



Large instruments
High-fidelity simulations
HPC library

Publish/Put/Write

Steer

Storage

I/O management

Optimization Engine

Workflow management

Bi-directional I/O

Surrogate models
Large Language Models
Digital twins

AI library

Subscribe/Get/Read

Adjust AI and HPC sim

Visualization
Analysis (human in the loop)

I/O library

Bi-directional control

