

# *What's your data strategy?*

08 JULY 2021

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## *Presenters*

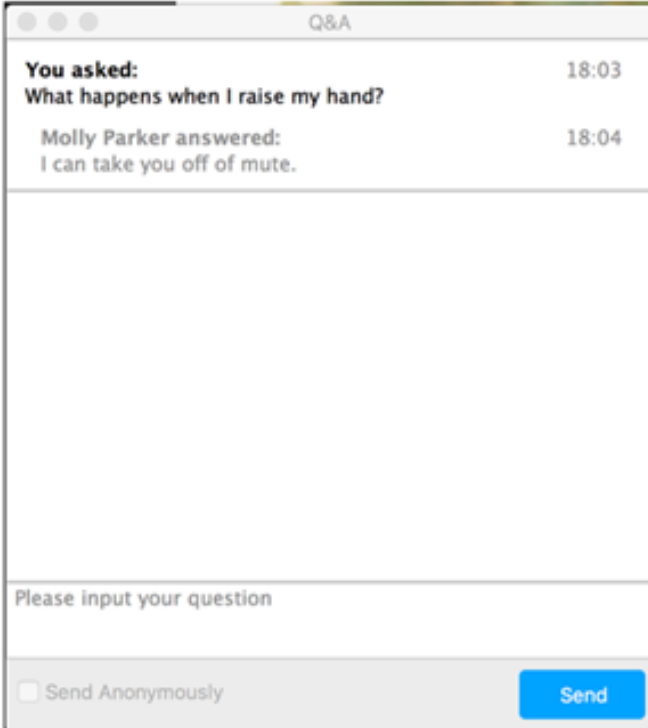


Becky Shields, Partner  
Moore Kingston Smith



Shamus Rae, CEO/Co-Founder,  
Engine B

# *Ask a question*



The screenshot shows a Q&A window with a title bar containing three window control buttons and the text "Q&A". The main content area displays a question and an answer:

<b>You asked:</b> What happens when I raise my hand?	18:03
Molly Parker answered: I can take you off of mute.	18:04

Below the question and answer is a large empty text input area. At the bottom of the window, there is a text prompt "Please input your question", a checkbox labeled "Send Anonymously" which is currently unchecked, and a blue "Send" button.

## ***To ask a question***

Click on the **Q&A** button in the bottom toolbar to open the submit question prompt.

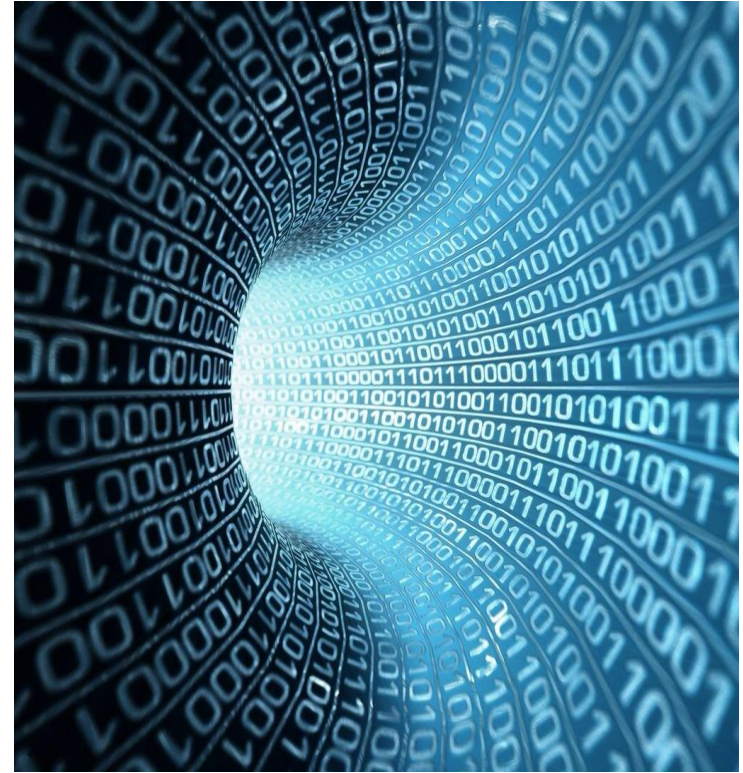
Type in your question and click **send**.

Note. If you wish to ask your question anonymously check the **send anonymously** box shown on the illustration to the left.

