

Recommendations

to

**The Florida Technology, Research, and Scholarship
Board**

and to

The Florida Board of Governors

**Regarding the
Centers of Excellence Program**

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**The Florida Board of Governors Research and Economic Development Committee and
The Florida Technology, Research, and Scholarship Board**

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Introduction

The 2002 Legislature provided \$30,000,000 to fund Centers of Excellence (COE). This funding resulted in the creation of three Centers of Excellence, one each at the University of Florida, the University of Central Florida, and Florida Atlantic University, each funded at \$10M.

The 2006 Legislature provided \$30M to fund COEs. This funding resulted in six additional Centers of Excellence: two at the University of Florida, and one each at Florida State University, the University of South Florida, the University of Central Florida, and Florida Atlantic University. Thus, a total of 9 Centers of Excellence currently exist and are funded at these levels:

| <u>Center of Excellence</u> | <u>Funding Awarded</u> |
|--|------------------------|
| 2002 COE Awards | |
| UF COE in Regenerative Health Biotechnology | \$10,000,000 |
| FAU COE in Biomedical and Marine Biotechnology | \$10,000,000 |
| UCF Florida Photonics COE | \$10,000,000 |
| | \$30,000,000 |
| 2006 COE Awards | |
| USF COE in Biomolecular Identification & Targeted Therapeutics | \$8,000,000 |
| FAU COE in Ocean Energy Technology | \$5,000,000 |
| UF Institute for Sustainable Energy/ Energy Technology Incubator | \$4,500,000 |
| UCF Florida Photonics COE Laser Technology Initiative | \$4,500,000 |
| UF COE for Nano-Bio Sensors | \$4,000,000 |
| FSU COE in Advanced Materials | \$4,000,000 |
| | \$30,000,000 |

The 2007 Legislature was generous in providing \$100,000,000 for what will be the third round of COE funding. Given the magnitude of this appropriation, and benefiting from two rounds of COE competition, annual reporting, accountability data gathering, and ad hoc meetings on the subject of COEs with the State University System (SUS) Council of Vice Presidents for Research, the SUS Council of Academic Vice Presidents, and representatives of other potential respondents, this set of recommendations is presented for enhancing the COE competitive process. It is hoped that the Florida Technology, Research, and Scholarship Board (FTRSB), working together with the Florida Board of Governors (BOG), can create a more efficient, focused, and accountable process, resulting in an even greater return on the investment that Florida is making in higher education and economic development through this program.

2007 COE Budget Parameters

It is recommended that, generally, COE proposals reflect a budget of between \$10M and \$20M. This will assist in ensuring that proposals are of the magnitude contemplated by the legislation. All proposals with budgets exceeding \$10M should submit secondary “fallback” budgets indicating how their proposals could be successfully scaled if they were to receive funding at \$10M. Any proposal requesting equipment valued at over \$1 Million must include an analysis to determine whether the equipment can be utilized throughout the State University System and other public and private institutions, as appropriate.

Notwithstanding the recommendation above, proposals at less than \$10M may be entertained if they clearly demonstrate that they are responding to the criteria for success as outlined later in this document.

At the other end of the spectrum, proposals with budgets above \$20M may be entertained. These “Supercenter” proposals must demonstrate the following:

- extraordinary chances for success, indicating that elements of their planning are well in-process and involve major stakeholders in Florida including business and industry, government, and other economic development entities;
- clear, substantial, meaningful, and multifaceted collaboration with shared decision making among multiple (to be defined as more than two) postsecondary institutions, as documented by a Memorandum of Understanding submitted with the proposal; and
- the likelihood of achieving tangible results in a critical area of concern such as energy efficiency, the environment, or a similar area of major concern to Florida’s and the Nation’s citizenry.

Initial Institutional Review of COE Proposals

Submitting institutions must have in place an internal process for review and selection of COE proposals for formal submission to the FTRSB and, if it is requested, must be able to provide the documentation associated with their internal processes. Formal proposal submissions to the FTRSB are to be accompanied by a cover letter signed by the institution’s Chief Executive Officer, whose signature attests that the internal process for review and selection is in place and has been duly applied.

