NOAA SCIENCE ADVISORY BOARD, August 2, 2015

CHIEF SCIENTIST UPDATE

OUTLINE

- STRATEGIC RESEARCH GUIDANCE MEMORANDUM (60)
- R2X (20)
- CI21 (10)
- OTHER (10)

“Build a **robust portfolio logic** for NOAA’s research enterprise as reflected in **clear strategic guidance…**

MISSION-OPTIMIZED RESEARCH

…that defines critical

***mission-optimized* operational and organizational principles and alignment of capabilities**

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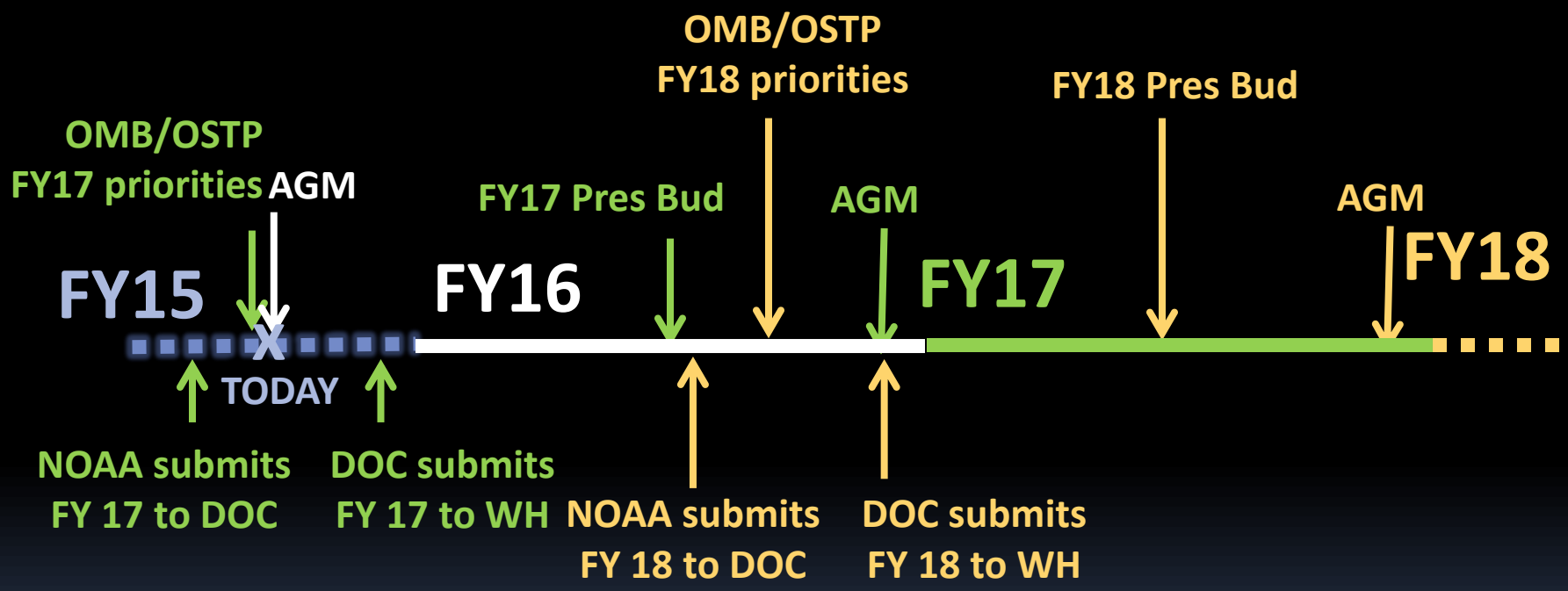
BUDGET MILEPOSTS



STRATEGIC RESEARCH GUIDANCE MEMORANDUM

PRIORITIES represent where we've been and where new or added investments should be made ***based on assessment as expressed in Part I (Framework of Principles)***

STRATEGIC RESEARCH GUIDANCE MEMORANDUM

PRE-DECISIONAL DRAFT

Strategic Research Guidance Memorandum

NOAA was established in 1970 "...for better protection of life and property from natural hazards...for a better understanding of the total environment...[and] for exploration and development leading to the intelligent use of our marine resources..."[1] Today, NOAA is the Nation's premier environmental intelligence agency with a mandate to develop predictive understanding of processes from the surface of the sun to below the ocean floor. As a science-based services agency, NOAA maintains a research and development (R&D) portfolio that underpins every dimension of NOAA's mission. Robust R&D is essential for NOAA's products and services to improve continually in light of:

1. Growing demand for new and improved services;
2. Changes in NOAA's portfolio of mission needs in response to evolving environmental conditions or directives from the Legislative, Judicial and Executive branches;
3. Emerging understanding of the dynamic Earth system;
4. Innovations in R&D methods, tools and approaches; and
5. NOAA's role in cooperative environmental research and management efforts.

