



THE UNIVERSITY OF  
TENNESSEE  
SYSTEM

2021

# ANNUAL REPORT

*Institutional Effectiveness*



# MISSION

The institutional effectiveness team promotes a culture of continuous improvement and enhances evidence-based decision making by offering services in planning, assessment, accreditation, institutional research, and business intelligence.

# VISION

The institutional effectiveness team will be recognized as an exemplar of best practices and leader among system institutional effectiveness units.

# VALUES

*Integrity*

*Excellence*

*Transparency*

*Collaboration*

*Collegiality*

*Creativity*

*Teamwork*

*Dependability*

*Innovation*

*Respect*

*Diversity*

*Quality*

*Improvement*

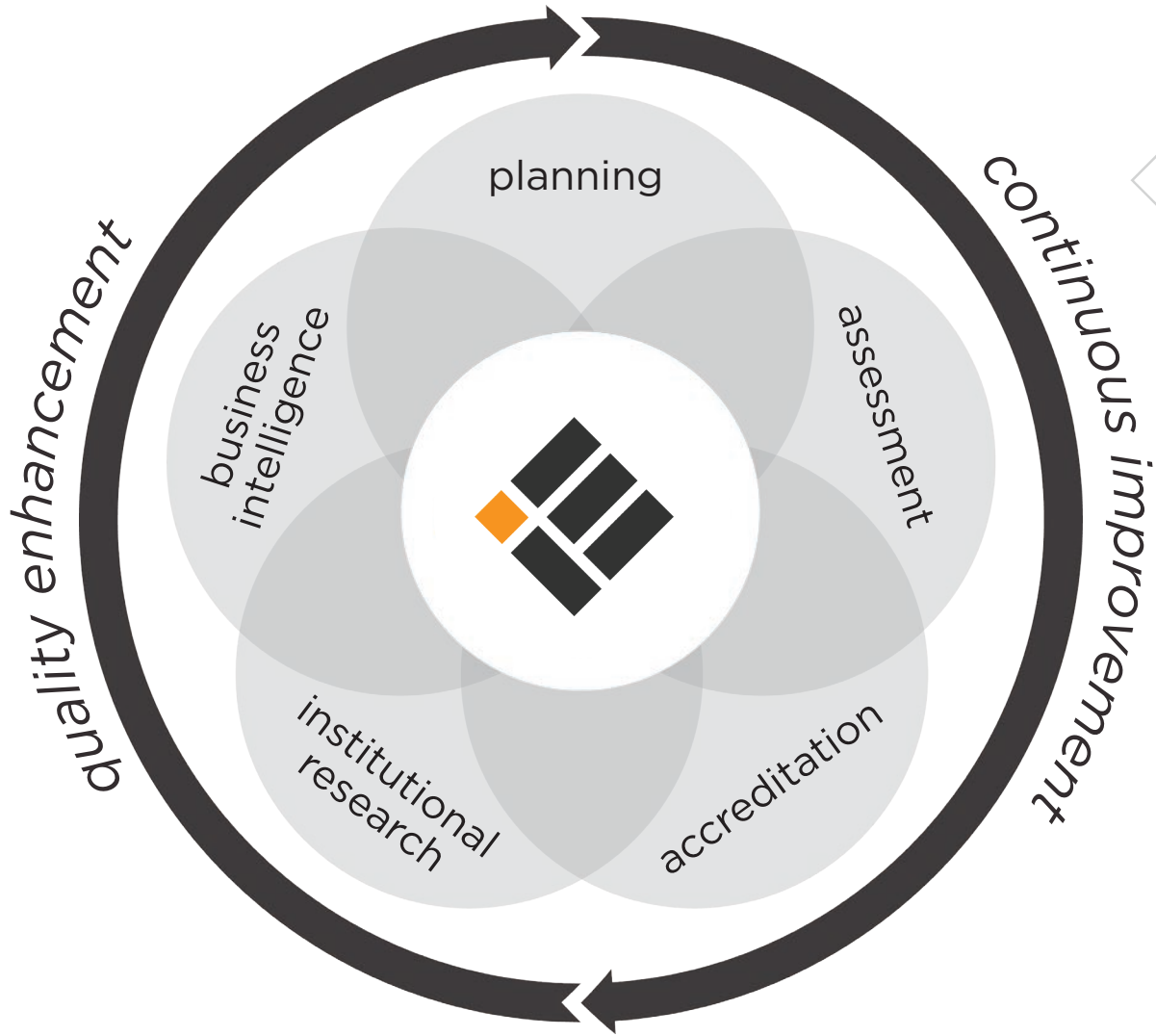
*Impact*

*Learning*



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# institutional effectiveness

# *a note from our* **ASSOCIATE VICE PRESIDENT**



I am pleased to present this report as an opportunity to reflect on the year we are leaving behind, ground the important work of the UT System's institutional effectiveness (IE) team in the promise of a new year, and articulate a vision for sustaining the team's momentum. As we enter the new year, we find ourselves in the midst of another surge in a pandemic that has reshaped how we live and work. The IE team has reflected workforce dynamics playing out globally, replacing two business intelligence (BI) software developers and two institutional research (IR) associates in the last year alone. Considerable churn notwithstanding, this report highlights noteworthy accomplishments in the functional areas that comprise the IE team: IR, BI, planning, assessment, and accreditation.

