

# Key Elements of a Successful Data Governance Program



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## Peter Aiken, Ph.D.

- I've been doing this a long time
- My work is recognized as useful
- Associate Professor of IS ([vcu.edu](http://vcu.edu))
- Institute for Defense Analyses ([ida.org](http://ida.org))
- DAMA International ([dama.org](http://dama.org))
- MIT CDO Society ([iscdo.org](http://iscdo.org))
- Anything Awesome ([anythingawesome.com](http://anythingawesome.com))
- Experienced w/ 500+ data management practices worldwide
- Multi-year immersions
  - US DoD (DISA/Army/Marines/DLA)
  - Nokia
  - Deutsche Bank
  - Wells Fargo
  - Walmart
  - HUD ...
- 12 books and dozens of articles



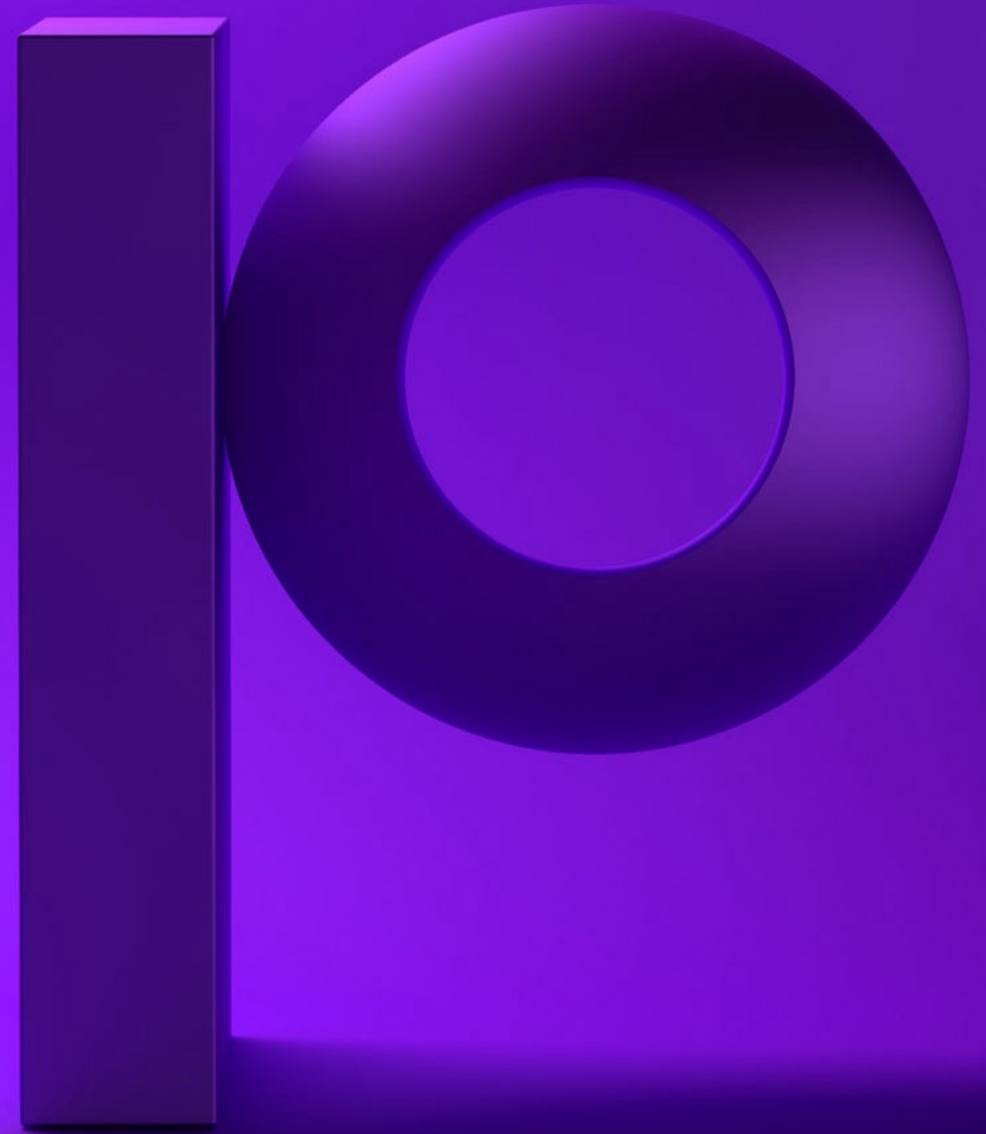
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precisely

# It's Not REALLY about Data Governance

Matt Vandevere, Vice President  
Strategic Services

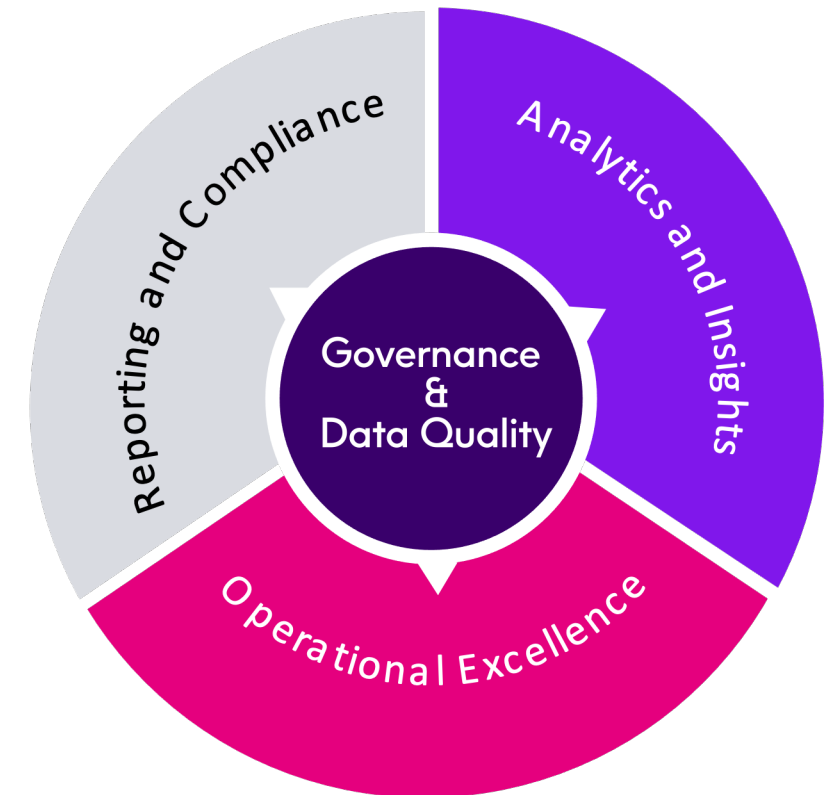


# The Point of Governance is NOT Governance

The most common mistake we make is how we position and talk about governance.



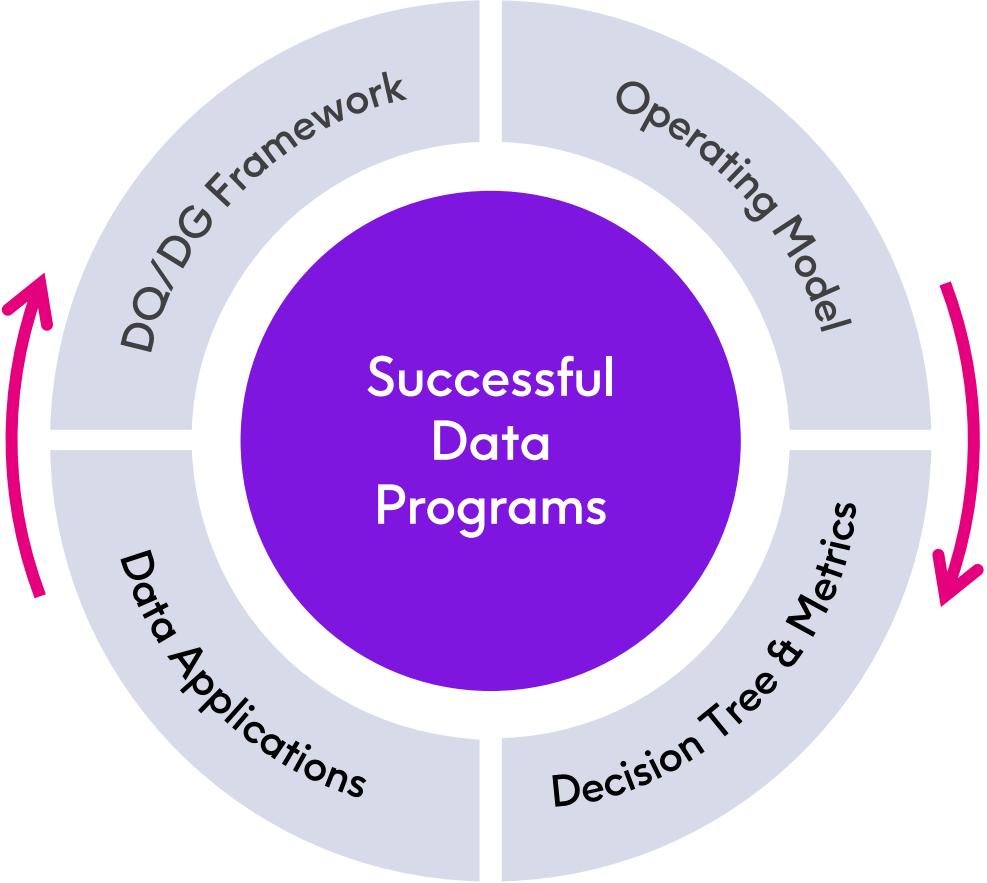
The point is:  
**Deliver Business Outcomes**  
and  
**Connect Business Goals, Objectives & Value with Data Governance Efforts**



# Successful Data Programs Core Components

**Data Quality & Integrity Framework** that ensures the availability, usability, integrity, and sustainability of our most critical data in support of analytics, business operations and compliance

**Data Architecture and Applications** that are directly aligned to business objectives, integrate seamlessly, scale and promote data collaboration, efficiency and literacy

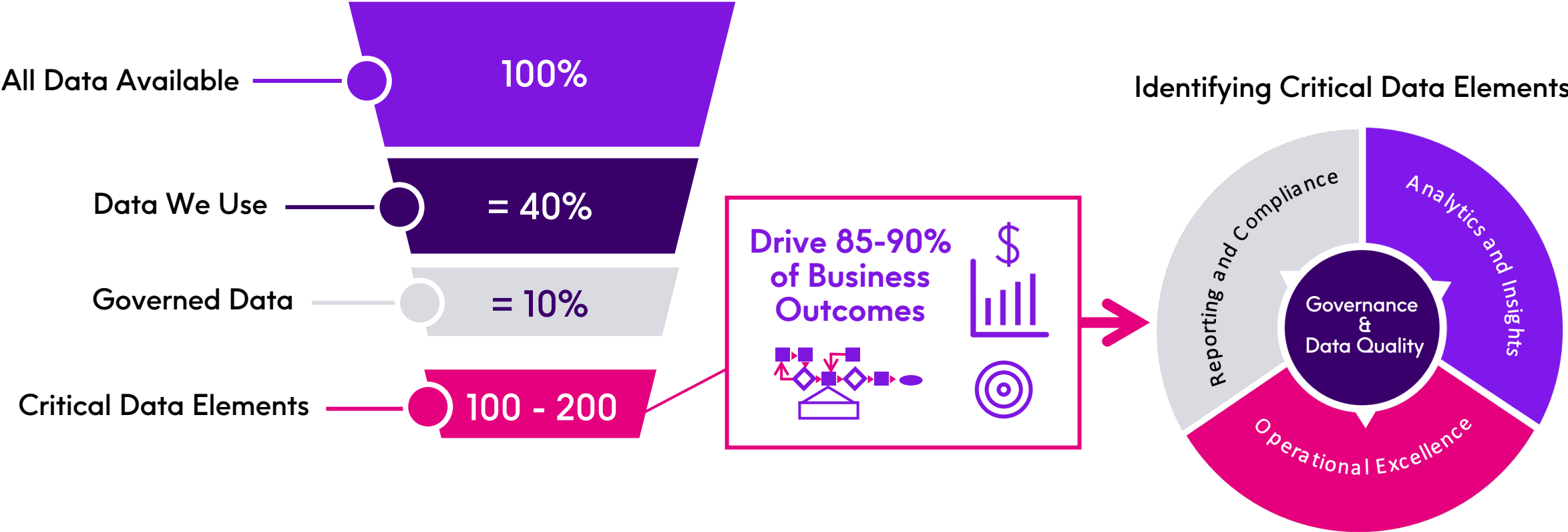


**Business accountability** for data with 'fit for purpose' operating models/processes and a complementary org construct to provide a structured & repeatable process for sustained data integrity and value creation

**Decision Tree** to identify critical data and ensure governance actions are always based on value drivers and follow a repeatable and scalable model with **metrics** aligned to business objectives

# Not All Data Requires Governing – Focus on What Matters

Precisely's Methodology of Quickly Achieving Value via Critical Data Elements



# Precisely's Data Governance Methodology

Leveraging a Repeatable Governance Framework to ensure ongoing information integrity



## What do we Govern?

Does this data represent strategic value?

Are there Compliance, Analytical, Financial or Operational Impacts?



## How should we Govern?

How will this data impact the business and what is the governance approach? (i.e., Active, Passive, Procedure) should be used?



## Where should we Govern?

Where in our business processes and systems should we apply the rules and validation checks to ensure accurate, high-quality data?



## Who should Govern?

Who within the organization has decision rights for what 'good' data looks like and who should govern it?



## The Result

Critical Data is being Governed proactively via a structured, enterprise level, cross-functional capability driving information trust.

Vs.

A data state of an unstructured and reactive approach to managing data within organizational silos.

# Demonstrating Business Value



## Strategic

### Transform the Business

Critical information driving business goals, objectives, KPIs, and metrics

e.g., KPIs / metrics, strategic programs, data privacy & protection



## Operational

### Grow the Business

Critical data that drives business processes and operations

e.g., product development, planning, sourcing, manufacturing



## Tactical

### Run the Business

Critical data assets that have operational, compliance and analytical business impacts

e.g., data migrations, system implementations, data science & engineering



## The leader in data integrity

Our software, data enrichment products and strategic services deliver accuracy, consistency, and context in your data, powering confident decisions.

**12,000**

customers

**99**

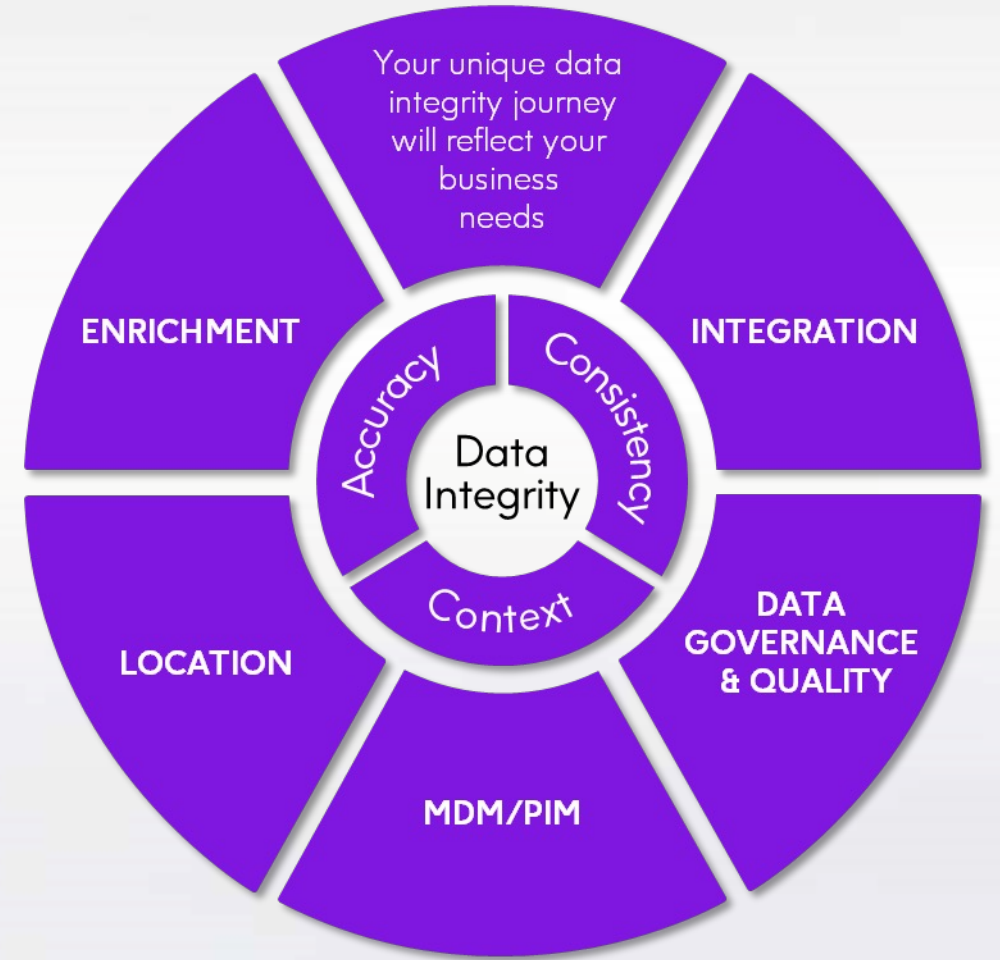
of the Fortune 100

**100**

countries

**2,500**

employees





# What we deliver...



## Data Strategy

Leverage our team of career data leaders and professionals to define, implement and optimize your data program using proven and leading practices and data solutions



## Organization Enablement

Instill a data-driven culture and accountability mindset for trusted decision-making and ensure business adoption of data-centric mentality using proven data operating models



## Data Operations

Implement proven approaches to ensure critical data is prioritized and of high quality to deliver business results and enable strategic priorities



## Value Realization

Clearly align data initiatives to business value drivers with meaningful performance measures that quantify their value and drive followership and adoption within the organization.

