National Aeronautics and Space Administration

NASA's Impact in Nebraska: 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 **$3 million** in the state of Nebraska.

Since 2001, NASA's SBIR/STTR Program has invested more than **$1.2 billion** nationwide.

How NASA's SBIR/STTR Program Benefits the U.S. Economy

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. **(Visit http://sbir.nasa.gov for more information on the SBIR/STTR program.)**

Featured Spinoff to Nebraska Company

NASA Lubricants Improve Agricultural Irrigation System
(Omaha)

Lindsay Corporation builds center pivot agricultural irrigation systems composed of multiple lengths of water pipe and spray nozzles supported by wheeled towers. The system rotates around a center pivot, watering hundreds of acres in a single revolution. Each three-ton tower has an electric motor and transmits power to the wheels via gear boxes that incorporate NASA lubrication technologies to protect them from wear and heat stress. Lindsay engineers used NASA's Lubrication Handbook, a reference for designers, manufacturers, and maintenance crews of aerospace hardware, to redesign its gear boxes. Gears in the Lindsay design are now immersed in NASA-developed lubricants that provide low-friction protective coatings for bearings and surfaces. Lindsay's center pivot irrigation systems are now used in numerous countries, enabling farmers to increase crop yields while using less water, energy, labor, and chemicals.

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. This activity benefits the regional economy and strengthens the nation's competitiveness in the global marketplace. NASA has helped 11 Nebraska companies develop revolutionary spinoff technologies.

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

nebraska

Office of the Chief Technologist
NASA Headquarters
Washington, DC 20546
www.nasa.gov

NP-2012-01-812-HQ | 01.31.12

HQ-ART-NE-001_Econ-Impacts_2012-01-31.indd 1 2/24/12 11:55 AM