

HOUSE OF REPRESENTATIVES STAFF ANALYSIS

BILL #: CS/HB 69 Space Industry
SPONSOR(S): Economic Development Policy Committee/Hukill and others
TIED BILLS: **IDEN./SIM. BILLS:** SB 888

	REFERENCE	ACTION	ANALYST	STAFF DIRECTOR
1)	<u>Economic Development Policy Committee</u>	<u>21 Y, 0 N, As CS</u>	<u>Malcolm</u>	<u>Kruse</u>
2)	<u>Economic Development & Community Affairs Policy Council</u>	<u></u>	<u></u>	<u></u>
3)	<u>Transportation & Economic Development Appropriations Committee</u>	<u></u>	<u></u>	<u></u>
4)	<u>Full Appropriations Council on Education & Economic Development</u>	<u></u>	<u></u>	<u></u>
5)	<u></u>	<u></u>	<u></u>	<u></u>

SUMMARY ANALYSIS

CS/HB 69 creates a multi-university Space Technology and Research Development Institute (STRDI) within the Governor's Office of Tourism, Trade and Economic Development (OTTED) and supported by Space Florida. The STRDI will be a university-based program, led by Embry-Riddle Aeronautical University, to provide research and development and policy analysis to improve the competitiveness of the space transportation industry in Florida. Additionally, the STRDI will seek designation as a Federal Aviation Administration sponsored Center of Excellence. Research to be supported by the institute includes, but is not limited to:

- Range and airspace management systems;
- Spaceflight human factors;
- Launch vehicle safety;
- Materials science; and
- Spaceport instrumentation, technologies, and processes.

This bill does not require OTTED to appropriate funds or assign personnel to the STRDI.

HOUSE PRINCIPLES

Members are encouraged to evaluate proposed legislation in light of the following guiding principles of the House of Representatives

- Balance the state budget.
- Create a legal and regulatory environment that fosters economic growth and job creation.
- Lower the tax burden on families and businesses.
- Reverse or restrain the growth of government.
- Promote public safety.
- Promote educational accountability, excellence, and choice.
- Foster respect for the family and for innocent human life.
- Protect Florida's natural beauty.

FULL ANALYSIS

I. SUBSTANTIVE ANALYSIS

A. EFFECT OF PROPOSED CHANGES:

Background

In early 2004, President Bush and the National Aeronautics and Space Administration (NASA) announced a new "Vision for Space Exploration" that will send humans beyond Earth orbit for the first time since 1972.¹ Moreover, the Space Shuttle program is scheduled to end in 2010 and the next phase of human space flight, called Constellation, will likely launch after 2015. During this five year period, NASA is soliciting private companies to provide crew and cargo services for the International Space Station through its Commercial Orbital Transportation Services (COTS) program. Consequently, the prevailing view is that Florida's position as the premier location for space exploration along with the highly skilled workforce associated with the shuttle program may be diminished.

Space Florida's Mission

In 2006, the legislature created Space Florida within Chapter 331, Florida Statutes, as the successor organization to the Florida Space Authority, the Florida Space Research Institute and the Florida Aerospace Finance Corporation. Space Florida is responsible for promoting the development of a sustainable aerospace industry, space infrastructure, and educational opportunities for people interested in working in the space and aerospace industry. Among the elements in the Space Florida's 2007 strategic plan are:

- Broadening Florida's presence in the space industry beyond launch activity to include research and development (R&D), design, manufacturing, assembly, testing, launch, and servicing of space vehicles;
- Claiming a large share of the emerging global market for horizontal launches, including suborbital space tourism, transportation and cargo, and orbital payload delivery;
- Expanding and focusing use of the Space Life Sciences Laboratory;
- Establishing a Center of Excellence for Aerospace; and
- Providing focused funding support to the most relevant and worthwhile education programs.²

In 2001, Space Florida's predecessor agency, the Florida Space Authority, broke ground on what was originally called the Space Experiment Research and Processing Laboratory (SERPL), which has since been renamed the Space Life Sciences Lab (SLS Lab). Now owned by Space Florida, the SLS Lab is a

¹ "President Bush Announces New Vision for Space Exploration Program", Office of the Press Secretary, The White House, January 14, 2004, available at <<http://history.nasa.gov/Bush%20SEP.htm>> (last accessed March 6, 2009).