- Recognized Data Thought Leadership
- 100% Referenceable Client Success
- Strategy Through Execution
- Customer Enablement
- Business Value Delivery Model
- Proven Industry Knowledge



“Top choice for clients looking for a well-rounded data solutions with solid data quality capabilities and data strategy consulting services”

The Forrester Wave™

# Precisely Strategic Services

- Trusted voice and strategic advisors
- Value-based approach with a lean delivery model
- Industry-leading practice points of view
- Operationalizing people, processes and performance measures
- Teach to Fish delivery models

## Brands you trust, trust us



## Data leaders partner with us



precisely

Learn More  
Precisely.com



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# Program overview

- Data's Confounding Characteristics
  - Uneven understanding
  - Has lead fractured views of data and to
  - Increasing organizational data debt



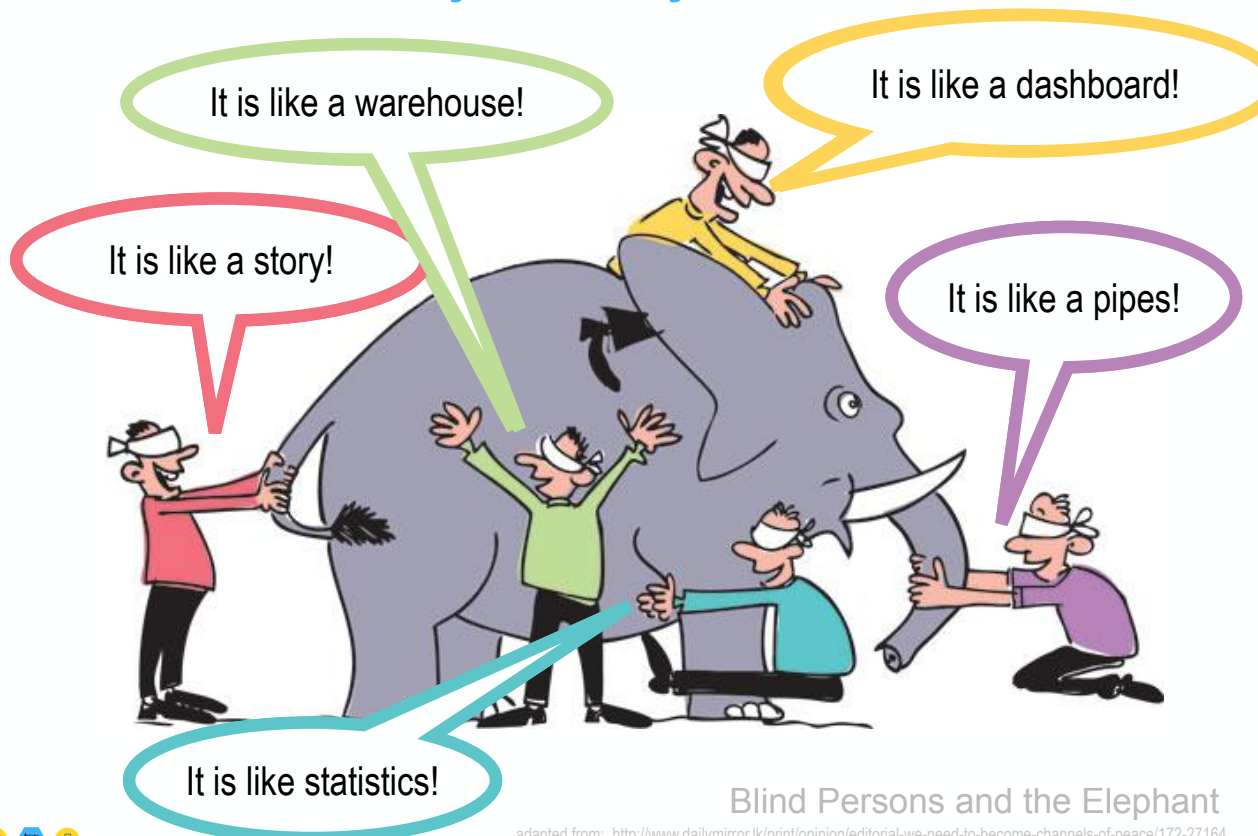
1. Keeping DG practically focused on strategy
  - This is a young profession and must
  - Directly support organizational strategy by
  - Improving data and its use in the short and long term
2. DG must exist at the same level as HR
  - In order to achieve effectiveness,
  - DG is central to DM (and central to digitization efforts)
  - Must be de-coupled from IT strategy
3. Gradually add ingredients (practicing and getting better)
  - Digital and data are dependent on high speed automation/data processing
  - Employ a DG Frameworks to refine focus
  - Plan to evolve (PDCA)
4. Data governance in action: Storytelling
  - Take Aways/References/Q&A

## Key Elements of a Successful Data Governance Program



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## Data is not broadly or widely understood



Blind Persons and the Elephant

adapted from: <http://www.dailymirror.lk/print/opinion/editorial-we-need-to-become-channels-of-peace/172-27164>

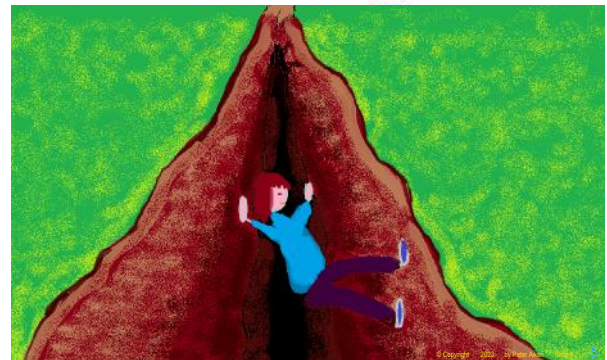


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## Confusion as to data responsibility



- IT thinks data is a business problem
  - "If they can connect to the server, then my job is done!"
- The business thinks IT is managing data adequately
  - "Who else would be taking care of it?"



## Doing a poor job with data governance

- Failure to understand the role of data governance re: proposed and existing software/services
  - Locks in imperfections for the life of the application
  - Restricts data investment benefits
  - Decreases organizational data leverage
- Accounts for 20-40% of IT budgets devoted to evolving
  - Data **migration** (Changing the data location)
  - Data **conversion** (Changing data form, state, or product)
  - Data **improving** (Inspecting and manipulating, or re-keying data to prepare it for subsequent use)
- Lack of data governance causes everything else to
  - Take longer
  - Cost more
  - Deliver less
  - Present greater risk (with thanks to Tom DeMarco)







Separating the Wheat from the Chaff



## Organizing the Wheat Separated from the Chaff



**Is well organized data worth more?**



**DATA ROT EXPLAINED**



# Pre-Information Age Metadata



- Examples of information architecture achievements that happened well before the information age:

- Page numbering
- Alphabetical order
- Table of contents
- Indexes
- Lexicons
- Maps
- Diagrams



"While we can arrange things with the intent to communicate certain information, we can't actually make information. Our users do that for us."

Example from: *How to make sense of any mess* by Abby Covert (2014) ISBN: 1500615994



## DATA ROT EXPLAINED



<https://anytinguadone.com>

# Remove the structure and things fall apart rapidly



- Better organized data increases in value

The collage includes several diagrams:

- A Venn diagram with three overlapping circles labeled 'MOVIE', 'FRIDAY NIGHT AT HOME', and 'PIZZA'.
- A hierarchical tree diagram showing categories like 'Movie' and 'Action'.
- A complex flowchart or organizational chart with many interconnected nodes.
- A diagram showing a central 'Movie' node connected to various related terms like 'Genre', 'Director', and 'Cast'.
- A keyboard layout diagram.
- A Gantt chart or timeline diagram with various tasks and time slots.
- A diagram showing a grid of data points or categories.

At the bottom right of the collage is a green CD with a book cover titled 'HOW TO MAKE SENSE OF ANY MESS' by Abby Covert, partially overlapping it. Below the CD is the text 'DATA ROT EXPLAINED'.



<https://anytinguadone.com>

# Organizing the Wheat Separated from the Chaff



- Better organized data increases in value
- Poor data management practices are costing organizations money/time/effort
- 80% of organizational data is **ROT**
  - **R**edundant
  - **O**bsolute
  - **T**rivial
- The question is which data to eliminate?
  - Most enterprise data is never analyzed



**DATA ROT EXPLAINED**



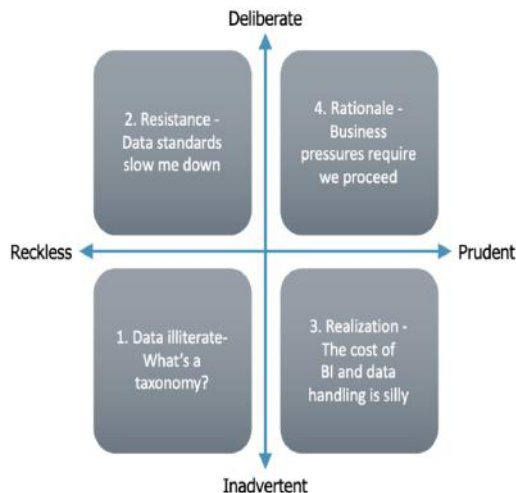
## You must address data debt proactively



**Data debt:**

- Slows progress
- Decreases quality
- Increases costs
- Presents greater risks

- Data debt
  - The time and effort it will take to return your shared data to a governed state from its (likely) current state of ungoverned
- Getting back to zero
  - Involves undoing existing stuff
  - Likely new skills are required



<https://uk.nttdataservices.com/en/blog/2020/february/how-to-get-rid-of-your-data-debt>





**2020 American Airlines market value ~ \$6b**  
**AAdvantage valued between \$19.5-\$31.5b**  
**2020 United market value ~ \$9b**  
**MileagePlus ~ \$22b**

EDITORS' PICK | Jul 15, 2020, 09:00am EDT

# How Airlines Make Billions From Monetizing Frequent Flyer Programs



**JT Genter** Advisor Contributor  
**Advisor** Contributor Group ©  
 Personal Finance



<https://www.forbes.com/sites/advisor/2020/07/15/how-airlines-make-billions-from-monetizing-frequent-flyer-programs/?sh=66da87a614e9>

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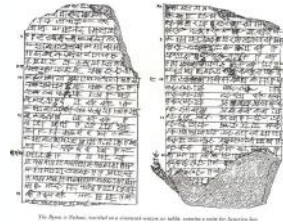


## Key Elements of a Successful Data Governance Program



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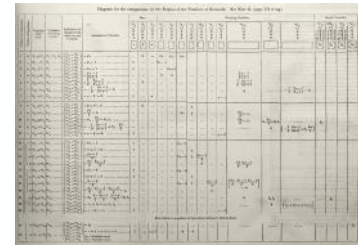
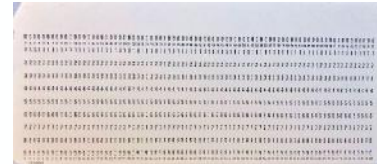
# How old is your profession?



- 8,000+ years
- formalize practices
- GAAP



**Augusta Ada King  
Countess of Lovelace  
(1815-52)**



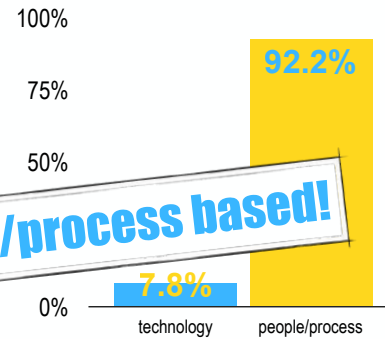
# What We Learned From Top Execs About Their Big Data And AI Initiatives



**Randy Bean** Contributor  
**CIO Network** Contributor Group  
 Enterprise & Cloud

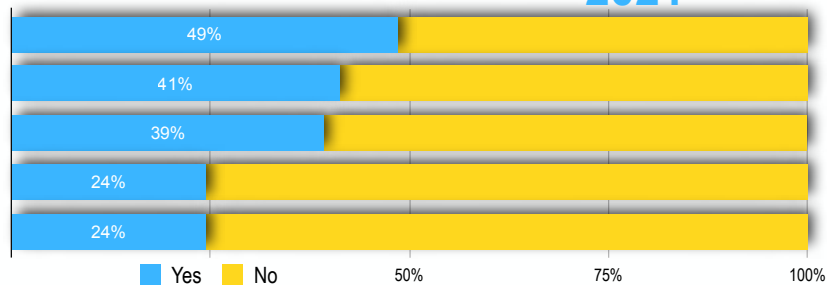
## Culture still eats strategy for breakfast

This aphorism is attributed to legendary management consultant Peter Drucker, and it certainly appears to hold true for data transformation efforts. Leading companies continue to identify culture – people, process, organization, change management – as the biggest impediment to becoming data-driven organizations – 92.2%. Few companies – only 30.0% – have even developed a well-articulated data strategy that culture could eat for breakfast. There is plenty of work to be done.



**80% of data challenges are people/process based!**

- Driving Innovation with Data
- Competing on data and analytics
- Managing data as a business asset
- Created a data-driven organization
- Forged a data culture



## Corporate Governance

- "Corporate governance - which can be defined narrowly as the relationship of a company to its shareholders or, more broadly, as its relationship to society....", Financial Times, 1997.
- "Corporate governance is about promoting corporate fairness, transparency and accountability" James Wolfensohn, World Bank, President Financial Times, June 1999.
- "Corporate governance deals with the ways in which suppliers of finance to corporations assure themselves of getting a return on their investment", The Journal of Finance, Shleifer and Vishny, 1997.



## IT Governance

- "Putting structure around how organizations **align IT strategy with business strategy**, ensuring that companies stay on track to achieve their strategies and goals, and implementing good ways to measure IT's performance.
- It makes sure that all stakeholders' interests are taken into account and that processes provide **measurable results**.
- Framework should answer some key questions, such as how the IT department is functioning overall, what **key metrics** management needs and what **return** IT is giving back to the business from the investment it's making." CIO Magazine (May 2007)
- IT Governance Institute, 5 foci:
  - Strategic Alignment
  - Value Delivery
  - Resource Management
  - Risk Management
  - Performance Measures



## 7 Data Governance Definitions

- The formal orchestration of people, process, and technology to enable an organization to leverage data as an enterprise asset – [The MDM Institute](#)
- A convergence of data quality, data management, business process management, and risk management surrounding the handling of data in an organization – [Wikipedia](#)
- A system of decision rights and accountabilities for information-related processes, executed according to agreed-upon models which describe who can take what actions with what information, and when, under what circumstances, using what methods – [Data Governance Institute](#)
- The execution and enforcement of authority over the management of data assets and the performance of data functions – [KiK Consulting](#)
- A quality control discipline for assessing, managing, using, improving, monitoring, maintaining, and protecting organizational information – [IBM Data Governance Council](#)
- Data governance is the formulation of policy to optimize, secure, and leverage information as an enterprise asset by aligning the objectives of multiple functions – [Sunil Soares](#)
- The exercise of authority and control over the management of data assets – [DM BoK](#)



What is Data Governance?

**Managing  
Data  
with  
Guidance**

Go Ask  
Anyone!™

*Would  
you  
want  
your  
sole,  
non-  
depletable,  
non-  
degrading,  
durable,  
strategic  
asset  
managed  
without  
guidance?*



Data Governance is

Go Ask  
Anyone!™

# Managing Data Decisions with Guidance

*Would you want your sole, non-depletable, non-degrading, durable, strategic asset managed without guidance?*



<https://anyinguidance.com>

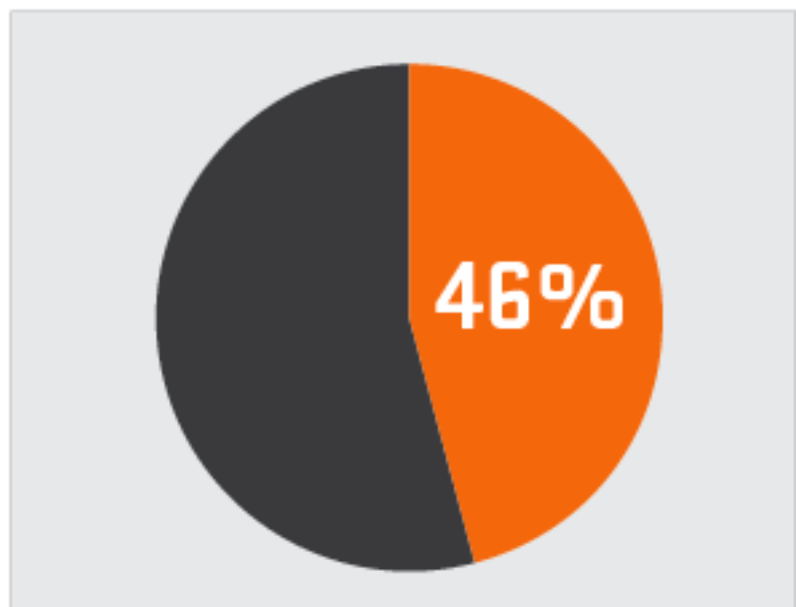
21

## Bad Data Decisions Spiral

### NEWS FLASH!

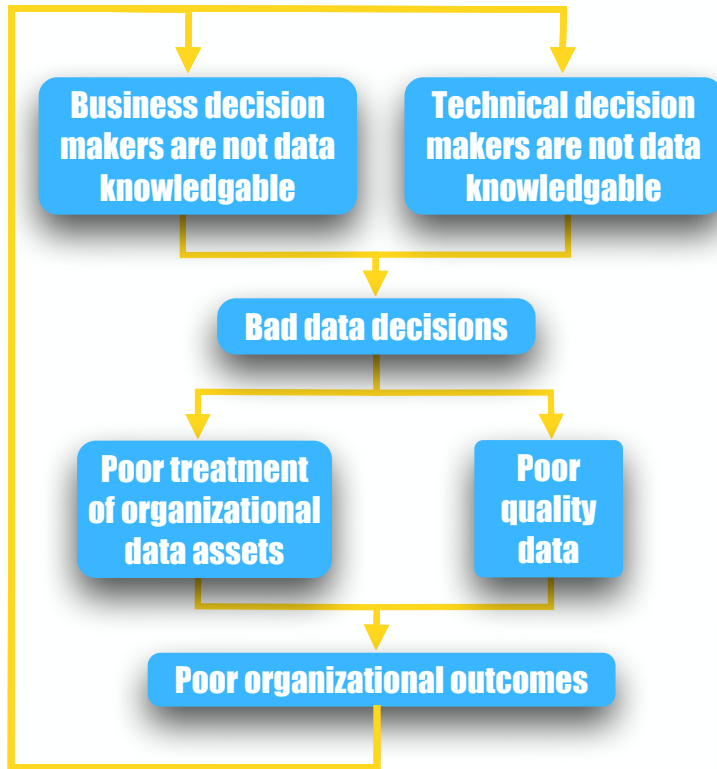
46% of companies report they made an inaccurate business decision based on bad or outdated data. Bad data leads to bad business decisions. Companies need to be careful that their data is sound – especially when dealing with investors.

Like Comment Share



<https://anyinguidance.com>

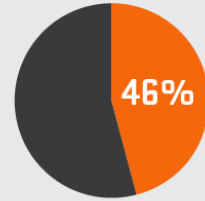
# Bad Data Decisions Spiral



## NEWS FLASH!

46% of companies report they made an inaccurate business decision based on bad or outdated data. Bad data leads to bad business decisions. Companies need to be careful that their data is sound – especially when dealing with investors.

[Like](#) [Comment](#) [Share](#)

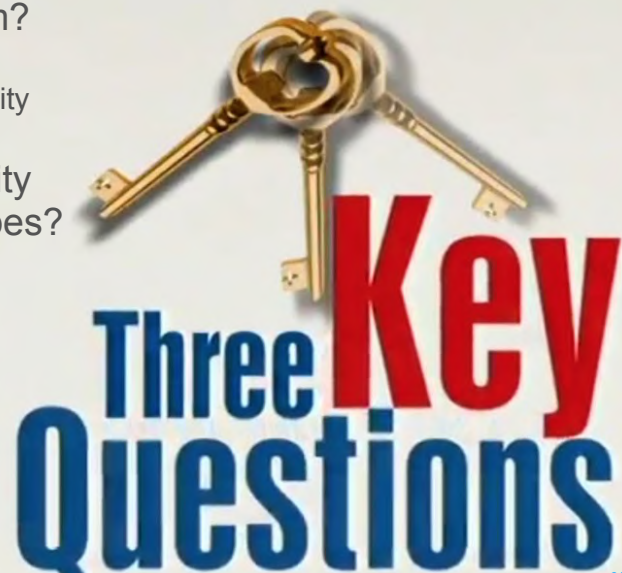


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## Three Key Questions (from the data perspective)

1. Is the quality of the data in the new system forecast to be of better quality than the data in the old system?
  - Lift and shift does not improve data quality
2. Are we able to formulate plans to obtain significant new value from this data in the new system?
  - If not we are lacking required specificity
3. Does this afford us an opportunity to consolidate data and data types?
  - Many system capabilities meet 'requirements' - looking at the opportunity to simplify an existing environment provides additional value



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## Keep the proper focus

- Wrong question:
  - How should we govern all this data?

