The **Economy** of the
Tampa Innovation Alliance District

SEPTEMBER 2015

Tampa
Innovation
Alliance ™

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Executive Summary

The Tampa Innovation District consists of a region surrounding the University of South Florida's Tampa campus, and encompasses an economic footprint that includes six different zip codes. Today, 1 in 6 jobs the Tampa Innovation District are "high tech" – roughly 11,800 technology jobs.

Leaders of the new Tampa Innovation Alliance believe that these jobs are just the "tip of the iceberg", and that the true growth and economic potential of the District can be nurtured with smart planning, smart investment, smart cooperation, and a sustained focus.

By leveraging the top research strengths of the University of South Florida and building an innovation-friendly corporate and employment environment, the Tampa Innovation Alliance believes it can double the current high-tech employment in the district and create an economic powerhouse that each year will generate more than **$11.3 billion in local sales impact** and support more than **58,000 direct, induced, and indirect jobs** in the District.

The objective of this report is to provide an economic and innovation framework for the planning of the Tampa Innovation District. The report will start by providing a geographic and economic definition of the Tampa Innovation District which can be used for economic analysis and benchmarking. It will include an overview of the current employment and industry makeup of the district, as a "starting point" for comparison against growth and change. It will provide profiles of the District's largest employers, who will be the partners and stakeholders for building a technology future in the District.

This report will then benchmark the region on key innovation clusters – biosciences and cybersecurity – against other metropolitan areas across the United States. Finally it will establish a performance goal for the Tampa Innovation Alliance to accomplish over the next ten years, and describe the impact that achievement of that goal will have on the Tampa Innovation District's economy.

Defining the District

Defining the District

Geographically, the TIA district is bounded by I-275 and I-75 on the West and East, and from Bearss/ Bruce B. Downs Boulevard on the North to Busch Boulevard on the South. These boundaries will serve as the basis for future development and planning activities for the District.

Unfortunately, these boundaries do not match any existing political, census, municipal, or other economic area definitions. For purposes of economic research, the closest definition of the District must combine several zip codes that fall completely or partially within the defined geography. The resulting geography definition is larger than the official district boundaries, but should provide the most representative and feasible definition of the District's economy for analytical purposes. We'll refer to this as the "District Economic Area", and we will use it to mine federal employment and economic data to better understand the region.
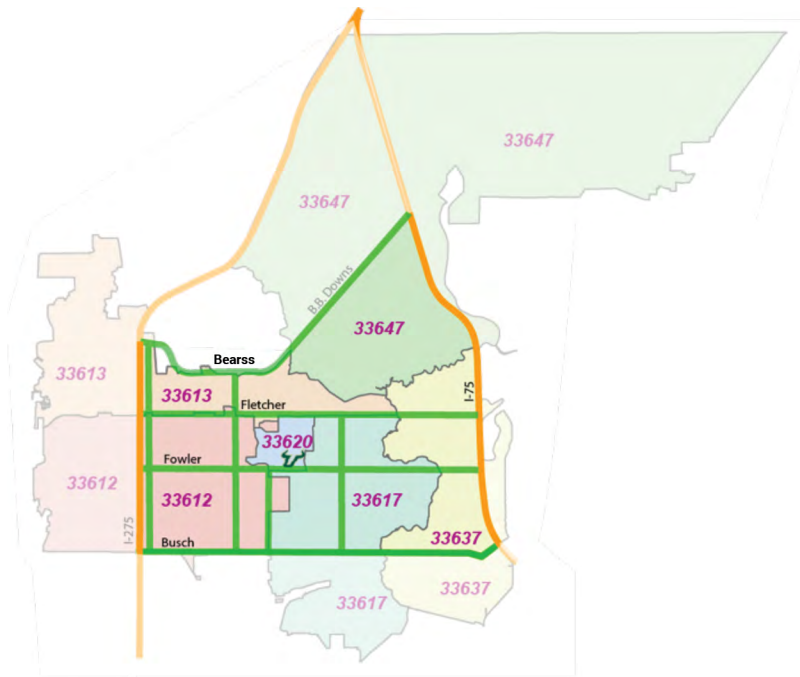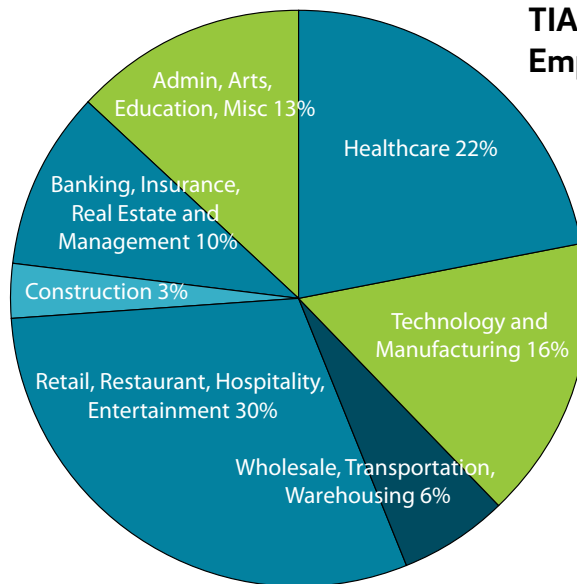
In the above picture, the "core" District geographic boundaries are in bold, while the included zip code areas that lay outside the "core" area are shown but shaded. The District Economic Area's zip codes include 33612, 33613, 33617, 33620, 33637, and 33647.

The Economy of the District Today

As defined above, the District supported more than 74,000 jobs across multiple industries as of 2012 (the most recent data year available)[1]. The greatest employment sectors are in healthcare (16,000 jobs), retail (9,794 jobs), food and restaurant (8,708 jobs), and finance/ insurance jobs (5,071 jobs).

Technology companies currently make up only a minority of District employment. Combining "professional, scientific, and technical services", "information", and "manufacturing", we are shown that there are approximately 11,807 tech jobs – roughly 1 job in 6 jobs and 1 in 3 businesses in the District are in technology-related sectors.

TIA District Employment

- Healthcare 22%
- Technology and Manufacturing 16%
- Wholesale, Transportation, Warehousing 6%
- Retail, Restaurant, Hospitality, Entertainment 30%
- Construction 3%
- Banking, Insurance, Real Estate and Management 10%
- Admin, Arts, Education, Misc 13%

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1   Source: US County Business Patterns, 2012.

