Best Practices (BP) for a 3 Phase Framework of Transition Plans, Version 2[1], [2]

OAR Weather Program Office (WPO)
and
NWS Office Of Science Technology Integration (OSTI)

Executive Summary

This document summarizes Recommended Best Practices (BP) for improving the efficiency and effectiveness of Transition Plans for Research, Development, Demonstration, and Deployment (R, D, D & D) Projects that are funded by OAR WPO and have intended near term benefits and engagement with the NWS through the OSTI review process.

The core of the BP is a three-phase approach to transition plans, that increase in detail and NWS engagement as the project life cycle and Readiness Levels (RL) increase:

- PHASE 1 (Research to Development or Knowledge)
- PHASE 2 (Development to Demonstration)
- PHASE 3 (Demonstration to Deployment/Operations)

This approach is consistent with the intent of NAO 216-105B: Policy on Research and Development Transitions, NOAA Administrative Order (NAO) 216-105B: Policy on Research and Development Transitions Procedural Handbook, and OAR Circular 216.7 Guidance on Research and Development Transition Plan Development, Review and Approval.

Purpose

The purpose of this document is to establish and concisely summarize Best Practices (BP) for developing, collaborating, reviewing, and approving Transition Plans for research, development, demonstration, and deployment (R, D, D&D) projects that may transition output directly or indirectly to National Weather Service (NWS) applications.

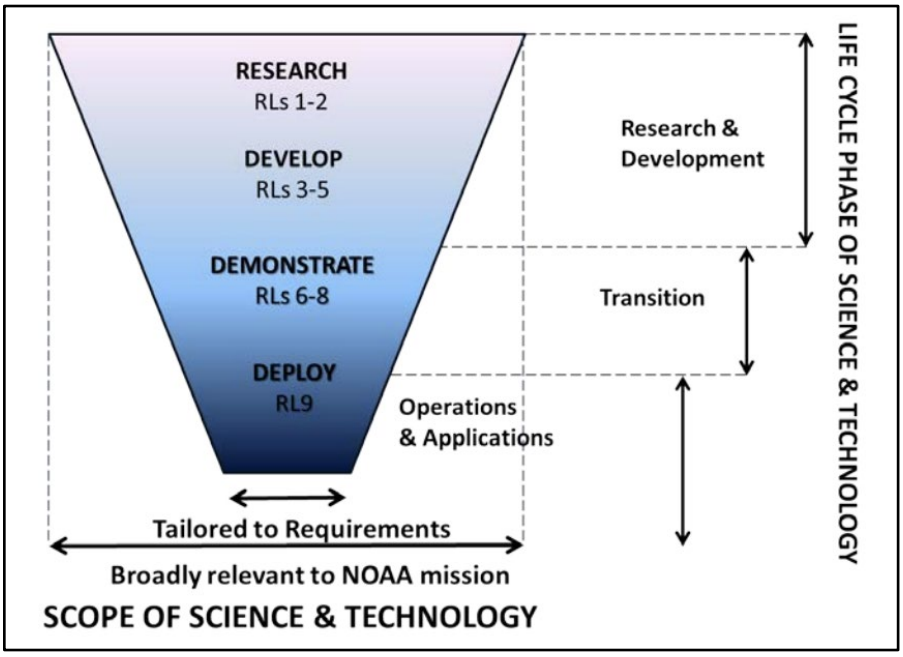
[1] Version 1.0 Approved by OAR/WPO Management and NWS/OSTI Management October 17, 2023
[2] Version 2.0 Revised Note 1 and Note 2 of Table 1

Summary of Best Practices

1) The core content of a Transition Plan will align with the realistic results of a funded Project (or set of complementary Projects).
2) Transition Plans will be categorized into three phases corresponding to the approximate boundaries of the Life Cycle Phases of the funnel (Research, Development, Demonstration, and Deployment) (see Figure 1).
3) Transition Plans will increase in detail and NWS engagement as the Life Cycle Phase and Readiness Levels (RL) increase (See Table 1 and Table 2).
4) Follow-on Projects may elevate Transition Plans to a higher Phase.

