Operations and Services Improvement Process

Opportunity Or Need → Research & Concept Exploration → Research Demonstration & Solution Analysis → Operational Development → Deploy, Maintain, & Assess

OSIP 101

Overview and Process Introduction
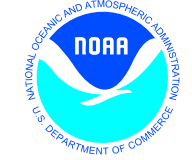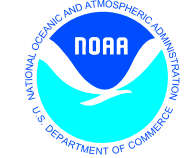
Outline

- ✓ **OSIP Overview**
  - What, why, when
  - Process Description
  - Roles and Responsibilities
  - Relationship to Other Processes
  - Points of Contact and References
- ✓ **Submitting Authorities and Gates**
  - Membership, Review Team, and activities
  - Mission Priority
  - Submitting Authority activities
- ✓ **Integrated Work Teams**
  - Roles and Responsibilities
 - Process Flow by Stage

What is OSIP?

Operations and Services Improvement Process

*Ensures **field and customer needs** are adequately described, enabling the developers to provide **a solution which best meets the need**.*

- ✓ OSIP is a standard, systematic, and disciplined process for evaluating needs and opportunities which …
  - Documents requirements and concept of operations which meet the user's need.
  - Develops solutions considering alternatives and corporate perspective.
  - Prioritizes resources and provides visibility to the senior managers across the organizations who allocate the resources.
  - Provide necessary links to PPBES for defining and requesting resources

- ✓ Provides for better communications between Line Offices. The idea is to obtain stakeholder agreement before development. We will "document what we do" and "do what we document"

Closes the gap in customer expectations, resulting in far less re-work, and the best use of resources.
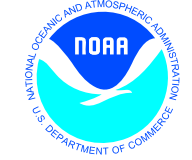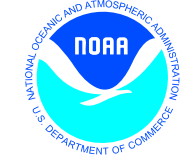
Why have OSIP?

OSIP fulfills the NOAA mandate to follow a Requirements Management Process

- Assigns to Line Offices, responsibility for requirements validation and project oversight for non-major projects (LCC <$250M) projects

- Assigns to corporate NOAA responsibility for requirements validation and project oversight for *major* (LCC >$250M) projects

- OSIP is the NWS requirements management process approved by the NWS Corporate Board in June '05.

OSIP…
- Collects needs and opportunities,
- Validates the requirement,
- Identifies and documents solutions,
- Assists in prioritizations and resource allocation.

When do I need OSIP?

- **OSIP is used if one or more of the following applies:**

  - ✓ You have a new requirement or need a solution identified (not already in PPBES programmed baseline)
  - ✓ Your need/solution impacts more than one system or cross LO
  - ✓ You need resources to develop, procure, implement or   maintain a solution

- **There will be gray areas, and at various screening points common sense is used to determine what goes through the process.**

Not everything goes through OSIP

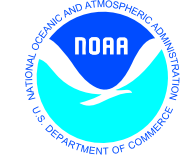**OSIP does NOT replace existing Change Management functions.**

- *When appropriate, you still submit Requests for Change (RCs) and data related DRG items.*

(Reminder: RCs apply to NWS systems under Change Management. An RC without a requirement, a defined solution, or funding may be referred to OSIP).

Is there a minimum size or dollar threshold for projects to go through OSIP?

NO. For several reasons:

1. *Cost not known until a solution is researched and identified*

2. *"Low cost" items may have significant cross organizational impact.*

3. *We **need to** document new requirements and **ensure that the solution meets the need, regardless of cost.***

4. *Need to coordinate requirements across the enterprise, regardless of cost.*

OSIP Answers the Following Questions

Requirements Validation Questions:

- *Do the stated requirements align with the field/customer needs?*

- *Is there a pre-existing or similar requirement?*

- *Is it within our mission and aligned with Strategic Plan?*

- *Will operational products, services, and/or efficiency be improved?*

- *What is the mission priority?*

Project Management Questions:

