



# NCAR's Earth Observing Laboratory (EOL) Scientific Data Management



NCAR

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The EOL CDS Facility provides complete life-cycle scientific data management including research and operational data collection, data processing, quality assurance/control, and long-term data archival, access, and stewardship for national and international projects.

### Project Web Pages & Project Planning

Data Policy, Data Management Plan, General Project Documentation, Data Access, Publications, Meetings, Mailing Lists

DC3 Deep Convective Clouds & Chemistry Experiment

VORTEX2009-2010 Verification of the Origin of Rotation in Tornadoes Experiment

Bering Sea Integrated Ecosystem Research Program

### Data Management Services

- Data Policy, Protocol, and Plan Development
- Project Web Pages (Data Access, Publications)
- Data Processing, Data Composites, and QA/QC
- Data Archival with "One Stop Shopping" Access
- Long-term Data Access and Stewardship
- Legacy Project Stewardship
- Project Legacies: Archive, Publications, Metrics

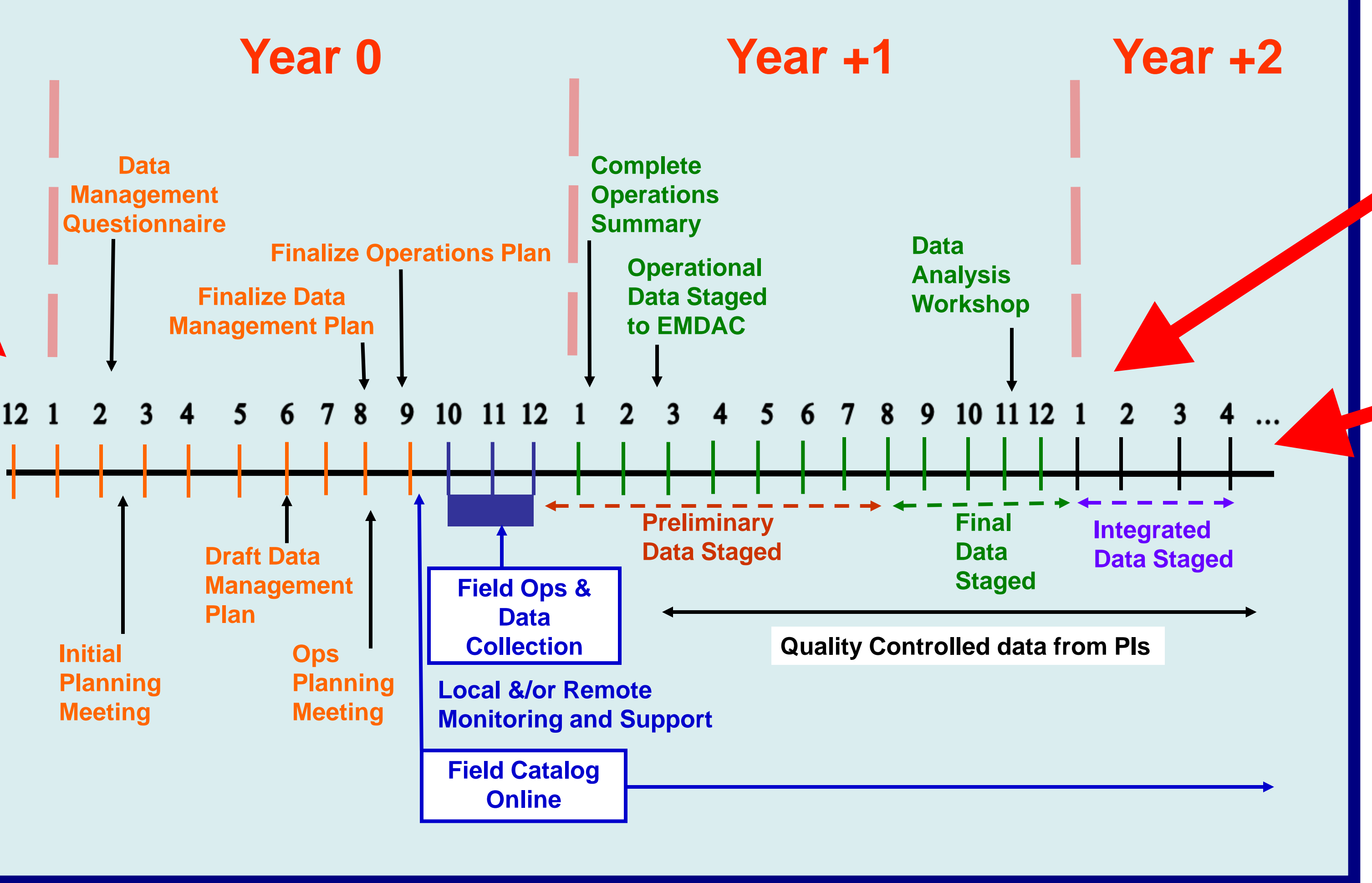
### Project Legacies: Data Archive & Access, Publications, Metrics, Stewardship

