

iREAL Research Working Group

Question:

The American public research university is built upon instructional revenues providing the salary support for faculty to pursue their research. How can the research university survive if the focus is on providing validation of individual learning in ways that are “less expensive than ever before?” As subsidized support for research decreases, how do we continue to increase research and PhD production at FIU?

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Executive Summary

The following report addresses the tension between the decrease in state and federal support for research and the concurrent imperative for increased research and PhD production at FIU in order to maintain our status as a research university. This report recognizes that the term “research” covers both scientific and cultural creativity: both are central to the future of FIU as a research university. The iREAL working group recognizes that higher education is operating in a “new *disruptive* normal,” characterized by a number of challenges and trends that will shape FIU in the future. Fiscal stress, increased competition, changing demographics, and rapidly evolving technologies challenge our nation’s research universities (The National Academies, 2012, 23). Within this context, FIU must be strategically positioned to reach our *next horizon* as a public metropolitan research university, leveraging our strategic advantages of “place,” geography, diversity, demographics, size, and our relatively young institutional age. To best address the charge of the commission, the working group identified three *bold ideas* that respond to this new disruptive normal:

- 1) A Focused and Coordinated Approach to Research Centers and Partnerships
- 2) Synchronized Communication Focusing on Expanding Donor Base
- 3) Striving to be a Leading Public Research University with Very High Research Capabilities

We advocate for the implementation of these ideas as a response to the conflicting forces of reduced financial resources and increased pressure for research.

Context

Public universities have experienced a long-term erosion of state and federal support in the face of increasing demands for expenditures in other areas (The National Academies, 2012, 55). To maintain its competitive status, FIU has to increase its research enterprise and PhD production during a time of steep reductions in state appropriations for higher education and increased competition for federal funding. Alternative sources of funds need to be identified and tapped. The increasing competitiveness of federal funding directly affects all graduate education at FIU, but it especially impacts STEM disciplines.

Structural issues are slowing our research and doctoral degree production. As compared with our SUS peer/aspirational group, FIU has the lowest number of graduate assistantships (Table 1). Therefore, faculty cannot attract the number and quality of PhD candidates required to remain competitive.

Table 1: Graduate Assistantships by Institution

SUS	2007	2008	2009	2010	2011
FIU	1,036	985	990	1,038	1,071
FSU	3,022	2,812	2,946	2,997	3,033
UCF	1,764	1,698	1,335	1,509	1,541
UF	4,440	4,473	4,403	4,480	4,354
USF	1,725	1,774	1,866	2,071	2,059

FIU also has the lowest number of tenured and tenure-track faculty (Table 2). Recognizing faculty as the drivers for research and teaching delivery, this discrepancy may place us at a competitive disadvantage.

Table 2: Tenured and tenure-track full-time faculty

SUS	2007	2008	2009	2010	2011
FIU	656	646	633	634	655
FSU	1120	1071	1074	1034	983
UCF	798	792	754	748	785
UF	2780	2658	2562	2560	2519
USF	1175	1103	1115	1142	1142

Our sister SUS institutions have more aggressively hired non-tenure track faculty than we have, (Table 3)
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Table 3: Non-tenure track full-time faculty

SUS	2007	2008	2009	2010	2011
FIU	172	171	191	210	310
FSU	680	664	647	606	667
UCF	454	455	528	564	621
UF	1647	1661	1645	1655	1766
USF	582	476	503	523	501

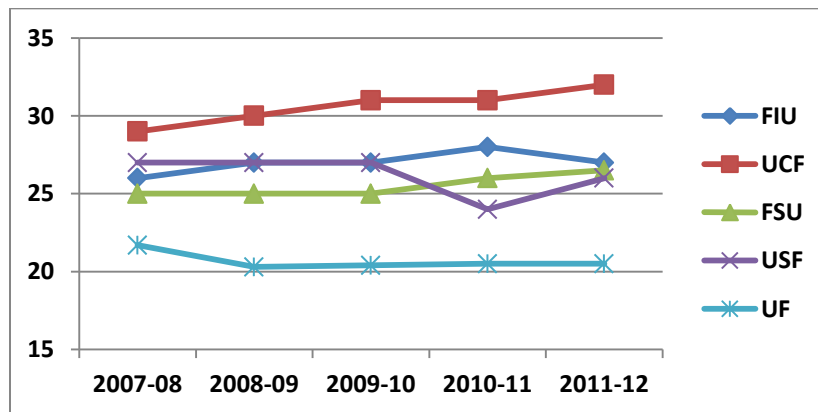
The ratio of tenured and tenure-track faculty to non-tenure track faculty varies within the SUS (Table 4). We should consider whether we have the right balance of faculty staffing and whether we are utilizing these two groups efficiently. Note that although we have the second highest headcount enrollment and the third highest fundable FTE enrollment in the SUS, we have the lowest number of faculty in both types of faculty.

