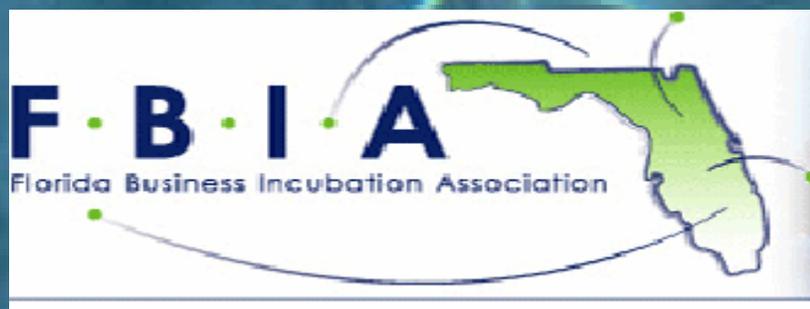


The Contributions of Business Incubators
An Impact Study
On Business Incubators in Florida

Prepared by:
East Central Florida
Regional Planning Council



Prepared for:
Florida Business Incubation Association





Introduction:

The purpose of this study is to show the effects of business incubators on Florida's economy. The Florida Business Incubation Association (FBIA) was established in 1998 and is comprised of 21 business incubators spread geographically around the state. The FBIA provides networking opportunities among members so incubator managers can share their experiences in advancing economic development in their communities.

FBIA Members



The National Business Incubator Association (NBIA), established in 1985, serves as a clearinghouse for all information about incubators in the U.S. to help incubator managers better communicate with each other. Beginning with 40 members in 1985, membership has grown to 1600 in 2006.

(Source: NBIA)

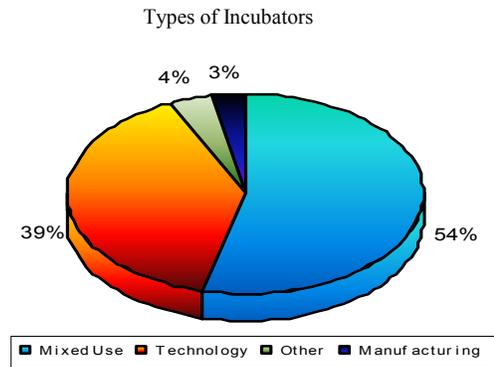
Business incubators play an essential role in supporting entrepreneurship and innovation in the economy of Florida. Their services make it more possible for companies with new and upcoming technologies to succeed. Stories of successful businesses that began at incubators are abundant. Examples include: The Fortune 500 company AlphaMicron, which was at the Kent Business Incubator in Kent, Ohio. Martek Biosciences company, which entered the Advancement Program at the University of Maryland at College Park in 1985 and in 2004 reported revenues in excess of \$184 million.

Incubator companies receive assistance in many forms such as networking opportunities and business advice in addition to the benefits of operating in a cluster of business development. Sometimes these services can mean the difference between success and failure, as evidenced by the higher success rate among new companies that begin in incubators versus those that do not.

The survival rate of startup companies in such programs was 87% in 2006 (Source NBIA).

I. Economic Development Role of Business Incubators:

Many incubators specialize in the type of companies they host, while others provide services to a wide range of sectors. According the National Business Incubator Association (NBIA), 54% of incubators are mixed use, 39% are technology based, 3% specialize in manufacturing firms and 4% operate in very specific areas of expertise.

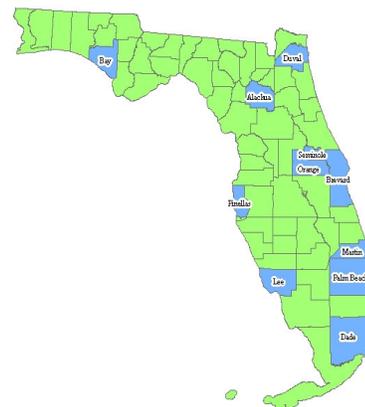


Measuring the dollar value of the incubator’s impact on local economies requires an understanding of the wide economic development contributions they make to their regions.