- Right question:
  - Should we include this data item within the scope of our current data governance practices?

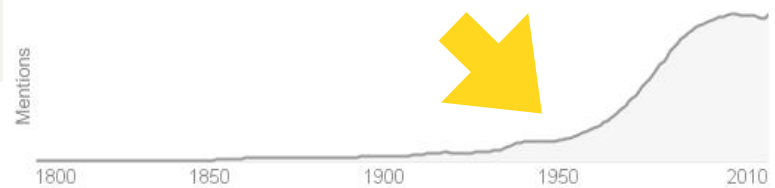


- Regardless of the decision, document why!



## What is Strategy?

Use over time for: Strategy



strat·e·gy

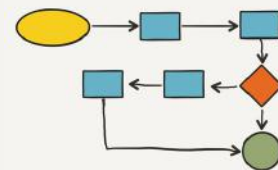
/ˈstrætəjē/

noun

1. a plan of action or policy designed to achieve a major or overall aim.  
"time to develop a coherent economic strategy"  
synonyms: master plan, grand design, game plan, plan (of action), action plan, policy, program; More

A thing

- Current use derived from military
  - **a pattern in a stream of decisions**  
[Henry Mintzberg]



PROCESS



# Every Day Low Price



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Wayne  
Gretzky's  
Strategy

He skates to where he  
thinks the puck will be ...



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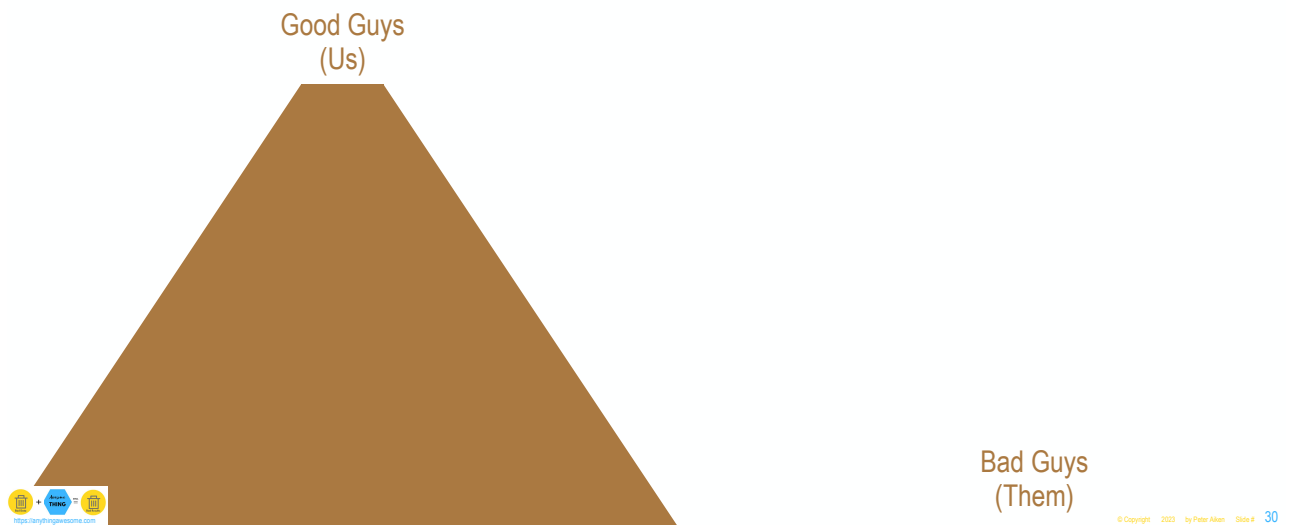
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## Strategy Example 3



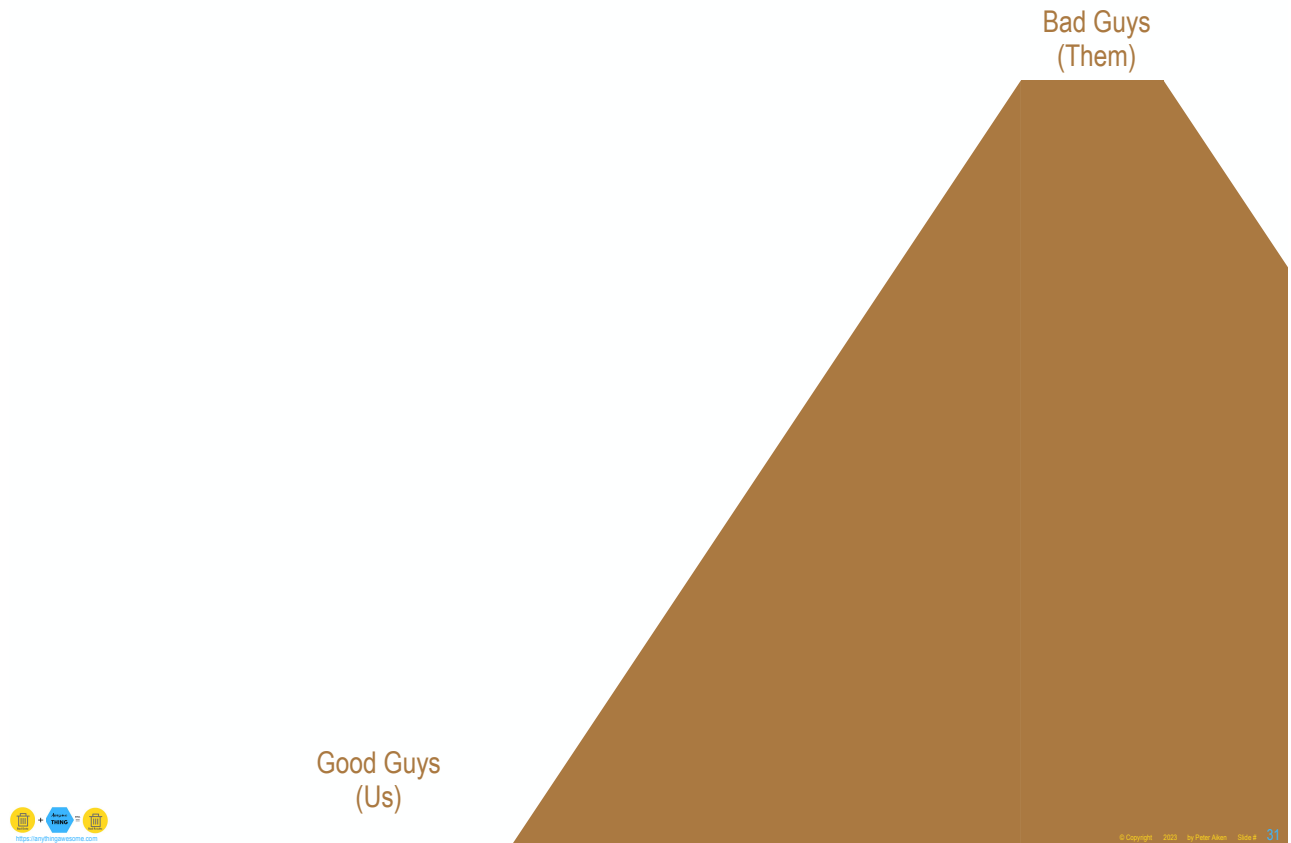
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## Strategy Example 3



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## Strategy Example 3

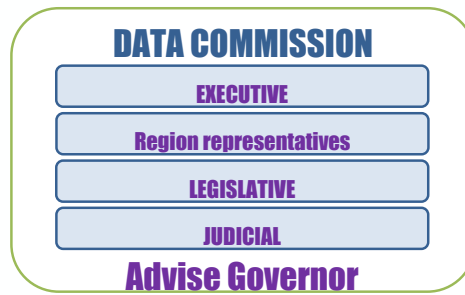


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## Strategy Guides Workgroup Activities

A pattern  
in a stream  
of decisions

# Complex Data Governance Environment



- Data sharing and analytics
- Identify goals and objectives
- Prioritize initiatives
- Study & report
- Recommend changes to budget and code



**execute**

- Define, approve, and communicate data strategies, policies, standards, rules, guidelines, & best practices
- Provide a governance, policy, and technology framework
- Define agency data governance responsibilities
- Encourage & facilitate data sharing
- Facilitate coordination to prevent duplication
- Coordinate policy and technology proposals and recommendations
- Administer and manage the commonwealth data trust
- Track and enforce compliance and conformance
- Oversee dissemination of open data

**Data Governance Council**

- Liaise between agency operations & CDO
- Advise CDO on technology, policy, and governance strategies
- Administer data governance policies set by the board
- implement data sharing & analytics projects
- Review open data assets
- Report progress & compliance to the Board

**Advise CDO**

**Executive data board**

- Translate commonwealth goals to agency performance targets
- provide resources
- Remove organizational obstacles
- appoint data governance council members
- Oversee the data governance council
- Oversee data sharing & analytics projects

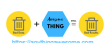
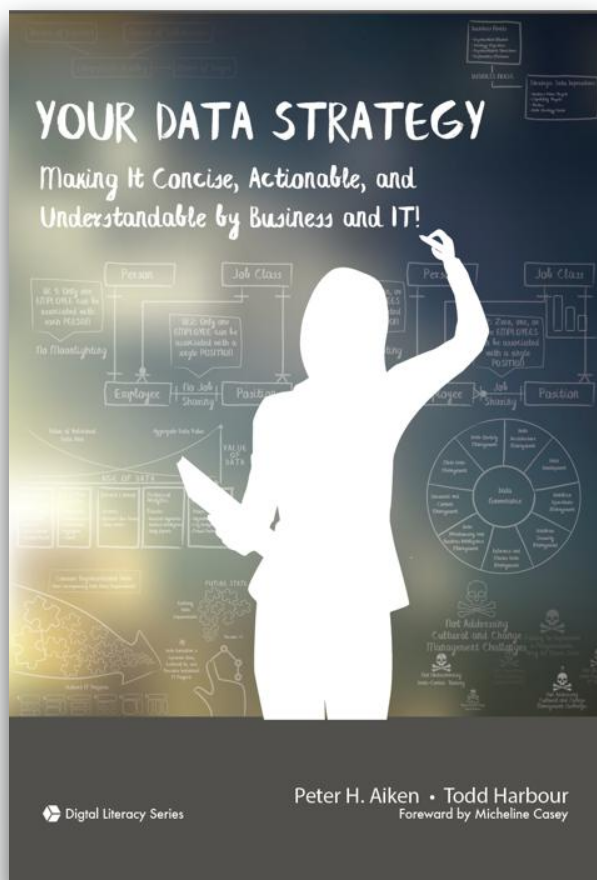
**Oversee council**



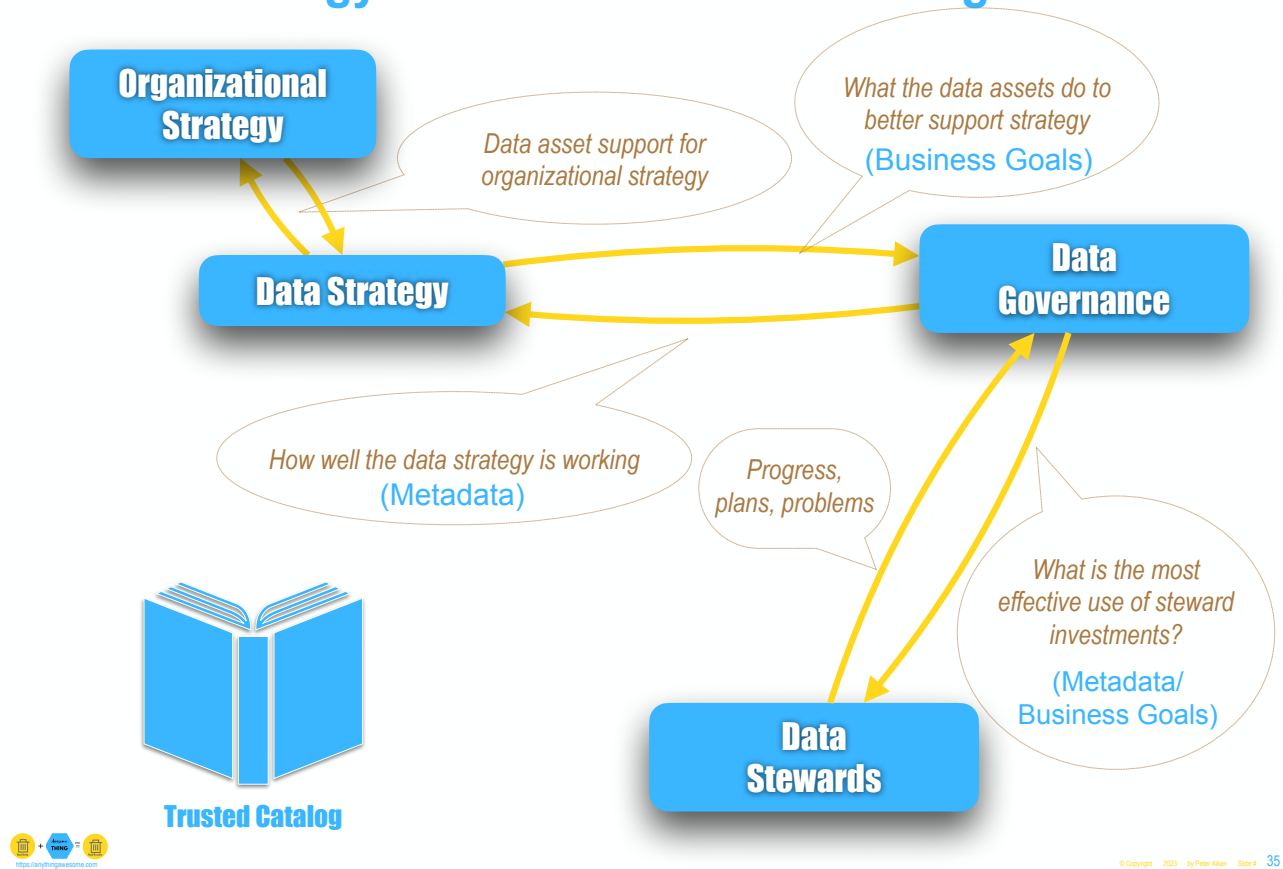
## Your Data Strategy

- Highest level data guidance available ...
- Focusing data activities on business-goal achievement ...
- Providing guidance when faced with a stream of decisions or uncertainties

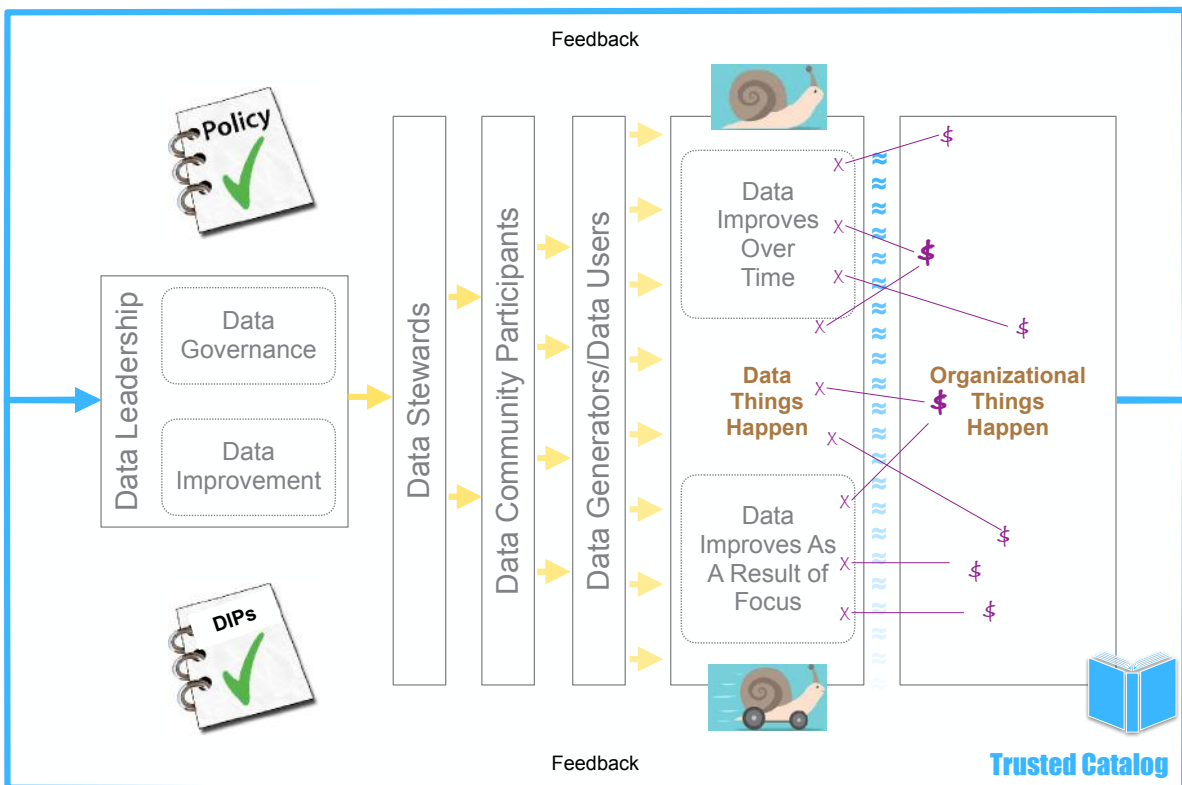
- Data strategy most usefully articulates how data can be best used to support organizational strategy
- This usually involves a balance of remediation and proactive measures