This NOAA Strategic Research Guidance Memorandum establishes an overarching framework by which the agency-wide R&D enterprise can be continually reviewed, evaluated and rebalanced in light of the Agency's evolving mission needs, thus allowing the Agency to implement a portfolio-logic approach to its R&D investment. "Portfolio logic" refers to a detailed understanding of the full portfolio of NOAA mission needs that require R&D for accomplishment.[2] Used effectively, this guidance will foster aggressive decision-making with regard to investment as well as divestment within all areas of the NOAA R&D portfolio.

Researchers, technology developers and managers at all levels of the Agency will use this Guidance when reviewing NOAA's R&D portfolio, exploring new research opportunities or determining when a research activity should be expanded, accelerated, shelved or terminated. Beneficiaries of NOAA R&D such as operational entities and resource

- Mission alignment
- Research balance
- Workforce excellence
- Scientific integrity
- Facilities and infrastructure
- Partnerships
- Transitioning R&D
- Accountability

FRAMEWORK OF PRINCIPLES

EXECUTIVE OFFICE OF THE PRESIDENT OF THE UNITED STATES

July 9, 2015

M-15-16

MEMORANDUM FOR THE HEADS OF EXECUTIVE DEPARTMENTS AND AGENCIES

FROM: Shaun Donovan
Director
Office of Management and Budget

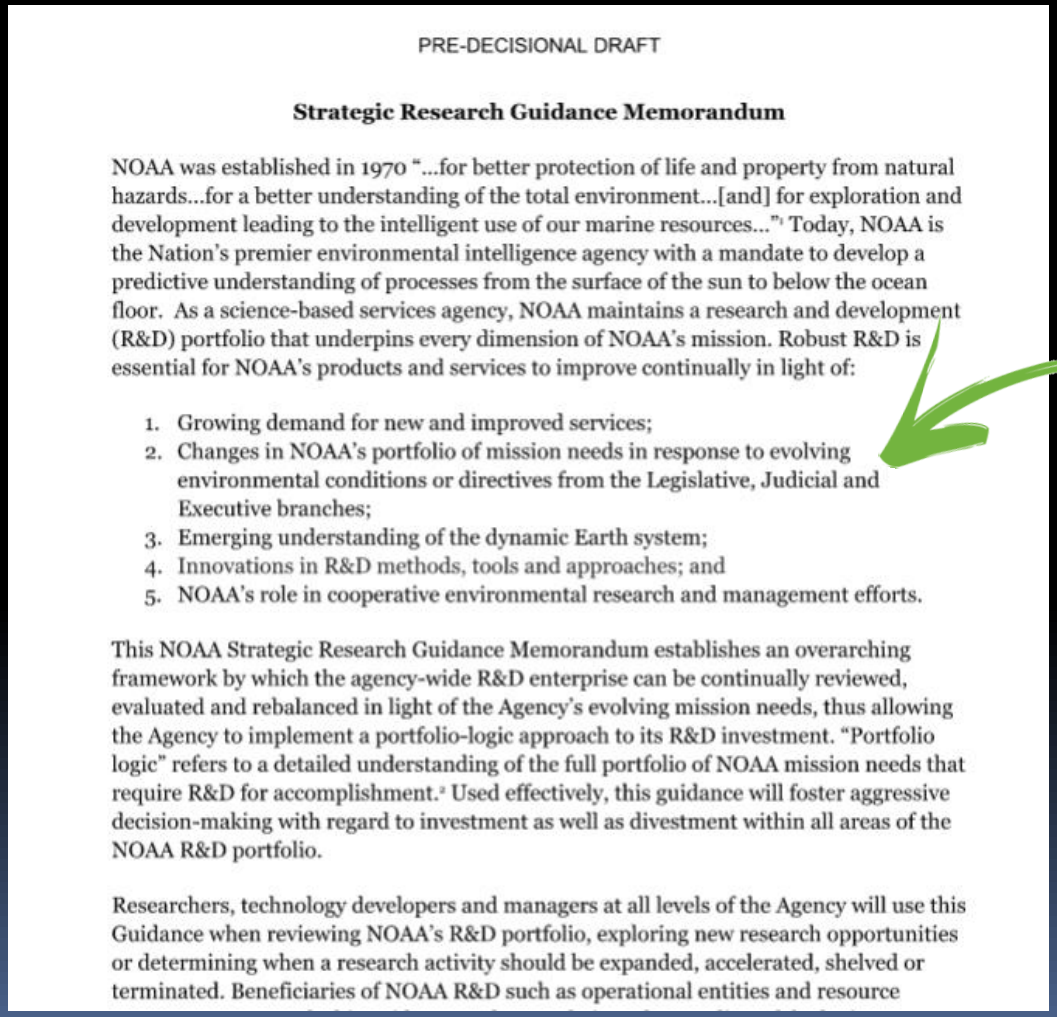
Dr. John P. Holdren
Director
Office of Science and Technology Policy

