

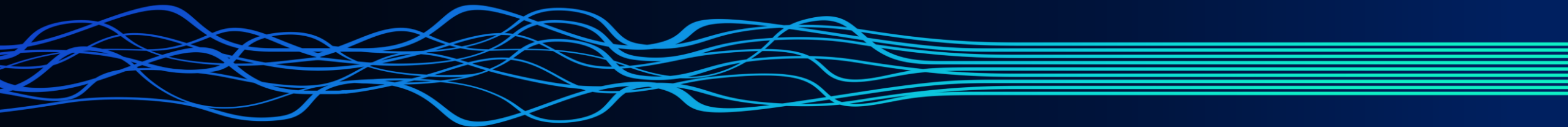
# Data Governance, Data Literacy, and the Management of Data

*How does Literacy Overlap with Governance?*

We need our people to have  
high data literacy

Um... what?

They can make  
data-driven decisions



In modern society, we all

USE

DEPEND ON

COMPARE

DECIDE TO BELIEVE

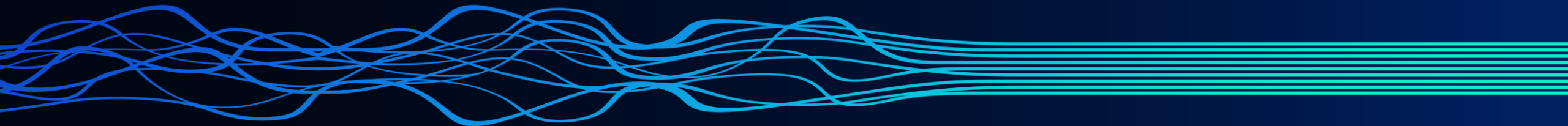
REACT TO

DEBATE

CELEBRATE RESULTS OF

every day.

