STATE UNIVERSITY SYSTEM *of* FLORIDA
Board of Governors

Programs of Excellence Report

September 2018

Pending Board of Governors Approval

STATE UNIVERSITY SYSTEM of FLORIDA
Board of Governors

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August 22, 2018

The Honorable Joe Negron
President, Florida Senate
Room 305, Senate Office Building
404 South Monroe Street
Tallahassee, Florida 32399

The Honorable Richard Corcoran
Speaker, Florida House of Representatives
Room 420, House Office Building
402 South Monroe Street
Tallahassee, Florida 32399

Dear President Negron and Speaker Corcoran,

Please find enclosed the Board of Governors' Programs of Excellence Report as required by section 1001.7065, *Florida Statutes*.

Florida is a state on a path to greatness in higher education. The State University System continues to make great strides to elevate its national research profile to the very top echelon. As a result of your leadership, the Programs of Excellence initiative will continue to strengthen Florida's reputation as the best state for higher education. With support from the Legislature and Governor, the State University System recently rose from No. 5 to No. 4 in national research rankings and increased its research awards by 8 percent even as funding fell 5 percent nationwide.

As chair of the Board of Governors Academic and Research Excellence Committee, I believe that the recommended framework included in this report will allow the state of Florida to provide investments in strategic areas important to Florida's future and allow the State University System the opportunity to use its strengths and collaborate to address these areas. The framework and concepts in this report were developed by a workgroup of State University System provosts and vice presidents for research. In addition, all 12 State university System institutions had the opportunity to review and provide feedback on this report.

The Board of Governors appreciates the opportunity to provide recommendations on how to elevate the excellent academic and research programs that exist across the State University System in a manner that will address important areas for the state.

We look forward to working with the Legislature on this important initiative.

Sincerely,

Alan Levine
Chair, Academic and Research Excellence Committee
Florida Board of Governors

SUMMARY OF PROGRAMS OF EXCELLENCE
September 2018

INTRODUCTION

Section 1001.7065, *Florida Statutes* requires the Florida Board of Governors to identify standards and measures to identify Programs of Excellence across the State University System of Florida. The goal of this initiative is to achieve and improve upon world-class, nationally recognized university programs of excellence within the State University System of Florida (SUS).

Included in this report is a recommended framework, including sample standards and metrics, for implementing Programs of Excellence in the SUS. This framework was developed by a workgroup of three SUS provosts and three SUS vice presidents for research. The workgroup met several times during the spring and summer of 2018 (see Appendix A). The workgroup developed multiple frameworks for establishing Programs of Excellence. After thoroughly reviewing each framework, the workgroup unanimously agreed that only one framework met the intent of the legislation and the supplemental guidance provided by legislative staff. The proposed framework also received broad support from all SUS provosts and vice presidents for research. Below is a detailed description of the recommended framework. A concept paper outlining all frameworks as presented to the Board of Governors in June 2018 is provided in Appendix B.

