



Building Connections: Partnering with Your Business Community to Build Regional Economic Opportunity

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Development Board

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Florida Space Coast's Challenge

- End of NASA's Space Shuttle program
 - Follow-on program (Constellation) cancelled/re-started due to delays & cost over-runs
- Major economic dislocation
 - 6,000-7,500 contractors laid off Oct 2010 - Aug 2011
 - Up to 15,000 indirect job losses in East Central Florida
- Estimated 5-7 year gap to next major human spaceflight program (at best)
- Challenging economic environment

Opportunity: A World-Class Skilled Workforce

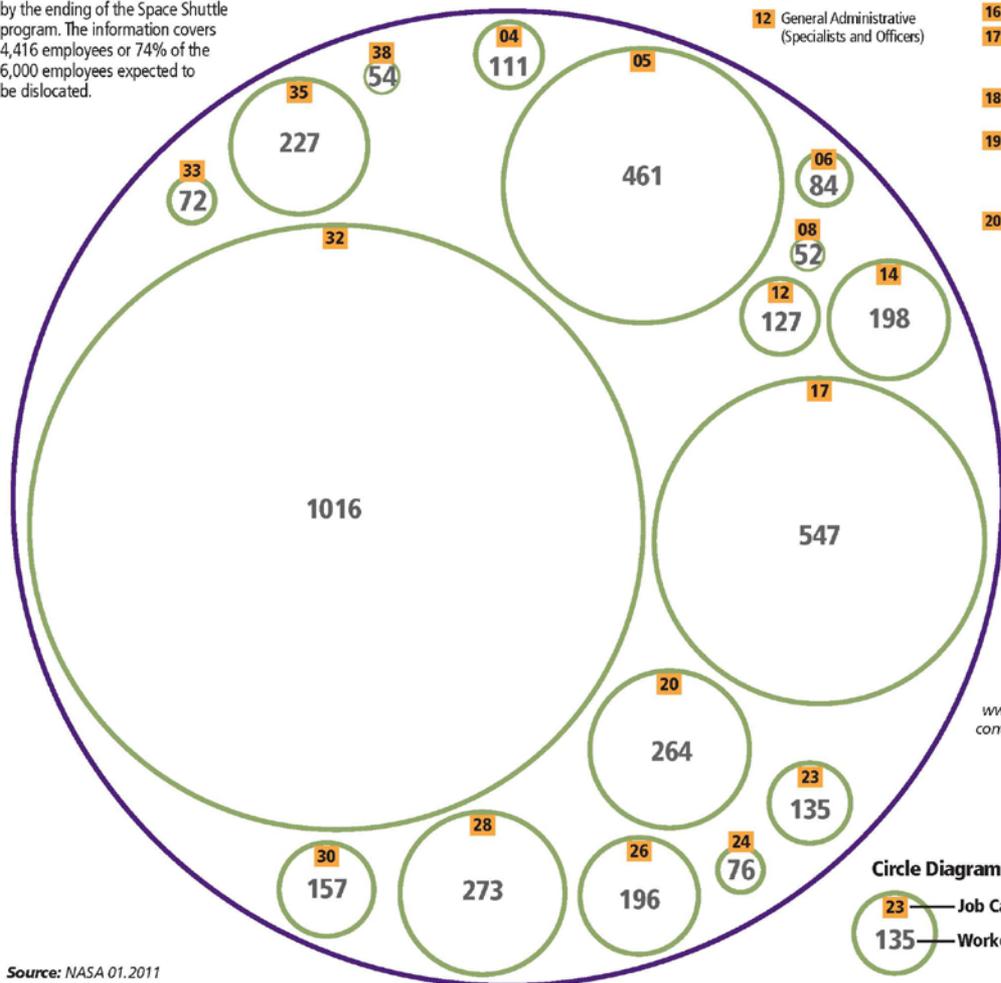
TALENT MAPPING *by Job Title*

Projected numbers of dislocated aerospace workers/KSC

The data shown represents results from the NASA Skills Mapping Survey and is a particularly valuable view of talent becoming available on Florida's Space Coast. This is a roll-up of information received from several KSC contractor companies being impacted by the ending of the Space Shuttle program. The information covers 4,416 employees or 74% of the 6,000 employees expected to be dislocated.

- 1 Financial Operations (Accountants)
- 2 Legal (Attorneys, Advisors and Specialists)
- 3 Medical Officers
- 4 Procurement and Cost/Price Analysts and Contract Specialists
- 5 Management Support Assistants and Secretaries
- 6 Budget, Program and Management Analysts and Officers
- 7 Business Development and Industry Specialists
- 8 Documentation/Communication Specialists
- 9 Education Specialists
- 10 Equal Opportunity Managers and Specialists
- 11 Export Control Specialists and Officers
- 12 General Administrative (Specialists and Officers)
- 13 Human Resources Specialists
- 14 Project Control, Internal Assessment and ISO 9000; Analysts, Specialists and Officers
- 15 Public Affairs Managers and Specialists
- 16 Aviation Safety Specialists
- 17 Building, Realty, Logistics, Property, Supply, Equipment, Facility, and Service Specialists
- 18 Construction Representatives and Specialists
- 19 Environmental Protection Specialists, Industrial Hygienists, and Food Services Specialists
- 20 Information Technology and Telecommunications Specialists and Project Managers
- 21 Security and Investigation Specialists and Officers
- 22 Transportation and Traffic Operations Management Specialists
- 23 Engineering and Electronics Technicians
- 24 Quality Assurance Specialists
- 25 Safety Specialists
- 26 Engineers (Non AST)
- 27 Scientists (Non-AST)
- 28 AST, Data Systems and Analysis
- 29 AST, Earth Science
- 30 AST, Engineering Technical and Project Management
- 31 AST, Facilities and Environmental Factors
- 32 AST, Flight Systems
- 33 AST, Fluid and Flight Mechanics
- 34 AST, Life Sciences and Systems
- 35 AST, Materials and Structures
- 36 AST, Measurement and Instrumentation
- 37 AST, Operations
- 38 AST, Propulsions and Power (Liquid and Solid Propulsion)
- 39 AST, Management (SES/SL)
- 40 Management (SES/SL)
- 41 Technical Training: Specialists & Instructors
- 42 Scientific Photographers & Imagery Support
- 43 Other Marine Operations
- Other