DATA



# We rely on consistent standards and units

We take for granted that we can depend on

What time it is

When

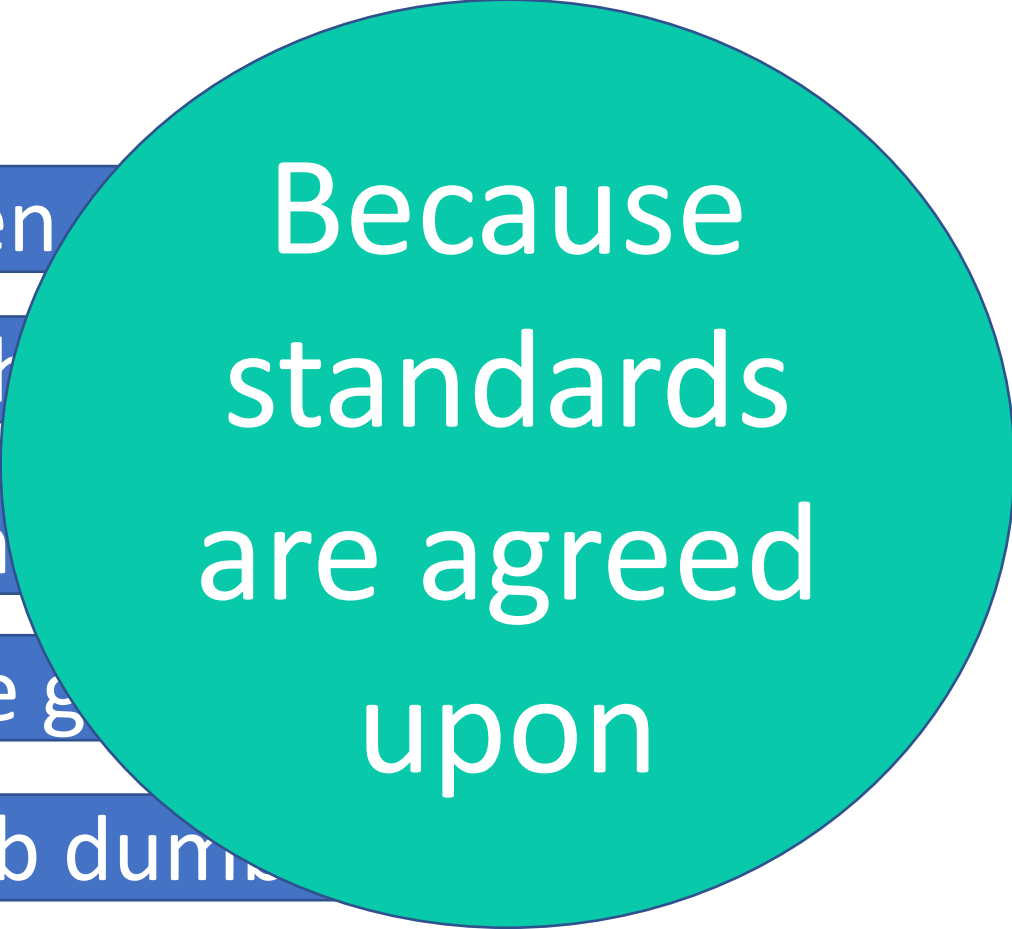
Who holds a world record

Wh

The dollars in our bank statements

How fast the speedometer says we're going

The weight of a 5lb dumbbell



Because  
standards  
are agreed  
upon

# We make confident comparisons

Today was colder

My team scored more points

This job pays more

That stock price is higher than

I've lost weight!

This car gets more miles per gallon

Because data  
are collected,  
and standards  
are applied  
consistently

# We make data-driven decisions

We respond to real time data and predictions

Because  
we  
(usually)  
trust the  
sources

Monday.. Let's picnic on Saturday

Google.... I will go another way

are down.... Time to buy a house

ally lower in the fall... I'll go then

an eclipse on May 3<sup>rd</sup>... let's go see

# And.....sometimes we make data-driven decisions

## FROM QUESTIONABLE SOURCES

A celebrity took Ivermectin....

A politician says vaccines can

That product has a five-star

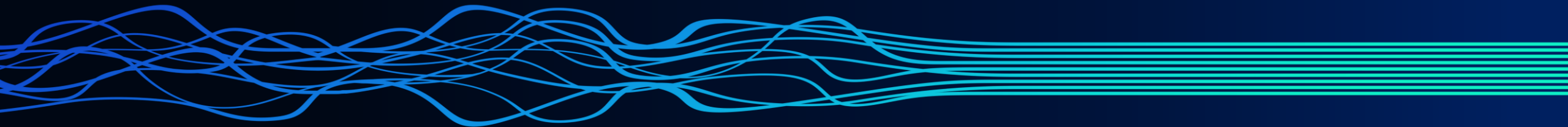
4 in 5 dentists recommend the

That person has 1M followers...

Because we  
sometimes  
misplace trust  
and don't know  
how to assess  
validity

We need our people to have  
high data literacy

So, they can make reliable  
data-driven decisions





# A person who has low nutritional literacy

Still consumes food.

He just may choose differently.



# A person who has low data literacy

Still consumes information.

He just may choose and use it differently.



# If we think about consumption (food or data)

## There are parallel responsibilities

### 1. Governing bodies who insure:

- Safety
- Consistency
  - Definitions, metrics, processes
- Transparency

### 2. Consumers who understand

- Their role in using information
- The meaning of information

| Nutrition Facts          |            |
|--------------------------|------------|
| Amount Per Serving       |            |
| <b>Calories</b>          | <b>450</b> |
| %                        |            |
| Total Fat 14g            |            |
| Saturated Fat 1.8g       |            |
| Trans Fat 0g             |            |
| Polyunsaturated Fat 1.8g |            |
| Monounsaturated Fat 4.8g |            |
| Cholesterol 35mg         |            |
| Sodium 1550mg            |            |
| Total Carbohydrate 51g   |            |
| Dietary Fiber 8g         |            |
| Total Sugars 20g         |            |
| Protein 35g              |            |
| Vitamin D 0mcg           |            |
| Calcium 98.8mg           |            |
| Iron 8.46mg              |            |
| Potassium 470mg          |            |
| Vitamin A 1710mcg        |            |
| Vitamin C 66.2mg         |            |

