

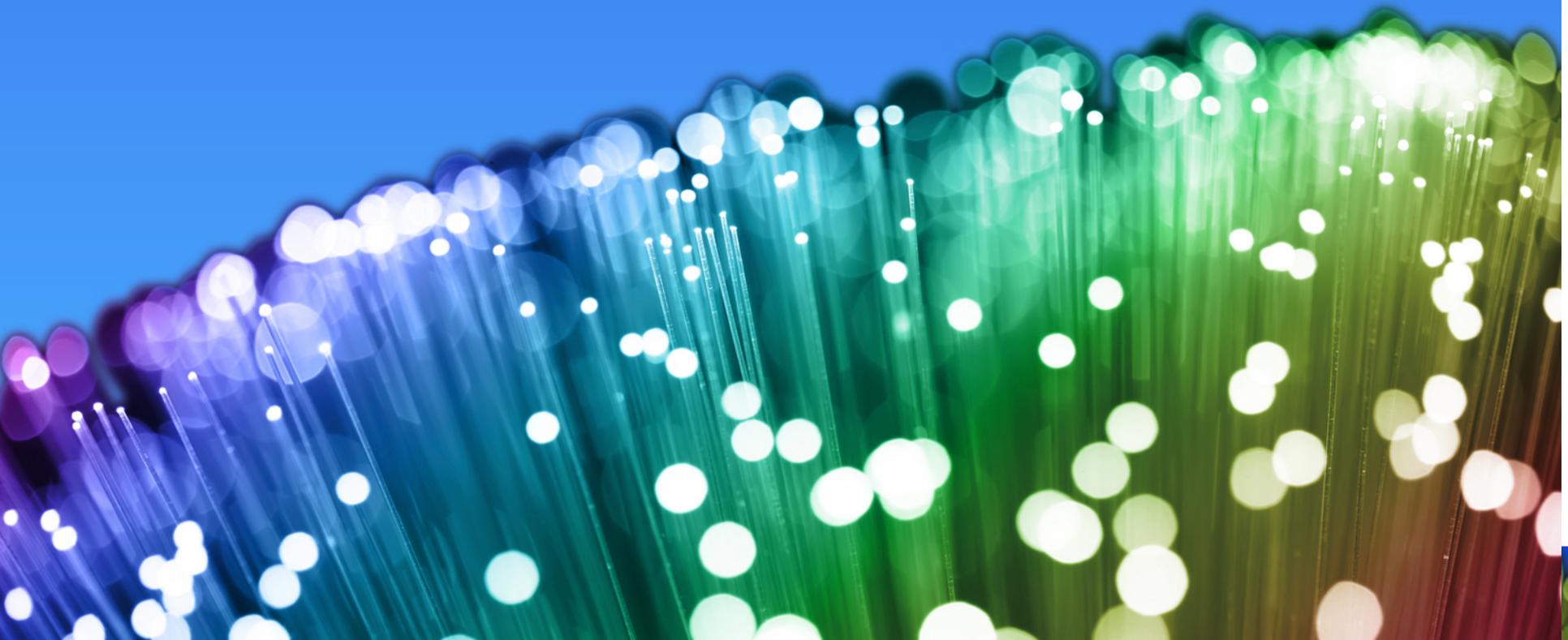


Approach for

Enterprise Risk Management (ERM) at the National Science Foundation (NSF)

National Science Board Briefing

February 21, 2017



Topics

- Overview of the Office of Management and Budget (OMB) Circular A-123 *Management's Responsibility for Enterprise Risk Management and Internal Control* policy guidance
- Overview of NSF's implementation plan agreed to by OMB in September 2016
- Ideas under consideration to be included in NSF's initial risk profile, due to OMB in June 2017
- Discussion

OMB Circular A-123 Update: ERM Goals

- Ensure appropriate risk management processes and systems **to identify challenges early, to bring them to the attention of Agency leadership, and to develop solutions** to support the achievement of strategic objectives.
- Engage all agency management, **beyond the traditional ownership** of OMB Circular No. A-123 **by the Chief Financial Officer community**. In particular, it will require leadership from the agency Chief Operating Officer and Performance Improvement Officer, and close collaboration across all agency mission and mission-support functions.
- Establish and foster **an open, transparent culture** that encourages people to communicate information about potential risks and other concerns with their superiors without fear of retaliation or blame.

