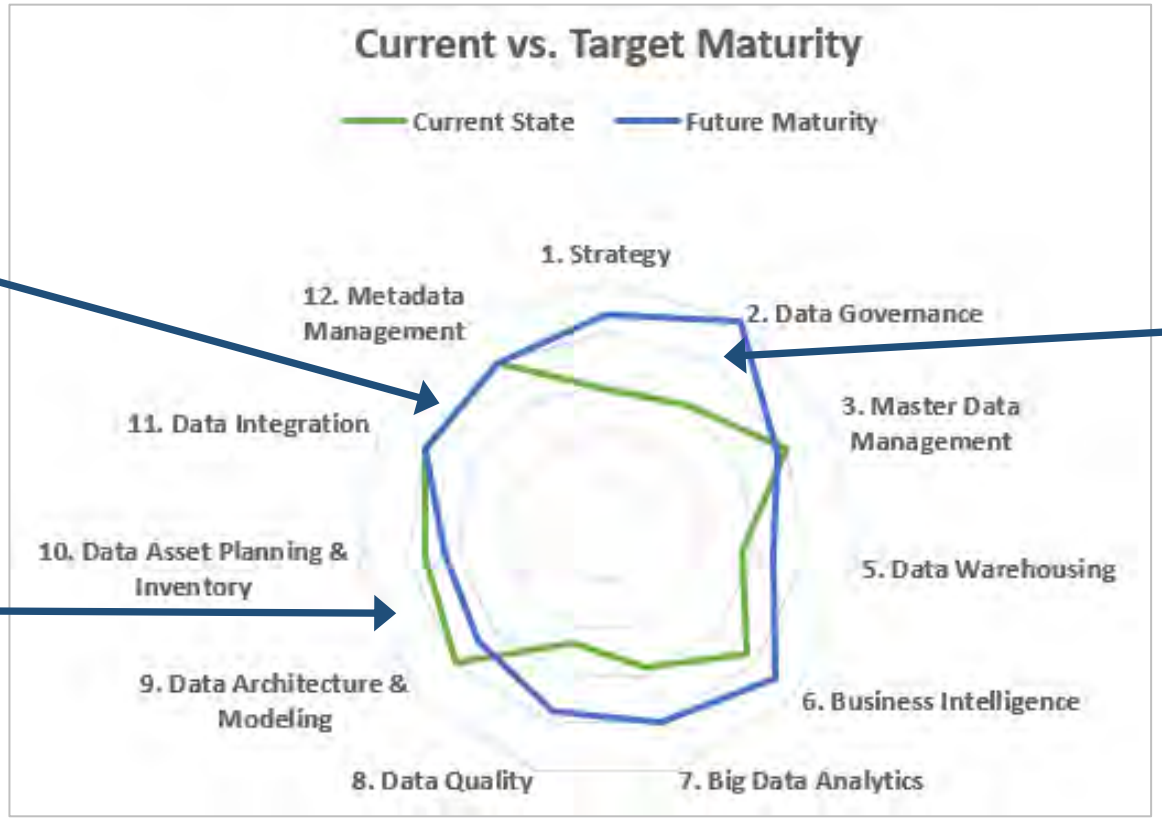
Visualising Current vs. Target Maturity

Determine Relative Strengths

- It's important to take a realistic look at your organisation's current state maturity
  - Where you are
  - Where you want to be

Metadata Management meets Target Maturity

We're "overdoing it" for Data Architecture



Significant Gap in Data Governance

STEP 2 into STEP 3: Maturity Assessment – Key Recommendations

///AdeptEvents

In general, there is an overall lack of data labelling and documentation. A POC with Data Catalog is underway within the Azure environment around the claims data assets but is still in the early stages of discovery.

Although XXX is currently engaged in efforts to modernise its external database platforms, a more comprehensive data strategy needs to be developed to align data mgmt capabilities for both internal and external applications. Sponsorship for the data strategy should be actively championed and visible at the highest level of senior leadership.

A formal Data Governance organisation has not yet been established. While the Data Solutions team and Data Governance Officer in particular have been critical in developing the initial framework of policies to date, the programme is challenged by lack of business involvement. The next step for XXX is to focus on building out and operationalising DG practices.

XXX has invested the capabilities in the MS Azure stack to start addressing system performance issues. However, current platforms and applications remain siloed, with limited ability to integrate data from these sources.

Master Data is not formally managed at XXX and key data domains (e.g. customer, product, employee) should be identified as a future priority. At present, master data is duplicated in inconsistent ways across several data sources. This causes inefficiencies and the need for significant manual matching of data.

An external audit of XXX's Information Security policies and practices has produced a 2021 Information Security roadmap, which is being executed to improve capabilities around internal/external technology assets and data access

XXX has migrated the existing DW repository to an Azure environment which includes a suite of products that support increased capacity for storage, data transformation, and reporting. Subsequent focus in this space should be on integrating and conforming data in an optimised data warehouse design.

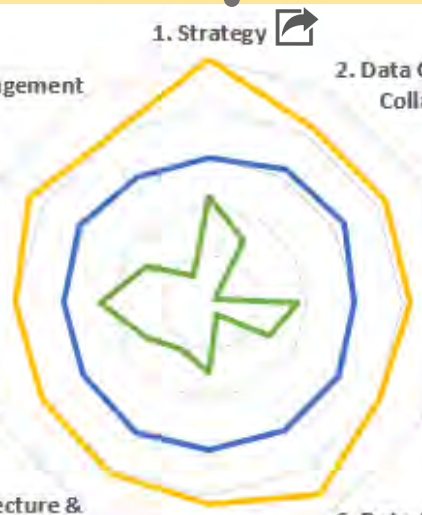
Data assets cataloguing and classification exists at XXX, within the scope of meeting data protection and regulatory compliance around personal data. Performing a more comprehensive inventory of XXX's assets and definition of key domains and their lifecycles needs to be prioritised as critical activity for XXX.

PowerBI is currently being used as XXX's enterprise reporting tool and is increasingly replacing MS Excel reports. Future outputs in this area should also ensure enterprise-wide metrics and data sourcing consistency

There is a lack of any overall Data Architecture, with primary and secondary data sources not clearly identified and documented. Conceptual data models exists on a limited set processes, making it difficult for XXX to identify its key data objects and attributes and where these are physically held and mastered.

Data Quality practices have largely been done in an ad hoc, reactive & manually intensive way. XXX has recently acquired a data profiling tool and this can accelerate development of formal business rules and target KPIs / quality thresholds with wider business engagement.

XXX has access to an extensive amount of data held in its externally hosted databases around managed services which is only likely to increase with shifts in both technological and legislative advances within the industry. The organisation needs to be positioned with regards to its analytical and real time capabilities once a solid foundation in supporting data mgmt domains has been established.



Current State Optimisation Transformation Maturity Assessment Detail

Critical Data Element (CDE) Identification – One Way

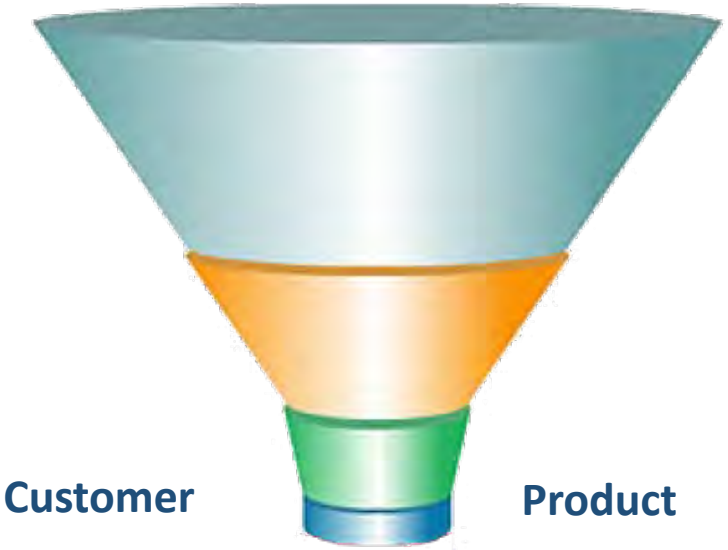
High priority data items and attributes

Identify Key Business Drivers

Filter Data Elements Aligned with Business Drivers

Focus Strategy Efforts on Key Data

e.g. Launch a New Product – Marketing Campaigns require better customer information

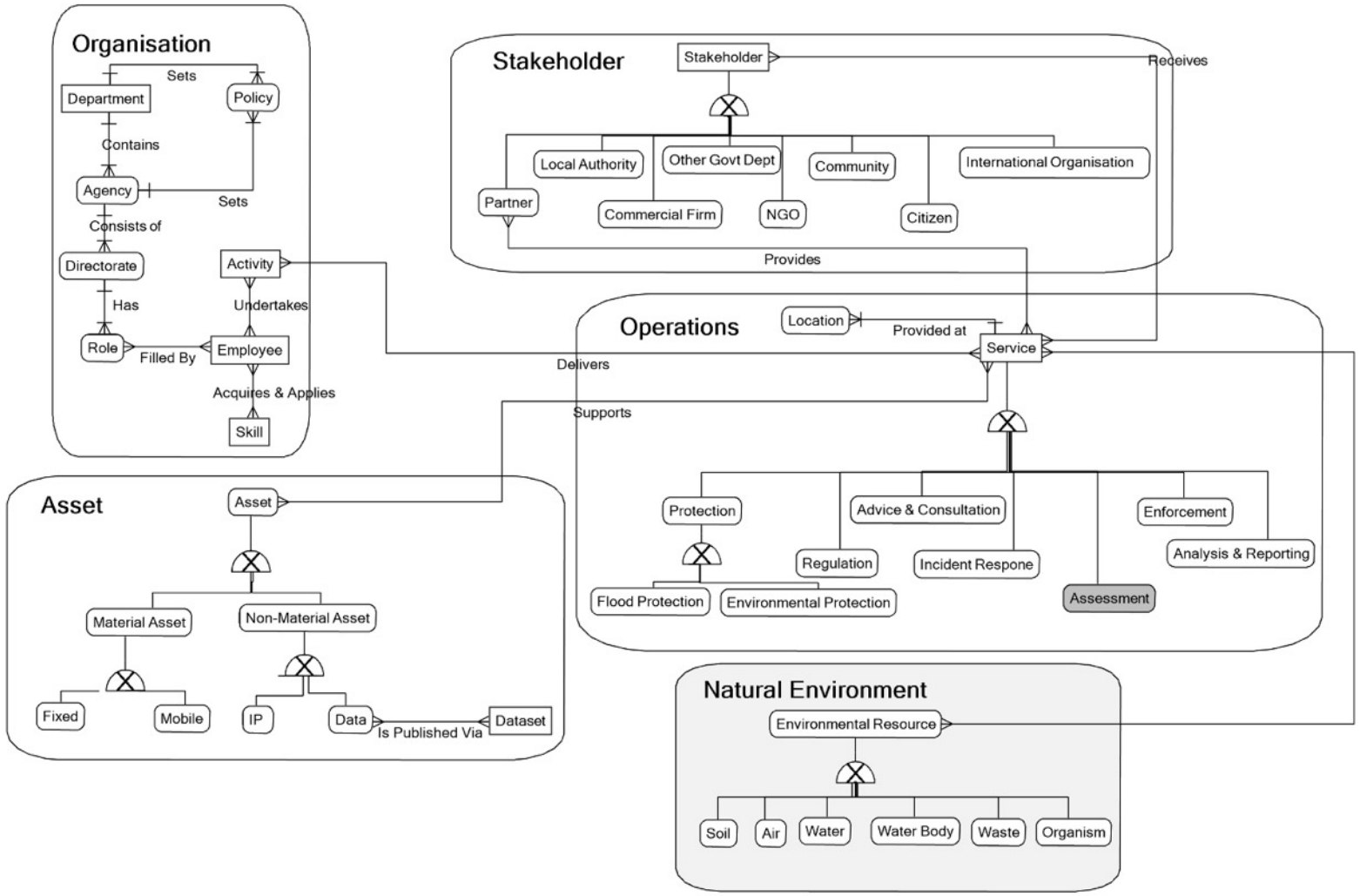


Targeted Projects in the Data Strategy to Deliver Short-Term Results

CDE Identification – Another Way

Audience		Purpose
Business Stakeholders **Data Architects**	**Enterprise** **Subject Areas**	**Organisation & Scoping** of main business domain areas
Business Stakeholders **Data Architects**	**Conceptual** Business Concepts	**Communication & Definition** of Business Concepts & Rules
Data Architects **Business Analysts**	**Logical** Data Entities	**Clarification & Detail** of Business Rules & Data Structures
DBAs **Developers**	**Physical** Physical Tables	**Technical Implementation** on a Physical Database

Actual Business / Conceptual Data Model



Baseline Key Data Sources

- Data quality will arise as a key problem in Step 1 – guaranteed!
- To quantify the scope and scale of data quality problems consider data profiling key data sources
- This will:
  - Provide real, concrete evidence for existing data problems
  - Help identify and quantify the state of critical data elements (CDEs)
  - Help to build the business case for action

DATA PROFILING TOOLS

- Data profiling tools automate the process of assessing and reporting on the quality of data sources
- The benefits of data profiling include:
  - Fast processing of large data sets
  - Complete analysis of an entire data set, so identifies all outliers
  - Some profilers enable drill down to individual records / rows
  - Automatic generation of metadata
  - Checks conformance of the dataset with business rules (pre-built or added)
  - Enables fact based discussion of the causes and impacts of data problems
  - Excellent starting point in data quality workshops

Results Browser

Job: US Customer Data Profiling

Input Field	Total Number	Minimum Length	Maximum Length	Minimum Value	Maximum Value
ID	5438	9	9	AAC434152	ZZZ642455
Name	5438	11	39	Anne Mullen	de Chana, Sergio Marques
Street	5438	2	41	# 3 Riverdrive Rd. East	Wilson & Kirk Road
City	5438	3	20	ABERDEEN	waterloo
State	5438	2	2	AB	WY
ZIP	5438	4	10	01801-6202	n2j4a9
Country	5438	1	13		United States
Phone	5438	1	25	(113) 072 3578	x
Cell	5438	4	14	(113) 575 3765	9978 158
Work	5438	4	28	(113) 007 6029	x7562
eMail	5438	16	35	Aaron.A.Koontz@thu.com	zoi.gibso@snomail.com
DoB	5438	19	19	Jan 1, 1900 12:00:00 AM	Mar 29, 2007 12:00:00 AM
Gender	5438	1	1	F	U
Active	5438	1	1	0	Y
CreditLimit	5438	1	5	0	32800
StartDate	5438	19	19	Apr 1, 2006 12:00:00 AM	Apr 1, 2009 12:00:00 AM
EndDate	5438	19	19	Apr 1, 2008 12:00:00 AM	Apr 1, 2014 12:00:00 AM

Min and Max Profile | Data

Example partial Data Profiling report

Key Data Identification: Create a Business Glossary

The importance of definitions

- Definitions are as important as the data elements themselves
- Many data-related problems and issues are caused by unclear or ill-defined terms

What do you mean by "**customer**"?

