

City of Cape Coral

**University Economic
Development Liaison
Assessment and Strategy
Report**

June 9, 2008

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Prepared for

City of Cape Coral
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Executive Summary

The purpose of this project is to assist the City of Cape Coral in laying the groundwork for an eventual firm recruitment strategy by conducting research on the needs of early stage technology firms and best practices in technology transfer and commercialization partnerships. This report studies the priority needs of startups and maps these requirements in relations to Cape Coral assets and gaps; analyzes the experience of relevant Offices of Technology Transfer (OTTs) and incubators in promoting technology transfer and firm creation; and provides recommendations for Cape Coral to prepare itself for launching a firm recruitment program.

Competitive Challenges

This study highlights a number of significant gaps that need to be filled in order for Cape Coral to emerge as a competitive location for technology-based companies. The region's lack of a premier research university or hospital creates significant challenges in attracting technology talent and companies. Moreover, without a large anchor company in the region, it is difficult to attract other companies, as technology companies tend to prefer to cluster near each other. Also, given the needs of early stage technology companies, the region must work vigorously to establish a physical site where such firms can agglomerate, have access to flexible and low cost space, be connected with university research programs, and be provided with business incubation services.

Key Assets

Despite these challenges, our research also revealed significant assets around which the Cape can build its recruitment strategy. Despite not yet being a premier research university, Florida Gulf Coast University (FGCU) was repeatedly mentioned as a significant asset which Cape Coral should leverage. There are also a number of other strong universities in the region that are interested in exploring the establishment of partnerships and affiliate relationships. Throughout the outreach process, nearly all individuals interviewed commented on the wonderful quality of life available in Cape Coral and cited it as a major asset for attracting firms and top talent. Key elements of the Cape's quality of life cited include its affordable land prices, natural beauty, recreation, beaches and boating; its relatively low cost of housing; low crime; and lack of traffic. Lastly, the Cape Coral region has a significant wealth of human capital. The area has a large number of residents with high educational attainment, wealth, and executive experience. Cape Coral should work to tap into the experience and resources of these residents to provide mentoring to early stage firms and angel funding for startups, and to leverage their professional networks in attracting firms to the region.

Case Study Examples

Our examination of the academic literature and good practices led us to highlight two Florida-based case studies. These cases exemplify key strategy elements that have been used to successfully attract investment and firm growth. The first case (the University of Central Florida) focuses on the critical role that can be played by a research university and its related institutions in successfully commercializing university research and supporting regional economic development. The second case (the Port St. Lucie biomedical cluster) focuses on an alternative model—recruiting a private research institute—and highlights the key roles of clustering, incentives, and personal networks. Despite their differences, both of these cases demonstrate that successful technology-based economic development requires local generation of research and intellectual output, a physical site for agglomeration and business growth, and active

collaboration between research institutions and a broad range of regional economic development organizations.

Recommendations

The Cape is not currently prepared to compete with other regions that already have technology agglomerations, top research universities, or top incubators and research parks. But it can and should begin to build on its strengths. The key task now is to embark on the long-term process of building local research capacity, establishing partnership relationships that will be critical to for future firm recruitment and developing the regional innovation infrastructure needed to capture and retain startups from research institutions. This entrepreneurial infrastructure, including the business services and investment capital available to entrepreneurs, will largely determine whether startup tech firms choose to locate and remain in the community or move elsewhere. This report concludes by presenting a business recruitment strategy that outlines key action items that Cape Coral should consider as priority next steps.

Align Industry Focus with Existing Assets. Leverage FGCU's academic and research capacities by aligning key elements of economic development strategy with the university's current and near-term research strengths and priorities. Given existing local economic strengths, consider focusing on green building, bio-ecology, and medical device manufacturing.

Enhance Collaboration with Regional Academic Institutions. Encourage academic leadership at FGCU to become more fully engaged in economic development. Work with corporations and foundations to encourage sponsorship of and participation in academic-based R&D, technology transfer and entrepreneurship. Establish complementary technology transfer relationships with a range of other nearby Florida universities, such as the University of South Florida and University of Central Florida

Establish a Research Park. Cape Coral should accelerate efforts to establish a research park as a place to attract and agglomerate technology companies, strengthen the research base, and spur technology transfer. Ideally, an incubator and/or small business development center should be located on the park grounds to provide business and commercialization assistance services.

Provide Business Incubation Services. Establish an incubator to support both homegrown startups and those that might be recruited from other locations. This incubator could be established either by the University, the EDO, the Chamber of Commerce, or—ideally—as a joint-venture.

Enhance Local Financing. Expand the availability of research funding and early stage financing to help attract, grow, and retain startup businesses. Encourage and broker collaboration between local academics and entrepreneurs to jointly go after SBIR and STTR grant funding. Provide gap funding and commercialization assistance. Mobilize local business leaders, investors, and high net worth individuals to create a local Angel Fund.

Enhance Regional Visibility and Marketing. Increase the Cape's visibility as an attractive location for technology businesses through the following activities:

- Participate in Florida and Southeastern bioscience and technology forums;
- Reach out to site location and placement entities and educate them on key local assets;
- Ensure that local firms are listed on Florida technology databases and websites;

- Support the establishment of a new BioFlorida chapter in Southwest Florida; and,
- Consider co-hosting a high visibility regional event or conference.

Organize for Collaborative Action: Cape Coral has a number of important assets on which to base its business recruitment efforts. The next step is for the community to organize itself and come together to align and leverage those assets, address key gaps identified, and begin to pursue a shared strategy. The EDO should take the lead in creating a structure for engaging key academic and industry stakeholders who want to participate in local economic development activities, strengthening cooperation with FGCU, establishing a collaborative process for defining a shared vision and strategy for the region, and launching outreach efforts to key partners outside of the region.

