Annual Report

Of the Office for Research & Economic Development’s

Five-Year Strategic Plan
(2019 – 2024)

Year 1: June 1, 2019 – May 31, 2020

August 16, 2020
Dear UA Community:

I am very pleased to present the Annual Report of the Office for Research & Economic Development’s (ORED) Five-Year Strategic Plan. This Year One report summarizes our progress from June 1, 2019 to May 31, 2020. The report is not an exhaustive and comprehensive account of research and scholarly activities at UA, or even of units reporting to ORED. Rather, it informs and updates the UA Community on specific progress we are making on our Plan.

The Plan, framed by seven Guiding Principles, fully supports ORED’s mission to facilitate the growth and impact of the UA research enterprise. I believe ORED made significant progress in all six Strategic Themes of the Plan, and this progress will advance UA toward our goal of becoming one of the premier comprehensive research institutions in the Southeast over the next five years, while translating research productivity and innovation into economic and societal development. Some noteworthy selected accomplishments include:

**Theme 1: Research Environment**

- ORED is collaborating with UA Human Resources to develop a new *Research Professional Career Track* that will launch in fall 2020. This Career Track will enable UA to recruit and retain world-class employees focused on all the different types of research and creative activities at UA.
- ORED aligned two existing entities to create a world-class core analytical facility, the Alabama Analytical Research Center (AARC), and have solidified plans and resources to move AARC into the North Engineering Research Center.

**Theme 2: Alabama Research Institutes**

- ORED successfully recruited executive directors for three Alabama Research Institutes and continues to frame and realize major federal priorities around the missions of all Alabama Research Institutes.

**Theme 3: Transformative Initiatives**

- ORED supported a campus-wide collaborative proposal to create UA’s first Magnetic Resonance Imaging (MRI) Center, now underway. The center will be funded jointly by the Office for Academic Affairs and the Office for Research & Economic Development.

**Theme 4: Translating Intellectual Property**

- ORED developed and launched the Tide Research Partnership (TRP) Program. The TRP Program significantly promotes research partnerships with industry with the goal of growing the research enterprise and its impact while providing opportunities for UA students. The TRP Program allows a company the option to pre-pay a fee when executing a sponsored research agreement in exchange for 1% royalty fee for exclusive worldwide rights to all intellectual property resulting from the research.
Theme 5: Economic and Business Engagement

- UA created the “Five-Year Economic Development Priorities and Strategic Goals for The University of Alabama, 2019-2024” endorsed by the UA System Board of Trustees. This guiding plan is meant to align all UA economic development assets and ensure the University meets its strategic goals in this area. As highlighted in this Annual Report, ORED made contributions to support UA’s economic development efforts across Alabama. A separate report on UA’s progress over this past year on this guiding plan will be completed in fall 2020.

Theme 6: Assessing Progress and Impact

- UA’s research enterprise increased by 33.6% to $132.5 million in FY 2019, a new record for externally sponsored awards. To date in FY 2020, UA’s research enterprise has increased by another 45.5%. This increase in externally sponsored awards for UA is remarkable and unparalleled by comprehensive, research-intensive universities in the United States, and far exceeds the Plan’s goal of increasing research growth by 15% annually. This increase speaks volumes about the talent of our faculty, staff and students.

We hope you enjoy reviewing the Year One Annual Report on our Five-Year Strategic Plan, and that you agree with us that it has been a very successful year for research at UA. We are honored to serve the UA Community and are inspired by the great research, scholarship and creative work at the Capstone.

Roll Tide!

Russell J Mumper, PhD
Vice President for Research & Economic Development
UA HAS ACHIEVED DOCTORAL UNIVERSITIES VERY HIGH RESEARCH ACTIVITY STATUS IN THE CARNEGIE CLASSIFICATION OF INSTITUTIONS OF HIGHER EDUCATION

3,108
GRADUATE STUDENTS SUPPORTED BY EXTERNALLY FUNDED AWARDS (in FY 2019)

1,080
CONTRACTS AND GRANTS SUBMITTED (in FY 2019)

$117M+
ACQUIRED IN ECONOMIC RELIEF BY ALABAMA BUSINESSES AS A RESULT OF ASSISTANCE FROM ALABAMA SMALL BUSINESS DEVELOPMENT CENTER IN RESPONSE TO COVID-19

5
EDGE LABS INCUBATED HIGH-TECH START-UP COMPANIES

327
EXTERNAL LIFETIME HONORIFIC AWARDS RECEIVED BY FACULTY

709
FACULTY INVOLVED IN NEW AND EXISTING EXTERNALLY FUNDED AWARDS (in FY 2019)

80.6K
CITATIONS OF UA PUBLICATIONS (from 2014-2018)

LAUNCHED THE TIDE RESEARCH PARTNERSHIP (TRP) PROGRAM TO PROMOTE RESEARCH PARTNERSHIPS WITH INDUSTRY

CREATED THE FIRST FACULTY/STAFF BUSINESS PITCH COMPETITION SUPPORTING START-UP COMPANIES

THE FIRST UNIVERSITY-WIDE ECONOMIC DEVELOPMENT COUNCIL WAS CREATED AND DEVELOPED THE "FIVE-YEAR ECONOMIC DEVELOPMENT PRIORITIES AND STRATEGIC GOALS FOR THE UNIVERSITY OF ALABAMA 2019-2024"
1. RESEARCH ENVIRONMENT

ORED has the important role of creating and sustaining a strong research environment at The University of Alabama. The research environment is comprised of critical components including culture, facilitation, communication, trust, transparency, infrastructure and partnerships. Strategic Theme 1 has eight Strategic Objectives and key progress on each Objective is highlighted.