Table 4: Ratio of Tenured and Tenure-track faculty to Non-tenure track faculty

	2007	2008	2009	2010	2011
FIU	3.8	3.8	3.3	3.0	2.1
FSU	1.6	1.6	1.7	1.7	1.5
UCF	1.8	1.7	1.4	1.3	1.3
UF	1.7	1.6	1.6	1.5	1.4
USF	2.0	2.3	2.2	2.2	2.3

Despite the university's high student/faculty ratio (Table 5), FIU faculty have an outstanding research record. However, to increase our research productivity we need to focus our faculty resources in areas of high research productivity.

Table 5: Faculty/Student Ratio



The Degrees Conferred Table (Table 6) below reflects problems described above; we are lagging behind in the number of graduate degrees conferred, and immediate steps need to be taken to ensure that we are competitive in critical disciplines.

Table 6: Graduate Degrees Conferred, 2011-12

University	PhD's Conferred	PhD's in STEM fields	% PhD's in STEM fields
FIU	381	53	14%
FSU	850	149	18%
UCF	266	111	42%
UF	1,954	-	-
USF	417	120	29%
ASU	636	-	-
UM	158	-	-

The next strategic plan needs to tackle the above structural issues to ensure FIU’s continued growth as a research university.

In principle, the research enterprise provides an opportunity to infuse funds into the University, but it can also be a drain on University resources if sufficient external funds are not raised. If the issue is not resolved, one of the major drivers of the growth of FIU and its prestige will be stalled.

FIU constitutes an important base of knowledge, expertise, and entrepreneurship for the region and has the potential to grow in this role. The net economic impact of FIU’s non-payroll *operating expenditures and the personal expenditures* of its employees at the county level is 7,650 jobs created or \$539.8 million of output; the net impact at the state level is 2,373 jobs, or \$171.7 million. The net economic impact of *student expenditures* at the county level is 3,784 jobs created, equivalent to \$375.5 million in economic output. At the state level, the net impact is 1,266 jobs, or \$126 million. And the net economic impact of incremental *alumni expenditures* at the county level is 10,845 jobs created, equivalent to \$1.08 billion in economic output. At the state level, the net impact is 1,634 jobs, or \$1.63 billion (Thompson, 2010). Unless bold steps are taken now to address the tension between decreased funding streams and increased research expectation, the impact on the actual and potential economic and technological growth of the region may be significant. The next section of the report sets forth our approach to taking bold action within this context.

Transformational Ideas

Our approach is guided by the following general principles:

- We need a clear and focused vision for FIU’s future areas of research excellence

- Growth in research requires increased investment in the “right mix” of graduate students, research faculty, and instructors
- High-caliber research faculty are attracted by a culture of collegiality and collaboration (University Business Executive Roundtable, 2010)
- Decisions should be data-driven
- Performance of FIU centers indicates the potential for increased investment in centers to drive the growth of FIU as a research university
- FIU needs to be more private-sector oriented, increase our capacity for entrepreneurialism, and be able to thrive in the hybrid zone (public/private)
- We can no longer be the “best kept secret” and understand the importance of “telling our story”
- Attention to increasing profitability
- FIU values and brand should infuse all efforts

1. A Focused and Coordinated Approach to Research Centers and Partnerships

The first of our three big ideas calls for a focused approach towards themed research centers, institutes and partnerships. The principles of *collaboration*, *integration* and *interdisciplinarity* underlie this idea. Topic-centered institutes and centers foster collaborative research, the primary source of productive innovation and increasingly the target of federal and private funding. Themed centers also provide a platform for fundraising and successful awarding of grants. This FIU initiative places centers and institutes under one umbrella (e.g., coordination by the Division of Research with formal linkages to academic colleges). The approach is to 1) incentivize colleges, departments and faculty to participate in multi-disciplinary arrangements, 2) incorporate FIU values/brand/priorities (e.g., global, community engaged research university) into center/institute operations, 3) align center/institute topics with the environment (regional needs, growth potential, funding availability), and 4) coordinate center/institute topics with other urban SUS research universities (USF, UCF) to minimize duplication. A focused and coordinated approach to research centers requires consideration for structural implementation that will facilitate interdisciplinary growth.

This approach enables these universities to lobby as a block for State resources targeting Florida metropolitan research universities. From a broader institutional perspective, FIU, USF and UCF, working together, can be an “unstoppable” force for change and a serious challenger to the “preeminent” institutions of UF and FSU. Among them, FIU, USF, and UCF have 70% of the underrepresented groups and half of the total enrollment in all FL state universities. The goal is to coordinate what FIU, USF and UCF are doing, and to collaborate with them to make our resources go further. This initiative requires political and administrative will, and a clear sense of the “brand” and “distinctiveness” of each institution.

