The I-GUIDE Platform
Filling the HDR Ecosystem's "Missing Middle"

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Vision

Integrate distributed geospatial data capabilities and advanced CI to form a composable and open I-GUIDE platform to accelerate scientific workflows and support education and workforce development as well as broader community engagement.
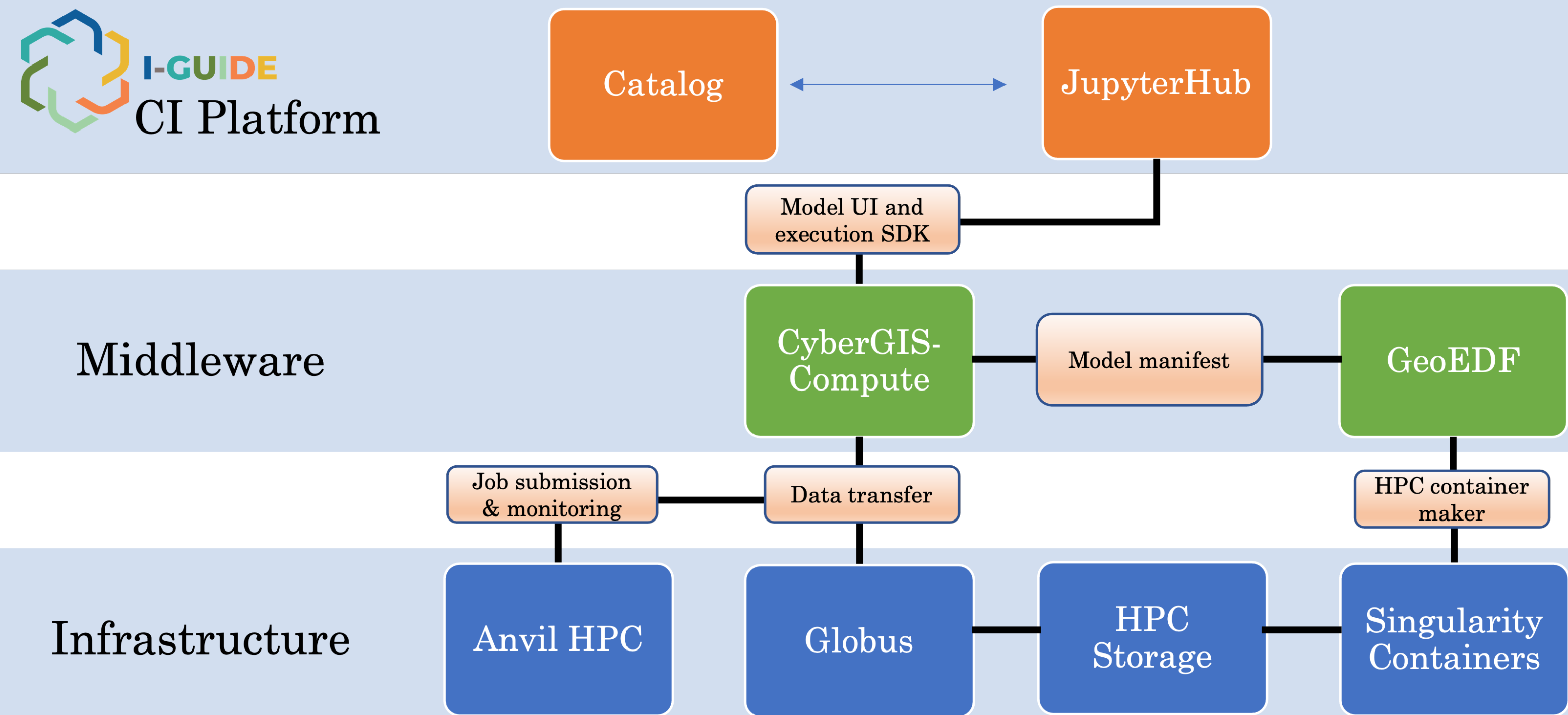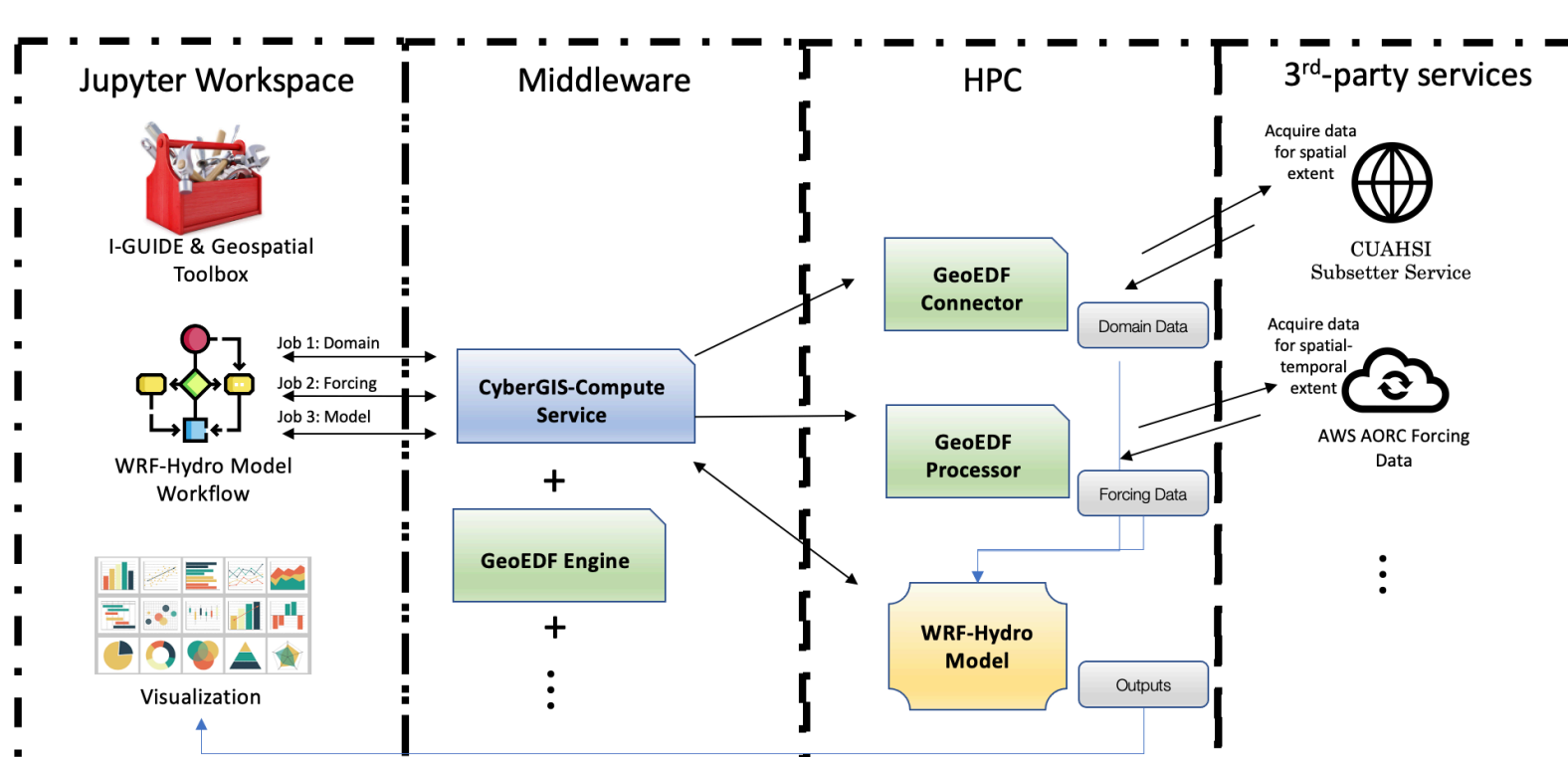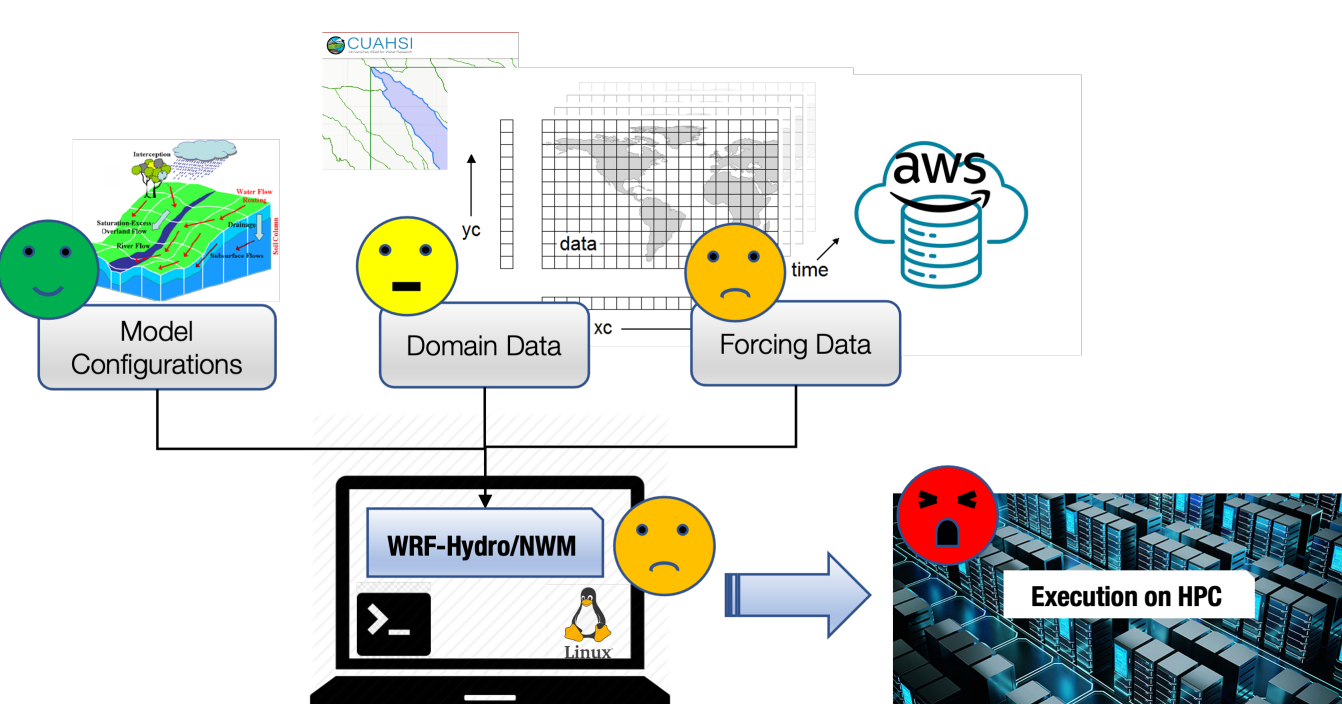
Aging Dam Use Case