The IE team was formed in January 2020 via the merger of IR and BI under the Division of Academic Affairs and Student Success. Soon thereafter, as remote work became the norm for every UT System employee at the onset of the pandemic, the areas of planning, assessment, and accreditation were added to the IE team's portfolio of services. As this report goes to press, the IE team is part of the first wave of units moving into the UT Tower, the new headquarters of the UT System in downtown Knoxville; the IE team was previously distributed across three different locations. I am excited about the IE team sharing the same physical space for the first time since its inception, yet keenly aware of how almost two years of mostly remote work continues to contour workplace dynamics globally, across the UT System, and for this team.

Upon the formation of the IE team, we reevaluated two fundamental aspects of the UT data ecosystem: 1) how the UT System receives academic data from its campuses, and 2) how the System organizes and presents academic data to the UT Board of Trustees.

To address inefficiencies and redundancies in the flow of data from the campuses, we established a single point of contact for all data requests and asked each of the campuses to follow suit. For us, this took the form of the appointment of the UT System's first chief academic data officer; with varying titles, each campus also named one point of contact for requests of academic data. The results have been encouraging.

To improve the process of conveying data to the Board of Trustees, the IE team created executive summaries in the form of data visualizations assembled into infographics, presentations, and dashboards. Thumbnails of various infographics appear in this report, and every infographic the IE team has created to date can be found at <https://ie.tennessee.edu/infographics/>.

Looking forward, the IE team aims to continually enhance the quality of the decision support tools and reports it produces. Opportunities for improvement exist, for instance, in the areas of advanced data modeling and predictive analytics. Moreover, the team envisions playing an active role in the collaborative development of the UT System's data governance framework.

These challenging times call for insight, proactivity, and nimbleness that leaders can achieve only with timely, relevant data and innovative decision support. To this end, the IE team is fully committed to its mission of quality enhancement and continuous improvement, and energized about its potential to continue contributing significantly to the broader mission of the UT System.



# institutional research & business intelligence

## EXECUTIVE DASHBOARDS

Members of the Business Intelligence (BI) team began development of compact data visualizations to support decision makers and monitor progress on the strategic plan. These visuals will be displayed in dynamically generated web pages and dashboards. Multiple compact visualizations will be embedded in web pages to create multi-visual dashboards. Proof of concept has been achieved.

**2022 Goal:** Continue with proof of concept and continue product to production.

## GRADUATION & RETENTION REPORTS

Members of the Institutional Research (IR) team developed a series of graduation and retention reports disaggregated by specific student sub-populations. Reports will be in the same format as extant standard enrollment reports and will include counts by major, full-time/part-time enrollment status, student level, and other characteristics.

## HUMAN RESOURCES MODEL

Designed and created an HR model to mirror monthly snapshots created in IRIS/Business Warehouse (BW). This will allow us to create standard reports that can be published by IR, as well as allow users to create their own HR reports and dashboards.

**2022 Goal:** Continue expanding model and develop standard HR reports.

## IPEDS HR SURVEY

Extracted data from BW to fulfill annual federal reporting requirements on the number of employees within the UT System Administration and the UT Institute of Public Service.

## ACADEMIC DATA DEFINITIONS WORKGROUP

This workgroup, funded by a OneUT Grant, aims to further standardize academic data definitions across the UT System.

**2022 Goal:** Continue expanding the scope of common academic data definitions across UT campuses.

## POST-GRAD OUTCOMES

Began creating reports using data from the Tennessee Longitudinal Data Study (TLDS) to determine post-graduation outcomes of UT students. Initial queries were developed with assistance from the institutional research department at MTSU. Restricted tables that are not part of our usual data set were required; the process of obtaining access to restricted tables is under way. Completed reports will be used to create a webpage that will enable public review of graduation outcome trends for majors at each of the UT campuses.

**2022 Goal:** Incorporate data from other external data sources such as the National Student Clearinghouse to track students who leave Tennessee.

## **PROJECT MANAGEMENT**

Conducted extensive research and testing in finding a viable solution to the Institutional Effectiveness and Academic Affairs & Student Success teams project organization needs. The ending result was the purchase of Hive, a project management information system. Worked with Hive support to conduct training for all teams under AA&SS umbrella, including individual training to dig deeper into the details of the software. Worked with all stakeholders and team leads to input all projects, as well as organizational work, in order to keep a separation of the two for the purpose of having clear visibility of the scope of work being done within the team as well as the asks of the team from outside sources. Created a project charter template allowing the projects to have official approval and signoff capabilities and continue to improve on the process in creating a solution that fits with our team dynamics. Obtained project management training through a Veterans scholarship program at Syracuse University and achieved the PMP certification.

## **RESEARCH DATA MODEL**

Members of the Business Intelligence team deployed a UT System-wide research data model co-developed with colleagues at UTK, UTHSC, and UTSA. This is a system-wide sponsored projects model containing information about research projects, proposals, and awards, allowing the creation of reports that can filter by campus, college, department, sponsor, and investigators among others.

