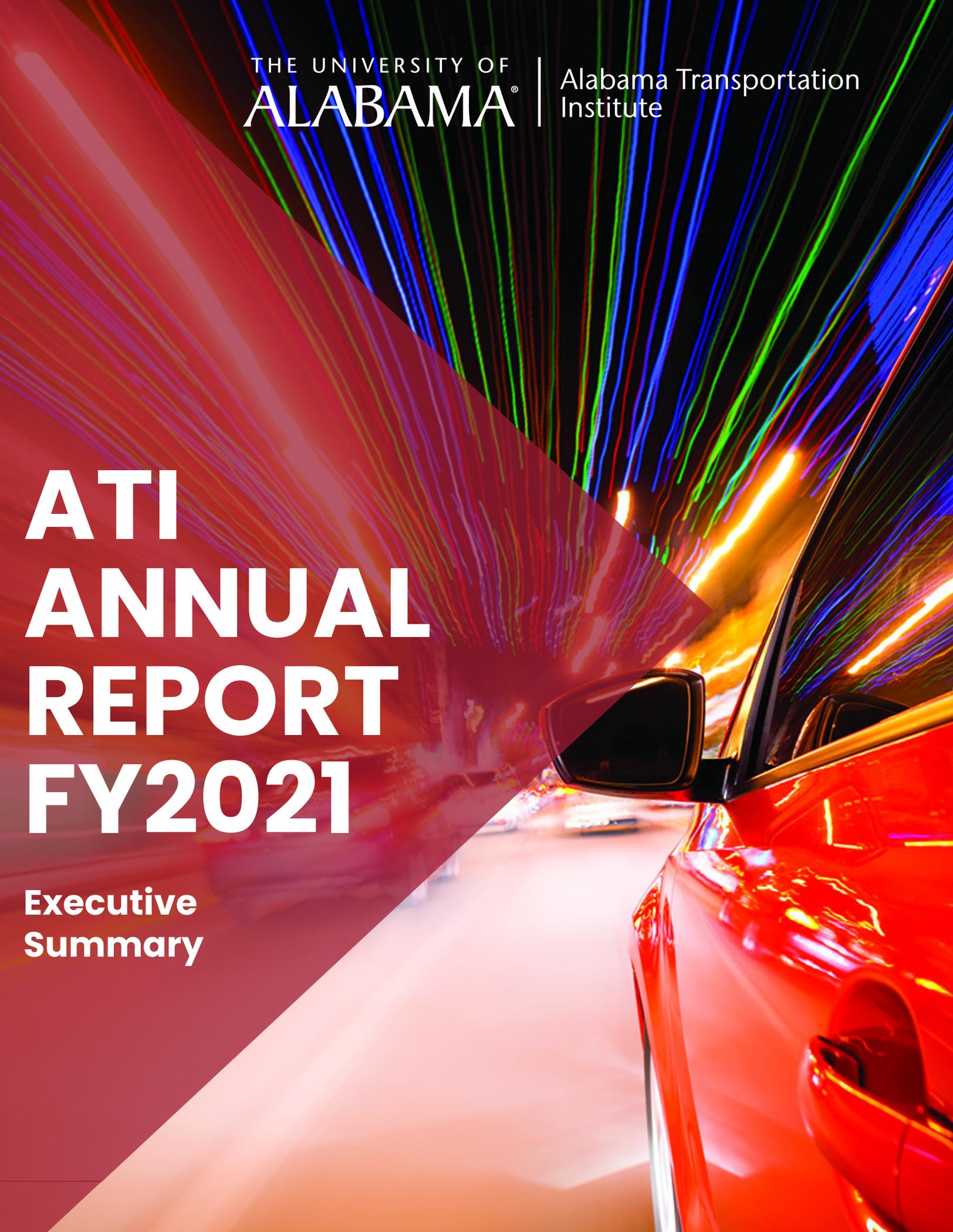


THE UNIVERSITY OF
ALABAMA[®]

Alabama Transportation
Institute

ATI ANNUAL REPORT FY2021

Executive
Summary



Message from the Director

Welcome to the Alabama Transportation Institute Annual Report for Fiscal Year 2021 – covering the period from October 1, 2020 through September 30, 2021.

