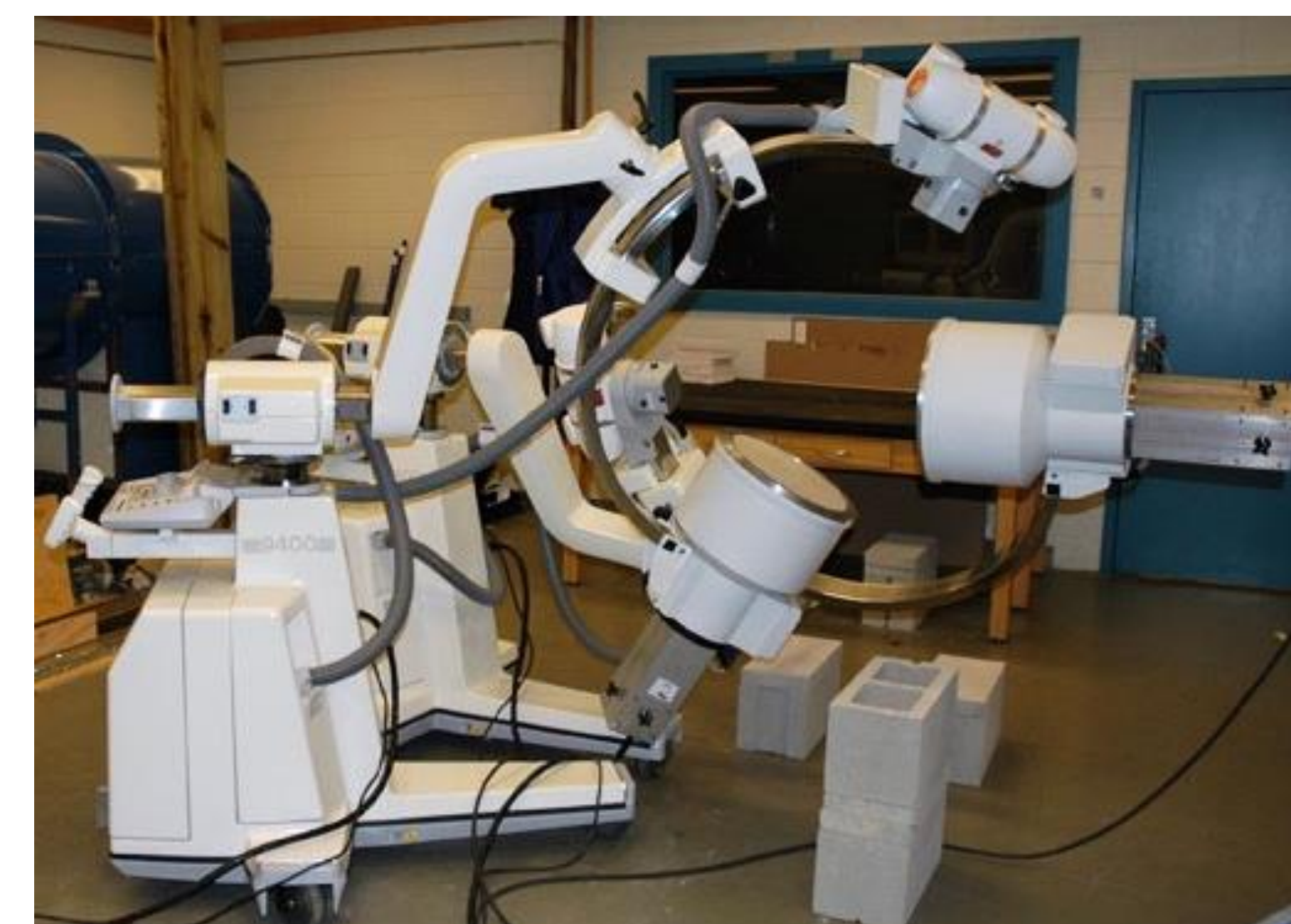


NSF MRI project: Data Lifecycle Instrument (DaLI)