Number of Institutional Submissions

On a date specified in a timetable approved by the FTRSB and the BOG, each submitting institution shall provide a Letter Of Intent. The Letter Of Intent must be transmitted by the institution’s Chief Executive Officer and accompanied by an abstract of no more than one page for each proposal. It is recommended that, subsequent to

their internal review processes, institutions submit no more than three COE proposals of which they are designated as the lead institution. There is no limit to the number of proposals on which institutions may collaborate as less than lead institutions. Subsequent to the submission of proposals, institutions submitting more than one proposal may be asked to rank-order by priority proposals for which they are the lead institution. Existing COEs are eligible to submit proposals per statutory language, and these would count as a submission on the part of the lead institution.

External Review of Submissions

It is recommended that the FTRSB's review process of COE proposals include an external review for scientific merit by a major national academy or other national scientific entity or entities, the costs for which must be borne by the submitting institutions, absent other means of paying for them. The review should include the proposal's technical merit, the vitas of the technical team, and an assessment of the opportunity, growth, competition, and maturity of the proposed technology. Such a review may serve as a "first cut" process for proposals from a scientific perspective, with possible responses being "Highly Recommended," "Recommended," or "Not Recommended." Ultimately, the exact nature of the service provided by the external reviewing agency will be determined through a dialogue of negotiation between the agency and the FTRSB through the Board of Governors Office. It will be necessary for these external reviews to consider the viability of budgets and "fallback" budgets as discussed under the "2007 COE Budget Parameters" section.

Institutional Contact with Boards

Consistent with the spirit of national competition, it is recommended that university representatives at all levels refrain from contacting FTRSB or BOG members with respect to COE submissions once proposals have been formally submitted. In the event that FTRSB members have specific questions about proposals subsequent to their submission, a mechanism will be created to facilitate information exchange.

Board Final Deliberations and / or Voting

It is recommended that any voting by the FTRSB should be effected by individual member rank-ordering. The nonvoting of recused or absent members will be accommodated in the scoring by utilizing a proposal's rank-order average on the completion of the vote. Geographic balance of awards and diversity of research portfolio may be factors in determining final recommendations.

COE Criteria

The following recommendations are provided to the FTRSB for its consideration of COE proposals:

1. While the criteria adopted in 2006 by the FTRSB are still valid, it is recommended that the seven criteria be reduced to four key areas. It is believed that this will improve and facilitate the FTRSB’s review and scoring process, and allow for more appropriate weightings to be applied in key areas which heretofore may have appeared under-valued.

| 2006 COE Criteria | 2006 Weighting |
|---|-------------------|
| Vision. The proposal must demonstrate a clear and integrated vision to develop commercially promising, advanced, and innovative technologies and to transfer those technologies to the commercial sector. | 25% |
| Research Focus. The proposal must demonstrate national and prominent technology-centric research focus. | 25% |
| Economic Impact Potential. The Proposal must demonstrate the potential for positive economic impact on the State of Florida and the Nation. | 20% |
| Leadership and Management. The proposal must clearly outline its leadership and management plan to assure success if the center is funded. The plan must show lines of authority and responsibility of the proposed Center’s organization, and clearly identify a Program Manager who is the single point of contact for information regarding program management, execution, and reporting for the proposed Center of Excellence. | 10% |
| Leveraging Resources. The proposal must demonstrate the ability and plans to acquire and leverage public and private-sector resources to support the operations and research of the center, including funding, personnel, facilities, and equipment. | 10% |
| Center Collaboration with Other Entities. The proposal must demonstrate how the Center of Excellence promotes collaboration among university scholars, research center scientists and engineers, public schools, and private businesses. | 5% |
| Workforce Development. The proposal must clearly describe how the Center of Excellence will foster the development of a highly skilled, high-wage workforce. | 5% |

