University of South Florida
Emerging Preeminence Plan: A 5-Year Plan for National Excellence

> **Vision**
> The University of South Florida is a global research university dedicated to student success and positioned for membership in the Association of American Universities (AAU).
>
> *University of South Florida Strategic Plan, 2013-18*

Background. In 2013, the Legislature and Governor Scott approved SB 1076[1], creating the Preeminent State Research Universities Program, specifying 12 benchmarks and providing added resources and benefits to those eligible universities who meet 11 out of those 12 benchmarks. In 2016, the program was expanded through HB 7029[2] with a second designation for "Emerging Preeminent State Research Universities" for those institutions that meet six of the 12 preeminence benchmarks.

Meeting nine preeminence benchmarks (see Table 1) the University of South Florida (USF), a Carnegie-classified Doctoral Research University, Highest Research Activity[3], now qualifies for the Emerging Preeminent designation from the State University System's Board of Governors (SUS BOG). Investments granted to USF through this program will target areas that will most effectively and efficiently position the university to reach the full preeminent designation, advance its sharply focused 2013-18 Strategic Plan vision for student success and further development of a research profile consistent with eligibility for membership in the Association of American Universities (AAU)[4]. USF strives to become a Top 50 national university.

Through this Emerging Preeminence plan, USF will:

- Raise its stature among the nation's top public research universities,
- Enhance research productivity,
- Make greater contributions to the national and global prominence of the State of Florida and SUS, and
- Support innovation and economic development in the Tampa Bay region and the State of Florida.

Table 1. Preeminence Metrics from the 2016-17 BOG Work Plan.

	MEASURE	BENCHMARK	USF
A	Average GPA and SAT Score for 2 subtests for incoming freshman in Fall semester	4.0 GPA 1200 SAT	4.1 GPA 1223 SAT
B	National Public University Ranking	Top 50 in 2 or more publications	4
C	Freshman Retention Rate (Full-time, FTIC)	≥ 90%	88%
D	6-year Graduation Rate (Full-time, FTIC)	≥ 70%	68%
E	National Academy Memberships	6	8
F	Total Annual Research Expenditures (Science & Engineering only)	≥ $200 M	$420
G	Total Annual Research Expenditures in Diversified Non-Medical Sciences (Science & Engineering only)	≥ $150 M	$229
H	National Ranking in Research Expenditures in at least 5 STEM disciplines as reported by NSF (includes public & private institutions)	5 in Top 100	7
I	Patents Awarded (over 3 year period)	≥ 100	297
J	Doctoral Degrees Awarded Annually includes Research Doctoral Degrees and Medical/Health Professional Doctoral Degrees	≥ 400	601
K	Number of Post-Doctoral Appointees	≥ 200	289
L	Endowment Size ($M)	>$500 M	$417
NUMBER OF CRITERIA ABOVE THE BENCHMARK:			9

Quality Indicators. The foundation of USF's strategy is accountability, guided by its 2013-18 Strategic Plan and the BOG's 2025 Strategic Plan. The USF Board of Trustees and university leadership consistently track progress towards meeting AAU membership eligibility, the SUS preeminence designation, and other contributions to the SUS strategic plan. Table 2 shows the 27 metrics most important to our emerging preeminence plan and to USF's AAU aspirations.

[1] http://www.flsenate.gov/Session/Bill/2013/1076
[2] https://www.flsenate.gov/Session/Bill/2016/7029
[3] http://carnegieclassifications.iu.edu/
[4] http://www.aau.edu/

Table 2. Metrics tracked for National Excellence, SUS BOG Preeminence, & AAU Eligibility.

