

Personalized Medicine Through Personal Data Pods

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vito

imec

Scalable Personalized Medicine?

€ Unfortunately, still quite expensive

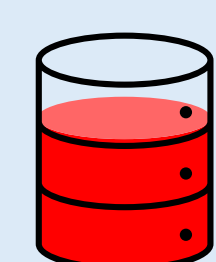
But why? Sequencing is getting pretty cheap.

Answer:  Data privacy is crucial

 Genomic data storage is expensive

Question: Any way to fix that?

Personal Genome Sequence Data

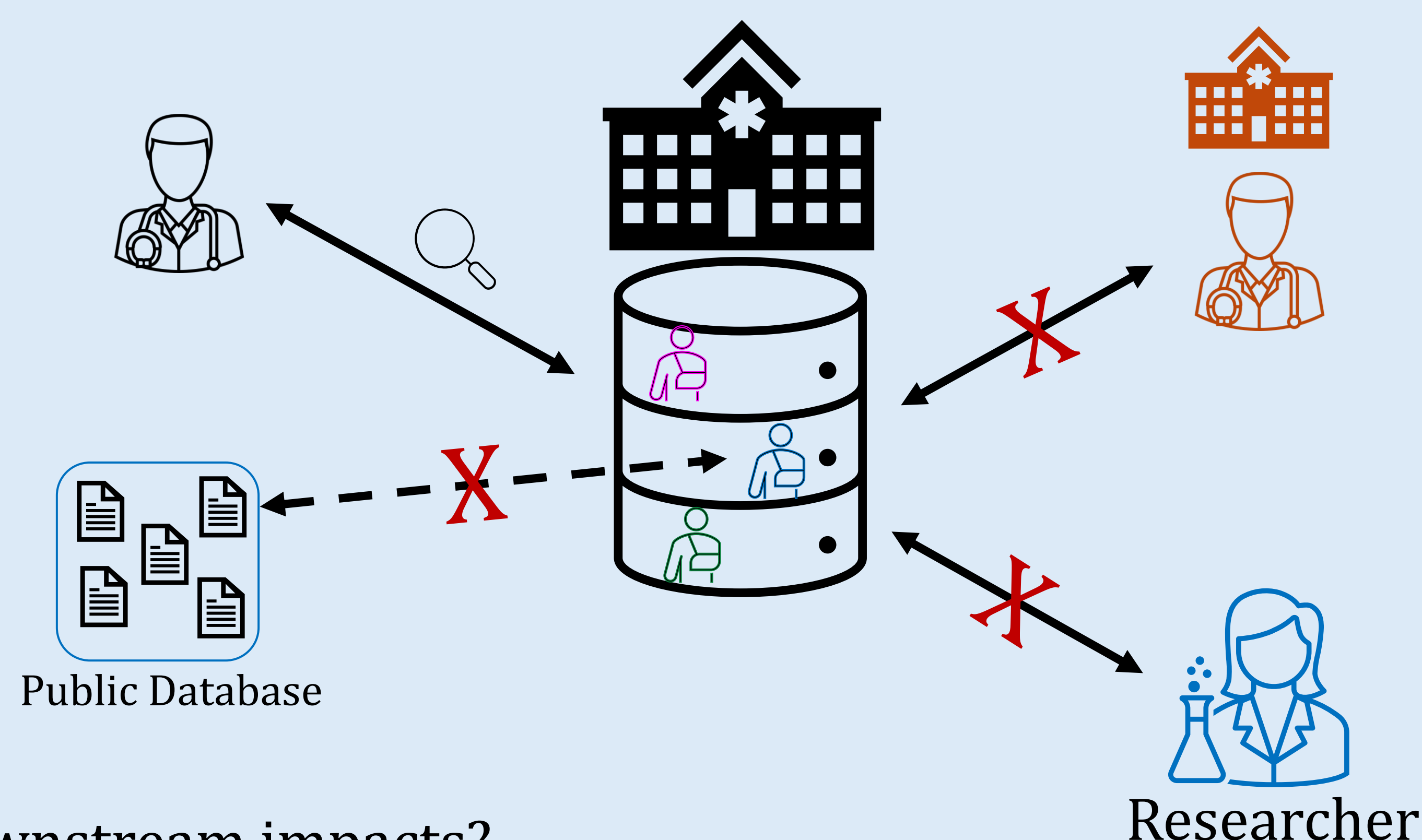


Very large (~GBs in size)