Address the questions of whether and where socioeconomically disadvantaged populations are vulnerable to disasters caused by potential aging dam failures.
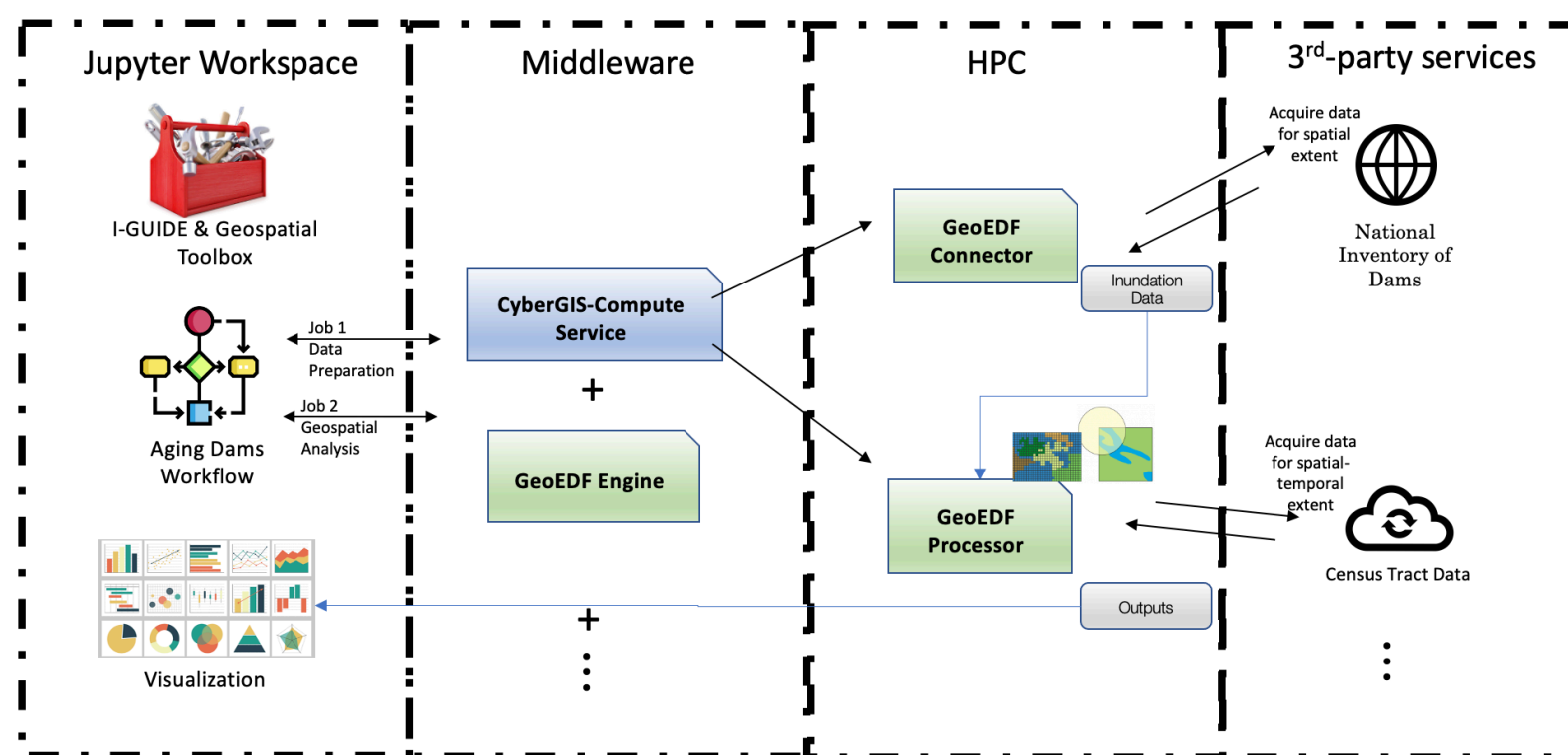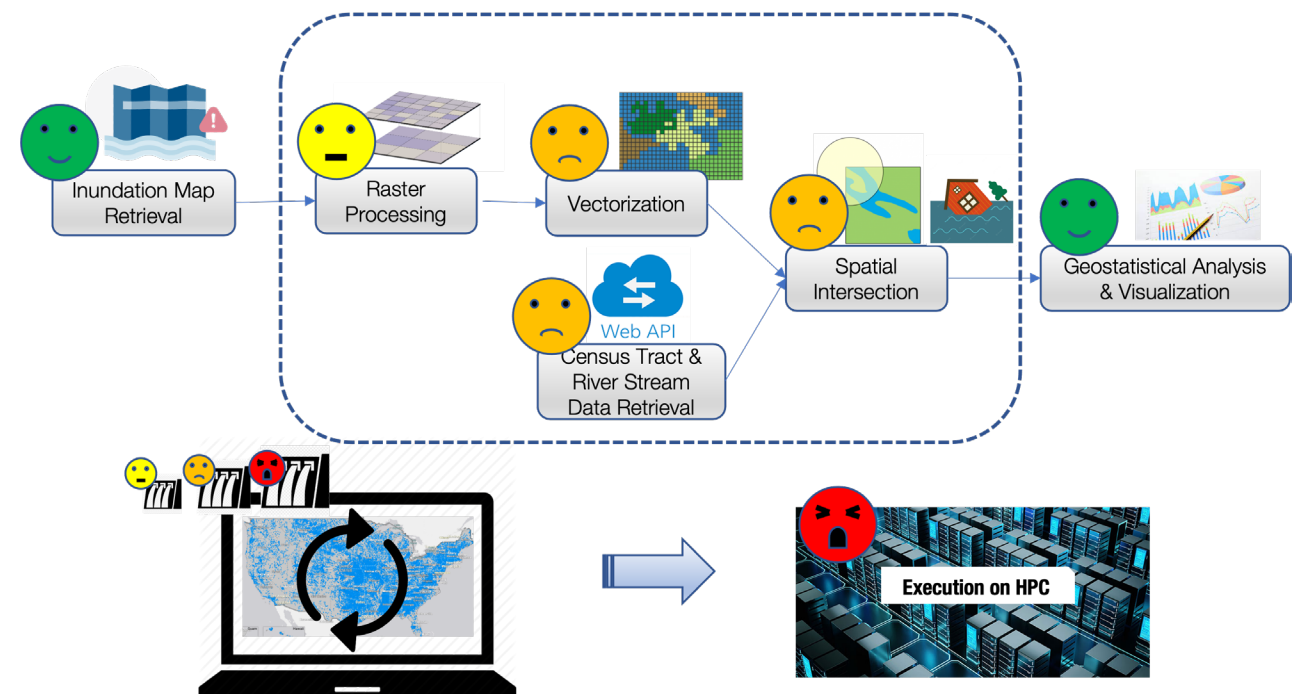
WRF-Hydro Use Case