PROGRAMS OF EXCELLENCE: RECOMMENDED FRAMEWORK

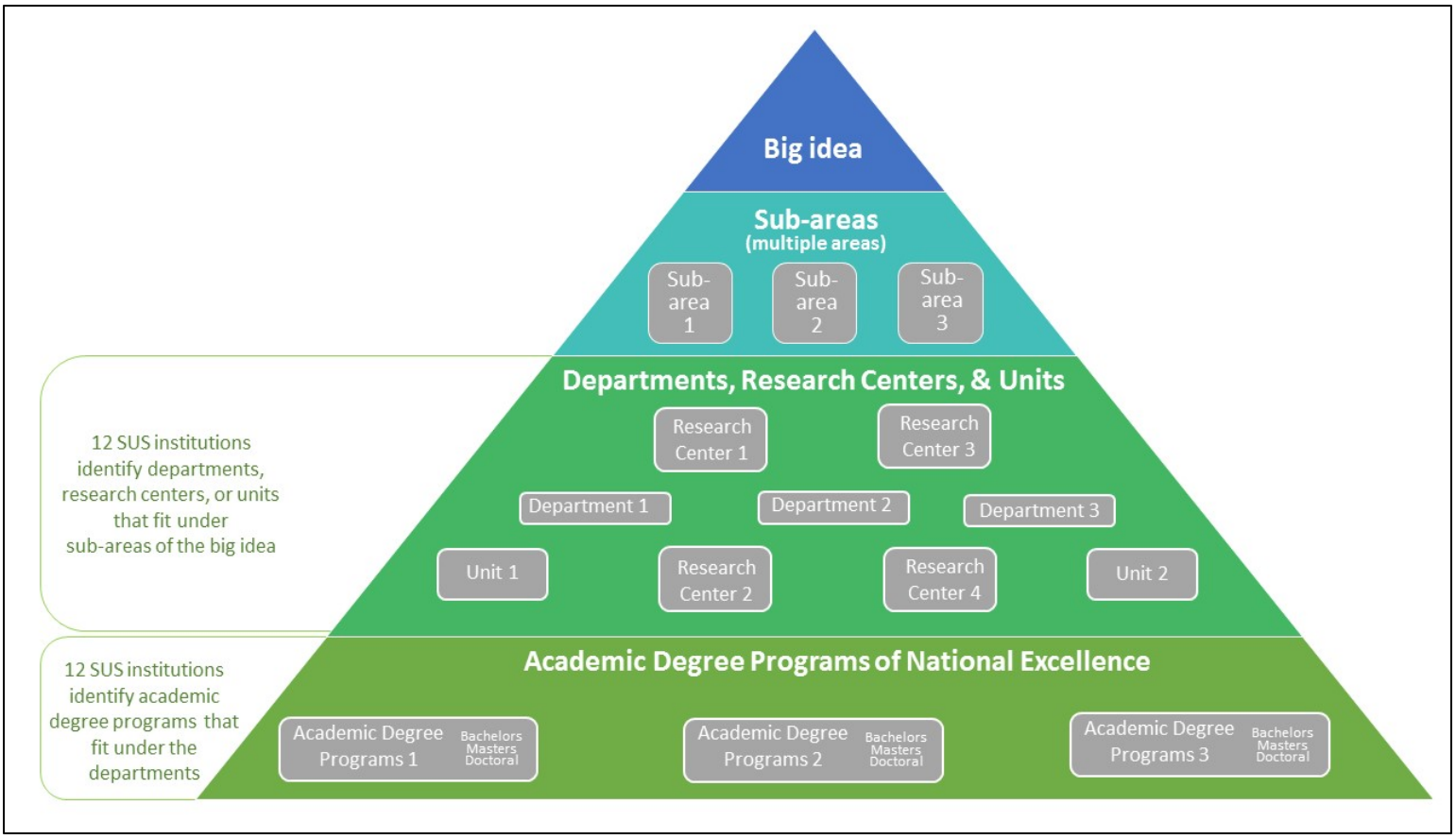
Programs of Excellence allow the state of Florida to provide investments in strategic areas important to Florida's future and allow the State University System an opportunity to use its strengths to address these areas. The recommended framework for Programs of Excellence is one that builds on both research and academic programs within the SUS.

The workgroup developed and selected this concept using the following criteria.

- Provides opportunities for all 12 SUS institutions to participate.
- Allows for universities to elevate both research and academic programs that are nationally recognized.
- Allows for programs across disciplines and degree levels to be recognized.
- Encourages institution collaboration.
- Addresses key areas important to Florida.
- Provides for flexibility in implementation.

The concept builds upon "big ideas" that require large investments to transform Florida, the nation and the world. The State University System would use Programs of Excellence to address these big ideas. As shown by Exhibit 1, the concept starts with a big idea, then is supported by sub-areas, which are in turn supported by academic departments and research centers. Academic programs can support either the big idea, the sub-area, or the academic departments and research centers. The sub-areas can involve faculty, postdoctoral students, and student researchers from a variety of departments and research centers. Additionally, SUS institutions have the flexibility to identify programs at the department, research area, unit, or academic degree program level that are nationally recognized. Some institutions may only want to submit distinct academic programs that are nationally recognized, such as a bachelor's degree program in computer science that would fit under a selected big idea or sub-area, while others could submit broader ideas across multiple departments, such as nanoscience technology.

