

Going all-in on Data Products



Hello!



Thomas Inman

Tech Lead

[linkedin.com/in/thomas-inman-mcr](https://www.linkedin.com/in/thomas-inman-mcr)

Going all-in

1

Case Study

2

Implementation

3

Pain Points

4

Pay Off

5

Summary



Autotrader's Reach

- 14,013 retailers
- 449,000 stock advertised
- 81.6m average monthly visits
- 557m average monthly minutes



← Back to results



Available to reserve now

Volkswagen ID. Buzz

Pro 77kWh Style Auto 5dr

6,461 miles 2023 (73 reg) Automatic Electric

£41,899

£2,195 below market average ⓘ



£644 per month (PCP) →

Reserve

Build a deal

Build a deal

- ✓ **Save time:** Personalise your deal online, with the option to add part exchange and explore payment options
- ✓ **Order with confidence:** Online deals come with a free vehicle history check

Build a deal

The Volkswagen Approved Used Sale
Ends 30th April

SALE NOW ON

- Up to two years* free servicing
- Up to two years* unlimited mileage warranty*
- Up to two years* roadside assistance
- Increased finance deposit contribution available on solutions PCP finance with 3.4% APR representative*

Approved Used **cars**



Implementation



Data Products in a Data Mesh

The team building the operational product are the best people to think about analytical data too.



Consumer



Wheels ✓

Panels ✓

Upholstery ✓

Electronics ✓

Warning Lights ✓

Valuation £££

Retailer



Wheels ✓

Panels ✓

Upholstery ✗

Electronics ✓

Warning Lights ✓

Valuation ££

Treat analytical considerations
the same as operational ones

Always produce events

- Whenever writing application state produce an event
- If we want to produce a specific event it's a good hint that the application state will also need to change
- Use the same names/terminology through the whole stack
- Think about how often different pieces of state will change and which pieces will change at the same time

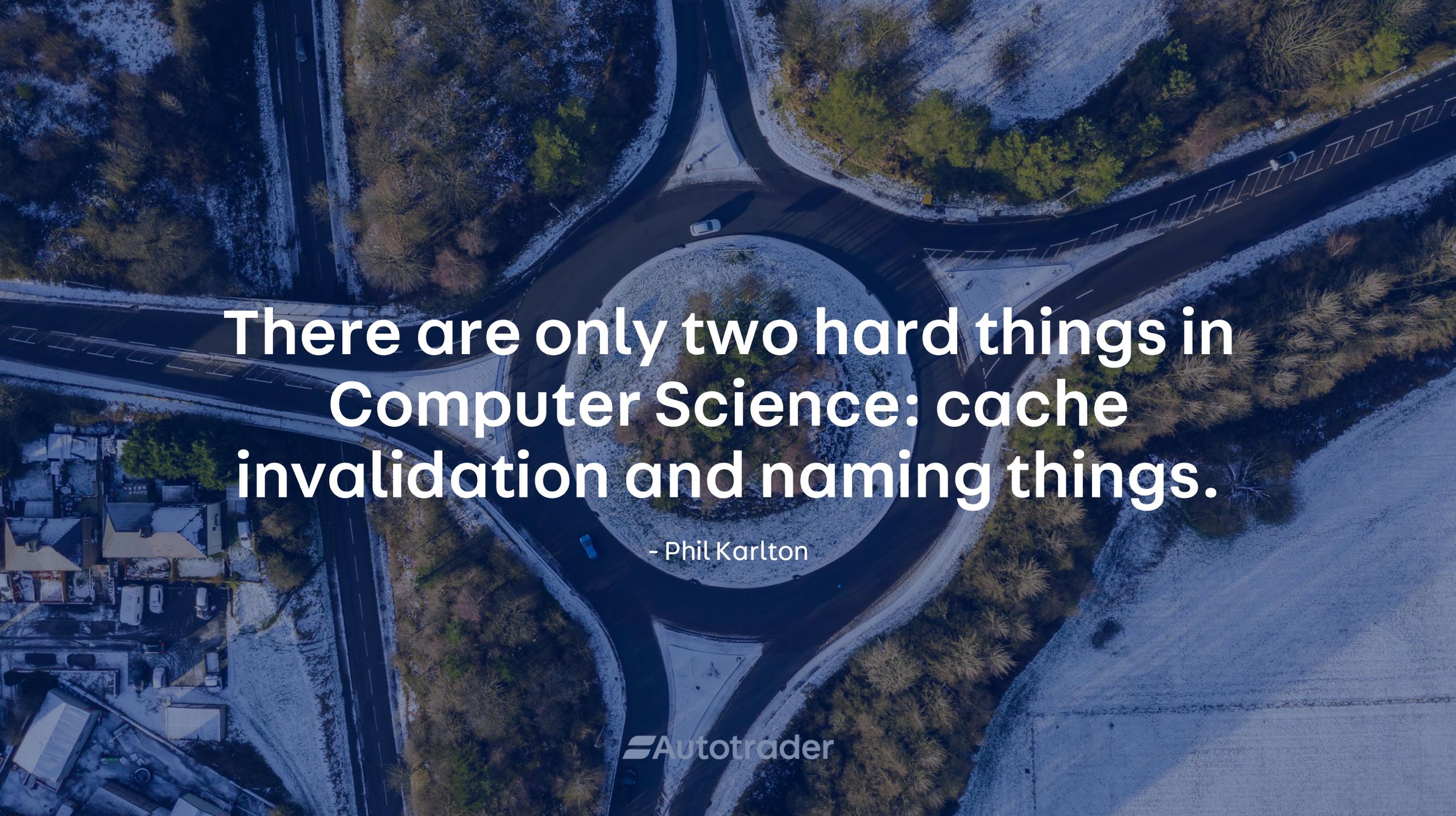
Put ourselves in the position of the users of the data

- Developer specific terminology is confusing
- Terms that are usually overloaded might be the best way of describing something in plain English
- Break data points down into single understandable concepts
- Assume the data will be seen without additional context



Pain Points



An aerial photograph of a roundabout with a central island, surrounded by roads and vegetation. The image is overlaid with a semi-transparent blue filter. The text is centered over the roundabout.