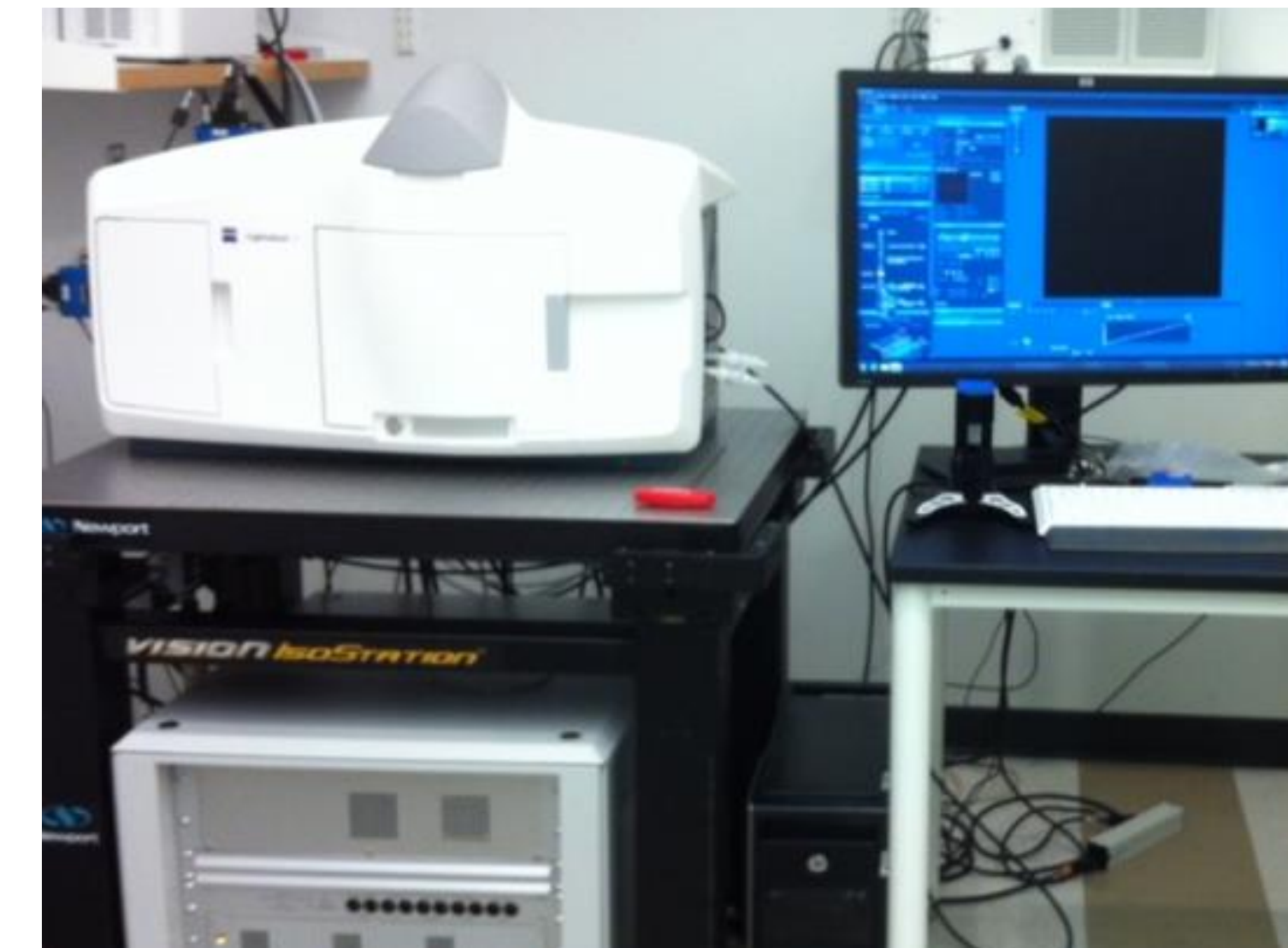
The Data Lifecycle Instrument (**DaLI**) project enables scientists to acquire, transfer, process, visualize, store, and share large and complex research data, in a unified workflow for various experiments and observations from remote instruments such as telescopes, astronomical arrays, ecological field station sensors, sequencing machines and multidisciplinary research.