As part of this process, we can collaborate with our sister institutions for lower enrollment/higher cost PhD programs. And we can seek non-traditional funding by establishing executive doctorate degrees with the potential to generate high revenue and profitability, and strengthen ties to the community. (See also Education Advisory Board, 2013). Many universities are offering the executive/professional doctoral programs aimed at senior-level managers who are looking to further their education to either shift to academia or to bring high-level research skills into the workplace. According to AACSB, most of these professional doctoral programs differ from traditional PhD programs in that they are part-time,

can usually be completed in three years, and are aimed at working senior executives with advanced degrees and at least 15 years of work experience. In addition, the programs encourage research that executives can apply directly back to the business world. The areas for executive/professional doctoral programs include leadership, business/management, higher education, public health and health administration/leadership. Professional doctoral programs are more prevalent in Europe and Australia, but there are an increasing number of US universities entering the market (Gill & Hoppe, 2009). A few early adopters have been Georgia State, Case Western, Kennesaw, and Oklahoma State. The benefits of executive doctoral programs are 1) meeting market demand, 2) high generators of revenues (self-pays or employer subsidized), 3) encourages applied research for solving “real world” problems, and 4) realigns doctoral education for the careers new doctorates will follow. This initiative reinforces FIU’s mission as a *solutions center*.

Creating academic/public/private partnerships is key to addressing the tension between reduced funding and increased research and PhD production demand. Our approaches are to 1) expand our partnerships over time with the support of interdisciplinary centers (e.g., assist Royal Caribbean with not just hospitality but also IT issues and help them create “Smart Ships”), 2) use partnerships (e.g., industrial, clinical, community, etc.) to determine the partner’s “unmet needs” and assist with providing the necessary research to solve these needs, 3) develop focused, seamless, peer-to-peer relationships with local/regional industry that enhance our research, student involvement, entrepreneurial ecosystem and development, 4) provide stipends (e.g., summer grants) for faculty and student investigators and researchers to embed themselves within a partner’s operations for a short period of time and develop an understanding of the partner’s operations and better help their research capabilities, 5) focus strategically on student opportunities by establishing more graduate exchange programs and foreign study opportunities to provide broadening experiences and to reduce research costs incurred by FIU (e.g., self-funded or non US-government funded graduate students, and a much more extensive and inclusive waiver program, 6) develop partnerships first with partners that have a high level of commonality between our educational/research strengths and our partner’s operations, and 7) start locally and expand to include regional and Latin American relationships and beyond.

A particularly bold move would be to combine the concepts of partnerships and centers to create academic-corporate partnerships that leverage the resources of both academic and corporate sectors to work toward common goals. Achieving such integration would be a challenge, but it is increasingly common at American universities (e.g. HP has teamed with the University of Utah and Johns Hopkins University) and has been done on a large scale at the new RWTH Aachen University in Germany (Scott, 2013). Such integration can infuse substantial resources including corporate funding into the research enterprise, enable synergies of goals and expertise, and foster translational research and technology transfer.

2. Synchronized Communication Focusing on Expanding Donor Base

Our second bold idea focuses on synchronized communication and “connectivity,” and calls for a reorganization of FIU’s communications strategy. Currently, there are multiple offices established to promote our external communications with some focused on attracting students, others focused on community relations and others focused on attracting and retaining donors to the university. Different colleges and divisions within the university have very different communication strategies and use a variety of different agencies which results in fragmentation of the FIU message. This is particularly apparent when dealing with companies and foundations since multiple FIU units would communicate

simultaneously without coordination causing confusion internally and externally. When messaging is fragmented, it signals to the broader community that FIU does not know what it wants to be. Not having a unified message in effect means FIU is all things to all people.

Currently, divisions such as External Relations, Research, Engagement, and University Advancement operate relatively independently. Reaching out to the community with “one voice/one face” is arguably more effective and persuasive than multiple “asks” from different (albeit overlapping) institutional perspectives. Indeed FIU should be more strategic in crafting a singular, even if it is multi-faceted, external message (which can be nuanced to fit specific audiences), informed by multiple internal divisions to demonstrate to potential funders that FIU is nimble, efficient and collaborative – that FIU does not waste time or resources in duplicating efforts. Having a coordinated, single goal for each organization with whom we want to do business will also yield larger philanthropic investment in the long run. It will also mitigate donor fatigue – which can occur if multiple units are asking for funding for its particular program. The goal is for University Advancement to facilitate a synchronized and integrated communication strategy developing compelling messages about FIU’s preeminent programs focused on attracting donors while also communicating to students, alumni and community partners.

