Developing Metrics to Measure Excellence

President’s Report
to the Board of Trustees
May 4, 2018
Dashboard Considerations and Categories

- Institutional Metrics and Rankings
- Penn State Foundations
- Outcomes of Initiatives
Rankings – Quality Indicators
Full list at http://www.psu.edu/this-is-penn-state/rankings

• Top 1% in the world (Academic Ranking of World Universities)
• *U.S. News and World Report*
  o No. 52 among national universities; 14 among publics
  o No. 1 in A+ Schools for B Students
  o 18 graduate programs in the top 10
  o No. 8 (tied) for best online bachelor’s programs; No. 9 graduate
• World Campus in *Military Times’* top 10 “military-friendly schools”
• No. 1 in disciplines in Top 10 of research funding (15)
Students – from Application to Graduation

- Enrollment
- PA Application Rates
- PA Yield
- International
- Pell Numbers
- Retention Rates
- Course Size
- Student/Faculty Ratios
- Graduation Rates
- Debt
Undergraduate and Graduate Enrollment

- University Park
- Commonwealth Campuses
- World Campus

*Does not include Penn College
World Campus Headcount and Enrollments

RI = Resident Instruction, includes students with a non-World Campus home campus. Budget Academic Year = Summer, Fall, Spring (in that order) *17/18 data as of 4/27/18.

Includes graduate/undergraduate degree-seeking, non-degree and certificate students. Headcount is unduplicated; course enrollments include multiple courses per year per student.
PA Student Application Rates (estimated)

Estimated Percentage of PA High School Graduates among PSU Applicants


19.0% 19.1% 19.4% 19.0% 18.8% 18.0% 19.8% 20.3% 19.7% 19.2%
PA Student Yield Rates

Yield Rate of Undergraduate Degree-Seeking Applicants With PA Residency - University-Wide excluding World Campus

- 50% (2008)
- 48% (2009, 2010)
- 47% (2011)
- 46% (2012)
- 51% (2013)
- 48% (2014)
- 48% (2015)
- 45% (2016)
- 47% (2017)
- 46% (2018)

PennState
International Students at Penn State

Number of International Students by Level - University-Wide

<table>
<thead>
<tr>
<th>Level</th>
<th>Fall 2008</th>
<th>Fall 2009</th>
<th>Fall 2010</th>
<th>Fall 2011</th>
<th>Fall 2012</th>
<th>Fall 2013</th>
<th>Fall 2014</th>
<th>Fall 2015</th>
<th>Fall 2016</th>
<th>Fall 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergrad</td>
<td>4,011</td>
<td>4,421</td>
<td>4,985</td>
<td>5,645</td>
<td>3,823</td>
<td>4,666</td>
<td>5,471</td>
<td>5,944</td>
<td>6,688</td>
<td>7,024</td>
</tr>
<tr>
<td>Graduate</td>
<td>2,479</td>
<td>2,474</td>
<td>2,558</td>
<td>2,529</td>
<td>2,781</td>
<td>2,950</td>
<td>3,079</td>
<td>3,246</td>
<td>3,218</td>
<td>3,136</td>
</tr>
</tbody>
</table>

PennState
Undergraduate Retention—First to Second Year

- University Park
  - 2007: 92%
  - 2008: 91%
  - 2009: 89%
  - 2010: 90%
  - 2011: 91%
  - 2012: 91%
  - 2013: 92%
  - 2014: 92%
  - 2015: 93%
  - 2016: 93%

- University-wide
  - 2007: 85%
  - 2008: 86%
  - 2009: 87%
  - 2010: 88%
  - 2011: 89%
  - 2012: 90%
  - 2013: 91%
  - 2014: 92%
  - 2015: 93%
  - 2016: 94%

- Commonwealth Campuses
  - 2007: 70%
  - 2008: 75%
  - 2009: 80%
  - 2010: 85%
  - 2011: 90%
  - 2012: 95%
  - 2013: 100%
  - 2014: 100%
  - 2015: 100%
  - 2016: 100%
**Course Section Size**

