A BALANCED SCORECARD TEMPLATE FOR FLORIDA INCUBATORS

by

JULIO A. LUJAMBIO
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Major Professor: Dennis Kulonda

ABSTRACT

Incubators are organizations that have become a key factor to the success of new ventures. One study jointly sponsored by the University of Michigan, Ohio University, the National Business Incubation Association, and the Southern Technology Council found that 87% of the firms that went through an incubator program remain in business and 84% remain in their community. Clearly properly run incubators can provide much benefit. However there is little consensus on goals and best practices for managing the incubators themselves. Recently an approach to integrating strategy and practice called the balanced scorecard (BSC) has emerged as a popular tool in many public and private organizations.

The purpose of this thesis is to examine the BSC as a potential performance and management tool for Incubators in Florida. While the list of major corporations and public institutions that has adopted some form of a balanced scorecard continues to grow, there has been no research into its adaptability to incubators. This thesis found potential benefits associated with applying the BSC model to incubators, such as maintaining incubator's competitiveness and improving communication and employee's performance.

Because a full-scale balanced scorecard system entails a fairly intensive implementation effort, it cannot be prescribed randomly across the variety of incubator enterprises. Accordingly, a stage of development framework is employed to help categorize incubators, assess their respective planning needs and identify how the balanced scorecard approach can be applied beneficially. Under these parameters, it is proposed that for incubators where both the degree of managerial complexity and the prospects for extensive change are high, the balanced scorecard

can be a useful mechanism for effective management. A number of important implementation

issues are also explored and some directions for future research are identified.

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LIST OF ABBREVIATIONS

BSC - Balanced Scorecard
CRM - Customer Relationship Management
GTEC - Gainesville Technology Enterprise Center
KSFs - Key Success Factors
NBIA - National Business Incubation Association of United States
ROCE - Return On Capital Employed
SPICE - The Science Park and Innovation Centre Expert Group
SWOT - Strengths, Weaknesses, Opportunities, and Threats
UCF - University of Central Florida
UF - University of Florida
UCSD - University of California at San Diego

CHAPTER 1: INTRODUCTION

A 1997 published research study on the impact of incubators by The University of Michigan, Ohio University, the National Business Incubation Association, and the Southern Technology Council reports that:

Of those firms that went through a program in a business incubator:

- 87% remain in business.

- 84% remain in their community.

- On average, they returned $4.96 for each $1.00 of public investment..

"Business incubators have become crucial to the success of fledgling companies. Many science and technology based entrepreneurs have little experience in managing and growing small enterprises. Engineers and scientists may have an idea or technology that can be potentially marketed as a product or service. However, they often lack the capital, business skills, and experience needed to commercialize their products." (Rainey & Associates, 2002)

Incubators are organizations that help new ventures to become successful. Incubation programs catalyze the process of starting and growing companies by providing entrepreneurs with management expertise, mentor and advisor networks and access to seed capital. Incubators may also provide the "physical infrastructure necessary to launch new businesses, offering furnished offices and laboratory space, and shared resources such as specialized equipment and support services" (Rainey & Associates, 2003). "They also generate business plans, financial backing, or recruit the necessary talent to launch a business" (Hart, 2000).

The 2001 United Nations report states that in business incubators the efforts to build capacity to encourage enterprise development take many forms, and the process is still evolving.

"Best practice" is not a static concept – there is still much need for improvement in incubators. No definitive models yet exist which provides convincing templates for institution building (United Nations, 2001).

"If the incubator's model is done properly, there could be more. The region is on the verge of blowing up," insists Roman Fitzmartin, 2000, referring to business incubators in Philadelphia, a second-tier technology city. Roman Fitzmartin is the company's director of business development at a Philadelphia-area incubator called "bHive." Hoping to create a sustainable business, incubators are trying different business and management models (Pavis, 2000).

This research found that 67% of Florida's incubators do not have measures for their internal business processes and/or know what they could measure and only 17% of them are set using strategic planning. More over, 50% of the incubators do not know the key business process they need to deliver to fulfill their value proposition and 50% of them are reacting to clients' requirements.

According to the National Business Incubation Association of the United States (NBIA), over 84 percent of the total incubators institutions that were in operation in 2003 are non-profit and 16 percent were for profit (NBIA Updates, 2003). To solve the challenges of Florida's incubators the Balanced Scorecard (BSC) performance and management model was chosen as it differs from the traditional management models that only consider financial aspects of an organization. This new management model is emerging among all kinds of organizations; it was first presented by David P. Norton and Robert Kaplan in 1992 and has not been tested in incubators. The BSC applies well to non-profit organizations as it considers non-financial aspects of an organization. Thus, facilitates the application in non-profit institutions. The scope

of this thesis is to show the fit of the BSC on non-profit incubators; however, this work with minimal modifications could be applicable to for-profit incubators.

When a breakthrough strategy is used to create transformation in an organization, change in the business structure, marketing, internal operations, and organization culture are required to fit the new desired context. The required change in order to use a BSC is substantive and systemic, and therefore, it differs from the traditional organizational development that addresses one system at a time to produce incremental improvements. For instance, traditional management uses financial measures as sources of information for decision making. "However, financial measures could not capture the value creating activities of an organization's intangible assets: the skills, competences, and motivation of employees; databases and information technologies, efficient and responsive operating processes; innovation in products and services; customer loyalty and relationships; and political and societal approval" (Kaplan & Norton, 2001). The BSC requires the alignment of the business units, shared service units, teams, and individuals around overall organizational goals; using measures across the all aspects of the organization. In the BSC these aspects are grouped in four organizational areas: customers, internal, financial, and learning and growth; the four organizational areas are explored latter on in this paper.

With the insights provided through the understanding of the balanced scorecard model and incubators' practices, this paper investigates two systems, the BSC and the incubators' performance measures and management practices currently in use. The intent is to describe the strategic processes an incubator could employ to achieve a successful business management model for itself and also compare the fit of BSC practices in similar environments and actual incubator's management systems. A thorough investigation about business incubators' internals

(management practices, needs, products and services, and business measures in use) is presented as an aid in understanding the choices available to aid an incubator achieve its strategic goals.

In the second chapter, the methodology of balanced scorecard is reviewed. Also, an assessment of the most relevant incubator's business indicators and management models is presented.

The third chapter explains the methodology followed in this work. The research consists on the revision of balanced scorecard practices and case studies of incubators, those recognized by international business incubator associations. Subsequently, an assessment of different business indicators and management models of incubators, those that are located in the Florida Region and recognized by the NBIA is presented. The results of the investigation will be compared with the model provided by the balanced scorecard to achieve a new business model for incubators.

In the fourth chapter, the core of this thesis, an analysis of relevant information will be presented. Structures and systems are studied and characterized in the final segments of this part.

The thesis is ended with two chapters recapitulating the main achievements, learning, and conclusions.

CHAPTER 2: LITERATURE REVIEW

Since 1992 a new model to execute strategy has emerged. The balanced scorecard (BSC),
developed by David Norton, management consultant, and Robert Kaplan, Harvard Business
School professor, was first introduced in 1992 in a Harvard Business Review article. There they
stated the scorecard tracks the key elements of a company's strategy – from continuous
improvement and partnerships to teamwork and global scale.

The balanced scorecard was first developed to solve a performance measurement
problem in a knowledge-based competitive market environment. Traditional financial measures
could not capture the value creating activities of an organization's intangible assets: the skills,
competences, and motivation of employees; databases and information technologies, efficient
and responsive operating processes; innovation in products and services; customer loyalty and
relationships; and political and societal approval (Kaplan & Norton, 2001). "Later on, Executives
were using the BSC to align their new business units, shared service units, teams, and individuals
around overall organizational goals. Vision, strategy, and resource allocation flowed down from
the top; implementation, innovation, feedback, and learning flowed back up from the front lines
and back offices (Kaplan & Norton, 2001)."

The Balanced Scorecard, Background

Kaplan and Norton, 1996, stated, ``the Balanced Scorecard translates an organization's
mission and strategy into a comprehensive set of performance measures and provides the
framework for strategic measurement and management.'' Traditionally, most organizations
looked at their corporate performance by reviewing the financial aspects, such as budget. Their

financial-reporting process remained anchored to a short term control accounting model developed centuries ago for an environment of arm's-length transactions between independent entities (where vision, strategy, personal incentives, revisions, planning, and capital allocation all were tied to the financial situation of the company). This venerable financial accounting model is still being used as a management tool during this age of information as companies attempt to build internal assets and capabilities. However this model provides only lagging indicators (Kaplan and Norton, 1996) limiting its ability to manage progress.

Ideally, the financial accounting model should have been expanded to incorporate the valuation of a company's intangible and intellectual assets, such as high-quality products and services, motivated and skilled employees, responsive and predictable internal processes, and satisfied and loyal customers (Kaplan and Norton, 1996). It was assumed that in order to build a successful company, a financial system should show how to plan the company's future (Simon, 1996). However, financial measures alone were not a balanced view of the critical success factors of any organization, mainly because financial measurements tend to measure the past (Kaplan and Norton, 1996).

The BSC is a set of measures that gave top managers a fast but comprehensive view of the business. It complemented financial measures with operational measures on customer satisfaction, internal processes, and the organization's innovation and improvement activities-operational measures that are drivers of future financial performance (Kaplan and Norton, 1992). This provided a framework for value creation (Kaplan and Norton, 2001) in organizations. According to Michael Treacy and Fred Wiersema, 1993, "the concept of value includes convenience of purchase, after sale service, dependability, and so on." Kaplan and Norton, 2001,

were more specific stating, "The value proposition describes the unique mix of products, price, services, relationships, and image that the provider offers its customers."

The framework in which the scorecard operates has four different perspectives. First, the financial perspective, "The strategy for growth, profitability, and risk viewed from the perspective of the shareholder" (Kaplan & Norton, 2001). The second perspective relates to the customer, "The strategy for creating value and differentiation from the perspective of the customer" (Kaplan & Norton, 2001). Third, is the internal business processes perspective, "The strategic priorities for various business processes, which create customer and shareholder satisfaction." The fourth perspective relates to the learning and growth, "The priorities to create a climate that supports organizational change, innovation, and growth" (Kaplan & Norton, 2001).

There is a linkage among these four perspectives. The scorecard brings together, in a single management report, many of the elements of a company competitive agenda such as: becoming customer oriented, shortening response time, improving quality, emphasizing teamwork, reducing new products' launch time, and managing for the long term (Kaplan and Norton, 1992). In this way the BSC minimizes information overload by limiting the number of performance measures used. It forces mangers to focus on the handful of measures that are most critical within the organization (Kaplan and Norton, 1992). Once a scorecard that accurately describes the strategy has been developed, it then serves as the organizing framework for the management system (Kaplan and Norton, 1996). This framework puts strategy at the center of the management process (Kaplan and Norton, 2001), as shown in Figure 1.

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                    ┌─────────────┐
                    │ Translation │
                    │ of the Vision│
                    └─────────────┘
┌─────────────┐     ┌─────────────┐     ┌─────────────┐
│Communicating│     │             │     │  Feedback   │
│     and     │─────│     BSC     │─────│     and     │
│   Linking   │     │             │     │  Learning   │
└─────────────┘     └─────────────┘     └─────────────┘
                    ┌─────────────┐
                    │  Business   │
                    │  Planning   │
                    └─────────────┘
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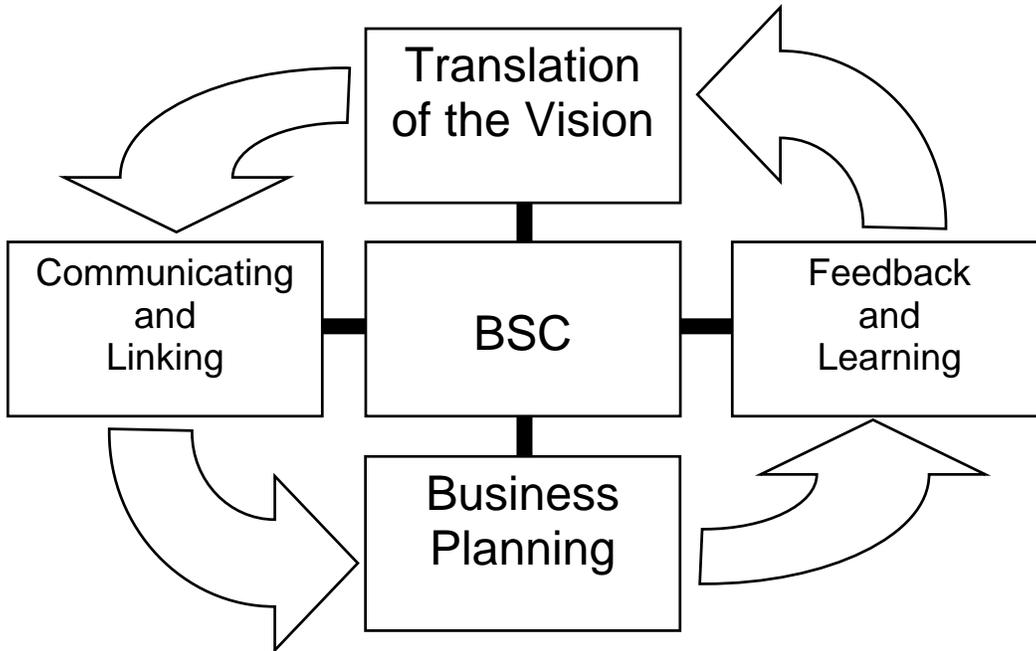
Figure 1: Strategic Management System, designed around long-term strategic view (adaptation from Kaplan and Norton, 2001)

The scorecard process starts with the translation of the vision of the company to lower levels. Thus, the management should translate the business strategy into unit's strategic goals and from there into specific objectives (Kaplan and Norton, 1996). Then, the balanced scorecard's Strategic objectives and measures should be communicated through the organization, for instance, via newsletters, bulletin boards, videos, and even e-mails (Kaplan and Norton, 2001).

The BSC has its greatest impact when it is developed to drive organizational change. Senior executives should establish 3-5 year targets for scorecard measures, in the four dimensions of the scorecard that, if achieved, will transform the company. Then, short term milestones for each target need to be defined to provide specific targets for assessing progress. In this way, the planning and target setting management process will enable the organization to

quantify outcomes and to identify mechanisms and provide resources to achieve those outcomes (Kaplan and Norton, 1996).

The strategic feedback and learning process complete the loop embodied in figure 2 feeding into the next vision and strategy process where the objectives in various perspectives are reviewed, updated, and replaced in accordance with the most current view of the strategic outcomes and required performance drivers for the upcoming periods (Kaplan and Norton, 1996).

In effect, the balanced scorecard changes the financials only mentality of the formal management system; it becomes an important execution tool for a new Strategic Management Process (Kaplan and Norton, 1996). According to Larry Bossidy and Ram Charan, in their book *Execution: The discipline of getting things done*, 2002," "Execution is a discipline, and an integral part of strategy. Execution is the major job of the business leader." Further, they remark, execution must be a core element of an organization's culture. Organizations do not execute unless the right people, individually and collectively, focus on the right details at the right time (Bossidy and Charan, 2003).

Strategic Aspects of the Balanced Scorecard

The strategic themes describe the "recipe" for combining the intangible ingredients of skills, technologies, and organizational climate, with internal processes, such as sourcing and distribution, to create tangible outcomes (Kaplan and Norton, 2001). Generally, the strategic themes are defined in advance of the start of the scorecard's building process.

A strategy map is an illustration that makes explicit the strategy's hypotheses. The generic example provided in Figure 2 shows how each performance measure of the BSC

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becomes embedded in a chain of cause and effect logic that connects the desired outcomes from the strategy with the drivers that will lead to the strategic outcomes (Kaplan and Norton, 2001).

Linking the scorecard to a company's strategy involves three principles:

1. Cause-and-effect relationships,

2. Performance drivers, and

3. Linkage to financials (Kaplan and Norton, 1996).

Another thing to consider when linking the balanced scorecard to the strategy is the number of measures for the four perspectives. The number of performance measurements need to be relevant to the achievement of each strategy. It is important to view all strategies and measurements together with equal weight (Kaplan and Norton, 2001).

Strategy is the planned fit between an organization's capabilities and its evolving environment, crafted to achieve a favorable position within the competitive marketplace (Cook et al., 1997). The strategy map (as shown in Figure 2) describes the process for transforming intangible assets into tangible customer and financial outcomes. It provides executives with a framework for describing and managing strategy in a knowledge economy (Kaplan and Norton, 2001). Figure 2 is an example of a strategy map. It shows the logic used to build a regular business' strategy map, key measurements and targets for each perspective of the balanced scorecard. In the last column the map express initiatives directed at affecting the measurement areas and in this way reach targets.

The final outcome of a strategy map is to translate the business mission into desired business outcomes. To achieve this, the strategy is developed over time to meet the changing conditions posed by the real world. The *Core* values are fairly stable. The *Mission* provides the starting point, and the *Vision* paints a picture of the future that clarifies the direction of the

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organization and helps individuals understand how they should support the organization (Kaplan and Norton, 2001).

Once the top-level scorecard has been created, the local scorecards describe how each department does its job to contribute to the top-level organizational objectives (Kaplan, 1999). Details about how targets are linked with initiatives can be found later in this chapter.

Sourcing and Distribution Theme	Measurement	Target	Initiative
Financial — Profitability ← Revenue Growth	Operating Income	20 % Increase	
	Same Store growth	12% Increase	Support Internal Initiatives
Customer — Product Quality → Shopping Experience	Return Rate	Reduce by 50% each year	Quality Management
	Other		
	Customer Loyalty Ever Active	60%	Customer Loyalty
Internal — "A" Class Factories ↔ Line Plan Management	Merchandise from A Factories	70 % by Year 3	Corporate Factory Development Program
	Items in Stock	85%	
Learning — Factory Relationship Skills, Merchandise Buying/ Planning Systems	% of Strategic Skills Available Strategic Systems vs. Plan	Year 1 (50%) Year 2 (75%) Year 3 (90%)	Strategic Skills Merchant Desktop
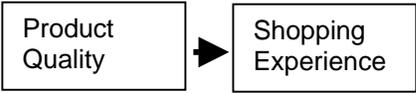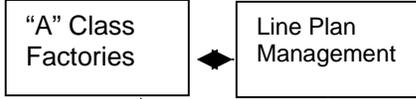
Figure 2: Generic Strategy Map (adaptation from Kaplan and Norton, 1996)

Strategy's Mapping

The scorecard enables the strategic hypothesis to be described as a set of cause and effect relationships that are explicit and testable (Kaplan and Norton, 2001). Thus, the architecture of the balanced scorecard has a top-down logic, starting with the desired financial and customer outcomes and then moving to the value proposition, business processes, and infrastructure that are the drivers of change, a general example is provided in figure 3. The relationships between the drivers and the desired outcomes constitute the hypotheses that define the strategy (Kaplan and Norton, 2001).

Vision and Strategy

Financial Perspective

"If we succeed, how will we look to our shareholders"

Objectives	Target	Measures	Initiatives

Customer Perspective

"To achieve my vision, how must I look to my customers"

Objectives	Target	Measures	Initiatives

Internal Perspective

"To satisfy my customer, at which processes must I excel"

Objectives	Target	Measures	Initiatives

Learning and growth Perspective

"To achieve my vision how must my organization learn and improve"

Objectives	Target	Measures	Initiatives

Figure 3: Defining the Cause and Effect Relationships of the Strategy (adaptation from Kaplan and Norton, 2001)

Rucci, Kirn, and Quinn, 1998, provide one specific example of the direction of the cause and effect relationships in Sears during 1992-95. Here, the target for the strategic initiative was in the financial dimension and was to achieve a growth in revenue of 0.5%. Once the financial target was established, the managers derived from this target the customer, internal-operations-processes, and learning and growth targets. Thus, managers aligned their strategic quality, response time, and reengineering initiatives for achieving the breakthrough strategy. As figure 4 shows, through a series of cause and effect relationships embodied in the balanced scorecard, these capabilities eventually translated into superior financial performance.
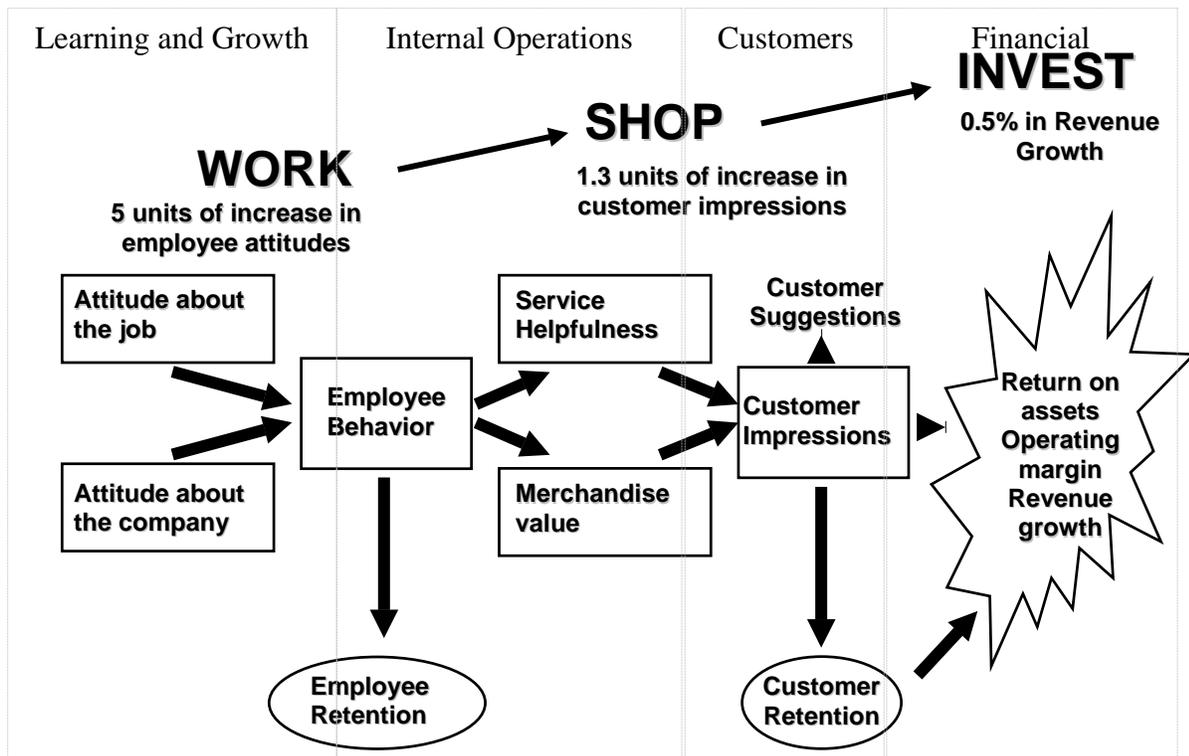
Figure 4: Cause and Effect Map at Sears (adaptation from Jack Phillips, 2000)

The starting point of this model is the area of learning and growth. The chain of cause and effect relationships starts with improvements in this area. The unit of improvement used was the result of a set of operational measures, based on characteristics of the work environment, and from Sears' database of attitudes. These improvements point to a higher level in the business processes. This in turn, caused improvements in customer satisfaction and subsequently a growth in the desired finance measures (Jack Phillips, 2000). The customer units used came from a 60 second survey that was distributed with the customer's monthly statements (Kaplan and Norton, 2000).