ATI is a valuable resource for the State of Alabama and its residents. It has developed partnerships throughout the state to assist state and local agencies with obtaining support for transportation projects that ultimately benefit everyone – and support the economic well-being and growth of our state. ATI provides transportation expertise in policy, economics, planning, operations, and safety.

During ATI's five-year history, it has helped bring \$200M in federal money to the state and has invested \$2M in matching support for approximately \$20M in federal grants (a ten-fold return). During the last fiscal year, it directly invested \$1.7M in seed funding for 33 faculty members who obtained over \$6M in research funding (a four-fold return). ATI has been the leader in many important projects, including the \$16.8M ACTION project to develop a connected corridor between Tuscaloosa and the MBUSI facility, and to make Tuscaloosa more connective and "future-ready" to support autonomous, connected and electric vehicles.

In FY 2021, ATI initiated the Alabama Mobility and Power (AMP) Center as an R&D organization devoted to electric vehicle technologies. AMP will be located in the new \$36M Smart Communities and Innovation Building, along with ATI and the ALDOT Transportation Systems Management and Operations (TSMO) center. This state-of-the-art facility will open in late 2023 and will be the centerpiece of our state-of-the-art footprint in research on transportation systems of the future.



ATI is proud to serve the transportation enterprise for the State of Alabama. We welcome your feedback and look forward to serving you in FY 2022 and beyond.

A handwritten signature in blue ink, appearing to read "A. Parrish", written in a cursive style.

Allen S. Parrish
Professor of Computer Science
Executive Director, Alabama Transportation Institute

ABOUT ATI

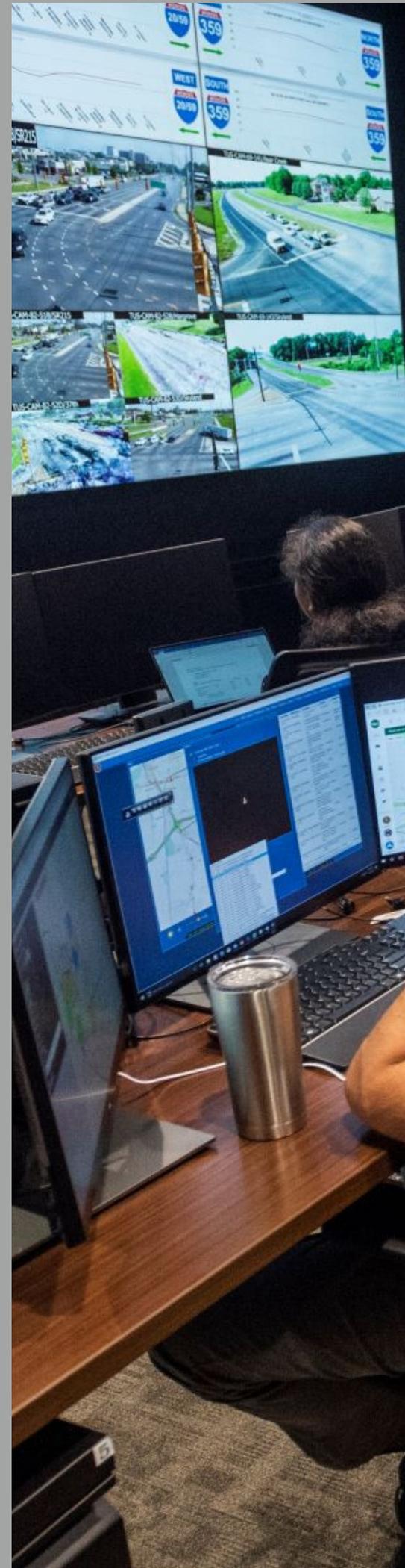
Leading the Way for Emerging Transportation Solutions

Our interdisciplinary institute enables Alabama to lead the way on emerging issues like developing creative solutions for financing the construction and maintenance of roads and bridges, advancing transportation safety research, and evaluating the impact that a quality transportation system will have on Alabama's economic future. ATI serves as an independent resource that develops unbiased information for local, state, and national leaders in developing transportation policy. The result is more and better-informed decision-making that leads to innovative, data-driven, cost-effective solutions that advance Alabama's economy, safety, and quality of life through transportation.