How are we defining a "**household**"?

We're calculating "**total sales**" differently in each region!

What's the difference between an "**ingredient**" and a "**raw material**"?

Sales is using a different "**monthly calendar**" than Finance.

What's a "**PEG ratio**"?

What's an "**equity derivative**"?

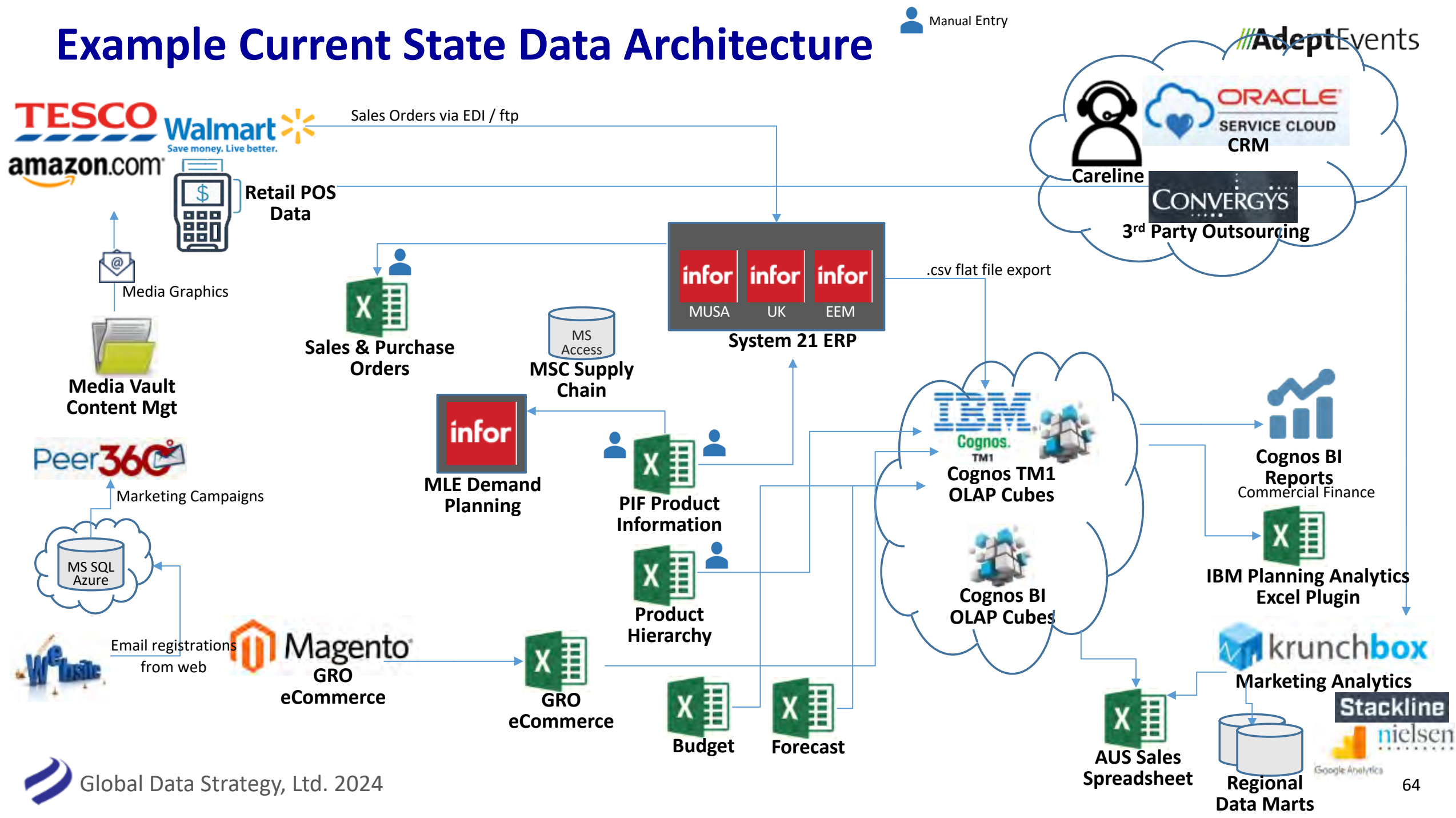
"**API**" as in "Application Programming Interface?" or "American Petroleum Institute"?

Data Source Inventory

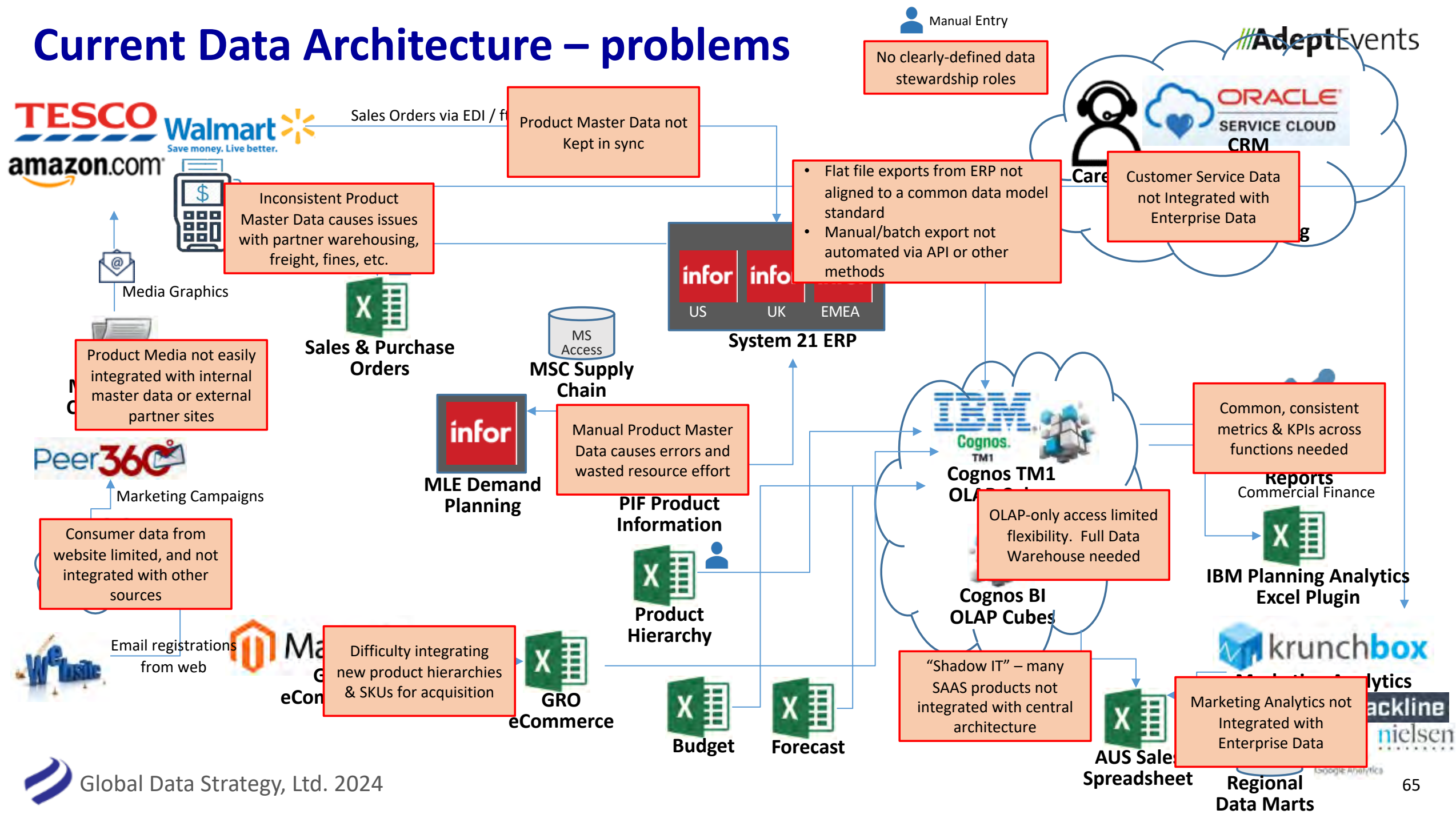
- Document key data sources across the organisation… as well as who is using them (i.e. key departments & stakeholders)
- Data models & other architecture tools can help document the technical structures & metadata

Data Sources	Leadership	Sales	Finance	Marketing	Support	R&D	HR	Legal	Compliance
Relational Databases									
MySQL				X					
Oracle		X	X	X	X	X	X	X	X
SQL Server		X	X						
Sybase			X						
Etc.									
BI Tools									
Tableau		X			X	X	X	X	X
Qlik	X		X	X					
Etc.									
Open Data									
Data.gov – agricultural data	X			X		X			
Etc.									

Example Current State Data Architecture



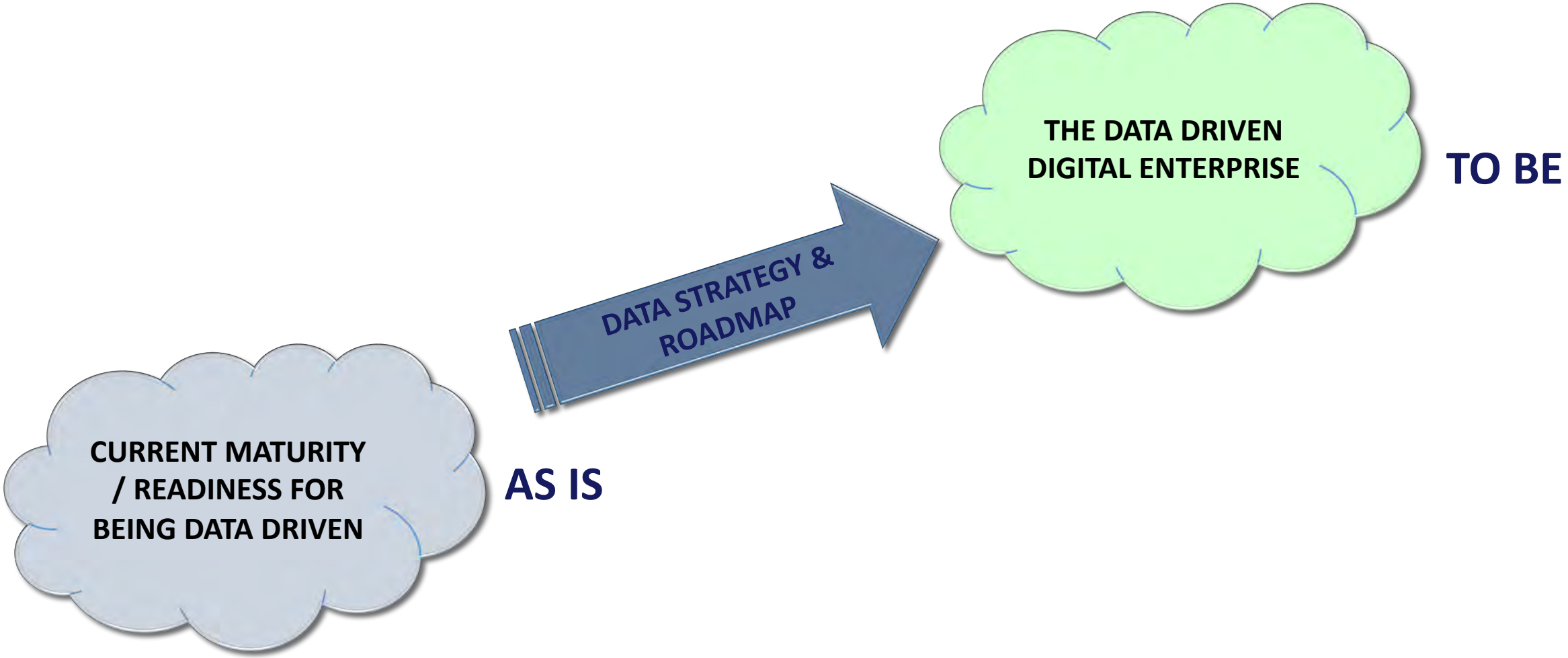
Current Data Architecture – problems



Building a Data Strategy
STEP 3

Propose Future State Capabilities, Processes & Organisational Structure

Maturity baseline – plotting your data strategy



Example Future State Architecture

Customer Relationship (CRM) managers relationships and interactions with consumers and prospects.

eCommerce Platform builds Digital Storefront to sell products to customers digitally.

Branding & graphics

Product Information Management (PIM) ensures provides trusted product content for unified commerce.

Consumer

Product
Consumer

Transactions

Product

Enterprise Resource Planning (ERP) provides operational end-to-end processes, such as finance, HR, distribution, manufacturing, service and the supply chain.

Transactions

Location

Employee

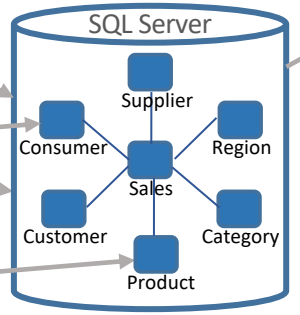
Product
Supplier
Consumer
Location
Employee

Supplier

Consumer

Customer

Product



Business Intelligence (BI) tool provides the ability to visualise data via structure reports and graphs.

Consumer

MDM Hub stores a Single, Consistent View of Customer, Product, Supplier, etc. to publish across all enterprise systems

Data Warehouse stores data extracted from transaction systems, operational datastores and external sources for summarised reporting and easy "slice and dice" analysis.