Operating Principles of the BSC

According to the Webster's Dictionary definition, a principle is a basic truth, law, or assumption. It is a basic generalization that is accepted as true and that can be used as a basis for reasoning or conduct. Kaplan and Norton, 2001, stated that there are 5 common principles that operate in successful strategy-focused organizations.

- Principle 1: Translate the strategy to operational terms,

- Principle 2: Align the organization to the strategy,

- Principle 3: Make strategy everyone's everyday job,

- Principle 4: Make strategy a continual process,

- Principle 5: Mobilize change through executive leadership.

The operation of any company under these principles creates alignment and focus of the company resources. Consequently, companies can achieve breakthrough results (`Bossidy and Charan, 2002).

<div align="center">**Suggested Process to Build a Scorecard**</div>

As was determined by Kaplan and Norton in their book *The Balanced Scorecard: Translating Strategy into Action,* (1996) constructing an organization's first balanced scorecard can be accomplished by a systematic process that builds consensus and clarity about how to translate a mission and strategy into operational objectives and measures.

The first step for building a successful balanced scorecard is to identify and agree on the principal purposes for the project, the objectives. The program objectives will help:

- Guide the construction of objectives and measures for the scorecard,

- Gain commitment among the project participants, and

- Clarify the framework for implementation and management processes that must follow the construction of the initial scorecard.

Although each organization is unique and may wish to follow its own path for building a balanced scorecard, below is a description of the needed steps to build the scorecard from a typical and systematic development plan. The following tasks were presented by Kaplan and Norton in 1996.

Task 1. Select the Appropriate Organizational Unit: Define the Measurement Architecture

Most corporations are sufficiently diverse. Therefore, constructing a corporate-level scorecard may be a difficult first task. The initial scorecard process works best in business units, ideally those that conduct activities across an entire value chain: innovation, operations, marketing, selling, and service.

Task 2. Identify Unit/Corporate Linkages

The relationship among the divisions and corporate organization must be understood in several aspects:

- Financial objectives (growth, profitability, cash flow, harvest)

- Overriding corporate themes (environment, safety, employee policies, community relations, quality, price competitiveness, innovation)

- Linkages among business units (common customers, core competencies, opportunities for integrated approaches to customers, internal supplier/customer relationships)

Task 3. Build Consensus around Strategic Objectives

The task to build consensus involves the processes of:

- Acquiring information on the industry and competitive environment, including significant trends in market size and growth, competitors and competitor offerings, customer preferences, and technological developments.

- Obtaining input on the company's strategic objectives and tentative proposals for balanced scorecard measures across the four perspectives.

Task 4. Synthesis Session

The output of the synthesis session should be a listing and ranking of objectives in the four perspectives. Each perspective and objective within the perspective will be accompanied by anonymous quotes from the executives of the organization that explain and support the objectives, and that identify issues to resolve.

Task 5. Refine Objectives: First Round

Using the output of task 4, the next step is to identify three to four strategic objectives for each perspective, a detailed descriptive statement for each objective, and a list of potential measures for each objective.

Task 6. Select and Design Measures

This task attempts to accomplish four principal objectives:

1. Refine the wording of the strategic objectives in line with the intentions expressed in the first executive workshop.

2. For each objective, identify the measure or measures that best capture and communicate the intention of the objective.

3. For each proposed measure, identify the sources of the necessary information and the actions that may be required to make this information accessible.

4. For each perspective, identify the key linkages among the measures within the perspective, as well as between this perspective and the other scorecard perspectives. Attempt to identify how each measure influences the other (Kaplan and Norton, 1996).

A good example to demonstrate the process and principles of a balanced scorecard into practice is Mobil North America Marketing and Refining (NAM&R).

<u>Balanced Scorecard into practice: MOBIL</u>

This example was first presented by R. S. Kaplan, during 1996, in the Harvard Business School article named "Mobil USM&R (A): Linking the balanced scorecard." The following is a summary of the complete case of Mobil presented in the book "The Strategy Focused Organization. How Balanced Scorecard Companies Thrive In the New Business Environment" written by David Norton and Robert Kaplan, (2001). Mobil NAM&R successfully implemented a strategy that required a significant marketplace repositioning connected with substantial cost reductions and operational improvements. The process starts by building a balanced scorecard that describes and communicates the strategy. It translates the strategy to operational terms. Mobil's strategy was two-pronged: (1) reduce costs and improve productivity across its value chain, because of the capital intensive nature of the industry, a high cost of raw materials, a commodity product, and (2) generate higher volume on premium-priced products and services, because Mobil wanted a strategy for growth and differentiation. If successful, Mobil's margins would improve through both components.

Financial Perspective: Mobil started its scorecard by defining its high-level financial objective: to increase *return on capital employed* (ROCE). Mobil planned to improve its high-level ROCE measure by using two financial themes: *productivity* and *growth.* The productivity theme consisted of two components: cost reduction and asset intensity. Cost reduction would be measured by operating cash expenses versus the industry (using cents per gallon, normalized for volume), with the goal of being the industry cost leader.

Higher asset productivity would enable Mobil to handle greater volumes from its growth strategy without expanding its asset base. For this objective, it selected a measure of cash flow, net of capital spending, to indicate the benefits from generating more cash (i.e., throughput) from existing assets plus any benefits from inventory reductions.

Mobil set a financial growth objective to develop new sources of revenue, and it measured this objective by non-gasoline revenues and margins. Thus the financial perspective incorporated objectives and measures for both productivity and growth strategies.

Customer Perspective: Mobil struggled initially to understand how it could generate the desired growth in volume, margins, and non-gasoline revenues. When MOBIL met to discuss ways to develop a new profitable growth strategy, the executives expressed quite divergent views about why customers might be willing to pay a $0.06 to $0.10 per gallon premium to purchase Mobil gasoline. Eventually, they turned to the Gasoline Marketing Department, which had just completed a study that revealed five distinct consumer segments among the gasoline-buying public (e.g. as shown in Table 1).

Table 1

Mobil's Growth Strategy: Understand the Customer -Results of a Market Segment Study- (adaptation from Kaplan and Norton, 1996)

Road Warriors 16%	Generally higher-income, middle-aged men who drive 25,000 to 50,000 miles a year.. .buy premium gasolines with a credit card . . . purchase sandwiches and drinks from the convenience store. ..Will sometimes wash their cars at the carwash.
True Blues 16%	Usually individuals with moderate to high incomes who are loyal to a brand and sometimes to a particular station ...frequently buy premium gasoline and pay in cash.
Generation F3 27%	Fuel, Food, and Fast: Upwardly mobile men and women-half under 25 years of age-who are constantly on the go.. .drive a lot and snack heavily from the convenience store.
Homebodies 21%	A housewife or similar who shuttle their children around during the day and use whatever gasoline station is based in town or along their route of travel.
Price Shoppers 20%	Generally aren't loyal to either a brand or a particular station, and rarely buy the premium gas, frequently low budgets.

In its customer perspective, therefore, Mobil selected the outcome measure to be market share in three targeted segments, Road Warriors, True Blues, and Generation F3. Measuring total market share would represent an undifferentiated strategy, perhaps no strategy at all, attempting to be all things to all consumers. The differentiation strategy demanded a measure consistent with targeting specific consumer groups. Mobil wanted to be the number one choice of Road Warriors, True Blues, and Generation F3. A share of segments for these three groups was the logical outcome measure for the customer perspective. But companies cannot stop with outcome measures alone. Mobil needed to define the value proposition that it must deliver to attract,

retain, and deepen its relationship with customers in the three targeted segments. Again, market

research was critical; the research identified the attributes that constituted a great buying

experience. Mobil summarized these attributes as offering customers "a fast, friendly service."

But how could all the attributes of the fast, friendly service buying experience be measured?

Mobil decided that the consumer's buying experience was so central to its strategy that it

invested in a new measurement system: the "mystery shopper." Mobil hired an independent third

party to send a representative (the mystery shopper) to every Mobil station every month to

purchase fuel and a snack and to evaluate the experience, based on twenty-three specified

attributes. A summary of the ratings would constitute the mystery shopper score for that station

that month. Mobil learned how difficult it was to brand its product. Now it would attempt to

brand the buying experience. At this point, Mobil had a fairly simple set of objectives and

measures for the customer perspective: three outcome measures (share of three targeted

segments) and a summary measure of the value proposition (mystery shopper score) expected to

drive the outcomes.

The customer perspective, however, was not complete. If end-use consumers were to

receive a great buying experience, then the independent dealers had to deliver that experience.

Dealers were clearly a critical part of Mobil's new strategy. In a sharp departure from the past,

Mobil adopted an objective to increase its dealers' profitability. Mobil set a stretch target to have

its dealers become the most profitable franchise operators in the country so that it could attract

and retain the best talent. The new strategy emphasized creating a positive-sum game, increasing

the size of the reward that could be shared between Mobil and its dealers so that the relationship

would be win-win. Mobil therefore set an objective to create the win-win relationship with

dealers and measured this objective by the gross profits that could be split between the dealers and Mobil.

The customer strategy could now be represented by linked measures in the customer perspective (e.g. as shown in Table 2 & Figures 5). The objectives and measures in Mobil's customer perspective were not generic, undifferentiated measures such as customer satisfaction or customer loyalty. They were specific, focused measures that clearly communicated and were derived from the strategy. This is a key facet of the BSC process.

Internal Business Process Perspective: With a clear picture about the outcomes desired in the financial and customer perspectives, Mobil turned to the objectives and measures in the internal business process perspective. For direct linkages to the customer objectives, Mobil identified *two* important internal processes:

1. Develop new products and services

2. Generate dealer profits from non-gasoline revenues

The first objective signaled the desire to enhance the buying experience of consumers by developing new offerings at the gasoline station. The second objective supported both the new win-win relationship with dealers and Mobil's financial objectives. In addition to processes aimed at improving customer objectives, Mobil included several objectives and measures in its internal business process perspective for its basic refining and distribution operations. Measures for these operations stressed low cost, consistent quality, reductions of asset downtime, and the elimination of environmental, safety, and health-threatening incidents. Most of these measures related to the cost reduction and productivity themes in the financial perspective. Therefore, Mobil had to follow an operational excellence strategy in its basic operating processes. Having several measures in the internal process perspective for cost reduction, fixed asset productivity,

and yield improvements signaled this strategy. Thus Mobil's internal business process objectives and measures supported both its differentiated strategy with consumers and dealers, and its financial objectives for cost reduction and improved productivity. Table 2 and Figure 5 show a representation of this perspective.

Learning and Growth Perspective: The final set of objectives provided the foundation for Mobil's strategy: skills and motivation of its employees and the role for information technology. The project team identified three strategic objectives for the learning and growth perspective: Core Competencies and Skills, Access to Strategic Information, Organizational Involvement. The measures to support these three objectives, however, proved to be among the most difficult to specify. Ideally, Mobil wanted to identify the specific skills and information each individual should have to enhance internal process performance and deliver the value proposition to its customers; these might include, for example, measures such as strategic competency availability percentage and strategic systems availability. The company had to defer actual measurement, however, until it could develop the measurement instruments. For the third objective, Mobil implemented an employee survey designed to measure people's awareness about the new strategy and their motivation to help the company achieve its targets.

Concluding, with the learning and growth perspective specified, Mobil now had a complete representation of its new strategy. It finished the first process in creating a Strategy-Focused Organization by translating its vision and strategy into a set of objectives and measures in the four perspectives (e.g. as shown in Table 2 & Figure 5). These were represented in a strategy map (e.g. as shown in Figure 5) that graphically portrayed the cause-and-effect linkages of the objectives and measures across the four perspectives. In this way, the objectives and measures,

and their representation in a map, can be linked and communicated clearly to the rest of the organization.

Table 2

Mobil NAM&R Balanced Scorecard (adaptation from Kaplan and Norton, 1996)

	Strategic Themes	Strategic Objectives	Strategic Measures
Financial	Financial Growth	F1 Return on Capital Employed F2 Existing Assets Utilization F3 Profitability F4 Industry Cost Leader F5 Profitable Growth	• ROCE • Cash Flow • Net Margin Rank (vs. Competition) • Full Cost per Gallon Delivered (vs. Competition) • Volume Growth Rate vs. Industry • Premium Ratio • Nongasoline Revenue Margin
Customer	Delight the Consumer Win-Win Dealer Relations	C1 Continually Delight the Targeted Customer C2 Build Win-Win Relations with Dealer	• Share of Segment in Selected Key Markets • Mystery Shopper Rating • Dealer Gross Profit Growth • Dealer Survey
Internal	Build the Franchise Safe and Reliable Competitive Supplier Quality Good Neighbor	I1 Innovative Products and Services I2 Best in Class Franchise Teams I3 Refinery Performance I4 Inventory Management I5 Industry Cost Leader I6 On Spec. on Time I7 Improve EHS	• New Product ROI • New Product Acceptance Rate • Dealer Quality Score • Yield Gap • Unplanned Downtime • Inventory Levels • Run-out Rate • Activity Cost vs. Competition • Perfect Orders • Number of Environmental Incidents • Days Away from Work Rate
Learning and Growth	Motivated and Prepared Workplace	L1 Climate for Action L2 Core Competencies and Skills L3 Access to Strategic Information	• Employee Survey • Personal Balanced Scorecard (%) • Strategic Competency Availability • Strategic Information Availability

Increase ROCE

Revenue Growth

•ROCE
•Net Margin (vs. Industry)

Productivity

New Sources of Nongasoline Revenues

Increase Customer profitability

Become Industry Cents Leader

Maximize Use of Existing Assets

•Nongasoline Revenue Margin

•Volume vs. Industry
•Premium Ratio

•Cash Expense (Cost per Gallon) vs. Industry

•Cash Flow

CUSTOMER PERSPECTIVE

"Delight the Consumer"

•Mystery Shopper Rating

•Share of Segment

Basic

•Clean
•Quality Product
•Trusted Brand

Differentiate

Speedy Purchase

Friendly, Helpful Employee

Recognize Loyalty

"Win-Win Dealer Relations"

More Consumer Products

Help Develop Business Skills

•Dealer Profit Growth
•Dealer Satisfaction

INTERNAL PERSPECTIVE

"Build the franchise"

"Increase Customer Values"

"Achieve Operational Excellence"

"Be a Good Neighbor"

Create Nongasoline Products and Services

•New Product ROI
•New Product Acceptance Plan

Understand Consumer Segments

•Share of Target Segment

Best in Class Franchise Teams

•Dealer Quality Rating

Improve Hardware Performance

Improve Inventory Management

•Yield Gap
•Unplanned Downtime

•Inventory levels

On Spec On Time

Industry Cost Leader

•Perfect Orders

•Activity Cost vs. Competition

Improve Environment, Health, and Safety

•Environmental accidents
•Safety Accidents

LEARNING AND GROWTH PERSPECTIVE

A MOTIVATED AND PREPARED WORKFORCE

Climate fro Action

•Aligned
•Personal Growth

•Personal Scorecard
•Employee Feedback

Competencies

•Functional Excellence
•Leadership Skills
•Integrated View

•Strategic Skill Coverage Ratio

Technology

•Process Improvement
•Y2K

•Systems Milestones

Figure 5: Mobil NAM&R Strategy Map (adaptation from Kaplan and Norton, 1996)

The Balanced Scorecard in Non-profit, Government, and Healthcare Organizations

In 1996, the migration of the BSC to the non-profit and government organizations was in its embryonic stages. During the next four years, the concept became widely accepted and adopted in these organizations around the world (Kaplan and Norton, 2001). In the next paragraphs, the implications of the use of the scorecard in these organizations will be presented. Finally, the principal differences among the different sectors that are covered will be discussed.

Strategic Theme in Non-Profit Organizations

According to the experience of Norton and Kaplan, 1996, most non-profits or government organizations have considerable difficulty in defining clearly their strategy. These organizations must consider that "even non-business entities depend on strategies to help employees or members plan new programs or revitalize services so that constituencies are better served" (Cook et al., 1996). They are able to well articulate their mission and vision, but most of their supporting documents are a list of programs and initiatives, not the outcomes the organization is trying to achieve. Nonprofit or government organizations must understand Michael Porter's admonition that strategy is not only what the organization intents to do, but also what it decides not to do (Kaplan and Norton, 2001).

Building the BSC in Non-Profit Organizations

Most non-profits and government organizations had difficulty with the original architecture of the BSC, where the financial perspective was placed at the top of the hierarchy (Kaplan and Norton, 2001). Yet public sector organizations can identify strategic themes by

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combining the financial and customer perspectives in the scorecard (Kaplan, 1999). Therefore, the scorecard reflects a total of three perspectives: the blend of customer and financial perspectives, the internal operation, and the learning and growth perspectives. They are reiterated below:

The *customer perspective* expresses how the customers see the organization. Customers are members of identifiable clusters of people who have economic and/or social interest in the behaviors and performance of a specific organization (Cook et al. 1996). Organizations offer customers enhanced functionality; this perspective represents the specific performance attributes of the company's products and services that are translated to the stakeholders (Kaplan, 2003). Government and non-profit organizations must develop objectives for donors, the ones that pay for a service; and recipients, the ones that receive the service (Kaplan and Norton, 2001).

The *financial perspective* expresses how the organization looks to shareholders. It is not an indicator of whether or not non-profit or government organizations are delivering on their mission (Kaplan and Norton, 1996). However, this measure will help the organization to recognize its strengths, maximize its opportunities, and optimize its future (Simon, 1996). Kaplan and Norton, 2001, suggest that these organizations should set a high-level aim that represents their long-term objective, such as improving the environment. Then, the objectives within the scorecard can be better oriented to obtain this objective.

The *internal perspective* expresses the area in which the organization must excel. Learning and growth communicates the organization capacity of continuum improvement and value creation.

The organization must ensure that there are linkages between the customer perspective and the next two perspectives (Financial and learning and growth) to ensure that lower levels in

the organization have clear targets for actions, decisions, and improvement activities that will

contribute to the company's overall mission (Kaplan and Norton, 1992).

The final purpose of the balanced scorecard is to bring together an organization that will

focus on the overall structure and achieve the overall goal (Kaplan and Norton, 1996). Thus, a

public sector organization has three high level objectives it must satisfy if it is to accomplish its

mission: *create value, minimize cost, and develop support from its source(s)* (Kaplan and Norton,

2001).

From these three high level objectives, the organization proceeds to identify its objectives

for internal processes and for the learning and growth that will enable the objectives in its three

high-level perspectives to be achieved (Kaplan, 1999).

The next step is to link departments, so that their scorecard will have operating

performances, objectives, and measures that are linked to one or more of the strategic themes

defined at the start of the process (Kaplan and Norton, 2001).

Communicating the top-level and departmental scorecards throughout the organization

allows each individual to align his or her day-to-day actions with the organization's strategic

objectives. This is the power of the scorecard (Kaplan, 1999).