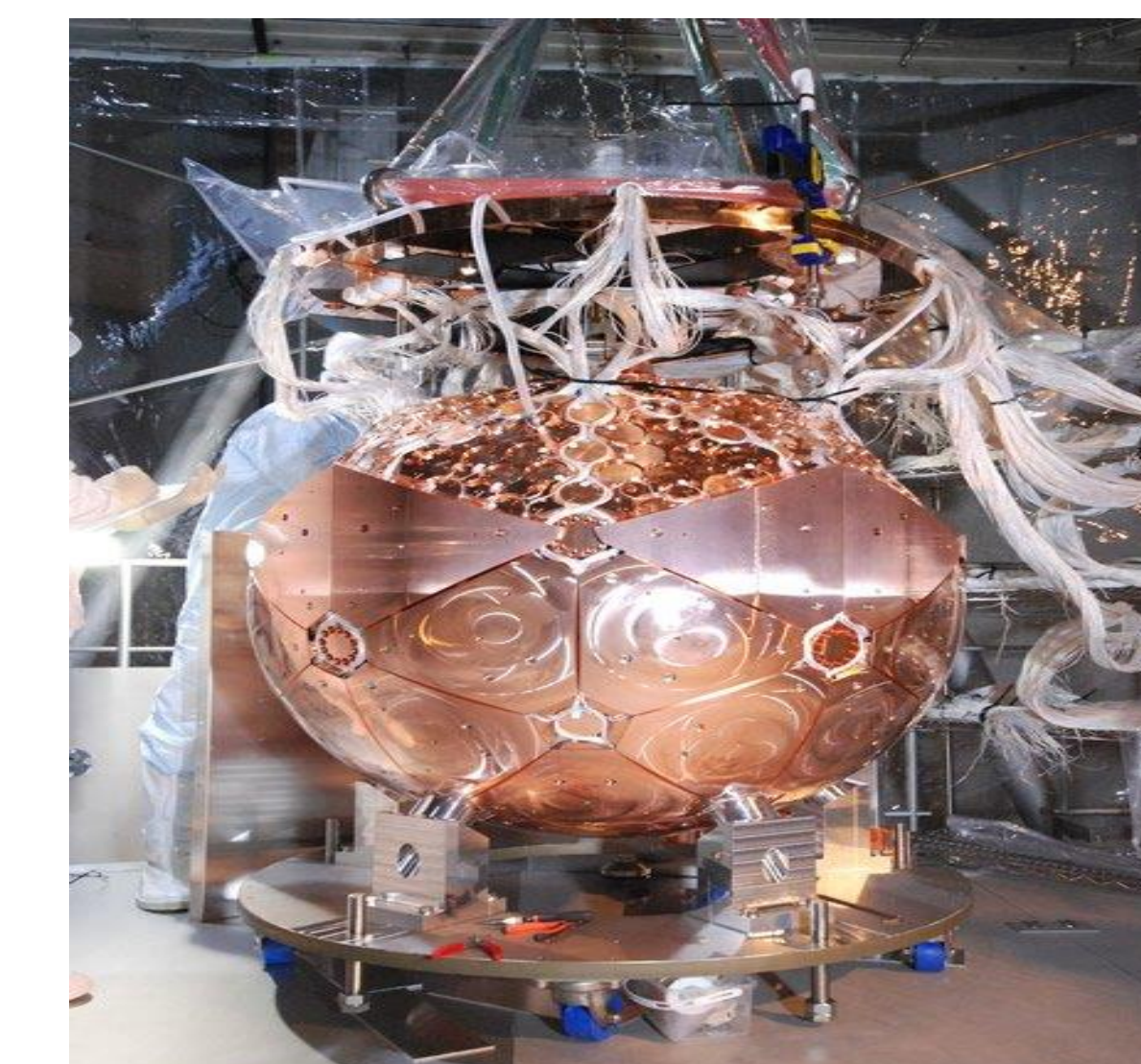
South Pole Telescope



X Ray Instrument



Light Sheet Microscope



Dark Matter Detector



Gene sequencing

Figure. 1. Types of projects supported by DaLI

Storage

- 2 Petabyte High Performance Pool
- 1 Petabyte Nearline Pool
- 1.2 Petabyte Tape Backup Pool

