



UK Longitudinal Linkage Collaboration

Innovations and a new era for public benefit research

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University of Bristol

HDR UK Midlands – November 2025
Healthcare Data from Different Sources



UK Research
and Innovation



ESRC
and MRC

Strength in partnership



Led by:



Powered by:



Funded by:



In partnership with:



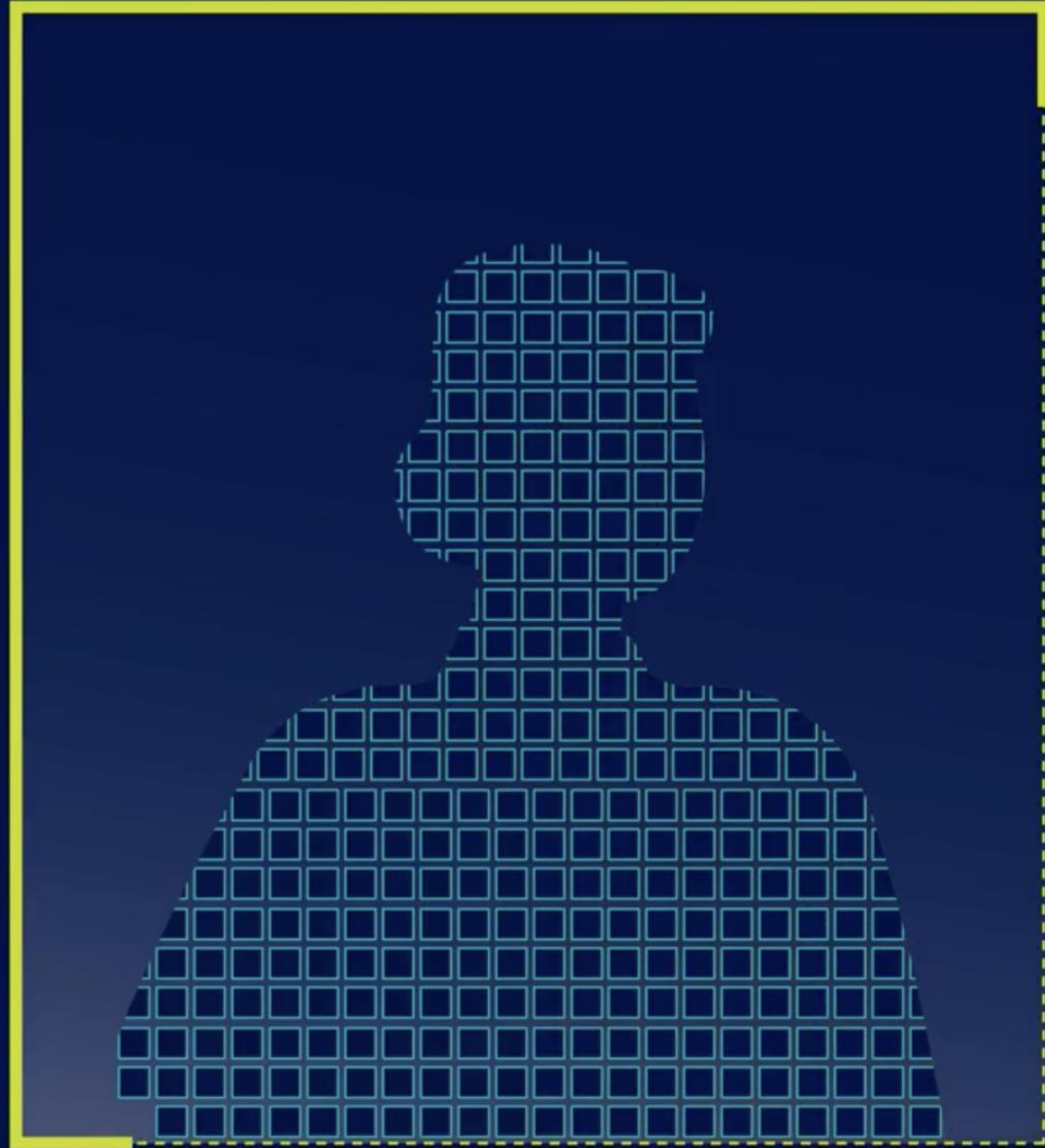
Partner Longitudinal Population Studies:



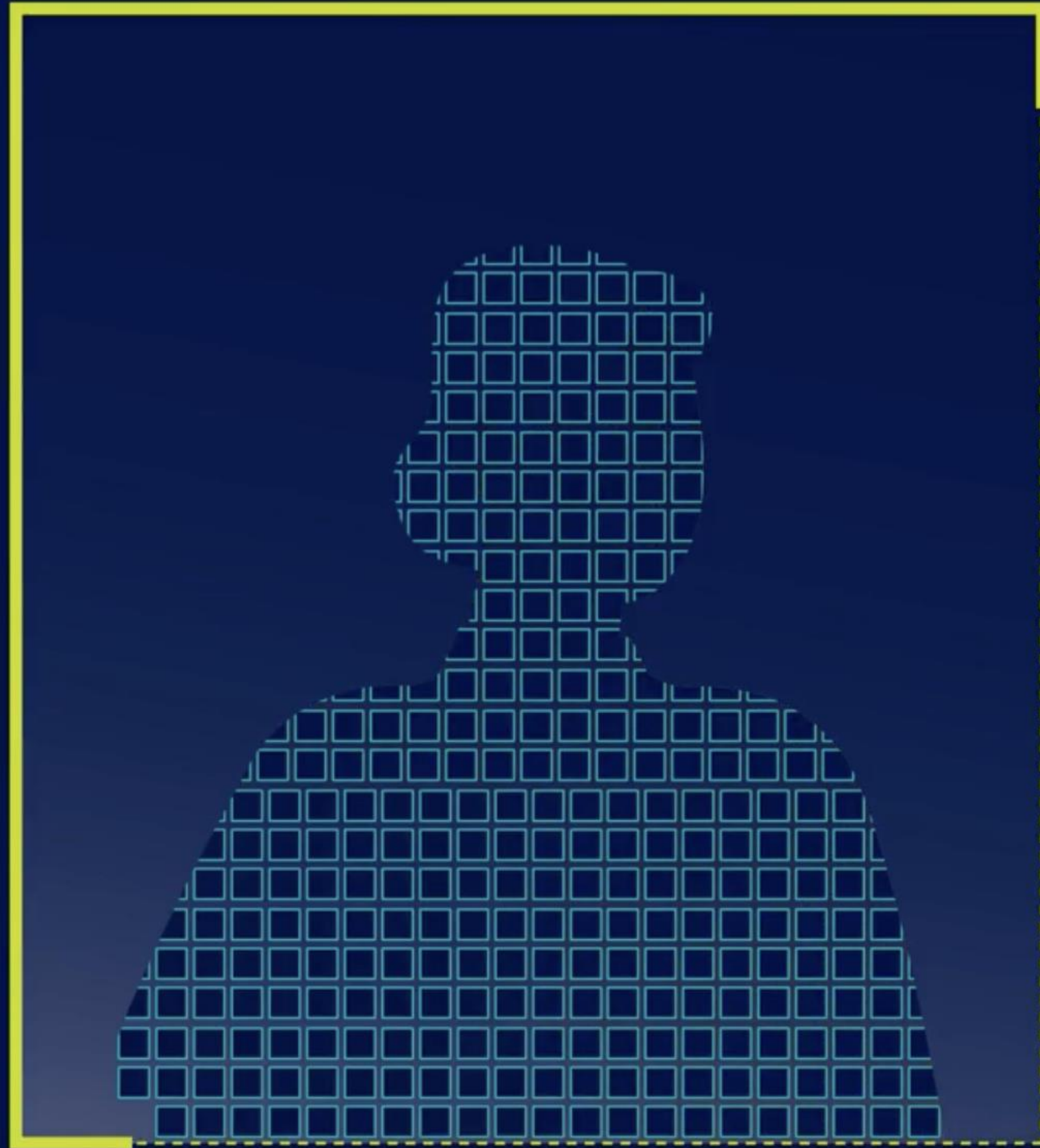
Collaborators:



An extraordinary UK scientific tradition



An extraordinary UK scientific tradition



Longitudinal population studies

- selected cohorts of participant volunteers
- >250 studies; >5 million UK residents
- Unparalleled depth and diversity of data collection
- Data collected using Surveys, Assessment visits and by collecting biological samples
- Consent for record linkages

Celebrating Midlands longitudinal studies



EXCEED

- 11,000 participants
- Focus on long-term health outcomes & genomics



UK REACH

- 18,000 NHS workers
- COVID-19 and workforce pressures

+ many studies with national coverage...

