**Request for Information**

**Federal Technology Transfer Authorities and Processes**

**Last day to submit the responses: July 30, 2018**

### Introduction

In order to advance the President's Management Agenda to modernize government for the 21st century, including the associated Lab-to-Market CAP Goal in coordination with the White House's OSTP, NIST is initiating a Return on Investment (ROI) Initiative [4] with the intent of conducting a comprehensive assessment of the Federal technology transfer system that will identify opportunities to improve Federal technology transfer efforts, policies, and practices. The goal of this effort is to, where appropriate, streamline and accelerate transfer of technology from Federal R&D investments to attract greater private-sector investment for innovative products, processes, and services, as well as new businesses and industries that will create jobs, grow the economy, and enhance national security.

NIST is seeking broad input and participation from stakeholders in Federal R&D, intellectual property, and technology transfer to assist in identifying and prioritizing issues and proposed solutions. This assessment will address: (a) Core Federal technology transfer principles and practices that should be protected, and those which should be adapted or changed; (b) approaches to improve efficiency and reduce regulatory burdens for technology transfer to attract private sector investment in later-stage R&D, commercialization, and advanced manufacturing; (c) new partnering models and technology transfer mechanisms with the private sector, academia, other Federal agencies, state, and other public-sector entities to support technology development and maturation; (d) new approaches that will reduce or remove barriers, and enable accelerated technology transfer, with a focus on areas of strategic national importance; (e) better metrics and methods to evaluate the ROI outcomes and impacts arising from Federal R&D investment; and (f) new approaches to motivate significantly increased technology transfer outcomes from the Federal sector, universities, and research organizations.

This information will only be used as input to the Return on Investment initiative. All submissions, including attachments and other supporting materials, will become part of the public record and subject to public disclosure. Sensitive personal information, such as account numbers or Social Security numbers, or names of other individuals, should not be included. Submissions will not be edited to remove any identifying or contact information. Do not submit confidential business information, or otherwise sensitive or protected information. Comments that contain profanity, vulgarity, threats, or other inappropriate language or content will not be considered.

### Instructions

This template is designed to facilitate responses to the RFI. Use of this form is optional.

It is not required to fill out all of the sections, for example a participant may elect to only provide input on one question.

Save and email it to [roi@nist.gov](mailto:roi@nist.gov).

# Contact Information

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| Full Name | Samantha Zhang |
| Email address | szhang@usbr.gov |
| Organization Name | Bureau of Reclamation, Department of the Interior |
| Organization Type | Government owned government operated |

Questions

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

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| The Federal TT principles and practices that need to be protected include:  1. Establishment of the Office of Research and Technology Application (ORTA) as required by 15 U.S.C. §3710(b).  This is important in establishing a technology transfer office in federal agencies that do any scientific, research, or technical work. Maybe the name can be changed from ORTA to Technology Transfer Office because ORTA sounds not so clear especially to those who are not familiar with technology transfer.  Currently, technology transfer does not seem to be well recognized as a career choice across federal agencies. For example, technology tranfer is usually not listed on the usajobs website. In addition, there is a lack of technology transfer training available across federal agencies. In order to recognize the importance of the technology transfer role that it plays to transfer federal technologies to the world, it needs to be recognized as a career choice and training needs to be available for someone who chooses this career path.  2. Technology transfer, consistent with mission responsibilities, is a responsibility of each laboratory science and engineering professional.” 15 U.S.C.§3710(a)(2).  It is important that federal agencies recognize this responsibility and it is not clear whether that's always the case.  3. Each laboratory director shall ensure that effort to transfer technology are considered positively in laboratory job descriptions, employee promotion policies, and evaluation of the job performance of scientists and engineers in the laboratory." 15 U.S.C.§3710(a)(2).  It is important that federal agencies recognize this responsibility and it not clear whether that's always the case.  4. Allow each federal agency to enter into cooperative research and development agreements and negotiate licensing agreements (15 U.S.C. 3710a).  This general authority is significant to give authority to federal agencies to partner with non-feds to conduct research and development. |

1. 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?

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| 1. Lack of career choice and training for technology transfer professionals - Give recognition to the role of the technology transfer through having this as a job series or category available on usajobs Website and providing training for those interested in pursuing technoglogy transfer as a career across federal agencies.  2. Inefficiency to get technology transfer agreements signed - Currently, it can take up to 5 weeks to get simple agreements like material transfer agreements signed. There are layers of reviews and approvals needed to get TT agreements signed. These reviewers and approvers do not always seem to be knowlegeable about technology transfer activities and the agreements they're reviewing or signing which can add layers of unnecessary reviews and approvals and prolong the time to get these agreements signed. This can result in loss of opportunities with non-federal partners.  3. Guidance for managing confidential information. In handling intellectual property matters, there are serious liabilities and consequences for mishandling sensitive or confidential information. However, there is a lack of clear guidance or statute for managing sensitive or confidential information.  4. Information in annual technology transfer reports. Annual technology transfer reports as required by 15 U.S.C. §3710(f) need to capture relevant information of how technology transfer changes the world. Some of the metrics including inventions disclosed or number of patents filed and issued don't necessarily indicate the impacts of technology transfer.  5. Foreign entities. In some federal agencies, doing business with foreign entities is encouraged. However, there is no clear guidance on how to enter into these technology transfer partnerships with foreign persons, industrial organizations, or other non-government foreign entities.  6. Ethics guidance. Technology transfer is a contact sport and involves different areas of expertise including technical, business, legal, ethics, and others. However, there is a lack of guidance on how these different areas affect technology transfer especially with ethics responsibilities for federal employees.  7. TT need to be recognized or function as a program and not just a tool. TT involves various areas of expertise including technical, business, legal, ethics and others to ensure TT activities are carried out in accordance with legislation and that opportunities are not lost to effectively transfer technologies to the market to help boost the U.S. economy. Currently, at my agency, technology transfer is not recognized as a program but it is being recognized as a tool. TT is part of the Research and Development Office. Science and Technology Program. There is currently 1 full time employee to manage all technology transfer activities for over 5,400 employees at Reclamation. About 700 of the 5,400 employees are scientists and engineers from the Technical Services Center in Denver, Colorado and regional ofifices.  8. Patent technologies that will only enhance the transfer of technologies. Many federal technologies get patented but just sit on the shelf collecting dust. There needs to be better processes or guidance on ensuring these patented technologies are transferred to the market.  9. Software or copyright protection. Currently, there is a lack of guidance on software or copyright protection in working with non-federal partners.  10. Know-how protection for federal technologies. Private sector are allowed to protect trade secrets, however, federal agencies are not allowed to protect know-how. Prior to having to go through the long and expensive process of filing a patent to protect a technology, it maybe more efficient for the federal government to speed up the partnership process to get technologies transferred.  11. Entrepreneurship for government technologies. Currently, there is no clear process for federal employees to spin out their technologies developed under government's time. At times, federal agencies are not best at transferring technologies into the market. If employees have proven that they can do a better job in transferring technologies into the market, become entrepreneurs of their inventions and is able to create jobs, then they need to have the opportunity to be able to transfer those technologies. |

