



Enabling Collaboration Using the Biomedical Informatics Research Network (BIRN)

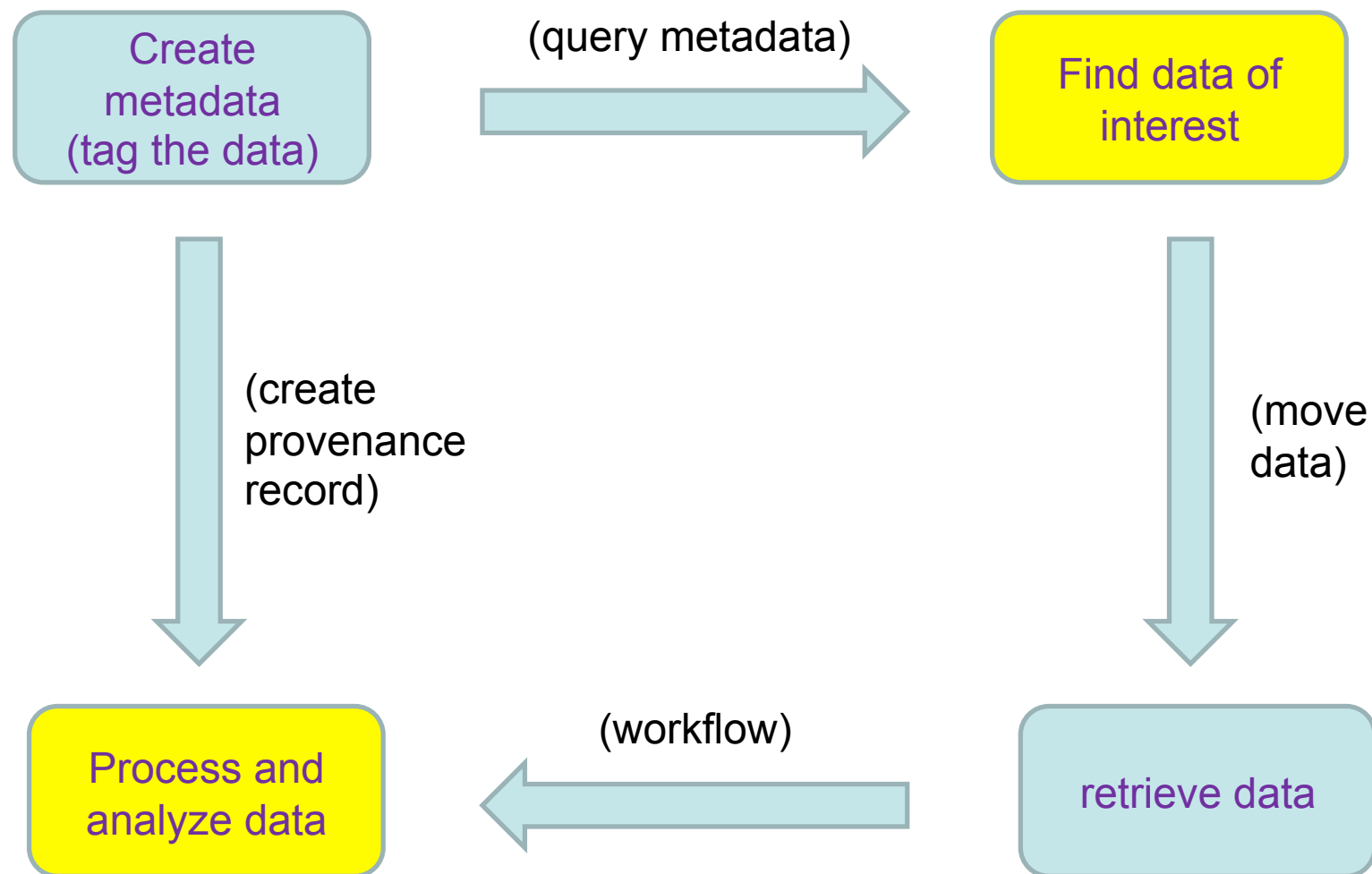
Bruce Rosen M.D., Ph.D.