AST = Aerospace Technology



Circle Diagram Legend
23 — Job Category #
135 — Workers Available

The Most Available Talent Categories	
# of Workers	Category #
400 + workers	05, 17, 32
200-399	20, 28, 35
100-199	04, 12, 14, 23, 26, 30
40-99	01, 06, 07, 08, 09, 24, 33, 38
20-39	21, 36, 37, 43
10-19	13, 15, 19, 25, 27, 39, 40, other
3-9	11, 18, 41, 42

FULL REPORT: Access the full KSC Skills Mapping Survey report at www.launchnewcareers.com/business or contact Jenn Lasser, Lead Business Liaison, at jlasser@brevardworkforce.com

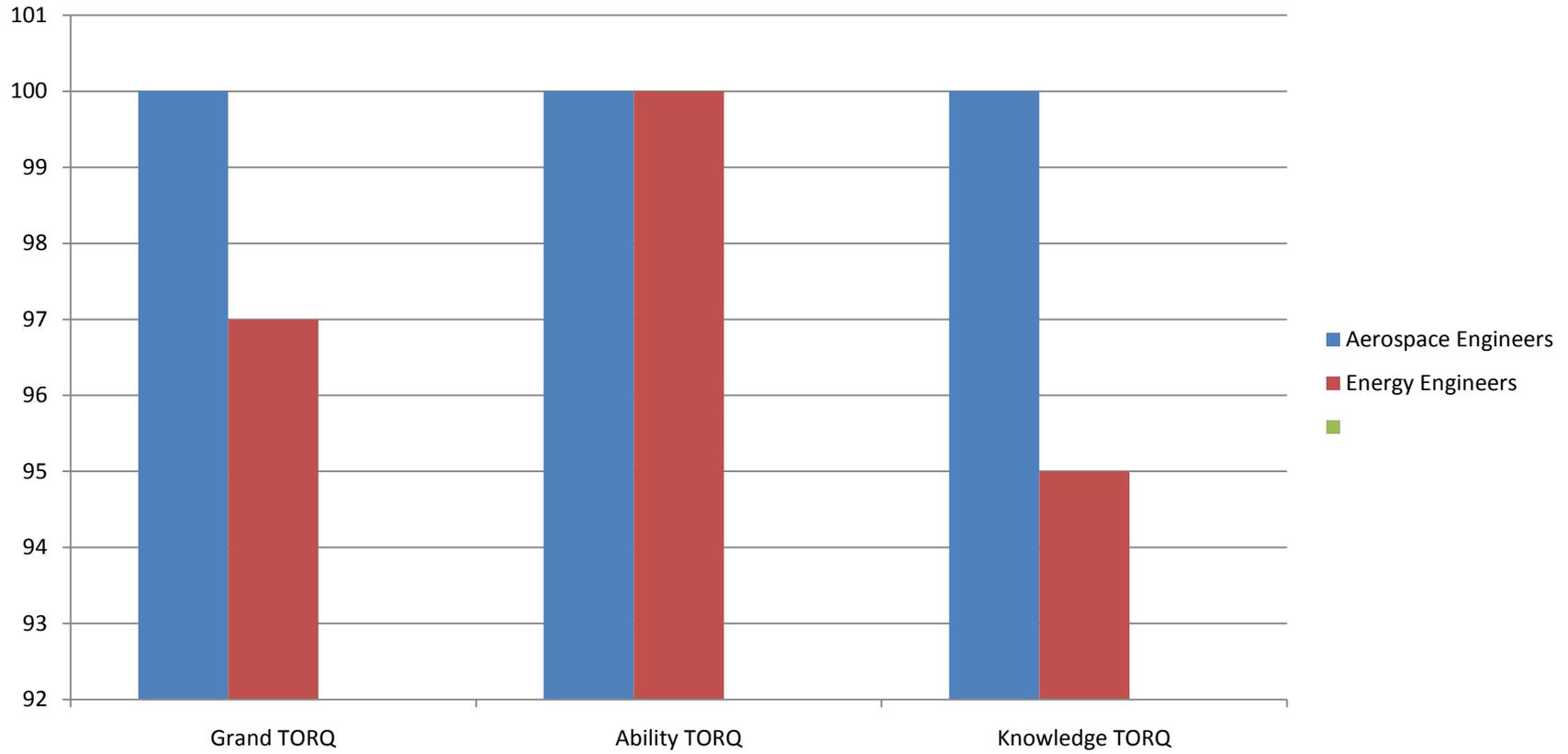
The data will be used to continue to market the workforce to interested employers and will only be provided in aggregate form.