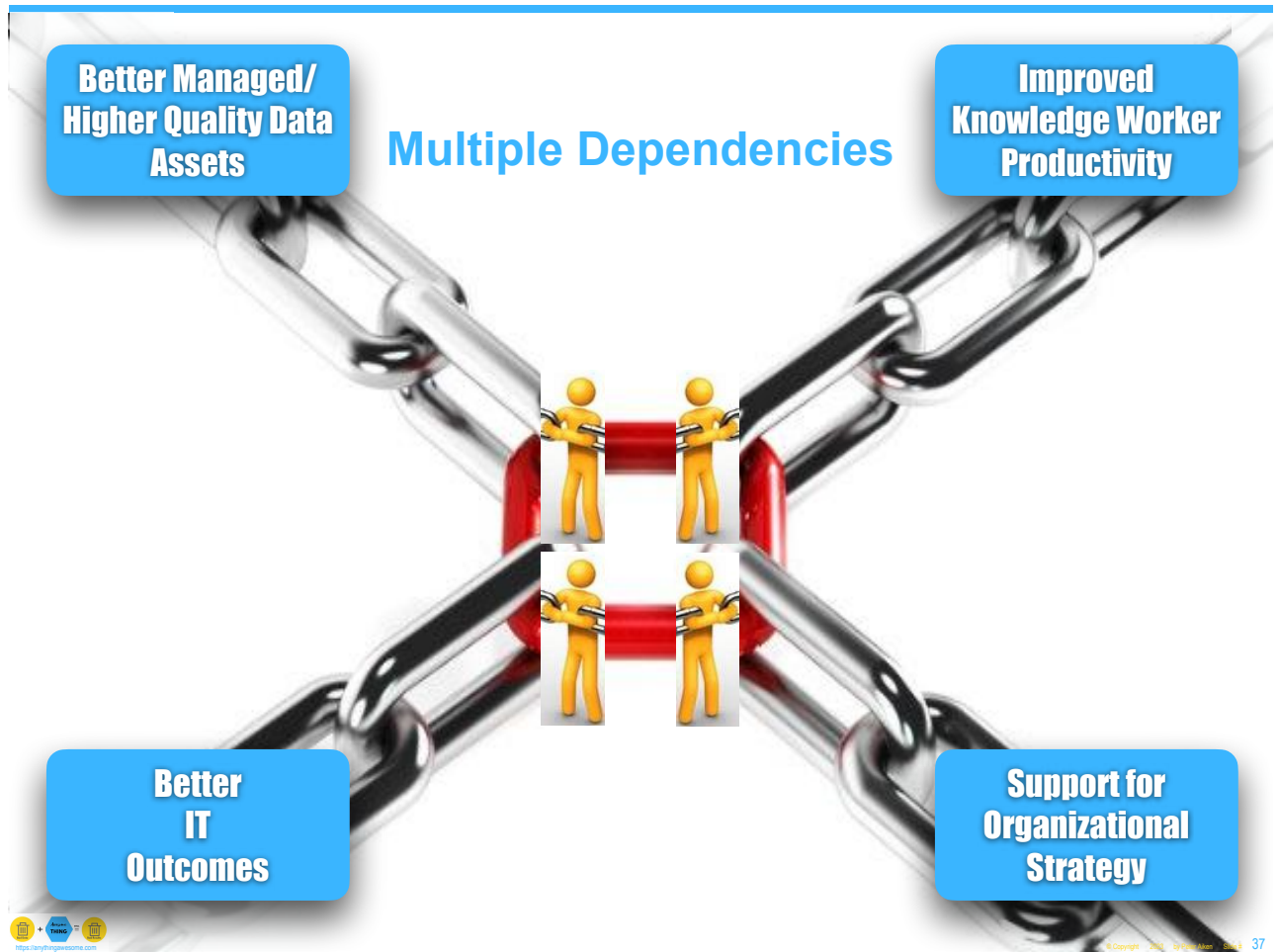


# Data Strategy and Governance in Strategic Context

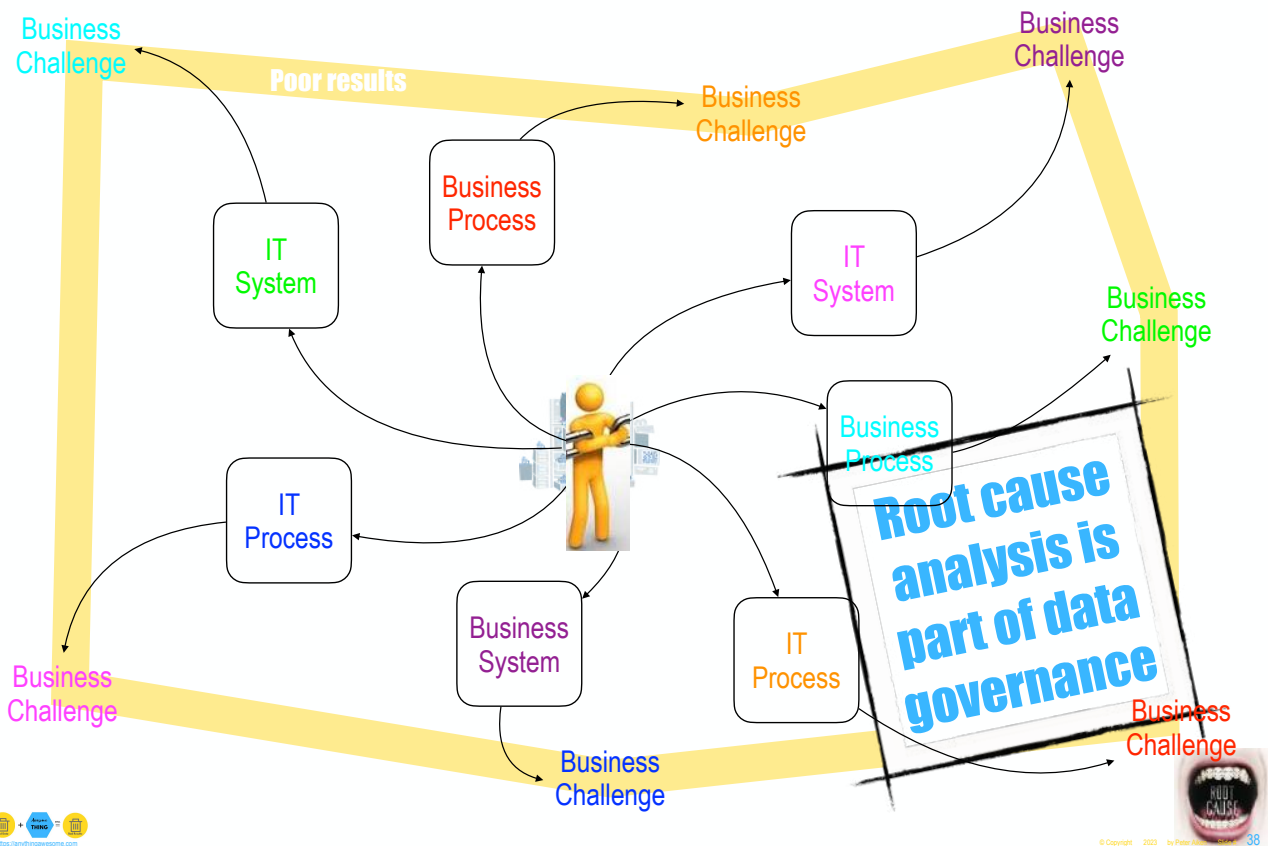


**Data Governance Role: Produce systemic organizational changes that impact data and work practices over time**

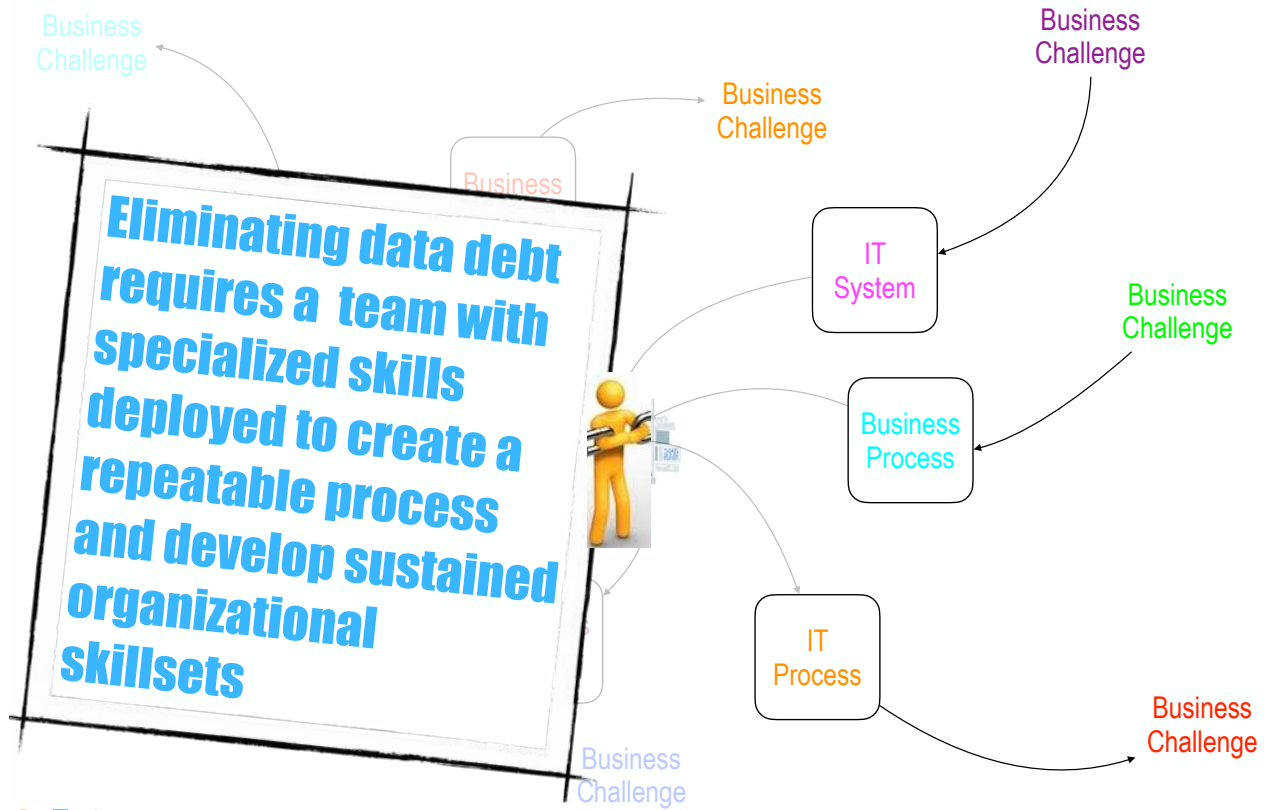




**Poor data manifests as multifaceted organizational challenges**



# Consistency Encourages Quality Analysis



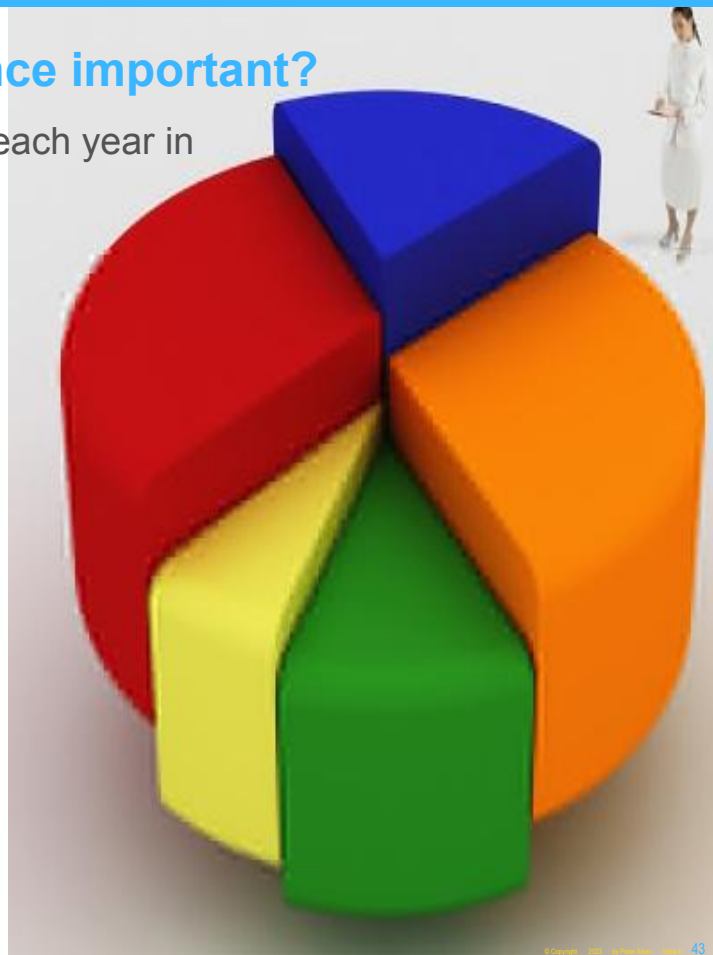
The MacGyver approach to DG uses paperclips and duct tape

# MACGYVER



# Why is Data Governance important?

- Cost organizations millions each year in
  - Productivity
  - Redundant and siloed efforts
  - Poorly thought out hardware and software purchases
  - Delayed decision making using inadequate information
  - Reactive instead of proactive initiatives
  - 20-40% of IT spending can be reduced through better data governance



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# Data is not a Project

Common Organizational Data  
(and corresponding data needs requirements)



Future State



**Evolve**

*Data evolution is separate from, external to, and precedes system development life cycle activities!*

Systems Development Activities

**Create**

New Organizational Capabilities

*Data programmes drive IT programs*



# Data programmes drive IT programs



*Data evolution is separate from, external to, and precedes system development life cycle activities!*

# What is the Difference Between?

## Data Governance

- Policy level guidance
- Setting general guidelines/direction
- Example: All information not marked public should be considered confidential
- Keep in mind "firehouse" metaphor

## Data Management

- The business function of
  - Planning for,
  - Controlling and
  - Delivering
  - Data/information assets
- Examples: Delivering data to solve business challenges



Sample from: <https://artist.com/kathy-linden/on-outside-looking-in/?artid=4385>



## External Comprehension

Everything Else Data

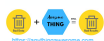
Data Management

Data Governance Program

Data (blah blah blah)

Most do not appreciate the difference between Data Governance and the other data stuff that needs to be done

**Data Program**



# Differences between Programs and Projects

- Programs are Ongoing, Projects End
  - Managing a program involves long term strategic planning and continuous process improvement is not required of a project
- Programs are Tied to the Financial Calendar
  - Program managers are often responsible for delivering results tied to the organization's financial calendar
- Program Management is Governance Intensive
  - Programs are governed by a senior board that provides direction, oversight, and control while projects tend to be less governance-intensive
- Programs Have Greater Scope of Financial Management
  - Projects typically have a straight-forward budget and project financial management is focused on spending to budget while program planning, management and control is significantly more complex
- Program Change Management is an Executive Leadership Capability
  - Projects employ a formal change management process while at the program level, change management requires executive leadership skills and program change is driven more by an organization's strategy and is subject to market conditions and changing business goals



Your data program must last at least as long as your HR program!

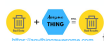


Adapted from [http://top.idownloadnew.com/program\\_vs\\_project/](http://top.idownloadnew.com/program_vs_project/) and <http://management.simplicable.com/management/new/program-management-vs-project-management>

## Data Management Body of Knowledge (DM BoK V2)



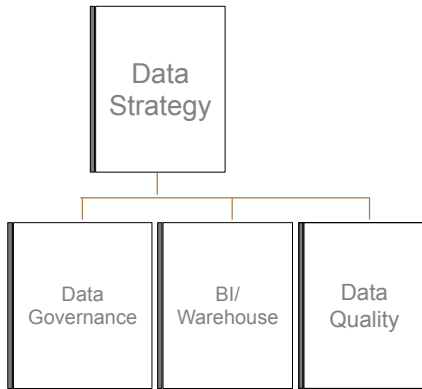
Practice Areas



# Iteration 1



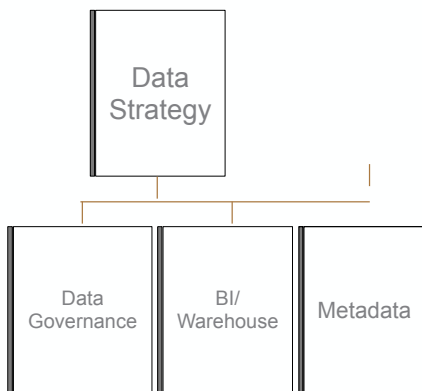
## Perfecting operations in 3 data management practice areas



# Iteration 2



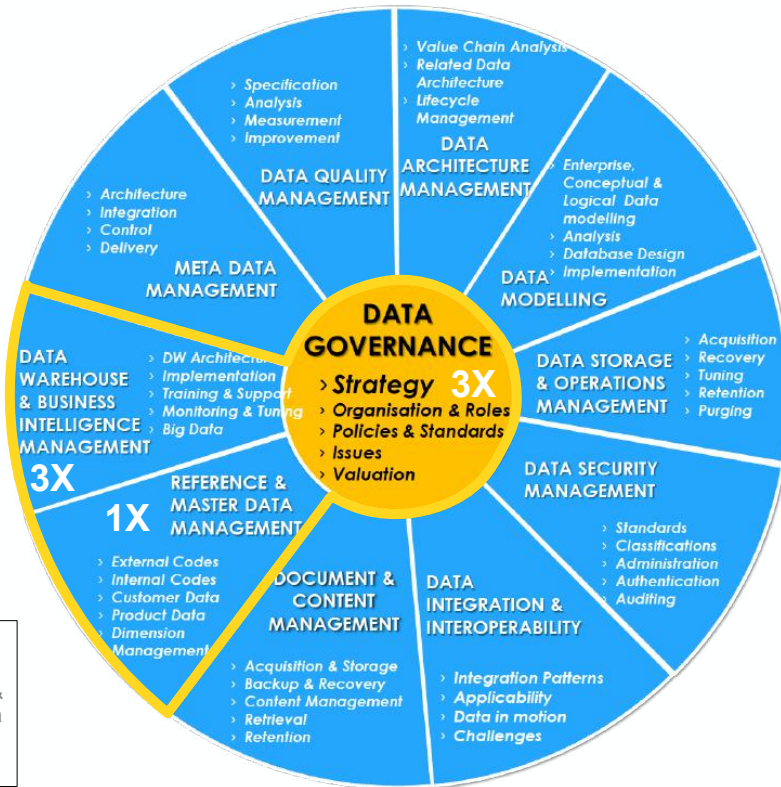
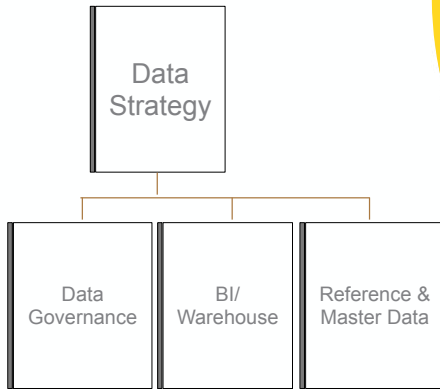
## Perfecting operations in 3 data management practice areas



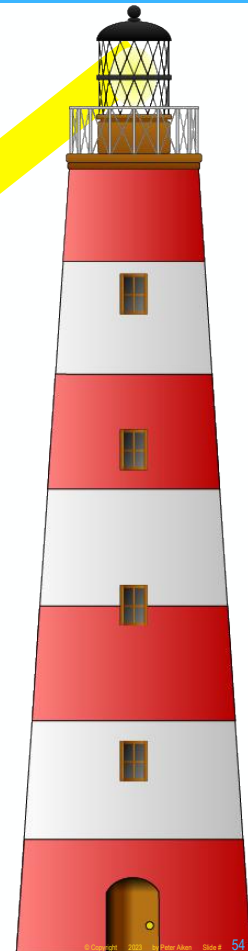
# Iteration 3



## Perfecting operations in 3 data management practice areas



# DG Lighthouse Metaphors Provides Focus



# IT Project or Application-Centric Development

- In support of strategy, organizations implement IT projects
- Data/information are typically considered within the scope of IT projects
- Problems with this approach:
  - Ensures data is formed to the applications and not around the organizational-wide information requirements
  - Process are narrowly formed around applications
  - Very little data reuse is possible