Mission Statement

The mission of the Alabama Transportation Institute at The University of Alabama is to facilitate and reflect world-class leadership in the interdisciplinary transportation research that serves the state of Alabama and beyond. ATI will support collaborations centered primarily around these emergent themes:

- Digital Transportation
- Connected Vehicles and Infrastructure
- Transportation Safety, Security, and Accessibility
- Electric Vehicles and Fuel Economy
- Sustainable Transportation Infrastructure



THE NUMBERS



Looking Back at FY2021...



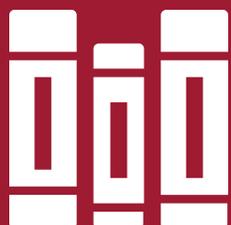
73
Submitted
Grants

143
Employees



30
Awarded
Grants

87
Affiliated
Faculty



85
Published
Papers

78
Students
Funded



UA TRANSPORTATION RESEARCH



Of **\$20M** in FY2021 contracts brought in by our faculty

ATI provided **\$2.2M** in matching funding



\$5.5M
Connected Vehicles & Fuel Economy



\$4.5M
Traffic Safety Technology



\$2.5M
NSF IUSE Workforce Development

\$1.6M

IN SEED MONEY FOR **33** FACULTY IN FY2021

In FY2021 these faculty produced **\$6.5M** in awards

SERVICE TO ALABAMA

\$320M Annual Revenue for Rebuild Alabama

For every **\$1** of state funds invested, ATI has helped to secure **\$8** in federal money from 2017-2021

\$200M

Federal Dollars brought to the state since 2017



SERVICE TO ALABAMA

Rebuild Alabama

ATI has supported legislative leaders and the Governor's office in Alabama on efforts that led to the Rebuild Alabama (Transportation Infrastructure) legislative package being enacted. This package is expected to generate about **\$320 Million annually** for the state to invest in roads and bridges across the state, and the Port of Mobile. This is the first time in 27 years that the state has been able to raise the revenue streams for transportation.



Transportation Policy Research Center



Our services are routinely requested for any number of needs ranging from policy and economic impact analysis, assistance with state and federal grant applications, researching legislative best practices, and identifying funding mechanisms for construction and maintenance of physical infrastructure. These services are available to any community in the state of Alabama.

SERVICE TO ALABAMA

DECATUR INFRASTRUCTURE FUNDING ASSISTANCE

Assisted the City of Decatur, AL to develop a successful application to the USDOT for \$14.2 million in federal funding for a road and bridge construction project with an additional \$4 million from ALDOT.

UNIVERSITY BOULEVARD CORRIDOR IMPROVEMENTS

The City of Tuscaloosa received a RAISE grant for over \$17.1 million dollars from the USDOT for University Boulevard Corridor improvements. ATI provided the cost benefit analysis and grant development assistance.

ACTION GRANT

ATI is leading a multi-faceted project, called the Advanced Connected Transportation Infrastructure & Operations Network, or ACTION. The project represents an \$8 million award from the USDOT and an additional \$8.3 million from various partners in Alabama, totaling \$16.3 million. ACTION's core theme is to leverage technological advances to enhance efficiency, capacity, and safety, all of which are critical for the region's economic vitality and interstate commerce.