www.BrevardWorkforce.com
www.LaunchNewCareers.com

Aerospace to Energy Skills Transition Scores

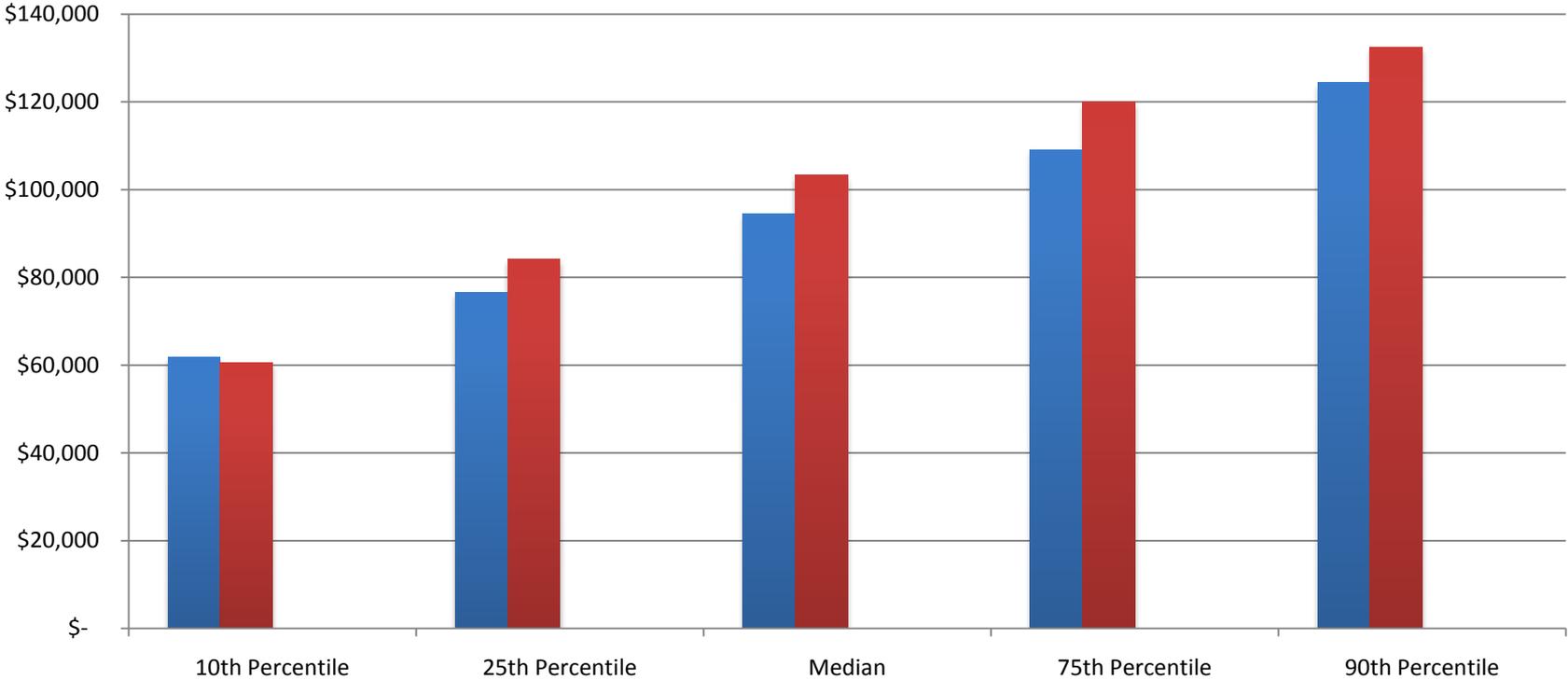
TORQ Scores



Aerospace to Energy Compensation Comparison

Compensation (State LMI)

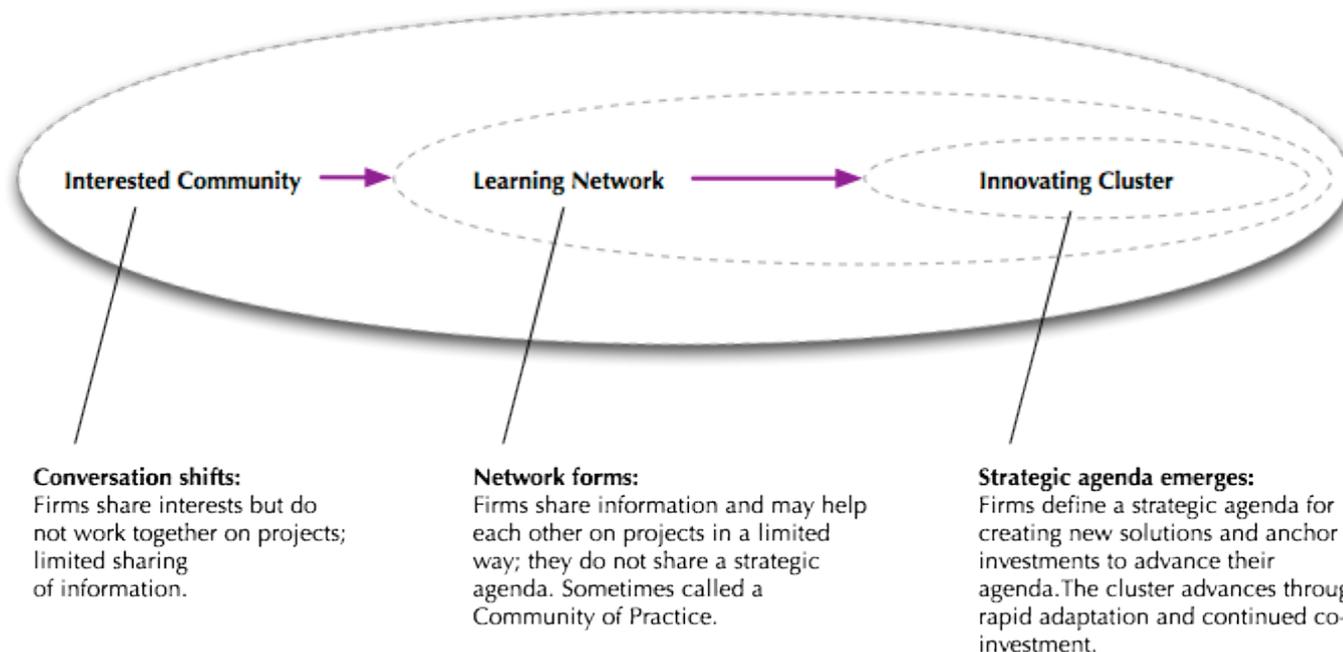
■ Aerospace Engineers ■ Energy Engineers ■ ■



