

Adoption of OMOP (Observational Medical Outcome Partnership) Common Data Model across the UK

The role of Health Data Research UK and the Alliance

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Our mission & vision

HDR UK's mission is to unite the UK's health data to enable discoveries that improve people's lives

Our 20-year vision is for large scale data and advanced analytics to benefit every patient interaction, clinical trial, biomedical discovery and enhance public health.

Core funders 2023-28

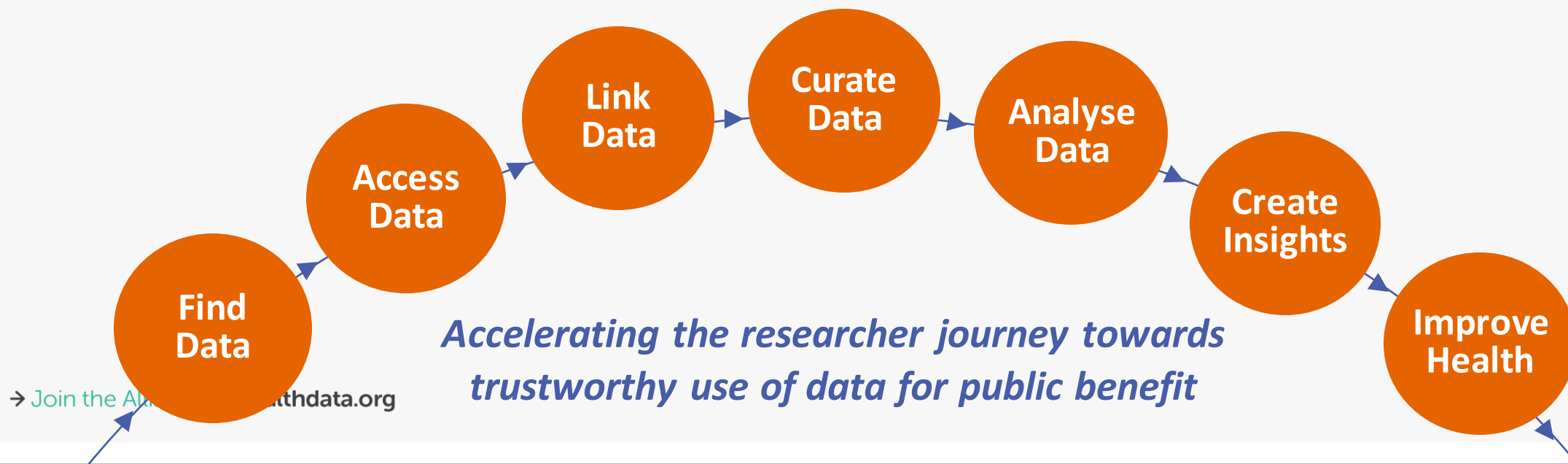


What are we about?

Improve health and boost UK science by making it easier for researchers to find, access and use diverse, high quality data

Provide leadership to fix difficult technical problems, by creating innovative solutions needed for researchers to use large-scale data safely and securely

Accelerate & streamline health data science by developing open collaborations that connect data, people and organisations across the UK and internationally