Exhibit 1
Overview of the Recommended Framework for Programs of Excellence



PROCESS

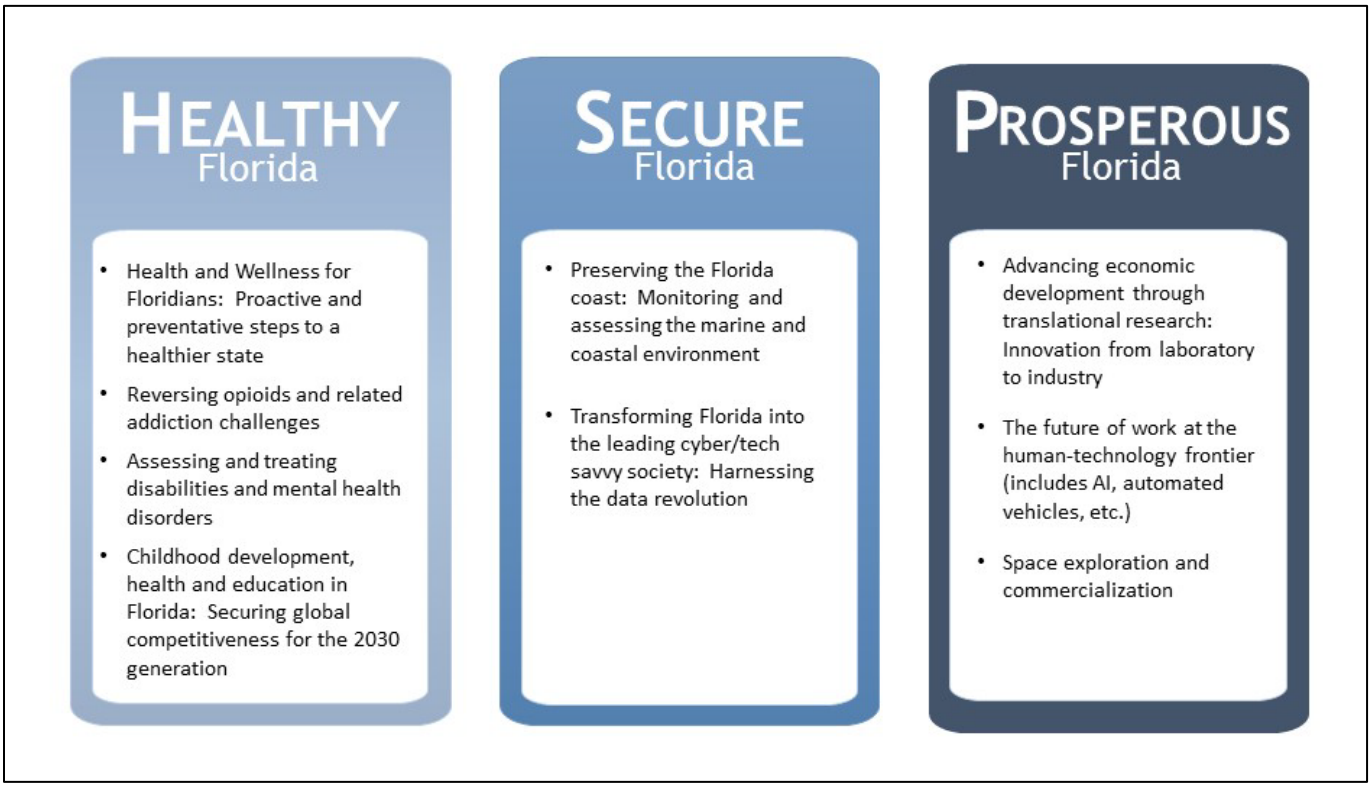
This framework was designed with the thought that two or three of these big ideas would be selected so that all 12 SUS institutions have the opportunity to participate. Once the big ideas are selected, SUS institutions should submit programs to be included within the big idea that fits into this framework. The SUS institutions should identify programs and select metrics that reflect national excellence. Examples of potential metrics are provided in Appendix C, though the list is not an exhaustive list. Appropriate metrics should be selected based on the research area and/or academic program selected. It is important to note that depending on the program selected, evidence of improvement in national rankings may take a few years to realize.

Institutions should be required to document how any state funding allocated for this initiative will be a return on investment to the state. The institution should also identify how the identified program of excellence would improve by participating in this program. The Board of Governors should oversee the implementation of this initiative and provide the legislature with any required information.

BIG IDEAS

Driven by the State University System's areas of research strength and academic programs of national excellence, to advance (during the next decade) the national and global leadership of the state, the workgroup identified potential collaborative projects. Exhibit 2 provides an overview of some of the examples identified by the workgroup.

