

NOAA's National Weather Service

Objective and Scope of NWS STI

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The key Science and Technology Integration (STI) roles: Centralized “coordination” and “management”.

STI requirements: (1) Field pull – capabilities needed to enhance services; (2) Science push, which is unique for STI, innovations from the field and partners including the research community who believe the science advancement can improve our services. Maintain proper balance between push and pull is a challenge for STI. These requirements need to be vetted, validated, prioritized by the Mission Delivery Council, the new National Weather Service (NWS) Governance. STI’s role is to lead coordination and development of solutions to address prioritized requirements, which lead to actual activities/funding projects to arrive at solutions.

It should be made clear the distinction between the requirement and the solution. The Capabilities and Requirements Decision Support (CaRDS) process validates for requirements. A key distinction between CaRDS and previous Operations and Services Improvement Process (OSIP) is that OSIP evaluates project plans which are solutions, and most of the solutions were not coordinated, hence there could be redundancy, and/or some of them could be random walk approaches that NWS could not sustain. It is important to coordinate needs from the beginning, *i.e.* bringing fields together to figure out what solution can address the requirement for many offices and services needs, not only for one, e.g. yours, his, hers or theirs. Partial needs don’t meet the requirement. Ideally, at this point, STI comes in to check off (meet) the requirements for service delivery.

NWS OSTI is a program office, which coordinates and manages resources, but not an execution office (directly conducting development activities). STI coordinates development of solutions by field expertise and resource of the field execution units to conduct development, testing and implementation. Hence the field own STI sponsored projects. The message is not what headquarters do for fields, but OSTI enables field to make progress in developing and implementing new capabilities. The Annual Operating Plan (AOP) process is to prioritize solutions (projects) to validate and meet requirements.

In summary, how does STI support requirement through AOP?

- 1) Coordinate to develop solutions to address the requirement (not only for single user). Take systematic approach, avoiding “random walk”.
- 2) Align scientific and technical approaches. NOAA is a science based service organization, not just a service organization. The development should have scientific bases. STI will not invest in efforts that does not have mature scientific basis. The question should always be asked if the science is available supporting the approach to address the requirement, and if it aligns with overall technical platform/approaches.
- 3) Must have viable transition path. Who is going to own and sustain the capability? WFOs are not set up to maintain and sustain software applications/tools. To be sustainable, not affected by people leaving/retirement, STI transitions the application tools to appropriate operational entities with infrastructure supported by other operational service delivery portfolios.

(Audio Recording Notes by Jiayu Zhou)

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