1. Project Background

The purpose of this project is to assist the City of Cape Coral in laying the groundwork for an eventual firm recruitment strategy by conducting research on the needs of early stage technology firms and best practices in technology transfer and commercialization partnerships. ICF's Cluster and Foundation-Input analysis conducted in the summer and fall of 2007 determined that Cape Coral should launch effort to enhance key investment readiness elements prior to reaching out to individual companies and embarking on a firm recruitment program. To that end, instead of identifying individual firms to recruit, this report:

- Studies the priority needs of startups and maps these requirements in relations to Cape Coral assets and gaps;
- Analyzes the experience of relevant Offices of Technology Transfer (OTTs) and incubators in promoting technology transfer and firm creation; and
- Recommends actions for Cape Coral to prepare itself for launching a firm recruitment program.

We focused our analysis and outreach on OTTs, incubators and related commercialization entities for two principal reasons. First, because these organizations work closely with startups and university spinoffs, they can provide critical insights into the needs and preferences of early stage technology firms that might ultimately be attracted to Cape Coral. Secondly, these organizations can serve as key partners for Cape Coral as it launches its recruitment program by providing learning opportunities from their past experience; sharing their resources and networks; and eventually providing a source of potential recruitment targets. A successful industry attraction and development program is ultimately built on a series of networks and relationships across the academic, industry, and government sectors, so a critical first step for the Cape is to identify important potential partners and begin to engage them.

ICF employed a dual-pronged approach to carry out this research, consisting of a review of the academic literature on best practices in technology transfer and commercialization as well as a series of key informant interviews with Florida University OTTs, technology incubators, research parks, private firms, and relevant industry associations. In our literature review, we focused on the critical roles played by OTTs, incubators and research parks in technology transfer and on model cases of collaboration between local governments and these entities in promoting commercialization and entrepreneurial development. We then augmented this nationwide best practice review, with outreach to key Cape Coral and Florida leaders. In the 14 interviews we conducted, we asked a range of questions relating to the priority needs of startup technology firms, perceptions of Cape Coral's investment readiness, strategies for firm recruitment, and explored opportunities for collaboration between Cape Coral and the interviewee's organization. For a complete list of interviews conducted, please see Appendix A.

This report is organized as follows: Section 2 highlights the key needs of startup firms and aligns those needs to Cape Coral's existing economic foundation assets and challenges; Section 3 presents good practice examples of technology transfer and business recruitment; and Section 4 presents priority recommendations for Cape Coral to lay the groundwork for a successful recruitment strategy.

2. Cape Coral's Competitive Position

Cape Coral's ability to create, attract, and expand technology clusters will depend largely on the region's ability to provide sources of economic input advantages. These inputs are the economic infrastructure that supports regional competitiveness and, in their absence, it is very difficult for a cluster to flourish, in spite of best intentions and other support. The following are the seven categories of economic foundations that have major impacts on the competitiveness of clusters, and the sustainable prosperity of economies.

- **Innovation** (Discovery, Development, Deployment): Generating knowledge and moving it to the marketplace.
- **Finance** (Initiation, Expansion, Restructuring): Providing the continuum of capital needed to form and expand companies.
- **Infrastructure** (Water, Sewer, Bandwidth, Energy, Transportation): Providing adequate access and cost-effective to land and utilities and ensuring the flow of goods.
- **Workforce** (Preparation, Advancement, Renewal): Developing and sustaining the workforce skills needed for competitiveness.
- **Governance** (Business Climate, Tax, Regulation, Administration): How the taxes, regulations and policies impact competitiveness and how the responsiveness of local governments affect employer and resident needs.
- **Quality of Life** (Housing, Climate, Recreation): Providing for the amenities and services that draw new people to the region.
- **Marketing** (Design, Distribute, Brand): Ability of the region to define and productize its key assets, access market channels, and sustain its visibility.

In our interviews, the economic inputs most frequently cited as critical to startup firms, and thus key for Cape Coral's strategy, were: innovation; financing; flexible commercial space; and access to business development services. The section below examines the priority needs of startup firms identified in our research and analyzes the availability and performance of these critical foundations in Cape Coral.

Innovation

Understanding the economic impact of the innovation system requires recognition of the "innovation pipeline." This 'pipeline' is made up of the public and private institutions and organizations that (a) conduct research and create new knowledge, (b) develop new applications for this knowledge, and (c) move these applications to the marketplace in the form of new or expanding businesses that sell the applications as products or processes. The extent to which a particular city or region is able to participate in the various steps of the pipeline affects the economic impact of innovation in the economy. The innovation pipeline works well when the discovery, development, and deployment systems generate a high volume of high-quality content that flows speedily from one system to the next.

During the interviews conducted for this analysis, virtually all respondents highlighted the critical need among startup technology firms for continual access to new research, innovations, and intellectual property (IP). Startups also require continuing access to professors and graduate students to assist with the development of their innovations, as well as labs and facilities in which to

conduct research and product development. As such, the vast majority of respondents felt that most startups would have a strong preference to locate themselves close to a major research university.

Several of those interviewed observed that the region's lack of a premier research university or hospital creates significant challenges for Cape Coral in attracting technology talent and companies. Moreover, without a large anchor company in the region, it is difficult to attract other companies, as technology companies tend to prefer to cluster near each other.