Sector Breakdown:

	Sector	Employees	Establishments
62	**Health Care and Social Assistance**	**16,525**	**607**
44	Retail Trade	9,794	691
72	Accommodation and Food Services	8,708	374
52	Finance and Insurance	5,071	270
54	**Professional, Scientific, and Technical Services**	**5,065**	**582**
56	Administrative and Support and Waste Management and Remediation Services	4,414	205
51	**Information**	**4,405**	**69**
42	Wholesale Trade	3,689	206
71	Arts, Entertainment, and Recreation	3,570	64
61	Educational Services	2,685	72
81	Other Services (except Public Administration)	2,608	339
31	**Manufacturing**	**2,337**	**61**
23	Construction	2,293	260
53	Real Estate and Rental and Leasing	1,267	238
55	Management of Companies and Enterprises	953	18
48	Transportation and Warehousing	728	49
	Total (all employment)	**74,112**	**4,105**
	Total (high tech employment only)	**11,807**	**1,319**

A Closer Look at Local Technology Companies

As shown in the following chart, ¾ of technology jobs currently in the district are in companies with 1 to 4 employees – many of which are freelancers and self-employed. There are a handful of small companies (5-25 employees), and only a very small number of technology companies with more than a thousand employees (for example, Verizon).

District Techology Companies by Employment Size

- 100-249 1%
- 1,000+ 1%
- 50-99 1%
- 20-49 4%
- 10-19 7%
- 5-9 10%
- 1-4 76%
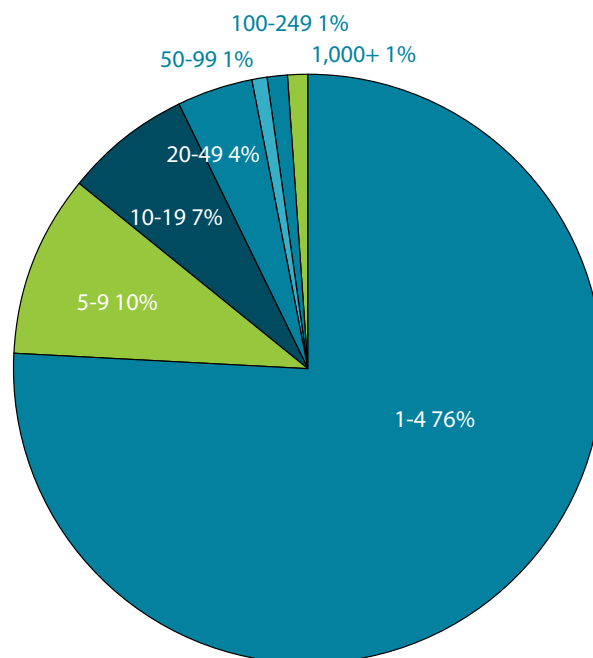
What Do These Statistics Mean?

Technology currently makes up a minority of employment in the District; the majority of employment is supported by secondary industries such as restaurants, retail stores, banking, and services. While secondary industries create jobs, they are not major economic drivers since they do not generally bring in money from outside of the economy's boundaries, and tend to grow or shrink based upon the size of the local population. Industries that attract customers from outside of the region are referred to as primary industries and are the most important components for the growth of any economy.

While there are some important exceptions, the great majority of technology companies that are in the District appear to consist of freelancers and self-employed workers, or companies with less than five employers. A growing technology sector will mean more opportunities for these small companies to grow. However, there may be very few local technology companies with sufficient resources to partner and invest in new programs and initiatives. These local companies may be the seeds for future growth, but significant resources for financing, customer/ purchase relationships, and other innovation business components may need to be attracted from outside of the District.

If efforts are successful to build a much stronger technology base in the District, employment will grow across all industries but fastest in Information Technology and Professional, Scientific, and Technical Services sectors. The overall average wage for the District in particular should increase significantly.

The Region's Leading Employers

The District's Largest Employers

As documented in the previous section, companies in the Tampa Innovation District constitute a wide spectrum of industry categories, and the largest employers in the area are no exception. Using company website data and commercial database sources[1], we've built brief economic profiles of the 20 companies which are the most prominent employers contributing to the area's economy. Collectively, they include healthcare, manufacturing, sales and marketing, education, entertainment, technology and professional services sectors.

For each of these employers, we have estimated their annual economic impact on the Tampa Innovation District's economy. These estimates were built using standard industry categories, estimated company employment, and the MIG Implan econometric software with the 2013 model year for Hillsborough County.

Accentia Health and Rehabilitation is a rehabilitation service provider. Formed in 2012, they have a staff of approximately 286 employees. Housed by Gulf Coast Health Care, operating 44 skilled nursing and assisted living centers throughout Florida, Accentia Health specialize in areas such as skin and wound care, tracheostomy and respiratory care, orthopedic care, restorative nursing and speech therapy. They are a 244 bed community with an annual revenue estimated to be around $5 million.

▶ Employment Impact (direct, indirect, and induced): 432 jobs

▶ Gross Regional Product (value add): $26.9 million

▶ Sales Impact (economic output): $44.1 million

AchieveGlobal Inc. provides consulting and training services to organizations worldwide with an expanded, all-inclusive approach for developing, managing and sustaining long-term customer relationships. Formed in 1973, the Tampa location has a staff of approximately 400 employees and their annual revenue from this location is estimated to be around $23.4 million. AchieveGlobal Inc. offers custom solutions from tailored public workshops to on-site programs to online learning solutions to top level executives. AchieveGlobal is a subsidiary of MHI Global companies based in Singapore.

▶ Employment Impact (direct, indirect, and induced): 545 jobs

▶ Gross Regional Product (value add): $26.1 million

▶ Sales Impact (economic output): $41.6 million

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1   InfoUSA and Hoovers (9/2015).

Acosta Sales & Marketing provides sales, marketing and retail merchandising solutions to consumer packaged goods companies and retailers. Founded in 1927, they have a staff of approximately 270 employees at the Tampa branch location. Over the years, they have grown from a local food broker to become the leading outsourced sales and marketing agency serving consumer packaged goods companies and retailers across the United States and Canada. Acosta Sales & Marketing are a proven resource for top retailers from coast to coast.

▶ Employment Impact (direct, indirect, and induced): 565 jobs

▶ Gross Regional Product (value add): $66.7 million

▶ Sales Impact (economic output): $103.3 million

Bausch & Lomb, Inc. is an optical goods manufacturer. Founded in 1991, they have a staff of approximately 450 employees. A division of Valeant Pharmaceuticals International, their annual revenue is estimated to be around $3 billion. Bausch & Lomb, Inc.'s core businesses include contact lenses and lens care products, ophthalmic surgical devices and instruments and ophthalmic pharmaceuticals.

▶ Employment Impact (direct, indirect, and induced): 1,169 jobs

▶ Gross Regional Product (value add): $150.4 million

▶ Sales Impact (economic output): $253.6 million

Busch Gardens (Blackrock/SeaWorld) is an animal theme park owned and operated by SeaWorld Entertainment. Opened in 1959, they have a staff of approximately 2,700 employees and their annual revenue is estimated to be around $1.5 billion. Through entertainment, Busch Gardens connects and cares for the natural world which also extends beyond their borders. The park offers guests a unique, up-close look at world-class animal care, from nutrition to X-rays to surgeries and more.