Percent of Course Section by Size - University Park

<table>
<thead>
<tr>
<th>Year</th>
<th>Fewer than 20 students</th>
<th>20-49 students</th>
<th>50 or more students</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>18%</td>
<td>52%</td>
<td>30%</td>
</tr>
<tr>
<td>2009</td>
<td>17%</td>
<td>50%</td>
<td>33%</td>
</tr>
<tr>
<td>2010</td>
<td>18%</td>
<td>50%</td>
<td>32%</td>
</tr>
<tr>
<td>2011</td>
<td>19%</td>
<td>51%</td>
<td>30%</td>
</tr>
<tr>
<td>2012</td>
<td>15%</td>
<td>46%</td>
<td>15%</td>
</tr>
<tr>
<td>2013</td>
<td>15%</td>
<td>47%</td>
<td>15%</td>
</tr>
<tr>
<td>2014</td>
<td>15%</td>
<td>46%</td>
<td>13%</td>
</tr>
<tr>
<td>2015</td>
<td>13%</td>
<td>44%</td>
<td>15%</td>
</tr>
<tr>
<td>2016</td>
<td>15%</td>
<td>47%</td>
<td>15%</td>
</tr>
<tr>
<td>2017</td>
<td>15%</td>
<td>46%</td>
<td>15%</td>
</tr>
<tr>
<td>2018</td>
<td>19%</td>
<td>53%</td>
<td>19%</td>
</tr>
</tbody>
</table>

- Fewer than 20 students
- 20-49 students
- 50 or more students
Student to Faculty Ratio

<table>
<thead>
<tr>
<th>Year</th>
<th>University Park</th>
<th>Commonwealth Campuses</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>16.8</td>
<td>15.1</td>
</tr>
<tr>
<td>2013</td>
<td>17</td>
<td>15.1</td>
</tr>
<tr>
<td>2014</td>
<td>16.2</td>
<td>14.9</td>
</tr>
<tr>
<td>2015</td>
<td>15.9</td>
<td>14.6</td>
</tr>
<tr>
<td>2016</td>
<td>15.9</td>
<td>14.6</td>
</tr>
<tr>
<td>2017</td>
<td>16.2</td>
<td>14.6</td>
</tr>
</tbody>
</table>

PennState
Six-Year Graduation Rate: Actual vs. Predicted

(U.S. News and World Report)
Average Loan Debt at Graduation

Average Loan Debt for Graduating Students (Baccalaureate) with Loans

Out-of-state students

All students

In-state students

In-state average = $35,543
Out-of-state = $40,329
Diversity and Inclusion

- Percentage of Minority Faculty
- Percentage of Minority Staff/Administrators
- Minority Student Graduation Rates
- Student Sense of Belonging and Safety
Percentage of Minority Faculty Members

Full-Time Minority Faculty - University-Wide

Note: A new data collection method was implemented in 2010 for race/ethnicity. International faculty became a distinct category, and are now counted separately from other race/ethnicity categories.
Percentage of Minority Staff/Administrators

Percent of Administrative/Staff who are Minorities- University-Wide

- Race/Ethnicity Unknown
- Black/African American
- Hisp/Latino
- Asian
- Other*

Note: A new data collection method was implemented in 2010 for race/ethnicity. International staff became a distinct category, and are now counted separately from other race/ethnicity categories.

* Other: American Indian/Alaska Native, Native Hawaiian/Pacific Island, Two/More Races, International
Students’ Sense of Belonging and Safety

Sense of Belonging - Undergraduate Students, University-wide

Percent of students that rate their sense of belonging as a "4" or a "5" on a 5-pt. scale where 5 is the highest sense of belonging.

2007 2010 2014 2017

Sense of Safety/Security - Undergraduate Students, University-wide

Percent of students that rate their sense of safety as a "4" or a "5" on a 5-pt. scale where 5 is the highest sense of safety.

