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**Office of
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U.S. DEPARTMENT OF ENERGY

A U.S. Department of Energy laboratory
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Managing Instrument Change

Doug Sisterson

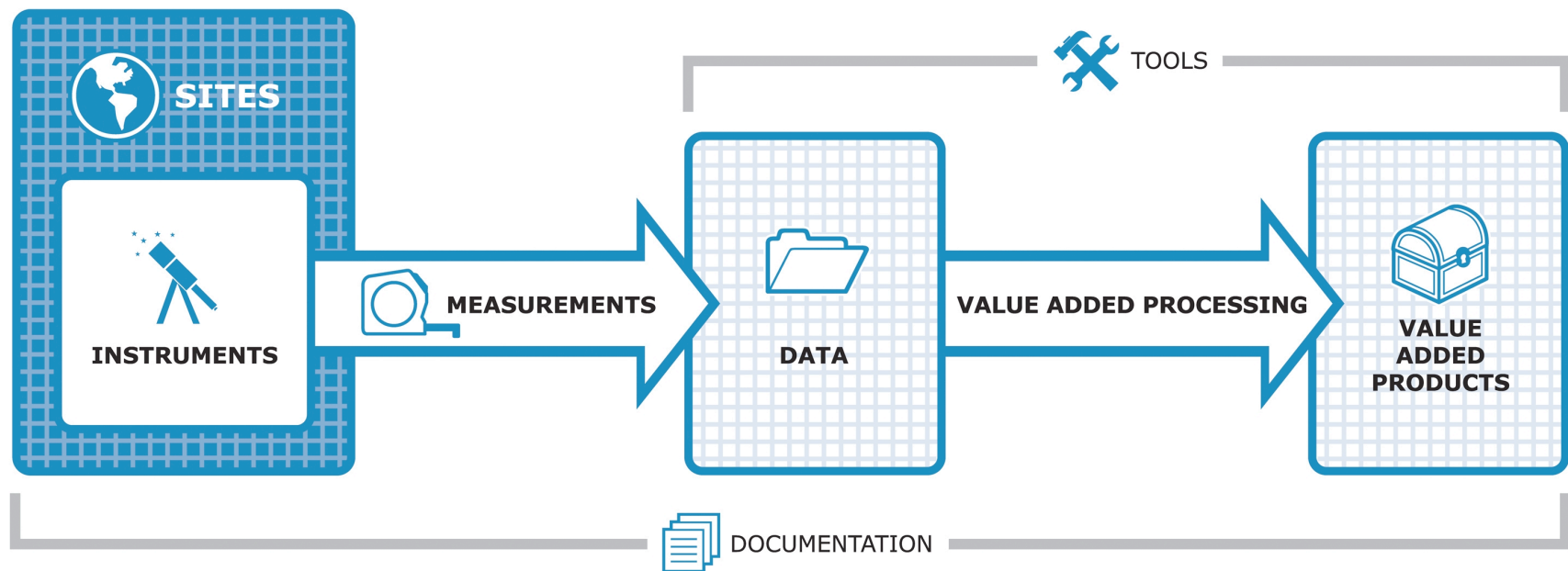
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*Meeting on the Implementation of the
GCOS Reference Upper Air Network (GRUAN)*

New Instruments



New Instruments

Atmospheric System Research (ASR) represents the ARM Climate Research Facility Users

The ASR is divided into three Working Groups:

- Cloud Interactions
- Aerosol Interactions
- Cloud and Aerosol Interactions

New Instruments

The ASR Working Groups entertain new instrument and or measurement systems

Each Working Group prioritizes their recommendations

The Science and Infrastructure Steering Committee reviews and normalizes prioritizes all recommendations

The DOE ASR and ACRF Program Managers Approve

New Instruments

Once approved, an Instrument Mentor is assigned.

The Mentor is responsible for instrument procurement technical specifications and acceptance testing.

