

## SC Fraunhofer USA Alliance

### What is the SC Fraunhofer USA Alliance?

The South Carolina Fraunhofer USA Alliance (SCFUSA) is a collaborative effort between The South Carolina Council on Competitiveness (The Council), the South Carolina Department of Commerce, and the Fraunhofer USA network. The alliance was created to advance applied research across the state of South Carolina with the Fraunhofer USA network and South Carolina research institutions. Examples of research foci include artificial intelligence, Industry 4.0, machine learning, wearables and other advanced digital technologies.

The work of the alliance and the research it supports give South Carolina a competitive edge in advancing applied research and increasing the competitiveness of South Carolina based organizations.

### Now Accepting New Proposals

The South Carolina Department of Commerce has made significant funding available to match private sector funding for applied research projects between South Carolina's universities and Fraunhofer USA to promote applied research that improves the competitiveness of South Carolina companies and results in a positive economic impact within the state. Effective immediately we are accepting project proposals to collaborate with the South Carolina Fraunhofer USA Alliance. Eligible applicants (see qualifying criteria) can apply for matching funds and must commit a cash match to be eligible.

### Eligibility Requirements

Project proposals will be assessed using seven criteria and each criteria is weighted – resulting in a cumulative score. Criteria and its respective weighting as follows:

	Assessment Criteria	Scoring to be done by:
30%	Does the project enhance the client's competitiveness and lead to additional job creation? If yes, how will competitiveness be improved and how many possible new jobs could result?	Proposers/Client
20%	Does the proposed project match the Alliance's collective competencies/capabilities?	FhUSA
15%	Does the project offer other positive secondary impacts? For example: Is a supply chain strengthened? Will employee skills be enhanced and justify higher wages?	Proposers/Client
10%	Is the organization operating and/or have a substantial investment, presence, workforce in South Carolina? The more direct the impact on SC economy, the better the project	SC Dept. of Commerce
10%	Does the project offer strategic benefits to any of these overall State goals: 1) supporting small and medium enterprises 2) supporting rural-based companies 3) supporting growing technology sector 4) Other	SC Dept. of Commerce
10%	Does the project address one or more of South Carolina's strategic industries targeted for expansion by Commerce? Projects that build success stories in Manufacturing, Healthcare, or Shipping and Logistics are preferred.	SC Dept. of Commerce
5%	Can the project serve as a economic development showcase to attract new domestic and international business to South Carolina?	SC Dept. of Commerce

## Recent Collaboration

The ultimate goal of the South Carolina Fraunhofer USA Alliance is to make South Carolina operations more competitive, more successful and to have a statewide impact on growing companies, jobs, and the economy.

The primary focus is to support digital transformation, innovation and new product and systems development.

An overview of projects underway or recently completed can be found below:

Innovation Projects Supported by the South Carolina Fraunhofer USA Alliance					
Completed Projects			Ongoing Projects		
Project Title	SC Companies/Agencies	Lead Institute/Other	Project Title	SC Companies/Agencies	Lead Institute/Other
Assembly Defect Detection Using Wearables			Telehealth & Data Analytics		
Production Line & Workflow Optimization			Fuel Cells Manufacturing	<b>JTEKT</b>	
Wire Harness Automation			Biomanufacturing of Enzymes & Protein Catalysts	<b>IMCS</b>	
Cloud-based Data Platform	<b>DATOS</b>		AI - Training, Competence Development & Knowledge Transfer		
Machine System Integration	<b>SIEMENS</b> <b>Heraeus</b>		Industry 4.0 Data Transformation, Machine Learning & AI (Operations)	<b>DELTA DRAVO</b>	
Advanced Visual Inspection System	<b>SAMSUNG</b>		AI Models, Predict Satellite Anomalies, Space Weather Events		
Development of Cloud-Based AI Platforms			Proactive & Automated Material Control		
Implementing Industry 4.0	<b>Rexroth</b>		Production of Metallic Bipolar Plates for PEM Fuel Cells	<b>JTEKT</b>	
Robotic Guided Fixture Loading			Separator Technology for Rechargeable Lithium Metal Batteries		
Predictive Analysis of Manufacturing			Optimization of Digitalization for Assembly & Warehouse	<b>SIEMENS</b>	
Business Readiness for Vaccine Production			High Pressure Resin Transfer Molding for Cycling Industry	<b>TIME</b>	
			Digitalization for Warehouse of the Future		

## History of the SC Fraunhofer USA Alliance

The establishment of the SC Fraunhofer USA Alliance marks the first in the South applied research initiative with the prestigious Fraunhofer network and is a direct result of South Carolina's sister-state relationship with Rhineland-Palatinate, Germany. The sister-state relationship came about in the mid-1990s as a result of the Charleston Naval Base closing and American military base closings in Rhineland-Palatinate. A sister-city relationship then developed between Columbia and Kaiserslautern, Germany (where Ramstein Air Base is today) and the home of the Fraunhofer Institute for Experimental Software Engineering. Today, we can partner with any of the centers/institutes within the Fraunhofer network and we look forward to building, developing and growing this unique relationship.

## Learn more about the SC Fraunhofer USA Alliance

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