

NC AEROSPACE STEERING COMMITTEE

NORTH CAROLINA AEROSPACE INDUSTRY



nade
National Aerospace Development Center

WELCOME!

PRESENTATION TO THE NC AEROSPACE STEERING COMMITTEE AUGUST 2007

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Economic Development of the North Carolina Aerospace Industry

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North Carolina Aerospace Initiative is identifying Opportunities in North Carolina to:

- Expand the pipeline of entry-level employment
- Develop training and certification programs
- Retain incumbent workers
- Transition individuals and their skill sets from North Carolina's declining industries to aerospace

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Military/Aerospace Industry Sector team Focused on Needs of New and Existing Businesses:

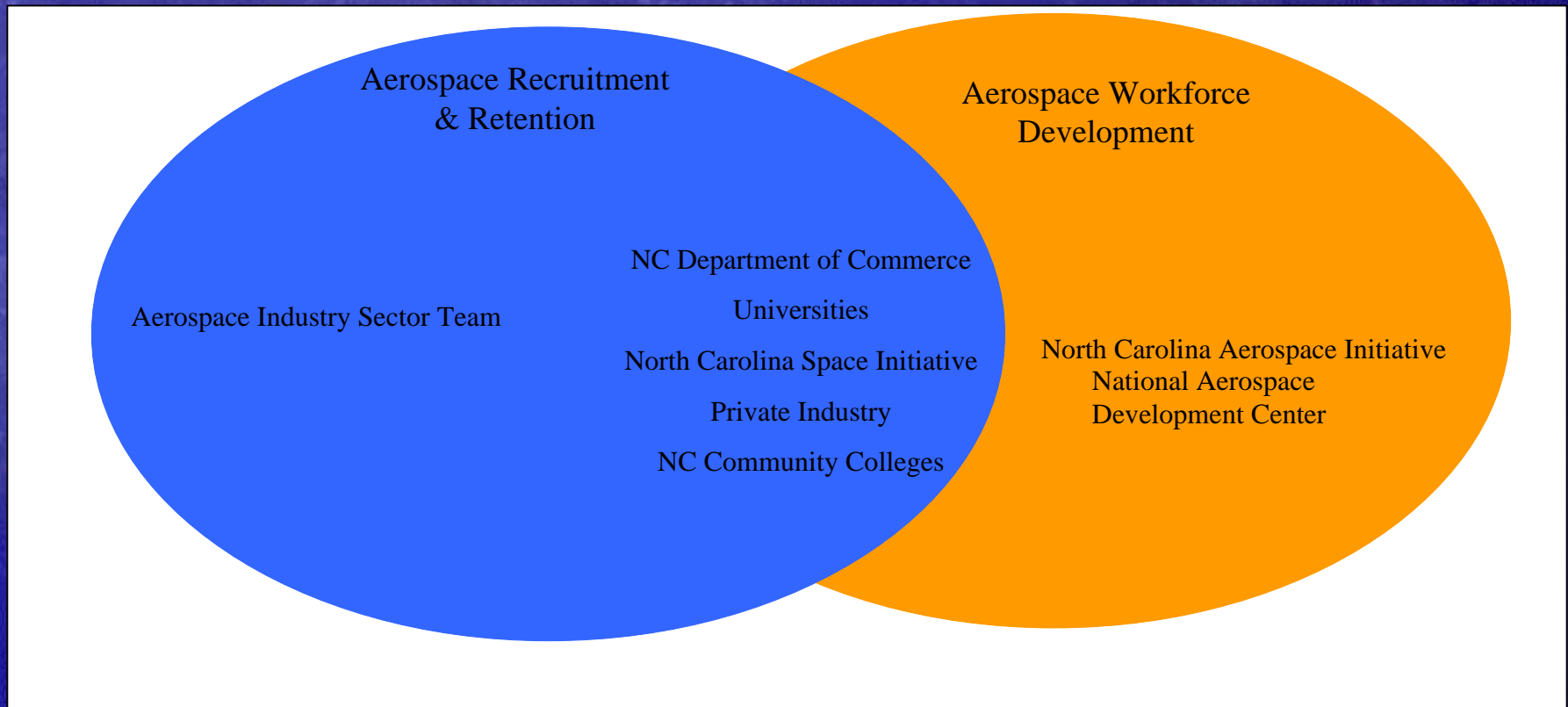
- Identify workforce and workforce trends
- Identify and create training programs relevant to business needs
- Monitor Legislation relevant to Industry
- Research and Analysis provided to companies to make informed location decisions