Figure 1: Life cycle phases of the NOAA transition funnel

(source: NOAA Administrative Order (NAO) 216-105B: Policy on Research and Development Transitions Procedural Handbook)



Summary of Transition Plan Phases

- **PHASE 1 (*Research to Development or Knowledge):*** Projects scoped to remain in Research or Development (generally RL4-RL5) will have outputs that mostly benefit/involve OAR researchers and/or the R&D community. Thus, there is less need at this phase for planning detailed long-term NWS operational implementation, as transition plans primarily focus on short-term knowledge transfer.

- **PHASE 2 *(Development to Demonstration)*:** Projects scoped to end in Demonstration (generally RL6-7) will incrementally increase NWS involvement, as more resources, such as data ingest, data impact studies, testbeds or proving grounds, will be needed to demonstrate advancements in NOAA environments and align output with operations. STI and NWS should use the collaborative judgment of the transition experts to determine how particular projects are reviewed within NWS and STI.
- **PHASE 3 (*Demonstration to Deployment/Operations):*** Projects scoped to end in Finalization to Deployment/Operations in NWS (RL8-9) will maintain the current OSTI established process of a full-scale NWS review and approval process.

Table 1. Summary of the NWS Representative roles and OAR and NWS approval requirements for the three phases of Transition Plans.

	NWS Rep Role	OAR Program/ WPO Signature	NWS Receiving Office Signature	NWS Review Meeting	NWS & OAR LOTM Signature +	NWS & OAR AA Signature +
Phase 1 ***Research to Development or Knowledge (RL4-5)***	*Optional SME*	✅	❌*	❌	❌*	❌
Phase 2 ***Development to Demonstration (RL6-7)***	*Liaison*	✅	✅	❌**	✅	❌**
Phase 3 ***Demonstration to Deployment/ Operations (RL8-9)***	*Partner POC*	✅	✅	✅	✅	✅

***Note 1**: Email acknowledgement of the Transition Plan **may** be requested at the discretion of stakeholders (OAR Program Manager, Receiving Office Director, NWS LOTM, Receiving Office Director, WPO Program Manager, or WPO Director or Deputy Director).
****** **Note 2**: Signature of the Transition Plan **may** be requested at the discretion of the stakeholders.
+ Note 3: OAR and NWS LOTM and AA signatures may be at the individual Transition Plan or consolidated set of Transition Plans

Table 2. Summary of PI, WPO Program, & NWS POC roles for the three proposed phases of transition planning.

	Phase 1 Plan	Phase 2 Plan	Phase 3 Plan
WPO Program Manager	Responsible for coordinating the development and quality control of the Transition Plan including identifying the Phase and providing the Transition Plan template. Coordinates kickoff and status meetings with PI	Responsible for coordinating the development and quality control of the Transition Plan including identifying the Phase and providing the Transition Plan template. Coordinates kickoff and status meetings with PI and NWS Liaison	Responsible for coordinating the development and quality control of the Transition Plan including identifying the Phase and providing the Transition Plan template. Coordinates kickoff and status meetings with PI and NWS POC
PI (Research) Role	Responsible for writing the research and development content of the Plan	Responsible for writing the research, development, and demonstration content of the Plan. Assists NWS Liaison POC on writing transition content.	Responsible for writing the research, development, and demonstration content of the Plan. Assists NWS Partner POC on writing transition content.
NWS (Operations) Role	**Optional SME**; if appropriate, provide input about operational considerations to assist the PI in writing the plan.	**Liaison** Responsible for writing the high level potential operational implementation components of the plan, working alongside the PI. Briefs the plan to NWS HQ portfolios at the NWS review meeting, if requested by the NWS LOTM	**Partner POC** Responsible for writing the detailed operational implementation components of the plan, working alongside the PI. Briefs the plan to NWS HQ portfolios at the NWS review meeting and leading any requested revisions.