² Space Florida, "Strategic Business Plan," Version 2007-2, March 31, 2007, p. 13, available at <http://www.spaceflorida.gov/docs/Strategic_Business_Plan-2007-2.pdf>.

world-class laboratory with all the capability and systems necessary to host International Space Station experiment processing, as well as associated biological and life sciences research.

Florida's Centers of Excellence Program

In 2002, the Legislature passed the "Florida Technology Development Act,"³ which directed the State Board of Education to designate Centers of Excellence at state universities. The purpose of the centers is to stimulate university research and commercialization efforts in high-tech fields. In 2003, the State Board of Education designated three centers: the Center of Excellence in Biomedical and Marine Biotechnology at Florida Atlantic University; the Florida Photonics Center of Excellence at the University of Central Florida; and the Center of Excellence in Regenerative Health Biotechnology at the University of Florida. Each center received \$10 million from the state.

In 2006, the Legislature provided \$30 million for an expanded Centers of Excellence Program⁴ designed to promote the research and development of commercially viable science and technology and to transfer those discoveries to commercial sectors. The law established the Florida Technology, Research, and Scholarship Board within the Board of Governors of the State University System to recommend to the Board of Governors methods for implementing and administering the Centers of Excellence Program. In November 2006, the Board of Governors disbursed the entire amount to five universities to advance various research projects:

- The Center of Excellence in Advanced Materials at Florida State University (\$4 million);
- The Florida Center of Excellence for Biomolecular Identification and Targeted Therapeutics at the University of South Florida (\$8 million);
- The Center of Excellence in Ocean Energy Technology at Florida Atlantic University (\$5 million);
- The FISE Energy Technology Incubator at the University of Florida (\$4.5 million);
- The Center of Excellence in Laser Technology at the University of Central Florida (\$4.5 million); and
- The Center for Nano-Bio Sensors at the University of Florida (\$4 million).

In 2007, the Legislature provided \$100 million for additional Centers of Excellence Programs.⁵ Under the 21st Century Technology, Research, and Scholarship Enhancement Act, there were two proposals associated with space and aerospace submitted to the Board of Governors. The Joint Institute for Space Exploration Research consortium included Embry-Riddle Aeronautical University, the Florida Institute of Technology, and Florida State University. The other team was led by the University of Central Florida in partnership with the University of Florida.

Federal Aviation Administration Centers of Excellence⁶

Through the Air Transportation Centers of Excellence (COEs) for aviation research, the Federal Aviation Administration (FAA) supports the sharing of knowledge and transfer of emerging aviation technologies to the federal and private sectors. Participating universities benefit through funded research programs that enrich the educational opportunities for students by linking their learning to real world experiences. Since 1992, the FAA has created partnerships with academic institutions and industry, state, and local government affiliates. By establishing research centers throughout the country, the FAA strengthens internal research capabilities while creating a pool of trained professionals for the next generation.

A Center develops and implements programs within a theme best suited for it to make the most significant contribution to the transportation community in its particular region, and in some cases, nationally. The theme provides the overall direction necessary to focus resources in the most effective way. As the program matures, each center further focuses its effort to build expertise so the center can become a national resource in a particular area of transportation. A fundamental goal of the program is

³ Ch. 2002-265, L.O.F.

⁴ Ch. 2006-58, L.O.F.; *See also* s. 1004.226, F.S.

⁵ Section 154A of ch. 2007-72, L.O.F.