Plan “B” – Identify an Opportunity, and Build a Regional Network

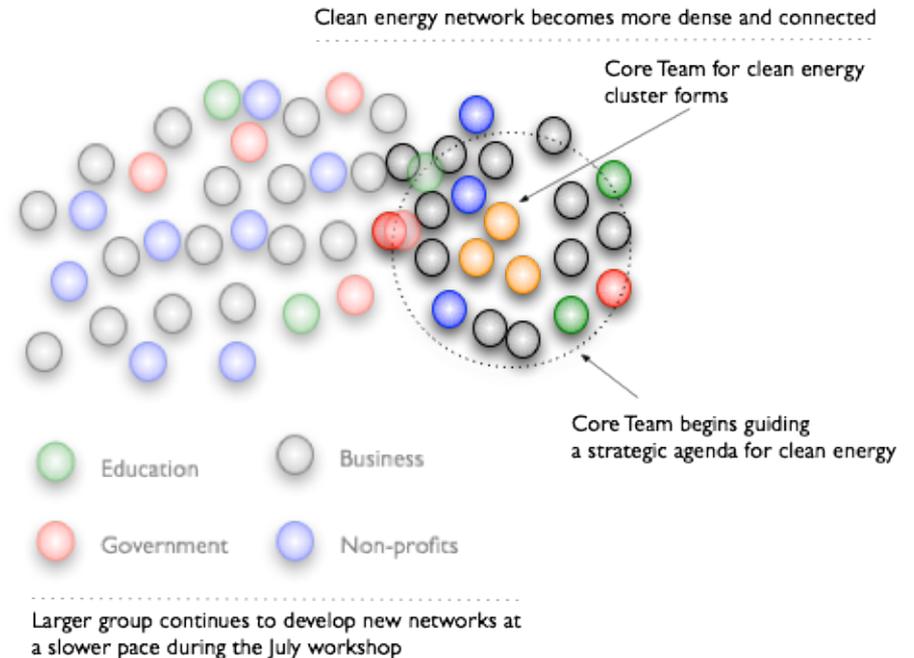
Brevard's Strategic Doing Forum

- Identified “Energy” as a desired focus for a clean and emerging industry on the Space Coast.
- Focused on accelerating the process, a small group of volunteers led by local businesses committed to forming an Energy Consortium



Strategic Doing

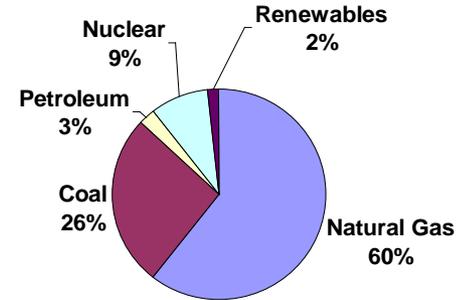
- Identify an area of common interest, partners, and action items
- Define next steps, who is responsible, and DO THEM!



Global Energy is a “Hungry” Market

Existing and expanding global economies have a large appetite for Energy...
...with no signs of letting up!

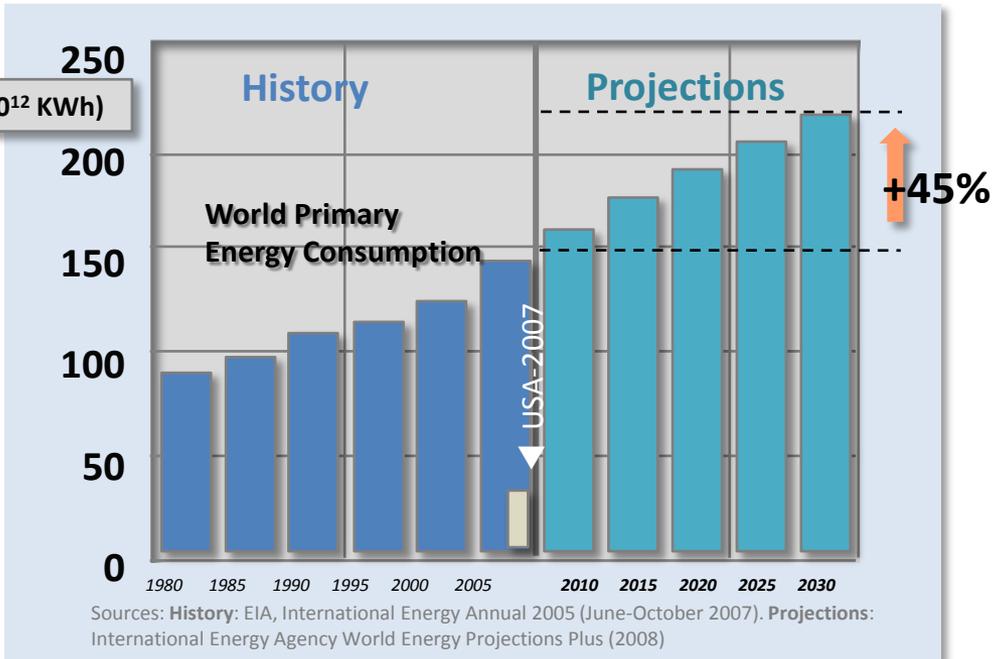
Florida Electricity Generation, May 2010
56 GW peak capacity - 19.6 GWh generated