Funding for the incubators comes from various governmental and non-governmental sources. The analysis here covers the operations of incubators, the companies they host, and their indirect and induced effects. The REMI Policy Insight Florida State economic impact model (which includes a baseline forecast for the economy) was used in this study. The model includes state - and county - specific data about the economy and the types of jobs created each year, their wages, productivity, disposable income earned, and sales generated.

Due to the lack of detailed records on the operations of incubator companies, we used the model’s economic assumptions to calculate the impacts of the jobs created and the wealth generated by them.

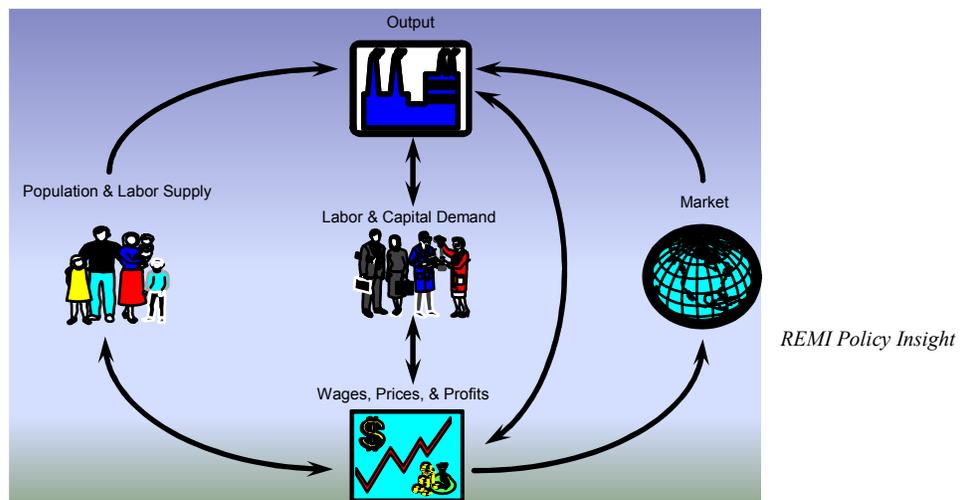
Thirteen incubators from eleven counties (displayed in the map to the right) in Florida provided information about their operations. Appendix C includes the list of incubators that participated in this study and the counties they operate in. These incubators varied in scale from regional ones hosting over fifty companies to local ones with less than ten companies. In 2006, there were **868 jobs** in these incubators with a total yearly budget of just over **\$4 Million**.



II. Model and Study Assumptions:

The REMI Policy Insight model includes a baseline forecast for the state's economy until 2050. This forecast is formulated using data from several governmental and non-governmental agencies, such as the Bureau of Labor Statistics (BLS), Bureau of Economic Analysis (BEA) and the Census. In the model, employment is broken down by industry according to the North American Industry Classification System (NAICS). Each occupation's income, sales, and productivity are determined by complex inter-industry relationships and the demand and supply conditions in the market.

To study the economic impact of any business activity, data is entered into the model by changing any of the thousands of variables in the model's five main blocks (displayed below): output, population, employment, wages and prices, and market shares. By doing this, we create a new forecast for the economy, which is then compared to the baseline forecast.



In our case of study, detailed information about the incubators' business was needed to determine their economic impact. A survey was created and sent to all incubator managers requiring data about the incubator's industry of operation, staff, number of companies, jobs, wages, budget, investment, and expected growth in the future. An example of this survey can be found in Appendix B. Most incubators were only able to provide limited information about the jobs they have. As a result, we were only able to look at the general impact of these occupations on the economy.

