National Aeronautics and Space Administration

NASA's Impact in Idaho: A Tech Transfer Perspective

You know that NASA studies our planet, our sun, the solar system, and the Universe.
But did you know about the space program's economic impact here on Earth?

In 2011, NASA invested over **$2.5 million** in the state of Idaho.

Since 2001, NASA's SBIR/STTR Program has invested nearly
$4 million in **7 Idaho companies**
and more than **$1.2 billion** nationwide.

How NASA's SBIR/STTR Program Benefits Idaho

NASA is committed to moving technologies and innovations into the mainstream of the U.S. economy, and the Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) program helps fulfill this goal.

SBIR/STTR stimulates technological innovation by encouraging small, high-tech companies—particularly minority and disadvantaged businesses—to partner with NASA to help meet its research and development needs in key technology areas. At the same time, this program strengthens small companies by enabling them to bring cutting-edge new products into the U.S. economy.

The list to the right highlights Idaho businesses that received SBIR/STTR contracts from NASA since 2001. **(Visit http://sbir.nasa.gov for more information on the SBIR/STTR program.)**

NASA SBIR/STTR Companies in Idaho

American Semiconductor, Inc.	Boise
EnTempo Corporation	Moscow
ICs	McCall
Manning Applied Technology	Troy
Optimal Solutions Software, LLC	Idaho Falls
Sentient Corporation	Idaho Falls
TenXsys, Inc.	Eagle

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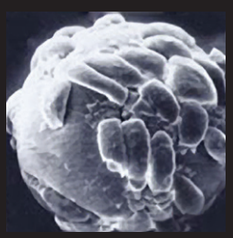
How NASA Spinoffs Benefit Idaho

Miniature Devices Present Sharp, Colorful Images on Panels, Modules, and Projectors *(Boise)*
NASA funding enabled Displaytech, Inc., now Micron Technology, Inc. to develop miniature, electronic, color displays based on its ferroelectric liquid-crystal-on-silicon technology. The company applies active matrix displays to a tiny silicon chip, with a final product smaller than a thumbnail. These rugged, low-power modules deliver 24-bit color images at 60 frames per second with resolutions as high as 800 x 600 dots per inch (dpi).

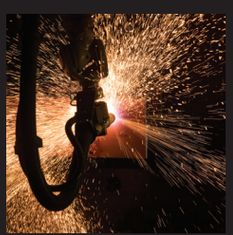
NASA-Proven Technology Helps Small-Aircraft Pilots Fly Safely In All Weather Conditions *(Boise)*
A collaboration between NASA, Chelton Flight Systems, and the Federal Aviation Administration is enhancing safety for small aircraft. The technology provides a real-time, forward-looking three dimensional depiction of surrounding terrain on the primary flight display. Wind information, air temperature, true airspeed, and groundspeed are provided as well as the plane's relationship to any obstructions. The technology is installed in small planes, light jets, and helicopters.

Technology Sparks Efficient Cleaner Engines for Utility, Automotive, Aviation Uses *(Sandpoint)*
Automotive Resources, Inc. produces self-contained ignition systems that can be retrofitted to existing spark- and compression-ignition engines. The technology employs a needle-like ceramic and metal core to deliver fuel ignition without a spark, resulting in efficient engines with cleaner emissions. Uses abound in a variety of industries with applications for tractors, portable generators, lawnmowers, small aircraft engines, and pumps, to name just a few.

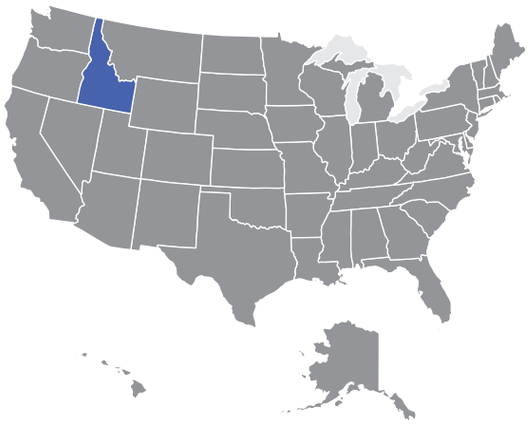


NASA Method Streamlines Nanotube Technology Manufacturing Process *(Boise)*
NASA's single-walled carbon nanotube manufacturing process is less expensive, safer, and simpler than previous processes involving metal catalysts. Idaho Space Materials, Inc. licensed the process and commercialized the product, and scientists are working with these robust nanotubes to create next-generation composite polymers, metals, and ceramics. These materials can be used to manufacture fuel cells, large-screen televisions, ultra-sensitive sensors, and advanced composite materials.

Submersible Robot Inspects Storage Tanks, Reduces Risks to Humans and Environment *(Idaho Falls)*
A Space Act Agreement enabled Solex Robotics Systems to design a remote-controlled submersible robot to inspect the bottoms of petroleum and chemical storage tanks, allowing tanks to remain operational during inspection. NASA's unique testing capabilities and experience with tether management were critical to the robot's development. The technology decreases human exposure to dangerous chemicals and reduces environmental risks associated with draining and refilling tanks before and after inspections.



Technologies Yield Real-Time Video Images of High-Energy Industrial Processes *(Idaho Falls)*
Control Vision, Inc. produces laser-augmented video sensor technologies that provide real-time imaging of high-temperature processes, such as welding, plasma arc spraying, and metal casting. Developed with NASA funding, the technology aided NASA in its space shuttle assembly work. It is also used in extreme industrial, scientific, and military applications, where the sensors enable operators to check on processes occurring at temperatures up to 2,000°C.



NASA actively seeks partnerships with U.S. companies that can license NASA innovations and create "spinoffs" in areas such as health and medicine, consumer goods, transportation, renewable energy, and manufacturing. When businesses leverage NASA technologies to develop new products, it not only benefits the regional economy, but significantly strengthens the nation's competitiveness in the global marketplace.

NASA's centers across the country have helped 19 Idaho companies develop revolutionary spinoff technologies.

Learn more about how NASA innovations benefit the public in *Spinoff*, an annual publication that highlights NASA's most significant technology transfer successes.
(Available at: http://www.sti.nasa.gov/tto)

National Aeronautics and Space Administration

Office of the Chief Technologist
NASA Headquarters
Washington, DC 20546

www.nasa.gov

Publication herein does not constitute NASA endorsement of the product or process, nor confirmation of manufacturer's performance claims related to any particular spinoff development.

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