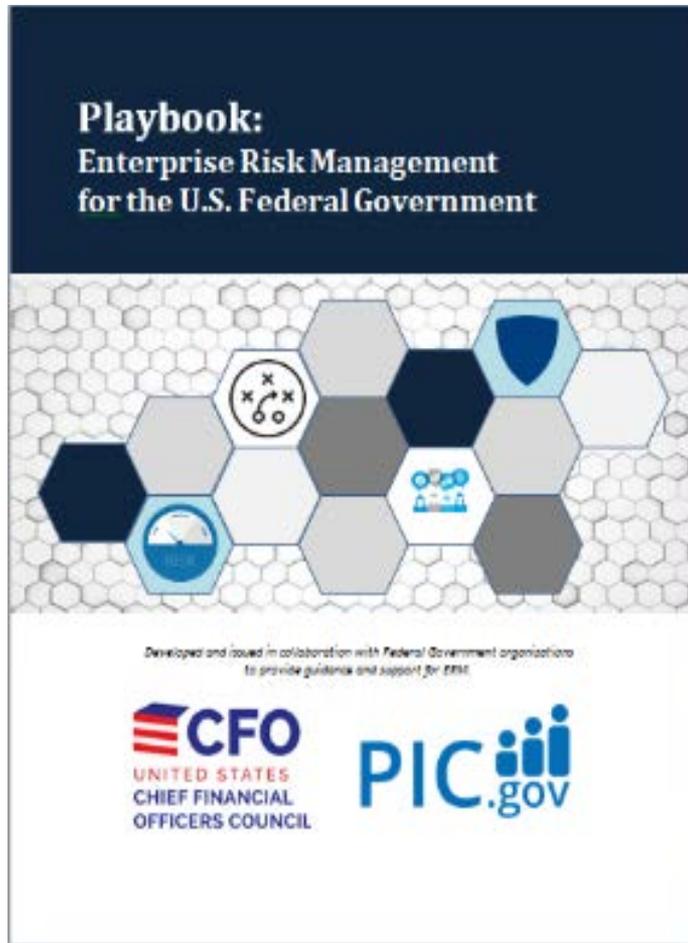


OMB Circular A-123 Update: Key ERM Requirements

- Management is responsible for the **establishment of a governance structure** to effectively implement, direct and oversee implementation of the Circular and all the provisions of a robust process of risk management and internal control.
- Implementation of the Circular should **leverage existing offices or functions** within the organization that currently monitor risks and the effectiveness of the organization's internal control.
- Agencies should develop a **maturity model approach** to the adoption of an ERM framework.
- Management must evaluate the effectiveness of internal controls annually using GAO's Standards for Internal Control in the Federal Government. (The Green Book)



ERM Playbook



- Useful to employees at all levels of an agency
- A useful statement of principles for senior staff, whose leadership is vital to a successful risk management culture and ERM program implementation
- Practical support for operational level staff who manage day-to-day risks in the delivery of the organization's objectives
- A reference for those who review risk management practices, such as those serving on Risk Committees
- Helpful for implementing the requirements of OMB Circular No. A-123

NSF Initial ERM Steps

- BFA Risk Profile Pilot (Grants, Financial Management, Acquisition, Large Facilities, and Budget Functions)
- Leadership connection with NSF Director, Chief Operating Officer (COO) and Senior Management Roundtable (SMaRt)
- Business & Operations Advisory Committee Engagement
- Director's Watch List and National Science Board Risk Discussions
- Deputy Assistant Directors (DAD) Engagement



NSF ERM Implementation Plan

OMB's Office of Performance and Personnel Management and Office of Federal Financial Management met with each major agency to discuss its planned approach for ERM implementation. At the September 2016 meeting, NSF discussed:

- Planned risk management governance structure
- Process for considering risk appetite and risk tolerance levels
- Methodology for developing a risk profile
- General implementation timeline
- Plan for maturing the comprehensiveness and quality of the risk profiles over time



NSF ERM Governance Structure

- Ultimate accountability and responsibility rests with NSF's COO
- Senior Management Roundtable (SMaRt) supports the COO to ensure ERM is integrated into the NSF culture and that responsibilities have been appropriately delegated throughout agency
- SMaRt provides value by having different points of view all together in the same room (e.g., All Programs with Office of General Counsel, Office of Legislative and Public Affairs, Office of Diversity and Inclusion, etc.)
- SMaRT and DADs provide governance and guidance on which risks to filter or share
- NSF will leverage its CXO Council for integrating ERM with mission support functions
- NSF's Deputy Chief Financial Officer and Deputy Performance Improvement Officer will provide senior staffing support



