



Employ Florida
BannerCenter
>>> Aviation & Aerospace

Focus Group Report

**Aviation and
Aerospace**

**Brevard County
and Central Florida**

28 January 2010

TABLE OF CONTENTS

I. Overview of Focus Group Activities

- Purpose
- Methodology
- Summary of Findings and Action Items

II. General Discussion Comments, Notes, and Findings

- Current and Future Hiring Environment and Trends
- Worker Knowledge and Skill Set Gaps and Needs
- Certifications and Current Gaps
- ARC Curricula, Relevance, and Possible New Curricula

III. Appendices

- Meeting Agenda
- Focus Group Attendees

**Brevard County and Central Florida
Aviation & Aerospace Focus Group
Thursday, 28 January 2010
08:30 A.M. to 12:30 P.M.**

I. Overview of Focus Group Activities

Purpose

The main intent of the three regional focus groups for this contract year is to ascertain from the perspective of each region what single "entry-level" or "skills upgrade" curriculum the Aerospace Resource Center should target for development in response to the industry environment, current and projected trends in hiring, and the demonstrated needs of Brevard County's and Central Florida's incumbent and incoming aviation and aerospace workforces. In addition, the focus groups are expected to engage in broad discussions concerning workforce knowledge and skills assessments, needs for various specific FAA and other types of certifications, and other issues pertaining to the aviation and aerospace job markets.

Methodology

The focus group was led by Tom Baine, ARC Program Manager. Gene Milowicki, ARC Director, and Judy Rice, ARC Program Coordinator were also in attendance. The focus group was executed in a seminar-style discussion format. Representatives from industry, educational institutions, and workforce agencies collaborated to address the agenda items in the following sequence:

- Individual introductions and backgrounds
- General Banner center background and focus group orientation
- Discussion of current and future hiring environment and trends
- Discussion of worker knowledge and skill set gaps and needs
- Discussion of certifications and current gaps
- Discussion of current ARC curricula, its relevance, and possible new curricula for development

Summary of Findings and Action Items

Discussion of the hiring environment and trends centered on the pending space shuttle retirement and its anticipated effect on the aerospace workforce in Brevard County. In short, the current outlook in this region of Florida presents many challenges and the prospects are not encouraging. More than 7,000 space shuttle workers are expected to be released from their current employment at the end of the space shuttle program in late 2010 or early 2011. While some may find immediate re-employment in the aerospace industry within the state, the current employment outlook for the aerospace workforce in this region will, in most cases, require aerospace workers currently employed by government space programs and industry to

open their job searches to options and opportunities outside of Florida. While it is preferable to retain these workers' skill sets, corporate knowledge, and expertise on the Space Coast, current economic realities and expected government space policy decisions will make doing so an improbable proposition. Therefore, the transition of space shuttle workers to the private sector and different industries was a dominant theme of discussion at the focus group. Potential industry ideas for these transitions included commercial space, general aviation, and alternative energy industries, among others. It was largely agreed upon that these aerospace workers have skills that, ideally, would be easily transferrable to other industries. The key will be nurturing those other industries and creating an environment that would be conducive to diversification and expansion into new entrepreneurial endeavors.

Certifications gaps were discussed. The idea of the "transportability" of certifications was universally recognized as important to providing aerospace workers with flexibility in their job searches. Helping aerospace workers attain airframe and power plants (A&P) mechanic certifications through leveraging of their maintenance experience in the space program is a priority. The FAA has procedures and protocols in place to make this possible.

The current ARC curricula are still relevant and new curricula items were discussed. New curricula should include space worker transition skills to the commercial aerospace and general aviation fields. Noteworthy potential curriculum choices include unmanned air systems training, introduction to aviation biofuels, and introduction to mechatronics, among others.

II. General Discussion Comments, Notes, and Findings

Current and Future Hiring Environment and Trends

The general unemployment rate in Brevard County is very high, currently estimated at over 10.8% in 2009, an approximate three-fold increase since 2000, although it is in line with the general unemployment rate in the state (10.5%). This does not account for those "underemployed" or those who have stopped searching for a job, some of whom have been searching for longer than a year. Furthermore, it does not account for the potential influx of 7,000 space shuttle workers onto the job market in the near future, which will undoubtedly raise that figure considerably higher to approximately 12.1% in Brevard County alone.