## **RESEARCH DATA QUERIES**

Worked with the Assistant Vice President for Research on creating ad-hoc queries to answer questions from the Board of Trustees as well as others on employees involved in sponsored research. Queries looked at research expenditures by employee groups, by campus, and by race and gender.

## **SALARY DASHBOARD**

Institutional Effectiveness team maintains a PowerBI dashboard of all UT employees'

salaries, listed by employee name. Data is updated annually based on the official November snapshot.

## **STUDENT STANDARD ENROLLMENT REPORTS & STUDENT DATA MODEL**

Business Intelligence and Institutional Research team members made enhancements to the standard student enrollment reports, providing additional information about campus residency. The team members also created a revised data model for student data that is submitted by campuses to the System. The revised model will greatly improve the interactivity of standard enrollment reports.

## **STANDARD OCCUPATION CODES CAPTURE FOR IRIS & BUSINESS WAREHOUSE EMPLOYEE DATA**

Business Intelligence team members worked with UT System Human Resources and UT IRIS personnel to discuss and resolve missing Standard Occupation Classifications (SOC) Codes for UT employees within the IRIS database. SOC codes are necessary for annual IPEDS federal reporting.





## SMART POLICY NETWORK (SUCCESSOR TO SOAR: SUMMIT ON OPIOID ADDICTION & RESPONSE)

Worked to clean and clarify data on opioid addiction in Tennessee. Much of the information on opioid addiction aid exists on a county level and oftentimes counties have disparate methods of data collection and recording. Our task was taking the many different forms of data on help centers that were reported to us and consolidating them into a single usable file for use in dashboards and future reports by the SMART Policy Network. The process is continuous but we have found some great resources in terms of what is available to Tennesseans in combating opioid addiction.

Created a dashboard to help substance use disorder (SUD) victims and their friends locate resources near them in Tennessee (Dashboard) which is deployed on the SMART Policy Network website.

## SOFTWARE LICENSING STUDENT & EMPLOYEE HEADCOUNTS

Created tables providing faculty, staff, and student headcounts for annual software licensing.

## STEM VS NON-STEM ENROLLMENT & GRADUATION RATES BY GENDER

Prepared a set of tables for President Randy Boyd highlighting the disparities in gender in STEM versus non-STEM enrollment and in graduation rates. The information reflected a 60/40 ratio of males to females in STEM enrollment, but roughly the opposite ratios in non-STEM enrollment and overall graduation rates, with higher female enrollments and graduation rates at each UT campus.

## STUDENT DATA SUBMISSIONS FROM UT CAMPUSES

Worked with campuses to collect and clean enrollment, extended, reference, applications, and completions data throughout the year. By continuing to help clean data and refine our edit checks, student data should gradually become more reliable and can be used confidently in any reporting. The collected data is then formatted through SQL to correctly match THEC's outline and sent to THEC for further review.

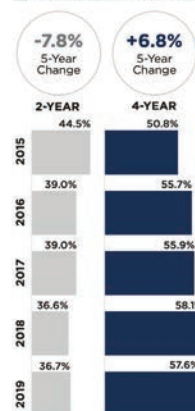
## TENNESSEE ASSOCIATION FOR INSTITUTIONAL RESEARCH (TENNAIR)

The University of Tennessee was well-represented at TENNAIR Conference 2021: Defining a New Normal, in Chattanooga, August 4-6. Each campus was represented by the director of its institutional research team as well as other associates. There were eight UTSA attendees, three of which were conference presenters. Congratulations to new TENNAIR president Sherry Marlow Ormsby, Executive Director of the Office of Planning, Evaluation, and Institutional Research at the University of Tennessee at Chattanooga.

## TENNESSEE PUBLIC HIGH SCHOOL GRADUATES DEMOGRAPHICS & COLLEGE-GOING TRENDS

Collaborated on development of tabular reports and an infographic capturing key postsecondary enrollment trends of Tennessee high school graduates. This material was presented at the February 2021 BOT meeting.

2-YEAR VS. 4-YEAR COLLEGE TRENDS



UT SYSTEM FIRST-TIME FRESHMAN 1-YEAR RETENTION RATE







## TENURE DEPARTMENTS

Assisted UT campuses and IRIS to verify departments available for Tenure in IRIS are up to date.

## THEC CCTA FORMULA FUNDING

Reviewed the AY2022 THEC Complete College Tennessee Act (CCTA) Formula Funding metrics and worked with THEC to remedy inconsistencies.

## UT PROCUREMENT REPORTING

Collaborated with the UT System Procurement Office to simplify monthly reporting required by the State of Tennessee. We have cut down some of the time it takes for monthly reporting and continue to work on acquiring all the data required so a model can be created. Once the model is designed the monthly reporting time will be cut significantly and easy to comprehend dashboards will be created to visualize the data. Part of the procedure in understanding the process is to attend Supplier Diversity Task Force Meetings.

**2022 Goal:** Complete model and create dashboards. Completion of model includes links for contract system, procurement card bank data, capital projects, process for vendor updates in database that cannot be completed in IRIS. Creation of reports including Capital Spend, GODBE Diversity Spend, certified vendors and others.

## UT PROMISE

Assisted in imports of student data into PeopleGrove Mentor Platform. Typically, students directly submit their information through PeopleGrove, but oftentimes information is needed on students that has already been collected and stored in our UT System Student Information System (SIS) SQL servers.

