



Outline

- Overview of the final Strategy
- Next Step – Implementation Plan
- Other Updates (CENOTE, ANTX)
- Questions/Discussion



Update to the Ocean Exploration Advisory Board - April 9, 2020 - via Videoconference

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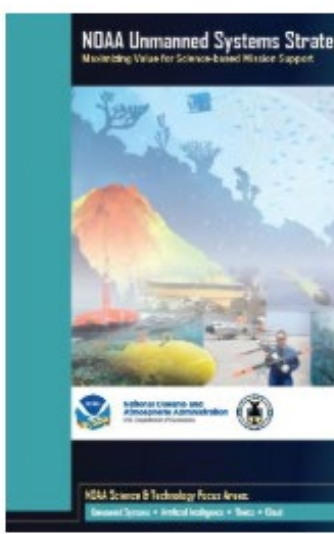


NOAA SCIENCE & TECHNOLOGY



NOAA's new strategies in four key services across our mission areas use new methods to analyze material such as satellite data to deliver the world's best weather forecasts.

NOAA Unmanned Systems Strategy



PDF

Strategies and Fact Sheet
press release: <https://www.noaa.gov/newsroom/2020/02/20200201-noaa-unmanned-systems-strategy>

NOAA's Unmanned Systems Strategy

Maximizing Value for Science-based Mission Support

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business of NOAA's products and services, and the use of advanced technologies and high S&T applications to help

Draft NOAA Cloud Strategy



PDF

science-and-technology





Definition

*Unmanned systems are vehicles—aerial, terrestrial, or marine—and associated elements, such as sensors and communications software, that can execute data-collection missions **without a human presence** aboard.*

They are typically controllable or programmable, self-powered, untethered, and operate on a continuum from attended to fully autonomous.

*This strategy also includes **Remotely Operated Vehicles** which are typically deployed from ships and receive power and operator instructions from a tether.*



Benefits

The recent rapid expansion in availability of UxS, fueled in part by NOAA scientists and discoveries, has brought **a corresponding increase in their innovative use as a force multiplier** for many NOAA programs -augmenting data collection often **at lower cost, increased safety, and reduced risk**, especially in remote or extreme environments.

Examples include hydrographic and habitat mapping, ocean exploration, marine mammal and fishery stock assessments, emergency response, and at-sea observations that improve forecasting of extreme events, such as harmful algal blooms and hypoxia.

VISION

NOAA is the national and global leader in UxS operations that support science, public safety, and security.

PURPOSE

To dramatically expand the collection and utilization of critical, high accuracy, and time-sensitive data by increasing the application and use of unmanned aircraft and marine systems (together, “unmanned systems” or “UxS”) **in every NOAA mission area** to improve the quality and timeliness of NOAA science, products, and services.





NOAA Unmanned Systems Strategy Goals

Goal 1: Coordinate and Support UxS Operations at an Enterprise Level.

Goal 2: Expand UxS Applications Across NOAA's Mission Portfolio.

Goal 3: Accelerate Transition of UxS Research to Applications.

Goal 4: Strengthen and Expand UxS Partnerships.

Goal 5: Promote Workforce Proficiency in UxS Use and Operations.

Goal 1: **Support UxS Operations at an Enterprise Level**

Objective 1.1.

Establish an Effective and Adaptive Organizational Structure.

Objective 1.2.

Identify and Deliver Priority Core Services Including Cybersecurity, Training, and Acquisition.

Objective 1.3.

Implement an Innovative, Robust, and Encompassing UxS Data Enterprise.



Goal 2: **Expand UxS Applications Across NOAA's Mission Portfolio.**

Objective 2.1.

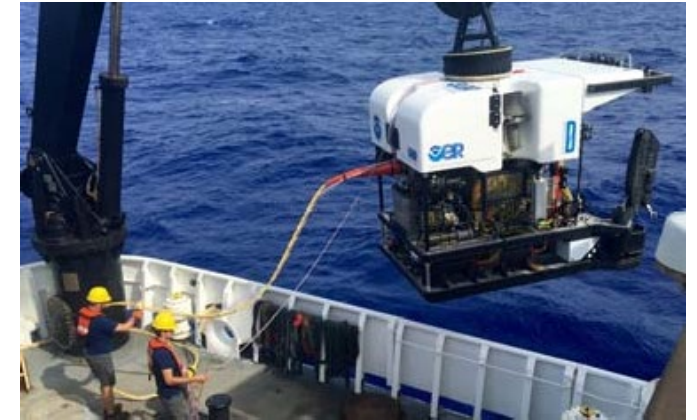
Establish A Requirements-Based Process to Prioritize UxS Operational Applications and Use.

Objective 2.2.

Establish a Thriving UxS Community of Practice at NOAA.

Objective 2.3.

Objective 2.3. Institutionalize Operational Applications Through Formal Concepts of Operations.



Goal 3: Accelerate Transition of UxS Research to Applications.*

Objective 3.1.