It is recommended that the “General Success Factors” stipulated in statute be combined with the “Specific Success Factors,” also stipulated in statute, joined with any “Additional Considerations” to create four criteria areas with the following weighting:

| 2007 COE Criteria | 2007 Weighting |
|---|-------------------|
| <p><u>Vision, Leadership, and Research Focus</u> (clear and integrated vision and plan to assure success for developing innovative technologies and transferring them to the commercial sector; technology-centric research focus)</p> <p><i>Additional Considerations</i></p> <ul style="list-style-type: none"> ○ Evidence that the core team has a past track record of success in comparable endeavors. ○ The scientific strength of the proposal (as supported by external review). ○ The relevance of the research and the extent to which it is either waxing or waning. ○ Whether or not the research is wholly new or has been attempted before. ○ An identification and analysis of the national / world competition and the extent to which it might be displaced by the proposal. ○ The extent to which the research addresses any Florida specific societal issues beyond the stated goals of the legislation. ○ The interpretation of “innovative technologies to include technological processes or applications as well as products. ○ Is the investment level appropriate and sufficient to make a difference in the identified technology area, and to result in a sustainable Center? | <p>50%</p> |
| <p><u>Economic Opportunity</u> (potential for positive national and state impact, including a high-skilled, high-wage Florida workforce)</p> <p>The regional economic structure and climate.</p> <p>The degree to which the applicant transfers advanced and emerging sciences and technologies from its laboratories to the commercial sector.</p> <p>The degree to which the applicant stimulates and supports the creation of new ventures.</p> <p>The existence of a plan to increase the likelihood of faculty and graduate students pursuing private-sector careers in the state.</p> <p>The existence of a plan to increase the number, quality, and retention rate of <u>faculty and graduate students</u> in advancing and emerging science and technology-based disciplines.</p> <p><i>Additional Considerations</i></p> <ul style="list-style-type: none"> ○ The extent to which Center will foster a high skilled, high wage workforce. ○ The likelihood of new or expanded economic clusters as a result of Center. ○ The interpretation of “economic development” to include the creation of jobs or the removal of barriers to further economic development. | <p>25%</p> |

| | |
|--|------------|
| <p><u>Management and Infrastructure</u></p> <p>The maturity of the applicant’s existing programs relating to a proposed Center of Excellence.</p> <p>The ability of the applicant to provide capital facilities necessary to support research and development.</p> <p>The comprehensiveness and effectiveness of site plans relating to a proposed Center of Excellence.</p> <p>The existing amount of the applicant’s resources dedicated to activities relating to a proposed Center of Excellence.</p> <p>The presence of a comprehensive performance and accountability measurement system.</p> <p><u>Additional Considerations</u></p> <ul style="list-style-type: none"> ○ An effective management structure showing clear lines of authority and responsibility. ○ Evidence that the investment level is appropriate and sufficient to make a difference in the identified technology area. | <p>10%</p> |
| <p><u>Leveraging Resources and Other Collaboration</u> (the ability to acquire public and private-sector funding; and the ability to value-add by creating multi-sectored partnerships with scholars, research center scientists and engineers, other educational institutions, and private businesses)</p> <p>The degree to which the applicant identifies and seizes opportunities to collaborate with other public or private entities for research purposes.</p> <p>The ability of the applicant to raise research funds and leverage public and private investment dollars to support advanced and emerging scientific and technological research and development projects.</p> <p>The existence of a plan to enhance academic curricula by improving communication between academia and industry.</p> <p><u>Additional Considerations</u></p> <ul style="list-style-type: none"> ○ The extent to which the Center supports the mission of each partner. ○ Existence or development of a framework to encourage long-term university/industry collaboration. ○ The demonstration of collaborative commitment by in-kind, matching funds, or other tangible investments. ○ The level of industry consensus that supports the proposed Center. | <p>15%</p> |

It is believed that considering all three sets of language will better reflect statute and the stated expectations of the BOG and the FTRSB, and that it will assist the FTRSB during its deliberative process.

2. It is recommended that the FTRSB encourage the submission of collaborative COE proposals in areas that demonstrate cross-sector and multi-institutional areas of SUS strength. Further, it is recommended that the FTRSB encourage proposals by major research institutions in the SUS that genuinely involve smaller SUS institutions in meaningful collaboration. Proposals submitted that do not reflect inter-institutional collaboration should articulate why such collaboration was not appropriate or possible.