That said Florida Gulf Coast University (FGCU) was repeatedly identified as a significant asset around which Cape Coral can build its technology recruitment strategy. FGCU is one of the fastest growing universities in Florida. FGCU is vigorously working to strengthen its research capacity, and is emerging as a center for ecology and conservation biology. FGCU recently applied jointly with the University of West Florida and the University of North Florida to become a Center of Excellence for Environmental Technologies.

Financing

One of the most critical needs of technology startups is seed and early-stage financing. Technology firms need to grow and scale-up very quickly, so traditional debt financing doesn't typically meet their needs. As a result, the success of start-up firms often depends on securing early funding from high net worth Angel Investors and, subsequently, expansion funding from venture capital funds. Our interviews further highlighted the importance of early stage financing as a determinant of startup fund location decisions. It was pointed out that university spinouts typically first locate in incubators and research parks associated with the university that spawned them and then relocate once they've secured their first round of venture funding—often to the city in which the primary investors are located.

Cape Coral currently has one local VC Fund (SI Ventures), but needs to expand the availability of early stage financing in the region, through a combination of federal research grant support, gap funding programs, and private angel and venture funding

Infrastructure

Cape Coral's affordable land prices and building costs were repeatedly cited as important competitive assets for the region. Several interviewees also mentioned the presence of Southwest Florida Airport in Fort Myers as an important asset in attracting international firms, particularly those that might take advantage of the airport's direct flights to Germany.

However, technology startups have particular needs for space and infrastructure that go beyond low prices. These young companies need access to flexible space with flexible leases. To be competitive in attracting startups, Cape Coral's real estate industry should be encouraged to offer flexible, short-term commercial space to early stage companies, with shorter lease lengths, month-to-month contracts, and subleasing allowed.

The other critical infrastructure need facing the City is the need to create a location where technology firms can agglomerate and where premiere R&D can take place. Creative approaches are needed to engage the community and FGCU to find land and funding for such a facility.

Incubation Services

Many startup firms have a critical need for business incubation services to help them survive and mature in their earliest stages. Incubators provide their clients with management guidance, technical assistance and consulting tailored to the needs of young growing companies, and

often also provide flexible office space, shared basic business services and equipment, technology support, and assistance obtaining financing. They often provide access and referrals to a network of business development services—such as lawyers and accountants—that are uniquely familiar with the needs of technology startups.

Perhaps most critically, incubators allow entrepreneurs to ‘rub shoulders’ and have access to others who have a successful track record of bringing products to market and securing financing. These peer and mentoring relationships are invaluable in helping inspire, inform, and guide technology entrepreneurs in the critical early stages of establishing their businesses.

Quality of Life

Throughout the outreach process, nearly all individuals interviewed commented on the wonderful quality of life available in Cape Coral and cited it as a major asset for attracting firms and top talent. Key elements of the Cape’s quality of life cited include its natural beauty, recreation, beaches and boating; its relatively low cost of land and housing; low crime; and lack of traffic. Several people suggested that Cape Coral may have success recruiting people and companies out of congested urban areas, such as Miami, based on its high quality of life.

Cape Coral should highlight its quality of life attributes in its marketing efforts and must maintain the currently high level of amenities to retain this significant competitive advantage. Additionally, it was suggested that if a research park is built in the area, it should seek to build on these assets by integrating high-end amenities such as naturalistic landscape features and/or a waterfront setting into park design.

Marketing

Cape Coral has some strong attributes for branding and marketing itself as a business location. It is known as a premier residential location, and has an emerging reputation as a center of environmental technology. FGCU recently gained greater national exposure by being upgraded to NCAA Division I school and the time is ripe to capitalize on this marketing momentum.

However, in discussions with site location and placement professionals, it became clear that Cape Coral has some challenges to overcome in elevating itself as a premier location for relocating firms. Efforts must be made by local businesses, FGCU leadership, and economic development professionals at the City and County levels to better describe local assets and opportunities and to increase the visibility of Cape Coral as an emerging location for bioscience, IT, and environmental technologies. Attendance by companies, economic development professionals and City officials at any of the South Florida, Florida and Southeastern bioscience and technology forums is the first step to getting the Cape Coral name out into the public arena.

Organize for Collaborative Action

In summary, Cape Coral has a number of important assets on which to base its business recruitment efforts. The next step is for the community to organize itself and come together to align and leverage those assets, address key gaps identified, and begin to pursue a shared strategy.

The EDO should take the lead in creating a structure for engaging key academic and industry stakeholders who want to participate in local economic development activities, strengthening cooperation with FGCU, establishing a collaborative process for defining a shared vision and strategy for the region, and launching outreach efforts to key partners outside of the region.

3. Case Studies

This section presents two Florida-based case studies that exemplify key strategy elements that have been used to successfully attract investment and firm growth. The first case focuses on the critical role that can be played by a research university and its related institutions in successfully commercializing university research and supporting regional economic development. The second case focuses on an alternative model—recruiting a private research institute—and highlights the key roles of clustering, incentives, and personal networks. Despite their differences, both of these cases demonstrate that successful technology-based economic development requires local generation of research and intellectual output, a physical site for agglomeration and business growth, and active collaboration between research institutions and a broad range of regional economic development organizations.

3.1. University of Central Florida

The example of University of Central Florida provides a strong model of the significant impact that university-led research can have on economic development and highlights the importance of collaboration between the university and regional organizations to leverage community resources. It also provides an excellent case study of one of the country's most effective business incubators, the UCF Technology Incubator.

