

Personalized Medicine Through Personal Data Pods

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Scalable Personalized Medicine?

€ Unfortunately, still quite expensive

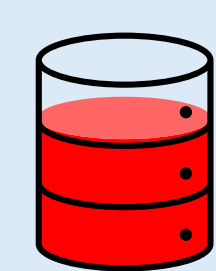
But why? Sequencing is getting pretty cheap.

Answer:  Data privacy is crucial

 Genomic data storage is expensive

Question: Any way to fix that?

Personal Genome Sequence Data

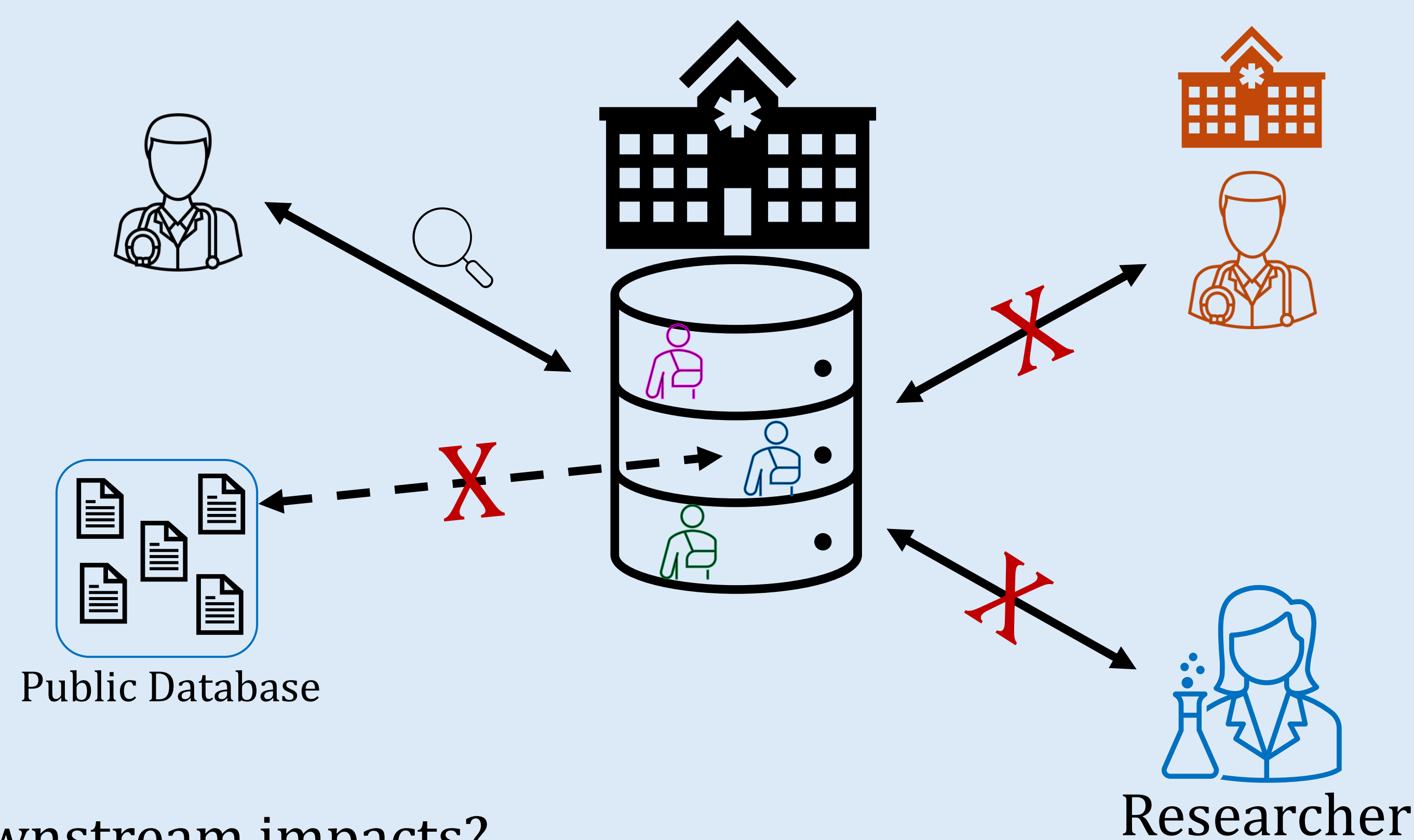


Very large (~GBs in size)