Government Organization's Case: Strategic Logic in the Public Sector

The following is a summary of a case study, City of Charlotte, wrote by Kaplan and

Norton, 2001. In 1990, the City of Charlotte already had a mission and a vision statement that

communicated the city's desire to provide high-quality services to its citizens that would make it

a "community of choice for living, working, and leisure activities." But the City Council was

unsure about how to implement the mission and vision. This was incremental and spread across

all operating departments. Pam Syfert, then deputy city manager, felt the need to establish a strategy and set priorities for city initiatives. The group debated the city themes and eventually selected the following:

- Community safety

- Transportation

- City within a city (preserving and improving older urban neighborhood)

- Restructuring government

- Economic development

To implement these five themes effectively, Syfert formed a core project team to translate the five themes into strategic objectives for a city balanced scorecard. The team decided to place the customer (citizen) perspective at the top of its scorecard. It established seven customer objectives (e.g. shown in Figure 6), two objectives each for community safety and restructuring government, and one each for the other three strategic themes. As the team worked on the five strategic themes, it realized that many financial, internal, and learning and growth objectives were common across several themes. The team, therefore, built its initial scorecard for all five themes (e.g. shown in Figure 6).
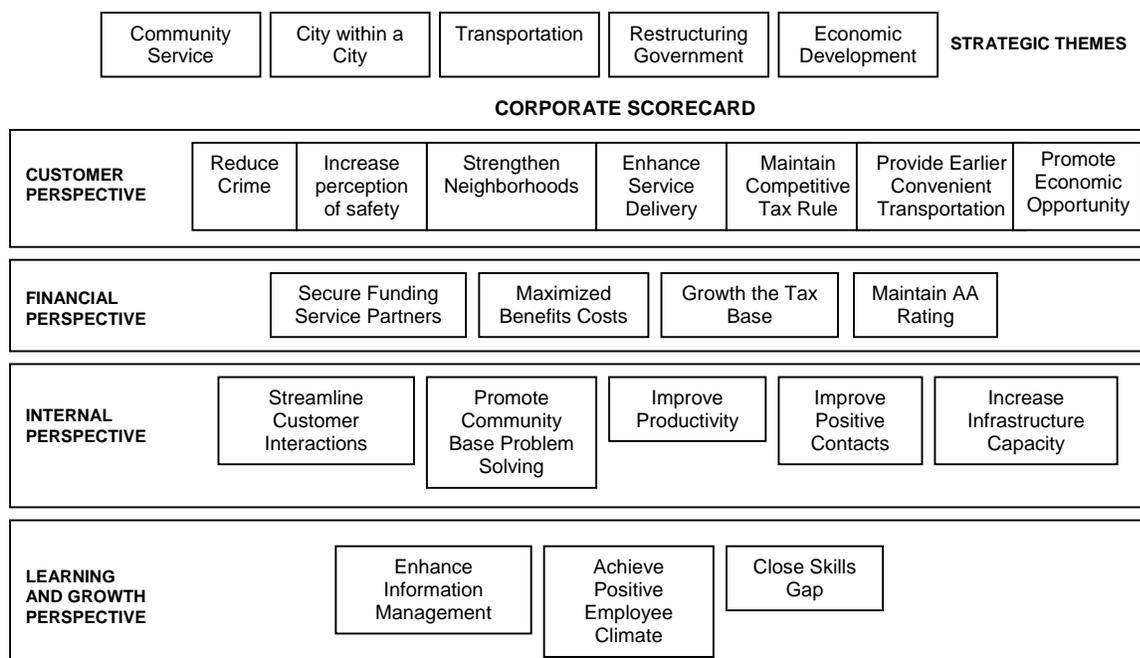
Community Service	City within a City	Transportation	Restructuring Government	Economic Development	**STRATEGIC THEMES**

CORPORATE SCORECARD

CUSTOMER PERSPECTIVE	Reduce Crime	Increase perception of safety	Strengthen Neighborhoods	Enhance Service Delivery	Maintain Competitive Tax Rule	Provide Earlier Convenient Transportation	Promote Economic Opportunity

FINANCIAL PERSPECTIVE	Secure Funding Service Partners	Maximized Benefits Costs	Growth the Tax Base	Maintain AA Rating

INTERNAL PERSPECTIVE	Streamline Customer Interactions	Promote Community Base Problem Solving	Improve Productivity	Improve Positive Contacts	Increase Infrastructure Capacity

LEARNING AND GROWTH PERSPECTIVE	Enhance Information Management	Achieve Positive Employee Climate	Close Skills Gap

Figure 6: City of Charlotte, City Council's Strategy Map (adaptation from Kaplan and Norton, 2001)

The top line, "customer perspective," captured the aspects of the five strategic focus areas. Its objectives represented the key services the city was delivering for its citizens.

The financial objectives became the enablers for helping the city achieve its customer objectives. It measured delivering the city's services at a good price, securing external partners and maintaining its solid tax base and credit ranking to fund high-priority projects. The operational (internal) and the learning and growth objectives then supported both the financial and the customer objectives. The internal objectives encouraged the city to change and improve the way it delivered services, especially by forming partnerships within communities, and improving productivity. And the learning and growth objectives identified whether the city was maintaining technology and its employee training and skills so that it could continually improve.

The team developed descriptive statements for each of the nineteen objectives on the "corporate

scorecard."

The strategic nature of the scorecard emphasized that each of the city's departments, such

as fire, wastewater treatment, and transportation should think how their operations could

contribute to one or more of the city's top-level objectives (e.g. shown in Table 3).

Table 3

City of Charlotte Top Level Objectives (adaptation from Kaplan and Norton, 2001)

Partnering with private and other sources extends and makes more effective the city's use of its resources.   Growing a neighborhood's tax base by attracting new businesses and encouraging the expansion and retention of existing ones is important to its economic vitality.   _____   Promoting "community-based" problem-solving: ▪ Empowers neighborhood residents   ▪ May reduce the level of city involvement to solve a problem   ▪ Reduces duplication of effort   ▪ Enhances delivery of city services
To succeed, we must support employees with the training and technical resources to facilitate solutions.   While focusing on the city's older urban neighborhoods, this problem-solving model will be shared as a best practice for managing similar issues in other city areas.

With the citywide scorecard now established as a template, the team then identified the

relevant strategic objectives for each of the five themes and built separate scorecards for each

theme (Figure 7 shows the scorecard for the "city-within-a-city" theme).

Finally, the main contribution of this BSC setup is that the scorecards for the five

strategic themes then became the basis for active discussions among managers, from many

different departments, about how these cross-departmental objectives could be achieved.

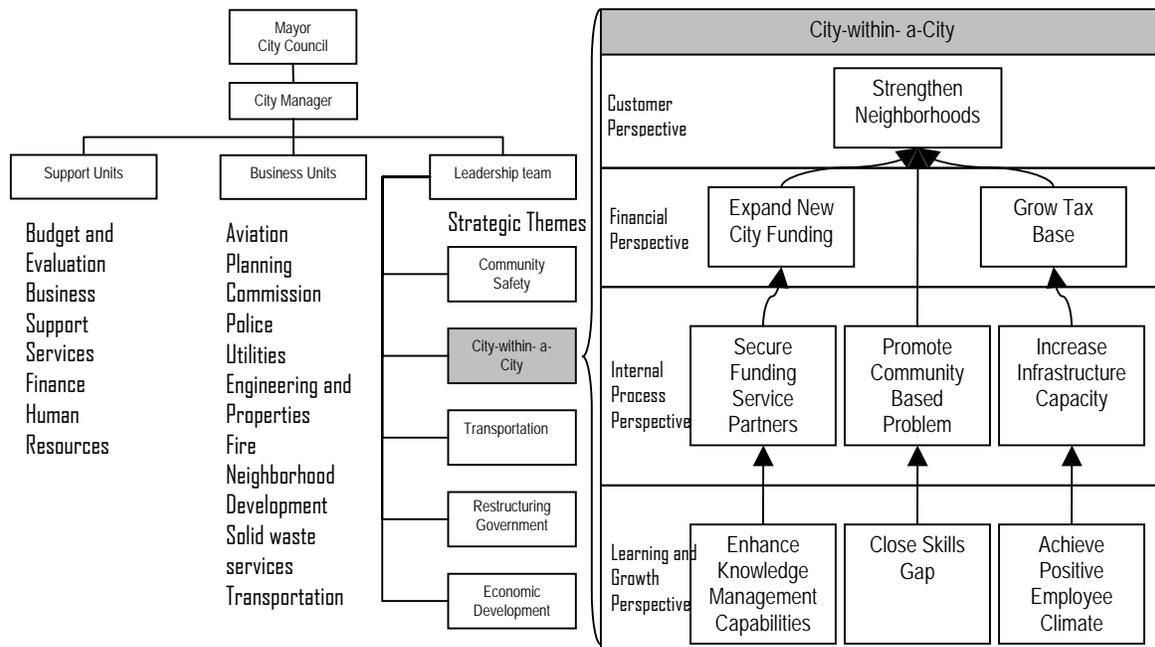Figure 7: City of Charlotte, Defining the Balanced Scorecard for Strategic Themes (adaptation from Kaplan and Norton, 2001)

In the case of the Transportations Department, they identified objectives in the four

perspectives of the city's balanced scorecard that were most relevant to its operations (e.g. shown

in Figure 8). In the customer perspective, this naturally included "availability of safe, convenient

transportation." The team also felt that "improved service quality" represented an important

objective for their department. With this process, the department developed a balanced set of

lead and lag performance measures that were linked to higher level city objectives and were

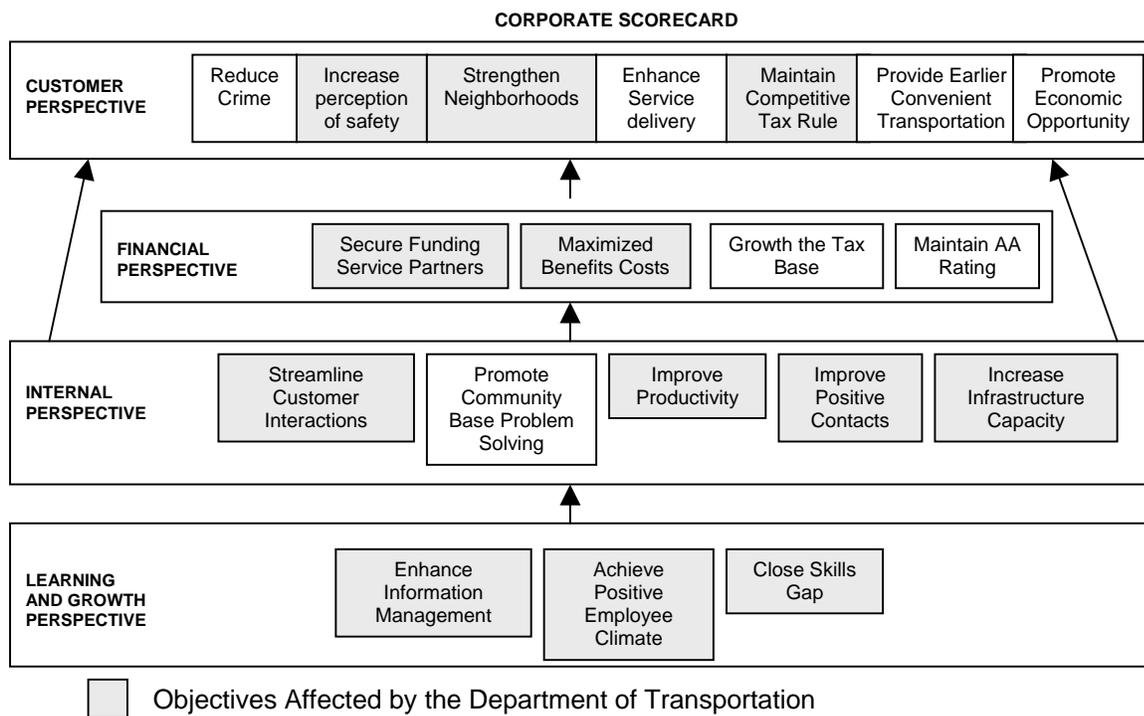consistent with the department's mission and strategy.

CORPORATE SCORECARD

| CUSTOMER PERSPECTIVE | Reduce Crime | Increase perception of safety | Strengthen Neighborhoods | Enhance Service delivery | Maintain Competitive Tax Rule | Provide Earlier Convenient Transportation | Promote Economic Opportunity |

| FINANCIAL PERSPECTIVE | Secure Funding Service Partners | Maximized Benefits Costs | Growth the Tax Base | Maintain AA Rating |

| INTERNAL PERSPECTIVE | Streamline Customer Interactions | Promote Community Base Problem Solving | Improve Productivity | Improve Positive Contacts | Increase Infrastructure Capacity |

| LEARNING AND GROWTH PERSPECTIVE | Enhance Information Management | Achieve Positive Employee Climate | Close Skills Gap |

☐ Objectives Affected by the Department of Transportation

Figure 8: City of Charlotte's Scorecard (adaptation from Kaplan and Norton, 2001)

History of Incubators in United States of America

U.S. business incubators as we now know them came into being in the 1970s, although

the oldest began in Batavia, NY, in 1959. Incubators got their first big impetus from the U.S.

Small Business Administration, which strongly promoted incubator development from 1984 until

1987. The National Business Incubation Association was formed in 1985 by industry leaders, growing from about 40 members in its first year to about 1,130 members today (NBIA.org, 4-8-2003)

What is a Business Incubator?

U.S. business environment considers two categories of incubators: business incubators and technology incubators. According to Rainey & Associates, 2003, "Business Incubation programs catalyze the process of starting and growing companies by providing entrepreneurs with management expertise, mentor and advisor networks and access to seed capital. Technology incubators may also provide the physical infrastructure necessary to launch new businesses, offering furnished offices and laboratory space, and shared resources such as specialized equipment and support services." But, other incubator programs give more than just guidance or expertise. They also generate business plans, financial backing, or recruit the necessary talent to launch a business (Hart, 2000).

There are several definitions of "business incubator". According to Rice and Matthews, 2001, in a report of the United Nations, incubators are "start-up ventures whose purpose is the development of other start-up companies." The most important international organizations of business incubation have defined business incubators in a different way, but with similar meaning and are shown below:

The United States National Business Incubation Association (NBIA) defined a business incubator as "an economic development tool designed to accelerate the growth and success of entrepreneurial companies through an array of business support resources and services. A business incubator's main goal is to produce successful firms that will leave the program

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financially viable and freestanding (NBIA Updates, 6-8-2003)." The NBIA is a private non-profit membership organization and the world leading organization in business incubation. Its mission is to advance the business creation process to increase entrepreneurial success and individual opportunity, strengthening communities worldwide. The majority of the incubators that exist in the U.S. are members of this association.

The European Commission defined a business incubator as "a place where newly created firms are concentrated in a limited space. Its aim is to improve the chance of growth and survival rate of these firms by providing them with a modular building with common facilities (telefax, computing facilities, etc.) as well as with managerial support and back-up services. The main emphasis is on local development and job creation. The technology orientation is often marginal" (United Nations, 2001). This commission has four roles that are: to propose legislation to Parliament and the Council, to administer and implement Community policies, to enforce Community law (jointly with the Court of Justice) and to negotiate international agreements, mainly those relating to trade and cooperation (European Commission About, 6-12-2003).

The Science Park and Innovation Centre Expert Group (SPICE) defined the business incubator concept as an

> Organization/institution aimed at creating a favorable and supportive
> environment, for start-up enterprises. The most important functions of business
> incubators are: office/workshops space for lease, often (in some countries/cities)
> at lower than market rates and offering for flexibility getting additional space as
> required as well as flexible leasing terms. Administration and technical services
> (telephone, copying, conference/meeting rooms, secretariat etc. and start-up
> consulting/business planning for a would-be entrepreneur is also offered.

Additionally there might be a wide range of other (consulting) services, technology transfer activities, seminars and training offers etc. (http://www.spicegroup.de/abc/?id=5, 6-8-2003).

"The SPICE Group is a global network representing 29 countries including 17 national and international associations of innovation centers. Members of SPICE Group are experts in business incubation, innovation centers, technology parks, regional economic development, technology transfer, and entrepreneurship (United Nations p.4, 2001)".

Reviewing the previous definitions we can say that the definition of technology incubator provided by Rainey & Associates, 2003, is comprehensive because it provides a global perspective about business incubation. This is the definition of incubator adopted by this author and used in the rest of the paper.

Incubators' Business Indicators

Rainey & Associates, 2003, asked in a survey intended to identify success indicators "how would you measure the success of a technology-oriented small business incubator?" According to this study (from 70 interviews) the goal of diversified the local economy away from reliance on actual businesses (such as agriculture or tourism) was the high priority. From a count of all proposed measures, the results showed that 80% of the measures were directly customer related and 20% were related to the incubator's internal business model.

Incubators may have a multitude of purposes, among which the following are possibly the most important:

- Job creation;
- Establishment of start-up companies;

- Modernization, transfer of technology, use of new scientific discoveries;

- Business incubators can also be created for specific purposes, such as helping women, immigrants, or minorities.

- Some further aims can be identified:

- The economic growth of a region;

- The diversification of the region's industry;

- The multiplication of the sponsor's investment;

- The increase of the region's economic activity" (United Nations 22, 2001);

- Increased tax base (Johnsrud et al. 2003).

Traditional incubators often focus on creating a number of diverse companies (manufacturing, retail, services, etc.) that will "graduate" from the incubator facility, lease or purchase office space in the same community, and continue to grow. The expected results are the ones mentioned before. In contrast, the new incubator's programs approaches emphasized profitability in strategically targeted industries (Johnsrud et al. 2003).

<u>Incubators' Business Practices</u>

In this section, three primary approaches of business practices at incubators are explored and general managerial practices adopted are expressed.

The first approach is loosely referred to as for-profit incubators that invest directly in selected start-ups and that profit from their equity positions (Johnsrud et al. 2003). First, these types of incubators are private sector, profit-driven with the payback coming from investment in companies rather than from rental income. Secondly, they tend to focus mainly on high-tech and

internet-related activities and unlike 'traditional' incubators, do not have job creation as their principal aim. Thirdly, these incubators often have an essentially virtual presence with financial and business services at the core of the offering unlike their 'traditional' counterparts that usually centre on the provision of physical workspace (CSES, 2003). Working more like "operating companies," these "incubators" hand pick a few extremely promising start-ups, invest heavily, and provide intensive management, financial and technical resources to move them into profitable initial public offerings, mergers and acquisitions and other liquidity events (Johnsrud et al. 2003).

The second approach also involves making direct investments in promising start-ups, but the investment is made by a corporation in a start-up with a technology that will somehow enhance the parent corporation's product line(s) (Johnsrud et al. 2003). Typically these incubators are run by multinationals that capitalize on their expertise. They offer advisory expertise to the new start-ups within a predefined incubator model (CSES, 2003). The corporate parent profits through a more indirect means in that the start-up's products are closely integrated with those of the investing company. Thus, "corporate venture arms" provide the parent corporation with increased R&D agility and flexibility, save the costs of maintaining internal R&D divisions, and ultimately produce successful start-ups that add value to the product line and bottom line (Johnsrud et al. 2003).

The third approach, generally seen in non-profit incubators, involves the facilitation of economic development by promoting entrepreneurship, innovation, employment opportunities and growth. For this reason, most of the incubators are operated directly by the national or local authorities. Specialized incubators have been established by universities or private sector organizations (CSES, 2003).

Autio and Magnus, 1998, write that there are several recognized management practices in incubators:

- Focus on objectively observable needs of the ventures: Incubators in general made several conscious attempts to identify and focus on the "real" needs of the participating ventures. Here, a "real" need is defined as a need that can be independently observed by an uninvolved party, in this case, the management of the incubator's support arrangement. For example, in an incubator named Spinno in Espoo, Finland, the two-stage evaluation and selection system has been explicitly designed for this purpose. In other incubator named SMIL (Foundation for Small Business Development in Linkoping), in Sweden, each participating firms is regularly visited, and regular one-day meetings are held with each firm in order to diagnose its needs.

- Multifaceted credibility enhancement: Positive impact on the credibility is achieved through a reputation for innovativeness and for a serious approach. The good reputation of the arrangement constitutes an asset that the participating incubators can use in their interactions with clients, some times, as financing institutions and potential industrial partners.

- Extensive use of external resources: Incubators' arrangements actively fostered links with other support organizations. Thus, incubators become a kind of one-stop-shop for their participating clients whereby all necessary forms of support can be rapidly and easily accessed.

- Emphasis on hands-on, tailored management support: New ventures often receive add-hoc management support and interventions from the incubators full-time project

coordinator, external resource associated with the incubator, or other professional personnel from the incubator.

- Exploitation of synergies between firms and academia: Universities financially support many non-profit incubators or provide a place to locate the business. In this way, the universities make active use of new ventures entrepreneurs as lecturers. At the same time, they participate in the planning of entrepreneurship courses at the Universities, to mention an example.

- Full-time project coordinator: Incubators assign a key individual to guarantee efficient organizational learning processes and a continuous improvement of the services offered by the arrangement.

- Top-level commitment of participating organizations secured: Top-level commitment from the incubator and supporting organizations are emphasized. Top-level commitment provides the adequate institutional that new ventures need.

- Enrollment fees imposed on participants: Charging an enrollment fee is an important way of securing sufficient commitment from the participating new ventures. Furthermore, enrollment fees also help maintain the quality of the services offered by the incubator.

Best Practice: UCSD CONNECT

To conclude, a best practice of an incubator, from the book *Best Practices in Action, Guidelines for Implementing First-Class Business Incubation Programs, 2001,* that summarizes this section, is presented. Founded in 1985 at the urging of San Diego's business community, UCSD CONNECT is widely regarded as the nation's most successful regional program linking

high-technology and life science entrepreneurs with the resources they need for success: technology, money, markets, management, partners, and support services. Part of the University of California, San Diego, CONNECT has a dual role in accelerating growth: it provides added value and delivers targeted, high-level expertise to San Diego's technology business community by teaming up with the region's most prominent industry-specific organizations and individuals, and by partnering with world-class UCSD resources, such as the School of Medicine, Jacobs School of Engineering, San Diego Super Computer Center, and Scripps and Salk Institutes. When it was first established, the CONNECT program served as an economic catalyst by bringing together the nascent technology industry into the San Diego region. The program faced numerous challenges in gaining credibility with the private sector in its first four to five years of operation. However, the high quality of its programs combined with the dynamic leadership of the organization established CONNECT as the premier organization for supporting high technology development in the region. Today's industry groups such us the San Diego Software Industry Council and Biocom were established as a result of the earlier work initiated by CONNECT.

CONNECT's services are tailored to meet the varying needs of San Diego entrepreneurs at all stages of their business life cycles and growth. Since its inception, CONNECT has assisted more than 800 technology companies. Its programs serve as a catalyst for the development and exchange of ideas, a forum to explore new business avenues and partnerships, and an opportunity to network with peers. This Incubator accomplishes its goals through educational and networking programs, practical business seminars, technology transfer demonstrations, and international strategic and financing forums. The program provides opportunities for the biotech and high tech

communities to learn about research taking place at the university, as well as for the university to learn about research taking place in industry.

