

Director Jennifer Haskell Remarks as Delivered  
“U.S. EU STI Collaboration”  
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Good afternoon. Thank you for inviting me.

It is such a pleasure to be here in Brussels. I haven't been here in more than 20 years. Sometime I will have to come during the spring or summer, though. So we are here to talk about the US-EU science and technology relationship. We have here multiple stakeholders and this allows us to discuss ways we can work to continue the S&T aspects of the transatlantic partnership.

I hope to give you a sense of how the United States' science enterprise works and to let you all know what the US government's goal is in having Science and Technology Agreements, not only with the EU, but with our partners around the world. The title, “science and technology agreement” is a bit of a bureaucratic hold-over. Lack of the word “innovation” does not signal anything, and we've been actively engaged with our bilateral counterparts on the topic globally.

Today, the United States is experiencing greater demand than ever to partner with other countries on science, technology, and innovation. At the root of this desire is the understanding that science and technology

are the basis for solutions to local and global challenges and that we must continue developing and maintaining knowledge-based innovative economies.

Generally speaking, in the United States our science enterprise is focused on whatever inquiry scientists and the private sector think is important. Our federal government science and technology agencies focus on their specific missions and funding mandates.

Dr. John Holdren, science advisor to President Obama, recently related how he sees US STI, when he said, “*Science, technology, and innovation is not a ‘pipeline’ in which investments in science and technology—and the associated generation of discoveries—necessarily lead to successful innovation defined in terms of widespread application.*

*Instead, the pace of progress depends on a complicated set of feedbacks among science, technology, and innovation in which the availability of capital at the demonstration and pilot phases... incentives for public-private-academic partnerships ... the existence or absence of subsidies for incumbent technologies... and many other factors play important roles.”* So he said innovation isn’t really a pipeline but a web of factors.

In the United States, we facilitate innovation through a “bottom up” approach, recognizing that the ecosystem necessary to advance science, technology, and innovation exists across a wide variety of disciplines and jurisdictions at the federal and local level as well as within the academic and private sector worlds. There is no single national authority -- no Ministry -- that oversees the conduct of science, technology, and innovation. While this approach has an inherent unpredictability, it contributes to enhancing the potential for disruptive game changing solutions

We treat federal funding for research and development as an important “first step” in developing new knowledge, new data, new processes and technologies that, down the road, lead to incremental or game-changing disruptive elements within the economy. This is good for the economy-- good for society. Federal R&D investment is essential to address the basic science that might not otherwise be undertaken due to insufficient, timely economic incentives for the private sector to make the investment.

Over the years, in the U.S., the private sector has funded around 70% of R&D, in applied science as well as in the experimental development phase. The federal government funds 30% of R&D, largely but not entirely, in basic research.

Fundamental, basic, curiosity-driven inquiry, which has been a hallmark of the American research enterprise, is a powerful driver of unexpected new technology. Discoveries from such science have led to important commercial applications that have resulted in significant positive impacts on the U.S. and global economy – in sectors that include work in ICT, life sciences, and advanced materials.

These changes are often exploited by small and medium sized businesses. SMEs are critically important to the U.S. economy as they create the most jobs and are big exporters.

The U.S. government plays a key role in supporting SMEs whether it is through funding of basic research programs like the Small Business Innovation Research program, or “SBIR” as an example.

- **SBIR** provides competitive funding opportunities to assist with the commercialization of new technologies by small businesses through a competitive awards-based program.

I want to add here that while many organizations such as universities, non-profits, and small businesses benefit from federal research funding, their research proposals -- based on their own curiosity and assessed opportunities for commercial benefit -- are funded based on merit.

In the federal government, our science agencies are first and foremost charged with the pursuit of their respective missions and on funding mandates established through legislative and budget processes. At their core, these mandates support both the advancement of scientific knowledge and the competitiveness of American markets, alike.

