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NATIONAL TECHNOLOGY INITIATIVE
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What we are doing here today is extremely important. This nation far too often has failed to turn its scientific excellence into marketplace winners fast enough. You already know the story of how the transistor, the VCR and other technologies were invented here but were successfully commercialized elsewhere. We need to turn this situation around.

If we as a nation are truly going to succeed in today's competitive global economy, we must first develop new technologies ... figure out how to use them to meet consumer demands ... then market them ... and make them an effective contributor to the world economy.

We realize that the development and marketing of new technologies is a tall order, but as scientists, inventors and entrepreneurs we know you have the expertise and drive to make it happen.

The National Technology Initiative was specifically created to help you along in your task of creative problem solving -- and we're delighted that many of you have shown an interest in seeing what our labs and research centers have to offer.

At the FAA's Technical Center for example, one company has already come to use the wind tunnel and other sophisticated testing equipment to develop a new smoke evacuation valve. Another will soon be working with FAA scientists in the creation of electrically conductive asphalt in the hopes of creating runways that will de-ice themselves.

And we've had similar visits from the business community to our other research facilities -- The Federal Highway Administration's Turner-Fairbank Highway Research Center in McLean, Virginia and the John Volpe National Transportation Systems Center in Cambridge, Massachusetts.

In fact, we have about 24 active Cooperative Research and Development Agreements (CRDA's) currently going on within the DOT. Also this year we will soon be awarding a record number of Small Business Innovation Research Program (SBIR) grants: approximately 40 from a field of nearly 500 applicants. And nearly a quarter of all our large SBIR grant recipients have reached some level of commercialization.

Given that the new surface transportation legislation signed by the President last December -- named ISTEA -- expands the Department's funding of R&D projects, I'm sure that there will be more cooperation between DOT and you when it comes to research, development and marketing of new transportation technologies.

I don't have to tell anyone in the audience today of the importance of marketing this new transportation technology. As one dollar out of five spent in the U.S. annually goes to transportation related products and services, any invention or improvement to safely speed along the transportation of our goods or people -- whether across the street or across international borders -- will boost this nation's productivity and economic well-being ten-fold.

In fact, it has been estimated that by improving the performance of our roads and bridges by just one percent would result in national savings of nearly $30 billion.

So there is a tremendous demand out there in global markets for converting our high- tech research into transporation related products.

Just yesterday, I read on the PRNewswire how plans are underway for the construction of buses made from light-weight materials federally invented and used in the production of stealth bombers.

Not only would such a bus weigh 10,000 pounds less than a conventional bus, but it would make it easier to install clean air engines -- such as those run on electricity or natural gas -- and to incorporate a floor plan that would allow easy access to the disabled:

thereby helping transit agencies across the country in their effort to meet the America with Disabilities Act regulations.

This is not only a good example of how we can convert military technology for civilian purposes, but of how government labs -- working closely with the private sector -- can revolutionize the transportation industry: to say nothing of creating an enormous world market for our products.

Another example of applying military research to civilian transportation uses involves the Global Positioning System or GPS -- the vital navigation tool used by our forces in Operation Desert Storm.

GPS now makes it possible to locate any vehicle, plane, train or ship with an unprecedented degree of accuracy and the Department has been actively

evaluating its use for widespread commercialization.

Besides helping the private sector in the research and marketing of satellite-based navigation and surveillance equipment, the Department has also been actively involved with a number of firms working in the areas of "materials technology" and "advanced instrumentation" -- the latter utilizing integrated sensors, data processing, and diagnostic logic for the inspection of everything from bridges to tank railway cars. And let me here recognize our recent Cooperative R&D Agreement with Grumman Aerospace of New York to develop acoustic testing to detect cracks in aircraft.

One promising area of transportation research involves devising unique ways to give bridges, airplanes and other structures their own nervous

systems, muscles and brains to allow them to sense problems and correct them.

Imagine a bridge design where special sensors act as nerves, warning of stress and corrosion. And where metals called "shape memory alloys," serve as tendons and muscles -- flexing themselves to compensate for structural weaknesses.

While advanced electronic equipment can be used to monitor structural damage in bridges, they can also be used on our highways and in our cars to help reduce traffic congestion and improve safety. And here I'm talking about the development of "smart cars / smart highways" or Intelligent Vehicle Highways Systems (IVHS).

Perhaps the most familiar example of IVHS technology is centralized computer control of a region's traffic lights -- continually revised on the basis of real-time sensing of actual traffic flows. Such a system -- called INFORM -- is already operational on Long Island. It integrates microelectronic information and surveillance technologies to coordinate the flow of traffic between the Long Island Expressway, Northern Parkway and Jericho Turnpike with selected cross and adjacent streets.

While supporting such highway projects as INFORM, we have also been active in assisting private sector research and commercialization related to new mass transit technologies -- including high speed rail and MAGLEV.

Intermagnetics General Corporation from New York, for example, just received one of our Small Business Innovative Research Program grants to develop shielding from high magnetic fields associated with superconducting MAGLEV technologies. And we have been busy working with the New York/New Jersey University Transportation Center -- a research consortium of 12 universities led by the City University of New York -- in its design and development of electric vehicles for mass transit.

To assist this university research consortium, our own Research and Special Programs Administration just announced a new $1 million grant award -- with an additional half-a-million going to the newly founded University Transportation Center located at the New Jersey Institute of Technology in Newark.

We look forward to working with both of these research centers on developing new technological solutions to today's transportation problems.

But while we can help with stimulating and coordinating R&D, conducting demonstrations and developing national standards, it's still up to you -- the members of the business and academic community -- to successfully carry the ball on commercializing the exciting innovations mentioned here today: like GPS and IVHS technology.

I encourage you to take the opportunities presented here today seriously ... and to make the most of them.

Thank you.

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