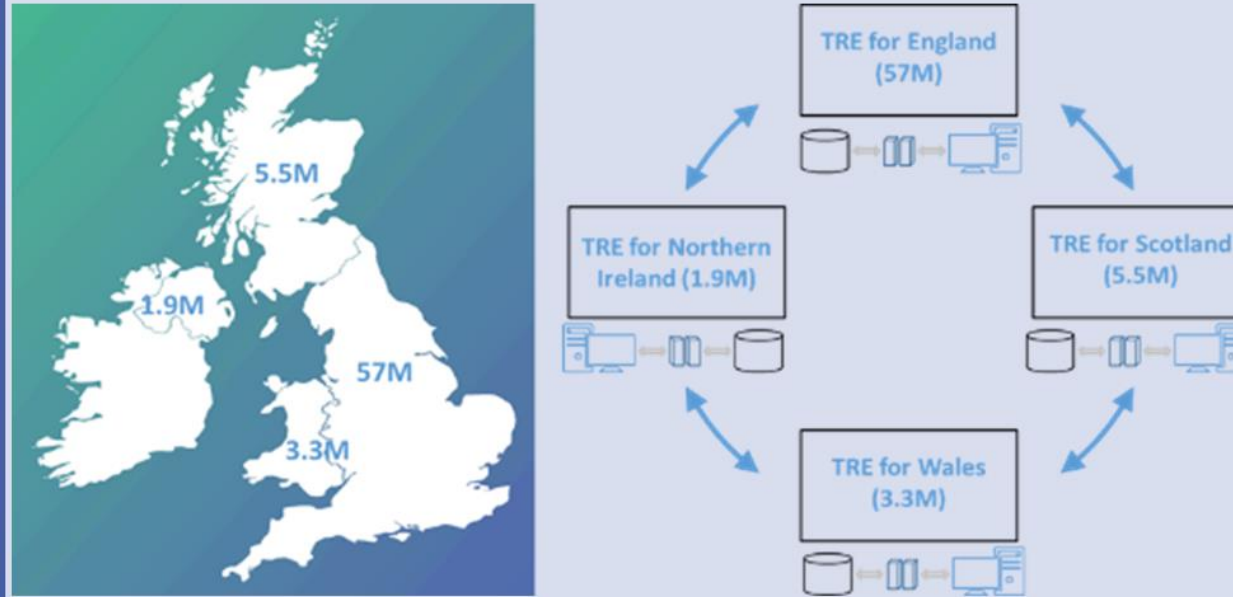
Accelerate Trustworthy Data Use

Through a national data strategy

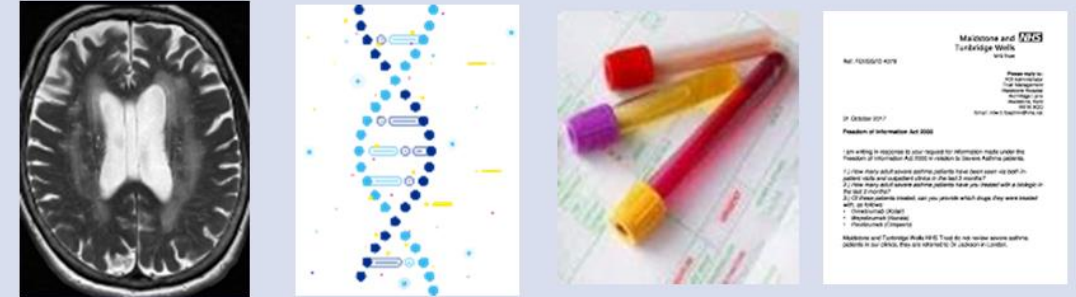
HDRUK
Health Data Research UK

UK Health Data
Research Alliance

NHS: NATIONALLY COLLATED, POPULATION-WIDE DATA



NHS: LOCAL (REGIONAL) DATA



NON-NHS: HEALTH-RELEVANT ADMINISTRATIVE DATA

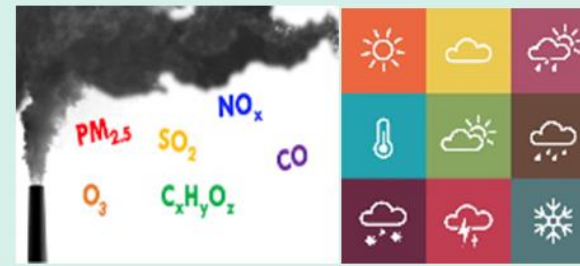
Census, education, disability, income....