Original articulation from Doug Bagley @ Walmart © Copyright 2023 by Peter Allen Slide # 55

## This is the wrong way to think about data strategy



~~Organizational Strategy~~

~~IT Strategy~~

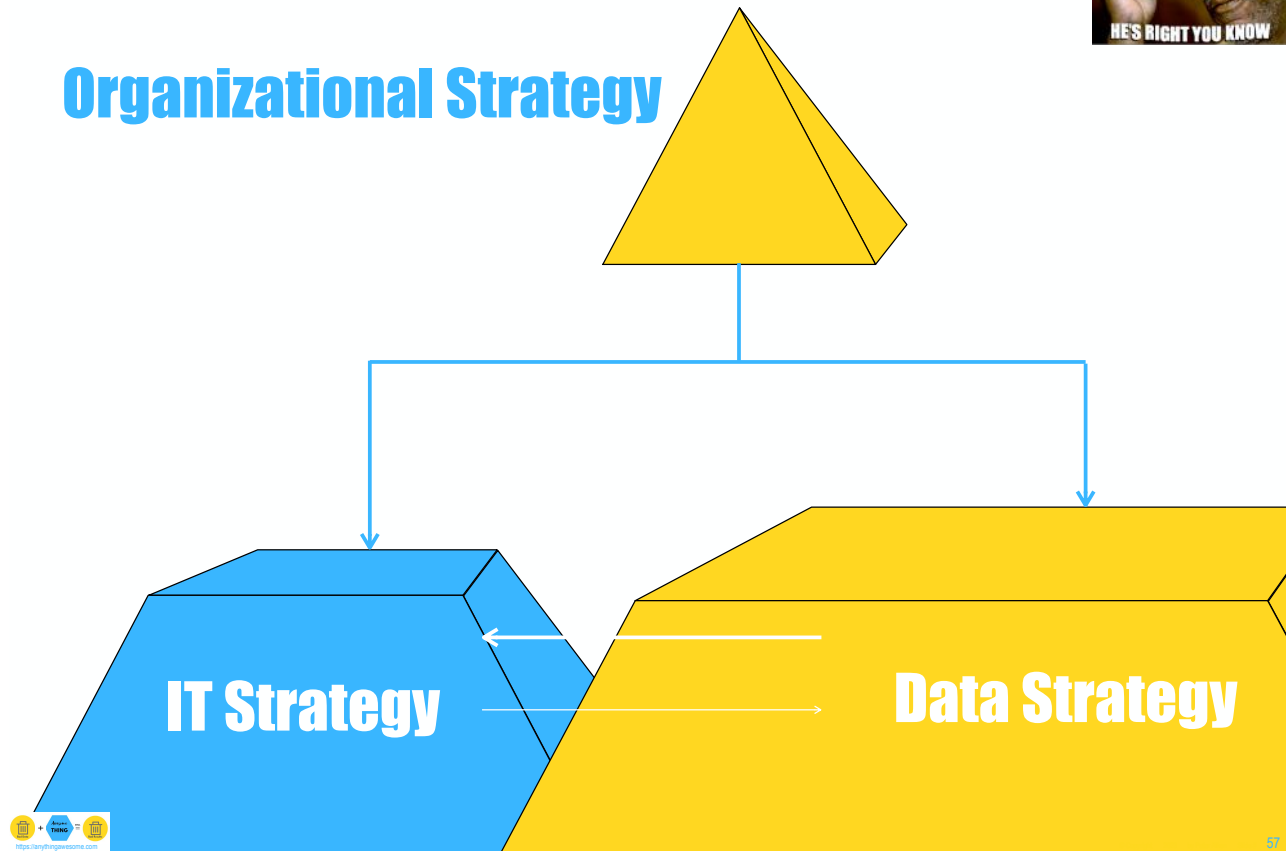
~~Data Strategy~~



This is correct ...



## Organizational Strategy



## Data-Centric Development

- In support of strategy, the organization develops specific, shared data-based goals/objectives
- These organizational data goals/objectives drive the development of specific IT projects with an eye to organization-wide usage
- Advantages of this approach:
  - Data/information assets are developed from an organization-wide perspective
  - Systems support organizational data needs and compliment organizational process flows
  - Maximum data/information reuse



# Program overview

- Data's Confounding Characteristics
  - Uneven understanding
  - Has lead fractured views of data and to
  - Increasing organizational data debt
- 1. Keeping DG practically focused on strategy
  - This is a young profession and must
  - Directly support organizational strategy by
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  - Digital and data are dependent on high speed automation/data processing
  - Employ a DG Frameworks to refine focus
  - Plan to evolve (PDCA)
- 4. Data governance in action: Storytelling
  - Take Aways/References/Q&A



## Key Elements of a Successful Data Governance Program



## Digital Insight



DIGITAL

DATA

— DATA

— DIGITAL

?

DATA

- Subtract data from digital and what do you have?
- Subtract digital from data and you still have data





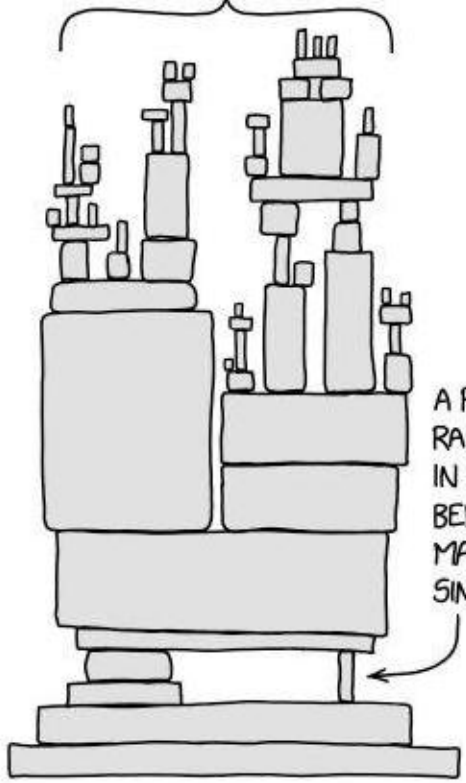
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# Digital

**It isn't possible to go digital**



ALL MODERN DIGITAL  
INFRASTRUCTURE



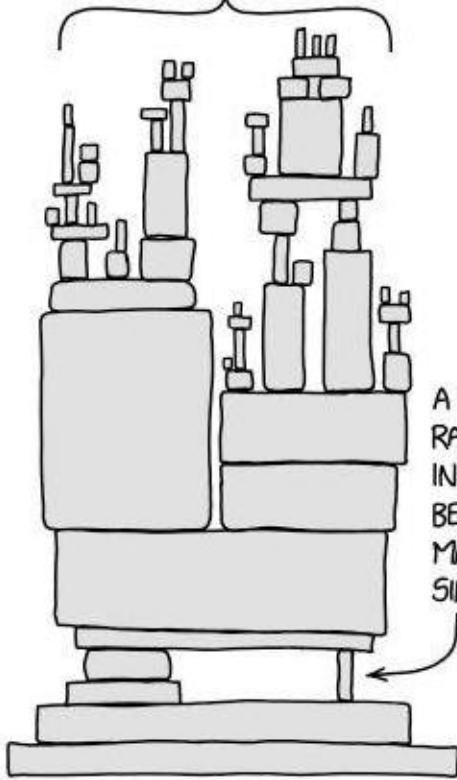
# Dat

A PROJECT SOME  
RANDOM PERSON  
IN NEBRASKA HAS  
BEEN THANKLESSLY  
MAINTAINING  
SINCE 2003

**By just spelling 'data'**



ALL MODERN DIGITAL  
INFRASTRUCTURE



A PROJECT SOME  
RANDOM PERSON  
IN NEBRASKA HAS  
BEEN THANKLESSLY  
MAINTAINING  
SINCE 2003

**It requires more work!**

**D**at  
a

**GI→GO!**

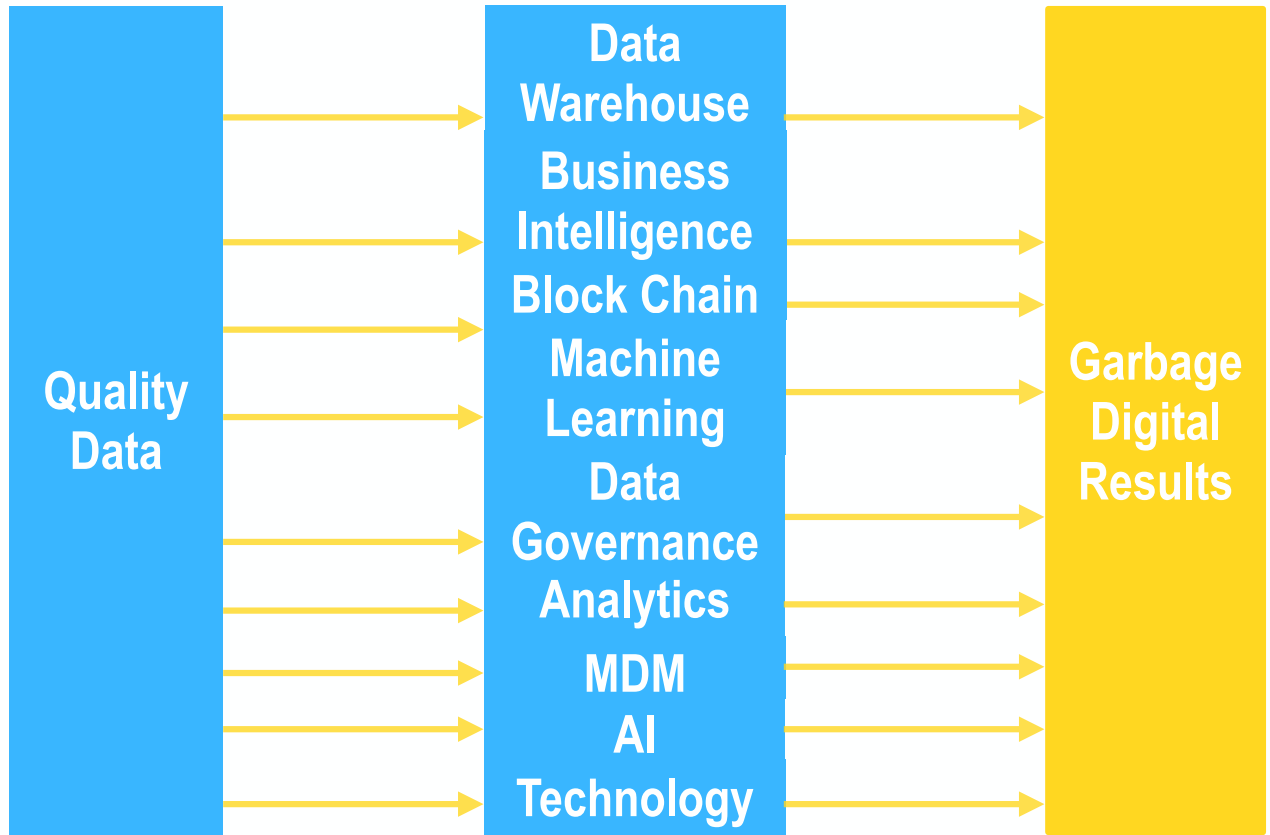
Garbage  
Data

Technology

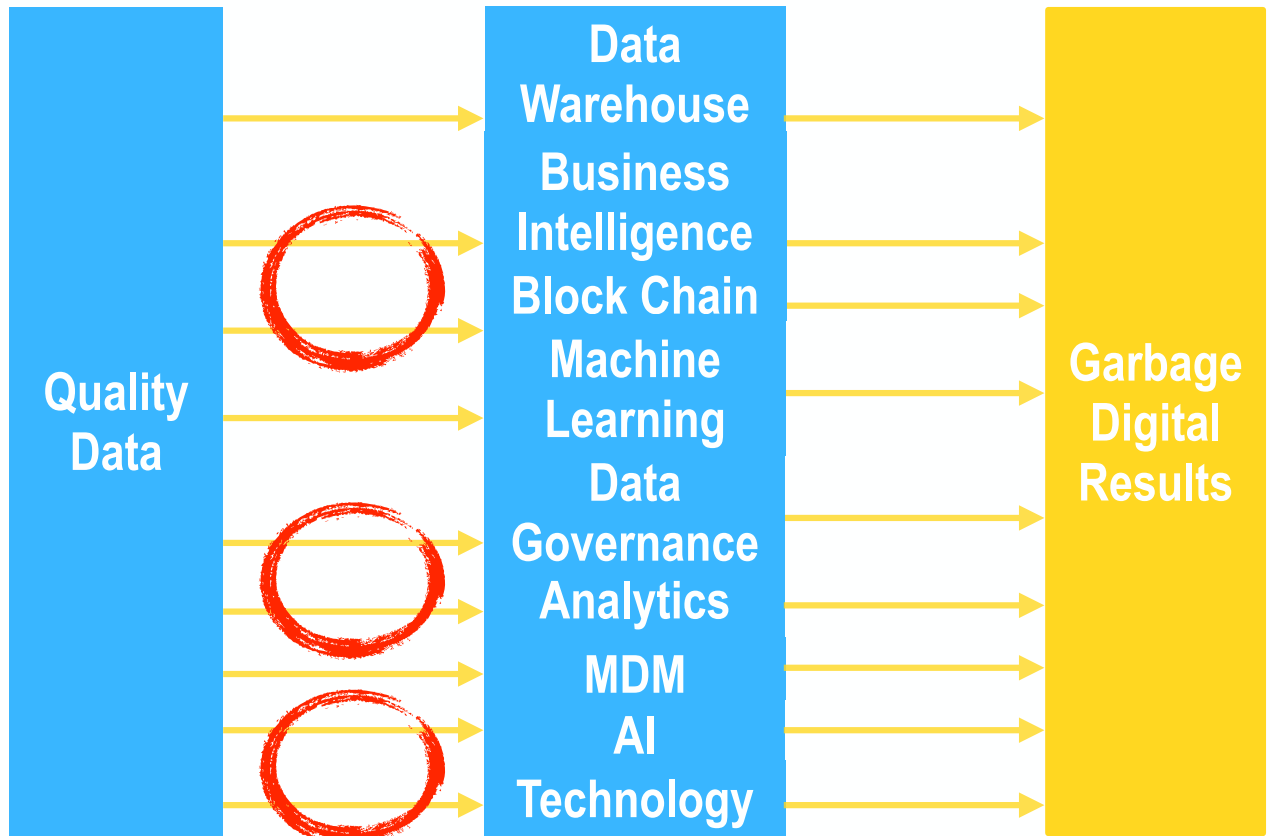
Garbage  
Digital  
Results

**Garbage In → Garbage Out!**

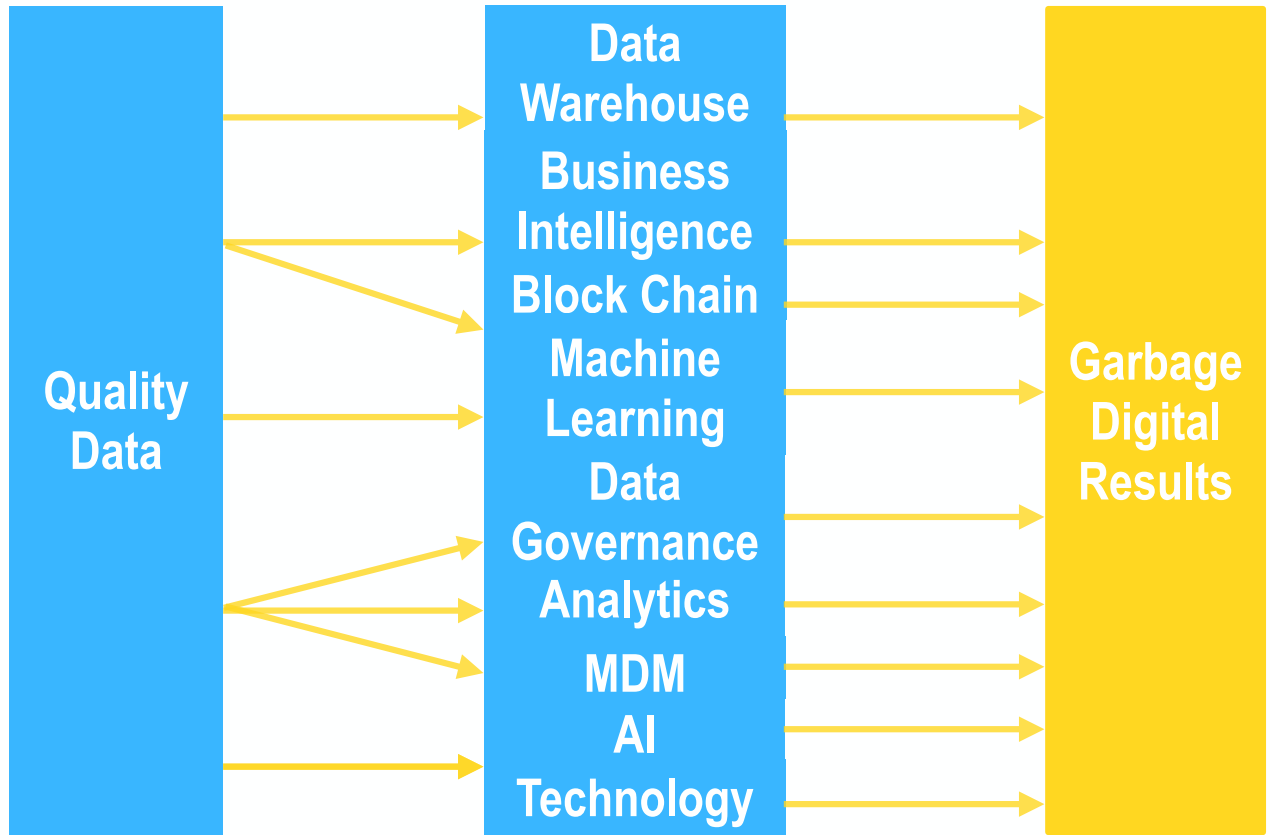
## GI→GO!