UK Longitudinal Linkage Collaboration



- The national Trusted Research Environment (TRE) for data linkage in longitudinal research.
- Enables the linkage of participants' study data with health, socio-economic and environmental records at scale
- A FAIR TRE where researchers can apply to access to integrated and linked data from many studies simply and efficiently.
- Since of

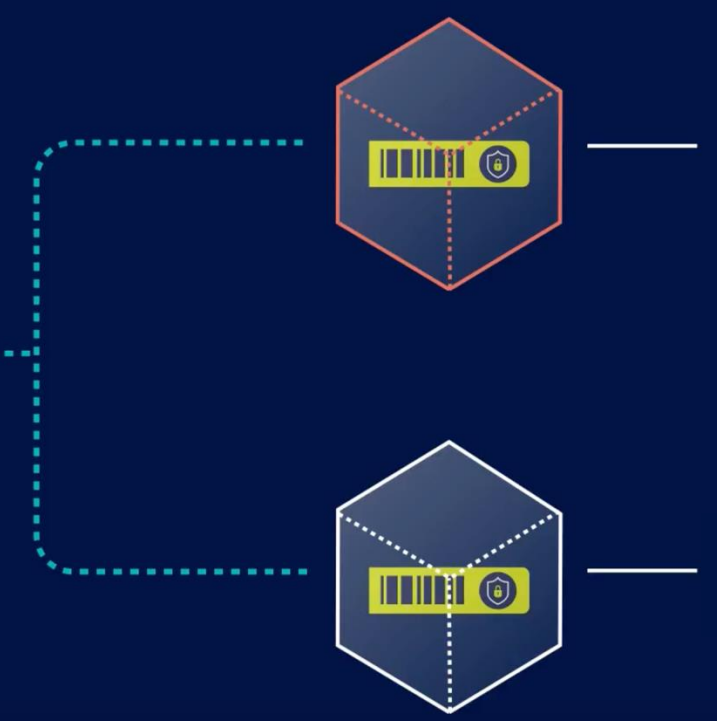
Innovative partnership working



- A partnership of studies and infrastructure specialists
- Co-design between UK LLC core team and study data managers
- Informed by study participants and UK LLC public contributors
- Addressing shared challenges and knotty governance problems
- SeRP UK providing the secure compute, HPC and essential trusted third-party functions