CONNECT's success is directly attributable to the generous, unfailing support of its friends and supporters. Its multifaceted network of business and university resources form the platform for its award-winning programs and events. The active, hands-on participation by its premier partners, vendors, and providers from the areas of high technology, life sciences, law, accounting, investment banking, marketing, and communications brings invaluable expertise. The business professionals and capital providers who serve as CONNECT management fellows and form its various committees round out CONNECT's circle of resources. The result is an energetic, resource-rich environment for honing ideas, pursuing personal growth and professional development, and exploring innovative business opportunities. Because of its success, the CONNECT model has been replicated in other cities and countries, including Scotland, Denmark, Norway, and Sweden. CONNECT is entirely self-supporting and receives no funding from the university or the state of California. It is supported through membership dues, course fees, and corporate underwriting for specific programs.

CHAPTER 3: RESEARCH METHODOLOGY

Research Question/ Problem

This is an investigative study focused on the application of the "Balanced Scorecard" in incubators. Considering the importance of good management practices and the numerous new incubator enterprises that are starting up, this revision proposes to show this practice applied to incubators.

Research Model

The main activities in this study are to establish the required empirical and theoretical foundation, define research scope, determine the research design (Nahmens, 2003), identify the required attributes for the development of a balanced scorecard, select the sample population, administer interviews, and conduct the data analysis (e.g. as shown in Figure 9). Formulated the research question, the model identified the required attributes for the development of the BSC using a theoretical framework that guided the research and generated the questions that were used to collect data / empirical information. This framework supplied the questions for the interviews and guidelines for the administration of them. With the questionnaire, a first pilot interview was done and some adjustments were made to the questions. After this, the data was categorized and analyzed to formulate conclusions and recommendations.
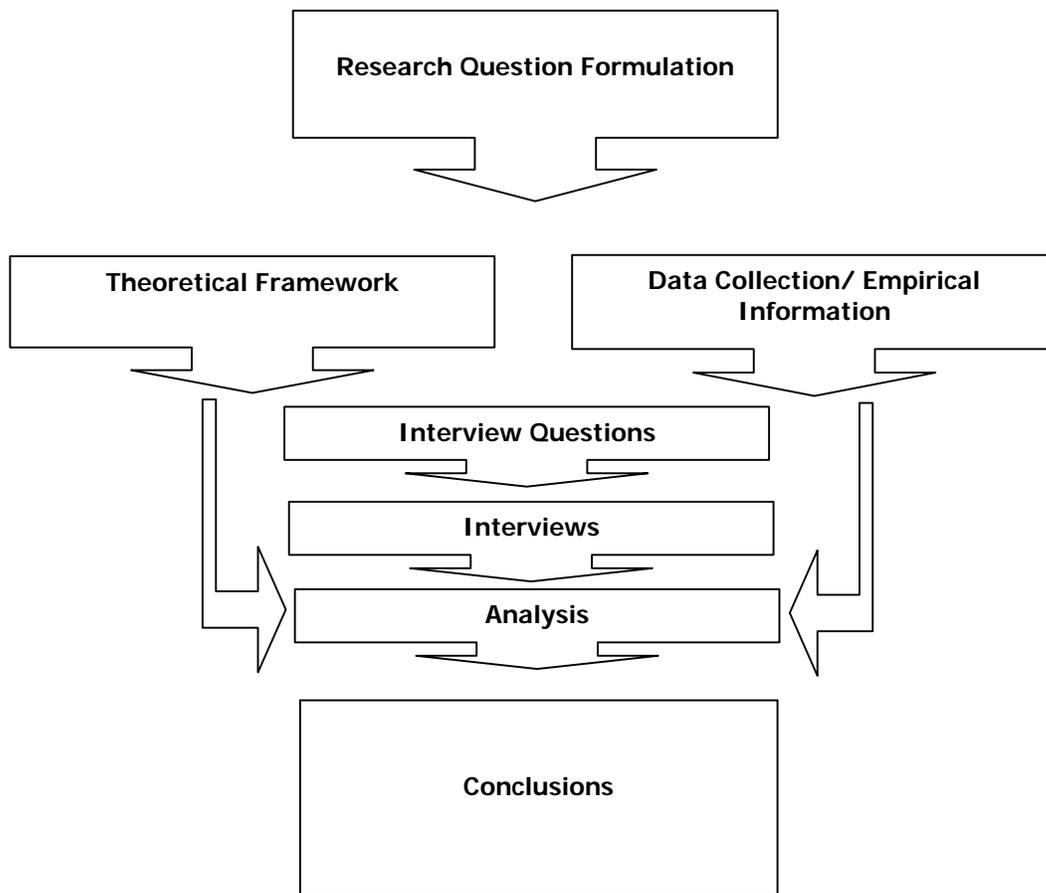
Research Question Formulation

Theoretical Framework

Data Collection/ Empirical Information

Interview Questions

Interviews

Analysis

Conclusions

Figure 9: Research Methodology Flow Chart

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Research Strategy

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The strategies that are of interest to this study are interviews and several case studies. One intention is to investigate incubator's practices by using the interviewees as tools of information; the purpose is to reveal a clear and honest picture of the each incubator. Case studies are suitable for practical problems and they are often thought of as being problem-centered, small-scaled, and entrepreneurial. Moreover, one of the strengths of a case study is its unique ability to use a variety of empirical evidence (Yin, 1994). The main focus is to examine

the managerial practices in incubators in Florida and their relation with the balanced scorecard's management practices and setup. Thus, the research strategy that is best suitable to this thesis is multiple-case study.

This study is designed in such a way that the research findings in incubators will represent comparative cases. They are comparative in the sense that the interviews are semi-structured, thus inviting the interviewees to contribute in additional areas of importance. The cases are also comparative in the sense that all the interviewees possess equivalent managerial positions.

The research method is clearly qualitative, because it conducts in-depth interviews of employees from incubators in Florida. This approach enables a clear understanding of each studied incubator that will help in answering the research questions.

Data Collection

The data collection of this thesis involves several different strategies, such as conducting interviews and identifying comparable theories through the various case studies reviewed in chapter 2. Moreover, various cases are reviewed in order to have a more detailed understanding of what it takes to develop a BSC and run an incubator. Interviews from the incubators (primary data) ensured the gathering of relevant information that is current and has a real-life perspective. Case studies (secondary data) provided a deeper understanding of the subject as well as the subject's history and development. By gathering secondary data, for example annual reports of status of incubators, a learning of the incubator's organization and structure are achieved. This, in turn, provided a sound platform for each case when combined with the interviews.

Eighteen people from Florida's institutions, recognized as incubators by the NBIA, have been selected to be interviewed. The list is available upon request: It has not been included in order to protect the privacy of interviewees.

Most of the interviews were one to one interviews over the phone and one, with the UCF incubator, was in person. The interview process started on July 1, 2003. It consisted of contacting the incubators following the incubator's list provided by the NBIA web site. Contact was made by calling each incubator's main phone number to make an appointment with the incubator's director. Most calls ended in voice mail messaging systems and just seven calls were answered by a living person or returned after the message was left. Although an extensive follow up was done to maximize the response rate, finally six interviews were completed. The follow up consisted of making at least two phone calls to the main numbers and leaving messages and sending one e-mail to the those incubators that did not respond to the phone calls. The messages and the e-mails asked for an appointment and explained the purpose, importance, and scope of the research. Also, they included the interview's estimated time and the name, phone number, and e-mail of the researcher and a reference name. The reference name provided was from the first director interviewed.

At the close of the interviews (March 5, 2004), a total of ten responses, to the calls or e-mails, were achieved. Six of them were interviewed and four were left out. From those four, one responder was scheduled but not interviewed due to time conflicts. Another from the University of West Florida SBDC told the researcher his institution was not an incubator. The third responder asked for an e-mail copy of the questions and promised to return it as soon as possible but failed to provide feedback in a timely manner. The last responder made contact to tell the researcher he did not have time for the interview. The rest did not respond. It is important to

note that some respondents asked for their answers to be anonymous. Therefore, names were replaced by responder or answers #1 to #6 in the answers table that is in chapter 4. Answers were mixed among the responder's numbers, and text inside the answers that could identify the respondent was generalized.

Interview Questions

The interview questionnaire started with a question related to the number of employees of the incubator, information that the researcher could not collect from other sources.

- How many employees work in your incubator?

Next, the interview was focused on gathering information about the clarity the incubator had in their vision, mission, purpose, and environment.

- Who defined the statements of Vision and Mission for the incubator?

- Did you do a SWOT analysis of your incubator?

- How does your Incubator define its value proposition?

After this, the interview was focused on identifying strategic objectives and measures that related to the four dimensions of the balanced scorecard, Financial, Internal Operations, Learning and Development, and Customers. The following were questions related to the financial dimension:

- What financial measures are considered in your incubator, especially those related to growth and productivity?

- What is the current financial strategy followed by your incubator? Why?

Considering the purpose of most incubators, and the way the balanced scorecard is structured in different organizations, especially in non-profit institutions, the customer dimension was explored using these questions:

- Do you know what are the needs and preferences of your client? (clients: current resident and prospects)

- Are you using any tools to know their needs and preferences?

- Do you consider different customer segments?

- How do you measure the impact of the Incubator over your clients?

- How do you contact your clients?

To explore the internal business processes in the incubators, the following questions were used:

- How do you define productivity in your incubator?

- Could you articulate the desired balance between growth and productivity in your incubator?

- What are the objectives and measures of your internal business processes?

- How does your incubator define these objectives and measures? (Productivity, cost, quality, etc.)

- Could you identify the critical internal processes needed to deliver your value proposition?

- How does your organization align those internal processes to deliver the value proposition?

- How does the information flow inside your incubator? (Customer relationship management databases, knowledge databases, process documentation, etc.)

- What other technology is needed to run an incubator?

To find information related to the learning and growth dimension of the BSC, the questions below were formulated:

- Are the core competences needed to be mastered by your employees documented?

  o What process is followed to determine those competences?

  o How are the competences measured?

  o Do you use performance appraisals?

- Do you have any formal communication system in place?

- Currently, on how many goals is your incubator working on?

- Are there individual goals among the employees?

- Are there team-based goals in your organization?

- Do you have any reward system in place? How does it tie to attainment of objectives by employees?

- Meetings:

  o How frequently do you hold a meeting?

  o What levels are involved?

  o What is or are the purpose/s of those meetings?

- How frequently does your incubator provide training to the internal front line and middle managers?

The interview closed with a general question that had the intention to stimulate the interviewed to formulate any statement he /she believe would contribute to the research.

- Is there anything you want to add that you feel will be useful in this research? (Please define what a successful incubator is?)

<u>Interviews</u>

The interviews were designed according to the requirements expressed in the theory about the balanced scorecard (reviewed in chapter 2). Conducting the interviews represented one of the essential sources of gathering information for this study. The kind of interviews used was what Sharan Merriam (1998) author of the book "Qualitative Research and Case Study Applications in Education" refers to as semi-structured interviews. This kind of interview is guided by a brief explanation and a set of structured questions and issues to be explored. Aware of the downside of conducting interviews in this manner, such as response bias and reflexivity, the order of the questions were not predetermined. The interviewer had a set of topics to be explored commonly for each interview in order to be able to cross-analyze the answers. Thus, the interviews were constructed so that the respondents were free to bring up other issues they felt were of interest to the subject. This created a "discussion-friendly" atmosphere in which everybody was able to ask follow-up questions.

The questions were selected from the reviewed literature about BSC. The intent was that the data to be collected should provide information of the incubators related to key organizational areas considered in the development of a BSC. This is referred to the state of measurement and management practices related to the four dimensions of the scorecard. To be able to gather useful information, the questions were formulated considering what information could be and could not be obtained from other sources that from interviews, as well as information needed to be analyzed for the particular situation of the incubators in Florida. With

this clear, the questions were extracted from the literature review and first tested with one

incubator's director and validated. This facilitates the understanding of the incubators

environment and how they work.

The intention of the interview was to explore factual data, observed by the people

interviewed, regarding how their organization works with a scorecard setup. The interviews were

conducted with people who possessed the most factual data possible and people who have a good

insight into the subject of interest in the organization. Therefore, the people responsible to

oversee the incubator's operations were interviewed.

Research Analysis Plan

In the attempt to organize the collected data, a predetermined structure was used.

All the theory and the data were organized according to the different topics needed to build a

scorecard. The classification of the findings constituted the next step, which was also based on

the questions found in the interviews conducted. This truly enhanced the ability to cross-analyze

the information, since the comparable data were organized and classified in advance (see

appendix A and B). In the final step, the aim was to enlighten factors that were general across

the analyzed cases. To do this, code phrases or words and their synonyms were used in each of

the answers. Then, the codification was translated to graphs to facilitate the understanding of the

information and to highlight factors. However, individual findings of interest and of importance

to the topic were stressed as well.

CHAPTER 4: CURRENT STATE OF INCUBATORS, ANALYSIS

This section presents the analysis of the empirical results. The researcher aspires to answer the research question by contrasting and making a comparison of the different incubators. First, the answers to the interviews provided by the managers of the six incubators interviewed are presented in table 4. Second, the reasons and motives to use the BSC among incubators will be presented and analyzed. Third, the factors that have an influence on the organizations' application of a scorecard will be offered and analyzed; Thus providing an analysis of current incubators' work environment and its effect on the balance scorecard.

Interview Answers

The interviews were conducted in person or by phone and the time expended for each interview was approximately 45 minutes. During the interviews all answers were recorded and then transcribed. This information constituted fresh data that was arranged in a table (i.e. as shown in table 4). The table presents the question in the first column and the answers as provided by each incubator's director in next columns.

Table 4

Interview Answers

	1. How many employees work in your incubator?
Interview 1	Six
Interview 2	Two and a part time, nobody works full time because the majority of business we do is to tie to the small Business Development Center at SCC. That is one funding mechanism and in this way the help we provide is not all located only to the incubator; our efforts are divided.
Interview 3	Three and a part time
Interview 4	Two
Interview 5	Three
Interview 6	Two

	2. Who defined the statements of Vision and Mission for the incubator?
Interview 1	I have to start it but I didn't do it exactly. I had something in mind and I received input from a group of: Orange County representatives, partner's corporations, clients, Dean of College of Engineering, probably 8 to 9 people and running through the Incubator Advisory Board.
Interview 2	Original business plan, the college in conjunction with Seminole County, Seminole Port Authority. We put together a business plan that outlines mission and vision of the incubator.
Interview 3	It was defined in '95; however, our main sponsor, UF Research Foundation, was involved in the definition.
Interview 4	Myself and an advisory group: a CPA, a City of Gainesville representative, Senior entrepreneur (somebody that has experience in our business), investor capitalists, a Bank, CBA, other incubator manager, representative from the UF, representative of the University of North Florida, one attorney.
Interview 5	Myself and city council
Interview 6	Advisory board, UCF business incubator

	3. Did you do a SWOT analysis of your incubator?
Interview 1	No

Interview 2	We did it at the time we did the business plan.
Interview 3	No, a formal… Certain issues get discuss to time to time…we did some when we did our business plan.
Interview 4	Yes, we did, with the Advisory Group…
Interview 5	Yes, two years ago by myself
Interview 6	Yes, informal

	4. How does your Incubator define its value proposition?
Interview 1	Creating successful high growth companies. Creating a high number of added value jobs.
Interview 2	We tell people that we have an environment that is surrounded by people in similar circumstances, our location receives a huge amount of traffic internationally, access to our staff (open door policy) we bring instantaneous services.
Interview 3	State of the art biotech facilities – it will include scientific equipment and business support services
Interview 4	Here we have an entrepreneurial ecosystem. A full network of people, which assists businesses in our facilities. Businesses that helps one to another plus the interaction with us.
Interview 5	This was a warehouse where local people were stack. What we are looking for is to build a place where people can came in with a rather low overhead cost for and startup business and a lot of one on one assistance that the tenant will not get if they were on their on.
Interview 6	It is to assist the technical transfer from university to companies, (to match communities needs)

	5. What financial measures are considered in your incubator, especially those related to growth and productivity?
Interview 1	The only financial consideration is to pay the bills. Once a year, a budget and a monthly cash flow. We are too young and trying to balance how to serve our 15 clients. We measure the finance for our clients if they can pay the rent. We provide assistance to companies. We help to figure out what their needs are and try to satisfy them. We provide this help at least once a month.
Interview 2	Annual budget and plan of funding: We are the business agent of the Community College and depend from their outside partners and the College is the fiscal agent.
Interview 3	Amount of private investment in our incubating companies and graduated companies, the amount of awards received, and job creation. Budget, track cash flow and inner reserve balance. We are subsidized but the operation operates in the black and our reserves increase every year (we have profit).
Interview 4	Budget, (240K) we primarily relay in rent income, approximately 90% to breakeven… We do cash flow and P&L… The state does them for us.

Interview 5	We do a touch base measurement with tenants. And go to all their financial information: sales vs. plan, expenses, Net operating income, capital investments, then we have a sense of where they are going and they we have a sense of when we will have vacancies. We check the budget in our business plan.
Interview 6	At this moment we are thinking in 1: how we build up, our new facilities, and 2: how we retain what we have. IS to find the financial resources to be able to operate the incubator and remain within budget.
	6. What is the current financial strategy followed by your incubator? Why?
Interview 1	Our strategy is to get bills that match the rent residents pay for. Because with this strategy we can stay a long term rather that had been depending on government budget. We can always maintain ourselves if we can collect the rent that pays our bills. We always are looking for new sources of funding, every time we write a proposal we include money for the incubator on it. We also try to include commercialization and overall requirements for the incubator's in the overall strategy of the University.
Interview 2	Is to get close to the partners that are committed to the development of the incubator's effort. We start the incubator in response of the request of the county to coming and administer an incubator project.
Interview 3	We used to be a subsidized operation, our revenue come for two sources: small line item in the state budget and fees we collect for the companies in our building for space. We follow this strategy because the nature of our business, we can not survive just being subsidized.
Interview 4	The City of Gainesville provided the first 2 years of operating expenses, money for operations and repair expenses. The idea is to use their funding until we can sustain ourselves. The building is free; then, we just need money for operations, and secure repairs and new capital for investments. Where is looking to a sustainable model for certain issues: building equity now that we have a proven track record, we do not take any equity position until now. The biotech incubator that is run for the university does. Therefore, we are looking for attract business in our facilities that help us. And we expect to show equity of 1 or 2 % in the next two years.
Interview 5	Look what we can do to maximize the use of the property. We have a master plan for complete utilization of our facilities and new facilities. Our incubator is a service and light industrial incubator.
Interview 6	Continue to provide services to the existing incubating companies and expand to the new level (3 more companies) and provide the services and the space in the new building at the end of the year.
	7. Could you tell what are the needs and preferences of your clients? (clients: current residents and/or prospects)
Interview 1	They want to be profitable, generate enough revenue to at least pay their bills; they want us to provide the contact for funding (investors) and for sale activities.
Interview 2	Client are a hands on approach, develop personal relationship with clients.
Interview 3	They want to be in the building and they need to renew each year, primary we have web lab space that it is almost impossible to find in the Gainesville area outside of the university.
Interview 4	Yes. Basically they are looking for money and also we help them in management.

Interview 5	Come of a result of our keeping in touch. Quarterly tenants meetings we have. They have specific needs like workshops and facilities space.
Interview 6	They need to strength their business plan, management team, and probably funding

	8. Are you using any tools to know clients' needs and preferences?
Interview 1	Resources like accountants or other consultants, getting in their business plans and financial statements and talking to them. Basically, interviewing them based on our experience.
Interview 2	We respond to client requests, personal contact.
Interview 3	Our pipeline comes from the University of Florida, we have a captive audience, we assess them when we meet with them at the university and see if they are good for the incubator.
Interview 4	Constant interaction with the businesses and experience in the industry for 15 years and using a model that is defined in the industry as services offered. Basically is what is defined in the business plan.
Interview 5	They expressed directly what they feel they need. Others things they need but they do not know they need is provided by the one that is in this chair.
Interview 6	One on one meeting, mentors that help the companies and faculty and students that also help the companies.

	9. Do you work with and specific customer segment?
Interview 1	Not specifically, simulation, engineering, not oriented to any segment just we have this kind of companies that match the current expertise with UCF.
Interview 2	We consider a single sector, the biotech.
Interview 3	Yes, there is a study done for a firm with base in Atlanta, they identified medical devices, telecommunications, and electronic devices, and biotechnology (but we do not focus in this area, there is other incubator that does that in the area).
Interview 5	Tenants have to be in light industrial or services.
Interview 6	Yes, we are very focus on the biological sciences, biotech, and information communications.

	10. How do you measure the impact of the Incubator over your clients?
Interview 1	We measured if they are doing well, check their policy and if they can pay their bills, we stop by and see how they are doing. We check revenue and cash flows. Measure commitment and financial staff. Leading measures: cash flow and lagging, profit. Also our technology is leading and customers and sales are lagging, manufacturing capability as lagging, cash is always lagging, and we focused more into measure that. It is a difficult balance not to growth to fast to go out of business and how to manage growth.

Interview 2	Sales growth, employment of more people, occupied commercial real state, growth of capital. In 1 to 3 years.
Interview 3	With the success of our companies, we will like to add market cap, beginning to track patterns, probably an issue. Satisfaction with the incubator facilities and staff. And with the ones in our installations, walk to their offices and talk to them. We will use our new web base software to do this.
Interview 4	Every quarter in term of # of employees, sales, dollar attracted and the number of milestones they reach according to their business plan. We measure customer satisfaction in monthly bases, we send out and ask the top 3 needs to get some ideas of what they needs are and whether we are meeting them, and a quarterly we ask what can be we doing to improve our value to you?
Interview 5	By seen how many graduates we have. (how much they growth)
Interview 6	We do not have any measure tools in place. However, we do sit down with tenants and check how well they are meeting they benchmark.