# WHAT'S YOUR DATA STRATEGY?

Becky Shields  
Head of Digital Transformation

- 
- WHAT IS A DATA STRATEGY
  - WHY IS IT IMPORTANT
  - WHERE DO YOU START
  - DATA DEMOCRATIZATION
  - BIG DATA TECH STACK
  - DATA LAKE VS DATA WAREHOUSE
  - DATA GOVERNANCE



# WHAT IS A DATA STRATEGY

A data strategy is a vision for how a business will collect, store, manage, share and use data

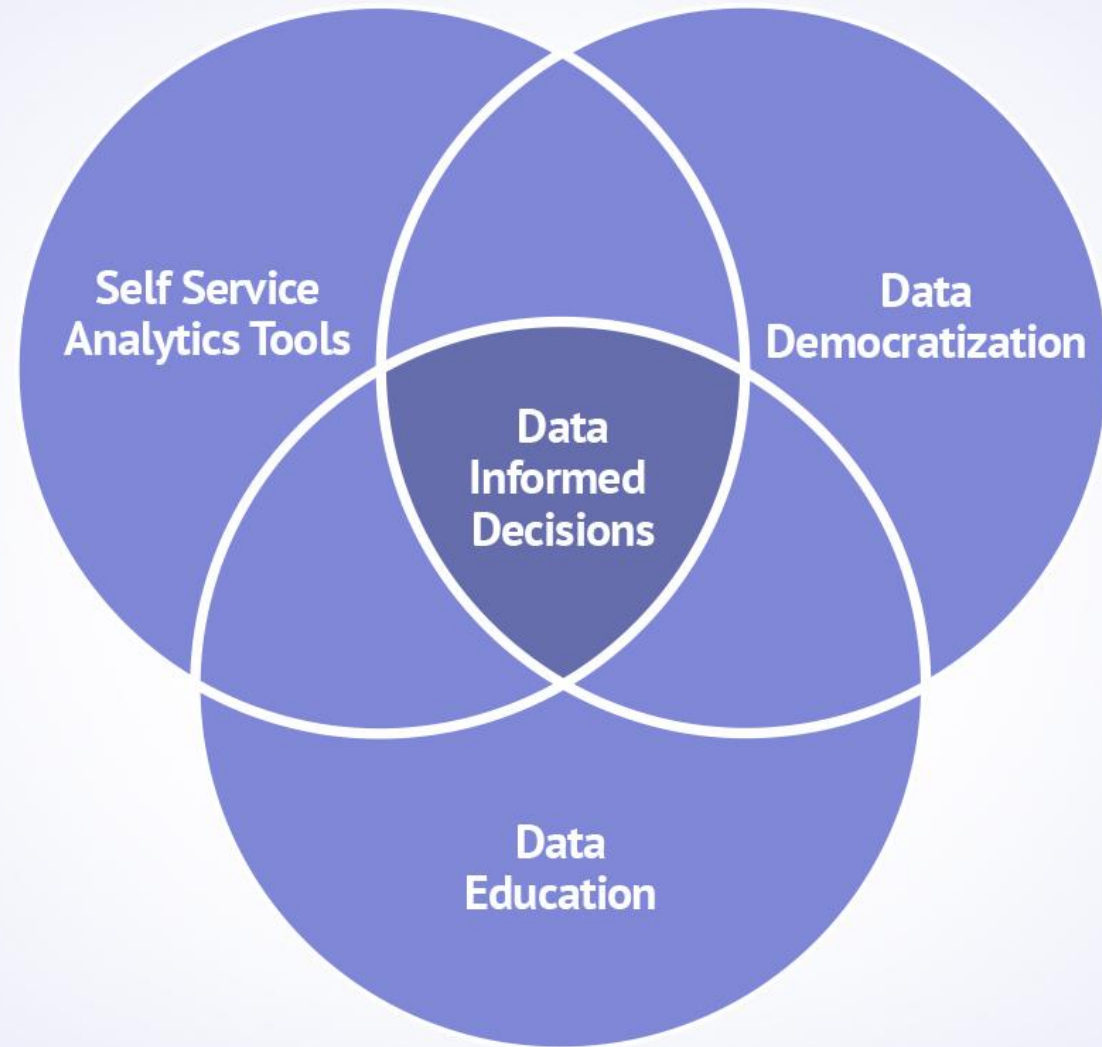
# WHY IS IT IMPORTANT?

Data: One of Your  
Most Valuable  
Assets

**Gartner**: Information  
is under-managed,  
under-utilised asset  
because its not a  
balance-sheet asset

The volume of data  
that exists in the world  
and that's available to  
businesses is  
increasing rapidly