▶ Employment Impact (direct, indirect, and induced): 4,684 jobs

▶ Gross Regional Product (value add): $259.3 million

▶ Sales Impact (economic output): $492.7 million

Florida Hospital Tampa is a not-for-profit health care provider. Opened in 1968, the Fletcher Avenue location has a staff of approximately 2,500 employees and their annual revenue is estimated to be between $100 and 500 million. They offer leading-edge medicine in the Tampa Bay region. Florida Hospital Tampa offers expert care in key specialties including cardiovascular care, neurosciences, orthopaedics, women's health, cancer and surgical advancements with access to skilled surgeons utilizing minimally invasive and robotic-assisted procedures. Through their clinical research program, they apply the latest advancements in medical technology to medical treatments.

▶ Employment Impact (direct, indirect, and induced): 4,640 jobs

▶ Gross Regional Product (value add): $362.8 million

▶ Sales Impact (economic output): $637.0 million

H. Lee Moffitt Cancer Center is a not-for-profit cancer treatment and research center. Opened in 1986, they have a staff of approximately 4,500 employees and their annual revenue is estimated to be around $1.7 billion (more than $30.8 million dedicated to research). It is the third largest cancer center in the United States based on outpatient volume. Working in the areas of patient care, research and education, they are one of only 45 National Cancer Institute (NCI) designated cancer centers in the country and the only one based in Florida. NCI designation is the highest recognition of quality cancer research spanning population, basic and translational sciences.

 ▶ Employment Impact (direct, indirect, and induced): 7,423 jobs

 ▶ Gross Regional Product (value add): $580.6 million

 ▶ Sales Impact (economic output)[2]: $1.94 billion

Infocrossing Healthcare Services Inc. is an IT managed services provider specializing in selective outsourcing services supporting the mission-critical data center computing and business processing requirements of some of the world's leading companies - particularly in the healthcare sector. Originally incorporated in 1984 as Computer Outsourcing Services Inc., the company went public in 1993 and made several acquisitions of other information technology and software companies. Infocrossing was acquired by the India-based outsourced services WIPRO corporation in 2007. Infocrossing's Tampa division is estimated to support more than 230 employees and over $23 million in annual revenue.

 ▶ Employment Impact (direct, indirect, and induced): 716 jobs

 ▶ Gross Regional Product (value add): $80.0 million

 ▶ Sales Impact (economic output): $144.1 million

Leslie Controls, Inc. is a control valves and instrumentation manufacturer. Opened in 1987, they have a staff of approximately 250 employees at this subsidiary facility and their annual revenue is estimated to be between $20 and 50 million. Leslie Controls product lines have grown significantly since its founding and now include a wide variety of products to cover almost any need for power plants, processing and HVAC to Navy Ships.

 ▶ Employment Impact (direct, indirect, and induced): 549 jobs

 ▶ Gross Regional Product (value add): $59.1 million

 ▶ Sales Impact (economic output): $128.2 million

Nestlé Purina PetCare Company is a dog and cat food manufacturer. Formed in 2004, they have a local staff of approximately 250 sales representatives. As the pet care division of Nestlé S.A., the world's largest food company, they offer high-quality pet foods from sourcing ingredients to product packaging.

 ▶ Employment Impact (direct, indirect, and induced): 553 jobs

 ▶ Gross Regional Product (value add): $61.7 million

 ▶ Sales Impact (economic output): $95.7 million

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2   Source: H. Lee Moffitt Cancer and Research Center 2014 Annual Report

Pepsi Beverages Co is a wholesale beverage provider. Formed in 2007, their Tampa operations support a staff of approximately 300 employees. As one of the world's leading food and beverage companies, they have a global portfolio of diverse brands available in more than 200 countries and territories around the world.

▶ Employment Impact (direct, indirect, and induced): 953 jobs

▶ Gross Regional Product (value add): $107.5 million

▶ Sales Impact (economic output): $352.5 million

Robbins Manufacturing Company is a lumber treatment manufacturer. Founded in 1938, they have a staff of approximately 400 employees and their annual revenue is estimated to be amost $33 million. Family-owned Robbins Manufacturing Company produces enhanced wood products that lend strength and structure to construction projects of all types and sizes. They have a comprehensive selection of wood construction products for a variety of residential, commercial, agricultural and marine building applications.

▶ Employment Impact (direct, indirect, and induced): 992 jobs

▶ Gross Regional Product (value add): $143.0 million

▶ Sales Impact (economic output): $314.8 million

Shriners Hospitals for Children is a network of twenty-two non-profit medical facilities across North America. The first hospital in the system opened in 1922 and they have a staff of approximately 350 employees in Tampa. Their annual revenue is estimated to be more than $110 million. Shriners Hospitals for Children provides care for a wide range of pediatric orthopedic and neuro-musculoskeletal conditions with a skilled staff of surgeons, therapists, nurses and orthotists.

▶ Employment Impact (direct, indirect, and induced): 650 jobs

▶ Gross Regional Product (value add): $50.8 million

▶ Sales Impact (economic output): $89.2 million

Sypris Electronics, LLC is an integrated systems solutions provider. Opened in 1988, their Tampa location is a subsidiary with a staff of approximately 550 employees and an annual revenue estimated to be almost $36 million. With over 45 years of experience, Sypris Electronics develops, manufactures and integrates leading technologies into mission critical electronics systems with ruggedized electronic products, advanced engineering services and complete electronic manufacturing capabilities.

▶ Employment Impact (direct, indirect, and induced): 1,142 jobs

▶ Gross Regional Product (value add): $103.8 million

▶ Sales Impact (economic output): $272.1 million

Tampa Veterans Health Administration (James A. Haley Veterans' Hospital – JAHVH) is a health care service provider for veterans. Activated in 1972, they have a staff of approximately 2,600 employees. JAHVH is a tertiary care facility classified as a Clinical Referral Level 1 Facility and a teaching hospital, providing a full range of patient care services, with state-of-the-art technology as well as education and research.

- ▶ Employment Impact (direct, indirect, and induced): 4,825 jobs

- ▶ Gross Regional Product (value add): $337.4 million

- ▶ Sales Impact (economic output): $662.5 million

Time Customer Service is a global leader in the magazine industry for more than 25 years, Time Customer Service offers effective and turnkey subscription fulfillment services and is a full-service marketing partner offering digital, payment, e-commerce, marketing, strategy and data solutions. Time Customer Service supports more than 1,500 employees and $100 million in annual sales.