1.1 ORED will promote and enhance the university-wide culture for research, scholarship, and creative activities, and, especially for cross-disciplinary and collaborative efforts in these areas, commensurate with a Carnegie-designated R1 doctoral research university. In collaboration with faculty and staff, ORED will identify barriers to this culture and take a lead role in addressing these barriers.

YEAR ONE
- ORED developed criteria for Transformative Initiatives as listed in Strategic Objective 3.1.
- ORED is collaborating with UA Human Resources to develop a new Research Professional Career Track that will launch in fall 2020. This Career Track will enable UA to recruit and retain world-class employees focused on all the different types of research and creative activities at UA.
- ORED developed a draft policy titled “Policy for the Disclosure of External Activity by Faculty and Other Research Grant and Contract Eligible Employees.” The policy, planned for launch in fall 2020, is currently being reviewed by stakeholders and the UA System Office.
- The vice president for research and economic development led efforts in collaboration with the Colleges of Engineering, Business and Arts & Sciences to expand the partnership between The University of Alabama and NASA’s Marshall Space Flight Center (MSFC). UA and NASA’s MSFC signed a memorandum of understanding to further develop mutually beneficial areas relating to advanced and in-space manufacturing.
- Important current or planned on-campus collaborations were solidified:
  - United States Army Corps of Engineer Tribal Nations Technical Center of Expertise
  - United States Geological Survey’s Hydrologic Instrumentation Facility

1.2 The core mission of ORED is to facilitate the growth and impact of the UA research enterprise and to ensure compliance with university, UA System, state and federal regulations. ORED's policies, practices and procedures to facilitate pre-award, post-award, and compliance functions must be efficient, effective, and scalable. ORED will invest in personnel and resources to ensure it is meeting the needs of the research enterprise and provide professional development for all ORED personnel.

YEAR ONE
- ORED restructured its organizational chart to facilitate its core missions and execute its Five-Year Strategic Plan.
- ORED hired an assistant vice president for research and executive director for the Offices of Sponsored Programs and Contract & Grant Accounting.
- ORED launched a campus-wide survey regarding the Institutional Review Board application, review and approval process (see Strategic Objective 6.1).
- ORED started to track and quantify workflow to efficiently and effectively fulfill our mission. This initiative is a work-in-progress.
ORED established annual employee performance evaluations independent of the traditional human resources evaluation process at UA. This new approach of linking evaluations directly to employee position descriptions allows supervisors to standardize the evaluation process and ensures position descriptions currently and accurately define job duties and responsibilities. The new evaluation process is strategic for our long-term goal to attract and retain the best career professionals to the ORED team.

1.3 **ORED will enhance strategic communications with campus and external stakeholders.**
ORED will proactively identify and make the campus community aware of significant emerging funding opportunities and effectively communicate ongoing research, scholarship and creative activities and their outcomes and impacts.

**YEAR ONE**
- ORED created the Office for Marketing and Communications. This office serves as a partnership with UA’s Division of Strategic Communications and works collaboratively with all Alabama Research Institutes to advance global outreach and showcase research and innovation through websites, social media, news releases, newsletters, events and annual reports.

**1.4 ORED will partner with campus deans and associate deans for research to ensure it is facilitating and meeting the needs of the research mission of all colleges and schools including faculty recruitment and retention.**

**YEAR ONE**
- ORED expanded its recurring monthly meetings with associate deans for research to include all ORED leadership. The monthly meetings are held to discuss initiatives, address issues and improve information sharing.

1.5 **ORED will collaborate with the Office for Academic Affairs, colleges and schools to develop a process to identify and nominate faculty for external honorific awards.**

**YEAR ONE**
- Brainstorming has started, but no defined action has been taken other than to develop a process through Academic Analytics that identifies UA faculty who have received external honorific awards and are eligible for awards.

**1.6 ORED will provide world-class core analytical facilities.**

**1.6.1** ORED will explore alignment and coordination of the existing core facility, Central Analytical Facility (CAF), and center, the Materials for Information Technology (MINT), resources.

**YEAR ONE**
- ORED aligned these two existing entities to create a world-class core analytical facility, the Alabama Analytical Research Center (AARC), and have solidified plans and resources to move AARC into the North Engineering Research Center.
- ORED developed a proposal to make AARC a designated core facility for the UA System.
1.6.2 ORED will evaluate if other core analytical capabilities are needed.