1. 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.

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| 1. Lack of career choice and training for technology transfer professionals. Identify technology transfer as a job series on USAjobs Website. Dedicate resources and training capabilities to foster technology transfer as a career choice.  2. Inefficiency in getting technology transfer agreements signed - To work effectively and efficiently with non-federal partners, approval or signatory process need to be streamlined so that opportunities are not lost. Approvers or signatories for technology transfer agreements need to be delegated to those who are experienced or have demonstrated proficiency in technology transfer. These approvers need to understand that inefficient and ineffective process for approving technology transfer agreements can result in opportunities lost. They need to understand how companies conduct business and that these companies may only have a specific window of time to use their resources to conduct specific projects and that time can hurt their bottom line. Signatories or those involved in review and approval of technology transfer agreements must demonstrate experience or proficiency in technology transfer and the various types of technology transfer agreements.  3. Guidance for managing confidential information. Develop an office and resources to develop and manage guidance and information for managing confidential information for technology transfer activities for all federal agencies.  4. Information in annual technology transfer reports. Update relevant metrics and information that indicate impacts of technology transfer.  5. Foreign entities. Develop an office and dedicate resources that develops and manages information and guidance on entering into partnerships with foreign entities.  6. Ethics guidance. Develop an office and dedicate resources that develops and manages information and guidance on ethics responsibilities related to technology transfer activities for federal employees.  7. TT need to be function as a program and not just a tool. In order to transfer federal technologies efficiently and effectively to the market, TT need to function as a program with adequate resources and capacity to carry out its activities.  8. Patent technologies that will only enhance the transfer of technologies. There needs to be better processes or guidance from the US Patent and Trademark Office and federal agencies on ensuring these patented technologies are transferred to the market.  9. Software or copyright protection. Dedicate resources and develop guidance on software or copyright protection.  10. Know-how protection for federal agencies. Dedicate resources and update guidance on being able to protect know-how for federal technologies so that it would speed up the process to transfer technologies into the market.  11. Entrepreneurship for government technologies. Dedicate resources and develop guidance on allowing federal inventors to become entrepreneurs. |

1. 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?

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| 1. Currently, each federal agency has their own versions of technology transfer agreements. From my experience, majority of these legal provisions or terms in these agreements are developed from internal policies rather than from the Federal Technology Transfer legislation which applies to all federal agencies. There needs to be standard technology transfer agreements (non disclosure agreements, material transfer agreements, facility use agreements, CRADAs, licensing, partnership intermediary, technical assistance, etc.) that would be developed in accordance with Federal Technology Transfer legislation, so that it would allow businesses to enter these agreements with any federal agency with ease and efficiency. Businesses interested in entering into these technology transfer agreements know what to expect from any federal agency and they are aware that agencies must abide by this legislation, therefore, the negotiation and legal review process can be streamlined.  2. Develop show case events for different areas of federal technologies to allow companies to see and explore on working with federal inventors to develop and improve technologies.  3. Develop a one stop shop with short videos and talks to demonstrate federal technologies and one-stop shop for non-federal entities to license federal agencies.  4. Develop an interactive site where federal inventors from multiple areas of expertise can chat with each other about developing/improving their inventions.  5. Dedicate an office or resources that find or secure contractors or other sources to help all federal agencies find research partnerships.  6. Dedicate an office or resources to help all federal agencies with technology transfer questions including statutory, agreements, licensing, royalty rates, etc.  7. Have the Federal Laboratory Consortium connect with Association of University Technology Managers and Licensing Executive Society on exploring ways to work together to transfer federal technologies.  8. Have Federal agencies that have well developed TT programs to help smaller federal agencies. Smaller federal agencies may not need 20 to 30 full time employees to help manage their small portfolio of TT activities. However, these small agencies need to carry out their TT activities in accordance with TT legislation and do not have access to specific expertise like patent attorneys, partnership intermediaries, marketing, licensing staff, and other resources or tools to help find research partnerships, etc. If smaller federal agencies can use some of these resources and capabilities from the bigger federal agencies, this will help save government funds. |

## Thank you for your time and participation.