\$15M BUILD GRANT

ATI was instrumental in Obtaining a \$15M BUILD Grant for Tuscaloosa and has continued to serve as a go-to organization for state and local agencies in Alabama who need assistance with transportation projects. In this area, we were successful in helping Tuscaloosa obtain a \$15M BUILD grant to support a portion of the Riverwalk project, along with the Saban Center and some bridge improvements.

TUSCALOOSA INFRA GRANT

ATI coordinated efforts with various stakeholders including, but not limited to, the City of Tuscaloosa, ALDOT, and DCH Regional Medical Center to secure \$6.87 million in federal funding for the construction of a new University Blvd. bridge over McFarland Blvd. The new bridge will lengthen and widen the overpass to create greater efficiency and safety, providing more access to education, healthcare, and business/employment opportunities.

WIREGRASS ECONOMIC DEVELOPMENT CORPORATION BUILD GRANT

The BUILD grant awarded to the Southeast Alabama Regional Planning & Development Commission funded the economic feasibility study for two traffic projects in the Wiregrass region. ATI developed the report that quantified, at a broad macroscopic level, the costs associated with the status quo (i.e., the proposed widening is not built, or the "No-Build" scenario) and presents findings of key economic and safety benefits associated with the proposed SR-167 expansion.

NATIONAL RESEARCH

Transportation Research Board

The Transportation Research Board (TRB) provides leadership in transportation improvements and innovation through trusted, timely, impartial, and evidence-based information exchange, research, and advice regarding all modes of transportation. For example, committees, researchers, and staff are currently focused on advancing resilient infrastructure, exploring transformational technology, and caring for the public's health and safety.

The TRB Annual Meeting is the largest global gathering of transportation professionals and researchers with a focus on innovative solutions for all modes of transportation.

Every January, transportation researchers from around the world gather in Washington, D.C. for this premier transportation conference. More than 14,000 policy makers, administrators, practitioners, researchers, and representatives of government, industry, and academic institutions attend the conference annually.



Researchers from the Alabama Transportation Institute exhibited a strong presence at the 2021 conference. ATI researchers were involved in 26 separate presentations.

ATI researchers also participate heavily in TRB Standing Committees. Almost all serve as a member or friend on several of the various committees.

ATI AFFILIATED CENTERS

Alabama Mobility and Power Center

AMP will provide a platform for ATI and UA to establish leadership in transportation electrification, which will be a pivotal concept in transportation over the next decade.

Center for Advanced Public Safety

CAPS is an interdisciplinary research center dedicated to the implementation of technologies that enhance public safety.

Institute of Data and Analytics

IDA advances the creation, transformation, and distribution of knowledge through data and analytic research with a positive impact.

Center for Sustainable Infrastructure

CSI is a technical innovation resource that addresses issues related to sustainable infrastructure.

Center for Transportation Operations, Planning and Safety

C-TOPS plays a vital role in transportation education, research, and technology-transfer activities throughout Alabama and the region.

Transportation Policy Research Center

ATPRC plays a critical role within the Alabama Transportation Institute by helping to communicate and interpret research findings to the general public and policymakers.

Center for Advanced Vehicle Technologies

CAVT conducts interdisciplinary research and educational programs that are dedicated to the advancement of vehicle technology.

Center for Business and Economic Research

CBER provides forecasts of economic activity, impact and needs assessments, and various forms of analysis for various stakeholders both public and private.