- *What is concept of operations?*

- *How does solution map to current and/or new operational systems?*

- *How will it be developed/transitioned/sustained?*

- *What are the alternatives? Is it the most cost-effective solution?*

- *Does the Solution meet initial intent?*

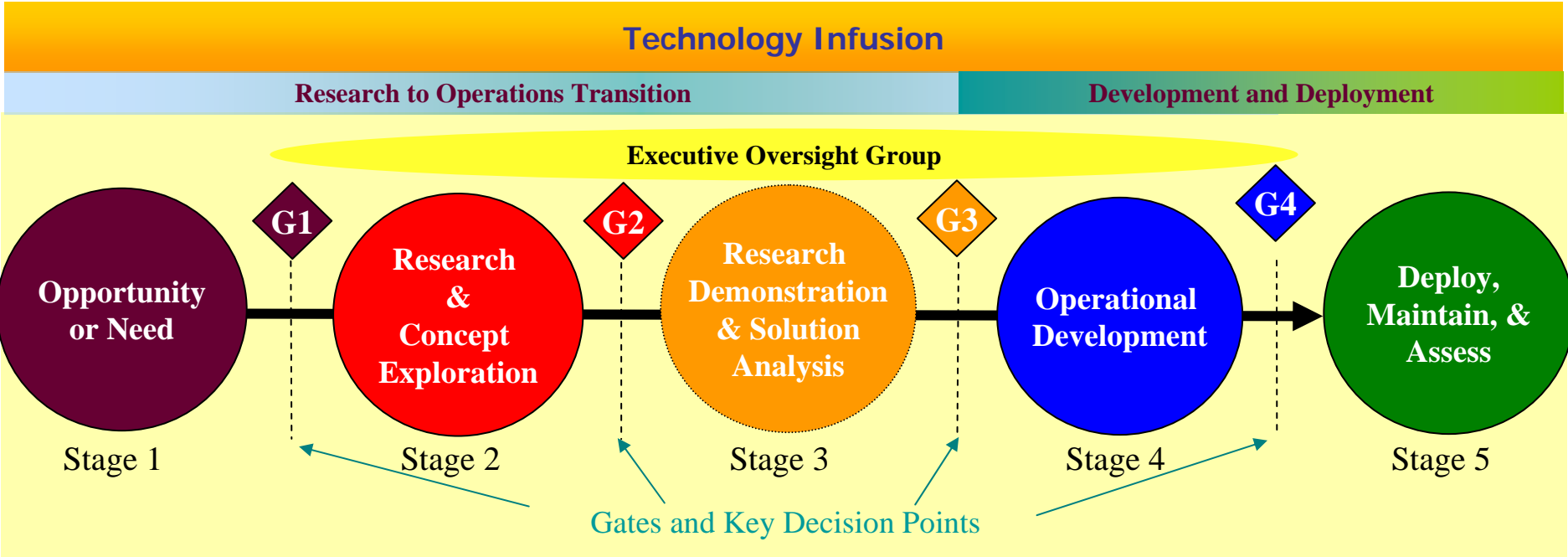- *How will development/transition and O&M be resourced?*
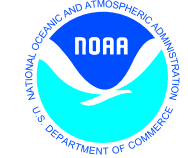
OSIP Stages

The major activities in OSIP are grouped in stages with key decision points after each stage.

NOTE: Not all items go through all stages – some may be redirected to other existing processes.

Stage	Major Activity	Typical Decision Point (Gate) Questions?
1	Collect and Validate Need or Opportunity	Is this valid for the Weather Service? What is to be done next? (and who will do it)
2	Research and Concept Exploration and Definition	Are the Concept and high level Requirements adequately defined or is research needed? What is to be done next? (and who will do it)
3	Applied Research and Solution Analysis	What solutions are feasible, which is best? What is to be done next? (and who will do it)
4	Operational Development	Does developed solution meet requirements? Is there funding for Deployment and subsequent activities? What is to be done next? (and who will do it)
5	Deploy, Maintain and Assess	Survey – How well did the solution meet the requirements?

The OSIP Gates are comprised of representatives from the Field and NWSHQ Offices

OSIP Stages

Technology Infusion

Research to Operations Transition — Development and Deployment

Executive Oversight Group

Stage 1 — Opportunity or Need — **G1**
Stage 2 — Research & Concept Exploration — **G2**
Stage 3 — Research Demonstration & Solution Analysis — **G3**
Stage 4 — Operational Development — **G4**
Stage 5 — Deploy, Maintain, & Assess

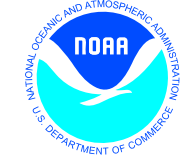Gates and Key Decision Points

- **Statement of Need or Opportunity**
- **Project Plan**

- **Exploratory Research (R&D)**
- **Concept of Operations and Operational Requirements**

