



Geospatial Research Data Management

Crop Yield Modeling Project

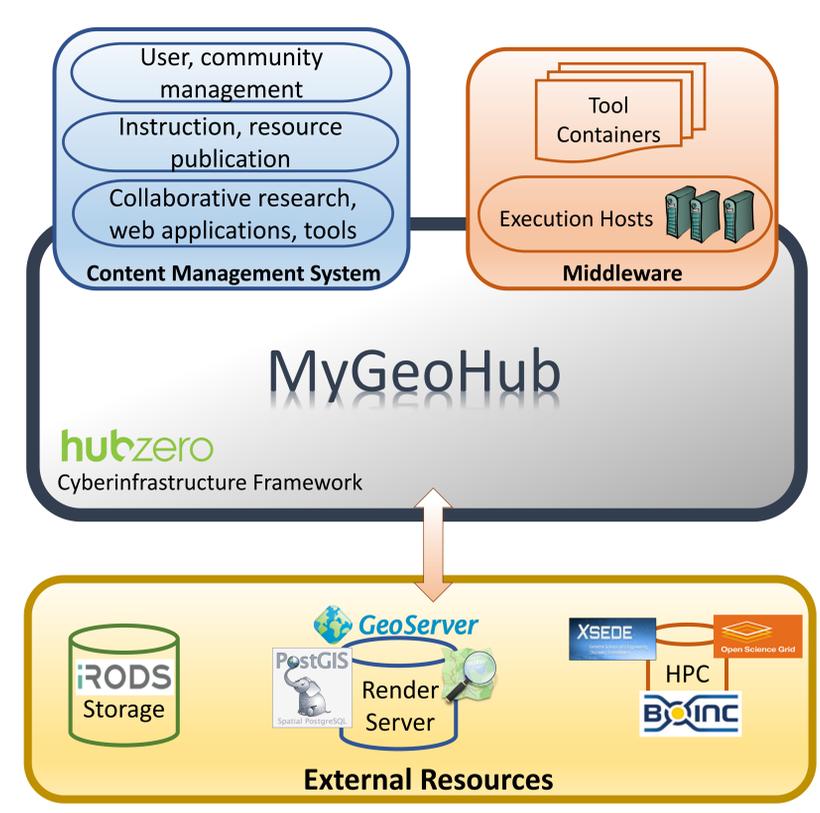
- ❖ Web manage, share geospatial data
- ❖ Annotate, extend automatically extracted metadata
- ❖ Keyword + geospatial bounds search

- ❖ Web preview of spreadsheet, geospatial (raster, vector) data
- ❖ Support for point data exploration, multiple base maps
- ❖ Files processed on-demand

Crop Yield Modeling Project

- ❖ Publish any set of files; metadata automatically bundled as RDF document
- ❖ DOI generated automatically

Geospatial Research Data Management



Geospatial Processing & Visualization Tools

- ❖ Launch tools from data management interface
- ❖ Uniformly accessible data storage
- ❖ **MultiSpec**: Visualize, process multi, hyperspectral geospatial data
- ❖ **GeoBuilder**: Explore, visualize, filter geo-located spreadsheet data
- ❖ Source agnostic metadata processing

Interoperability

- ❖ Data service API for interoperability
- ❖ iOS, Android mobile app software for field devices
- ❖ OAuth authentication, resource authorization

Outreach

- ❖ MultiSpec tool used in Purdue's TOTAL (Turned On Technology and Leadership) Camp for middle school students in 2016, 2017
- ❖ Students performed flood extent classification task on Landsat 5 data
- ❖ MultiSpec used in outreach efforts by the GLOBE program and USGS
- ❖ MultiSpec used in AmericaView states for laboratory exercises on remote sensing applications
- ❖ TOTAL camp students used GeoBuilder to visualize City of Chicago service request public data repository
- ❖ GeoBuilder used to visualize water quality testing locations, associated time series precipitation data

Education

- ❖ Self-paced courses using MyGeoHub tools and applications
- ❖ Rapid tool development using MyGeoHub geospatial toolkits
- ❖ Jupyter, RStudio ideal for follow-along courses, tutorials
- ❖ Inline visualization provides instant feedback