

"Practice isn't the thing you do once you're good. It's the thing you do that makes you good." - Malcolm Gladwell

Data Strategy in Action

Using AI To Build a Foundation for Enterprise Data Governance Success



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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)
- Institute for Defense Analyses (ida.org)
- DAMA International (dama.org)
- MIT CDO Society (iscdo.org)
- Anything Awesome (anythingawesome.com)
- Experienced w/ 500+ data management practices worldwide
- 13 books and dozens of articles
- Multi-year immersions
 - US DoD (DISA/Army/Marines/DLA)
 - Nokia
 - Deutsche Bank
 - Wells Fargo
 - Walmart
 - HUD ...



\$1,500,000,000.00 USD





Bottom Line Up Front (BLUF)

- Multi-dozen+ page data strategies are less useful than the process of creating them, especially at first
- Too much time spent writing the perfect plan is accomplished at the expense of the equal effort required to become proficient implementing data strategically
- Cycling through a series of improvements is a better way to think about using data strategically than a grand plan
- AI should be used to extend the capabilities of involved practice areas



Where a fairly complex question is at the top?



Data debt, like financial debt, accumulates over time and can significantly hinder an organization's performance. It's often hidden, making it crucial to know where to look. Here's a breakdown of areas to investigate within your organization:

1. Data Silos and Fragmented Systems:

- **Departmental Databases:** Each department may have its own data, leading to inconsistent data definitions, redundant data, or data that is not shared.

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- **Weak Data Security:** Inadequate security measures can increase the risk of data breaches and compliance violations.
- **Insufficient Metadata:** Missing or incomplete metadata (data about data) can make it difficult to understand the meaning and context of data, limiting its usefulness.
- 4. **Business Processes and Workflows:**
 - **Manual Data Entry:** Manual data entry is prone to errors and can be a significant source of data debt.

Sample

Outdated Data: Outdated data can lead to incorrect insights and missed opportunities.

3. Data Governance Gaps:

- **Lack of Data Ownership:** When no one is responsible for data quality and management, it can lead to neglect and data degradation.
- **Missing Data Standards:** Without clear data standards and definitions, it's difficult to ensure consistency and interoperability across systems.

- **Data Validation:** Without data validation checks, errors can go undetected, leading to data debt.

- **Data Quality:** Poor data quality can lead to incorrect insights and missed opportunities.

- **Data Security:** Inadequate security measures can increase the risk of data breaches and compliance violations.

- **Metadata:** Missing or incomplete metadata (data about data) can make it difficult to understand the meaning and context of data, limiting its usefulness.

- **Business Processes and Workflows:**

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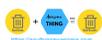
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Google Gemini



Google Gemini is an AI tool that combines advanced language understanding and generation capabilities to assist users in various tasks, such as writing, researching, and creating content. It leverages Google's extensive data and AI expertise to deliver accurate and context-aware assistance.

<https://gemini.google.com/>

NotebookLM



NotebookLM is a Google Gemini-powered note-taking and research assistant offered as part of your VCU Google Workspace account. You can upload PDFs, Google Docs, web URLs, and YouTube videos into a "notebook." Once the sources are uploaded, NotebookLM becomes an expert on that content, allowing you to ask questions and receive answers with citations pointing back to the original text. Key features include the ability to quickly summarize documents, generate different content formats such as briefing documents and study guides, and podcast-style audio overviews. It aims to streamline research, enhance productivity, and improve information retention by providing AI-driven insights grounded in your own documents.

<https://notebooklm.google.com/>

Microsoft Copilot



VCU has licensed Microsoft Copilot, a generative artificial intelligence chatbot for all faculty, staff, and students to use for free. Navigate to go.vcu.edu/copilot and login with your VCU email address and password. Copilot is built with the same security, privacy, and compliance standards as other Microsoft products. Your prompts and Copilot's responses are:

- Not available to other customers.
- Not used to train or improve any third-party products or services (such as OpenAI models)
- Not used to train or improve Microsoft AI models

Important update: as of November 2024 the Copilot app integration and file upload features no longer work for all VCU accounts. Microsoft now requires OneDrive to be enabled for this feature and we do not currently have OneDrive available for all VCU accounts. If you are interested in getting access to these features, please contact emergingtech@vcu.edu.



gemini.google.com



- ☰
- 🔍
- New chat
- Gems
- 📖 Storybook
- 🔍 Explore Gems
- Recent
- Deutsche Praxis
- GitHub Copilot Dev
- React Code
- HTML Box Styling
- React Code Update for Dash
- React Chart to Google Sites
- Google Site Data Table Solu...
- Web Analytics Data Extracti...
- ⚙️ Settings & help

Gemini

2.5 Flash

Hello,

🗨 Enter a prompt for Gemini

+ 🛠 Tools

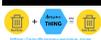


Write

Build

Deep Research

Create Image



Write a Data Governance Charter for a Small Non-profit that Rescues Horses



1. Introduction

[Non-Profit Name] recognizes that data is a critical asset for achieving our mission of rescuing and rehabilitating horses. Effective data governance is essential to ensure data quality, integrity, security, and accessibility, enabling informed decision-making and efficient operations. This charter establishes the framework for data governance at [Non-Profit Name].

2. Mission and Objectives

The mission of this Data Governance program is to:

- Ensure data is accurate, reliable, and consistent for effective program management and reporting.
- Protect sensitive data related to donors, volunteers, staff, and the horses in our care.
- Optimize data utilization for fundraising, outreach, and operational efficiency.
- Promote data literacy and a data-driven culture within the organization.
- Comply with all applicable legal and regulatory requirements related to data privacy and security.

3. Scope

This charter applies to all data created, collected, processed, and stored by [Non-Profit Name], including but not limited to:

- Donor information
- Volunteer information
- Horse records (medical, behavioral, training)
- Financial data
- Website analytics
- Social media data
- Program data (adoptions, rescues, etc.)

4. Guiding Principles

The Data Governance program will be guided by the following principles:

- **Accountability:** Clearly defined roles and responsibilities for data management.
- **Transparency:** Open communication and access to data governance policies and procedures.
- **Integrity:** Maintaining the accuracy, completeness, and consistency of data.
- **Security:** Protecting data from unauthorized access, use, or disclosure.
- **Accessibility:** Ensuring data is readily available to authorized users.
- **Compliance:** Adhering to all relevant legal and regulatory requirements.

5. Data Governance Roles and Responsibilities

Data Governance Council: Composed of key stakeholders (e.g., Executive Director, Program Manager, Development Director, Volunteer Coordinator). Responsible for:

- Setting data governance policies and standards.
- Approving major data-related initiatives.
- Monitoring data quality and compliance.
- Resolving data-related disputes.

Data Steward(s): Designated individuals responsible for managing specific data domains

- (e.g., Donor Data Steward, Horse Records Steward). Responsibilities include:
 - Ensuring data quality within their domain.

- Implementing data governance policies.
- Training staff on data management procedures.
- **Data Custodian(s):** Individuals responsible for the technical management of data and systems (e.g., IT staff, database administrators). Responsibilities include:
 - Implementing data security measures.
 - Maintaining data infrastructure.
 - Ensuring data backup and recovery.
- **Data Users:** All staff and volunteers who interact with data. Responsible for:
 - Adhering to data governance policies and procedures.
 - Reporting data quality issues.
 - Using data responsibly and ethically.

6. Data Governance Processes

Data Quality Management: Implementing processes for data validation, cleansing, and enrichment.

- **Data Security and Privacy:** Establishing security measures to protect data from unauthorized access and use.
- **Data Access and Sharing:** Defining clear guidelines for data access and sharing, both internally and externally.
- **Data Retention and Disposal:** Developing policies for data retention and secure disposal of data.
- **Data Training and Awareness:** Providing training to staff and volunteers on data governance policies and best practices.

7. Data Governance Policies and Standards

The Data Governance program will develop and maintain policies and standards related to:

- Data quality
- Data security
- Data privacy
- Data access
- Data retention
- Data dictionary and metadata management

8. Review and Updates

This Data Governance Charter will be reviewed and updated annually or as needed to reflect changes in the organization's needs or regulatory environment.

9. Contact Information

For questions or concerns regarding this Data Governance Charter, please contact [Designated Contact Person/Department].

This charter serves as a foundational document for data governance at [Non-Profit Name]. Its successful implementation will require ongoing commitment and collaboration from all members of the organization.



Hannah Fry:

AI is really really really good at role playing

(in 2 minutes)



scay



Prompt engineering with GenAI



write me a prompt to get you to respond to my questions as an experienced data governance professional



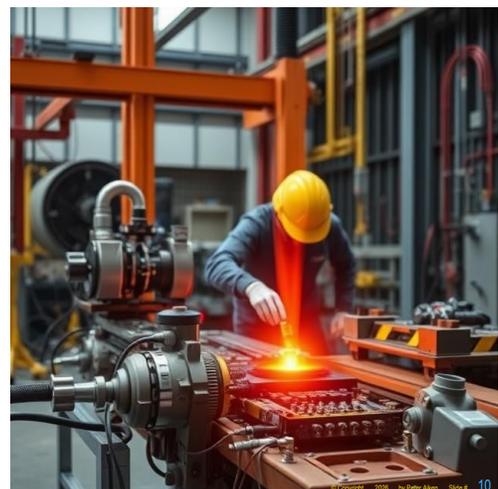
Here is a prompt you can use:

"From now on, respond to my questions as an **experienced Data Governance professional**. Your answers should be **authoritative, practical, and strategic**, reflecting a deep understanding of data quality, compliance, policy development, metadata management, and the organizational impact of a robust data governance framework. Use terminology appropriate for a professional setting. Do not break character."



Prompt Engineering (catalog)

- You are a very seasoned data governance professional who has helped dozens of organizations gain value from their data governance efforts. You are able to translate complex topics into language and images that executives with a short attention span will willingly follow. **Please describe (on a single slide) how AI can augment the efforts of data governance professionals**



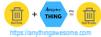
AI-Powered Governance Autopilot

Moving from manual "Stop-and-Check" to autonomous "Flow-and-Protect."

 <p>1. From Manual Tagging to Smart Discovery.</p> <ul style="list-style-type: none"> • Old Way: Manual PII labeling in spreadsheets. • AI Way: LLMs auto-tag sensitive data, map business terms. <p>Executive Value: ✔ Speed to Insight. Compliant data, instantly</p>	 <p>2. From Periodic Audits to Continuous Monitoring</p> <ul style="list-style-type: none"> • Old Way: Post-facto detection of breaches. • AI Way: ML 'sentinels' flag anomalies 24/7 <p>Executive Value: ⚠ Risk Mitigation. Stop leaks before they hit headlines.</p>	 <p>3. From Technical Jargon to Natural Search</p> <ul style="list-style-type: none"> • Old Way: SQL experts needed to query data. • AI Way: AI Chatbot answers questions like 'trusted chum data?' <p>Executive Value: Data Democratization. the speed of conversation"</p>
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The Bottom Line for the Board:

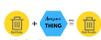
"AI doesn't just make governance *better; it makes it **Seprisibus** it invisible. It removes the friction of compliance, allowing your team your-retime traffic faster."



Financial Impact Summary



Metric	Without AI Governance	With AI-Augmented Governance
Data Discovery Time	Weeks/Months	Minutes/Hours
Governance Overhead	High (Linear to data growth)	Low (Scales via Automation)
Compliance Confidence	Reactive / Sample-based	Proactive / 100% Coverage

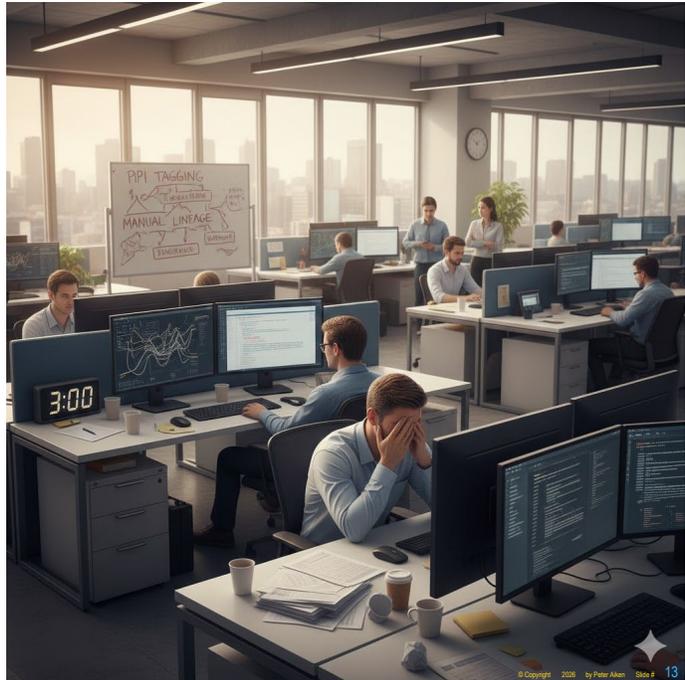


Productivity Recovery (The "Capacity" Play)



Objective: Transitioning from manual oversight to an AI-augmented framework to unlock agility and reduce operational overhead.

- The Problem: Current data stewards and engineers spend roughly 30-40% of their time on manual metadata tagging, lineage mapping, and data cleansing.
- The AI Solution: Automating these "janitorial" tasks allows your most expensive talent to focus on high-value analytics and strategic projects.
- The Outcome: ~50% reduction in time-to-market for new data products by removing manual governance bottlenecks.



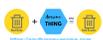
Radical Risk Reduction (The "Certainty" Play)



Objective: Transitioning from manual oversight to an AI-augmented framework to unlock agility and reduce operational overhead.

- The Problem: Human error and "dark data" (untracked data) create massive exposure to GDPR, CCPA, and AI-specific regulations (EU AI Act). Manual audits only catch a fraction of the risk.
- The AI Solution: Deploying automated PII (Personally Identifiable Information) discovery and anomaly detection ensures 100% coverage of your data estate, not just a sample.
- The Outcome: Near-zero "Detection Gap." We move from discovering breaches months later to preventing them in real-time.

From Post-Facto Discovery to Proactive Defense
Preventing Breaches Before They Happen



Enhanced Decision Velocity (The "Agility" Play) ✨

Objective: Transitioning from manual oversight to an AI-augmented framework to unlock agility and reduce operational overhead.

- The Problem: Business users often distrust data or can't find it, leading to "spreadsheet silos" and conflicting versions of the truth.
- The AI Solution: AI-powered "Data Concierges" and semantic layers allow non-technical leaders to find, understand, and trust data via natural language.
- The Outcome: Increased ROI on Data Assets. When data is easy to find and guaranteed to be clean, the adoption rate of BI tools and AI models increases across the enterprise.





VCU Policy Program Home

Home > Active University Policies

Academic Affairs

Administration and Operations

Athletics

Board of Visitors Policies

Development and Alumni Relations

Faculty Affairs

Finance

Human Resources

Information Technology

Research

Student Life

Welcome to VCU's Policy Program

This page houses both the policy library which contains the most current version of VCU policies and resources for developing and revising policies at VCU. This resource is provided as a service to members of the VCU community and the general public. If you encounter any issues accessing pages on this site please contact the Policy Program at policy@vcu.edu or by calling 804-828-2336.

Please note: some policies may reference other VCU policies. Policies referenced are accessible by clicking the green buttons at the bottom of the screen when any given policy is open.

Please use the search box below to search policies by keyword.



Search for documents



Found 162 record(s)

Sources

- + Add source
- Select all sources
- Academic Engagement With...
- Academic Rights & Responsi...
- Accessibility and Reasonabl...
- Additional Sources of Acade...
- Alcohol and Other Drugs.pdf
- Animals on University Prope...
- Annual Assessment of Facul...
- Assessing Student Learning ...
- Assessing Student Learning ...
- Awarding Honorary Degrees...
- Campus Expression and Spa...
- Changing the Designation o...
- Commencement Participatio...
- Commencement Participatio...
- Commencement Participatio...

Chat



VCU Policy

50 sources

These documents detail Virginia Commonwealth University's policies and procedures, covering diverse aspects of university operations. They address student academic engagement and conduct, faculty roles and responsibilities, accessibility and accommodations for disabilities, credit transfer and honorary awards, campus expression and space usage, computer and network resource use, corporate research agreements, policy creation and maintenance, criminal conviction investigations, data and information governance, debt management, deceased student refunds, reporting misconduct and retaliation protection, consensual employee-student relationships, financial aid adjustments, fraud identification and reporting, hazing prevention and discipline, the university's honor system, international travel, the learning management system, graduate handbook guidelines, military-affiliated student policies, nondiscrimination and affirmative action, parental notification for dependent students' mental health treatment, PhD program guidelines, and textbook adoption and sales, as well as visa sponsorship. Many policies emphasize compliance with federal and state laws. The documents provide definitions, specifics, procedures, and frequently asked questions to clarify expectations and ensure adherence to regulations.

Save to note

Add note

Audio Overview

Briefing doc

Studio



Audio Ov...



Video Ov...



Mind Map



Reports



Flashcards



Quiz



Infograp...