Require strict privacy protections

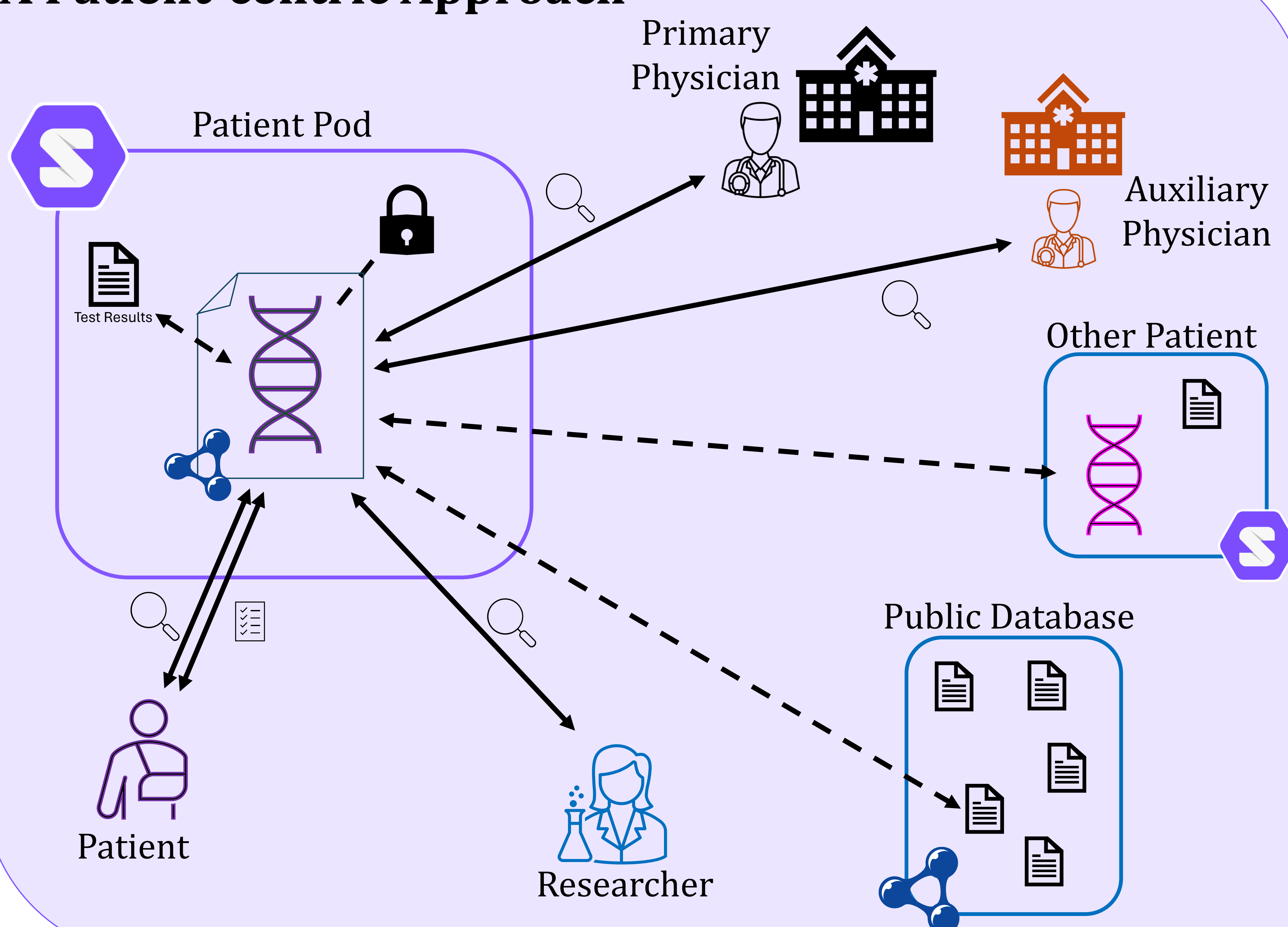
The current institution-centric system






Downstream impacts?

