



# Assessing the Economic Benefits Created by NOAA's Technology Transfer



Saildrone vehicle performing a comparison mission with NOAA ship *Bell M. Shimada*.



Aurora Flight Sciences is a small business that teamed up with NOAA's SBIR program to design a new tool used to improve the U.S.'s elevation measurements in both the federal sector and commercial markets. NOAA SBIR provided Aurora the research, development and testing support needed for Centaur (shown in photo), an optionally piloted aircraft system flying an elevation measurement sensor, to gather data that describes earth's structure.

The NOAA Technology Partnerships Office (TPO) oversees two programs that foster technology innovation and commercialization: Small Business Innovation Research (SBIR) and Technology Transfer. In 2019, the TPO contracted Eastern Research Group (ERG) to assess the economic impact and overall effectiveness of the SBIR and the Cooperative Research and Development Agreement (CRADA) component of the Technology Transfer Program.

SBIR provides grants directly to U.S. small and medium-sized businesses for development of new and innovative technologies that support NOAA's mission. SBIR encourages innovation and commercialization, which benefits both NOAA's mission and the U.S. economy. Similarly, CRADAs offer U.S. companies the opportunity to work directly with NOAA Labs and Centers to develop and test innovative technologies. Under a CRADA,

companies may commercialize any inventions, while NOAA Labs use the results to support their mission.

To evaluate the monetary and non-monetary value of these programs, NOAA and ERG sent custom surveys to each eligible SBIR and CRADA company. Forty-nine SBIR and nine CRADA companies supplied responses for analysis and application of appropriate Regional Input-Output multipliers.

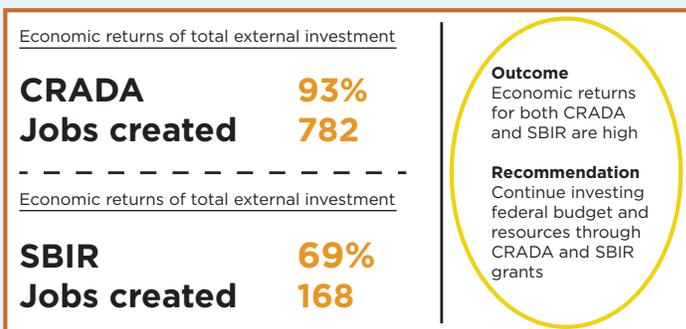
Based on these activities, the cumulative economic impacts of NOAA's CRADA activities were estimated at \$214.4 million, with a value-added of \$104.8 million and earnings of \$56 million, and 873 jobs created. The total cumulative output from the SBIR program was estimated at \$60.3 million, with value-added at \$33.2 million, earnings of \$17.5 million, and 283 jobs created.

## CRADA & SBIR BY THE NUMBERS

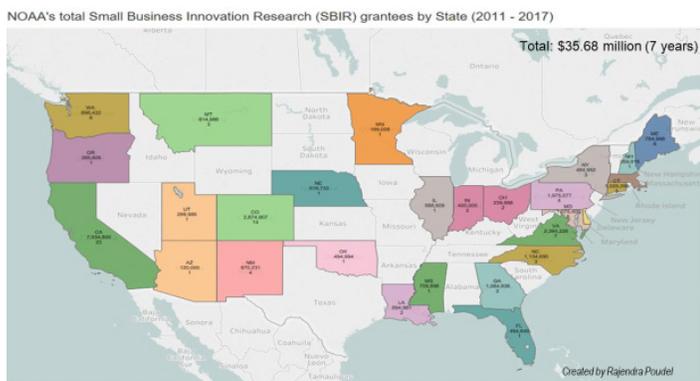
Brief description	CRADA	SBIR
Total number determined for survey	23	130
Eligible for survey	20	99
Survey responses received	9 (45%)	49 (49%)
Industry categories covered from the survey responses	4	6

## RETURN ON INVESTMENT: CRADA & SBIR

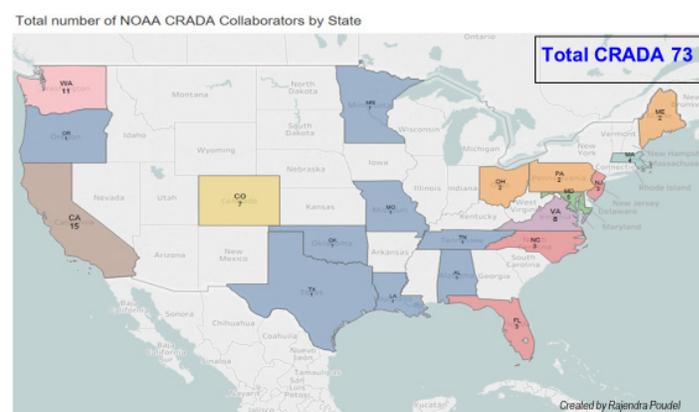
In addition to economic analysis of CRADA and SBIR, five case studies were documented that demonstrate the success of companies spearheading research and innovation as well as to excel in developing new product lines. In the future, interagency collaboration in cross cutting sectors such as energy, scientific and engineering technologies, and other sectors may be helpful to augment the cross agency priority and also enhancing the national and economic security of the United States.



NOAA grants for Small Business Innovation Research (SBIR) ~\$36 million in 7 years (2011 to 2017)



NOAA Cooperative Research and Development Agreement (CRADA) was 73 in total in 7 years (2011 to 2017)



Reference: NOAA Technology Partnerships Office (2019). *Assessing the Economic Impact and Value Created by NOAA's Technology Partnerships Office*. Silver Spring, MD 20910.

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CFO Contact: Rajendra Poudel  
[rajendra.poudel@noaa.gov](mailto:rajendra.poudel@noaa.gov)

TPO Contact: Derek Parks  
[derek.parks@noaa.gov](mailto:derek.parks@noaa.gov)

THE VALUE OF NOAA RESEARCH



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