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The Economic Contribution of the Tampa Global Communication Teleconvergence Center

An Analysis Performed by

CENTER FOR ECONOMIC DEVELOPMENT RESEARCH
College of Business Administration



1101 Channelside Dr., 2nd Floor N., Tampa, Florida 33602
Office: (813) 905-5854 or Fax: (813) 905-5856

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Preface

The Tampa International Technology Center, LLC was formed in March 2001 to develop the Tampa Global Communication Teleconvergence Center.

The Tampa International Technology Center, LLC commissioned this study and the Center for Economic Development Research, College of Business Administration, University of South Florida performed the study. The purpose of the study is to quantify the Tampa Global Communication Teleconvergence Center's economic contribution to Hillsborough County, the Florida High-Tech Corridor and the Rest of Florida.

The Center for Economic Development Research provides information and conducts research on issues related to economic growth and development in the Nation, in the state of Florida, and particularly in the central Florida region. The Center serves the faculty, staff, and students of the College of Business Administration, the University, and individuals and organizations in the University's service area. Activities at the Center for Economic Development Research are designed to further the objectives of the University and specifically the objectives of the College of Business Administration.

Robert Anderson, Dean, College of Business Administration (COBA), USF
Dennis G. Colie, Director and Principal Investigator, Center for Economic Development
Research (CEDR), COBA, USF

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EXECUTIVE SUMMARY

This is the first of two studies with the purpose of estimating the future economic contributions of the Tampa Global Communication Teleconvergence Center. This study is based on planned, project-specific economic activity. The follow-on study will be broader in scope by incorporating other spillover effects, i.e. outcomes that transform the region's economic profile, but are not necessarily identified or captured by this initial economic impact study

The purpose of this study is to obtain a preliminary estimate the future economic contributions of the Tampa Global Communication Teleconvergence Center. The Center will be located on a 12-acre site located on the waterfront in the City of Tampa in Hillsborough County, Florida along Channelside Drive adjacent to the Tampa Port Authority headquarters. The Center will consist of a 400-room upscale hotel, 52 condominium-hotel units, a high-tech conferencing center, a sports club and health spa, a network operations center and a cyber (data) center.

Economic Contributions

Construction Phase (2005 to 2007).

- Hillsborough County – over 2,600 jobs by 2006; \$762.0 million in economic activity over three-year construction period.
- Rest of High-Tech Corridor – over 770 jobs by 2006; \$240.2 million in economic activity over three-year construction period.
- Rest of Florida – over 140 jobs by 2006; \$46.2 million in economic activity over three-year construction period.

Operations Phase (beginning in 2008).

- Tampa Global Communication Teleconvergence Center.
 - Hillsborough County – between 1,300 and 1,900 jobs and \$116.0 million and \$170.3 million in economic activity.
 - Rest of High-Tech Corridor and Rest of Florida – depending on competition for market share there may be a small loss or small gain in jobs and economic activity.
- Visitors' Spending outside the Center.
 - Hillsborough County – about 90 jobs and \$8.1 million in economic activity.
 - Rest of High-Tech Corridor and Rest of Florida – about 30 jobs and \$4.6 million in economic activity.

Operations Phase (stabilizing in 2012).

- Tampa Global Communication Teleconvergence Center.
 - Hillsborough County – between 1,550 and 2,250 jobs and \$142.6 million and \$207.7 million in economic activity.
 - Rest of High-Tech Corridor and Rest of Florida – depending on competition for market share there may be a small loss or small gain in jobs and economic activity.
- Visitors' Spending outside the Center.
 - Hillsborough County – about 110 jobs and \$10.5 million in economic activity.
 - Rest of High-Tech Corridor and Rest of Florida – about 40 jobs and \$6.1 million in economic activity.

The conceptual foundation of this analysis is the understanding that job creation in one industry begets additional jobs in related industries. In addition, further jobs are created to support an increased level of aggregate household income and spending resulting from the inter-industry job creation. This phenomenon of job creation, with concomitant increased levels of income and production, is called the multiplier or ripple effect. For this analysis, the economic contributions of the Tampa Global Communication Teleconvergence Center, as they ripple through the economy, are estimated using the *REMI™ Policy Insight* regional economic impact model. We analyze both the Construction Phase and the Operations Phase of the Center. We make estimates of the economic contributions to the Hillsborough County economy, the economy of Florida's High-Tech Corridor, and to the economy of the Rest of Florida

We find that the Construction Phase (2005 through 2007) would bring a significant economic contribution to Hillsborough County as well as positive contributions throughout the High-Tech Corridor and the Rest of Florida. During the final year of construction the project will support approximately 3,500 jobs in Hillsborough County and another 1,000 jobs in the other counties of the High-Tech Corridor. Over the three-year Construction Phase more than \$1 billion in output will be added to the economy of the state of Florida.

For the Operations Phase beginning in 2008 and projecting out five years to 2012, we estimate a range of outcomes, which depend on our economic assumptions about market competition and jobholders' wages. Additionally, we estimate the economic contribution spending outside the Center by visitors attracted to the Center's hotel.

At the high end of the range of outcomes, an increase of about 2,250 jobs in Hillsborough County is possible throughout the many years of operation of the Center. The Center could also give long-term support for another 600 jobs in other parts of Florida. By 2012, we anticipate that the Center can be contributing over \$300 million a year of added output to Florida's economy – about two-thirds of that addition in Hillsborough county.

Furthermore, the attraction of visitors to the Center, located in Hillsborough County, will produce more sales and jobs at other businesses in the County. By 2012, we expect that visitors' spending at other businesses will add 110 jobs in Hillsborough County and about 40 more jobs throughout Florida. The annual sales (output) increase in Hillsborough County will be over \$10 million with another \$ 5 million of increased sales in other parts of Florida.

I. Introduction.

The purpose of this study is to estimate the future economic contributions of the Tampa Global Communication Teleconvergence Center. The Center will be located on a 12-acre site located on the waterfront in the City of Tampa in Hillsborough County, Florida along Channelside Drive adjacent to the Tampa Port Authority headquarters. The site is not economically productive at this time. The Center will consist of a 400-room upscale hotel, 52 condominium-hotel units, a high-tech conferencing center, a sports club and health spa, a network operations center and a cyber (data) center. The developers' vision of the Tampa Global Communication Teleconvergence Center is to provide their clients with a local, national, and globally networked communications capability that will remain unparalleled into the foreseeable future. We make estimates of the contributions for the construction and operation of the Center to the Hillsborough County economy, the economy of Florida's High-Tech Corridor, and the Rest of Florida.

We base this study on data provided to us by the developers, Tampa International Technology Center, LLC.

The conceptual foundation of this analysis is the understanding that job creation in one industry begets additional jobs in related industries. In addition, further jobs are created to support an increased level of aggregate household income and spending resulting from the inter-industry job creation. This phenomenon of job creation, with concomitant increased levels of income and production, is called the multiplier or ripple effect. For this analysis, the economic contributions of the Tampa Global Communication Teleconvergence Center, as they ripple through the economy, are estimated using the *REMITM Policy Insight* regional economic impact model. We describe the model in **Appendix A**.

After completion of this study, there will be "follow-on" study performed by Innovation Insight, Inc.¹ An important element of the "follow-on" study is "cluster" benefits research. The purpose of "cluster" benefit research is to document the spillover effects of the Tampa Global Communication Teleconvergence Center. We define spillover effects as outcomes that transform the region's economic profile, but are not necessarily identified or captured by this initial economic impact study. Subsequently, with the spillover effects effectively identified, we will be able to create and refine worst case, probable case, and best case economic contribution scenarios for the Center.

¹ President / Principal is Mr. Guy Hagen. See <http://innovationinsight.com>.