All Fuels except Renewables imported from out-of-state

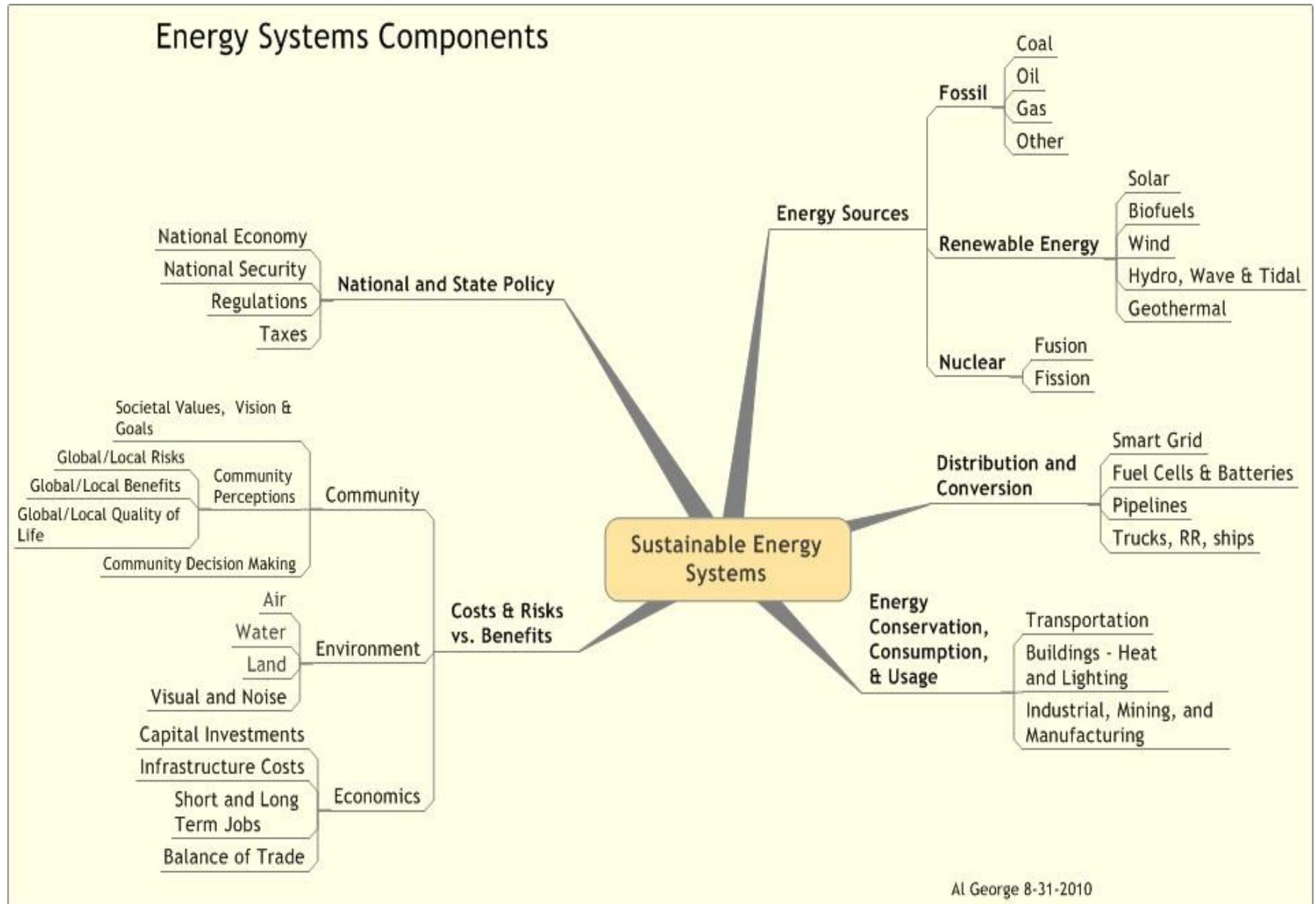
Source: EIA State Profiles 2010

- Florida will need **76% more energy** by 2030 in order to meet the needs of its population and projected economic growth (Florida Chamber)
- Florida is #2 in Electrical Generation and #5 in CO2 Emissions
- Major Demand: Residential Electricity & Transportation



“In order to meet the 45% increase in projected demand, an investment of over \$26 trillion will be required ...”

Energy is a “Cross-Cutting” Industry



What is the Space Coast Energy Consortium?

- Group of local businesses and community leaders devoted to:
 - Develop and foster a new “innovation ecosystem” in the Space Coast and Central Florida region focused on energy-related products and services
 - Build a clean, high-growth and sustainable energy economy with global impact!
 - Assist the transformation of the Space Coast region and Central Florida by redeploying assets to be competitive in today’s global knowledge economy

Space Coast Energy Consortium

Driving Clean Energy Jobs and Industry in the Space Coast and Central Florida

The Space Coast Energy Consortium is a group of business and community leaders who are dedicated to driving energy-related economic development in the Space Coast and Central Florida. The Consortium grew out of the Space Coast Energy Symposium, an event that brought together leaders from throughout our community and the state of Florida to discuss ways to diversify our economic base and promote new and sustainable pathways for economic development following the end of NASA's Space Shuttle program.