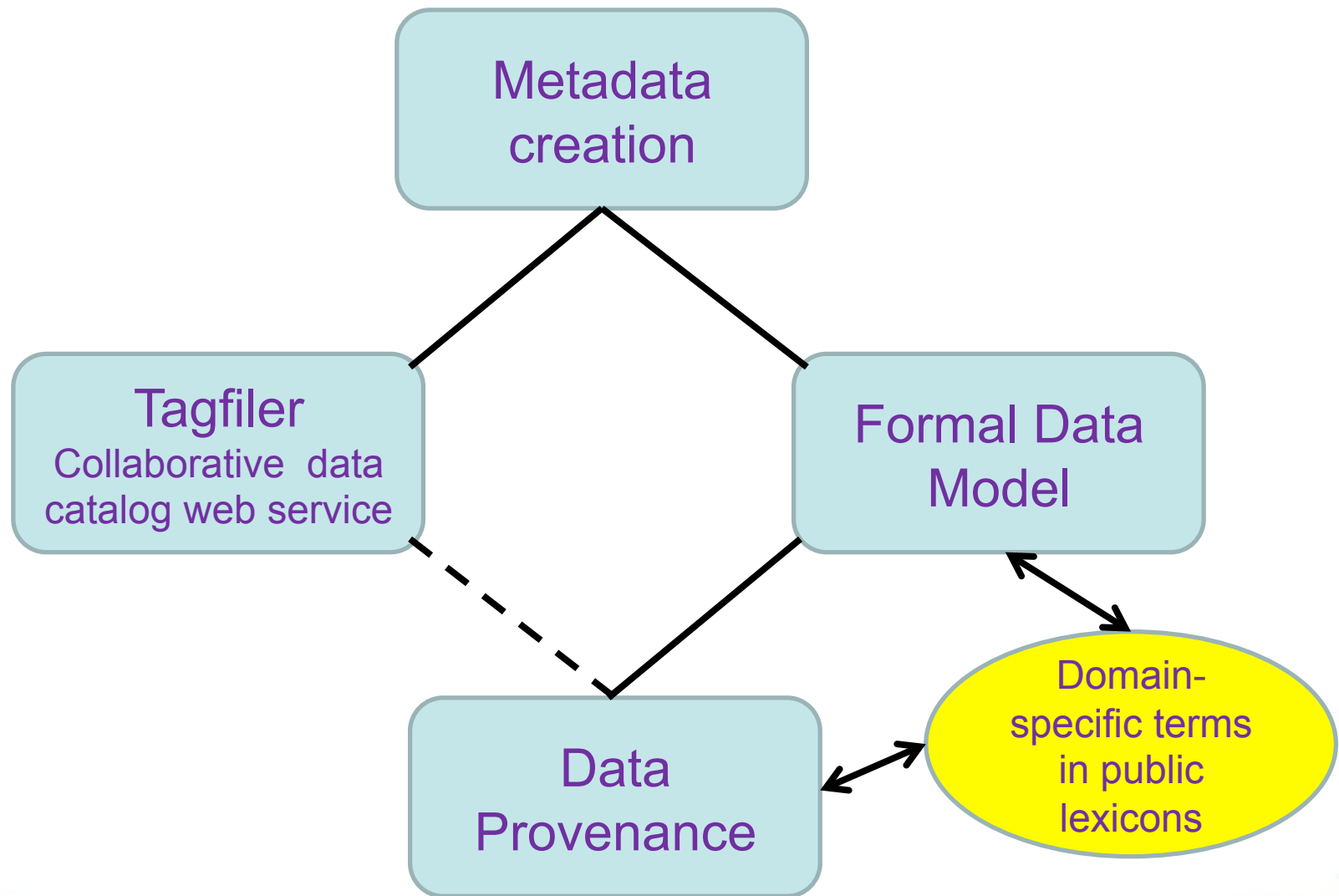
National Institute of
General Medical Sciences

