Challenges and solutions for executing best practices in transferring NOAA’s research to NWS operations

**Challenges**
- Assuring operational meteorologists stay current with subject-matter expertise in satellite remote sensing
- Integrating new satellite products into the operational workflow
- Collecting relevant feedback
- Providing a pathway to operations following a successful demonstration

**Risks**
- Does not necessarily replicate operational setting
- Potential for inadequate training and misinformation
- Unclear responsibility for integrating demonstrated products into software systems

**Solutions**
- Employ satellite liaisons to facilitate training exercises and work with operations to prepare meteorologists for capabilities of the new generation weather satellites
- Hire technical liaisons and fund cooperative institutes to develop plug-ins for the Advanced Weather Interactive Processing System (AWIPS)

---

**Operational Demonstrations**

**Challenge**
- Centralizing priorities and developing a consistent vision for NOAA’s agencies, cooperative institutes, and private partners to function effectively

**Solutions**
- Appoint a coordinator of proving ground activities
- Joint governance between the NWS Operational Advisory Team (NOAT) and research community

---

**Research Proposals**

**Challenge**
- Building relationships with operations to discover worthy research topics
- Understanding types of information that would add value to the operational mission
- Developing an algorithm for a new instrument based on current capabilities
- Maintaining an algorithm and/or product following completion of the original proposal

**Risks**
- Funding research activities that do not return value to operations
- Operationally-relevant research proposals with scientific merit may go unfunded if importance to operations is unclear or understated

**Solutions**
- Hold technical interchange meetings and working groups with both operational and research participants
- Use proxy and simulated imagery from existing instruments and/or numerical models

---

**Oversight and Strategic Direction**

**Challenge**
- Lack of alignment between research portfolio and operational requirements
- Delayed R2O process resulting from funding cycle

**Solutions**
- Appoint a coordinator of proving ground activities
- Joint governance between the NWS Operational Advisory Team (NOAT) and research community

---

**R2-No – Popular Excuses**

**Tight Budgets**
- Necessitate prioritization of products to transition

**Rigid Policies**
- Impede R2O progress and agility

**No Personnel on the Interface**
- No process owner to facilitate the “2” in R2O

**Limited IT Infrastructure**
- Delays implementation of new products in the field

**Cumbersome IT Security Regulations**
- Compromise the mission

---

**Jordan J. Gerth**
Cooperative Institute for Meteorological Satellite Studies (CIMSS)
Space Science and Engineering Center (SSEC), University of Wisconsin at Madison

@jjgerth
Jordan.Gerth@noaa.gov