Powered by  **SeRP | UK**

Secure data linkage at scale

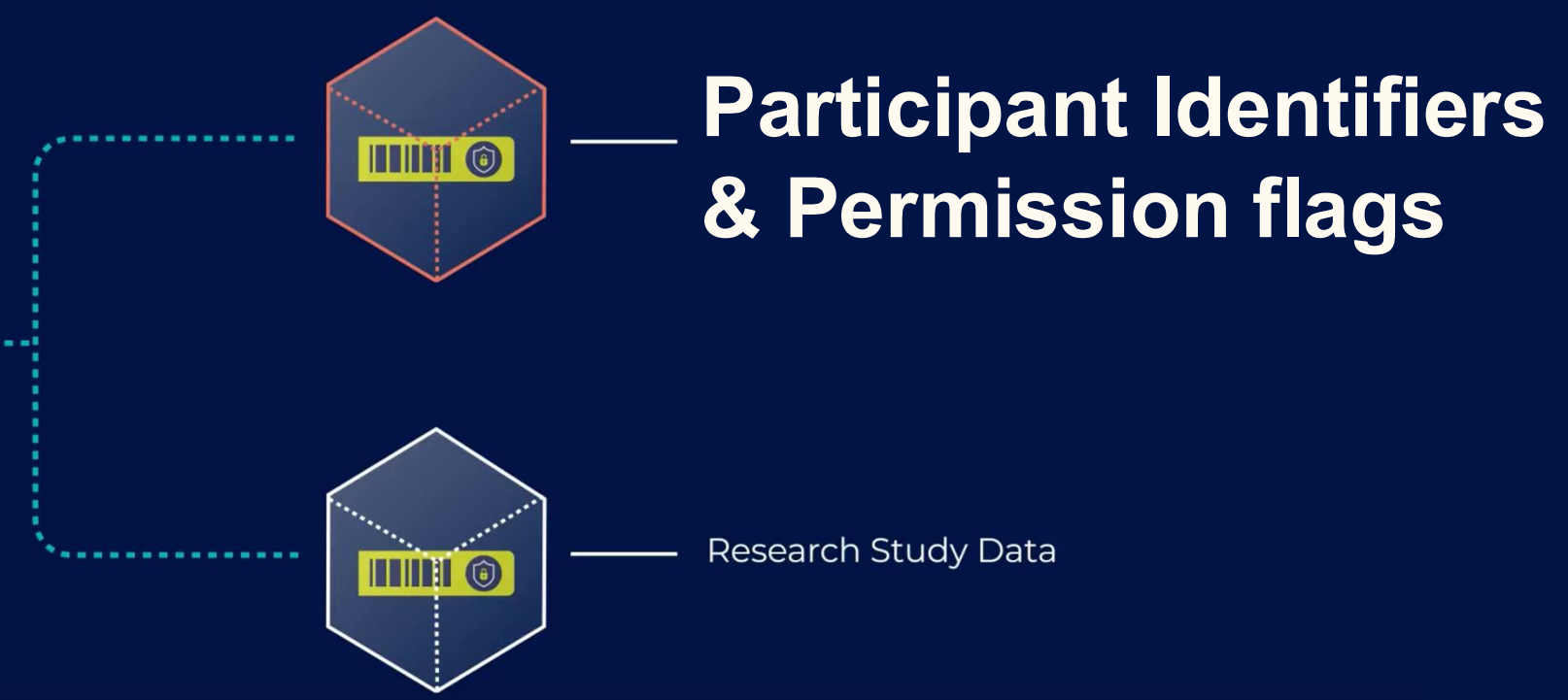


- Unprecedented pooled database of de-identified study data
- Highly heterogenous sample
- Powered for rare events/outcomes and sub-group analysis

