Peer Institution Selection
Key Performance Indicator Development

East Tennessee State University
June 13, 2022
Overview

• **Purpose of higher education**
  – The purpose of any non-profit organization is to demonstrate public value

• **Peer development**
  – Current Peers
  – Chronical of Higher Education – Peer Comparison
  – IPEDS data
  – Example Analysis

• **Key Performance Indicator Development**
  – Current KPIs
  – Example KPI types

• **Next Steps**
Public Purpose of Higher Education

- **Access:** All students should have access to public post-secondary education
- **Equity:** Barriers to participation should be removed
- **Affordability:** Federal, state, and institutional financial aid policies should promote affordable access to post-secondary education
- **Quality:** Students should have the highest quality educational system affordable to them
- **Public Service:** Institutions should provide services to local communities to support broad societal needs
- **Research and Economic Development:** Institutions should serve as the driver of the current economy and vehicle for expansion of the knowledge economy
Higher Education in Tennessee: Current Landscape and Emerging Challenges

East Tennessee State University

Peer Institution Selection
Types of Comparison Groups

- **Jurisdictional** – is used where the rational for conducting the comparison is that all of the institutions are in a common jurisdiction, such within a system or state.

- **Competitor** – is used when the rationale for the comparison is the evaluate competitive standing within the educational arena.

- **Aspirational** – is made up of institutions that have one or more characteristics that the comparing institution is considering emulating.

- **Peer** – is comprised of institutions which are similar in regard to contextual factors important to a particular analysis, if not more generally.
Current ETSU Peer Institutions

- Ball State University
- Central Michigan University
- East Carolina University
- Florida Atlantic University
- Georgia Southern University
- Indiana State University
- Marshall University
- Oakland University
- Old Dominion University
- Sam Houston State University
- Southern Illinois University – Edwardsville
- Texas Woman’s University
- University of Arkansas at Little Rock
- University of Missouri – Kansas City
- University of North Carolina at Charlotte
- University of North Carolina at Greensboro
- University of Northern Colorado
- University of South Alabama
- Wright State University – Main Campus
Peer Institution Selection Process

IPEDS Peer Institution Analysis

- **Predetermined Categories – 65 institutions including ETSU**
  - Title IV Participating
  - Public 4-Year or Above
  - Degree Granting
  - Doctor’s Degree Research/Scholarship & Professional Practice
  - Primarily Bachelor & Above
  - Doctoral: High Research Activity

- **Peer Selection Process**
  - 38 Variables from the three most recent years of IPEDS data to inform Peer Model
  - K-Means Clustering method for peer selection - example
K Means Cluster Analysis R - 3 Clusters

Arkansas State University
Boise State University
Central Michigan University
Cleveland State University
East Tennessee State University
Florida Agricultural and Mechanical University
Georgia Southern University
Idaho State University
Louisiana Tech University
Marshall University
Montclair State University
New Mexico State University-Main Campus
North Dakota State University-Main Campus
Oakland University
Old Dominion University
Rutgers University-Camden
South Dakota State University
Texas A & M University-Corpus Christi
Texas Southern University
The University of Montana
University of Akron Main Campus
University of Alabama in Huntsville
University of Arkansas at Little Rock
University of Colorado-Colorado Springs
University of Idaho
University of Louisiana at Lafayette
University of Maryland Eastern Shore
University of Massachusetts-Dartmouth
University of Massachusetts-Lowell
University of Missouri-Kansas City
University of Missouri-St Louis
University of North Carolina Wilmington
University of South Alabama
University of South Dakota
Wichita State University
William & Mary
Wright State University-Main Campus
K Means Cluster Analysis R - 5 Clusters

Boise State University
Central Michigan University
Cleveland State University
East Tennessee State University
Georgia Southern University
Montclair State University
New Mexico State University-Main Campus
North Dakota State University-Main Campus
Oakland University
Old Dominion University
South Dakota State University
The University of Montana
University of Akron Main Campus
University of Idaho
University of Louisiana at Lafayette
University of Massachusetts-Lowell
University of Missouri-Kansas City
University of North Carolina Wilmington
University of South Alabama
Wichita State University
William & Mary
Wright State University-Main Campus
K Means Cluster Analysis R - 10 Clusters