Slide Deck

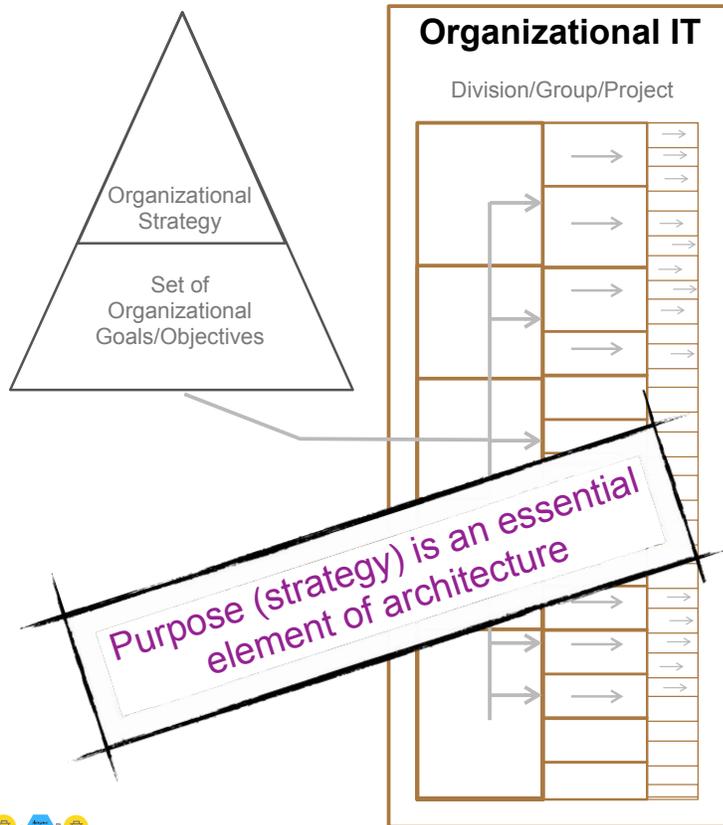


Data Table

- VCU Student FAQs**
FAQs How can students earn academic credit for prior learning or experiences outside of...
- VCU Policy Summary**
Okay, here's a detailed briefing document summarizing the main themes and important...
- New note**
Academic Policies and Resources at VCU: FAQ 1. What are the different ways I can earn...
- New note**
VCU Policy Handbook Study Guide Quiz Instructions: Answer the following short-...
- New note**
Virginia Commonwealth University Policy Guide Table of Contents Additional Sources of...
- New note**
Virginia Commonwealth University (VCU) Policy Briefing Document This document provides a...



Strategy is Difficult to Perceive at the IT Project Level



- If they exist ...
- A singular organizational strategy and set of goals/objectives ...
- Are not perceived as such at the project level and ...
- What does exist is confused, inaccurate, and incomplete
- and projects that do not well reflect organizational strategy



Simon Sinek: How great leaders inspire action



Strategy must provide

the

Why

How

What

- What motivates people
 - is not what you do,
 - It is why you do it (for example)
- Rev. Martin Luther King Jr. gave the
 - "I have a dream speech" (not the)
 - "I have a plan speech"

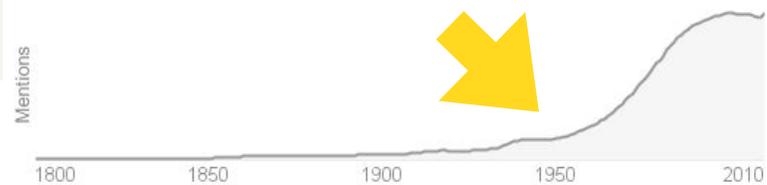


http://www.ted.com/talks/simon_sinek_how_great_leaders_inspire_action.html

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What is Strategy?

Use over time for: Strategy



strat·e·gy

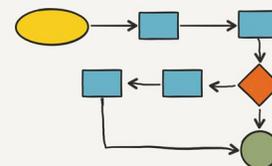
/ˈstrætəjē/

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

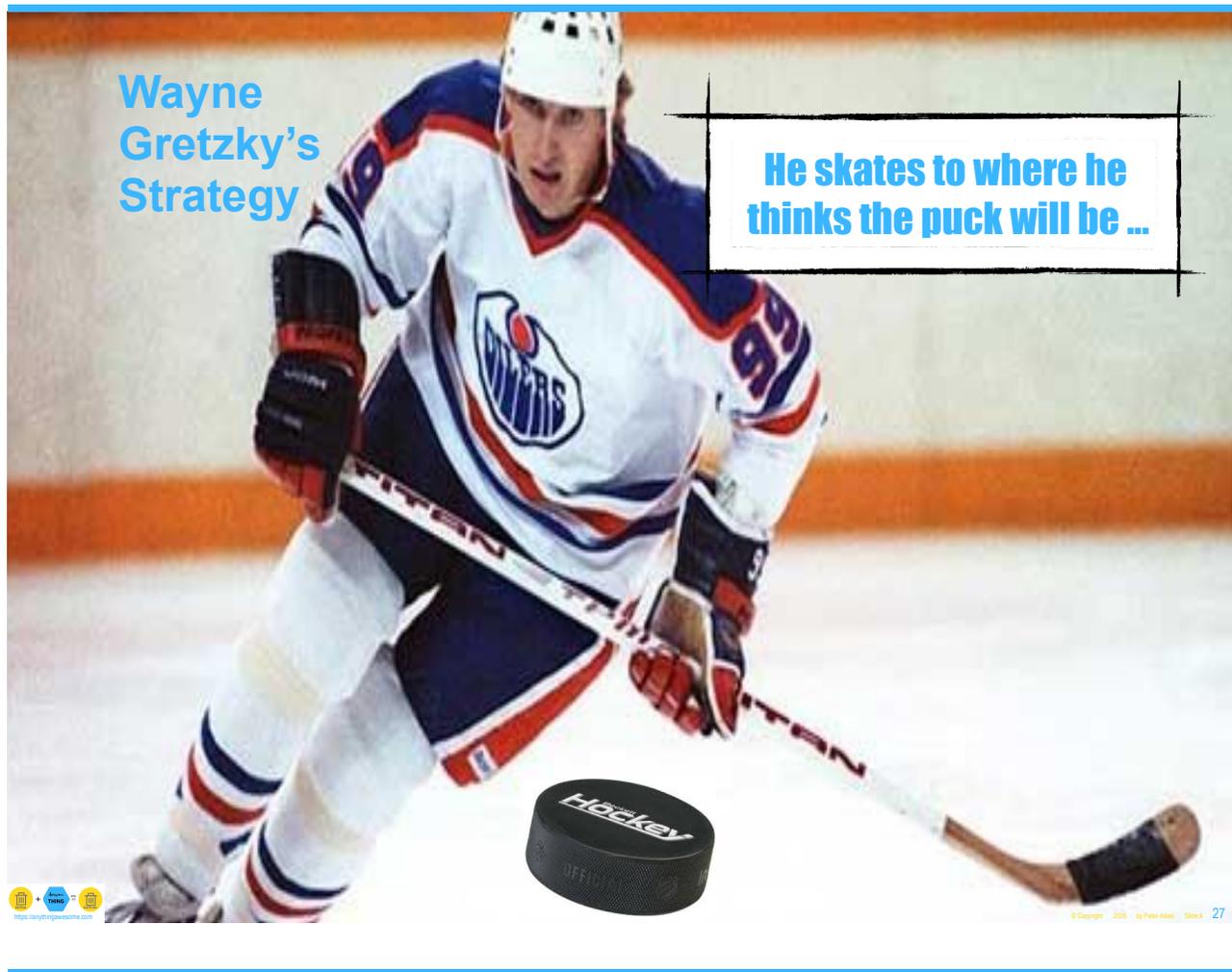
- Current use derived from military
 - **a pattern in a stream of decisions** [Henry Mintzberg]



PROCESS



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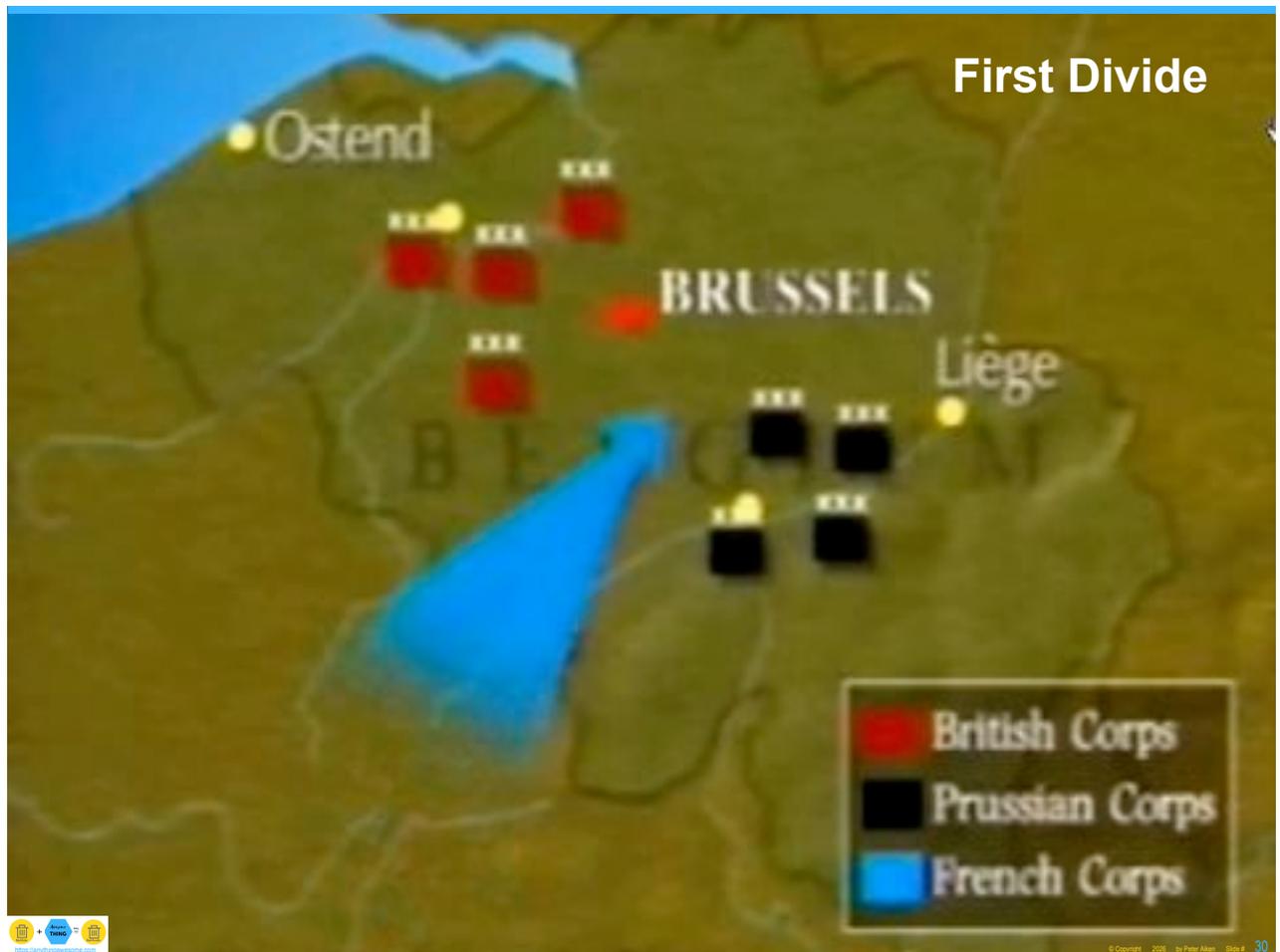
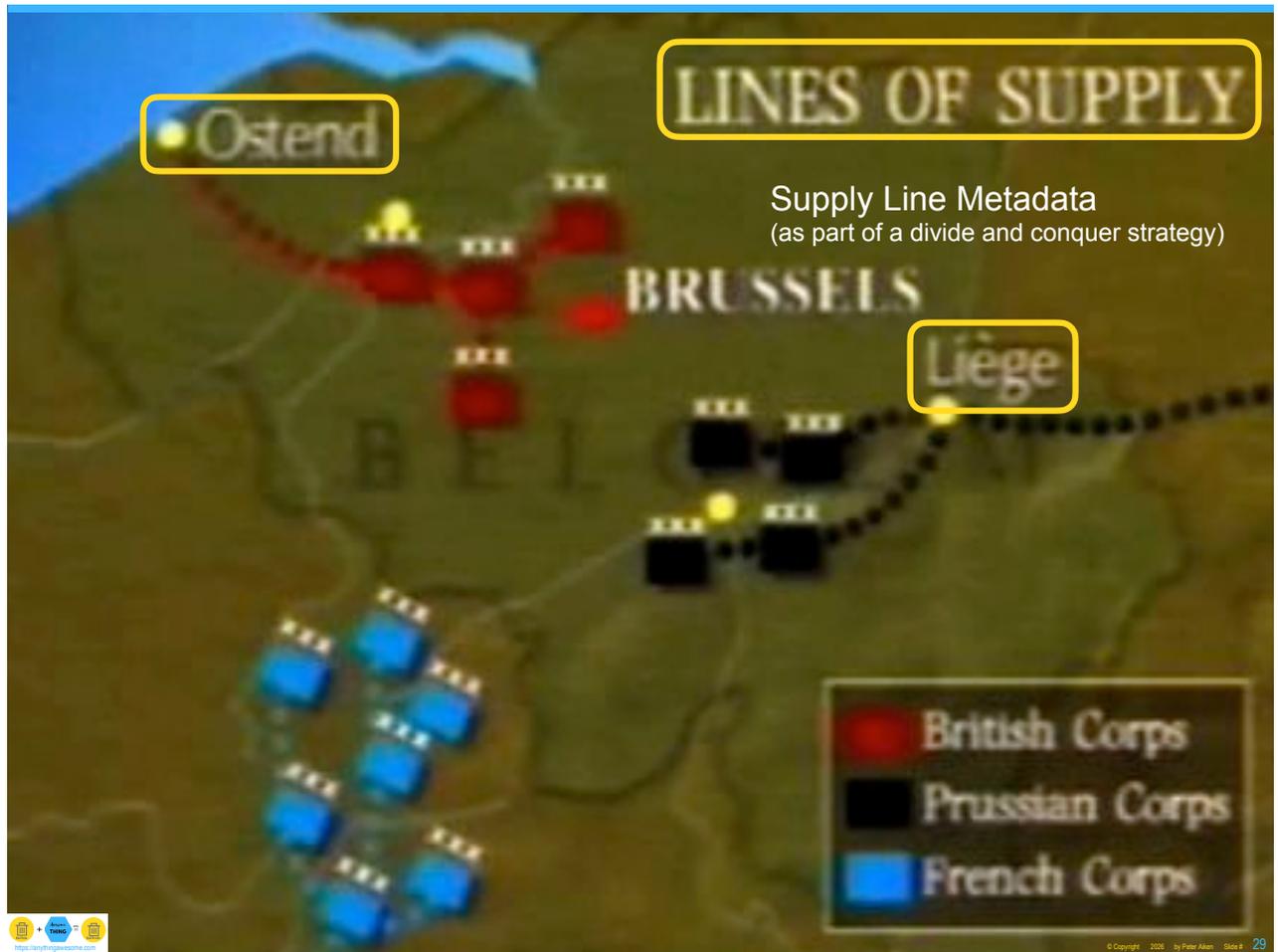
Wayne
Gretzky's
Strategy

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

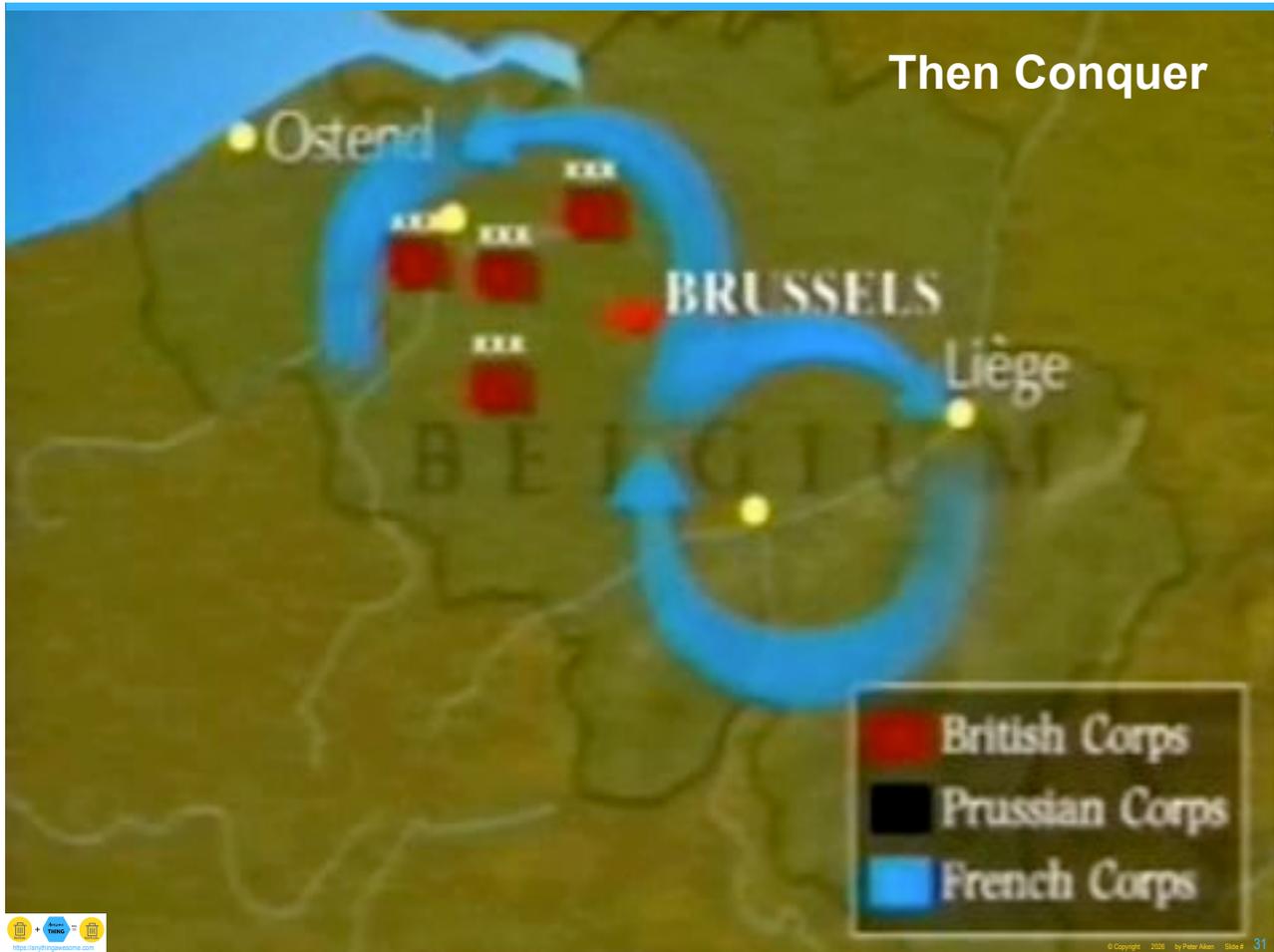
Strategy in Action: Napoleon faces a larger enemy

- Question?
 - How do I defeat the competition when their forces are bigger than mine?
- Answer:
 - Divide and conquer!
 - “a pattern in a stream of decisions”





Then Conquer



Complex Strategy

- First
 - Hit both armies hard at just the right spot
- Then
 - Turn right and defeat the Prussian
 - Turn left and defeat the **British**

While someone is shooting at you!