Model hydrological processes in a watershed using the WRF-Hydro model to reproduce the National Water Model (NWM) results.
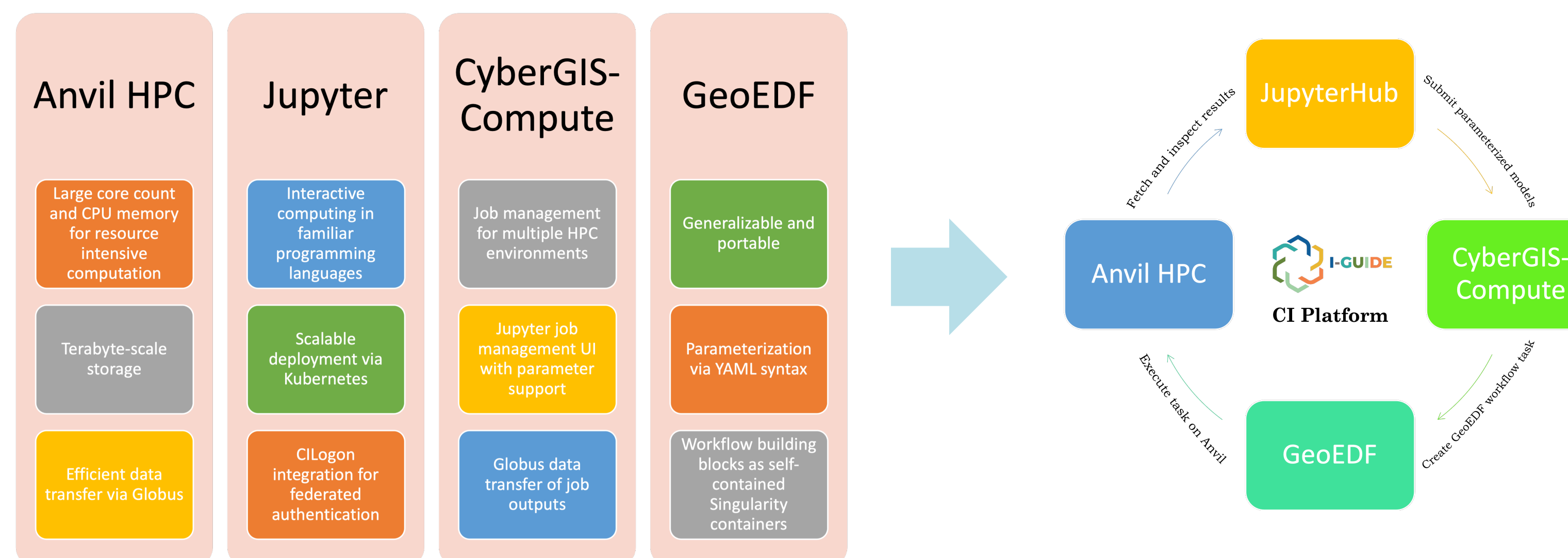