	METRIC	SOURCE	BENCHMARK	2016 PERFORMANCE	2017 GOALS	2018 GOALS	2019 GOALS	2020 GOALS	2021 GOALS
A. Student Access									
				Fall 2015	Fall 2016	Fall 2017	Fall 2018	Fall 2019	Fall 2020
1	**Average GPA and SAT Score** for incoming freshman in Fall semester	Preeminence	4.0 / 1200	**4.1/ 1223**	4.0 / 1220	4.05 / 1222	4.075 / 1224	4.10 / 1226	4.15 / 1228
				Fall 2015	Fall 2016	Fall 2017	Fall 2018	Fall 2019	Fall 2020
2	**Freshman in Top 10% of Graduating High School Class** for incoming freshman in Fall semester*	AAU	31.5% (Fall 2014)	**34%**	35%	35%	36%	36%	37%
				Fall 2015	Fall 2016	Fall 2017	Fall 2018	Fall 2019	Fall 2020
3	**Freshman Acceptance Rate** for incoming freshman in Fall semester	SUS Research Institutions	51.7% (Fall 2014)	**44.6%**	44.5%	44.4%	44.3%	44.2%	44.1%
B. Student Success									
				2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
4	**Freshman Retention Rate** (Full-time, FTIC)	Preeminence	90%	**88%**	90%	91%	92%	93%	94%
				2011-15	2012-16	2013-17	2014-18	2015-19	2016-20
5	**4-year Graduation Rate** (Full- and Part-Time, FTIC)	SUS Research Institutions	40% (2011-15)	**51%**	54%	56%	58%	60%	62%
				2009-15	2010-16	2011-17	2012-18	2013-19	2014-20
6	**6-year Graduation Rate** (Full-time, FTIC)	Preeminence	70%	**68%**	67%	70%	72%	74%	76%
				2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
7	**Percent of Bachelor's Degrees Awarded in STEM and Health**	SUS Research Institutions	34% (2014-15)	**43.0%**	44.3%	45.0%	46.0%	47.0%	48.0%
				2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
8	**Percent of Graduate Degrees Awarded in STEM and Health**	SUS Research Institutions	45% (2014-15)	**61.0%**	64.0%	65.0%	66.0%	67.0%	68.0%
C. Value									
				4/2016	4/2017	4/2018	4/2019	4/2020	4/2021
9	**Public University National Ranking** (in more than one national ranking)	Preeminence	2	**4**	5	5	5	5	5
D. Faculty Excellence									
				2016 (2015-16)	**2017 (2016-17)**	**2018 (2017-18)**	**2019 (2018-19)**	**2020 (2019-20)**	**2021 (2019-20)**
10	**National Academy Memberships***	Preeminence	6	**8**	9	10	10	10	11
				2013	2014	2015	2016	2017	2018
11	**Faculty Awards***	AAU	12 (2013)	**8**	7	8	9	10	12
				Fall 2012	Fall 2013	Fall 2014	Fall 2015	Fall 2016	Fall 2017
12	**Number of Post-Doctoral Appointees***	Preeminence	200	**289**	321	298	277	285	290
				Fall 2012	Fall 2013	Fall 2014	Fall 2015	Fall 2016	Fall 2017
13	**Number of PhDs on Non-Faculty Appointments***	AAU	150 (Fall 2013)	**126**	126	119	100	110	120
				Fall 2015	Fall 2016	Fall 2017	Fall 2018	Fall 2019	Fall 2019
14	**Student-to-Faculty Ratio**	AAU	16 (Fall 2014)	**24**	23	22	21	20	19

Table 2. Continued

	METRIC	SOURCE	BENCHMARK	2016 PERFORMANCE	2017 GOALS	2018 GOALS	2019 GOALS	2020 GOALS	2021 GOALS
E. Research: Productivity									
				2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
15	**Total Research Expenditures ($M)***	AAU	$386 (2012-13)	**$485**	$486	$501	$516	$531	$547
				2014-15	2015-16	2016-17	2017-18	2018-19	2019-2020
16	**Federal Research Expenditures ($M)**	AAU	$205 (2012-13)	**$218**	$219	$222	$226	$229	$232
				2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
17	**Total Annual Research Expenditures ($M)** (Science & Engineering only)	Preeminence	$200	**$420**	$421	$427	$434	$440	$447
				2014-15	2015-16	2016-17	2017-18	2018-19	2019-2020
18	**Total Annual Research Expenditures in Diversified Non-Medical Sciences ($M)** (Science & Engineering only)	Preeminence	$150	**$229**	$230	$233	$237	$241	$244
				2013-14	2014-15	2015-16	2016-17	2018-19	2019-20
19	**National Ranking in S.T.E.M. Research Expenditures** (includes public & private institutions)	Preeminence	Top 100 in 5 of 8 disciplines	**7**	7	8	8	8	8
				2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
20	**Total R&D Expenditures per Full-Time Tenured, Tenure-Earning Faculty Members**	SUS Research Institutions	$231,150 (2013-14)	**$484,763**	$491,000	$486,000	$501,000	$516,000	$531,000
				2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
21	**Doctoral Degrees Awarded Annually***	Preeminence	400	**601**	645	650	655	660	665
				2013-15	2014-16	2015-17	2016-18	2017-19	2018-20
22	**Citation Impact**	AAU	1.47 (2012-14)	1.59	1.60	1.62	1.64	1.65	1.67
F. Research: Innovation and Commercialization									
				2013-15	2014-16	2015-17	2016-18	2017-19	2018-19
23	**Patents Awarded** (over 3 year period)	Preeminence	100	**297**	291	273	276	279	282
				2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
24	**Licenses/Options Executed***	AAU	47 (2012-13)	**91**	119	120	121	122	123
				2014-15	2015-16	2016-17	2017-18	2018-19	2019-2020
25	**Number of Start-up Companies***	AAU	4 (2012-13)	**11**	8	9	10	11	12
G. Philanthropic Support									
				2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
26	**Endowment (in Millions)**	Preeminence	$500	**$417**	$395	$412	$432	$448	$460
				2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
27	**Gifts Received ($1000s)**	AAU	$103,033 (2012-13)	**$59,903**	$65,000	$70,000	$75,000	$80,000	$85,000