Basic Discoveries for Better Health

Data Lifecycle and BIRN

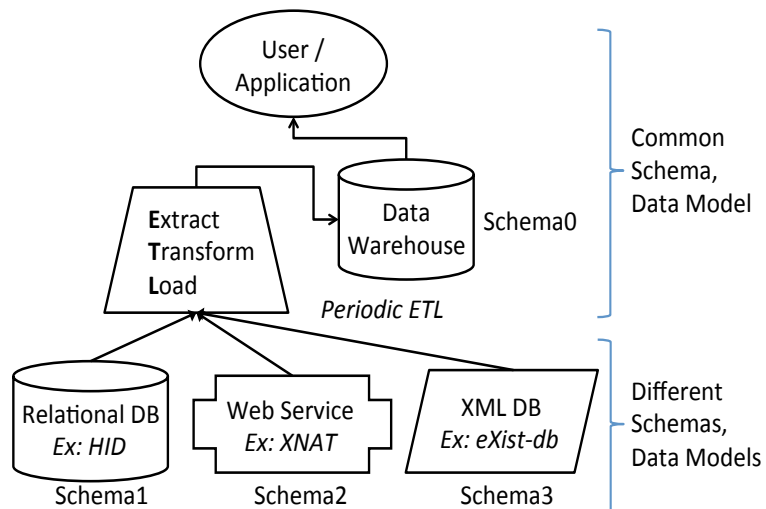


The Challenge: Create Metadata for Data Identification



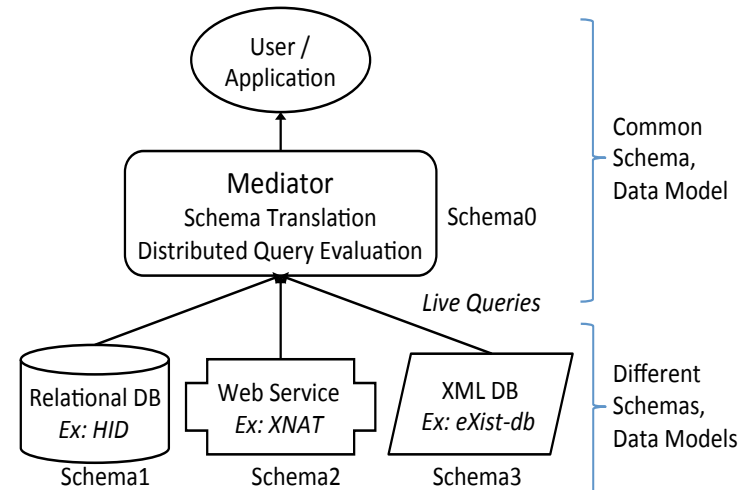
Data integration architecture approaches

Data Warehouse(s)