II. Conceptual Foundation of the Analysis.

When jobs are created in an industry, these jobs motivate the creation of additional jobs in related industries. The Frenchman Francois Quesnay, founder of the physiocratic or “natural order” philosophy of economic thought, first described inter-industry relationships in 1758. The physiocrats depicted the flow of goods and money in a nation, and thus made the first attempt to describe the circular flow of wealth on a macroeconomic basis. Wassily Leontief was born in Russia in 1906 and first studied economic geography at the University of St. Petersburg before moving to Berlin and China. He came to the United States in 1931 and, after a brief 3-month stint at the National Bureau of Economic Research in New York, Harvard University hired him. At Harvard, Professor Leontief undertook a research project that encompassed a 42-industry input-output table showing how changes in one sector of the economy lead to changes in other sectors. From this research, he developed the concept of multipliers from input-output tables, and was subsequently awarded the Nobel Prize in economics in 1973 for his development of input-output (I-O) economics.

For example, an increase in purchases (first round) of output from a manufacturing industry in a region may require that the manufacturing industry, in order to expand output, purchase (second round) factor inputs from other industries of the regional economy. In turn, these other industries may have to purchase (third round) inputs to deliver the supporting production of factors to the manufacturing industry. The rounds of spending will continue with each round becoming increasingly weaker in its impact because of leakage from the region attributable to imports, savings, and taxes.

The first round is called the *direct effect* of the change in demand in an industry of the economy. The second and subsequent rounds are collectively referred to as the *indirect effects* of inter-industry purchases in response to the direct effect. Changes in spending by households as income increases due to changes in the level of production are also included in the indirect effects. The *total effect* is the sum of the direct and indirect effects. Because increased production is a desired outcome for an area’s economy, we call the total effect or impact an *economic contribution* to the area.

III. Background, Vision, and Mission

Tampa International Technology Center, LLC provided CEDR with the following information about the background, developers' vision and mission of the Tampa Global Communication Teleconvergence Center.

Background.

Dr. Murf Klauber is the founder and Chairman of The Colony Beach & Tennis Resort on Longboat Key, Florida. The Colony, in its 34th year of operation, is consistently recognized as the leading tennis and beach resort in the world. Dr. Klauber is a visionary who has created, designed and developed many projects in the Buffalo/Rochester, New York region and the Sarasota/Longboat Key, Florida area.

In the past decade, the United States has changed from a manufacturing and industrial country to an economy of information and high technology. Resorts, hotels and convention centers have been consistently losing group business from their previous manufacturing and industrial business participants. Small companies were no longer in business, as their products were being produced or purchased offshore, or their company was so successful, they were being acquired by bigger corporations who required much larger hotel meeting space and many more rooms. The group meeting business was rapidly diminishing.

Approximately four or five years ago, when Dr. Klauber assessed the profitability of the hospitality sector, he contacted and met personally with the top business professionals in the financial, engineering, manufacturing, medical, legal, accounting and academic world to find a solution for the future of hotel business meetings. The conclusion was that the direction of the hospitality industry to be profitable was destined to be high technology. Technology is power.

Vision.

Dr. Klauber's approach for the future of the hospitality industry and its growth within the hotel/resort community was the creation of an ultra high-tech Global Teleconvergence Conference Center, a truly high-tech smart/green Hotel, Condominiums, Condo/Hotel Suites, Restaurants, a Spa, Private Club and a Network Operations Center/Cyber Center that would service all the components of this development. His philosophy was to integrate technology to deliver the most intelligent, most efficient, highest-performing, new-age green buildings for the people who live and work inside them and to use technology to create value for customers and guests. Dr. Klauber then formed the company Tampa International Technology Center, LLC in March 2001 to develop this high-tech village The Tampa Global Communication Teleconvergence Center.

The Tampa Global Communications Teleconvergence Center will occupy 4 plus acres of a 12-acre site on the waterfront at the Port of Tampa. Blending stunning

architecture and a warmly hospitable contemporary atmosphere with 21st century technological advances. This will be an intelligent, green and environmentally sound development. Numerous innovative features that ensure profitability will be implemented.

The complex will consist of the following components: a 400-guest room/suite (plus 52 condo-hotel units) World-Class hotel. Above the hotel building will be a twenty story, totally wired condominium, that has concierge, valet, catering, housekeeping, dining and parking privileges of the world-class hotel, a state-of-the-art conference center which features a complete communication systems integration, multiple amphitheaters, meeting, breakout and board rooms, plus an exhibition hall/ballroom. These are all designed with an accessible under-floor computer-cabling infrastructure to accommodate conferences and exhibits, as well as global conferencing, which allows for a new level of complete convention services that exceeds any existing venue. The remaining 8 acres will be developed into high-tech offices, training centers, exhibition centers and museums.

The condos are created for full-time living “in the sky.” The rooms are comfortably large with six-fixture modern bathrooms, expansive walk-in closets, a contemporary functional kitchen, and a den / business office with all the proper amenities.

Mission.

The mission is to create the United States’ largest developmental high-tech corridor by forming the ‘MOST’: Metropolitan Orlando, Sarasota, Tampa TRIANGLE. The Tampa Global Communication Teleconvergence Center will join Tampa’s and Orlando’s Convention Centers and the many high-tech businesses already operating in the corridor. Serving the TRIANGLE are four major airports located in Orlando, St. Petersburg, Tampa, Sarasota. Then add to this creation the University of South Florida, the University of Central Florida, Tampa University, New College, the Ringling School of Fine Art and other higher education centers of the High-Tech Corridor as well as the cultural aspects of Sarasota.

Why Tampa? Tampa is an exceptional destination city with a twelve-month season.

- ◀ This is a project that will reshape the technological, cultural, commercial and social landscape of Florida, with the promise of progress, economic enrichment and sophistication.
- ◀ This project will be the catalyst behind downtown Tampa becoming the undisputed leader amongst the nation’s high-tech centers.
- ◀ The Tampa area is the only temperate area in the state that is not inhibited by geographic growth.
- ◀ This project will ignite the engine for the Florida High-Tech Corridor, fortifying the expanse between Tampa, Orlando and Sarasota. Creating the

'Most Triangle' with the ingredients for development of the highest-tech state in the country.

- The addition of a world-class hotel and conference center that features an unprecedented level of technological capabilities will make this area a destination of choice for global, national and local events.
- With the nation's top airport, major attractions, entertainment complexes, sports and cultural venues in close proximity, the area is an ideal destination for corporate and leisure travelers ... travelers that will invariably fortify local business.
- The phenomenal growth being experienced by the cruise industry in Tampa will be further augmented by the creation of a traveler's Mecca, providing convenience, choice and sophistication.
- The development of over 380,000 square feet of space devoted to luxury condominiums provides an alternative, high-tech residential option to families, corporate executives and professionals who will benefit from access to gourmet restaurants and upscale retail services.
- The additional 8 acres will be built to accommodate the southern business headquarters for training centers, exhibition areas and a technology museum and for the nation's high technology manufacturers or organizations.

IV. Method of Analysis.

We analyze both the Construction Phase and the Operations Phase of the proposed Tampa Global Communication Teleconvergence Center. The future site of the Center is not economically productive at this time, but planned expansion would dislocate some ongoing economic activity. Nevertheless, we assume that all economic activity that now uses space planned for expansion of the Center will relocate to other space within the Port of Tampa in Hillsborough County. Thus, there is no anticipated loss of direct jobs, output or wages from ongoing economic activity.

For the Construction Phase, we introduce into the REMI model estimated increases in sales for specific industries in Hillsborough County for years 2005 through 2007. We gleaned the amount of the increases from information provided to us by the developer.² **Table 1** summarizes the increases we input into the model. The project's direct costs are increases in sales for the industries shown in the table.

