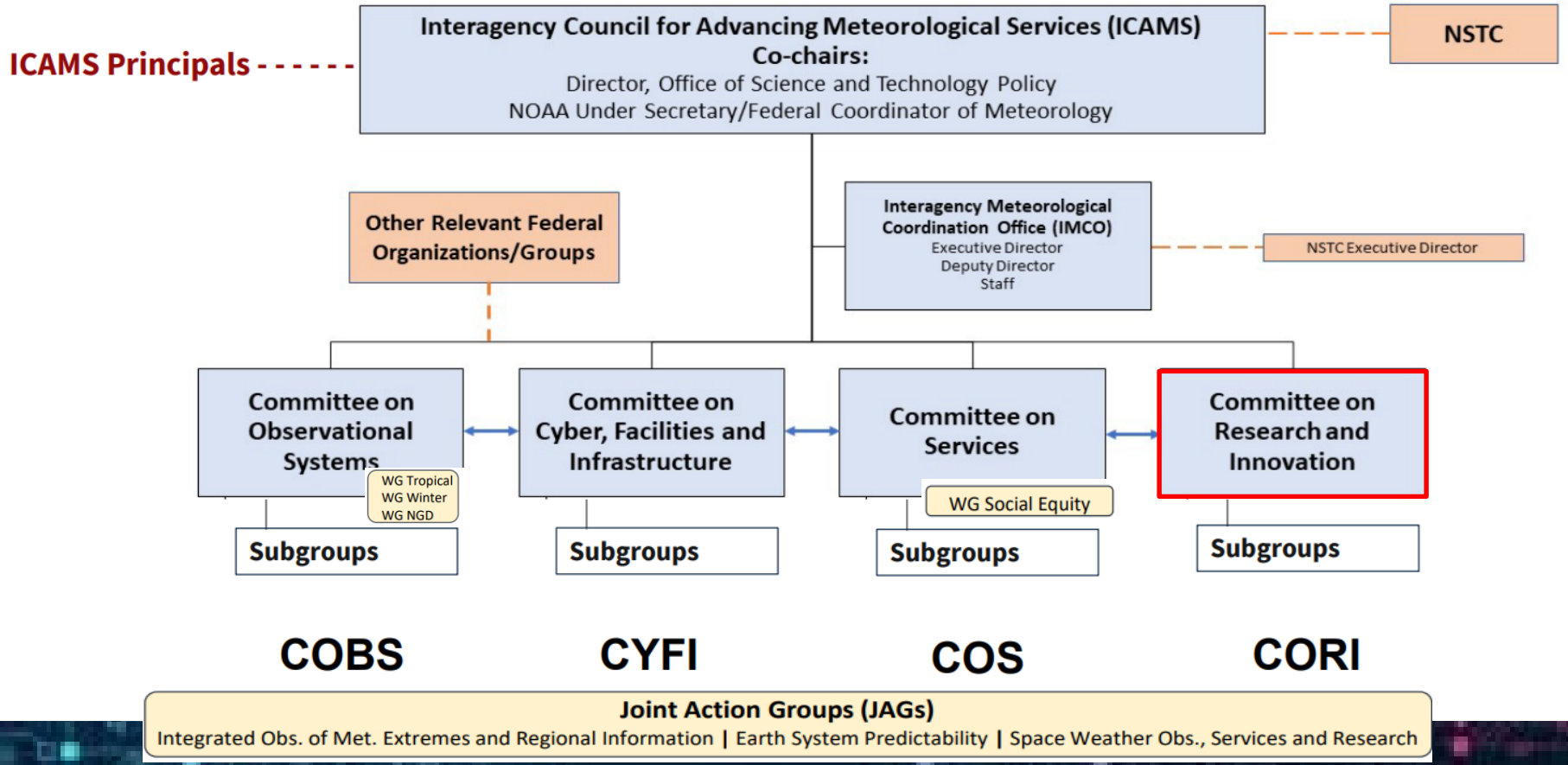
November 4th, 2024

ICAMS
1st Workshop

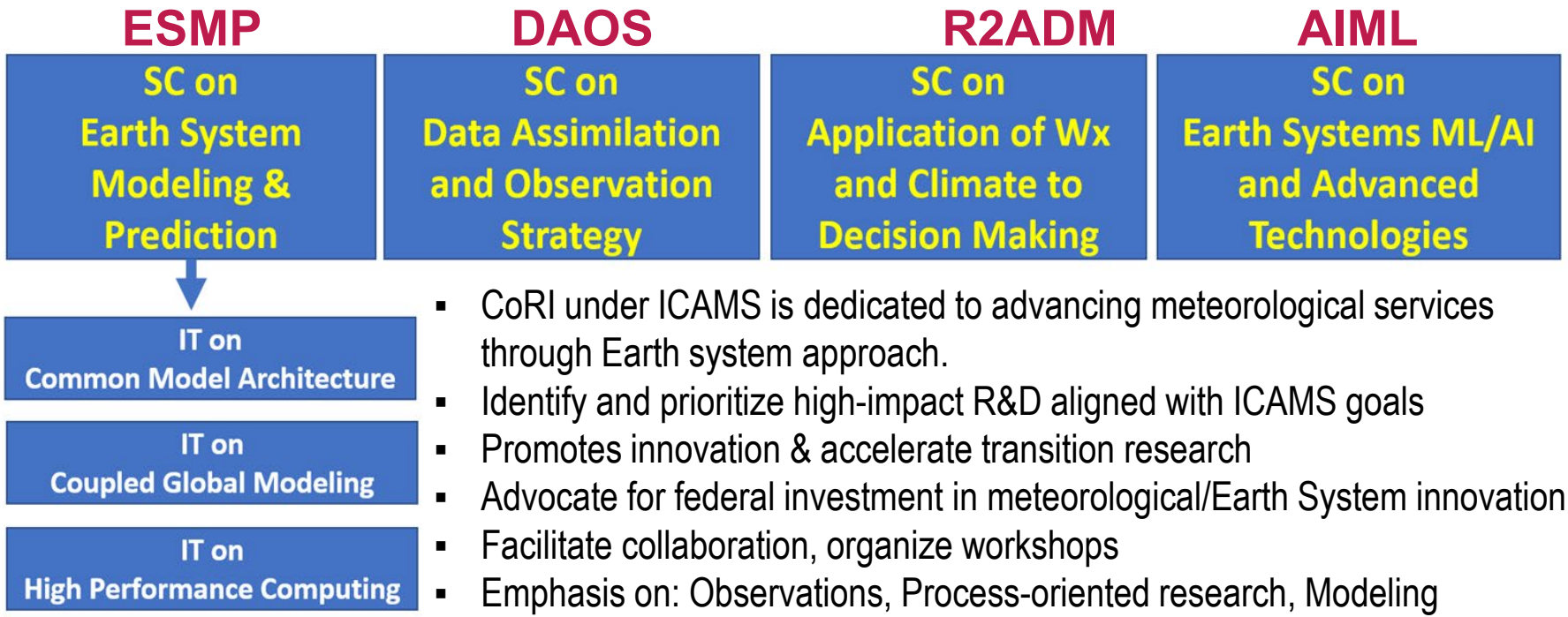
AI/ML

Co-chairs: Renu Joseph (DOE)
& Jebb Stewart (NOAA)

ICAMS Structure



Committee on Research and Innovation (CoRI)



- CoRI under ICAMS is dedicated to advancing meteorological services through Earth system approach.
- Identify and prioritize high-impact R&D aligned with ICAMS goals
- Promotes innovation & accelerate transition research
- Advocate for federal investment in meteorological/Earth System innovation
- Facilitate collaboration, organize workshops
- Emphasis on: Observations, Process-oriented research, Modeling (spatial/temporal), Operational predictions and products, Applications, Decision support systems, & Social science

Why this Workshop & Workshop Series

- Tremendous progress and extensive use of AI-ML techniques in the recent years
- Charged by OSTP to have a series of AI-ML workshops for ICAMS on and that the first one had to be before the end of November?
- Goals of the Workshop
  - Understanding Agency's early success stories for AIML
  - Identify gaps in knowledge and capabilities for advancing AI.
  - Identify areas of collaboration
  - Identify topics for follow-on workshops
- This is the first of series of ICAMS workshops that focuses on Observations, Modeling, and Services