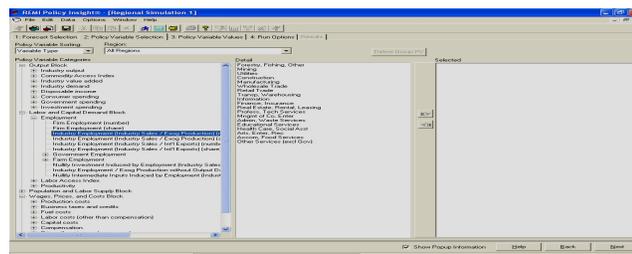
When a new job is created in the market, new economic activity is generated by its income, productivity, and sales. In 2006, there were 868 jobs in the thirteen incubators we looked at. Due to the lack of detailed information supplied to us about these jobs and the industries they operate in, we assumed they all have the market prevailing averages related to income, sales, demand, investment, and productivity among all other characteristics. For example, in 2006 the average annual compensation rate in Orange County for a job in the professional and technical sector was \$62,287. This means that when a job is created in Orange County in the professional sector through the model, it will have this compensation rate unless we overwrite the model's assumption.

According to the data collected, 140 jobs were in the business incubator in Orange County in 2006. These were distributed among the following sectors: professional and technical services 60, management of companies and enterprises 18, manufacturing 24, information services 29, healthcare services 1, administration services 8. The average compensation rate for jobs in these sectors varied between \$94,000 in the management sector and \$30,000 in the administration sector. For the purposes of this study, we assumed each of these jobs had the average compensation rate of the industry it belongs to.

To calculate the economic impact of total jobs created, we eliminated them from the underlying baseline forecast in REMI Policy Insight for the respective years and calculated the impact of their loss on the economy (counterfactual modeling). We did that for all jobs in the thirteen incubators in all the counties they operate in. This led to reduction in all income, consumption and sales related to these jobs.

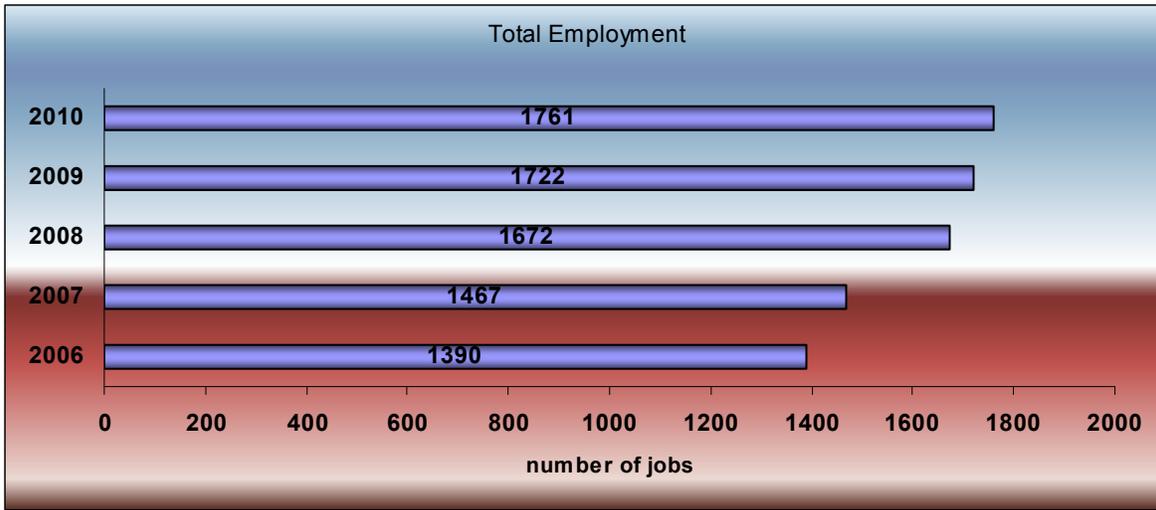
Since this approach presumes that all jobs in the incubators would not have existed if it was not for the incubators existence, we applied a 20% competitive market adjustment rate to all the results assuming that some of the jobs and companies would still have existed.