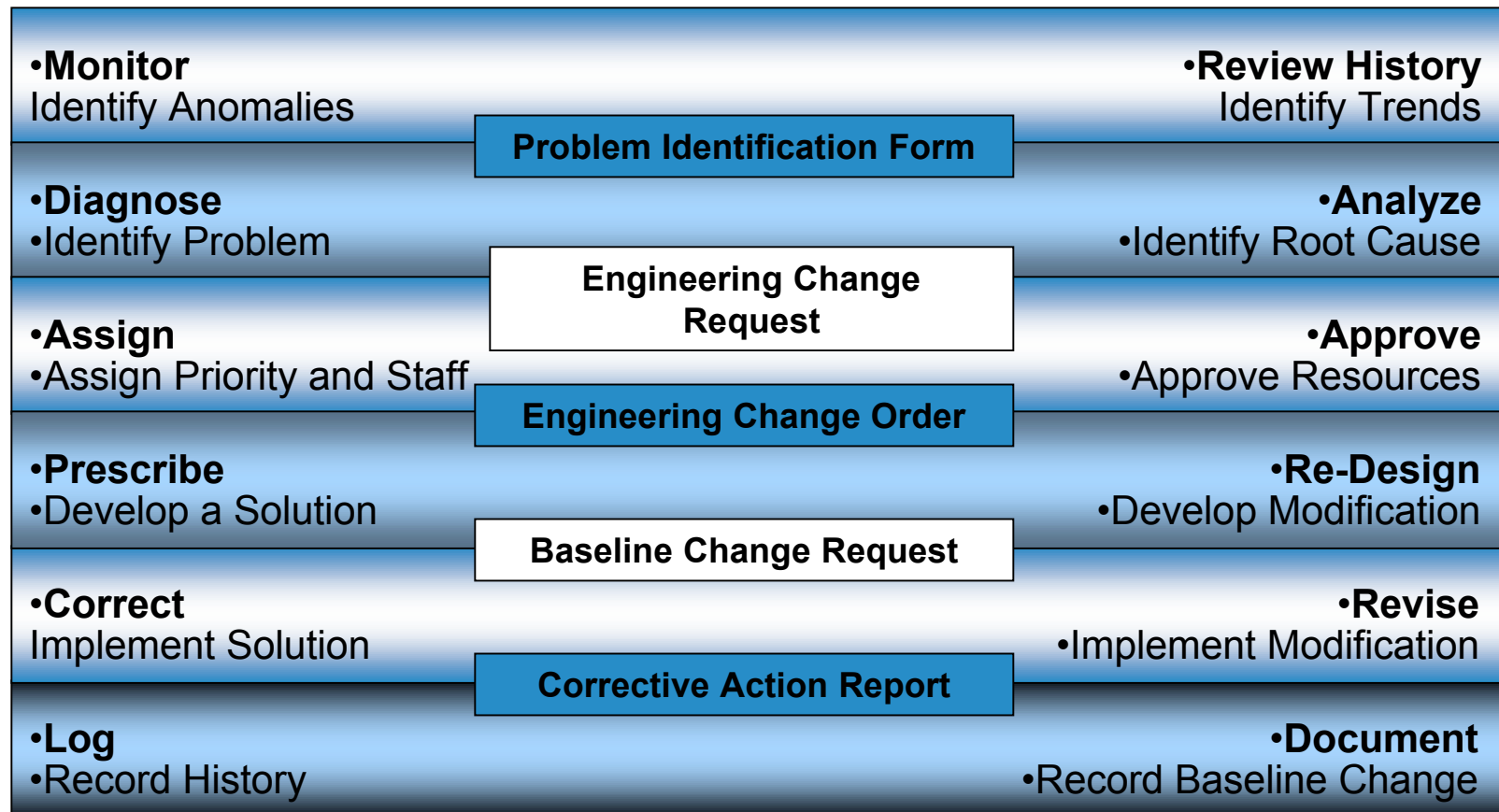
The Mentor is assigned a Developer for collection/ingest.

The Mentor works with the Data Quality Office for automated higher-level data quality algorithms.

Instrument is thoroughly field tested, baselined and data analyses completed (validation) by the Mentor.

After the Mentor is satisfied that the instrument is ready, the instrument is put into operation and users notified that there is a new data available.

Engineering and Operations Management Processes and Procedures



Identifying Problems

Formal Tracking of Larger Problems:

- » Problem Reporting Forms, e.g., PIF/CAR/DQR
- » Data Quality Reports

The Problem Reporting forms are used to track and report problems and issues with ARM data. To send a general comment or question about data quality, please send email to: armdataquality@arm.gov.

Data Quality Problem Reporting System:

Real-time discussion between data quality office, site operations, instrument mentors, and site scientists. If problems are not resolved quickly, they are tracked by the PIF/CAR/DQR Process.

Identifying and Testing Solutions

The ECR process is used to formally request that a change be made to the infrastructure and help set priorities.

- » [Engineering Change Order and Engineering Work Request/Order](#)
 - » [ECR/EWR Guidelines](#)

An ECO is an engineering task or project directly resulting from an ECR. It is tracked and addresses project requirements, analysis, design, development, testing, and documentation. In most cases, every ECO is completed by the issuance of a BCR, as managed by the Engineering and Operations Manager.

An EWR is used to request engineering resources, as soon as possible, when operational, science, or engineering needs require a quick engineering response where no design or redesign is required.

Configuration Management

- » Baseline Change Request
 - » BCR Guidelines

The BCR system is used to manage all operational procedures, hardware, software, and structures for all systems within ARM. A BCR is required to change an established operational baseline. It is used to provide a detailed description of a proposed change, which is assigned reviewers for comments and recommendations. The ARM Operations Manager is responsible for final approval of all BCRs.

ARM Climate Research Facility:
A DOE/BER National User Facility for Climate
Observations for Climate Research

WWW.ARM.GOV