	11. How do you contact your clients?
Interview 1	We do not contact them they find us. We do marketing and networking, we send our bulletin and newsletter, and, also, we try to get interviews in newspaper and related media about what we are doing.
Interview 2	Direct mail, education programs, seminars, web site. Marketing on campus to recruit entrepreneurs. Participate in a counsel of campus to provide information for faculty that requires information for entrepreneurs. In fact we do not need to market, or recruit customers they come us. Companies are required to have an association with UFL to be in our facilities and most of our companies come through the university. Therefore there is a limit of the effect of marketing because there is just a certain limit of faculty or professors that need to be considered and basically the pipeline develops on campus. The office technology that is on campus does the job to recruit companies and that is pretty much all done on campus.
Interview 3	By walking around, and if somebody come like a chamber of commerce we contact them by e-mail. Formally we contact our clients every 2 weeks, informally constantly. For external we use the UFL they send to us every entrepreneur that come to the UFL. Secondary is the entrepreneurial training that we provide, generally through the chamber of commerce we marketing the programs. Finally we connect to potential clients through CPA, law firms, and Banks.
Interview 5	Speaking around town in various clubs. Promotion of the place and marketing did not do a good job. Therefore we focalize in the speeches.
Interview 6	Basically we meet demand from university

	12. How do you define productivity in your incubator?
Interview 1	Number of new jobs created, increased level. I will measure with how well the companies are doing.

Interview 2	Measure clients contacts and outcomes: sales of clients and economic indicator of the success of the business they are incubating, do they start the business, sales they have, changes on capital positions, they review cash flow if they are ask to but they review just gross sales
Interview 3	Probably not in the sense your are looking for, but we look at it in terms of the progress of our companies toward commercializing of their products, whether it be increase investment, progress in clinical trials, or corporate relationships that they are forming with pharmaceutical companies or biotech companies, strategic alliances.
Interview 4	Reach the goals I have. 1. Entrepreneurial series do it in one year; 2.graduates a year; 3. Add 12 additional resources values to the businesses for a year; 4. At least 4 seminars or workshops per year as part of the entrepreneurial series; 5. Attract 6 new businesses per year; 6. Visit 6 universities or colleges per year; 7. Visit 10 corporate business to see if they need technologies we could fulfill in next business; 8. Provide CPA; 9. Maintain the retention rate we have in the business.
Interview 5	We don't. Probably if we growth we will need more people but the staff will not growth as fast at tenants. We have 17 tenants.
Interview 6	Not defined
	13. Could you articulate the desired balance between growth and productivity in your incubator?
Interview 1	That what we are right now. I think there is not a point from where the Incubator is balance; you are always looking at it. We don't know if we are balanced.
Interview 2	Goal is to be 95% full; we can hold 45 companies total and currently we have 27. That is on both incubating programs, Technology side we can hold around 20 companies. 400 total clients, but in are just a portion of that. They run in a small budget.
Interview 3	Consider we have been a relatively full incubator and progress toward the market place. 15 companies that will be full capacity, we have 19 web-labs. Probably we will run out of space and we are looking for possible expanded. I do not feel is adequate 3.5 people to handle those 15 companies, I feel probably we need 4.5 people.
Interview 4	12 business max 15 companies per 2.5 employees
Interview 5	For us reaching occupancy level percentages and workshops and people who attend workshops and the number of graduates. Also, people that we need to remove because they will not succeed in their ventures.
Interview 6	Seven companies can be handled by one full-time incubator's employee.
	14.1 What are the objectives and measures of your internal business processes?
Interview 1	We are not very organized, we measure things but I am not sure we get all. Basically we try to make sure everybody does what is expected to do. We measure our progress toward our 5 years goals. We meet at least once every six months to check how we are doing with that.
Interview 2	We have goals to meet every year as part of our contractual; we need to create 15 new business per year and 50 employees.

Interview 3	We do not have this kind of measures.
Interview 4	We do not track them
Interview 5	Cost performance imposed by the director of the incubator. City just wants us below budget.
Interview 6	We do not use.

	14.2 How does your incubator define these objectives and measures? (Productivity, cost, quality, etc.)
Interview 1	We meet and spend the all day setting them. One of goals is to have a building paid for, other goal is to hire high quality staff, other goal is to increase our company base from 1 to 5 and we certainly pass that. One goal was to create and incubator that spun off from the university. Try to be with enough money to do our job, we try to do efficient thing to do staff that matter and we measure the quality we provide if the company is successful. We define goals from our business plan.
Interview 2	Setup by the sponsors and the incubators personnel.
Interview 3	We don't.
Interview 4	Those, I think, were key to maintain a healthy program. I develop those by main own and the advisory approved, and we review them in every meeting. Every month check balanced sheet and cash flows and check how we are doing.
Interview 5	Defined by myself considering city situation.
Interview 6	Myself and through experience

	15. Could you identify the critical internal processes needed to deliver your value proposition?
Interview 1	Not really, there are many different internal processes that vary according to each client. Some could be provide finance advice, strategy and tactical advice, as well as follow – up during the execution of the business plans of each company
Interview 2	I can't. Most of our clients come from recommendation from recommendations from existing clients. We obviously are meeting client needs and wants if they are recommending us to others.
Interview 3	We at the minimum need to make sure all of our contractual relationship are in place, not only initial contract but annual renewal, insurance and complains with regulation to run the laboratories. We provide library services, and external service providers that we introduce to the companies.
Interview 4	According to a study of the NBIA, provide service to your residents running your incubator as a business itself. Providing the services they want or need, provide direct links to venture funding, make sure they businesses plan are well done and somebody will want to invest on it.
Interview 5	The most critical process is working with a potential tenant in a construction of their business plan. If tenants are meeting their business plan goals..

Interview 6	Don't know
	16. How does your organization align the internal processes to deliver the value proposition?
Interview 1	There is a log for each company on what they are doing and we check the log and know what we need to do next.
Interview 2	We do a close tracking of our clients, if we do not meet our monthly goals, then we loose our funding, therefore we are totally focused on them. Every client is entry in the database, every contact, we collect how many ours, how many clients persons attended to a seminar, etc..
Interview 3	We have defined who is responsible for the various components and the supervision of the incubator director.
Interview 4	I can not nor should I be of seen (172) all people. I have amazing people who are Harvard MBA, who had raise founds for previous startup businesses that are willing to provide their time and assist to our startup business. There is an environment here that allows us to take place on ongoing bases.
Interview 5	Review tenants business plan and check how they are doing and how we can help them
Interview 6	Don't
	17. How does the information flow inside your incubator? (CRM databases, knowledge databases, process documentation, etc.)
Interview 1	E-mail is the main source of flow, we also have newsletter and bulletins that help us communicate with our clients as well as internally. We not have a centralized source for our information, certain records are paper based, other in electronic format, and there is not a predetermined process of filing. Each person knows how to file client's information or the information they need to perform their jobs.
Interview 2	Database, and files, we first filed out in papers and then input in the database, we used papers as backup of the database.
Interview 3	E-mail. Internet. Distribute mail to their mailbox..meetings..website. To get info about our customer… and marketing materials that we produce.
Interview 4	We use the knowledge network in the website. We do not provide contact information there, because I try to manage the relationship between the residents and that database, so I know it is properly take of. And also the knowledge network is not getting been not too much with a person with a lot of requests. Most of the information is using e-mail and we have everybody in the address book. There are several ideas but not. We have articles in the chamber of commerce newsletter.
Interview 5	We are three people and is fairly easy, between myself and the staff with e-mail. Also with the city and some tenants we use e-mail. Pretty unsophisticated and not real formal means of communications.
Interview 6	E-mail

	18. What other technology is needed to run your incubator?
Interview 1	For this incubator probably just installations and common office supplies, however other incubators, i.e. related to biotechnology will have different requirement in facilities, such us labs.
Interview 2	Wireless, wife. Technology, plasma screens in conference rooms, mostly related to electronic.
Interview 3	Consultant business advisors that work for us and help our companies..
Interview 4	Internet access, business equipment, lab space, web labs, I like to have a national database to track what is going on in every incubator in the country to improve our operations.
Interview 5	I love to have a computer lab for our tenants to show them what they can do with them, and to show them that computer can be tools. Also, a conference room that allow us to do long distance conferencing and learning.
Interview 6	A CRM and scheduling software tailored for incubators.
	19. Are the core competences needed to be mastered by your employees documented?
Interview 1	We not have all the competences documented. There are different skills of sets if we need some competence we hire the person.
Interview 2	We currently have documented, and tasks are divided.
Interview 3	We have a job requirements documentation of each position.
Interview 4	The advisory group, the ones that hired me.
Interview 5	Yes
Interview 6	No
	20. What process is followed to determine those competences?
Interview 1	We hire an advisor and define what the competences we need.
Interview 2	We develop with the companies what are the competences and work with an outside consultant what are the competences needed.
Interview 3	When there is a need and nobody can satisfied, also the competences need it are defined by the manager.
Interview 4	Was predefined by the chamber of commerce.
Interview 5	The city provided it. The city provides training.

Interview 6	We defined according to incubators needs

	21. How are the competences measured?
Interview 1	We not measure activities we measure accomplishments. We hear our customers in what we are most useful and we try to do that.
Interview 2	We did assessments for the professional background that is needed. We do our practices based in our strengths. We have a database where we track our activities with clients; we have a contractual agreement in which 75 % of our time needs to be spending in supporting activities. We also survey the clients. What we call impact (federal form).
Interview 3	Performance review at the end of the year.
Interview 4	The chamber of commerce gives me the position and I never receive a review of my position. Maybe the result I have with the incubator.
Interview 5	We do have an annual performance appraisal that measures our performance.
Interview 6	No

	22. Do you use performance appraisals?
Interview 1	Yes it is more by exception than formalized. Problem ó reaction.
Interview 2	Mandated by the college, evaluated every 6 months and in annual bases.
Interview 3	Yes, every year.
Interview 4	No
Interview 5	Yes
Interview 6	No

	23. Do you have any formal communication system in place?
Interview 1	Newsletter, e-mail newsletter, and a biggest newsletter every quarter, we are in the newspaper at least once a week to communicate what we are doing.
Interview 2	Private site where they get information, internal intranet, e-mail, and their database.
Interview 3	PB: E-mail, website.

Interview 4	E-mail database and the meeting.
Interview 5	Not really, just our website.
Interview 6	E-mail and website

	24. Currently, on how many goals is your incubator working on?
Interview 1	Six
Interview 2	They work in 3 main goals that are in their currents business plan.
Interview 3	Four goals
Interview 4	Nine
Interview 5	Five
Interview 6	More than nine goals

	25. Are there individual goals among the employees?
Interview 1	We know what every body needs to do next year to meet our 5 years goal and then let go do it. We know what every body is responsible to do.
Interview 2	Yes
Interview 3	Yes and defined to achieve our main 4 goals
Interview 4	Yes and also are the team and organization goals.
Interview 5	Yes, everybody has specific thing that they need to do that related to the incubators goals.
Interview 6	NO, we use our incubator's goals.

	26. Are there team-based goals in your organization?
Interview 1	We try to function like a team but we are 6 people in different locations, we all are doing what is their part of the pay.

Interview 2	Yes, are the 3 of the business plan, and we all focus on them. Each one is accountable for those goals.
Interview 3	The same as in the organization.
Interview 4	Too small we are a team of two.
Interview 5	Yes and align with our individual, mainly thing that we need to do as a team to reach our incubators goals.
Interview 6	NO

	27. Do you have any reward system in place? How does it tie to attainment of objectives by employees?
Interview 1	Not money, the reward is to see how you help the companies to be successful, nobody complies about that, we have some retreats. Goals are not tied reward, we just celebrate success, and there is not formal system.
Interview 2	No, money, but internal recognition, informal recognition program. We are not attaining to objectives, just informal, we try to create a positive work environment here, where everybody is respected and consider. In immediate recognition over success.
Interview 3	No, informal congratulations.
Interview 4	Not
Interview 5	There is no way to reward financially, but yes we do some informal things to stimulate my staff. I even do informal reward with the tenants, if there is a story that runs in a paper or TV news, we try to do a big issue.
Interview 6	No, but personal congratulations and thanks are used.

	28.1 Meetings: How frequent do you hold a meeting? b. What levels are involved?
Interview 1	Once a week all staff besides me, except a meet once a month as a CEO with the incubator operations manager.
Interview 2	No staff meeting because we are really small, formal communications are done via e-mail
Interview 3	Every day at morning all staff..
Interview 4	Once a month with advisors
Interview 5	About every two weeks with the all staff.
Interview 6	Once a day, me and my secretary.

	28.2 Meetings: What is or are the purpose/s of those meetings?
Interview 1	Once a week to work over day to day staff problem solving and once a month myself to see strategic issues.
Interview 2	None.
Interview 3	To do troubleshooting, potential problems, main changes, etc.
Interview 4	Make sure we are still together on what the calendar says. And to check all the formalities. Really our meetings are very informal because we are three people.
Interview 5	None.
Interview 6	Follow status reports

	29. How frequent does your incubator provide training to the internal front line and middle managers?
Interview 1	At least once a year during the Annual incubators national Conference (4 days).
Interview 2	To provide a service to the clients of this incubator you have to be a certified business analyst, and that requires a minimum of 45 hrs of professional training per year, mainly we attend conferences to meet this requirement.
Interview 3	Training is available through the university, in average 2 days per year.
Interview 4	NBIA, and City of Gainesville, 4 days average per year.
Interview 5	Training to the staff is available every week two or three ours through the city. Around 10 full days per year and for me 7 days per year.
Interview 6	2 day and 5 days

	30. Is there anything you want to add that you feel will be useful in this research? (Please define what a successful incubator is?)
Interview 1	That there are still different definitions of what is a successful incubator. For us a successful incubator is the one that can graduate high growing companies. For example high growing means companies that at least can pass in two years from 2 to 60 employees or have revenue between 1 to 5 millions per year.
Interview 2	The number one issue is to get funding.
Interview 3	Our new web based database will help us to consolidate and to increase our productivity. Our success is defined by the success of the companies we host. We are lacking here is the resources to maintain the scientific equipment.

Interview 4	Job creation of high paying technology jobs, creating an entrepreneurial environment in the community, create jobs in residents companies that pays more in average than the jobs that are in the community outside the building. The challenge was to get 80% of occupancy between 4 to 5 years; at we are at 85% in less than 3 years. This is a goal that is driving me. As conclusion, the manager of the incubator can not satisfy all needs of all people, but to fill the necessities of the resident companies getting the best help possible to them. One time the incubator manager happen to be all things, write business plan, read the financials, and I think is just not appropriate, I believe the role of the manager is to create the entrepreneurial environment for the startup companies.
Interview 5	Occupancy level we have and the time of payment of tenants and other activities we charge to generate revenues. This kind of incubator is very different from a high tech incubator. We do things that are basic and down to earth with our tenants. We don't create work; we focus in doing what is right and helpful for the tenants. The fewer people we have the better performance we have in our incubator. Tenants pay rent to the city therefore we can not include in our financial. The city provide me a report of who pays they rent. I made an issue for myself to speak urgently to those people who not pay they rent on time because that is a signal to me that something is wrong. The tenants rent are not enough to cover our operating costs and we our far away for being self sustaining. Which is why adding facilities for us is important and maintaining incubator's overhead lower is important.
Interview 6	An Incubator manager must remain totally open minded and the second is the positive actions to reactions that the manager should take, and last but not least is to balance resources (dollars, people, sponsors, and the community involved with the incubator). Successful incubator is the one that provide high value jobs and economic development. One that not close its doors. The one that utilizes resources effectively. the six most important word is: I made a mistake, the five is: I did a good job, the fourth is: what is your opinion, the third is: Thank you, the second is: We, and the least is: Team

Motives and Reasons for BSC Among the Studied Organizations

While there are many reasons to use a BSC, the essential motive is to propose a successful business management tool to run an incubator. Therefore, the initial challenge was to find the management practices currently in use to run the organization. The next paragraphs of this chapter address these findings.

In general there is no consensus among the interviewed incubator directors, as to what is considered a successful incubator. As such there is no consensus on which parameters or factors need to be considered to have a successful incubator (see table 5). For instance, one incubator's director articulated "a successful incubator is the one that can graduate high growing

companies." Likewise, another defined success saying "our success is defined by the success of

the companies we host." A third director defined success as "job creation of highly paying

technology jobs." Although there was no consensus on what makes incubators successful, they

did measure some common parameters: job creation, number of graduates per year, and

percentage of utilization of building space capacity for clients. All of these parameters relate to

client performance not to the incubators financial, internal business processes, or internal

learning and growth capabilities. Instead, 83% of incubators expressed that they control their

budget, 17% checked their cash flow, and 33% used a profit and loss report to see how there are

doing financially (as shown in figure 10). In addition, the incubator's goal achievements were

not attached to a formal reward system, economic or non-economic (see figure 11). This

behavior confirmed that the nature of the interviewed incubators is the same as that found in non-

profit organizations. Therefore it was determined that it was proper to apply the same principles

used in the BSC for non-profit organizations.

Table 5

Incubator Success Factors Identified in Study

Successful Incubator
Graduate high growing companies
Strong funding
Success of the companies it hosts
Provides entrepreneurial environment for the startup companies
Creates high paying jobs
Has high occupancy level
Has paying tenants
Provide high value jobs
Economic development
One does not close its doors
Utilizes resources effectively
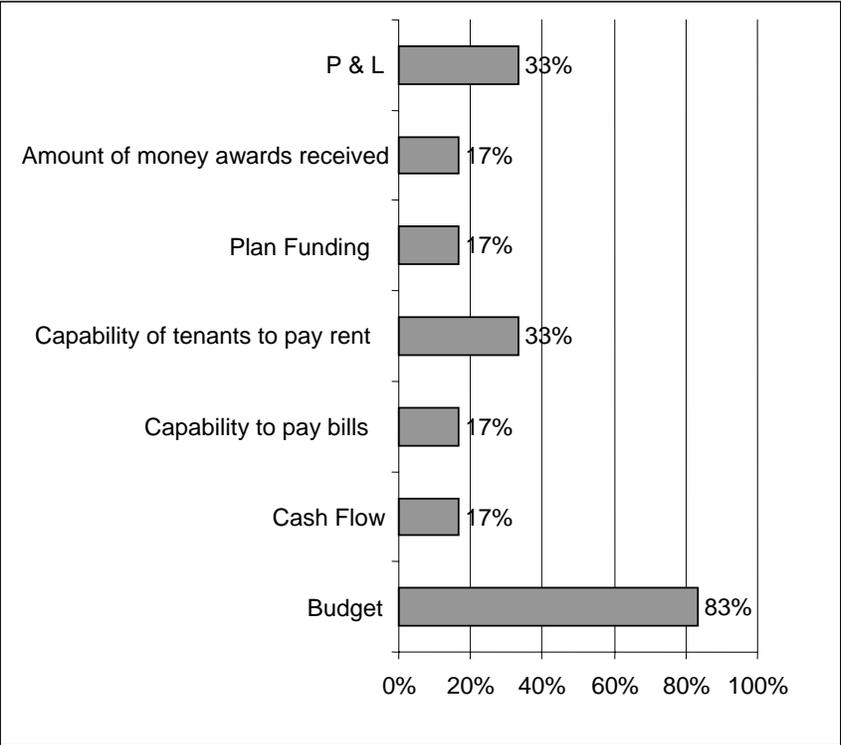
Figure 10: Financial measures considered in incubators.
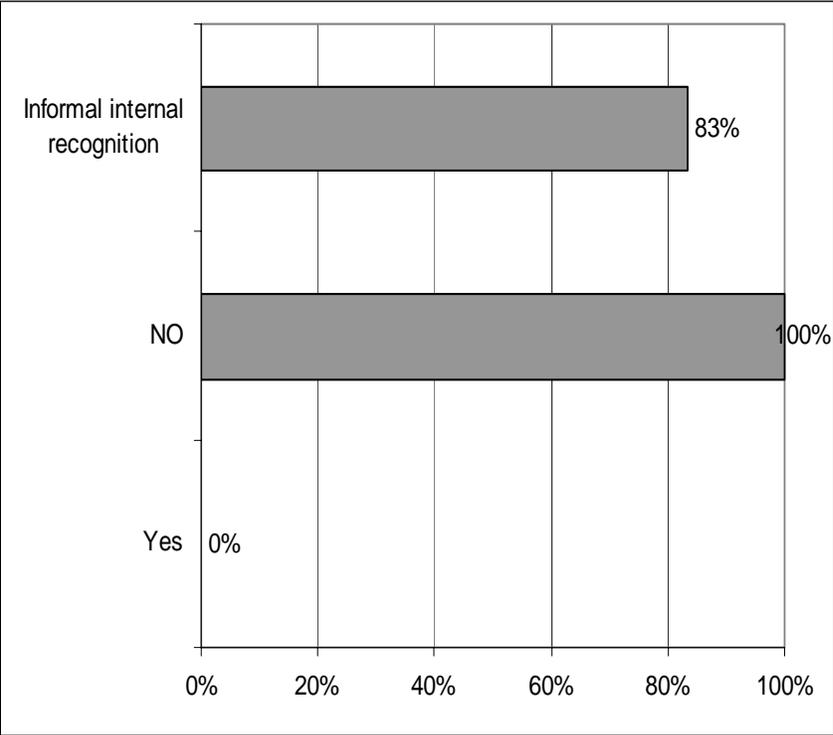
Figure 11: Reward Systems in Florida's incubators.

Strategic Aspects

As was mentioned earlier in chapter 2, linking the scorecard to a company's strategy involves four areas: cause-and-effect relationships, performance drivers, linkage to financials, and the number of measures for the four perspectives.

