

# ***How can the U.S. can maintain leadership in the drilling community and Earth sciences in the near term without the JR platform and the ability to collect new data and samples?***

- Increase involvement of early career researchers (~5–7 years post-Ph.D.; includes Ph.D. students) at the co-lead/PI level on drilling proposals
- Involvement of ECRs is CRITICAL to reduce/eliminate the knowledge gap that may occur due to decades of no riserless drilling AND to train the next generation of scientific ocean drilling scientists.

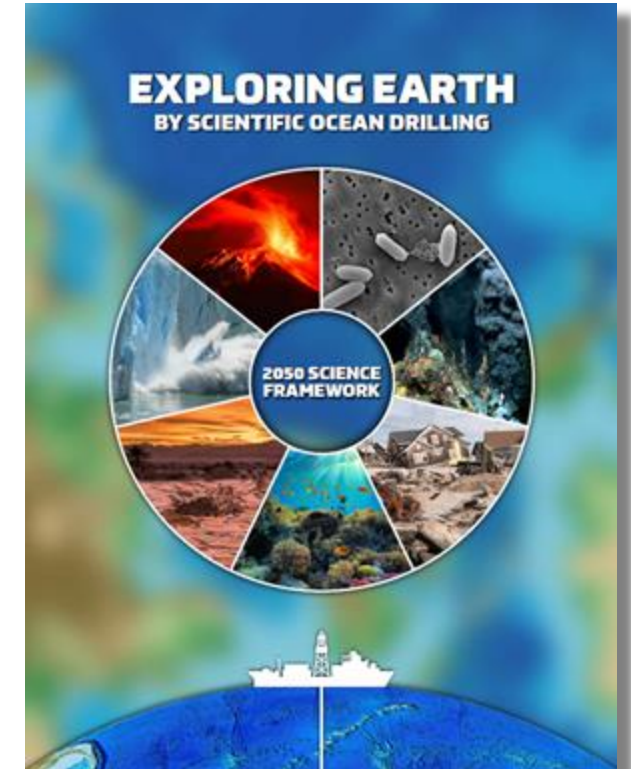


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# ***How do we perceive the future of drilling program in the context of recent reports (e.g., Ocean Climate Action Plan, UNs) and TIP, and how they see drilling priorities overlapping with broader ocean science priorities?***

- Goals completely or in part overlap with the Strategic Objectives in the 2050 Science Framework
- Many of these objectives cannot be met in whole or in part without SciOD
  - DSOS Priority Science Question: What are the rates, mechanisms, impacts, and geographic variability of sea level change? → 2050 SF Strategic Objective 3: Examining variations in ice sheets, ocean and atmosphere dynamics, and sea level
  - Ocean Climate Action Plan: Climate-adaptive marine protected areas → 2050 SF Strategic Objective 1: Defining the conditions for, and the role of, life in the marine realm



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- Economic and societal issues related to natural hazards, climate change, and biodiversity trends are core to the 2050 Science Framework Strategic Objectives and link with TIP's mission to 'address pressing societal and economic challenges'
- Top of our game regarding technology and the ability to take on new challenges and opportunities
  - Opportunity to train the next generation of STEM workforce



## **TIP's mission**

The Directorate for Technology, Innovation and Partnerships, TIP, harnesses the nation's vast and diverse talent pool to advance critical and emerging technologies, address pressing societal and economic challenges, and accelerate the translation of research results from lab to market and society. TIP improves U.S. competitiveness, growing the U.S. economy and training a diverse workforce for future, high-wage jobs.



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# ***What is the current functional reality of the U.S. drilling program and the near-future outlook, and what is the U.S. relationship to international components of the program?***

- International partnerships are strong and at the heart of SciOD
- Time is now to increase partnerships among international partners at all levels
  - Pressing need to obtain sedimentary archives from across the world ocean to continue inferring how climate change and geohazards will affect Earth systems, and in, turn society

## **ENDURING PRINCIPLES**

Implementation of the *2050 Science Framework* requires an international approach and a cohesive set of guiding principles for bringing online future scientific ocean drilling programs. These eight *Enduring Principles* follow current strengths in scientific ocean drilling.

**Collaborative and inclusive international programs.** Scientific ocean drilling addresses truly global science questions. To make significant progress on the science goals encapsulated in the *Strategic Objectives* and *Flagship Initiatives* requires collaborative and inclusive approaches through a united collective of international programs.



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# ***What is the current functional reality of the U.S. drilling program and the near-future outlook, and what is the U.S. relationship to international components of the program?***

- Encourage our early career researchers (ECRs) to go abroad and forge relationships with our international collaborators to build collaborations that will carry over the decades without riserless drilling
  - Need strong financial support for ECRs
  - Need strong infrastructure to support the next generation of scientific ocean drilling scientists (e.g., USSSP, USAC)



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