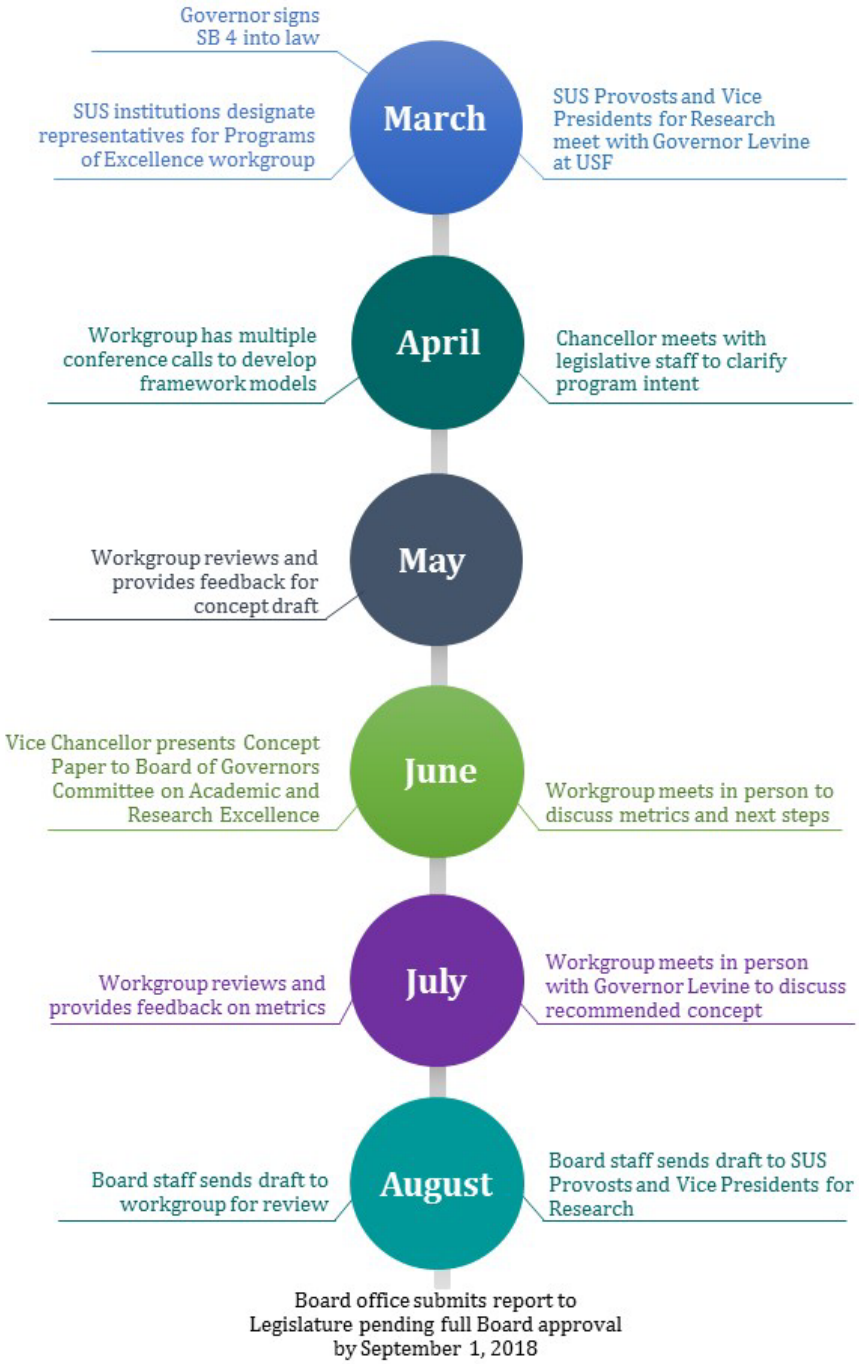
Exhibit 2
Potential Big Ideas for Florida's Future



These ideas are intended to be examples of areas that could be supported by the recommended framework. The workgroup focused these ideas around areas that are important to Florida, that could leverage federal research funding, and that are known strengths of the system.

Florida has an opportunity through Programs of Excellence to utilize the strengths of the State University System to address key issues for the state.

Appendix A
Summary of Activities Related to Programs of Excellence Report



Programs of Excellence workgroup members included:

- Barbara Feldman, Provost, New College of Florida
- Kenneth Furton, Provost, Florida International University
- Ralph Wilcox, Provost, University of South Florida
- Daniel Flynn, Vice President for Research, Florida Atlantic University
- David Norton, Vice President for Research, University of Florida
- Gary Ostrander, Vice President for Research, Florida State University

Special thanks to Pritish Mukherjee, Vice Provost at the University of South Florida and Andres Gil, Vice President for Research at Florida International University for their contributions.