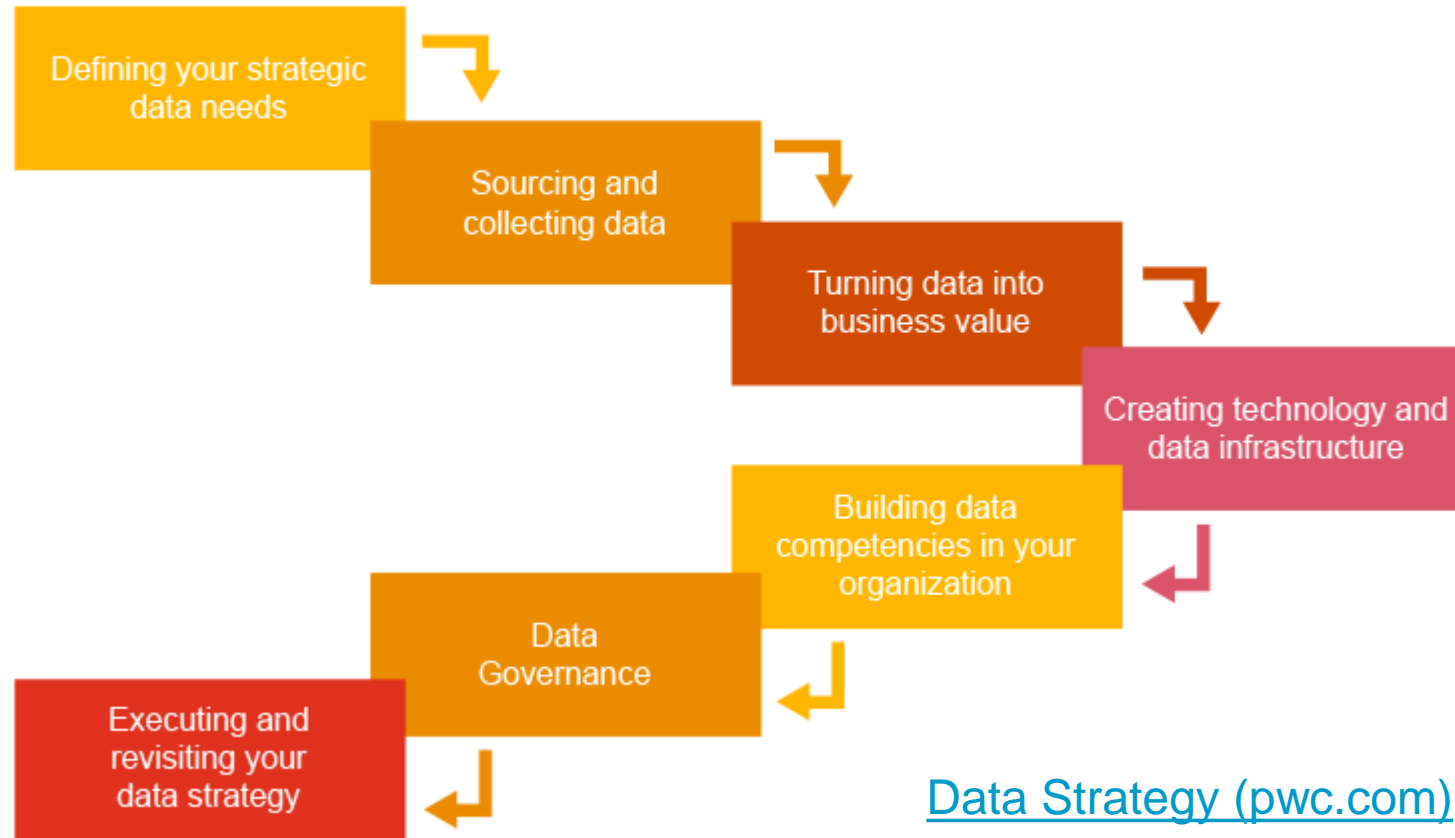
90% of the data in the  
world became  
available in just the  
last two years





# WHERE DO YOU START

## Creating Data Strategy



# DATA DEMOCRATIZATION

## Challenges to Data Democratization

### Challenges

#### Data Strategy

Only about 30% of respondents to a McKinsey survey had a data strategy in place.

#### Data Literacy

The 2nd most reported internal roadblock by CDO's

#### Data Trust

According to a Harvard business review study, only 3% of executives believe that the data their departments use is trustworthy.

#### Data Privacy

59K data breaches were reported under GDPR in 2018

#### Data Growth

By 2022, data mgmt. manual tasks will be reduced by 45 percent through the addition of ML and automated- service level management.

### Solutions

Understand how data is linked to business processes and outcomes for prioritization

Determine data standards and semantics to provide consistency and a common business language for data

Determine the data image & automatically implement data quality rules to understand & improve trust

Design and implement privacy at the data level as part of your data governance framework

Language the power of AI and machine learning to execute the heavy lifting

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**Analytics & BI Layer:**  
Analysis

