Building a Data Strategy:
Practical Steps for Aligning with Business Goals

DATA ARCHITECTURE STRATEGIES

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Global Data Strategy, Ltd.

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Global Data Strategy
The Business of Data

Donna Burbank

Donna is a recognized industry expert in data management with over 25 years of experience in data governance metadata management, and enterprise architecture. Her background is multi-faceted across consulting, development management, brand strategy, marketing, and business leadership.

She is currently the Managing Director at Global Data Strategy, Ltd., an international data management that specializes in the alignment of business drivers with data-centric technology.

In past roles, she has served in key brand strategy and product management roles for several of the products in the market.

As an active contributor to the data management community, she is a long time DAMA International member the DMBOK 2.0, Past President and Advisor to the DAMA Rocky Mountain chapter, and was awarded the Excellence in Data Management Award from DAMA International.

She has worked with dozens of Fortune 500 companies worldwide in the Americas, Europe, Asia, and Africa and speaks regularly at industry conferences. She has co-authored several books and is a regular contributor to industry publications. She can be reached at donna.burbank@globaldatastrategy.com Donna is based in Boulder, Colorado, US.

DATAVERSITY Data Architecture Strategies

This Year's Lineup

- **January**   Emerging Trends in Data Architecture – What's the Next Big Thing?

- **February**   Building a Data Strategy - Practical Steps for Aligning with Business Goals

- **March**   Master Data Management - Aligning Data, Process, and Governance

- **April**   How do Data Governance & Data Architecture Support Each Other?

- **May**   The Role of the Chief Data Officer (CDO) in Business Transformation

- **June**   What Does It Mean to be a Data-Driven Organization?

- **July**   Data Architect vs. Data Engineer vs. Data Scientist – Making Sense of Roles in Today's Data-Centric Organization

- **August**   Data Quality Best Practices (with Nigel Turner)

- **September**   Best Practices in Metadata Management

- **October**   Enterprise Architecture vs. Data Architecture

- **December**   The Business Benefits of Data Modeling

What We'll Cover Today

- Developing a **Data Strategy for your organization can seem like a daunting task – but it's worth the effort**.

- **Getting your Data Strategy right can provide significant value, as data drives many of the key initiatives in today's marketplace**, from digital transformation to marketing, customer centricity, population health, and more.

- This webinar will help **demystify Data Strategy and its relationship to Data Architecture** and will provide concrete, practical ways to get started.

A Structured Approach to Data Strategy: Getting Key Questions Answered

DATA **ARCHITECTURE** STRATEGIES

Business Goals & Strategy	Current State Assessment	Proposed Future State	Implementation Roadmap

- What are the key **business drivers** for data?
- How are **business stakeholders** affected?
- How can we **link data management to business drivers**?
- How can we **show value & ROI** from data?

- How complex is the **current data landscape**?
- What **key technical issues** impacting the business?
- How **mature** is our data management practice?
- How do we align with **industry best practices**?

- How do align the **people, process and technology** to enact change?
- What is the **right data architecture** pattern for us?
- What **tools and technologies** do we need?
- How do we design our **Data Governance Framework**?

- **What do we do next**?
- How do **we plan for the long-term, via "quick wins"** along the way?
- How do we **change the culture** to support data?
- How do we promote data projects through **marketing & communication**?

The Rise of the Data-Driven Business

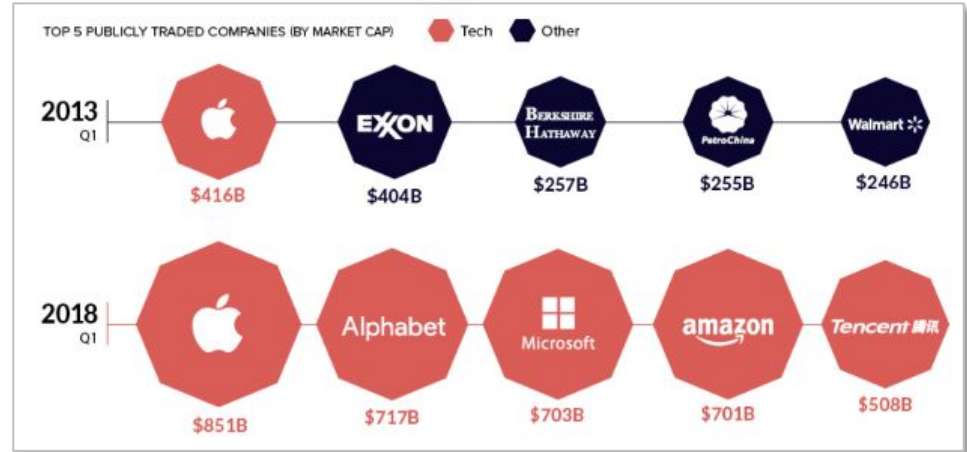Data, more than ever, is seen as a key business asset and strategic differentiator.

Data is Driving the Future of the Global Economy

- "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

TOP 5 PUBLICLY TRADED COMPANIES (BY MARKET CAP) — Tech / Other

2013 Q1:
- Apple $416B
- Exxon $404B
- Berkshire Hathaway $257B
- PetroChina $255B
- Walmart $246B

2018 Q1:
- Apple $851B
- Alphabet $717B
- Microsoft $703B
- amazon $701B
- Tencent $508B

[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

What is a Data Strategy?

