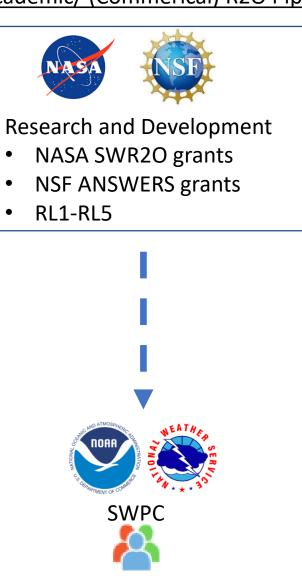
# Commercial Perspective: Overview, Benefits, Issues, Solutions

J.C. Green Space Weather Round Table

#### **Basic Research** RL2 Applied Research RL3 **Proof of Concept R20** RL4 Selection for Validation in Lab Environment Proving Grounds Space Weather Proving Grounds User Selection for Advances in Validation in Relevant Environment Requirements, Demonstration RL6 Science and Operational Demonstration Test Environment Technology Concepts, and Data RL7 Selection for Environment Operational Transition Actual Environment Operational Capability Operations

Figure 1: Research to Operations to Research Process (NOAA Example)

#### Academic/ (Commerical) R2O Pipeline



Users

#### **Commercial R2O Pipeline**



### Research and Development

- SBIR/STTR contracts
- RL1-RL9
- Models/products/data can be implemented by operational centers or delivered directly to users



## Benefits of SBIR/Commercial Space Weather

## Adds needed/supplemental capabilities to the space weather enterprise

- Commercial groups can provide *tailored* services/products/models directly to users for their specific systems and use cases that are outside of scope of government operational centers
- Commercial groups can provide specific services/products/models to government agencies through contracts rather than grants

## Additional funding

Users fund tools/applications that they need

## Issues

# Commercial route to users and the SBIR/STTR process is not well defined and issues exist

SBIR/STTR funded Commercial Product Commercial products compete rather than collaborate with government agencies

- Users are accustomed to direct support from agencies (NOAA/NASA)
- Commercial products are not advertised or are not considered part of the toolset for addressing space weather impacts

Government agencies are not using SBIR developed products

- Users may be reluctant to adopt tools not used/endorsed by NOAA/NASA
- Options for government implementation of SBIR/STTR developed decision aides are not used or understood
  - SBIR Phase 2 extended contracts or sole source contracts





## Solutions/Improvements

Development of space weather decision aides should be a collaborative effort between government agencies and commercial sector that benefits both groups

- 1. Define a mechanism for government agency contracting with commercial providers and small businesses that would enable SBIR phase II-extended/Phase III development and other collaborative transition efforts
- 2. Develop protocols for agency interaction with commercial space weather providers and products
- 3. Create an informational web page for users with descriptions of commercially available space weather products
- 4. Identify/create a government liaison that would interact with commercial providers and implement the tasks above