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Collaborative Efforts



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Purpose of our meeting today;

**To inform aerospace industry leaders in
North Carolina of the Aerospace
Workforce Development Initiative**

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The Aerospace Workforce Development Initiative is a joint agreement between:

**North Carolina Department of Commerce
North Carolina State University
North Carolina Community College System
National Aerospace Development Center**

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NADC selected North Carolina as one of five states to;

- **Form a Steering Committee of Industry, Academia, and State Leaders.**
- **Outline a strategic plan for aerospace workforce development.**
- **Conduct a ‘summit meeting’ for aerospace development.**

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HISTORY

- **First meeting held in May.**
- **NC Resource Organizations Committed-**

NC Department of Commerce
NC Military Foundation
NCSU School of Engineering
NC Space Initiative
Kenan Institute
NC A & T

NC Lieutenant Gov
NC Community College System
NC Aerospace Alliance
NC Military Business Center
NC Global TransPark
Duke University
AVRC

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RECOMMENDATIONS

We will present strategic recommendations to the state legislature and the office of the Governor for possible inclusion in the 2008 budget.

Initial recommendations include;

- 1. Tuition assistance/refund critical skills/certification program**
- 2. Expand the Learn and Earn program to include critical skills**
- 3. Establish a process to allow industry to identify critical skills**
- 4. Conduct a more comprehensive review of the new space economy opportunities (e.g. NASA)**
- 5. Advanced Manufacturing Center**
- 6. Public relations thrust, image of state and image of tech jobs**

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SUBCOMMITTEES

- **Research and Development**
- **Education and Training**
- **Legislative**
- **Military and Commercial Space**

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NEXT STEPS

Commitment needed-

- **Subcommittee members**
- **Strategic plan and Summit meeting support**
- **Conference support (people and/or funding)**

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What are other 'non-space' states doing?

VIRGINIA

April 4, 2007: State legislature passes the Space Flight Liability and Immunity Act to encourage commercial use of the Mid-Atlantic Regional Spaceport on Wallops Island

WISCONSIN

“The strategic focus of the Great Lakes Aerospace Science & Education Center at Spaceport Sheboygan is to advance Wisconsin’s economic position in the aerospace industry;...”
Expected to open in mid-2008.

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What are other 'non-space' states doing?

HAWAII

June 7, 2007: Governor Linda Lingle of Hawai'i signed into law a bill establishing the Pacific International Space Center for Exploration Systems (PISCES). - PISCES is a collaborative project of the Japan-U.S. Science, Technology & Space Applications Program, the Hawai'i State Department of Business, Economic Development & Tourism, and the University of Hawai'i at Hilo. The islands are an ideal location to support international programs for testing and evaluating innovative technologies to support future robotic and manned exploration of the Moon and Mars, as well as for training scientists, engineers and future astronauts for future space missions.

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What are other 'non-space' states doing?

OKLAHOMA

The newly licensed Oklahoma Spaceport is located in the National Airspace System(NAS) and has signed an agreement with the FAA/ARTC Regional Office establishing a protected Reusable Launch Vehicle(RLV) flight corridor, offering the advantage that eliminates the possible conflicts of utilizing military airspace and making the Oklahoma Spaceport idea for space commerce.