The University of Central Florida (UCF), formerly called Florida Technological University, was established in 1963 as one of Florida's 11 state universities. Located outside of Orlando, UCF serves an 11-county area in east central Florida. In 2006 UCF had 47,000 students, about 15 percent of whom were graduate students. As part of its strategic plan, "Pathways to Prominence," UCF embarked in 2000 on a plan to strengthen its research programs and entrepreneurial initiatives.

Since that time, UCF has become a recognized leader in commercialization partnerships, entrepreneurship, and business incubation. UCF leaders have worked actively with a range of regional partners to establish the regional entrepreneurial infrastructure needed to capture and retain spinoffs from the University's research activities, including the Venture Lab, which provides faculty, students and local entrepreneurs with assistance in launching businesses, the Central Florida Research Park, and the UCF Technology Incubator. Key elements that have contributed to UCF's success are detailed below:

- **UCF's leadership and strategic planning processes were critical in laying the groundwork for increasing research funding and strengthening the entrepreneurial infrastructure needed for commercialization.** Between 1998 and 2007, UCF more than tripled its research expenditures, from \$36 million to \$121 million per year. Along with this rise in research expenditures came a rise in patent applications. In FY 2005, UCF filed 80 patent applications, placing it nationally in the top 15 relative to research expenditures.
- **Partnerships were established between the University and regional organizations to focus on economic development goals.** University leaders consciously conceived of entrepreneurship initiatives at the University as a team effort with local and regional government and organizations such as the Florida High-Tech Council, City of Orlando and Orange County. These entities funded regional planning studies and partnered with the University in funding the Incubator, Venture Lab and Research Park, and they continue to play a role in supporting and expanding UCF entrepreneurial activities.

- **The University worked with regional partners to identify and address market needs.** UCF and the region identified commercialization and entrepreneurial needs through university and regional planning processes involving focus groups and other means. In response, UCF developed the Technology Incubator and Venture Lab to fill entrepreneurial gaps identified through these processes. UCF also is now working to develop more angel and seed capital. These initiatives are beginning to pay off by increasing the number of entrepreneurs at the University and in the Orlando community.

The UCF Technology Incubator

The UCF Technology Incubator (UCFTI) was established in 1999 and was named “Best Incubator of the Year” in 2004 by the National Business Incubation Association. The incubator was initially created in response to faculty demand for assistance in launching companies. It started as a three year effort to pull together the necessary resources and educate the community on the need and vision for the incubator until it was opened within the heart of UCF’s research park. Below are key details of the incubators creation, services, and elements of its success.

- **Original funding:** At its inception, the Incubator was jointly funded by the UCF Office of the Vice President for Research, Center for Research and Education in Lasers, School of Electrical Engineering and Computer Science, and School of Business Administration; the Florida High Technology Council; and the Technology Research and Development Authority. The Scottish Technology Research Institute also provided funding for the first two years in order to use the Incubator as a “stepping off” place for Scottish firms to the U.S. market.
- **Facilities:** The Incubator is located in three buildings of the Central Florida Research Park—The University Tech Center, which is the main incubator and has office space for about 10 companies; the Bennett Center, which spans 48,000 square feet and includes laboratory and production facilities; and an additional facility that has laboratory space for a large biomedical startup. In addition, the Incubator rents space in a downtown Orlando office building located in a Historically Underutilized Business zone. The UCF Incubator also has partnered with the Seminole Technology Business Incubation Center to provide incubation at Seminole Community College.
- **Clients:** Initially, the incubator housed six companies, mostly tied to UCF research. Since 1999, it has provided assistance to around 90 companies. Of these, 24 have graduated (6 of which were acquired and the rest scaled up to achieve some financial stability). Forty-six are still current clients, and another 20 have exited the program. About one-fourth of the 90 companies have received some type of venture capital.

The UCF Technology Incubator (UCFTI) is a University-driven community partnership providing early stage technology companies with the enabling tools, training and infrastructure to create financially stable high growth enterprises. Key features of UCFTI include:

- It operates out of three locations totaling over 70,000 square feet.
- It has 7 full time staff, four “entrepreneurs in residence” who provide mentoring, and a network of professional services providers.
- Annual budget for the main incubator location at the University Tech Center is \$1.8 million, of which \$1.2 million goes to rental of space.
- Source of annual funding include approximately \$600,000 from the university, \$700,000 from rents received, \$100,000 from the city, \$100,000 from the county, and the remainder from a combination of training revenues and other grant sources.

In 2007 the Incubator had more than 50 active clients, seven of which were UCF startups. Incubator clients are drawn from a wide variety of fields including educational software,

energy, information technology, biomedical, lasers, scientific instrumentation, advanced materials, and others. UCF's evaluations show that businesses graduating from the Incubator have generated more than \$150 million in revenues, have attracted more than \$150 million in investments, and have been responsible for creating more than 850 jobs.

- **Activities:** The UCFTI is a “full service” technology business incubator that provides a broad range of assistance to startup firms, with a strong emphasis on business development needs such as strategic planning, capital strategies, legal advice, financial services and advice, marketing and sales advice, human resources issues and technology resources.
 - The Incubator has four “entrepreneurs-in-residence” that are available to regularly meet with clients to provide ongoing mentoring and assistance with strategic issues and connect clients with resources available through the Incubator.
 - The Incubator has referral relationships with a number of professional service providers in the community such as law firms, accounting and CPA firms, marketing and advertising firms, investment organizations, insurance companies and others that offer products and services relevant to our clients. A number of service providers come to the incubator periodically and are available to meet with clients at no cost. Others are available as needed to give some guidance and advice. The initial assistance is provided free-of-charge to the client. If more extensive services are needed, the client is responsible for forming a fee-based relationship with the service provider.
 - The Incubator holds “Incubator Showcases” roughly four times per year, in which incubator residents present business plans to potential investors. Incubator staff have also helped clients to secure around \$6 million in SBIR awards and other government contracts.