University Advancement should work closely with the Technology Transfer office and the Division of Research to further leverage our efforts including highlighting research activity which is primarily focused within centers and institutes coordinated by the Division of Research. Effective communication about the research enterprise at FIU is one important way to coordinate advancement and engagement. FIU engages with the community and region, contributing to its health and vitality with the expertise and resources uniquely at its disposal. The advancement effort benefits from clear, coordinated messaging about FIU’s community engagement involvement. Communication is the key, and depending on the audience, can begin with stories about the research excellence happening within some of the academic units; or that FIU feels a responsibility to use its resources to be a solutions center for the local community and beyond; or that 80% of our graduates remain in Miami and are therefore the future of Miami’s workforce. Strong attention to communication about FIU research, with particular focus on research impacting community engagement and research impacting the issue or science itself (e.g. treating adolescents with ADHD with or without medicine), is recommended as a means to strengthen the advancement effort, as well as to fulfill higher education’s mandate to educate the public. FIU’s web presence needs to reflect a much more purposeful approach to advancement.

3. Striving to be a Leading Public Research University with Very High Research Capabilities

Our third bold idea focuses on becoming a public university with very high research capabilities. FIU is distinct from our local and regional public institution “competitors” by its focus on the research enterprise. This section examines this distinction by 1) focusing on national and state-level classifications/rankings, 2) engaging students with the research enterprise, 3) maximizing the impact of external funding, 4) optimizing and enhancing our institutional infrastructure to increase research productivity, and 5) focusing our graduate program portfolio on the most successful programs, maximizing the return on our investment. The guiding principle is that FIU should blaze trails where we can be the best in the world (e.g., Aquarius, Center for Children and Families, the Wall of Wind). Particular attention should be focused on location-specific opportunities that give FIU a unique edge and that will inspire the involvement and support of the local and regional community. Additionally, increasing our rankings, patent filings, licenses and incubated companies would appeal especially to donors, thereby increasing philanthropic investment in our research enterprise.

First, in order to further define this distinction, and raise our “prestige” factor, we should coordinate our university-wide efforts in improving our national and state-level rankings; namely, in attaining Carnegie Very High Research Activity classification and in strengthening our state-level ranking. The Carnegie Research classification is measured based on two main indices. The first index represents the aggregate level of research activity, and the second captures per-capita research activity using the expenditure and staffing measures divided by the number of full-time faculty whose primary responsibilities are identified as research, instruction, or a combination of instruction, research, and public service. These indices are calculated based on the following quantitative data: 1) amount of research & development (R&D) expenditures in science and engineering (S&E), 2) amount of R&D expenditures in non-S&E fields, 3) number of S&E research staff (postdoctoral appointees and other non-faculty research staff with doctorates), 4) number of doctoral conferrals in humanities fields, in social science fields, in STEM (science, technology, engineering, and mathematics) fields, and in other fields (e.g., business, education, public policy, social work). [Professional degrees – JD, MD, PharmD, AudD, DNP, etc. – are not taken into account].

We are behind most of our sister institutions in the level of research development and expenditures (Table 7). We suggest that there is a direct correlation between our research performance and the levels of financial support. Given the decline in state and federal funds for research, this indicates an urgent need to generate funds from other sources.

Table 7: Research and Development 10-11 Expenditures

	Research & Development 10-11 Expenditures *	
	Federal	Total
FIU	\$65.0	\$110.0
UCF	\$69.1	\$109.2
UF	\$306.0	\$740.0
FSU	\$140.9	\$230.4
USF	\$245.4	\$400.7

*in millions

Source: Florida Board of Governors, Annual Accountability Report, 2011-12

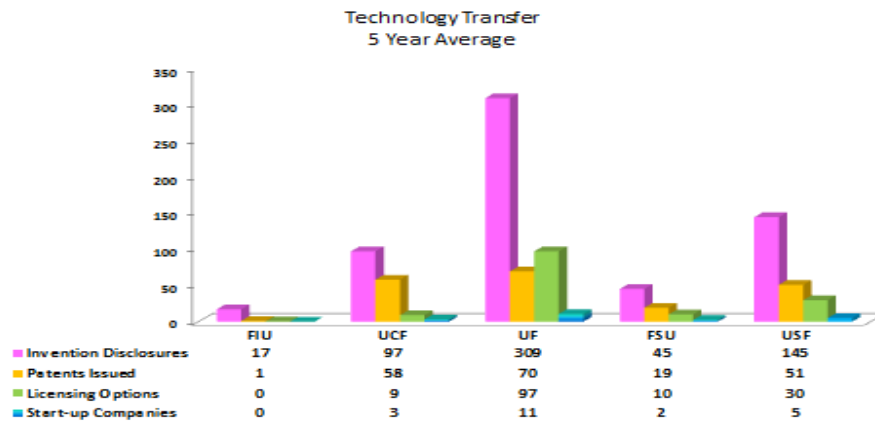
FIU has the lowest performance for patent disclosures and subsequent patents within our peer group for this important SUS performance indicator (Table 8). It is also imperative that FIU dramatically increase the number of patent disclosures and subsequent patents, licenses and incubated companies (Table 9). One response is to incentivize faculty and students to disclose intellectual property developed at FIU and to have a target number of patents to be filled each year.