Grilled Salmon Salad



| Nutrition Facts       |             |
|-----------------------|-------------|
| Amount Per Ser        |             |
| <b>Calories</b>       | <b>1130</b> |
| %                     |             |
| Total Fat 67g         |             |
| Saturated fat 27g     |             |
| Trans fat 3g          |             |
| Cholesterol 220mg     |             |
| Sodium 1920mg         |             |
| Carbohydrates 64g     |             |
| Net carbs 61g         |             |
| Sugar 18g             |             |
| Fiber 3g              |             |
| Protein 70g           |             |
| Vitamins and minerals |             |
| Vitamin A 90µg        |             |

Double Cheeseburger



# Governance. Information and Rules about:

**Cumulative  
information  
needed  
to  
insure  
safety and  
accuracy**



Collect/ Source



Transport  
/Transfer



Transform



# Consumer Roles Vary. Governance oversees

More literacy (skill) needed for each level



Prepare / Manipulate



| Nutrition Facts          |      |
|--------------------------|------|
| Amount Per Serving       | 450  |
| Calories                 |      |
| Total Fat 14g            |      |
| Saturated Fat 1.8g       | 18%  |
| Trans Fat 0g             | 9%   |
| Polyunsaturated Fat 1.8g |      |
| Monounsaturated Fat 4.8g |      |
| Cholesterol 35mg         | 12%  |
| Sodium 1550mg            | 67%  |
| Total Carbohydrate 51g   | 19%  |
| Dietary Fiber 8g         | 29%  |
| Total Sugars 20g         |      |
| Protein 35g              | 70%  |
| Vitamin D 0mcg           | 0%   |
| Calcium 98.8mg           | 8%   |
| Iron 8.46mg              | 45%  |
| Potassium 470mg          | 10%  |
| Vitamin A 1710mcg        | 190% |
| Vitamin C 66.2mg         | 70%  |

Grilled Salmon Salad



Format/Deliver

Double Cheeseburger



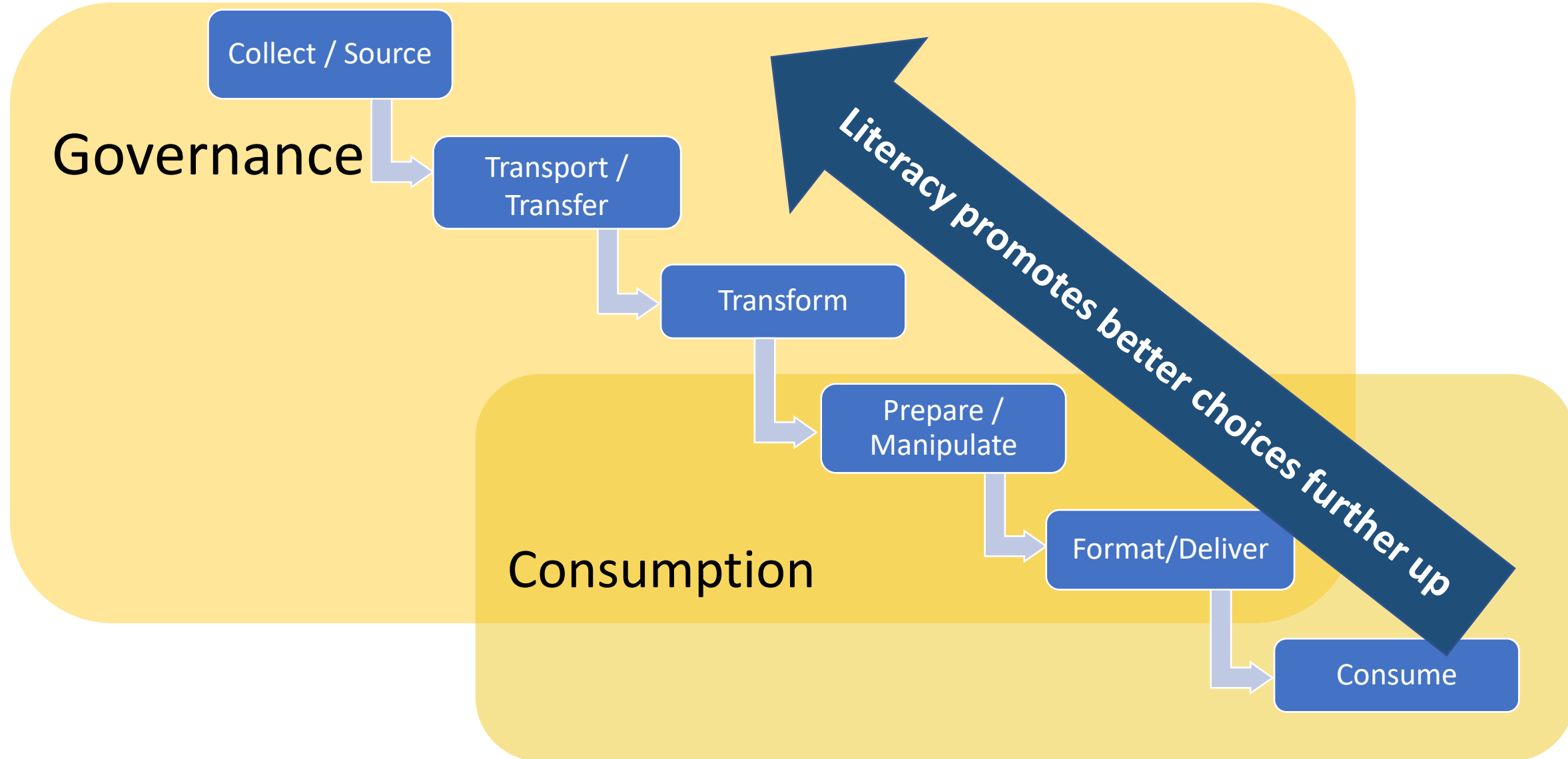
| Nutrition Facts       |      |
|-----------------------|------|
| Amount Per Ser        | 1130 |
| Calories              |      |
| Total Fat 67g         |      |
| Saturated fat 27g     | -    |
| Trans fat 3g          | -    |
| Cholesterol 220mg     | -    |
| Sodium 1920mg         | 80%  |
| Carbohydrates 64g     | -    |
| Net carbs 61g         | -    |
| Sugar 18g             | -    |
| Fiber 3g              | 12%  |
| Protein 70g           |      |
| Vitamins and minerals |      |
| Vitamin A 90µg        | 10%  |