Table 1
Tampa Global Communication Teleconvergence Technology Center

Project Costs - Construction Phase					
Item	2005	2006	2007	Total	REMI Industry
Construction	\$240,760	\$111,099,397	\$156,159,564	\$267,499,721	Construction
Developer Fee	\$7,213,871			\$7,213,871	Real Estate
Design & Development	\$407,040	\$6,066,285	\$8,526,675	\$15,000,000	Professional Services
Pre-opening Marketing	\$429,661	\$6,403,409	\$9,000,531	\$15,833,600	Business Services
Operating Supplies & Equipment	\$168,976	\$2,518,317	\$3,539,707	\$6,227,000	Wholesale
Construction Interest	\$1,279,344	\$19,066,592	\$26,799,701	\$47,145,637	Banking
Broker Fee	\$54,272	\$808,838	\$1,136,890	\$2,000,000	Credit & Finance
Origination - Sr. Loan	\$91,177	\$1,358,848	\$1,909,975	\$3,360,000	Credit & Finance
Origination - Mezzanine	\$37,990	\$566,187	\$795,823	\$1,400,000	Credit & Finance
Closing Costs	\$6,784	\$101,105	\$142,111	\$250,000	Credit & Finance
Legal & Professional Fees	\$5,427	\$80,884	\$113,689	\$200,000	Professional Services
Securitization Costs & Fees	\$249,700	\$3,721,383	\$5,230,717	\$9,201,800	Credit & Finance
Underwriting Fee	\$89,820	\$1,338,627	\$1,881,553	\$3,310,000	Credit & Finance
Other	\$980,512	\$14,612,969	\$20,539,759	\$36,133,239	Wholesale
Total Direct Costs	\$11,255,335	\$167,742,839	\$235,776,694	\$414,774,868	

² The developer, Tampa International Technology Center, LLC, provided to CEDR the spreadsheet called GTC_Financial_Model_09-04-04.xls.

For the Operations Phase, we introduce into the REMI model the estimated employment (new direct jobs) at the Tampa Global Communications Teleconvergence Center as well as estimated spending outside the Center by visitors attracted to the Center’s hotel.³

To input the number of new direct jobs at the Center into the REMI model we rely on estimates provided by the developer.⁴ From the developer’s estimates we constructed **Table 2** for the number of direct jobs beginning in 2008, the first year of operations, and projecting out five years to 2012. We increased the estimated employment in consonance with estimated occupied room nights (shown in Table 3, below).

Table 2
Tampa Global Teleconvergence Technology Center

Number of Direct Jobs - Operations Phase

Activity	2008	2009	2010	2011	2012	REMI Industry
Hotel	381	437	471	493	493	Hotels
Conference Center	422	484	521	546	546	Misc Business Services
Cyber Center	54	62	67	70	70	Misc Business Services
Private Club	28	32	35	36	36	Eating & Drinking
Condos	38	44	47	49	49	Hotels
Total	923	1,059	1,141	1,195	1,195	

When we input the number of direct jobs into the REMI model, we can select either of two methods. We name the first method *Competitive Market Sharing*. The model’s underlying assumption for this first method is that the market’s size remains at the baseline level and the new Tampa Global Communication Teleconvergence Center competes with existing businesses for market share. This method generally results in loss of market share (and jobs, output, and wages) in those areas from which the new Center draws customers. We name the second method *Total Market Expansion*. The model’s underlying assumption for the second method is that the new Center attracts new customers, thereby expanding the market, and there is no loss of market share by existing businesses. We will use and report results for both methods.

Along with the developer’s estimates of the number of direct jobs at the Center, the developer provided us with expected wages for the jobholders. We compared the

³ Introducing the new direct jobs into the model accounts for economic activity at the Tampa Global Communication Teleconvergence Center including visitors’ spending. We included employees serving the condos in the Hotel industry, rather than the Real Estate industry, because their functions seem more closely related to hotel-type activities.

⁴ The developer, Tampa International Technology Center, LLC, provided to CEDR the spreadsheet called Employees_Count – Ver2.xls.

expected wages with baseline average industry wages in the REMI model. In most cases, the expected wages are higher than the baseline average wages. To accommodate differences in expected wages vis-à-vis baseline average industry wages, we calculate a job number adjustment. The job number adjustment permits the REMI model to consider the impact of a change in an industry’s wage bill at other than the average wage. Our calculations for the job number adjustments are in **Appendix B**. We will use and report results for both the unadjusted (industry average) and adjusted wage.

We also estimate the impact of outside spending by visitors staying at the hotel in the Tampa Global Communication Teleconvergence Center. That is, while we expect that most of the spending will occur on the premises of the Center, there will also be some outside spending. Examples of outside spending by visitors are 1) local transportation, 2) shopping, 3) entertainment, particularly in the Ybor City and Channelside areas, 4) attendance at sports events, such as hockey at the nearby Forum, collegiate and professional football at the Stadium, or professional baseball’s spring training, and 5) other cultural venues, for instance the Florida Aquarium and Lowry Park Zoo.

Table 3 reflects our estimate of outside spending by visitors staying at the Center.

Table 3
Tampa Global Communication Teleconvergence Technology Center
Estimated Occupied Room Nights and Outside Spending by Visitors

	2008	2009	2010	2011	2012
Hotel Rooms	73,000	80,300	84,680	87,600	87,600
Condo Rooms	9,490	10,439	11,008	11,388	11,388
Total	82,490	90,739	95,688	98,988	98,988
Expenditures outside Hotel	\$93.99	\$99.11	\$104.46	\$110.03	\$115.84
less Substitution Effect (25%)	\$23.50	\$24.78	\$26.11	\$27.51	\$28.96
New Expenditures outside Hotel (per party / per day)	\$70.49	\$74.34	\$78.34	\$82.52	\$86.88
Total New Visitors' Expenditures	\$5,814,828	\$6,745,188	\$7,496,665	\$8,168,805	\$8,599,975

The Center’s hotel will have 400 rooms, thus in a 365-day year there are 146,000 available Room Nights. The 52 condominium units will generate another 18,980 available Room Nights. The report titled “Tampa High Technology Conferencing Center Evaluation Report,” revision 1, prepared by ARINC Engineering Services, LLC, 100 Parkplace Drive, Warner Robins, GA 31088 and dated March 4, 2004, is the source for

the estimated of Occupied Room Nights for the hotel rooms. We then proportionally allocate occupied Condo Rooms at the same occupancy rate as for Hotel Rooms.⁵

We estimate expenditures outside the hotel from data promulgated by the Tampa Bay Convention & Visitors Bureau and subtract 25% from the estimated outside expenditures for our approximation of a substitution effect. The substitution effect is recognition of the phenomenon that some visitors, in this case one-quarter of the visitors, would have stayed in other hotels in Hillsborough County even if the Tampa Global Communication Teleconvergence Center had not been built. Total New Visitors' Expenditures is the product of Total Occupied Room Nights and New Expenditures outside Hotel.

⁵ The estimated occupancy rate starts at 50% in 2008, increases to 55%, then 58% in the next two years, and peaks at 60% in 2011. This conservatively compares with the 63.2% occupancy rate estimated by the Tampa Bay Convention & Visitors Bureau for Hillsborough County at <http://VisitTampaBay.com> as of October 6, 2004.

V. Economic Contributions of the Tampa Global Communication Teleconvergence Center.

In this section, we report the economic effects of the construction and subsequent operation of the Tampa Global Communication Teleconvergence Center. We measure economic contribution by employment, output, and wage and salary disbursements. These are three interrelated measurements of the same economy, like mass, volume, and density are three interrelated measurements of a solid. We measure all effects as differences from the REMI model's economic baseline forecast. The by-county geographic coverage of the model allows us to examine the principal component counties of the Florida High-Tech Corridor. The principal component counties are Brevard, Hernando, Hillsborough, Lake, Manatee, Orange, Osceola, Pasco, Pinellas, Polk, Sarasota, Seminole and Volusia counties. Florida's counties other than the principal component counties are aggregated in the model as the Rest of Florida. The main economic effects of the project are in Hillsborough County, where the Center will be built. Thus, we report the effects for Hillsborough County separately from the other principal component counties of the Corridor. In this report, we call the principal component counties, less Hillsborough, the Rest of the High-Tech Corridor.

