

The talent, intellect, and entrepreneurial spirit of the American people have made this nation the leader in economic and technological advancements. American leadership is fueled by national investments in an educated and skilled workforce, groundbreaking federal research and development by the public and private sectors, and a steadfast commitment to being the most competitive and innovative nation in the world.

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Promoting American High-Tech Manufacturing

For over a generation, there has been a steady decline in manufacturing as a portion of the American economy. In reality, the American manufacturing sector isn't failing – it's evolving. In my Silicon Valley district, manufacturing still plays a leading role on our local economy. Among our nation's largest metropolitan areas, we have one of the highest percentages of the workforce involved in the manufacturing sector at nearly 20% -- more than twice the national average. While the factory floors no longer look like your grandfather's workroom, by using the business model of Silicon Valley companies, we can recapture many of the jobs we've lost, become a country that makes products again, and remain globally competitive in the 21st century.

I have proposed a number of policies that will help promote advanced manufacturing. [My](#)

[Market Based Manufacturing Incentives Act](#)

aims to identify the next ten game-changing technologies and provide consumers tax credits to purchase these products as long as they are manufactured in the US. This will help create demand for domestically manufactured products and provide manufacturers with an incentive – access to the US market – to make their products here. My

[Scaling Up Manufacturing Act](#)

also seeks to promote domestic advanced manufacturing, but from a different direct. The SUM Act would give companies a tax credit for the construction, purchase, or lease of their first domestic manufacturing facility if it is built in the US. This will enable our nation to receive a greater return on our investment in R&D by locating manufacturing facilities and jobs here.

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Ensuring America's Competitiveness – Encouraging Innovation and the Development of Technology

Unfortunately, America's global leadership in technological advancement and innovation is being seriously challenged by other countries. To address the state of America's global competitiveness in science and technology, I worked with my colleagues on the Democratic Leader's task force to develop the Democrats Innovation Agenda - A Commitment to Competitiveness To Keep America #1. Working with leaders from the high-technology, venture capital, academic, biotech and telecommunications sectors, we identified and committed to the following priorities that will guarantee our national security and prosperity, expand markets for American products, and assert economic leadership throughout the world:

- Create an educated, skilled workforce in the vital areas of science, math, engineering, and information technology;
 - Invest in a sustained federal research and development initiative that promotes public-private partnerships;
 - Guarantee affordable access to broadband technology for all Americans;
 - Achieve energy independence in 10 years by developing emerging technologies for clean and sustainable alternatives that will strengthen national security and protect the environment;
- and,
- Provide small businesses with the tools to encourage entrepreneurial innovation and job creation.

In 2007, Congress passed and the President signed into law the [America COMPETES Act](#) whi

ch incorporated many important elements of the Innovation Agenda as well as recommendations included in the National Academies' report *Rising Above the Gathering Storm*.

As a member of the Commerce, Justice, Science and Related Agencies and Labor, Health and Human Services, Education, and Related Agencies Appropriations Subcommittees, I am proud to have delivered on the funding needed to implement the America COMPETES Act in the years following its enactment.

In 2010, Congress passed and the President signed into law the [America COMPETES Reauthorization Act, H.R. 5116](#)

, to continue investing in American innovation. I was pleased that the bill included provisions to ensure coordination of federal Science, Technology, Engineering, and Mathematics education programs that I originally proposed in my

[Enhancing Science, Technology, Engineering, and Mathematics Education Act](#)

I am continuing my work to improve STEM education in our country, including the development of excellent teachers, to ensure that we have the workforce needed to “win the future” as President Obama said in his 2011 State of the Union address. My [STEM Education Innovation Act](#) aims to raise the profile of STEM education at the Department of Education, better coordinate federal and state STEM efforts, and invest in innovative educational technologies, and my [STEM Network Act](#) seeks to help state-based efforts to improve student achievement in the STEM disciplines.

New Media Working Group

Democrats have been at the forefront of using new media in politics for more than a decade and intend to stay on the cutting edge. That's why I helped create the Democratic Caucus New Media Working Group to give Members of Congress the tools they need to reach out to their constituents through the many avenues that new media offers. President Obama has set a great example for how useful the Internet can be in energizing supporters, informing the public and creating an open dialogue with the American people. Now, the American public expects (and deserves!) a government that uses these tools to give them opportunities to participate in all levels of the political process.

Nanotechnology

While serving as a member of the [Science Committee](#) , I enacted [legislation](#) to encourage the development of nanotechnology in the United States. The emerging fields of nanoscience and nanoengineering (collectively, “nanotechnology”), which allow the control of materials at the atomic level, are leading to unprecedented scientific and technological opportunities that will benefit society by changing the way many items are designed and made, in areas such as electronics, medicine, energy, biotechnology, and information technology. According to various estimates, including those of the [National Science Foundation](#) , the market for nanotechnology products and services in the United States alone could reach over \$1 trillion later this century. You can read about a roundtable I hosted to discuss the commercialization of results from federally sponsored nanotechnology research [here](#)

Following enactment of this important bill, I convened the Blue Ribbon Task Force on Nanotechnology with State Controller Steve Westly. This distinguished group, whose diverse membership drew from academia, government, established industry, startup companies, consulting groups, non-profits, and industry associations throughout California, debated ideas and developed a series of policy recommendations that are included in the report [Thinking Big About Thinking Small](#)

Many of these recommendations are reflected in a bill I introduced, the [Nanotechnology](#)

[Advancement and New Opportunities \(NANO\) Act](#)

, designed to respond to the ways in which the field has evolved over the past few years. The NANO Act would focus America's nanotechnology research and development programs on areas of national need such as energy, health care, and the environment, and have provisions to help assist in the commercialization of nanotechnology. The bill also addresses the uncertainty that is one of the major obstacles to the commercialization of nanotechnology – uncertainty about what the health and safety risks might be and uncertainty about how the federal government might regulate nanotechnology in the future – by requiring the development of a nanotechnology research plan that will ensure the development and responsible stewardship of nanotechnology.

Other important areas that are addressed by my bill include:

- the development of curriculum tools to help improve nanotechnology education;
- the establishment of educational partnerships to help prepare students to pursue postsecondary education in nanotechnology;
- support for the development of environmentally beneficial nanotechnology; and
- the development of advanced tools for simulation and characterization to enable rapid prediction, characterization and monitoring for nanoscale manufacturing.

I am also working to address these issues through my role on the Commerce, Justice, Science and Related Agencies Appropriations Subcommittee, which has jurisdiction over many of the key agency participants in the National Nanotechnology Initiative.

I believe it is critical that we ensure that the development of nanotechnology is done responsibly. You can read a speech I delivered at the "[NanoWorld: Toward a Policy for the Human Future](#)" Conference to hear my thoughts on the promise of nanotechnology and the need to consider ethical questions as we move forward.