



Public Comment from the Federation of Associations in Behavioral & Brain Sciences (FABBS)

Re: Request for Information on Workforce Development in Emerging and New Technologies

Date: January 15, 2026

Question 1: How might NSF TIP collaborate with critical and emerging technologies industries to best prepare future workers and reskill current workers?

FABBS appreciates TIP's focus on preparing workers and students for careers in critical technology sectors. FABBS encourages TIP to adopt a holistic conception of workforce readiness that moves beyond technical systems-level concentration to include the human element of technology development and adoption. While specialized technical roles are essential, emerging technologies are increasingly becoming general purpose tools that will reshape work across virtually all industries and occupations.

FABBS urges TIP to prioritize partnerships with K-12 systems and community colleges. K-12 partnerships ensure that relevant curriculum bridges the gap between academic learning and real-world needs by sparking interest and providing early exposure to STEM fields. These early experiences are essential for building a confident STEM identity for long-term career persistence. Additionally, community colleges play a critical role in providing accessible artificial intelligence (AI) training and preparing students for in-demand roles through apprenticeships pathways. These partnerships will be essential in limiting the mismatch between industry needs and workers' knowledge, skills, and abilities (KSA).

In regards to reskilling, TIP should prioritize research into the psychological and cognitive barriers in skill advancement, particularly for adult workers with limited digital literacy. Research from the brain and behavioral sciences demonstrates that skill acquisition is not a uniform process. Adult learners vary widely in prior educational experiences and digital fluency. FABBS also cautions TIP to frame workforce development as a continuous "opportunity for growth" rather than a remedial "reskilling" process. TIP can better incentivize workers to enter and remain in emerging technology fields without the stigma that is often associated with traditional retaining programs.

Question 2: How might NSF TIP leverage local, state, and tribal, including regional, efforts in workforce development to help provide all Americans with the skillset(s) required for careers in critical and emerging technologies or closely aligned fields?

FABBS encourages TIP to build on existing, evidence-based state and local frameworks such as the Societal Experts Action Network (SEAN), developed by the National Academies of Sciences,

Engineering, and Medicine (NASEM) with support from NSF's Directorate for Social, Behavioral, and Economic Sciences (SBE). SEAN's work highlights the importance of delivering expertise to state and local governments' capacity to effectively and responsibly adopt and use emerging technologies such as AI. Leveraging frameworks like SEAN ensures that TIP accomplishes its goal to provide all Americans with the skills required for careers in critical and emerging industries.

In addition to SEAN, TIP should look to interdisciplinary programs like the Collaborative Research in Computational Neuroscience (CRNCS). This program exemplifies how merging computational theory with computer science and neurobiology can create robust STEM talent. TIP can scale this model regionally to foster collaboration between local industries and research agencies.

Question 3: Beyond questions 1 and 2 above, are there specific sectors, organizations, or groups that NSF TIP must especially engage to fully address the goals articulated in the workforce roadmap and this RFI? If so, which ones, why, and how?

To fully address the goals articulated in the roadmap, FABBS encourages TIP to engage a broader ecosystem of partnerships beyond traditional tech sectors. First, deep integration with NSF's Directorate for STEM Education (EDU) and the Directorate for Social, Behavioral and Economic Sciences (SBE) is essential. While EDU offers expertise in learning systems, SBE provides the foundational understanding of human behavior necessary to predict how current workers will adapt to technological shifts. Furthermore, the National Center for Science and Engineering Statistics (NCSES) is a vital partner for collecting data on STEM workforce trends. Similarly, the National Center for Education Statistics (NCES) serves as a crucial partner by providing data on the condition of U.S. education.

TIP should also engage researchers and practitioners from the behavioral and brain sciences who study workforce motivation and retention. Organizational neuroscience suggests that prioritizing employee engagement leads to higher productivity and lower voluntary turnover (Brown, 2025). By engaging experts in the brain and behavior science industry, TIP can design workforce strategies that focus on retention and how technology makes humans better and more productive, rather than simply how humans can serve the technology.

Brown, T. (2025, December 3). *Neuroscience of Employee engagement: 5 practical applications*. LSA Global.

<https://lsaglobal.com/neuroscience-of-employee-engagement-5-practical-applications/>

Question 4: As technology impacts nearly all economic sectors, a full range of technology-enabled roles will require a wide range of skills. Where should NSF TIP emphasize its investments in workforce development in the near and long term?

Building on our response to question 1, FABBS highlights the need for sustained, long-term investment in K-12 education. FABBS encourages TIP to prioritize early and continuous exposure to digital fluency to ensure that students can critically evaluate and apply emerging tools across any career path.

FABBS also urges TIP to prioritize rigorous data collection and evaluation to ensure that federal investments fulfill their anticipated outcomes. As TIP scales its workforce initiatives, FABBS suggests that TIP move beyond participation metrics and adopt a longitudinal approach that measures the impact and fidelity of these investments.

Question 6: What may be the most effective strategies to address workforce gaps as critical and emerging technologies are introduced into a range of industries?

Parallel to technical opportunities, FABBS recommends TIP address the underlying behavioral and social barriers to STEM participation. FABBS encourages TIP to use human-centered design tools to address underlying barriers for skill development. Research from ICF demonstrates that human-centered design in organizational transformation can boost employees' confidence (Dawkins-Lyn, 2020). Further research shows that cultivating STEM identity and a sense of belonging is often a prerequisite to successful skill development and long-term careers in STEM-related work (Singer et al, 2020).

By aligning skill development with strategies that foster motivation, adaptability, and trust in technology, TIP can effectively address workforce gaps and support a resilient, future-ready workforce. FABBS emphasizes that addressing these underlying barriers should not be a secondary goal but a prerequisite.

Dawkins-Lyn, N. (2020, June 23). *Human-centered design is key to successful organizational transformation*. ICF.

<https://www.icf.com/insights/strategy/human-centered-design-organizational-transformation>

Singer, A., Montgomery, G. & Schmoll, S. (2020). How to foster the formation of STEM identity: studying diversity in an authentic learning environment. *IJ STEM Ed* 7, 57

<https://doi.org/10.1186/s40594-020-00254-z>