The Construction Phase begins in 2005 and ends in 2007. We discuss the costs for the Construction Phase in the previous section of this report. These expenditures trigger the first round of output and motivate subsequent rounds of economic activity. In **Table 4** (next page), we report our estimates of the total economic contribution associated with the construction of the Tampa Global Communication Teleconvergence Center.

We expect the project to generate about 171 new jobs when construction gets underway in 2005 and top out at 4,775 new jobs during 2007, the final year of the Construction Phase. Most of these jobs will be in Hillsborough County. The workers in these new jobs will produce output valued at more than \$1 billion over the three-year span for construction.⁶ About 73% of the output (approximately \$762 million) will occur in Hillsborough County. During the last year of the Construction Phase, the increased output, which we predict to be slightly over \$429 million in Hillsborough County, represents a 0.5% gain over the County's baseline forecast of about \$84 billion. The implied output multipliers (total increased output divided by construction costs) for the 3-year Construction Phase are 1.84 in Hillsborough County, 2.42 in the High-Tech Corridor, and 2.53 throughout the state of Florida. And, we anticipate that the workers holding the newly created jobs will earn nearly \$333 million in wage and salary disbursements during the three-year Construction Phase.

⁶ Output can be thought of as the dollar amount of sales. Technically, output measures sales plus or minus an inventory adjustment.

The Operations Phase begins in 2008. We project the economic contributions for five years to 2012. At that time we expect operations to reach maturity and continue to contribute to the economy year-after-year as measured for 2012 with dollar values appropriately adjusted for inflation.

In **Table 5** (next page), we report results of our analysis of the economic activity associated with the operation of the Tampa Global Communication Teleconvergence Center. We report our results in ranges consistent with our assumption of *Competitive Market Sharing at Average Industry Wages* at the low end or our assumption of *Total Market Expansion at Project Specific Wages* at the high end. The more new customers attracted by the Center – as opposed to taking customers from existing Florida businesses – and the higher the wages paid to the Center’s employees relative industry average wages, the more likely the upper range for the estimates of economic contribution will be achieved.

Table 5
Tampa Global Teleconvergence Technology Center
Range of Economic Contributions during Operations Phase

Panel A - Employment

Location	2008		2012	
	Competitive Market Sharing at Average Industry Wages	Total Market Expansion at Project Specific Wages	Competitive Market Sharing at Average Industry Wages	Total Market Expansion at Project Specific Wages
Hillsborough County	1,303	1,900	1,562	2,256
Rest of High Tech Corridor	-107	489	-155	539
High Tech Corridor	1,196	2,389	1,407	2,795
Rest of Florida	-129	84	-164	97
Total Florida	1,066	2,473	1,243	2,892

Panel B - Output (2003 \$)

Location	2008		2012	
	Competitive Market Sharing at Average Industry Wages	Total Market Expansion at Project Specific Wages	Competitive Market Sharing at Average Industry Wages	Total Market Expansion at Project Specific Wages
Hillsborough County	\$115,973,872	\$170,315,914	\$142,592,637	\$207,648,456
Rest of High Tech Corridor	\$3,236,223	\$67,077,078	\$3,640,475	\$80,088,242
High Tech Corridor	\$119,210,095	\$237,392,993	\$146,233,112	\$287,736,698
Rest of Florida	-\$8,423,000	\$12,271,140	-\$10,740,000	\$14,833,610
Total Florida	\$110,787,095	\$249,664,133	\$135,493,112	\$302,570,309

Panel C - Wages & Salary (nominal \$)

Location	2008		2012	
	Competitive Market Sharing at Average Industry Wages	Total Market Expansion at Project Specific Wages	Competitive Market Sharing at Average Industry Wages	Total Market Expansion at Project Specific Wages
Hillsborough County	\$45,110,000	\$77,520,000	\$68,230,000	\$115,600,000
Rest of High Tech Corridor	-\$2,411,000	\$17,610,000	-\$4,181,000	\$25,270,000
High Tech Corridor	\$42,699,000	\$95,130,000	\$64,049,000	\$140,870,000
Rest of Florida	-\$3,906,000	\$3,143,000	-\$6,195,000	\$4,761,000
Total Florida	\$38,793,000	\$98,273,000	\$57,854,000	\$145,631,000

We expect the Tampa Global Communication Teleconvergence Center to generate between 1,300 and 1,900 new jobs in Hillsborough County during its first year of operation and level off at between 1,560 and 2,250 jobs by 2012. If competitive market sharing develops, there could be a slight decrease in jobs in other Florida counties.

We estimate that the workers in the new jobs in Hillsborough County will produce output valued between \$115.97 million and \$170.31 million in 2008 and leveling off at between \$142.59 million and \$207.64 million in 2012. The Rest of the High-Tech Corridor will also benefit from increased sales (output) related to the Center's operation; we predict increased sales in the \$3.23 million to \$67.07 million range in the first year of operations.

In 2008, we estimate that the workers in the newly generated jobs in Hillsborough County will earn wages and salary totaling between \$45.11 million and \$77.52 million. This equates to an average of \$34,620 to \$40,800 per job. In 2012, the estimated payroll increases from about \$68.23 million to \$115.60 million or an average of \$43,680 to \$51,240 per job.⁷ If there are some job losses in the Rest of the Corridor and the Rest of Florida, there will also be concomitant decreases in aggregate wage and salary disbursements in those areas.

In **Appendix C**, we report in more detail our estimations of the economic contribution of the Tampa Global Communication Teleconvergence Center according to four scenarios: 1) Competitive Market Sharing and Average Industry Wages, 2) Total Market Expansion and Average Industry Wages, 3) Competitive Market Sharing and Project Specific Wages, and 4) Total Market Expansion and Project Specific Wages. Scenario 1 is the basis of the low end and Scenario 4 is the basis of the high end of the ranges that are reported in Table 5. The estimations for Scenarios 2 and 3 fall between these lows and highs.

While Table 5 provides estimations for operations *within* the Tampa Global Communication Teleconvergence Center, in **Table 6** (next page) we report our estimates of the economic contribution associated with visitors' spending *outside* of the Center.

⁷ The increase in wage and salary disbursements from 2008 to 2012 includes an approximate 6.5% per annum inflation in employment costs. Hillsborough County's baseline average wage is \$36,490 in 2008 and rises to \$41,890 in 2012.

Table 6
Tampa Global Teleconvergence Technology Center
Visitors' Spending outside Center - Operations Phase

Panel A - Employment

Location	2008	2009	2010	2011	2012
Hillsborough County	88	98	105	109	110
Rest of High Tech Corridor	29	29	30	33	35
High Tech Corridor	118	127	135	143	145
Rest of Florida	5	5	6	7	8
Total Florida	123	132	141	150	153

Panel B - Output (2003 \$)

Location	2008	2009	2010	2011	2012
Hillsborough County	\$8,131,425	\$9,117,755	\$9,809,181	\$10,381,318	\$10,516,069
Rest of High Tech Corridor	\$3,775,226	\$3,977,352	\$4,583,729	\$4,921,710	\$4,921,710
High Tech Corridor	\$11,906,651	\$13,095,107	\$14,392,910	\$15,303,029	\$15,437,779
Rest of Florida	\$808,945	\$674,195	\$943,806	\$1,078,667	\$1,146,485
Total Florida	\$12,715,596	\$13,769,302	\$15,336,716	\$16,381,696	\$16,584,264

Panel C - Wages & Salary (nominal \$)

Location	2008	2009	2010	2011	2012
Hillsborough County	\$2,922,000	\$3,513,000	\$3,960,000	\$4,337,000	\$4,532,000
Rest of High Tech Corridor	\$976,600	\$1,129,000	\$1,312,000	\$1,465,000	\$1,495,000
High Tech Corridor	\$3,898,600	\$4,642,000	\$5,272,000	\$5,802,000	\$6,027,000
Rest of Florida	\$183,100	\$198,400	\$274,700	\$335,700	\$351,000
Total Florida	\$4,081,700	\$4,840,400	\$5,546,700	\$6,137,700	\$6,378,000

By 2012 we anticipate that visitors to the Tampa Global Communication Teleconvergence Center will generate sales of about \$16.58 million per year at other businesses outside of the Center. We also estimate that this visitors' spending will generate about 153 more new jobs in Florida by 2012, with the jobholders receiving wages and salary totaling \$6.3 million. This equates to an average annual wage of \$41,720. Most of the increased sales and new jobs will be in Hillsborough County.