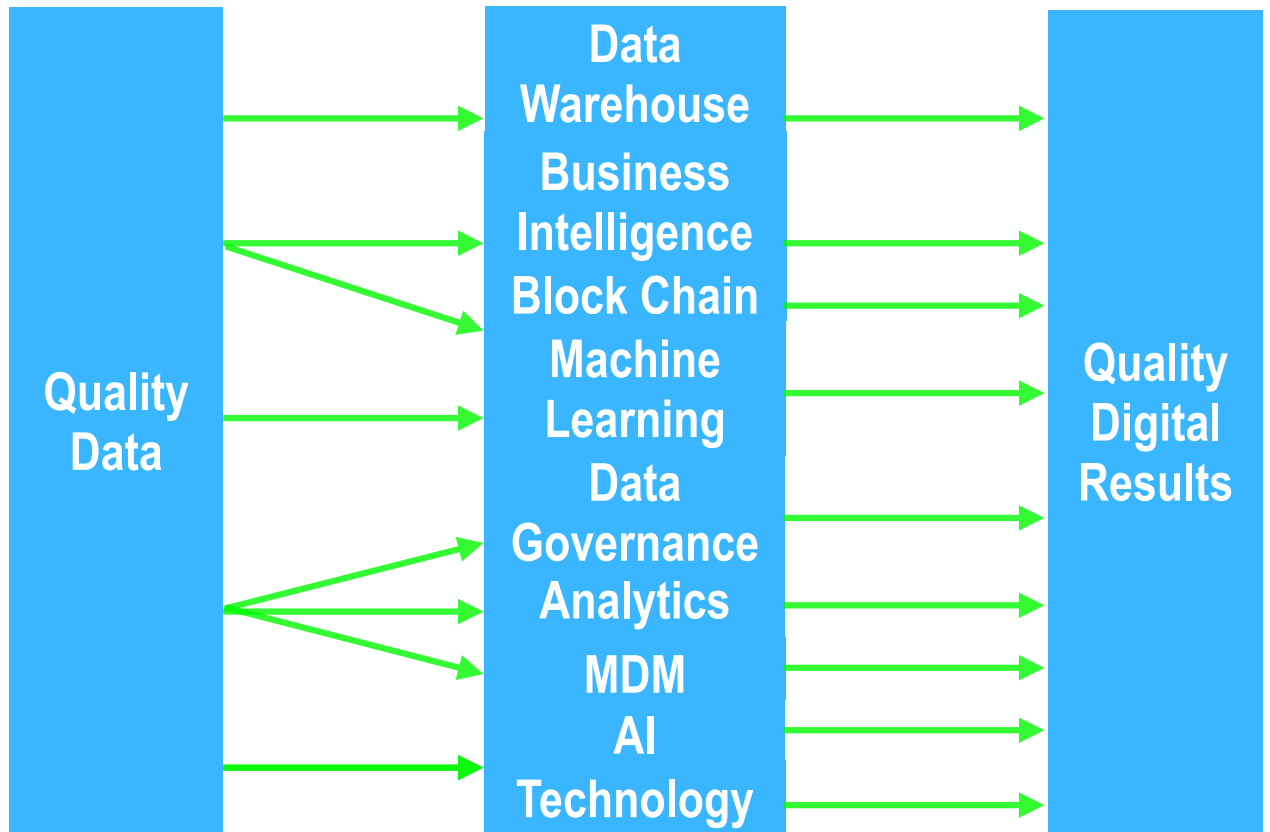
## GI→GO!



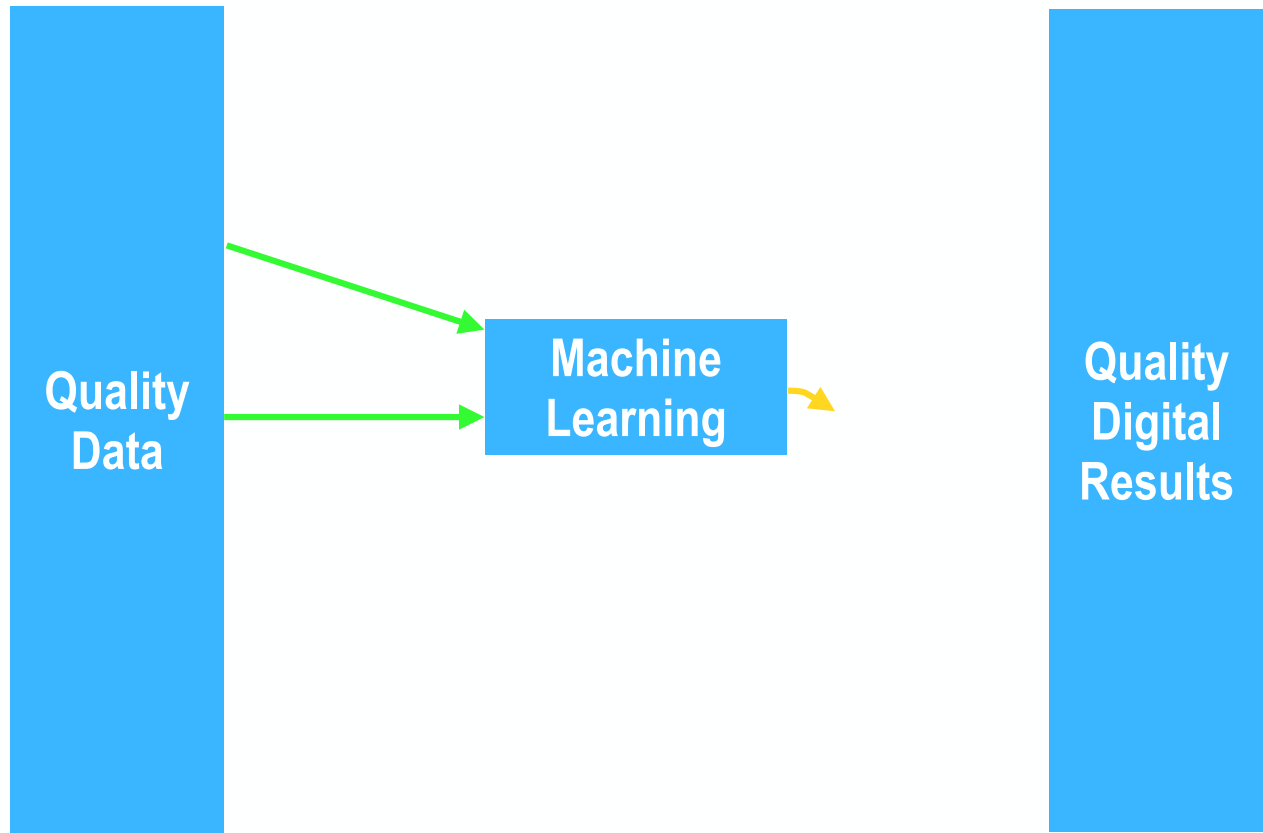
## GI→GO!



## QI→QO!



# Today



(A Newly Released Chatbot) what are you (Me)

I am a chatbot.

what is a chatbot

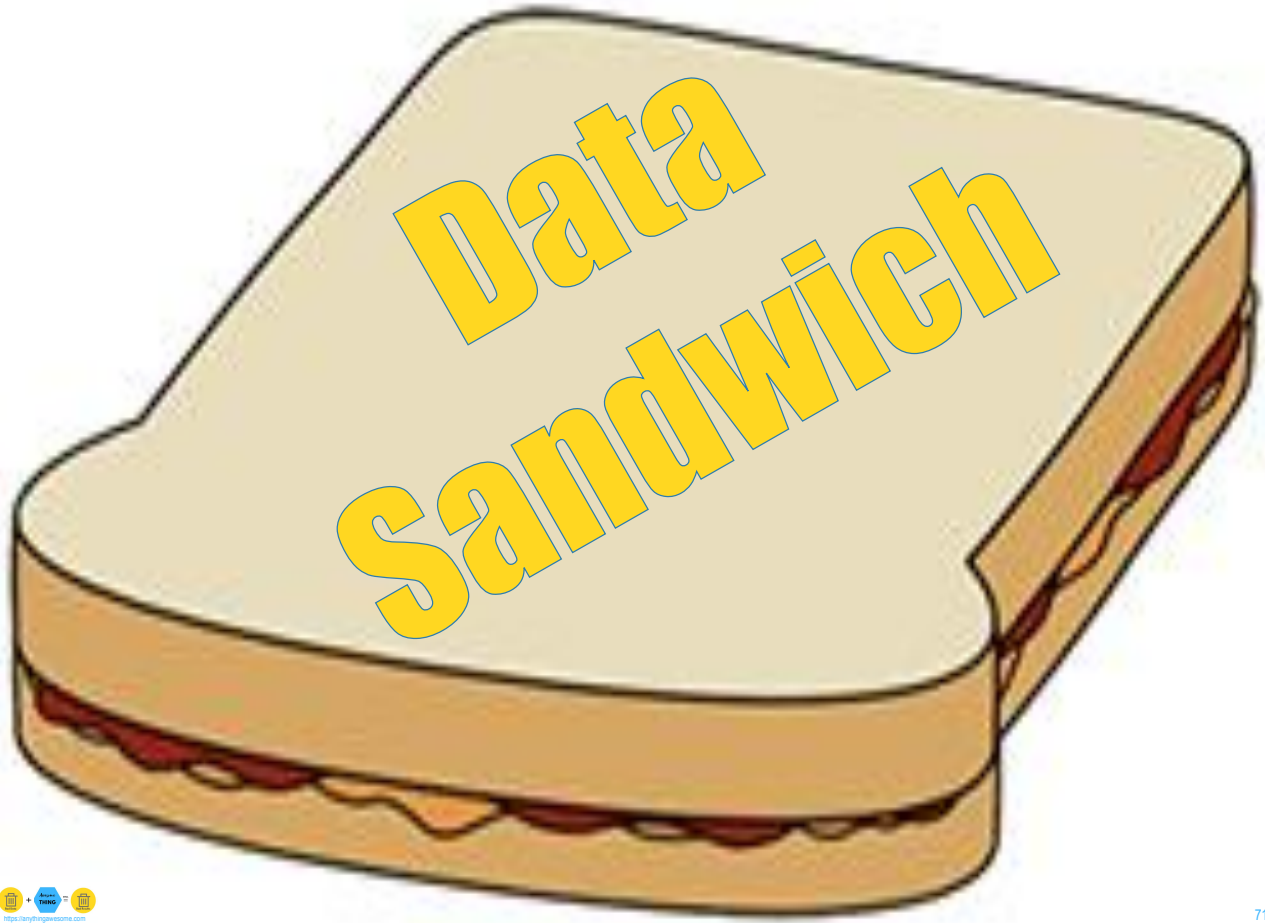
A chatbot is a computer program or an artificial intelligence which conducts a conversation via auditory or textual methods.

why would I want to chat with a chatbot

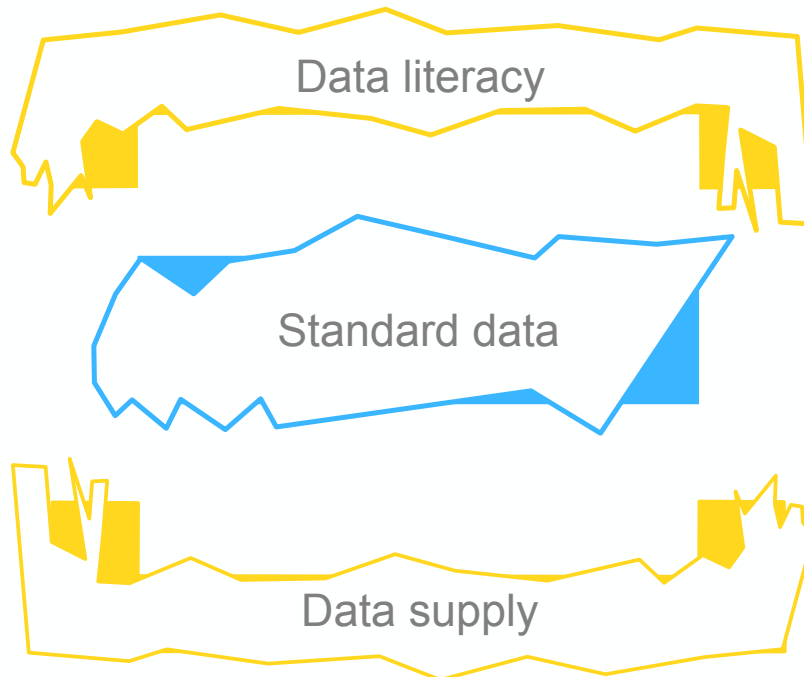
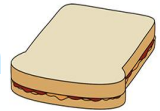
Uh oh! It looks like I'm stumped!

Please submit a ticket below and we will get back to you at our earliest convenience.~

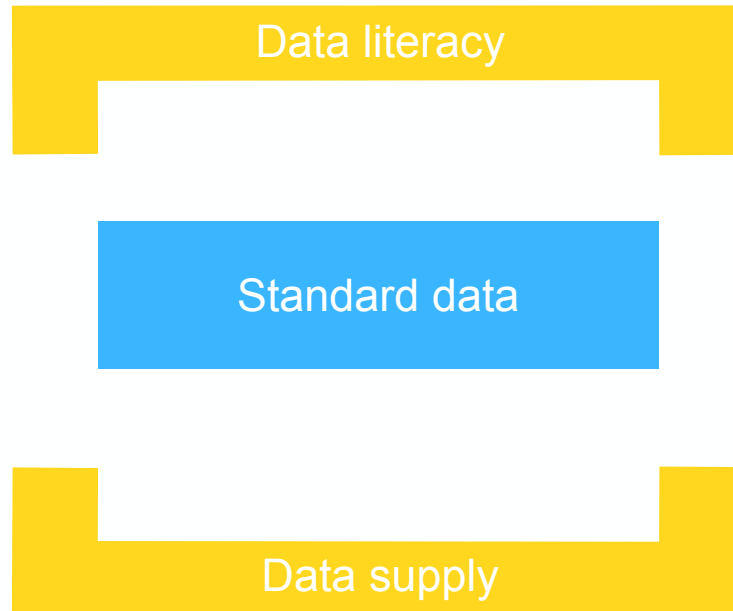
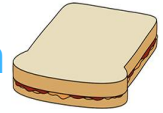
**AI's delivery is often ahead of value**



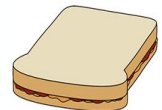
## Leverage point - high performance automation



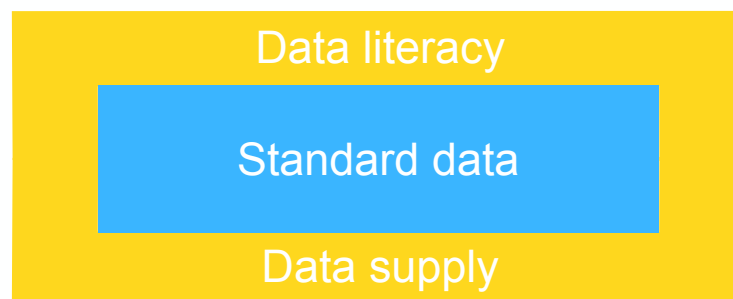
## Leverage point - high performance automation



## Leverage point - high performance automation

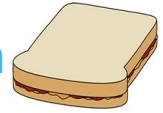


*This cannot happen without investments in engineering and architecture!*



**Quality engineering/  
architecture work products  
do not happen accidentally!**

## Leverage point - high performance automation



*This cannot happen without investments in  
data engineering and architecture!*



**Quality data engineering/  
architecture work products  
do not happen accidentally!**

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## Our barn had to pass a foundation inspection

- Before further construction could proceed
- It makes good business sense
- No IT equivalent



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# Data Governance Frameworks

- A system of ideas for guiding analyses
- A means of organizing project data
- Priorities for data decision making
- A means of assessing progress
  - Don't put up walls until foundation inspection is passed
  - Put the roof on ASAP
- Make it all dependent upon continued funding



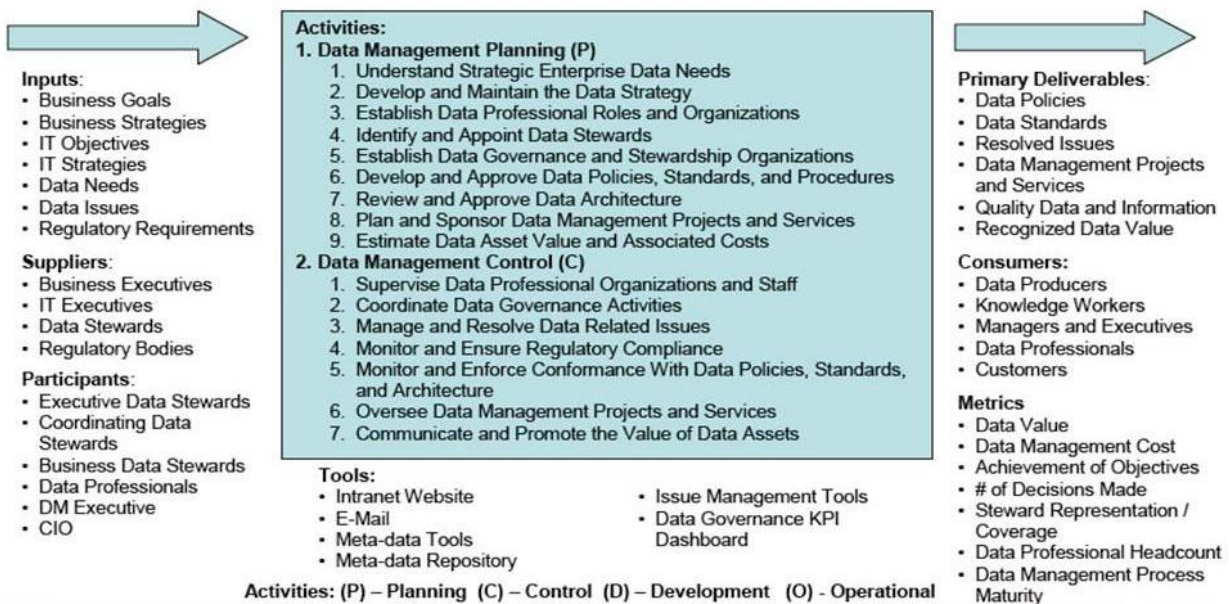
from The DAMA Guide to the Data Management Body of Knowledge © 2009 by DAMA International

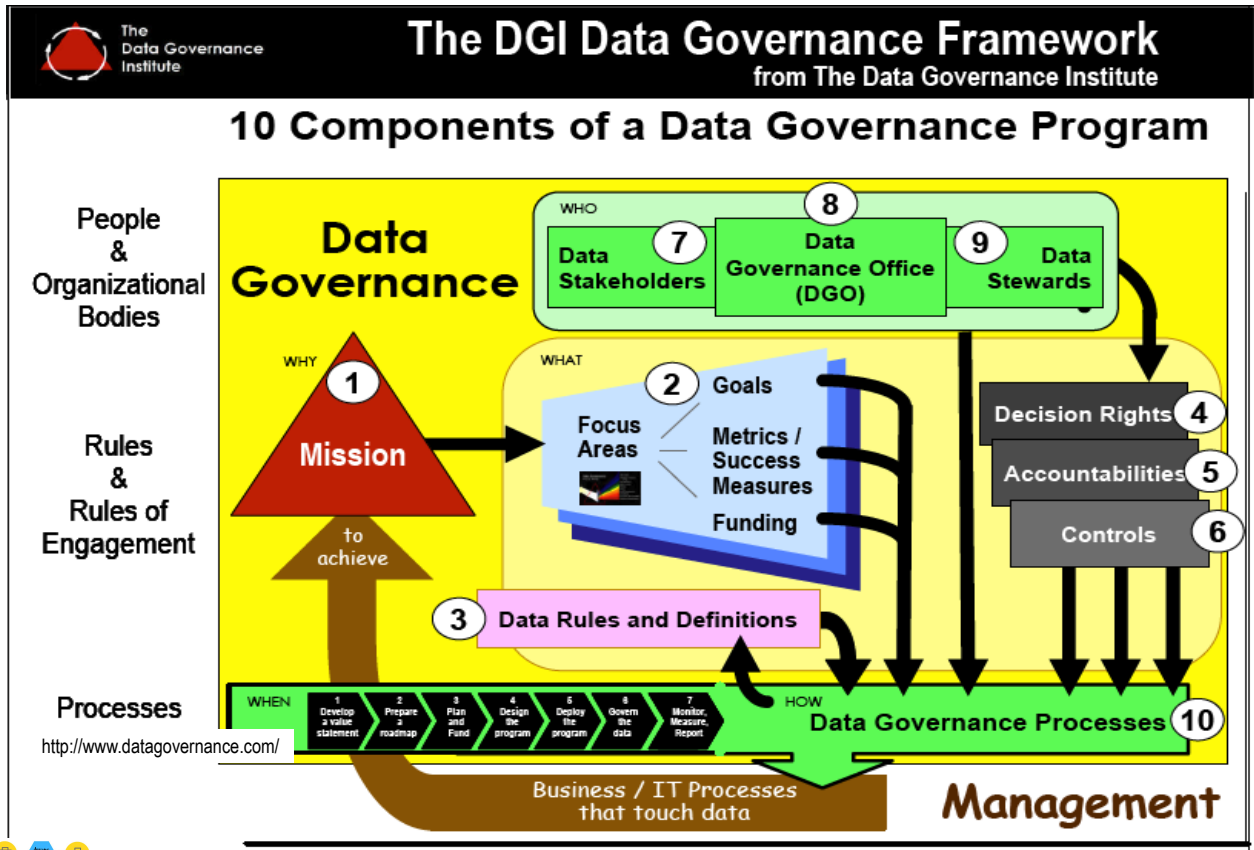
## Data Governance from the DMBOK

**Definition:** The exercise of authority and control (planning, monitoring, and enforcement) over the management of data assets.