Although it was not a formalized question within the interviews, the alignment between the strategic goals and the vision and mission, was discussed as it came naturally during the discussion. The interviewed incubators responded that their strategic alignment was tied to the business plan they followed. For instance an incubator's director said "We have goals to meet every year as part of our contract and part of our business plan". This provides a desired starting

point for a BSC. As seen on the answers to questions 24, 25, and 26 the linkage between individual and team goals with organizational goals was very close to the organization's strategic objectives, as one director said "we know what each person needs to do next year to meet our 5 years goals and then we let go to do it. We know what each one is responsible to do." A possible explanation for this could be the small size of the organizations, which had a maximum of seven employees (see figure 12). This linkage is good for the purpose of establishing a scorecard in these organizations. It is important to note that more than 50% of the incubators focus on more than 3 or 4 organizational goals, according to Ram Charam and Larry Bossidy, this decreases their capability to focus on all those goals (see figure 13).
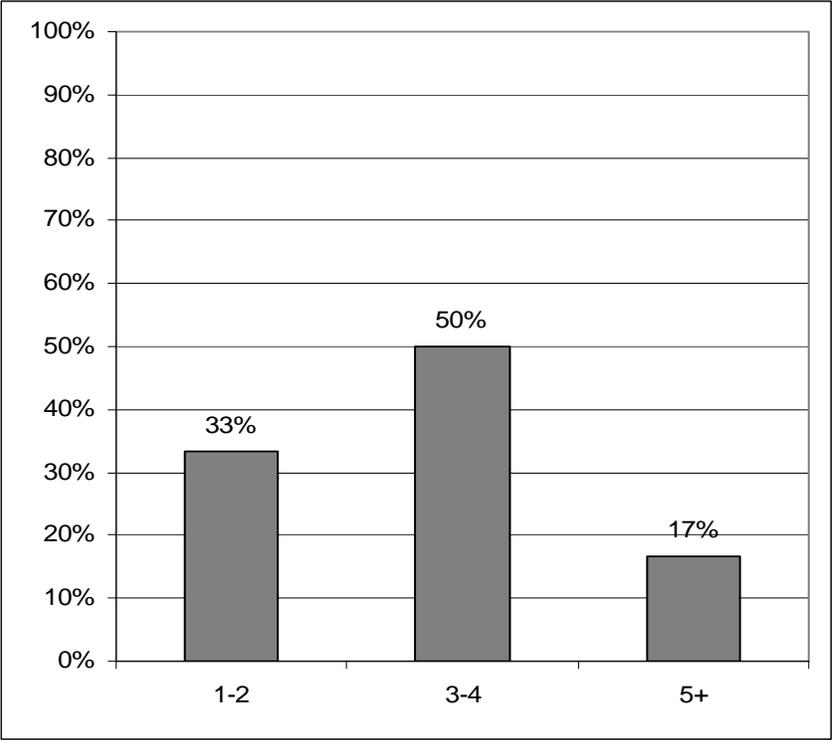
Figure 12: Number of employees per incubator.
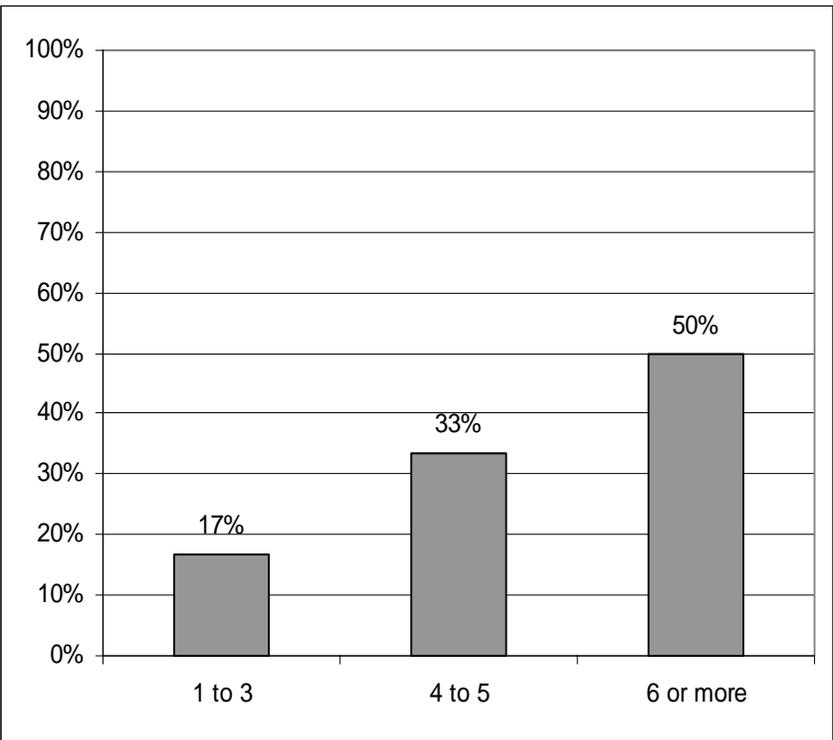
Figure 13: Number of organizational goals.

Lead indicators, were scarce among the incubators interviewed, only 17% of them

mentioned the use of cash flow as a financial measure of their business performance. Thirty three

percent (33%) measured satisfaction with incubator's facilities and staff (see figures 14). One can

argue that most of the incubators had defined and knew the market segment in which they choose

to compete, but they did not formally track market share. However, all of them mentioned they

tracked lagging indicators or outcome measures. For instance: number of graduating companies

per year or informal measurement of customer satisfaction. The incubators did not totally reflect

the individuality of the company strategy, in terms of internal processes and learning and growth

objectives, which deliver their value proposition. The BSC requires a proper mix of customized

outcome measures and performance drivers. Most of the incubators were deficient in this regard as they had insufficient consideration of lead measures in their practices.
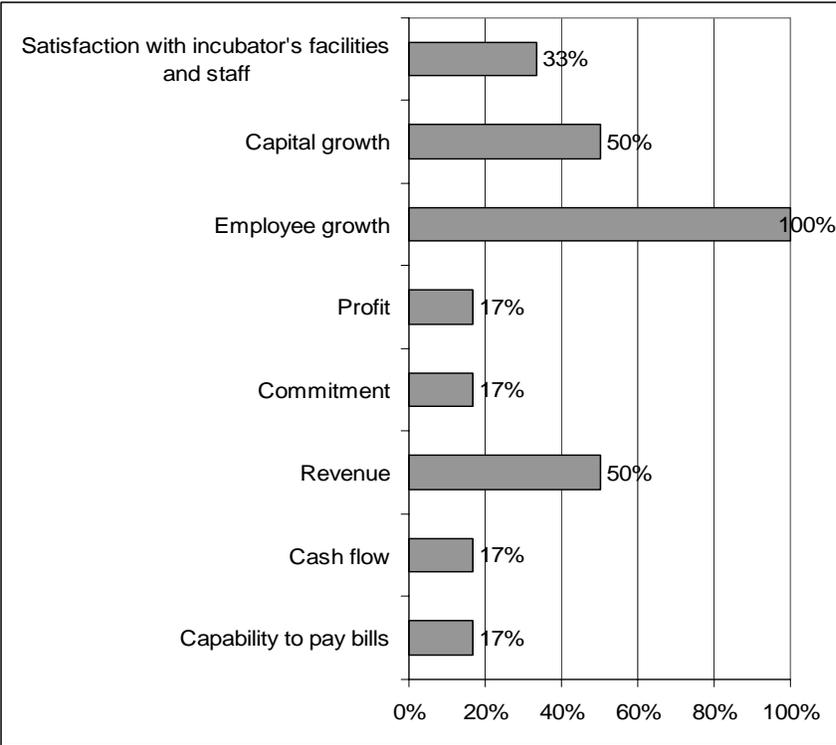
Figure 14: Measures used by incubators to quantify incubator's impact over clients.

The interviewed incubators in Florida were non-profit organizations. They depended on external funding and in the rent they charged the new hosted ventures in their building. Therefore, the linkages of most incubator's programs that were in place are not directly related to the deliver of future financial performance, they were related to the satisfaction of the needs of the main sponsors that were universities and government, at state, county, and even city level.

This research found that 50% of the incubators tracked six or more goals. Also, they used personal interviews with customers as a diagnostic measure, to monitor whether the business remains in control and can signal when unusual events are occurring and require immediate attention, and strategic measures (as shown in figure 15). The researcher could not find any competitive breakthrough factor that was officially considered in an incubator.
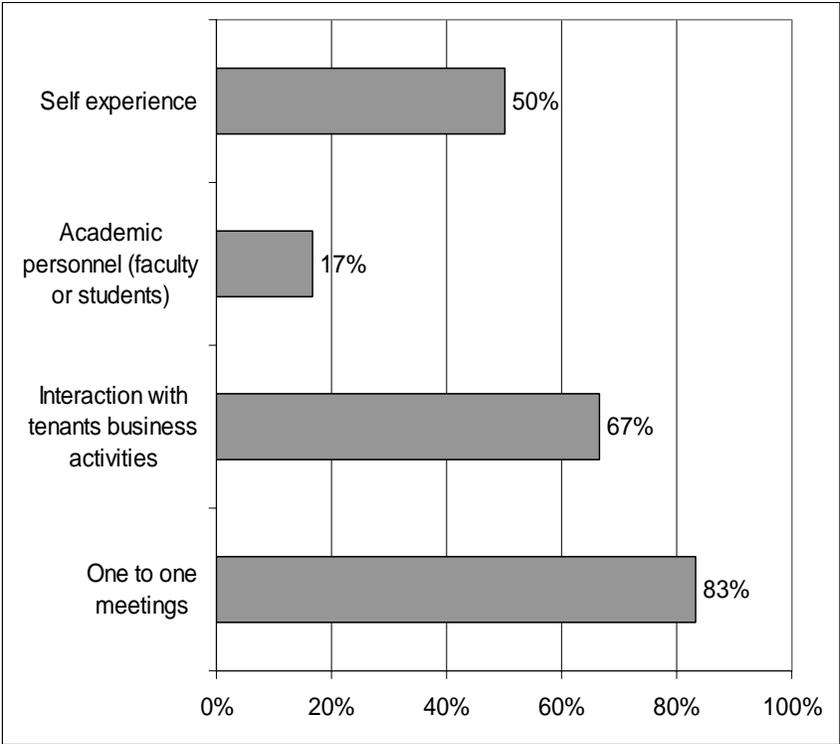
Figure 15: Incubator's tools to gather clients' needs.

In general the incubators' mission and vision were established by their incubator sponsors of the incubator. Eighty three percent (83 %) of the incubators mentioned universities as sponsors, in conjunction with the incubator's director and some included outside consultants (see

figure 16). In addition, it was observed that more than 60% of the incubators did not conduct structured SWOT analysis, which focuses on the identification of strengths, weaknesses, opportunities, and threats (figure 17). There were different statements of the value proposition among the interviewed incubators, but in essence all of them offered business assistance in terms of: locations for new ventures at better rates than commercial places, close neighbor companies that were in similar business situations, neighbor companies that were in similar business industry segment, access to investors, links to advisors, and shared office services and equipment (see figure 18).
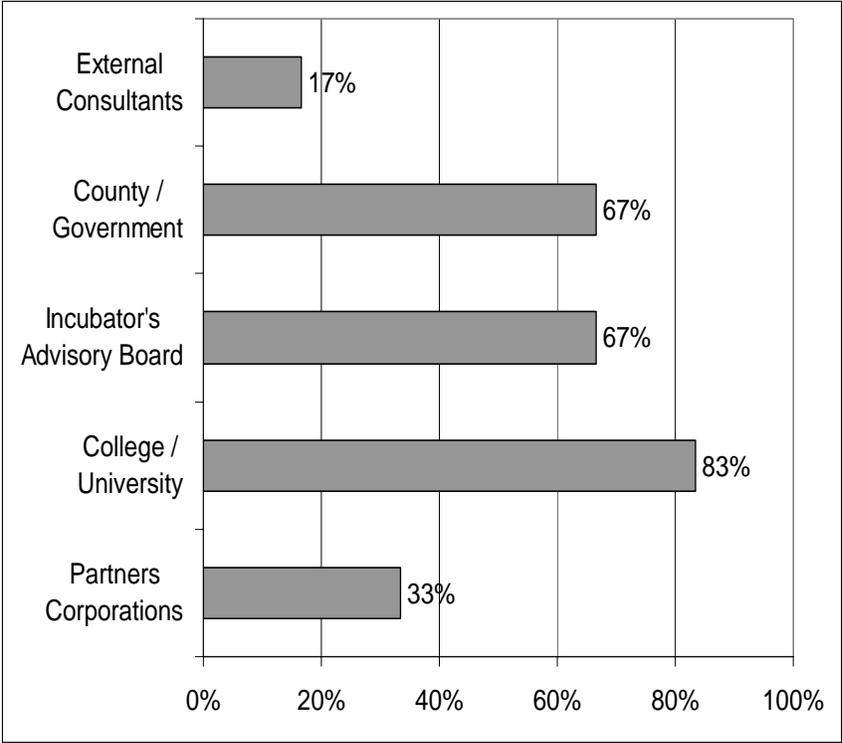
Figure 16: Institutions involved in defining incubator's mission and vision.
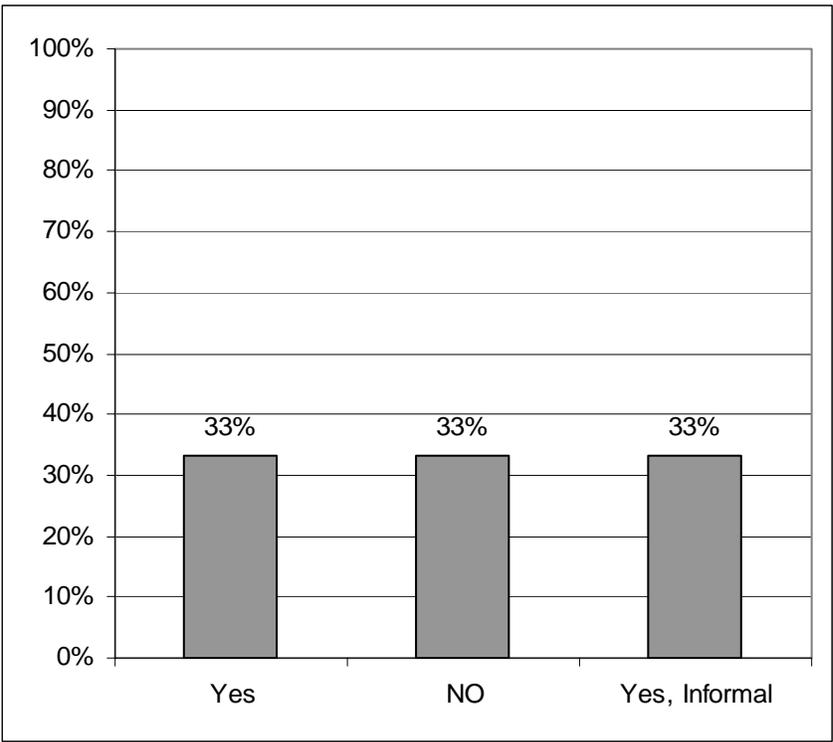
Figure 17: Incubators that use SWOT analysis to define strategies and objectives.
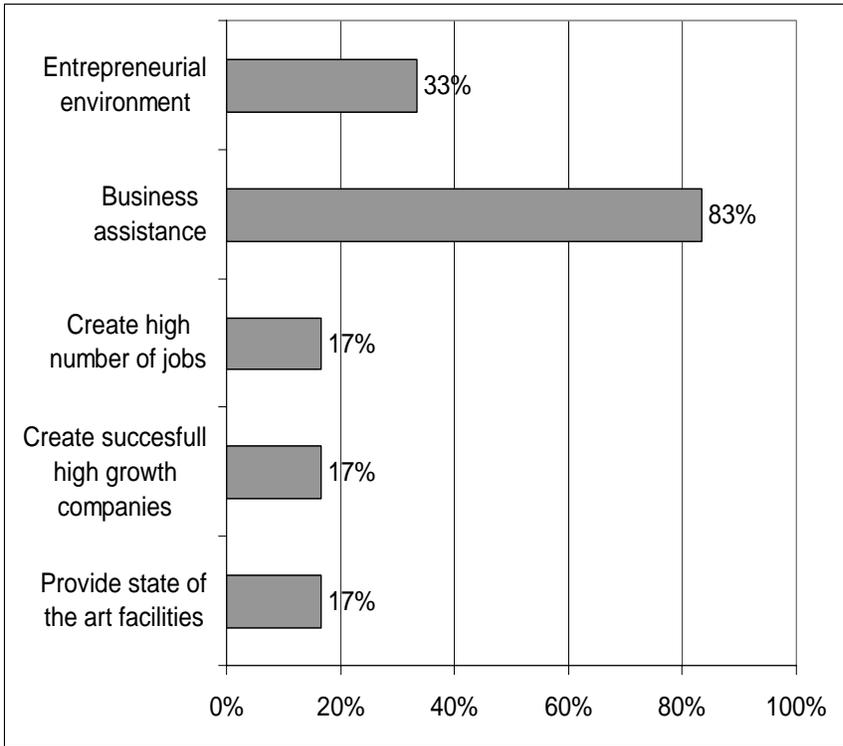
Figure 18: Incubator's value proposition content.

Financial Aspects

Future financial performance was not an objective of main consideration in the interviewed incubators. This can be seen clearly in the financial strategy followed by incubators, which were: Try to match bills with tenant's rent, look for new sources of funding, and try to be included in partners (sponsors) budget (figure 19). These three sources of income were used by the incubators to set the annual budget that sustained their operations. Thus, the incubators' financial goals were to be under budget, except for one that was generating an annual profit (1% to 2%) and had equity (see answer to question # 6). Delivering profits was not within the intentions of the incubator's activities; they satisfied the requirements of the main sponsors. The

primary requirement of the sponsors, as is expressed in all incubator's missions (see appendix

B), were to provide business assistance in their geographical area. The sponsors provided the

capital to run the incubator for this purpose and expected the incubators to use the rent charged

to resident companies as a way to off-set costs. All the incubators relied on the rent income to

keep their programs running efficiently. In addition, almost all incubators wanted to be

financially sustainable and rely less on sponsors funding and more in other incomes, specifically

rent. They were looking for a sustainable model based on a main income provided by resident

company charged fees. Inner operation balances, cash flows, and capability of resident

companies to pay rent were financial measurements the incubators tracked in regular monthly or

quarterly bases.
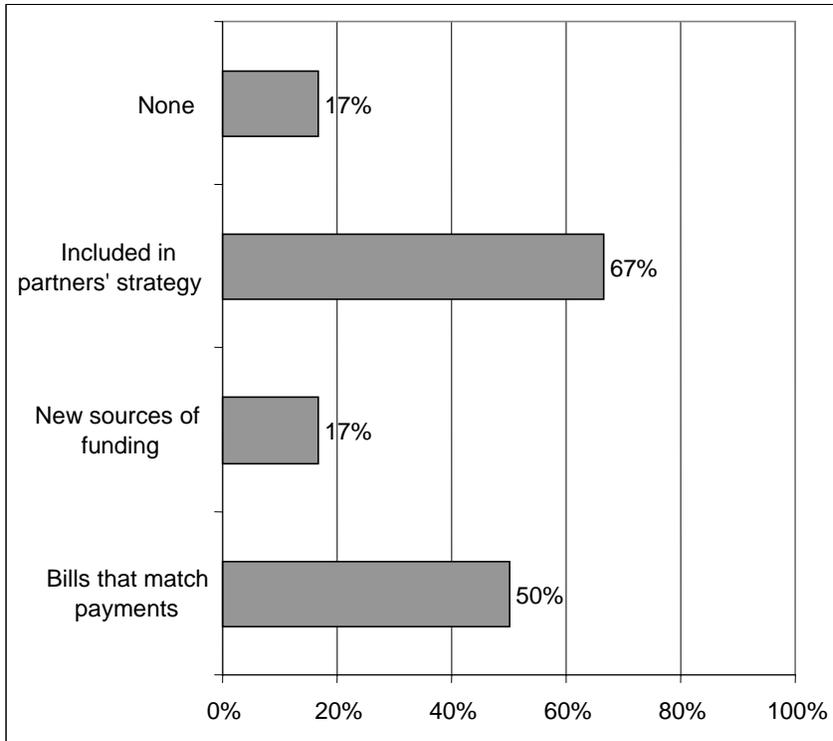
Figure 19: Incubator's financial strategies.

Finally, financial objectives are long-term goals for for-profit organizations, but here financials were more a restraint than an objective. There was no evidence collected or in the literature, that the success of an incubator was determined by how good they were on the spending of their budget or how profitable their operations were. Therefore, financial considerations in the Florida's incubators play a constraint role but were not a primary goal.

Customer Aspects

The customer perspective helps organizations align their processes and behaviors through outcome measures that target objectives in market sectors. Those objectives are related to satisfaction, loyalty, retention, and profitability. In this case the incubators were focused on satisfying sponsors' wants, who were the source of the incubator's vision and mission. However, incubators had two well differentiated clients to satisfy, the ones that provide funding (sponsors), and the ones that pay fees to become incubator residents or dependants (clients, tenants, or residents). It is important to note that by satisfying the needs of the residents the incubators were satisfying the wants of the sponsors.

The incubators' mission statements and value propositions (see figure 18) showed that the incubator's main purpose were fundamentally to help new ventures in their early stages. This shows that the incubators seemed to be clear in what they were offering, which is a key point in the development of a scorecard.

In addition, 80% of the incubators expressed that they were specifically oriented to one market sector, such as high technology, biotechnology, or agriculture; this was also confirmed by the principal activities they performed (as shown in appendix B). Incubator managers had a clear

idea of the business segment they were satisfying and had set different measures for this interaction (see answers to question 9).

