

UPDATE ON NSF'S BIG IDEAS

NSF's Bigs Ideas, first put forth in FY 2017, ended as a unifying concept in FY 2023 as planned. Investments in these forward-looking research categories across the R&RA, EDU, and MREFC accounts provided the groundwork for many new successes. Most of the Big Ideas will continue as core research programs or be superseded by new but related efforts. For example, while the *Understanding Rules of Life (URoL)* Big Idea has ended, in FY 2024 the BIO Directorate will build upon the knowledge gained through URoL to create a new effort focused on Using the Rules of Life, which will support convergent, use-inspired research in biotechnology. The data-driven discovery, workforce development, and community-building activities supported by the *Harnessing the Data Revolution* Big Idea lay a foundation for, and will naturally feed into, FY 2024 investments in programs such as Accelerating Computation-Enabled Discovery. *The Future of Work at the Human Technology Frontier (FW-HTF)* Big Idea will sunset, but new investments connected to FW-HTF concepts will be made as components of new and existing activities, such as Future Manufacturing, clean energy research hubs, circular economy engineering and science, and sustainable regional systems research.

Growing Convergence Research and *Mid-scale Research Infrastructure Track 1* within Integrative Activities, and *Mid-scale Research Infrastructure Track 2* within the MREFC account will continue as independent programs. *Navigating the New Arctic* within the GEO Directorate will be superseded by a new effort which builds on the core success of engaging with local communities and broadens the scope to look at resilient futures for these communities. *Windows on the Universe* will continue as a meta-program between the MPS and GEO Directorates to fund innovative investments in multi-messenger astrophysics. *Quantum Leap* was previously superseded by the QIS program. *NSF INCLUDES*, renamed in the CHIPS & Science Act of 2022 as the *Eddie Bernice Johnson INCLUDES Initiative*, continues to advance equity, inclusion, and broaden participation in STEM at scale by providing research, sustainable activities, and infrastructure for collaborative systems change through the EDU Account.