2007 2010 2014 2017

*URM: Underrepresented Minorities
Financial Health

• Moody’s Ratings
• Financial Stability
Penn State’s Institutional Credit Rating (Moody’s)

- Prime (Aaa)
- High (Aa1)
- Upper Medium (Aa2)
- Lower Medium (Aa3)

<table>
<thead>
<tr>
<th>Year</th>
<th>Prime (Aaa)</th>
<th>High (Aa1)</th>
<th>Upper Medium (Aa2)</th>
<th>Lower Medium (Aa3)</th>
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</thead>
<tbody>
<tr>
<td>2007-08</td>
<td></td>
<td></td>
<td>Aa2</td>
<td></td>
</tr>
<tr>
<td>2008-09</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009-10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010-11</td>
<td>Aa1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011-12</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2012-13</td>
<td></td>
<td></td>
<td>Aa2</td>
<td></td>
</tr>
<tr>
<td>2013-14</td>
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</tr>
<tr>
<td>2014-15</td>
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</tr>
<tr>
<td>2015-16</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>2016-17</td>
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</tbody>
</table>

PennState
Moody's Aa1 Median not yet available for 2016-17; Total Cash & Investments to Total Debt, and Total Cash & Investments to Total Operations not provided by Moody's prior to 2010-11.
Financial Stability

PSU Operating Margin (per Moody's database)

Moody's Aa1 Median not yet available for 2016-17. Moody's adjusts operating margins of all institutions from year to year to "smooth" for cyclical factors, such as long term investment returns.
Alumni Engagement

• Alumni Association Members
• Average Attendance Athletics
• Fundraising
Alumni Engagement

Number of Paid Alumni Association Members

2008: 160,742
2009: 161,234
2010: 164,658
2011: 165,182
2012: 169,209
2013: 172,732
2014: 174,379
2015: 177,307
2016: 176,427
Average Attendance at Athletic Events

Average Sporting Event Attendance for Football and Other Sports

<table>
<thead>
<tr>
<th>Year</th>
<th>Football</th>
<th>Other sports combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>08-09</td>
<td>108,254</td>
<td>18,185</td>
</tr>
<tr>
<td>09-10</td>
<td>107,008</td>
<td>20,029</td>
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<tr>
<td>10-11</td>
<td>104,234</td>
<td>20,051</td>
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<tr>
<td>11-12</td>
<td>101,427</td>
<td>21,551</td>
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<td>12-13</td>
<td>96,730</td>
<td>22,767</td>
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<tr>
<td>13-14</td>
<td>96,587</td>
<td>28,447</td>
</tr>
<tr>
<td>14-15</td>
<td>101,623</td>
<td>29,501</td>
</tr>
<tr>
<td>15-16</td>
<td>99,799</td>
<td>29,186</td>
</tr>
<tr>
<td>16-17</td>
<td>100,257</td>
<td>27,318</td>
</tr>
<tr>
<td>17-18</td>
<td>106,707</td>
<td>27,791</td>
</tr>
</tbody>
</table>
Research Enterprise

• Sources of Funds
Examples of Initiatives

- Invent Penn State
- Sustainability
Invent Penn State

21 LaunchBoxes across the state

First reporting year (2016-17) – with only 5 hubs open the full year:

• 2,500+ faculty, staff and students engaged in entrepreneurial activity.
• 100s of community entrepreneurs were supported.
• 80 new products were developed.
• 79 startups were launched.
• 110 student internships were created.

2nd annual IP Conference and Fair

• 611 attendees
• 80+ startups in Venture Connection
• 40+ VCs in Venture Connection
Number of Disclosures, Patents, Licenses and Startups

- Total disclosures of inventions
- Licenses and options executed
- Number of patents issued
- Startup companies (Licensed PSU tech)

Years: 2007 to 2017

- Total disclosures of inventions
- Number of patents issued
- Licenses and options executed
- Startup companies (Licensed PSU tech)
Sustainability on our Campuses

• Reduced campus greenhouse gas emissions by 18% since 2005; set an ambitious new reduction goal of 35% by 2020.

• Ongoing programs have saved or avoided energy costs in excess of $62M since 2003.

• Energy procurement strategies save $11.8M annually.

• Additional strategies at: sustainability.psu.edu
Summary and Next Steps

• Continue to develop Institutional Dashboard Metrics.
• Use metrics to assess the performance and success of the University; promote transparency; and identify trends.
• Group metrics around strategic goals.
• Consider quantitative vs. qualitative metrics/survey data.
Discussion