Research Study Data



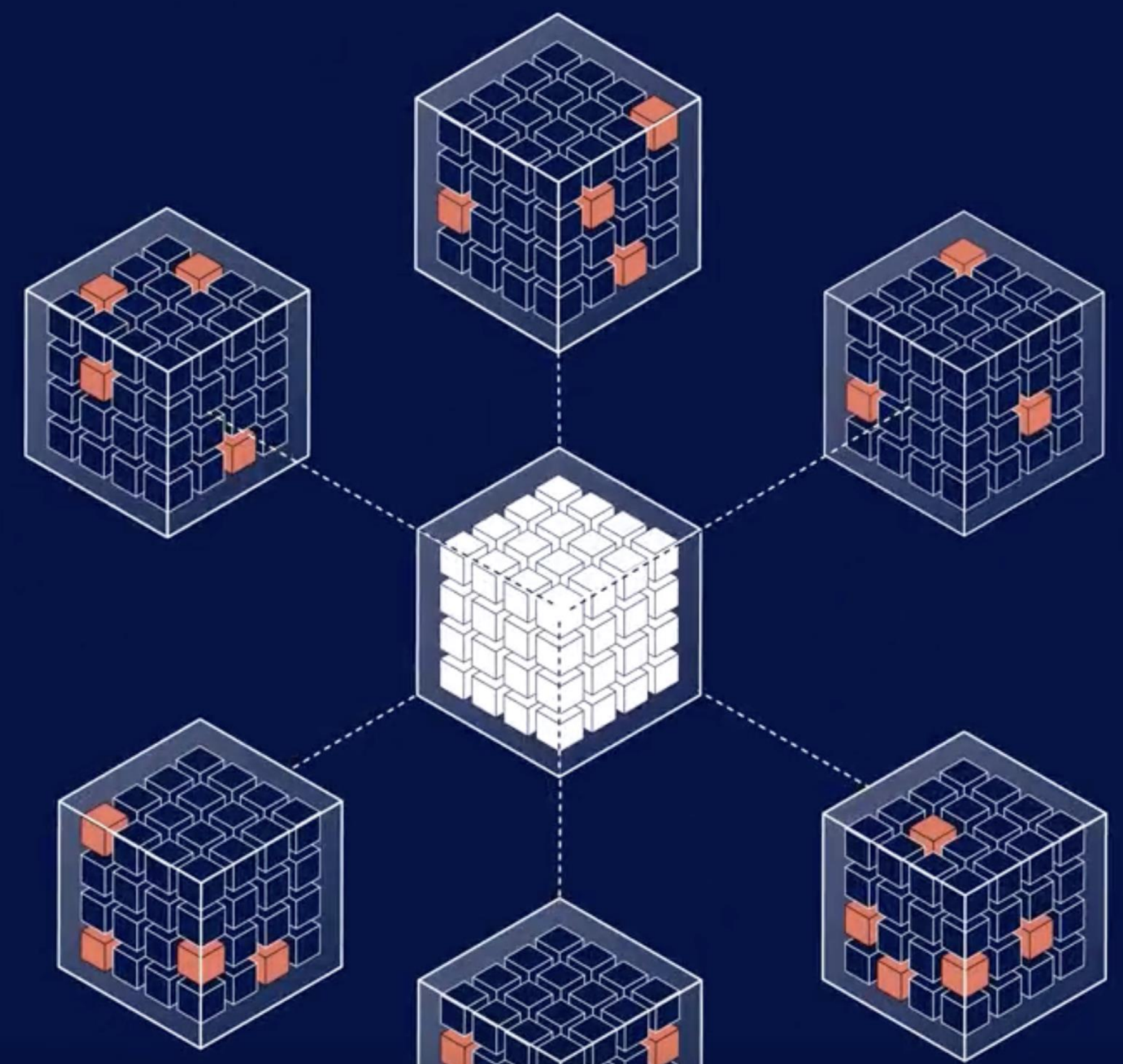
Secure data linkage at scale



Highly-efficient four nation NHS and UK statistical agencies linkages which are acceptable to both data owners and LPS and their participants

Secure data linkage at scale

All data brought together into an integrated research ready & FAIR database



Interdisciplinary four nations follow-up

**20+ Longitudinal Population Studies
with >420,000 participants**

Any and all study data, including:

- Behaviours and aspirations
- Socio-economic variables
- Genomics and other Omics
- Education to employment trajectories
- Occupational role & workplace experiences
- Devices and “smart data”
- *Anything collected by LPS.*

Administrative records

- Employment and earnings
- Benefits
- Pensions

Health records (NHS)

- Primary care
- Secondary care
- Hospital records
- Mental health community records

