

Central Florida Cluster Study: *Industry Cluster Assessment & Selection*

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Executive Summary



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Introduction

Polk County and Central Florida have witnessed significant economic and demographic shifts over the last two decades. Following a series of adverse developments – including a downturn in the phosphate industry, several citrus crop freezes, and the closure of the Piper Aircraft manufacturing facility in Lakeland – Polk County has undertaken a series of initiatives to diversify its economic base. In recent years, the county has experienced a shift in employment toward higher-skilled and higher wage industries, while migrating away from traditional sectors such as agriculture and natural resources. Simultaneously, the county has seen continued population growth, steady growth in business establishments, and a significant drop in unemployment over the long term.

In support of its efforts for continued industry diversification and sustained economic growth, the Central Florida Development Council (CFDC), a public-private partnership charged with improving the county's economic performance and prospects, contracted SRI International to conduct a research assignment to provide a foundation of information and analysis upon which to build sustainable cluster development strategies. This Executive Summary outlines the target cluster selection process and key findings of the cluster research and analysis.

Target Cluster Selection Process

To determine a short-list of potential target clusters for Polk County, the SRI team followed a rigorous and systematic screening methodology, summarized in the following diagram.

SRI Target Cluster Screening Framework For Polk County	
1 	Industry Cluster Overview: Polk County & Central Florida <ul style="list-style-type: none"> Analysis of the twenty-five industry clusters that comprise the economy in Polk County and Hardee, Highlands, Hillsborough and Orange counties.
2 	Short-List Of Potential Target Clusters For Polk County <ul style="list-style-type: none"> All twenty-five clusters were subjected to a set of screening criteria (growth potential, critical mass, wage/skill levels, high-potential niches, and regional interest) and a short-list of seven potential target clusters was developed.
3 	In-Depth Analysis Of Potential Target Clusters <ul style="list-style-type: none"> The seven short-listed clusters were assessed in more detail, focusing on regional assets supporting cluster development, national and global market trends, regional synergies, and the cluster's potential for regional economic diversification and transformation.
4 	Selection Of Target Clusters For Polk County <ul style="list-style-type: none"> CFDC, in consultation with its board of directors and private sector stakeholders, will select and prioritize four high-potential target clusters, with the expectation that the council will concentrate efforts and resources on developing and implementing strategies for the top two clusters.

- 1) **Industry Cluster Overview:** The assessment began with an analysis of the twenty-five industry clusters that comprise the Polk County economy. Key cluster trends – including employment, employment concentration, wages, and growth rates – were analyzed at county, regional,

and national levels, in order to gauge the overall trajectory and key indicators for these clusters in recent years (Q4 2003 to Q3 2007 is the period that was analyzed).

2) Screening and Short-List of Potential Target Clusters: SRI developed a short-list of seven potential target clusters for further assessment based on the following screening criteria:

- The cluster has demonstrated growth potential,
- The cluster has a solid or established economic base in Polk County upon which to build,
- The cluster has a solid or established economic base in Central Florida,
- The cluster offers the potential for economic diversification into higher-skill and higher-wage industries,
- The cluster has high-potential sub-clusters or niche areas that have demonstrated strong growth potential in Polk County or nationwide, high wages and skill levels, and an existing critical mass in Polk County, and
- The CFDC and Polk County have already demonstrated interest in the cluster.

Based on these criteria, the seven clusters selected for further analysis include:

- Life Sciences & Medical Services
- Business Services
- Financial Services
- Logistics & Supply Chain Management
- Construction & Real Estate
- Research & Engineering Services
- Agriculture & Agribusiness

The results of the screening process leading to the identification of these seven clusters are presented in the table on the following page. The reasons underlying the selection of these seven clusters are outlined below and on the page following the table.