YEAR ONE
• ORED is considering investments as highlighted in Strategic Objective 1.6.3.

1.6.3 ORED will continue to invest in the analytical facilities and ensure the facilities have a sustainable business model.

YEAR ONE
• ORED is the recipient of $41 million of the $1.25 billion bond funds resulting from the May 2020 signing of the Public School and College Authority bond issued by Governor Kay Ivey. This funding will support two UA projects. One project will move AARC into the North Engineering Research Center and expand its capabilities to become the preeminent, multi-dimensional materials characterization facility in the United States. The second project is highlighted in Strategic Objective 2.1.

1.6.4 ORED will secure an endowment to support core facilities.

YEAR ONE
• ORED is developing plans related to Strategic Objective 1.6.1 and 1.6.3.

1.7 ORED will work together with the Graduate School to develop programs and initiatives that support the missions of each.

YEAR ONE
• ORED established baseline data for the number of graduate students supported by externally funded awards (see Strategic Objective 6.3).

1.8 ORED will, through the Office for Undergraduate Research, support significant expansion of undergraduate research, scholarship and creative opportunities at UA with a concurrent increase in associated outcomes. ORED will secure an endowment for this initiative.

YEAR ONE
• ORED plans for the director of the Office for Undergraduate Research to become a full-time position in FY 2021.
• ORED developed plans for the Alabama Research Institutes and the Honors College to collaborate on both academic and research initiatives.
2. ALABAMA RESEARCH INSTITUTES

Great research-intensive universities have strong campus-wide institutes that invite and coalesce faculty, staff and students from many different departments around a profound research topic or theme. Such institutes are a conduit for the institutions to address grand challenges and provide innovative solutions to an extent not possible in its absence. The University of Alabama’s existing (and future) research institutes serve as both signatures to distinguish UA and as an opportunity to maximize the impact of research, scholarship and creative activities through transformative cross-disciplinary initiatives. Strategic Theme 2 has four Strategic Objectives and key progress on each Objective is highlighted.

2.1 ORED will invest in and grow the Alabama Research Institutes and evaluate their success.

YEAR ONE
- ORED placed a strong emphasis on how UA’s annual Federal Priorities were aligned to Alabama Research Institutes. For FY 2020 and FY 2021, 11 and 21 projects were put forward by UA as major Federal Priorities, respectively.
- Alabama Transportation Institute (ATI) assisted the state with the passage of the “Rebuild Alabama Act,” and spearheaded a successful $16.3 million grant from the U.S. Department of Transportation to support traffic management through technology development and deployment.
- ORED is the recipient of $41 million of the $1.25 billion bond funds resulting from the May 2020 signing of the Public School and College Authority bond issued by Governor Kay Ivey. This funding will support two UA projects. One project will renovate the One North Building and establish the Alabama Transportation Center, a new home for ATI and its strategic partners. The second project is highlighted in Strategic Objective 1.6.3.
- ORED coordinated and sponsored joint-Alabama Research Institute seed-funding related to future and current pandemics.

2.1.1 Have full-time executive directors and personnel that meet or exceed expectations.

YEAR ONE
- ORED successfully recruited executive directors for three of the Alabama Research Institutes: Alabama Life Research Institute (ALRI), Alabama Transportation Institute (ATI) and Alabama Water Institute (AWI).
- ORED appointed a UA Cyber Initiative chairperson.

2.1.2 Make existing discipline-related centers better and encourage effective collaboration between centers towards the expansion and development of new centers.

YEAR ONE
- Activities are underway, such as collaborative pilot grants and collaborative grant applications. These activities are often led by the Alabama Research Institutes.
2.1.3 Have a sustainable business model.

**YEAR ONE**
- All Alabama Research Institutes, including AARC, are in the process of developing strategic plans and concomitantly sustainable business models that align with ORED’s Five-Year Strategic Plan.

2.1.4 Have sufficient space to execute their mission.

**YEAR ONE**
- ORED identified additional space for ALRI in the AIME Building, ATI in One North Building, AWI in Cyber Hall and AARC in North Engineering Research Center.

2.1.5 Be named and endowed.

**YEAR ONE**
- ORED developed plans and case statements aligned with UA’s planned public launch of its capital campaign.

2.1.6 Be evaluated at least annually on relevant criteria to ensure continued productivity and ability to facilitate and enhance university-wide research and impact, those not meeting the criteria will be sunset.

**YEAR ONE**
- ORED developed a draft policy titled “Policy for Establishment and Periodic Review of Board of Trustee-Designated Research Institutes and Centers,” currently being shared with numerous stakeholders. The draft policy requires annual reporting and a critical five-year review. The planned launch for the policy is fall 2020.

2.2 ORED will expand the Association for Assessment and Accreditation of Laboratory Animal Care (AAALAC) accredited small animal research space on campus to facilitate and significantly expand opportunities for life research.

**YEAR ONE**
- ORED currently has no action on this Strategic Objective.

2.3 ORED will shepherd cross-disciplinary foundational research, scholarship and creative initiatives that focus efforts on identifying, understanding and solving problems related to rural and underserved communities.