Consume





# Moving up the chain



# Literacy: Moving up the chain

Collect / Source

Transport /  
Transfer

I will select and prepare based on  
what I know about the ingredients ....

Prepare /  
Manipulate



Format/Deliver

Double Cheeseburger



Consume

I'll just eat whatever you serve me....

# A person who has low data literacy

Still consumes information.

He just may choose and use it differently.





# Today's Panel Guests

**In what ways is there a disconnect between governance efforts and literacy efforts?**

**Are there specific misconceptions that non-data people have about data governance, if so, how could literacy efforts fix those?**

**What can data literacy efforts learn from data governance experiences?**

**Any lessons learned.....**

# Today's Panel

## **Josh Reid**

Data Strategy, Data Literacy,  
Data Governance and Delivery Leader  
Succeed Data



## **Bill Wood**

Data Governance Officer  
HealthTrio



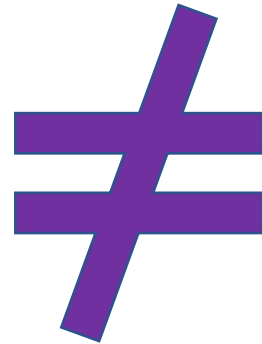
# Data Governance, Data Literacy and the Management of Data

June 1, 2023



The data literacy dilemma

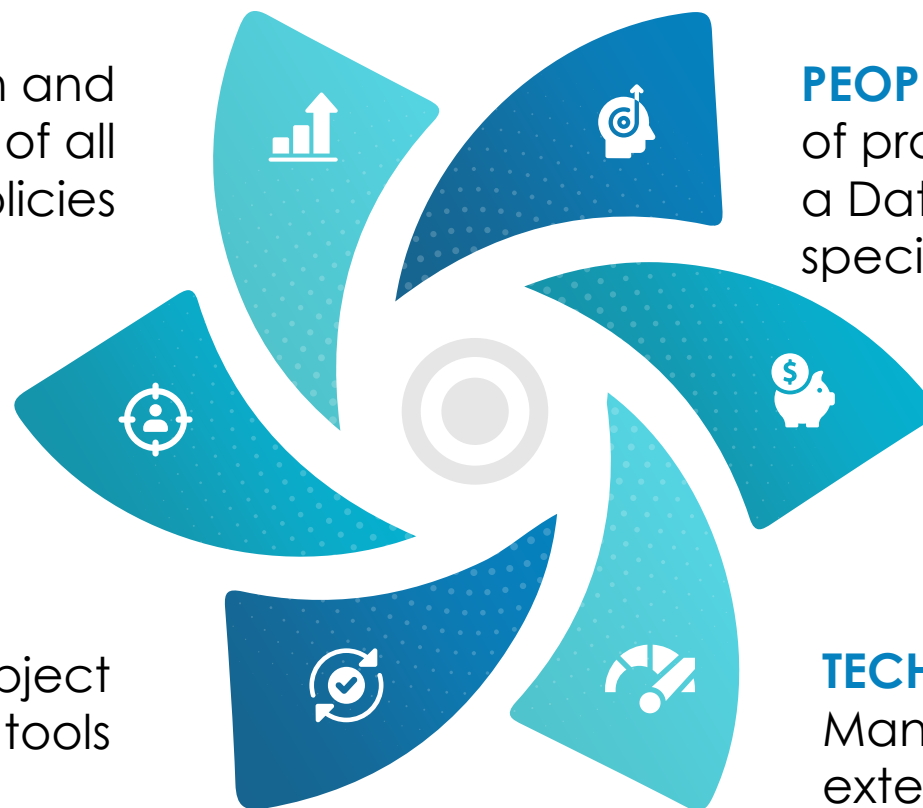
**DATA LITERACY**



**DATA LITERACY**

# HOW DATA LITERACY INTEGRATES WITH YOUR DATA GOVERNANCE PROGRAM

**POLICY** A vehicle to train and test the knowledge of all employees on data policies



**PEOPLE** Data Literacy a community of practice working group lead by a Data Governance & Literacy specialist

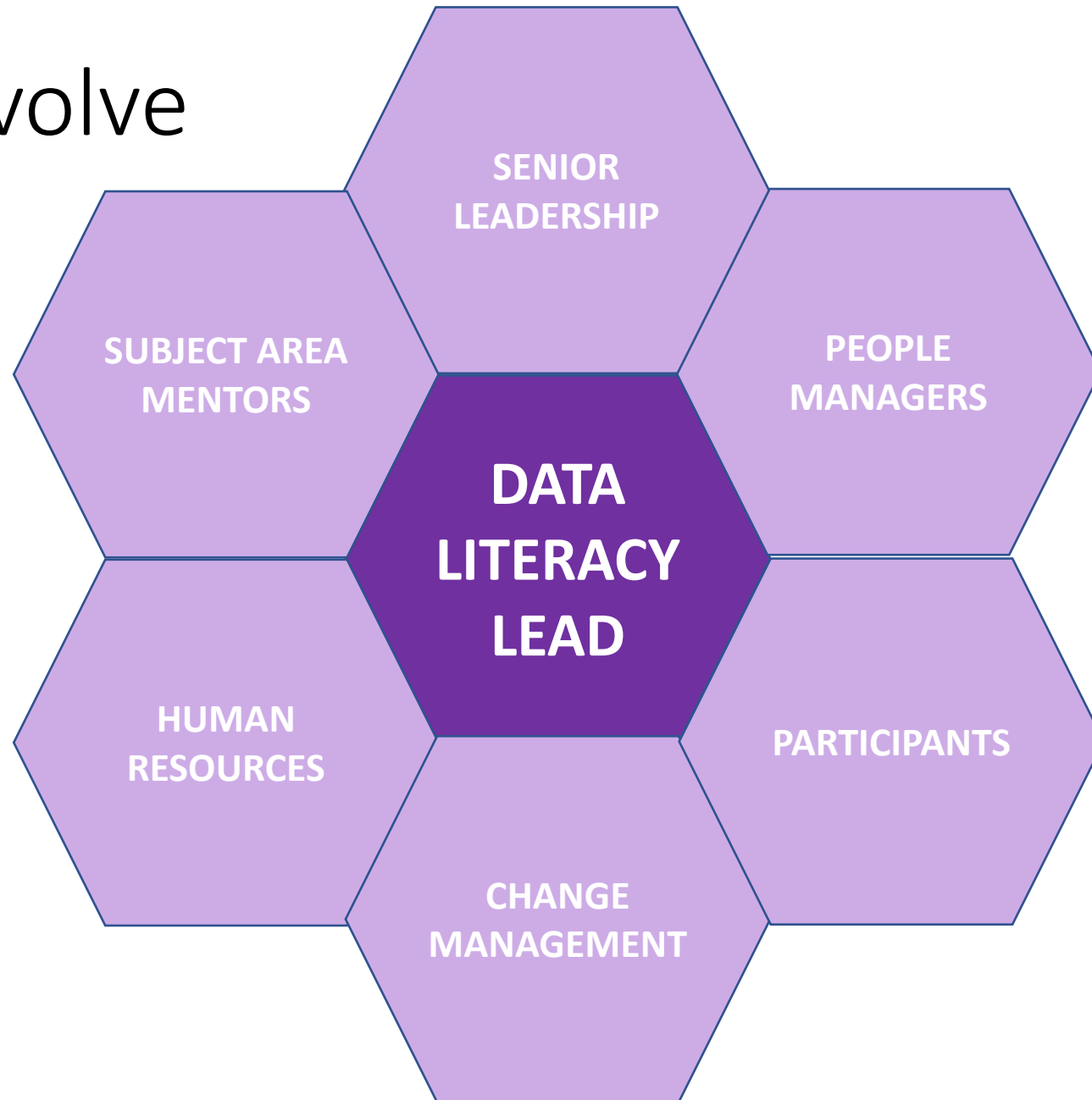
**PROCESS** embedded in employee development plans and all change programs