Agenda for 1st ICAMS AI-ML Workshop

TIME (ET)	TOPIC
9:30 - 9:40	Welcome from ICAMS
9:40 - 9:50	Introductory Talk-01
9:50 - 10:00	Introductory-Talk-02
10:00-10:10	Scope of the workshop (expectations, goals -choose follow on topics for the workshop series)
10:10-12:30	Agency updates on AI/ML for Earth System Predictability, Observations, & Services (15+5 minutes /agency) **USGS** -Anne Kinsinger; **NSF** - Eric Deweaver; **NOAA** - Rob Redmon; **NASA**- Katherine H. Breen; DOE – Gerald Geernaert; **DOD**-Navy - Josh Cossuth; DOD-AF**-** Michael A. Greene
12:30-13:30	BREAK
13:30-15:30	Parallel breakout panels on predictability Breakout co-chairs 1.Bill Collins (DOE) 2. Jun Wang (NOAA) 3. Manil Maskey (NASA) 2. V Ramaswamy (NOAA) 2. Sue Haupt (NCAR) 3. Ruby Leung (DOE) 3. Jeff Anderson (NCAR) 2. Katherine Breen (NASA) 3. Pete Doucette (USGS)
15:30-16:20	BREAK
16:20-17:00	Report Out from breakouts emphasizing : 1) Gaps/new opportunities; 2) Synergies across agencies; 3) Topics for future workshops
17:00	END OF WORKSHOP

Breakout Sessions : Goals & Expectations

- Based on initial feedback and interest from the attendees, we have narrowed down the topics in the breakout to focus on

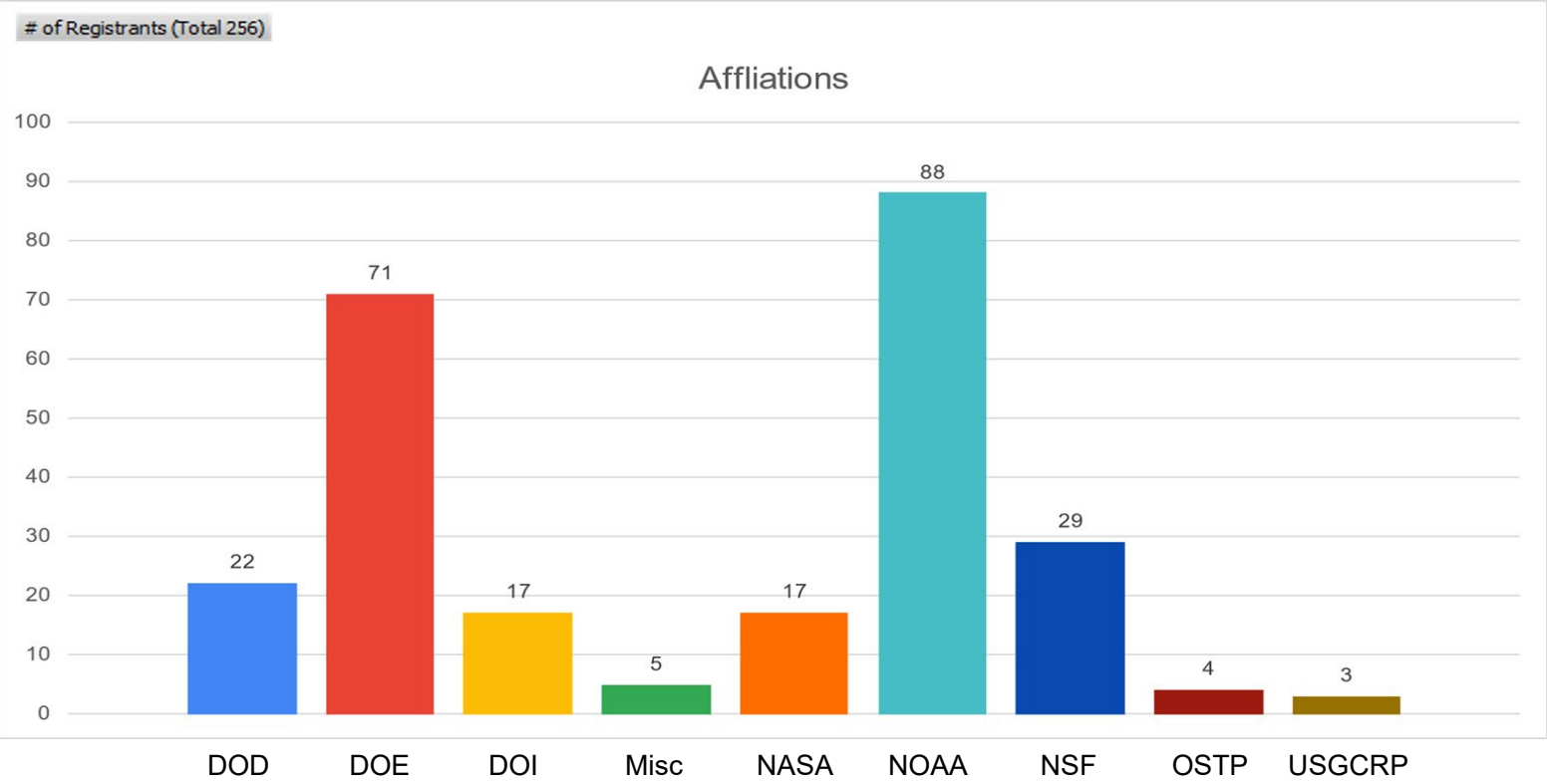
AI-ML for Earth system predictability (Modeling and Observations).