Product
Consumer
Etc.

Enhanced Customer Support through text mining & voice analytics and potential for automated chat bots.

Social Media Platforms provide insight into customer sentiment and advocacy.

SQL Azure

Data Lake stores structured & unstructured data in raw format for advanced analytics & insights.

Advanced Analytics uses sophisticated techniques and tools to discover deeper insights, make predictions, or generate recommendations.

Future State Architecture: Benefits

Customer Relationship (CRM) managers relationships and interactions with consumers and prospects

Consumer Data integrated through MDM to support Marketing campaigns & analytics activities

Enterprise Resource Planni provides operational end-t processes, such as finance, HR, distribution, manufacturing, service and the supply chain.

Transactions

Product
Supplier
Consumer
Location
Employee

Consumer

Enhanced Customer Support through text mining & voice analytics and potential for automated chat bots.

eCommerce Platform provides direct to consumer purchase with related data insights

eComm Storefront to sell products to customers digitally.

Branding & graphics

PIM ensures consistent product branding & content to eCommerce & Partner platforms, based on Product Master Data

Produc ensures provides trusted product content for unified commerce.

Product
Consumer

Transactions

Product

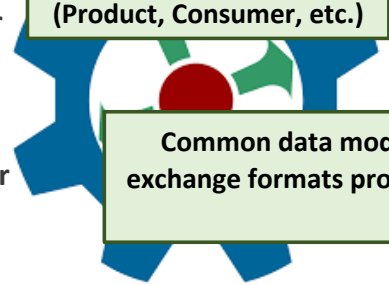
Master Data Hub serves consistent data for key business data areas (Product, Consumer, etc.)

Lo **e**

Supplier

Consumer

Customer

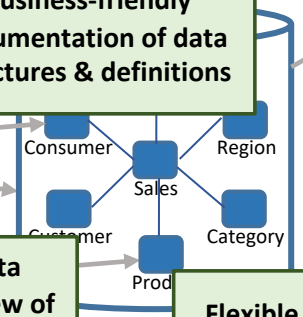


Common data models & design across MDM, DW, and data exchange formats provide a consistent, business-focused view of enterprise data

MDM Hub stores a Single, Consistent View of Customer, Product, Supplier, etc. to publish across all enterprise systems

Product
Consumer
Etc.

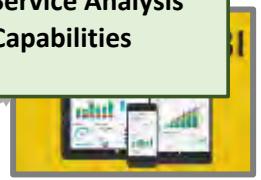
Business-friendly documentation of data structures & definitions



ouse st transaction systems and external sou reporting and easy "slice and dice" analysis.

Flexible, Customisable Data Warehouse for Enterprise Data

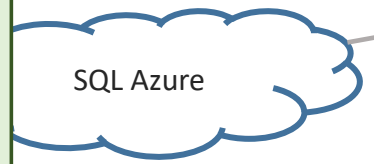
Self Service Analysis Capabilities



Business Intelligence (BI) tool provides the ability to visualise data via structure reports and graphs.

Social M insight into advocacy.

Data Lake provides common source for unstructured data to provide analytics insights on consumer sentiment and other key areas



ata Lake stores structured & unstructured data in raw format for advanced analytics & insights.

Advanced Analytics uses sophisticated techniques and tools to discover deeper insights, make predictions, or generate recommendations.

HOTEL GROUP CASE STUDY ACTIVITY

- Perform a high-level enterprise Data Management maturity assessment of the Hotel Group
- Use the Data Management Capability topics to help your assessment
- Highlight a score for each capability between 1 & 5 where:
  - 1 is lowest capability (Current or Desired)
  - 5 is highest capability (Current or Desired)
- Provide a brief reason for your scores
- Use the Assessing Maturity template and the Data Management Capability topics in the workbook to complete the activity

Activity – Assessing Maturity

Data Maturity Capability	Current State Score	Desired Future State Score (within 3 years)	Reason
Data Strategy			
Data Governance & Collaboration			
Master Data Management			
Data Warehousing			
Business Intelligence			
Data Analytics			
Data Quality			
Data Architecture & Modelling			
Data Asset Planning & Inventory			
Data Compliance & Security			
Data Integration			
Metadata Management			

Rating Scale for Current State Score & Desired Future State Score:
1 = Lowest
5 = Highest

Performing a Current & Future State Assessment: Capabilities

DATA MANAGEMENT CAPABILITY	EXAMPLE TOPICS ANALYSED
Data Strategy	Alignment of data to business strategy; budgets & resources; communication
Data Governance	Accountability; stewardship; data issue management; critical data identification
Master Data Management	Master & reference data storage & processing; matching rules; hierarchies; CDEs
Data Warehousing	DW capability; performance & scalability; documentation; design methodologies
Business Intelligence	Provision of user reports; tooling; self-service; semantic layer; visualisation
Data Analytics	Operational v predictive; use of data science, AI/ML; social media; geographic data
Data Quality	Measurement & KPIs; root cause analysis; tooling; enrichment; data entry validation
Data Architecture & Modelling	Models; data standards; process / data mapping; system architecture; documentation
Data Asset Planning & Inventory	Location & documentation of data assets; data lifecycle management; data retention
Data Compliance & Security	Legal & regulatory compliance processes; privacy tagging; access & security controls
Data Integration	Batch v real time capability; APIs ; common business logic; platforms & tools
Metadata Management	Business data glossary, dictionaries & catalogs; data lineage; maintenance processes

Building the Business Case

Making the Case for Change

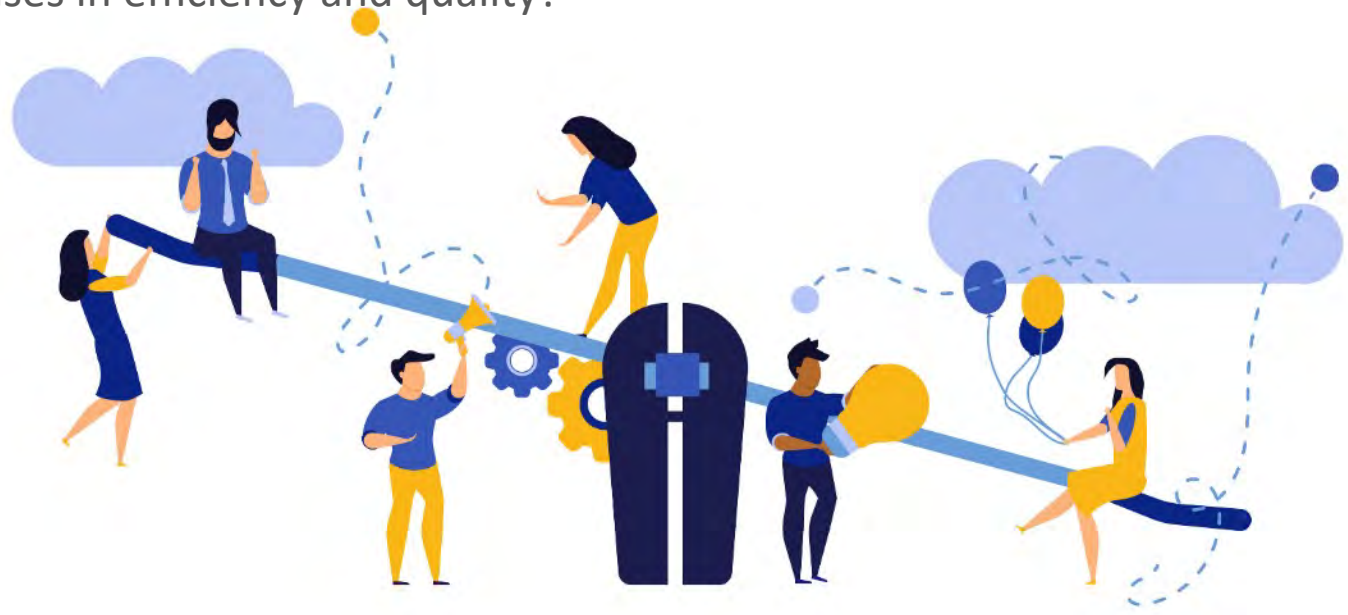
- Make the Right Business Case to the Right Audience
  - Know your audience – do they want a spreadsheet, quick PowerPoint, 100 page document, water cooler conversation?
  - Understand what detail is needed, i.e. don't "overkill" – sometimes simple is better
  - Focus on high-priority business needs
  - Define key business metrics for success aligned with data mgt deliverables
- Plan to start small, with a plan to build to a longer-term goal
- Lay out the current status quo including
  - Successes to date
  - Challenges with current structures & processes
- Include Metrics & Anecdotes where possible
  - Cost savings or revenue gains
  - Data quality improvements
  - Compliance & regulatory issues
  - Any real-world anecdotes that can be shared (e.g. We underreported sales last year due to data quality issues)

VS

Find Advocates Across the Organisation

- It's key to find champions for your data strategy effort across the business
  - Both "business" and "IT"
  - From senior level executives as champions to field staff as supporters
- In making the case for funding or buy-in, it's helpful to have someone else tell your story
  - Can marketing advocate the case for change to improve campaigns?
  - … Or sales discuss the potential increases in revenue?
  - …. Or Engineering point out the increases in efficiency and quality?

While we may want to take the "credit" for the data strategy, it is often most successful when other people have embraced it as their own



Making the Business Case

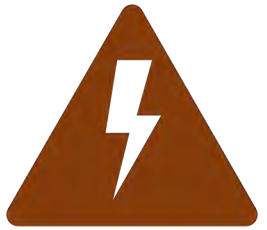
While Business Cases and ROI Calculations can be complex, they generally fall into 4 categories:

Decreasing Costs

- **Wasted Labor costs due to manual efforts**
  (Data cleansing, manual integration, etc.)
- **Inefficient business processes for data management**
  (Product Master Data process)
- **Data quality cost avoidance**
  (Wasted mailings sent to wrong address)

Increasing Revenue

- **Price Optimisation through Analytics**
- **Improved Marketing Campaigns through Quality Customer Data**
- **Data-Driven Recommendation Engines to enhance the sales cycle.**
- **Better Grant writing through data-driven needs analysis**



Reducing Risk

- **Industry regulations**
  (GDPR, HIPAA, BCBS 239, Spice, HIPAA, etc.)
- **Product Traceability**
  (Food lineage from farm/catch)
- **Litigation due to Data Breach**
- **Health and Safety Audit**

Protecting Reputation

- **Customer Satisfaction**
- **Brand Trust**
- **Social Media Voice of Consumer**
- **Loyalty & 'Stickiness'**

Activity: Making the Business Case

What are some key areas that can drive ROI for the hotel?

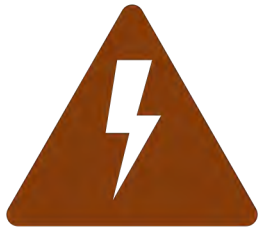
List some of the ROI drivers for the hotel chain in each of the areas below:

Decreasing Costs

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

Increasing Revenue

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



Reducing Risk

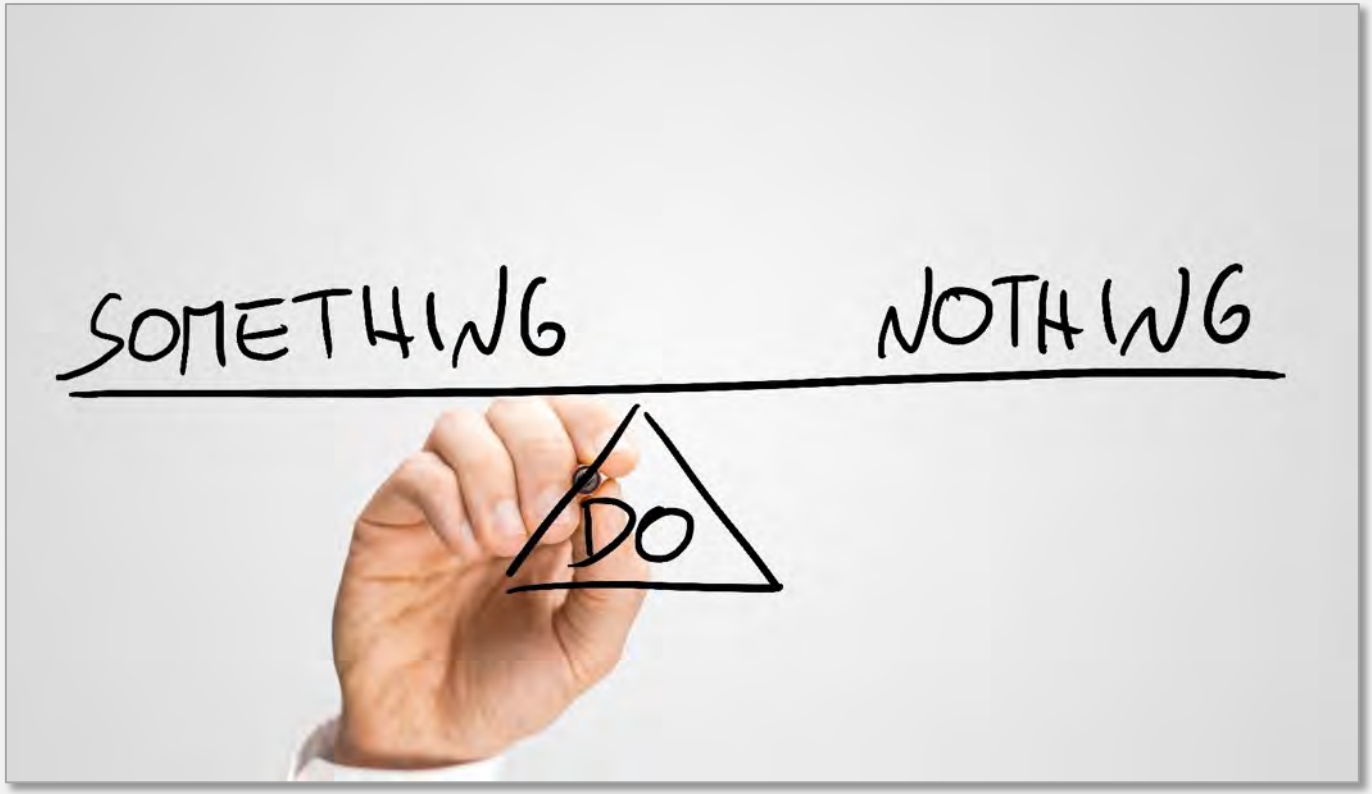
1. _____
2. _____
3. _____
4. _____
5. _____

Protecting Reputation

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

Include the Risk of Doing Nothing

- There is significant cost and risk in the status quo
- Doing nothing often has a higher cost than investing in data management.
- Make sure to include the “do nothing” option in your analysis.