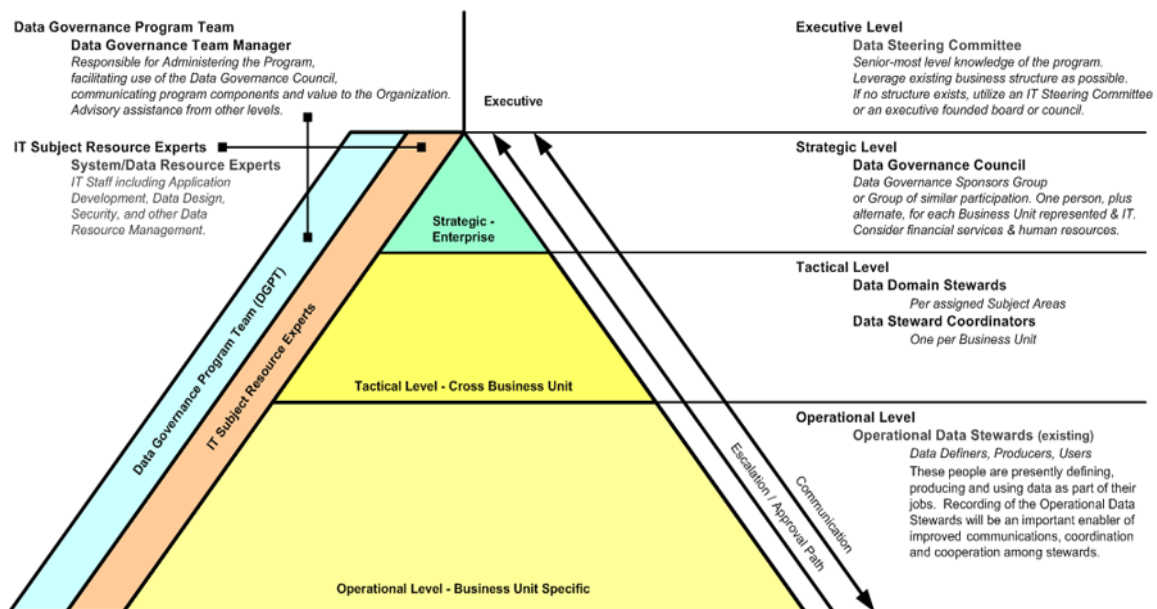
**Goals:**

1. To define, approve, and communicate data strategies, policies, standards, architecture, procedures, and metrics.
2. To track and enforce regulatory compliance and conformance to data policies, standards, architecture, and procedures.
3. To sponsor, track, and oversee the delivery of data management projects and services.
4. To manage and resolve data related issues.
5. To understand and promote the value of data assets.

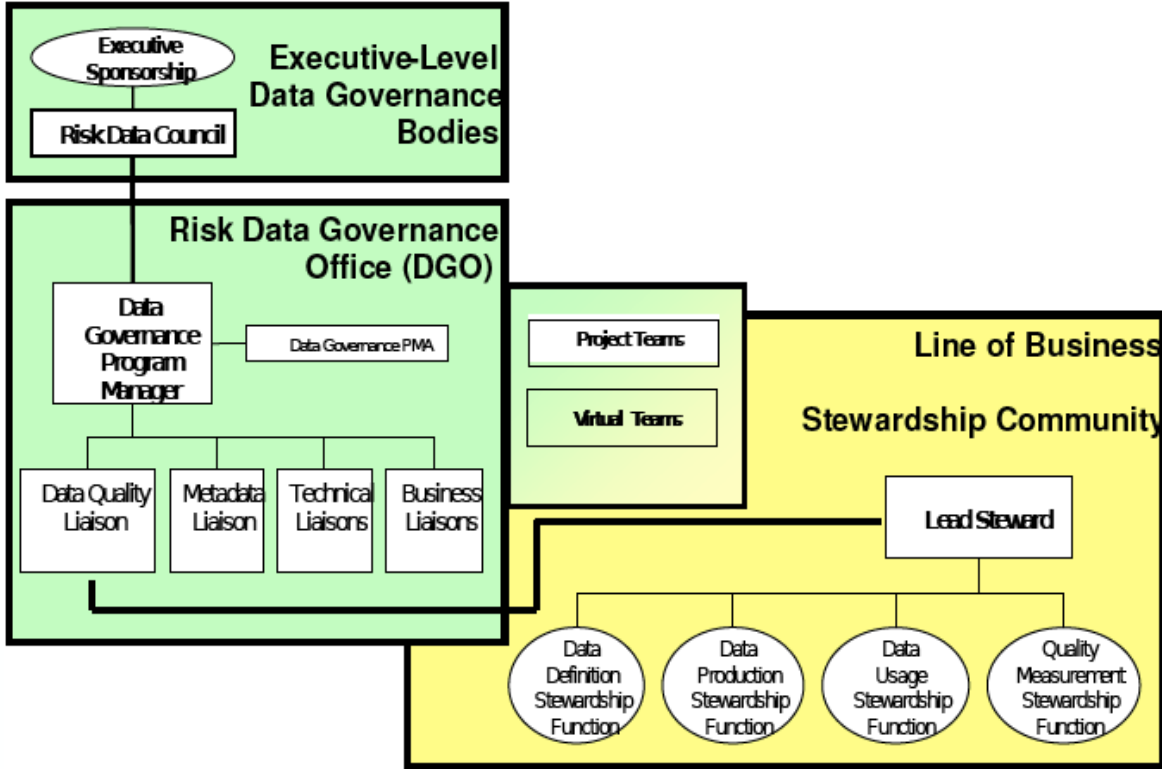




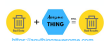
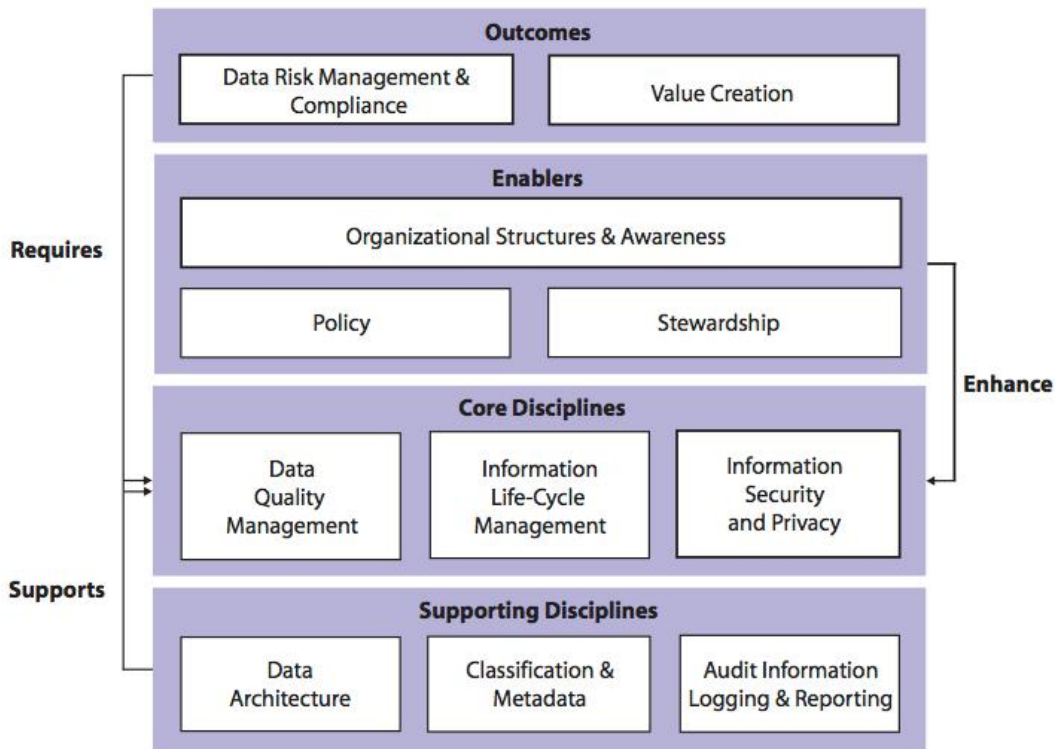
**KiK Consulting & Educational Services, LLC**  
**“Non-Invasive Data Governance”™ Operating Model of Roles & Responsibilities**



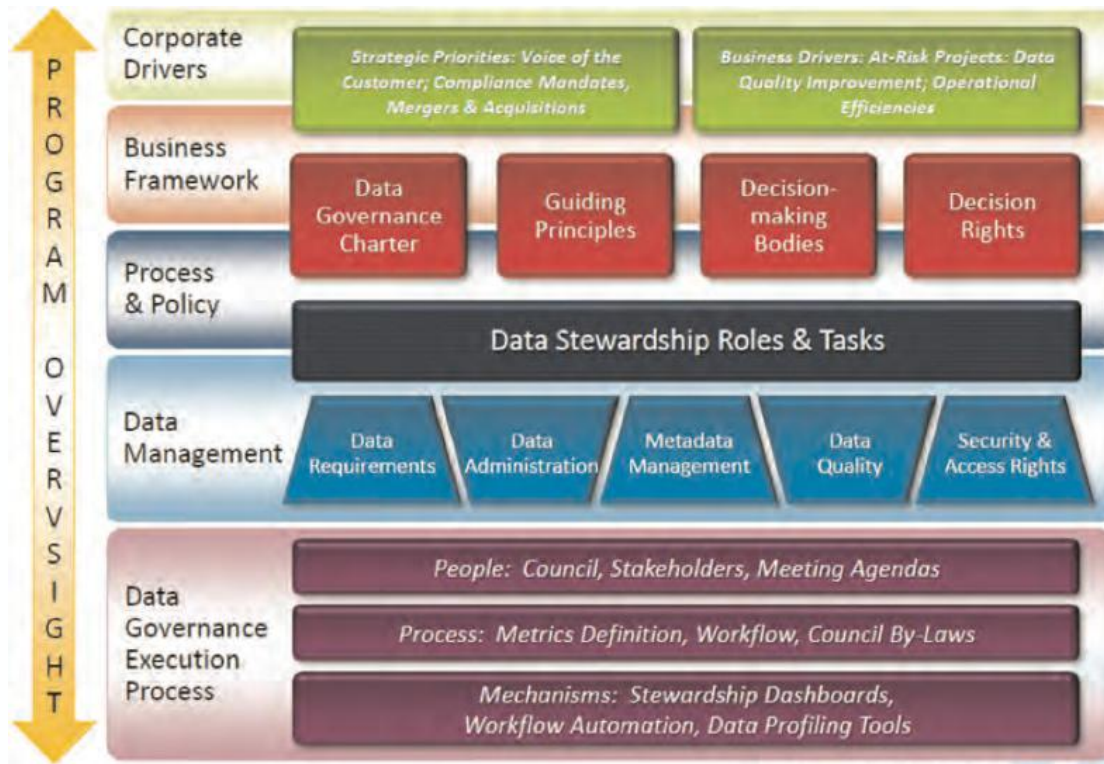
# IBM Data Governance Council



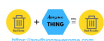
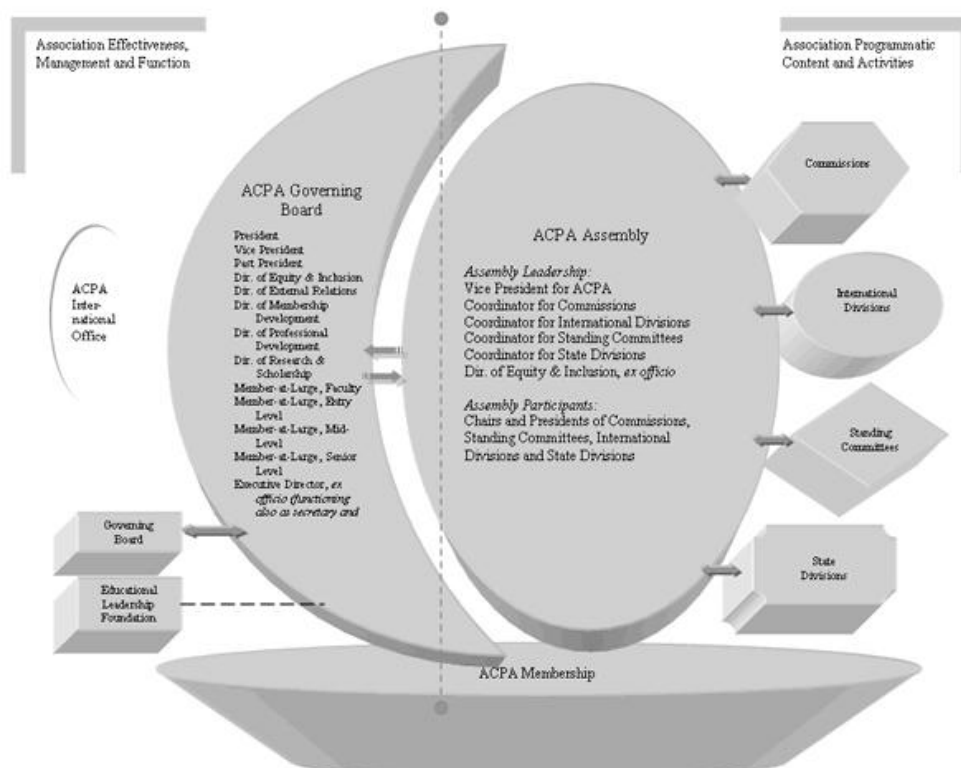
# Elements of Effective Data Governance



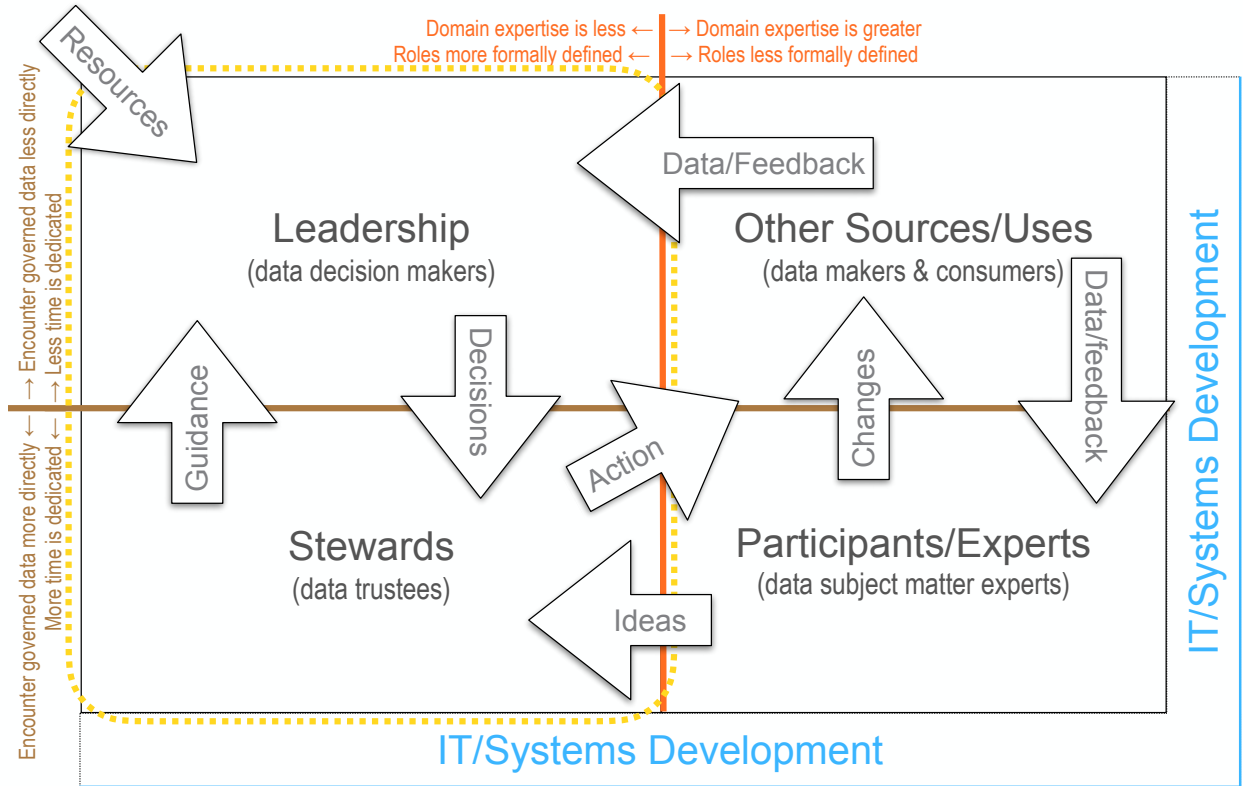
# Baseline Consulting [\(sas.com\)](https://sas.com)



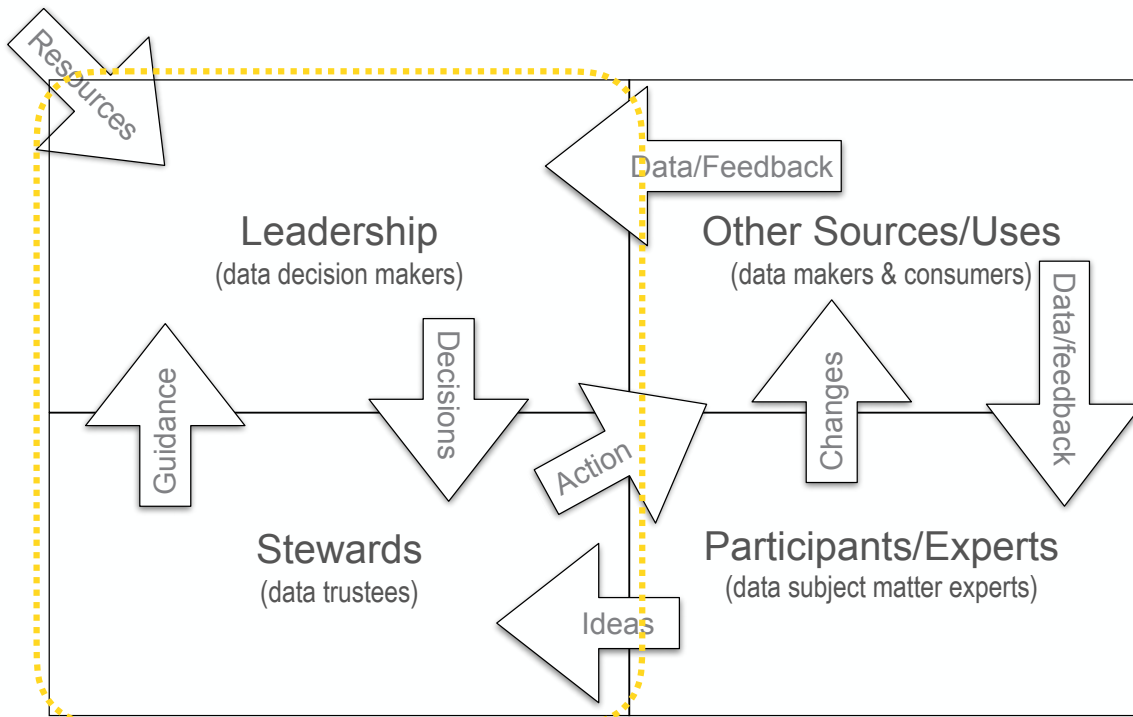
# American College Personnel Association



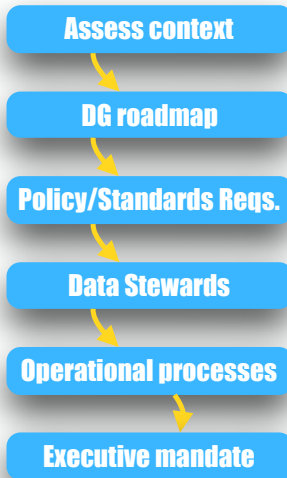
# Components comprising the data community



# Components comprising the data community



# Getting Started with Data Governance



## Goals and Principles

- To define, approve, and communicate data strategies, policies, standards, architecture, procedures, and metrics.
- To track and enforce regulatory compliance and conformance to data policies, standards, architecture, and procedures.
- To sponsor, track, and oversee the delivery of data management projects and services.
- To manage and resolve data related issues.
- To understand and promote the value of data assets.