- **Applied Research Evaluation**
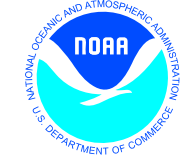- **Technical Requirements**
- **Business Case**

- **Design, development, acquisition, and testing**

- **Deployment and Assessments**

OSIP relationship with other processes

- Projects in OSIP may be redirected at various key decision points to any of the following as appropriate:

    - Configuration Control Board (Requests for Change - RCs),
    - Data Review Group (DRG requests),
    - AWIPS Software Recommendation and Evaluation Committee (SREC),
    - National Centers for Environmental Prediction's Transition Process,
    - Aviation Weather Technology Transfer (AWTT),
    - Hydrologic Operations & Service Improvement Process (HOSIP),
    - New / Enhanced Products process,
    - Program, Planning, Budgeting and Execution System (PPBES), and
    - NOAA's Requirements Management Process

- The CCB or other process may elevate or forward items to OSIP.

- The redirection may take place at any key decision point, including OSIP Gate 1.

I have a Need – How do I get Started?

1. Review the OSIP web site for background information and project examples. (https://osip.nws.noaa.gov)

2. Click on the link for Statement Of Need (SON) Form, fill in information

3. Attach Project Plan if available and supplementary data if needed.

4. Submit the form to the Submitting Authority (SA) from the drop-down list – corresponding to the Originator's office or region. If the originator is an external customer, their NWS point of contact should assist with the form and their corresponding SA applies.

5. You will receive email confirmation of receipt of the SON. An OSIP Analyst will contact you to assist and set-up schedule.

Where do I go for OSIP info?

✓ **OSIP Web site: https://osip.nws.noaa.gov/**

    Access to the website requires your NOAA email username and password.

    The OSIP website provides the following information:

        • More detailed OSIP information – OSIP 101 presentation
        • Document templates and documents from existing OSIP projects
        • OSIP Project Status Summary Report
        • OSIP Project details – contacts, meeting notes, etc.

✓ **OSIP Analysts** are available to provide help with process information, IWT Training & documentation:

    Sal Romano, Deborah Lavine, Joan VonAhn (OCWWS)

    Anthony Robinson, Carlos Diaz (OCWWS)

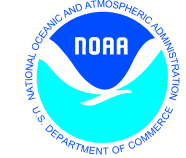   Robb Kookaby (OCWWS) – OSIP Web site / Req. Tool Support

    Douglas Hilderbrand (OST)

   Paul Trotter, Steve Holt (OST)

    Marylin Andre (OHD)

    Ella Lichtenberg (CIO)
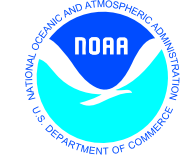
✓ OSIP Manager – Cindy Woods (OCWWS)

OSIP Roles

- Submitting Authorities: Approve submission of SONs

- Gate Members: Make project approval and resource decisions

- Integrated Work Team: Develop documentation and support OSIP stage efforts, e.g. analysis.

- OSIP Manager: Oversee process, provide updates

- Gate Review Team: Address project issues prior to gate meetings, make recommendations to gate members

- OSIP Analysts: Support IWT and maintain project status and information
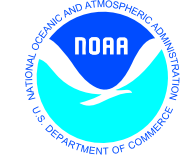
OSIP
# Submitting Authorities and Gates

Submitting Authorities

Office and Field representatives which facilitate initiation of a Need or Opportunity.

- *Assist their constituents (office, customer or partner) with preparation of Statement of Need (or Opportunity) – SON.*

- *Reviews and adds clarifications as needed and submits SONs for OSIP processing. (May reject with reason if requirement already exists, is not within NWS mission, or other stated reason and may also recommend other venue when applicable, such as CCB or New or Enhanced Products Process)*

Submitting Authorities are the first level of "triage" in OSIP
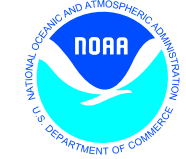
OSIP Gates
(Key Decision Points)

Office and Field representatives which make decisions on the Priority, Disposition, and Resources for OSIP projects

- *Represent their Office with respect to projects being addressed.*
- *Determine Mission and implementation priority.*
- *Make decisions on project disposition, which include:*
  - Approve (proceed with next OSIP stage)
  - Conditionally Approve (proceed, but required to meet stated conditions)
  - Not Ready (go back to the drawing board…)
  - Rejected (with stated reason)
  - Re-directed (forward to CCB or other process such as PPBES)
  - Idle (no additional OSIP action – e.g. needs funding to proceed)
- *Provide or commit resources as required*