Rocketplane/Kistler, the first Oklahoma based Space Tourism company to launch from the Oklahoma Spaceport, is set to begin test flights in late 2008.

Armadillo Aerospace has been using the Oklahoma Spaceport for their flight testing of the Lunar Lander in competition for the X-Prize Cup.

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SNAPSHOT of ONE TRADITIONAL SPACE STATE



Public-private partnership responsible for promoting and developing Florida's aerospace industry

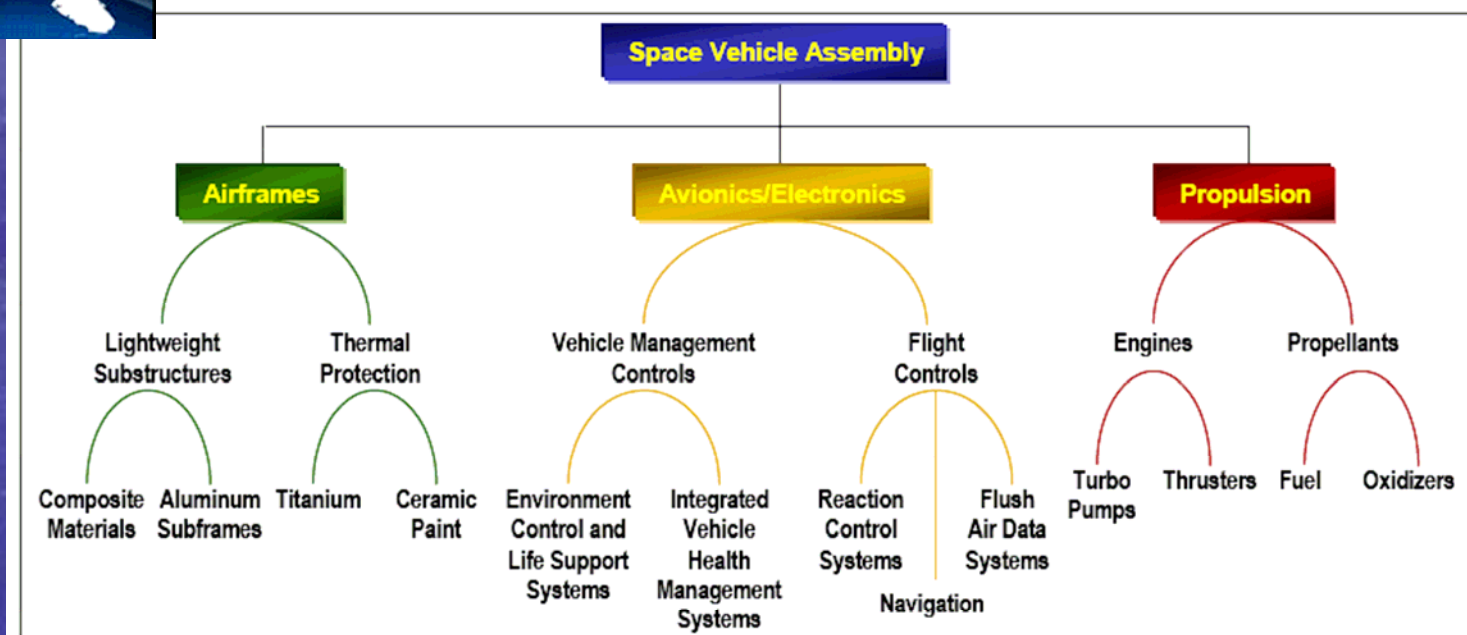
Single point of contact for state aerospace-related activities with federal agencies, the military, State agencies, universities, and the private sector, consolidating the roles and responsibilities of three predecessor organizations:

- FL Space Authority – state govt. agency for space-related development opportunities for businesses, education, and government
- FL Space Research Inst. - industry-led center for space research, technology development, and education. FSRI leveraged academic and economic development resources with those of industry, NASA, and the military.
- FL Aerospace Finance Corp. - Provide financial resources and technical expertise to help the aerospace industry finance a wide variety of projects, including infrastructure, manufacturing, assembly, and launch investments.