Aided in the reformatting of mentor information for better student matching in future terms. Before, mentors had been matched on a few specific criteria such as student level/class and regional origin, however matching on similar interest and mentor expertise was hamstrung due to the fact there were multiple values for each category. The solution to this was correcting the import so that mentors could be uploaded alongside their interests and expertise rather than having them exist outside the imported data. Future matching should now reflect on student and mentor interests much better due to this change.

Created the list of cities/regions that is used to help match students and mentors. The list is based off U.S. Census data and mentor location. Students pick cities that they want to work in after graduation and are matched with mentors that live in that area.

## UT PRESENCE

Members of the Institutional Effectiveness team oversaw annual updating of UT Presence - UT student, employee, alumni, and economic impact metrics reported by TN county and TN legislative districts - for use by UT Government Relations and UT Communications and Marketing.

This year's updating provided geocoding and stored data on UT personnel and facilities in SQL servers for later use in UT Presence dashboards and other deliverables. Geocoding and maintaining this data on a year-by-year basis will show trends in physical growth of the UT System as well as create informational materials for state legislators on the importance of the university system to Tennessee.

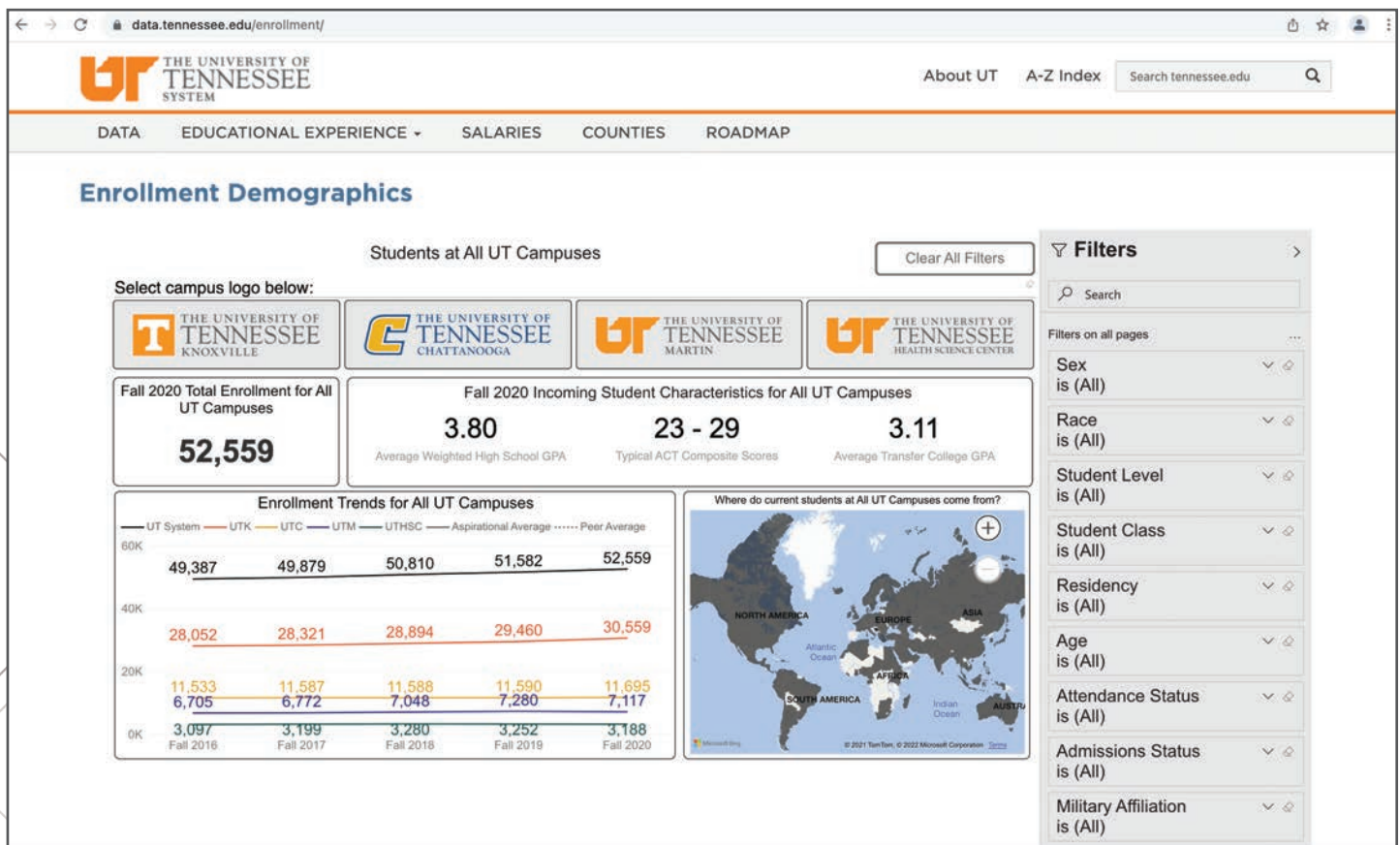
## UT SOUTHERN STUDENT DATA

Met with THEC directors of Fiscal Policy, Planning and Research to discuss initial steps and timeline of UT Southern student data collection and reporting to THEC. THEC will not include UT Southern in annual CCTA Formula Funding until data for at least four fiscal years have been collected and analyzed (FY2022 - FY2025).

