Infrastructure Overview
2008
ARM Science Team Meeting

Jim Mather
Technical Director
ARM Climate Research Facility

Atmospheric Radiation Measurement
Climate Research Facility
U.S. Department of Energy

Office of Science
U.S. Department of Energy

Infrastructure Overview Outline

- **Program Goals, Mission, and Objective**
- **The Organization**
- **Interactions and Process**
- **Key Contacts**
- **Closing Points and Questions**

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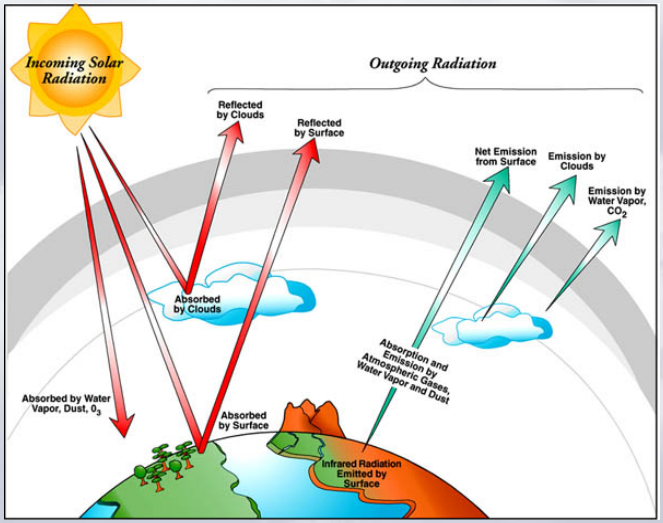
Infrastructure Overview
Program Goals

Provide the infrastructure at both fixed and mobile sites to meet the Atmospheric Radiation Measurement (ARM) Climate Research Facility (ACRF) mission and ARM science goals

Primary ARM Science Goal

To improve climate models by developing and testing improved representation of cloud and radiative processes



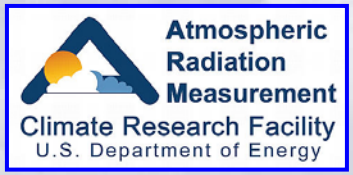
Atmospheric Radiation Measurement
Climate Research Facility
U.S. Department of Energy

Office of Science
U.S. Department of Energy

Infrastructure Overview
ARM and ACRF

- **The ARM Program has two *separately funded* components**
  - ARM science for grant funded science and research

  - ACRF is the “Infrastructure”—a designated DOE Office of Science National User Facility