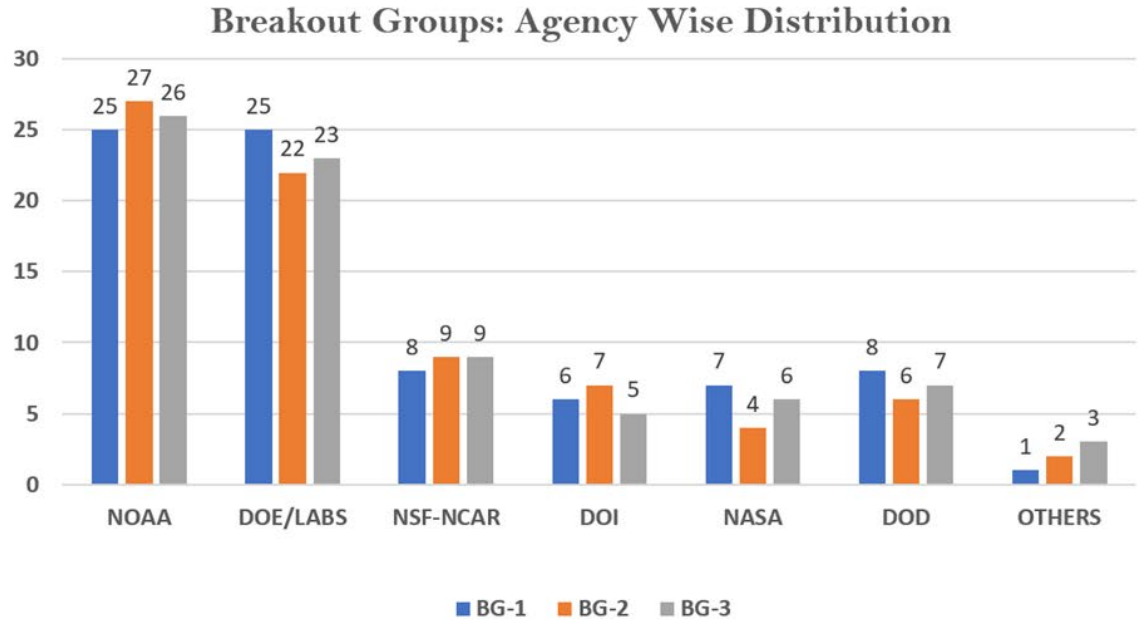
- **Report back on Nov 4th should include:**

1. Identify gaps in knowledge and capabilities for advancing predictive understanding and modeling using AI.
2. Identify areas of inter-agency collaboration on Earth system predictability using AI
3. Identify topics for follow-on workshops

- **Summarize results from each breakout in a 3 page Whitepaper within 2 months (Jan 15th, 2025)**

Agency representation




Breakout Groups: Agency Wise Distribution
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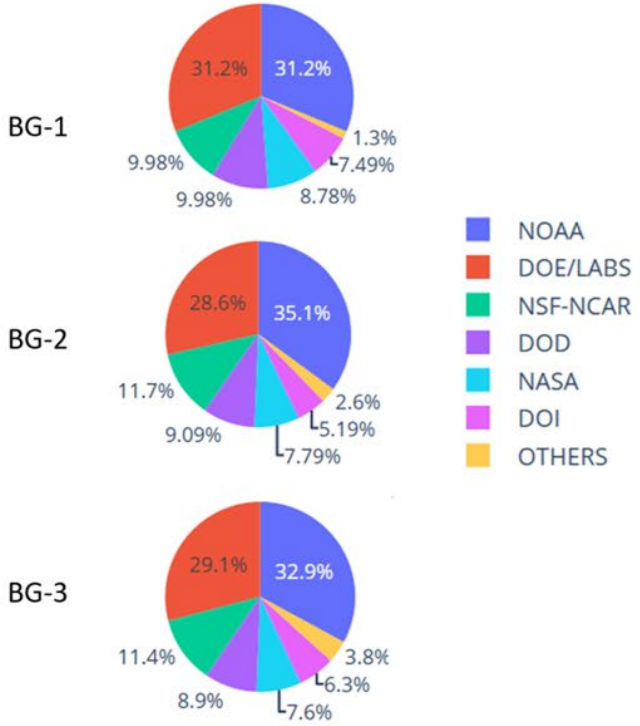
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DOE/LABS
NSF-NCAR
DOD
NASA
DOI
OTHERS