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Strategic Business Plan (March 31, 2007)



Data Source: Cambridge Systematics

Figure 3 – Space Vehicle Supply Chain

Which Industries exist in North Carolina?

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NASA discovers the Space Economy

The Space Economy – The full range of activities and the use of resources that create and provide value and benefits to human beings in the course of exploring, understanding and utilizing space.

Examples:

- Infrastructure – Space operations, suppliers, contractors
- Applications – GPS, weather, climate, defense, imagery
- Transactions – Finance, medicine, communications
- Commerce – Tourism, services, logistical support

Which industries exist in North Carolina?

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Global economic competition

President of India addresses April 2007 Boston University Space Symposium and discusses:

- Space-based Solar Power for energy and water desalination
- Solar system-wide communication systems
- “Aerobic” space transportation from Earth to orbit requires oxygen liquefaction in high-speed flight in Earth’s atmosphere
- Lunar and asteroid mining
- Low-gravity manufacturing (orbit, asteroids, Moon)

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Global economic competition

June 13, 2007

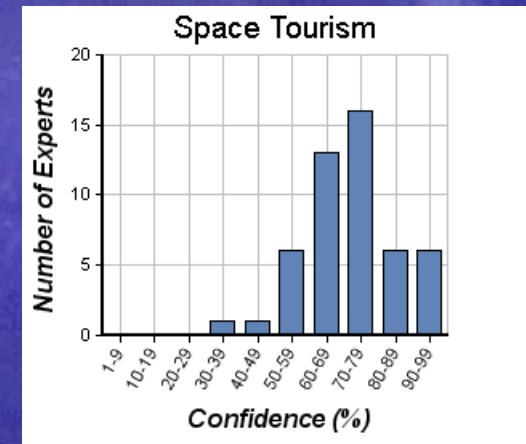
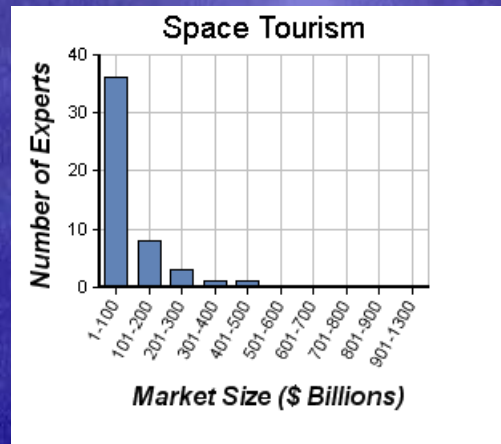
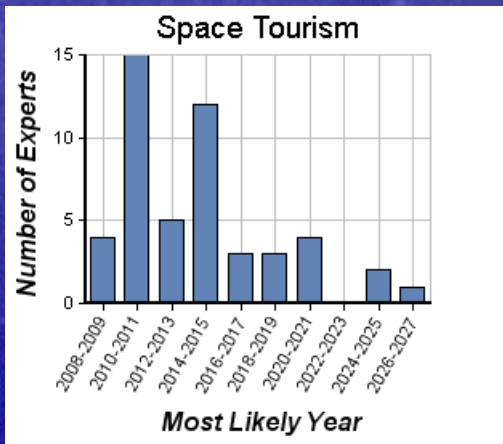
“European aerospace company EADS Astrium unveiled plans on Wednesday to develop a sub-orbital passenger spacecraft that would compete in the space tourism market.”

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SPACE TOURISM ECONOMIC IMPACT

	Mean	Std Dev	N (# Experts)
Most Likely Year	2013	5	
Market Size (\$B)	90	86	49
Confidence (%)	68	14	



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Thank you for your attention.

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