PERSONAL MONITORING DATA



ENVIRONMENTAL DATA

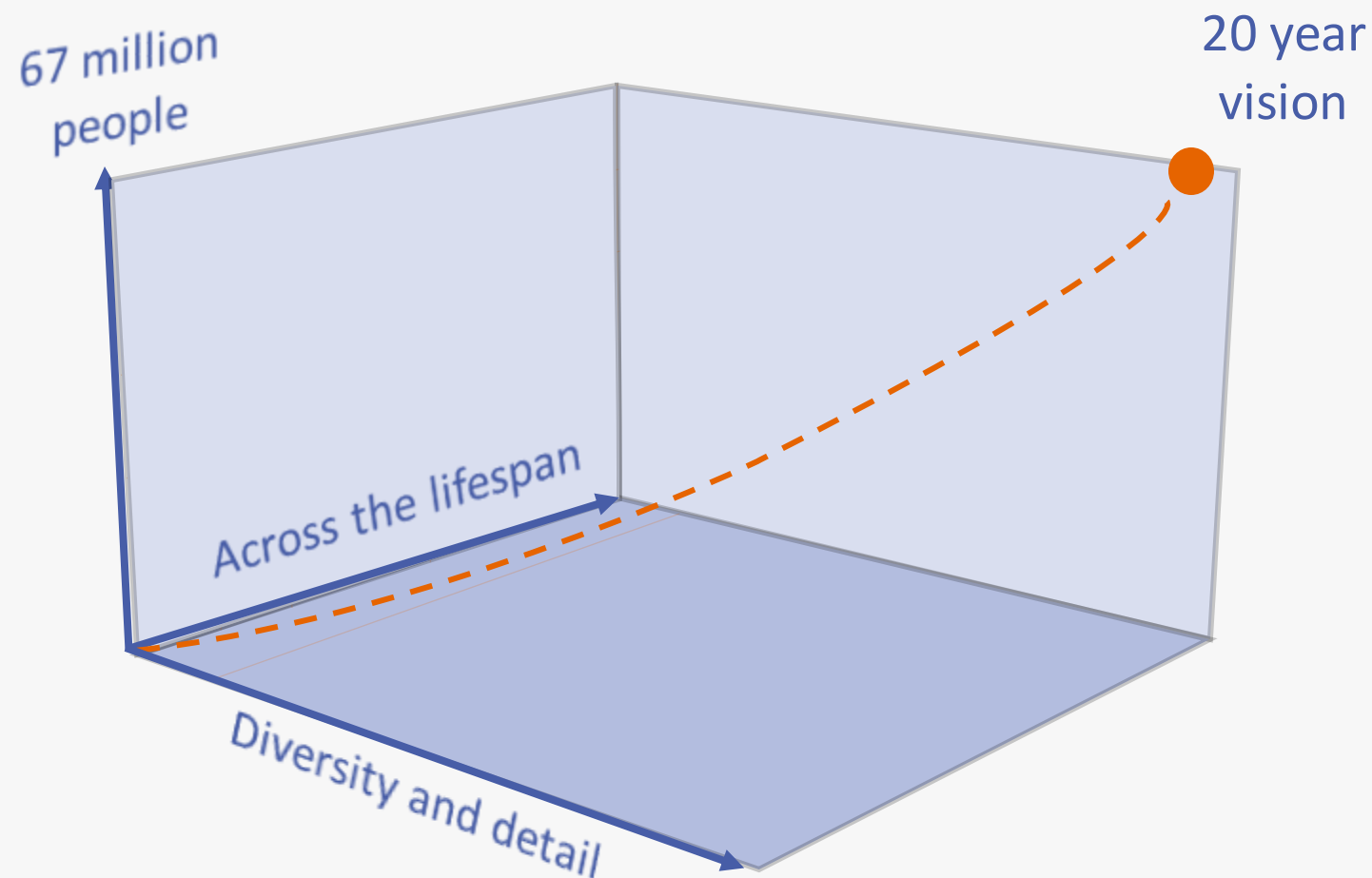


RESEARCH-GENERATED DATA

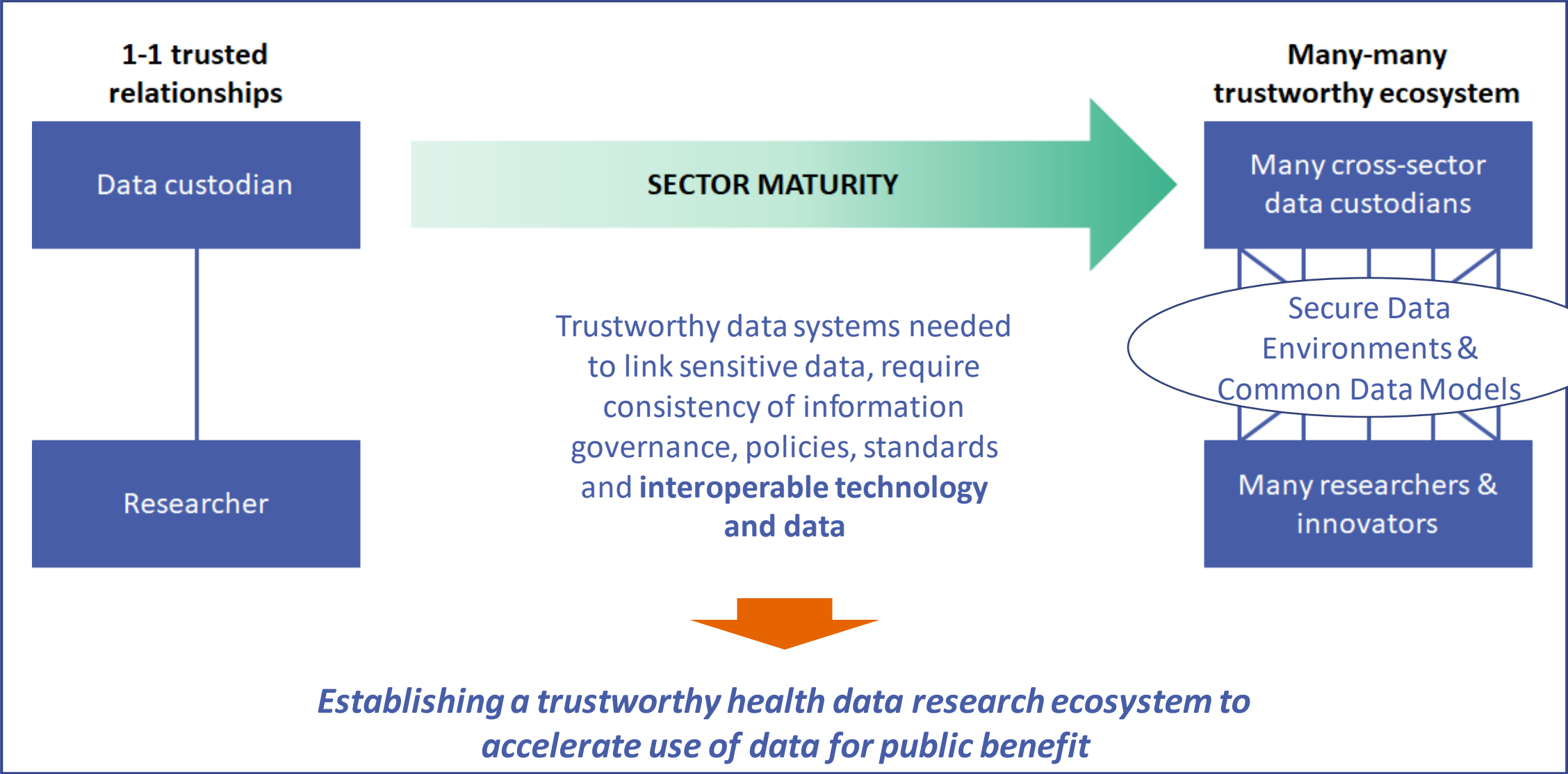