An outline for a documented Data Strategy

Typical Data Strategy 'headings' – document and / or presentation

- Executive Summary – Headlines
- Business Context
  - Current business drivers, strategy & goals (Motivation Model)
  - The overall dependence on data
- Key Data Focus – What is our key data?
- Current Problems with Key Data
  - What are the main issues – quality, accountability, accessibility, security, etc.
  - Potential benefits of improvement
  - Unrealised / future data opportunities
  - Implications of the 'Do Nothing' option
- Overall Approach – Key Objectives of the Data Strategy
  - Business priorities
  - Consequent data priorities
- Roadmap:
  - 0-3 Months
  - 3 – 6 Months
  - 6 – 12 Months
  - 12 – 24 Months
- Tracking Benefits and Progress – KPIs and Success Measures

Building a Data Strategy
STEP 4

Developing the Data Strategy Roadmap: Prioritise Efforts & Identify Quick Wins

Setting Priorities & Activities

WHY?

- Ensure clear focus & priority to manage limited time
- Important to make an early impact to gain credibility
- Need to gain support of Data Champion & Steering Group (see later)
- Build confidence & experience in principles & approaches

HOW?

- Prioritise Issues List & agree priorities with the Data Champion
- Sell the data vision to the Steering Group
- Specify any support (financial and / or resources) required
- Create & lead a team to deliver the Data Strategy

WHAT?

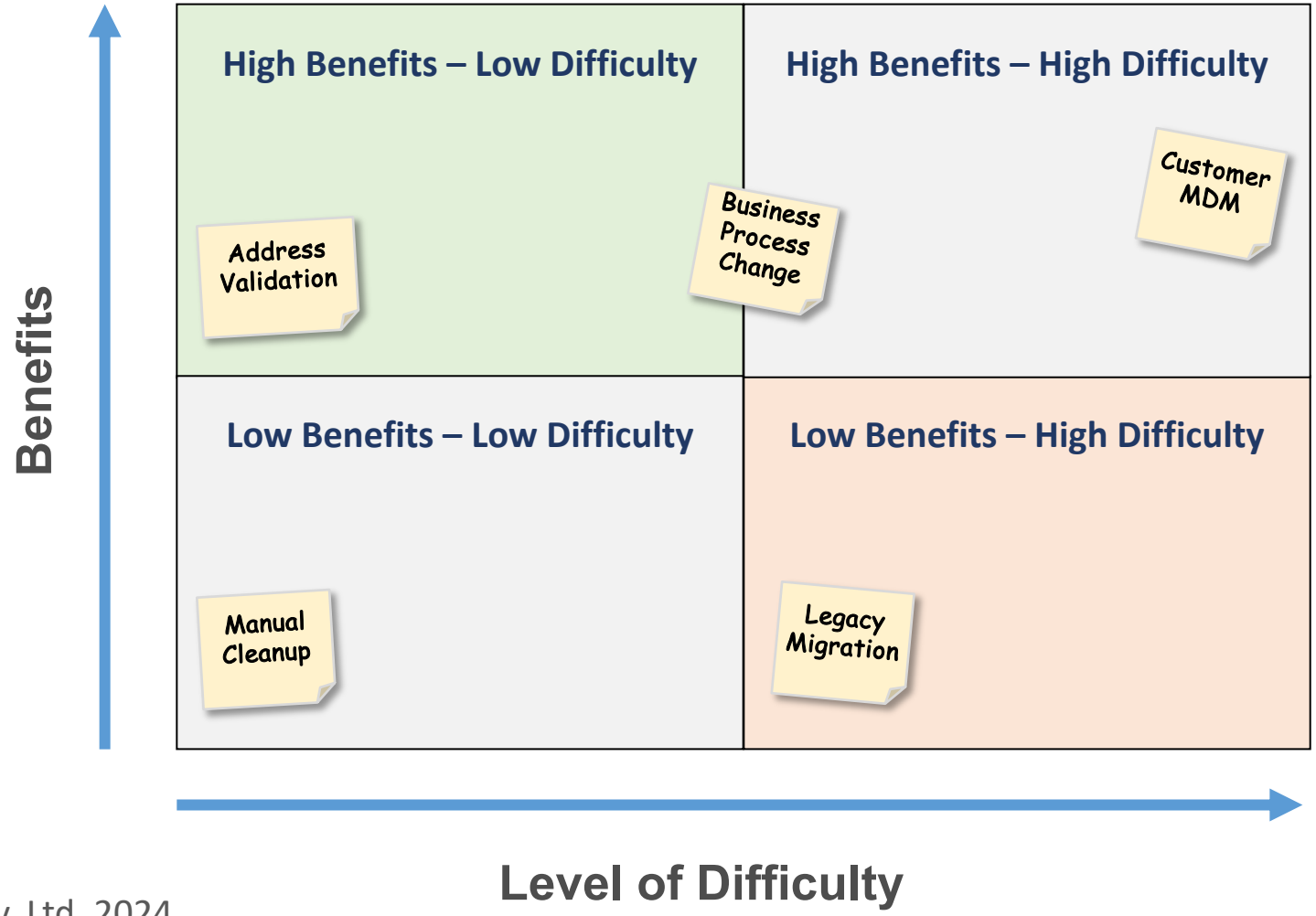
- Look for 'quick wins'
- Data Quality improvement projects often a good source of quick wins as benefits easier to quantify
- Create a use case for promoting the value of the Strategy
- Build a foundation for longer term success

WHEN?

- Don't spend too long doing analysis and reflection
- Start a pilot / PoC project as the top priority
- Use the pilot / PoC to introduce Strategy principles & practices
- Apply to further pilots / POCs

Setting Priorities: Priority Grid

Priorities based on Benefits vs. Level of Difficulty can often be easily determined via a workshop activity using a Priority Grid.



Who: Return to the Stakeholder Matrix

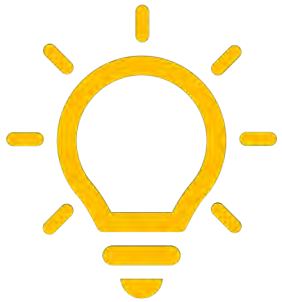
- When building the Roadmap, it's important to **consider the Key Stakeholders who will see benefits**
  - Document the departments, roles, etc. that will be affected
  - Consider the WIIFM factor (What's in it for me)?

Stakeholder Matrix

Stakeholder Name / Group	Job Title/Role	Location	Involvement				Role on Project	Influence	Impacted	Phone	Email
			R	A	C	I		H / M / L	H / M / L		
EXECUTIVE REVIEW											
Mary Smith	CIO	Plano, TX	X			X	Executive Sponsor	H	H	+1 (214) 555-1212	mary.smith@thisco.com
Robert Quantiles	CFO	New York, NY			X	X	Executive Chamption for Finance data	H	H	+1 (212) 555-1212	robert.quantiles@thisco.com
STEERING GROUP											
Stuart Ling	Director of Enterprise Architecture	San Francisco, CA	X	X			Core working group	H	H	+1 (415) 555-1212	stuart.ling@thisco.com
Ian Wordingham	Director of Data Strategy	London, UK	X	X			Core working group	H	H	+44 (020) 1234 1234	ian.wordingham@thisco.com
Melissa Smith	Strategic Consultant	Edinburgh, UK			X		Core working group	H	L	+44 131 123 1234	melissa.smith@thisco.com
DATA ARCHITECTURE											
Eric Wong	Data Architect	Plano, TX			X	X	Recommendations & input on data architecture	M	H	+1 (214) 555-1212	eric.wong@thisco.com
Wendy Collington	Data Architect	San Francisco, CA			X	X	Recommendations & input on data architecture	M	H	+1 (415) 555-1212	wendy.collington@thisco.com
Myles Stuart	DBA	Plano, TX				X	Historical input on legacy systems	L	M	+1 (214) 555-1212	myles.stuart@thisco.com
ETC - Other IT Groups listed											
FINANCE											
Lisa Winston	Director of Finance	New York, NY			X	X	Input into US finance needs for data	H	H	+1 (214) 555-1212	lisa.winston@thisco.com
Timothy Preston	EMEA Finance Lead	London, UK			X	X	Input into EMEA finance needs for data	H	H	+44 (020) 1234 1234	timothy.preston@thisco.com
Juan Morales	Latin America Finance Lead	Santiago, CL			X	X	Input into LATAM finance needs for data	H	H	+56 2 12345678	juan.morales@thisco.com
ETC - Other Business Groups listed											

Look for "Quick Win" Projects

Quick Win Project: A "Quick Win" Project is a project that shows early value while at the same time building towards a long term goal. A successful "quick win":



- Aligns with business objectives and **solves a high-value business problem** *or*
- Creates a **proof of concept for a high-value business opportunity**
- Sets a **solid foundation for future efforts**
- Acts as a **"light bulb moment" for key stakeholders** to understand the value of data-centric activities

A “Quick Win” is Not a “Quick Fix”

A Quick Win is not a sloppy, “quick fix” that will not scale for future use

NO

A Quick Win is well-planned first step to build a strong foundation for future efforts

YES

Quick Wins Should Build Towards the Journey

- As part of the Roadmap Planning
  - Show how each Quick Win fits as a step towards the goal
  - Plan the timing and coordination accordingly
- Tie these steps into the larger Story and Vision

HOTEL GROUP CASE STUDY ACTIVITY

- Use the Boston Grid to identify at least 5 potential top priority activities which should be included in a Data Strategy for the Hotel Group
- Try to ensure that you identify at least 2 quick win projects

Activity: Defining Priorities

Pick 5 potential top priority activities for the Hotel Chain and place them in the appropriate area of the matrix

High Benefits – Low Difficulty	High Benefits – High Difficulty
Low Benefits – Low Difficulty	Low Benefits – High Difficulty

Benefits

Level of Difficulty

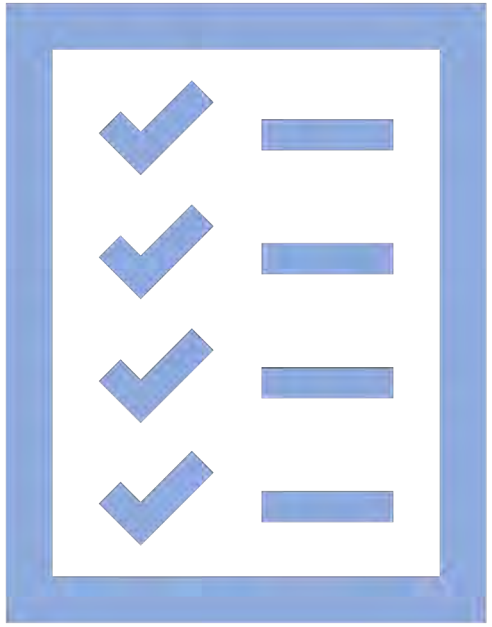
Data Issues & Opportunities Log: Updating Priority

///AdeptEvents

ID	Short Name	Brief Description	Priority Score 1 – High Benefits / Low Difficulty 2 – High Benefits / High Difficulty 3 – Low Benefits / Low Difficulty 4 – Low Benefits / High Difficulty
1	**Customer Data Duplication**	Both in the CRM platform and the Customer Data Warehouse there are known customer record duplications, mainly caused by marketing and salespeople not being able or willing to search for an existing customer record. One estimate is that up to 25% of CRM customer records are duplicates. Data Warehouse duplication unknown.	2 Further analysis needed to understand the root causes of data duplication. Conducting an initial data cleanse of the CRM platform may be a potential quick win and a starting point for a more strategic solution
2	**Product Data Inconsistencies**	Product data is held and processed in several different platforms and systems. Each system has its own set of product reference codes. Many inconsistencies have been caused by the company making several acquisitions over recent years. No attempt has yet been made to standardise codes despite wide awareness that this causes problems for the business.	2 There is a widely accepted need for a single, consistent reference source for all product data. The first step is to get data owners to agree definitive product codes and then to design a solution embracing people, process and technology to implement it
3	**Poor Data Training of Data Entry People**	Data entry people are distributed throughout the company in many different siloed parts of the organisation. This has led to many data entry people being unaware of where data they enter is used across the business, other than within their own immediate functional areas.	1 Consistent data literacy and data entry awareness training could be introduced for all existing data entry people and new starters. This could be done quite quickly to include around 30 data entry people.