According to a Boeing industry representative, Boeing will be laying off 40 workers in February 2010, an additional 60 workers in March 2010, 180 workers in September 2010, and finally 300 with the space shuttle retirement. For every one job opening posted, the Boeing representative informed the group that the company receives an average of 500 job applications. This strongly sends a message to aerospace workers that "to stay employed within the aerospace industry, you must leave Florida."

Potential alternative target industries for displaced aerospace workers in the central area of the state include the medical information systems industry, information technology, mass transportation, and homeland security, among others. CyberTech, General Electric, and Exxon were mentioned as being ahead in the areas of technology training needs and rebuilding infrastructures. The pending high-speed rail project between Tampa, Orlando, and Miami was also mentioned as a possible source of jobs for highly-skilled technicians and engineers from the aerospace industry.

The future of Unmanned Aircraft Systems (UAS) was a topic of discussion at the meeting. UAS technology has advanced considerably in the last decade world-wide, and the increased use of these systems in Florida should have sustained long-reaching employment implications for aerospace workers. The UAS industry will need engineers, operators, maintainers, airspace controllers/specialists, and information processing specialists.

Biofuels was brought up as a potential area for strategic partnerships by the aviation industry in Florida. As the aviation industry seeks to transition away from a dependency on fossil fuels, there is potential opportunity for growth in the biofuels field for the aviation industry. A partnership with the Banner Center for Alternative Energy at the University of Central Florida was mentioned as a possibility.

There was also considerable discussion about transitioning space shuttle workers towards the alternative energy industry here in Florida. Different possibilities include biofuels, nuclear energy, and solar energy. It was also mentioned that a path should be provided to transition these workers towards this growing field via industry-recognized certifications and training.

Worker Knowledge and Skill Set Gaps and Needs

If the space shuttle technicians are to transition over to the aviation industry, having the industry-recognized FAA Airframes and Power Plants Mechanic certifications will enhance their ability to find employment. The FAA recognizes the experience of aerospace workers, and will allow these workers do use their documented experience to satisfy the experience requirements needed to take the written exams. Some companies and workforce boards are engaging to help workers complete all the requirements necessary to achieve these certifications. Ultimately, it will be each individual worker's responsibility to satisfy all written and practical exam requirements necessary to earn the licenses.

The idea of a transition assistance program for exiting space shuttle technicians into the private sector was mentioned in the focus group. This program would resemble that of similar programs in the military in that it would teach space shuttle technicians, many of whom have had the same job for more than two decades, skills that will help them transition into the private sector more easily. Such a program would teach them current resume writing skills, modern networking and communications techniques, and the use of technological aids for job searching (i.e. job boards, etc.). These types of programs already exist at the regional workforce board and through various individual company programs.

The following were the most significant skill set gaps and needs identified by the group:

- Transition from space industry to related fields.
- A&P certification gaps for space workers to aviation field.
- Workforce soft skills.
- Advanced avionics repair.

Certifications and Current Gaps

There was minimal discussion about certification gaps that exist between space and aviation technicians. A certain amount of discussion revolved around working with the FAA to let space shuttle technicians utilize their space shuttle experience to provide them with the requisite experience required by the FAA to take the A&P written and practical exams.

SpaceTEC has a national “Certified Aerospace Technician” course that is recognized industry-wide and applies to the specialized world of aerospace workers involved in government space industries and concerns, particularly on the Space Coast. This certification has considerable value to aerospace workers, and it has significant future possibilities nationwide outside of its current sphere of influence. Coupled with FAA A&P Aviation Maintenance Technician certification, it should act to enhance the average aerospace worker’s value to both the aviation and aerospace job markets.

ARC Curricula, Relevance, and Possible New Curricula

The ten existing ARC curricula were discussed and thought to be relevant at present and in the near future. It was generally agreed that further new curricula should be designed to fill the needs and identified gaps in the aviation and aerospace industry in Florida, as identified by industry.

It was also advised that certain items of our curricula can be exportable to different industries. Such curricula could include Sheet Metal Technician, Introduction to Non-Destructive Testing, Principles of Troubleshooting, Maintenance Human Factors, J-STD-001 Through-Hole Soldering, Introduction to Fiber Optics, and the Overview of Structural Composites courses. These courses can be applicable in other industries, such as the marine and automotive vehicle industries, within which aerospace workers should be able to readily make employment transitions.