SUBJECT: Multi-Agency Science and Technology Priorities for the FY 2017 Budget

Scientific discovery, technological breakthroughs, and innovation are the primary engines for expanding the frontiers of human knowledge and are vital for responding to the challenges and opportunities of the 21st century. The Nation depends on science, technology, and innovation to promote economic growth and job creation, maintain a safe and sufficient food supply, improve the health of Americans, move toward a clean energy future, address global climate change, manage competing demands on environmental resources, and ensure the Nation's security.

OSTP/OMB Memorandum on S&T Priorities to Agencies for FY17 Priorities

STRATEGIC RESEARCH GUIDANCE MEMORANDUM



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- **NOAA Research Council** (September 2014 retreat and following)
- **SAB strategy discussion** (Spring 2015)
- **SAB 2004 report**
- **PRTF**
- **NOAA Science Challenge Workshop** reports (2010 – 2014)
- **NOAA PARR plan**
- **NOAA Ecological Forecasting Roadmap**
- **NOAA Arctic Action Plan**

STRATEGIC RESEARCH GUIDANCE MEMORANDUM: Part I

Framework of Principles

Mission alignment

An R&D portfolio focused on NOAA's explicitly defined mission needs

Transitioning R&D

Develop the most promising research to meet mission needs...to the point that it can ultimately be transitioned into operations, applications, commercialization or other use (R2X).

Research balance

A vigorous and forward-looking R&D enterprise that includes a wide range of natural and social sciences...will tolerate a degree of risk .. in support of the Agency's mission needs.

Partnerships

Engage external partners using tools optimal for a mission need, and adjust the current set of tools to best meet NOAA's evolving mission needs

STRATEGIC RESEARCH GUIDANCE MEMORANDUM: Part I

Framework of Principles

Facilities and infrastructure

Prioritize infrastructure investments based on a corporate view of mission needs and R&D

Workforce excellence

Recruit, develop, and retain a creative, diverse, and vibrant scientific workforce

Scientific integrity

Transparency, traceability, reproducibility and scientific integrity at all levels of practice and management

Accountability

Will be regularly evaluated and adjusted based on objective reviews

STRATEGIC RESEARCH GUIDANCE MEMORANDUM

FY18 NOAA Research Priorities

- Integrated Earth system modeling
- Observing system optimization
- Decision science, risk analysis and risk communication
- Data science
- Water prediction
- Arctic