⁶ "FAA Centers of Excellence," Federal Aviation Administration, available at <http://www.coe.faa.gov/mission_vision.htm> (last accessed March 10, 2009).

to create close ties between education and research activities. These ties occur through programs that provide opportunities for faculty and students to interact in the classroom and on research projects.

Effect of Proposed Change

This bill creates s. 331.365, F.S., to establish a multi-university Space Technology and Research Development Institute (STRDI) within the Governor's Office of Tourism, Trade and Economic Development (OTTED). The STRDI will be a university-based program, led by Embry-Riddle Aeronautical University, to develop high-impact research and development and provide policy analysis to advance state and federal interests in improving the competitiveness of the space transportation industry. The institute will support research in the following areas:

- Spaceport licensing and safety;
- Range and airspace management systems development, simulation, and qualification;
- Spaceflight human factors issues;
- Spaceflight passenger, crew, and technician training and certification;
- Launch vehicle safety analysis;
- Materials science for spaceflight;
- Spaceport instrumentation, technologies, and processes;
- And other topics of interest to federal and state agencies and the space industry.

The bill requires the STRDI be established in phases, with the initial phase focused on developing a management structure, establishing a formal relationship with the Federal Aviation Administration, and forming partnership with academic institutions and industry.

The bill adds paragraph (c) to subsection 8 of s. 331.3051, F.S., to, where possible, have Space Florida support the development and operation of the STRDI, including advisory support; provide access to the Cape Canaveral Spaceport and other spaceport sites, provide support for the institute among agencies and policymakers, partnering in support of space policy, provide range and spaceport technology development, and other space transportation technology programs, and give support to projects through the Florida-NASA Matching Grant Program as provided in subsection (10) of s. 331.3051, F.S.

The bill also provides that, upon passage of the bill OTTED is not required to appropriate funds or assign personnel to administer STRDI.

The bill provides an effective date of July 1, 2009.

B. SECTION DIRECTORY:

Section 1: Provides the short title as "Space Technology Research and Development Institute Act."

Section 2: Provides legislative findings.

Section 3: Paragraph (c) is added to subsection (8) of s. 331.3051, F.S., to expand Space Florida's responsibilities for space and research development by assisting the development and operation of the Space and Transportation Research and Development Institute.

Section 4: Creates s. 331.365, F.S., to establish a multi-university Space Technology and Research Development Institute within the Office of Tourism, Trade and Economic Development.

Section 5: Provides that passage of the bill shall not require the appropriation of funds or assignment of personnel.

Section 6: Allows for an effective date of July 1, 2009.

II. FISCAL ANALYSIS & ECONOMIC IMPACT STATEMENT

A. FISCAL IMPACT ON STATE GOVERNMENT:

1. Revenues:

None.

2. Expenditures:

None.

B. FISCAL IMPACT ON LOCAL GOVERNMENTS:

1. Revenues:

None.

2. Expenditures:

None.

C. DIRECT ECONOMIC IMPACT ON PRIVATE SECTOR:

If the Space Transportation Research and Development Institute is funded and implemented, and is successful in training students for aerospace careers or develops new technologies that can be commercialized, the space industry may financially benefit from having a skilled and talented workforce, as well as equipment and technology that improves space travel.

D. FISCAL COMMENTS:

None.

III. COMMENTS

A. CONSTITUTIONAL ISSUES:

1. Applicability of Municipality/County Mandates Provision:

None.

2. Other:

None.

B. RULE-MAKING AUTHORITY:

None.

C. DRAFTING ISSUES OR OTHER COMMENTS:

None.

IV. AMENDMENTS/COUNCIL OR COMMITTEE SUBSTITUTE CHANGES

On March 11, 2009, the Economic Development Policy Committee adopted an amendment which directs the Space Transportation Research and Development Institute (STRDI) to pursue sponsorship from the Federal Aviation Administration as a Center of Excellence and also provides that Space Florida's assistance to STRDI is permissible rather than required.