Transform data into common schema and load into one or more warehouses

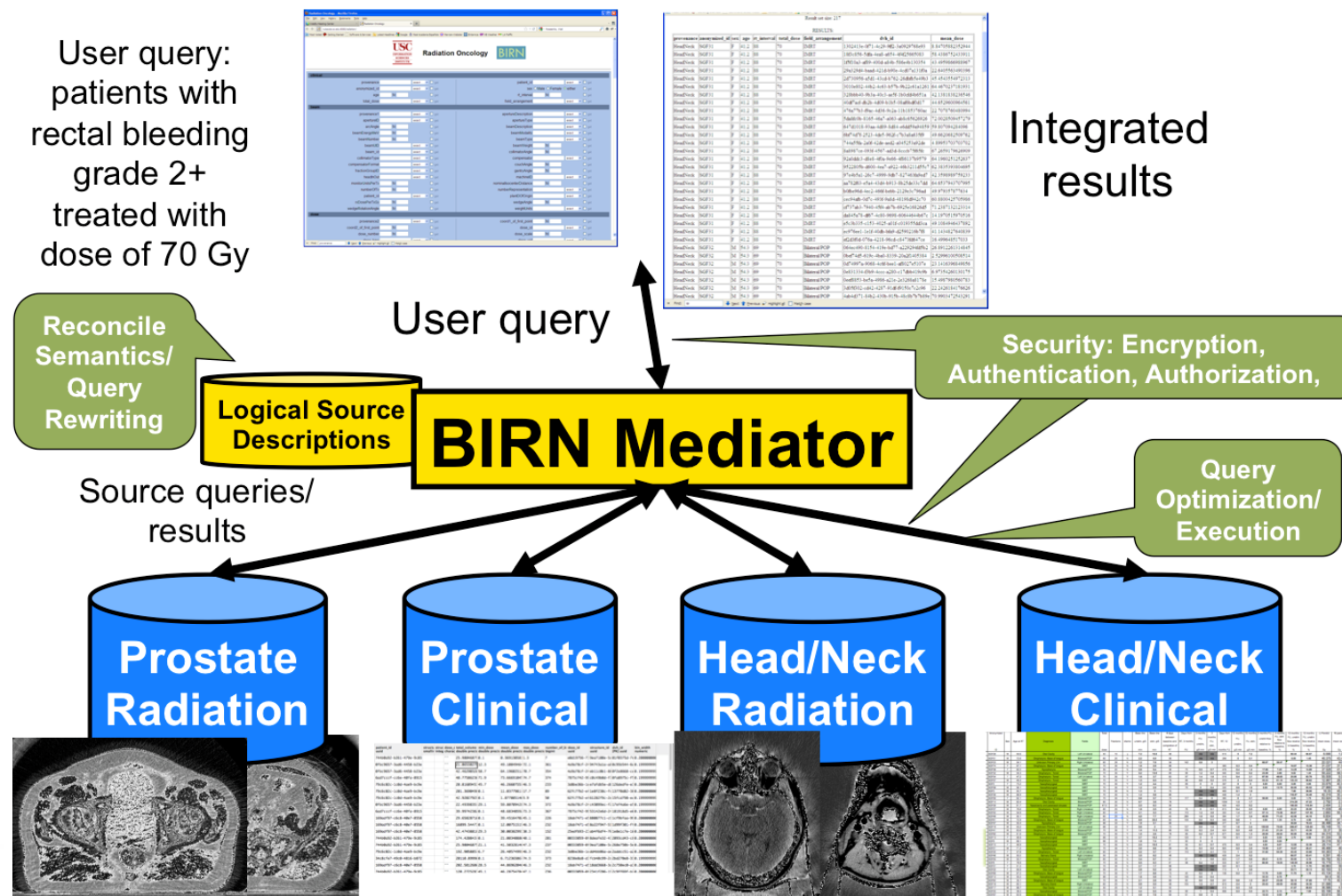
Mediation between Data Sources



Mediator translates queries for each individual source, while data and local schemas stay the same

The Challenge: Multiple, Heterogeneous Data Sources

BIRN Mediator provides deep integration across complex data sources, with access control and encryption while supporting complex queries.



The Challenge: Moving and Sharing Data *Easily* – Globus Online

- Globus Online

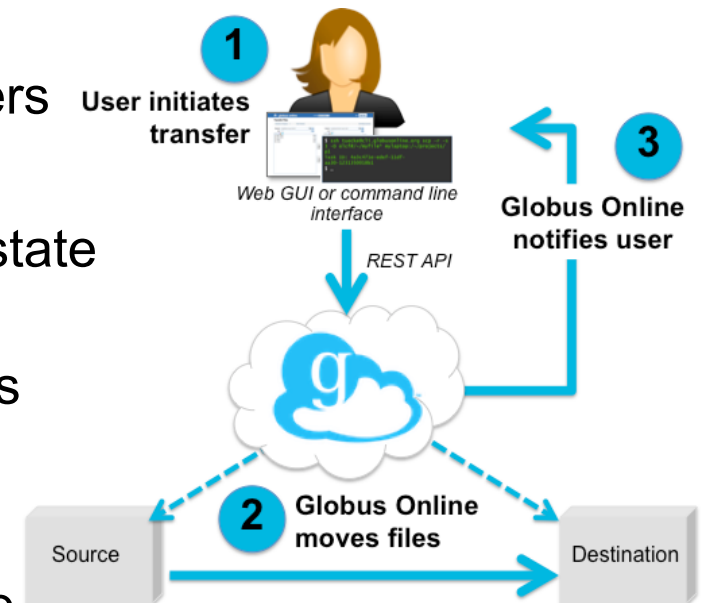
- Hosted service with “fire-and-forget” transfers
- Cloud service can be used as endpoint
- Web, command line, and representational state transfer (REST) interfaces
- User/Group management with BIRN Access

- Globus Connect

- transfer files to and from your local machine
- Installed and run as a user w/o admin privileges
- Outbound connections only, works behind a firewall