Policy Insight Model Simulation



III. Economic Impacts of Incubators:
Results of the REMI Policy Insight Model:

Figure 1



A. Job Generation:

Figure 1 shows the total number of jobs created directly through the incubators and indirectly through the new business in the economy. In 2006, the total number of jobs created by the thirteen incubators and their companies was 1,390 in the following sectors (Total direct job market impact = 868 jobs): Health care services sector 13, information services 43, professional and technical services 446, construction 48, educational services 66, administration services 105, retail trade 6, management services 33, other services 51, finance and insurance services 15 and the manufacturing sector 42. These jobs helped create an additional 522 jobs (indirect and induced impact) in the market as a result of the new business activities and the new money spent. They are the result of the indirect and induced effects of higher demand and supply of products and services between the industries, and the increase in consumption from the income earned by the new employees. Figure 2 shows the split between the direct and indirect job market impact. Total employment is expected to rise to 1,761 by 2010.

Figure 2

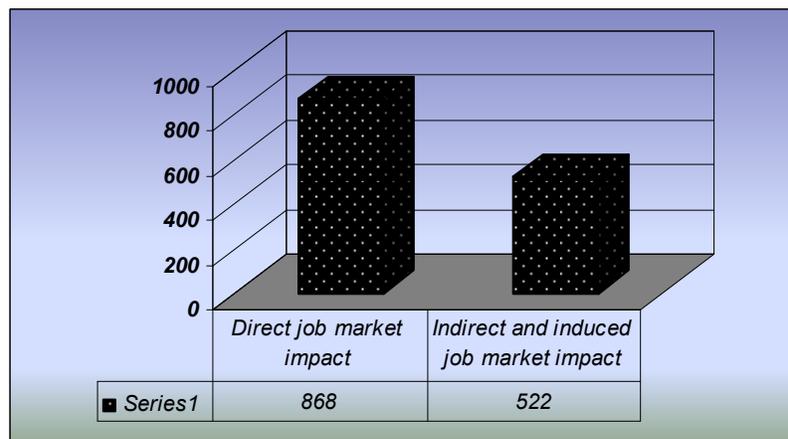
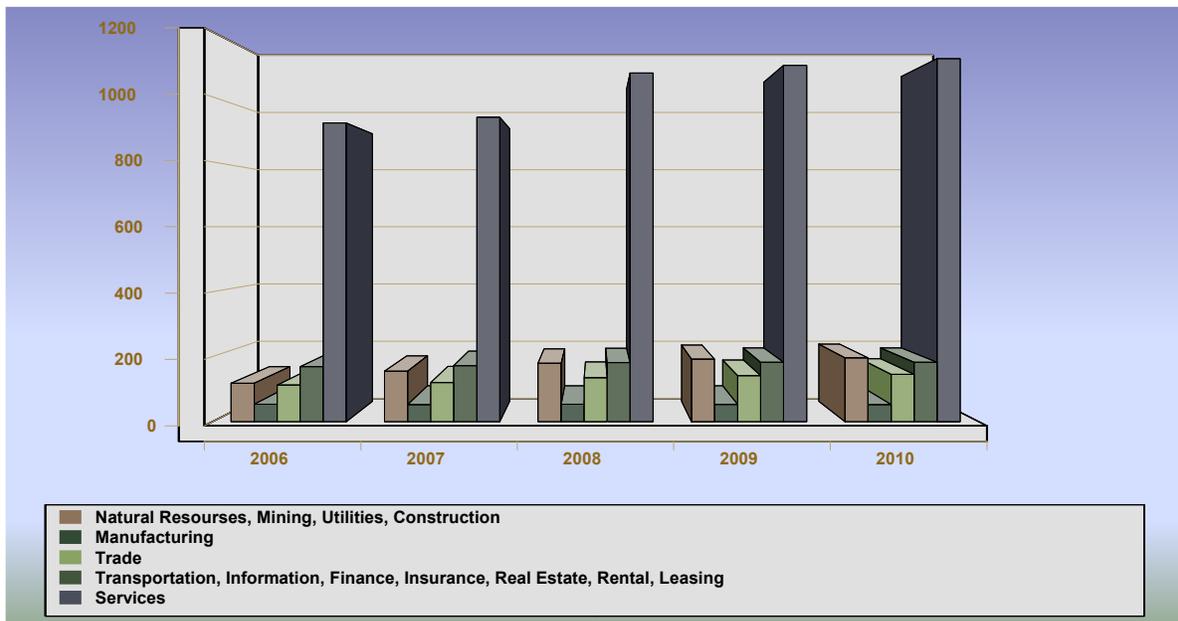