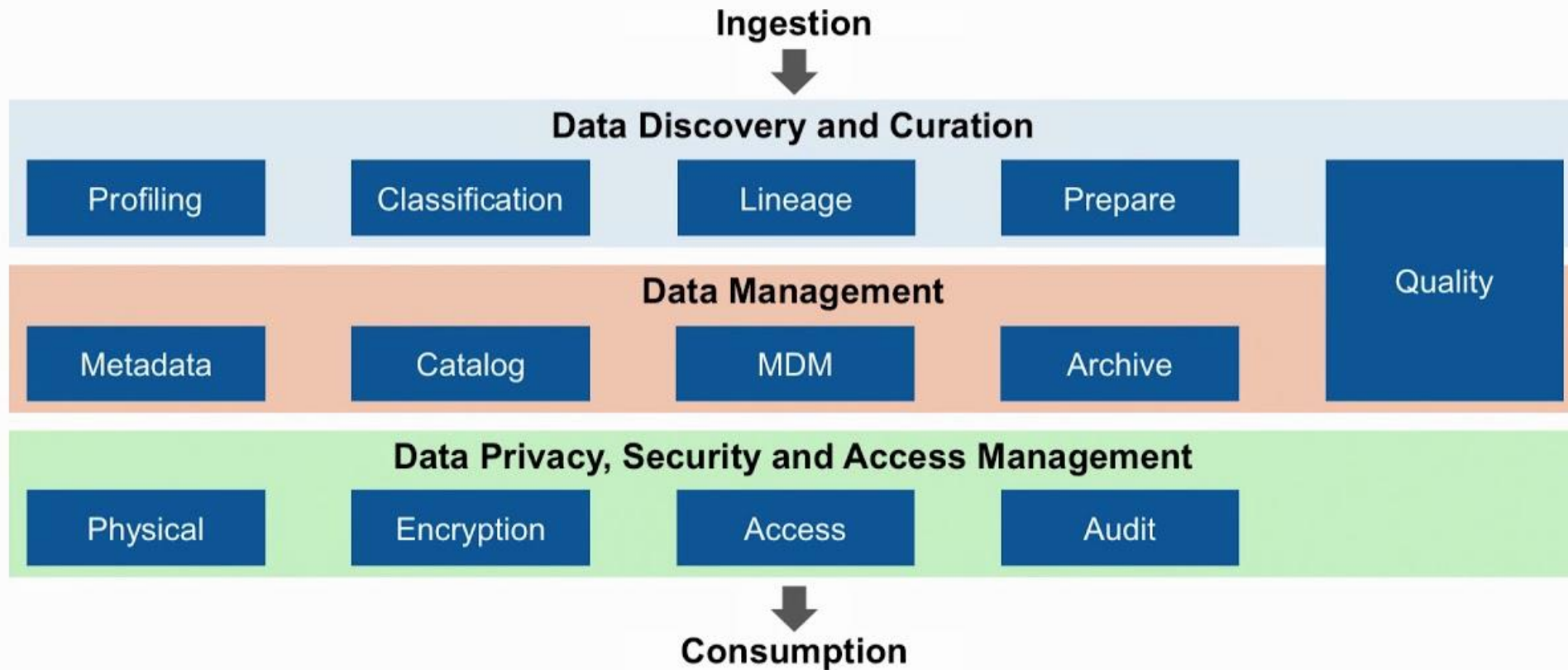
**Processing Layer:**  
Crunching

**Integration & Ingestion Layer:**  
Plumbing

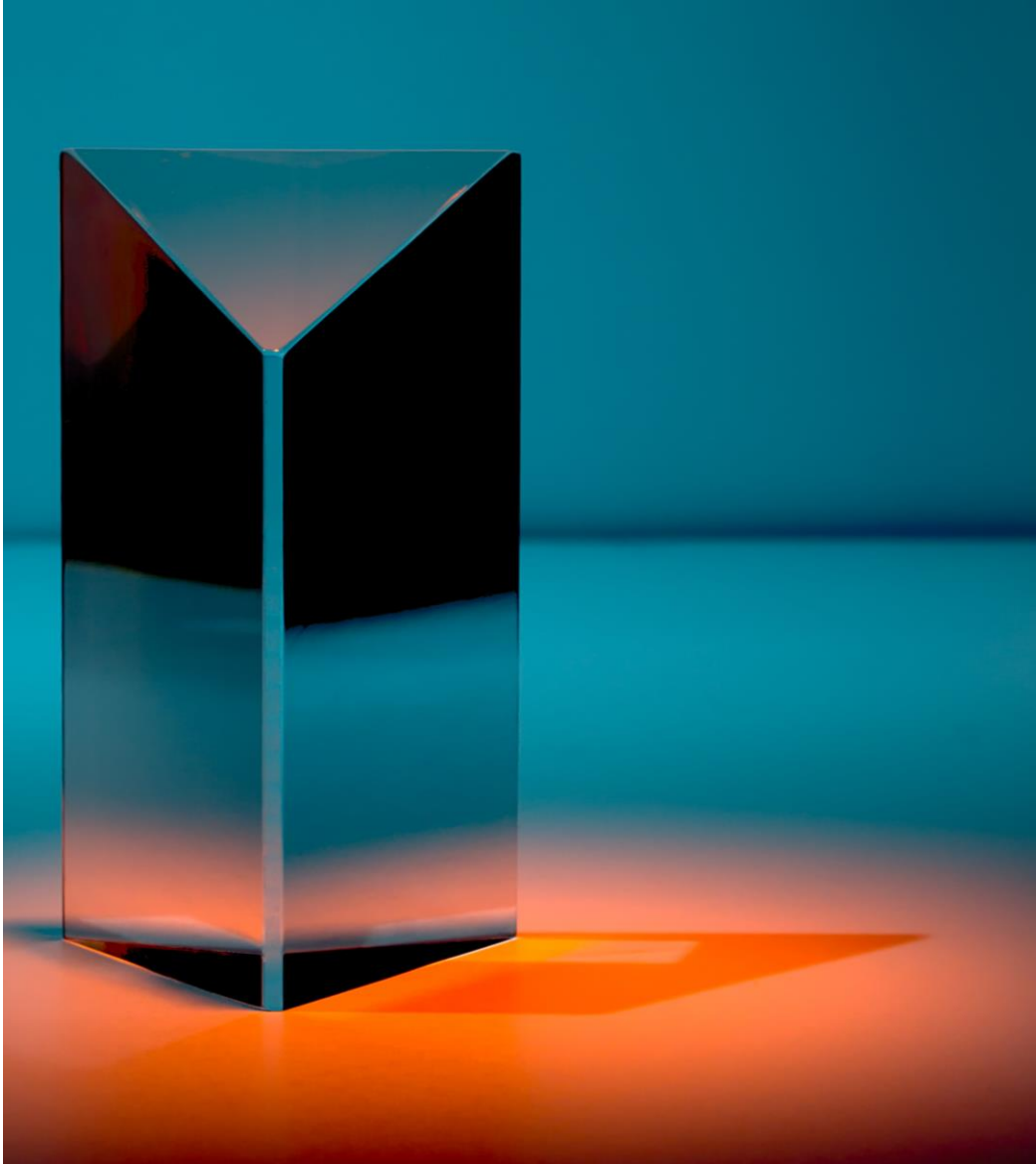
**Data Layer:**  
Storage

	Data Lake	Data Warehouse
Data Structure	Raw	Processed
Purpose of Data	Not yet determined	Currently in use