- ▶ Employment Impact (direct, indirect, and induced): 1,419 jobs

- ▶ Gross Regional Product (value add): $113.0 million

- ▶ Sales Impact (economic output): $187.7 million

University Of South Florids (USF) is a member institution of the State University System of Florida and a public research university. Founded in 1956, they have a staff of approximately 13,584 employees with an academic staff of about 6,000. Their annual revenue is estimated to be between $500 million - $1 billion. Part of the University of South Florida System, USF serves more than 48,000 students and is ranked 43rd in the nation for research expenditures among all universities, public or private. The university is one of only four public universities in Florida classified by the Carnegie Foundation for the Advancement of Teaching in the top tier of research universities, a distinction attained by only 2.3 percent of all universities.   USF is the largest employer in the Tampa Innovation District, and is the most significant generator of new technology and innovation in the Tampa Bay region.

- ▶ Employment Impact (direct, indirect, and induced): 35,000 jobs

- ▶ Combined Economic Impact[3]: $4.44 billion

3	The source for the University of South Florida economic impacts is from an internal report titled "2011-2012 USF Economic Impact Analysis, Summary Results" (USF Office of Research, 1/21/2014).

Verizon Data Services Inc. is a subsidiary of Verizon Communication Inc, and serves as their central data repository that combines data on individual customers from landline, DSL, VoIP, fiber, and video billing systems, as well as data from other sources on demographics, operations and competitive gains or losses. Opened in 2009, they have a staff of more than 2,700 employees. The annual revenue for Verizon Data Services Inc. is about $309 million. Much of Verizon Data Services' operations are categorized under data processing and preparation in the areas of wireless, residential and small business, and enterprise services.

- ► Employment Impact (direct, indirect, and induced): 8,401 jobs

- ► Gross Regional Product (value add): $938.7 million

- ► Sales Impact (economic output): $1.69 billion

Yuengling Beer Company of Tampa, Inc. is a beer brewery company. The Tampa location opened in 1999 and they now have a staff of approximately 200 employees. Their annual revenue is estimated to be between $20 - 50 million. A family owned and operated business, D.G. Yuengling & Son, Inc. is one of the nation's oldest breweries producing the highest quality lagers, porters and ales for wholesalers, retailers and consumers nationwide.

- ► Employment Impact (direct, indirect, and induced): 631 jobs

- ► Gross Regional Product (value add): $108.4 million

- ► Sales Impact (economic output): $275.0 million

Villas At University Village is a retirement community offering senior living community residents luxury services. Opened in 2010, they have a staff of approximately 400 employees. Villas At University Village also offers independent and continuing care retirement services to community members. Each villa in the community is part of its own neighborhood with a community center where residents have access to the University Village services, amenities and clubs.

- ► Employment Impact (direct, indirect, and induced): 549 jobs

- ► Gross Regional Product (value add): $26.9 million

- ► Sales Impact (economic output): $44.3 million

National Cluster Benchmarks

National Benchmarking –
Where Tampa Bay Stands Today

This section leverages published federal occupation data to benchmark the Tampa region with other US regions[1]. Based upon discussions with TIA leadership and preliminary research results, two target sectors were selected for benchmarking: "biosciences/bioengineering" and "cybersecurity".

An industry "sector" may be described as a category of businesses that share similar products and services, as well as similar customers and supply chains; "clusters" are specialized interdependent industries represented by shared geographies. The more "cutting edge" an industry sector or cluster is, the less likely that federal industry and occupation classification systems will have "caught up" to create accurate definitions and measurements of that sector. As a result, the most innovative and fastest evolving sectors tend to be partially or completely "hidden" in more traditional industry and occupation categories (e.g., "cybersecurity" companies possibly being classified as "computer network administration" companies). Currently, there is an incomplete NAICS definition of bioscience industries published by the US Bureau of Labor Statistics, and no category at all for cybersecurity. Defining and measuring an industry cluster based upon the skills and activities of specialized occupations can sometimes overcome this issue, and for the purposes of this report there are good "keystone" occupation definitions tracked by the US Bureau of Labor Statistics for both biosciences and cybersecurity sectors.
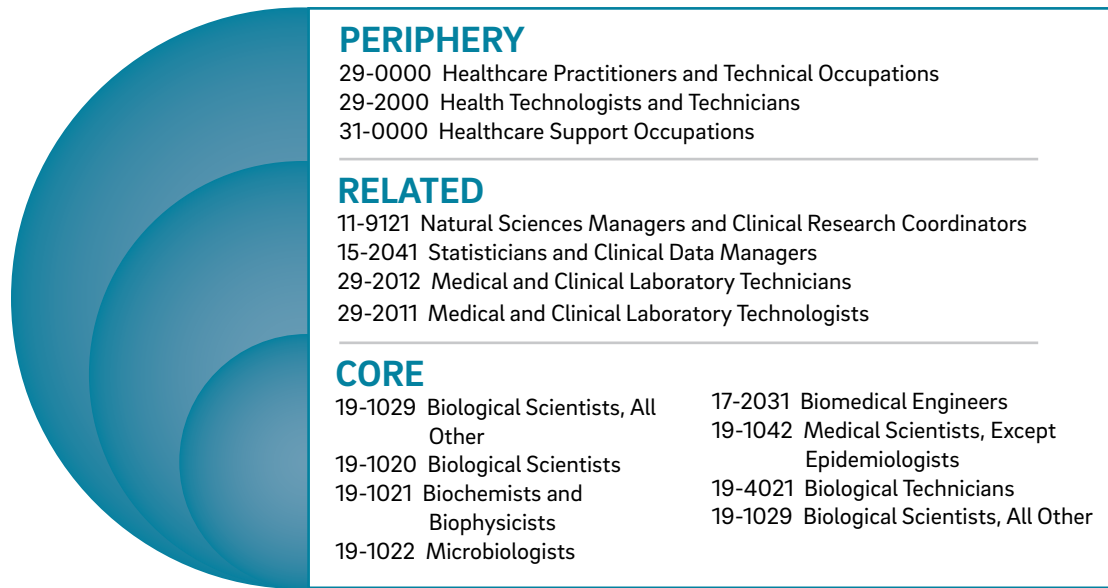
These occupation categories do not provide a complete or comprehensive picture of all specialized employment in biosciences and cybersecurity, but can provide a very consistent (if understated) snapshot of cutting-edge industries such as these. We have selected occupation codes for benchmarking based not on inclusiveness (as many possibly related codes as possible), but accuracy (the "core" occupations most clearly associated with each sector)[2]. Because of this research choice, our figures will probably significantly under-estimate the size of each region's total cluster employment, but hopefully will be more accurate and consistent with the true relative strength of bioscience and cybersecurity clusters across the U.S.