**There are only two hard things in
Computer Science: cache
invalidation and naming things.**

- Phil Karlton

Surface Area

- The bigger the surface area of the data product the more chance you are affected by change
- Changes come from
 - Product evolution
 - Upstream data products
- Having a widely available data product means you have lots of users to care about



Skills

- Thinking about data modelling is a (very learnable) core skill
- Building data pipelines to form data products is a different skill
- Acknowledge the different types of work required, how much of it there is, and how your team will cope with it





Pay Offs

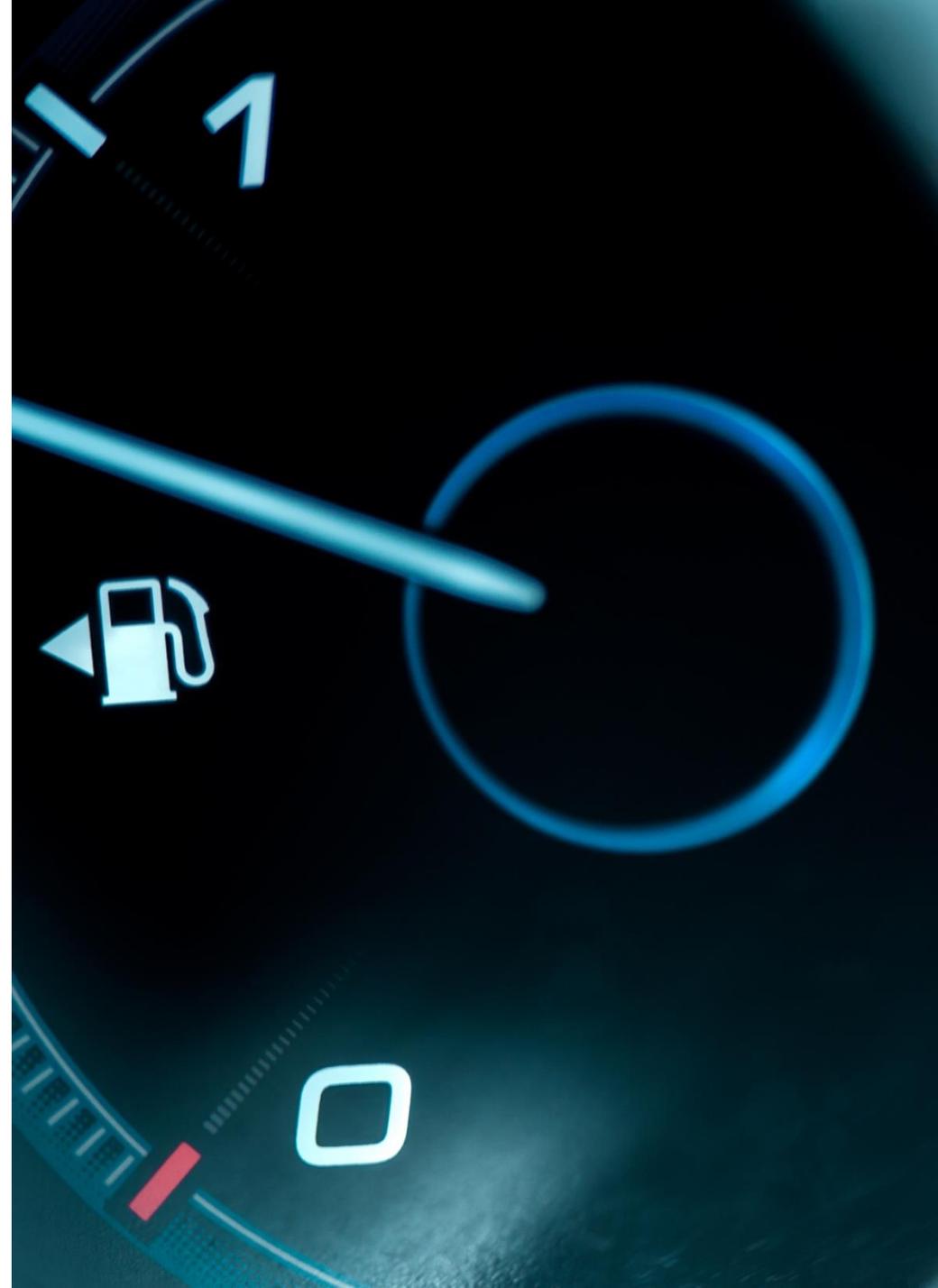
 Autotrader

Analytical Insights

Having the ability to answer important questions *now* without any lead time is key.

Previous blockers

- Time to implement
- Time to collect data



Operational Benefits

- Great resource for testing
- Fantastic for debugging live problems
- Allows additional observability and monitoring





Using the Data Mesh

We built a data product and user facing dashboard to show delivered value.

And a data product to feed into billing systems.

Summary



A complete data product

Committed to tracking everything across the product

Wanted the data to be very readable and discoverable



There are some extra costs involved

A large surface area makes managing change challenging

Must be careful that teams will be able to cope with the different types of work needed



But the benefits are very strong

Great for decision making analytics

Really powerful tool for development team

Easy to build on top of

Bye!



Thomas Inman

Tech Lead

[linkedin.com/in/thomas-inman-mcr](https://www.linkedin.com/in/thomas-inman-mcr)

careers.autotrader.co.uk