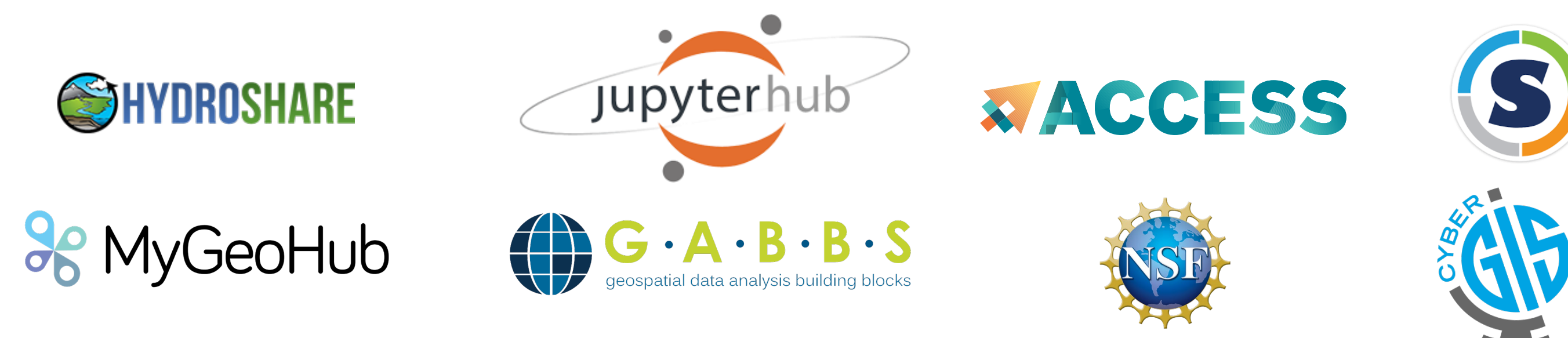IGUIDE (beta) platform design overview

System Design

- Bring together disparate tools and leverage past investments in tools
- Lower the barrier by using a familiar interactive computing platform like Jupyter as the entry point
- Hide details via the CyberGIS-Compute that can seamlessly execute diverse models and workflow building blocks
- Efficiently leverage existing tools and national CI capabilities such as GeoEDF, JupyterHub, Globus, Singularity containers, and Anvil HPC
- Future resource catalog integration will simplify resource discovery and utilization

An Integrated Approach (beta)