In summary, our findings show that the Construction Phase during 2005 to 2007 would bring a significant economic contribution to Hillsborough County as well as positive contributions throughout the Rest of the High-Tech Corridor and the Rest of Florida. During the final year of construction the project will support approximately 3,500 jobs in Hillsborough County and another 1,000 jobs in the Rest of the High-Tech Corridor.

Over the three-year Construction Phase more than \$1 billion in output will be added to the economy of the state of Florida.

Although the Operations Phase will not generate as robust an impact on the economy as the Construction Phase, we predict that it will contribute a substantial and sustainable economic benefit. At the high end, an increase of about 2,250 jobs in Hillsborough County is possible throughout the many years of operation of the Tampa Global Communication Teleconvergence Center. The Center could also give long-term support for another 600 or so jobs in other parts of Florida. By 2012, we anticipate that the Center can be contributing over \$300 million a year of added output to Florida's economy – about two-thirds of that addition in Hillsborough county.

Furthermore, the attraction of visitors to the Center, located in Hillsborough County, will produce more sales and jobs at other businesses in the County. By 2012, we expect that visitors' spending at other businesses will add 110 jobs in Hillsborough County and about 40 more jobs throughout Florida. The annual sales (output) increase in Hillsborough County will be over \$10 million with another \$ 5 million of increased sales in other parts of Florida.

VI. Conclusion

For this analysis, the economic contributions of the proposed Tampa Global Communication Teleconvergence Center, as they ripple through the economy, are estimated using the *REMITM Policy Insight* regional economic impact model. We analyze both the Construction Phase and the Operations Phase of the Center.

For the Construction Phase, we introduce into the REMI model estimated increases in sales for specific industries in Hillsborough County for years 2005 through 2007. These expenditures trigger the first round of output and motivate subsequent rounds of economic activity. We find that the Construction Phase would bring a significant economic contribution to Hillsborough County as well as positive contributions throughout the Rest of the High-Tech Corridor and the Rest of Florida. During the final year of construction the project will support approximately 3,500 jobs in Hillsborough County and another 1,000 jobs in the Rest of the High-Tech Corridor. Over the three-year Construction Phase more than \$1 billion in output will be added to the economy of the state of Florida.

For the Operations Phase beginning in 2008 and projecting out five years to 2012, we input into the REMI model the estimated employment (new direct jobs) at the Tampa Global Communications Teleconvergence Center. We used the developer's estimates of the number of new direct jobs and expected wages for the jobholders at the Center. We have four scenarios: 1) Competitive Market Sharing and Average Industry Wages, 2) Total Market Expansion and Average Industry Wages, 3) Competitive Market Sharing and Project Specific Wages, and 4) Total Market Expansion and Project Specific Wages. We use the scenarios to develop a range of economic contributions for operations within the Center. Additionally, we estimate spending outside the Center by visitors attracted to the Center's hotel and input the outside spending estimates into the REMI model.

At the high end of the range of outcomes, an increase of about 2,250 jobs in Hillsborough County is possible throughout the many years of operation of the Center. The Center could also give long-term support for another 600 jobs in other parts of Florida. By 2012, we anticipate that the Center can be contributing over \$300 million a year of added output to Florida's economy – about two-thirds of that addition in Hillsborough county.

Furthermore, the attraction of visitors to the Center, located in Hillsborough County, will produce more sales and jobs at other businesses in the County. By 2012, we expect that visitors' spending at other businesses will add 110 jobs in Hillsborough County and about 40 more jobs throughout Florida. The annual sales (output) increase in Hillsborough County will be over \$10 million with another \$ 5 million of increased sales in other parts of Florida.

We conclude that operations at the Tampa Global Communication Teleconvergence Center will contribute a substantial and sustainable economic benefit.

Appendix A

Regional Economic Development Policy Analysis

*The Center for Economic Development Research (CEDR), College of Business Administration, University of South Florida (USF), uses the **REMI Policy Insight™** model to estimate economic and demographic effects that policy initiatives or external events may cause on a regional economy. Data - the last available historical year is 2000 - for each of USF's seven county economic development region, Hernando, Hillsborough, Manatee, Pasco, Pinellas, Polk and Sarasota; as well as the counties of Brevard, Lake, Orange, Osceola, Seminole and Volusia; and a consolidation of the remaining 54 Florida counties are available. The REMI software is managed by CEDR and available to the USF community for research and teaching purposes. The following article briefly explains the policy insight model.*

Founded in 1980, Regional Economic Models, Inc. (REMI) constructs models that reveal the economic and demographic effects that policy initiatives or external events may cause on a local economy. REMI™ Policy Insight model users include national, regional, state, and city governments, as well as universities, nonprofit organizations, public utilities and private consulting firms. REMI™ users in Florida include the State of Florida (Legislature, Governor's Office, Agency for Workforce Innovation), Tampa Bay Regional Planning Council, the University of South Florida, Florida State University, City of Jacksonville, Florida's Space Coast Economic Development Commission, and the Northeast Florida Regional Planning Council.

REMI™ is a dynamic model that predicts how changes in an economy will occur on a year-by-year basis. The model is sensitive to a wide range of policy and project alternatives as well as interactions between regional economies and the national economy. The model uses data from the Bureau of Economic Analysis, the Bureau of Labor Statistics, the Department of Energy, the Census Bureau and other public sources.

The model's dynamic property means that it forecasts not only what will happen but also when it will happen. This results in long-term predictions that have general equilibrium properties. This means that the long-term properties of general equilibrium models are preserved without sacrificing the accuracy of event timing predictions and without simply taking elasticity estimates from secondary sources.

REMI™ is a structural model, meaning that it clearly includes cause and effect relationships. The model shares two key underlying assumptions with mainstream economic theory: households maximize utility and producers maximize profits. Because these assumptions make sense to most people, the model can be understood by intelligent lay people as well as trained economists.

In the model, businesses produce goods to sell to other firms, consumers, investors, governments and purchasers outside of the region. The output is produced using labor, capital, fuel and intermediate inputs. The demand for labor, capital and fuel

per unit of output depends on their relative costs, because an increase in the price of any one of these inputs leads to substitution away from that input to other inputs. The supply of labor in the model depends on the number of people in the population and the proportion of those people who participate in the labor force. Economic migration affects the population size. People will move into an area if the real after-tax wage rates or the likelihood of being employed increases in a region.

Supply and demand for labor in the model determines the wage rates. These wage rates, along with other prices and productivity, determine the cost of doing business for every industry in the model. An increase in the cost of doing business causes either an increase in price or a cut in profits depending on the market for the product. In either case, an increase in cost would decrease the share of the local and US market supplied by local firms. This market share combined with the demand described above determines the amount of local output. There are also many other feedback loops in the model such as the feedback from changes in wages and employment to income and consumption, the feedback of economic expansion to investment, and the feedback of population to government spending.

The model brings together the fundamental economic elements mentioned in the previous two paragraphs to determine a baseline forecast for each year. The model includes all the inter-industry relationships that are in an input-output model, like IMPLAN ProfessionalTM, and goes beyond the input-output model by including added relationships with population, labor supply, wages, prices, profits, and market shares.

A feature, which distinguishes the REMITM model from other economic simulation models, is the way REMITM handles the labor market. In the basic REMITM model, the general equilibrium demand for labor slopes downward and the general equilibrium supply of labor slopes upward. The wage responds to derived labor demand and there is an inverse relationship between the wage and market share. Thus, as the demand for labor rises, the wage rises and market share falls. Also, migration responds directly (positively) to a change in the wage, thereby increasing the labor supply.

