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CICompass

Panel: Cyberinfrastructure for Major Facilities: Challenges and a path forward

Co-leads: Anirban Mandal and Robert Casey

Panel at the 2022 NSF Cyberinfrastructure for Major Facilities Workshop

USC Viterbi School of Engineering Information Sciences Institute

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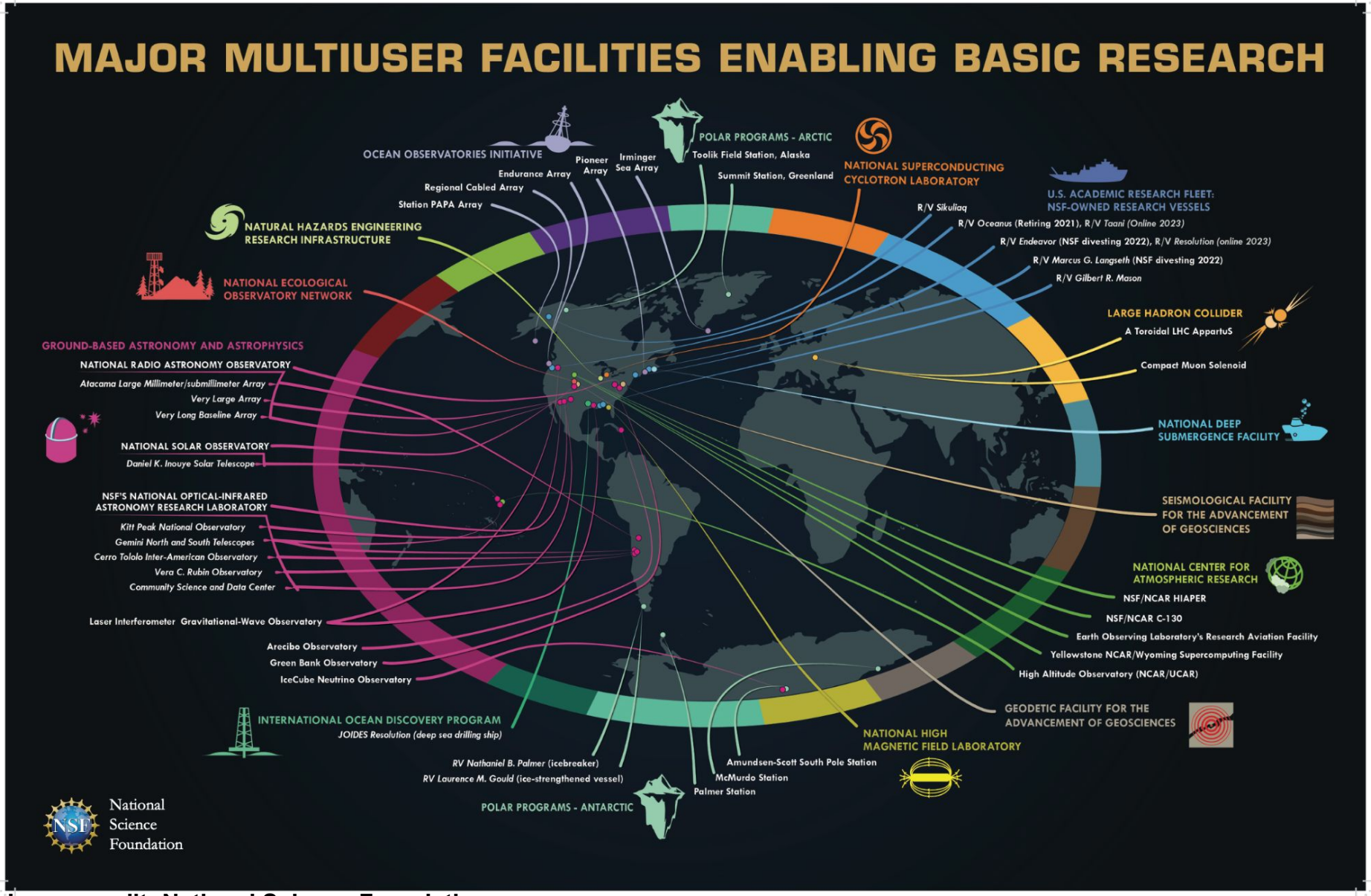