Met with TICUA director of Technology & Data Systems to discuss the process by which Martin Methodist College reported unit-record student data to TICUA, with the aim of determining the best means for the UT System to collect UT Southern student data.

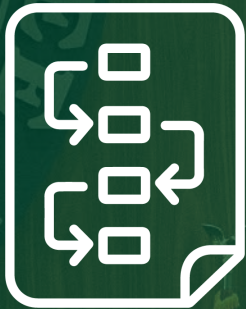
## UT TRANSPARENCY

Interactive public-facing dashboard updated annually and available on data.tennessee.edu. Includes student enrollment, degrees awarded, retention rate, average ACT, GPA scores and demographics.



# *overall* **ACCOMPLISHMENT**

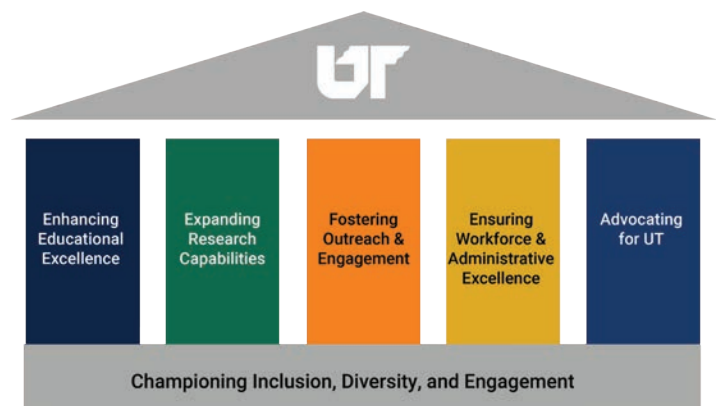
To achieve UT's greatest decade, re-imagined the UT System Strategic Plan for 2021-25 with a focus on identifying meaningful metrics and infusing IDE (inclusion, diversity, and engagement) throughout the plan.



## strategic planning

### **PHASE I: PRE-PLANNING**

- Named a UT System Strategic Plan Steering Committee, Pillar Leads, and working groups, with campus/institute representatives, for each of the five Pillars of the plan.
- Conducted a pulse survey of faculty and staff on the current state of UT affairs.
- Steering Committee: identified strategic issues to guide planning.
- Working groups:
  - Reviewed the new UT System mission, vision, and values, strategic issues, and existing goals (2019).
  - Conducted environmental scan, including a STEEP (social, technical, environment, economic, and political) analysis, discussion of competitors, and identification of distinctive capabilities.



## PHASE II: PLANNING

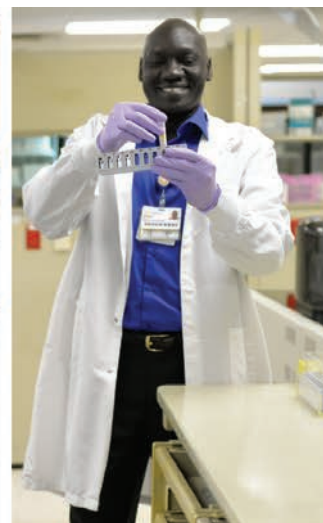
- Each working group:
  - Identified three strategic goals for each Pillar.
  - Developed objectives for achieving the goals.
  - Determined metrics, collected baseline data, and identified a 2025 target.
  - Gathered example strategies for achieving the objectives.
- President Boyd and the Pillar Leads updated the Board of Trustees, presenting:
  - Strategic goals and sample objectives at the Annual (June) meeting,
  - Goals, objectives, metrics, and example strategies at the Fall (October) meeting.
- Developed two written reports on the strategic planning process for the UT Board prior to their June and October meetings.

## PHASE III: PRE-IMPLEMENTATION

- Steering Committee met to discuss:
  - Needed resources for plan implementation.
  - A schedule of quarterly meetings for ongoing monitoring.
  - The creation of an implementation team focused on inclusion, diversity, and engagement.
- Pillar Leads named implementation teams that will begin work in 2022.

## OTHER ACTIVITIES:

- Conducted weekly update meetings.
- Attended working group meetings.
- Developed a metrics database to help define the metrics, document the data owner and data location, and other factors to assist in monitoring progress toward the achievement of goals and objectives.
- Met with system-wide and campus Diversity Officers to discuss infusing inclusion, diversity, and engagement in each Pillar of the System plan.
- Met with Office of General Counsel to discuss how best to measure progress toward increasing diversity.
- Met with representatives of UTK and UTC who were working on campus strategic plans to ensure alignment with the System plan Pillars.
- Met with BOT Chair to ensure presentation for Oct BOT meeting would meet Board member expectations.
- Outlined key milestones for the implementation and monitoring phase, Years 2-5 (2022-2025):
  - Monitoring schedule tailored to each objective with results displayed in dashboards.
  - Mid-year status reports from Pillar working group leads.
  - Annual review of goals, objectives, metrics, with adjustments as needed.
  - End-of-plan review and preparation for the next 5-year cycle.