Table 8: Technology Transfer and Research

SUS	Patents per 1,000 faculty	Research \$ per Faculty
USF	42	\$312,420
UF	27	\$250,478
FSU	18	\$209,741
UCF	65	\$170,119
FIU	2	\$169,834

Source: Florida Board of Governors, Annual Accountability Report, 2011-12

Table 9: Technology Transfer, 5-Year Average



Source: Florida Board of Governors, Annual Accountability Report, 2011-12

Second, even as financial support for research is under threat, the research enterprise remains the force in redefining the role of a public metropolitan university in the community. Creating and sharing knowledge has a direct benefit of helping people and of improving the quality of life of our citizens. It also enriches the FIU experience for our students. Students report that working on projects with research faculty who are generating knowledge is a life-altering experience for them. If FIU is to maximize its potential as a *solutions center*, research and creative activity should be placed at the heart of the “FIU Experience.”

We identify three strategies that will help centralize research in the culture of FIU. 1) Require all graduate students to write and submit a fellowship application. In addition to raising financial support for graduate education, writing fellowship applications provides the invaluable experience of developing new research ideas, which may complement the experience of contributing to a faculty-prioritized research program. 2) Require all undergraduate students to have some research experience during a course in their first semester at FIU. 3) Better integrate undergraduate and graduate research efforts in the context of a seamless research enterprise. Graduate student involvement in undergraduate research direction, under faculty oversight, maximizes the utility of faculty time and energy, provides

graduate students with valuable experience in communication and mentoring, and invigorates undergraduates with near-peer interactions and insight into career development.

Third, it is imperative that we maximize the funds generated from successful grant applications in this environment of ever increasing competition for external grant dollars. One strategy is to incentivize faculty to generate more research funding in disciplines that do not have built-in incentives. This is facilitated by changing the institutional culture such that the activities involved in acquiring external funding are expected, supported, communicated, and rewarded (University Leadership Council, 2010. P. 10). For example, salary savings from grants can be incentivized by tying salary increases or annual bonuses to inclusion of academic year salary in grant budgets (University Leadership Council, 2010). Alternatively, in some disciplines it may be practical to require faculty to generate a percent of their salary from external funding; however, such an approach should be implemented with caution because it can lead to an orientation toward short-term research payoffs and cause faculty insecurity, with consequent detrimental effects on long-term research health and faculty morale.

Fourth, a high priority should be placed on optimizing and enhancing our institutional infrastructure to increase research productivity, moving us toward Carnegie VHRA classification. Improving research infrastructure maximizes the productivity of all research faculty and is the one productivity-increasing measure over which we have direct control. Furthermore, hiring high-caliber research faculty is a direct way to increase research productivity, and such faculty are more likely to choose an institution that provides strong research infrastructure. In fact, strong research infrastructure may be a greater incentive than a large startup package (University Business Executive Round Table, 2010). Specific approaches for improving FIU's research-supporting infrastructure include reducing the grant administration burden on research faculty and increasing the efficiency and transparency of the purchasing process. For the long run, we should ensure that the critical research infrastructure required to enhance research productivity is explicitly addressed in an ongoing manner.

A final way to move FIU toward Carnegie VHRA classification is to focus our graduate program portfolio on the most successful programs, maximizing the return on our investment. Criteria include favorable program cost, production of graduates, and job prospects for graduates. Revenue-generating programs such as executive doctorates are also attractive.

To conclude, our nation's research universities continue to be the primary source of the new knowledge and talented individuals who apply it to achieve our security, health, prosperity, and other national goals (The National Academies, 2012, 23). FIU is no exception, despite the context in which we function. The three "transformational" ideas discussed above for FIU are in alignment with the charge of iREAL; namely, to be bold and innovative and open to exploring non-traditional approaches.