Strategy vs. Management

Strategy:

1. the art of devising or employing plans or stratagems toward a goal

2. an adaptation or complex of adaptations (as of behavior, metabolism, or structure) that serves or appears to serve an important function in achieving evolutionary success

3. the science and art of military command exercised to meet the enemy in combat under advantageous conditions

   - Source Merriam Webster

Management:

1. judicious use of means to accomplish an end

2. the act or art of managing **:** the conducting or supervising of something (such as a business) *- Source Merriam Webster*

But What is "It", Really?

- Many people are overwhelmed with the concept of building a Data Strategy – it can seem like a massive and overarching task.

- On a very tactical level, many wonder what format it should be in – Word Document, PowerPoint presentation, Interpretive Dance? 😊

- While many formats can be effective, a visual presentation often has the most impact. Key sections of the strategy should include:

  - Business Alignment – case for change and value proposition

  - Current State Analysis

  - Future State Recommendations

  - Roadmap and Next Steps

  - Projected ROI and Benefit

Business Optimization vs. Business Transformation

Digital Transformation is transforming business

Business Optimization
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
  - Monetization of information
- Digital Transformation
  - New Business Models
  - Data is the Business
- Etc.

How do we do something different?

Business & Data Strategy – the Interdependency

Informs & Guides

Business Strategy

Data Strategy

Informs & Guides
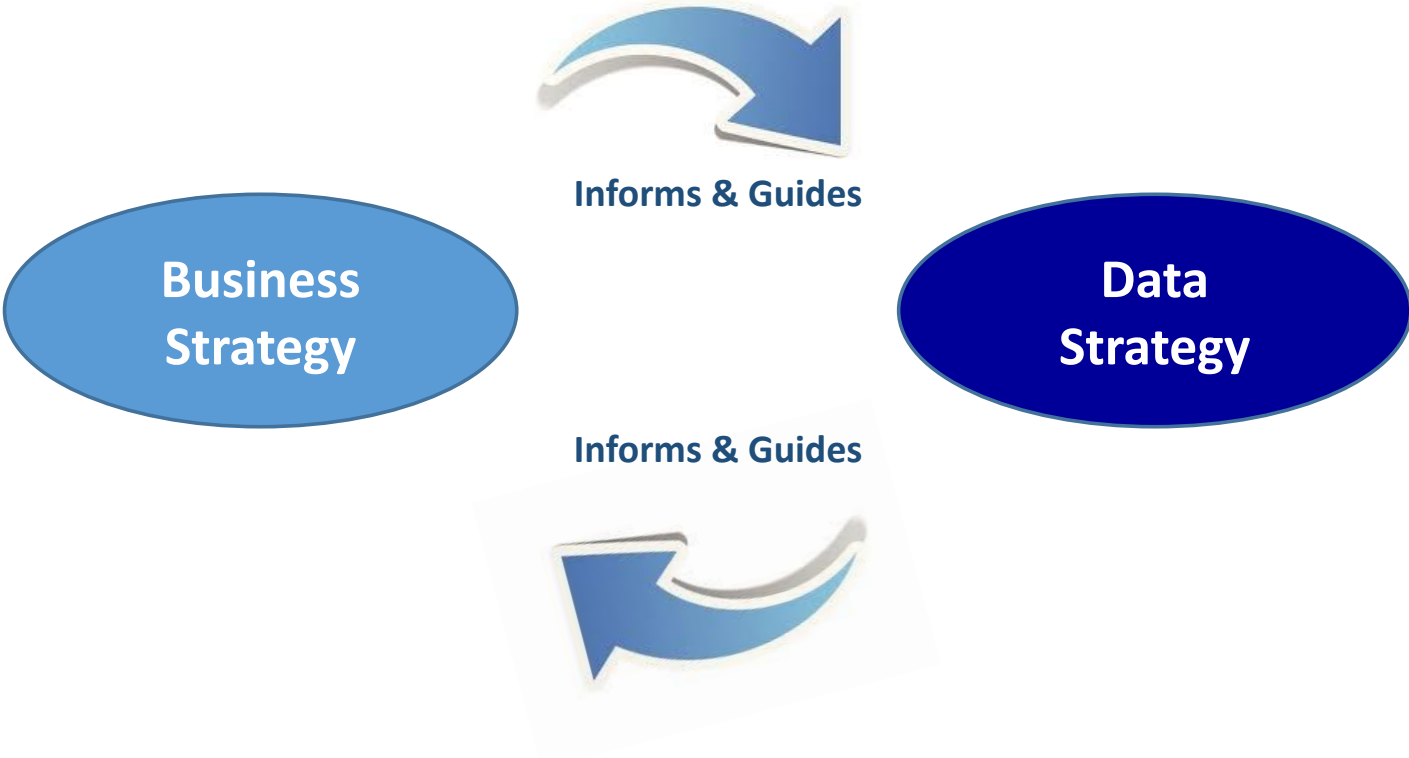
Aligning Business Strategy with Data Strategy

A Successful Data Strategy links Business Goals with Technology Solutions

- "Top-Down" alignment with business priorities
- Managing the people, process, policies & culture around data
- Leveraging data for strategic advantage
- Coordinating & integrating disparate data sources
- "Bottom-Up" management & inventory of data sources

Business Strategy — **Alignment** — **Data Strategy**

Data Governance & Collaboration

People | Process | Policy | Culture

Master Data Management | Data Warehousing | Business Intelligence | Data Analytics | Data Quality Management | Data Architecture & Modeling

Data Asset Planning | Data Security | Data Integration | Metadata Management

Databases | Big Data | Unstructured Data | Semi-Structured Data | Document & Content Mgt.

