



**ECONOMIC DEVELOPMENT COMMISSION
OF FLORIDA'S SPACE COAST**

**Senate Committee on Commerce Science and Transportation:
Subcommittee Field Hearing RE: NASA and Shuttle Transition**

Economic Impact

The Economic Development Commission of Florida's Space Coast (referenced in document as EDC) is seriously concerned of the economic and business impact of the retirement of the Shuttle and impending "gap" of lost jobs due to the transition.

Earlier this year, NASA released preliminary estimates of the expected employment changes at each of its centers as a result of upcoming changes to the agency's program of work¹.

Through 2010, the agency projects between 5,700 and 6,400 KSC workers will be displaced as NASA transitions from the Shuttle Program to that of the Constellation, before the center regains some employment as it ramps up in preparation for the new vehicle.

An internal EDC analysis of the higher job loss figure, using a widely-accepted economic impact model and the opinions of our contracted Space Consultants, estimated the cumulative economic impact to Brevard County over the next three years at approximately **13,000 lost jobs and \$650 million in lost income:**

ESTIMATED ECONOMIC IMPACT OF PROPOSED KSC JOB LOSSES*				
	Direct¹	Indirect²	Induced³	TOTAL
FY 2008 - FY 2009				
Employment	700	301	419	1,420
Labor Income	\$44,800,000	\$14,224,290	\$12,236,400	\$71,260,690
Output	\$210,693,460	\$48,808,770	\$37,767,010	\$297,269,240
FY 2009 - FY 2010				
Employment	900	387	538	1,825
Labor Income	\$57,600,000	\$18,288,370	\$15,732,520	\$91,620,890
Output	\$270,891,580	\$62,754,130	\$48,557,590	\$382,203,300
FY 2010 - FY 2011				
Employment	4,800	2,062	2,871	9,733
Labor Income	\$307,200,000	\$97,537,960	\$83,906,760	\$488,644,720
Output	\$1,444,755,070	\$334,688,630	\$258,973,790	\$2,038,417,490
CUMULATIVE				
Employment	6,400	2,750	3,828	12,978

¹ "Workforce Transition Strategy - Initial Report", National Aeronautics and Space Administration, March 2008.



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Labor Income	\$409,600,000	\$130,050,620	\$111,875,680	\$651,526,300
Output	\$1,926,340,110	\$446,251,530	\$345,298,390	\$2,717,890,030

* All numbers negative; analysis assumes average annual wage of \$64,000, per EDC Space Consultants

¹Captures the impact the initial job loss has on the KSC population

²Captures the impact of decreased inter-industry purchases as KSC responds to decreased activity

³Refers to the impact of the decreased activity that occurs across the Brevard economy because of the lost income paid by all of the businesses involved, directly or indirectly (diminished household spending)

Source: Economic Development Commission of Florida's Space Coast (using IMPLAN economic software)

Background and Early Success

Since the announcement of the Visions for Space Exploration the EDC worked to develop a plan of action to mitigate the job loss. The first and successful effort was to attract and Build the Crew Exploration Vehicle (Orion) in Brevard County. This was an immense undertaking – as in the 50 years of Space Exploration in the state of Florida, the State has never been successful in attracting the manufacturing and/or assembly of a launch vehicle of such a major component. On February 22, 2006 Lockheed Martin announced plans to assemble the CEV in Brevard County contingent on securing the Final CEV contract. On August 31, 2006 NASA announced the award of the contract to build the CEV to Lockheed Martin. This will result in 400 direct jobs and 35 million dollar capital investment – a successful initial step in mitigating the job loss due to the Shuttle Transition.

Plan of Action to Mitigate the Job Gap

The EDC's strategy is designed around four key initiatives: 1) Worked derived from Exploration Programs (mostly Constellation oriented programs; 2) Commercial opportunities tied to COTS, CRS, Supply Chain business opportunities and Satellite Manufacturing and Assembly facilities; 3) Space Tourism; and 4) Emerging opportunities. The overall goals of the key initiatives is focused on generating new (and/or retaining existing) high skill high wage jobs in Brevard County).

Those Key Actions associated with each of the four major areas of interest are listed below.

Initiative 1 - Exploration:

Key 1) Keep the Constellation program(s) sold during the change in administrations. This involves educating the presidential candidates, shaping party platforms and informing selected House and Senate members and staffers relative to the importance of Constellation to the State and to Brevard.