Longitudinal cohorts & clinical trials, e.g.



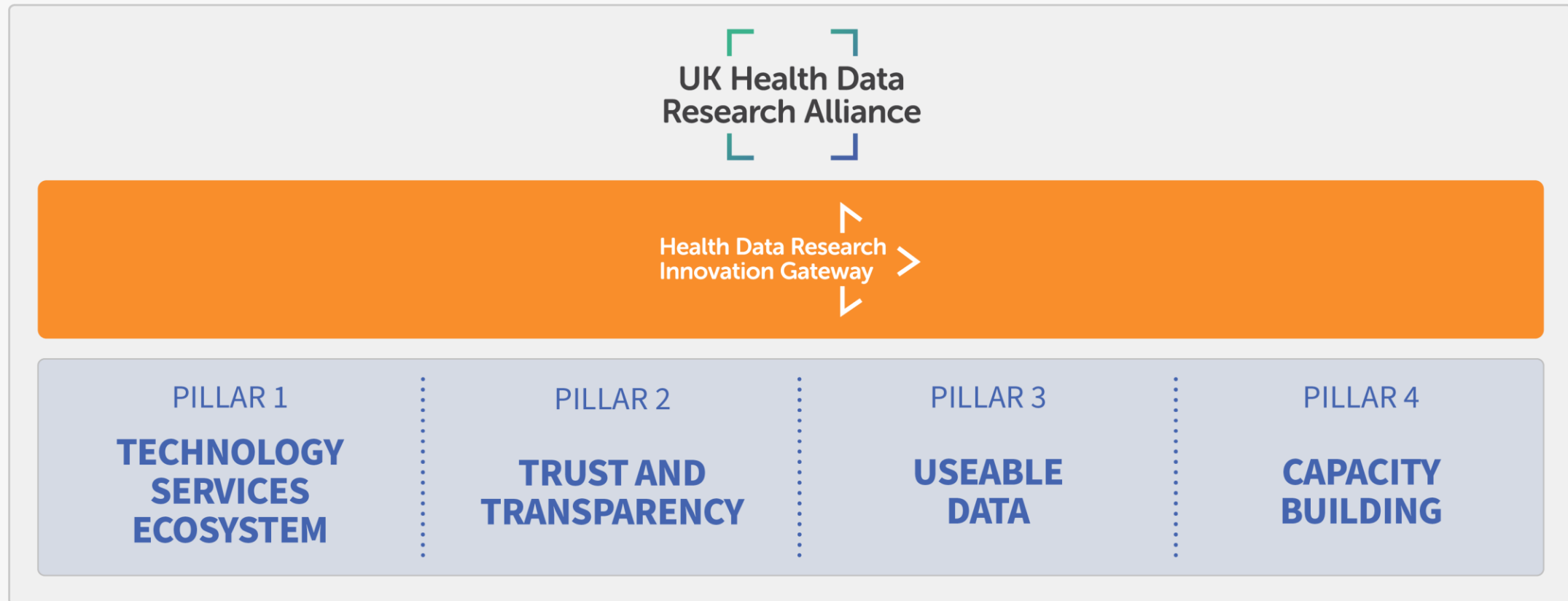
Enabling studies on multi-modal, longitudinal data covering 67m+ people to speed up research that improves lives



