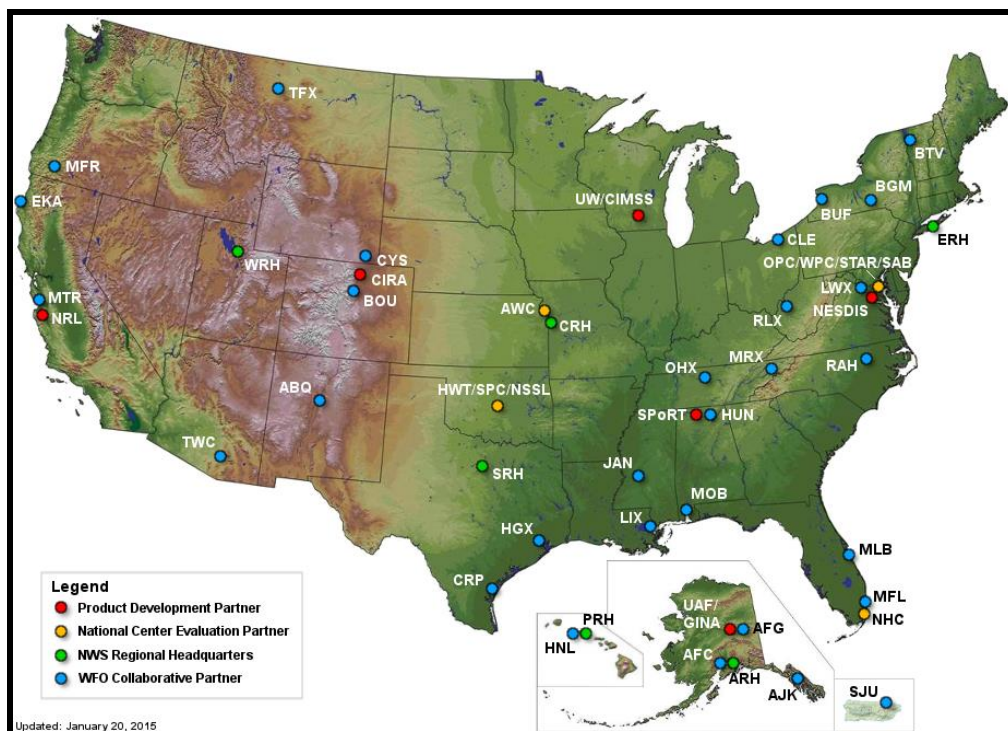


Transitioning NASA and NOAA Satellite Products, Modeling & Data Assimilation Techniques, and Nowcasting Tools to Operations

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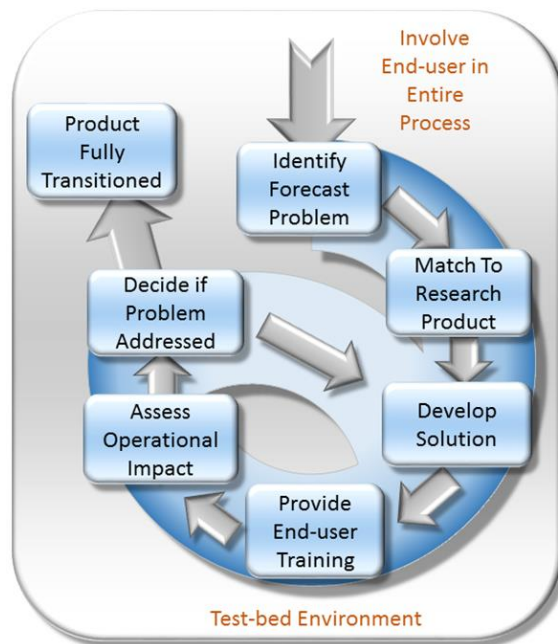
The Short-term Prediction Research and Transition (SPoRT) project at NASA's Marshall Space Flight Center in Huntsville, AL is a NASA- and NOAA-funded activity to transition experimental/quasi-operational satellite observations and research capabilities to the operational weather community to improve short-term weather forecasts on a regional and local scale. The program continues to expand on its suite of unique products, building additional collaborations and partnerships, and conducting innovative research to address specific weather forecast challenges and benefit operational activities in the NOAA/National Weather Service (NWS) and the disaster response community. End users include NWS Weather Forecast Offices (WFOs), NWS/National Centers for Environmental Prediction (NCEP) National Centers, other government agencies, and Private sector partners.

Originally working with partners in the southeastern United States, over the last five years, SPoRT has seen an expansion of data products that support new collaborating partners. Now, SPoRT has active collaborations with more than 30 WFOs in all 6 NWS regions and 5 NCEP National Centers. SPoRT works collaboratively with university partners to obtain real-time data and engage the research community in the development of new experimental products. A map of partners is given the following figure.



SPoRT's expertise is separated into four research areas: remote sensing, modeling and data assimilation, total lightning, and disasters. In remote sensing, SPoRT focuses on transition of multispectral (i.e. Red, Green, Blue [RGB]) imagery and passive microwave imagery and derived products. Modeling and data assimilation activities focus on improving regional land surface and atmospheric models through the use of satellite-derived vegetation, sea surface temperature, and soil moisture along with hyperspectral infrared sounder observations. Expertise in total lightning involves transition of ground-based lightning mapping array observations and gridded products to prepare forecasters for future satellite-based lightning observations. Disasters activities focus on use of high-resolution land-surface imagery and vegetation along with unique Day/Night Band observations for post-disaster response and recovery.

The SPoRT program functions in a testbed environment that is illustrated in the following figure. This research-to-operations/operations-to-research paradigm enables the project and its partners and collaborators to provide products that are needed and can be readily used in an operational environment. Keys to this paradigm are active collaboration and communication with end users, formatting experimental data sets for view in end-user decision support systems, creating training materials focused on user needs and applications, and obtaining end-user feedback on the forecaster confidence and operational impact of experimental products.



Additional details and information concerning the SPoRT program can readily be obtained by visiting the NASA SPoRT Website at:

<<http://weather.msfc.nasa.gov/sport>>