Boise State University
Central Michigan University
East Tennessee State University
Georgia Southern University
Montclair State University
New Mexico State University-Main Campus
North Dakota State University-Main Campus
Old Dominion University
University of Idaho
University of Massachusetts-Lowell
University of North Carolina Wilmington
University of South Alabama
William & Mary
IPEDS Peer Institution Analysis

- Full Analysis:
  - “Highly Similar” – Categorized in the same group as ETSU for all 3 clustering techniques
  - “Similar” – Categorized in the same group as ETSU for 2 of the clustering techniques
  - “Somewhat Similar” – Categorized in the same group as ETSU for 1 of the clustering techniques
  - “Not Similar” – Did not get categorized in the same group as ETSU for any of the clustering techniques

- The 3 different clustering approaches used:
  - kMeans (Lloyd algorithm) – uses squared Euclidean distances from centroids for classification
  - PAM or “Partition Around Medoids” – uses Manhattan distances from medoids for classification
  - Modified kMeans gMADD() – uses Mean Absolute Difference of Distances (MADD) from centroids for classification
# K Means Cluster Analysis R - 10 Clusters

<table>
<thead>
<tr>
<th>ID</th>
<th>Inst</th>
<th>Grp_kmeans_Lloyd</th>
<th>Grp_PAM_manhattan</th>
<th>Grp_MADD</th>
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<td>230728</td>
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<td>206604</td>
<td>Wright State University-Main Campus</td>
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<td>3</td>
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East Tennessee State University
Key Performance Indicator Development
Key Performance Indicators – Potential Categories

- Enrollment
- Student Success
- Post-Graduation Outcomes
- Equity and Inclusion
- Research
- Faculty/Staff
- Finance
- Facilities
## Key Performance Indicators

### East Tennessee State University Strategic Plan Tracking Dashboard November 2021

<table>
<thead>
<tr>
<th>Category/Metric</th>
<th>Value 2016</th>
<th>Value 2021</th>
<th>Goal 2026</th>
<th>Status</th>
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<tbody>
<tr>
<td><strong>University Enrollment</strong></td>
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<tr>
<td>Freshmen Applications</td>
<td>6,672</td>
<td>8,565</td>
<td>12,000</td>
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<tr>
<td>First-year Average ACT Score</td>
<td>23.2</td>
<td>23.4</td>
<td>24</td>
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<tr>
<td>First-time Freshmen</td>
<td>1,886</td>
<td>1,856</td>
<td>3,000</td>
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<tr>
<td>First-time Transfers</td>
<td>1,027</td>
<td>1,137</td>
<td>2,000</td>
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<tr>
<td>Undergraduate Enrollment</td>
<td>11,065</td>
<td>10,309</td>
<td>15,800</td>
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<td>Graduate Enrollment</td>
<td>2,354</td>
<td>2,425</td>
<td>2,854</td>
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<tr>
<td>Out-of-State Enrollment</td>
<td>2,180</td>
<td>2,252</td>
<td>2,500</td>
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<tr>
<td>International Enrollment</td>
<td>646</td>
<td>265</td>
<td>1,000</td>
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<tr>
<td>Overall University Enrollment</td>
<td>14,285</td>
<td>13,543</td>
<td>18,000</td>
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<tr>
<td><strong>Research and Service</strong></td>
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<tr>
<td>Research Expenditures</td>
<td>$11,395,380</td>
<td>$11,119,000</td>
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<tr>
<td>Externally Sponsored Research</td>
<td>$7,653,066</td>
<td>$16,054,862</td>
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<tr>
<td>Extramural Funding Proposals - Submitted</td>
<td>$94,438,572</td>
<td>$158,952,772</td>
<td>TBD</td>
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<tr>
<td>Extramural Funding Proposals - Funded</td>
<td>$38,811,378</td>
<td>$82,133,208</td>
<td>$60,000,000</td>
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<tr>
<td><strong>Stewardship of Place</strong></td>
<td></td>
<td></td>
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<tr>
<td>Number of Service Hours</td>
<td>48,707</td>
<td>-</td>
<td>TBD</td>
<td>-</td>
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<tr>
<td>Patient Encounters</td>
<td>414,493</td>
<td>356,170</td>
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<tr>
<td>Total Funds Raised - Giving</td>
<td>$7,400,000</td>
<td>$35,075,947</td>
<td>$25,000,000</td>
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<tr>
<td>Percent Alumni Giving</td>
<td>3.5%</td>
<td>2.9%</td>
<td>10%</td>
<td>↓</td>
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</tbody>
</table>
### Key Performance Indicators

