

# Future Direction of the UAS Program



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March 10, 2017



# UAS Program Going Forward

**New Vision: “Innovative and cost-effective UAS capabilities are available to meet NOAA’s observing requirements”.**

**New Mission: “Identify, Evaluate, and Transition effective and affordable UAS capabilities to satisfy NOAA’s observing requirements”**

# UAS Innovation Cycle

**Research.** *Identify UAS innovations, trends, and capabilities that have the potential to impact NOAA observing requirements. Determine the barriers, challenges, and capabilities of potential UAS solutions to determine applicability or “user case” in real world operational environments.*

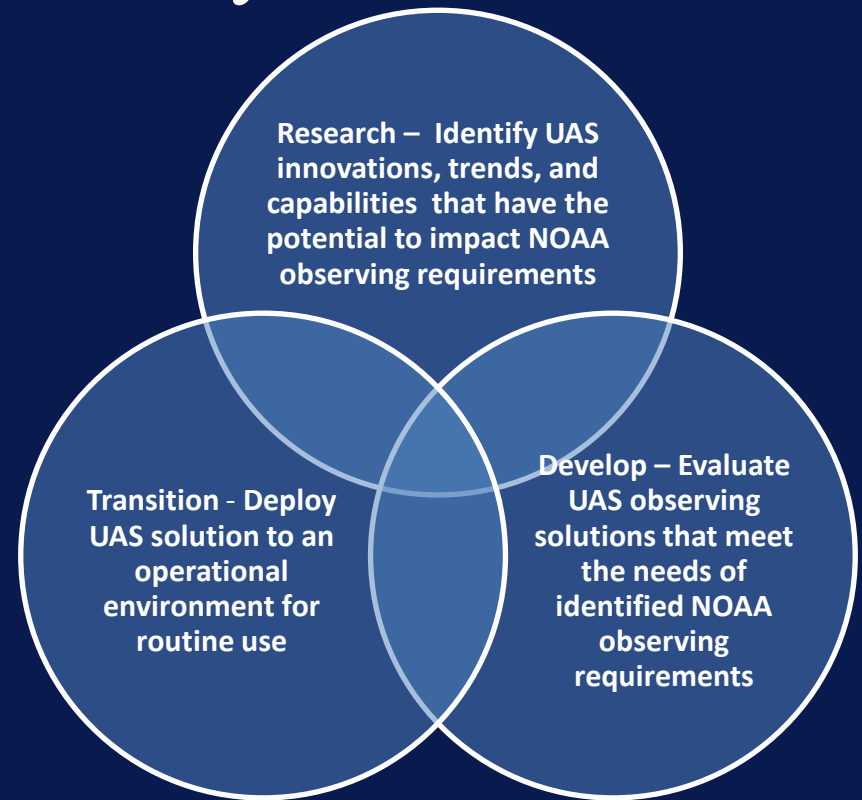
*Outputs: Market Scans, Gap Analysis, Requirement Documents, Technical Priority Listing, Analysis of Alternatives, Reference Databases,*

**Develop.** *In collaboration with industry, academia, and federal partners, evaluate UAS observing solutions that meet the needs of identified NOAA observing requirements and demonstrate UAS applicability in a real-life environment.*

*Outputs: Technical Analysis for Payload and Platform selection; Initial Transition Plans; Data Management requirements; Requests for Proposal (RFP); Performance Reports, Whitepapers, Workshops, Concept of Routine Operations documents,*

**Transition.** *Deploy UAS solution to an operational environment for routine use; Understand the impact of the UAS Innovation Cycle on the NOAA Observing Capabilities and how well transitioned solutions meet User Requirements*

*Outputs: Technical Positions Statements, User Recommendations, Briefings; Metrics, Reference Databases, Measurement & Reporting,*



# An Observing Requirement is met through effective Observing Strategy

- An Observing Strategy is the culmination of a series of planning steps and resource allocation decisions necessary to deploy and routinely utilize a UAS for operational observing duties.
- An Observing Strategy is designed for each Observing Requirement and it is presumed that the “owner” of the requirement will be an active participant in the design of the strategy
- A Transition Plan is primarily focused on the technological development of a UAS solution, while an Observing Strategy is focused on improving the observing capabilities of a specific user.
- Multiple Observing Strategies can exist for a single Observing Requirement. The selection of one over another is based upon the Business Case of each – a balance of operational effectiveness and cost efficiency.



# UAS Strategic Framework

- **Goal Level (5 year Horizon)**
  - **Objective Level (2-5 year Horizon)**
  - **Activity Level (Annual)**
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## Science Focus Areas:

- Polar Monitoring
- High Impact Weather
- Marine Monitoring

## Science Objectives:

- Planetary Boundary Layer Data Collection
- Artic Ice and Oil Spill Mapping
- Key Population Data Collection
- Marine & Costal Ecosystem management
- Simulation based approaches and Data Evaluation
- Improved Warnings & Forecasts of Oceanic and Continental Storms

## Science Questions:

- Science questions in each focus area will be identified through mission requirements workshops conducted jointly with UASPO stakeholders.

# Q&A