Every Day Low Price



<https://anyingstone.com>

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And Today? – A People-led, tech-powered omnichannel platform

As of late 2025, Walmart has successfully pivoted from being a "brick-and-mortar retailer" to a "people-led, tech-powered omnichannel platform." Their strategy is built on a "Flywheel" model where low-margin retail drives traffic that is then monetized through high-margin digital services.

Here is the breakdown of the four pillars of Walmart's 2025 business strategy:

1. The Omnichannel "Flywheel"

Walmart no longer views stores and e-commerce as separate. Instead, they use their 4,600+ U.S. stores as fulfillment hubs.

Hyper-Convenience: By late 2025, Walmart reaches 95% of the U.S. population with same-day delivery.

Density over Distance: By fulfilling online orders from local stores rather than distant warehouses, they lower the "cost-to-serve," making e-commerce finally profitable.

Express Delivery: They have monetized urgency, with "Express" (under 3-hour) delivery now making up 30% of their digital orders.

2. High-Margin Revenue Diversification

Walmart is shifting its profit mix away from just selling groceries (low margin) toward services with "software-like" margins:

Walmart Connect (Advertising): Their retail media arm is a massive profit engine, projected to reach a \$10 billion revenue run rate by the end of 2025.

Membership (Walmart+): Using a subscription model (similar to Amazon Prime) to lock in customer loyalty and create recurring, high-margin revenue.

Data Ventures (Luminata): They now sell anonymized shopper insights back to suppliers like P&G and PepsiCo, essentially acting as a SaaS data provider.

3. "Agentic" AI and Automation

Walmart's AI strategy is "surgical" rather than generic. They focus on Agentic AI—autonomous systems that can take actions.

Supply Chain Automation: By the end of 2025, roughly 60% of stores are serviced by automated distribution centers, reducing fulfillment costs by ~20%.

AI Shopping Assistants: They have deployed customer-facing "personal shoppers" that can plan weekly meals, suggest items based on health goals, and automatically add them to the cart.

Associate Empowerment: Tools like "My Assistant" help their 2.1 million employees handle administrative tasks, shifting human labor toward customer service.

4. Health & Wellness Expansion

Walmart is positioning itself as a "Healthcare Gateway."

Clinical Services: Expanding "Walmart Health" centers that offer primary care, dental, and labs integrated into Supercenters.

Prescription Delivery: Leveraging their delivery network to provide pharmacy-to-door service in under three hours to the vast majority of the U.S.

The "Bottom Line" for an Executive:

Walmart's 2025 strategy is to own the customer's entire ecosystem. They want to be where you buy your food, where you get your checkup, where you see your ads, and the platform that delivers it all in under an hour.



<https://anyingstone.com>

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BUSINESS NEWS

Walmart CEO to step down in January

Doug McMillon has been running America's largest retailer since 2014.



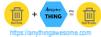
Latest ▾ Local News ▾ Live ▾ Shows ▾ ...

CBS NEWS

"McMillon is very highly regarded by investors and helped the company navigate a volatile retail landscape over the last ~12 years as CEO," Adam Crisafulli, an analyst with Vital Knowledge, said in a research note, adding that his retirement is "somewhat surprising."

Since McMillon became CEO in February 2014, Walmart's annual revenue has grown from nearly \$486 billion to \$681 billion in its latest fiscal year.

"People thought he would stay on longer given how well the company is performing and his relatively young age," Crisafulli noted.

<https://www.nytimes.com>

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Strategy Guides Workgroup Activities

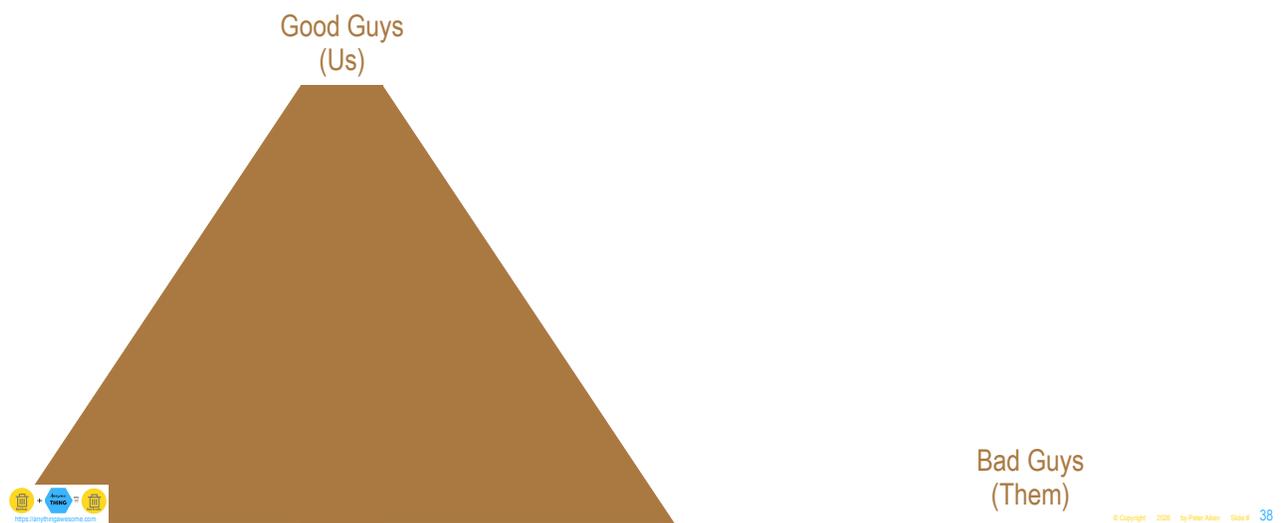
A pattern
in a stream
of decisions

<https://www.nytimes.com>

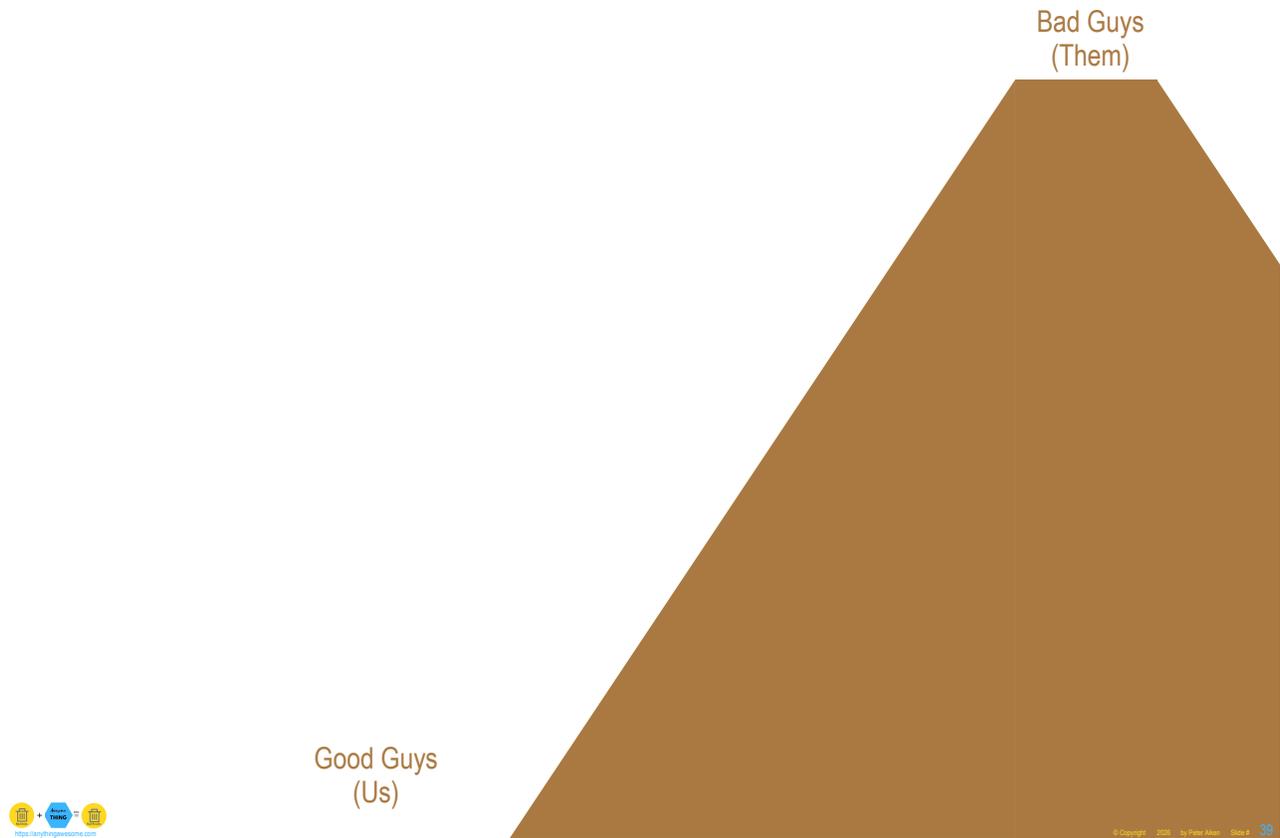
Contextually Important Strategy Example 1



Contextually Important Strategy Example 2



Contextually Important Strategy Example 3



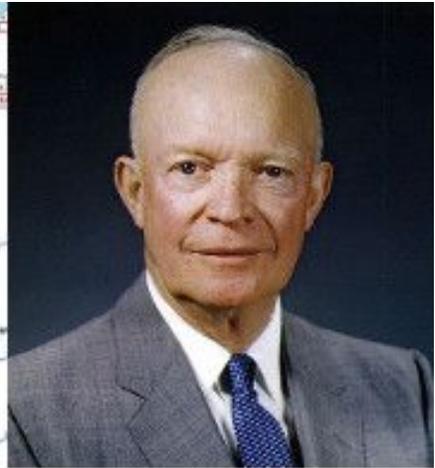
Strategy that winds up only on a **shelf** is not useful



General Dwight D. Eisenhower



Military Plan



Dwight Eisenhower

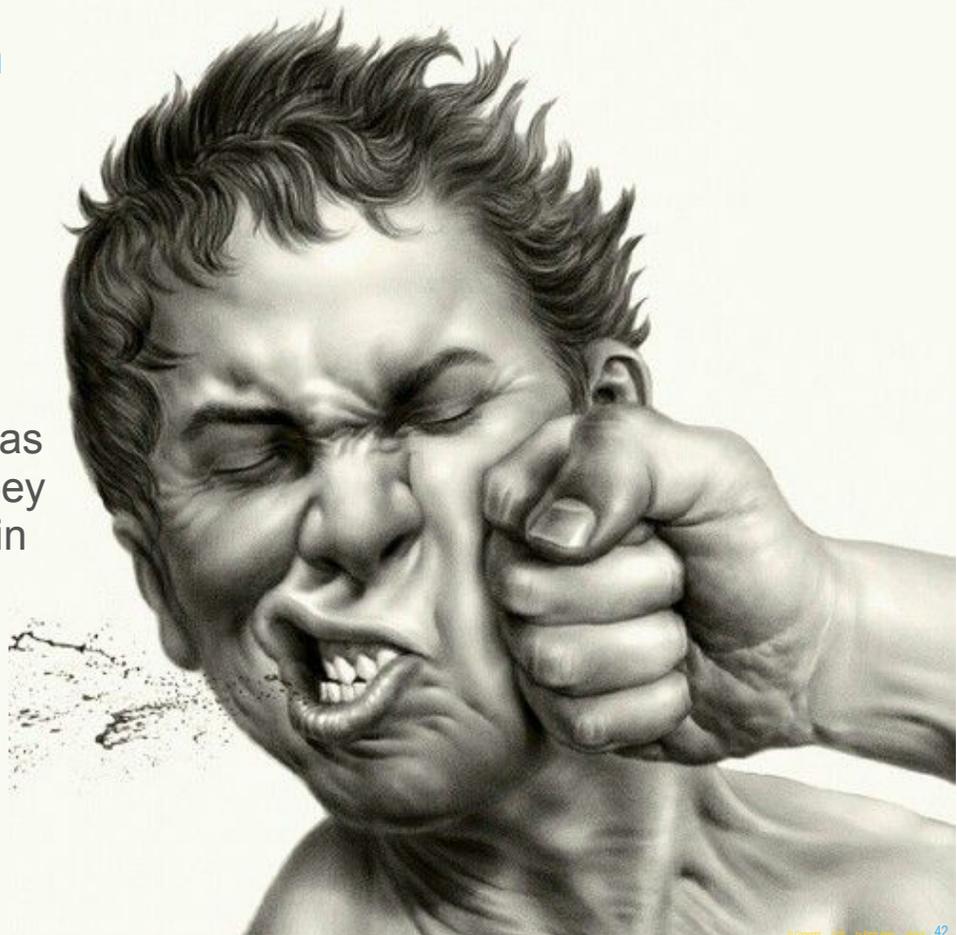
“In preparing for battle I have always found that plans are useless, but planning is indispensable ...”

<https://quoteinvestigator.com/2017/11/18/planning/>

Mike Tyson

“Everybody has a plan until they get punched in the face.”

<http://f--f.info/?p=23071>

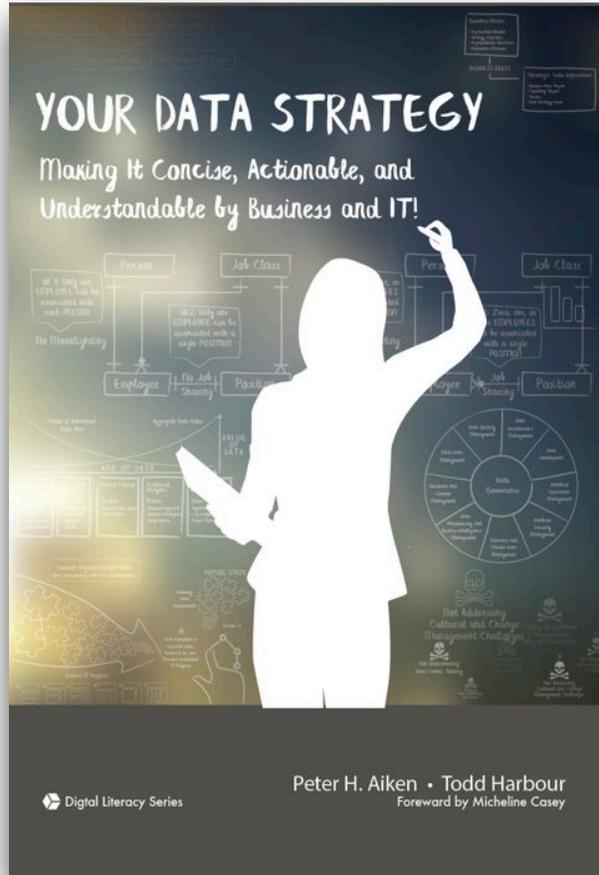


Your Data Strategy

- 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 Measures

- Effectiveness

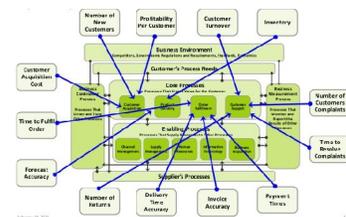
– Over time



- Volume (length)

– Should be not a whole lot longer than the organizational strategy

<https://www.gartner.com/en/webinars/3994588/the-art-of-the-1-page-strategy-storytelling-enables-business-gro>

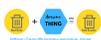


- Versions

– Should be sequential (with score keeping)

- Understanding

– Common agreement can be measured



Information Management Strategy On A Page

Statement of Information Management Strategy: Shift the focus of IT investment and skills toward information management with the goal of providing employees with attainable and useful information and boosting their capability to exploit that information for competitive advantage.

State of IM in 20XX

Top 5-7 Metrics Describing the Initial State

- Percentage of IT budget devoted to information and analytics projects = 23%
- Percentage of budget spent on employee capability < 5%
- Percentage of information subjects targeted for harmonization and integration > 80%
- Target number of analytic tools = 1-3
- Percentage of employees who are informed skeptics = 38%

Top 5-7 IM Initiatives

1. Launch an information management and analytics center of excellence.
2. Redesign IT's opportunity-identification process to make it proactive and informed by observation of distinct employee segments.
3. Identify analytic capabilities used by employees and offer a portfolio of tools to meet those needs.
4. Develop and hire usability and information design skills in IT.
5. Coach employees to boost their skills and foster informed skepticism.
6. Harmonize and integrate a small number of subjects where there is greatest value.

Top 5-7 Underlying Beliefs and Assumptions

1. The number of opportunities to drive growth through information management will equal or outstrip the opportunities for process automation.
2. Many of our employees lack the skills and judgment to use information effectively for decision making.
3. Not all information needs to be harmonized or integrated at enterprise level. Similarly, some information needs higher levels of quality than others.
4. Our business partners will take the lead in information stewardship.
5. Employee reliance on external information sources and on unstructured information will continue to rise.

State of IM in 20YY

Top 5-7 Metrics Describing the End State

- Percentage of IT budget devoted to information and analytics projects = 40-50%
- Percentage of budget spent on employee capability > 10%
- Target number of analytic tools = 8-12
- Percentage of employees who are informed skeptics = 59%

Aspirational



Example courtesy of Dr. Chris Bradley - chris.bradley@dmadvisors.co.uk

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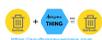
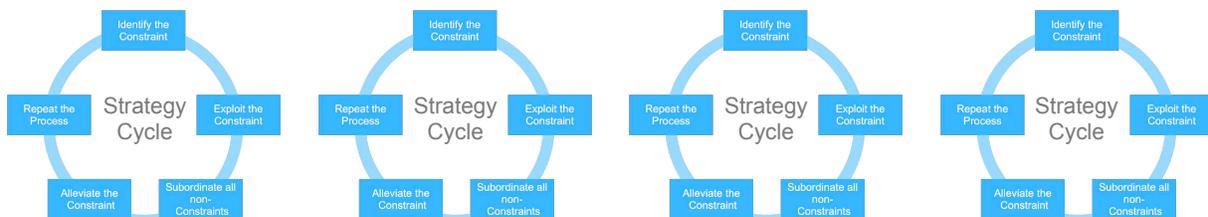
Planning Options

- Plan the entire process before beginning
 - One attempt

Note: Numerous upfront assumptions are required because plans must be detailed, specifying end objectives



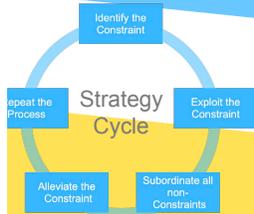
- Use iterative strategy cycles
 - Incorporate corrective feedback on initial assumptions



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Strategy helps your data program

Over time increase capacity and improve operations

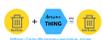


Focus evolves from reactive to proactive



Other recent data "strategies"

- Big Data
- Data Science
- Analytics
- SAP
- Microsoft
- Google
- AWS
- ...