- **Life Sciences & Medical Services** was selected as a potential target cluster because it meets all of the selection criteria. The cluster employs approximately 21,100 people in Polk County, has a concentration ratio of 1.0, and has been growing at a rapid rate of 11.7% annually. In the Central Florida region, the cluster employs 146,485 workers, has a concentration ratio just below the national average (0.9), and has been growing at 8.4% annually. U.S. growth trends (1.9% annual growth) are also positive. Polk County's existing cluster is focused almost exclusively on the *Health & Medical Services* sub-cluster – the county has little to no employment in *Pharmaceuticals* and *Medical Equipment*.
- **Business Services** has demonstrated strong annual employment growth rates both in Polk County (10.7%) and nationwide (1.7%). In particular, two sub-clusters – *Management & Administrative Services* and *Direct Sales & Call Centers* – have strong growth trends. The cluster currently employs 22,579 workers in Polk County and has an employment concentration of 1.5. Throughout the broader Central Florida region, the cluster employs 187,095 people and has a concentration ratio of 1.6. The only selection criteria not met by this cluster is “high wages,” but average wages for the cluster in Q3 2007 are only about 6% below the overall average for the county (and typical wages for some sub-clusters and occupations within the cluster are also above average).

Target Cluster Decision Matrix										
	Growth Potential		Critical Mass in Polk County		Critical Mass in Central FL Region		High-Skill/High-Wage		Local Factors	
	Avg. Ann. Emp. Growth In Polk County >4%	Avg. Ann. Emp. Growth In U.S. >1.5%	Emply. Conc. Ratio At Or Above 1.0	Employment >5,000	Emply. Conc. Ratio At Or Above 0.9	Employment >35,000	Wages 5%+ Greater Than Polk County Average	High Industry Skill Level	High-Potential / High-Growth Sub-Clusters	Currently Targeted Cluster
Life Sciences & Medical Services	X	X	X	X	X	X	X	X	X	X
Business Services	X	X	X	X	X	X		X	X	X
Financial Services	X		X	X	X	X	X	X	X	X
Logistics & Supply Chain Management	X	X	X	X	X	X			X	X
Construct. & Real Estate	X	X	X	X	X	X	X		X	
Research & Engin. Ser.	X	X			X	X	X	X	X	X
Agriculture & Agribus.		X	X	X	X		X		X	X
Wholesale Trade		X		X	X	X	X	X	X	
IT Services		X			X		X	X	X	X
Energy & Environment	X	X					X		X	X
Education & Government	X		X	X		X		X		
Tourism	X	X		X	X	X				
General Services	X	X		X		X		X		
Retail Trade	X		X	X	X	X				
Aerospace, Defense, & National Security	X						X	X		X
Electronics	X						X	X		X
Materials & Chemicals			X	X			X			X
Paper & Paper Products	X		X				X			
Automotive & Transportation Mfg.	X							X		X
Telecommunications							X	X		X
Media & Design Services							X	X	X	
Utilities & Waste Mgmt.	X	X								
Industrial & Commercial Equipment Mfg.							X			X
Wood & Furniture			X							
Textiles & Apparel										

- **Financial Services** meets all the selection criteria except for nationwide growth rates (U.S. employment has been growing by only 0.6% annually). The cluster offers wages that are 38% higher than the average wage rate for Polk County, and it employs 8,355 workers (employment concentration ratio of 1.0). Within the larger five-county region, this cluster employs 74,576 workers and has a concentration ratio of 1.2.
- **Logistics & Supply Chain Management** has Polk County's highest employment concentration ratio (2.0), and it also has the second highest annual growth rate (13.6%) in the county. The *Ground Freight Transportation* and *Logistics & Warehousing* sub-clusters have been growing especially rapidly in Polk County, and these two sub-clusters represent the bulk of the cluster's overall employment (approximately 10,880). Looking at all five counties in Central Florida, the cluster's employment size is 37,692, its employment concentration ratio is 0.9, and its annual growth rate is 6.2%. This cluster meets all the selection criteria except for its wages and skill level, but the cluster's wages are actually about 3% greater than the average county wage in Q3 2007. Additionally, some of the fastest-growing occupations and niches within this cluster actually have very high skill levels, which are not reflected in the skill level for the overall cluster.
- **Construction & Real Estate** shows strong results across most of the screening criteria, but is not currently being targeted by Polk County as a high-potential cluster. This cluster employs 17,564 workers in the county (employment concentration of 1.1), and has been growing at 9.8% annually in the county and 3.8% nationwide. Throughout Central Florida, the cluster employs 133,339 people (employment concentration of 1.1), and it has been growing at 7.7% annually. However, the strong growth within this cluster may be partially attributed to the spike in construction activity in 2004-2006 resulting from severe hurricane damage in the Central Florida region. Within this cluster, the *Construction Services* sub-cluster comprises the majority of employment in Polk County, has demonstrated the strongest growth rates, and has above-average wage levels.
- **Research & Engineering Services** meets all of the selection criteria except for two (employment concentration and employment size). Although the cluster does not have a strong critical mass in Polk County – it currently employs only 2,717 workers and has a concentration ratio of 0.6 – it has been growing at a rapid rate of 14.4% annually in the county. In addition, this cluster is very strong in the broader Central Florida region, with 43,035 workers, a concentration ratio of 1.3, and a regional growth rate of 14.1% annually. *Research & Engineering Services* encompasses a wide variety of different and amorphous activities that feed into and support other clusters. Therefore, the SRI team decided to short-list this cluster in combination with three other mid-ranking clusters that encompass related “high-tech” activities: *IT Services*; *Aerospace, Defense, & National Security*; and *Electronics*. Since none of these “high-tech” clusters have a strong critical mass in Polk County right now (as compared to the other six potential target clusters), the idea is to look for opportunities for Polk County to nurture these burgeoning industries and/or tap into opportunities presented by the strong presence of high-tech and R&D activities in the nearby Tampa and Orlando regions.
- Although **Agriculture & Agribusiness** has not shown strong growth trends overall, several sub-clusters offer strong growth trends, high-wages, strong critical mass and local interest,