We need a *trustworthy* health data research ecosystem to translate the potential of health data research at scale requires



Assembling advanced infrastructure and services



The background of the hero section is a photograph of two women. On the left, a woman with curly hair is smiling. On the right, a woman with long dark hair is also smiling. The image is slightly blurred and has a dark overlay to make the text stand out.

We are an alliance of leading health, care and research organisations united to establish best practice around the ethical use of UK health data for research and innovation at scale

[Find out more](#)

Data Standards and Quality

Activities to promote the adoption of standards for health data (particularly the Observational Medical Outcome Partnership (OMOP) Common Data Model (CDM)). These include:

- **Build on work of HDR UK** partners and Alliance members (e.g., CO-CONNECT, health data gateway and cohort discovery, UK Biobank)
- **Collaborate** with European Health Data Evidence Network (EHDEN), Observational Health Data Sciences and Informatics (OHDSI), data partners and SMEs
- **Partner** with NHS England:
 - Implementation/adoption of standards by the sub-national Secure Data Environment network
 - Facilitate data discoverability and usability through e.g., the Innovation Gateway
 - Survey of the landscape of OMOP users to identify the best ways to support adoption of the OMOP CDM.
- **Convene** Alliance OMOP Special Interest Group and **support** Observational Health Data Sciences and Informatics (OHDSI) UK Node

EHDEN Call#7: UK Data Partners

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Discover-NOW



- 5 New UK Data Partners mapping their data to OMOP in partnership with certified SMEs
- Run in collaboration with EHDEN
- Joining 17 existing UK data partners

NHS England partnership

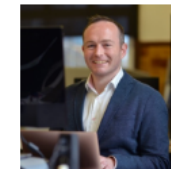
[Visit the Gateway](#)[Visit the Alliance](#)[Visit HDR UK Futures](#)[About](#) [Advancing Health Research](#) [Access Health Data](#) [Helping with Health Data](#) [Study and Train](#) [News, Opinion and Events](#)[Home](#) | [News](#)

Opinion

NHS Research SDE Network agrees to adopt common data model

15 August 2023 | Author: Dr Chris Russell, Head of Delivery, Data for R&D at NHS England

Our healthcare system is complex and has evolved over time rather than developing in line with an agreed grand plan. Health data is no different and while the benefits from a more standardised approach to data are enormous, achieving this presents a significant challenge. Dr Chris Russell, Head of Delivery, Data for Research and Development at NHS England, discusses how adoption of a common data model can help.