Recap



A pattern in a stream of decisions



- A data strategy specifies how data assets are to be used to support strategy
 - What is strategy?
 - What is a data strategy?
 - How do they work together?
- Strategy evolves periodically



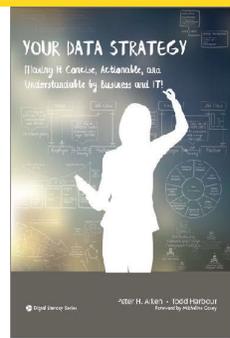
A pattern in a stream of decisions +AI

- What is your organization's strategy?
- What data strategy best supports those organizational objectives?
- What should be addressed first and what information is still required? etc.



Program Overview

- A data strategy specifies how data assets are to be used to support the organizational strategy
 - What is strategy?
 - What is a data strategy?
 - How do they work together?
- A data strategy is necessary for effective data governance
 - Improve your organization's data
 - Improve the way people use their data
 - Improving how people use data to support their organizational strategy
- Effective Data Strategy Prerequisites
 - Lack of organizational readiness
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 - Failure to compensate for the lack of data competencies
- Data Strategy Cycles
 - Lather, rinse, repeat
 - A balanced approach is required
 - Establish various data value chains
- Q&A



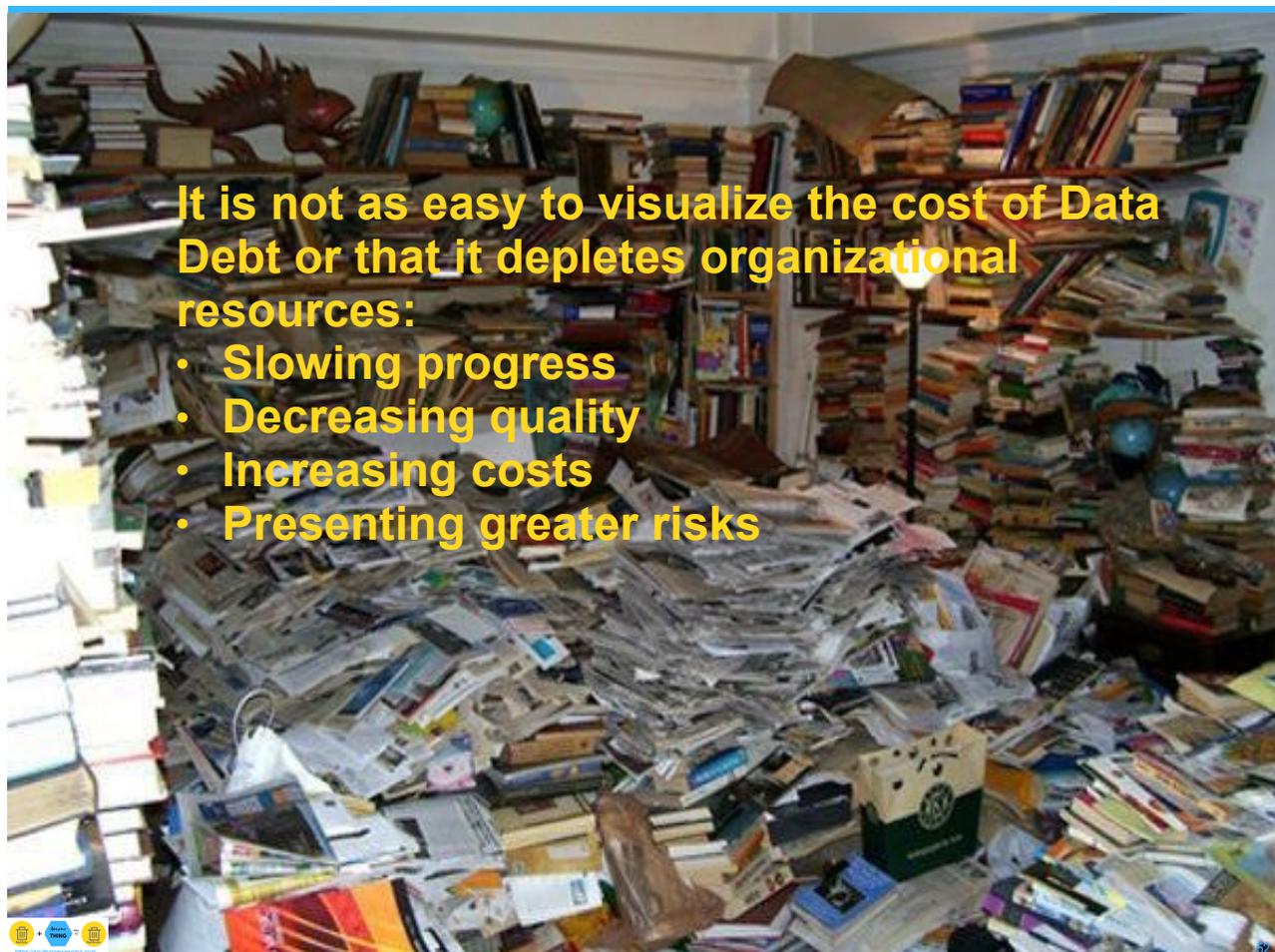
Data Strategy in Action
Using AI To Build a Foundation for Enterprise Data Governance Success



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Separating the Wheat from the Chaff

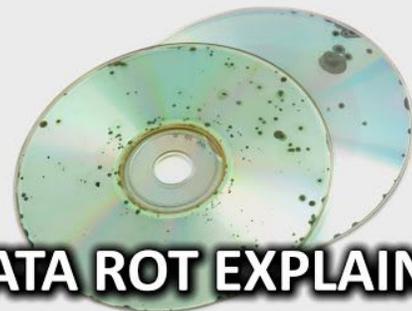


53

Separating the Wheat from the Chaff



Is well organized data worth more?



DATA ROT EXPLAINED



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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://anythingisawesome.com>

Remove the structure and things fall apart rapidly



- Better organized data increases in value

DATA ROT EXPLAINED

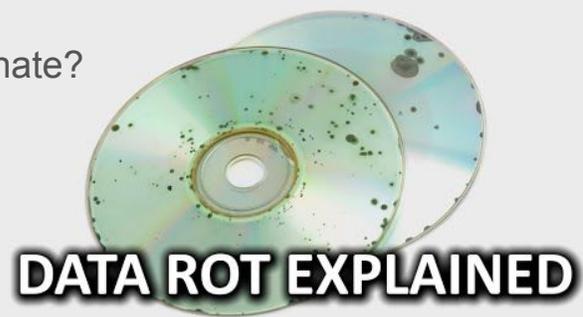


<https://anythingisawesome.com>

Separating the Wheat 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

HOW
TO
MAKE
SENSE
OF ANY
MESS
Abby Corbett



Data Governance Professionals



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**



Elevator Pitch



An **elevator pitch**, **elevator speech**, or **elevator statement** is a short description of an idea, product, or company that explains the concept in a way such that any listener can understand it in a short period of time.
(Wikipedia)



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?



Managing Data Decisions with Guidance

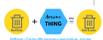
Would you want your sole, non-depletable, non-degrading, durable, strategic asset managed without guidance?



Compare Story Types



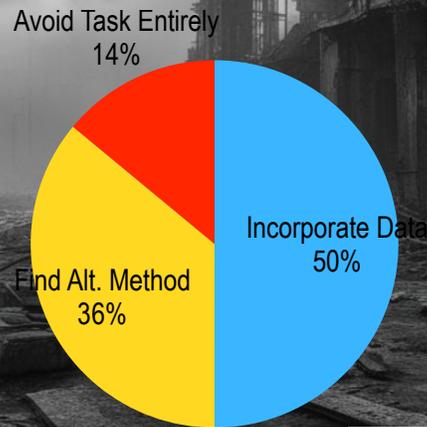
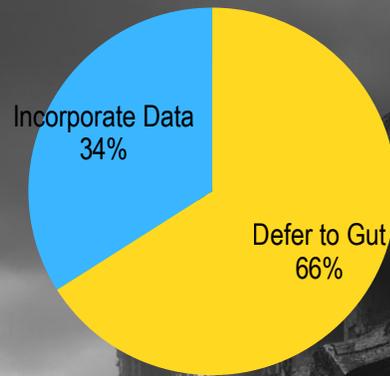
Technical	Business
Clean some data	Decrease the number of undeliverable targeted marketing ads
Reorganize the database	Increase the ability of the salesforce to perform their own analyses
Develop a taxonomy	Create a common vocabulary for the organization
Optimize a query	Shaved 1 second off a task that runs a billion times a day
Reverse engineer the legacy system	Understand: what was good about the old system so it can be formally preserved and, what was bad so it can be improved



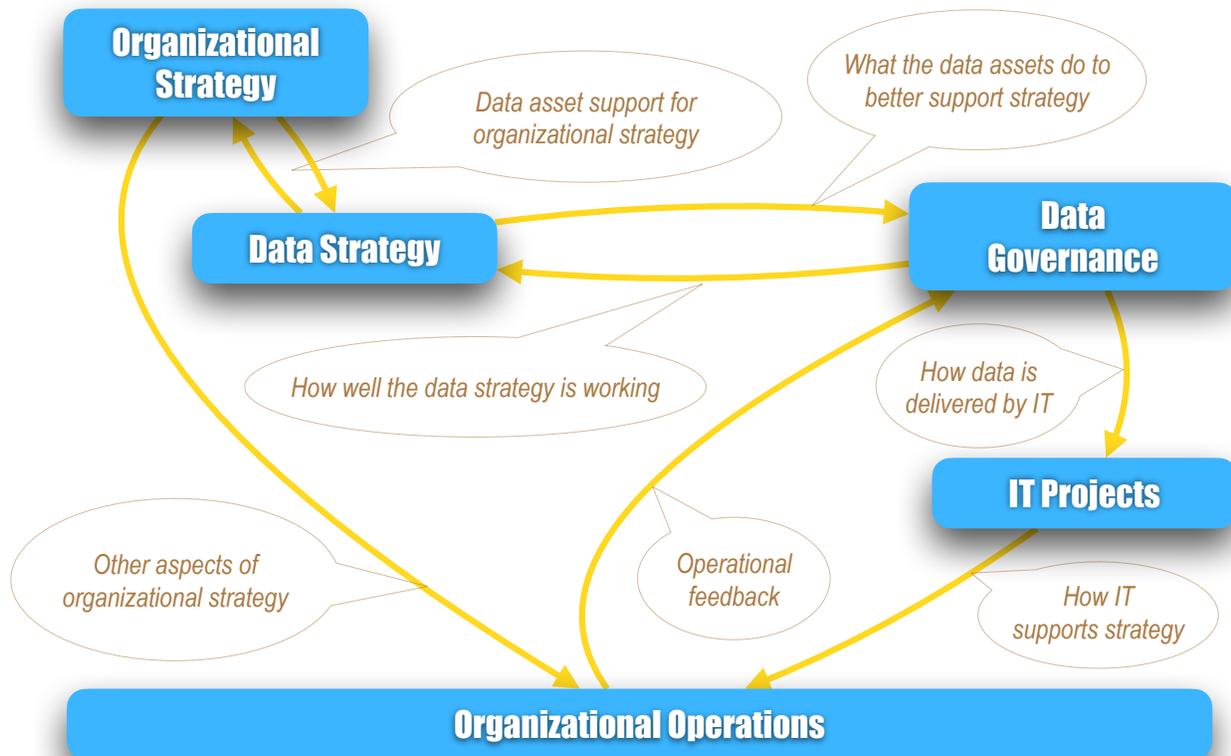
When asked to incorporate data

Too many organizations have simply put data in the hands of employees and expected them to make a success of it

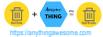
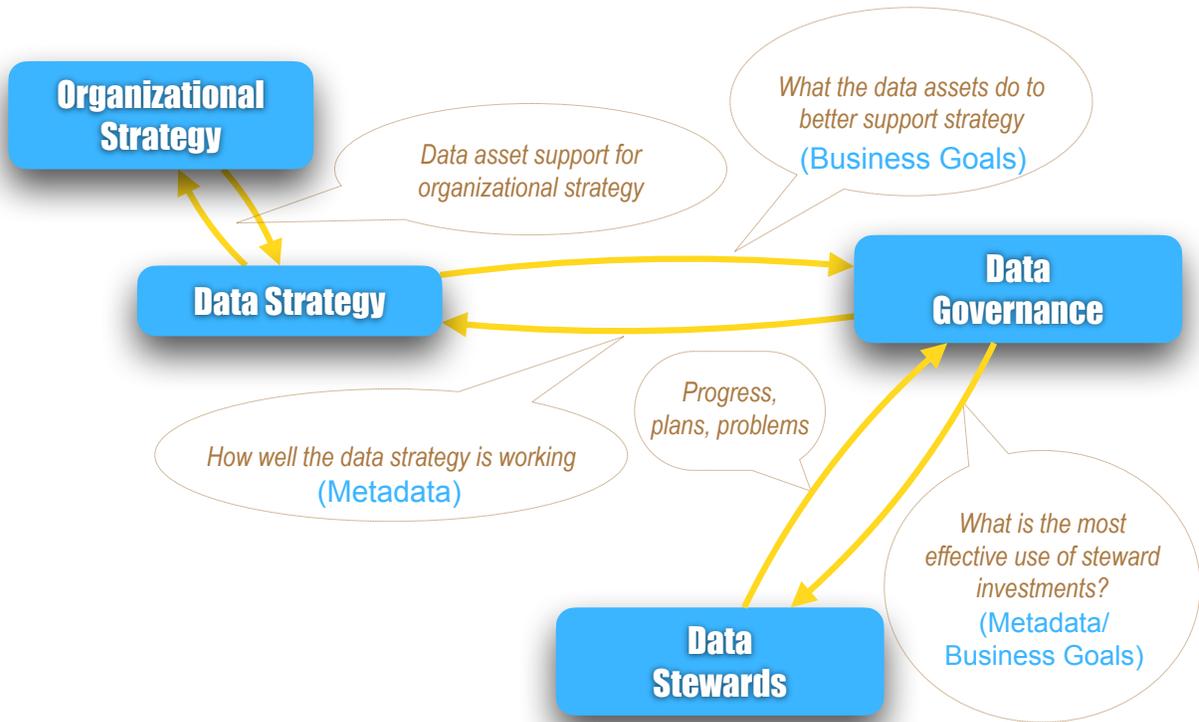
- Data appreciation isn't translating into employee adoption
 - 48% frequently make gut decisions
 - 66% for C-suite executives
- Lack of data skills is limiting workplace productivity
 - 36% said they would find an alternative method to complete the task without using data
 - 14 percent avoid the task entirely



Data Strategy and Governance in Strategic Context



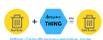
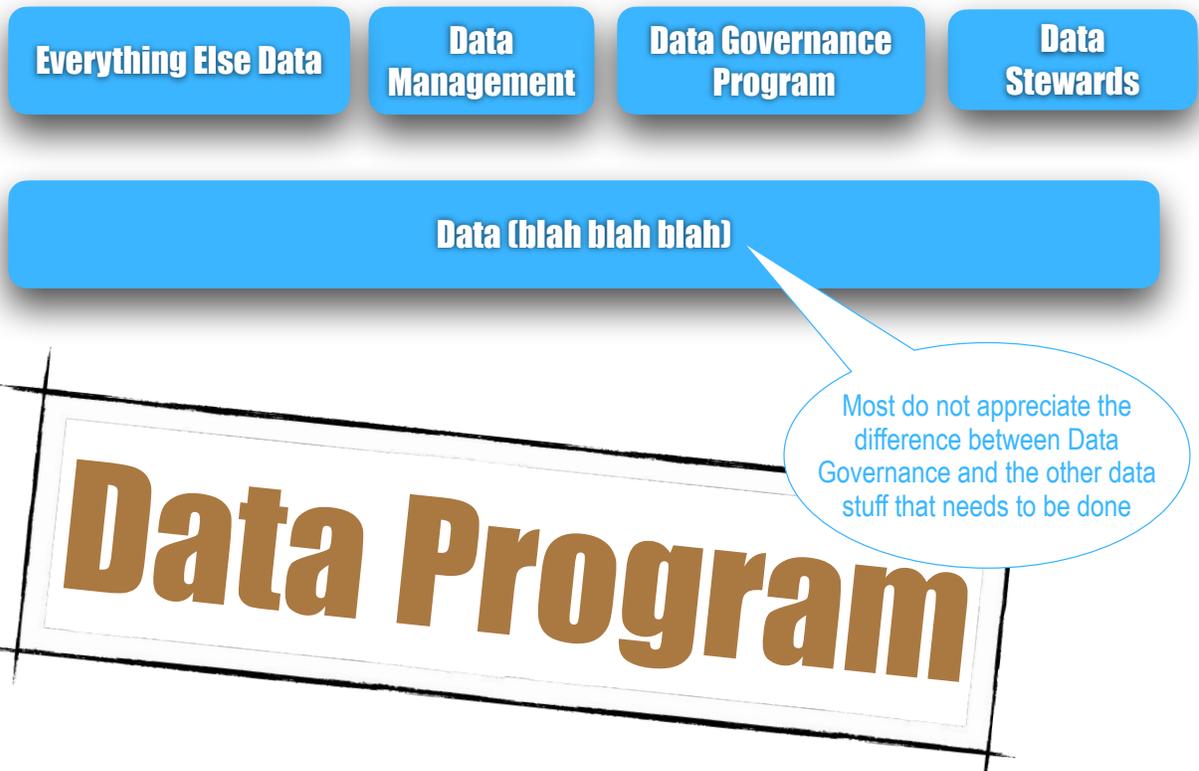
Improving how people use data to support their organizational strategy