and overall good potential for Polk County. These sub-clusters include: *Food Processing, Agriculture-Related Equipment, and Flavorings/Essences/Fragrances.*

3) In-Depth Analysis of Potential Target Clusters: The seven clusters that met the initial screening criteria were subjected to additional review and analysis. SRI's in-depth analysis of the seven clusters, combined with qualitative perspectives gathered through in-person and telephone interviews with approximately 45 Polk County stakeholders, is summarized below. The four screening criteria included in this round of assessment are:

- National market trends and forecasts support future growth prospects for the cluster.
- Polk County and the surrounding region offer foundational assets to support further development of the cluster into high growth and high value-added niches, including existing core companies and/or research institutions; existing infrastructure or workforce assets; and/or existing research, publication, or patenting activity.
- The cluster can build off of and respond to synergies with existing industry strengths in the surrounding counties.
- The cluster offers potential for development across both rural and urban areas of Polk County, to encourage economic diversification and transformation throughout the region.

The following table summarizes key findings related to the seven potential target clusters.

Summary of Key Findings for Potential Target Clusters	
Life Sciences & Medical Services	<ul style="list-style-type: none"> • <i>Life Sciences & Medical Services</i> is forecasted to experience continued growth through 2013, with particularly strong expansion in medical specialties. The pathways of Polk County's medical centers mirror this U.S. trend, a factor that bolsters cluster prospects. • Polk County has a strong, growing concentration of <i>Life Sciences & Medical Services</i> employment (concentration at 1.013), a characteristic that is shared by the five-county Central Florida region, which has an employment concentration of 0.912. • The five counties – particularly Hillsborough, Polk, and Orange Counties – boast institutional and research assets that could support cluster expansion and innovation.
Business Services	<ul style="list-style-type: none"> • Market trends indicate continued growth in <i>Business Services</i>, with growth generally slightly below or keeping pace with overall GDP growth. Within the <i>Business Services</i> industry, office staffing and temporary agencies are anticipated to experience higher growth rates, at about 3.0% annually, for the next five years. • Polk County and several neighboring counties enjoy strong employment in several business services categories, indicating an existing area of economic strength and potential base for attracting additional employers. • Though stakeholders recognized the <i>Business Services</i> cluster as providing significant employment in the county, few considered it an important target for future growth, mainly because wages (especially at call centers) were viewed as relatively low.
Financial Services	<ul style="list-style-type: none"> • Declining employment growth trends, high competition, the cluster's overall maturity, the subprime mortgage crisis, and broader uncertainties in the financial sector point to a difficult national and global environment for this industry, all of which should be weighed carefully prior to investing in efforts to expand this cluster in the county. • Population growth, rather than by inherent regional advantages, may be driving <i>Financial Services</i> growth in Polk County and Central Florida. • In Polk County, back-office financial services may represent one niche for future growth, given the existing base of employers and regional circumstances (e.g., physical constraints to growth within Hillsborough County).