Contact

Dr Chris Russell
[@DrChrisRussell](#)
[LinkedIn profile](#)

Partners

NHS England

→ [Join the Alliance](#) [ukhealthdata.org](#)

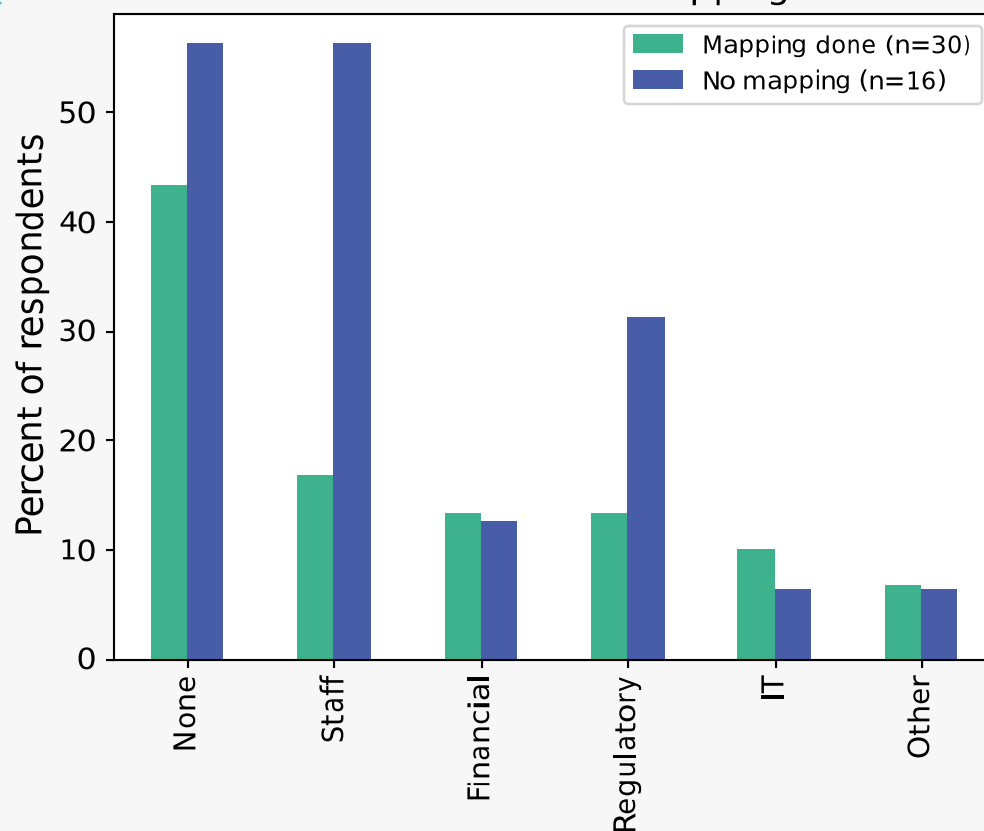
Survey of UK OMOP landscape

- **Aim:** understand the scope of OMOP adoption in the UK, and the barriers that need to be mitigated.
- Survey includes
 - desk-based research
 - interviews
 - online questionnaire
- Working with NHSE but aiming to cover all 4 nations via Alliance
- Targeting data users, and data custodians, whether they were current OMOP users or not



Barriers and limitations

Barriers to OMOP mapping



→ [Join the Alliance ukhealthdata.org](https://ukhealthdata.org)

- 1. Financial support.** Mapping new data sets can be a significant undertaking and is not the highest priority for many data custodians.
- 2. Skilled staff.** Many organisations report a shortage of staff with the necessary skills to deliver their mapping projects.
- 3. Concerns** about the suitability of OMOP for different data types. E.g.
 - Loss of granularity of data
 - Inconsistent mappings of common data sets giving multiple different versions of common data assets or formats.
 - Incompatible data types, missing, unsuitable or inappropriate vocabularies, e.g. cancer scales, or the US-centric ethnicity coding.