Our Mission:

- Build a clean, high-growth and sustainable energy economy with global impact!
- Assist the transformation of the Space Coast region and Central Florida by redeploying assets to be competitive in today's global knowledge economy

Short-term Action Plan:

- *Identification and Mapping* of Brevard and Central Florida's existing energy assets, stakeholders and competitive advantages
- *Educate* the stakeholders on the local, regional, federal and global "Energy Landscape"
- *Initiate* "business to business" opportunities to leverage existing interests and assets in energy-related businesses
- *Discover and Facilitate* space industry transition opportunities

Consortium Goals:

- Develop and foster a new "innovation ecosystem" in the Space Coast and Central Florida region focused on energy-related products and services
- Establish a framework and focal point for the flow and connectivity of information for long-term economic development
- *Serve as a "convening point" for discussion and collaboration among existing assets and programs across our region*
- Identify opportunities for funding programs and provide information for businesses and institutions seeking such opportunities
- Accelerate opportunities to ameliorate job loss related to the Kennedy Space Center transition, and apply our space workforce's world-class skills to energy-related engineering challenges



Space Coast Assets In Clean Energy

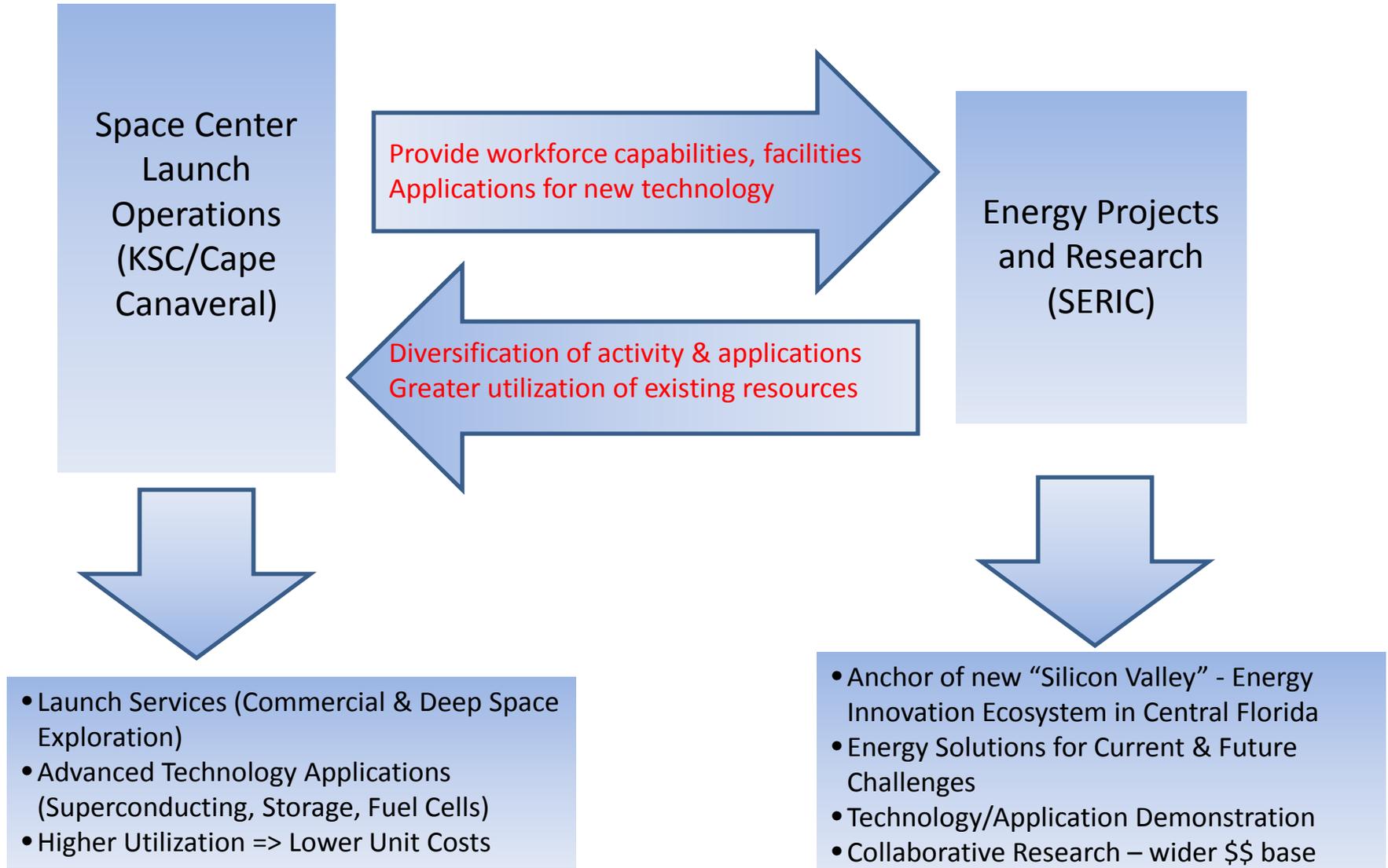


- Florida Solar Energy Center
 - Largest clean energy research center in the Southeast
 - Many energy-related training & certification programs
- Technology & Manufacturing
 - Emerging Technologies
 - High-End Textiles
 - Automobiles
 - Missile & Comm Systems
 - Algal fuel technologies
 - Composite Materials & Coatings
 - Next-generation lighting
 - Aerospace components
 - Gas Turbine Manufacturing
 - Solar Water Heating systems