Recently, UCF created a UCF Incubator Network to expand the reach of its business development support. The City of Orlando, Orange County Government, Seminole County Government, Florida High Tech Corridor and the Metro Orlando Economic Development Commission (EDC) all partner with UCF to support the incubator network. Cape Coral and Lee County should consider joining this strong network to take advantage of the resources and experience of this successful commercialization program and strengthen Cape Coral's links to the broader regional economy.

3.2. Port St. Lucie Biomedical Cluster

Earlier this month, the Oregon Health and Science University's Vaccine and Gene Therapy Institute (VGTI) announced that it will be opening a major research operation in Port St. Lucie, adjacent to the Torrey Pines Institute planned East Coast headquarters. This case is instructive for the City of Cape Coral, as it demonstrates the process of industry clustering around an anchor research institution, the power of state and local incentives as a tool for attraction, and the key importance of personal networks in business recruitment.

VGTI is planning to build a 130,000 square foot campus immediately adjacent to the Torrey Pines Institute for Molecular Studies' building, currently under construction at the Tradition development. The VGTI project will create 200 local jobs and over the first 20 years of operation is expected to generate \$2 billion in payroll and \$4.2 billion in gross state product. Below are details of the key factors that led to VGTI's decision to locate in Port St. Lucie:

- Clustering:** VGTI was eager to join the emerging cluster of life-science organizations clustering around Port St. Lucie, particularly the Torrey Pines Institute for Molecular Studies (TPIMS), which, 18 months ago, announced its intention to locate its 189-employee East Coast headquarters in the community. Both of these institutes will be located within the Florida Center for Innovation, a 120-acre research park under development in the 8,300-acre master-planned community of Tradition. The park is anchored by the Torrey Pines Institute and will also be home to the Mann Research Center, a six-building life sciences complex and a new medical campus for Martin Memorial Health Systems.

VGTI was particularly excited by the opportunity for ongoing, face-to-face collaboration with the major biomedical organizations clustering in the area. One of the intended benefits of this move is that VGTI Florida expects to collaborate heavily with the Torrey Pines Institute, which has developed an extensive library of 5.5 million chemical compounds, many of which will be used in VGTI's research and development. VGTI will begin its Florida operations inside part of Torrey Pines' space and then move into its own facility later this year or in early 2009.

- Incentives:** VGTI was lured to the region by a \$117.8 million state and local incentives package. The State is providing \$60 million of that assistance from the Florida Innovation Incentive Fund, the same program that was used in assisting the Burnham Institute and Torrey Pines projects. Port St. Lucie is providing \$53 million, targeted for infrastructure and other improvements at the Tradition development. The remainder of the incentive package will come from property tax abatements and impact-fee rebates from the city of Port St. Lucie and St. Lucie County.
- Networks:** One of the significant factors in attracting the institute to the area was the personal relationship between VGTI's Director Jay Nelson and Torrey Pines' founder and President, Richard Houghten. Impressed with the support that Torrey Pines had received from state and local partners, and determined to help build a true research cluster in the region, Houghten called his former colleague Nelson to discuss possibility of moving to the region and brokered a meeting with the St. Lucie EDC. This underscores the need for Cape Coral to increase its networking activities, both by organizing local networking events and by ensuring representation at State and national industry conferences.
- Regional Collaboration:** Another factor that attracted VGTI was that Port St. Lucie has gained a reputation as a business friendly environment where local and regional organizations collaborate effectively. As an example, John DelRusso, president of Mann Research Center had been looking for real estate in the region ever since The Scripps Research Institute decided to build its East Coast headquarters in Jupiter. When asked why he selected Port St. Lucie as the site for his the Center's new life sciences complex, he was quoted as saying that he was impressed by how well local officials worked together. Regional collaboration and a "business friendly" attitude are key components to marketing a location.

Torrey Pines Institute for Molecular Studies (TPIMS)

was founded in 1988. Its mission is to pursue innovative research that leads to the understanding and treatment of medical conditions such as multiple sclerosis, AIDS, Alzheimer's disease, pain, arthritis, heart disease, cancer, and more.

TPIMS is establishing its East Coast headquarters in Port St. Lucie where it will employ more than 180 scientists, technicians and administrative staff. The Institute plans to partner with Florida Atlantic University for research efforts and with Indian River Community College to make science training programs available to residents.

"Florida has stepped forward at a time when the life sciences are more important than ever, and has demonstrated that communities like Port St. Lucie can provide the environment in which our scientists can search for solutions to diseases that affect all of mankind," Torrey Pines Founder and President Richard Houghten said. "There is a clear partnership here, dedicated to building a thriving life sciences sector."

4. Business Recruitment Strategy

Building a high technology cluster is a long-term process. For instance, the “San Diego Miracle” involving the Scripps Research Institute, was 30 years in the making. Many years of conscious effort and planning are needed to lay the groundwork for these ‘overnight’ successes. Cape Coral is at the early stages of these efforts; before the Cape should reach out to individual firms it must align its efforts and create a unified strategy. The city is not prepared to compete with other regions that already have technology agglomerations, top research universities, or top incubators and research parks. But it can and should begin to build on its strengths.