Appendix B
Concept Ideas Presented to BOG June 26, 2018

Three Concepts for Envisioning "Programs of Excellence"[1]

May 10, 2018

Goal: Achieving world-class, nationally recognized university programs of excellence within and among the SUS

- Issue #1: Two aspects to the goal: 1) maintain the quality of programs that are already preeminent or "programs of excellence and 2) moving programs that are on the cusp of preeminence of excellence. It is possible to include both aspects in the overall goal.

- Issue #2: The programs of excellence are to be developed so that the SUS regional-comprehensive and the state's liberal arts institutions are able to participate.

- Issue #3: To identify "programs of excellence," institutions may need to use both objective and subjective elements. "Objective elements would include those used to measure a program's quality (e.g., data) and subjective elements would include those used to determine a program's prominence (e.g., reputations). It is worth noting here, however, that subjective information is involved in the assessment of program quality (which data are used, for example) and that measures of programmatic prominence may contain objective, data-driven elements."

Working toward a draft *definition* of "programs of excellence:" From earlier work conducted by the SUS/SBE in 2004, the following definition of "preeminent" might well serve as well as the definition for "programs of excellence:"

- For the purposes of this project, an academic program is said to be "preeminent" when it has (1) documented high quality; (2) documented external recognition of its high quality; and (3) documented national or international prominence. To be considered preeminent, a program must meet all three of these criteria.

Concept A: A Collaborative in which university excellence addresses problems Florida needs to solve

One of the ways in which to promote programs of excellence is to develop expertise in a program among several institutions within the SUS, along the lines of the Rhode Island Model (INBRE) which follows a regional-type of collaborative. Here, a research focus area of excellence is identified. Collaborations are fostered between institutions that are research intensive (faculty have significant release time to lead research projects) and institutions with a

[1] The document included in Appendix B was presented to the Board of Governors on June 26, 2018. Since that meeting, Board staff has revised the document to incorporate technical edits to reflect the name of the program as "Programs of Excellence" which is consistent with section 1001.7065(7), *Florida Statutes*.

stronger education emphasis where release time may be limited to summer or parts of a semester. There would be continuity in research programs achieved through collaborations between institutions. Pilot project grants could support collaborations, engage faculty for summer research, support undergraduate research opportunities and create a pipeline of future graduate students and faculty for the systems R&D mission. The goal would be to develop the academic program and research capacity and reputation of the participating institutions; increase the number of star faculty within the SUS in the program area; and increase the number of junior investigators who would then pursue academic and research careers in the program area within the SUS; provide access to facilities, labs and instrumentation for faculty and students conducting cutting-edge research; or to develop a centralized research core facility in which all could participate.

As an example of how this would work, INBRE grants in the Rhode Island Model are funded at about $1M per proposal. The state could fund five or six of these whereby partnerships would be created with a research-intensive university in the lead and education-intensive colleges collaborating as a way to expand their research capacity.

Indicators of Success: To judge the success of the Collaborative, the following are just a few of the indicators that might be considered:

- Total R&D expenditures in the program area
- Number of grants/contracts between 2 or more institutions
- High placement rates in professional positions for student graduates
- National academic members
- Measureable improvement in area of need

Examples of a collaborative that focuses on a programmatic theme in which more established measures of quality exist could include the following:

- Improving the health of Floridians
- Growing technology and development
- Addressing Florida's environmental needs

An example of a collaborative that focuses on a programmatic theme in which measures of quality are known, but more subjective, might be "Improving the human social experience," (such as a collaborative that includes multiple institutions demonstrating excellence in programs in the arts, tourism/hospitality and entertainment)

Concept B: Unique Programs of Excellence

Another way to promote programs of excellence is to focus on discipline-specific programs. These programs of excellence would arguably be more narrowly defined and may be likely to have more agreed-upon indicators of quality throughout the Academy.

Indicators of Success

Indicators of the program's excellence could include national rankings in college guides, program reputation rankings, per capita number of publications and/or creative works, high percentage of passing scores on certification or licensure exams, student success in competitions and performances, and so on.