**YEAR ONE**
- ALRI named its first faculty fellows to address rural and underserved communities.
- One of ALRI’s major research themes in its new draft strategic plan is titled “Rural Health and Health Disparities.”
- ORED personnel participated in collaborative efforts in COVID-19 screenings at 14 sites in four rural Alabama communities.
2.4 ORED will develop a university-wide process for proposing and establishing new Alabama Research Institute(s), as appropriate, and invest in their initial launch with new executive director(s) and personnel.

**YEAR ONE**

- See Strategic Objective 2.1.6.
3. TRANSFORMATIVE INITIATIVES

Consistent with our Guiding Principles, transformative ideas and initiatives, as well as their quality and impact, will be the primary determinants for investments by ORED. ORED will evaluate potential investments through a constructive and transparent process using defined criteria. Investments in these initiatives will be financial investments as well as targeted pilot and seed programs, which will have clear expectations and delineated outcomes. Strategic Theme 3 has five Strategic Objectives and key progress on each Objective is highlighted.

3.1 Working collaboratively with campus stakeholders, ORED will routinely evaluate the merits of investments in major research and creative initiatives, using the following criteria: transformative, cross-disciplinary, pathway to excellence, return on investment and societal impact.

YEAR ONE
• ORED supported a campus-wide collaborative proposal from six colleges, ALRI and the University Medical Center to create UA’s first Magnetic Resonance Imaging (MRI) Center, now underway. The center will be funded jointly by the Office for Academic Affairs and the Office for Research & Economic Development.

3.2 ORED will establish a program to support state-of-the-art research and creativity conferences on campus that explore and promote transformative initiatives and will secure an endowment to support the program.

YEAR ONE
• ORED is developing an annual request for proposals to support the program.
• In the meantime, ORED has made four awards:
  o The Comic Renaissance in Italy
  o The International Conference on Medieval and Renaissance Scottish Literature and Language
  o MINT: Celebrating Our Past and Envisioning the Future Science
  o 52nd Annual Southeast Undergraduate Research Conference

3.3 ORED will launch pilot and seed-funding programs to facilitate research, scholarship and creative initiatives that are cross-disciplinary and transformative.

YEAR ONE
• ORED is in early planning stages to develop and launch these programs.

3.4 In an effort to facilitate their success while working collaboratively with campus stakeholders, ORED will seed potentially transformative projects that develop mutually beneficial research, scholarship and creative activity partnerships with other research universities, both domestic and international.

YEAR ONE
• ORED currently has no action on this Strategic Objective.
3.5 ORED will establish an external advisory board and an internal advisory board comprised mainly of faculty to counsel ORED on emerging transformative opportunities and on its progress in executing its Strategic Plan.

YEAR ONE
- ORED is in planning stages of establishing both boards.
4. TRANSLATING INTELLECTUAL PROPERTY

Consistent with the research mission of The University of Alabama and ORED’s mission, ORED must support and foster the initiatives and innovations of faculty, staff and students. Such support includes translating their tangible intellectual property to achieve maximum economic and societal impact. Intellectual property is defined broadly as creations of the mind including inventions, patentable material, socio-behavioral, literary and artistic works, as well as designs and models. As the University’s research enterprise grows, the value of its intellectual property will grow. The University’s intellectual property should return resources to the University so ORED can reinvest them into the research enterprise. The intellectual property will also help develop partnerships with industry for meaningful and impactful research. Strategic Theme 4 has five Strategic Objectives and key progress on each Objective is highlighted.

4.1 ORED will develop criteria and processes to inform faculty and students if UA-developed intellectual property is more suitable for licensing or a start-up venture.

**YEAR ONE**
- ORED created a working group for commercialization of UA innovations that do not meet patentability requirements.
- ORED hired an assistant vice president for research and technology agreements.
- ORED hired an intellectual property analyst.

4.2 ORED will develop a proposal to revise and advocate for changes to the systemwide patent policy to be consistent with best practices regarding faculty consulting and intellectual property.

**YEAR ONE**
- ORED currently has no action on this Strategic Objective.

4.3 ORED will reimagine technology transfer at UA by identifying and securing a strategic outside organization to work with the University to facilitate technology transfer on its behalf.

**YEAR ONE**
- ORED completed a one-year pilot partnership with an outside firm. The pilot informed future types of partnerships ORED will pursue.
- ORED changed the name of the Office for Technology Transfer to the Office for Innovation & Commercialization and will hire a director.
4.4 ORED will promote industry-sponsored projects at the University and remove uncertainty and financial concerns by developing and instituting a suite of licensing options consistent with best practices.

**YEAR ONE**

- ORED developed and launched the Tide Research Partnership (TRP) Program. The TRP Program significantly promotes research partnerships with industry with the goal of growing the research enterprise and its impact while providing opportunities for UA students. The TRP Program allows a company the option to pre-pay a fee when executing a sponsored research agreement in exchange for 1% royalty fee for exclusive worldwide rights to all intellectual property resulting from the research.
- ORED created a working group to develop an express license to use with UA start-up companies.