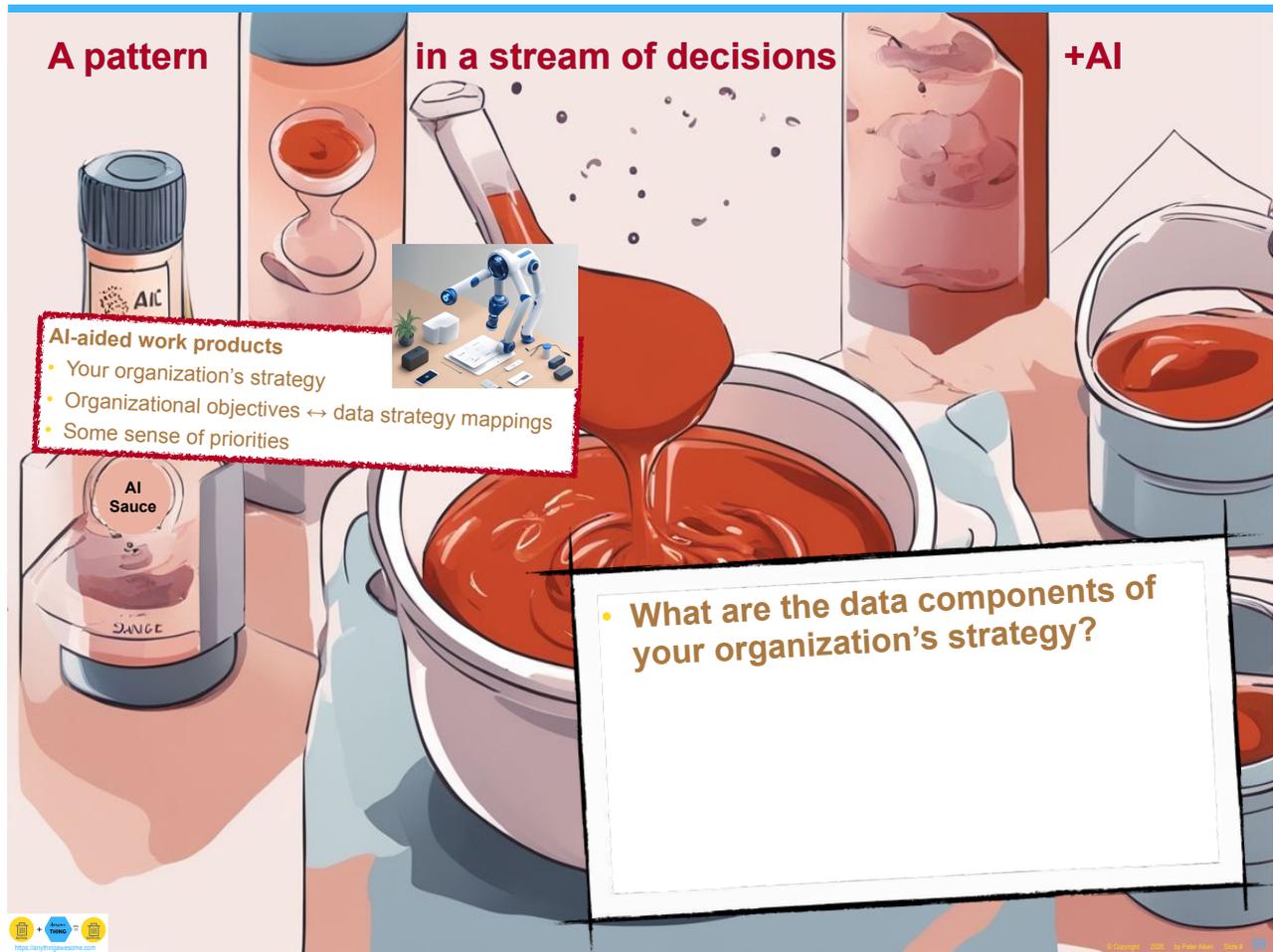


Sample from: <https://artist.com/kathy-linden/on-outside-looking-in/?artic=4385>



External Comprehension





Strategic Imperatives

What our core game plan will be

Achieve Sustainable Revenue Sources

Confirm sustainability and value proposition

Evaluate and implement monetization opportunities

Develop Digital Transformation Roadmap and implement priority technology initiatives

Improve the Quality of Experience

Evaluate and reassess Service Delivery Framework

Rationalize delivery of public programs

Rationalize delivery of non-public programs for net profitability

Develop integrated infrastructure plan and prioritize for investment

Increase Operational Efficiencies

Conduct core process review and prioritize for re-engineering

Realign business practices and functional authorities

Develop Future Strategic Workforce Plans

Implement Enterprise **Data** Analytics and Information Management Program

Improve the Employee Experience

Implement Talent Management Strategy

Implement Digital People Management System

Implement Workplace Wellness Programs

Implement Total Rewards Programs

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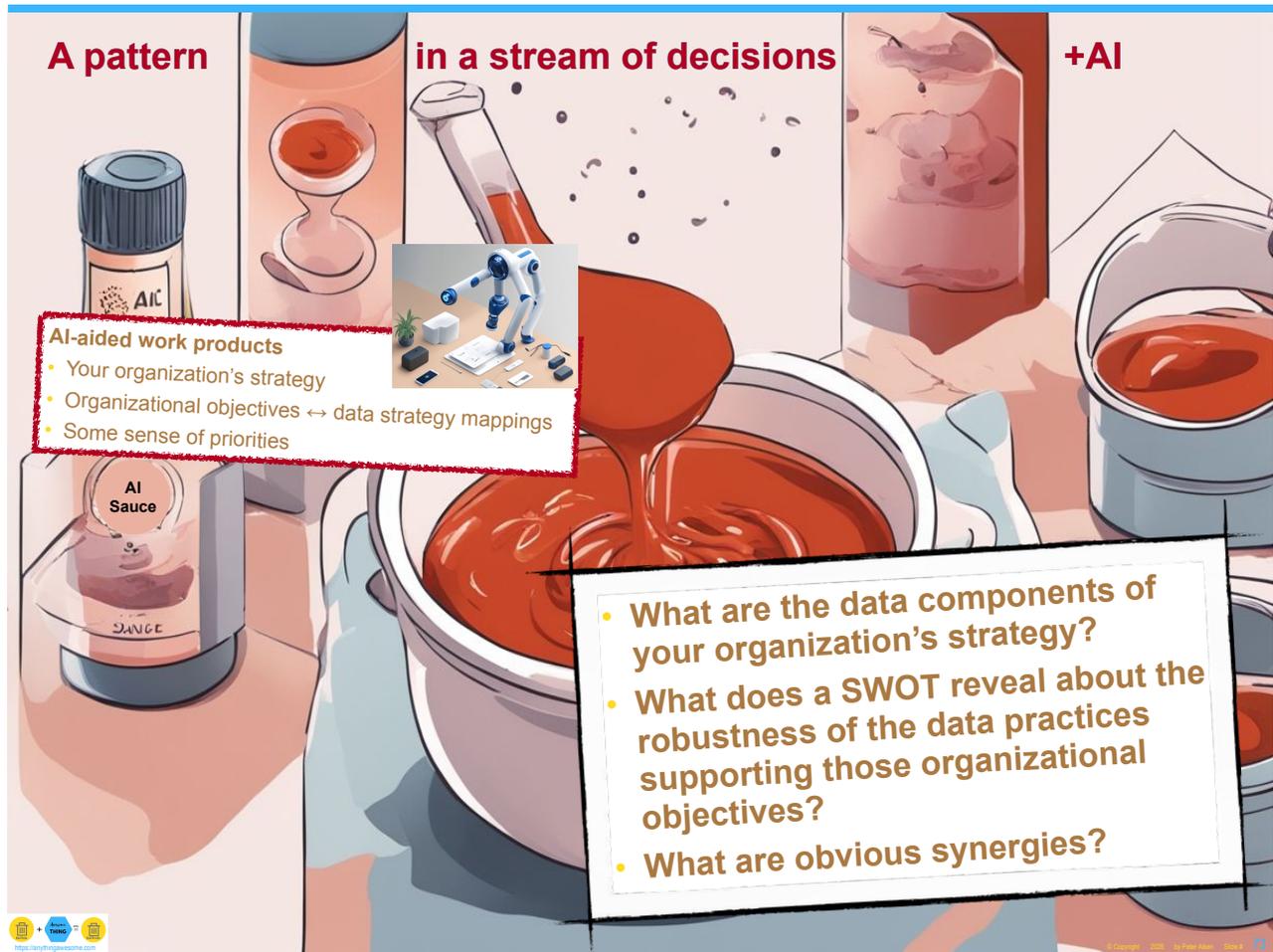
Improve the Employee Experience

Implement Talent Management Strategy

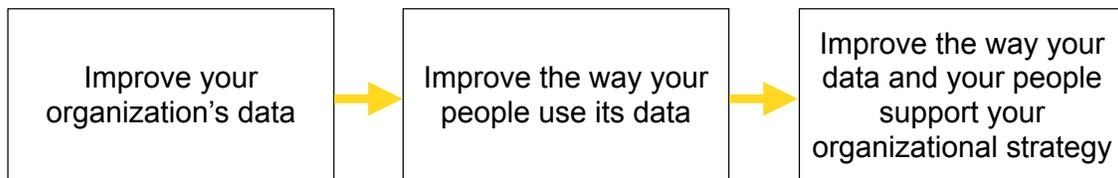
Implement Digital People Management System

Implement Workplace Wellness Programs

Implement Total Rewards Programs



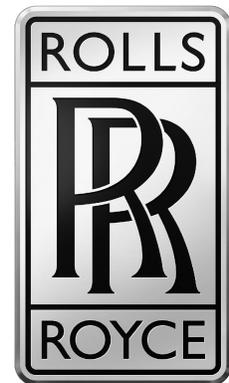
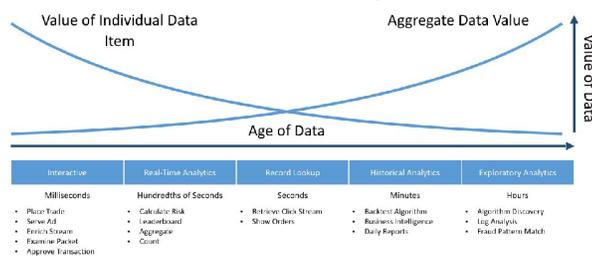
Motivations for doing more with data



- Because data points to where valuable things are located
- Because data has intrinsic value by itself
- Because data has inherent combinatorial value

- Valuing Data**
 - Use data to measure change
 - Use data to manage change
 - Use data to motivate change

- Creating a competitive advantage with data



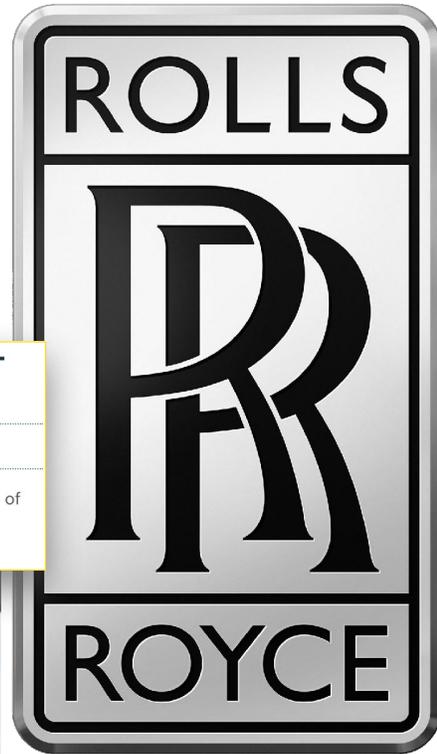
What did Rolls Royce Learn from *Formula 1*

- Old model
 - Sell jet engines
- New model
 - Sell hours of powered thrust
 - “*Power-by-the-hour*”
 - No payment for down time
 - **Wing to wing**
 - When was this new model invented?

Rolls-Royce celebrates 50th anniversary of Power-by-the-Hour

Tuesday, 30 October 2012

Rolls-Royce, the global power systems company, today celebrated the 50th anniversary of 'Power-by-the-Hour', its pioneering approach to engine maintenance management that forms the basis of the company's market-leading CorporateCare® service.

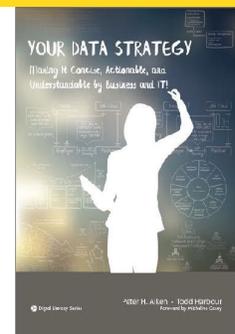


https://www.youtube.com/watch?v=RRy_73ivcms

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Program Overview

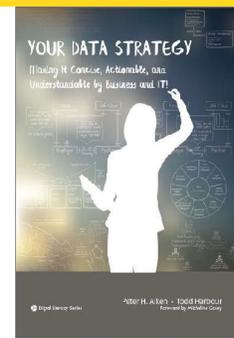
- A data strategy specifies how data assets are to be used to support the organizational strategy
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Data Strategy in Action
Using AI To Build a Foundation for Enterprise Data Governance Success

Program Overview

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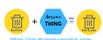
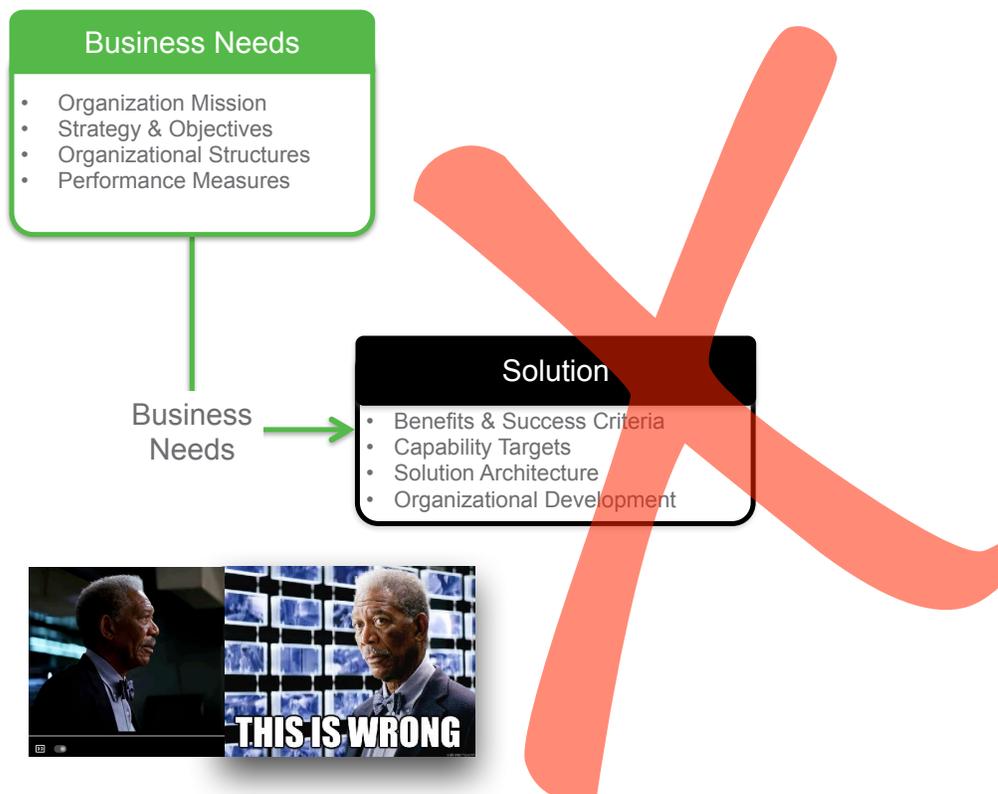


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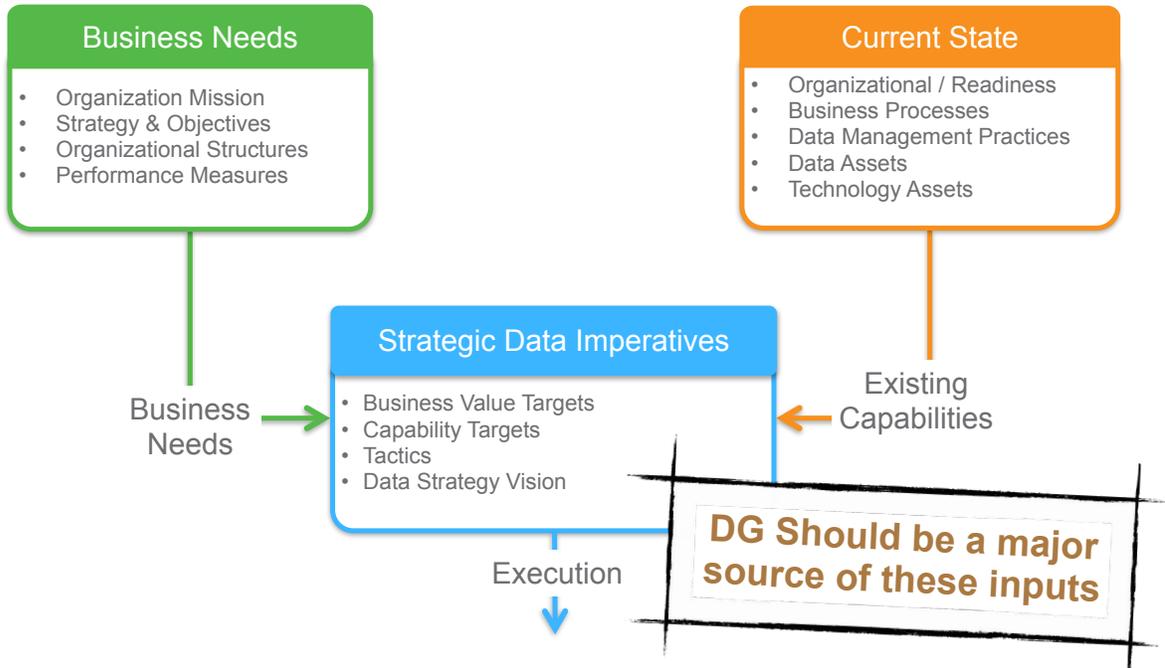
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Data Strategy Framework (Part 1)

