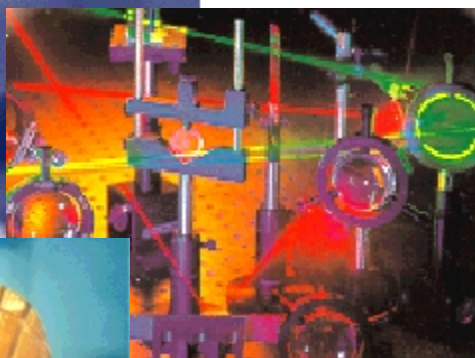


# Executive Summary



Complete report available via the web at:  
[www.angelouconomics.com/clients/orlandoreports.html](http://www.angelouconomics.com/clients/orlandoreports.html)

Consultant Team: Angelou Economics



ORANGE  
COUNTY  
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## Acknowledgments

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The project team interviewed more than 60 organizations and individuals from the Metro Orlando community. Their input shaped this strategy, and their future support will be critical to growing a technology-based economy.

## Executive Summary

In December 1999, the team of Angelou Economics, The University of Texas IC<sup>2</sup> Institute, and M+W Zander began constructing the Metro Orlando Technology Strategy. The City of Orlando, Orange County, and the EDC of Mid-Florida Inc. commissioned the project and led the creation of the strategy. An advisory board consisting of local technology, academic, and public sector visionaries provided guidance throughout the course of the project.

The initiative described in this report will result in many benefits for Metro Orlando. Economies founded on technology experience greater economic growth and wealth creation. The diversification of Metro Orlando's economy will decrease the region's susceptibility to economic downturns. Technology companies will bring highly skilled labor into Metro Orlando. The wealth generated by these companies and their employees will multiply through Metro Orlando at a higher rate than other industries, impacting almost every level of the economy.

The benefits associated with a technology-based economy drove the need for a Metro Orlando Technology Strategy. Metro Orlando already has a base of technology companies. This plan seeks to expand and strengthen the existing technology business base. The implementation of this strategy will require community-wide cooperation and a regionally-coordinated economic development campaign. If successfully implemented, Metro Orlando will experience unprecedented economic growth.

# METRO ORLANDO TECHNOLOGY STRATEGY

## Overview

The strategy begins by identifying the strengths of the region's economy. The results of this analysis are contained in Part One of the strategy, ***Metro Orlando Economic and Cluster Analysis***. Part One compares Metro Orlando to other technology regions. It also contains a cluster analysis that identifies technology industries to target in economic development.

Entrepreneurship drives successful technology regions. The creation of homegrown businesses, however, is left out of many economic development efforts. Part Two of the strategy, ***Accelerating Technology-Based Entrepreneurship***, offers recommendations for Metro Orlando to create an environment in which technology start-ups thrive. Part Two emphasizes that economic developers should dedicate the same level of resources to entrepreneurship as they do to business recruitment and retention.

Semiconductor manufacturing facilities impact an economy more than almost any other type of business. Competition for these facilities is fierce among

technology regions. Part Three of this strategy, ***Semiconductor Site Assessment***, examines Metro Orlando's potential for recruiting another semiconductor manufacturer. The report also identifies the region's top two semiconductor sites.

The final step of Metro Orlando's technology strategy, ***Marketing a High Tech Metro Orlando***, pulls together the results of Parts One, Two, and Three into a plan for marketing the region. It provides recommendations for promoting the region's benefits to its target industries. It also offers advice on acquiring community-wide support and energy for a technology initiative.



## Findings and Recommendations

Metro Orlando is ideally positioned to grow its technology base.

**The four-county region already contains almost 4,800 technology companies and employs 70,000.** The region has produced some of the most talked about new technology companies in the U.S., such as the recently-public company Triton Network Systems. A technology push has already begun and the region is supported by numerous private and public organizations dedicated to building a technology economy.

**Metro Orlando has the tools - hard and smart infrastructure, existing technology base, global recognition, and leadership - to become a top location for technology.**

Economies founded on technology experience greater economic growth and wealth creation.