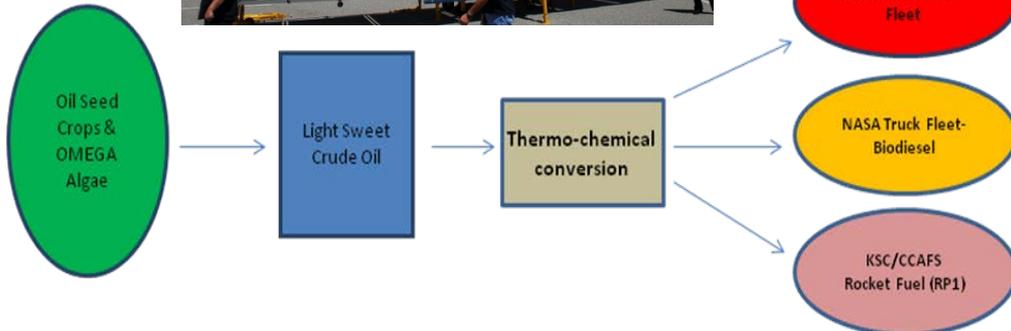
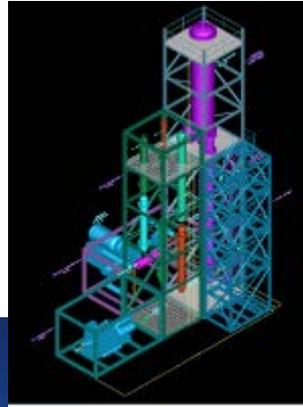
Space Coast Assets To Be Leveraged

- Kennedy Space Center
 - Hydrogen Generation & Storage
 - Life Sciences research
 - Solar PV integration
 - Highly complex integration and engineering solutions
- Academic Research & Training
 - University of Central Florida
 - Florida Tech
 - Brevard Community College
 - State-wide STEM Education Initiatives (FL Energy Workforce, STEMflorida, Gates Learn & Earn)
- National Spotlight due to Space Shuttle Transition

A Vision for the Future: Kennedy Space & Energy Center



Potential Space-to-Energy Projects



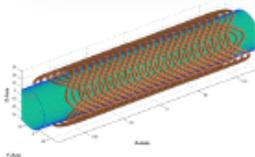
- “Hydrogen Hub” - Generation & Refueling Station(s), Fleet Ops
- Multi-Fuel Processing & Refining Facilities
- Superconductivity
- Smart Grid & Energy Storage Demonstrations
- 3-D Printing
- Turbine Efficiency Testing
- International Space Station Research

Focus on “Enabling” Technologies, and Florida’s Technical Strengths

Next Steps – Identify Synergies and Projects



- Space Based Products benefiting from the very high power to low weight ratio energy density
 - Motors, generators, actuators, radiation shielding, energy storage, propulsion, HRST launch sleds, nano-satellite launch, etc...
 - Renewable Energy and Energy Efficiency Applications
 - Superconductor Development & Testing
 - Cryogenics, Life Science R&D, Bio/Medical R&D, Composites R&D



Efficient Products to Address a Global Market for Energy Production, Transmission and Use

Leveraging Assets

Workforce Board's Role: Creating a Pipeline of Special Programs to Ease this Transition

Collaborative Team Including:

- Private Industry
- Educational Institutions
- Economic Development Partners
- Workforce Board(s)

Measure Results!

=> Listen to Feedback

=> Adjust

=> Repeat...



Pathways to Energy Careers Opportunities in Energy for the KSC Workforce

Space Coast
Energy
Consortium

*Driving Clean Energy
Jobs and Industry in
the Space Coast and
Central Florida*

"With the impending end of the Space Shuttle Program, Brevard County has a ready workforce to build the next industrial economy on the Space Coast. We want that to be in energy related products and services."

Mike Aller, Executive
Director, Space Coast
Energy Consortium

Pre-registration is required.*
To sign up, email
info@spacecoastenergy.org
or call 321-613-2973

* All participating companies and educational institutions must register as a sponsor or exhibitor

Energy Companies:

- Showcase your products and emerging technologies to the KSC workforce.
- Meet the KSC workforce and obtain a better understanding of the talent pool available to grow your business.

KSC Workers:

- Meet companies and learn about employment opportunities in the fast-growing energy sector.

Educational Institutions:

- Provide information about programs and training opportunities to help transition our aerospace workforce to careers in energy-related industries.

When: April 27, 2011

Where: Florida Solar Energy Center
1679 Clearlake Road,
Cocoa, Florida 32922

Format: Three separate 3-hour sessions
8:00 am – 11:00 am
12:00 pm – 3:00 pm
4:00 pm – 7:00 pm

Contact us for Sponsorship and Educational and Business Showcase opportunities.*



Pathways to Energy Careers



Clean Energy Jobs Accelerator

Space to Energy Regional Innovation Center will

accelerate the commercialization of new energy technologies and help to forge partnerships between industry developers and the space center's energy-related technical facilities and expertise, in order to sponsor, support, and accelerate the commercialization of emerging clean energy products and technologies.