**TECHNOLOGY** Internal Learning Management Systems and external learning tools

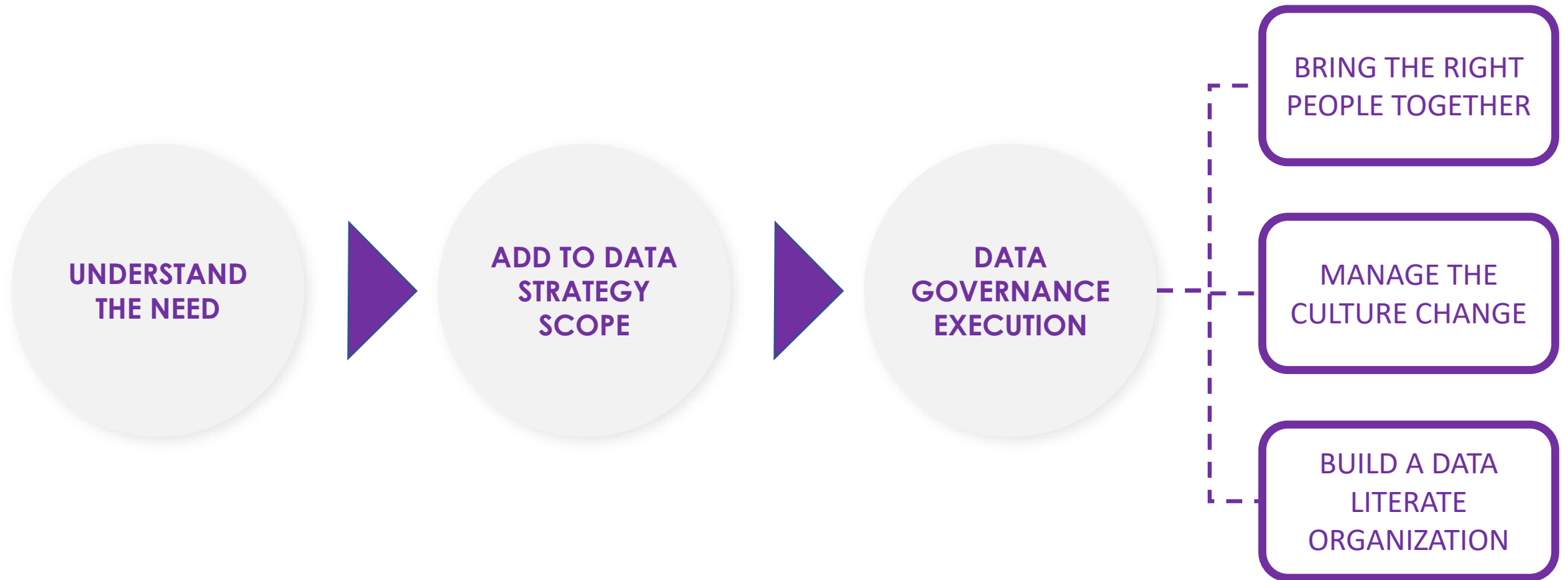
**ORGANIZATION** Data Literacy standing topics in Data Governance Council and requires ongoing funding