# assessment



## ASSESSMENT PROJECTS

This year assessment initiatives included creating several online surveys for different departments in the UT System and helping the departments disseminate them and analyze the results. The Strategic Planning team assisted in developing surveys to determine opinions about the current direction of the UT system before strategic planning began. One of these pulse surveys was sent to all UT System employees and the other was sent to the Board of Trustees.

A pair of surveys was also developed for the second year of the UT Promise program. Surveys were sent to mentors asking about their experiences in the first year of the program and whether they intended to return for the second year. Application process surveys were sent to the students who completed their first year of college, and a satisfaction survey was sent to each student who was approved for the scholarship. Additional one-off surveys were created throughout the year, such as an instrument designed to determine decision support tool needs.

Another major project this year was the ERS committee meeting about test-optional policies in undergraduate admissions. One element of the project included creating a reading list of relevant journal articles for the committee members. An additional outcome of the project was a presentation discussing trends in test-optional applications across the U.S., Tennessee, and UT peers and the impact of COVID on test-optional application rates. After contacting potential guest speakers, we also helped arrange for Dr. Li Cai from the Center

for Research on Evaluation, Standards, and Student Testing to speak at the meeting.

Ongoing assessment projects include the creation of a metrics dictionary for Strategic Planning. An initial build has been developed and we are waiting on the implementation teams to have their first meetings to discuss the final metrics. A survey repository for the UT System is also in development. A prototype has been built and requests for points of contact have been sent to each of the system departments.

## INSTITUTIONAL RESEARCH PROJECTS

Reports that show retention rates for undergraduates by ACT and HS GPA were created for the 2019-2020 and 2020-2021 academic years. Data was collected for the Board of Trustee reports and several institutional research projects this year such as the UT Diversity Presentation.

An ongoing IR project is the development of a dashboard showing post-graduation outcomes for UT graduates. Currently we are waiting on TLDS data permissions from the TN Office of Evidence & Impact. Request forms have been submitted and are currently under review.

## 2021 CONFERENCES & WORKSHOPS

- TENNAIR
- Dr. Kathy Obear's Inclusion Partners Program
- The Assessment Institute hosted by IUPUI



# What is **INSTITUTIONAL ACCREDITATION?**

Accreditation is a peer-review process by which institutions of higher education evaluate and enhance quality and effectiveness via the attainment of minimum standards. The U.S. Department of Education recognizes seven accrediting commissions operating in six independent regions.

## **2021 ACCREDITATION ACTIVITIES**

The Institutional Effectiveness Team hosted three meetings of the UT System Accreditation Network (UTSAN) throughout the year. Comprising campus accreditation liaisons and other institutional effectiveness leaders, UTSAN is a forum for systemwide collaboration and sharing best practices. The Tennessee Accreditation Network (TAN) emerged from UTSAN last year as an analogous collaborative forum for SACSCOC accreditation liaisons across the state.

The IE Team coordinated systemwide collaboration with then Martin Methodist College as it prepared a case for continuation of its regional accreditation as UT Southern, the fifth and newest campus of the UT System.

For more information, please visit:  
<https://ie.tennessee.edu/accreditation/>

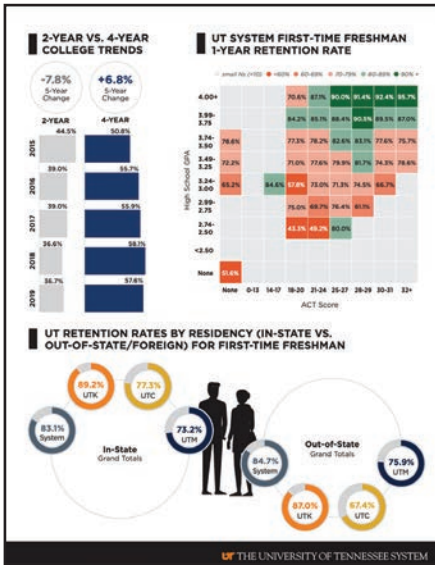
**2022 Goal:** Continue collaborative efforts and normalize participation of UT System representatives as observers of SACSCOC reaffirmation on-site campus visits.



# accreditation

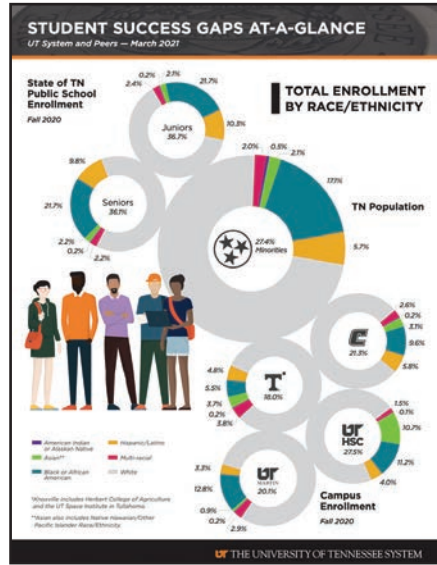
# DATA VISUALIZATION

## infographics



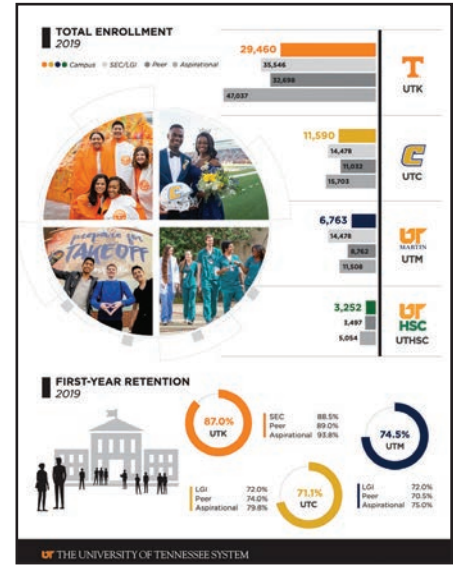
**Tennessee High School Graduate Trends**