The report focuses on those issues that could potentially slow Metro Orlando's technology drive. Recommendations center on improvements to the existing system that will make Metro Orlando more competitive for recruiting companies and growing start-ups.

Background information and supporting documentation are contained in each part of the strategy. Parts One, Two, and Three contain benchmarking data, plotting Metro Orlando against

some of the most successful technology regions in the U.S. The following summarizes the findings and recommendations of each part of the strategy.

### Part One: Economic and Cluster Analysis

Compared to other technology regions, Metro Orlando has the advantages of a lower cost of living and lower labor costs. A higher percentage of the region's workforce is employed in services and trade, and a disproportionately low percentage in manufacturing, due to Metro Orlando's large entertainment and tourist industry. The region has the following characteristics compared to other technology regions:

- Low cost of living and low cost of labor
- High growth in international trade
- High percentage of workforce in services and trade
- Low percentage of workforce in manufacturing
- Strong technology industry (containing 70,000 workers and 4,750 companies)
- Strong technology services and telecommunications industry (employing the highest percentage of technology workers in the region)
- High population turnover

Cluster analysis is a method of identifying industries that a region has a competitive advantage in recruiting, retaining, and growing. Cluster analysis is based on the theory that

# METRO ORLANDO TECHNOLOGY STRATEGY

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companies locate in regions containing other companies, suppliers, and customers from their industry. **Based on cluster methodology, Metro Orlando's strongest technology clusters are: (1) defense and aerospace, (2) semiconductor, (3) software, multimedia, and simulation, and (4) telecommunications.**

Cluster analysis is the first step in identifying target industries for economic development. The second step is determining which top clusters have the highest potential for growth in the future. Recommended **targets for Metro Orlando's technology initiative are, therefore, based both on the region's existing strengths and industry trends.**

Much of Metro Orlando's existing technology industry emerged from its strongest cluster, defense and aerospace. While it is important to nurture current defense employers, economic development efforts should not target this industry for recruitment. Rather, Metro Orlando should market to **companies producing goods or services that expand telecommunications bandwidth.** These companies fit Metro Orlando's existing industry, defense activities, and university strengths. The target audience for Metro Orlando's technology marketing strategy are companies in the following categories:

- **Optical** networking, routing, and switching equipment
- **Multimedia** applications for the entertainment and simulation industries
- **Digital convergence**, producing hardware and software to increase bandwidth
- **Wireless** and **satellite**-based telecommunications companies
- Software and hardware for **caching**
- Internet **co-location facilities**
- **Semiconductors** manufactured for optical networking

## Part Two: Accelerating Entrepreneurship Growth

Part Two examines Metro Orlando in terms of labor force, public-private sector cooperation and commitment, education and research, existing industry, and business success stories. Based on this assessment, **Metro Orlando contains many of the key elements necessary for technology entrepreneurship to drive the region's future development.**

**Assets** that enhance Metro Orlando's climate for entrepreneurship include:

- Entrepreneurship knowledge and mentors for start-up companies
- Support organizations focused to support local entrepreneurs
- Strong existing technology industry

# METRO ORLANDO TECHNOLOGY STRATEGY

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- Public research and development centers
- The University of Central Florida and the technology training programs at Valencia and Seminole Community Colleges
- Technology incubators and research parks
- Orlando International Airport

Economic development, business, and academic leaders can assist with overcoming several **challenges** to entrepreneurship success:

- Enhancing the international perception of the region as not only a great place for vacationing, but also for growing technology companies
- Increasing the availability of venture and angel capital in Metro Orlando
- Educating the region's private and public resources (e.g. banks, law firms, and government) about meeting the needs of start-up companies
- Educating the workforce about technology venturing
- Recruiting and retaining technical talent, senior and mid-level managers, and entrepreneurs
- Networking the region's entrepreneurial academic, business and government assets to a common goal of increasing homegrown businesses

Recommendations for accelerating technology-based entrepreneurship are offered:

**Strengthen regional collaboration between the public and private sectors.** Business, academic and government leaders should focus on the common goal of increasing entrepreneurship and celebrating local entrepreneurial successes by sharing information and cooperating on joint entrepreneurship initiatives.