The importance of collaboration

Alliance OMOP Special Interest Group and OHDSI UK

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Health Data Research UK

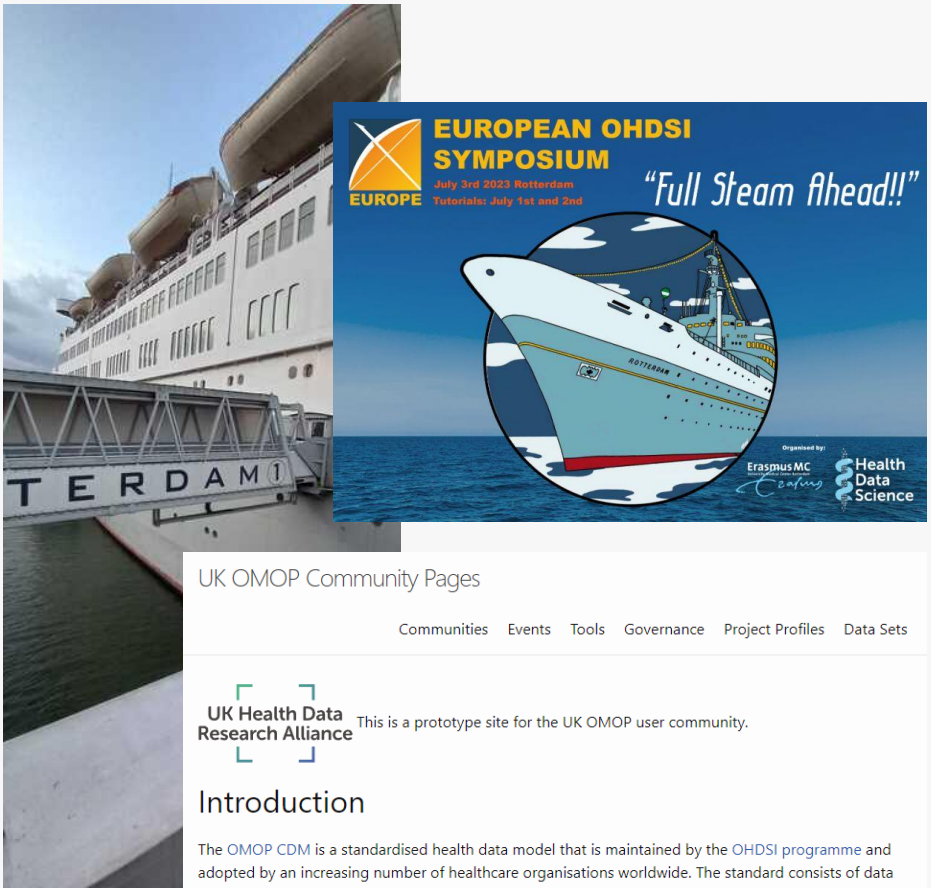
UK Health Data
Research Alliance



- Alliance OMOP Special Interest Group
 - Inaugural meeting held online on 19 June 2023, 77 attendees
 - Co-chairs: Geoff Hall & Dani Prieto-Alhambra
 - Next meeting 8th November: [Register here](#)
 - This Group will complement work of OHDSI UK (research use cases), by bringing data custodians together and focussing on organisational efforts
- The Alliance also sponsored OHDSI UK meeting (Oxford, 15th September)

In summary

- Significant momentum behind the adoption of the OMOP CDM in the UK (and beyond) among both data users and custodians.
- Factors limiting adoption include financial support, lack of skilled staff, concerns about the suitability of OMOP for different data types.
- HDR UK, through the Alliance, working to mitigate barriers and enable OMOP adoption in the UK where applicable.
- Collaborating with open-source communities like OHDSI UK and other international groups to demonstrate impact of using OMOP data. NHS SDE Network important vehicle for delivery.
- Will build on work of others & encourage sharing of resources - <https://hdruk.github.io/OMOP/>
- How can techUK members contribute and benefit?
→ [Join the Alliance ukhealthdata.org](https://ukhealthdata.org)



EUROPEAN OHDSI SYMPOSIUM
July 3rd 2023 Rotterdam
Tutorials: July 1st and 2nd
"Full Steam Ahead!!"

Organised by:
Erasmus MC
OHDSI
Health Data Science

UK OMOP Community Pages

Communities Events Tools Governance Project Profiles Data Sets

UK Health Data Research Alliance This is a prototype site for the UK OMOP user community.

Introduction

The **OMOP CDM** is a standardised health data model that is maintained by the **OHDSI programme** and adopted by an increasing number of healthcare organisations worldwide. The standard consists of data tables and vocabularies that encompass most types of data that occur in medical practice. Mapping to the CDM involves the creation of a data conversion software pipeline or ETL process that can be run to create a new database in the OMOP CDM format.

Mapping health data to a common data model facilitates data analysis, code re-use, aggregation and federation, while ensuring data are anonymised.

Useful Links



Data Standards



HDR UK



Alliance



Gateway



OMOP GitHub Pages

Health Data Research UK	https://www.hdruk.ac.uk/
UK Health Data Research Alliance	https://ukhealthdata.org/
Alliance Data Standards	https://ukhealthdata.org/projects/data-standards-and-quality/
Health Data Research Innovation Gateway	https://www.healthdatagateway.org/
OMOP GitHub	https://hdruk.github.io/OMOP/