Require strict privacy protections

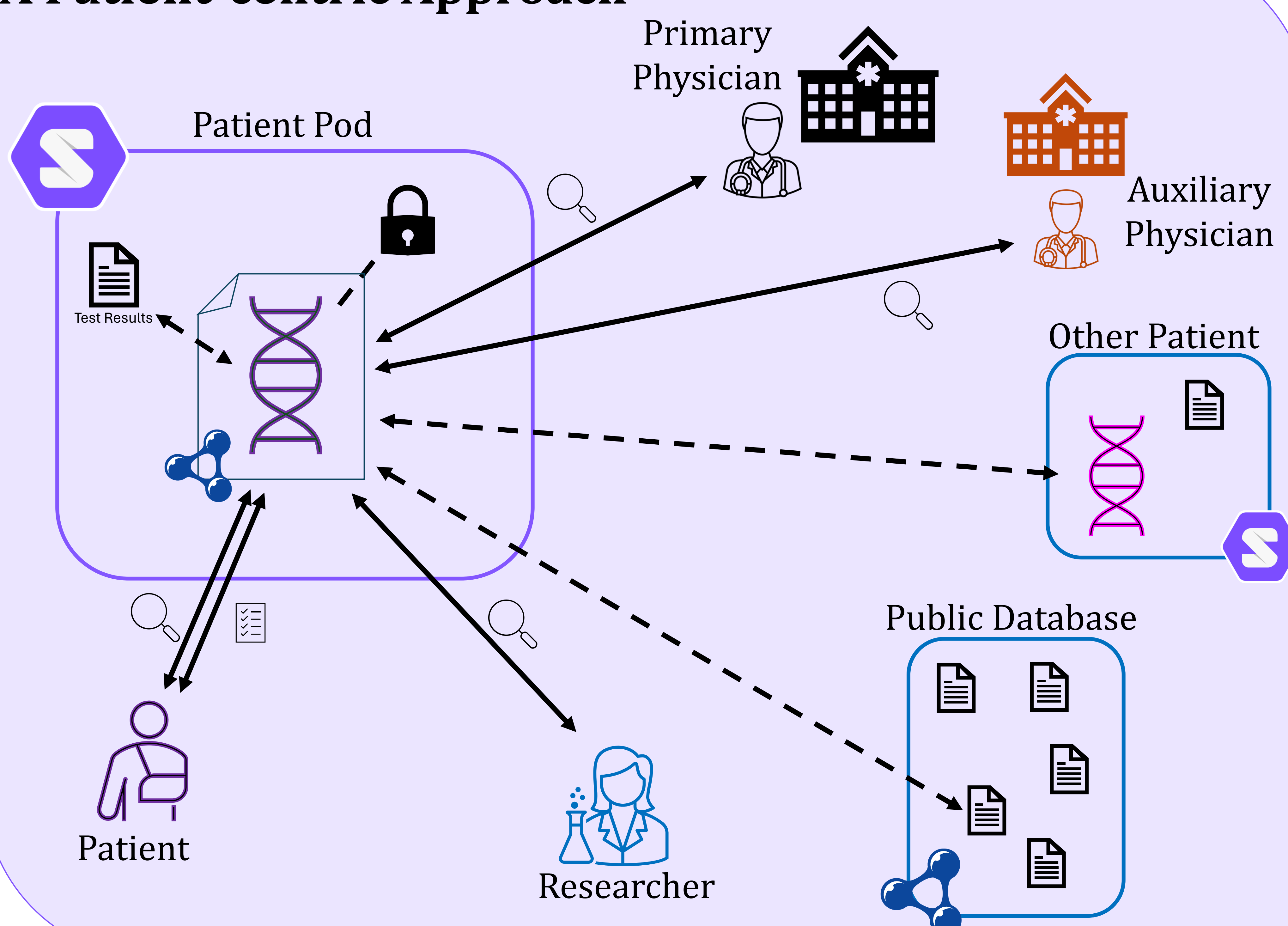
The current institution-centric system



Downstream impacts?

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

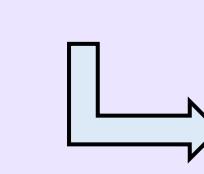
A Patient-centric Approach



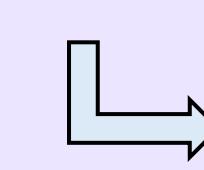
Key Challenges



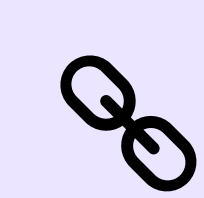
Privacy granularity



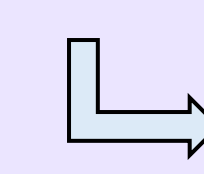
Governance?