The key task now is to embark on the long-term process of building local research capacity, establishing partnership relationships that will be critical for future firm recruitment and developing the regional innovation infrastructure needed to capture and retain startups from research institutions. This entrepreneurial infrastructure, including the business services and investment capital available to entrepreneurs, will largely determine whether startup tech firms choose to locate and remain in the community or move elsewhere.

This section recommends key elements of a proposed business recruitment strategy and then outlines key action items that Cape Coral should consider pursuing as priority next steps.

4.1. Align Industry Focus with Existing Assets

Cape Coral should focus its cluster development and recruitment strategy around the region’s existing strengths.

- FGCU has a strong focus on ecology, sustainability, and environmental technologies. In particular, they have a strong Everglades Research Program and a Coastal Watershed Institute (<http://www.fgcu.edu/cwi/>). Cape Coral should leverage these academic and research capacities by aligning key elements of its economic development strategy with FGCU’s current and near-term research strengths and priorities.
- Combined with the strength of the local real estate and building sector, Cape Coral should develop a regional focus on green building technologies, including energy efficiency products and green building materials. If the City decides to pursue the development of the local green building industry, there are a range of local policies and initiatives (such as green building codes, and public procurement guidelines) that the City could adopt to stimulate local demand for these products and services.
- In the biosciences, Cape Coral should focus on target segments that it is currently capable of attracting to boost its current cluster depth. The key segments within the biosciences for this region are medical device R&D and manufacturing and laboratories. Cape Coral should focus on niche markets that it has existent competencies in such as bio-ecology R&D.

4.2. Enhance Collaboration with Academic Institutions

Innovation is fundamentally about building partnerships. Research on successful technology transfer has shown that strong personal relations between economic development staff, technology transfer agents and faculty, corporate licensees, and business and investment communities are key to successful efforts. The Cape Coral EDO should take the lead in initiating and forging the collaborative relationships that are necessary for a successful innovation and commercialization system. As a starting point, the EDO should think about local

academic institutions as community economic assets and promote them as such to other potential partners. Some activities that can be pursued include:

- Work with corporations and foundations to encourage sponsorship of and participation in academic-based R&D, technology transfer and entrepreneurship. Business, technology, and economic development organizations can act as intermediaries to help market academic institutions to local/state foundations, corporations, and successful entrepreneurs.
- Work with the University's press office, Office of Sponsored Research, and incubator services to publicize successes locally, regionally, and nationally.
- Encourage academic leadership to become more fully engaged in economic development. Organize meetings between University leadership, policy makers, corporations and other key stakeholders and generally facilitate University engagement in economic development and alignment of strategies and goals.
- Help educate regional academic institutions about local and state entrepreneurial resources and coordinate the resources with those at academic institutions.
- Help academic institutions evaluate their impact on local and state economies and present the outcomes to policy makers. Academic institutions, particularly state universities, need credible economic impact data to justify their requests for state funding of research, technology transfer and entrepreneurial activities. Helping the university "make its case" serves the institutions' and the community's economic interests.
- Develop and support programs with academic institutions to improve Small Business Innovation Research and Small Technology Transfer Research awards. Help promote collaboration between local firms and University faculty to jointly go after SBIR & STTR grants.
- Establish complementary technology transfer relationships with a range of other nearby Florida universities, such as the University of South Florida and University of Central Florida. When a research park is developed in Cape Coral, consider creating a space within the park in which a number of different universities can establish and maintain a local presence.

4.3. Strengthen FGCU's Research & Tech Transfer Capabilities

Drawing from the literature on good practice in research and technology transfer¹, below are some recommendations for the region's academic leadership. To strengthen research, build the innovation pipeline, and promote technology transfer, University leadership should:

- Focus on building excellent research and leveraging existing research strengths. In institutions with limited research funding, it is particularly important to identify and build niche research areas.
- Aggressively pursue federal funds to support research strengths, and leverage state and corporate funding to attract federal funds.
- Build research strengths in space dominated by local industries and create research centers that involve industry members.
- Set a tone that supports a technology transfer culture. Raise technology transfer to a higher level and promote excellence.

¹ *Technology Transfer and Commercialization Partnerships*, Innovation Associates, www.innovationassociates.us.

- Tap corporations, foundations and successful entrepreneurs to build research capacity and entrepreneurial programs.
- Focus on building industry partnerships to achieve long-term benefits rather than short term “pay-offs.”
- Make a commitment to economic development and focus on launching startups as part of the institution’s technology transfer and economic development commitments.

Throughout our interviews, several interviewees raised the question of FGCU’s institutional capacity to promote technology transfer and commercialization. FGCU does not currently have a full Office of Technology Transfer; rather they have an Office of Sponsored Research (OSR) whose principal focus is on assisting faculty in seeking outside (often Federal) funding for research. This office also tries to do some work related to licensing of intellectual property, but this has been very limited to date. FGCU is currently seeking its first licensee for a University-held patent.

Some interviewees suggested there would be benefits to upgrading FGCU’s OSR to a full-blown Office of Technology Transfer. Others, however, have warned that such an upgrade would require significant resources and may not yet be justified. On average, one invention gets created for roughly every \$2 million in funded research, so a university would need to get up to roughly \$40-50 million in funded research to justify creating an OTT. A more conservative approach would be to incrementally upgrade the OSR by adding one or two business development staff to help broker partnerships between companies and university staff.