- Reduced data sharing
- Reduced patient transparency
- Increased pertinent data dispersion
- Data duplication

A Patient-centric Approach



Key Challenges

-  Privacy granularity
 - ↳ Governance?
 - ↳ How much patient control?
-  Data Linkages
 - ↳ What data should be linked?
 - ↳ Data formatting Standards?
-  Querying performance
 - ↳ Genomic data is BIG
 - ↳ Requires novel approach?

Poster Paper



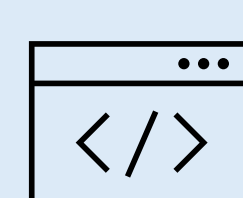
Future Directions



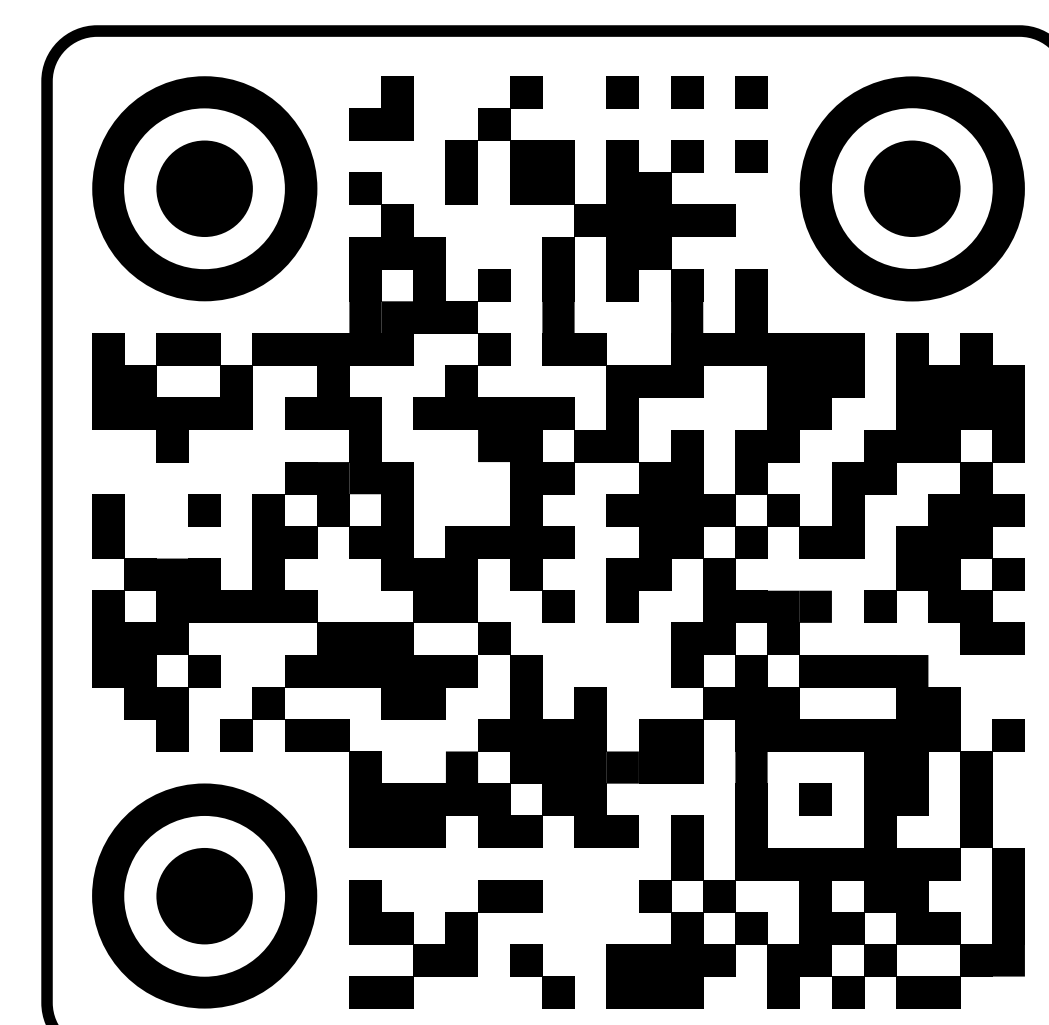
Researcher Access



Consent infrastructure



Unified Framework



Contact Details