Appendices

Appendix 1: Florida International University Centers and Institutes Total Expenditures, 2011-2012

Appendix 2: University of Central Florida Centers and Institutes Total Expenditures, 2011-2012

Appendix 3: University of South Florida Centers and Institutes Total Expenditures, 2011-2012

Appendix 4: History of Fundable Headcount Enrollment , Fall 2002-2012

Appendix 1

Florida International University Centers and Institutes Total Expenditures 2011-2012						
Center/Institute	E&G	C&G	Fees for Service	Private and Other	Total	Return on Invest ment
Southeast Environmental Research Center (SERC)	373,475	8,947,248	982,918	266,638	10,570,279	28.3
FIU Applied Research Center	915,888	5,181,773	0	53,977	6,151,638	6.7
International Hurricane Research Center	1,351,453	2,347,968	2,984	0	3,702,405	2.7
Center for Internet Augmented Research and Assessment	0	1,568,428	0	2,039,326	3,607,754	
Lehman Center for Transportation Research	0	2,577,991	0	0	2,577,991	
The Center for Research on U.S. Latino HIV/AIDS and Drug Abuse (CRUSADA)	0	2,037,692	0	0	2,037,692	
High Performance Data Research Center	0	1,938,805	66,710	9,744	2,015,259	
English Language Institute	0	0	1,942,834	0	1,942,834	
International Forensic Research Institute	289,923	1,556,563	74,203	8,180	1,928,869	6.7
Institute of NeuroImmune Pharmacology	364,659	1,279,841	0	14,821	1,659,321	4.6
The Center for Ethics and Professionalism	1,503,343	0	128,200	0	1,631,543	1.1
The Center for Leadership	723,491	0	491,802	54,311	1,269,604	1.8
Center for Diversity in Engineering and Computing	0	1,191,991	13,097	21,772	1,226,860	
Center for Advanced Technology and Education	0	800,000	0	100,000	900,000	
Women's Studies Center	487,249	328,681	30,976	6,710	853,616	1.8
Latin American and Caribbean Center	621,645	123,151	28,562	14,639	787,997	1.3
Center for the Administration of Justice	225,806	406,757	0	19,717	652,280	2.9
Metropolitan Center	349,282	140,034	102,586	14,004	605,906	1.7
Child and Family Psychosocial Research Center	0	604,140	0	0	604,140	
Center for the Study of Matter at Extreme Conditions	67,513	481,212	73	42,842	591,640	8.8
Infant Development Research Center	0	532,916	0	0	532,916	
Jack D. Gordon Institute for Public Policy and Citizenship Studies	220,932	156,478	9,952	89,737	477,099	2.2
Center for Labor Research and Studies	0	111,295	364,153	415	475,863	
Institute for Public Management and Community Services	0	71,860	368,132	0	439,992	
Institute for Hospitality and Tourism Education and Research	0	0	371,429	0	371,429	
Institute for Child Health and Development (I-CHAD)/CCF	0	154,060	0	135,857	289,917	
International Media Center	0	275,135	0	0	275,135	
Cuban Research Institute (CRI)	64,477	129,714	885	1,029	196,105	3.0
Telecommunications and Information Technology Institute	0	171,350	0	5,124	176,474	
Engineering Manufacturing Center	90,201	0	8,265	0	98,466	1.1
Center for Accounting, Auditing, and Tax Studies	0	0	55,413		55,413	
Ryder Center for Supply Chain Management	0	0	17,840	34,384	52,224	
Center for the Humanities in an Urban Environment	1,032	0	6,369	960	8,361	8.1
Jerome Bain Real Estate Institute	0	0	0	6,774	6,774	
Institute for Judaic and Near Eastern Studies	0	0	0	2,558	2,558	
	7,650,369	33,115,083	5,067,383	2,943,519	48,776,354	6.4

Appendix 2

University of Central Florida Centers and Institutes Total Expenditures 2011-2012						
Center/Institute	E&G	C&G	Fees for Service	Private and Other	Total	Return on Invest ment
Florida Solar Energy Center	3,244,521	17,562,358	1,832,522	7,536	22,646,937	7.0
Center for Research and Education in Optics and Lasers (CREOL)	5,633,428	8,403,379	0	2,381,003	16,417,810	2.9
Institute for Simulation and Training	2,167,012	13,827,687	0	0	15,994,699	7.4
Biomolecular Science Center	3,236,223	4,310,535	0	0	7,546,758	2.3
Advanced Materials Processing and Analysis Center (AMPAC)	1,106,843	1,999,608	414,193	1,102	3,521,746	3.2
Executive Development Center	0	0	2,600,689		2,600,689	
Florida Space Institute (FSI)	886,980	1,179,554	0	0	2,066,534	2.3
Small Business Development Center (Affiliate)	290,779	1,427,181	41,211	0	1,759,171	6.0
University of Central Florida Center for Forensic Science	803,039	412,320	0	0	1,215,359	1.5
Center for Planning, Research and Development	0	114,000	0	0	114,000	
Transportation Systems Institute	0	100,320	0	0	100,320	
Florida-Eastern Europe Linkage Institute	11,935	0	0	0	11,935	1.0
Florida-Canada Linkage Institute	11,933	0	0	0	11,933	1.0
Institute of Statistics and Data Mining	0	0	0	7,247	7,247	
Institute for Social and Behavioral Sciences	0	7,095	0	0	7,095	
Environmental Systems Engineering Institute	0	0	5,604	0	5,604	
	17,392,693	49,344,037	4,894,219	2,396,888	74,027,837	4.3