The metrics in Table 2 are grouped according to seven areas in which USF seeks to achieve national excellence: (1) student access; (2) student success; (3) value; (4) faculty excellence; (5) research productivity, (6) research innovation and commercialization; and, (7) philanthropic support. The preeminence metrics are highlighted in blue and the benchmark values are shown in the fourth column. While many preeminence benchmarks are important for AAU eligibility, as indicated with an asterisk, for those not benchmarked in preeminence, the value is based on the 25th percentile performance for the 34 U.S. public AAU institutions. The remaining metrics in Table 2 were selected as they contribute to the SUS BOG Strategic Plan goals and are often utilized in mathematical formulae for external ranking systems. For gauging our performance in the remaining metrics, we have calculated the most recently available average performance of the SUS designated research universities (i.e., FAMU, FAU, FIU, FSU, UCF, UF, and USF) as our benchmark value.

While USF will continue to balance its priorities to meet the performance goals for our 2013-18 Strategic Plan vision for AAU eligibility and all of the SUS BOG's 2025 Strategic Plan goals, the remainder of this discussion focuses on our plan to meet and sustain at least 11 of the 12 preeminence benchmarks through careful planning, strategic investments, disciplined execution and transparent accountability.

Critical to our current and planned performance for meeting preeminence is recruiting and retaining high quality, research productive faculty talent. The role of faculty in support of the preeminence goals is exemplified by consideration of *student-to-faculty ratio*, a metric that is often utilized in national rankings. As shown for Metric 9, to meet the preeminence benchmark for national rankings a university must be in the top 50 of at least two. USF is proud that it has risen into the top 50 of four rankings: *Kiplinger's Best Public College Value*, *Washington Monthly – National Universities*, *Times Higher Education World University Rankings*, and the *Center for Measuring University Performance (TARU).* USF will strive to be in the top 50 of at least one more ranking in this planning period.

USF has invested heavily to improve its *student-to-faculty ratio* to achieve its current value of 24:1. However, this falls short of the 25th percentile benchmark derived from AAU public institutions of 16:1. While USF will continue to serve a large undergraduate population, even a small improvement in our *student-to-faculty ratio* will show a large return on investment, positively impacting several preeminence metrics including, but not limited to, *freshman retention rate, 6-year graduation rate*, and the *number of doctoral degrees awarded annually*. USF currently meets the preeminence benchmark only for the last of these.

The *freshman retention rate* metric will be positively impacted by improving the *student-to-faculty ratio*. USF has made steady incremental progress for this goal, with current performance at 88%. We must, however, do a better job with student retention, not only to meet the preeminence benchmark of 90%, but because continuing their undergraduate education is a key element in students realizing their future dreams. We expect to reach this performance threshold by next year.

Linked to retention rates are the *4-year* and *6-year graduation rates*, the latter of which is a preeminence metric. USF has realized remarkable success in graduation rates under the stewardship of Dr. Judy Genshaft and her leadership team. For example, the 6-*year graduation rate* for the 2004 cohort (graduating in 2010) was 51%, and our current performance (2009 cohort, graduating in 2015) is 68%. While we celebrate this 17 percentage point increase, we are not satisfied. We will continue our current pattern of strategic investments, particularly those realized

through performance-based funding[5], to support our current and future student success initiatives. Our present trajectory suggests that we will meet the preeminence benchmark of 70% with the 2011 cohort projected to graduate in 2017.

Students will always remain USF's primary raison d'être, a fact supported by USF's proven ability to attract a talented pool of undergraduate and graduate students. Indeed, USF meets the *Average GPA and SAT* score preeminence benchmark with a profile of 4.1 GPA and 1223 SAT for its current freshman class and continued gains are fully anticipated. While 34% of our talented fall freshmen graduated in the *top 10% of their High School Class*, placing us above the 25th percentile of public AAU institutions and contributing to the SUS BOG's Strategic Plan goal of 50% for the system, we must balance seeking high-achieving students with our commitment to providing access to a diversified pool of talented young men and women, many of whom are first-generation in college. Not only are many USF undergraduates the first in their families to achieve the dream of attending university, a significant number (40% in Fall 2015) are low-income PELL recipients. In order to provide adequate support for a talented and economically diverse student population, USF must strive to achieve the preeminence *Endowment Size* benchmark of $500 million. Although we do not anticipate meeting this benchmark by 2021, we firmly believe that we will continue to see progress in achieving our philanthropic goals, particularly with the continued success of the USF *Unstoppable* campaign which is on target to meet its $1 billion goal within the next year[6]. We remain proud of the fact that only two other public institutions founded after 1950 (the University of California – San Diego and the University of California – Irvine) have reached an endowment value higher than that of USF's (based on FY 2015 nationally published data[7]).