PLOWs Data Sets

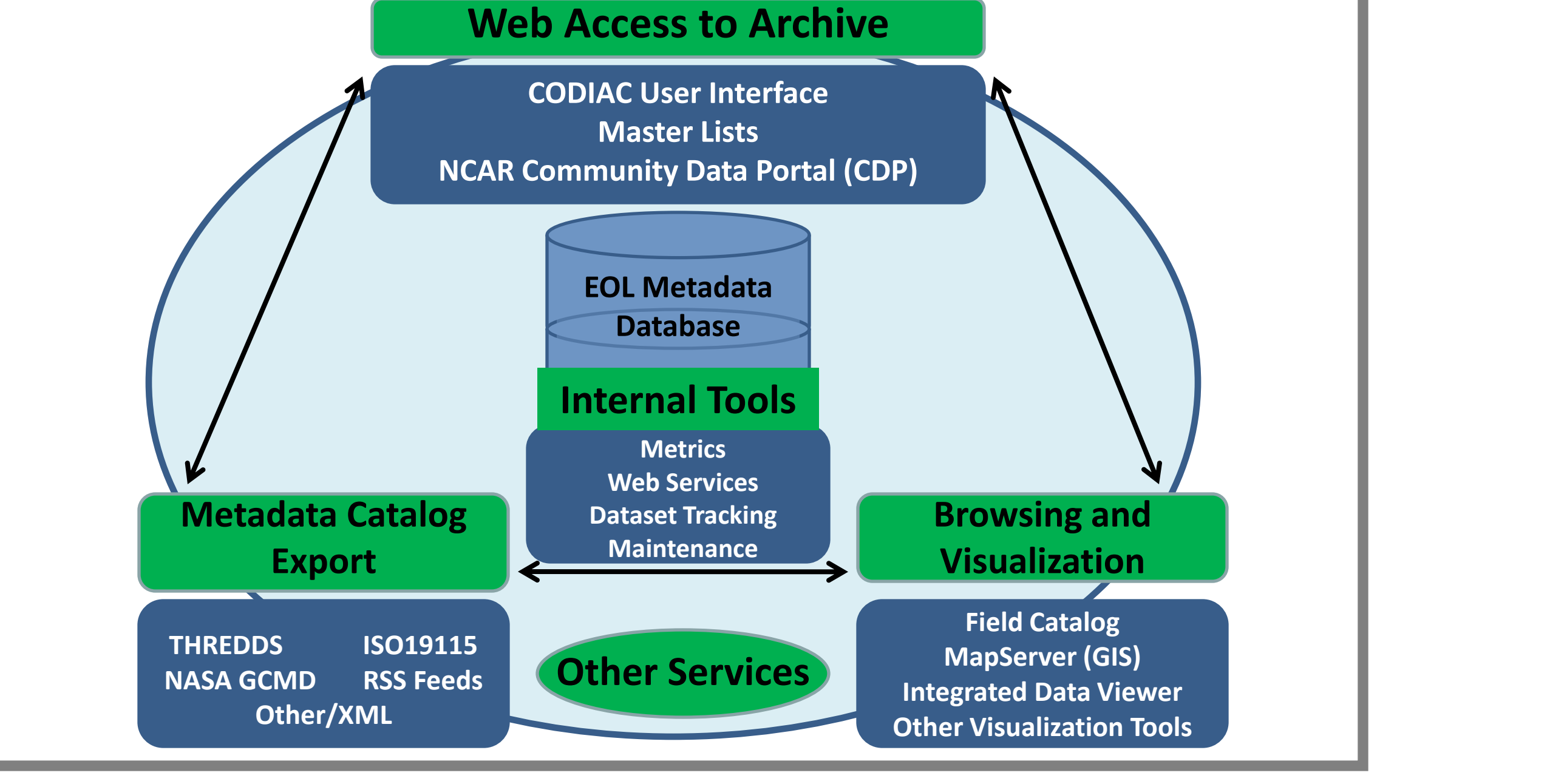
Publication References

T-REX Statistics

### Generic Data Management Timeline

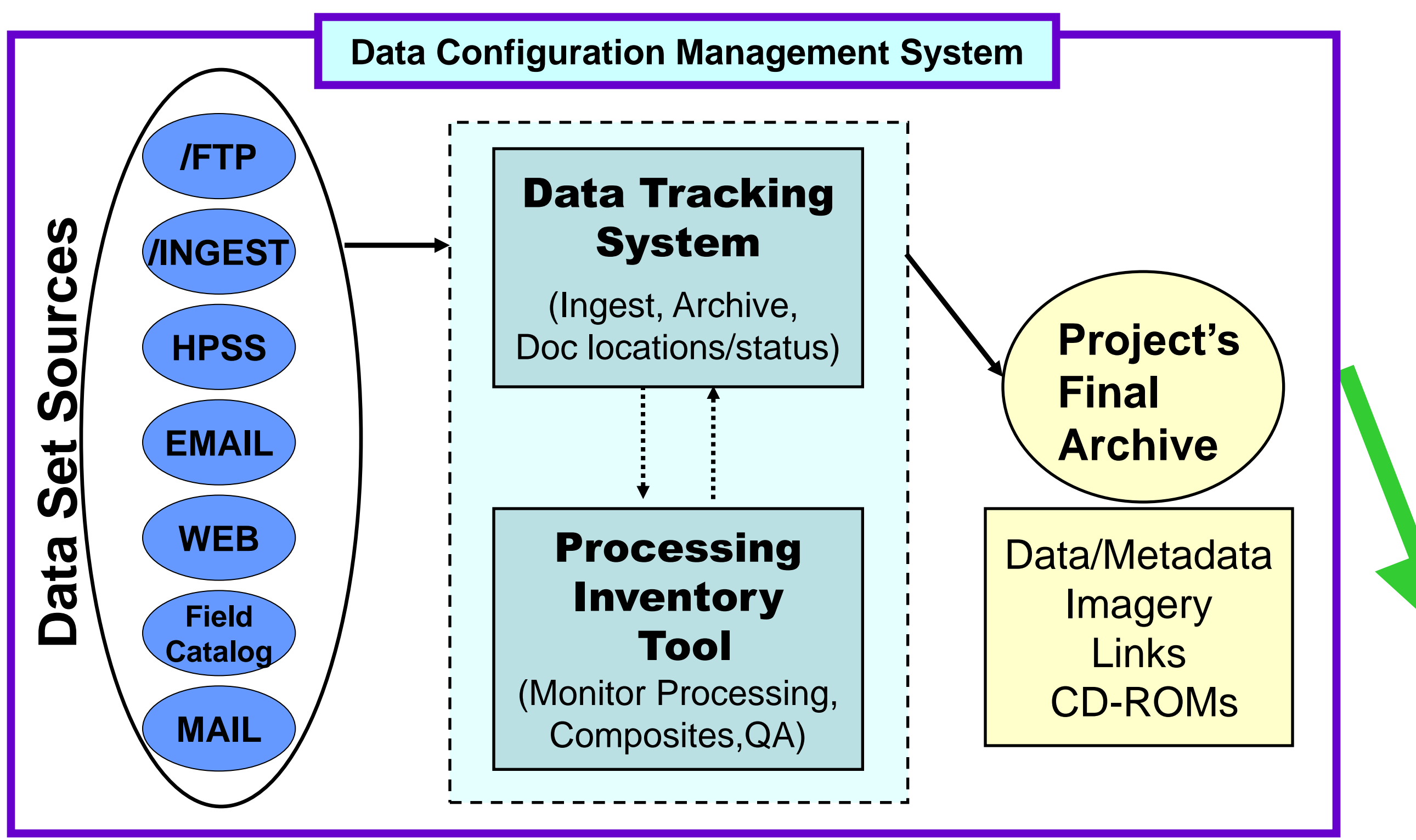


### EOL Metadata Database And Cyberinfrastructure (EMDAC)



EMDAC is the EOL cyberinfrastructure for long-term archival and web-based distribution of project data and documentation. It allows for interactive data browsing, subsetting, and format translation. Metadata are routinely exported to external archives using appropriate international standards.

### Data Flow - Ingest to Final Archive



Each project has a unique and varied set of data sources and types. All data are managed via the internal EOL Data Tracking System throughout the complete data set lifecycle.

Data Management is most successful when integrated throughout the complete lifecycle of a project from planning to implementation to long-term data and metadata stewardship. NCAR EOL CDS Data Management consists of a unique mix of scientists and engineers that can provide a customized suite of services tailored to meet the needs of any project.