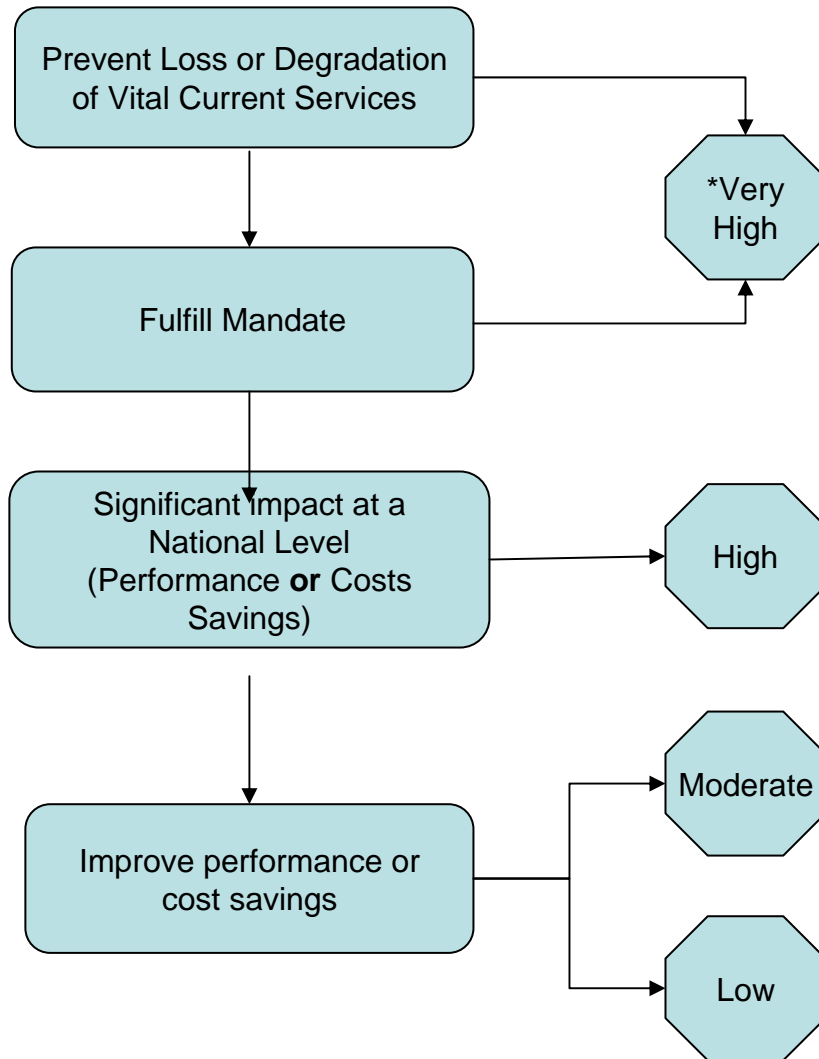Gates are the next level of "triage" in OSIP
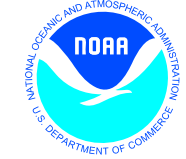
OSIP Project Priority

- ✓ The Gate determines priority and should therefore assign resources accordingly. The overall priority is based on two components:

  - *Strategic Priority – relates project to the National Weather Service Mission and takes into account Mandates and NWS Strategic Plan.*

  - *Operational Priority – relates to how important the project is to the user / field.*

- ✓ Corporate Priority - dictates the priority for the completion and implementation of the project; takes into consideration both the Operational and Strategic priorities.

Strategic Priority Guideline Flowchart

```
┌─────────────────────────┐
│ Prevent Loss or         │──────────┐
│ Degradation of Vital    │          │
│ Current Services        │          ▼
└─────────────────────────┘      ╔═══════╗
           │                     ║ *Very ║
           ▼                     ║ High  ║
┌─────────────────────────┐      ╚═══════╝
│ Fulfill Mandate         │──────────▲
└─────────────────────────┘
           │
           ▼
┌─────────────────────────┐      ╔═══════╗
│ Significant Impact at a │─────▶║ High  ║
│ National Level          │      ╚═══════╝
│ (Performance **or**     │
│ Costs Savings)          │
└─────────────────────────┘
           │
           ▼                     ╔═══════════╗
┌─────────────────────────┐ ┌──▶║ Moderate  ║
│ Improve performance or  │─┤   ╚═══════════╝
│ cost savings            │ │
└─────────────────────────┘ │   ╔═══════╗
                            └──▶║ Low   ║
                                ╚═══════╝
```

Actions which are required to prevent loss or degradation to existing vital operations or service with significant impact: Must be validated by the Ops Committee.