4.5 ORED will launch a new seed fund to facilitate intellectual property development and licensing and will secure an endowment for the fund.

**YEAR ONE**

- ORED developed and launched the new *Intellectual Property (IP) Gap Fund* to both enhance the value of intellectual property to the University and increase the likelihood for licensing and industry partnerships. The specific objectives of the IP Gap Fund are:
  - Further reduce an invention to practice
  - De-risk the technology
  - Increase the value of the IP
  - Increase the likelihood for licensing
  - Enhance the opportunity to parlay the IP into a long-term partnership with industry
- Through the IP Gap Fund, ORED made a joint investment with the College of Education for the commercialization of *Body Composition Assessment Technology*, developed within the college.
5. ECONOMIC AND BUSINESS ENGAGEMENT

Consistent with the research mission of The University of Alabama, ORED must facilitate and promote economic development. One of the critical assets of the University is our students. These students are the future workforce talent for our state, the nation and the world. ORED will develop strong partnerships with external stakeholders, especially industry, to increase the number of sponsored projects and, at the same time, create career opportunities for UA students. ORED’s ambition is for UA to be the go-to university for industry. Policies and processes mutually beneficial to maintaining sustainable partnerships and collaboratively offering solutions to solve complex problems are needed to accomplish this goal. Strategic Theme 5 has eight Strategic Objectives and key progress on each Objective is highlighted.

5.1 ORED will establish a university-wide Economic Development Council (EDC), chaired by the vice president for research and economic development. The EDC will prioritize, coordinate and align university-wide initiatives and opportunities for all initiatives relating to economic development at UA, except those relating to the academic mission or the research interests of faculty. ORED will contribute to the University’s priorities and strategic goals on economic development.

YEAR ONE
- UA, led by the vice president for research and economic development, created the EDC.
- UA created the “Five-Year Economic Development Priorities and Strategic Goals for The University of Alabama, 2019-2024” endorsed by the UA System Board of Trustees. This guiding plan is meant to align all UA economic development assets and ensure the University meets its strategic goals in this area. As highlighted in this Annual Report, ORED made contributions to support UA’s economic development efforts across Alabama. A separate report on UA’s progress over this past year on this guiding plan will be completed in fall 2020.
- ORED relocated four economic development centers from the Culverhouse College of Business to the Office for Economic & Business Engagement. This includes the UA Center for Economic Development and the Business Outreach Centers: Alabama Small Business Development Center, Alabama International Trade Center and Alabama Procurement Technical Assistance Center.

5.2 ORED will establish an Office for Economic & Business Engagement (OEBE) within ORED and recruit an associate vice president to lead the office. The primary mission of the OEBE will be to engage external partners to develop robust funded partnerships. This will include recruitment of business engagement personnel, one based at GulfQuest in Mobile to develop partnerships in south Alabama, and others to do the same across the rest of the state.

YEAR ONE
- ORED developed OEBE and successfully recruited the associate vice president for economic and business engagement.
- ORED created a shared economic development incubator and industry outreach center located at GulfQuest in Mobile.
- ORED partnered with the Mobile Chapter of UA’s National Alumni Association to present Showcase Mobile: A Career Fair for students and recent graduates interested in employment opportunities.
5.3 OEBE will develop a plan to engage industry and other external partners around core research and service disciplines at UA and work closely with the Division of Advancement to execute this plan with the primary goal to increase the number of externally funded projects leading to demonstrable impacts and outcomes.

YEAR ONE
- ORED developed the UA Rural Health Commitment with the College of Community Health Sciences.

5.4 ORED will identify and secure a strategic corporate partner and join the Government-University-Industry Research Roundtable (GUIRR) with the shared goal to maintain a long-term mutually beneficial research and academic partnership. This partnership will serve as a model for similar partnerships.

YEAR ONE
- ORED currently has no action on this Strategic Objective.

5.5 ORED will develop strategies and external proposals to build regional and state capacity to translate innovations into career opportunities for UA students through industry partnerships or commercialization assistance to The University of Alabama innovators and entrepreneurs.

YEAR ONE
- OEBE is working on this initiative.

5.6 ORED will develop a Workforce and Talent Retention plan that aligns with Accelerate Alabama 2.0/3.0 and partner with key stakeholders such as chambers of commerce, development authorities, and the Alabama Department of Commerce to increase the number and percentage of UA students remaining in the state after graduation.

YEAR ONE
- ORED is in the planning stages of developing the Workforce and Talent Retention plan.
- OEBE, in partnership with the UA Career Center and over 20 Alabama-based company stakeholders, conducted the inaugural virtual Hired in Alabama Career Fair attended by over 100 students. The Alabama Secretary of Labor and the Workforce Development Councils were included to promote careers with company operations in the state.
- Funded by the Alabama Department of Commerce, and in collaboration with the Center for Business and Economic Research, the UA Center for Economic Development contributed to workforce development in 40 rural Alabama counties.