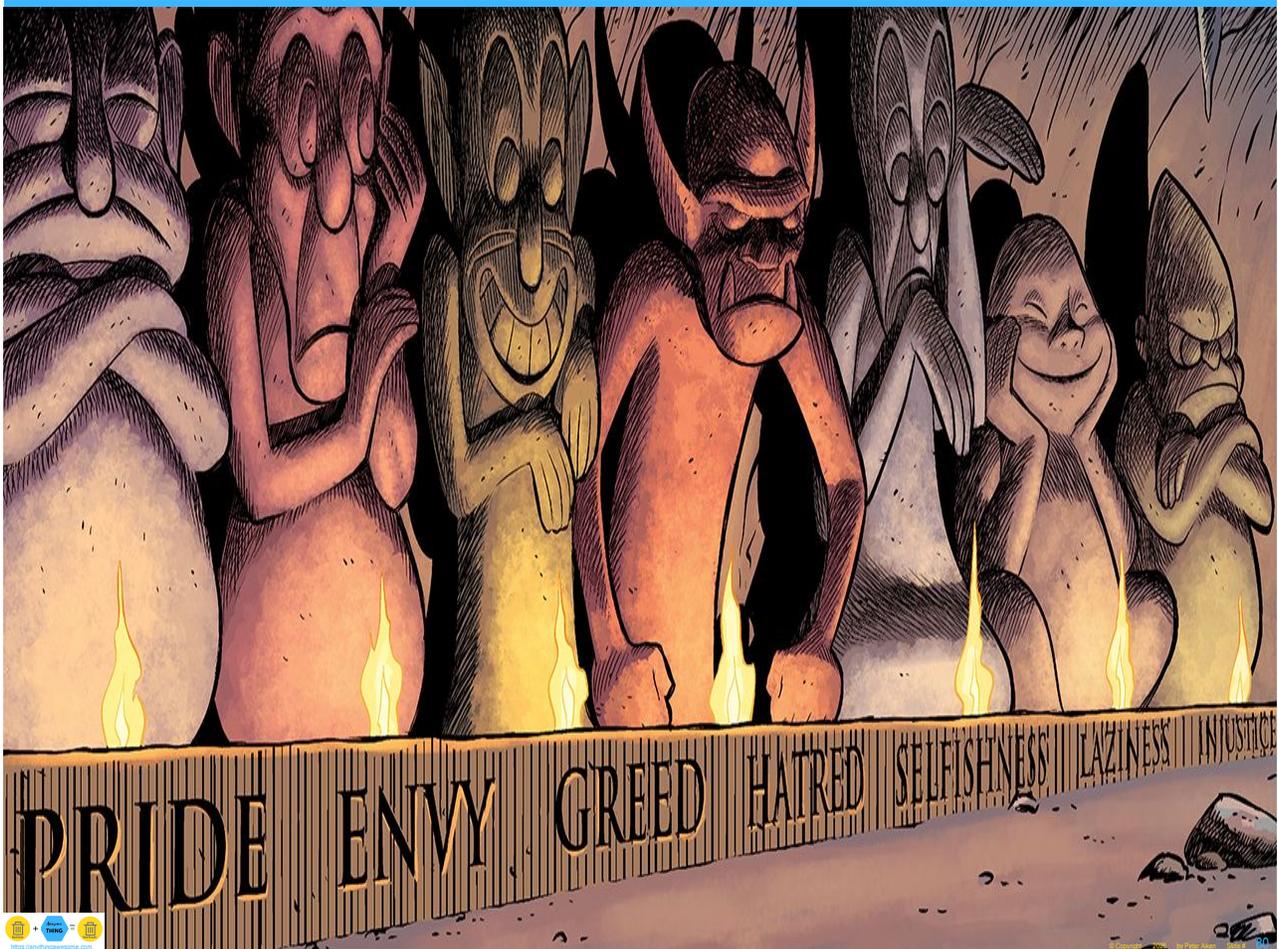


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Data Strategy Framework (Part 1)



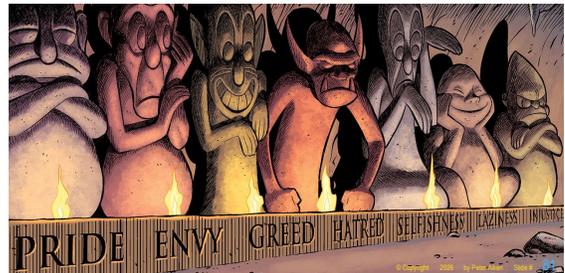
<https://anyingawilliams.com>



<https://anyingawilliams.com>

Exorcising the Seven Deadly Data Sins

-  1 Not Understanding Data-Centric Thinking
-  2 Lacking Qualified Data Leadership
-  3 Not implementing a Robust, Programmatic Means of Developing Shared Data
-  4 Not Aligning The Data Program with IT Projects
-  5 Failing to Adequately Manage Expectations
-  6 Not Sequencing Data Strategy Implementation
-  7 Failing To Address Cultural And Change Management Challenges



Credit: Image credit: Matt Vickers

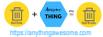
The Case for the Chief Data Officer

Recasting the C-Suite to Leverage Your Most Valuable Asset



MK
HODGAN SPAFFORD

Peter Aiken and
Michael Gorman



<https://anyingwastone.com>

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Chief Data Officer Combat

Recasting the executive team, make full use of the most valuable assets

首席数据官实战：

重铸高管团队，充分利用最有价值资产

〔美〕Peter Aiken, Michael Gorman 著 / 刘晨、冀军志 译

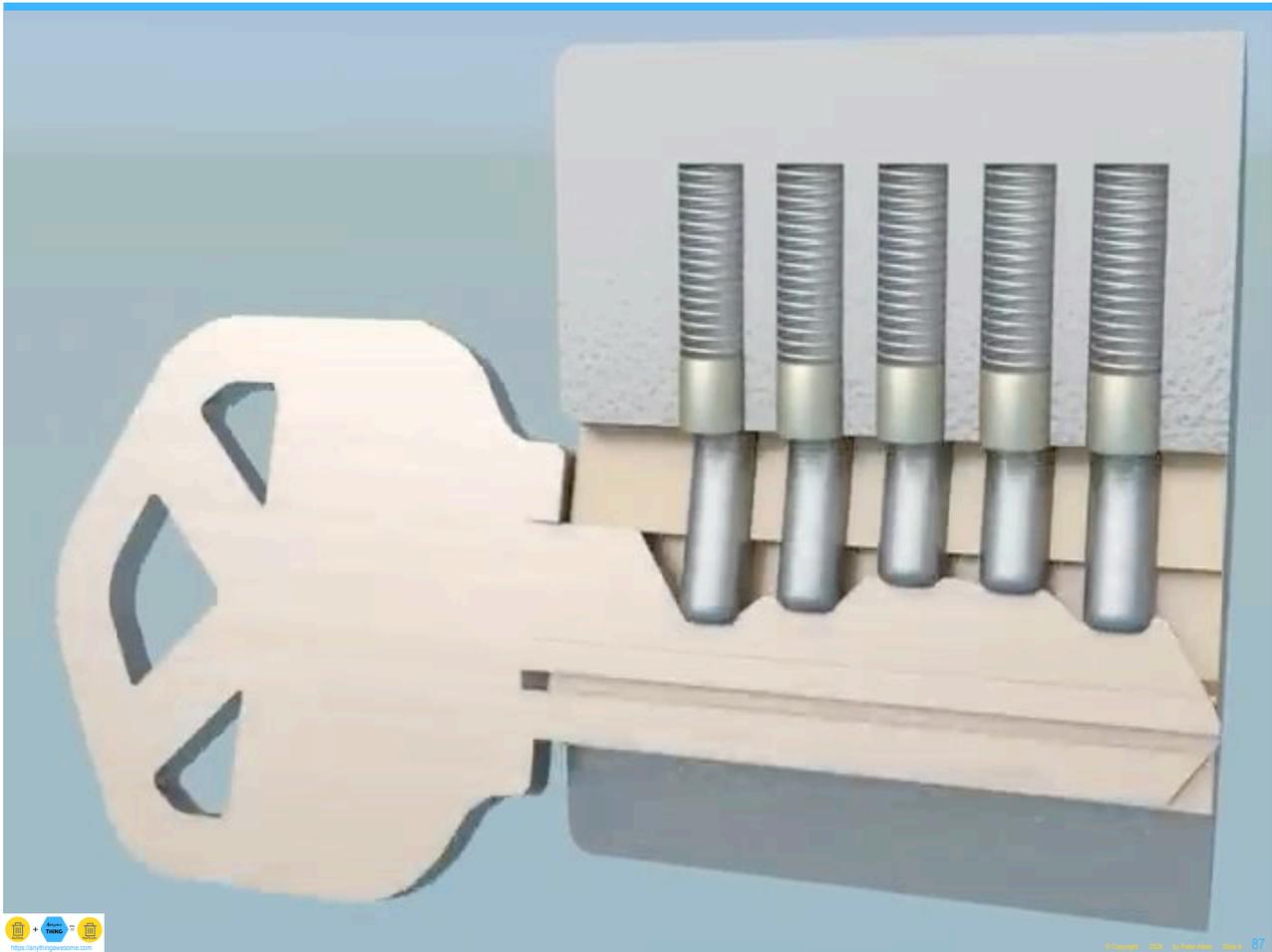


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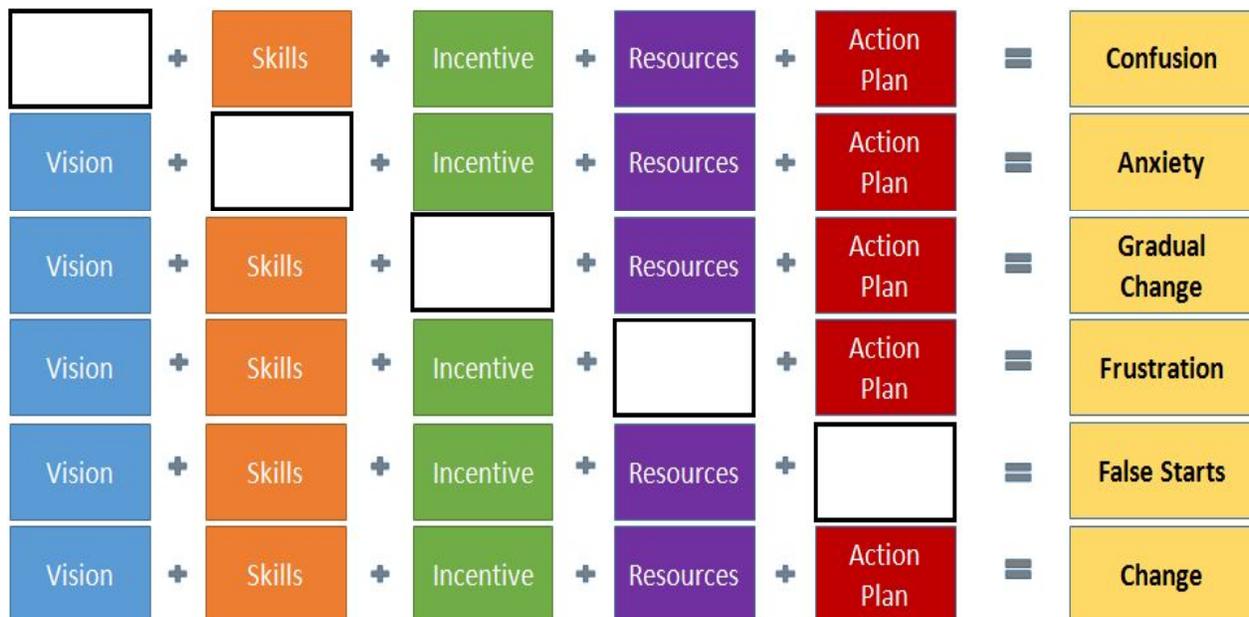


<https://anyingwastone.com>

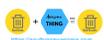
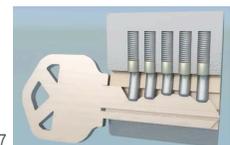
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Diagnosing Organizational Readiness



Culture is the biggest impediment to a shift in organizational thinking about data!



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RESEARCH-ARTICLE OPEN ACCESS EXPERIENCE: Succeeding at Data Management—BigCo Attempts to Leverage Data

Author: Peter Aiken [Authors Info & Affiliations](#)

Publication: Journal of Data and Information Quality (JDIQ) • May 2016 • Article No.: 8
• <https://doi.org/10.1145/2893482>



- **Download Here!**
— <http://dl.acm.org/citation.cfm?doi=2888577.2893482>

EXPERIENCE: Succeeding at Data Management—BigCo Attempts to Leverage Data

PETER AIKEN, Virginia Commonwealth University/Data Blueprint

In a manner similar to most organizations, BigCompany (BigCo) was determined to benefit strategically from its widely recognized and vast quantities of data. U.S. government agencies make regular visits to BigCo to learn from its experiences in this area. When faced with an explosion in data volume, increases in complexity, and a need to respond to changing conditions, BigCo struggled to respond using a traditional, information technology (IT) project-based approach to address these challenges. As BigCo was not data knowledgeable, it did not realize that traditional approaches could not work. Two full years into the initiative, BigCo was far from achieving its initial goals. How much more time, money, and effort would be required before results were achieved? Moreover, could the results be achieved in time to support a larger, critical, technology-driven challenge that also depended on solving the data challenges? While these questions remain unaddressed, these considerations increase our collective understanding of data assets as separate from IT projects. Only by recognizing data as a strategic asset can organizations begin to address these new challenges. Transformation to a data-driven culture requires far more than technology, which remains just one of three required “stool legs” (people and process being the other two). Seven prerequisites to effectively leveraging data are necessary but insufficient awareness exists in most organizations—hence, the widespread misfires in these areas, especially when attempting to implement the so-called big data initiatives. Refocusing on foundational data management practices is required for all organizations, regardless of their organizational or data strategies.

Categories and Subject Descriptors: H.2.0 (Information Systems): Database Management—General; E.0 (Data): General

General Terms: Management, Performance, Design

Additional Key Words and Phrases: Data management, data governance, data stewardship, organizational design, CIO, CIO, chief data officer, chief information officer, data, data architecture, enterprise data executive, IT management, strategy, policy, enterprise architecture, information systems, conceptual modeling, data integration, data warehousing, analytics, and business intelligence, BigCo

ACM Reference Format:
Peter Aiken. 2016. Experience: Succeeding at data management—BigCo attempts to leverage data. J. Data and Information Quality 7, 1-2, Article 8 (May 2016), 35 pages.
DOI: <http://dx.doi.org/10.1145/2893482>

1. CASE INTRODUCTION

Good technology in the hands of an inexperienced user rarely produces positive results.

Everyone wants to “leverage” data. Today, this is most often interpreted as investments in warehousing, analytics, business intelligence (BI), and so on. After all, that is what you do with an asset—you leverage it—so the asset can help you to attain strategic objectives; see Redman [2008] and Ladley [2010]. Widespread and pervasive

Author's address: P. Aiken, 10124C West Broad Street, Glen Allen, VA 23060; email: peter.aiken@vcu.edu. Permission to make digital or hard copies of all or part of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. Copyrights for components of this work owned by others than the author(s) must be honored. Abstracting with credit is permitted. To copy otherwise, or to publish, to post on servers or to redistribute to lists, requires prior specific permission and/or a fee. Request permissions from Permissions.acm.org.
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ACM Journal of Data and Information Quality, Vol. 7, No. 1-2, Article 8, Publication date: May 2016.



A pattern in a stream of decisions +AI

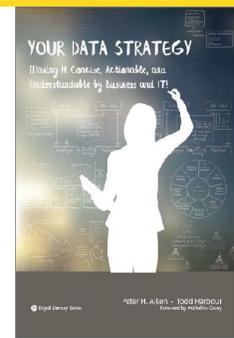
AI-aided work products

- Your organization's strategy
- Organizational objectives ↔ data strategy mappings
- Organizational strategy ↔ data practice mappings
- Data practice SWOT results
- Some sense synergistic opportunities and priorities

- What opportunities exist to use AI to supplement existing DG training, especially to those outside of the process?
- What opportunities now exist for specifically reducing your organizational cloud costs?
- What common DG practices can be implemented to willing receivers and will result in sufficient impact to be recognized as valuable components of your organization's strategy?