**Build and celebrate spectacular entrepreneurial successes.** Successful homegrown businesses should be promoted regionally, nationally, and globally. These companies will not only serve as inspiration to aspiring entrepreneurs but also will recruit entrepreneurial talent and support structures to Metro Orlando.

**Expand and build education and research programs centered on technology commercialization and entrepreneurship.** Metro Orlando business, academic, and government leaders should lobby for the resources needed to make the University of Central Florida (UCF) a Research I Facility. Organize a new Technology Transfer, Commercialization, and Entrepreneurship Center at UCF.

**Dedicate as many economic development resources to entrepreneurship as business recruitment and retention.** Both the public and private sectors should be committed to fostering entrepreneurship, as well as recruiting the best and brightest talent to Metro Orlando.

**Enhance and identify venture, angel, and other sources of capital.** Develop training programs for angel investors or leverage resources of MILCOM or CFIC to assist local investors with performing due diligence. Educate local banks and other professionals about the unique needs of entrepreneurs.

**Develop and retain a globally competitive workforce.**

Enhance the perception of Metro Orlando as a technology-rich community to attract both companies and new workers.

Supplement existing higher education programs with more non-degree training and continuing education.

**Enhance Internet connectivity and bandwidth.** Dedicate economic development resources and lobby state support for building a Network Access Point (NAP) or Internet Exchange in the Metro Orlando area. **A high speed infrastructure is critical to enabling Metro Orlando in attracting its target industries.**

**Following these recommendations will lead to Metro Orlando becoming a national center for technology-based wealth and job creation.** (Action items for the recommendations described above are included in detail in the Part Two report.)

## **Part Three: Semiconductor Site Assessment**

A semiconductor manufacturer has significant, long-term impact on an economy. With initial investment of up to \$2 billion, recruiting these facilities has become a fierce battle among economic development organizations worldwide. Communities that understand and prepare for the demands of these facilities prior to recruiting semiconductor manufacturers have a competitive advantage. Economic development organizations must ensure that semiconductor-friendly incentives are available, permitting processes are fast and easy, and adequate land and infrastructure is ready.

Part Three examines how prepared Metro Orlando is to recruit another semiconductor manufacturer. It looks at the region's existing industry and demographics and compares them to the requirements of a semiconductor company.

- Metro Orlando's **existing semiconductor industry employs 2,600 workers in 18 companies**
- An average manufacturing facility employs between **900 and 1200 workers**
- Manufacturers need a **minimum of 150 acres** of land
- Semiconductor sites require transportation access from at least **2 major roadways**
- Sites must be situated a minimum of 1 mile away from overhead power lines and rail lines
- Residential areas must be at least 1-2 miles from the site

# METRO ORLANDO TECHNOLOGY STRATEGY

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- Manufacturing facilities require a subsoil of bedrock or sand
- Facilities require access to high capacity electric, water, waste water, and gas

Greenfield sites in Metro Orlando were examined by semiconductor construction and design firm M+W Zander. Based on the criteria described above, M+W Zander identified two sites in the region that are well suited for marketing to semiconductor manufacturers: International Corporate Park and Lake Nona.

How competitive is Metro Orlando? The region has already gained the experience of recruiting and expanding Cirent Semiconductor. Labor in the region is more abundant and less costly than many other semiconductor regions. Several quality sites are currently available for a manufacturer to begin building. Many public sector roles in bringing the industry to Orlando are well-defined and able to meet the stringent time demands of these companies.

The top recommendation emerging from Part Three is that **Metro Orlando should consider creating an inducement package tailored specifically for semiconductor manufacturers.** To prepare customized incentives packages for this industry, the community should understand what inducements are offered by other regions. In addition, Metro Orlando should examine the economic impacts generated by

Cirent Semiconductor's local operations, and use those figures to educate the community about the benefits of the industry.