In contrast with REMITM, a basic input-output model suppresses the labor intensity response to wage rates, market shares responses to regional competitiveness, and migration response to real after-tax wage rates and relative employment rates. The result is a horizontal labor supply curve and a vertical labor demand curve. Employment is a fixed proportion of output. Thus, a basic input-output model is linear with respect to a change in output or employment. Labor is immobile, i.e. migration is not an alternative to unemployment. An implied assumption of labor immobility is that there are unemployed workers in the region if the number of jobs is to increase. Labor immobility is the assumption used in Type I (without household sector) and Type II (with household sector) input-output models.

Appendix B

Wages, Jobs, and Job Number Adjustments

Table B1, Panel A, B and C reports the estimated number of direct jobs and expected wages for those jobs from the start of operations in 2008 through 2012. The estimated number of direct jobs, along with expected annual wages in year 2004 dollars was provided to us by the developer. We increased the 2004 wages for inflation by the same rate as the REMI model employs for the pertinent REMI Industry. Then we calculated the job number adjustments by year by REMI industry. The job number adjustment permits the REMI model to consider the impact of a change in an industry's wage bill at other than the industry average wage.

Table B1 and its panels are presented in the following three pages of this report.

Table B1
Wages, Jobs and Job Adjustments
Panel A - Years 2008 and 2009

<u>HOTEL</u>	2008 Wages	2008 Jobs	2008 Adj	2009 Wages	2009 Jobs	2009 Adj
Housekeeping	\$32,301	65	8.59	\$33,462	74	9.72
Janitorial	\$32,301	16	2.11	\$33,462	18	2.39
Laundry	\$19,154	24	-7.89	\$19,843	27	-8.93
Engineering	\$106,139	12	32.64	\$109,955	14	36.97
Groundskeeping	\$37,179	10	3.03	\$38,515	11	3.43
Purchasing/Shipping	\$26,535	5	-0.35	\$27,489	6	-0.40
Finance	\$99,865	8	20.00	\$103,457	9	22.65
Floral Shop	\$25,358	6	-0.67	\$26,270	7	-0.76
Sales/Conference Svcs	\$69,525	15	21.55	\$72,025	17	24.41
Marketing/Advertising	\$55,064	3	2.79	\$57,044	3	3.16
Human Resources	\$48,212	4	2.76	\$49,945	5	3.12
Reception	\$23,433	15	-2.68	\$24,275	17	-3.04
Reservations	\$50,163	15	11.37	\$51,967	17	12.88
Concierge/Bell/Valet	\$40,073	30	12.13	\$41,514	34	13.74
Transportation	\$46,571	8	5.06	\$48,246	9	5.73
Kitchen	\$24,011	45	-7.13	\$24,874	51	-8.08
Main Restaurant	\$26,430	22	-1.62	\$27,380	25	-1.84
Speciality Restaurant	\$27,024	30	-1.59	\$27,996	34	-1.80
Lobby Lounge	\$28,452	8	-0.02	\$29,475	9	-0.03
Banquet & Meeting Set-up/Svcs	\$37,588	24	7.62	\$38,939	27	8.63
AV/Technology	\$66,423	8	10.62	\$68,812	9	12.03
Executive Management	\$113,398	8	23.80	\$117,475	9	26.95
Security	\$37,604	12	3.82	\$38,957	14	4.32
REMI Industry: Hotels	\$28,532	393	145.94	\$29,558	445	165.30
<u>CONFERENCE CENTER</u>						
Sales/Conference Svcs	\$69,529	22	30.67	\$72,028	25	34.74
Marketing/Advertising	\$55,067	6	5.38	\$57,047	7	6.09
Engineering	\$106,144	10	26.55	\$109,960	11	30.07
Housekeeping/Janitorial	\$32,302	20	2.25	\$33,463	23	2.54
Banquet & Meeting Set-up Svcs	\$37,590	45	13.24	\$38,941	51	15.00
Loading Dock/Storage/Shipping	\$42,428	15	6.91	\$43,953	17	7.83
Business Center	\$49,364	12	8.40	\$51,139	14	9.51
Kitchen	\$24,012	58	-10.05	\$24,875	66	-11.38
Restaurants (Conf Facilities)	\$26,431	160	-14.38	\$27,381	181	-16.29
Human Resources	\$48,214	4	2.64	\$49,947	5	2.99
Finance	\$99,870	6	14.63	\$103,461	7	16.57
AV/Technology	\$66,427	20	25.75	\$68,814	23	29.16
Fitness Center/SPA	\$50,278	30	21.94	\$52,086	34	24.85
Pool	\$32,302	6	0.67	\$33,463	7	0.76
Executive Management	\$113,403	8	23.24	\$117,480	9	26.32
REMI Industry: Misc Business Svcs	\$29,042	422	157.83	\$30,086	478	178.77
<u>CYBER CENTER</u>						
Systems Administrator	\$72,571	4	6.00	\$75,179	5	6.79
Tech Monitors	\$62,289	24	27.47	\$64,528	27	31.12
Information Systems Conceirge	\$50,293	12	8.78	\$52,101	14	9.95
Information Systems Specialist	\$78,559	12	20.46	\$81,383	14	23.17
Manager	\$166,646	2	9.48	\$172,636	2	10.73
REMI Industry: Misc Business Svcs	\$29,042	54	72.19	\$30,086	61	81.76
<u>PRIVATE CLUB</u>						
Lounge/Lt Food Svcs	\$28,542	10	5.84	\$29,568	11	6.61
Club Operations Department	\$70,517	8	23.30	\$73,052	9	26.39
Housekeeping/Janitorial	\$32,301	10	7.92	\$33,463	11	8.98
REMI Industry: Eating & Drinking	\$18,021	28	37.07	\$18,669	32	41.98
<u>CONDOS</u>						
Concierge/Transportation	\$40,073	8	3.24	\$41,514	9	3.67
Housekeeping/Janitorial	\$32,301	16	2.11	\$33,462	18	2.39
Gourmet/Mini Market	\$32,439	10	1.37	\$33,605	11	1.55
Engineering	\$106,139	4	10.88	\$109,955	5	12.32
REMI Industry: Hotels	\$28,532	38	17.60	\$29,558	43	19.93