While USF's dedication to student success is unwavering, we believe that it is our proven commitment to research and innovation that differentiates us from so many other colleges and universities across Florida and the nation. This dedication is responsible for USF leading the SUS in *Total R&D Expenditures per Full-time Tenured and Tenure-Earning Faculty Members* ($484,763 in FY2014) as reported in the BOG Annual Accountability Reports. Further, the commitment has resulted in USF's enviable recent trajectory in research related metrics, including meeting or exceeding performance benchmarks for the remaining preeminence metrics: *National Academy Members*; *Science & Engineering Research Expenditures*; *Non-Medical Science & Engineering Research Expenditures*; *National Ranking in S.T.E.M. Research Expenditures*, *Patents Awarded*, and the *Number of Post-Doctoral Appointees*. USF ranks 4th worldwide for organizations with the most Fellows of the American Association for the Advancement of Science (AAAS) named this year. USF is ranked 110th among all the world's universities in a ranking of faculty publications, according to *High Impact Universities* (2010). USF ranks 10th nationally and 13th among universities worldwide for U.S. patents granted in 2014, according to a report released by the National Academy of Inventors (NAI) and the Intellectual Property Owners Association (IPO). In 2015, USF was named an Innovation & Economic Prosperity University by the Association of Public and Land-grant Universities (APLU), in recognition of its strong commitment to economic engagement. These are no small achievements, yet we must continue to "raise our game", competing more successfully for external funding to support basic and applied work, together with exploring innovative pathways for taking important discoveries to the marketplace. In order for our research enterprise to flourish USF's leadership must build a sustainable plan to expand, equip and support state-of-the-art research space, and most importantly link our aims to improve *faculty-to-student ratio*, with strategic

[5] http://www.flbog.edu/about/budget/performance_funding.php
[6] http://unstoppable.usf.edu/fnd_web/default.aspx
[7] http://chronicle.com/article/Sortable-Table-College-and/235074

and laser-focused faculty recruitment, through careful stewardship of the emerging preeminence funding.

Solution: Strategic Faculty Hires. President Genshaft and her senior leadership team, including the Provost and the Senior Vice President for Health, will personally steward Emerging Preeminence funding by earmarking the State's investment for Strategic Faculty Hiring in key areas of research focus. The President and her senior team will serve as a selection committee to which Deans and Center directors can petition for recruitment support for pre-identified nationally and globally prominent faculty. Areas that are believed to offer the greatest reputational and scientific return on investment include:

- **Brain and Spinal Cord**: neuroscience, aging, hearing loss, Alzheimer's Disease, brain, prosthesis, neuromorphic computing, cognitive sciences, spinal cord injury prevention and mitigation;
- **Data Science**: including data analytics, financial data analysis, and electronic health record generation and security;
- **Heart**: basic, translational and clinical research, and cardiovascular disease-related care including integrated cell and organ physiology, pharmacology, nanotechnology and drug discovery, cardiac regeneration and surgery, molecular biology, genomics and personalized medicine, bioinformatics, and medical engineering;
- **Security**: cybersecurity, global security, spread and control of infectious diseases, and social networks;
- **Water**: purification, ocean ecology, marine and coastal issues, and sustainability; and
- **Research Translation**: the translation of research into products, processes, and policies that improve the human condition.

Future Steps. USF's commitment to strategic investment in targeted faculty hires will result in significant gains in our current 25th place National Science Foundation (NSF) ranking among public research universities for total research expenditures, while furthering student success. In addition, our plan supports the BOG's 2025 Strategic Plan goals for strengthening quality and reputation in teaching, research, and public service. The strategic faculty hires will allow us to foster research connectivity, collaboration, and entrepreneurial, problem-solving approaches to focus on complex issues where society needs innovation and change. We anticipate USF will meet 11 of the 12 preeminence metrics by 2018. Such an accomplishment will enhance the State of Florida's competitive position in the global marketplace and bring greater prominence to USF and the SUS.

Conclusion. Through thoughtful, metric-driven planning, USF has been successful in its relentless pursuit of excellence and enhanced performance. This strategy has led to our qualification for emerging preeminence status just a few years after the Florida Preeminence program was launched, and it will continue to drive our progress toward even higher gains in the years to come. The additional investments made available for this effort by our state leaders and supplemented with philanthropic support, will boost that progress exponentially, and we look forward to reporting back with more details of that inevitable success. USF is proud to work alongside the BOG, the Legislature and the Governor to provide the highest quality education to our tens of thousands of students, to enhance the national reputation of the State University System of Florida, and ultimately bolster the foundation of Florida's knowledge-based economy.