For biosciences, we identify three tiers of occupations based on how closely they are connected to the biosciences sector. The first tier includes several "core" occupation codes focusing on specialized research, innovation, and technical aspects of the biosciences. The second tier includes several related codes that may or may not support the healthcare service sector (and therefore, be partially attracted by the size of the local population and not the size of the local biosciences cluster). The third tier includes related "peripheral" occupations that provide general healthcare services and may also support other segments of biotech like agricultural and chemical products. As a biosciences cluster in an area grows, all three tiers of occupations are likely to grow; however, a large level of employment in the second and third tiers do not necessarily indicate the presence of a biosciences cluster.

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1   Federal occupation statistics are not available at the zip code level.
2   Refer to http://www.onetonline.org/find/career?c=8 and "Biotechnology, Medical Devices, & Pharmaceutical Manufacturing In California (2010)" for examples of these biotech occupations used in economic analyses.

Bioscience Occupations

PERIPHERY
29-0000 Healthcare Practitioners and Technical Occupations
29-2000 Health Technologists and Technicians
31-0000 Healthcare Support Occupations

RELATED
11-9121 Natural Sciences Managers and Clinical Research Coordinators
15-2041 Statisticians and Clinical Data Managers
29-2012 Medical and Clinical Laboratory Technicians
29-2011 Medical and Clinical Laboratory Technologists

CORE
19-1029 Biological Scientists, All Other
19-1020 Biological Scientists
19-1021 Biochemists and Biophysicists
19-1022 Microbiologists

17-2031 Biomedical Engineers
19-1042 Medical Scientists, Except Epidemiologists
19-4021 Biological Technicians
19-1029 Biological Scientists, All Other

Looking at just the "core" tier of bioscience occupation employment, we can compare how US metropolitan areas stack up. The following table benchmarks US bioscience employment by the top 340 metropolitan regions (MSAs). "Location quotient" – and the corresponding national rank – is a measure of specialization relative to the US average. The Tampa Bay region ranks #50 nationally out of 340 MSAs in terms of bioscience employment and #44 nationally in terms of specialization[3]. The region actually has considerably fewer bioscience workers than the US average.
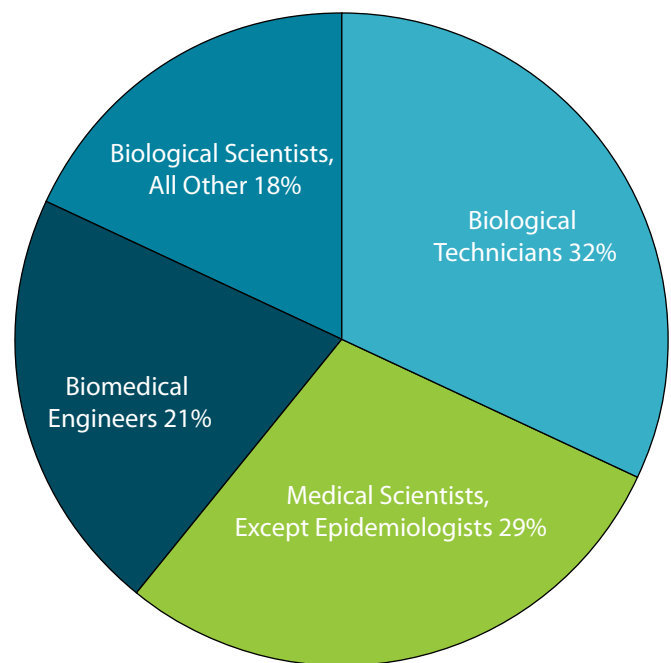
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3   Note, the published BLS occupation (OES) data does not include statistics below the MSA level; we cannot identify the ranking or statistics for the city of Tampa alone or the Tampa Innovation Alliance using this data.

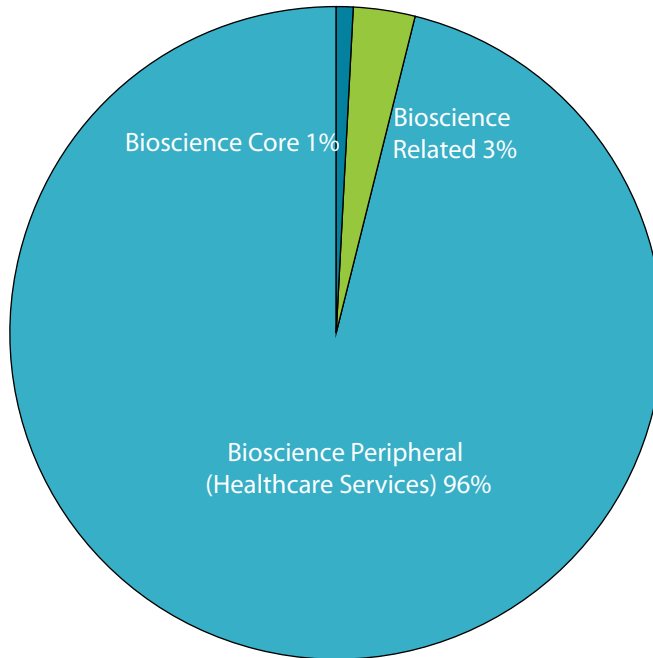| MSA	2014 Employment	LQ	Average Salary	Emp Rank	LQ Rank
Boston-Cambridge-Quincy, MA NECTA Division	19,750	18.54	$86,400	1	4
San Diego-Carlsbad-San Marcos, CA	10,170	12.98	$84,872	2	10
San Francisco-San Mateo-Redwood City, CA Metropolitan Division	9,990	15.49	$105,305	3	5
New York-White Plains-Wayne, NY-NJ Metropolitan Division	9,590	3.00	$80,241	4	33
Philadelphia, PA Metropolitan Division	8,820	7.98	$65,808	5	18
Bethesda-Rockville-Frederick, MD Metropolitan Division	7,990	23.78	$94,829	6	1
Los Angeles-Long Beach-Glendale, CA Metropolitan Division	7,930	3.29	$83,338	7	31
Seattle-Bellevue-Everett, WA Metropolitan Division	7,220	8.15	$70,397	8	17
Santa Ana-Anaheim-Irvine, CA Metropolitan Division	5,250	5.96	$92,639	9	20
Washington-Arlington-Alexandria, DC-VA-MD-WV Metropolitan Division	5,190	3.68	$87,733	10	29
St. Louis, MO-IL	940	1.21	$67,771	47	44
Boulder, CO	910	9.17	$58,370	48	14
Miami-Miami Beach-Kendall, FL Metropolitan Division	880	1.42	$64,984	49	43
Charlottesville, VA	840	14.45	$53,135	50	7
Tampa-St. Petersburg-Clearwater, FL	840	1.20	$55,299	50	44
Milwaukee-Waukesha-West Allis, WI	830	1.70	$59,797	51	41

The most salient point from this benchmarking is that the Tampa Bay MSA supports 840 bioscience scientists, biomedical engineers, and biotechnology specialists. If we break down that number, we can get a better sense of what makes up our region's "core" biosciences employment as well as its supporting occupations.