February 2021



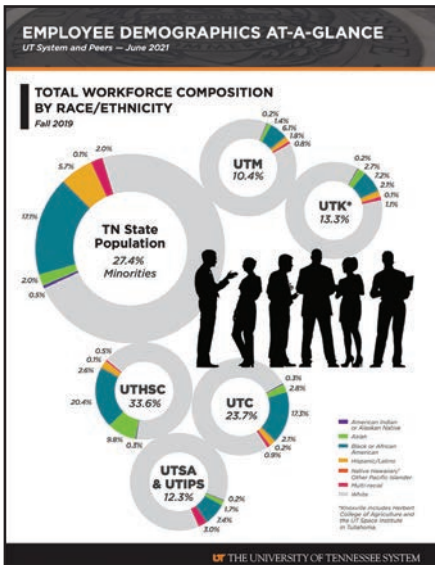
**Student Success Gaps At-A-Glance**

March 2021



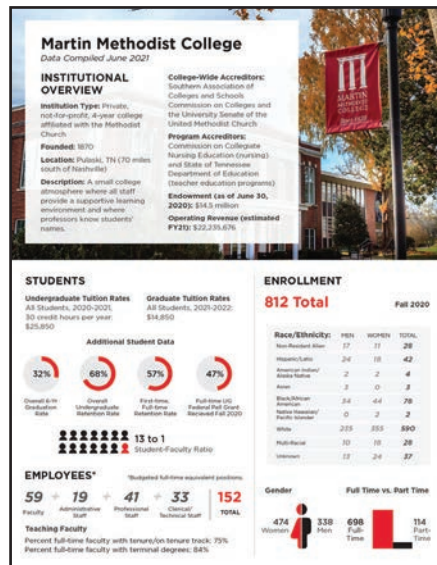
**UT System Performance Compared to Peers**