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Key 2) Participate in the development and implementation of a plan for incumbent contractor workforce during the transition period from Shuttle to Constellation.

Note: At the same time the space workforce is likely to decline, the demand for aviation workers in Brevard is expected to increase. Hence, it is critical that training programs be put in place to effect a smooth transition between these two sectors of the aerospace industry. It is also extremely important that the potential aviation employers be identified together with a characterization of their workforce requirements (skills, quantities and need dates).

Key 3) Make widespread distribution of the Central Florida Supply Chain Study results which identified several hundred Florida High Tech Corridor companies capable of satisfying Federal requirements for small business participation in the Constellation program(s).

Initiative 2 - Commercial:

Key 1) Identify and make contact with each potential contractor associated with COTS (Commercial Orbital Transportation Services) and CRS (Commercial Resupply Services (of the International Space Station)). Identify needs and demands of these contractors associated with COTS and CRS so that we can respond to their specific business, investment and workforce needs.

Key 2) Maintain KSC as the "gateway" to Space. Promote the use of utilizing existing launch infrastructure to support the International Space Station (ISS) for cargo and leveraging existing workforce inherent in the use of Atlas and Deltas.

Key 3) Promote and support the use launch capabilities of CREW support for ISS out of KSC to address the U.S Human Space Flight Gap.

Key 4) Identify and characterize all support facilities that may be of use to a COTS/CRS contractor.

Key 5) Identify and characterize those incumbent contractor employees that may be available to support commercial launch and processing opportunities. This effort includes making available the Supply Chain information referenced above.

Key 6) Identify and promote to domestic and international Satellite and related component manufacturers the competitive advantages of locating plants in Brevard county. As this industry sustains and grows, the need for additional sites in key markets such as the US and Florida will be needed. The EDC will aggressively seek out this new diverse investment opportunity.



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Initiative 3 - Space Tourism:

Key 1) Support Zero G in establishing and maintaining a flight operations capability in Brevard.

Key 2) Maintain an awareness of the evolving space tourism industry and identify potential flight operators and related ground based service providers.

Key 3) Market Brevard's technical and tourism capabilities to the several space tourism operators.

Initiative 4 - Emerging Opportunities:

Key 1) Maintain an awareness of emerging opportunities to include but not limited to:

- a. Exporting KSC developed technology to Brevard businesses and conversely promote technologies and capabilities of those same Brevard businesses to NASA and the Constellation prime contractors.
- b. Tracking newly assigned R&D tasking for KSC
- c. Promote KSC as the "gateway" to the International Space station National Laboratory.
- d. Market the NSLD (National Shuttle Logistics Depot) as the depot for continuing support of Shuttle, the ISS, and all Constellation programs. Additionally, promote NSLD in support of commercial and space tourism hardware elements.

Key 2) Lobby for closer cooperation between all Federal agencies that have an interest or need for space based operations (to include, NASA, DOD, NIH, DOA, DOE, NOAA, FAA, etc).

Note: The most common product associated with the activities surrounding "emerging opportunities" is likely to be a series of position papers suitable for education and lobbying.

Key 2) Identify and attract diversified industries to Brevard County. These industries, not directly associated or inherent in space, will contain high tech methods and kindred skill mix classifications associated with potential loss workers tied to Transition. This key initiative is best noted in the recently successful location of EMBREAR on May 13, 2008. The assembly of the Very Light Jet (VLJ) Class Phenom 100 and 300 in Melbourne Florida will hire 200 technically skill workers. Some of these workers may be absorbed from the job loss tied to Transition.

General and Closing Comments:



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1. The EDC will work with Space Florida, Enterprise Florida, Inc., Workforce Florida, Inc., the Brevard Workforce Board, and other state and county organizations together with companies from the aerospace community to accomplish the intent of the Space Plan.
2. Many of the companies expressing interest in doing business in the county have need for financial assistance and /or incentives. Accordingly, part of our action plan is to develop a capability to define sources of financial support and to serve as a “broker” between the parties.
3. Virtually all-prospective employers are interested in workforce quality and availability as well as available facilities to house their employees and operations.

While the challenges for our area are indeed serious, the past and successful efforts provide a template for future actions. However with the current potential recessionary economy, the need for support via federal, state and local agencies is critical and will determine the degree to which we mitigate and at best nullify the impending job loss on the Space Coast.