COE Accountability

At its March 28-29 meeting, the Board of Governors approved a set of accountability measures to be applied to all COEs. It is recommended that all submissions for new proposals include three years’ worth of estimates for all of these measures. They are:

| CENTERS OF EXCELLENCE 2007 Accountability Measures: Part I | |
|---|---|
| <u>Research Effectiveness</u> | |
| 1. | Competitive Grants Applied For and Received |
| 2. | Total Research Expenditures |
| 3. | Publications in Refereed Journals From Center Research |
| 4. | Professional Presentations Made on Center Research |
| 5. | Invention Disclosures Filed and Issued |
| 6. | Technologies Licensed and Revenues Received |
| <u>Collaboration Effectiveness</u> | |
| 7. | Collaborations with Other Postsecondary Institutions |
| 8. | Collaborations with K-12 Education Systems/Schools |
| 9. | Collaborations with Private Industry |
| 10. | Students Supported with Center Funds |
| 11. | Students Graduated |
| 12. | Job Placements of Graduates Upon Leaving the Center |
| <u>Economic Development Effectiveness</u> | |
| 13. | Business Start-Ups in Florida |
| 14. | Jobs Created and Jobs Saved in Florida |
| 15. | Specialized Industry Training and Education |
| 16. | Dollars Acquired from Venture Capitalists and Other Investments |

The BOG has created a working committee of Vice Presidents for Research charged with further defining and refining these measures to ensure that they are clearly understood and systematically reported.

In addition, the BOG has determined that each COE should be queried for a yearly set of “indicators of success” unique to each COE which will provide information regarding shorter-term milestones and achievements that will assist in determining the extent to which COEs are on-track to meet their larger goals. These indicators are in the process of being developed and, when finalized, will become a part of the COE Annual Report.

It is recommended that both internal and external review become a part of the normal operating procedures for Centers of Excellence, and the cost of such external reviews should be planned as part of the COE budget.

Finally, it is recommended that the accountability process should always be considered open to positive change as new data and concomitant measures become available, and as the FTRSB, the BOG, and other constituents work to maximize this important investment to the State.

COE Timeline

The following timeline is recommended:

| CENTERS OF EXCELLENCE TIMELINE | |
|---------------------------------------|--|
| July 19, 2007 | Finalize staff compilation of recommendations from multiple sources (FRC, CAVP, VPs for Research, BOG, etc.) regarding the criteria and process, and transmit to the BOG Corporate Secretary |
| July 26, 2007 | Mail staff recommendations to members of the FTRSB and the BOG |
| August 8, 2007 | FTRSB meets at the University of South Florida to discuss and approve 2007 criteria, recommendations for program improvement, and timeline; and to transmit recommendations to BOG |
| August 9, 2007 | BOG considers and approves FTRSB recommendations |
| August 17, 2007 | Send out RFP for Centers of Excellence |
| October 1, 2007 | Electronically transmitted Letters of Intent to Apply from institutional CEOs due by 5pm in BOG Office |
| October 2, 2007 | Letters of Intent to Apply transmitted to external reviewers |
| December 3, 2007 | Electronically transmitted Center of Excellence proposals due by 5pm in BOG Office |
| December 10, 2007 | Staff technical review of proposals completed |
| December 12, 2007 | Proposals sent to external reviewers |
| March 21, 2008 | Results from external reviews due in Board Office |
| March 25, 2008 | Results from external reviewers sent to FTRSB |
| April 1, 2008 to May 16, 2008 | FTRSB meetings to hear presentations, conduct deliberations, and determine final recommendations (multiple meetings, with a discrete "final recommendations" meeting) |
| May 22, 2008 | Titles for agenda items due to BOG Corporate Secretary |
| May 29, 2008 | Transmit final FTRSB recommendations and other agenda materials to the BOG Corporate Secretary |
| June 5, 2008 | BOG agenda mailed to BOG members |
| June 9-13, 2008 | BOG members briefed for June BOG Meeting |
| June 18-19, 2008 | BOG approves final Centers of Excellence recommendations |
| June 20-30, 2008 | COE awards distributed |