On a regular basis, incubators checked for the resident's top needs and ensured they were satisfying those needs. They did these fundamentally by using one to one meetings and interacting within the tenant's business activities.
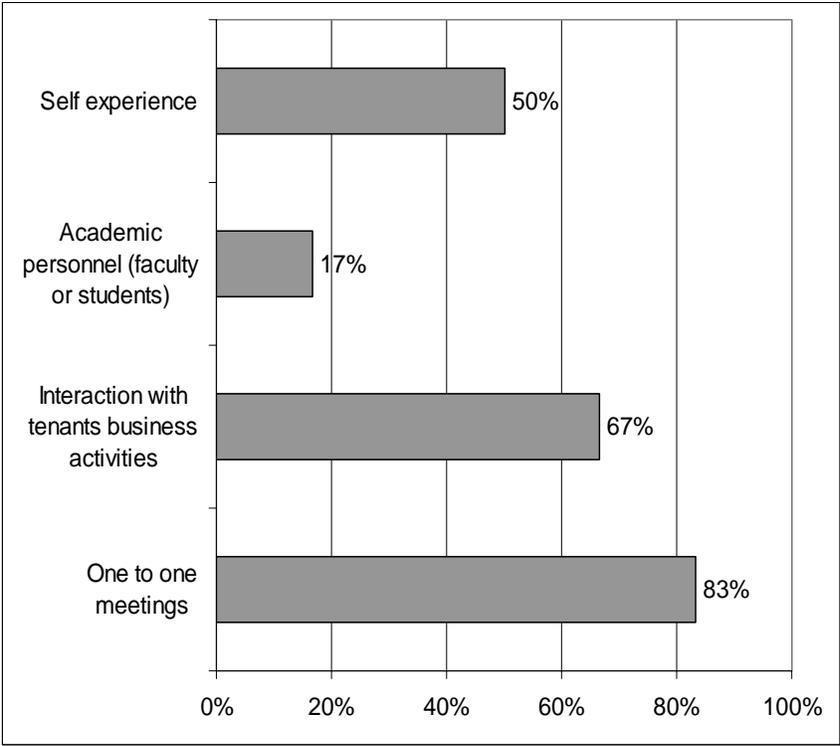
Figure 20: Tools used to identify tenant's needs.

Incubators systematically tracked their client's (tenants) retention rate, graduation rate, and acquisition rate using, in most cases, one to one meetings (e.g. as shown in Figure 20). In addition, to measure how well the incubator is impacting their clients, they checked the

capability of clients to pay rent, capital growth, revenues, and profitability in their business (see figure 14). There was not strong evidence in incubators of formal measurement methods of market share or customer satisfaction.

To better devise a customer perspective, leading measures, such as quality, services, and cost of the product offered to the residents, were informally taken into consideration by incubators. Moreover, quality of customer relationship and image on reputation were measured informally by the incubator's personnel when they met with their clients. It is important to note that some incubator managers asked their clients, on a regular basis, what they could do better (see answers to question 9).

High number of incubators got their clients from referrals by the chamber of commerce or from entrepreneurs who learned about the incubator while attending an academic program (see figure 21).
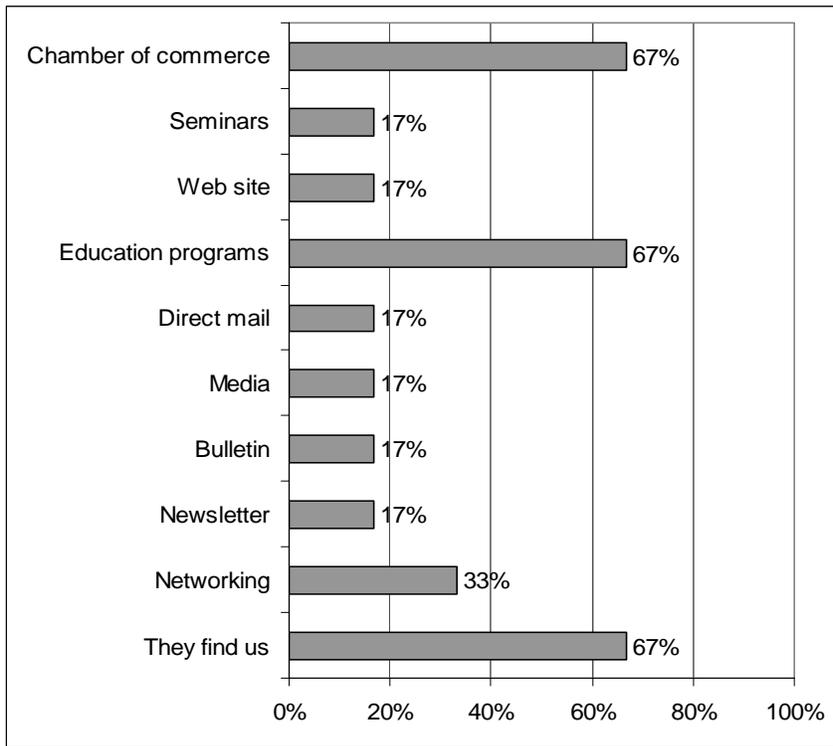
Figure 21: Points of contact with clients.

In regard to customer focus, incubators were in good position for lagging measures but they were lacking formal structure in the follow up of leading measures.

Internal Aspects

In this perspective, the organization needs to identify the critical processes needed to excel and meet the objectives of shareholders and target segments (Kaplan and Norton, 1996). The challenge is to know the expected process performances required by the resident organizations in each particular incubator and identify the factors related to performance, cost, quality, time, that will make possible to deliver greater quality.

Half of the incubators did not have or track internal business processes measures. And for those that tracked internal measures, they did so by using internal strategic meetings, manager, or sponsor meetings (figure 22).
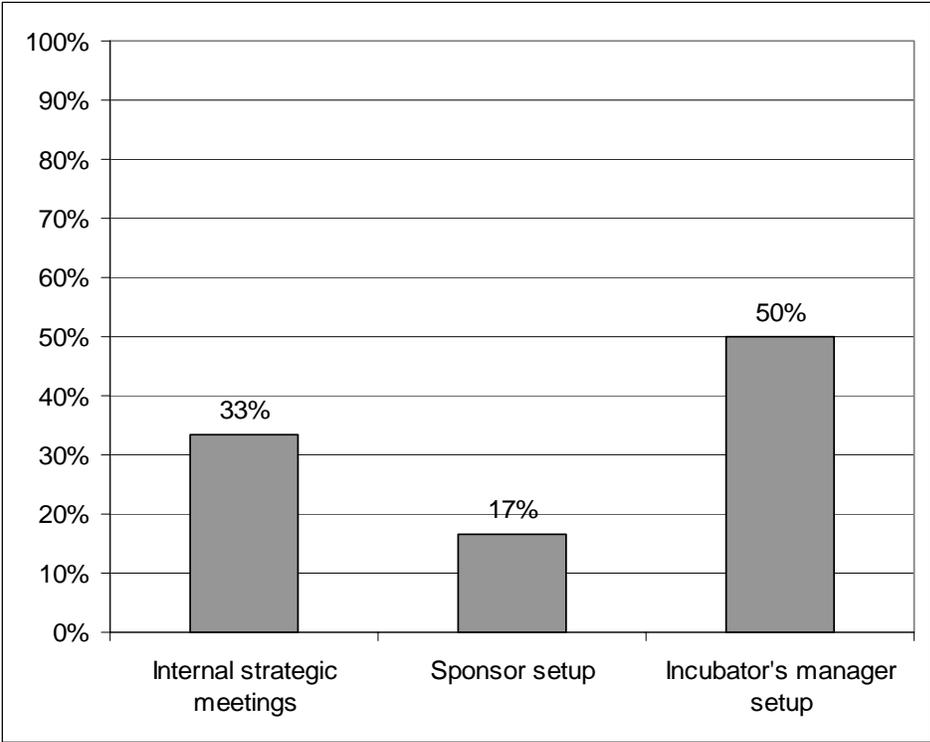
Figure 22: Internal business processes setup methodologies.

The processes to deliver the value proposition of the incubator's program were known and understood; however, it was difficult for respondents to identify the key core processes they perform to deliver their value proposition (see answers to question 15). There were identified contractual relations, services promised to customers, and checking tenants business plans (as

shown in figure 23). Additionally, 50% of the incubators were reacting to clients' requirements to deliver their value proposition.

Check if the tenant's business is according to plan — 33%

Services promised to customers — 50%

Contractual relations in place — 17%

0% 20% 40% 60% 80% 100%
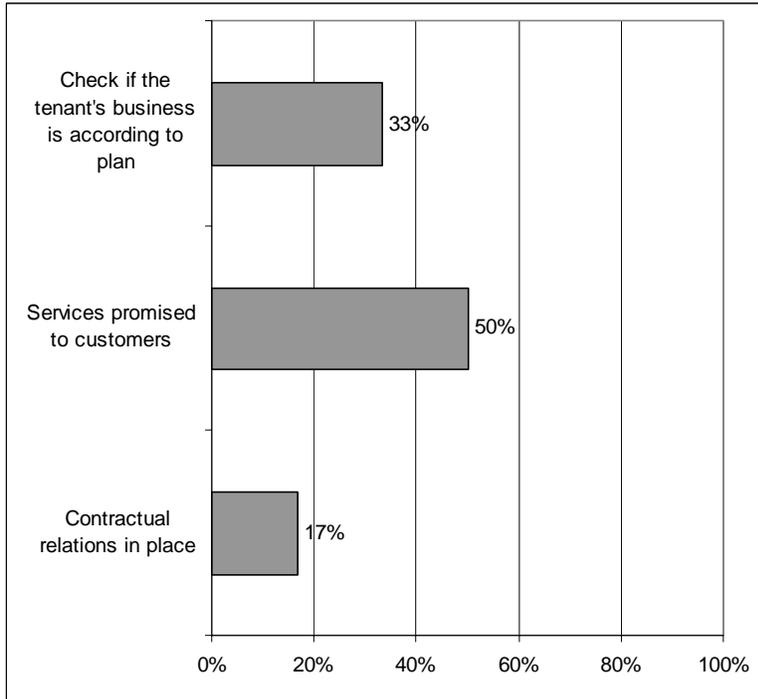
Figure 23: Critical internal business processes identified to deliver incubator's value proposition.

Each employee in the incubators managed multiple business processes that were normally linked to the achievement of the organization's objectives (see answers to questions 16 and 25). In all incubators it was found that the productivity measured was the ratio of number of resident companies per incubator's employee. Fifty percent (50%) of the incubators expressed that they would feel balanced if the maximum number of companies handled per incubator employee was between 4 and 6 (the average number was 5.8 tenants per employee). Outcome production was measured using results of resident companies, which were the number of jobs

created in a certain period of time, increase in sales, increase of capital, level of commercialization of products, increase in investment, progress in investigations, and number of corporate relationships (figure 25). As is seen, many of these measures are typical and related to monitoring or improving cost, quality, and time-based measures of existing processes.

The systems identified for information flow inside the organizations were: E-mail, bulletins, databases, and newsletters. Where E-mail was the main system used by all incubators to exchange information (see figure 26).
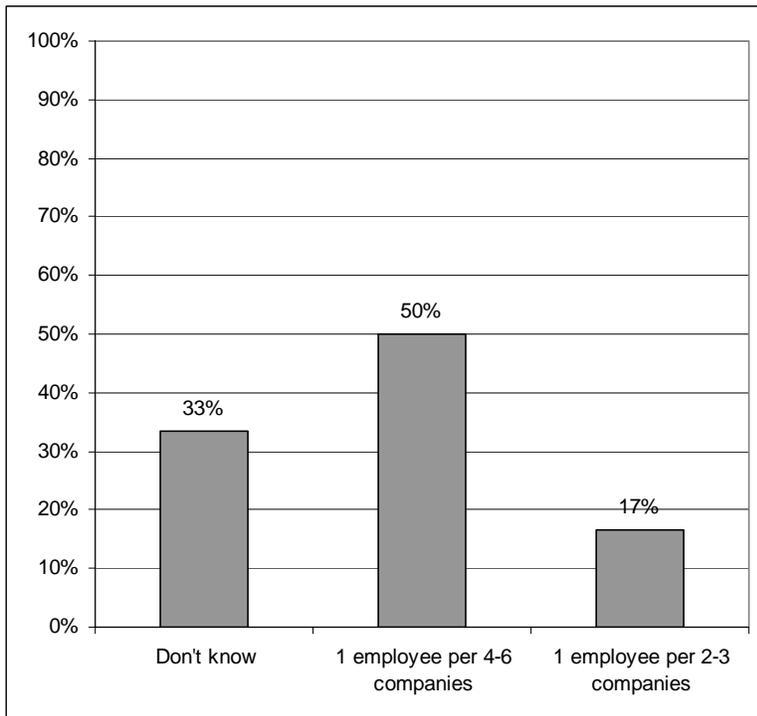
Figure 24: Ranges of maximum desired number of employees per incubator.
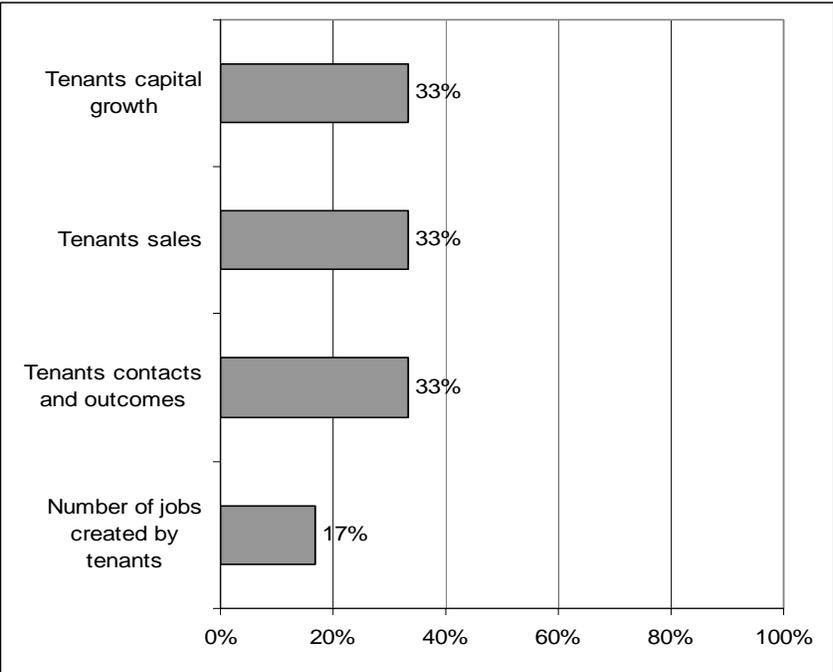
Figure 25: Utilized outcome measures.
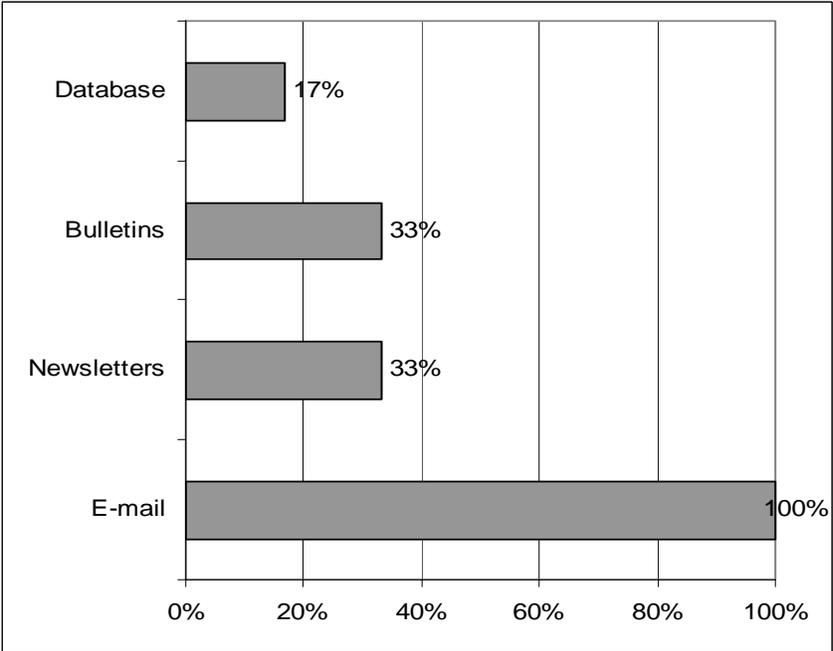
Figure 26: Utilized tools to transfer information.

To conclude this perspective, the internal processes were measured by the way they met internal contractual agreements or informally by means of achievement of assigned tasks.

Learning and Growth Aspects

The Learning and Growth perspective is the one that provides the foundations to enable the achievement of extraordinary results in the other perspectives. Inside the work market, employee capabilities were required to be in constant change and adaptation to new requirements. Incubators invested in average less than 2% of employee time in the development of new knowledge and capabilities. This is an average of 4 days per year used by incubators to update employee's capabilities (see answers to question 29). Core required competences for employees to perform their tasks, such as decision making, were documented by 33% of incubators and job requirements documentations, for example: understand a business plan, were present in 67% of the incubators (see figures 27 and 28). Generally they were defined by an expert in the area and/or the incubator's director (see answers to question 20).
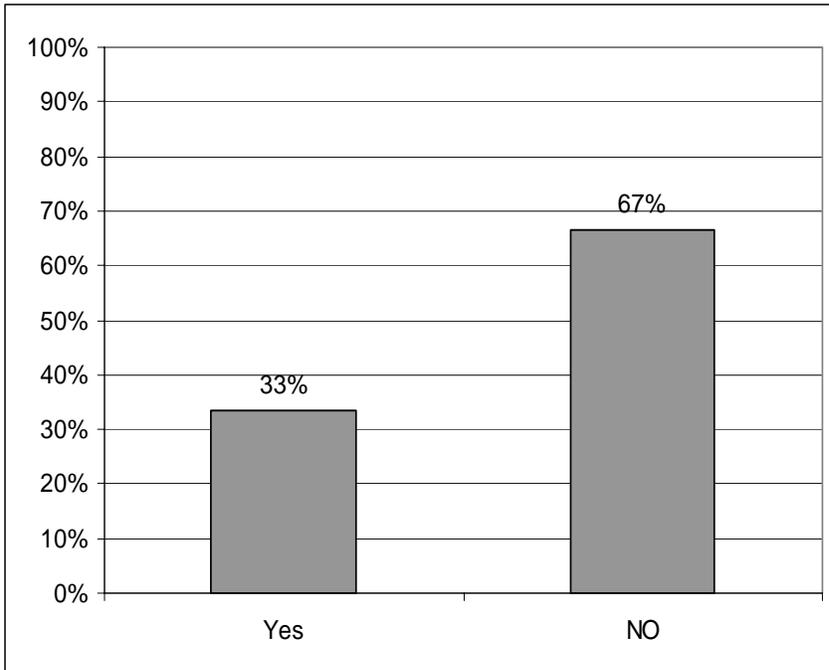
Figure 27: Percentage of incubators that have documented core functional competences.
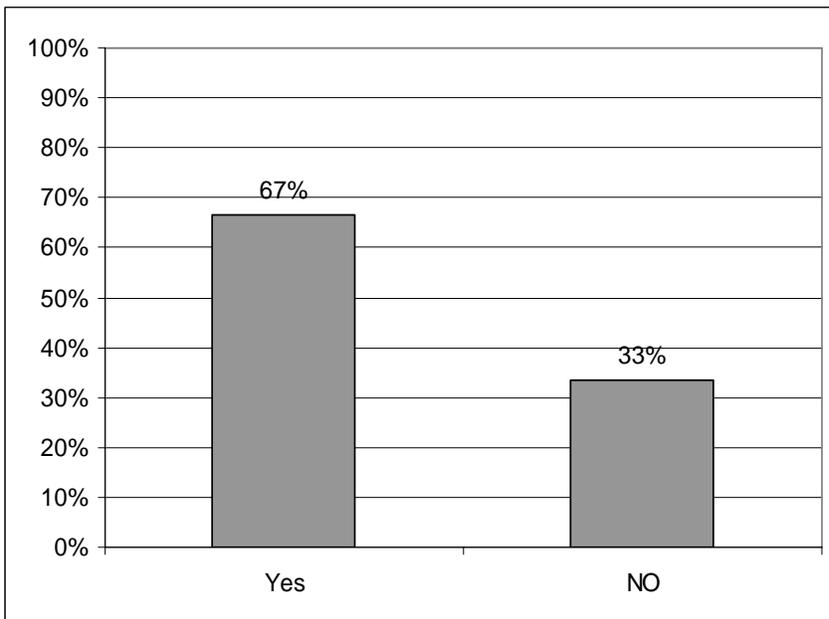
Figure 28: Job requirement's documentation usage.

The employee's performance was directly related to their main achievements and not to activities. Sixty seven percent (67%) of incubators said they used performance appraisals and, 33% of them agreed to do performance reviews once a year (see answers to question 22).

The responsibilities of each employee were acknowledged by employees and managers of most incubators and were defined and documented (as shown in answers to question 20). Therefore, it was unlikely that the incubators' employees had to take a dramatic change in responsibilities to excel in their actual positions.

New technologies to improve current information systems were required by 67% of the incubators' managers. They needed tailored customer relationship databases to increase their effectiveness, productivity, and efficiency (as shown in answers to question 18 and figure 29). All incubators used some of the advantages of information systems, such as email (which was their most used method). But, still, they were far from reaching all of the potential they could achieve in information systems. With a better use of technology information they could reach higher levels of performance and have all the required customer information more accessible.