Place-based datasets

- Air pollution
- Noise
- Greenspace
- Neighbourhood
- Property data

**Full documentation
“Guidebook”**

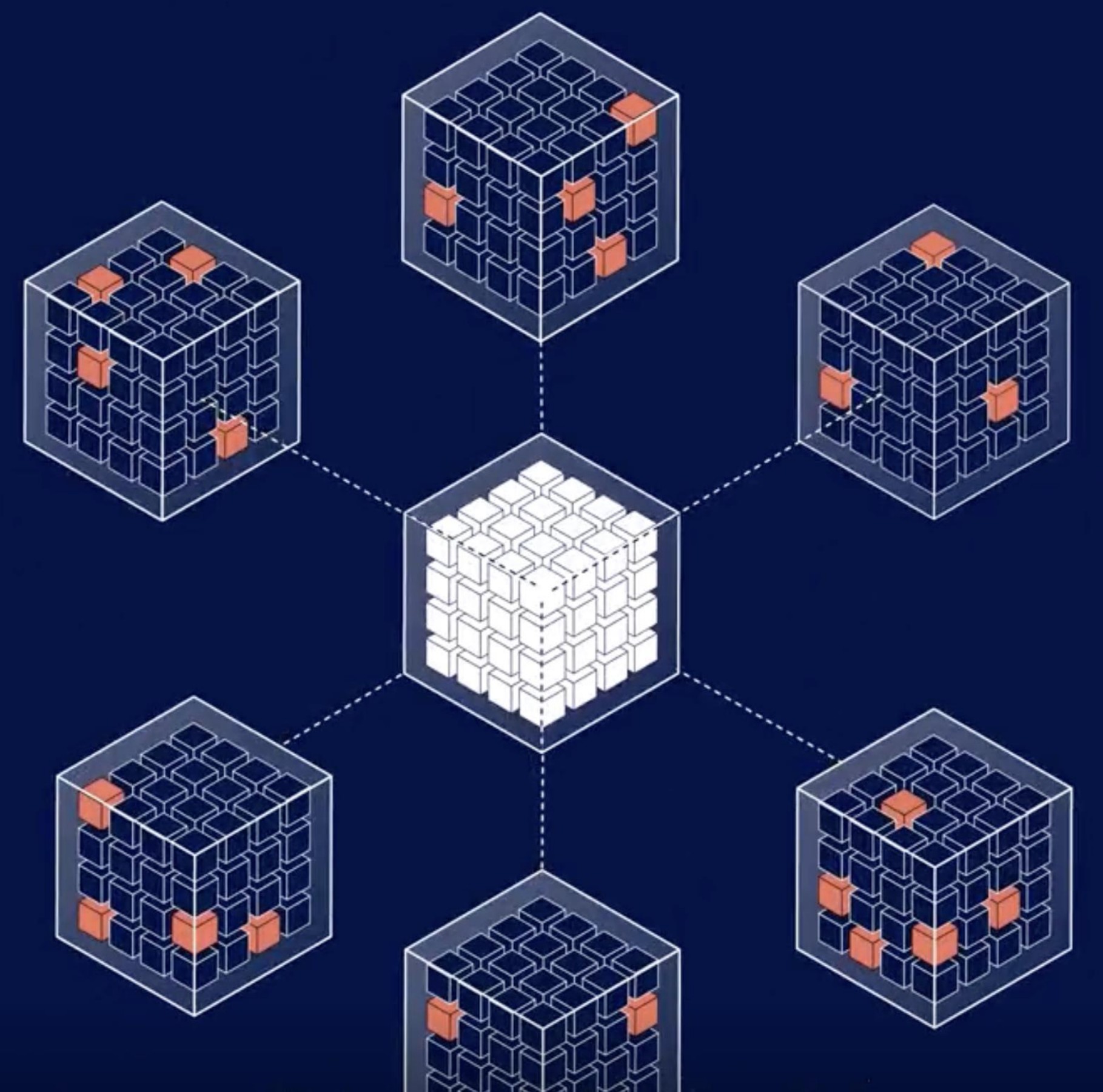


Secure data linkage at scale



Scalable to include many more LPS !

UK LLC will be hosting >2m participants by 2027



Primary Care

Secondary Care

Community Care

Registry

A Lifecourse perspective

GDPPR
(*covid only)
Dispensing

Admissions
Outpatients
A&E
Prescriptions

MHSDS
IAPT
CSDS

Cancer
Mortality
Demographics

● ————— | Patient Journey | ————— ●

Education (pending)

HMRC & DWP (work spells, disability, benefits)

● ————— ◆ ————— ◆ ————— ◆ ————— | LPS collections | ————— ◆ ————— ◆ ————— ●

GAD-7, Health status, risky behaviours

Education, Work experience, Social Media use, Self Harm

GAD-7, Life Events, Health Status, Gambling, Self Harm

GAD-7, Help-seeking behaviours

**Defining
multi-
morbidity
and co-
morbidity**

**Primary
Care**

GDPPR
(COVID only)
Dispensing

**Secondary
Care**

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**Community
Care**

MHSDS
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LPS collections

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status, risky
behaviours

Education, Work
experience, Social
Media use, Self Harm

GAD-7, Life Events,
Health Status,
Gambling, Self Harm

GAD-7, Help-
seeking
behaviours

**Upstream
(pre-clinical)
intervention
points**

**Primary
Care**

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(*covid only)
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**Secondary
Care**

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**Community
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GAD-7, Life Events,
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GAD-7, Help-
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behaviours

Lifecourse transitions

Primary Care

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(*covid only)
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GAD-7, Life Events, Health Status, Gambling, Self Harm

GAD-7, Help-seeking behaviours

Apply for access

A single application form and supported process – fast and predictable



Open for any
public good research
question

**FREE
TO ACCESS**

- A single application form
 - 12-week application to data provision timeline
- apply.ukllc.ac.uk**

* Currently UK-based non-commercial users only - but opening to international and commercial users in 2026



UK LLC thank the staff
and participants
of our partner studies

Thank You!

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 ukllc.ac.uk

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