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"Offense" vs. "Defense"

Which style of data strategy fits your organization?

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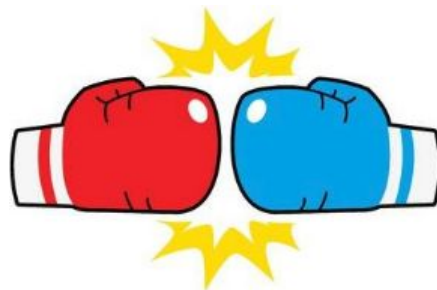
- Focused on Creating Opportunity
  - Improving Profitability
  - Increasing Revenue
  - Improving Customer Satisfaction
  - Competitive Advantage

Defense

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

On which end of the spectrum is your organization?

Look for Business Value "Levers"

Identify "Quick Wins"

Effort   **Fulcrum**   **Load**

- Identify areas that will derive the highest business value by addressing.

  - Is this supporting the new marketing campaign for a high visibility product launch?

  - Or are you "re-arranging the deck chairs on the Titanic" – i.e. focusing valuable time and effort no low-value activities

- As with any areas of the business that have value, it is helpful to build a model or architectural design around the key areas of business value.
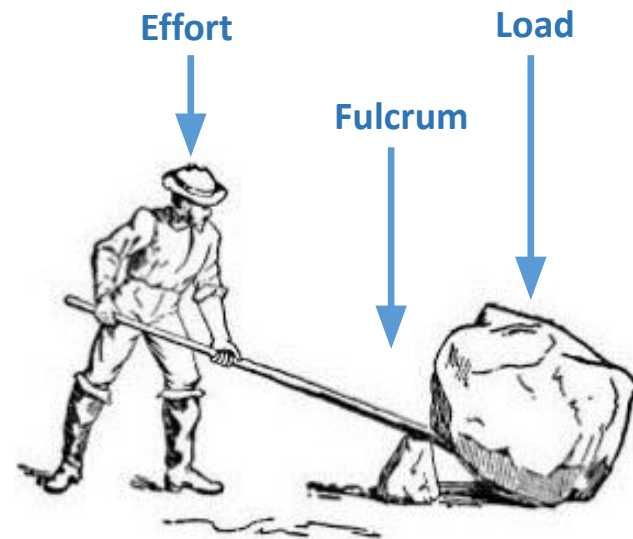
Identify areas where data can be the fulcrum.

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 Optimization 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'**

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.

SOMETHING NOTHING DO

Data Strategy & Data Governance are Priorities for Many Organizations

Which of the Following Are You Planning on Implementing in the Next 1-2 Years?
(Select all that apply)

Data Governance	42.79%
Data Strategy	39.74%
Data Quality	38.43%
Master Data Management	37.55%
Metadata Management	34.93%
Self-Service Reporting & Analytics	34.06%
Data Architecture	31.88%
Data Science (including AI or Machine Learning)	26.20%
Data Modeling	25.76%
Data Integration	24.02%

From Trends in Data Management 2023, a DATAVERSITY Report, by Donna Burbank and Michelle Knight

Applying a Structured Data Governance Framework

Vision & Strategy

Organization & People

Processes & Workflows

Data Management & Measures

Tools & Platforms

Culture & Communication
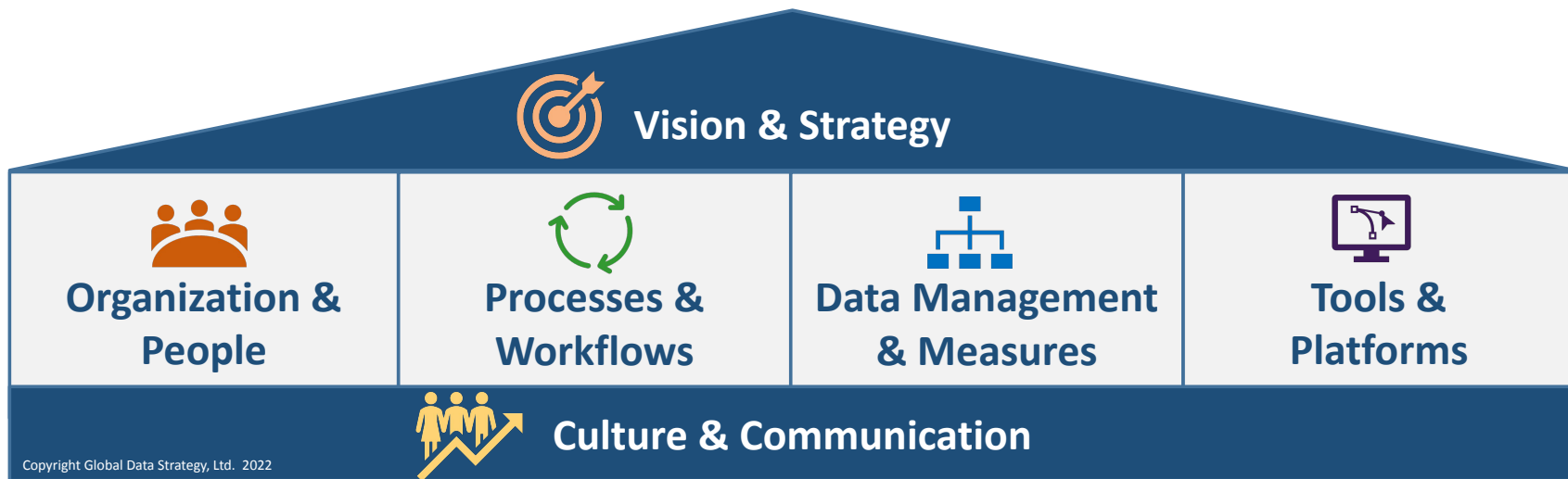
Mapping Organizational Capability for Data Governance

