



# The Evolution Of The Modern Data Platform

David Tuppen, Head of Digital, Data, & AI, GFT

Wednesday, 14 September 2022



## A Word From Today's Chairman

**Hugh Morris**  
Senior Research Partner  
Z/Yen Group





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# Today's Agenda

- 11:00 – 11:05 Chairman's Introduction
- 11:05 – 11:25 Keynote Presentation – David Tuppen
- 11:25 – 11:45 Question & Answer



# Today's Speaker

**David Tuppen**  
Head of Digital, Data, & AI

**GFT** ■



# The evolution of the modern data platform

The end-to-end modern data platform



David Tuppen

Head of Data and Analytics





## Modern data platform: topics

**00** Data and analytics – thinking differently

**01** The data platform evolution

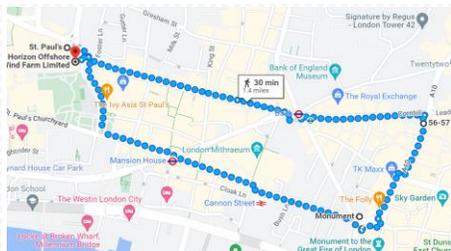
**02** The modern data platform

# Thinking differently... social analytics

“ We don't like to think of ourselves as boring - but we are - we are creatures of habit. Once in a while we break free of our habits - but the main behavior is very predictable." **Dr Alex Pentland, MIT**

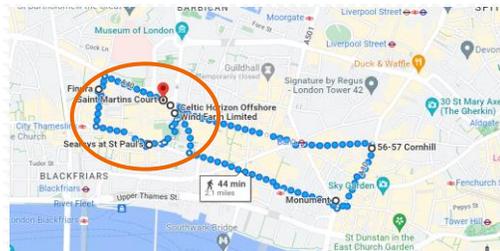
## 95% WE FOLLOW OUR SET PATH

- Wake up
- Breakfast
- Drive to work
- Lunch
- Drive home
- Gym, dog, shop
- Home



## 5% WE FORAGE

- New drive route
- Pharmacy
- Clothing store
- Cinema
- Drinks

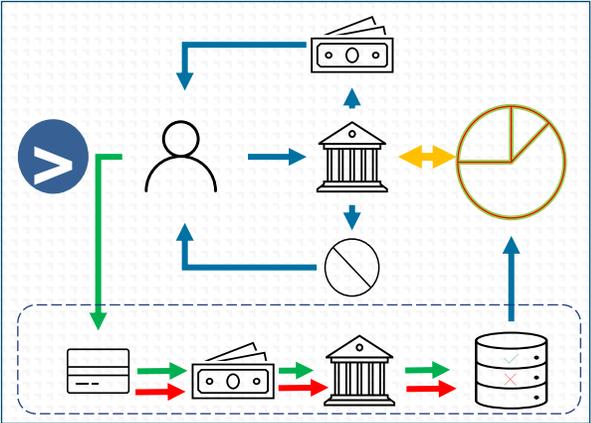


## FORAGING = THE SIGN OF GOOD HEALTH

- Foraging, exploring, investigating are in our nature
- The absence of this indicates something is wrong - we revert to the common usual paths which are necessary, as opposed to exploratory
- That 5% foraging indicates we have the ability to explore; without this it can indicate something is wrong... whether that be health, financial duress or some other change

**This is all well and good, but how do we use that information? What do we do with it?**

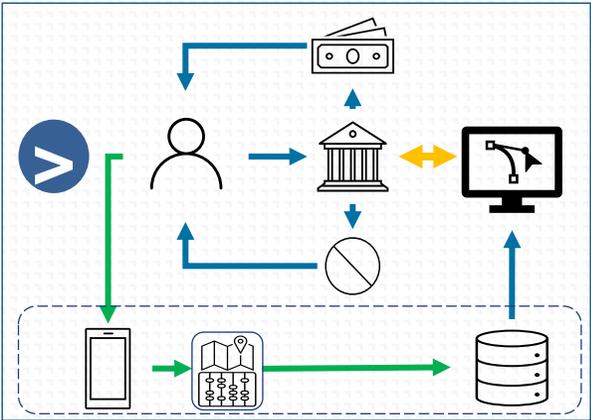
# Applying the rationale to a case study with technology



