Dr. Walter G. Copan  
Under Secretary of Commerce for Standards and Technology and National Institute of Standards and Technology  
NIST  
100 Bureau Drive  
Gaithersburg, Maryland  20899  
   
Dear Dr. Copan:  
    
On behalf of Fraunhofer USA , I would like to offer the following comments on the Federal Technology Transfer Authorities and Processes Return on Investment (ROI) Initiative.  
   
Fraunhofer USA is a US based non-profit corporation dedicated to the advancement of applied research, chartered in 1994, and affiliated with Fraunhofer Gesellschaft in Germany. The Fraunhofer USA board is composed of representatives from industry, academia and other US based research organizations. Fraunhofer USA operates 7 applied research and development centers in the states of Connecticut, Delaware, Maryland, Massachusetts and Michigan. These centers perform applied research projects for industry and government clients and are at the forefront in the fields of advanced manufacturing, laser application technologies, coatings and diamond technologies, experimental software engineering, molecular biotechnology, sustainable energy and energy innovation. It is the mission of Fraunhofer USA to close the innovation gap from the lab to the real market for our customers. To do so we develop and validate scientific applications and technologies for industrial innovation in the USA.

Fraunhofer USA pursues strategic alliances with one or more of the numerous Fraunhofer Institutes of Fraunhofer-Gesellschaft in Germany and other parts of the EU. Fraunhofer USA competes for federal grants and contracts as part of our applied research mission in the US.

Together with Fraunhofer research institutes in Germany, we strive to strengthen transatlantic collaboration in education, applied research and innovation. To facility the transfer of federally funded technologies from the laboratory to the market, Fraunhofer USA research centers are closely tied with major research universities in the US, including the University of Maryland, the University of Delaware, Boston University, the University of Connecticut and Michigan State University. Here the centers work with faculty and graduate students on moving new ideas faster along the technology readiness level chain toward practical deployment with industry partners or new business ventures.

We believe that the Fraunhofer approach to bridging the innovation gap from laboratories to markets is a model that has been thoroughly proven in Germany over the past 70 years and has attracted great interest in the United States over the past 25 years, which is demonstrated by the numerous successful applied research and development projects that the company has performed with federal government institutions and industry partners. In fact, contract research revenues at Fraunhofer USA are coming in equal amounts from commercial partners and federal sources, which is one of the key business targets for any Fraunhofer operation.

In terms of federal contracts and grants administration, we offer the following comments and suggestions to increase impact of federal research and improve the process:

To be successful in the long term, Fraunhofer’s business model relies on performance driven funding that consists of three equal parts: 1/3 contract research with industry, 1/3 contract research with government entities and 1/3 federal support in form of institutional base-funding. That institutional base-funding is invested in infrastructure and internal research efforts and its actual amount is determined based on a achieving a healthy balance of contract research with industry and government. Neither industrial nor federal contracts should outweigh the other to keep Fraunhofer operations where they should be: right in the center of bridging the gap between basic research at universities and industrial innovation.

This funding model for translational research is very powerful as it is performance based and self-regulates the participating institutions to focus on activities that do just that, bring technologies to market in collaboration with universities and industry partners. Overall, only one third of the costs are covered by institutional base-funding while two thirds of revenues are won in the competitive contract research market with government and industry clients.

We believe that the Fraunhofer USA model of applied research working with industries and universities can offer good insight as to how to achieve more impact from federal research spending, and other initiatives of the US government, such as the National Manufacturing Innovation Network. Fraunhofer have extensive experience in improving manufacturing processes working through our research institutes and our university and private sector partners. We also believe that the Fraunhofer model could very well work in the United States for many other research institutions that could be attracted to performing more translational research activities if a similar funding model would be available through federal institutions.

As you are located in Gaithersburg, Maryland, we would invite you to visit the Frauhofer Center for Software Engineering at the University of Maryland, as it is near NIST headquarters, or any of the other Fraunhofer Centers across the US as your travel schedule allows.  
  
Thank you for your consideration.  
  
Sincerely,

Thomas Schuelke

Fraunhofer USA