As a consequence, when we – the US government -- approach international cooperation, it is typically because it benefits the inquisitive and creative process while addressing an agency mission. Our science agencies choose to work internationally —often in spite of obstacles— because they recognize the value added to science by diverse thought – by unique perspectives -- and by differing expertise – especially when combined in pursuit of a common goal.

We have robust S&T cooperation with the European Union because we recognize a natural partner with scientists and innovators who appreciate the importance of putting the creative process first. We -- the US and Europe -- have the strongest, most robust research and development relationship in the world. Most of the funding comes not from governments but from the heavily analyzed and calculated investments of the private sector.

Given the depth and breadth of our cooperation and the potential for positive outcomes, the U.S. government and European Commission share a keen interest in creating the optimal environment for transatlantic cooperation ... not just to create new opportunities and new stakeholders, but to ensure the continued strength and success of the relationship as a whole.

At the government-to-government level, the U.S.-EU Science and Technology Agreement provides a platform for U.S. government agencies to partner with European Union entities on topics of scientific importance. We also have similar agreements with various EU Member States. These broad-based, non-specific, non-limiting agreements provide an umbrella under which our science agencies can cooperate more directly with their counterparts at the appropriate level. More specific implementing agreements, memoranda of understanding, and informal arrangements fall under the Agreement. These documents set the stage for successful collaboration. . We have agreements with more than 50 countries. I'll also repeat what was said earlier--that we do not have agreements with countries like Canada, Israel, and the United Kingdom, some of our strongest S&T collaborators, as an Agreement isn't always necessary for successful cooperation to take place.

Working through these agreements, we try to connect our international partners to diaspora communities, to university programs, and to tech

transfer offices.

Again, responding to what was said earlier, there is an ongoing “bottom up” effort in the U.S. government—in the NSF, to create a platform where users can query to find partners in the STI world. Right now the difficulty remains knowing where to go to find out which entity might be a good partner for a specific research opportunity. This will not be an easy process and will likely take years to complete.

We know that there are obstacles that present difficulties for our federal agencies and state institutions to cooperating with their European partners. Rather than force either side to attempt to change the basis for our respective economic and scientific enterprises, our preference is to see the two systems work in parallel -- on the basis of trust and in accordance with the rules of each side’s respective national programs.

Here are a couple of examples where the U.S. government is already cooperating with our partners at the EU level in accordance with those principles—a couple of these were already mentioned by Robert:

- In 2010, the U.S. National Nanotechnology Coordination Office established a dialogue on nanotechnology environmental health and safety research (called nanoEHS). This has resulted in three U.S.-EU workshops on bridging these research efforts and the

U.S.-EU Communities of Research, which serve as a platform for U.S. and EU scientists to share information on research interests and data needs. They recently opened the third call on Safe Implementation of Innovative Nanoscience and Nanotechnology joint research activity. This call, among others, serves as a demonstration of the ability of our governments to coordinate side by side without bureaucratic overlap.

- The National Oceanic and Atmospheric Administration --NOAA -- is serving as the U.S. co-chair for the U.S.-EU Marine Working Group, established by the Joint Consultative Group in 2013. This cooperation was set up to advance a shared vision for the Atlantic Ocean and to help identify priority areas for government-funded research in the Atlantic. This will lead to better coordinated research efforts, more shared data, more completely communicated research results, and greater transatlantic ocean literacy.  
and
- The US Department of Energy is working with its EU partners to establish electric vehicle smart grid interoperability centers. The first was recently opened at Argonne National Laboratory near Chicago with the second set to open soon in Ispra, Italy, later this year.



As the United States intensifies its science and technology engagement around the world, we must be mindful that opportunities for collaboration -- particularly those in Europe -- should remain centered on the needs and curiosity of our scientists and innovators in our universities and businesses. Events like this morning's workshop and this conference ensure that the multi-stakeholder nature of the science, technology, and innovation relationship is recognized, nurtured, supported, and involved in the deliberative processes of our governments. We look forward to our continuing work with the European Union and wish you all a successful conference.

Thank you.