## TYPICAL CREDIT DECISIONING

- We make transactions at stores with credit
- We either pay the credit issuer the money back, or we miss payments
- These payment results are stored and passed to credit ratings agencies
- We may then decide to apply for more credit, be that a loan or additional finance, etc
- The credit issuer examines our ratings from the agencies to see if we are a good risk
- We either receive or we do not receive extra credit

But what if we are going to miss some payments? What if we are unwell?  
What if we know we are going to be made redundant?



## ADDING A LAYER OF PREDICTIVE ANALYSIS

- By using a tracking device like GPS on a mobile device, we are able to store, process and analyse the movement of data.
- We can stream that data to a storage facility, model and enrich that data, and then analyse that data, to check if the 5% foraging target is being done.
- Further to this, we can analyse growth in foraging and higher freedom of movement.
- We are now in a position to predict good health or financial situation, by working with data which wasn't available in the past.

**Modern data platform:** We streamed data. We stored data. We modelled data. We created insights.

**Results**  
Study at TD Bank, in collaboration with MIT, showed 10 times more accurate results compared to traditional methods based on demographics and credit ratings.



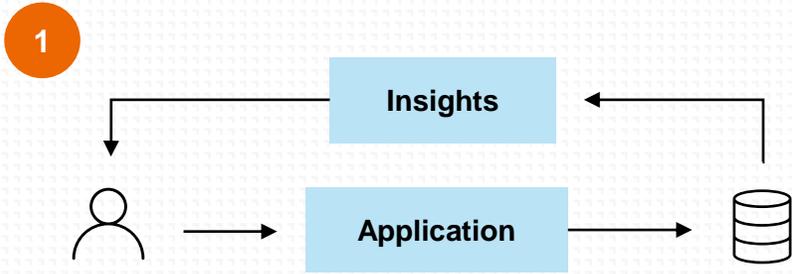
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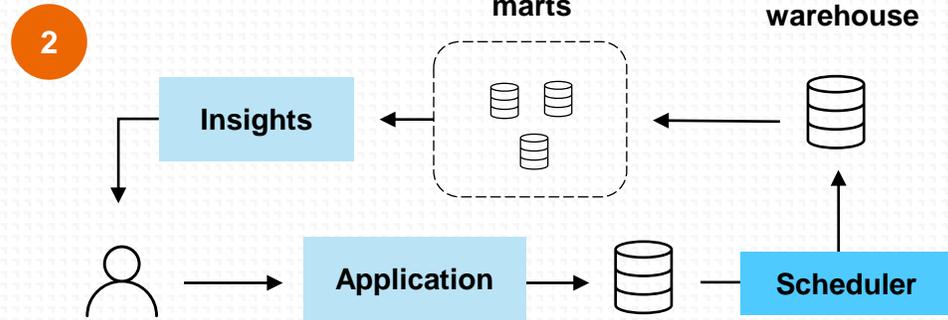
**02** The modern Data platform