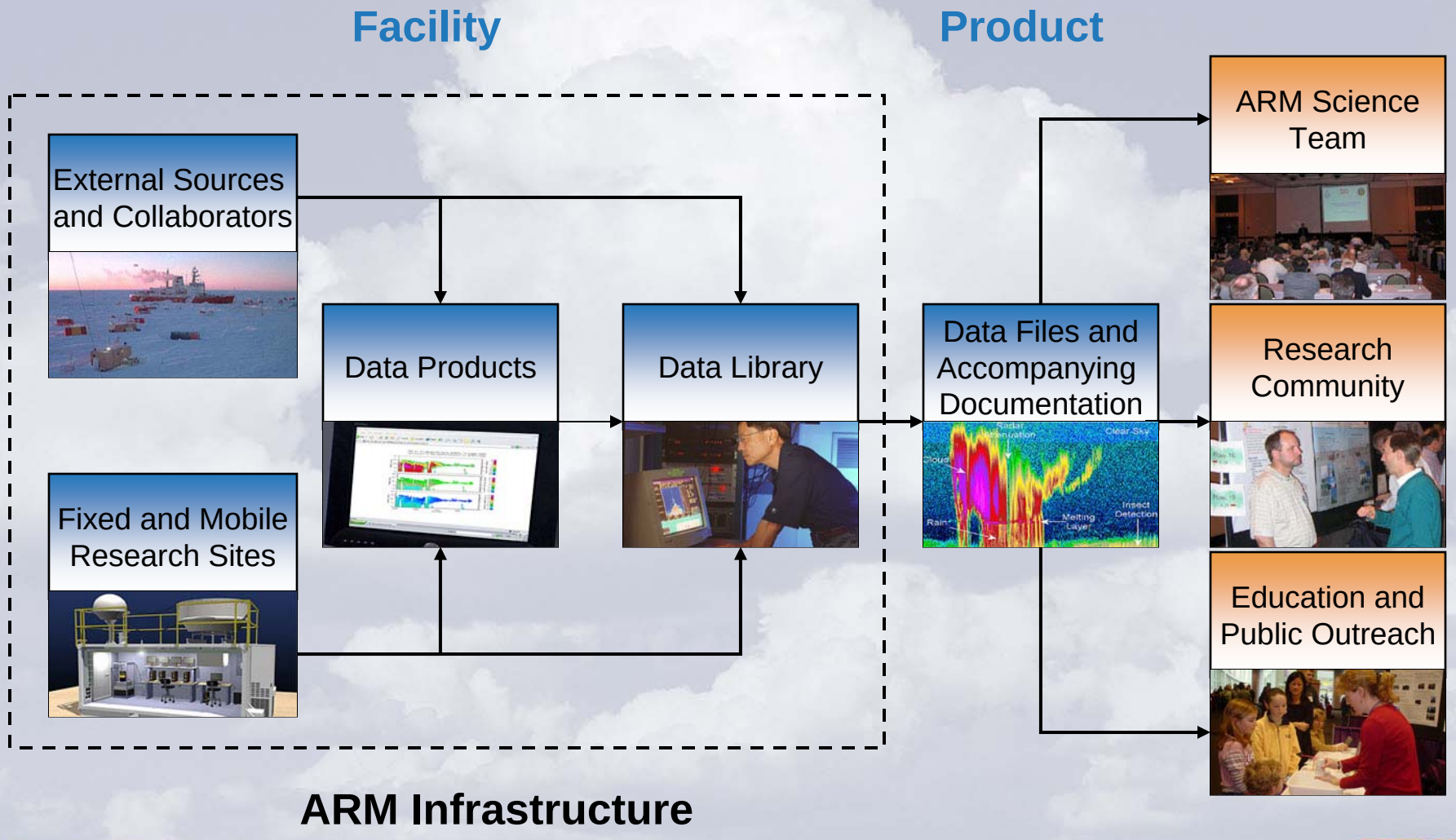


Infrastructure Overview
ARM Climate Research Facility Mission

- Provide the national and international scientific community with the infrastructure needed for scientific research on global change

- Global change research includes the study of alterations to climate, land productivity, oceans, water cycle, atmospheric chemistry, and ecological systems

Infrastructure Overview
ARM Climate Research Facility Concept



Infrastructure Overview
Infrastructure Objectives

- Manage and operate the ARM Climate Research Facility—a DOE Office of Science designated **national user facility**

- Improve and advance the efficiency and sustainability of our management, engineering, operations, and data usability processes

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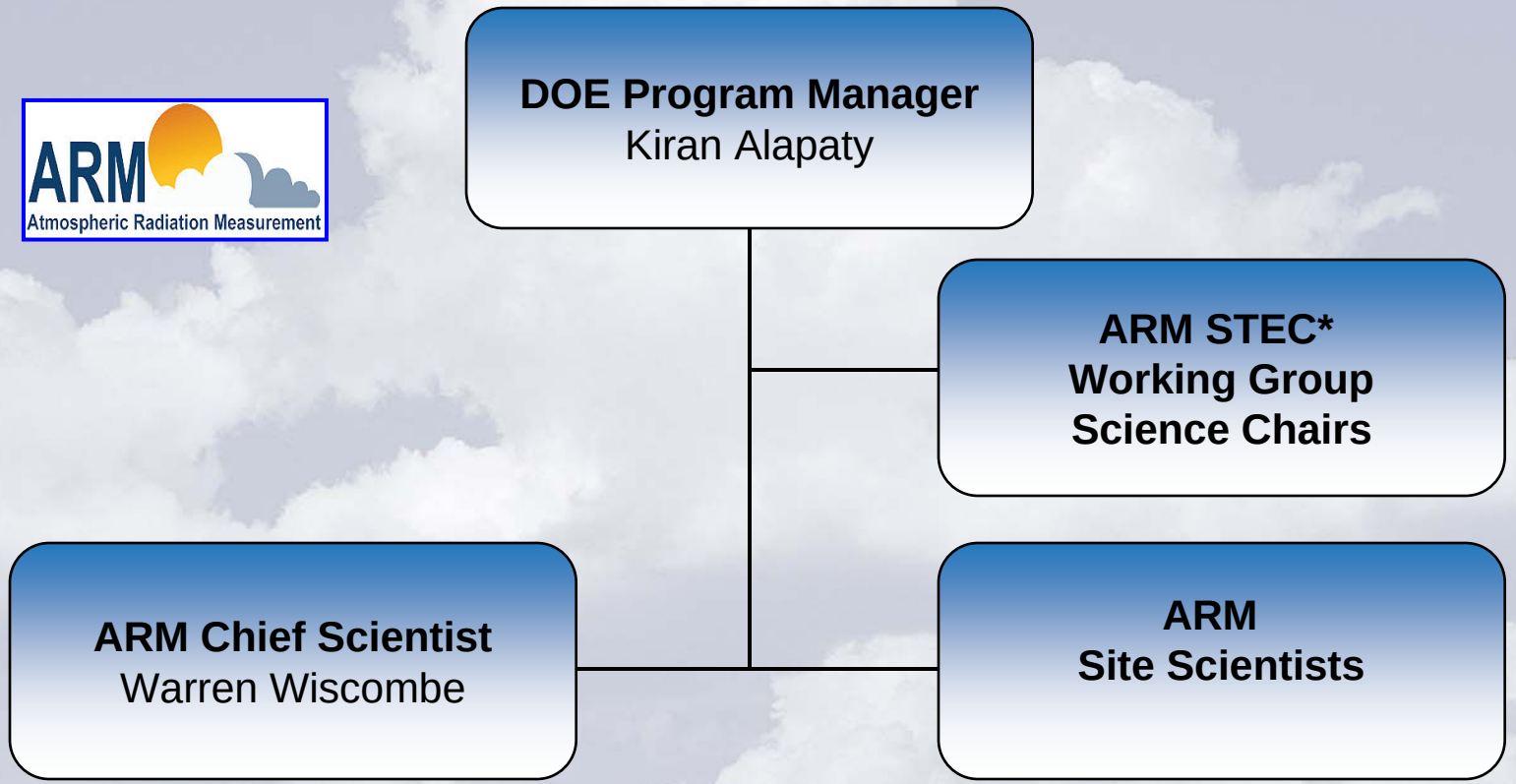
Infrastructure Overview
Our Organization