By examining the chart to the right, we see that "core" biosciences employment is relatively evenly spread across four occupations. However, when we compare these core occupations with other healthcare-related occupations which often get counted in biotech studies, we see that the core makes up only about 1% of the region's bioscience and biotech-related talent, the remainder of which is probably supported more by providing services to the local population than by the development of new drugs, therapies, and innovative healthcare products. If we include the Tier 2 "bioscience related" occupations, the Tampa Bay MSA supported 4,860 jobs in 2014. If we include both peripheral and related jobs (all three Tiers), we can observe that the region supported 118,390 jobs in 2014 – although the great majority of them are focused on providing healthcare services.

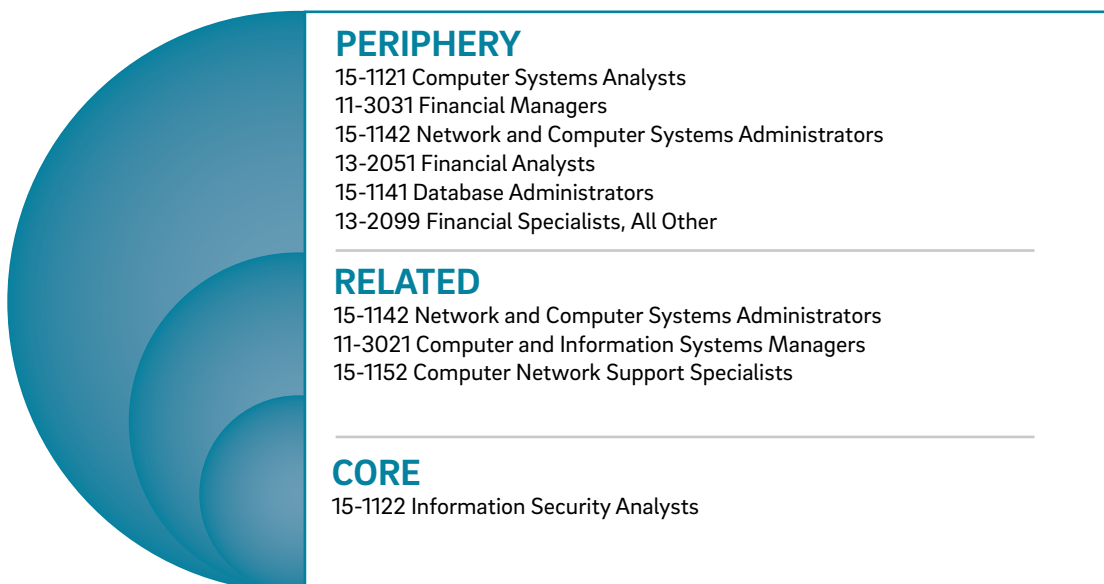**Tampa Bay Area Biosciences Core Employment**

- Biological Scientists, All Other 18%
- Biological Technicians 32%
- Biomedical Engineers 21%
- Medical Scientists, Except Epidemiologists 29%

Tampa Bay Area Healthcare Services versus Bioscience Core

Bioscience Core 1%

Bioscience Related 3%

Bioscience Peripheral (Healthcare Services) 96%

We can examine cybersecurity occupations in the same fashion. Currently, there is only one major Tier 1 ("core") occupation defined by this sector, but it is very well matched to our needs. The related occupations tend to support general information technology services and computer networking professions, or professions that support the financial transactions and banking industries.

Cyber / Information Security Occupations

PERIPHERY
15-1121 Computer Systems Analysts
11-3031 Financial Managers
15-1142 Network and Computer Systems Administrators
13-2051 Financial Analysts
15-1141 Database Administrators
13-2099 Financial Specialists, All Other

RELATED
15-1142 Network and Computer Systems Administrators
11-3021 Computer and Information Systems Managers
15-1152 Computer Network Support Specialists

CORE
15-1122 Information Security Analysts

Cybersecurity concerns are becoming increasingly relevant for a broad spectrum of computer data, database, information processing, network services, and analysis professions; we can observe in the following chart that the cybersecurity "supporting" (Tier 2) occupations in the Tampa Bay MSA make a much larger portion of the total than they do for the Tampa Bay region's biosciences cluster. If we include the Tier 2 occupations in our region's cluster employment, we can count 12,090 information security related jobs in 2014. If we include the Tier 3 (peripheral) banking and other information technology professions, this total rises to more than 23,330 jobs in 2014, but most of these are not focused on developing or providing primarily cybersecurity technologies.

The Tampa Bay MSA is shown to rank #23 nationally for information security analysts on location quotient, with a demonstrated specialization relative to the US average concentration of this occupation. The region ranks #17 nationally in terms of overall employment, supporting 1,110 information security analysts in 2014. The average annual wage for this category was more than $89,900 in 2014.

MSA	2014 Employment	LQ	Average Salary	Emp Rank	LQ Rank
Washington-Arlington-Alexandria, DC-VA-MD-WV Metropolitan Division	9,070	6.43	$107,980	1	1
New York-White Plains-Wayne, NY-NJ Metropolitan Division	4,400	1.38	$118,830	2	32
Boston-Cambridge-Quincy, MA NECTA Division	2,050	1.92	$89,690	3	11
Dallas-Plano-Irving, TX Metropolitan Division	2,030	1.53	$93,410	4	25
Chicago-Joliet-Naperville, IL Metropolitan Division	2,030	0.91	$93,660	5	65
Atlanta-Sandy Springs-Marietta, GA	1,820	1.28	$88,290	6	36
Phoenix-Mesa-Glendale, AZ	1,800	1.66	$86,190	7	19
Los Angeles-Long Beach-Glendale, CA Metropolitan Division	1,600	0.66	$100,680	8	103
Baltimore-Towson, MD	1,590	2.07	$104,380	9	6
Minneapolis-St. Paul-Bloomington, MN-WI	1,540	1.42	$88,530	10	29
Charlotte-Gastonia-Rock Hill, NC-SC	1,530	2.83	$94,160	11	3
Houston-Sugar Land-Baytown, TX	1,480	0.88	$91,370	12	70
Seattle-Bellevue-Everett, WA Metropolitan Division	1,450	1.64	$97,550	13	22
St. Louis, MO-IL	1,280	1.65	$75,920	14	21
San Francisco-San Mateo-Redwood City, CA Metropolitan Division	1,210	1.88	$110,680	15	13
Philadelphia, PA Metropolitan Division	1,180	1.07	$93,240	16	50
Tampa-St. Petersburg-Clearwater, FL	1,110	1.58	$89,900	17	23
San Jose-Sunnyvale-Santa Clara, CA	1,080	1.87	$113,510	18	14
Kansas City, MO-KS	1,040	1.74	$81,440	19	17
Denver-Aurora-Broomfield, CO	1,030	1.31	$94,290	20	34