Existing CIs and capabilities
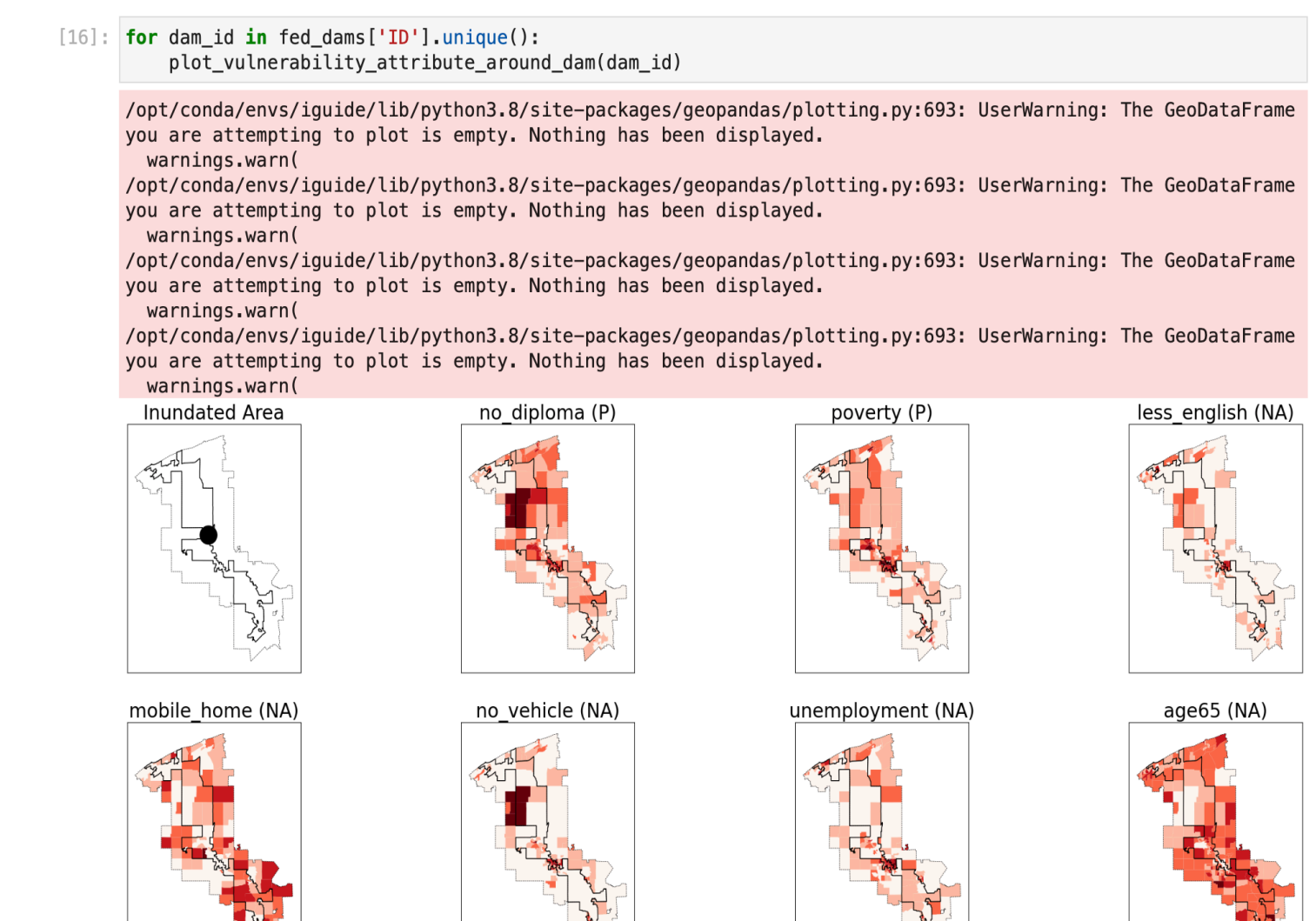
Integration of existing CIs

Aging Dam Notebook

WRFHydro Notebook

Reference

IGUIDE platform:
https://iguide.illinois.edu/platform/