- Organizational Capability, Organizational Structure, and Roles are key to any Data Strategy

Aligning to Organizational Capabilities
e.g. From Plan to Production to Sales & Distribution

Designing Org Structures for Data-Centric Efforts
e.g. Aligning Data Governance to Individual Culture
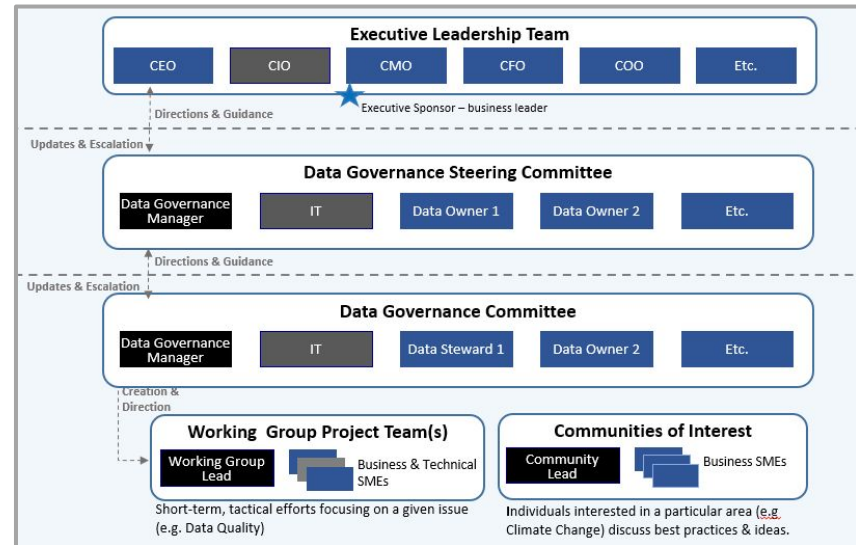
No "One Size Fits All" Data Governance Approach

Federated Approach with Agile Development Lifecyle
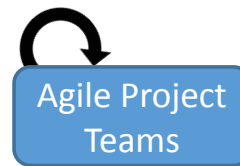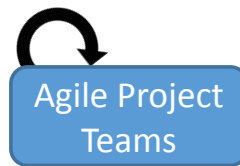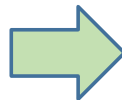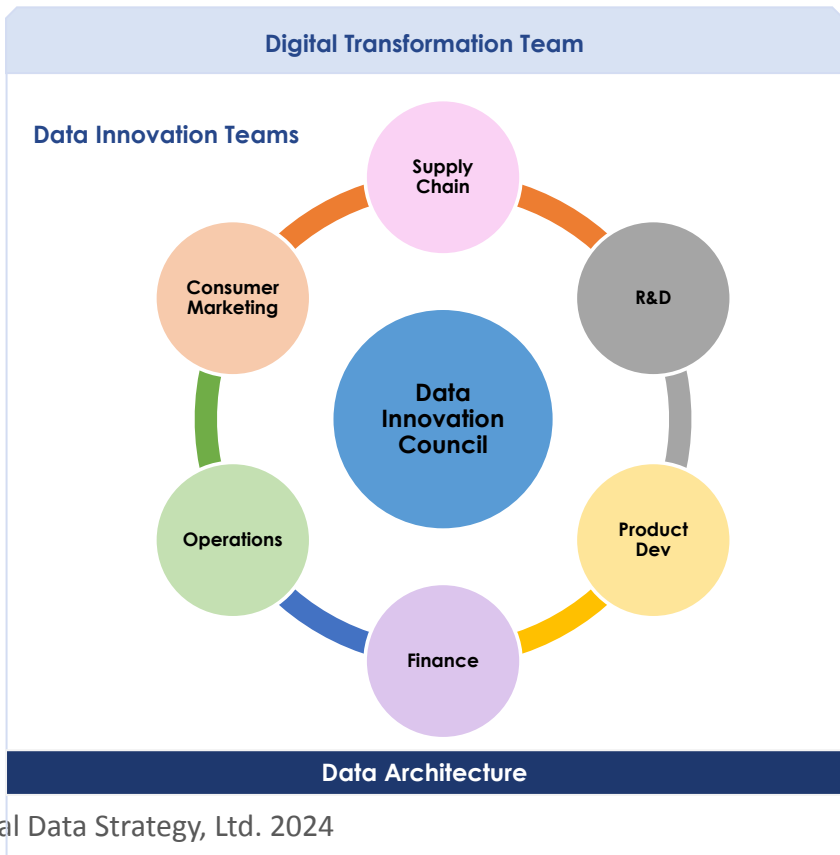
Designing the Right Architecture – Fit for Purpose Solutions