Another idea was to drop “aviation” from our curricula titles and replace with the word “aerospace.” Aerospace, generally thought to be inclusive of both aviation and space, might be a better descriptor that would add a broader appeal for workers from both disciplines.

In Northeast Florida, the ARC is currently delivering Maintenance Human Factors training and Aviation Sheet Metal Technician training on a fairly routine and institutionalized basis among a select group of industry partners. In Brevard County, the courses J-STD-001 Through-Hole Soldering, Introduction to Non-Destructive testing, Principles of Troubleshooting, Introduction to the Aerospace Industry, and Introduction to Fiber Optics are regularly being taught at SpaceTEC. We are challenged to create a market for the other offerings and to find other industry-driven needs that need to be met in all regions of the state.

There were a number of good ideas for possible new curricula for development this year. Among these were:

- Introduction to Unmanned Aircraft Systems (UAS) and other UAS-specific topics of interest pertaining to operations, control, maintenance, and information processing.
- Introduction to Aviation biofuels (work with Banner Center for Alternative Energy).
- Aerospace English.
- Aerospace Safety: OSHA and EPA Rules and Regulations.
- Advanced composites.
- Introduction to Mechatronics (combination of mechanical, electronic, computer, control, and systems design engineering).
- Introduction to International Traffic in Arms Regulations (ITAR) export rules (concerns the US regulations that control the import and export of defense-related articles and services on the U.S. Munitions List [USML]).
- Homeland Security as it relates to Aerospace (utilizing UAS technology).

III. Appendices



Aviation & Aerospace Focus Group
Brevard Workforce Development Board
Rockledge, FL
28 January 2010

Brevard County and Central Florida
Aviation & Aerospace Focus Group
Thursday, 28 January 2010
08:30 A.M. to 12:30 P.M.

Meeting Agenda

- 8:15 - 8:45 Registration & Continental Breakfast
- 8:45- 9:00 Welcome and Introductions
- Program Manager, Aerospace Resource Center
 - Other participants and leaders of represented groups
- 9:00 - 9:30 Purpose and Focus:
- Focus Group Orientation: context and flow of the focus group.
- 9:30 - 10:00 **General Industry Input and Perspectives** [Session One]
- Current hiring environment and trends
 - Future hiring environment and trends
 - Knowledge and Skill sets most clearly in need of development
- 10:00 – 10:15 Break
- 10:15 - 11:45 **Focused Industry Discussion on Requirements** [Session Two]
- TRENDS - What are the current and future trends influencing the aviation and aerospace industries in the Brevard County / Central Florida area —those which will drive workforce training needs?
 - CERTIFICATIONS - What specific aviation and aerospace certifications do you use, pursue, and value? What are the biggest gaps found for entry level and incumbent workers?
 - CURRICULA – Address relevance of current curricula and take recommendations for curriculum development.
- 11:45-12:00 Meeting Recap & Action Items
- Summary of significant issues raised or discussed
 - Summary of findings and action items
- 12:00 – 12:30 Open Discussion

Brevard County and Central Florida Aviation and Aerospace Focus Group Meeting
Attendees
28 January 2010

	Last Name	First Name	Company	Title
1	Milowicki	Gene	ARC Banner Center	Director
2	Baine	Tom	ARC Banner Center	Program Manager
3	Rice	Judy	ARC Banner Center	Program Coordinator
4	Ellegood	Eddie	Embry-Riddle University	Aerospace Analyst
5	Feltz	Erika	Brevard Workforce	Business Liaison
6	Fletcher	Bill	Brevard Community College	Assistant Professor
7	Gannon	Tony	Space Florida	Director of Education
8	Muldowney	Elizabeth	United Space Alliance	Mgr. II, Resource & Subcontract Support
9	Phifer	Millie	Boeing	Human Resources
10	Harvey	Larry	Center for Applied Space Technology	Sr. Director
11	Richardson	Ted	Florida International University	Sr. Associate Dean & Professor
12	Raeburn	Paula	Florida Aviation Trades Association	Executive Director
13	Doughty	Sean	D3 Air & Space Operations	Vice President & Chief Operating Officer
14	Hauer	George	Astrotech	General Manager, Eng. Services