**Tampa Bay Area Cybersecurity Core
versus Peripheral Occupations**
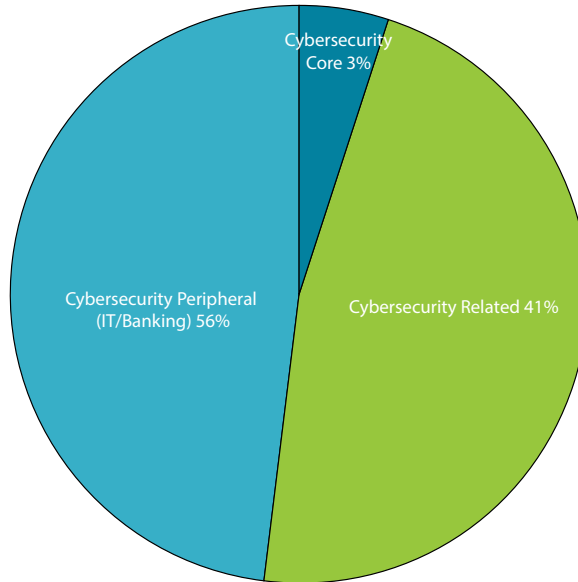
Setting Goals – Looking To The Future

The purpose of this benchmarking exercise was to first establish a baseline of current employment in areas key to the Tampa Innovation Alliance, which can be used to measure the impact of economic activities within the district. More importantly, these benchmarks provide a current employment level in each cluster, and context for establishing reasonable growth scenarios.

Currently, the Bureau of Labor Statistics OES projects 10-year employment growth for information security analysts to be an impressive 52%. That means if the Tampa Bay region continues to grow only at the US projected average, by 2025 it will support 1,690 security analyst jobs (16,122 if we include supporting occupations).

Based on BLS projections, the biosciences cluster core will grow 39.3% to 1.170 jobs – or up to 7,063 jobs if we include related occupations (the supporting occupations level includes two very high growth occupations including statistical analysts and laboratory technicians).

Cluster	Current Employment	10 Year Employment, Projected	Net Growth	Net Growth, %
Biosciences Core	840	1,170	330	39.3%
Biosciences Core+Related	4,860	7,063	2,203	45.3%
Cybersecurity Core	1,110	1,690	580	52.3%
Cybersecurity Core+Related	12,090	16,122	4,032	32.9%

Vision For Future Economic Impact

Impact Scenario – What Can The Tampa Innovation District Accomplish?

If employment in the Tampa Innovation District continues to grow at the same pace as Florida over the last five years, we can project that high-tech employment in the District will grow an additional 11% over the next 10 years to more than 14,000 high tech jobs.

However, the mission of the Tampa Innovation Alliance is to help the District grow much faster than average; its goal is to inspire and nurture unprecedented growth of the innovation sector and to help the District grow into its fullest potential. With that ambitious goal in mind, the following scenario is the basis for our economic impact analysis of what the Tampa Innovation Alliance can accomplish:

With help from the Tampa Innovation Alliance and its partners, the Tampa Innovation District will double its high-tech employment over the next ten years.

Doubling the District's high tech economy would add an additional 12,600 technology jobs for a total of more than 25,294 jobs in 2025. This is an ambitious goal, but an achievable one.

10-Year Scenario: Doubling The Tampa Innovation District's Technology Jobs

NAICS	Industry Sector	2026 Sector Employment
62	Health Care and Social Assistance*	1,680
54	Professional, Scientific, and Technical Services	10,130
51	Information	8,810
31	Manufacturing	4,674
	Total	**25,294**

To understand how this growth in high-tech jobs will impact the local economy, we have undertaken an economic impact analysis using the IMPLAN3 economic forecasting software.

About Economic Impact Analysis

Economic analysis can be confusing, especially to the layperson. However, the way the IMPLAN software models economic impacts can be very intuitive, if we use the metaphor of a tree.   Of course, there's a lot more to a tree than you can see above the surface; in much the same way, a company's activities touch the local economy on different levels. There are three types of impacts we consider – *direct, indirect, and induced* – and we will relate each of these to how a tree connects to the earth and surrounding landscape.

First, *direct impacts* represent the actual jobs and activities that take place in the company's industry sector. Just as it's easy to see a tree's trunk, branches, and leaves, it's relatively easy for most people to see and understand how these direct economic activities are a source of economic activity.

Indirect activities are like the roots of a tree, that reach unseen into the ground. Indirect impacts constitute the local demand for products and services from other companies and service providers (goods, materials, supplies). They are the local vendors and suppliers that receive money from the

company for goods and services provided; like roots, they are the feeder system in which local goods and services support the company or project.

Trees have leaves, branches, trunks and roots; but if you have ever pulled a tree or shrub from the ground, you know that you get left with a big hole in the ground and pull up a lot more than clean roots... you also get earth, weeds, grass, bugs and worms and everything else that makes up healthy soil. All of this additional earth and life that depends on the tree is analogous to what we call *induced economic impacts* of a company or project. Induced impacts reflect everybody who relies on spending generated by direct and indirect activity - restaurants, retail stores, service providers, schools, real estate, etc. They are job losses and gains by people who have no direct connection to the economic project, but benefit from the money that project introduces into the local economy.

| Direct | **+** | Indirect | **+** | Induced | **=** | Total Impact |

Thus, when we speak of economic impact, we speak about the combined contributions of all three types: *direct, indirect,* and *induced* together. Thus, our metaphor of economic impact includes not just the tree, but everything that is connected to and dependent upon it.

The IMPLAN software works by using documented *direct impacts* as inputs to calculate *indirect* and *induced impacts* over time. It is based upon federally published industry-by-industry buy-sell (input-output) relationships; how much each industry sells to each other industry to create the total national product. Using this national data, IMPLAN is able to create a national average profile of how much a typical company in each industry must buy, sell, and hire to do its business. It then calibrates its profile with state and local economic, business, tax, labor, and demographic information to generate local models of typical companies in each industry, and how much they must buy, sell, import, export, and hire locally or externally to do their business. As a result, IMPLAN can estimate how direct changes in a local industry trickle through the web of local buy, sell, and hire relationships. The result is a widely accepted and well-published model of the spending, employment, exporting, sales and production activities of typical companies in every industry sector, such as medical device manufacturing. This model is calibrated even further by information we can collect on a given company, project, or program's activities, expenditures, and operations.