4.4. Provide Business Incubation Services

The City of Cape Coral should consider establishing an incubator to support both homegrown startups and those that might be recruited from other locations. This incubator could be established either by the University, the EDO, the Chamber of Commerce, or—ideally—as a joint-venture. We recommend that it be a ‘mixed-use’ incubator, i.e., one that helps support a range of early-stage companies, rather than exclusively focusing on technology firms. If necessary, a second technology-focused incubator could be established at a later time, in a location proximate to FGCU.

Planning for an incubator will involve securing the necessary financing for operations. Typical operating costs for an incubator range from \$300,000-500,000 per year. A funding strategy that is employed by many cities is to find a partner (e.g., the County or a private developer or corporation) to pay for rental of office space so that the City is only responsible for financing the build-out and annual expenses associated with staff and operations.

In establishing such an incubator, the City can learn from and draw on the following resources:

- Best practices and case studies are available online at the Florida Business Incubation Association (FBIA) website: <http://www.fbiaonline.org/>
- The Cape Coral EDO and relevant partners have been invited to conduct study visits and have informational meetings by the directors of two of the State’s most successful incubators. Jane Teague of FAU’s Enterprise Development Corporation and Carol Ann Dykes of UCF’s Technology Incubator have offered to share their experience and provide guidance to Cape Coral in setting up an incubation program.

- To manage costs and benefit from a broader range of resources and contacts, Cape Coral could establish its incubator as a part of a broader regional incubation network, such as the recently formed UCF Incubator Network.

4.5. Enhance Local Financing

Cape Coral should work to expand the availability of research funding and early stage financing to help attract, grow, and retain startup businesses. Many communities and states have developed programs to help startups write SBIR/STTR proposals, and to assist Phase I awardees transition to Phase II/III through gap funding and commercialization assistance. The Cape Coral EDO should help encourage and broker collaboration between local academics and entrepreneurs to jointly go after SBIR and STTR grant funding

Also, due to the shortage of early stage funding in the region, Cape Coral should launch broad efforts to establish and support angel capital networks, seed capital funds, “fund-of-funds,” and enterprise forums. The City can further facilitate entrepreneurial growth by providing networking opportunities that introduce entrepreneurs to potential investors, customers, partners and service providers.

Finally, the City should consider mobilizing local business leaders, investors, and high net worth individuals to create a local Angel Fund. Based on a review of good practice in setting up an angel fund, below are a few factors to keep in mind:

- Total fund size of \$5-10 million. 10-20 transactions per year with investments ranging from \$300,000-500,000.
- Target deals with a 10x-30x return over a 5-7 year holding period to cover the costs of failed investments and the multi-year holding time needed for even the successful ones.
- Seek support from FGCU to fund technical and business students to assist with deal screening and evaluation.
- Industry experts should be encouraged to join the Fund and put their dollars into deals. Get enough influential members in the group to attract the attention of other venture capital firms.

Angel investors are often retired entrepreneurs or executives who provide capital for a business start-up, usually in exchange for convertible debt or ownership equity. A small but increasing number of angel investors organize themselves into angel networks or angel groups to share research and pool their investment capital. Profile of angel investors:

- The "average" private investor is 47 years old with an annual income of \$90,000, a net worth of \$750,000, is college educated, has been self employed and invests \$37,000 per venture.
- Most angels invest close to home and rarely put in more than a few hundred thousand dollars. Seven out of 10 investments are made within 50 miles of the investor's home or office.
- Informal investment appears to be the largest source of external equity capital for small businesses. Nine out of 10 investments are devoted to small, mostly start-up firms with fewer than 20 employees.
- Nine out of 10 investors provide personal loans or loan guarantees to the firms they invest in. On average, this increase the available capital by 57%.
- Informal investors are older, have higher incomes, and are better educated than the average citizen, yet they are not often millionaires. They are a diverse group, displaying a wide range of personal characteristics and investment behavior.
- Investors expect an average 26% annual return at the time they invest, and they believe that about one-third of their investments are likely to result in a substantial capital loss.
- Investors accept an average of 3 deals for every 10 considered. The most common reasons given for rejecting a deal are insufficient growth potential, overpriced equity, lack of sufficient talent of the management, or lack of information about the entrepreneur or key personnel.

Source: Center for Venture Research, University of New Hampshire

4.6. Establish a Research Park

Numerous interviewees stated the need for a designated Research Park in Cape Coral to help agglomerate technology companies, strengthen the research base, and spur technology transfer. Recent developments around Florida demonstrate that when a community is willing to create the space, it can succeed in attracting companies or a major institution. Many of the recent recruitment successes around the State have been spearheaded by a private or public gift of land, community support (taxes or a bond) to build a facility, followed by the application of State money to attract a major life science company or research institute. In this vein, it was suggested during the interview process that Cape Coral should consider gifting land to FGCU so that the University can apply for State funds to build an R&D Park.

ICF advises that, while there is continuing hesitancy within the community, Cape Coral should accelerate efforts to motivate key stakeholders to commit to establishing a research park. The Academic Village site may serve as an excellent location for such a park, as it is large enough to accommodate multiple uses and its location near the industrial park provides additional opportunities for commercialization of research. Ideally, an incubator and/or small business development center should be located on the park grounds to provide business and commercialization assistance services. There was general consensus among interviewees that such a park would be more likely to succeed if it is headed by a business person, rather than by an academic. For guidance, below is a summary of some key characteristics of typical North American university research parks.

City of Cape Coral Academic Village

The City of Cape Coral has designated the development of the Academic Village as a strategic priority. This site could be instrumental in the City's efforts to attract science and technology entities. The Cape Coral Economic Development Office has recently recommended that the Academic Village site be developed by the private sector, on a land lease, in which the public sector would build, own, and operate the following facilities:

- A research park modeled after the template previously created by FGCU;
- A higher-education park focused on technology and science curricula; and
- Facilities for meetings and conferences and the commercial amenities that would enhance the success of the final development.