5.7 ORED will obtain an endowment to support workforce development and talent retention of UA students and UA-based start-up companies in Alabama.

YEAR ONE
- ORED partnered with the Division of Advancement to secure a $1.4 million endowment from the Alabama Power Foundation to support business innovation, entrepreneurship, small business growth and talent retention in the state. The gift established the Alabama Power Endowed Innovation
OEBE will ensure EDGE Labs, formerly the Bama Technology Incubator, meets or exceeds best practices as a university-based wet laboratory incubator facility. EDGE Labs will work closely with The EDGE to develop mutually beneficial and synergistic programs.

YEAR ONE

- ORED aligned EDGE Labs with The EDGE in partnership with the Culverhouse College of Business, which included its name change.
- ORED and the Culverhouse College of Business began co-management of the National Science Foundation Innovation Corps (I-Corps) program.
- ORED and the Culverhouse College of Business enhanced support of UA innovation and entrepreneurship by programmatically aligning EDGE Labs and The EDGE.
  - UA continues success in the national business start-up program
  - Two UA technologies are part of a national start-up program
  - The OEBS conducted the inaugural faculty and staff business pitch competition that attracted 15 participants in a new category called Innovative Technology
6. ASSESSING PROGRESS AND IMPACT

With the motivation of continuous quality improvement, ORED will track and assess its progress and impact in achieving its Strategic Objectives. Data to support key metrics and outcomes must be reliable, valid and readily available. The data should be qualitative and quantitative, and this data must reflect the impact and recognition of the University’s research efforts on others through, for example, number of citations of University research publications and the number of external honorific awards received by faculty. Strategic Theme 6 has three Strategic Objectives and key progress on each Objective is highlighted.

6.1 ORED will routinely survey the University community to ensure it is meeting the needs of the community and continually improving.

YEAR ONE
- ORED launched the first University community survey specific to Institutional Review Board services and received 283 responses. Based on these responses, website enhancements are in progress and additional training programs will be developed for board members, staff and applicants.
- ORED will prioritize and develop additional surveys related to other core services.

6.2 ORED will track and assess both ORED’s and the University’s investment in research over the five-year period with the goal to more than double research awards through growing research awards by an average rate of 15% per year for the next five-years.

YEAR ONE
- The Carnegie Commission on Higher Education designated The University of Alabama as a Very High Research Activity doctoral university or R1.
- As shown in Table 1 and Table 2, externally sponsored awards have continued to grow and exceed the 15% per year growth goal.

Table 1. External Sponsored Awards to UA

<table>
<thead>
<tr>
<th></th>
<th>FY 2018</th>
<th>FY 2019</th>
<th>% Change</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>$99.1M</td>
<td>$132.5M</td>
<td>33.6%</td>
</tr>
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Table 2. Year-to-Date (YTD) External Sponsored Awards to UA

<table>
<thead>
<tr>
<th></th>
<th>FY 2019 YTD</th>
<th>FY 2020 YTD</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$73.9M</td>
<td>$107.5M</td>
<td>45.5%</td>
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</table>
6.3 ORED will track and assess Key Research and Business Engagement Metrics and Outcomes, and make available to the campus recurring reports that indicate the University’s progress in:

- Increasing the number of grants and contracts submitted

**YEAR ONE**
- Table 3. Dollar Amount and Number of External Grants and Contracts Submitted by UA

<table>
<thead>
<tr>
<th></th>
<th>FY 2018</th>
<th>FY 2019</th>
<th>% Change</th>
</tr>
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<tbody>
<tr>
<td>Total Amount</td>
<td>$349.1M</td>
<td>$425.6M</td>
<td>21.9%</td>
</tr>
<tr>
<td>Number of Submissions</td>
<td>984</td>
<td>1,080</td>
<td>9.8%</td>
</tr>
</tbody>
</table>

- Table 4. Year-to-Date (YTD) Dollar Amount and Number of External Grants and Contracts Submitted by UA

<table>
<thead>
<tr>
<th></th>
<th>FY 2019 YTD</th>
<th>FY 2020 YTD</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Amount</td>
<td>$225.5M</td>
<td>$204.4M</td>
<td>-9.4%</td>
</tr>
<tr>
<td>Number of Submissions</td>
<td>696</td>
<td>609</td>
<td>-12.5%</td>
</tr>
</tbody>
</table>

Year-to-date, the number and dollar amount associated with submissions decreased; however, dollar amount of awards received increased significantly (see Strategic Objective 6.2, Table 1 and Table 2).

- Increasing the number of awarded grants and contracts

**YEAR ONE**
- As noted in Table 1 and Table 2 above, the University has experienced growth in sponsored awards exceeding the goal of 15% per year.