Users	Data scientists	Business professionals
Accessibility	Highly accessible and quick to update	More complicated and costly to make a change

# Data Governance Framework for High Quality Analytics



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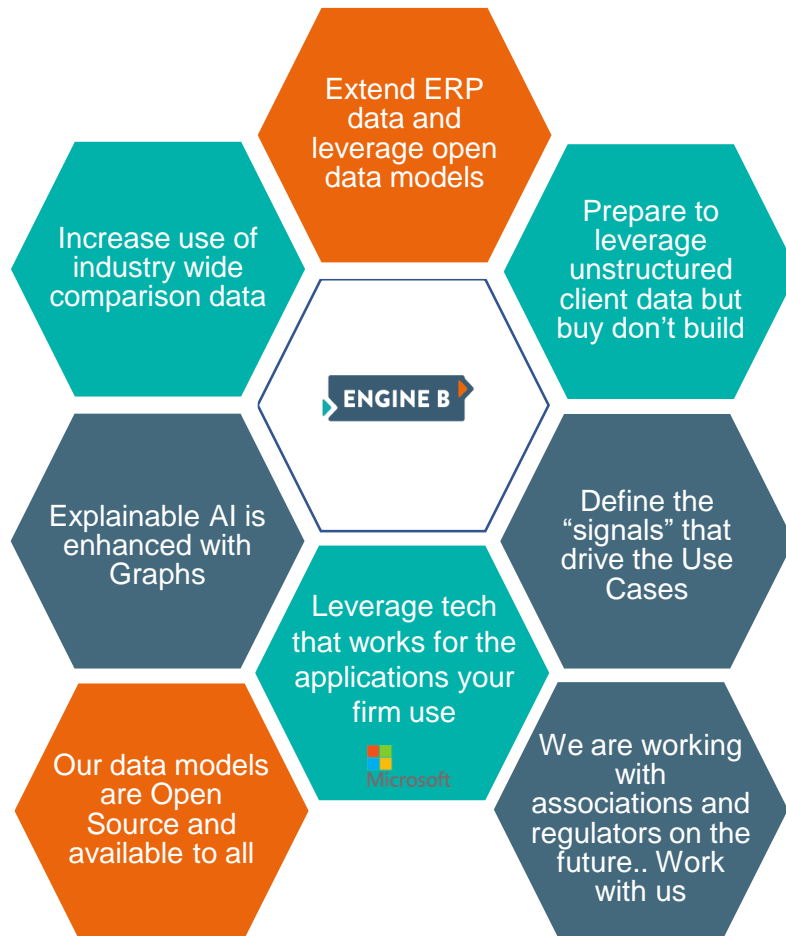
# ICAEW Data Analytics