Needs which are mandated by a Corporate board or higher. Mandate must be confirmed by Ops Committee.

Impact must be broad and significant. Cost savings must be on the order of $1M or higher ($ or FTE equivalent).

Impact at a regional level or impact at a national level not meeting higher criteria.

Impact at a local level or impact not meeting higher criteria.
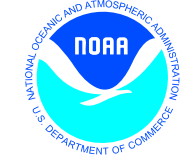
Combined - Corporate Priority

- Preserves VH priorities equally for Operational and Strategic input
- All VH combined priorities must be ratified by Ops committee
- Moderate priority centric (H + M = M,   H + L = M)
- VH Priorities with Large discrepancies (*) are pointed out to the Ops Committee for evaluation and decision.
- The Corporate Board may designate a higher priority - "Must Do" to any project.

|		Operational Priority			
		VH	H	M	L
Strategic Priority	VH	VH	VH	H*	M*
	H	VH	H	M	M
	M	H*	M	M	L
	L	M*	M	L	L
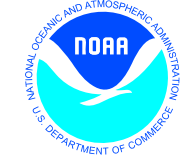
OSIP
Integrated Work Team

What is an IWT?

❖ An Integrated Work Team (IWT) is an NWS matrix team responsible for carrying out each stage of the Operations and Services Improvement Process (OSIP) for a project.

❖ The IWT is identified by the OSIP Gate Members and will be notified of assignment by their supervisor.

❖ The OSIP Gate Members also identify the IWT Lead.

❖ IWT Members should represent their respective office and specific interests – ensure internal coordination

❖ Membership of the IWT may change from stage to stage, depending on expertise required.
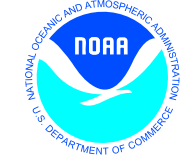
What Is The Role of the IWT Lead?

❖ Lead the IWT to achieve project goals.

❖ Ensure OSIP stage deliverables are developed

❖ Ensure the PACE requirements management tool is available to project team members.

❖ Brief the OSIP Gate members at key decision points.

❖ Keeps the IWT members informed about gate disposition and decision points.

❖ Perform routine project planning and status reporting.

❖ Coordinates with OSIP Analysts on status of deadlines and resolving any issues

Stage 3 Process Flow
Applied Research and Analysis

G2 → **Research Demonstration & Solution Analysis** → **G3**

Stage 3
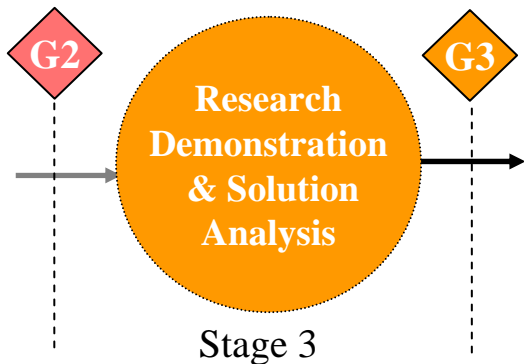
CORE DOCUMENTS:

Applied Research Results Document
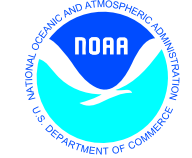
Technical Requirements

Business Case Analysis

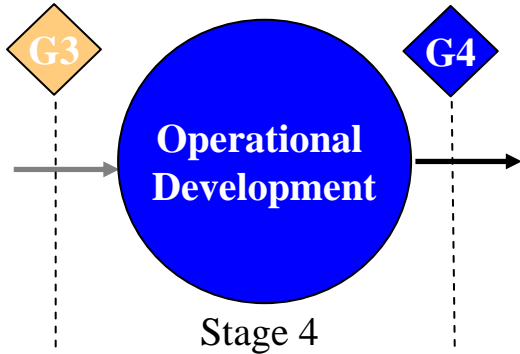**Operational Development Plan**

Update OSIP Project Plan

- IWT Kick-off meeting is held to address actions to be performed and IWT training if needed

- IWT conducts stage 3 actions as stated in Project Plan

- IWT Lead updates document and provides status to OSIP Analysts.