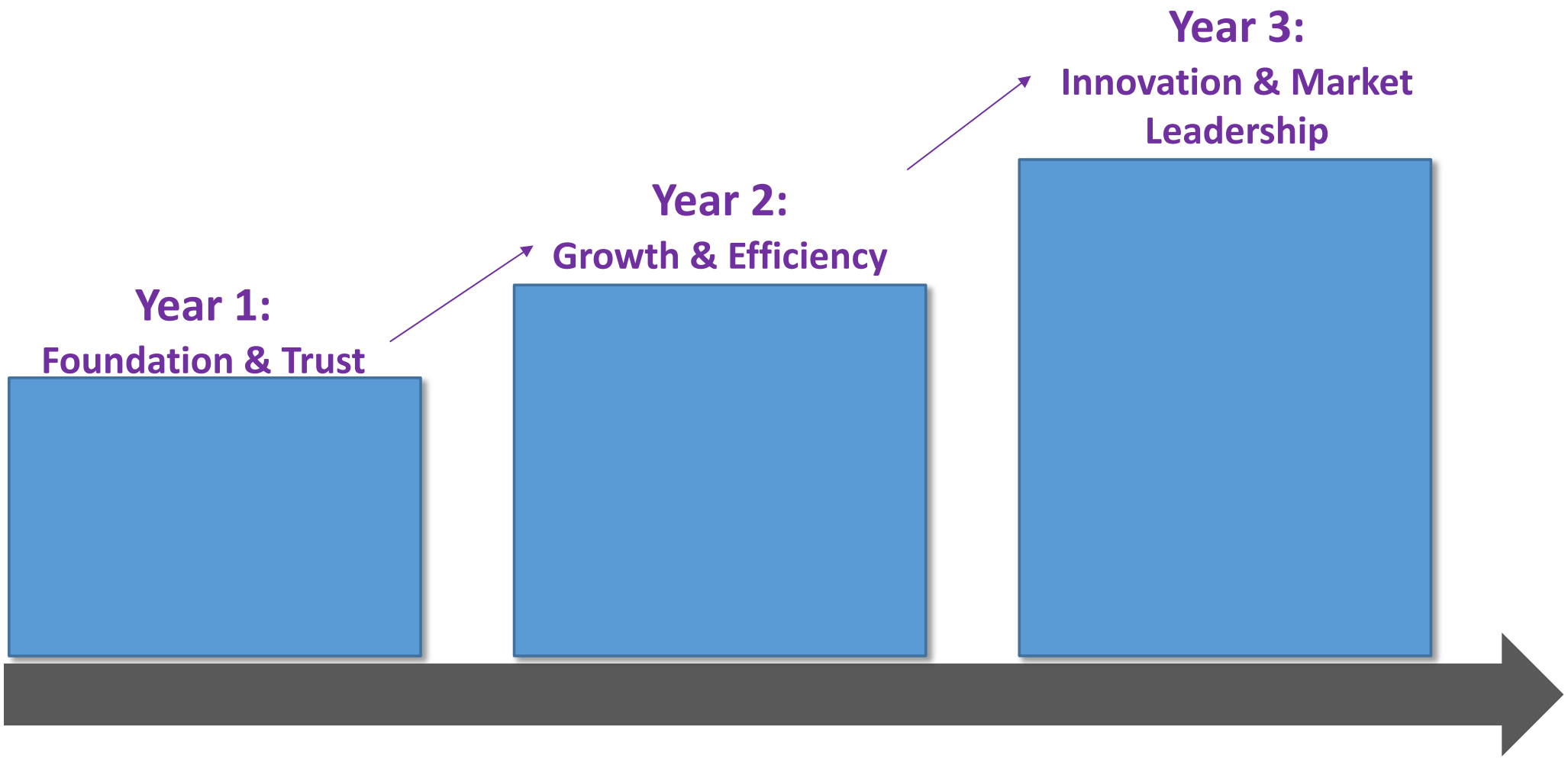
A Roadmap is Not a Laundry List

- A common error is to create a roadmap that reads like a “Laundry List” of activities
  - Create “themes” for each stage that tie into the vision
  - Call-out “quick wins” and value for each activity
  - Consider the WIIFM – what do key stakeholders care about?



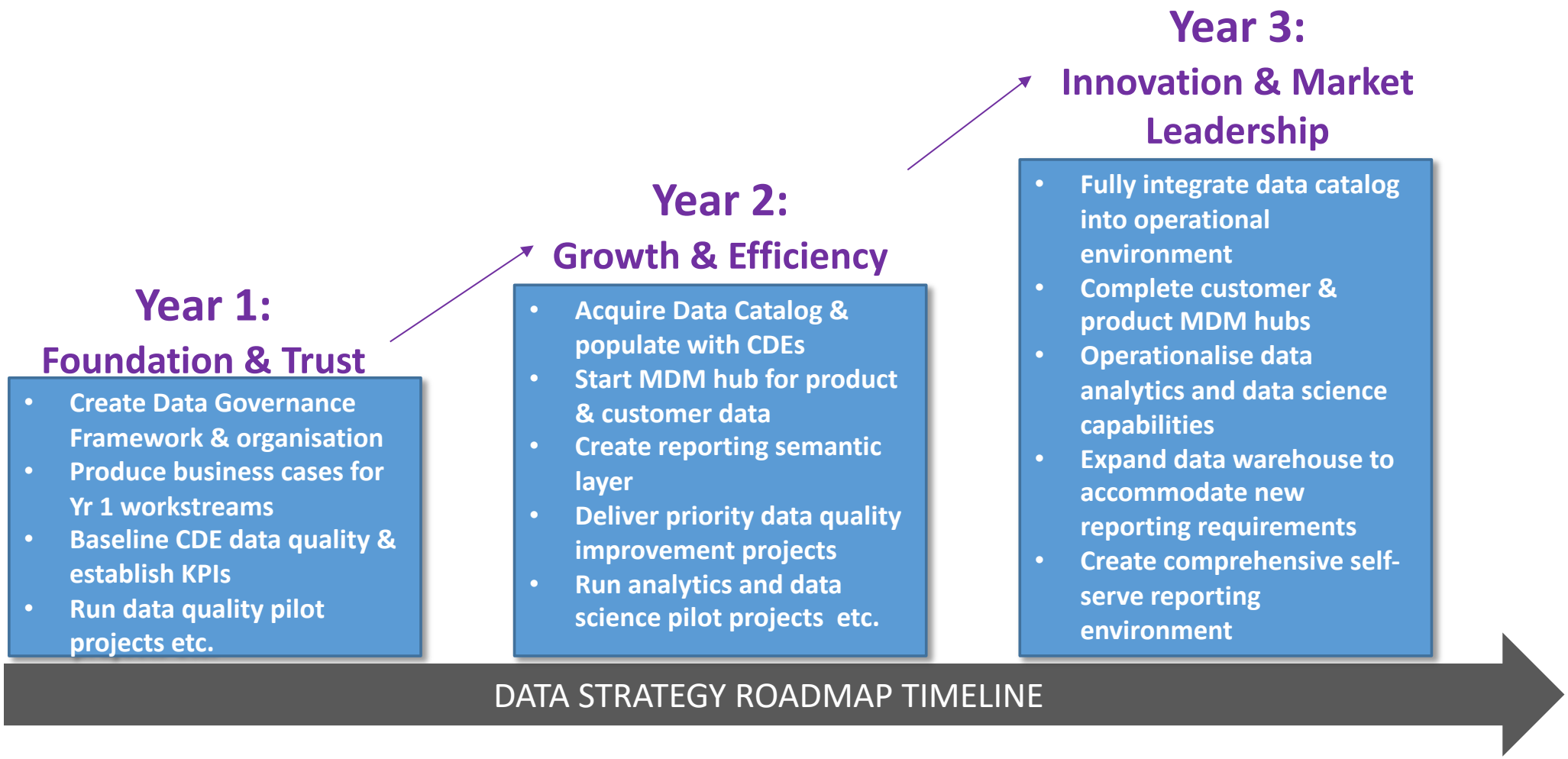
Define Themes and Evolution

- Tell the “Story” of the Journey by defining an overarching theme for each year



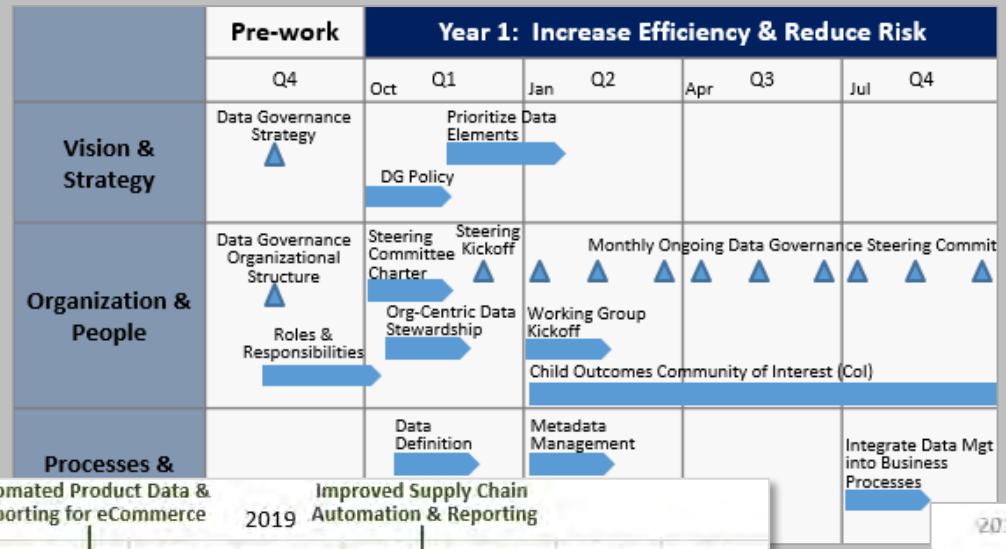
Define Themes and Evolution

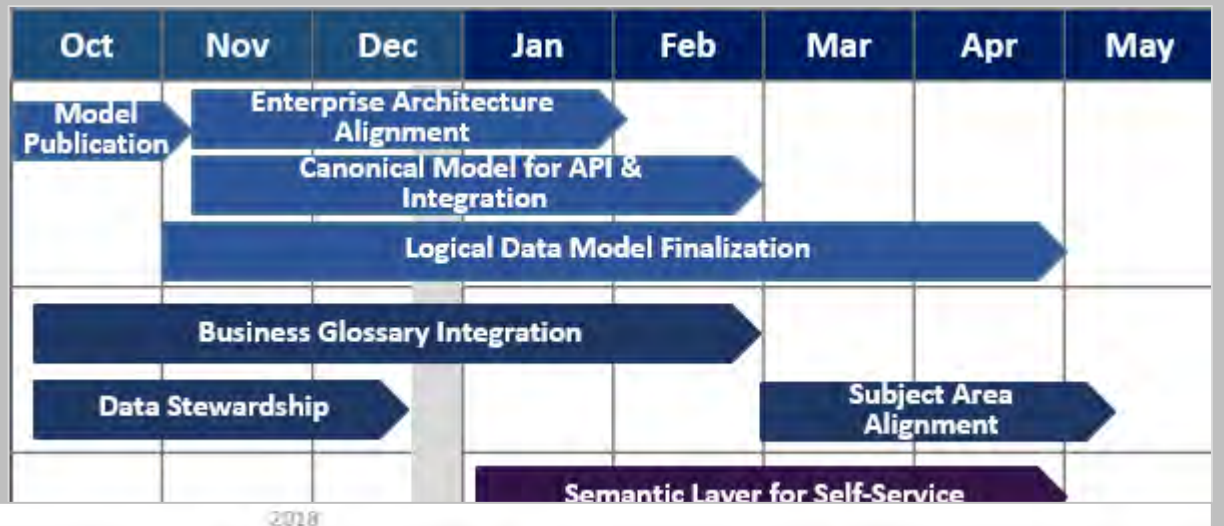
- Build the roadmap around the themes



How to Visualise the Roadmap

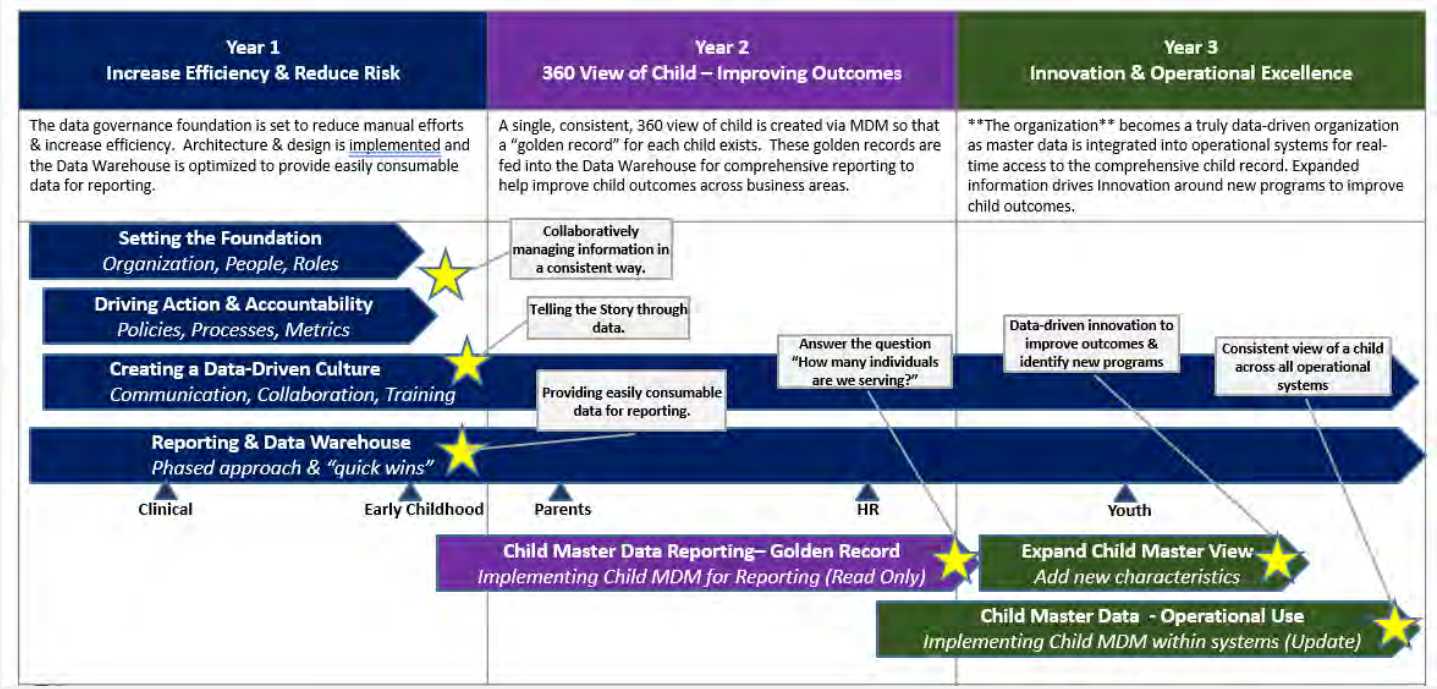
- The way the roadmap is visualised is highly subjective based on the audience.
- Understand your stakeholders & the level of detail and style they prefer. You may have several versions for different audiences.