# The start of the evolution...



**One tier architecture:** No reporting layer

**Challenge:** Scalability, Integrity, locking, security etc.

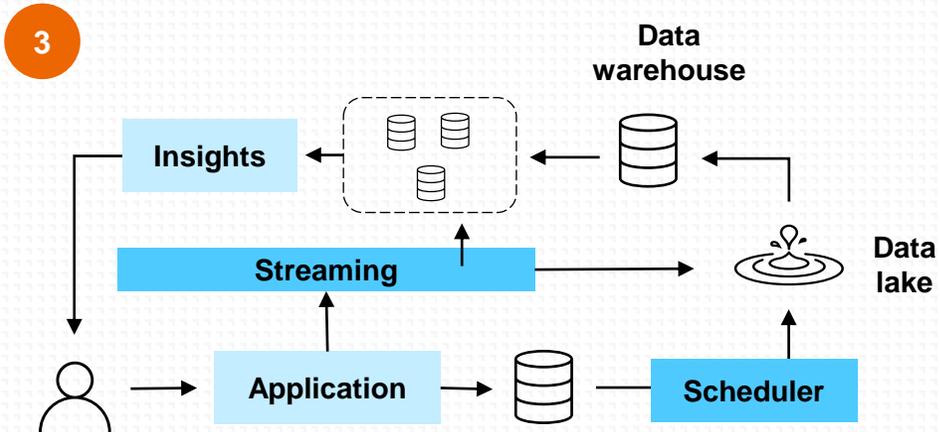


**Data warehousing:** Move and optimise all data for reporting

**Challenge:** Entire data warehouse generally needs to be complete before use, which does not keep up with business change.

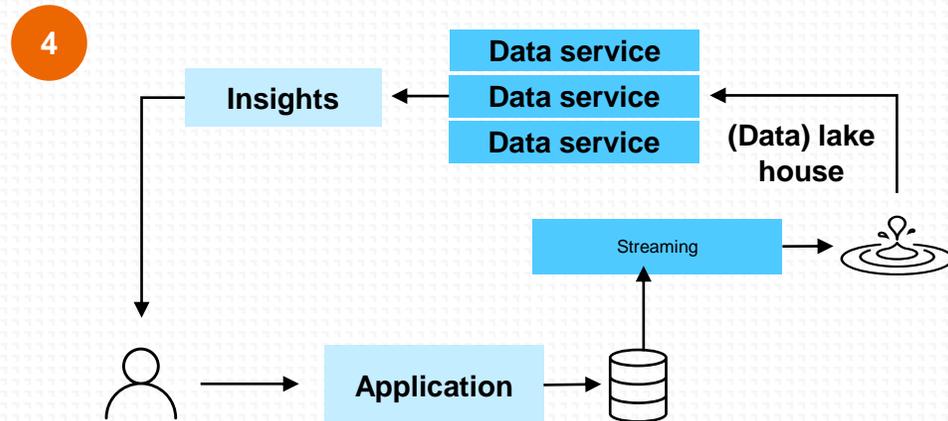


# Big data and data lakes



**Two tier architecture:** Data lakes are used to consolidate data.

**Challenge:** Still monolithic design. High optimisation requirement, with dependency on data warehouse completion for reporting.



**Data service and lake house:** Persisted data warehouses removed and replaced with pure data services, with focus on streaming.

**Challenge:** Optimisation requires removal of SQL-like functions which data warehouses were good at. No central location of data services, data asset duplication and poor quality common.





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# What are the analysts predicting when considering modern data platforms



By 2025, smart workflows and seamless interactions among humans and machines will likely be as standard as the corporate balance sheet, and most employees will use data to optimise nearly every aspect of their work.

McKinsey  
& Company

- Flexible data stores enable integrated, ready-to-use data through a **modernised data architecture**
- Data operating model treats '**data as a product**'
- The CDO's role is expanded to generate '**value from data**'.
- Data is processed and delivered in **real time**
- **Data marketplace and data-ecosystem** memberships are the norm
- **Data management** is prioritised and automated for privacy, security and resiliency
- **Data embedded** in every decision, interaction and process

## 5 STEPS TO A MODERN DATA PLATFORM

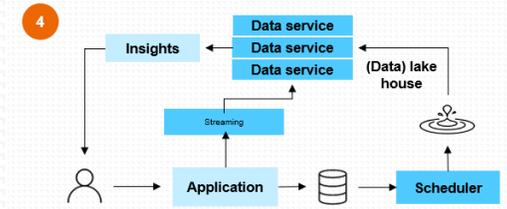
- ✓ Take advantage of a **road-tested blueprint**
- ✓ Build a **minimum viable product for deployment**, and then scale
- ✓ **Prepare your business for change.** Educate, train, communicate, manage
- ✓ Build and nurture an **agile data-engineering organisation**;
  - + split between data platform team (engineers, architects, modelers)
  - + and data product team (data scientists, analysts)