- Review Team meeting is held to discuss issues, address document content and make recommendations

- Gate Meeting is held for disposition and resource allocation. IWT for Stage 4 is identified.

- IWT proceeds with direction from Gate, carrying out activities as described in project Plan

NOTE: The disposition may be to re-direct the project to a Configuration Control Board, SREC or other process instead of proceeding with OSIP Stage 4.

Stage 4 Process Flow
Operational Development

- IWT Kick-off meeting is held to address actions to be performed and IWT training if needed

- IWT conducts stage 4 actions as stated in Project Plan

- IWT Lead updates document and provides status to OSIP Analysts.

- Review Team meeting is held to discuss issues, address document content and make recommendations

- Gate Meeting is held for disposition and resource allocation for Stage 5 is identified.

CORE DOCUMENTS:

Deployment Decision Document

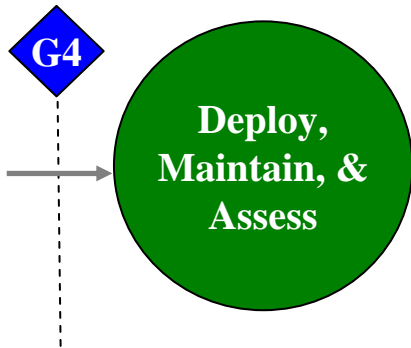**Deployment, Maintenance & Assessment Plan**

Update OSIP Project Plan and other

Documentation as needed
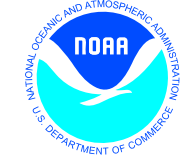
Stage 5
Deploy, Maintain and Assess

G4

Deploy, Maintain, & Assess

- Implement Deployment, Maintenance and Assessment Plan.

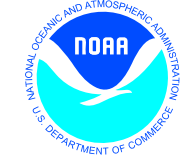- Implement the Program Management Responsibility Transfer Plan, as required.

OSIP Q & A

## Q: I hear OSIP requires much paperwork, how much documentation is needed?

- *The amount of paper work is commensurate with the project scope and the amount of information needed to make informed decisions.*

- *For example, some projects require only a couple of paragraphs to adequately describe their "Concept", other larger projects need many pages to describe the concept and different use cases.*

- *Developers (internal and contract based) are very glad to see that the NWS is finally putting down on paper the definition for the project scope, concept and requirements: Those details enable them to better do their job and to ensure that the developed solution meets the user needs.*

OSIP Q&A

## Q: Why does the OSIP process take so long?

- *Many projects have IWT members which do not have time to work on the project, others are awaiting funding.*

- *How long a project stays in a particular stage is typically dependent on when the IWT completes the description of the need, defining the requirements, or analysis of a solution, and resources available.*

- *AWIPS development and build cycle affects schedule.*

- *The issue is Resources, not the OSIP process.*

- *Projects that are 'idle' are analogous to projects which have in the past been put on a list or white-paper for development but have never gotten implemented due to lack of resources.* <u>OSIP makes such projects 'visible'.</u>
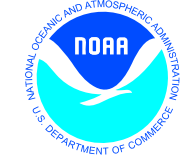
OSIP Q & A

Q: Is it true that there are too many projects in OSIP?

- *This is like saying there are "too many good ideas". Since OSIP is the process for introducing needs and opportunities into the NWS, and we have many talented folks with good ideas, many projects do come in.*

✓ The number of projects is dependent on:

- *Efforts to define and support processes outside of OSIP to identify needs which can be grouped together into a single effort, reducing piece-meal projects and fixes, before entering OSIP*

- *More discipline at the Gate or higher level in making decisions to 'terminate' projects which will not be resourced.*

- *IWT and developer time to work on their projects so they can be completed.*
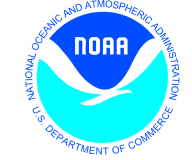
OSIP Q & A

Q: I hear that projects never get out of OSIP, is this true?

- *Over 131 projects have 'gotten out' (as of June 2008):*
  - 76 have gone through OSIP: validation, requirements and other necessary information prepared and forwarded to AWIPS SREC for build allocation, development and deployment.
  - 55 projects have been vetted through OSIP stages and are either deployed or closed.