Table B1
Wages, Jobs and Job Adjustments
Panel B - Years 2010 and 2011

<u>HOTEL</u>	2010 Wages	2010 Jobs	2010 Adj	2011 Wages	2011 Jobs	2011 Adj
Housekeeping	\$34,670	79	10.47	\$35,940	83	10.97
Janitorial	\$34,670	20	2.58	\$35,940	20	2.70
Laundry	\$20,559	29	-9.62	\$21,313	31	-10.08
Engineering	\$113,925	15	39.82	\$118,099	15	41.72
Groundskeeping	\$39,906	12	3.70	\$41,368	13	3.87
Purchasing/Shipping	\$28,481	6	-0.43	\$29,525	6	-0.45
Finance	\$107,191	10	24.40	\$111,118	10	25.56
Floral Shop	\$27,219	7	-0.81	\$28,216	8	-0.85
Sales/Conference Svcs	\$74,625	18	26.29	\$77,359	19	27.54
Marketing/Advertising	\$59,104	4	3.40	\$61,269	4	3.57
Human Resources	\$51,748	5	3.37	\$53,644	5	3.53
Reception	\$25,152	18	-3.27	\$26,073	19	-3.43
Reservations	\$53,843	18	13.87	\$55,816	19	14.53
Concierge/Bell/Valet	\$43,013	37	14.80	\$44,588	38	15.51
Transportation	\$49,987	10	6.17	\$51,819	10	6.46
Kitchen	\$25,772	55	-8.70	\$26,716	58	-9.11
Main Restaurant	\$28,369	27	-1.98	\$29,408	28	-2.07
Speciality Restaurant	\$29,007	37	-1.93	\$30,070	38	-2.03
Lobby Lounge	\$30,539	10	-0.03	\$31,658	10	-0.03
Banquet & Meeting Set-up/Svcs	\$40,345	29	9.29	\$41,823	31	9.74
AV/Technology	\$71,296	10	12.96	\$73,908	10	13.58
Executive Management	\$121,716	10	29.03	\$126,175	10	30.41
Security	\$40,363	15	4.65	\$41,842	15	4.88
REMI Industry: Hotels	\$30,625	479	178.03	\$31,747	502	186.52
<u>CONFERENCE CENTER</u>						
Sales/Conference Svcs	\$74,628	27	37.41	\$77,362	28	39.20
Marketing/Advertising	\$59,106	7	6.56	\$61,271	8	6.87
Engineering	\$113,929	12	32.39	\$118,103	13	33.93
Housekeeping/Janitorial	\$34,671	24	2.74	\$35,942	26	2.87
Banquet & Meeting Set-up Svcs	\$40,347	55	16.16	\$41,825	58	16.93
Loading Dock/Storage/Shipping	\$45,539	18	8.43	\$47,208	19	8.84
Business Center	\$52,985	15	10.24	\$54,926	15	10.73
Kitchen	\$25,773	71	-12.25	\$26,717	74	-12.84
Restaurants (Conf Facilities)	\$28,370	195	-17.55	\$29,409	204	-18.38
Human Resources	\$51,750	5	3.22	\$53,646	5	3.37
Finance	\$107,195	7	17.85	\$111,122	8	18.70
AV/Technology	\$71,298	24	31.41	\$73,910	26	32.90
Fitness Center/SPA	\$53,966	37	26.76	\$55,943	38	28.04
Pool	\$34,671	7	0.82	\$35,942	8	0.86
Executive Management	\$121,720	10	28.35	\$126,180	10	29.70
REMI Industry: Misc Business Svcs	\$31,172	515	192.54	\$32,314	539	201.72
<u>CYBER CENTER</u>						
Systems Administrator	\$77,893	5	7.31	\$80,747	5	7.66
Tech Monitors	\$66,857	29	33.52	\$69,306	31	35.11
Information Systems Conceirge	\$53,981	15	10.71	\$55,959	15	11.22
Information Systems Specialist	\$84,320	15	24.96	\$87,409	15	26.15
Manager	\$178,868	2	11.56	\$185,421	3	12.11
REMI Industry: Misc Business Svcs	\$31,172	66	88.06	\$32,314	69	92.26
<u>PRIVATE CLUB</u>						
Lounge/Lt Food Svcs	\$30,634	12	7.12	\$31,757	13	7.46
Club Operations Department	\$75,686	10	28.43	\$78,460	10	29.78
Housekeeping/Janitorial	\$34,669	12	9.67	\$35,940	13	10.13
REMI Industry: Eating & Drinking	\$19,342	34	45.22	\$20,051	36	47.37
<u>CONDOS</u>						
Concierge/Transportation	\$43,013	10	3.95	\$44,588	10	4.14
Housekeeping/Janitorial	\$34,670	20	2.58	\$35,940	20	2.70
Gourmet/Mini Market	\$34,819	12	1.67	\$36,094	13	1.75
Engineering	\$113,925	5	13.27	\$118,099	5	13.91
REMI Industry: Hotels	\$30,625	46	21.47	\$31,747	49	22.49

Table B1
Wages, Jobs and Job Adjustments
Panel C - Year 2012

<u>HOTEL</u>	2012 Wages	2012 Jobs	2012 Adj
Housekeeping	\$37,235	83	10.97
Janitorial	\$37,235	20	2.70
Laundry	\$22,081	31	-10.08
Engineering	\$122,354	15	41.72
Groundskeeping	\$42,859	13	3.87
Purchasing/Shipping	\$30,589	6	-0.45
Finance	\$115,122	10	25.56
Floral Shop	\$29,233	8	-0.85
Sales/Conference Svcs	\$80,147	19	27.54
Marketing/Advertising	\$63,477	4	3.57
Human Resources	\$55,577	5	3.53
Reception	\$27,013	19	-3.43
Reservations	\$57,827	19	14.53
Concierge/Bell/Valet	\$46,195	38	15.51
Transportation	\$53,686	10	6.46
Kitchen	\$27,679	58	-9.11
Main Restaurant	\$30,468	28	-2.07
Speciality Restaurant	\$31,153	38	-2.03
Lobby Lounge	\$32,799	10	-0.03
Banquet & Meeting Set-up/Svcs	\$43,330	31	9.74
AV/Technology	\$76,571	10	13.58
Executive Management	\$130,722	10	30.41
Security	\$43,350	15	4.88
REMI Industry: Hotels	\$32,891	502	186.52
<u>CONFERENCE CENTER</u>			
Sales/Conference Svcs	\$80,149	28	39.20
Marketing/Advertising	\$63,478	8	6.87
Engineering	\$122,357	13	33.93
Housekeeping/Janitorial	\$37,236	26	2.87
Banquet & Meeting Set-up Svcs	\$43,331	58	16.93
Loading Dock/Storage/Shipping	\$48,908	19	8.84
Business Center	\$56,904	15	10.73
Kitchen	\$27,680	74	-12.84
Restaurants (Conf Facilities)	\$30,468	204	-18.38
Human Resources	\$55,578	5	3.37
Finance	\$115,125	8	18.70
AV/Technology	\$76,573	26	32.90
Fitness Center/SPA	\$57,958	38	28.04
Pool	\$37,236	8	0.86
Executive Management	\$130,725	10	29.70
REMI Industry: Misc Business Svcs	\$33,478	539	201.72
<u>CYBER CENTER</u>			
Systems Administrator	\$83,655	5	7.66
Tech Monitors	\$71,803	31	35.11
Information Systems Conceirge	\$57,975	15	11.22
Information Systems Specialist Manager	\$90,558	15	26.15
	\$192,100	3	12.11
REMI Industry: Misc Business Svcs	\$33,478	69	92.26
<u>PRIVATE CLUB</u>			
Lounge/Lt Food Svcs	\$32,900	13	7.46
Club Operations Department	\$81,285	10	29.78
Housekeeping/Janitorial	\$37,234	13	10.13
REMI Industry: Eating & Drinking	\$20,773	36	47.37
<u>CONDOS</u>			
Concierge/Transportation	\$46,195	10	4.14
Housekeeping/Janitorial	\$37,235	20	2.70
Gourmet/Mini Market	\$37,395	13	1.75
Engineering	\$122,354	5	13.91
REMI Industry: Hotels	\$32,891	49	22.49

Appendix C

Economic Contributions during Operations Phase

When we input the number of direct jobs into the REMI model, we can select either of two methods. We name the first method *Competitive Market Sharing*. The model's underlying assumption for this first method is that the market's size remains at the baseline level and the new Tampa Global Communication Teleconvergence Center competes with existing businesses for market share. This method generally results in loss of market share (and jobs, output, and wages) in those areas from which the new Center draws customers. We name the second method *Total Market Expansion*. The model's underlying assumption for the second method is that the new Center attracts new customers, thereby expanding the market, and there is no loss of market share by existing businesses.

Along with the developer's estimates of the number of direct jobs at the Center, the developer provided us with expected wages for the jobholders. We compared the expected wages with baseline average industry wages in the REMI model. In most cases, the expected wages are higher than the baseline average wages. To accommodate differences in expected wages vis-à-vis baseline average industry wages, we calculate a job number adjustment. The job number adjustment permits the REMI model to consider the impact of a change in an industry's wage bill at other than the average wage.

This appendix contains Tables C1 through C4 on the following four pages. Each of the tables reports the economic contribution, which we measure by employment, output and wages, of the Tampa Global Communication Teleconvergence Center. **Table C1** reports the contribution, assuming *Competitive Market Sharing* at industry average wages. **Table C2** reports the contribution, assuming *Total Market Expansion* at project specific wages. **Table C3** reports the contribution, assuming *Competitive Market Sharing* at industry average wages. **Table C4** reports the contribution, assuming *Total Market Expansion* at project specific wages. The assumptions of Table C1 and Table C4 yield the lowest and highest estimates, respectively, of the economic contribution of the Center during the Operations Phase. The measurements reported in Tables C1 and C4 are the bases for the ranges reported in Table 5 in the body of this report.