Code of Conduct - Expected Behavior

- **Demonstrate respect and consideration for all people.**
- **Communicate openly and thoughtfully with others, listen well to others, and be considerate of the multitude of views and opinions that are different from your own.** Welcome a diversity of voices.
- **Be respectful in discussing and debating ideas.** Demonstrate that differing perspectives are valued—critique ideas, not people.
- **Be collaborative**. Be mindful not to exert dominance over others. Consider the effect of power differentials in relationships, positions, and experiences and of other factors to avoid dominance.
- **Be mindful of your surroundings and of your fellow participants**. Declare “stop work”, call emergency services, and alert venue security if someone is in immediate danger or if a serious safety concern exists.
- **Report conduct concerns to an event contact so that concerns can be addressed responsibly and in a timely fashion**. Respect and maintain the confidentiality of the individuals involved.

Code of Conduct - Unacceptable Behavior

- **Do not intentionally talk over or interrupt others.**
- **Do not favor those participating by video or by other means.**
- **Do not engage in biased, demeaning, intimidating, bullying, coercive, or harassing/hostile conduct or commentary,** whether seriously or in jest, on-site, online, and/or on social media.
- **Do not engage in physical or verbal abuse,** including attacks on ideas vs. respectful, disagreeing dialogue.
- **Do not offer unwelcome attention or engage in stalking behavior in person or online.**
- **Do not retaliate against or disadvantage anyone for reporting a conduct concern or assisting in its resolution.**
- **Do not disrupt the event, disallow participation by others, or engage in harm or threats of harm.**
- **Do not knowingly violate copyrights or copy presenter information without permission.**

The Planning team

- **Planning Committee Members:** Joseph Cione (OSTP), Kristin Ludwig (OSTP), Renu Joseph (DOE), Jebb Stewart (NOAA), Eric DeWeaver (NSF), Tsengdar Lee (NASA), Jason Nachamkin (DOD), Donifan Barahona (NASA), Xujing Davis (DOE), Monica Youngman (NOAA)

- **ICAMS:** Daniel Melendez, Kunhikrishnan Thengumthara, Kenneth Barnett, Erin McNamara, Floyd Hauth

- **Break-out co-chairs:** Bill Collins (DOE), Jun Wang (NOAA), Manil Maskey (NASA) , V Ramaswamy (NOAA), Sue Haupt (NCAR), Ruby Leung (DOE), Jeff Anderson (NCAR), Katherine Breen (NASA), Pete Doucette (USGS)

Backup

TIME (ET)	TOPIC	PRESENTER (AGENCY)
9:30 - 9:40	Welcome from ICAMS	Dr. Daniel Melendez, DD, ICAMS/IMCO
9:40 - 9:50	Introductory Talk-01	Dr. Joe Cione, ED, OSTP/ICAMS
9:50 - 10:00	Introductory-Talk-02	Dr. Michael Morgan, A/S,NOAA
10:00-10:10	Scope of the workshop (expectations, goals - choose follow on topics for the workshop series)	Workshop co-chairs: Renu Joseph (DOE)/Jebb Stewart (NOAA)
10:10-12:30	Agency updates on AI/ML for Earth System Predictability, Observations, & Services (20 minutes /agency)	USGS - Anne Kinsinger NSF - Eric Deweaver NOAA - Rob Redmon NASA- Katherine H. Breen DOE – Gerald Geernaert DOD-Navy - Josh Cossuth DOD-AF- Michael A. Greene
12:30-13:30	BREAK	
13:30-15:30	Parallel breakout panels on predictability	Breakout 1 co-chairs: Bill Collins (DOE-LBNL), Jun Wang (NOAA), Manil Maskey (NASA). Breakout 2 co-chairs: V Ramaswamy (NOAA), Sue Haupt (NSF-NCAR), Ruby Leung (DOE- PNNL). Breakout 3 co-chairs: Jeff Anderson (NSF-NCAR), Katherine H. Breen (NASA), 3. Pete Doucette (USGS).
15:30-16:00	BREAK	
16:00-17:00	Report Out from breakouts emphasizing : 1) Gaps/new opportunities; 2) Synergies across agencies; 3) Topics for future workshops	
17:00	END OF WORKSHOP	