Data Warehouse

Data Catalog & Metadata Management – data lineage, data dictionary, business glossary, etc.

Operational Data	Data Integration & Transformation	Structured Data Storage	Semantic Layer	Reporting

Registration System

Facilities Management

Order Management

Etc.

- Transformation
- Standardization
- Business Rules

ETL

- Structured format for trending over time
- Facts & Dimensions (often)

- Business-friendly view
- Common terms & calculations
- Ability to easily "slice & dice"

- Business Intelligence Reporting

- Core data cleansed & governed for reuse (Customer, Product, Vendor)

- Publish & Subscribe

Master Data

Data Governance – roles, organization, policies, standards, etc.

Data Lakehouse

Data Catalog & Metadata Management – data lineage, data dictionary, business glossary, etc.

Operational Data

- Structured/Relational Data Storage

Registration System | **Facilities Mgt** | **Order Mgt** | **Etc.**

- Sensor Data
- Log files
- Social Media
- Video

ELT

Streaming

Data Lake/ Raw Landing

- Structured Data Storage
- Unstructured Data Storage

- **Publish & Subscribe**

Master Data

- Core data cleansed & governed for reuse (Customer, Product, Vendor)

Structured Data Storage

- Structured format for trending over time
- Facts & Dimensions (often)

- Transformation

- Discovery & Analysis
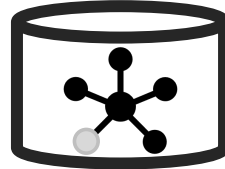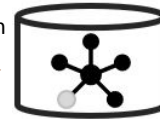
Semantic Layer

- Business-friendly view
- Common terms & calculations
- Ability to easily "slice & dice"

Reporting

- Business Intelligence Reporting

Advanced Analytics

- AI & ML
- LLM
- Graph Relationships
- Etc…

Data Governance – roles, organization, policies, standards, etc.

Data Fabric

Reporting, Analysis, and Discovery across Disparate Data Sources

• BI Reporting   • AI / ML   • Advanced Analytics

A Data Virtualization Layer Provides a Logical View for Data Access, removing the need to physically move data into a central place. A Semantic, business-friendly view is provided for Self-Service reporting.

Data Virtualization Layer
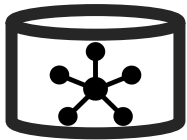
| Data Warehouse 1 | Data Warehouse 2 | Operational System(s) | Master Data | Data Lake | Data from Partner Organizations | Etc. |
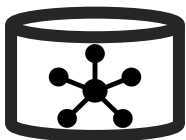
🏛 **Data Governance** – roles, organization, policies, standards, etc.

Architectures Are Becoming Ecosystems
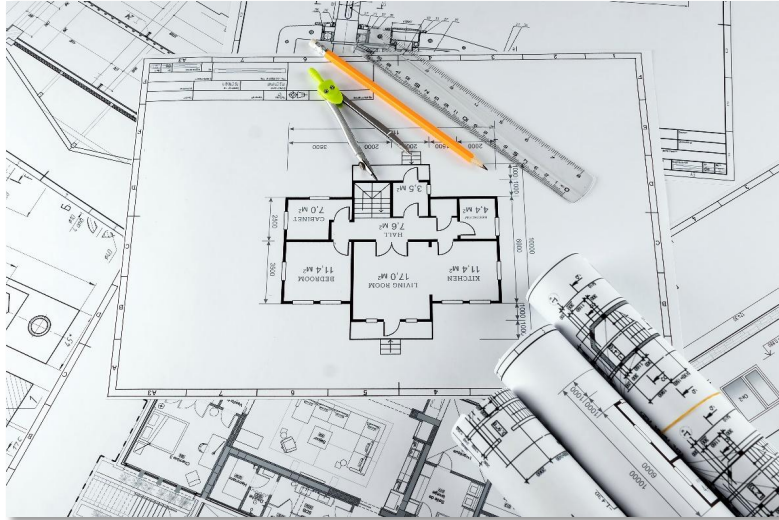
- Singular, Fit for purpose solutions
- Design for individual use-cases (e.g. DW, Big Data Analytics)
- Scalability could be limited by platform
- Targeted users by solution

- Dynamic, interrelated best of breed solutions
- Multi-faceted, interrelated use cases
- Faster-scalability with cloud-based provisioning
- User communities with self-service reporting & analytics capabilities

Building the Roadmap – Making Sense out of Chaos

Building Blocks to an Effective Roadmap

Why?