**STANDARDS** establish standard subject areas and delivery tools

# Who to involve



# How do we make this work?



# Key Take Aways

## Toolkit

- It's more than people, process and Technology
- It's both an organizational and individual skillset

## Employee Experience

- This is as hard to execute well as it is to be a participant
- Participants will feel the pressure of learning a new language and being expected to deliver

## True Data Literacy

- It's not a project – it is a culture shift
- What is the best way to approach data literacy for you?



# Data Governance and Data Literacy

Connecting the Dots



# Two Became One

## Online Insight

- Small company (~15 employees)
- Single owner
- Operating very lean
- Providing membership and billing services to health insurance companies
- ~8 clients
- HIPAA compliance
- Me – Director of Data Quality and Analytics with a vision of Data Governance

## HealthTrio

- Medium sized company (~120 employees)
- Board of Directors and financial backing
- Much more structured and formal
- Providing health care portals to payors and providers and their members
- ~ 60 clients
- Recent HITRUST certification

HealthTrio purchased Online Insight in November 2021

# The State of Data Governance

HealthTrio had

- A Data Governance Charter
- A Data Governance Committee with two co-chairs
- A CEO who stated that Data Governance is important
- A declared goal for 2022 to improve Data Governance
- We established a DG team of myself, my boss, and an interested data engineer.

**HITRUST<sup>®</sup>**

Data Governance efforts were driven by HITRUST requirements for data security and privacy.

## My Responsibility – A Roadmap

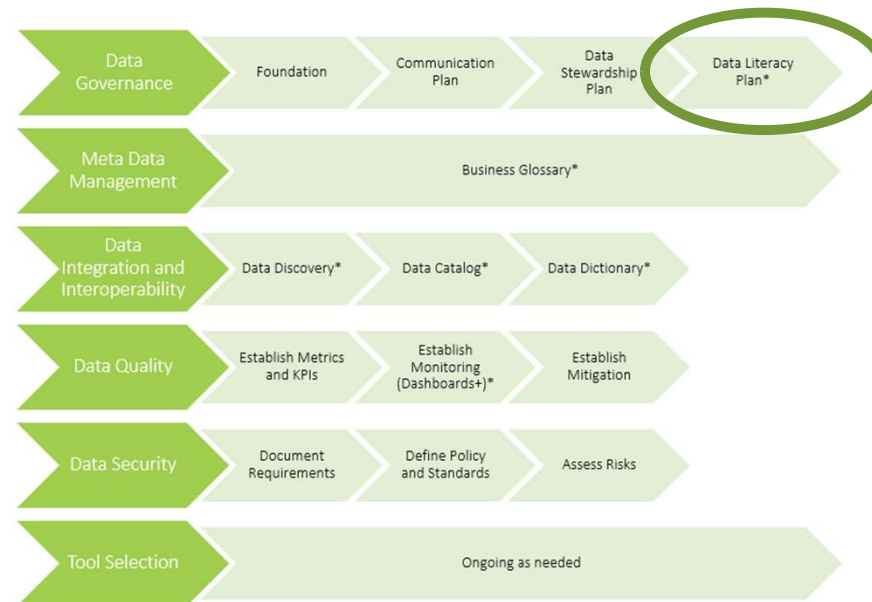
- My title was changed to Data Governance Officer
- I was added to the Data Governance Committee as a co-chair
- I was moved to the Data Technologies department at HealthTrio, within IT
- My first responsibility was to create a 2022 roadmap for data governance
- I was sent to attend the DGIQ conference in June 2022