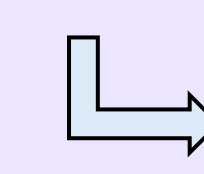
How much patient control?



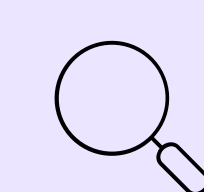
Data Linkages



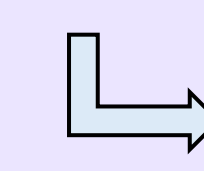
What data should be linked?



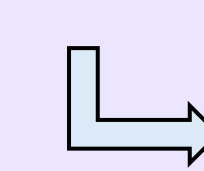
Data formatting Standards?



Querying performance



Genomic data is BIG



Requires novel approach?

Poster Paper



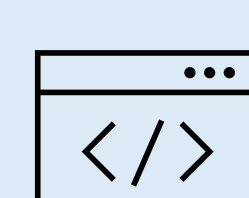
Future Directions



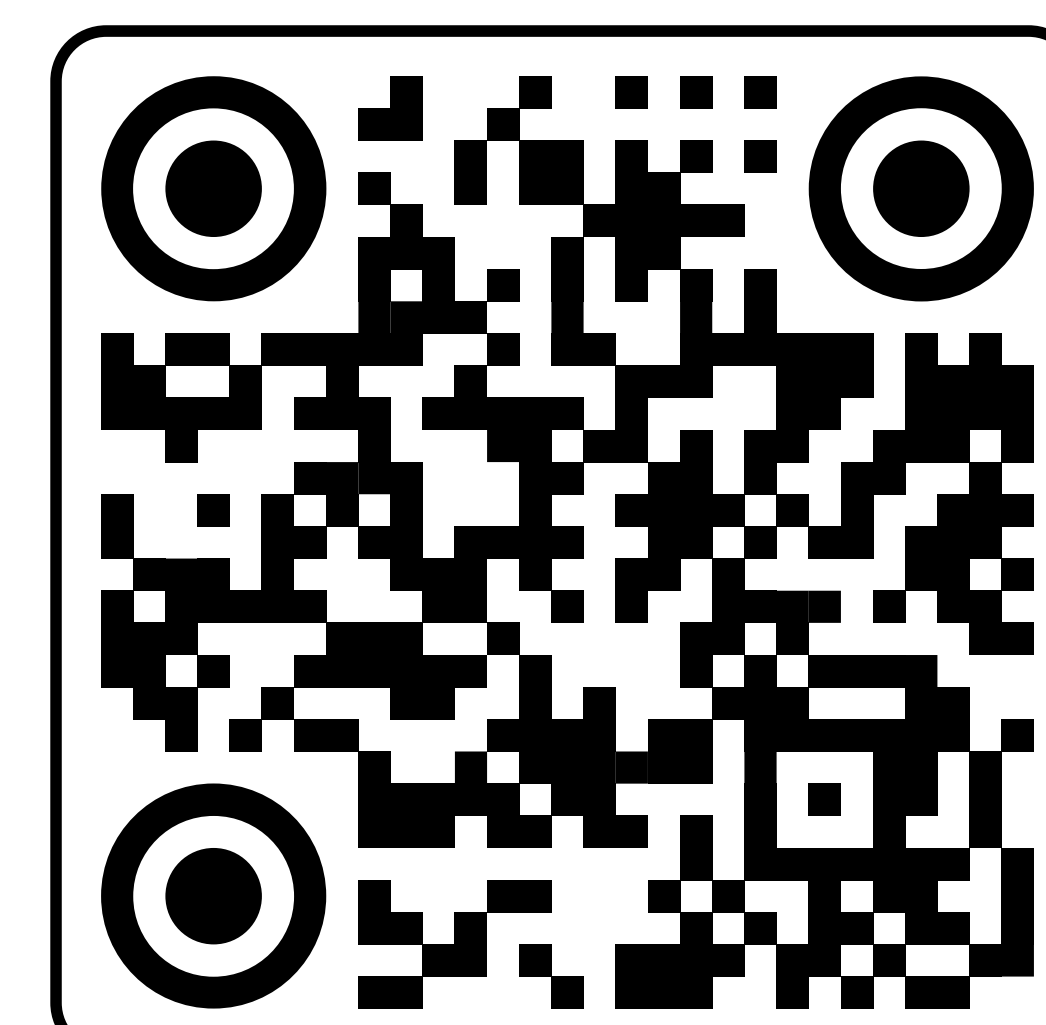
Researcher Access



Consent infrastructure



Unified Framework



Contact Details