What are the key business drivers?

Think both "Offense" & "Defense"

Who?

Who are the key stakeholders who will benefit?

Who are the Data Stewards who can be "discovered" in the organization?

When?

When will you roll this out?

What is the timing and cadence or actions and deliverables?

Are there other key initiatives it's important to align with?

How?

How will you organize the Data Governance team(s)?

What Data Architecture will you put into place?

What?

What data needs to be managed?

Is this structured or unstructured?

Real-time or batch?

Data Lake and/or Warehouse – or Fabric?

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?

Assess Organizational Maturity

- Perform a realistic maturity assessment of the organization's data management capabilities:

  - Current state by discipline

  - Future Goals

  - Gaps that need to be filled

Global Data Strategy's Data Management Maturity Assessment

Find Your "Quick Wins"

- It's important to show early value for the Data Strategy effort

- … and continue to deliver iterative value over time.
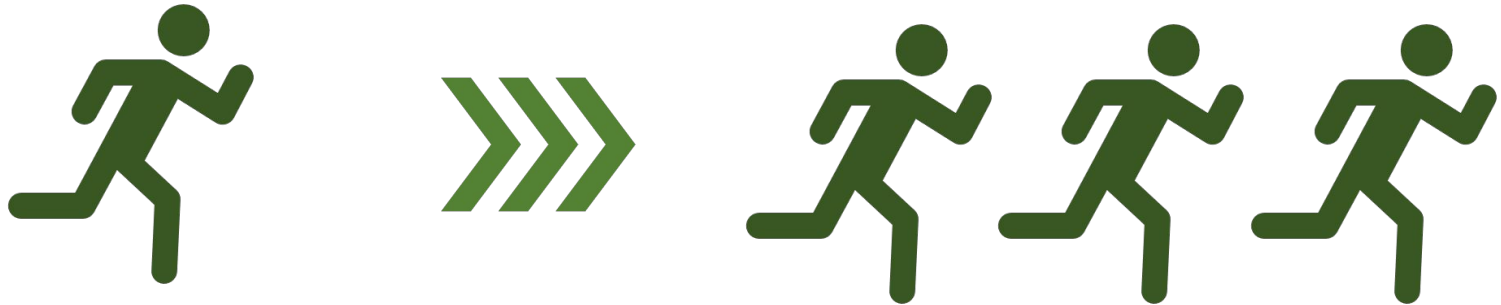
A "Quick Win" is Not a "Quick Fix"

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

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

NO

YES

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?

Implementation Roadmap

Define Roadmap & Staffing for Executing the Strategy

- Define your roadmap with key activities timed to align with key business initiatives.
- Align with necessary staffing and training.

Implementation Roadmap for Key Activities by Functional Area

Staffing & Training Recommendations

' Culture eats strategy for breakfast.'

Peter Drucker, Management Strategist & Consultant
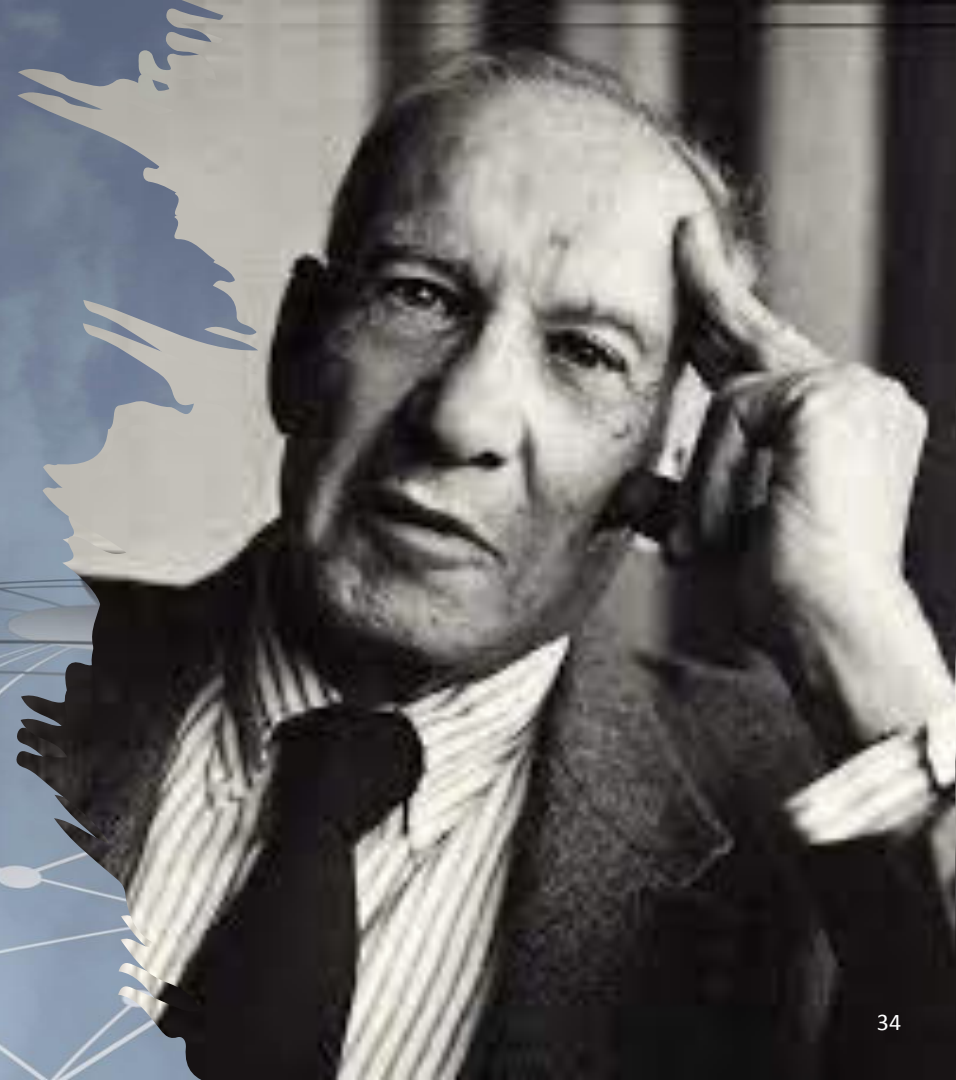
Organizational Culture and Organizational Change Management