July 2021

# Professional Services is only using 5% of the data it should be using

Data	Source	Use	In Use digitally?
General Ledger	ERP	Basic Audit	All firms
Accounts Payable, Receivables, Fixed Assets, Inventories, HR	ERP	Fraud, 3 way matching etc	Handful digitally (for smaller ERPs) otherwise manual requests
Contracts	Various (trending towards contract databases)	4 way matching. Risk analysis, revenue recognition, fraud etc	Manual request
Open Banking	Direct or via aggregators	5 way matching	Handful and mostly for smaller audits
Disclosure Notes	Accounts	“The Signs were there” analysis	Manual
Industry comparison financials	Companies House (UK) EDGAR (SEC)	Fraud, sustainability etc	Manual if at all
Industry comparison disclosure notes	Annual Reports (note XBRL not good enough)	Aggressive accounting treatment, fraud etc	Manual if at all
ESG Data	ERP, Contracts, Asset location etc	ESG reporting	Not yet but...
Operational Data	Various	Management BI	Partially

# A Data Strategy needs to create an open innovation platform (democratization of data)



We are focused on:

- 1 Knowledge Graphs using Artificial Intelligence
- 2 A Common Data Model backed by assets
- 3 Enabling you to build D&A tools leveraging AI, Graphs, Graph AI
- 4 Learning from other sectors to drive open innovation into Professional Services



# You should avoid closed Eco Systems

## Data Strategy



### Open Data Models

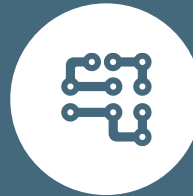
Should work with current firm infrastructure to reduce technical and cultural friction

Don't invent your own Data Model use Engine B's/Microsoft's (It's free) or a subset model like AICPA, SAF-T etc



### Next generation

- **Advanced Data & Analytics tools**
- **Interoperable technology**
- **Leverage all the data that adds value to your use case**
- **One Firm Data Strategy**



### AI & Knowledge Graphs

Your D&A and Tech teams need more investment

This feels like rocket science but doesn't have to be – leverage existing API's etc



### Platform

Platforms and SAAS models are here to stay and reduce down development time.

Firms will have internal platforms and will become Service Platforms for clients

# Our Core Intelligence Data Platform - Key features

1

## Data sources and storage

Describes critical business concepts and defines the semantic structure and purpose of information.

- Common data model
- Ontology
- Taxonomy
- Bi-directional data modelling; dynamic model to enrich CDM
- Applications / ERPs and any other relevant source
- 3<sup>rd</sup> party APIs – external data

2

## Ingestion and transformation

Focus on integration and consolidation of data from main accounting systems and/or any other relevant source, and normalisation of data.

- Data mapping or connectors
- ETL
- Data virtualisation
- Large-scale data processing
- Workflow management via PowerApps

3

## Usage and practical value

Allows the end user to define business rules and run dynamic search through attributes and relationships as well as advance analytics and ML.

- Semantic search – query engine
- Knowledge graph
- Real time analytics – always on audit
- User interface