**University of South Florida
Centers and Institutes
Total Expenditures
2011-2012**

Center/Institute	E&G	C&G	Fees for Service	Private and Other	Total	Return on Investment
Pediatrics Epidemiology Center	132,090	38,762,793	0	390,962	39,285,845	297.4
The Center for Leadership in Public Health Practice	14,950	19,191,581	2,508	0	19,209,039	1284.9
Center for Urban Transportation Research	1,194,124	8,633,811	0	24,142	9,852,077	8.3
Institute for School Reform, Integrated Services, and Child Mental Health and Educational Policy	0	5,527,549	0	0	5,527,549	
Institute for Research in Psychiatry and Neurosciences	1,321,653	1,570,617	0	1,642,660	4,534,930	3.4
USF Clinical and Translational Science Institute	2,607,516	977,844	74	513,900	4,099,334	1.6
Institute for Research in Art	1,746,132	28,097	1,416,003	289,216	3,479,448	2.0
USF Center for HIV Education and Research	1,505	3,089,661	16,949	0	3,108,115	2065.2
David C. Anchin Center for the Advancement of Teaching	480,295	1,759,453	576,117	280,618	3,096,483	6.4
Nanomedicine Research Center	428,049	2,038,701	45,814	101,279	2,613,843	6.1
Center for Aging and Brain Repair	749,356	1,142,038	0	489,220	2,380,614	3.2
The Archie A. and Mary-Louise Silver Child Development Center	589,708	732,114	0	991,451	2,313,273	3.9
Clean Energy Research Center	299,414	1,434,899	0	367,656	2,101,969	7.0
National Center for Transit Research (NCTR)	4,155	1,919,712	0	0	1,923,867	463.0
Center for Assistive, Rehabilitation and Robotics Technologies	23,881	1,768,230	0	66,406	1,858,517	77.8
Lawton and Rhea Chiles Center for Healthy Mothers and Babies (Health Science Center)	82,380	1,394,972	0	296,620	1,773,972	21.5
USF Center for Biological Defense	32,802	1,656,610	5,603	0	1,695,015	51.7
Small Business Development Center - Affiliate	408,388	1,112,150	30,083	32,761	1,583,382	3.9
Global Center for Hearing and Speech Research	643,151	926,293	0	0	1,569,444	2.4
Florida Health Information Center (FHIC) (HSC)	96,456	1,175,878	0	0	1,272,334	13.2
Florida Center for Community Design and Research	324,306	899,088	0	18,596	1,241,990	3.8
Diabetes Center (HSC)	1,052,613	25,486	9,117	94,288	1,181,504	1.1
Florida Center for Instructional Technology	252,832	148,162	654,313	57,063	1,112,370	4.4
USF Center for Wireless and Microwave Technology	546,663	557,302	0	0	1,103,965	2.0
Nanotechnology Research and Education Center	875,614	28,000	137,120	256	1,040,990	1.2
Center for Autism and Related Disabilities	0	961,667	0	0	961,667	
National Bus Rapid Transit Institute (NBRTI)	0	900,693	0	0	900,693	
Eric Pfeiffer Suncoast Alzheimer's Center	102,977	194,737	0	545,119	842,833	8.2
Center for the Study of Migrant Education	0	747,843	0	1,040	748,883	
Educational Research Center for Child Development	0	0	719,851	0	719,851	
Joy McCann Culverhouse Center for Esophageal and Swallowing Disorders	0	0	0	613,112	613,112	
The John Scott Dailey Florida Institute of Government	32,064	395,910	122,917	58,029	608,920	19.0
Alcohol and Substance Use Research Institute	27,062	543,330	0	0	570,392	21.1
Florida Kinship Center	89,801	299,183	0	33,643	422,627	4.7