Table C1
Tampa Global Teleconvergence Technology Center

Economic Contributions during Operations Phase
with Competitive Market Sharing and Industry Average Wages

Panel A - Employment

Location	2008	2009	2010	2011	2012
Hillsborough County	1,303	1,462	1,546	1,591	1,562
Rest of High Tech Corridor	-107	-135	-147	-154	-155
High Tech Corridor	1,196	1,327	1,400	1,437	1,407
Rest of Florida	-129	-150	-160	-167	-164
Total Florida	1,066	1,177	1,240	1,270	1,243

Panel B - Output (2003 \$)

Location	2008	2009	2010	2011	2012
Hillsborough County	\$115,973,872	\$130,995,249	\$139,720,903	\$144,470,309	\$142,592,637
Rest of High Tech Corridor	\$3,236,223	\$3,168,848	\$3,505,724	\$3,707,850	\$3,640,475
High Tech Corridor	\$119,210,095	\$134,164,097	\$143,226,627	\$148,178,159	\$146,233,112
Rest of Florida	-\$8,423,000	-\$9,827,000	-\$10,500,000	-\$10,930,000	-\$10,740,000
Total Florida	\$110,787,095	\$124,337,097	\$132,726,627	\$137,248,159	\$135,493,112

Panel C - Wages & Salary (nominal \$)

Location	2008	2009	2010	2011	2012
Hillsborough County	\$45,110,000	\$54,830,000	\$61,580,000	\$66,570,000	\$68,230,000
Rest of High Tech Corridor	-\$2,411,000	-\$3,052,000	-\$3,448,000	-\$3,876,000	-\$4,181,000
High Tech Corridor	\$42,699,000	\$51,778,000	\$58,132,000	\$62,694,000	\$64,049,000
Rest of Florida	-\$3,906,000	-\$4,868,000	-\$5,493,000	-\$6,012,000	-\$6,195,000
Total Florida	\$38,793,000	\$46,910,000	\$52,639,000	\$56,682,000	\$57,854,000

Table C2
Tampa Global Teleconvergence Technology Center

Economic Contributions during Operations Phase
with Total Market Expansion and Industry Average Wages

Panel A - Employment

Location	2008	2009	2010	2011	2012
Hillsborough County	1,754	1,978	2,097	2,161	2,120
Rest of High Tech Corridor	408	440	461	471	455
High Tech Corridor	2,162	2,418	2,558	2,632	2,575
Rest of Florida	71	74	80	84	81
Total Florida	2,233	2,491	2,638	2,715	2,656

Panel B - Output (2003 \$)

Location	2008	2009	2010	2011	2012
Hillsborough County	\$155,625,891	\$176,722,090	\$188,982,185	\$195,719,715	\$193,068,884
Rest of High Tech Corridor	\$56,959,739	\$63,365,914	\$68,015,914	\$70,854,513	\$69,374,466
High Tech Corridor	\$212,585,629	\$240,088,005	\$256,998,100	\$266,574,228	\$262,443,349
Rest of Florida	\$10,516,069	\$11,321,259	\$12,337,411	\$13,011,164	\$12,746,081
Total Florida	\$223,101,698	\$251,409,264	\$269,335,511	\$279,585,392	\$275,189,430

Panel C - Wages & Salary (nominal \$)

Location	2008	2009	2010	2011	2012
Hillsborough County	\$60,450,000	\$73,840,000	\$83,190,000	\$90,100,000	\$92,320,000
Rest of High Tech Corridor	\$14,710,000	\$17,610,000	\$19,740,000	\$21,360,000	\$21,480,000
High Tech Corridor	\$75,160,000	\$91,450,000	\$102,930,000	\$111,460,000	\$113,800,000
Rest of Florida	\$2,670,000	\$3,098,000	\$3,555,000	\$3,952,000	\$4,044,000
Total Florida	\$77,830,000	\$94,548,000	\$106,485,000	\$115,412,000	\$117,844,000

Table C3
Tampa Global Teleconvergence Technology Center

Economic Contributions during Operations Phase
with Competitive Market Sharing and Project Specific Wages

Panel A - Employment

Location	2008	2009	2010	2011	2012
Hillsborough County	1,443	1,593	1,682	1,732	1,698
Rest of High Tech Corridor	-36	-58	-65	-71	-77
High Tech Corridor	1,407	1,535	1,617	1,661	1,621
Rest of Florida	-120	-139	-146	-151	-150
Total Florida	1,287	1,397	1,471	1,509	1,470

Panel B - Output (2003 \$)

Location	2008	2009	2010	2011	2012
Hillsborough County	\$130,222,090	\$144,580,760	\$153,969,121	\$159,381,235	\$157,172,209
Rest of High Tech Corridor	\$12,403,682	\$12,746,081	\$13,751,188	\$14,557,482	\$13,883,729
High Tech Corridor	\$142,625,772	\$157,326,841	\$167,720,309	\$173,938,717	\$171,055,938
Rest of Florida	-\$7,887,328	-\$9,370,689	-\$9,842,316	-\$10,044,442	-\$10,044,442
Total Florida	\$134,738,444	\$147,956,152	\$157,877,993	\$163,894,276	\$161,011,496

Panel C - Wages & Salary (nominal \$)

Location	2008	2009	2010	2011	2012
Hillsborough County	\$61,990,000	\$73,730,000	\$82,500,000	\$89,220,000	\$91,490,000
Rest of High Tech Corridor	\$152,600	-\$61,040	-\$122,100	-\$213,600	-\$518,800
High Tech Corridor	\$62,142,600	\$73,668,960	\$82,377,900	\$89,006,400	\$90,971,200
Rest of Florida	-\$3,540,000	-\$4,440,000	-\$4,959,000	-\$5,356,000	-\$5,524,000
Total Florida	\$58,602,600	\$69,228,960	\$77,418,900	\$83,650,400	\$85,447,200

Table C4
Tampa Global Teleconvergence Technology Center

Economic Contributions during Operations Phase
with Total Market Expansion and Project Specific Wages

Panel A - Employment

Location	2008	2009	2010	2011	2012
Hillsborough County	1,900	2,108	2,234	2,301	2,256
Rest of High Tech Corridor	489	521	544	555	539
High Tech Corridor	2,389	2,629	2,778	2,856	2,795
Rest of Florida	84	87	94	97	97
Total Florida	2,473	2,716	2,872	2,953	2,892

Panel B - Output (2003 \$)

Location	2008	2009	2010	2011	2012
Hillsborough County	\$170,315,914	\$190,197,150	\$203,340,855	\$210,630,641	\$207,648,456
Rest of High Tech Corridor	\$67,077,078	\$73,350,713	\$78,464,608	\$81,634,561	\$80,088,242
High Tech Corridor	\$237,392,993	\$263,547,862	\$281,805,463	\$292,265,202	\$287,736,698
Rest of Florida	\$12,271,140	\$13,077,435	\$14,226,128	\$14,833,610	\$14,833,610
Total Florida	\$249,664,133	\$276,625,297	\$296,031,591	\$307,098,812	\$302,570,309

Panel C - Wages & Salary (nominal \$)

Location	2008	2009	2010	2011	2012
Hillsborough County	\$77,520,000	\$92,720,000	\$104,200,000	\$112,700,000	\$115,600,000
Rest of High Tech Corridor	\$17,610,000	\$20,780,000	\$23,250,000	\$25,050,000	\$25,270,000
High Tech Corridor	\$95,130,000	\$113,500,000	\$127,450,000	\$137,750,000	\$140,870,000
Rest of Florida	\$3,143,000	\$3,616,000	\$4,166,000	\$4,593,000	\$4,761,000
Total Florida	\$98,273,000	\$117,116,000	\$131,616,000	\$142,343,000	\$145,631,000