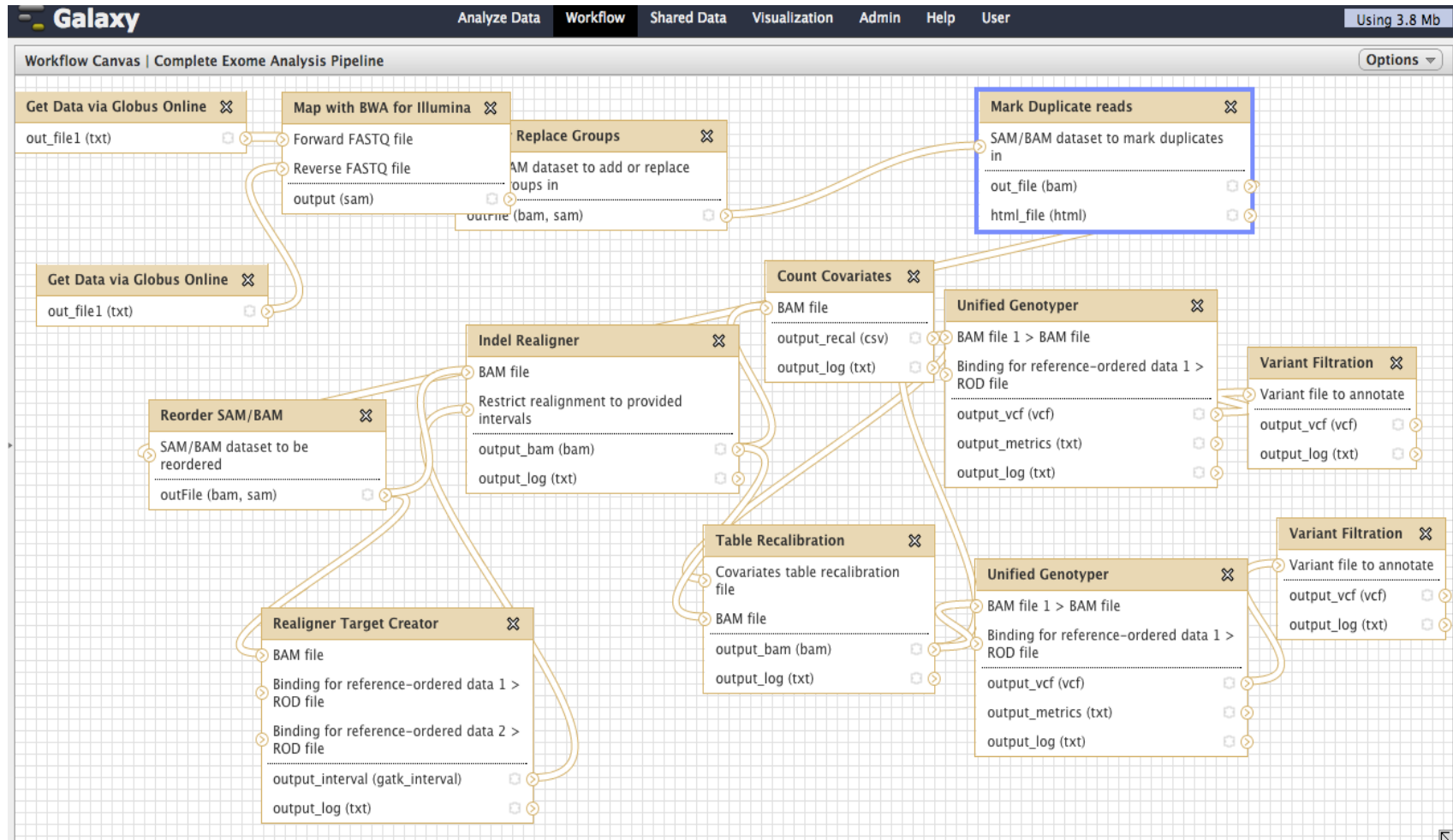
- Globus Connect Multiuser

- Create transfer endpoints in minutes
- Enable multi-user access for a resource
- GridFTP + MyProxy server + Certificate Authority



The Challenge: Customization of Processing and Analysis

- Galaxy and LONI-based Pipeline Tools



- Executive Committee
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 - Karl Helmer, CTSN
 - Arthur Toga, co-PI
 - Ian Foster, co-PI
 - Steven Potkin, co-PI
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 - Peter Lyster, NIGMS
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 - Gully Burns, Jessica Turner
- Communications
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- Workflows
 - Ivo Dinov, Ravi Madduri
- Genomics
 - Fabio Macciardi
- Executive & Steering Committees
 - Joe Ames, Karl Helmer

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