QUESTIONS, COMMENTS, EDITS from SAB members to the Executive Secretary

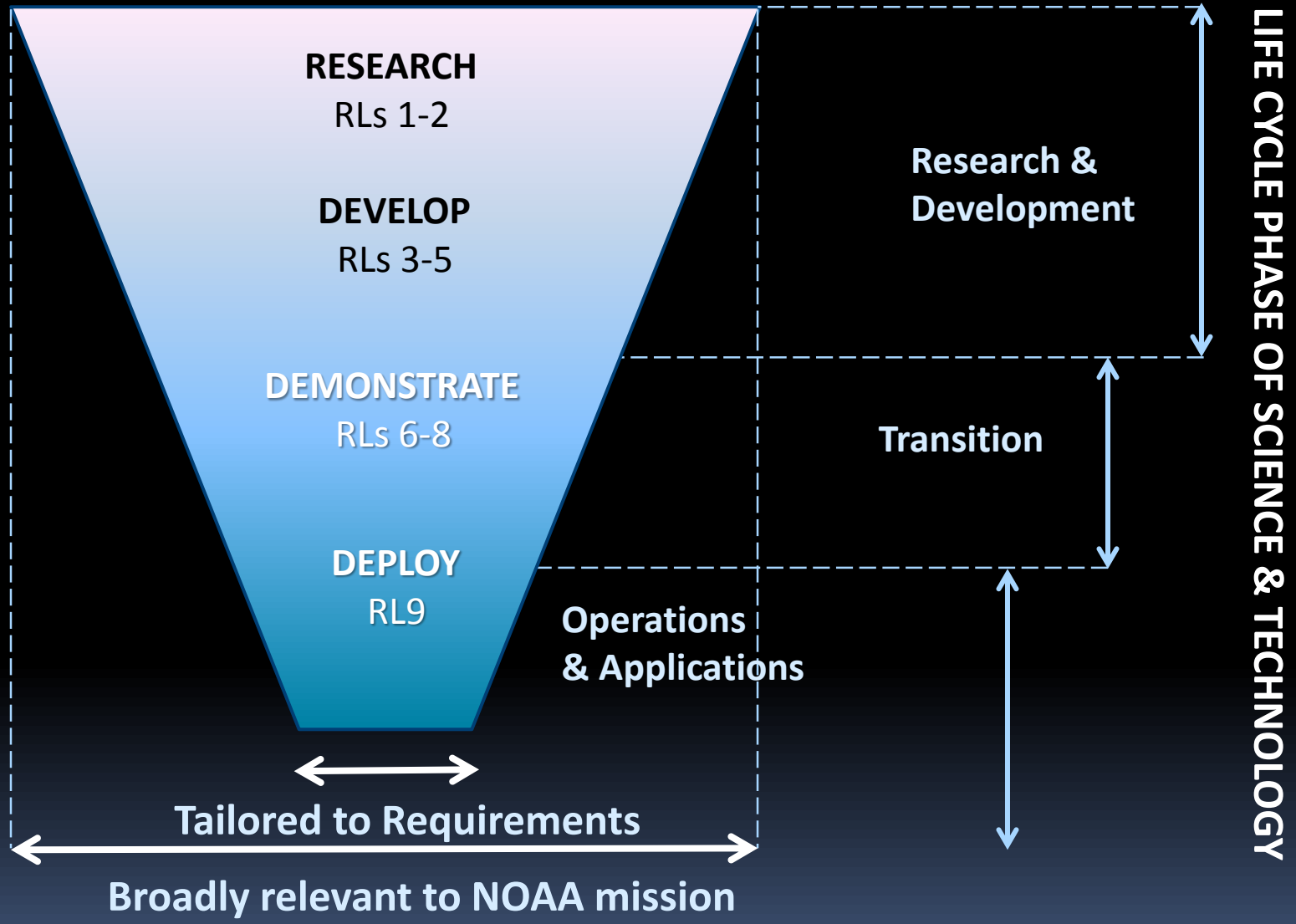
by August 18

PROCESS

RESOURCES

CULTURE

ACCELERATING R2X



SCOPE OF SCIENCE & TECHNOLOGY

ACCELERATING R2X

- Draft NOAA Administrative Order (NAO) on Policy on Research and Development Transitions
- Developing a Handbook for the NAO
- Provisional Announcement of Opportunity

R2X *EXPECTED OUTCOMES*

- Accelerated transitions
- Clear authorities and responsibilities
- Established process
- Dedicated resources

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- Improved mission performance

PARTNERSHIPS: CI21 SUMMIT

What: First-ever CI21 Summit held on June 17, 2015

Where: Silver Spring

Who: By invitation only
CIs, CI-selected
Cooperative Science Centers,
CESUs, RISAs, private sector

Format: workshop

PARTNERSHIPS: CI21 SUMMIT

BREAKOUT GROUP TOPICS

- Mission alignment
- Workforce development
- Finance and management
- Private sector involvement

PARTNERSHIPS: CI21 SUMMIT

NEXT STEPS

- Follow-up CI21 Summit discussion with Directors (completed)
- Release aggregate materials from CI21
- Develop framework for improvements over next several months (Cooperative Research Committee in collaboration with CI Directors) and circulate to CIs
- Draft and release Strategic Research Guidance Memo
- Deliver guidance document for NOAA and CIs to Dr. Sullivan. This will inform next competition (end of December 2015).

OTHER ACTIVITIES

OFCM

Scientist recognition

CENRS and Committee on Science

New Blue Economy

THANK YOU