- Increasing the percentage of faculty involved in new and existing externally funded awards

**YEAR ONE**
- Table 5 shows the number of UA faculty engaged in research, defined as faculty effort charged directly to externally sponsored awards during the fiscal year. In FY 2019, there was an increase in the number and percent of faculty engaged in research. As of May 31, 2020, 553 faculty members were engaged in research with an expected increase as the fiscal year continues.
Table 5. UA Faculty Engagement in Research

<table>
<thead>
<tr>
<th></th>
<th>FY 2018</th>
<th>FY 2019</th>
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<tbody>
<tr>
<td>UA Faculty</td>
<td>2,009</td>
<td>2,027</td>
</tr>
<tr>
<td>UA Faculty Engaged in Research</td>
<td>647</td>
<td>709</td>
</tr>
<tr>
<td>Percent of UA Faculty Engaged in Research</td>
<td>32.2%</td>
<td>35.0%</td>
</tr>
</tbody>
</table>

- Increasing the number of graduate students supported by externally funded awards

**YEAR ONE**

- Table 6 shows the number of UA graduate students engaged in research, defined as students with the role of Graduate Research Assistant who have effort charged directly to sponsored awards during the fiscal year. FY 2019 showed a slight decrease in the number and percent of graduate students engaged in research. As of May 31, 2020, graduate student participation in research reached a total of 462 with an expected increase as the fiscal year continues.

Table 6. UA Graduate Student Engagement in Research

<table>
<thead>
<tr>
<th></th>
<th>FY 2018</th>
<th>FY 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>UA Graduate Students</td>
<td>4,916</td>
<td>4,868</td>
</tr>
<tr>
<td>UA Graduate Students Engaged in Research</td>
<td>918</td>
<td>858</td>
</tr>
<tr>
<td>Percent of UA Graduate Students Engaged in Research</td>
<td>18.7%</td>
<td>17.6%</td>
</tr>
</tbody>
</table>

- Increasing research and other sponsored project awards

**YEAR ONE**

- As reported in Strategic Objective 6.2 (see Table 1 and Table 2), the University has experienced growth in sponsored awards that exceeds the goal of 15% per year.

- Increasing research and development expenditures as defined by NSF HERD Table 21
  - From federal, state and local government
  - From business and non-profit organizations
YEAR ONE

- The annual National Science Foundation (NSF) Higher Education Research and Development (HERD) Survey is the primary source of information on R&D expenditures within U.S. higher education institutions. The self-reported data gathered by the NSF is used to rank institutions based on R&D expenditures, which excludes instruction and other sponsored activities.

As shown in Table 7, R&D expenditures continue to increase each fiscal year thereby increasing the total NSF ranking. The University total ranking improved from #179 to #172 in FY 2018, placing UA in the top 30% among 645 other reporting institutions of higher education in the U.S. In addition, the increase in the growth rate for research expenditures from FY 2017 to FY 2018 places UA as second in the Southeastern Conference and 17th in the country for all public, comprehensive research universities. NSF will publish its FY 2019 HERD Survey in fall 2020.

Table 7. UA Research and Development Expenditures as Reported in the NSF HERD Survey

<table>
<thead>
<tr>
<th>R&amp;D Expenditures ($, in millions)</th>
<th>FY 2017</th>
<th>FY 2018</th>
<th>FY 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal</td>
<td>$27.7</td>
<td>$30.4</td>
<td>$37.9</td>
</tr>
<tr>
<td>State &amp; Local</td>
<td>$9.6</td>
<td>$9.6</td>
<td>$9.8</td>
</tr>
<tr>
<td>Institution</td>
<td>$22.6</td>
<td>$27.1</td>
<td>$30.8</td>
</tr>
<tr>
<td>Business</td>
<td>$1.9</td>
<td>$2.9</td>
<td>$2.8</td>
</tr>
<tr>
<td>Non-Profit</td>
<td>$1.1</td>
<td>$0.9</td>
<td>$1.0</td>
</tr>
<tr>
<td>Other</td>
<td>$0.4</td>
<td>$1.1</td>
<td>$1.0</td>
</tr>
<tr>
<td>Total R&amp;D Expenditures</td>
<td>$63.3</td>
<td>$72.0</td>
<td>$83.3</td>
</tr>
<tr>
<td>NSF Survey Rank - Total</td>
<td>#179</td>
<td>#172</td>
<td>TBD</td>
</tr>
</tbody>
</table>

- ORED is developing an NSF HERD Comparator Set of institutions most similar to UA to be presented in the next Annual Report.
- ORED is evaluating strategies to better account for existing investments in research, consistent with defined criteria for reporting R&D expenditures to the NSF HERD Survey.
- Increasing key outcomes for scholarly endeavors, namely:
  - Number of juried exhibitions and performances by faculty

**YEAR ONE**
- UA faculty representing art, music, theater and dance reported exhibitions and performances and their venue in the last three academic years as shown in Table 8.