Figure 3 shows the break-down of new employment by four private non-farm sectors. Inter-industry relations (where one sector’s output is used as another sector’s input) leads to indirect economic impacts. Jobs are created when one sector produces a service or a product and another sector uses it as an intermediate input to produce a new final product. As demand for this intermediate input rises, new jobs are created. On the other hand, induced market impacts result from the spending of wages by the new employees. When consumption increases as a result of the rise in income, businesses hire new people to satisfy the increased demand.

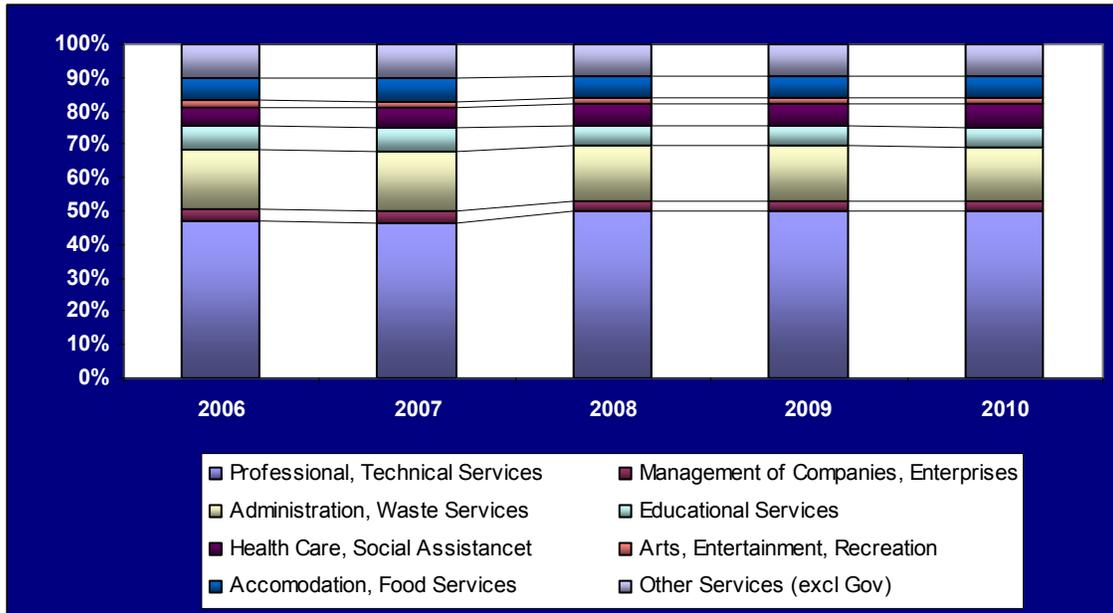
In this case, the Service sector added the most jobs as a result of the incubators business. In 2006, 919 service jobs could be traced back to the incubators. 198 new jobs will be added by 2010.

Figure 3: Private Non-Farm Employment



The service sector can be further broken down into a variety of professional and non-professional sectors. Figure 4 shows the detailed changes in these sectors projected to 2010.

