**NIST Question 1:** What are the core Federal technology transfer principles and practices that should be protected, and those which should be adapted or changed?

**EPA Response 2:**

* FTTA, Stevenson-Wydler, Bayh Dole statutes are all working well, and are essential to effective transfer of technologies, knowledge, and capabilities from Federal research and development (R&D). Revise language in 15 U.S. Code § 3710c to permit Offices of Research and Technology Applications (ORTA) to retain a portion of royalties or other payments received by a Federal agency from the licensing and assignment of inventions under agreements entered into by Federal laboratories under 15 U.S. Code § 3710a to support critical FTTA-related activities beneficial to the laboratory and researchers/inventors.
* Expand the Other Transaction Authority (OTA) to EPA to enable movement of technology into production and use in situations of a critical or timely nature (i.e., natural disasters, national security situations, etc.).

**NIST Question 2:** What are the issues that pose systemic challenges to the effective transfer of technology, knowledge, and capabilities resulting from Federal R&D? Please consider those identified in the RFI as well as others that may have inhibited collaborations with Federal laboratories, access to other Federally-funded R&D, or commercialization of technologies resulting from Federal R&D.

**EPA Response 2:**

* The use of Partnership Intermediary Agreements (PIAs) to increase the likelihood of success in conducting cooperative or joint activities with small business firms, institutions of higher education or educational institutions as anticipated under 15 USC 3715 (a)-(c) must be signed off at the Administrator level, a barrier to getting these agreements in place.
* Federal agencies are challenged with bridging the gap between development of technologies during basic research and maturing those technologies to the point where they can be licensed and be ready for sale in the marketplace.
* Federal employee inventors are not permitted to spend time commercializing a technology given ethics rules.
* Many collaborators on technology transfer efforts do not fully understand the unique rules and restraints that apply to Federal agencies, because these rules do not apply in the private sector.
* Establish strategies for guidance and technology transfer performance measures for leadership, management and staff that encourages and promotes technology transfer.

**NIST Question 3:** What is the proposed solution for each issue that poses a systemic challenge to the effective transfer of technology, knowledge, and capabilities resulting from Federal R&D? Please consider the approaches identified in the RFI.

**EPA Response 3:**

* Allow Partnership Intermediary Agreements (PIAs) and related FTTA support agreements to be delegated to a lower level, consistent with delegations for signing other FTTA agreements.
* Provide funding and support for a program similar to DOE’s Technology Commercialization Fund, to assist agencies in furthering development of early stage technologies (reference: <https://www.energy.gov/technologytransitions/services/technology-commercialization-fund>).
* Modify existing ethics rules (18 U.S.C. § 208) for Federal employees/inventors to allow them flexibility to participate in commercialization of their inventions, either independently or in coordination with a licensee.
* Help collaborators understand and accept that there are unique rules and restraints that apply to Federal agencies that don’t apply in the private sector (e.g. a Federal laboratory must avoid the appearance that it is providing “services” in the guise of a CRADA, must comply with the Freedom of Information Act, and cannot indemnify a partner or agree to binding arbitration).

**NIST Question 4:** What are other ways to significantly improve the transfer of technology, knowledge, and capabilities resulting from Federal R&D to benefit U.S. innovation and the economy? What changes would these proposed improvements require to Federal technology transfer practices, policies, regulations, and legislation?

**EPA Response 4:**

* Federal technology transfer programs are challenged with fully assessing the impact of Federal technology transfer activities. Many activities, such as patenting, take several years to come to fruition, followed by other significant periods to find licensees and negotiate licenses, and for a licensee to move the technology into the marketplace. This lag time is often significant, and makes it difficult to demonstrate economic impact or process improvements within short timeframes.
* EPA’s FTTA program could benefit from a consistent definition from Congress regarding how to best define what is considered successful technology transfer across the Federal government. Once this definition is provided, further guidance on the metrics that best demonstrate these impacts would be helpful. For example, while a metric such as job creation can be useful, it provides an incomplete picture given the variety of technologies transferred. Many EPA technologies may lead to better environmental health, or at least an improved ability to measure contaminants in the environment. How can environmental and human health improvements adequately be captured via metrics?
* Furthermore, Federal agencies are challenged by a lack of mechanisms to gather various metrics that would be beneficial in helping to calculate the impact of Federal technology transfer on society. An exemption to the Paperwork Reduction Act that would allow ORTAs to solicit valuable metrics from their partners and licensees could assist in more effective communication of the value and importance of Federal technology transfer activities to the U.S. economy and society.
* To demonstrate Federal technology transfer impact, Federal agencies should strategically develop a plan of action to engage technology transfer with a set percentage of research projects to be funded for the purpose of transferring technology into the market.