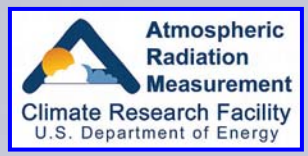
- DOE, multi-laboratory program; technical leadership activities conducted from:
  - **Argonne National Laboratory (ANL)**
  - **Oak Ridge National Laboratory (ORNL)**
  - **Pacific Northwest National Laboratory (PNNL)**
  - **Brookhaven National Laboratory (BNL)**
  - **Lawrence Livermore National Laboratory (LLNL)**
  - **Sandia National Laboratories (SNL)**
  - **Los Alamos National Laboratory (LANL)**
  - **Lawrence Berkeley National Laboratory (LBL)**
  - **National Renewable Energy Laboratory (NREL)**
- DOE Office of Science program management works with the climate research community to establish our agenda

Infrastructure Overview
ARM Science Management



* STEC – Science Team Executive Committee

Infrastructure Overview
ACRF Management



DOE Program Managers
Wanda Ferrell, ACRF
Rick Petty, AVP

Facility Science Board
ARM STEC* Working Group
Science Chairs and Climate
Research Community
Appointees

Infrastructure Management Board
Jim Mather, Technical Director
Sylvia Edgerton, Science Liaison
Doug Sisterson, Operations Manager
Raymond McCord, Archive Manager
Beat Schmid, AVP Manager

Archive
Raymond McCord (ORNL)

Operations
Doug Sisterson (ANL)

Engineering
Jim Mather (PNNL)

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Infrastructure Overview Interactions and Process

- Actions of the infrastructure are driven by the science and research needs
- The main components of the infrastructure are engineering, operations, and the archive

Engineering:	Operations:	Archive:
• Instrumentation • Computing and Networks • Data Quality • Value Added Processing	• Research Sites • Instruments • Data Processing • Safety	• Data Storage • Data Delivery

Infrastructure Overview Interactions and Process

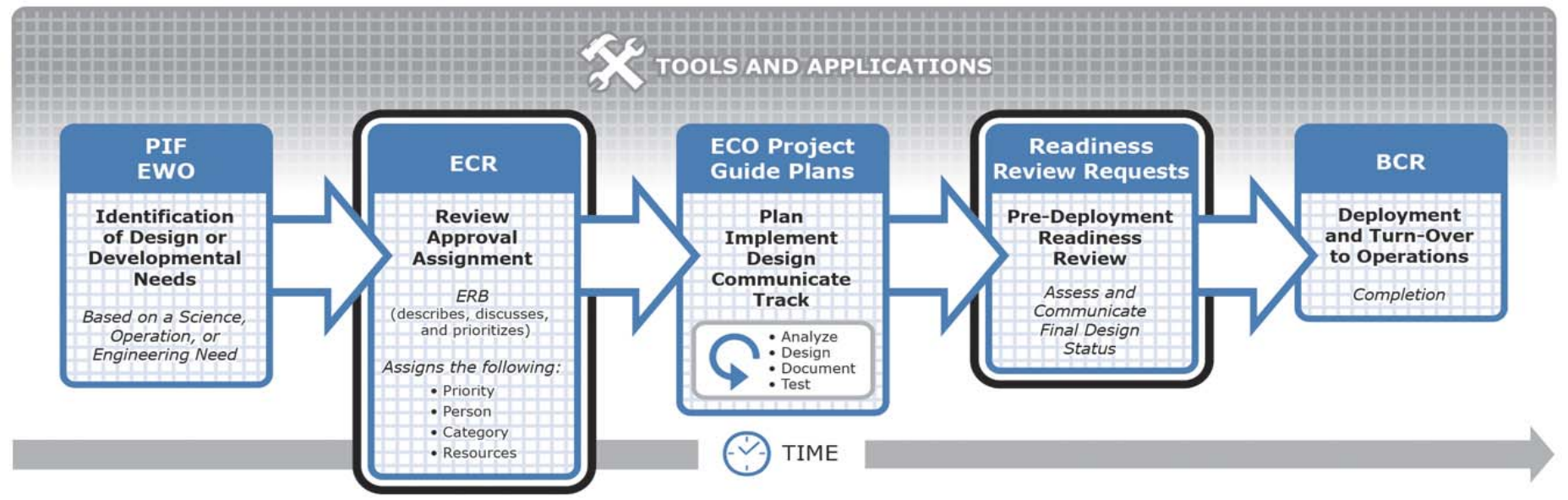
- You can help us evolve and improve
- By providing feedback as you interact with ARM products, research sites, and processes