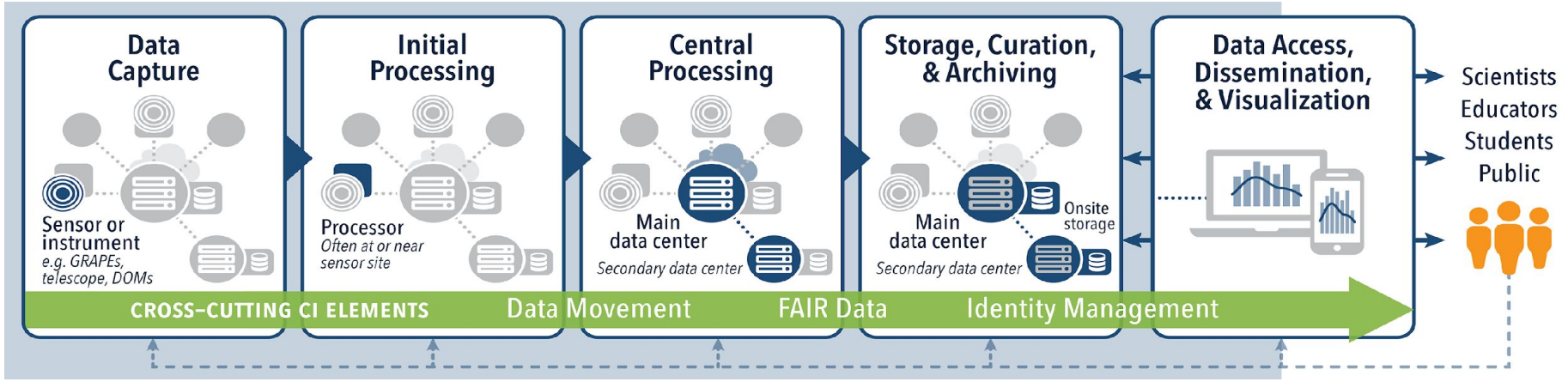
Image credit: National Science Foundation

NSF Major Facilities

Major Facilities rely on complex **cyberinfrastructure (CI)** to transform raw data into more interoperable and integration-ready data products

