TripleS 4 - Aspen

Results/Report Out

Earth Prediction Innovation Center (EPIC)

Question 1: How would you wish to contribute to the national success of EPIC (and UFS)?

- Focused on important considerations for contributing...
- Remember than an individual may need to sacrifice personal goals to support the greater good
- NESDIS Framework: Pilots, Structure, HPC technical knowledge with the goal of enabling ONE value chain
- Trust is the key to success, and balancing consensus is the keychain (lynchpin)
- Empower individuals to be responsible for delivering results

Earth Prediction Innovation Center (EPIC)

Question 2: In your experience, which funding opportunities have been the most productive? Why? Which criteria are you using?

- Successful funding opportunities have leveraged strengths of participants, and collaboration with the operational forecasters, EMC, etc. through strong engagement (NSSL and testbeds are good examples)
- Colocation or strong, continued, iterative engagement, with operational forecasters, modelers, and software engineers
- Challenge researchers to meet forecaster requests (O2R)
- Allow for direct feedback from forecasters, modelers, software engineers
- We can draw from HFIP successes and lessons learned

ORGANIZATION

Earth Prediction Innovation Center (EPIC)

Question 3: EPIC has $15M in President's Budget for FY20, what are the top three priority areas for financial investment?

- Use the $15M as leverage to use evidence-based refocusing of existing grants - grow some and attenuate others
- Creation of a modularized and community supported UFS documentation and training plan (possibly grassroots led)
- Invest in short-term successes (such as the graduate student test) and low hanging fruit
- Cloud-computing investment for R&D, and provide grants for the R&D Community (e.g., free cloud computing for graduate student projects).
- Verification and Validation
  - "CNN Metrics" around newsworthy events that will get congressional attention - high impact vs. anomaly correlation gobbledygook
- Better collaboration in using the cloud based services (and learning from others)

MANAGEMENT

Earth Prediction Innovation Center (EPIC)

Question: In your experience, which organizational structures have best-supported innovation? Communication? Engagement? What criteria are you using?

- "Smaller is better than bigger": A focused task where a small group is asked to figure out solutions will support innovation
  - "2-pizza teams"
- Flat organizational structure
- Leader will be held accountable
- Responsive, nimble, and innovative (allowed to work outside the firewall!)
- An EPIC Cooperative Institute - leverage best aspects of DTC and CI management structures

GOVERNANCE

Earth Prediction Innovation Center (EPIC)

Question 1: What is the balance of governance between institutions and government? How do they share this role?

- Non-NOAA governance, but shared participation and oversight with NOAA (see JCSDA, DTC as examples).
- There needs to be one EPIC leader:
  - EPIC leader determines objectives and key results (with guidance from a SAB), trickled down through organization
  - An EPIC advisory board should be populated by a wide swath of people-e.g. consortium on software engineering
- EPIC leader should be the best person for the job, regardless of background (not necessarily NOAA)
- Degree of influence/governance should be based on resource contribution of participants

Earth Prediction Innovation Center (EPIC)

Question 2: What are the responsibilities of the governing body?

- Ensure a flat management style with low bureaucracy
- Support both high and low risk projects
- Manage, formulate, and execute a budget
  - Ensure the budget supports the team priorities
  - Ensure budget aligns with key results and objectives (OKRs)
- Establish the vision with a common understanding, establish OKRs, establish buy-in, and ensure budget alignment
- Remember that this is the governing body of EPIC, and not NOAA!
- We can learn from DTC and JCSDA: What went well and what did not go well
- Remember that management of research activity is distinct from decision and management of operational implementation
- We have two governance models: One for community modeling, and one for operational, and we need to consider both - need an EPIC president with strong veto power, and an EPIC senate, and they EPICALLY collaborate!