Science Working Groups:	ARM Website:
• Measurements and Instrumentation • Field Campaigns • Value Added Products • Tools and Applications	• Measurement Performance • Data Quality • Engineering/Operations Processes • Information Content

Infrastructure Overview Interactions and Process

Engineering and Operational Processes

"Transform ideas into new products"

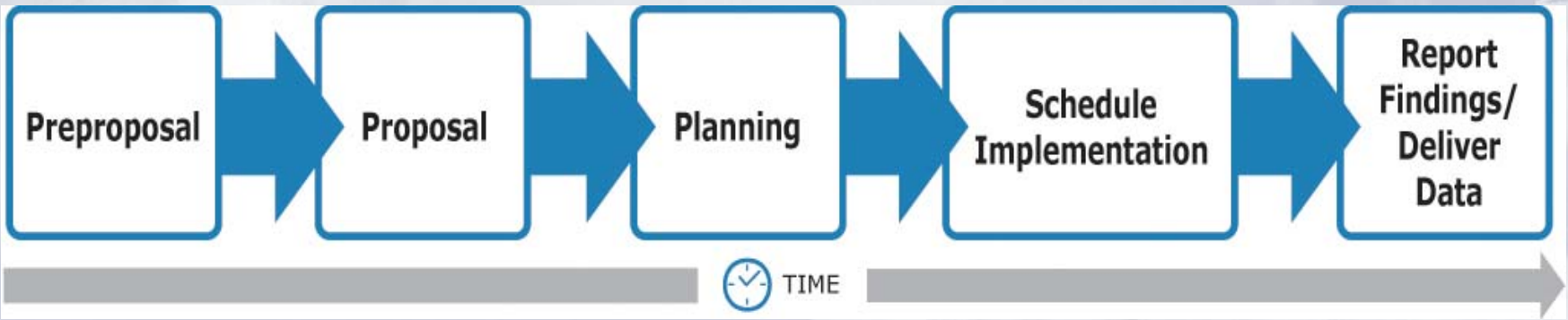


"www.arm.gov/acrf/capabilities.stm"

Infrastructure Overview Interactions and Process

Field Campaign and Intensive Operational Period Processes

"Augment routine data acquisition and test new measurement technologies"



"www.arm.gov/science/fc.stm"

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Infrastructure Overview
Key Contacts

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Jim Mather	Technical Director / **IMB**	jim.mather@pnl.gov	509.375.4533
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Sylvia Edgerton	Science Liaison / **IMB**	sylvia.edgerton@pnl.gov	703.300.4290
Raymond McCord	Archive Manager / **IMB**	mccordra@ornl.gov	865.574.7827
Beat Schmid	Aerial Vehicles Program/**IMB**	beat.schmid@pnl.gov	509.375.2996
Randy Peppler	Data Quality Office	rpeppler@ou.edu	405.325.6667
Jimmy Voyles	Instrument Coordinator	Jimmy.voyles@pnl.gov	979.690.9846
Dick Eagan	Data System Coordinator	dick.eagan@anl.gov	630.252.3435
Rick Wagener	External Data Center Manager	wagener@bnl.gov	631.344.5886
Jennifer Comstock	Lead Science Translator	jennifer.comstock@pnl.gov	509.372.4244

http://www.arm.gov/acrf/contacts.stm

Infrastructure Overview
Closing Points

- Your feedback is important to us!
- Because you provide feedback—we have more opportunities to improve
- The ARM Website is a valuable information resource: **“www.arm.gov”**
- Please call or send e-mail if you have any questions

Infrastructure Overview

Thank You

Questions?