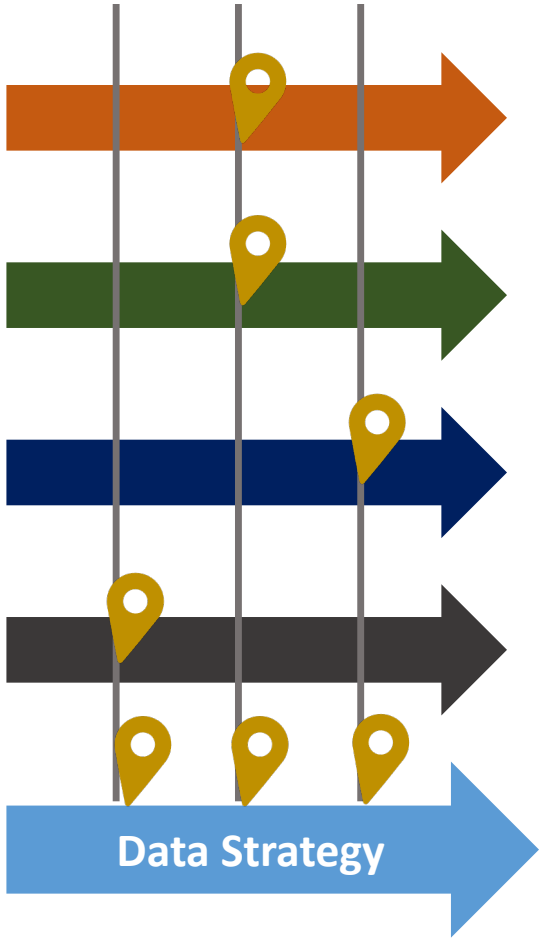
Create Themes for the Roadmap

- Tell the story of the evolution Year over Year
  - Showing a 3 year trajectory with a theme/aspiration for each year
  - High-level activities shown in a Gantt – like chart
  - “Quick wins” highlighted with narration”



Align with Other Roadmaps

- When building the Data Strategy, it's important to align with other key Roadmaps being developed.
  - Can the Data Strategy provide benefits that support these Roadmaps?
  - Will there be any conflicting resources?
  - Are there marketing events or communications you can align with and leverage the momentum?



HOTEL GROUP CASE STUDY ACTIVITY

- From the Data Maturity assessment carried out earlier:
  - Identify 3-5 potential Roadmap themes and give each a 1or 2 word title
  - List 2-3 key objectives for each of the themes / objectives. The objectives should relate to potential data strategy work packages or projects

Activity: Roadmap Themes and Goals

///AdeptEvents

Theme 1	Theme 2	Theme 3	Theme 4	Theme 5
Objectives	**Objectives**	**Objectives**	**Objectives**	**Objectives**
1.	1.	1.	1.	1.
2.	2.	2.	2.	2.
3.	3.	3.	3.	3.

The Need for Data Governance

Delivering the Roadmap

Data Governance – A Simple Definition

Data Governance is a business led continuous process to improve data for the benefit of all data stakeholders

Business Led Continuous Process

- Data is a business asset so must be owned by the business
- Data Governance must be an ongoing activity - it's not a project

Improve Data

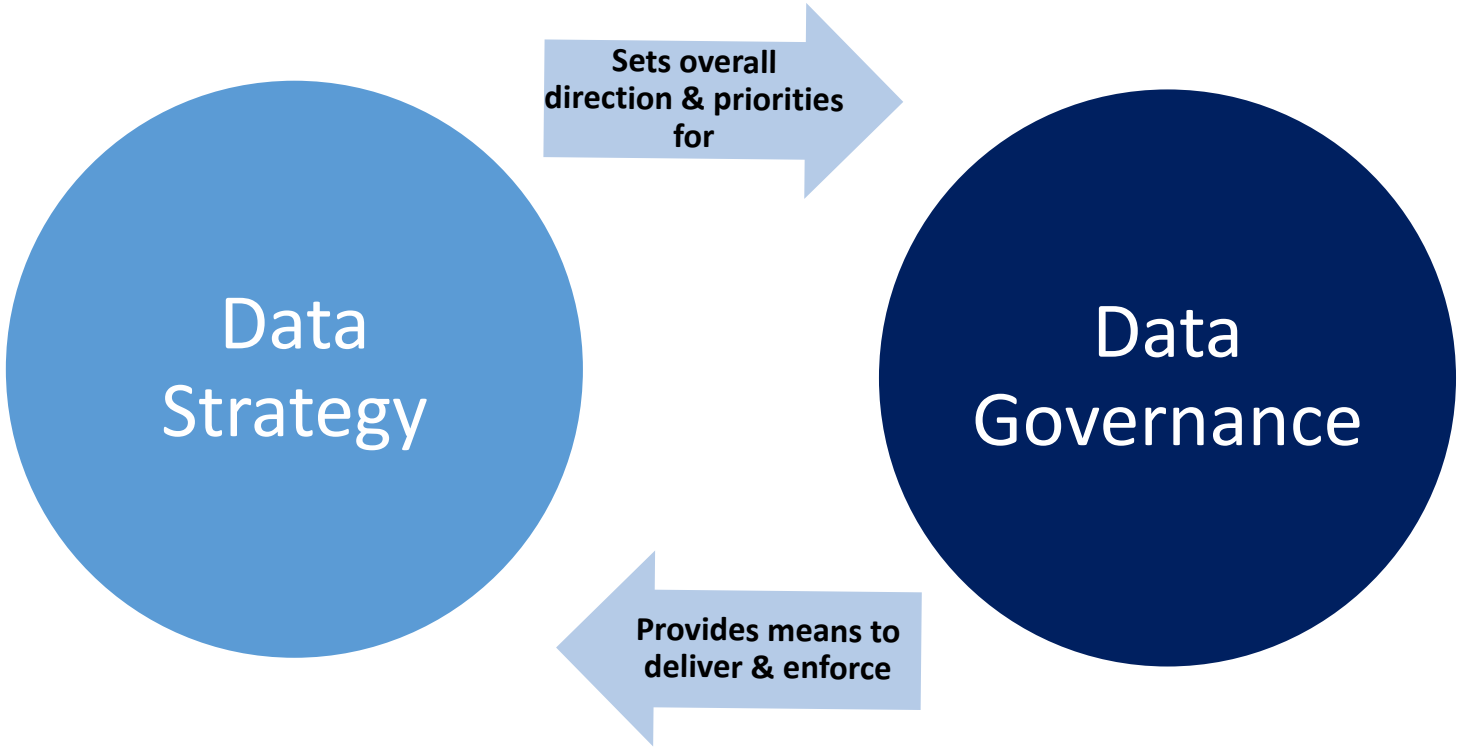
- Data Governance must demonstrate business improvement through better data
- Monitoring data without an improvement agenda is pointless

Benefit

- The benefits of Data Governance must be real and measurable
- All stakeholders (Business, IT, Customers, Suppliers, Regulators etc.) should recognise the benefits it brings to them

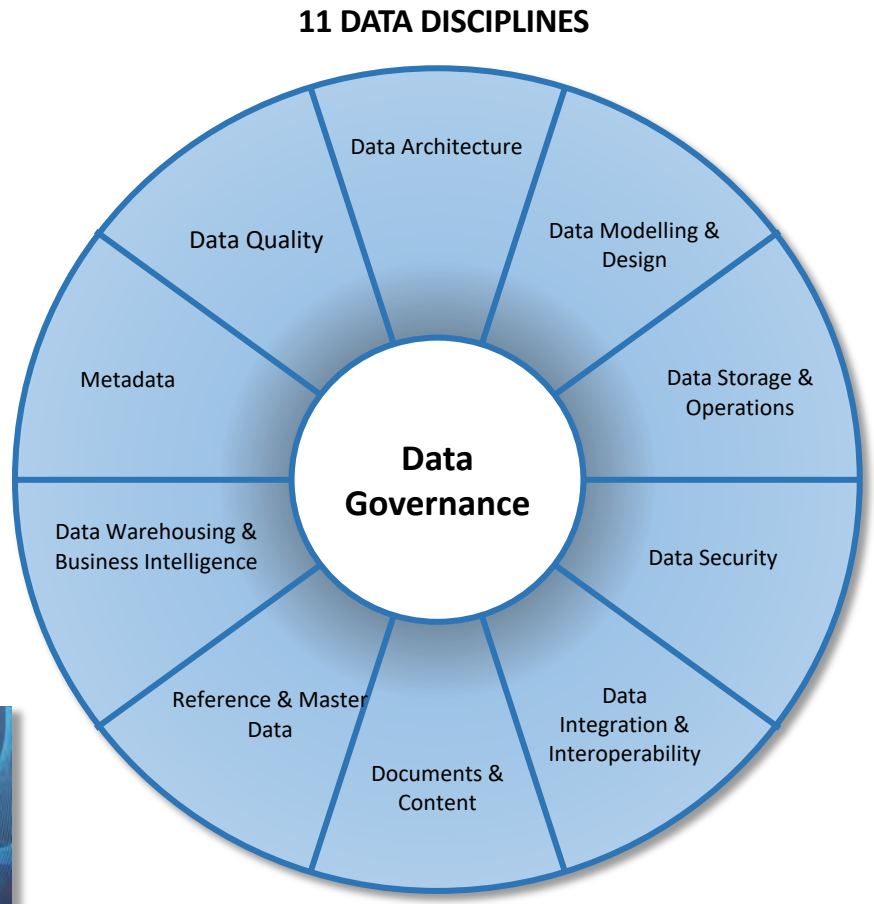
Data Governance: The Bridge Between Business & IT

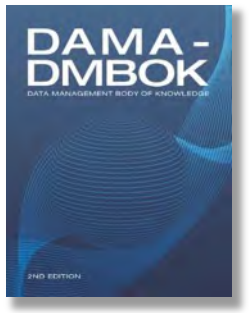
Data Strategy and Data Governance – mutual allies



Most successful Data Strategies depend on Data Governance as the primary mechanism to deliver them

Data Governance – Relationships with Other Data Disciplines





DAMA DMBOK – Version 2 2017

DISCIPLINE	EXAMPLE RELATIONSHIPS
Data Quality	Data Quality requires Data Governance to drive & sustain improvement so it becomes BaU
Data Architecture	Designs the structural framework for the management of data across platforms & systems
Data Modelling & Design	Identifies business definitions, entities & attributes to focus Data Governance activities
Data Storage & Operations	Lack of business accountability for data can impact Data Storage & Operations efficiency & reliability
Data Security	Lack of business accountability makes data less secure & more open to fraud
Data Integration & Interoperability	Depends on defined & consistent data formats & content
Documents & Content	Good Data Governance practices support Documents & Content, e.g. content ownership, version control, tagging, taxonomies
Reference & Master Data	Manages widely shared, business critical data, ensuring single truth data. Governance of the data is critical for success.
Data Warehousing & Business Intelligence	Data Governance is the foundation of effective DW&BI (e.g. business definitions for KPIs etc.). Also garbage in, garbage out is as true as ever.
Metadata	Metadata provides context & meaning to data and so supports effective Data Governance

Data Governance Roles

Executive Sponsor

- Promotes Data Driven Culture
- Champions Best Practices
- Advocate with ELT and Board
- Escalation Point for Key Issues

Business Data Owner

- Represents the data needs for a particular functional area
- Defines key KPIs & data elements
- Defines key business rules
- Sets Data Quality Metrics & Thresholds

Business Data Steward

- Responsible for the day-to-day management and quality of data
- Subject Matter Expert (SME) for a given business domain
- Aligns with the Data Owner to support business rules and to align with key KPIs

Technical Data Steward

- Digital/IT expert for a given business unit
- Subject matter expert for a given system and its usage
- Aligns with Business Data Stewards to ensure technical needs are met

Data Strategy and / or Governance Lead*

- Acts as a cross-functional lead for the data governance effort, working with both business and IT roles
- Chair of the Data Governance Steering Committee

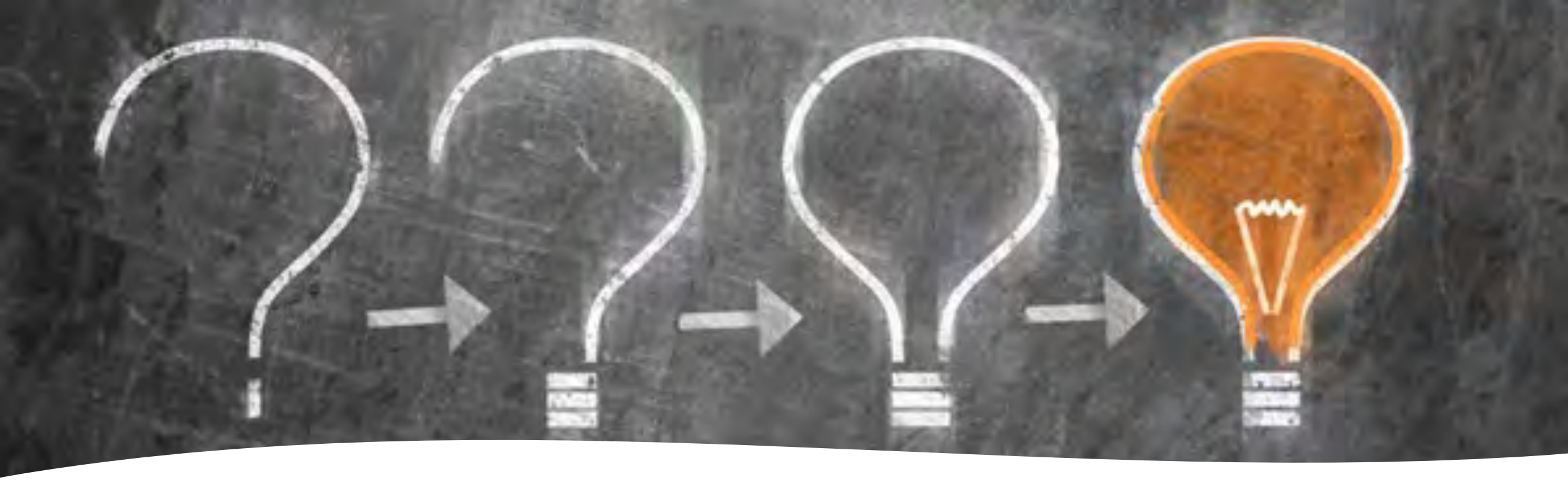
Data Architect*

- Oversees the holistic data architecture for the organisation, including data models, data standards, data integration, etc.
- Works with both business and technical stakeholders to ensure that systems implementations align with key business rules & needs

Data Security Lead*

- Ensures that the organisation adheres to the adequate security standards to support industry regulations and best practices
- Works with the Data Governance Lead and Data Architecture to ensure that data implementations support business needs in a secure way.