Compute and Network

- 28 SkyLake nodes
- 100Gb/s EDR InfiniBand
- 3D XPoint NVM

Data management software

- GPFS AFM
- Globus
- XROMM DM

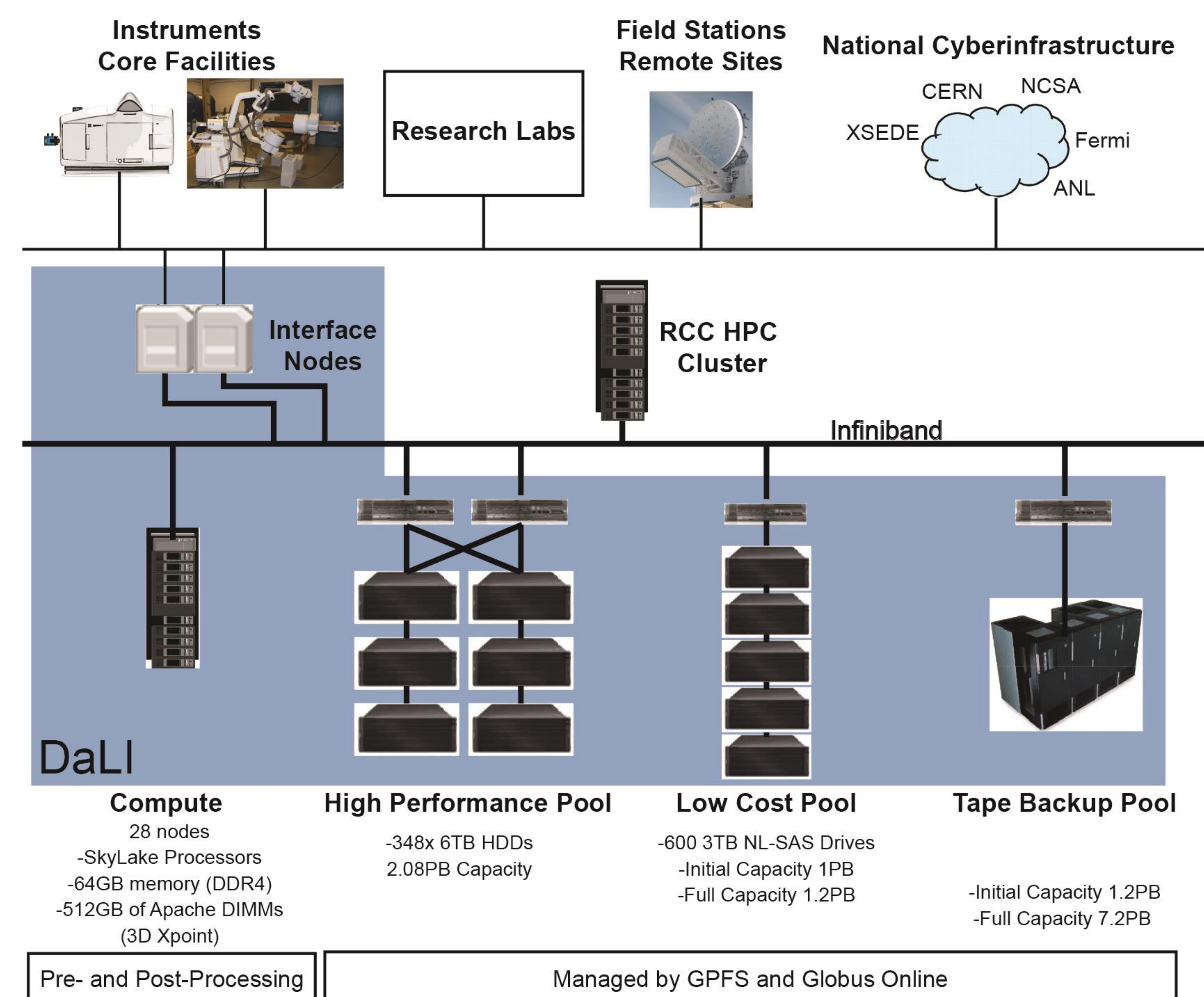


Figure 2. Overview of DaLI Organization