# The 2022 Roadmap



## Roadmap Overview



\* Will or may need tools or services

Proprietary and Confidential | © HealthTrio | 3

## 2022 - A Year of Transition

| Area               | Starts                          | Stops  |
|--------------------|---------------------------------|--|
| Communication Plan | New Employee Orientations       |  |
| Business Glossary  | Started in Confluence           |  |
| Data Discovery     | Manual inventory                |  |
| Data Dictionary    | Started in Confluence           |  |
| Data Quality       | Metrics Explored                | Discrepancy Process shelved  |
| Data Security      | A Separate Data Security office |  |
| Tool Selection     |                                 | Process shelved due to lack of funding<br>(We had gone far enough to narrow our choices down to three options and were ready to start presenting those options to the DG Committee.) |

# The 2023 Roadmap

- Increase institutional understanding of data governance
- Increase institutional data literacy
  - Select a data literacy assessment
  - Conduct baseline assessment
  - Based on results, conduct targeted training
  - Conduct year-end assessment
- Implement priority Initiatives
  - Open Source tool – OpenMetadata
  - Documentation (business glossary, data catalog, policies)
- Use dashboards to make DQ and DG metrics visible
- Partner with a team to implement DG as lighthouse project

Data Literacy took a much more prominent place

## How Hard Can It Be?


- There was not consensus that data literacy was of primary importance.
- We evaluated five data literacy assessments. We couldn't agree on one.
- I created my own. Despite how great I thought it was, that appreciation was not universal.
- After focusing on other priorities, a team member suggested a maturity assessment.
- We selected the assessment from OvalEdge LLC, one of the three tool vendors we had expressed interest in.
- We selected ONE of the tabs to focus on.



<https://www.ovaledge.com/blog/data-governance-maturity-model>




# The Assessment




DATA GOVERNANCE MATURITY MODEL QUESTIONNAIRE

| Data Literacy Program Questionnaire  | Answer |
|--|--------|
| Can more than just IT and developers interact with and understand the data?                                      | No     |
| Can business users understand the data?  | No     |
| Are you making it easy for business users to interact with data?   | No     |
| Is there training available to teach users how to interact with data?  | No     |
| Are users who contribute knowledge and report data quality issues rewarded?                                      | No     |
| Are terms across teams standardized so there are not multiple meanings of the same word across many departments? | No     |
| Does your organization have a business glossary?   | No     |
| Is the business glossary kept up to date?  | No     |
| Is there a defined system to introduce new terms into the business glossary?                                     | No     |
| Do people in your organization reach out to Business Data Stewards to gain additional insight on data elements?  | No     |
| Do you have owners for categories of data on the business side?  | No     |
| Is data classified and tagged for easy searchability?  | No     |
| Is cross-team collaboration across your organization encouraged?   | No     |
| Overall Data Literacy Program Level  |        |
|  |        |
|  |        |
|  |        |
|  |        |
|  |        |
|  |        |
|  |        |


ANSWER LEVELS




**Level 1: No**  
Issues are dealt with as they appear.




**Level 2: Beginning**  
The importance is becoming apparent and commonly accepted. Efforts are beginning as the organization determines what is needed.



**Level 3: In Progress**  
Policies and documentation are being created to implement a solution. Actions are being taken such as appointing people to positions or installing a tool.



**Level 4: Yes**  
The organization is now enforcing policies and procedures for data governance. There is an implemented solution being monitored for success.



**Level 5: Absolutely**  
The implemented solution is working and only needs small improvements for optimization. Workflows are redesigned to reduce redundancy.

## Next Steps

Synthesize

Synthesize results of assessment



Synthesize

Synthesize our understanding of the three current “pillars” of Data Literacy

- Peter Aiken and his book Data Literacy
- John Ladley and his approach to Data Acumen
- Wendy Lynch and her approach to Analytic Translators



Turn

Turn it all into a plan of action

## Lessons Learned

- Having Data Governance deep within IT has its drawbacks.
- Carefully consider what “executive sponsorship” means.
- It seems generally accepted that Data Governance is important. Data Literacy is less so.
- The approach to improving Data Literacy is even less well defined.
- Know what you want to accomplish, then communicate, communicate, communicate.
- Start Data Literacy efforts early and in parallel with Data Governance efforts. It will take time.