* Typically a full-time role



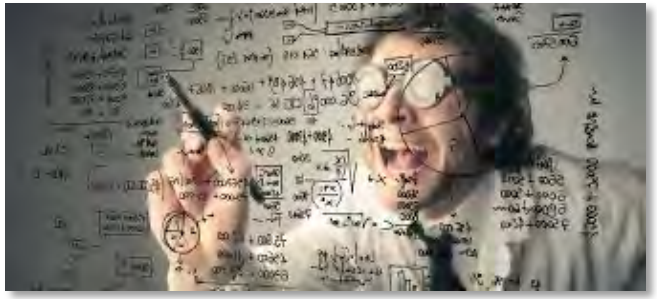
DISCUSSION

How might you determine who Data Owners and Data Stewards should be?

How to Find Potential Data Owners & Data Stewards

De Facto (Maybe Unrecognised) Owners & Stewards

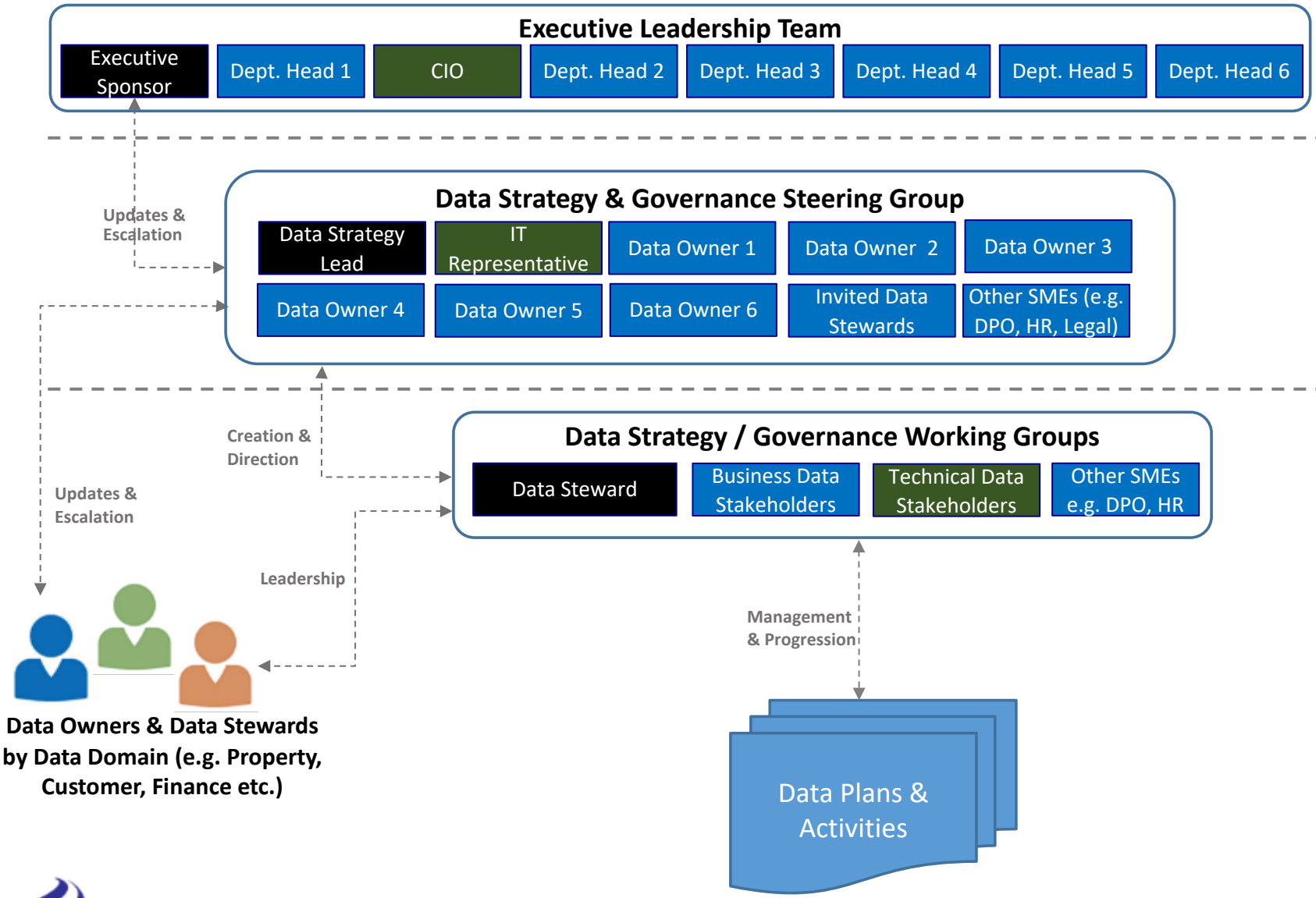
People Who Feel the Pain of Poor Data



Data Domain Experts / Geeks (The 'Go To' person)

Enthusiasts Seeking a New Challenge

Example Strategy / Governance Organisation



Executive Level

- Executive support
- Data advocacy
- **Vital to have ELT level sponsor and champion**

Strategic Level

- Owns and enacts the Data Strategy
- Sets strategic direction for Strategy & Data Governance
- **Owns the Roadmap**
- Identification of working groups as needed
- Funding within budgeted amounts for data quality & governance
- Identification of data stewards for key data areas
- Arbiter in the case of conflicting needs, definitions, or priorities around cross-functional use of data.

Tactical Level

- **Create Data Improvement Plans for Data Domains**
- Propose and progress data improvement initiatives
- Report progress to Data Governance Steering Group
- Escalate cross-domain issues and barriers to DG Steering Group

Key

- Lead Role
- Technical Role
- Business Role

Business & IT Roles in Data Strategy

BUSINESS ROLES	IT ROLES	JOINT ROLES
Establish a clear and communicable Business Strategy	Understand the Business Strategy & its potential technology implications and requirements	Formulate & execute the Data Strategy
Prioritise key data areas and problems	Evaluate, select & procure appropriate data technologies to support the Data Strategy	Ensure both business & IT senior management play an active role to ensure its success
Owns the Strategy through the establishment of Data Governance principles & practices	Understand and introduce Data Management industry best practices and methodologies	Exercise rapid and effective change control
Estimate, measure & realise potential and actual benefits delivered by the Data Strategy	Be aware of technology innovations and propose how these can be introduced to enhance the Data Strategy, e.g. Big Data, Cloud, Internet of Things, AI etc.	Monitor Data Strategy deliverables and instigate corrective action as required
Enact the business process and behavioural changes required to implement the Data Strategy	Proactively propose how future technologies might improve and enrich the Business Strategy	Ensure constant cross-business & IT collaboration to ensure continued alignment of Business & Data Strategies

Data Strategy Development – Potential Deliverables & Useful Tools

POTENTIAL DELIVERABLES
Data Strategy Slide Deck + 2 /10 min. pitches
Motivation Model
Stakeholder Matrix
Data Issues & Opportunities Log / Matrix
Business / Conceptual Data Model
Outline Business Case
Maturity Assessment Report Summary
Roadmap (1-3 Year Horizon)
Data Strategy Steering Group Charter
Data Strategy Working Group Charter
Application Landscape Diagram (Current)
Application Landscape Diagram (Future)
Business Glossary
Communications Plan

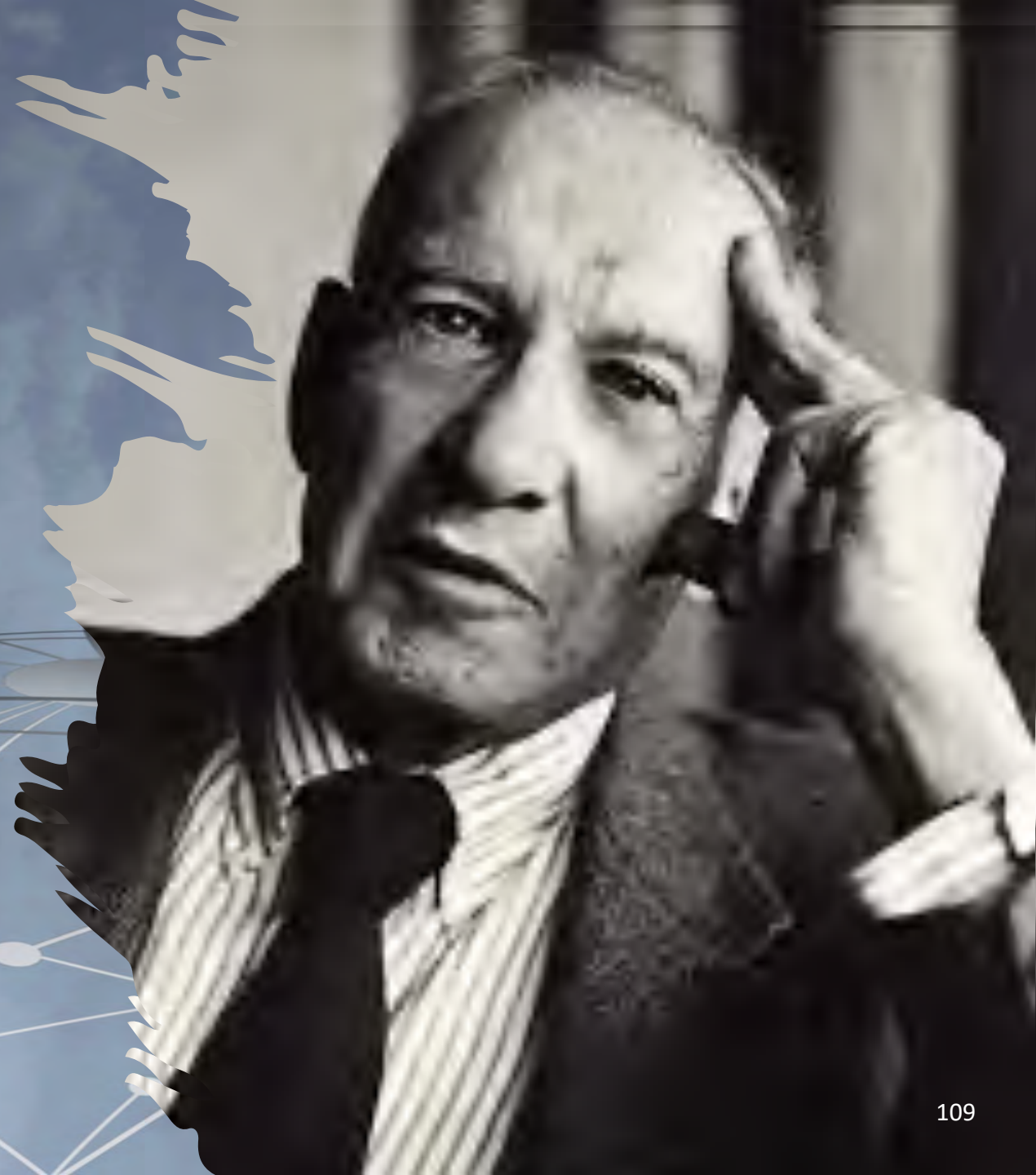
USEFUL TOOLS
PowerPoint / Visio
Data Modelling Toolset (e.g. ERwin, ERStudio)
Data profiling tool to baseline data quality in current source systems

Selling the Data Strategy

The Critical Importance of Change Management

‘Culture eats strategy for breakfast.’

Peter Drucker, Management Strategist & Consultant



Tell the Story – Explain Vision and the Journey to Get There

- Storytelling and vision-building is a key part to any strategy.
  - Build a sense of excitement
  - Provide a vision for what the future will look like
  - Show the journey and the effort required
  - Explain the steps to achieve the journey
  - Clarify everyone's role in the journey – where do they fit, and what skills do they need?

Organisational Change Happens at Three Levels

An organisational move to a future state requires individuals to reach their own future state

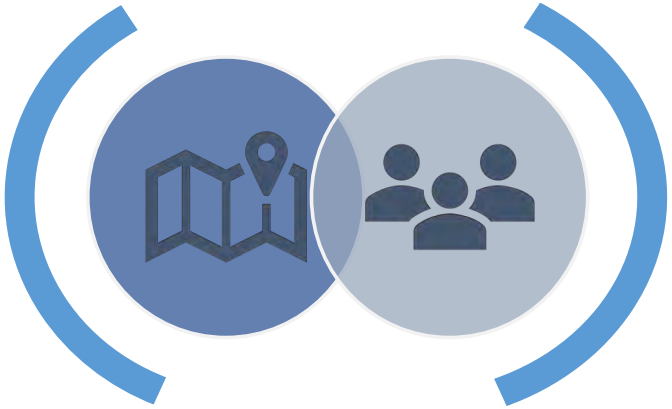
Data Governance directly impacts the culture of an organisation

"In what ways are my current responsibilities affected"?

Individual

Enable people's success by supporting them through the dimensions of change

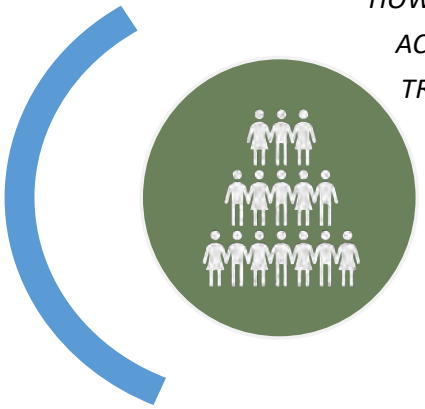
"Who are the impacted groups and how do we support them"?



Project

Increase outcomes and ROI by integrating activities into the project plan that help prepare, manage, and reinforce change and results in adoption and usage

"How do we successfully achieve large scale transformation"?