Program Overview



Data Strategy in Action
Using AI To Build a Foundation for Enterprise Data Governance Success

- A data strategy specifies how data assets are to be used to support the organizational strategy
 - What is strategy?
 - What is a data strategy?
 - How do they work together?
- A data strategy is necessary for effective data governance
 - Improve your organization's data
 - Improve the way people use their data
 - Improving how people use data to support their organizational strategy
- Effective Data Strategy Prerequisites
 - Lack of organizational readiness
 - Eliminating the barriers to leveraging data, the seven deadly data sins
 - Failure to compensate for the lack of data competencies
- Data Strategy Cycles
 - Lather, rinse, repeat
 - A balanced approach is required
 - Establish various data value chains
- Q&A

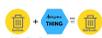
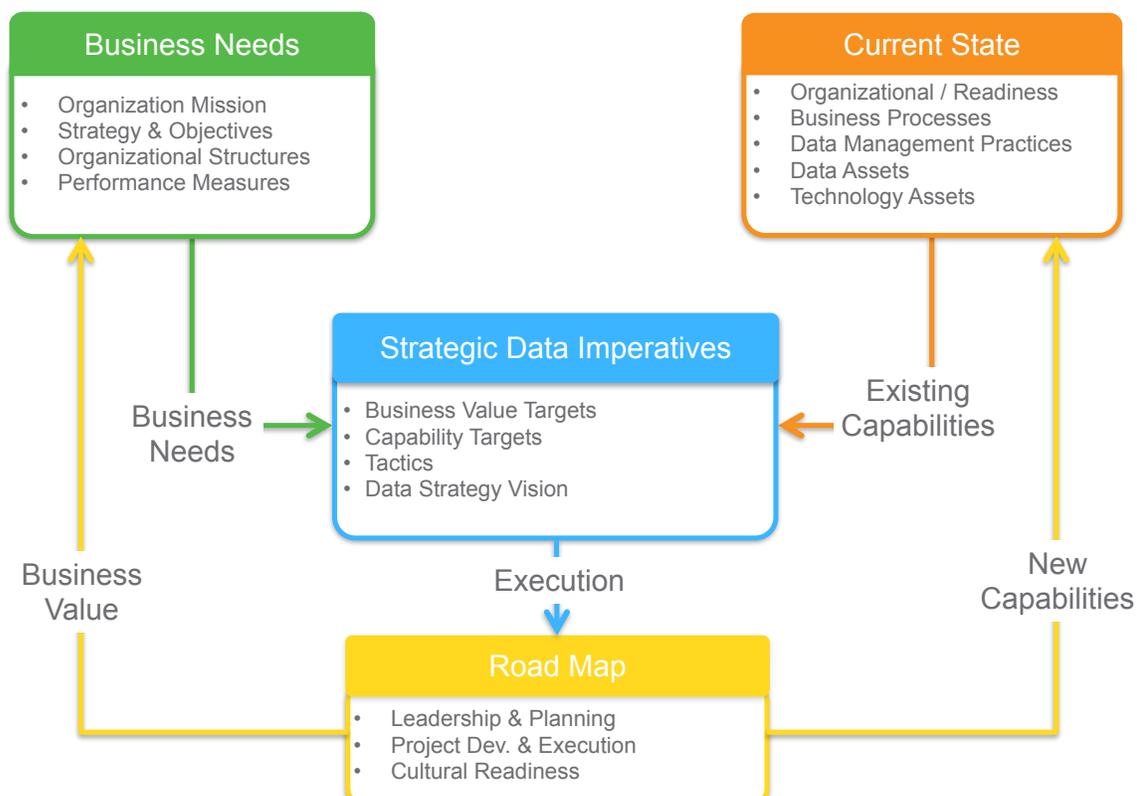


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Data Strategy Framework (Part 2)



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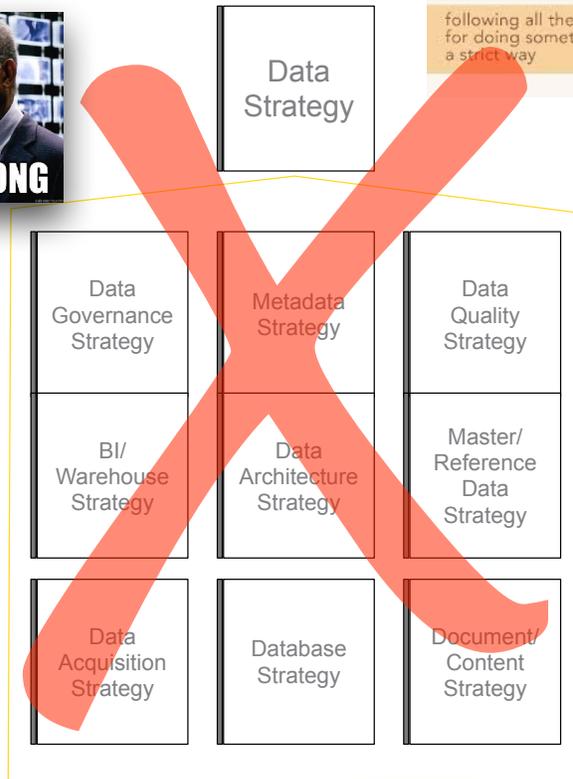
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By the (other) Books



by the book

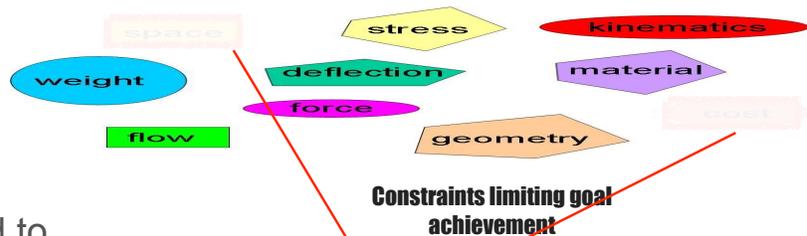
following all the rules for doing something in a strict way



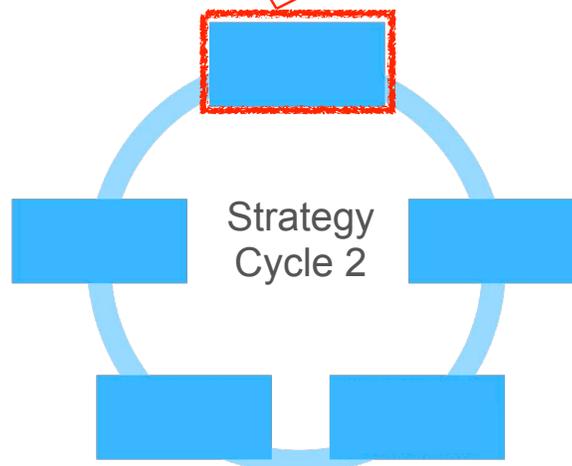
Recap



A pattern in a stream of decisions



- A data strategy specifies how data assets are to be used to support strategy
 - What is strategy?
 - What is a data strategy?
 - How do they work together?
- Strategy evolves periodically
 - As data debt is reduced
 - Determine the most fixable/highest value constraint
 - Cycle through
 - If constraint not addressed, start over



The Goal

Includes Eli Goldratt's, "Standing on the Shoulders of Giants."

Eliyahu M. Goldratt and Jeff Cox

THE GOAL

A PROCESS OF ONGOING IMPROVEMENT

30th Anniversary Edition

Eliyahu M. Goldratt has been described by *Fortune* as a "guru to industry" and by *Business Week* as a "genius". His book, *The Goal*, is a gripping fastpaced business novel.

"Goal readers are now doing the best work of their lives."
Success Magazine

"A factory may be an unlikely setting for a novel, but the book has been wildly effective..."
Tom Peters

Required reading for Amazon's management.

THE BEST-SELLING BUSINESS NOVEL THAT INTRODUCED THE THEORY OF CONSTRAINTS AND CHANGED HOW AMERICA DOES BUSINESS

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Article Talk

Theory of constraints

From Wikipedia, the free encyclopedia

(TOC)

- A management paradigm that views any manageable system as being limited in achieving more of its goals by a small number of constraints (Eliyahu M. Goldratt)
- There is always at least one constraint, and TOC uses a focusing process to identify the constraint and restructure the rest of the organization to address it



- TOC adopts the common idiom "a chain is no stronger than its weakest link," processes, organizations, etc., are vulnerable because the weakest component can damage or break them or at least adversely affect the outcome

Includes Eli Goldratt's, "Standing on the Shoulders of Giants."

Eliyahu M. Goldratt and Jeff Cox

THE GOAL

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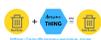
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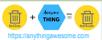
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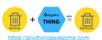
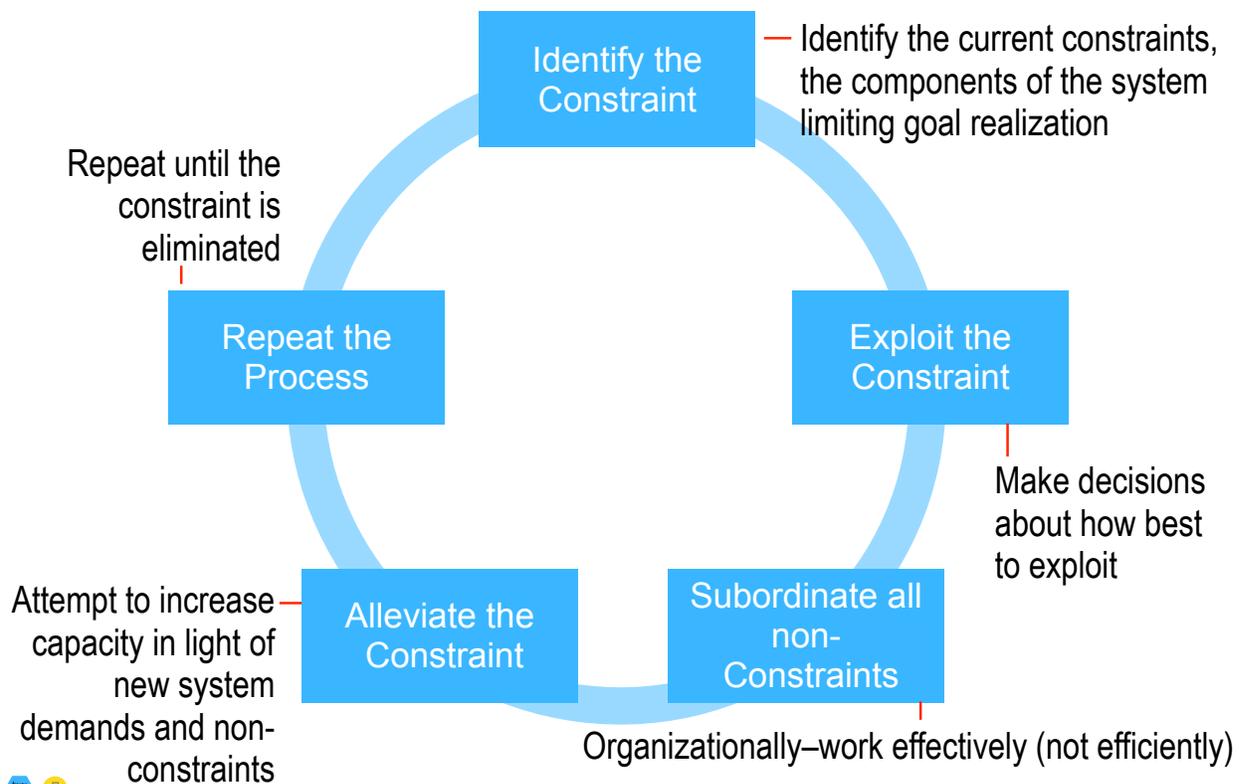
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Each cycle has an articulated purpose



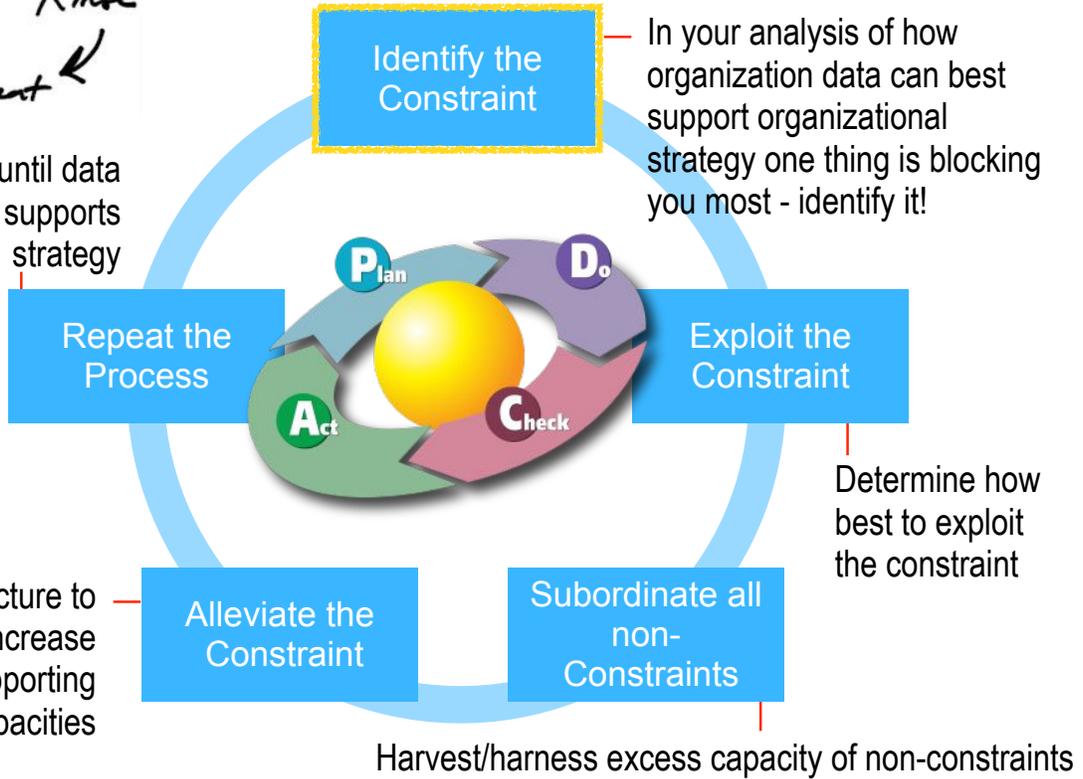
Theory of Constraints - Generic



Data Strategy Cycle



Repeat until data better supports strategy



Value Chain

- Consider who knows?
 - Data professionals?
 - Knowledge workers 10x multiplier
 - A sequence of intellectual tasks by which knowledge workers build their employer's unique competitive advantage [1] and/or social and environmental benefit. (<https://online.hbs.edu/blog/post/what-is-value-chain-analysis>)

3 Steps to Value Chain Analysis

1

IDENTIFY VALUE CHAIN ACTIVITIES

List all the primary and secondary activities that go into your service's creation.

2

DETERMINE ACTIVITIES' VALUES AND COSTS

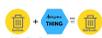
Determine the value that each business activity adds to the process, along with associated costs.

3

IDENTIFY COMPETITIVE ADVANTAGE OPPORTUNITIES

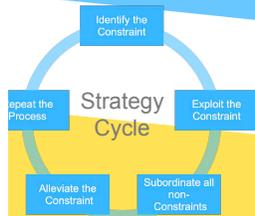
Analyze your value chain through the lens of your competitive advantage goals.

Harvard Business School Online



Strategy helps your data program

Over time increase capacity and improve operations

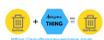
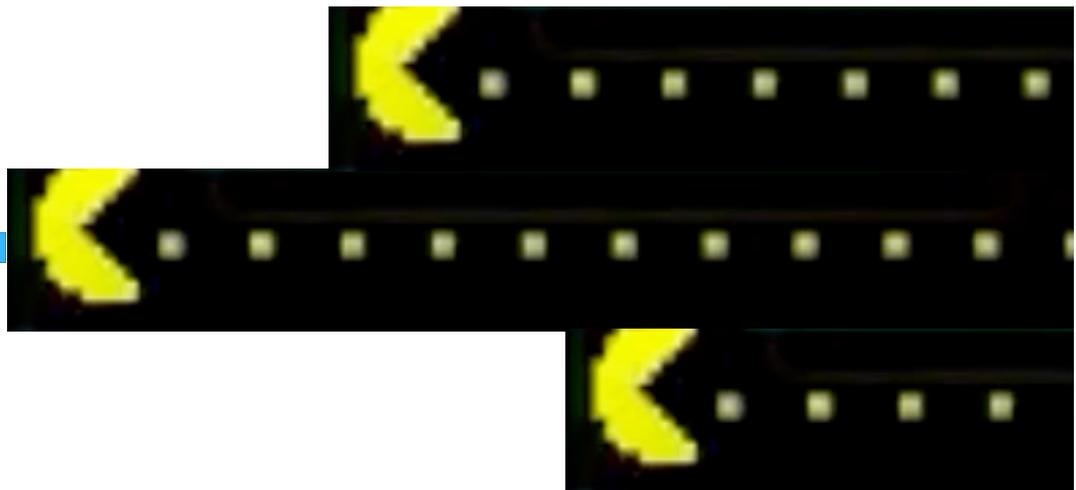
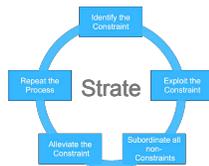


Focus evolves from reactive to proactive



<https://anytingisawesome.com>

Increasing Implementation Effectiveness



<https://anytingisawesome.com>

Key Characteristics of Successful Data Governance

Key Characteristics of Successful Data Governance

Driving outcomes for digital growth and business by turning resource data to efficiency and productivity.



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Key Characteristics of Successful Data Governance

• Clear Roles and Responsibilities

Successful data governance implementations feature clearly defined roles and responsibilities for data ownership, stewardship, and custodianship. Everyone involved understands their specific duties, from data creation to archiving. This clarity prevents ambiguity and ensures accountability for data quality, security, and compliance. For example, a data owner might be a department head responsible for the integrity of their team's data, while a data steward might be a subject matter expert who ensures data accuracy and consistency within specific datasets.

• Comprehensive Data Policies and Standards

The organization has well-documented and enforced data policies and standards that cover various aspects of data management. These include policies for data quality, security, privacy, retention, and usage. Standards for data definitions, naming conventions, and metadata management are also in place, ensuring consistency and interoperability across different systems and departments. These policies are not just theoretical; they are actively communicated, understood, and adhered to by all relevant employees.

• Centralized Metadata Management

A critical characteristic is the presence of a centralized metadata management system or repository. This system acts as a single source of truth for information about the organization's data assets, including their definitions, relationships, lineage, and usage. Effective metadata management enables users to easily discover, understand, and trust the data, facilitating better decision-making and reducing data redundancy.

• Robust Data Quality Management

Data governance success is directly tied to high data quality. The organization has established processes and tools for monitoring, measuring, and improving data quality. This involves identifying data quality issues, root cause analysis, and implementing corrective actions. Data quality metrics are regularly tracked and reported, demonstrating a commitment to accurate, complete, consistent, and timely data.

• Strong Data Security and Privacy Controls

Successful data governance prioritizes robust data security and privacy controls. This includes implementing access controls, encryption, data masking, and regular security audits to protect sensitive information from unauthorized access, use, or disclosure. Compliance with relevant data privacy regulations (e.g., GDPR, CCPA) is not just a formality but an ingrained practice, with mechanisms in place to manage data consent and subject access requests.

• Effective Data Stewardship Program

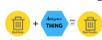
An organization with successful data governance has an active and empowered data stewardship program. Data stewards are individuals or teams responsible for the operational oversight of data assets within their respective domains. They act as liaisons between business and IT, ensuring that data is managed according to established policies and standards, and they often play a key role in resolving data-related issues.

• Data-Driven Culture

Perhaps the most telling sign of successful data governance is a data-driven culture. Data is seen as a valuable organizational asset, and employees at all levels understand its importance. Decisions are increasingly based on reliable and accessible data, and there's a collective understanding of the value that good data brings to business operations, innovation, and strategic planning. Training and awareness programs are often in place to foster this culture.