#### East Tennessee State University Strategic Plan Tracking Dashboard November 2021

<table>
<thead>
<tr>
<th>Category/Metric</th>
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<th>Value 2021</th>
<th>Goal 2026</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Student Success</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retention Rate</td>
<td>71.3%</td>
<td>67.0%</td>
<td>85%</td>
<td>↑</td>
</tr>
<tr>
<td>Graduation Rate</td>
<td>40.1%</td>
<td>51.0%</td>
<td>60%</td>
<td>↑</td>
</tr>
<tr>
<td>Graduation Rate - Male</td>
<td>37.2%</td>
<td>42.7%</td>
<td>60%</td>
<td>↑</td>
</tr>
<tr>
<td>Graduation Rate - Female</td>
<td>42.3%</td>
<td>57.1%</td>
<td>60%</td>
<td>↑</td>
</tr>
<tr>
<td><strong>Equity and Inclusion</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student Race/Ethnicity % Non-White</td>
<td>18.7%</td>
<td>23.9%</td>
<td>33.0%</td>
<td>↑</td>
</tr>
<tr>
<td>Graduation Rate Non-White</td>
<td>31.4%</td>
<td>38.9%</td>
<td>60.0%</td>
<td>↑</td>
</tr>
<tr>
<td>Students - Percent Female</td>
<td>58.2%</td>
<td>63.5%</td>
<td>TBD</td>
<td>↔</td>
</tr>
<tr>
<td>Students - Percent Male</td>
<td>41.8%</td>
<td>36.5%</td>
<td>TBD</td>
<td>↔</td>
</tr>
<tr>
<td>Full-time Staff - Percent Female</td>
<td>57.4%</td>
<td>58.0%</td>
<td>TBD</td>
<td>↔</td>
</tr>
<tr>
<td>Full-time Staff - Percent Non-White</td>
<td>15.3%</td>
<td>13.0%</td>
<td>TBD</td>
<td>↔</td>
</tr>
<tr>
<td><strong>Teaching Environment</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Total Instructional Faculty - Main Campus</td>
<td>942</td>
<td>926</td>
<td>TBD</td>
<td>↑</td>
</tr>
<tr>
<td>Percent Full-time Faculty - Main Campus</td>
<td>62.0%</td>
<td>62.0%</td>
<td>TBD</td>
<td>↑</td>
</tr>
<tr>
<td>Student-to-Faculty Ratio - Main Campus</td>
<td>15.9</td>
<td>16</td>
<td>18</td>
<td>↔</td>
</tr>
<tr>
<td><strong>Empowering Employees</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Great Colleges to Work For Rating</td>
<td>61.0%</td>
<td>70.0%</td>
<td>77% Favorability</td>
<td>↑</td>
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<tr>
<td>Voluntary Staff Turnover</td>
<td>9.2%</td>
<td>10.6%</td>
<td>TBD</td>
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</table>
Post Graduation Outcomes – Class of 2020

- 73.5% Working
- 18% Cont. Ed
- 8% Looking
- 1% Not Looking
- 0.5% Military
- 5.5% Response
- 3,000+ Surveys

Excludes HEP data (purchased data from LinkedIn etc.) that was used for the class of 2019 but will acquire this summer and update for BOT.
Approaches to KPI Display

• **Strategy Focused**
  – University of Tennessee Knoxville: [Strategic Plan - The University of Tennessee System](https://www.utk.edu/strategic-plan/)

• **Initiative Focused**
  – Ohio State: [University Dashboard and Scorecards | Office of Academic Affairs, The Ohio State University (osu.edu)](https://www.osu.edu/)

• **Accountability Focused**
  – Adams State: [Dashboard - Institutional Effectiveness - Adams State University](https://adamsstate.edu/dashboard/)

Next Steps – Summer 2022

• Internal deliberations to narrow list of peer institutions
• Review KPIs with leadership and develop operational definitions for the indicators discussed today
• Implement dashboard of KPIs
• Ensure internal metrics of performance are aligned with institutional KPIs
• Report of institutional performance at every board meeting