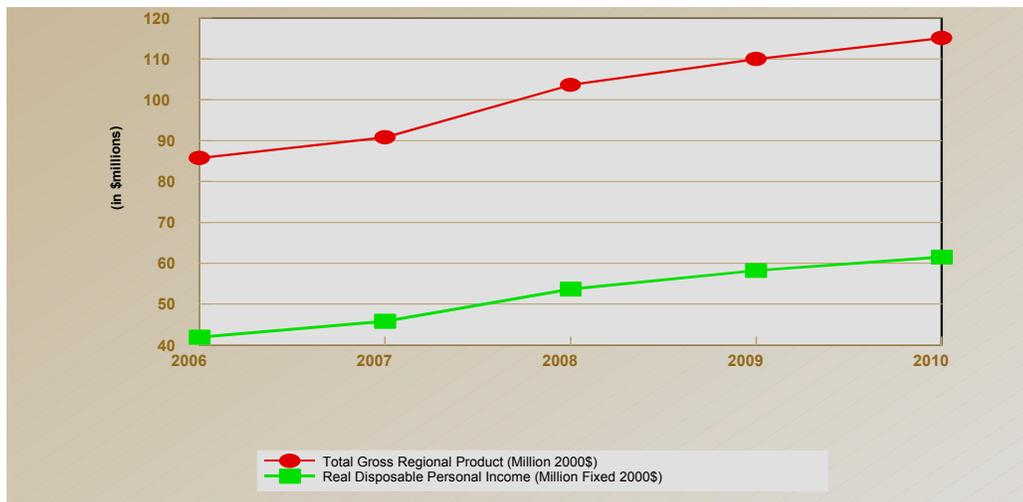
Figure 3: Change in Service Jobs by Sector



B. Sales and Income:

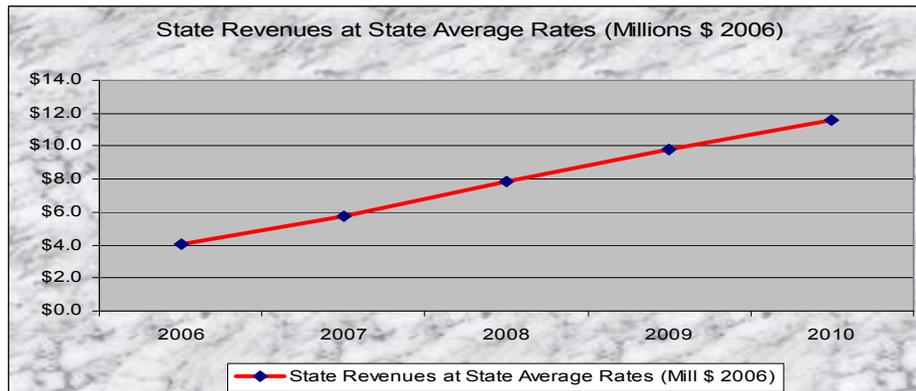
When measuring the success of different approaches to economic development in a region, it is also important to look at the wealth earned by the population, businesses, and governments as a result of those efforts. Real disposable personal income, gross regional product (GRP), and taxes are three economic indicators that can trace that wealth. Increases in disposable income lead to higher consumption and higher demand for products and services. As demand increases so do sales, investment, and government earnings. Figures 4 and 5 show the growth in these indicators between 2006 and 2010 as a result of the incubators’ activities.

Figure 4: Real Disposable Personal income & Gross Regional Product



- In 2006, Florida incubators and their hosted companies reported \$85 Million in Gross Regional Product (GRP). This is the total value added sales contributed by the businesses and its operations to the economy. The economic activity includes construction of buildings, investment in products and services, research and development, government spending and consumption. It is the result of the direct, indirect, and induced effects of the incubators. If successful businesses are sustained, GRP is projected to increase to \$115 million by 2010.
- In 2006, people involved and related to the business of the incubators earned \$42 Million in real disposable income (Figure 4). Given current conditions, this income is projected to increase to \$61 million. As sales increase, so does personal income, which leads to more investment and consumption. Real Disposable Personal Income is income available for spending after paying taxes.
- State net income from revenues and expenses like sales tax, utility tax and expenditure, insurance trust, and government administration increased by four million dollars in 2006 and is projected to increase by eleven million in 2010 (Figure 5). This income is generated from the services provided as a result of the increase in economic activity in the state.

Figure 5: Change in State Taxes



Summary:

This study gives a snap shot of the economic impact of business incubators and their companies. Because graduate companies that successfully finished the incubation programs were not part of the analysis, the return on investment is very much underestimated.

For now, it is still difficult to calculate the total return on investment of these programs due to the lack of detailed information on current and graduate companies. However, this research will continue to evolve to better reflect the true social and economic impacts of business incubators.