June 2021



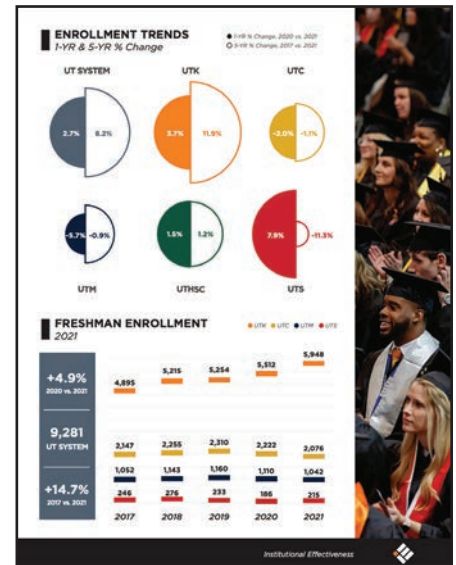
**Employee Demographics At-A-Glance**

June 2021



**Martin Methodist College Fact Sheet**

June 2021

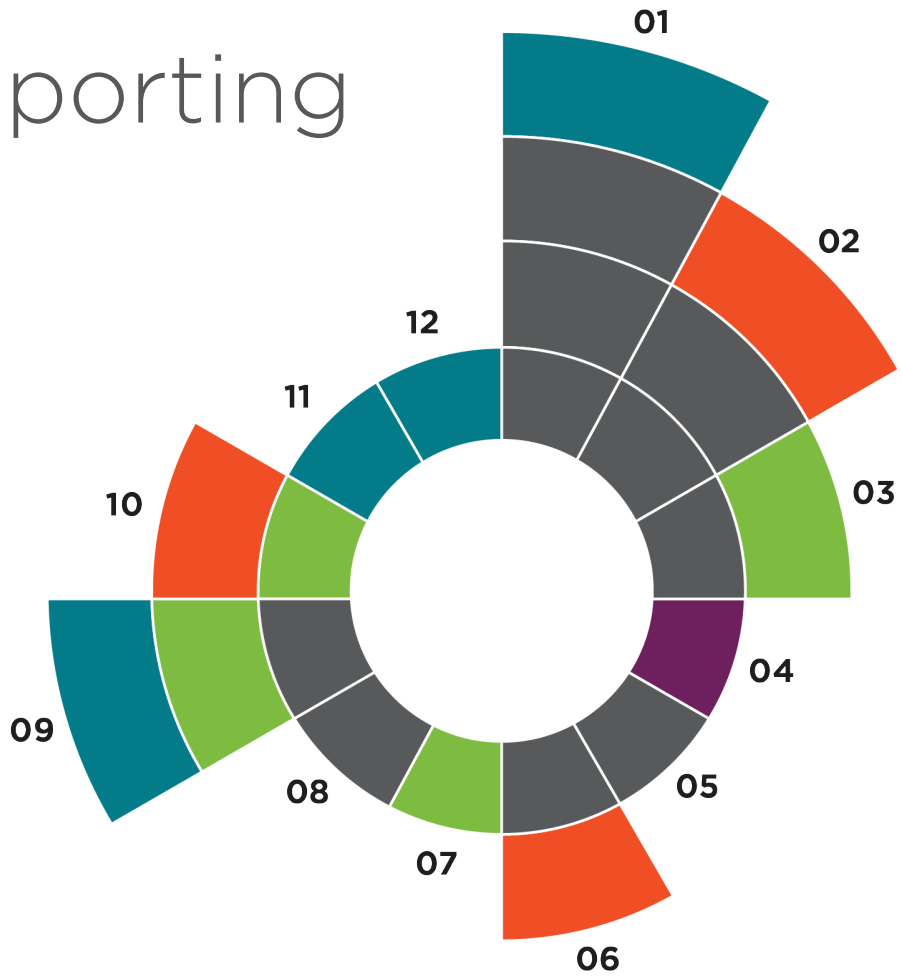


**Student Success Indicators**

October 2021

# annual reporting calendar

- INTERNAL UT
- PUBLIC
- IPEDS
- BOARD OF TRUSTEES
- THEC



01 JAN	02 FEB	03 MAR	04 APR	05 MAY	06 JUN
<ul style="list-style-type: none"> <li>UT System HR Annual Employee Turnover Report</li> <li>Campus Submissions: Fall End of Term Student Data</li> <li>UT Presence by Legislative District</li> <li>UT Transparency Impact by County</li> </ul>	<ul style="list-style-type: none"> <li>Campus Submissions: Spring Census Student Data</li> <li>Annual Diversity Metrics of Student, Faculty, and Staff</li> <li>Winter BOT Meeting: UT Institutions' Peers Comparison Metrics and At A Glance Infographic</li> </ul>	<ul style="list-style-type: none"> <li>Annual Request for Changes to Campus Data Collection</li> <li>Fall End of Term Student Enrollment and Course Data</li> </ul>	<ul style="list-style-type: none"> <li>Annual Survey of UT System Office and IPS Human Resources</li> </ul>	<ul style="list-style-type: none"> <li>Annual Data Dictionaries and Staging Table Script and ITS/OIT IPEDS Licensing Reports</li> </ul>	<ul style="list-style-type: none"> <li>Campus Submissions: Spring End of Term Student Data</li> <li>Summer BOT Meeting: UT Faculty &amp; Staff Academic Year Trend Metrics and At A Glance Infographic</li> </ul>
07 JUL	08 AUG	09 SEP	10 OCT	11 NOV	12 DEC
<ul style="list-style-type: none"> <li>Spring End of Term Student Enrollment and Course Data</li> </ul>	<ul style="list-style-type: none"> <li>UT System HR Annual Title VI (Diversity) Report</li> </ul>	<ul style="list-style-type: none"> <li>Campus Submissions: Fall Census and Summer End of Term Student Data and Annual Degrees Awarded</li> <li>Annual Student Degrees Awarded</li> <li>UT Transparency Student Dashboards</li> </ul>	<ul style="list-style-type: none"> <li>Summer End of Term Student Enrollment and Course Data</li> <li>Fall BOT Meeting: UT Enrollment &amp; Student Success Metrics and At A Glance Infographic</li> </ul>	<ul style="list-style-type: none"> <li>UT Transparency Salary Dashboard</li> </ul>	<ul style="list-style-type: none"> <li>UT Transparency Student Dashboard Peer Data (Timing dependent on IPEDS release date)</li> </ul>





# meet our team

**Jorge Pérez, Ph.D.**  
*Associate Vice President for Institutional Effectiveness*

## INSTITUTIONAL RESEARCH

**Brian Hester, Ph.D.**  
*Director of Institutional Research, Interim Director of Business Intelligence, and Chief Academic Data Officer*

**Taylor Bodin-Henderson**  
*Assistant Director of Institutional Research*

## ASSESSMENT

**Davery Bland**  
*Assessment Coordinator*

**Cheryl Fogler**  
*Research Analyst*

**Michael Richards**  
*Research Associate*

## DATA VISUALIZATION

**Katie Jones**  
*Data Visualization Specialist*

## BUSINESS INTELLIGENCE

**Nathan Vogel**  
*Associate Director of Business Intelligence*

**Rachel Borashko**  
*Software Developer*

## STUDENT INTERNS

**Griffin Judy**  
*Intern*

**Jeremy Bradford**  
*Software Developer*

**Jake Hagenow**  
*Software Developer*

**Dee Haley**  
*Software Developer*

**Mozhgan Shahidi**  
*Software Developer*

PROMOTING A CULTURE OF  
CONTINUOUS IMPROVEMENT  
AND ENHANCING EVIDENCE-  
BASED DECISION MAKING.



THE UNIVERSITY OF  
TENNESSEE  
SYSTEM

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ACADEMIC AFFAIRS AND  
STUDENT SUCCESS  
Institutional Effectiveness

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