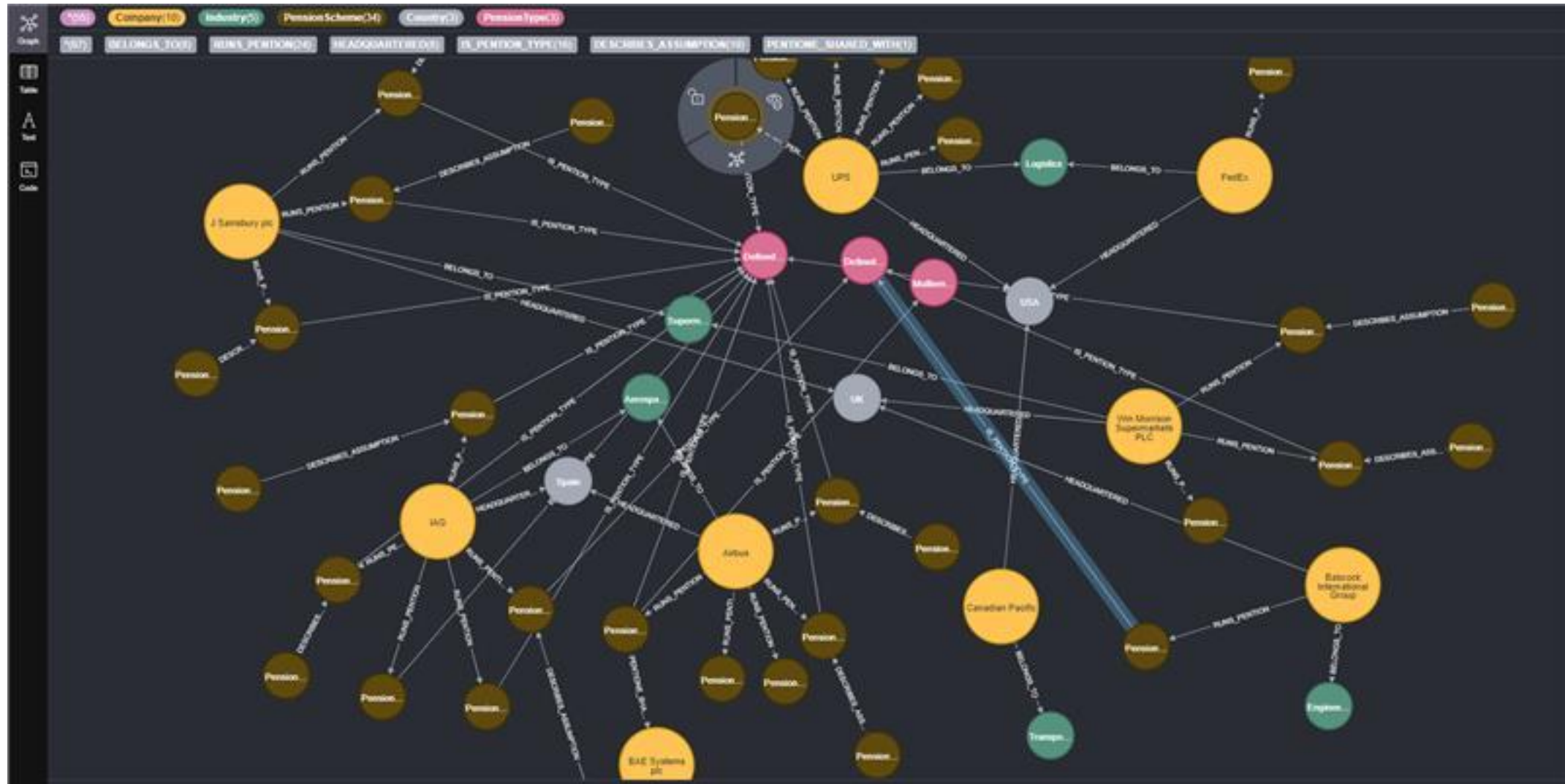
4

## Data management and governance

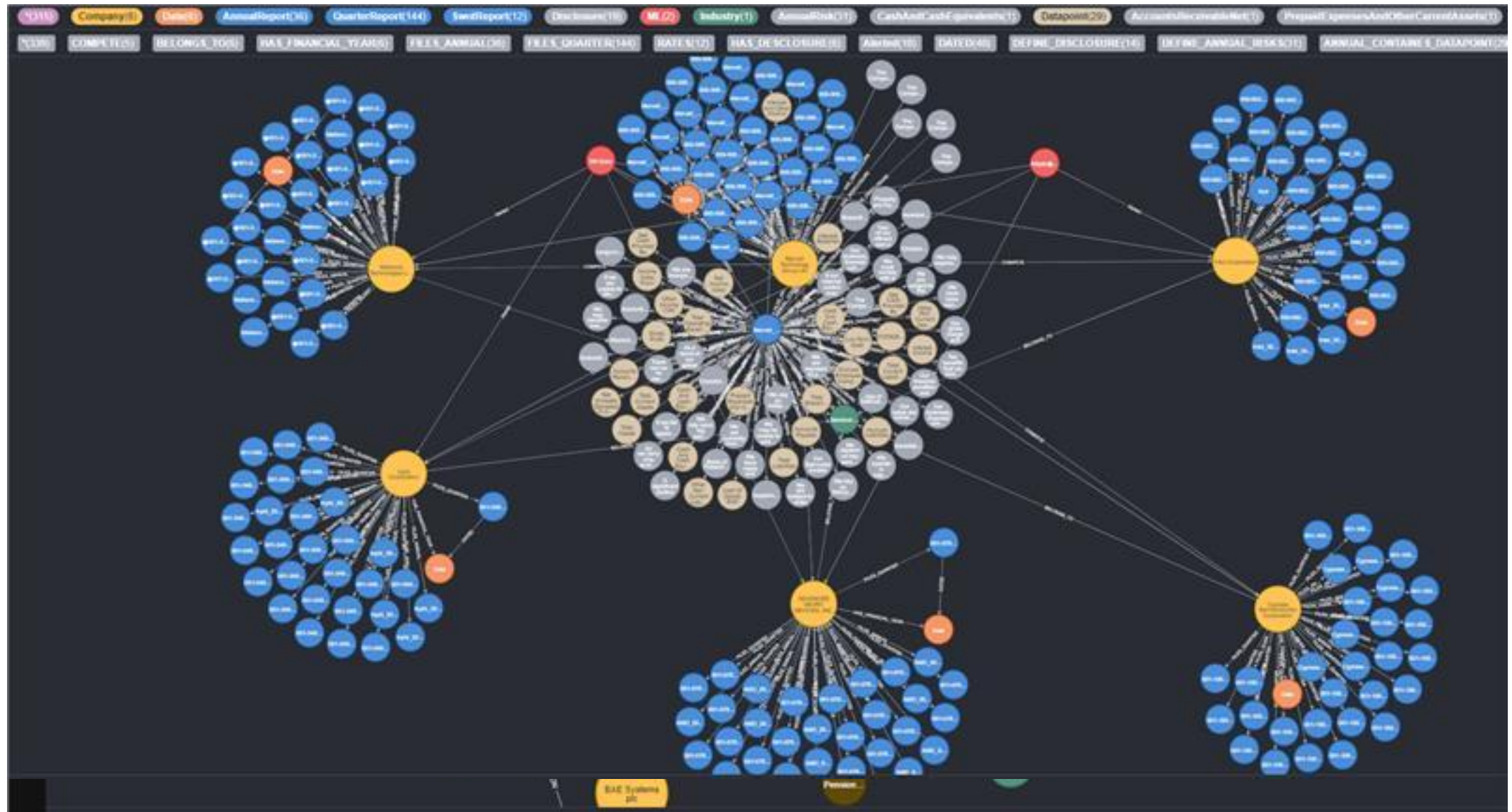
Data integrity and Assets. We analyse and map out the current workflows and conduct data-testing to compare the reliability of information.