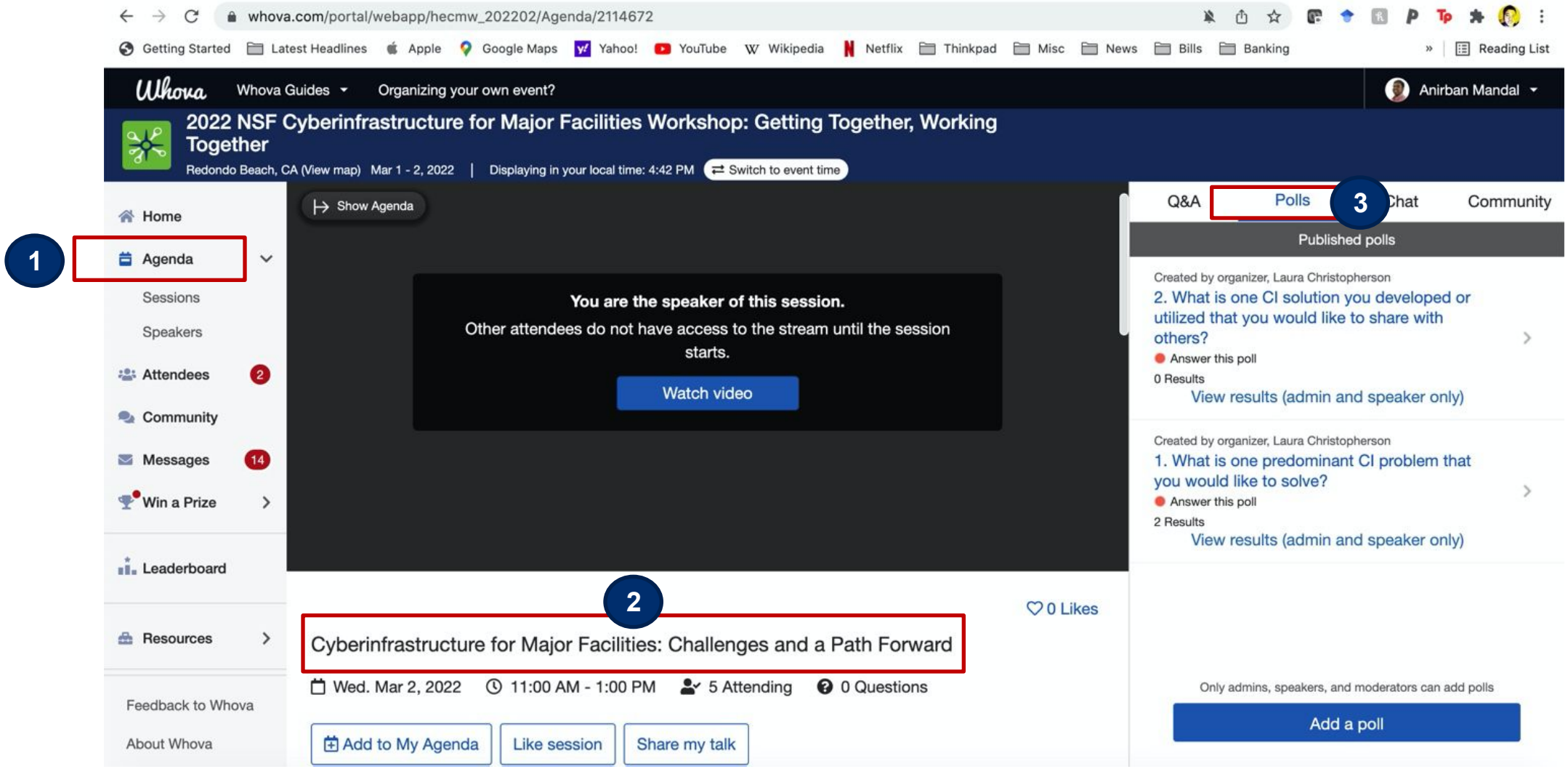
CI for Major Facilities: Challenges

- Technical Challenges
- Operational Challenges
- Collaboration Challenges
- Socio-technical Challenges



Poll in Whova

1. What is one predominant CI problem that you would like to solve ?
2. What is one CI solution you developed or utilized that you would like to share with others ?



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Guiding Questions for the Panel

1. What is *one predominant CI problem* that you would like to solve ?
2. What are the challenges and opportunities in utilizing *shared services or services offered by the broader NSF CI ecosystem* for your facility/project ?
3. What are the challenges and opportunities in *collaborations and/or sharing best practices for CI* between MFs, projects, and the broader CI ecosystem ?
4. What are the challenges and opportunities in *balancing adoption of new/emerging technologies with current operations* ?
5. What are some of the *socio-technical challenges* faced by your facility or project ? What are your plans for solving some of those issues ?

Meet the Panel

Gordon Bonan, Senior Scientist, NCAR, representing the **NCAR-NEON collaboration**

Ken Feldman, Data Systems Architect & Network Engineer, UW, representing **R2R/ARF**

Dan Stanzione, Associate Vice President for Research (UT Austin) and Executive Director, TACC, representing **LCCF**

Lauren Clay, Associate Professor & Dept. Chair, Dept. of Emergency Health Services, UMBC, representing **NHERI-CONVERGE**

Patrick Brady, Professor, Dept. of Physics, University of Wisconsin-Milwaukee, representing **SCiMMA/LIGO**

Philip Gates, Supervisor of Information Technology, representing **IODP/JOIDES**

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Panelists' slides