Metro Orlando leaders should cooperate with landowners of top semiconductor sites. Together, landowners and public sector organizations should prepare these properties for showcasing and marketing to semiconductor companies. Information about top sites should be made available on the City, County, and EDC's web sites.

The semiconductor site assessment was completed specifically for Orange County, although additional sites outside of Orange County were surveyed. It is believed that there are other semiconductor sites available in Volusia, Brevard, Seminole, Osceola and Lake counties. Each county is encouraged to use this assessment to determine all viable semiconductor sites in their respective counties. These sites should be shovel-ready and marketed by the Florida High Tech Corridor Council and Enterprise Florida.

## **Part Four: Marketing High Tech Metro Orlando**

Parts One, Two, and Three lay the groundwork for Metro Orlando's future marketing efforts. The final element of the technology strategy contains guidelines for preparing the region internally for marketing and tailoring Metro Orlando's promotional activities to its target audiences. If successful, branding and marketing activities will:

# METRO ORLANDO TECHNOLOGY STRATEGY

- Unite Metro Orlando behind a single marketing message
- Establish the image of Metro Orlando as a high tech region
- Maintain a “top of mind” awareness of Metro Orlando as part of a considered set of options when companies make site selection decisions
- Result in more high tech companies locating in Metro Orlando

Changing the perception of Metro Orlando into a top location for both tourism and technology is the primary goal of marketing activities. Part Four reveals three main factors currently slowing the region’s ability to distribute its technology marketing message. Though several organizations in the region have begun technology-marketing campaigns, marketing messages are disjointed. One of the region’s most marketable assets, the University of Central Florida, is not being marketed to its full

extent. Finally, the local entertainment industry is not being leveraged enough to help spread Metro Orlando’s technology message.

The audience for Metro Orlando’s marketing message includes: (1) the target companies identified in Part One; (2) business influencers and service providers; (3) skilled workers; and (4) technology entrepreneurs. Part Four concludes with a series of marketing recommendations designed to distribute the marketing message to Metro Orlando’s four target audiences:

**Develop a single message and brand** for all public and private constituents to market. For the purposes of this report, “TechOrlando” is the recommended brand with the theme “Access Imagination” carrying throughout all marketing activities.



**Engage in internal marketing** and receive community-wide support prior to launching the marketing campaign.

**Use “grass roots” efforts locally to assist in organizing and funding marketing**, including private sector volunteers, students, or donations for expanding companies.

Utilize **six tools for selling “TechOrlando”** to the four target audiences:

- 1. Develop and market one single web site**  
(e.g. [www.techorlando.com](http://www.techorlando.com)) for promoting Metro Orlando. The web site should contain a database of high tech companies in Metro Orlando; economic and industry information; a job bank of technology jobs in the region; and a wire service for distributing technology industry news.
- 2. Develop a database of target industry publications** for the on-line news wire service.
- 3. Attend, exhibit at, and sponsor target industry events;** recruit these events to Metro Orlando.
- 4. Become active members of target industry trade associations.**

**5. Schedule trade missions** to regions with high concentrations of the target audiences.

**6. Maintain a consistent image and message** throughout all collateral (print and electronic).

Though Metro Orlando may be one of the most highly marketed regions in the world, the current message is not targeted to high tech companies. Awareness of the region is high. **The image of Metro Orlando, however, is not one of technology but of a prime vacation destination.** It is this image that must be changed through tactical marketing.

The region’s top concern is perception. Metro Orlando compares favorably with the nation’s top technology regions. Its technology sector is well-developed and contains 4,700 companies. The region has generated several entrepreneurial successes, and is awaiting more in the near future. Metro Orlando has adequate sites and infrastructure for supporting large technology manufacturers.

Enhancing the world’s perception of Metro Orlando as a technology destination will require ongoing cooperation between businesses, academia, and public entities. The role of economic development leaders is to oversee the implementation of the strategy and ensure that all technology marketing efforts are communicating the same message.