Characteristics of Typical University Research Park

Size	<ul style="list-style-type: none"> • 114 acres • 6 buildings • 314,400 sq. ft. of space, 95% occupied • Only 30% of total estimated sq. ft. at build-out currently developed • 30,000 sq. ft. of incubator space
Location	<ul style="list-style-type: none"> • Suburban community • Less than 500,000 population
Tenants	<ul style="list-style-type: none"> • 72% are for-profit companies • 14% are university facilities • 5% are governmental agencies
Employment	<ul style="list-style-type: none"> • Typical park employs 750 • Major industry sectors: IT, drugs and pharmaceuticals, and scientific and engineering service providers
Finances	<ul style="list-style-type: none"> • Less than \$1 million per year operating budget

	<ul style="list-style-type: none"> • Revenues primarily from park operations but funds also come from universities and state, local, and federal government • Limited or no profitability; 75% of the parks have no retained earnings or retained earnings of less than 10%
Services	<ul style="list-style-type: none"> • Provide a range of business and commercialization assistance services, including <ul style="list-style-type: none"> – Help in accessing state and other public programs – Linking to or providing sources of capital – Business planning – Marketing and sales strategy advice – Technology and market assessment

Source: Association of University Research Parks

4.7. Enhance Regional Visibility and Marketing

As discussed earlier, Cape Coral needs to increase its visibility as an attractive location for technology businesses. Some specific actions that can be taken to raise visibility and increase marketing include:

- Reaching out to site location and placement entities (e.g., Enterprise Florida) and educating them about the competitive attributes of the Cape Coral region.
- Ensuring that local biotech firms are added to the Florida BioDatabase maintained by the Sid Martin Biotechnology Incubator: <http://www.biotech.ufl.org/database>
- Ensuring that local technology firms are added to the e-Florida Innovation Map: http://www.eflorida.com/innovation_map.aspx
- Supporting the proposed establishment of a new BioFlorida chapter in Southwest Florida,
- Sponsoring more industry events like the Lee County Medical Design Show. One option is to explore the possibility of hosting a future Enterprise Development Corporation’s annual Biotech Conference, which is hosted each spring by a different South Florida university.

4.8. Outline of Next Steps for Recruitment Strategy

Below is an outline of next steps that Cape Coral should consider pursuing as it develops its firm recruitment strategy.

Conduct Systematic Inventory of Cape Coral Economic Assets

Building on the outreach-based assessment presented here, Cape Coral should confirm its commitment and begin systematically assessing its key economic assets in the most critical foundation categories described in Section 2 above. This analysis and subsequent report offer a baseline assessment and critical jumping-off point for targeted assessment and follow-up. Key components for subsequent assessment are to:

- Take inventory of FGCU’s current and progressive research capacities and key research priorities over the coming 5 years. Assess capabilities of the Office of Sponsored Research and other technology transfer capacities of the university.
- Survey the development of entrepreneurial resources present in the community, including professional services firms, banks, venture funders and other sources of finance, and potential angel investors.

- Assess and document key elements of the local cost of living.
- Determine which local partners are interested in being involved in technology based economic development efforts and what they are willing to contribute. This, in turn, will help determine what types and sizes of firms can be attracted.

Conduct Market Research for Potential Recruitment

- Identify and get community agreement and support on a short list of potential industry sectors that are targets for recruitment. Talk to local companies in those sectors and ask them what types of support they need or would have needed to grow at an earlier stage of their development.
- Call companies in related industries outside of the local market area and interview them. Ask them what they would look for if they chose to relocate.
- Identify small startup firms for recruitment, examine public records of SBIR Phase 2 grants and find firms that received such grants in Florida. Conduct market research to identify which of these firms is “substantial” in terms of business concept, management team, number of employees, etc. and focus recruitment efforts there.
- When seeking to recruit firms from incubators, be aware that firms typically leave the universities and incubators that spawned them once they have achieved one or more of the following benchmarks: they have 10-15 employees; a product/service on the market; or have secured their first significant round of funding by a serious, institutional investor. They very often relocate themselves nearby to their principal investor.
- For recruitment of larger firms, consider initially trying to attract a small branch of the company that can focus on locally relevant technologies (e.g., environmental technologies, sustainable building materials, coastal/wetland technologies, etc.). Once a local branch has been established, this can be a beachhead for subsequently locating a larger portion of the company in the region.

Reach Out to Potential Partners

Finally, Cape Coral should begin the process of systematically reaching out to potential partners for technology transfer, incubation, and firm recruitment. Specific activities could include:

- Attend networking events, conducting study tours of successful programs, and exploring the creation of affiliate relationships with other Florida universities and innovation centers.
- Work with colleagues at BioFlorida to establish a new chapter in Southwest Florida.
- Reach out to Jane Teague, the Executive Director of FAU’s Enterprise Development Corporation. Learn from her experience and explore the possibility of becoming an affiliate member of the EDC and/or hosting their annual biotech conference.
- Reach out to Carol Ann Dykes, the Director of the UCF Technology Incubator. She has explicitly invited interested members of the Cape Coral community to come to UCF for a study visit to see their research park and incubation facilities, learn from her 10 years of award-winning experience, and explore potential partnership activities with UCF.
- Accelerate efforts to build community consensus on the benefits of establishing a research park in Cape Coral and solidify the vision for the development of the Academic Village.

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