Alabama Center for Insurance Information & Research

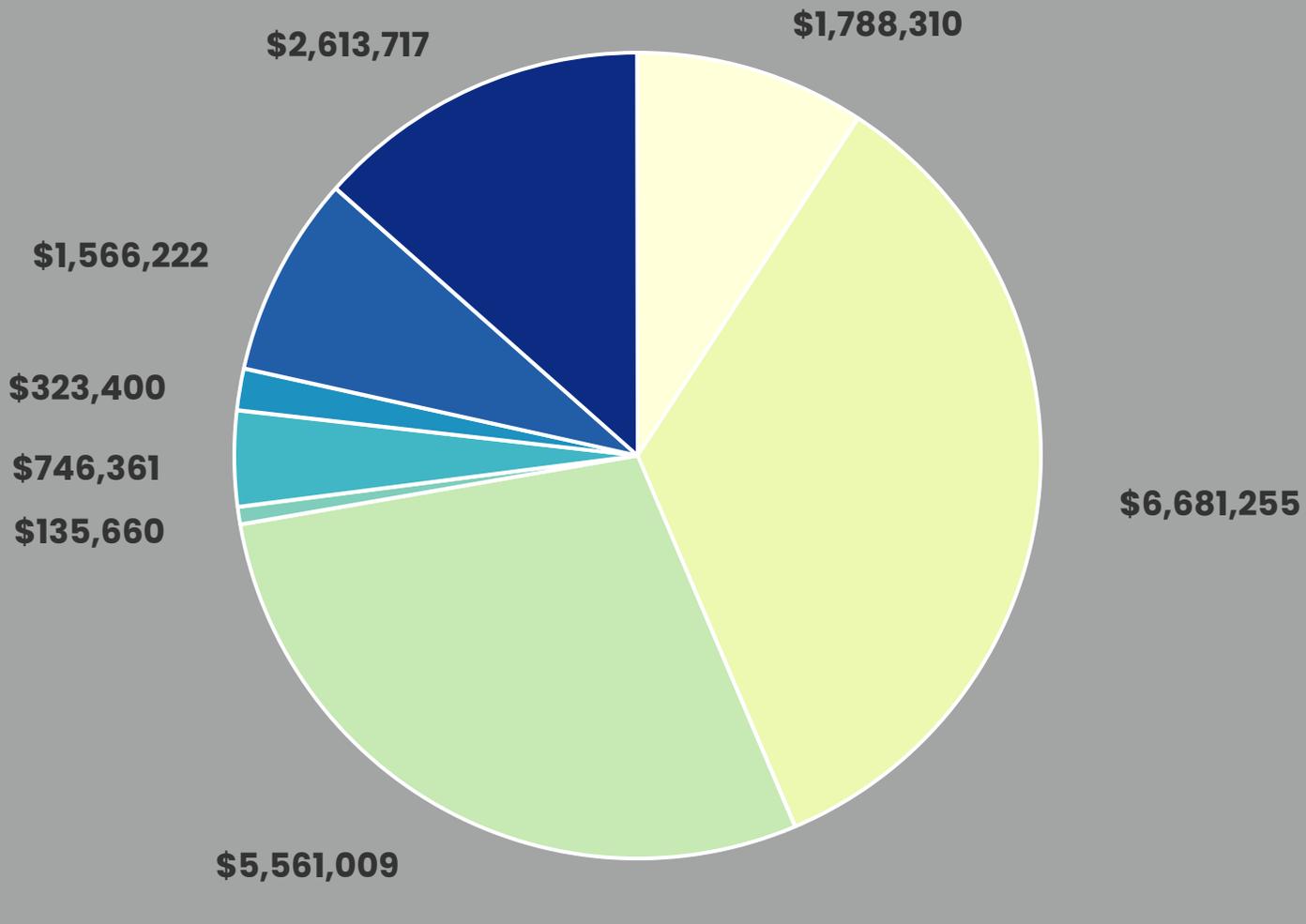
ACIIR works to provide facts and truths to parties, like ATI, who directly contribute to the economic development of Alabama.



ATI

ATI AFFILIATED CENTERS

FY2021 Awarded Research



ATI Centers

- AARC: Alabama Analytical Research Center
- CAPS: Center for Advanced Public Safety
- CAVT: Center for Advanced Vehicle Technologies
- CSI: Center for Sustainable Infrastructure
- IDA: Institute of Data and Analytics
- MPNC: Manufacturing at the Point of Need Center
- CTOPS: Center for Transportation Operations, Planning and Safety
- Other

\$19,415,964

University Blvd

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