Organizational Culture:

> "Organizational culture is the personality of the organization". [1]

Organizational Change Management:

Organizational change refers to the actions in which a **company or business alters a major component of its organization, such as its culture**, the underlying technologies or infrastructure it uses to operate, or its internal processes.

Organizational change management is the method of leveraging change to bring about a successful resolution. - Harvard Business School

[1] https://managementhelp.org/organizations/culture.htm

The Change Journey

AWARENESS
- Alignment with Business Value
- Vision & Roadmap
- Etc.

MOTIVATION
- WIIFM
- Testimonials
- Swag, slogans,
- Etc.

KNOWLEDGE
- Launch Awareness
- Trainings
- Coaching
- Certifications
- Etc.

REINFORCEMENT
- Ongoing Communication Plan
- ROI & Value over time
- Success Stories
- Etc.

COMMUNICATION !   COMMUNICATION!   COMMUNICATION!   COMMUNICATION!

Other people are excited about it – maybe it can help me, too.

I'm seeing the value of this over time – how did I ever work without this?

This is new! Should I be concerned?

This is interesting – I'm starting to understand how it can help me.
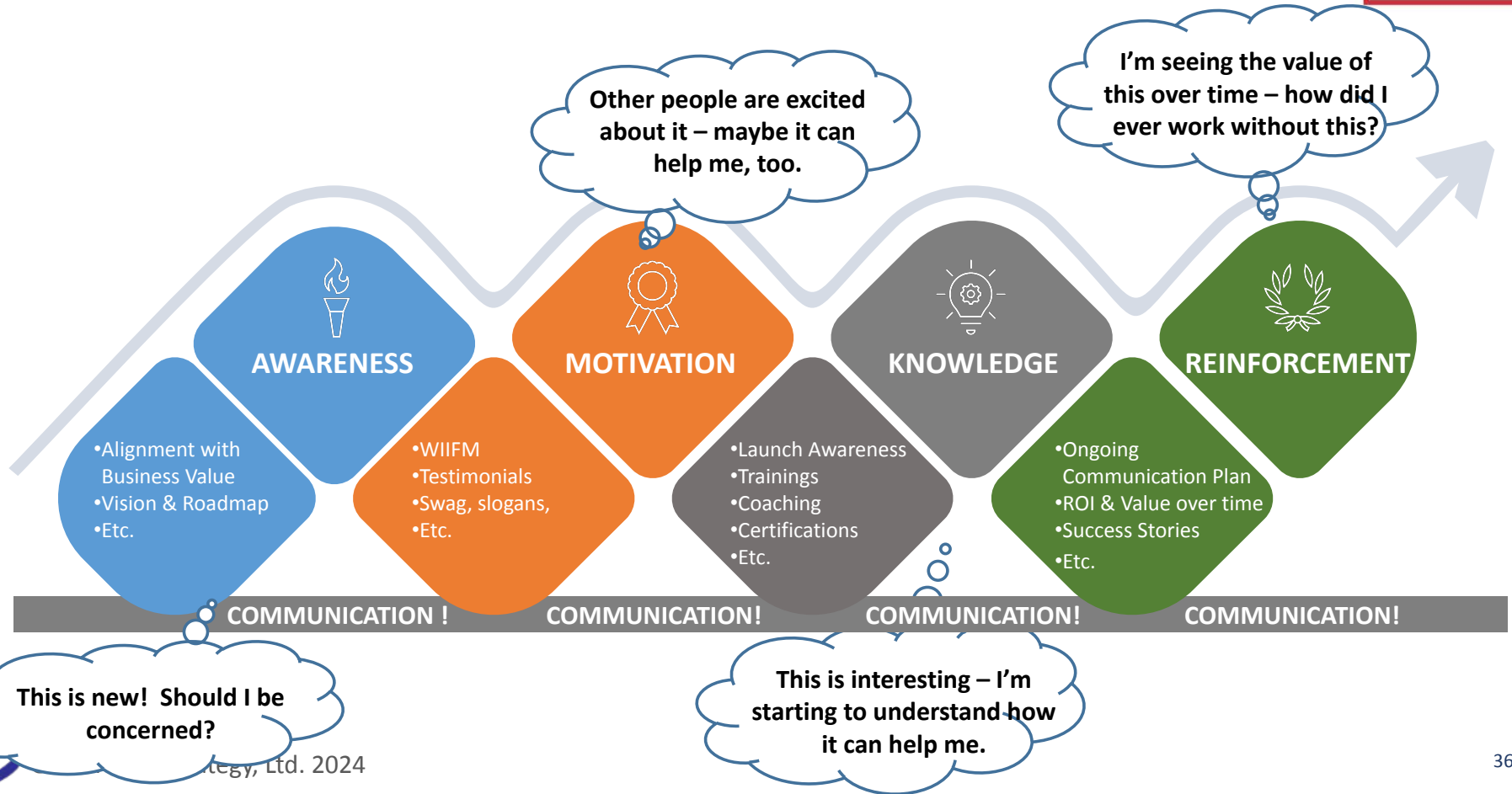
Organizational Change Happens at Three Levels