Data Tracking System - Data Loading Notes

Datasets by Project: ICE-T

DYNAMO Processed Data Set Listing

DLN for DYNAMO

IHP\_2002 Hourly Surface Composite Development

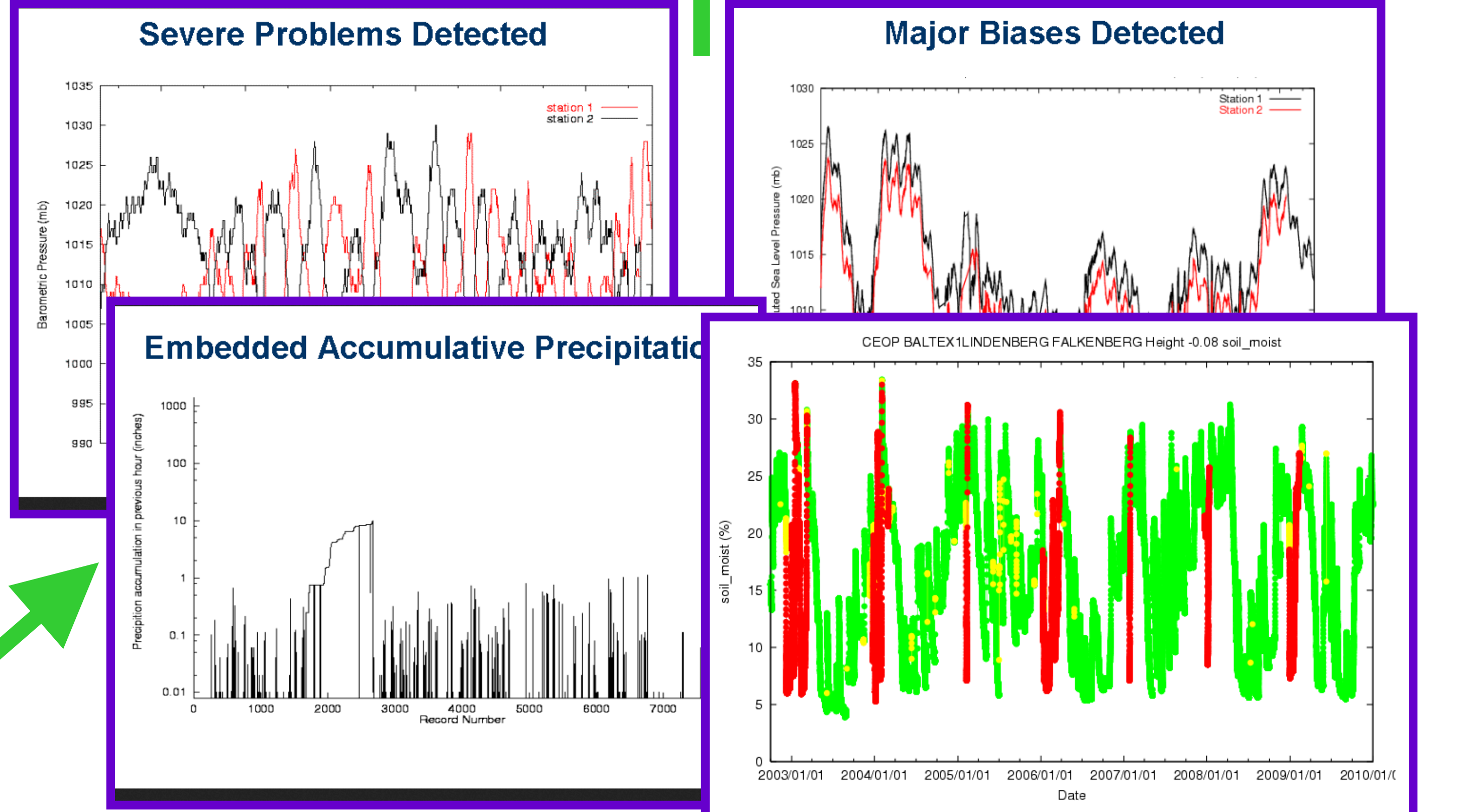
Gross Limit Checks

Horizontal QC

Examine Statistics

Visual

IHP\_2002 Hourly Surface Composite



**Composite** - a value added data set that is comprised of a collection (over some time period and region) of similar data (e.g., surface meteorological) from a variety of sources, put into a common format, and passed through a uniform quality assurance/control.

- Provides data in a uniform format with QA/QC.
- Allows determination of network and site problems.
- Useful for model applications.
- Prevents duplication of effort.