Summary of Key Findings for Potential Target Clusters

<p>Logistics & Supply Chain Management</p>	<ul style="list-style-type: none"> • Logistics and supply chain management are central to today's global economy and, therefore, the industry is and will continue to be fast-growing. • Substantial opportunities abound for Central Florida in the four main carrier segments (rail, air, sea, and truck), in support areas such as 3PL and call centers, and, to a lesser extent (because lower growth is expected nationally) in trade agents and brokers. • Polk County's existing employment structure and commercial and academic institutions particularly support transportation and logistics expansion in the rail and truck segments, as well as in high-end logistics functions (through the combined presence of major retailers and of skilled graduates of the Supply Chain Management Institute). • Concerns about the cluster include the land requirements of the warehouse component of the cluster and the existence of a misperception (i.e., that cluster wages are low). Further development of the cluster would need to address these challenges, e.g., by directing efforts toward higher technology and higher value segments.
<p>Construction & Real Estate</p>	<ul style="list-style-type: none"> • <i>Construction & Real Estate</i> does not appear to be the most advantageous investment target for Central Florida. The sector has been in decline over the last couple of years and, despite recent innovations in "green building," firms in the industry are grappling with fluctuating raw materials prices and an inhospitable macroeconomic climate. • Recent growth and mostly high employment concentration ratios in <i>Construction & Real Estate</i> in Central Florida are inextricably tied to the overall population growth that the region has experienced, as well as a post-hurricane rebuilding boom in 2004-2006. Thus, the cluster's fortunes can be anticipated to wax and wane with overall fluctuations in population as well as weather conditions and natural disasters, rather than be expected to respond to targeted cluster support activities. • Initiatives to support the construction and real estate cluster present challenges because the industry's fortunes are so dependent on uncontrollable forces, e.g., the overall economy, interest rates, and the climate.
<p>Research & Engineering Services and Other High-Tech Industries</p>	<ul style="list-style-type: none"> • High employment growth rates in <i>Research & Engineering and High-Tech</i> provide a basis for optimism about technology-based economic development in the region, and national trends are generally positive, with all sub-sectors (except the <i>Electronics</i> cluster) expected to grow at rates outpacing GDP growth for the next five years. • Because Polk County lacks strong critical mass in <i>Research & Engineering and High-Tech</i> companies and workers and does not currently have a research-oriented academic institution, a strategic focus on high-tech sectors may offer a lower return on investment (in terms of employment creation) in the near future as compared to other industries. • The greatest opportunities for building high-tech and R&D-oriented activities will likely be found in technology-oriented niches that spin out of existing industry strengths or their areas of intersection. • The breadth of the <i>Research & Engineering and High-Tech</i> industry as it is defined in this report does not typically lend itself to targeted development strategies, but it would be possible for niche-oriented strategies to be created.

Summary of Key Findings for Potential Target Clusters

Agriculture & Agribusiness

- U.S. industry trends in *Agriculture & Agribusiness* are not encouraging, except for the flavorings production sub-cluster, in which revenue growth is forecasted to exceed GDP growth for the next five years.
- Mirroring general national trends, Polk County also has experienced substantial declines in *Agriculture & Agribusiness* employment, although companies in the higher-value niche of flavorings, essences, and fragrances are operating in the county.
- Polk County and Central Florida R&D institutions conduct some research that could support advancement of the flavorings, essences, and fragrances sub-cluster. However, opportunities for public-private collaboration in this area are likely to be low due to the competitive nature of the industry and the companies that operate within it.

- 4) **Selection of Target Clusters for Polk County:** The SRI team recommends that the CFDC select up to four best-potential target clusters as an initial focus for competitiveness enhancement and investment promotion efforts. The selected clusters should offer significant market growth opportunities, and the region should offer sufficient strengths to underpin their development. To define future CFDC activities, SRI also recommends that CFDC work with its board and other stakeholders to rank the top four clusters in order of priority. Once the clusters are prioritized, targeted cluster development strategies can be developed for the top two clusters as an initial focused effort for cluster enhancement and promotion.