Table 8. Exhibitions and Performances by UA Faculty in Art, Music, Theater and Dance in the Last Three Academic Years

<table>
<thead>
<tr>
<th>Academic Year/Venue</th>
<th>State &amp; Local</th>
<th>Regional</th>
<th>National</th>
<th>International</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017-2018</td>
<td>469</td>
<td>85</td>
<td>168</td>
<td>81</td>
<td>803</td>
</tr>
<tr>
<td>2018-2019</td>
<td>390</td>
<td>120</td>
<td>191</td>
<td>81</td>
<td>782</td>
</tr>
<tr>
<td>2019-2020</td>
<td>406</td>
<td>115</td>
<td>148</td>
<td>104</td>
<td>773</td>
</tr>
</tbody>
</table>

- Number of peer-reviewed publications by UA faculty
- Number of published books written or edited by UA faculty
- Number of citations of University publications
- Number of faculty who receive external honorific awards

**YEAR ONE**
- The following key outcomes are reported based on data from Academic Analytics, a third-party database that aggregates information on scholarly research activities. For comparison purposes, data for UA from the 2016 Comparative Database and the 2018 Comparative Database is presented in Table 9.

Table 9. UA Faculty Productivity Metrics as Captured by Academic Analytics Comparative Databases for 2016 and 2018

<table>
<thead>
<tr>
<th>Academic Analytics (AA) Metric (period of data collection)</th>
<th>2016 AA Comparative Database</th>
<th>2018 AA Comparative Database</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td># of UA faculty in the AA database (in 2016 or 2018)</td>
<td>609</td>
<td>725</td>
<td>19.0%</td>
</tr>
<tr>
<td># of peer-reviewed publications by UA faculty (prior 4-year period)</td>
<td>4,127</td>
<td>5,487</td>
<td>33.0%</td>
</tr>
<tr>
<td># of published books (prior 10-year period)</td>
<td>370</td>
<td>401</td>
<td>8.4%</td>
</tr>
<tr>
<td># of citations of University publications (prior 5-year period)</td>
<td>62,813</td>
<td>80,564</td>
<td>28.3%</td>
</tr>
<tr>
<td># of UA faculty who received external honorific awards (lifetime)</td>
<td>262</td>
<td>327</td>
<td>24.8%</td>
</tr>
</tbody>
</table>
Increasing key outcomes for technology transfer, business engagement and talent retention in the state, namely:

- Number of submitted invention disclosures

**YEAR ONE**
- The University had a slight decrease in the number of submitted invention disclosures from 50 in FY 2018 to 46 in FY 2019. To date, 22 invention disclosures have been submitted for FY 2020 with an expected increase as the fiscal year continues.

- Number of license agreements

**YEAR ONE**
- The number of license agreements held steady between FY 2018 and FY 2019 at two per year. To date, no license agreements have been executed in FY 2020.

- Annual revenue from license agreements will equal or exceed annual patent expenses

**YEAR ONE**
- License income increased by 42.6% from $48,000 in FY 2018 to $68,450 in FY 2019. License income for FY 2020 will be evaluated at the end of the fiscal year.
- Patent revenue also increased 44% from $58,872 in FY 2018 to $84,762 in FY 2019 while patent costs for each respective year decreased 11.2% from $448,884 to $398,436. Patent reimbursements and costs for FY 2020 will be evaluated at the end of the fiscal year.

- Number of UA-based start-up companies in and graduating from the EDGE Labs (formerly Bama Technology Incubator)

**YEAR ONE**
- In 2019, EDGE Labs incubated five high-tech start-up companies: 525 Solutions, ThruPore Technologies, JAQ Energy, ForeSense Technologies and Sand Spirit. Within the last year, four companies graduated, and another start-up company moved into EDGE Labs.

- Demonstrable impact and outcomes to external partners and project sponsors

**YEAR ONE**
- University business outreach centers such as the Alabama Small Business Development Center, Alabama International Trade Center and Alabama Procurement Technical Assistance Center conducted 187 workshops with over 4,000 attendees and assisted with the start-up of 219 new small businesses. Clients also reported the following outcomes as a result of UA assistance:
  - 2,115 jobs created and retained
  - $94.7 million secured capital
- $183 million government contracts for the procurement of Alabama goods and services.
- In response to the COVID-19 pandemic, the [Alabama Small Business Development Center (ASBDC)](https://www.asbdc.org) delivered 55 Small Business Association Economic Injury Disaster Loans (EIDL)
Annual Report

and Paycheck Protection Program (PPP) training events with 5,500 participants. Funding in the amount of $117 million was issued to small businesses as a result of ASBDC assistance.
- EIDL advances awarded to 434 businesses
- EIDL awarded to 106 businesses
- PPP awarded to 773 businesses

Additionally, the University continued building partnerships with industry sponsors related to grants and contracts. As a result, industry-sponsored awards increased 59.2% from $4.1 million in FY 2018 to $6.6 million in FY 2019 and accounts for almost 5% of sponsored awards. As of May 31, 2020, the University was awarded over $3.5 million industry-sponsored contracts with an expected increase as the fiscal year continues.

Number and percentage of UA students remaining in the State after graduation

YEAR ONE
- OE BE is collaborating with the Center for Business and Economic Research and the UA Office of Institutional Research and Assessment to develop a more quantitative method for collecting and measuring student retention data.