<https://www.mckinsey.com/business-functions/quantumblack/our-insights/the-data-driven-enterprise-of-2025>

<https://www.mckinsey.com/business-functions/mckinsey-digital/our-insights/breaking-through-data-architecture-gridlock-to-scale-ai>

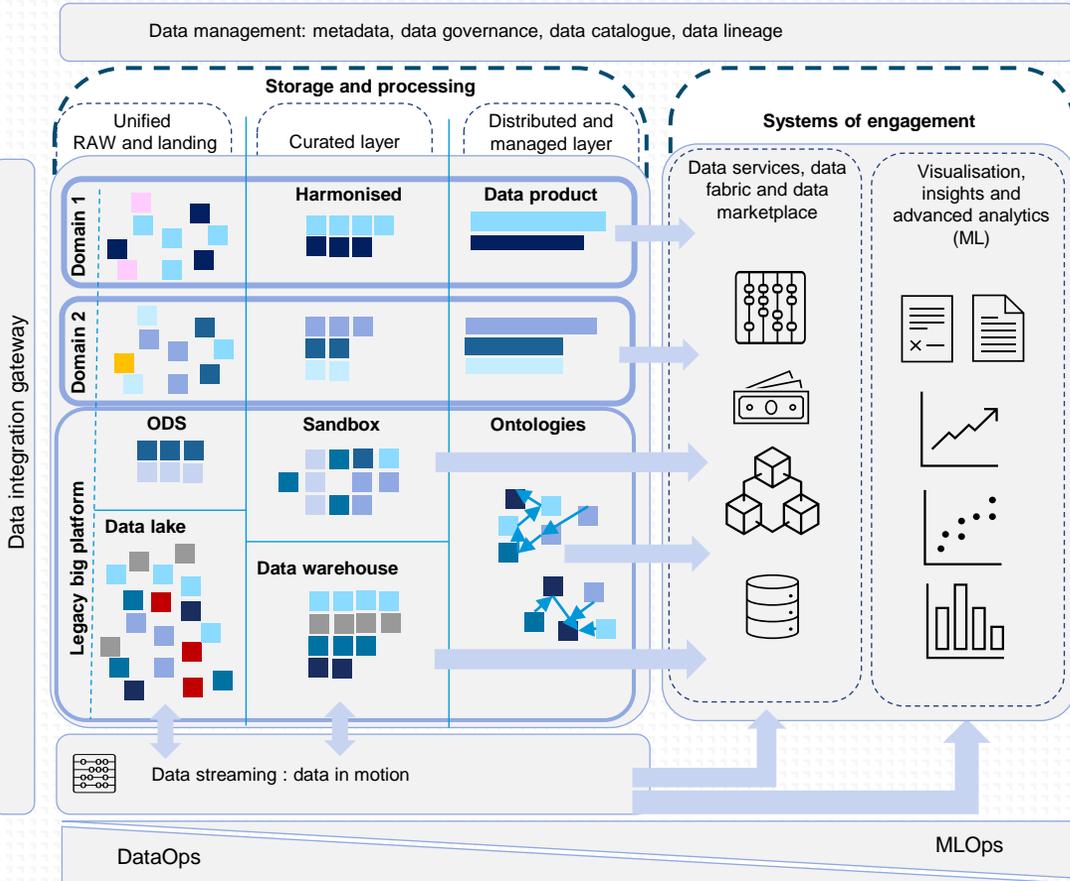
# The modern data platform

Take what features are needed, from available solutions, to suit your challenge



5

## Blueprint architecture

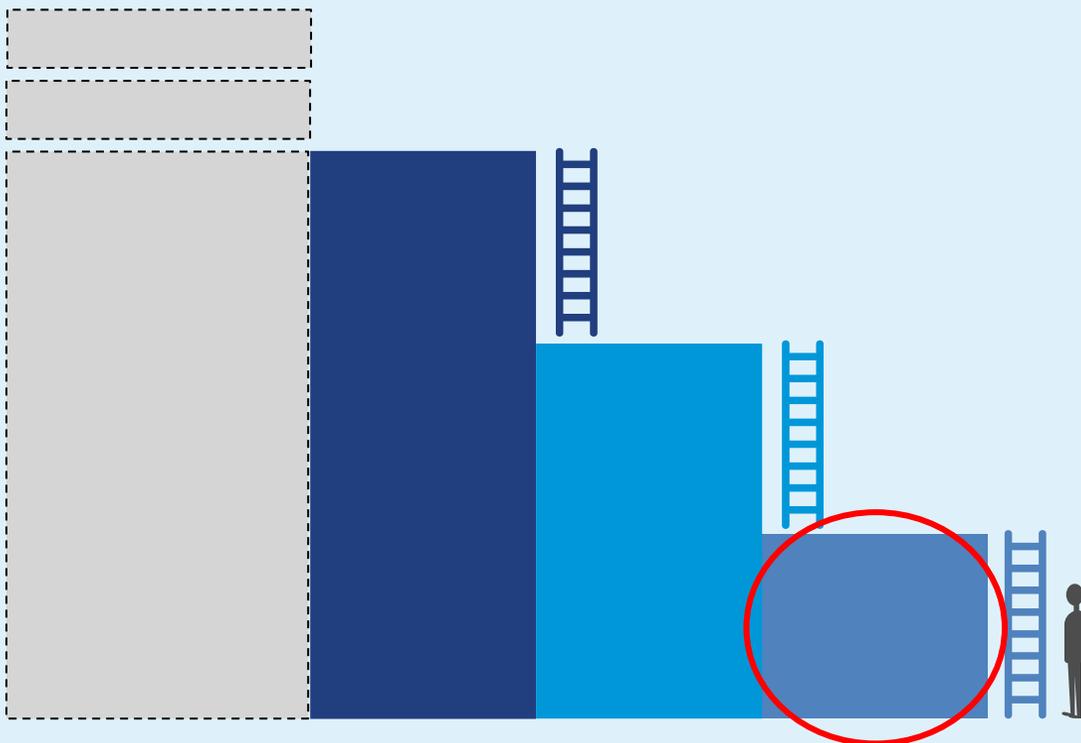


## Key themes

- Data as a product**  
 Move from critical data elements, to data assets, to data products
- Front-to-back design**  
 Focus less on technology first; focus on customer first. How are they using your system?
- Data marketplace**  
 Create a data ecosystem to trade and explore data products across domains and the enterprise
- Metadata management**  
 Knowledge management platforms which allow governance, security and trust in data
- Domain level architecture**  
 Democratise the business into domains, so that 'data silos' are controlled and formalised into domain-led products.
- Enhanced stream driven**  
 Stop waiting for schedulers to complete and move data through the enterprise by triggering events

Focus on creating incremental value, which show regular ROI.

The Modern Data Platform is still evolving.  
Focus on incremental value, showing regular ROI, as opposed to costly  
mega redesigns.



**There is no golden hammer!**

## Having a framework to get started with the modern data platform

Where would you like to be? What will generate the most value for the business? Don't focus on the new shiny tech.

- 1 **Assess** where you are, and where you want to be. Don't boil the ocean.
- 2 **Transform** your landscape, from technical design to people management.
- 3 **Manage and Govern** what you've put in place.
- 4 **Monetise** and generate additional revenue streams.

### The Modern Data Platform Nirvana...

There is no final stage to the modern data platform. There are merely nuances to a changing market, which will always alter the continued evolution of the modern data platform.

# Shaping the future of digital business

If you would like to reach out and discuss further, please get in touch

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viewing on a monitor. Please do not print.





# Comments, Questions & Answers





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# Thank You For Participating

## Forthcoming Events

- Tue, 20 Sep (11:00-11:45) Central Bank Digital Currencies In Europe
- Wed, 21 Sep (17:00-18:30) A City Of London & Birkbeck Roundtable Event on Sustainability & Resources
- Thu, 22 Sep (09:00-10:30) Launch Of Global Financial Centres Index 32
- Tue, 27 Sep (11:00-11:45) Emotional Intelligence & Financial Systems

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