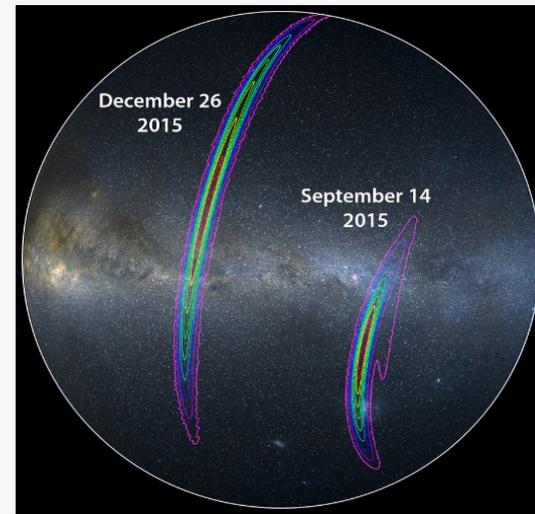
Appreciate Different Meanings of “Risk”

Excerpt from FY 2015
Performance and Financial
Highlights:

“NSF seeks high-risk,
potentially transformative
projects that will generate
pioneering discoveries and
advance executing new
frontiers in science.”

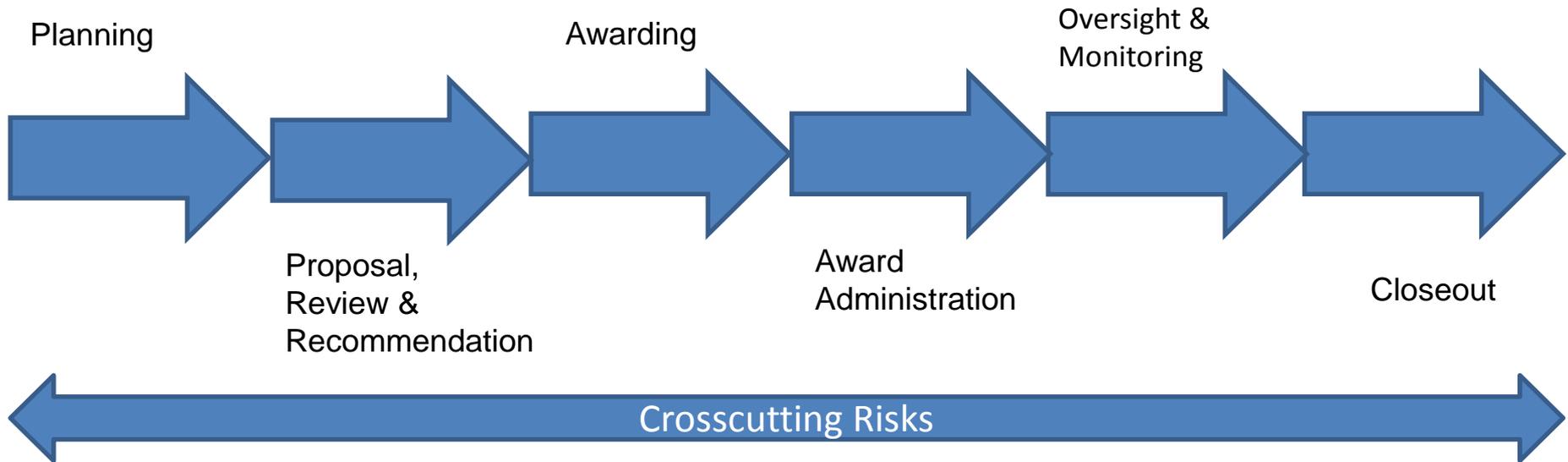
**NSF's ERM effort focuses on
business process risks we can
control or influence as
scientific risks are considered
during merit review.**

Gravitational waves detected from a second pair of colliding black holes. In December 2015, almost three months after the initial confirmation of the existence of gravitational waves in the universe, the NSF-funded Laser Interferometer Gravitational-Wave Observatory (LIGO) captured a second set of waves from another black hole merger 1.4 billion light years away. For the first time, researchers confirmed that one of the black holes was spinning, indicating that the spinning black hole experienced some dynamic process before the merger. NSF was the initial funder of the LIGO project 40 years ago, and its continued commitment to LIGO's high-risk, high-reward research now makes possible an entirely new way to observe some of the darkest yet most energetic events in our universe. The new astrophysical information is changing the way we understand the universe.



Mapping the approximate locations of LIGO detections on this sky map of the southern hemisphere. *Credit: LIGO/Axel Mellinger*

Integrating ERM at NSF: Award Lifecycle



Illustrative Examples of Risk:

- Conflicts of interest among program officers, reviewers and PIs
- Eligibility and capacity of recipients to manage federal funds
- Appropriate and adequate staff, resources, and training
- Information technology available 24/7
- Reputational harm from negative articles and reports
 - Award titles and abstracts
 - “Clean” audit opinion

General Implementation Timeline



Questions?