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

Data Strategy directly impacts the culture of an organization

"IN WHAT WAYS ARE MY CURRENT RESPONSIBILITIES AFFECTED"?

"WHO ARE THE IMPACTED GROUPS AND HOW DO WE SUPPORT THEM"?

"HOW DO WE SUCCESSFULLY ACHIEVE LARGE SCALE TRANSFORMATION"?

INDIVIDUAL

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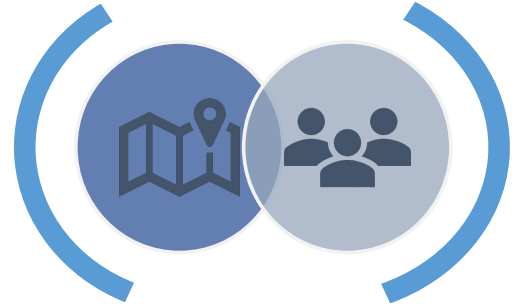
PROJECT

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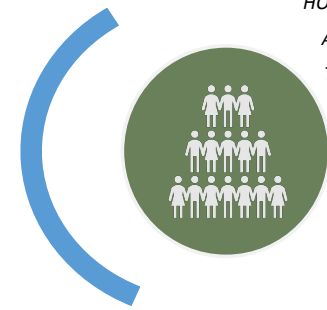
ORGANIZATION

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

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

Reference PROSCI for methodology content

Garnering Excitement - Engage Marketing & Branding

- It's beneficial to engage with your internal Marketing organization 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!

Resistance Management: Causes for and Approaches to

What looks like resistance is often a lack of direction

Typical Root Causes

Executives: Disconnected with their strategy, financial objectives or compensation

Middle Management: Lack of awareness, loss of authority or control, and overload of current responsibilities

Employees: Lack of awareness if why the changes are happening and "WIIFM". Comfort with the status quo and fear of the unknown.

Addressing Resistance

- Resistance prevention
  - Change management applied early – at the onset of every project
- Proactive resistance management
  - Anticipation and early identification of likely resistance so it can be addressed and eliminated upfront
- Reactive resistance management
  - Applying a set of tactics when resistance becomes enduring and persistent

Parting Thought – Culture Change in Your Organization

What do you think is the biggest fear of change that you'll face?

What would be the biggest excitement/opportunity driver?

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- What are the key **business drivers** for data?
- How are **business stakeholders** affected?
- How can we **link data management to business drivers**?
- How can we **show value & ROI** from data?

Current State Assessment
- How complex is the **current data landscape**?
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Proposed Future State
- How do align the **people, process and technology** to enact change?
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Implementation Roadmap
- **What do we do next**?
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- How do we **change the culture** to support data?
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www.globaldatastrategy.com

Summary

- **Aligning Data Strategy with business drivers** & goals is key to success

- Orchestrate the people, process, technology, & culture required through a robust **Data Governance** program.

- Define a right-sized **Data Architecture** to manage technological change

- **Your roadmap should tell a story** and show an evolution from the current state.

- **Culture building and organizational change** are critical to success

DATAVERSITY Data Architecture Strategies

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- **August**   Data Quality Best Practices (with Nigel Turner)

- **September**   Best Practices in Metadata Management

- **October**   Enterprise Architecture vs. Data Architecture

- **December**   The Business Benefits of Data Modeling

Who We Are: Business-Focused Data Strategy
Maximize the Organizational Value of Your Data Investment

In today's business environment, showing **rapid time to value** for any technical investment is critical.

But technology and data can be complex. At Global Data Strategy, **we help demystify technical complexity** to help you:

- Demonstrate the ROI and **business value of data** to your management

- Build a data strategy **at your pace to match your unique culture** and organizational style.

- Create an **actionable roadmap for "quick wins"**, which building towards a long-term scalable architecture.

Global Data Strategy's shares experience from some of the largest international organizations scaled to the pace of your unique team.

Global Data Strategy has worked with organizations globally in the following industries:

Finance · Retail · Social Services · Health Care · Education · Manufacturing · Government · Public Utilities · Construction · Media & Entertainment · Insurance …. and more

Thoughts? Ideas?
Questions?