The Impact of the Tampa Innovation District in Ten Years

Doubling the high-tech employment in the Tampa Innovation District will have an impact on the local economy of approximately 58,583 direct, indirect, and induced jobs. It will generate more than $11.3 billion in annual sales, and contribute more than $6.1 billion in annual GDP to the region.

2025 Economic Impact of the Tampa Innovation District ($Millions)

Impact Type	Output	Employment	Labor Income	Total Value Added
Direct Effect	$6,573	25,294	$2,294	$3,216
Indirect Effect	$2,662	17,049	$1,103	$1,629
Induced Effect	$2,158	16,241	$783	$1,301
Total Effect	**$11,392**	**58,583**	**$4,181**	**$6,146**

In ten years, the District's high tech employment will generate more than $270 million in state and local taxes, contributing significantly to the local government and infrastructure. More than $200 million of this will be spent locally in the form of business taxes, and both personal and business property taxes.

2025 State And Local Tax Impact of the Tampa Innovation District

Description	Employee Compensation	Proprietor Income	Indirect Business Tax	Households	Corporations
Dividends				$1,581,804	$1,581,804
Social Ins Tax-Employee Contribution	$1,323,428				$1,323,428
Social Ins Tax-Employer Contribution	$2,558,628				$2,558,628
Indirect Bus Tax: Sales Tax		$118,998,160			$118,998,160
Indirect Bus Tax: Property Tax		$85,105,136			$85,105,136
Indirect Bus Tax: Motor Vehicle Lic		$2,138,686			$2,138,686
Indirect Bus Tax: Severance Tax		$154,503			$154,503
Indirect Bus Tax: Other Taxes		$12,737,302			$12,737,302
Indirect Bus Tax: S/L NonTaxes		$7,648,829			$7,648,829
Corporate Profits Tax				$15,773,198	$15,773,198
Personal Tax: NonTaxes (Fines- Fees)			$16,711,303		$16,711,303
Personal Tax: Motor Vehicle License			$3,818,034		$3,818,034
Personal Tax: Property Taxes			$1,434,591		$1,434,591
Personal Tax: Other Tax (Fish/Hunt)			$255,275		$255,275
Total State and Local Tax	**$3,882,056**	**$226,782,600**	**$22,219,200**	**$17,355,000**	**$270,238,856**

Achieving Goals

Achieving these impressive impacts within ten years will require vision, strategy, and a significant level of cooperation and coordination with local government and business, and especially the University of South Florida. Based on the research collected for this report, the following recommendations provide one possible approach to achieving those impacts.

Build on Core Jobs and Cluster Companies

It will be valuable to identify the economic connections between *research* and *jobs* – how much area R&D activity acually translates into actual local employment in the core clusters we identified. By enhancing the processes which connect our best intellectual property sources with local commercialization activities, and addressing the needs of the businesses which support core cluster jobs, the TIA should be able to build a focused and targeted approach to assisting and documenting growth across the entire clusters.

A Full Ecosystem of Business, Innovation, and Office Space

It will be important to make full use of the USF Tampa Bay Technology Incubator and the USF Research Park. However, the District will need to develop a wide range of facilities and locations to support businesses of different types, sizes, and needs. For example, the District may need to support small businesses which have graduated from, or do not need the full services of the TBTI; there may be need for more security-based businesses; there may be need for urban manufacturing, technology retail, or small R&D offices of research partners who will benefit from being near, but not on the USF campus. It will also be important to help local economic developers attract key buyers and customers to the District, which will provide important financial relationships for local innovation businesses.

Leveraging Relationships

USF has already built decades of critical relationships with companies which are aware of, and value, USF expertise. Graduate research students have taken jobs with companies and have had time to achieve influential positions. Companies and research institutes have sought out and funded research with USF faculty. Currently, these relationships are not being mapped or leveraged for economic development purposes, yet they represent the paths to "champions" at exactly the types of companies and organizations which will be valuable to the District. The Tampa Innovation Alliance will need to become an expert connector, and develop new resources for networking, attracting investment, and organizing events which will attract funding, attention, and employment to the District.

Appendices

Appendix: General Economic Impact Definitions

Output: Output represents the value of industry production. In IMPLAN these are annual production estimates for the year of the data set and are in producer prices. For manufacturers this would be sales plus/minus change in inventory. For service sectors production = sales. For Retail and wholesale trade, output = gross margin and not gross sales. Economic impact figures, without definition, usually refer to Output.

Labor Income: All forms of employment income, including Employee Compensation (wages and benefits) and Proprietor Income.

Direct Impacts: take place only in the industry sector immediately affected, such as direct jobs and investments.

Indirect Impacts: concern inter-industry transactions: if an analyzed sector is removed from the economy, sector companies will no longer have a demand for locally produced materials needed to produce their product. This will affect all of their suppliers.

Induced Effects: measure the effects of the changes in household income: employees laid-off by removing the analyzed sector from the economy may reduce their expenditures in restaurants and shops since they are no longer employed. These changes effect the related industries.

GDP: Industry Gross Domestic Product is the contribution of each private industry and of government to the nation's output, or GDP. An industry's GDP, or its "value added," is equal to its gross output (which consists of sales or receipts and other operating income, commodity taxes, and inventory change) minus its intermediate inputs (which consist of energy, raw materials, semi-finished goods, and services that are purchased from domestic industries or from foreign sources). It can also be measured as the sum of incomes related to production, such as wages and salary accruals and gross operating surplus. (BEA)

Sources: Implan.com; Wikipedia.com

Appendix: Tax Impact Definitions

Dividends: Any payment to administrative government is considered a tax. It represents a source of revenue to state and local government.

Social Ins Tax- Employee Contribution: Employees' social contributions are the amounts payable by employees to social security funds and private funded social insurance schemes.

Social Ins Tax- Employer Contribution: Employers' social contributions are payments by employers which are intended to secure for their employees the entitlement to social benefits should certain events occur, or certain circumstances exist, that may adversely affect their employees' income or welfare - sickness, accidents, redundancy, retirement, etc.

Indirect Bus Tax: Prior to the 2003 comprehensive NIPA revision, IBT was the name of one of the three components of value added. It consists of tax and nontax liabilities that are chargeable to business expenses when calculating profit-type incomes and of certain other business liabilities to government agencies that are treated like taxes. Thus, IBT includes taxes on sales, property, and production, but it excludes employer contributions for social insurance and taxes on income. As part of the NIPA revision, this component was modified and termed "taxes on production and imports less subsidies." The major differences between the two are attributable to the treatments of subsidies and non-taxes. (BEA)

Indirect Bus Tax: Sales Tax: Includes sales tax charged to both businesses and individuals.

Sources: Implan.com; Wikipedia.com