Examples of Unique Programs

- Cybersecurity
- Dance
- Dietetics
- Marine Biology
- Neuroscience

Concept C: Research, Scholarly, and/or Creative Areas of Excellence

This concept might be thought of as a hybrid of Concepts A and B, essentially using both concepts but in a hierarchy – like a "decision tree." Concept C builds upon "big ideas" that require large investments to transform Florida, the nation and the world, such as improving human health, enabling environmental sustainability, harnessing big data, advances in surgery and medicine, assessing and treating disabilities and mental health disorders, advancing translational research, strengthening business practices, and enhancing the human experience.

Broader areas of RSC excellence (Concept A), which are nationally relevant and of strategic importance to Florida, are then anchored in sub-areas within departments and research centers (Concept B). The sub-areas can involve faculty, postdocs and student researchers from a variety of departments and research centers.

An area of excellence may include current national excellence or emerging national prominence as indicated by a rapid trajectory of recent advancement coupled with nearly-distinctive status.

Potential Indicators of National Excellence for Departments / Degree Programs may include rankings from the NRC; *U.S. News & World Report; Academic Analytics;* Blue Ridge Institute for Medical Research, which includes rankings by specific medical fields.

Appendix C

Potential Metrics

The following table provides a list of potential metrics developed by the SUS Programs of Excellence workgroup that SUS institutions could use to demonstrate excellence. This list is not intended to be exhaustive. Depending on the big idea identified additional metrics may better demonstrate excellence. These metrics could be tracked year to year for peer comparison and improvement. A key recommendation from the workgroup was that metrics used include a measure of return on investment (ROI).

Table C-1. Potential Indicators for Sub-Areas

Indicators of Success	Potential Source
Overall excellence in chosen sub-area	External peer review (by, for example, ORAU)
Total amount of annual funding ($)	
Total amount of annual federal funding ($)	
Total number of publications	Extracted from Web of Science or Scopus
Total number of citations	Extracted from Web of Science or Scopus
Total number of citations for publications in a fixed time-window	Extracted from Web of Science or Scopus
Total number of patents	Extracted from USPTO
Total number of licenses	
Total number of spin-off companies	
Independent rankings of research areas	Blue Ridge Institute for Medical Research (for example)

Table C-2. Potential Indicators for Departments and Academic Programs

Indicators of Success	Potential Data Source
Disciplinary national rankings	Academic Analytics, USNWR (selected)
Disciplinary international rankings	
Total number of books published	Academic Analytics
Number of books published per faculty	Academic Analytics
Total number of publications	Academic Analytics, Extracted from Scopus or Web of Science
Number of publications per faculty	Academic Analytics, Extracted from Scopus or Web of Science
Total number of citations for publications in a fixed time-window	Academic Analytics, Extracted from Scopus or Web of Science
Number of citations per faculty	Academic Analytics, Extracted from Scopus or Web of Science
Number of faculty in Top-1% of highest cited researchers in field	Clarivate Analytics (from Web of Science)
Number of conference proceedings	Academic Analytics, Extracted from Scopus or Web of Science
Number of conference proceedings per faculty	Academic Analytics, Extracted from Scopus or Web of Science
Number of faculty awards	Academic Analytics
Number of faculty awards per faculty	Academic Analytics
Number of research grants	
Number of research grants per faculty	
Total annual research funding	Academic Analytics
Annual research funding per faculty	Academic Analytics
Total annual federal research funding	
Annual federal research spending per faculty	
Number of patents	
Number of patents per faculty	

Table C-2. Potential Indicators for Departments and Academic Programs (continued)

Indicators of Success	Potential Data Source
Number of licenses	
Number of licenses per faculty	
Percent of graduated students employed / pursuing post-graduate studies	
Average post-graduation starting salary for students	
Average salary for graduates 5- or 10-years after graduation	
Number of undergraduate degrees per year	
Number of graduate degrees per year	
Number of doctoral degrees per year	
Passing rate in licensure exams	

Table C-3. Potential Indicators for Faculty

Indicators of Success	Benchmark
Number of published articles	Extracted from Scopus or Web of Science, Academic Analytics
Number of published books	Extracted from Scopus or Web of Science, Academic Analytics
Total number of citations	Extracted from Scopus or Web of Science, Academic Analytics
Number of citations in fixed publication time-window	
h-index	Extracted from Web of Science or Google Scholar
Highly-cited researcher	Clarivate Analytics (from Web of Science)
Total annual grant funding ($)	Academic Analytics
Total annual federal grant funding ($)	Academic Analytics
Number of conference proceedings in fixed time-window	Academic Analytics
Number and quality of faculty awards	Academic Analytics
Number of media cites	
Number of students advised	
Placement of mentored students	