Key Findings from the Industry Cluster Analysis

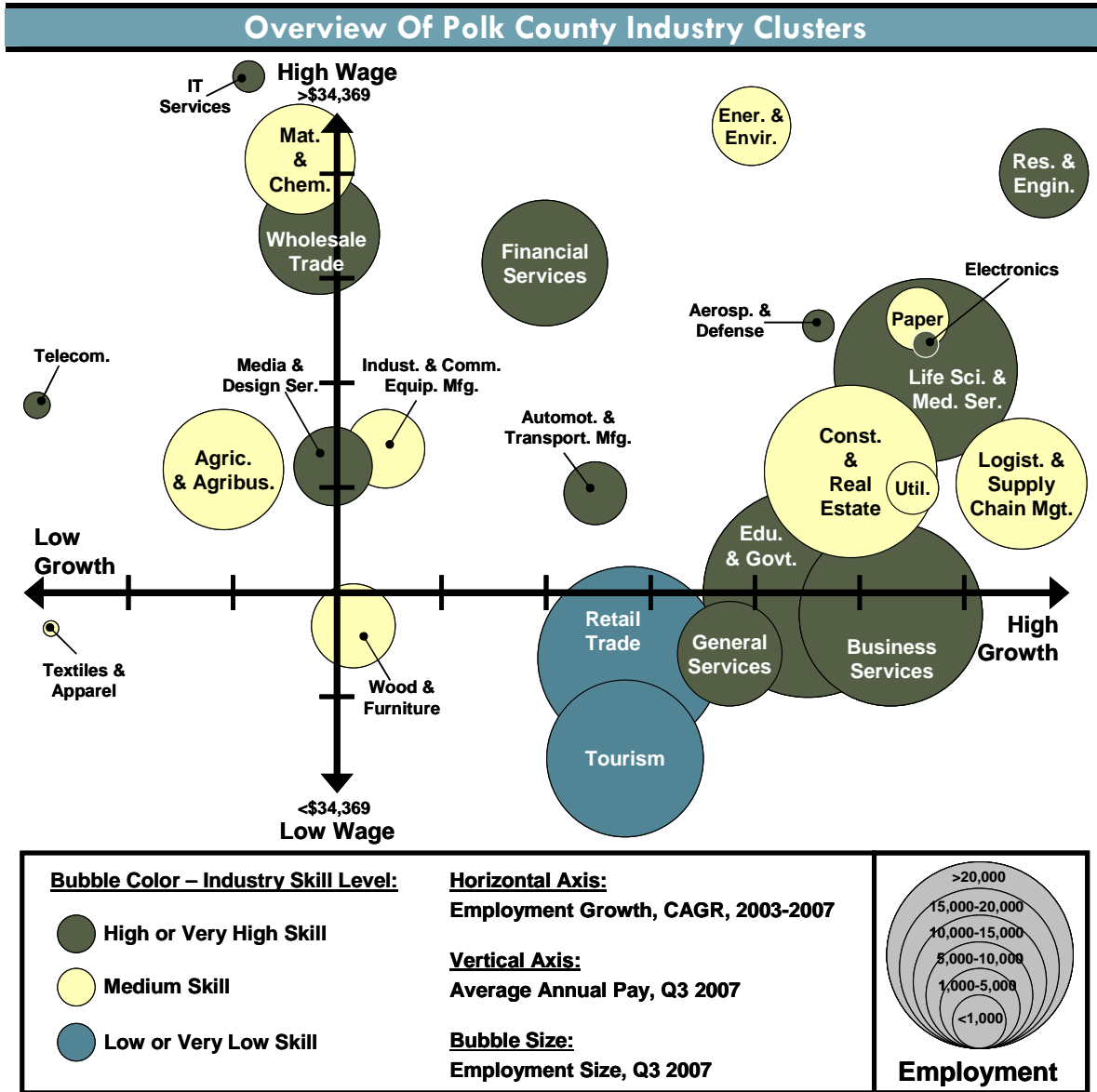
Polk County

Polk County's economic structure has moved away from traditional industries such as agriculture and natural resources, and higher-wage/higher-skill service-based industries have become more predominant employers. The following bubble chart provides a snapshot of trends in Polk County's twenty-five industry clusters. The key elements of the bubble chart include:

- The size of each industry cluster's "bubble" represents employment size cluster in Q3 2007.
- The color of each bubble represents whether that cluster is classified as high-skill (green), medium-skill (yellow), or low-skill (blue).
- The horizontal axis depicts employment growth expressed as a compound annual growth rate (CAGR) from Q4 2003 to Q3 2007. Clusters to the right of the midpoint have a positive employment CAGR; those to the left of the midpoint have a negative employment CAGR.
- The vertical axis represents average annual pay in Q3 2007. Industries above the midpoint have an average annual pay that is greater than Polk County's overall average (\$34,369); those below the midpoint have average annual pay levels falling below the county average.
- Thus, the industries that fall in the first quadrant (upper right-hand side) are "higher-wage/higher-growth" (e.g., *Life Sciences & Medical Services, Logistics & Supply Chain Management, Research & Engineering Services, Financial Services, Construction & Real Estate, and Energy & Environment, etc.*), and the industries that fall in the third quadrant (lower left-hand side) are "lower-wage/lower-growth" (e.g., *Textiles & Apparel*).

As demonstrated in the chart, *Education & Government* and *Business Services*, both high-skill and high-growth clusters, are the largest employer clusters in Polk County, followed by *Retail Trade*,

Life Sciences & Medical Services, and Construction & Real Estate. Together, these five clusters account for over 112,100 jobs, or 60% of the county's total employment. Industries with high employment concentrations in Polk County relative to the nation include Logistics & Supply Chain Management, Agriculture & Agribusiness, Business Services, Paper, and Materials & Chemicals.



Overall, Polk County's economy is dominated by **service industries**.

- Seven out of the county's ten largest industry clusters are service industries.
- Over 71% of the county's total jobs and 74% of total establishments were in services.
- Employment growth in these sectors has been strong, with a CAGR in employment of 7.9%.
- The average annual pay for service clusters in Polk County was \$30,957 in Q3 2007, slightly below the average annual pay for all workers in the county (\$34,369).

- The largest service clusters are a mix of higher-wage, higher-skill jobs and low-wage, low-skill jobs.
 - *Education & Government, Business Services, and Construction & Real Estate, and Logistics & Supply Chain Management* all offer relatively high-skilled jobs and/or wages that are near or above the average for the county.
 - At the other end of the spectrum are *Retail Trade* and *Tourism*, with lower skill levels, below average wages, and slightly slower growth rates (5.6% and 5.4%, respectively).

Knowledge- and technology-based industries represent a sizeable and increasing share of employment in Polk County.

- Knowledge- and technology-based industries employ about 19% of the region's total workforce and also represent about 19% of its establishments.
- These sectors are dominated by employment in *Life Sciences & Medical Services* and *Financial Services*, followed by *Research & Engineering Services*.
- Knowledge- and technology based industries have been growing rapidly in Polk County, with a CAGR for employment of 8.0% from Q4 2003 to Q3 2007.
- Knowledge- and technology-based clusters also offer the highest pay levels, with an average annual salary of \$43,289 in Polk County in Q3 2007 (over 25% higher than the average pay rate for the county as a whole).

Traditional and manufacturing industries are a small and shrinking portion of the county's economy.

- These sectors account for only 7% of the county's establishments and 10% of employment.
- Employment levels were declining by -5.1% annually from Q4 2003 to Q3 2007.
- *Agriculture & Agribusiness* is Polk County's largest traditional cluster, followed by *Materials & Chemicals*.

Hardee, Highlands, Hillsborough, and Orange Counties

Hardee, Highlands, Hillsborough and Orange counties tend to show strengths across a common set of clusters: *Business Services, Education & Government, Construction & Real Estate, Tourism, Life Sciences & Medical Services, Financial Services, Retail Trade, Wholesale Trade, and General Services*. *Agriculture & Agribusiness* is still a major employer in Hardee and Highlands counties, while *Research & Engineering Services* shows strong growth in Hillsborough and Orange counties.

- **Hardee County's** economy is more heavily concentrated in the traditional and manufacturing industries as compared to Polk County and other counties in the Central Florida region.
- The overall composition of industries in **Highlands County** is similar to that of Polk County, with 67% of employment in services, 22% in knowledge- and technology-based industries, and 11% in traditional and manufacturing industries.
- **Hillsborough County**, the second largest among the five counties assessed in this report (with 591,068 workers employed) also has a very strong focus on service industries (at 67% of employment) and knowledge- and technology-based industries (at 27% of employment).
- The largest of the five counties, with 625,557 workers, **Orange County's** economy is almost exclusively focused on services (at 76% of jobs) and knowledge- and technology-based industries (at 21% of jobs).