"Empowering Incubators Statewide to Launch the Business of Tommorrow"
FLORIDA BUSINESS INCUBATION ASSOCIATION

Disclaimer: This report includes forecasts and other projections that represent certain assumptions and expectations in light of currently available information. The accuracy of projections is subject to error because of the many unknown factors that will affect the economy over the projection period. This projection is for research purposes only.

Appendix A

Glossary

Gross Regional Product: Gross Regional Product as a value added concept is analogous to the national concept of Gross Domestic Product. It is equal to output excluding the intermediate inputs. It represents compensation and profits.

Induced impacts: Induced impacts result from the re-spending of wages.

Indirect impacts: Indirect impacts result from the purchase of intermediate goods.

Real Disposable Personal Income: Real Disposable Personal Income is the amount of real dollars available for consumption and savings.

Economic Documentation for REMI Policy Insight

Source: Regional Economic Models, Inc.

REMI Policy Insight is probably the most widely applied regional economic policy analysis model used to predict the regional economic and demographic effects of policies over a range of issues such as economic development, energy, transportation, the environment, and taxation. REMI Policy Insight is a structural economic forecasting and policy analysis model. It integrates input-output, computable general equilibrium, econometric and economic geography methodologies. The model is dynamic, with forecasts and simulations generated on an annual basis and behavioral responses to wage, price, and other economic factors.

The East Central Florida Regional Planning Council's version of REMI Policy Insight includes a REMI model that has been built especially for the East Central Florida region. The model-building system uses hundreds of programs developed over the past two decades to build customized models for each area using data from the Bureau of Economic Analysis, the Bureau of Labor Statistics, the Department of Energy, the Census Bureau and other public sources.

Appendix B: Survey Sample

Business Incubator Name		
NAICS Code & Type of Incubator		
Main Contact Info		
County		

Please also include the years whenever possible (example: what year the employees were hired).

Incubator Information:

1. Number of Employees and their respective positions by NAICS Codes with salaries and year of hiring
2. Investment in the Incubator and yearly annual budget by source.

Companies currently in the incubator

1. Year Company became a member of the incubator
2. Initial Investment and yearly budget of company and source after that
3. Sales or revenues of Companies
4. Venture Capital raised by companies per year.
5. Number of Employees and their respective positions by NAICS Code and yearly wage

Graduated Companies

Investment in building and equipment

Sales and projected sales growth by year.

Total employment and number of new jobs created.

Venture Capital collected.

For an even better analysis, provide the following type information:

Growth rates in the variables above. For example, sales expected to increase 10 percent per year & Employment expected to grow at 5 % & average yearly increase in wages.

Incubator Information		
Incubator Name:		
NAICS Code & Type of Incubator		
Incubator Address:		
Incubator Address 2:		
City:		
State:		
Postal Code:		
Incubator Contact Name/Title:		
Incubator Contact Email:		
Incubator Contact Phone #:		

Total No. of Incubator Employees				
List All Incubator Employee's Titles, Year Hired, Salary, NAICS Code	Employee Title	Year Hired	Current Salary	NAICS Code
<i>(add additional lines for employee titles if necessary)</i>				

Investment in the Incubator		
Annual Budget by Source	Source examples	Budget
Source #1	University	
Source #2	County	
Source #3	City	
Source #4	Client	
<i>(add additional lines for budget sources if necessary)</i>		

Appendix C

Participating Incubator List	
Incubator Name	County
Bay County Small Business Incubator, Inc.	Bay County
Gainesville Technology Enterprise Center	Alachua County
Enterprise Development Corporation Technology Business Incubator	Palm Beach County
Beaver Street Enterprise Center	Duval County
Center for Technology, Enterprise and Development, Inc.	Palm Beach County
STAR Technology Enterprise Center	Pinellas County
Seminole Tech. Bus. Incubation Center	Seminole County
The Business and Technology Development Corp	Miami Dade County
IRCC Business and Technology Incubator	Martin County
Southwest Florida Enterprise Center	Lee County
Florida/NASA Business Incubation Center	Brevard County
TRDA Business Innovation Center	Brevard County
University of Central Florida Incubation Program	Orange & Seminole Counties



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