- Data quality: dimensions and profiling
- Metadata: discovery, collection, integrate, automating, maintenance and use of metadata
- Data lineage, both business and technical, focus on data origination and movements.
- Security and privacy

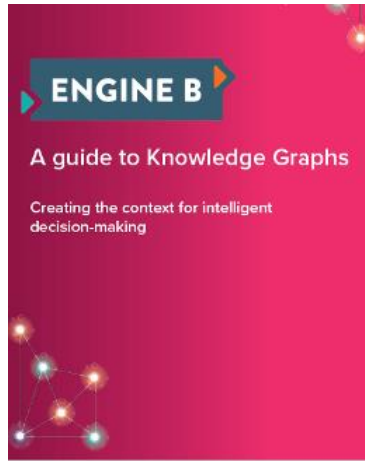
# Use Cases are increasing demands on data sources



# Investment Banks are using data we are not leveraging



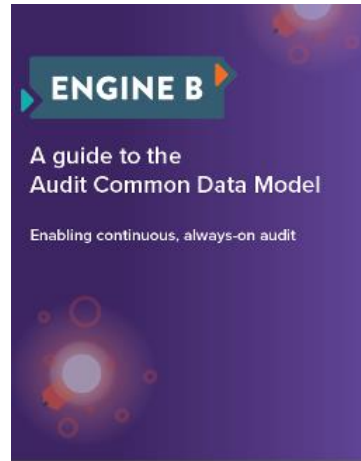
# Our assets and open approach for the industry



**Knowledge Graphs**



**Audit ethics**



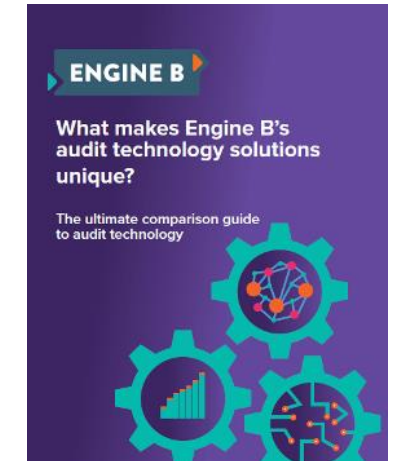
**Common data model**



**Anomaly Detection**



**Professional services**



**Unique audit technology**

The Engine B Common Data model v 1.0 is published on Github

<https://github.com/Engine-B/EngineB-Audit-CDM>

Our Partners at ICAEW and Microsoft share their views on why they support what we are doing to transform the Professional Services industry.

<https://www.engineb.com/partners/>

Our unique positioning with the ICAEW, working with the profession and alongside regulators has allowed us to articulate our view on the future of the industry.

<https://vimeo.com/542043612>

Password: FOA123!



# Contact Us

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# Appendix

# *Thank you for attending*

- Please take the time to fill out our short survey
- For any enquiries about individual or corporate subscription to the Faculty please visit:

[www.icaew.com/jointechfac](http://www.icaew.com/jointechfac)

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