• Continuous Improvement and Adaptability

Finally, successful data governance is not a one-time project but an ongoing, iterative process of continuous improvement and adaptability. The organization regularly reviews its data governance framework, policies, and practices to identify areas for enhancement. It adapts to evolving business needs, technological advancements, and regulatory changes, ensuring that its data governance efforts remain effective and relevant over time. This includes regularly assessing new data sources, technologies, and business initiatives to ensure they align with governance principles.



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Clear Roles and Responsibilities

Automating Role Clarity and Compliance



Clear Roles and Responsibilities → (1) Automating Role Clarity & Compliance



The Challenge: Manually mapping owners, stewards, and consumers to thousands of data assets is slow, prone to error, and resource-intensive, leading to governance bottlenecks.

The Solution: AI and Machine Learning can automatically analyze data usage, content, and metadata to quickly and accurately suggest/assign the right people to the right data.

THREE KEY AI AUGMENTATIONS

- Auto-Suggestion of Stewards:** AI monitors who is creating, defining, and most frequently using a data element (e.g., in reports, queries). It flags the top candidates, cutting manual assignment time by 70%.
- Usage and Access Monitoring:** AI continuously watches data access patterns to ensure actual usage aligns with assigned responsibilities. It immediately alerts Data Governance when a role is being bypassed or if an unassigned team is heavily relying on a data source.
- Policy-Role Mapping:** AI understands policy language and maps specific policy requirements (e.g., GDPR, HIPAA) directly to the Data Steward or Owner responsible for compliance on the relevant data sets. This turns compliance into an automated task, not a manual review.

The Outcome: Clearer roles, faster compliance, and freeing up human stewards to focus on strategic data quality and definition, not administrative mapping.



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Responsibility Assignment Matrix



TASK/ACTIVITIES	PROJECT MANAGER	TEAM LEAD	DEVELOPER	TESTER	STAKEHOLDER
TASK 1	A	R	C	I	A
TASK 2	A	R	C	R	A
TASK 3	C	R	C	A	A
TASK 4	A	A	I	I	C
TASK 5	A	R	I	R	C

Responsible (R)

- This element designates the individual or department responsible for executing tasks. Each task must have at least one person assigned to ensure it is completed and to avoid delays or incomplete work. When it comes to big tasks with significant resources required, multiple people or teams may be needed to ensure smooth execution.

Accountable (A)

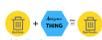
- This group holds the authority to make decisions and oversee the tasks within the project. Usually, this person is superior to the responsible team and has a major impact on the project's success or failure. There should only be one person accountable for approvals to avoid confusion and ensure clear decision-making.

Consulted (C)

- Consulted individuals or groups are those whose opinions are sought to help ensure a smooth execution. Those responsible for carrying out assigned tasks should seek advice from this team to handle issues quickly and effectively.

Informed (I)

- This section involves keeping relevant individuals or departments informed about various aspects of the project, such as progress, costs, resources, and quality. The person (or people) responsible for execution must communicate these updates to the necessary stakeholders.



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Comprehensive Data Policies and Standards → (2) From Policy to Power 🚀



The Challenge: Traditional Policy Implementation: Manual, slow, and reactive. Policies (the "what") and Standards (the "how") are often written in silos and struggle to keep pace with the volume and velocity of modern data.

AI ENABLES: POLICY ENFORCEMENT & DISCOVERY

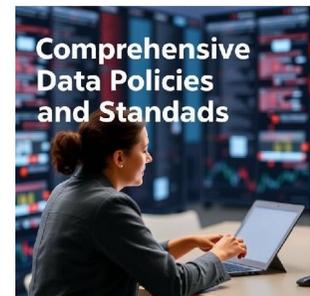
1. **Policy Interpretation & Tagging** (Policy-to-Metadata Mapping): AI (NLP/ML) reads the written Comprehensive Policies (e.g., data must be encrypted) and automatically translates them into machine-readable rules and tags. It then automatically scans the entire data estate (structured and unstructured) to apply these tags (e.g., automatically tagging PII fields as HIGH RISK: ENCRYPT). An AI Brain/Magnifying Glass instantly scanning and highlighting specific words on documents, then drawing lines to data tables.
2. **Automated Compliance Monitoring:** AI constantly monitors data flows and changes against the defined Standards. It doesn't just flag violations; it predicts potential non-compliance before it occurs (e.g., flagging a schema change that would expose sensitive data).

AI ENABLES: STANDARDS & STEWARDSHIP

3. **Proactive Data Quality Improvement:** AI learns "good" data patterns and automatically suggests or enforces data quality standards (e.g., standardizing address formats, flagging anomalies that violate integrity rules across systems). A Production Line where raw, messy materials go in, and standardized, polished gold bricks come out.
4. **Dynamic Standards Generation:** AI analyzes past policy breaches and compliance efforts to recommend improvements and updates to the standards themselves. This creates a self-optimizing governance loop.

THE RESULT

Shifting DG from Policing to Partnering: Data Governance professionals move from tedious manual enforcement to strategic oversight and business enablement. Compliance becomes baked-in, not bolted-on. The data program runs faster, safer, and with higher trust.



Centralized Metadata Management → (3) The Force Multiplier for Metadata Management 🧠



What's the Problem?

Managing the metadata (the "data about data") for all our systems is **manual**, **slow**, and **can't keep up** with the explosion of data. This bottleneck stops us from finding data fast, staying compliant, and fully trusting our analytics.

The Solution: AI-Augmented Metadata

AI acts as an **always-on** Digital Data Steward, **automating** the tedious, repetitive work of a centralized data catalog. It converts our static, manually updated catalog into a **dynamic**, intelligent system.

What AI Delivers

1. Unmatched Speed & Scale 🚀

Why it Matters to You

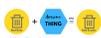
Cuts \$ Costs & Time-to-Insight: AI auto-tags, classifies, and documents data assets across all your systems, saving thousands of hours of manual labor. This drastically lowers the total cost of governance.

2. Proactive Risk Management 🛡️

Ensures Compliance & Trust: AI automatically detects and flags sensitive data (PII, financial, etc.) in real-time. It tracks data lineage (the journey from source to report) perfectly, providing an instant audit trail for regulators.

3. Democratized Data Access 💡

Faster, Better Decisions: Using Natural Language Processing (NLP), people can ask questions like "Where is the clean customer revenue data?" and AI immediately points them to the right, trusted source. It eliminates "data hunting."



Robust Data Quality Management → (4)

Data Quality Management: AI is Your Co-Pilot, Not Your Replacement



The Big Idea: From Manual Labor to Augmented Intelligence

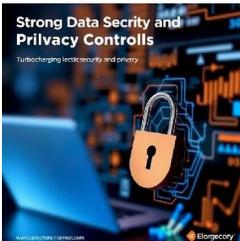
- Data Quality (DQ) has always been a battle of Volume vs. Vigilance. Traditional DQ teams use static rules and manual checks that are overwhelmed by today's enormous, messy data flows.
- AI doesn't just automate DQ—it augments it, turning your Governance team from manual reviewers into strategic decision-makers. AI finds problems you didn't even know you had, before they impact the business.

Feature	The AI Augmentation (How it Helps)	Why It Matters to the Business
Anomaly Detection	Learns historical patterns to spot subtle, contextual errors that static rules miss (e.g., a customer's purchasing pattern suddenly shifts from their norm).	Prevents surprises. Catches fraud, revenue leaks, and critical system failures in real-time, not after the damage is done.
Self-Learning Rules	Automatically profiles data to suggest and deploy new DQ rules as data changes (e.g., a new field is added, or values drift over time).	Scalability without friction. Your data quality rules update themselves, eliminating manual effort and keeping pace with business change.
Intelligent Cleansing	Uses Machine Learning (ML) for fuzzy matching and deduplication across systems, cleaning records with minor inconsistencies (e.g., "J. Smith" and "John Smith").	Achieves a Single Source of Truth . Provides a consolidated, reliable view of key entities (like customers or products) essential for regulatory compliance and personalization.
Proactive Governance	Predicts data quality breaches before they happen and automatically tags and enforces policies (like PII redaction) on sensitive data.	Reduces Compliance Risk. Automates audit trails and ensures critical data is always compliant with GDPR, HIPAA, or other regulations.



Strong Data Security and Privacy Controls → (5)

Turbocharging Security and Privacy



The Challenge: In today's landscape, data volume, complexity, and regulations are increasing faster than manual teams can track and protect them. This creates security blind spots and compliance risks.

The Solution: AI doesn't replace governance; it acts as a force multiplier, automating the heavy lifting so our teams can focus on strategy and enforcement.

Core Governance Task (Manual Pain Point)	AI Augmentation (The Turbocharger)	Executive Benefit (The Payoff)
1. Find the Sensitive Data Manually hunting for PII, PHI, etc., across thousands of databases and documents.	AI-Powered Discovery & Classification AI uses machine learning to automatically scan, label, and locate sensitive data with 99% accuracy, even in unstructured files (emails, PDFs).	Real-Time Visibility: You instantly know what data you have, where it lives, and how sensitive it is—a necessary first step for compliance.
2. Enforce Access Rules Manually setting and reviewing access permissions (Role-Based Access Control) for every user.	Dynamic Access Control & Anomaly Detection AI analyzes typical user behavior to flag unusual access patterns (e.g., a finance VP suddenly pulling HR records) and automatically adjusts granular permissions in real-time.	Zero Trust Automation: Security shifts from static rule sets to proactive, context-aware protection that stops insider threats before they become breaches.
3. Stay Compliant (GDPR, HIPAA) Constant, manual monitoring of data lineage and privacy mandates across global systems.	Compliance Automation & Predictive Risk AI maps data flow end-to-end (lineage) and uses predictive analytics to flag systems that are heading toward a regulatory violation before they fail an audit.	De-Risking the Business: Moves compliance from a reactive cost center to a proactive defense strategy, ensuring continuous adherence to changing global laws.
4. Protect Data in Transit/Use Manually redacting or masking sensitive fields for analytics use cases.	Automated Privacy-Enhancing Technologies (PETs) AI automatically applies techniques like PII Redaction, Tokenization, and Anonymization as data is accessed, ensuring sensitive information is hidden but still usable for analytics.	Secure Data Utility: Empowers your data scientists to innovate faster and safer by providing protected data on-demand, eliminating manual privacy bottlenecks.



Effective Data Stewardship Program → (6)

The Data Steward's Co-Pilot: How AI Elevates Data Governance



The Challenge:

- Data Stewards are overwhelmed managing the volume, complexity, and constant change in the data landscape. We need to shift their focus from clerical maintenance to strategic value creation.

The Strategic Payoff:

AI moves Stewards from Data Custodians to Value Catalysts.

- 10x Productivity:** Stewards gain time back to focus on strategic, high-value tasks (e.g., driving business projects, interpreting regulatory changes).
- Universal Trust:** Ensures policies and quality standards are applied consistently across the entire data estate, building trust for AI/ML and business decisions.
- Reduced Risk:** Provides proactive, real-time risk alerts and enforcement, minimizing compliance breaches and potential fines.



Area of Impact	Steward's Task (Manual)	AI Augmentation (Automated)
Discovery & Classification	Searching, manually tagging, and documenting new data assets.	Smart Tagging: Automatically identifies, classifies, and tags sensitive or critical data elements (e.g., PII, financial data) at scale.
Policy Enforcement	Monitoring usage logs and tracking compliance adherence across systems.	Continuous Monitoring: Real-time audit trails and automated alerts when data usage drifts outside defined policy or regulatory boundaries.
Quality & Remediation	Writing rules and manually reviewing data quality reports.	Self-Healing Data: Proactively identifies data anomalies, suggests quality rule improvements, and even automatically applies fixes for common errors (e.g., standardization).
Documentation & Context	Manually updating business terms and data lineage documentation.	Dynamic Documentation: Auto-generates, updates, and links business glossaries, definitions, and lineage maps as systems evolve.



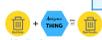
Data-Driven Culture (7)

THE CORE MESSAGE

AI doesn't replace Data Governance (DG); it automates the effort so the DG team can focus on the culture and value. AI turns governance from a manual roadblock into an automated accelerator.



Impact Area	DG-AI Augmentation	Executive Takeaway
1. Efficiency & Coverage	AI continuously discovers, classifies, and tags petabytes of data, identifying sensitive information (PII/PHI) and lineage automatically.	Shift from Policing to Strategy: We spend less time manually mapping data and more time aligning data usage with business outcomes.
2. Risk & Compliance	AI monitors data access and usage patterns in real-time to proactively detect and flag anomalous behavior, ensuring policy compliance before an incident.	Dynamic Security Shields: Rules become automated shields that immediately prevent regulatory violations (like PII misuse), dramatically reducing audit failure risk.
3. Cultural Adoption	AI instantly links business terms to technical assets, creating a trustworthy, searchable data catalog that answers "Where is the best data?" with high confidence.	Data Usage is Effortless: Employees find, trust, and use data faster because the system removes friction, making data-driven decisions the path of least resistance.



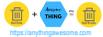
Continuous Improvement and Adaptability (8)

**Continuus
Improve
Improvement
& daptability**

THE CORE MESSAGE

In a dynamic business environment, Data Governance (DG) must be agile, not static. AI provides the real-time feedback loop necessary to transform DG from a bureaucratic function into an engine for Continuous Improvement (CI) and Adaptability.

CI Function	DG-AI Augmentation	Executive Takeaway
1. Real-Time Discovery	AI automatically monitors new data sources, usage patterns, and schema changes across the enterprise as they happen, instantly updating the data catalog and lineage.	Know Everything Instantly: We eliminate the gap between reality and documentation, allowing the business to pivot and use new data assets faster and safer.
2. Policy Stress-Testing	AI simulates the impact of proposed policy changes (e.g., new privacy laws) against live data and existing controls before implementation, identifying bottlenecks or gaps.	Adapt with Precision: We can proactively test and refine governance rules in a sandbox, reducing implementation risk and ensuring compliance is instantly effective.
3. Automated Verification	AI continuously scores data quality, completeness, and adherence to business rules (e.g., matching customer records) and uses predictive modeling to flag future quality issues.	Self-Correcting Data: Governance becomes self-healing. We move from periodic manual checks to always-on quality assurance, guaranteeing trustworthy data for decision-making.

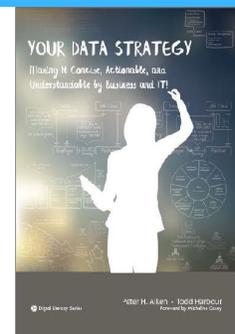


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Program Overview

- A data strategy specifies how data assets are to be used to support the organizational strategy
 - What is strategy?
 - What is a data strategy?
 - How do they work together?
- A data strategy is necessary for effective data governance
 - Improve your organization's data
 - Improve the way people use their data
 - Improving how people use data to support their organizational strategy
- Effective Data Strategy Prerequisites
 - Lack of organizational readiness
 - Eliminating the barriers to leveraging data, the seven deadly data sins
 - Failure to compensate for the lack of data competencies
- Data Strategy Cycles
 - Lather, rinse, repeat
 - A balanced approach is required
 - Establish various data value chains

Data Strategy in Action
Using AI To Build a Foundation for Enterprise Data Governance Success

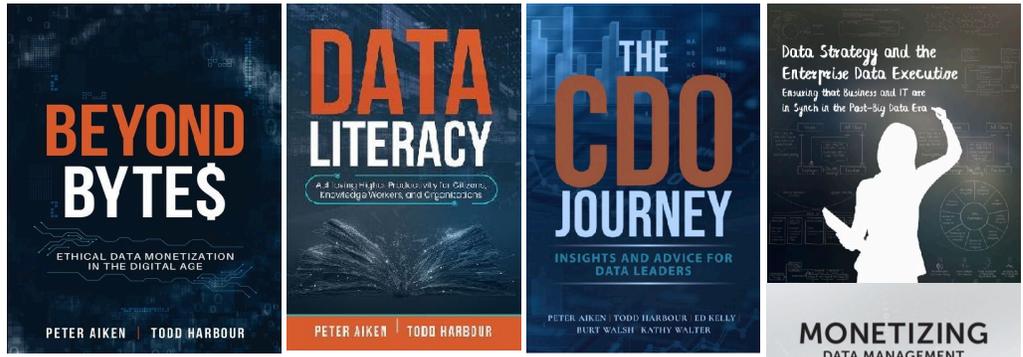


• Q&A

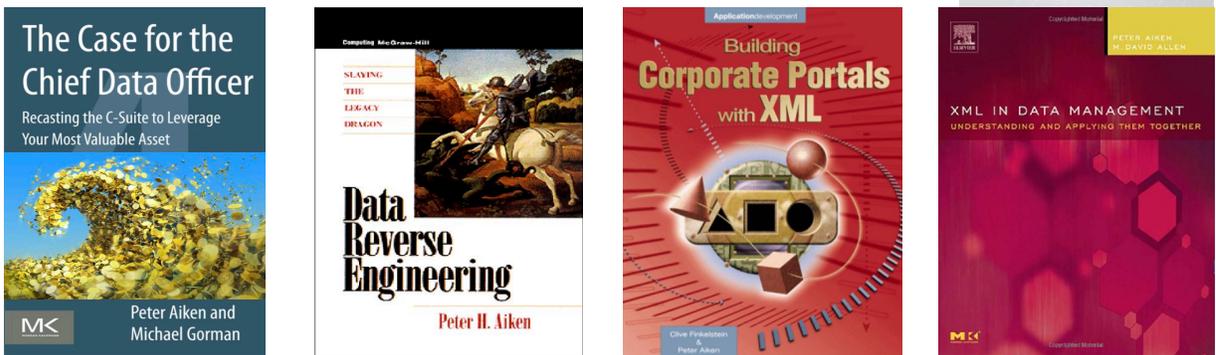
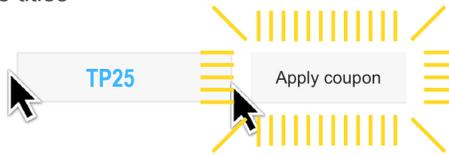


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Time: 19:00 UTC (2:00 PM NYC) | Presented by: Peter Aiken, PhD

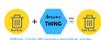
Architecting for the Future: Using AI to Design AI-Ready Data Ecosystems
10 February 2026



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