Organisation

Affect culture changes in the enterprise by embedding Change Management into every Data Strategy initiative

"The achievements of an organisation are the results of the combined effort of each individual".
Vince Lombardi

Methods for Managing the Change Impact of Data Strategy & Data Governance

1. Stakeholder Assessment

Identify, evaluate, and properly support people who can exert influence or pressure on your change, are responsible for creating your change, choose to use or not use the results of your change, & benefit from the work of your change

Key Success Enabler For:

Overall Adoption and ROI

2. Communication Planning

Aim to build awareness, interact with stakeholders, solicit feedback, elicit transparency, and publicly celebrate success as appropriate

Key Success Enabler For:

Awareness & Reinforcement

3. Knowledge & Coaching Plans

Develop a competency skill set in impacted stakeholders by providing tools, vocabulary, and best practices and other training they can utilise effectively in their roles and ensure their ability to be able to adopt changes appropriately

Key Success Enabler For:

Knowledge & Coaching

4. Resistance Management

Directly addresses barriers to successful adoption of change and increases the overall effectiveness of change management

Key Success Enabler For:

Interest & Excitement

Stakeholder Assessment Example

- Evaluate by using your stakeholder matrix and categorise into impacted groups
- Rate each group in each Change Phase from 1-5 (1 = least favorable 5 = most favorable)

The output score for each group allows the Change Mgt Team to prioritise the plans that are needed for each stakeholder group

Change Phase	Question	Group 1	Group 2	Group 3
Change Impact Scope	What aspects of the change will directly impact this group? ***None or indirect impacts*** ***New data governance policies*** ***New technology*** ***Changes to process workflows*** ***Added responsibility to existing role*** ***New job role*** ***Deprecated responsibilities in existing role*** ***Changes in reporting structure***			
Awareness	What are the business drivers or issues for this change? Are there group-specific issues wrt to this change that need to be considered?			
Awareness	Will building awareness with the group be easy or difficult? Why			
Awareness Rating	What is the level of awareness of the need for this change with the impacted group? ***1 = None, 2-4 Limited degrees, 5 = High***			
Motivation	What are the motivating forces in support of this change (what would cause someone in this group to support this change)?			
Motivation	What are the opposing forces to this change? (what would cause someone in this group to oppose this change)?			
Motivation Rating	Where would you label this group with regards to current level of support for the change? ***1 = Resistant, 2 = Neutral/Unknown, 3 = Mixed , 4 = Supportive***			
Knowledge/Coaching	List the knowledge, skills, and behaviors needed to support this change with this impacted group			
Knowledge/Coaching	Considering the skills and knowledge needed, what potential challenges do you see for employees in this group successfully implementing the change?			
Knowledge/Coaching	What barriers may inhibit this group from implementing this change?			
Knowledge Rating	To what extent does this group have the ability to implement the new change? ***(1 = None, 2-4 = Limited degrees, 5 = Sufficient)***			
Reinforcement	What reinforcements would be necessary to sustain the change in this group?			
Reinforcement	What characteristics of the group may cause the change not to be sustained?			
Reinforcement Rating	To what degree is this group receiving reinforcement for demonstrating the change? ***1 = Low, 5 = High***			

The importance of culture change & communication

- Remember that a Data Strategy is transformational and so must impact and involve all in the organisation who touch data
- This includes Data Creators & Data Consumers in addition to formal roles such as Data Owners, Stewards etc.
- Communication is critical as:
  - Data Strategy is a collaborative activity
  - It requires alignment of business and IT
  - All people in the organisation are required to change behaviours to support new ways of working
- Develop a clear communications plan and disseminate to all
- Develop case studies / use cases of successes
- Use existing internal events, newsletters, web sites etc.
- Create a 'home' for Data Strategy materials (web site etc.)

Garnering Excitement - Engage Marketing & Branding

///AdeptEvents

- It's beneficial to engage with your internal Marketing organisation and/or an external agency
- Include a number of activities and materials in your communication and marketing plan. Here are a few ideas:
  - Video Testimonial from users/stakeholders
  - Executive sponsor video
  - Lunch and learn sessions
  - Roadshows
  - Training sessions
  - Newsletters
  - Website for data initiative

  - Data initiative slogan
  - "Swag" – t-shirts, stickers, mugs, etc.
  - Posters
  - Badges and awards

AVOID DATA JARGON: USE BUSINESS LANGUAGE!

Selling & Communicating Your Data Strategy

- 2 minute 'Elevator Pitch'
  - This should simply state what a Data Strategy is, why your organisation needs it, how are you going to deliver it, and what the expected benefits will be.
  - It's best memorised and replayed whenever you need it. This is useful when asked what your job is and what you are trying to achieve.
  - It is also valuable when you are part of a Data Strategy core team to ensure all members of the team relay the same basic messages.

- 10 minute 'Taster Pitch'
  - Create a PowerPoint deck to expand on the above which can be delivered by you and others when you get an opportunity to talk to a senior manager or if you can get an invite to scheduled team meetings held across the organisation.
  - Try to use pictures to illustrate your key points – again these are more impactful than text lists and remember to include some of the stories you've collected. Use the ones most relevant to the audience of any particular pitch.

- 30 minute 'Full Pitch'
  - Expand on the Taster Pitch above to provide a more in depth overview of your Data Strategy & roadmap.
  - This can be used to brief key potential stakeholders and to convince people to become data owners and data stewards.

Discussion – Thinking of the Hotel Chain…

///AdeptEvents

What do you think is the biggest resistance to change that a Data Strategy would face?

What would be the main excitement / opportunity drivers?

Discussion – Thinking of Your Organisation…

///AdeptEvents

What do you think is the biggest resistance to change that a Data Strategy would face?

What would be the main excitement / opportunity drivers?

Summary

Use Cases & Key Messages & Conclusions

Summary: key steps to creating a Data Strategy

10 steps to success / key lessons learned

THE ESSENTIAL COMPONENTS OF A SUCCESSFUL DATA STRATEGY

Secure Senior Executive Support

- Identify a Data Champion among senior leadership

Define Vision, Drivers & Motivations

- Define a business-driven vision for the strategy & Roadmap

Identify & Interview Stakeholders

- Elicit feedback from key stakeholders – listen & communicate

Build the Business Case

- Outline key benefits of data strategy & risks of not doing so

Identify Business-Critical Data

- Focus on the data that has the highest impact on the business

Assess Data Maturity

- Assess the data maturity of the organisation across all aspects of data management

Map Business Priorities to Data Capabilities

- Create a realistic "heat map" aligning business goals with data management capabilities

Create Change Organisation

- Define an organisational structure to oversee and deliver the Data Strategy
- Implement change management to build support and engagement

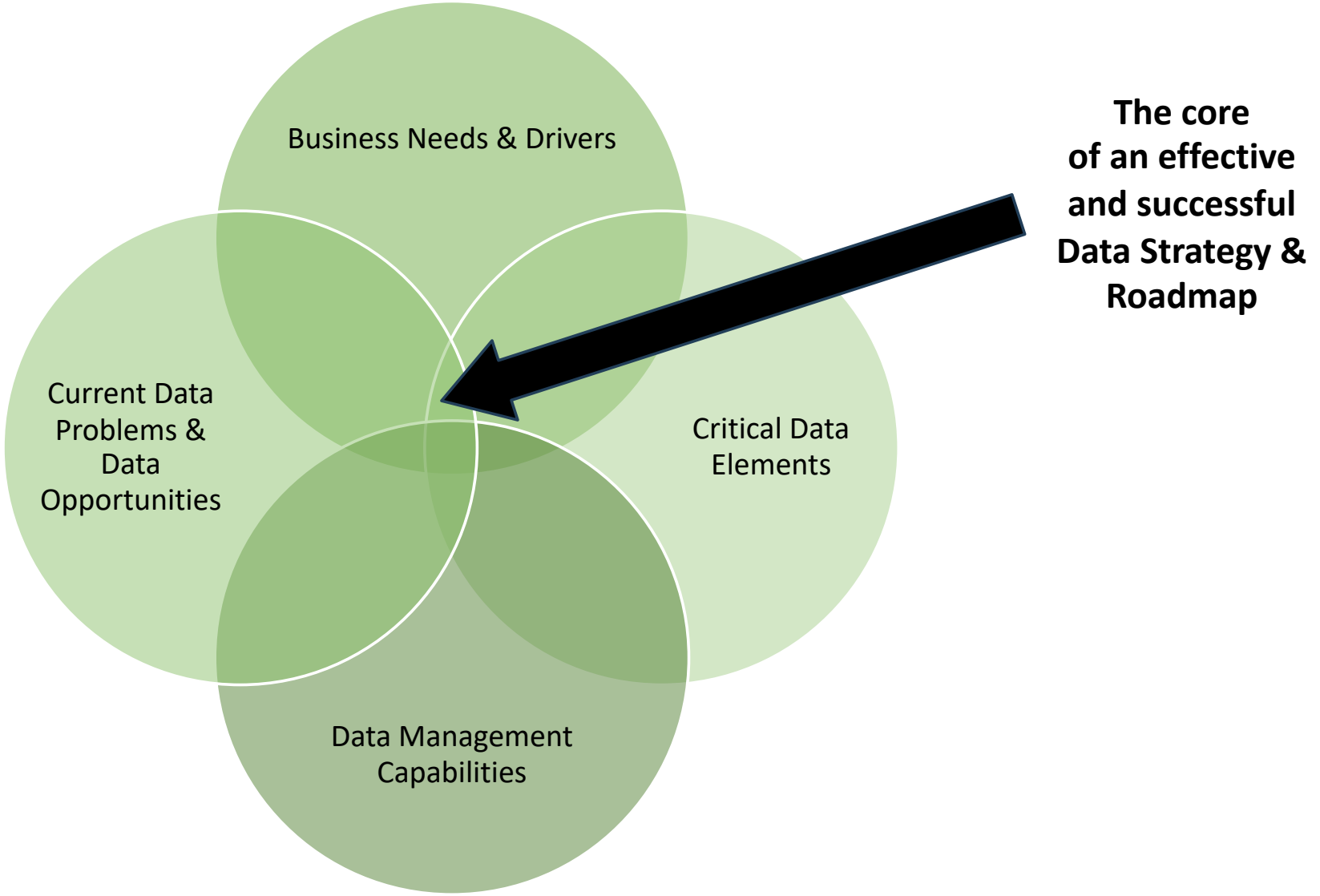
Deliver "Quick" Wins

- Short, iterative, business-driven projects deliver short-term value, building towards long-term gains

Communicate

- Build a communications plan from initial feedback phase through all phases of implementation

Summary: Need for a Laser Focus on the Core Priorities

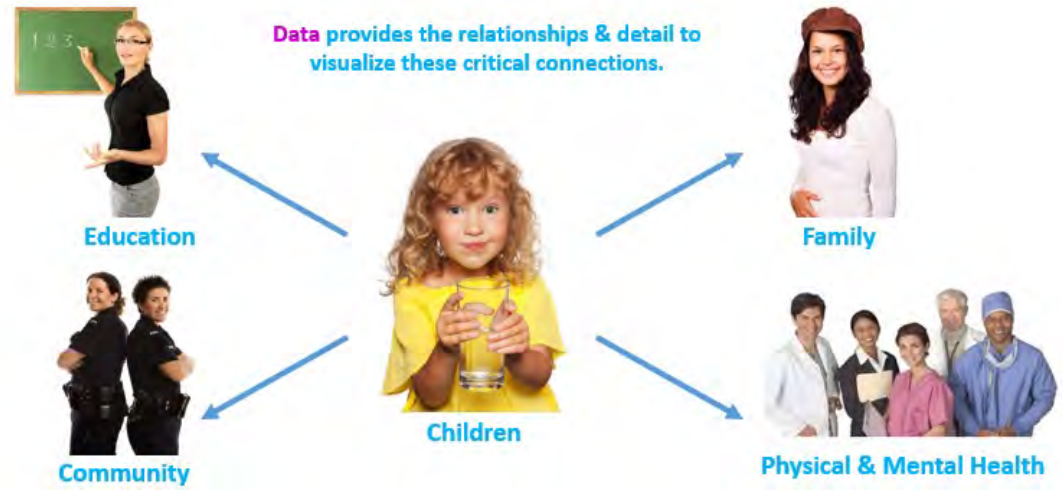


Case Study: Starfish Family Services

Using Data to Improve the Lives of Children

NHSA Events
NATIONAL HEAD START ASSOCIATION

- A local Head Start Program was looking to improve the lives of children & families through data, through a holistic, integrated view of the individual:
  - Physical Health
  - Mental Health
  - Education
  - Family Support
  - Community Support
  - Etc.



- Global Data Strategy performed a Data Maturity Assessment & Strategy in 2017
  - Evangelising to CEO
  - Holistic view of Data Landscape
  - Interviewing staff
  - Maturity Assessment
  - Alignment w/ Business Drivers
  - Etc.

- Resulting in a 5 Year Grant over $1M to better leverage data to help children
  - Data Governance
  - Data Warehousing
  - Reporting & Analytics
  - Master Data Management (MDM)

CRAIN'S BEST-MANAGED NONPROFIT 2018 WINNER

Building the foundations of a Data-Driven Business through a Data Strategy

A lesson from Ancient Greece

For Data Strategy success,
anchor Digital Innovation with Foundational Excellence

DIGITAL INNOVATION

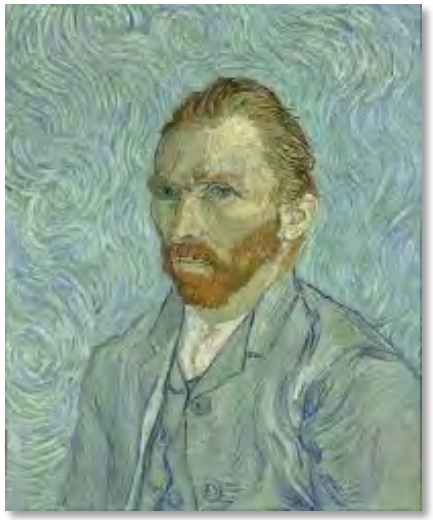
- Big Data
- Analytics
- Internet of Things
- Artificial Intelligence

FOUNDATIONAL EXCELLENCE

- Data Governance
- Data Architecture
- Data Quality
- Master Data Management

And remember, like the Parthenon, building a Data Strategy is part art and part science

Final Words



"Great things are not done by impulse, but by a series of small things brought together. And great things are not something accidental, but must certainly be willed."

Vincent van Gogh

Contact Information

- Email: nigel.turner@globaldatastrategy.com
- Twitter: @NigelTurner8
- Website: www.globaldatastrategy.com
- Linkedin: uk.linkedin.com/in/nigelturnerdataman

Good luck with your Data Strategy and hope our paths cross again!