## Primary Deliverables

- Data Policies
- Data Standards
- Resolved Issues
- Data Management Projects and Services
- Quality Data and Information
- Recognized Data Value



Illustration from *The DAMA Guide to the Data Management Body of Knowledge* © 2009 by DAMA International



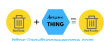
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## Roles and Responsibilities

- Suppliers:
  - Business Executives
  - IT Executives
  - Data Stewards
  - Regulatory Bodies
- Consumers:
  - Data Producers
  - Knowledge Workers
  - Managers and Executives
  - Data Professionals
  - Customers
- Participants:
  - Executive Data Stewards
  - Coordinating Data Stewards
  - Business Data Stewards
  - Data Professionals
  - DM Executive
  - CIO



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## Scorecard: Data Governance Practices/Techniques

- Data Value
- Data Management Cost
- Achievement of Objectives
- # of Decisions Made
- Steward Representation/Coverage
- Data Professional Headcount
- Data Management Process Maturity



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Source: "Data Governance Checklist for Educators" by Angela Guess; <http://www.dataversity.net/archives/5198>

## Data Governance Checklist

- ✓ Decision-Making Authority
- ✓ Standard Policies and Procedures
- ✓ Data Inventories
- ✓ Data Content Management
- ✓ Data Records Management
- ✓ Data Quality
- ✓ Data Access
- ✓ Data Security and Risk Management



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# DG Components

- Practices and Techniques
  - Data Value
  - Data Management Cost
  - Achievement of Objectives
  - # of Decisions Made
  - Steward Representation/Coverage
  - Data Professional Headcount
  - Data Management Process Maturity
- What do I include in my Data Governance Program?
  - Security and Privacy of Data
  - Quality of Data
  - Life Cycle Management
  - Risk Management
  - Content Valuation
  - Standards (Data Design, Models and Tools)
  - Governance Tool Kits and Case Studies



Illustration from *The DAMA Guide to the Data Management Body of Knowledge* © 2009 by DAMA International



### Goals and Principles

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  - Customer
- Participants:**
  - Executive Data Stewards
  - Coordinating Data Stewards
  - Business Data Stewards
  - Data Professionals
  - DM Executive
  - DM

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### Governance Practices and Techniques

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- Data Inventories
- Data Content Management
- Data Records Management
- Data Quality
- Data Access
- Data Security and Risk Management

### What do I include in my Data Governance Program?

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- Quality of Data
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- Risk Management
- Content Valuation
- Standards (Data Design, Models and Tools)
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# Evolve

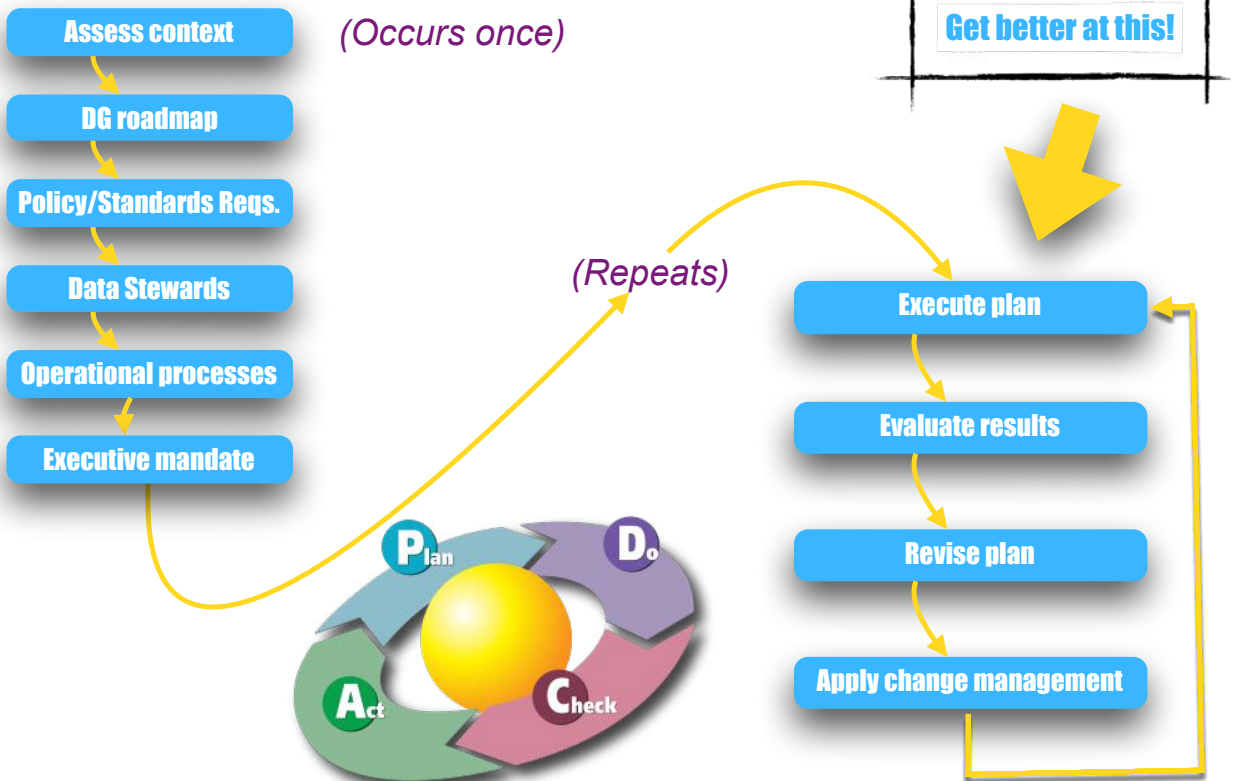




# Evolution is not goal oriented



## Getting Started with Data Governance



# Program overview

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  - Uneven understanding
  - Has lead fractured views of data and to
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- 1. Keeping DG practically focused on strategy
  - This is a young profession and must
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## Key Elements of a Successful Data Governance Program



### Business

## Non-Fungible Tokens

### 'Jack Dorsey's First Tweet' NFT Went on Sale for \$48M. It Ended With a Top Bid of Just \$280

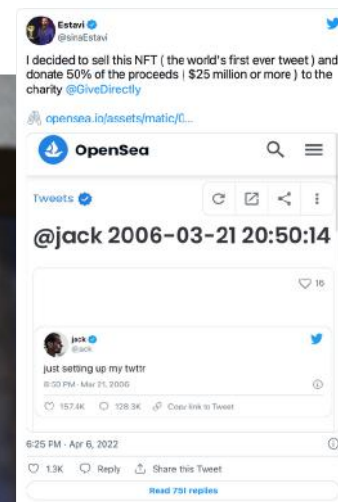


Crypto entrepreneur Sina Estavi bought Twitter founder Jack Dorsey's first-ever tweet as an NFT for \$2.9 million last year. He listed the NFT for sale again at \$48 million last week.

By Sandali Handagama · Apr 13, 2022 at 2:48 p.m. EDT · Updated Apr 16, 2022 at 10:12 a.m. EDT



Twitter founder Jack Dorsey's tweet NFT was briefly on sale again. (CoinDesk archives)



## Use Their Language ...



- *Getting access to data around here is like that Catherine Zeta Jones scene where she is having to get thru all those lasers ...*

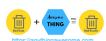


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## Barclays Excel Spreadsheet Horror

- Barclays preparing to buy Lehman's Brothers assets.
- 179 dodgy Lehman's contracts were almost accidentally purchased by Barclays because of an Excel spreadsheet reformatting error
- A first-year associate reformatted an Excel contracts spreadsheet
  - Predictably, this work was done long after normal business hours, just after 11:30 p.m...
- The Lehman/Barclays sale closed on September 22<sup>nd</sup>, 2008
- the 179 contracts were marked as "hidden" in Excel, and those entries became "un-hidden" when when globally reformatting the document ...
- ... and the sale closed ...

<https://www.businessinsider.com/2008/10/barclays-excel-error-results-in-lehman-chaos>



### Hidden spreadsheet rows hit Barclays with toxic Lehman contracts

by AccountantYEEB



### Lehman Excel snafu could cost Barclays dear

Hey, whoa, we never meant to buy that bit

### Excel error leaves Barclays with more Lehman assets than it bargained for

Law firm says spreadsheet reformatting error added 179 contracts to bankruptcy buyout deal

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# Excel spreadsheet error blamed for UK's 16,000 missing coronavirus cases

The case went missing after the spreadsheet hit its filesize limit

By James Vincent | Oct 5, 2020, 9:41am EDT

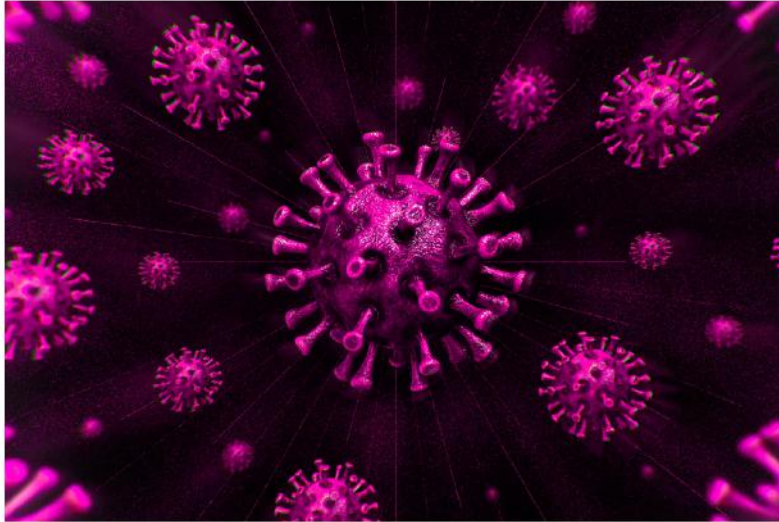


Illustration by Alex Castro / The Verge

The UK failed to add nearly 16,000 confirmed cases of coronavirus to its national track and trace system due to an Excel error. A number of reports, including from The Guardian, Sky News, and The Daily Mail, say the mistake was caused when an Excel spreadsheet used to track confirmed cases of the virus reached its maximum file size and failed to update.

"Failure to upload these cases to the national database meant anyone who came into contact with these individuals was not informed. It's an error that may have helped spread the virus further through the country as individuals exposed to the virus continued to act as normal."

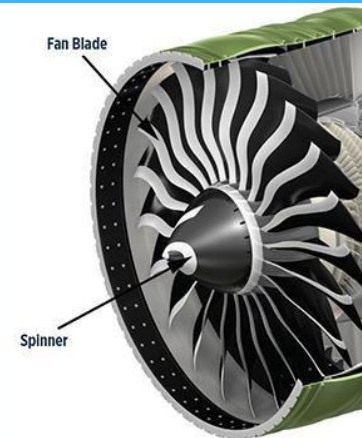


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## Fan Blade Sensor

- 1 Sensor
  - Probabilistic (generalist) maintenance forecasts
- 100 Sensors
  - Establish optimal monitoring targets
  - Finer tuned and safer maintenance
  - Mission Readiness ???
  - Storage \$\$\$
  - Handling \$\$\$
  - Opportunity \$\$\$
  - Systemic \$\$\$
  - Maintenance \$\$\$
  - Total > **\$1.5 Billion**



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# Program overview

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## Key Elements of a Successful Data Governance Program



## Take Aways

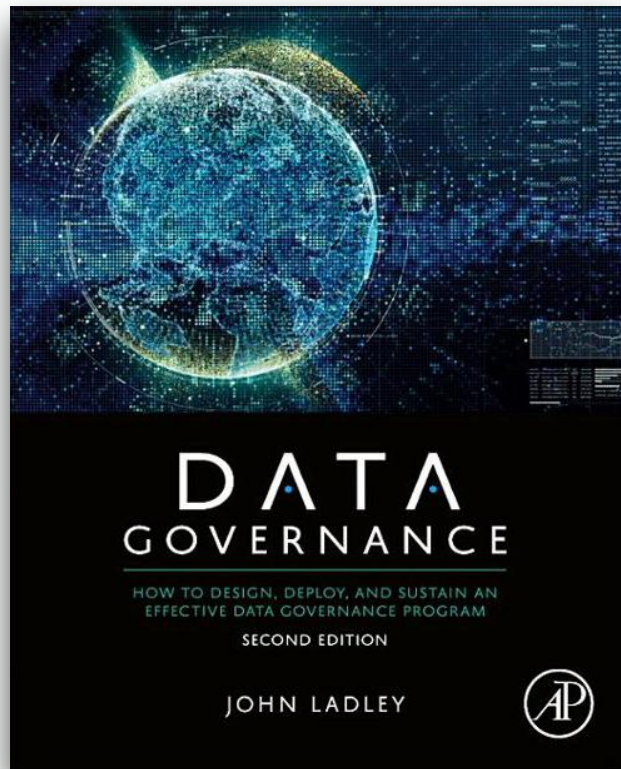
- Need for DG is increasing
  - Increase in data volume
  - Lack of rigorous practice improvement
- DG is a new discipline
  - Must conform to constraints
  - No one best way
- DG must be driven by 4 key elements
  1. Keep DG practically focused on strategy
  2. Implement DG (and data) as a program not a project
  3. Gradually add ingredients
  4. Learn the value of stories/storytelling
- The goal is to improve DG effectiveness and efficiencies (and the data itself) over time
- The more data literate the organization, the easier the transformation



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## By the book

- Data Governance: How to Design, Deploy, and Sustain an Effective Data Governance Program
- John Ladley
- Amazon Best Sellers Rank: #641,937 in Books (See Top 100 in Books)
  - #242 in Management Information Systems
  - #209 in Library Management
  - #380 in Database Storage & Design



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## References

### Websites

The Data Administration Newsletter (TDAN)—<http://www.TDAN.com>

DM Review Magazine—[www.dmreview.com](http://www.dmreview.com). Note: [www.dmreview.com](http://www.dmreview.com) is now [www.information-management.com](http://www.information-management.com).

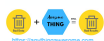
EIM Insight, published by The Enterprise Information Management Institute—<http://eiminstitute.org>

SearchDataManagement.com white paper library—<http://go.techtarget.com/r/3762877/5626178>

### Compliance Book

Thomas, Gwen. Alpha Males and Data Disasters: The Case for Data Governance. Brass Cannon Press, 2006. ISBN-10: 0-978-6579-0-X. 221 pages.

Bloem, Jaap, Menno van Doorn, and Piyush Mittal. Making IT Governance Work in a Sarbanes-Oxley World. John Wiley & Sons, 2005. ISBN 0-471-74359-3. 304 pages.



# IT Governance Books

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IT Governance Institute. Control Objectives for Information and related Technology (CobiT®). [www.isaca.org/cobit](http://www.isaca.org/cobit)

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Van Grembergen, Wim and Steven Dehaes. Enterprise Governance of Information Technology: Achieving Strategic Alignment and Value. Springer, 2009. ISBN 0-387-84881-5, 360 pages.

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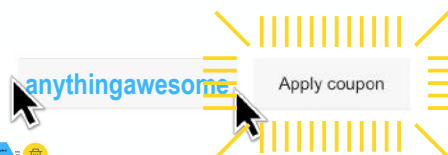
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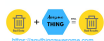


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## Upcoming Events

### Conceptual vs. Logical vs. Physical Data Modeling

11 July 2023



### The Importance of Metadata: 3 Leveraging Strategies

8 Aug 2023

**Time:** 19:00 UTC (2:00 PM NYC) | **Presented by:** Peter Aiken, PhD

### Getting Data Quality Right

12 September 2023

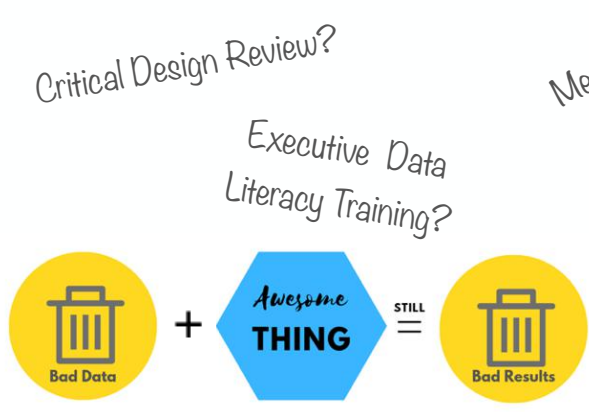


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Reverse Engineering Expertise?

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