Center for Industrial and Interdisciplinary Mathematics	0	369,844	0	0	369,844	
Institute for the Study of Latin America and the Caribbean	360,413	3,837	0	3,104	367,354	1.0
Florida Policy Exchange Center on Aging	0	169,887	112,356	59,660	341,903	
The Jim Walter Partnership Center	14,399	71,417	16,481	207,114	309,411	21.5
Gus A. Stavros Center for Free Enterprise and Economic Education	84,192	0	13,431	202,353	299,976	3.6
Suncoast Area Teacher Training (SCATT)	249,176	0	13,967	4,041	267,184	1.1
Center for Research, Evaluation, Assessment and Measurement	6,889	211,337	14,983	0	233,209	33.9
Center for Communications and Signal Processing	0	200,271	0	0	200,271	
Center for Entrepreneurship	2,673	40,345	0	155,920	198,938	74.4
Kiran C. Patel Center for Global Solutions	158,618	0	0	18,140	176,758	1.1
Center for Modeling Hydrologic and Aquatic Systems	16,019	0	0	117,218	133,237	8.3
Center for Human Morpho-Informatics Research	132,377	0	0	0	132,377	1.0
USF Humanities Institute	112,653	0	0	7,972	120,625	1.1
Institute on Black Life	105,114	0	0	12,014	117,128	1.1
Center for Eating and Weight Disorders	0	0	0	111,996	111,996	
Institute for Public Policy & Leadership	104,364	0	348	4,785	109,497	1.0
USF Parkinson's Disease and Movement Disorders Center, NPF Center of Excellence	0	0	0	67,281	67,281	
James and Jennifer Harrell Center for the Study of Family Violence	10,757	18,672	0	28,784	58,213	5.4
Institute for Environmental Studies	0	51,382	0	1,914	53,296	
Center for Hospice, Palliative Care and End of Life Studies At the University of South Florida	39,744	0	0	0	39,744	1.0
STEM Education Center	11,824	5,085	8,733	10,766	36,408	3.1
Center for Applied Anthropology	0	0	24,165	0	24,165	
Center for Environmental/Occupational Risk Analysis & Management	0	6,445	0	10,307	16,752	
USF-SMMARTT (Smart Metal Organic Materials Advanced Research and Technology Transfer)	14,017	0	0	0	14,017	1.0
Interdisciplinary Center for Hellenic Studies	0	0	0	12,901	12,901	
Institute for Systematic Botany	0	0	0	4,927	4,927	
Center for Music Education Research (CMER)	769	2,546	0	0	3,315	4.3
Ancient Studies Center, Department of History	0	0	0	2,200	2,200	
Institute for Information Systems Management	0	0	0	1,439	1,439	
Center for Jazz Composition	0	0	0	674	674	
Center for Neo-Platonic Studies	0	0	0	577	577	
Center for Social and Political Thought	0	0	0	300	300	
Interdisciplinary Center for Greek Studies	0	0	0	196	196	
Total	15,583,935	101,695,472	3,940,933	7,954,620	129,174,960	8.3

Appendix 4

TABLE 11. HISTORY OF FUNDABLE HEADCOUNT ENROLLMENT, FALL 2002 THROUGH FALL 2012

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Educational & General:											
Florida A&M University	12,467	12,907	12,940	12,028	11,755	11,398	11,848	12,261	13,277	13,208	12,051
Florida Atlantic University	23,996	25,139	25,474	25,807	25,488	26,347	27,021	27,707	28,390	29,249	30,155
Florida Gulf Coast University	5,236	5,776	6,167	7,214	8,266	9,328	10,238	11,105	12,038	12,655	13,442
Florida International University	33,799	33,601	34,817	37,193	38,306	38,364	39,146	40,455	43,925	47,799	50,109
Florida State University	36,651	37,072	38,316	39,227	39,843	40,470	38,661	39,751	40,289	41,081	40,750
New College of Florida	650	671	691	763	746	769	787	827	805	845	833
University of Central Florida	38,795	41,185	42,391	44,643	46,434	48,184	50,275	53,603	56,238	58,530	59,508
University of Florida	46,850	47,280	47,401	49,147	50,107	50,825	50,652	49,637	48,891	48,538	48,815
University of North Florida	13,460	13,837	14,446	15,224	15,899	16,371	15,427	16,719	16,320	16,368	16,356
University of South Florida--TAMPA	37,764	39,563	40,425	41,350	41,805	42,000	42,692	43,503	43,837	36,719	35,783
University of South Florida--SP										4,407	4,690
University of South Florida--SM										1,919	1,950
University of West Florida	9,206	9,412	9,485	9,541	9,780	10,110	10,516	11,191	11,645	11,997	12,680
Sub-Total E & G	258,874	266,443	272,553	282,137	288,429	294,166	297,263	306,759	315,655	323,315	327,122
Special Units: (1)											
FIU - Health									85	167	285
FSU - Health	69	115	172	220	283	356	411	450	475	476	476
UCF - Health								41	100	179	277
UF - Health and Medical Center	1,113	1,115	1,130	1,145	1,161	1,183	1,199	1,205	1,225	1,247	1,271
USF - Medical Center	1,611	1,633	1,745	1,892	2,092	3,161	3,640	3,804	3,963	4,317	4,984
Sub-Total Special Units	2,793	2,863	172	220	283	356	411	5,500	5,848	6,386	7,293
TOTAL	261,667	269,306	272,725	282,357	288,712	294,522	297,674	312,259	321,503	329,701	334,415

(1) Includes Medical Professional headcount

SOURCE: Online Enrollment Tool, <http://www.flbog.edu/resources/factbooks/factbooks.php>

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