NASA KSC
Space FL
SCEC
TRDA
BWF

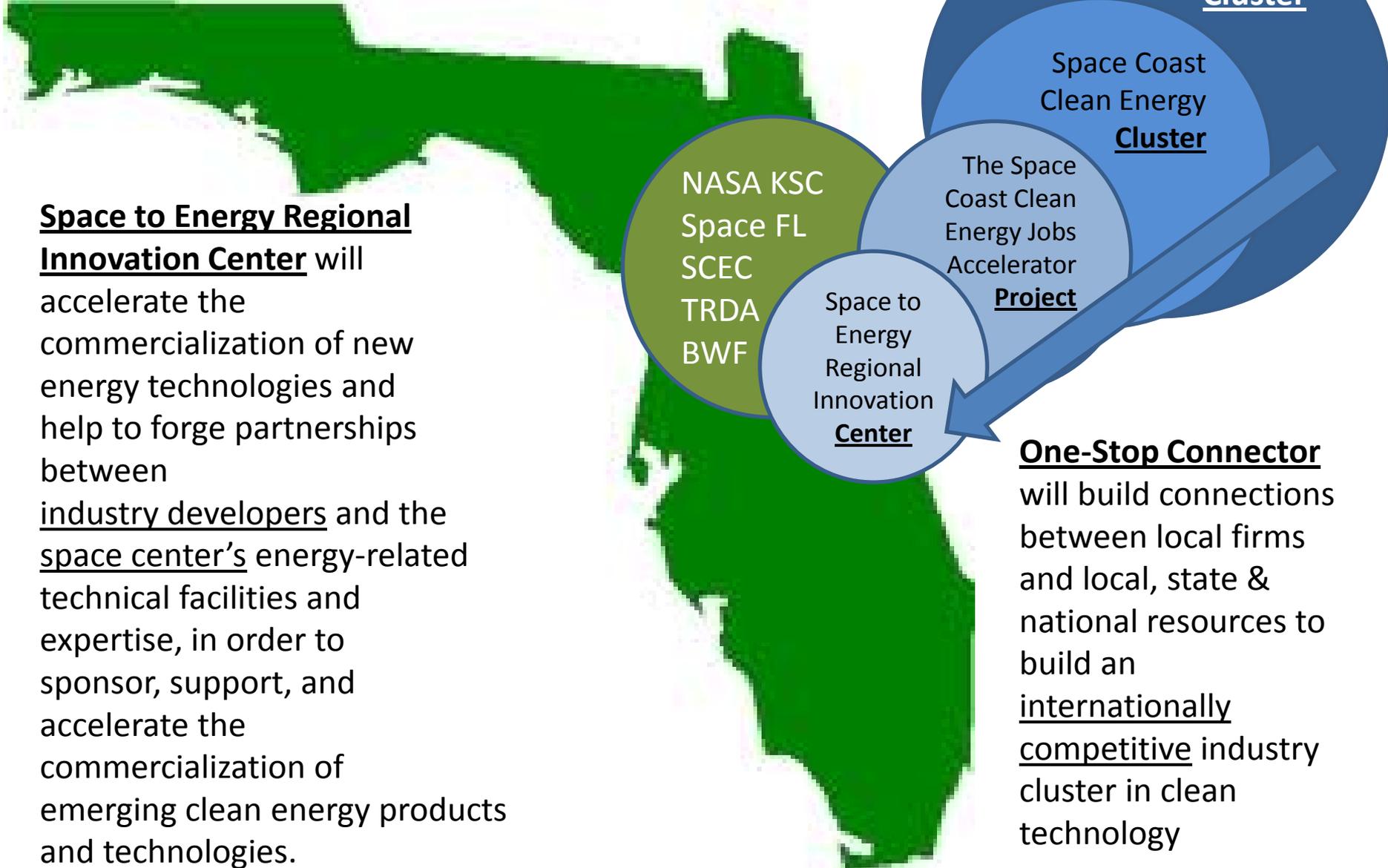
Space to Energy
Regional
Innovation
Center

The Space
Coast Clean
Energy Jobs
Accelerator
Project

Space Coast
Clean Energy
Cluster

Aerospace
Cluster

One-Stop Connector
will build connections
between local firms
and local, state &
national resources to
build an
internationally
competitive industry
cluster in clean
technology



Space Coast Clean Energy Jobs Accelerator (CEJA)

- **Project Team: Space Florida, Space Coast Energy Consortium, Brevard Workforce, Banner Center for Clean Energy, Technological Research & Development Authority (TRDA)**
- **\$2.15 million Federal Funding, with \$250k State Match Funding (via Space FL) = \$2.4 million Total**
- **\$1 million from the Department of Commerce, Economic Development Administration (EDA)** – Overseen by Space Florida supported by the Space Coast Energy Consortium, and used to:
 - create a **“One-Stop Connector”** for local energy firms to connect with state and national resources and help build capacity of clean energy companies in the area.
 - create a **Space-to-Energy Regional Innovation Center**, which will help space-related and traditional energy companies bring clean energy applications to market through trials and demonstrations utilizing the world-class engineering resources resident at NASA’s Kennedy Space Center.
- **\$1 million from the Department of Labor** – Brevard Workforce will oversee use of these funds and assist growing energy companies identify personnel and training needs and assist members of the Central Florida community obtain the training or certification(s) necessary to fill those job opportunities.
- **\$150,000 from the Small Business Administration (SBA)** – This funding will be managed through TRDA and used to mentor small businesses as they work through contracting/ proposal processes to grow their organizations.

- Awarded September 2011; Effective Oct 2011 – Sept 2013 (DoL funding through Sept 2015)
- Project Region: East Central Florida, including Brevard, Orange, Seminole and Volusia Counties, with applicability across the state.

- Workforce Development programs also funded via support from Department of Labor National Emergency Grant (Brevard Workforce)

Thank You!

For more information

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Jobs and Industry in
the Space Coast and
Central Florida*



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