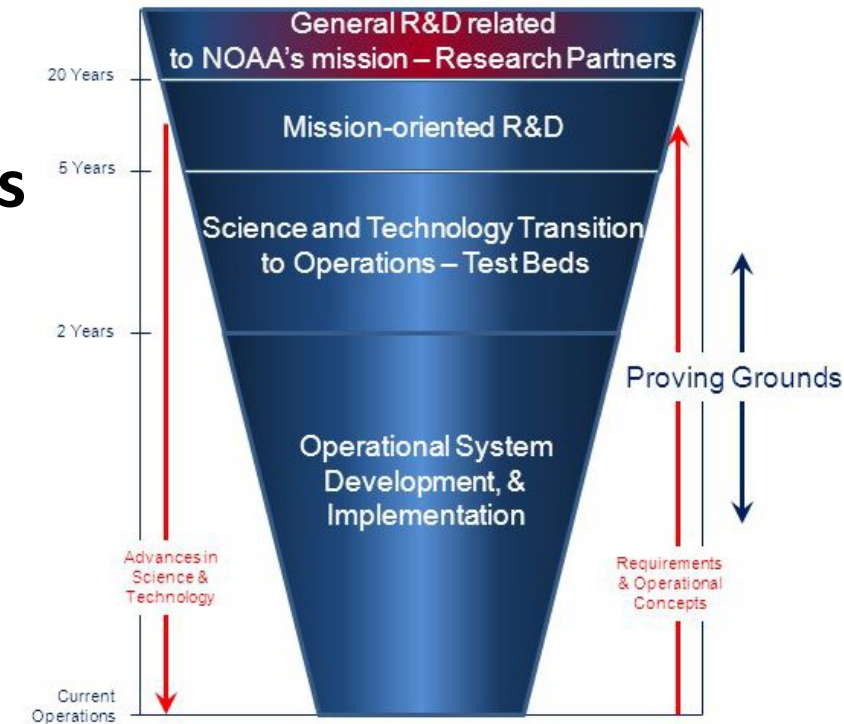
Identify and Prioritize Candidate UxS Platforms for NOAA Use.

Objective 3.2.

Develop Transition Plans With Operational Partners.

Objective 3.3.

Conduct Systematic Testing and Evaluation to Ensure High Performance.



NOAA Research & Development Funnel

* The UxS Strategy is inclusive of "R2X" considerations, i.e., Research to Operations, to Applications, and to Commercialization, as well as the feedback to Research. As such, the UxS Strategy is meant to consider the full R2X2R feedback of activities.

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Goal 4: Strengthen and Expand UxS Partnerships.

Objective 4.1.

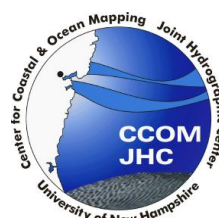
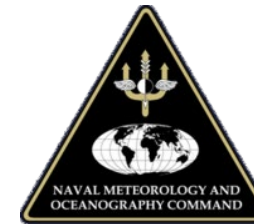
Increasingly Leverage Interagency Integration.

Objective 4.2.

Reinforce Cooperation With Academia.

Objective 4.3.

Dramatically Grow Partnerships With the Private Sector.



Goal 5: Promote Workforce Proficiency in UxS Use and Operations.

Objective 5.1.

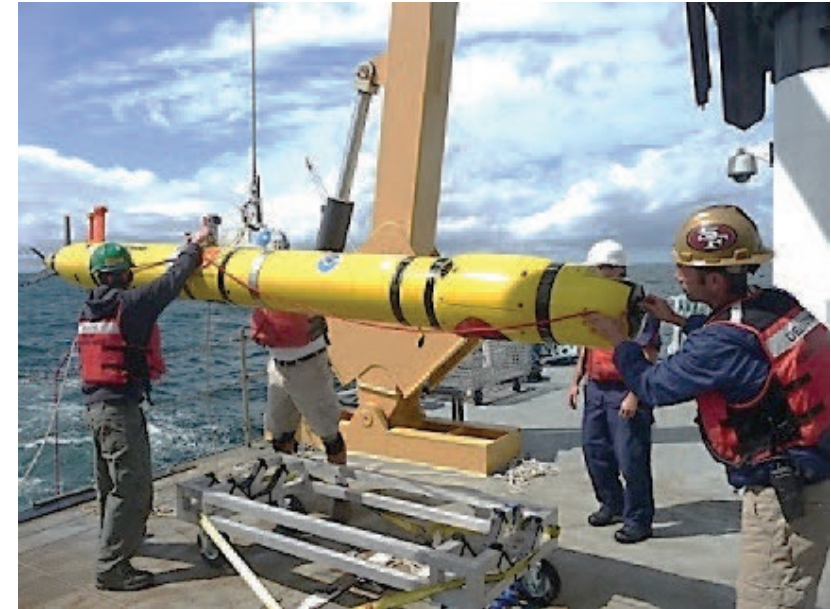
Expand Recruiting Efforts to Showcase NOAA UxS Activities.

Objective 5.2.

Establish Formal Training and Certification.

Objective 5.3.

Include NOAA UxS Assignments as a Retention Tool.



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NEXT STEPS AND IMPLEMENTATION PLAN

process/timeline

February - **Plan Process Initiated: with initial Planning/Process/Assignments Meetings**
(divide into Goal/Objective Teams)

Late April - **NOAA UxS Imp. Plan Workshop** (1.5-2 days, in person, DC area)

Mid-Late May - **Draft Implementation Plan, v1.0**

Late July - **Community Workshop on Draft Plan** (1.5-2 days, DC area with Stakeholders)

September - **v2.0 of Implementation Plan for NOAA review**

October - **Final UxS 5 Year Implementation Plan** (roll-out at OCEANS 2020, Biloxi, MS)



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NEXT STEPS AND IMPLEMENTATION PLAN

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A FEW MORE UPDATES

1. USN/NOAA CENOTE Collaboration
2. USN/NOAA ANTX 2020 Partnership
3. NOAA Press Release (March 31st)

New NOAA program to support and expand agency's use of unmanned systems
NOAA is establishing a new Unmanned Systems Operations Program to support the rapidly expanding use of these systems across the agency. The new program will promote the safe, efficient and economical operation of unmanned systems (UxS) NOAA uses to collect high-quality environmental data for the agency's science, products and services.

4. Pivot per COVID-19 Stand Down



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Thank You!