Personal alignment of employees with organizational goals was evident and the motivation to reach important program milestones was made clear (as shown in answers to questions 25 and 27). Team based goals were not present in 83% of the incubators, perhaps because the number of employees (as shown in figure 30). However, no director mentioned the existence of an established measurement of soft skills among incubator employees.
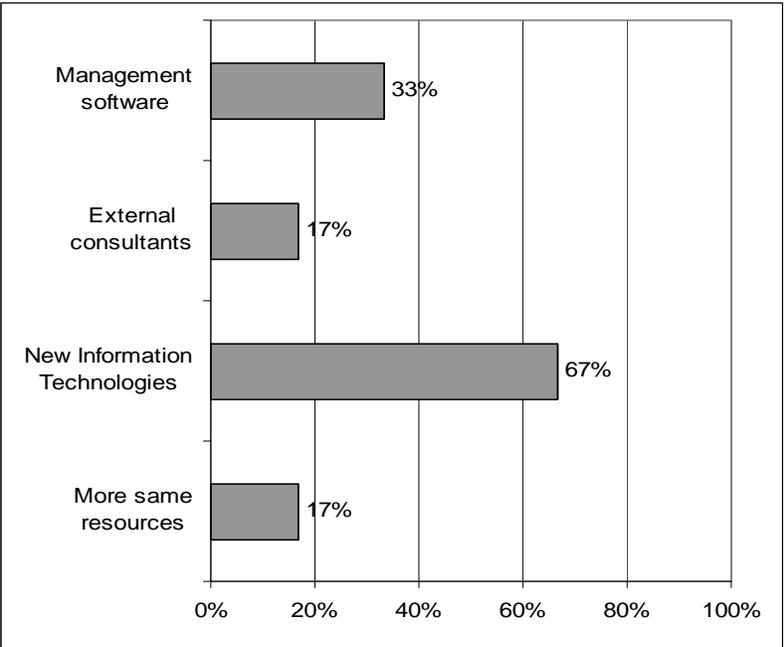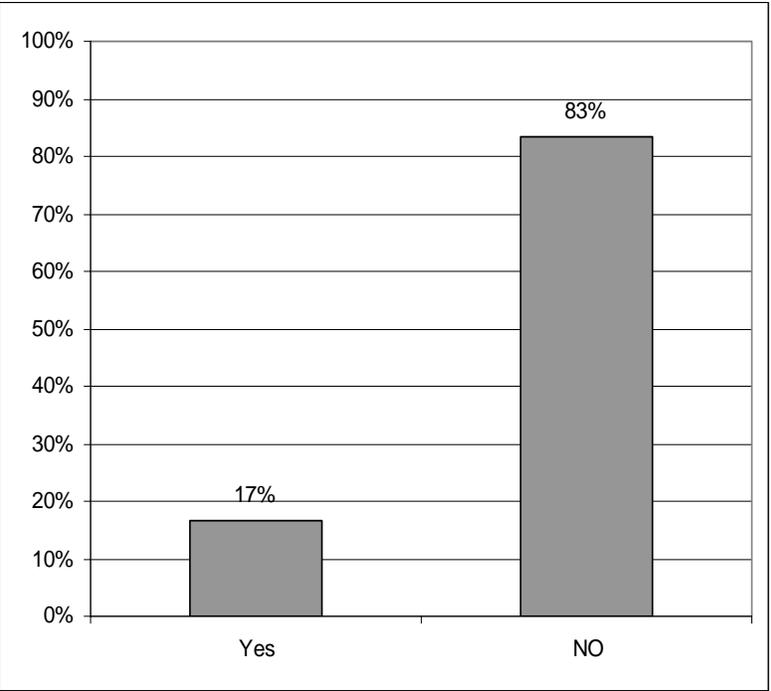
Figure 29: Need technologies.

Figure 30: Team goals usage.

Finally, the deficiency in incubator specific measures, for this perspective, was evident and indicated an opportunity for future development of tailored systems, employee, staff, and organizational metrics that can be linked to the incubator's strategy.

Stage of Development

The incubators in Florida required a high level of managerial skills to satisfy the variable needs of their resident companies. The incubators of the region were relatively small enterprises. They had an average of 3.5 employees. Because a BSC system (or any other integrated performance measurement framework) requires an intensive implementation effort, the associated investments of time and resources are such that 'planning failure' would result if the BSC are prescribed arbitrarily across the spectrum of small enterprises (American Productivity and Quality Center, 2000). Moreover, even though it may be that the poor performance and failure of small firms is often the result of a lack of attention to strategic issues (Jennings and Beaver, 1997), small companies do not often require elaborate performance evaluation mechanisms: in many instances, those who set the strategy, i.e. the directors, are close to the action (Hoque and James, 2000). Furthermore, the manager(s) is typically consumed by the day-to-day demands of the business and is rarely prepared to delegate strategic management responsibilities, which would be imperative if a BSC approach were to be recommended.

Most of the incubators had almost reached their resident holding capacity and were thinking about increasing their building space and / or capabilities (see answers to question 13 and appendix B). They all expressed their desires to be financially self-sufficient and less reliant on government funds. As well, incubators felt the need to adapt to the dynamic operating environment in which they were immersed. Therefore, a realistic expectation was that the

incubators in Florida will be immersed in substantial changes in the near future, which will generally be associated with a transition to a more advanced stage of organizational development and management complexity. Management complexity arises because people during periods of change may have a strong desire to return to more familiar and proven behaviors (Cook et. al., 1997). However, it is important to consider that the growth of an organization is not always synonymous with organizational development (Mount et. al., 1993). Thus, many operations are able to simply do more of the same by increasing operational capacity or adopting more efficient processes.

CHAPTER 5: SOLUTION TO RESEARCH OBJECTIVE

The biggest challenge with a balanced scorecard development is to determine the relevant information that the organization needs for success. Drawing on the material reviewed, analyzed case studies, interviews, and profile information of incubators collected in this investigation, this section outlines conclusions and a 4-step process with feedback to construct a scorecard for incubators (e.g. as shown in figure 33). The 4-step process is based on the 6-step process generated by Kaplan and Norton, 1996, to build a scorecard and tailored using the information provided by interviews and literature review. The identified and proposed 4-step process differs for the one suggested by Kaplan and Norton because it incorporates all the particularities of the incubators' environment and it considers that each incubator has it on particular needs and differs from the specific needs of the others. Then, the intent is to assess the needed conditions to implement a BSC and to generate a set of generic activities that build the foundation to create a scorecard for incubators.

Four Step Implementation Process

Step 1: Validating Organization Purpose and Defining a Strategy Map

The first part of the proposed process reviews and clarifies vision, mission, and strategies that were already in place; this often requires a facilitated process with discussions so that significant disagreements can be dealt with. The idea is to adequately resolve strategic differences within the organization so people do not work separately toward different visions. In this way, the achievement of a clear incubator's vision and mission would guide the development of strategies.

This phase also focuses on an understanding of the organization and its environment. This approach ensures that the system is developed from the outside-in so that designers understand what is actually required of the system and thus from the outset ensure that the best possible solution can be offered. By understanding the current situation before designing the actual measurement system, it is far more likely that the resulting system will be adequate and useful. Essentially, the organizational context must be described first before the available measurement information can be filtered and distributed. The most common technique is the traditional SWOT analysis, which focuses on the identification of strengths, weaknesses, opportunities, and threats for the organization under question. Then, the process of defining the success criteria for an incubator will be a challenge. In fact, to identify success criteria in incubators had more to do with understanding stakeholders' needs rather than with the process by which requirements were translated into BSC goals.

Having all this information in place, the strategy's hypotheses of the incubator becomes explicit, facilitating the generation of the strategy map for the organization. Non-profit organizations can identify strategic themes by combining the financial and customer perspectives in the scorecard (Kaplan, 1999). Therefore, the incubator's scorecard will reflect a total of three perspectives: the blend of customer and financial perspectives, the internal operation, and the learning and growth perspectives. This allows a clear definition of the chain of cause and effect logic. This logic permits the connection of the strategy with the performance drivers that enables the organization to reach their desired strategic outcomes (Kaplan and Norton, 2001).

The audience required for this step will be an executive team composed at least of representatives of the main sponsor of the incubator, the incubator's board, and an incubator advisor (expert in incubation organization). A meeting should be conducted with the purpose of

getting agreement on key goals and drivers, values, and their competitive situation. The team must build the map which will be used as the basis of the scorecard - not the measures themselves, but what concepts will be measured. A "linkage map," where to focus the incubator's actions or issues, will have the highest impact on outcome - customer service, profit, turnover, etc (e.g. shown in table 10). This will also help team-members achieve personal involvement and process ownership.

In summary, the deliverable for this step is a set of strategic themes for the incubator. This is the identification of the critical issues at which the organization must excel to deliver its value proposition to clients (Kaplan and Norton, 1996).

The next step is to mobilize the construction of the BSC to the critical phases of translating the strategy into operational terms by developing a set of Key Success Factors (KSFs) that are in direct relationship with the identified strategy.

Step 2: Defining Key Success Factors

Defining KSFs from non-profit organizations is difficult. As mentioned before, the objectives will center on stakeholders' needs instead on the classical financial performance of for profit organizations. The stakeholders, in the case of the incubators, are government institutions and the resident companies that presented complex and open-ended demands. In addition, this step delineates how to select leading and lagging factors and measures for the Internal and Learning and Growth Perspectives.

Most companies have found it difficult to break down high-level objectives, especially non-financial, into local operational measures. Therefore, the scorecard framework of linked cause and effect relationships can be used to guide the selection of lower-level objectives and

measures that will support the high level strategy. This is where the process and the measures start to come together.

The beginning starts by identifying the key deliverables and objectives of the strategy in the incubator that are going to be monitored by the balanced scorecard. These KSFs will usually describe required outcomes from activities (e.g. number of graduating companies per year, quality service levels, costs, etc.). They need to be chosen in such a way that they are consistent, where necessary, with the previously defined strategic goals of the incubator. Aim for a maximum of 10 factors, since more will be very difficult to handle. Make sure that the three perspectives in use are covered.

Because of the size of incubators, in terms of personnel, the audience required for this step will be an operational team composed at least for the director of the incubator, the operation manager, and an expert in incubation organization. A meeting should be conducted to agree on how to translate the key goals and drivers into the factors and measures that will represent each perspective of the scorecard.

Step 3: Selecting Measures

The next step is to identify a set of measures relating the core processes or activities that will influence the ability of the incubator to achieve the KSFs described in step 2. Some measures will be purely operational (e.g. keep office supply waste low), while others will be developmental (e.g. train employees in new database system), but it is likely that most will fall in the perspectives of Internal Processes and Learning and Growth. The goal here is not to replicate existing process control systems, but to pick the few objectives that, if reported against targets, will indicate the health status of the activities being monitored.

For each objective chosen, a selection of one or two measures, which tell how well the objective is being achieved, should be done. As an aid for selecting the measures, case studies from similar organizations could be used. Measure selection is often influenced by the need to obtain information quickly and the availability of sources that can update information frequently. However, the focus of this step should be identifying measures that establish how well the incubator is doing in achieving objectives.

The proposed measures for blended perspective of Financial and Customer Perspectives require special consideration. The incubators had to satisfy basically two customers, the sponsors and resident companies. However, by satisfying resident companies' needs and wants they will be satisfying their sponsors' needs, which are, basically, helping the new entrepreneurs to create sustainable and growing businesses in terms of money and employees.

Step 4: Establish Performance Targets

Once measures are selected, the next step is to set targets for these measures. One approach is to assign objectives from the scorecard to individuals that are responsible for these areas and to charge them with ensuring their delivery. These individuals are then on the best place to determine the targets for each measure. Likewise, the measures are linked to organizational objectives. In addition, many targets could be found using information from similar processes from other organizations or in incubators' best practices standards.

Considering that performance targets will directly influence behaviors inside the incubators, verification that the selected performance targets will generate the desired behaviors is required. The cause and effect chain needs to be reviewed and changes need to be made in case there are missing links or misalignment among targets, measures, and KSFs. The main

objective is satisfying the incubator strategy. Thus a closed loop system is generated in step 1 by

moving backwards from targets to the organizational strategy (e.g. loop shown in figure 31).
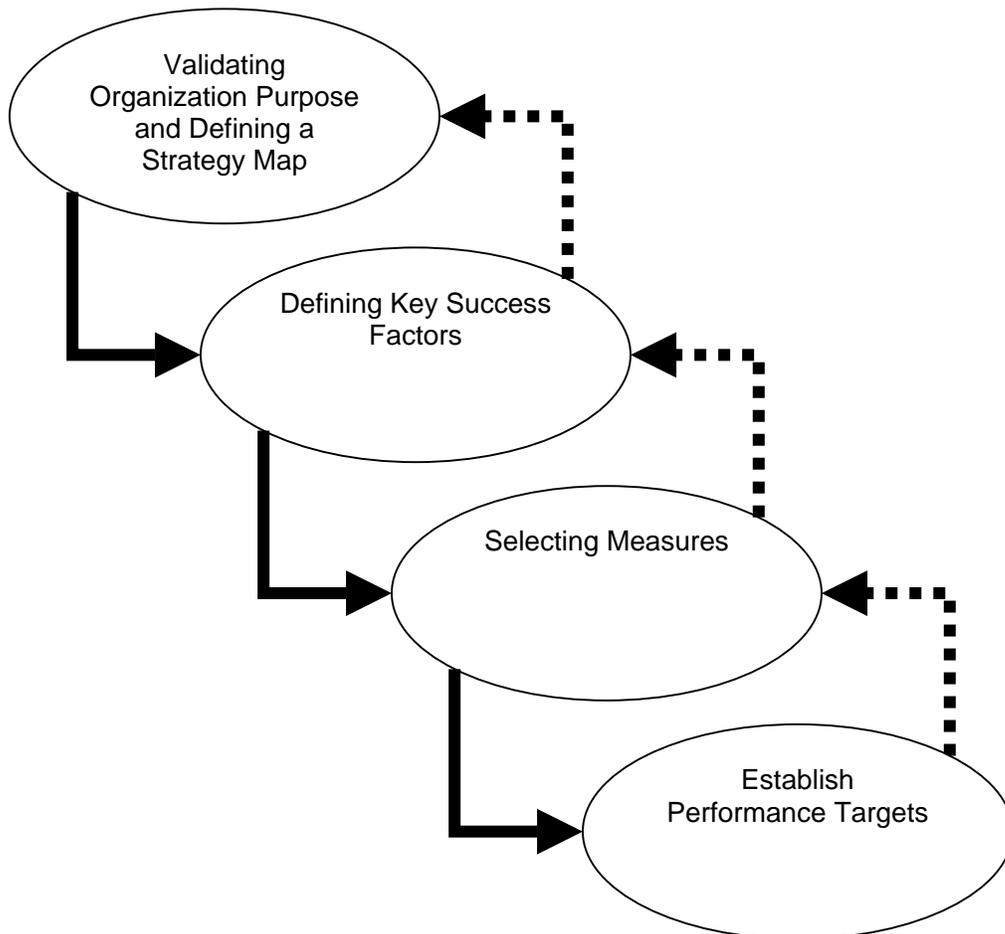
Figure 31: BSC Building Process Chart

To conclude this point, the results of the previous four steps of the proposed process to

develop a balanced scorecard for incubators can be exemplified as shown in figure 32 and table

6. They could be a deliverable, strategic map and balanced scorecard, for a given incubator. The

included values and numbers in the table are examples and included for representation purposes.
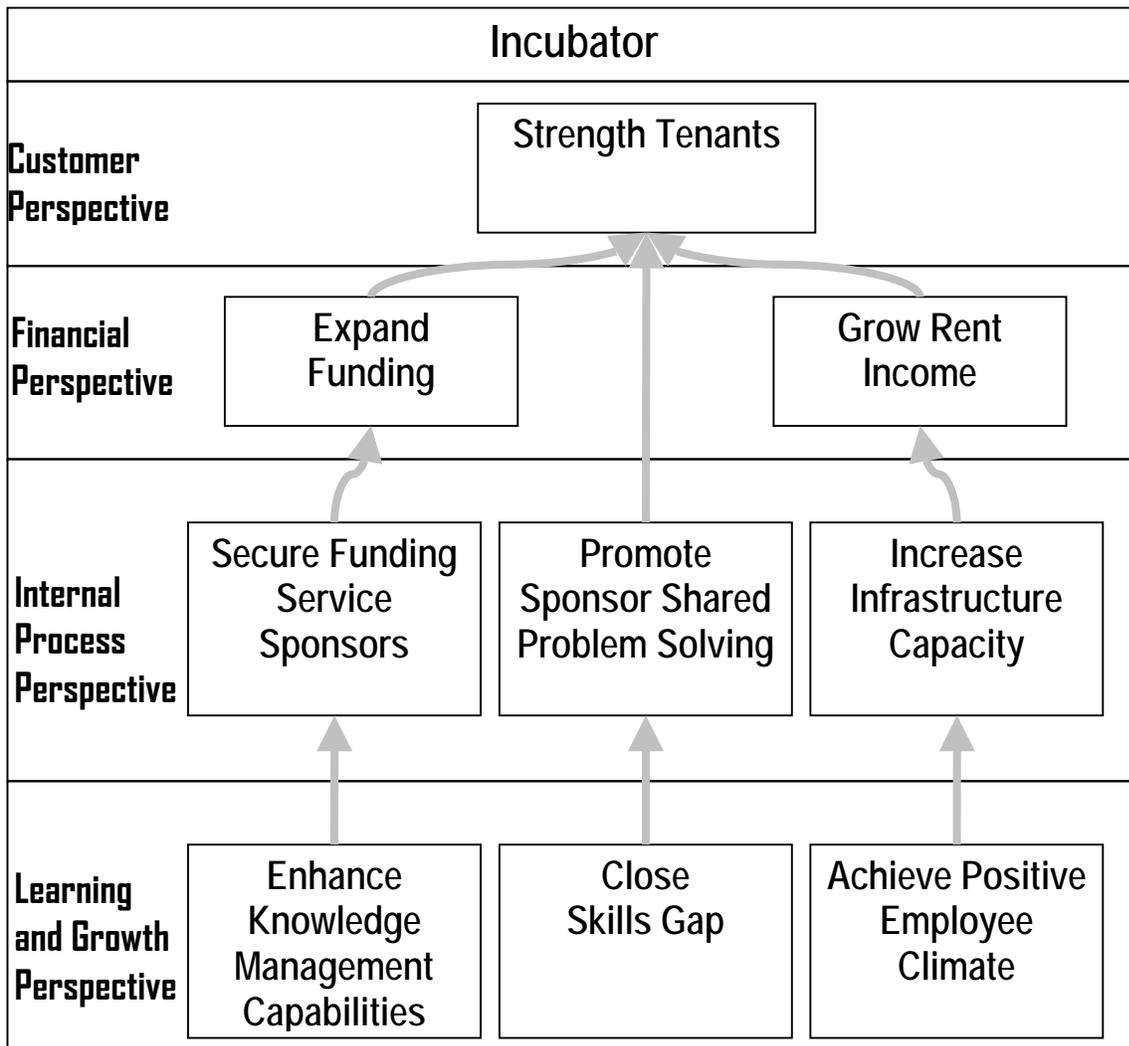
Figure 32: Illustrative Example of an Incubator's Strategy Map.

Table 6

Illustrative Example of an Incubator's BSC.

Perspective	KSFs	Measures	Possible targets for an incubator
Blended (Financial & Customer)	• Improve incubator performance	New ventures/Graduates (vs. plan) [Lag measure]	=1
	• Increase customer satisfaction	Satisfaction survey [lead measure]	+ 5% (increase) in next year
Internal	• Minimize operational problems	Request fulfillment time [Lag measure]	- 5% in next year
	• Understand our customers	Hours with customers finding needs [Lead measure]	+ 10% in next year
Learning and Growth	• Develop customer database	% of customers with key attributes defined [Lag measure]	95% of total customers

CHAPTER 6: SUMMARY AND CONCLUSIONS

Conclusions and Directions for Future Research

This conceptual discussion addresses some specifics pertaining to the incubators in Florida. To this end, this paper researched the balanced scorecard from a smaller organization perspective. This model is then proposed as a viable template for the design of a performance management system for incubators where the degree of managerial complexity and the prospects for changes are high, i.e., incubators that had not effectively articulated their strategy, had unclear drivers of success, and need to dramatically change their processes, systems, and structures. For these institutions, the BSC may play a pivotal role in helping management to coordinate its efforts in implementing strategy, supporting innovation, and nurturing its relationships with key external parties, all of which will have a direct attitude on the long-term viability of the incubator.

No one of the studied incubators used the balanced scorecard as management or measurement system. Also, there were no incubators that take the time to attach measures of success to internal measures. With the BSC model these measures will be taken into consideration. Considering the different areas of the scorecard, incubators do have a clear understanding of what their purpose is and has defined what strategy to follow in their business plans. This is a very good starting point to build a scorecard in their organizations. However, there is not much clarity on what are their success factors, moreover they completely lack of internal success factors; all factors considered are externals. Moreover, there is no use of internal measures, such as leading operational measures that may help the organization to react faster to

negative events. Therefore, operational targets are not present and their only operational measures and targets present are those informally present in task achievement.

Supplementary research is needed to test the BSC framework from the perspective of the incubators. One of the incubator's directors said this model could be applied. The next step will be to find an incubator to do it. Case examples would be most helpful in improving our understanding of the type of organizational setting in which this model is being used and to what extent the BSC needs to be worked down to its essential elements to meet the needs of Business Incubators. Additional research is needed to evaluate the relative merits of other mechanisms for integrating key processes, allocating resources, and so on. Perhaps the same (or better) results could be obtained with other performance metrics.

Benefits of Using a BSC

The potential benefits associated with applying the BSC model to incubators will be addressed in the next paragraphs.

In light of the challenge that characterized the fulfillment of the purposes of the incubators; organizational adaptability and continuous innovation were more than just rhetorical concepts for debate among academics and incubator's advisors. These were critical success factors, for which technological advances or new forms of competition were the order of the day. The BSC may create significant advantages, helping the incubators maintain competitiveness and to be the choice for start-up companies.

The incubators, as described in this paper, must deal with such issues as communications and information systems, customer service protocols, investors and lender relationships. In addition, incubators had a typical structure arrangement around teamwork and self-management.

Hence, the measurement of Learning and Growth is of utmost importance as the incubators rely more and more on employee judgment, proactivity, and creativity. In this way, the BSC framework helps to create more open communication and employee empowerment.

In addition, the broad participation in target-setting (and assigning responsibility) that was embodied in this system will help to cultivate a business environment in which employees rely less on the incubator's director or manager to solve problems.
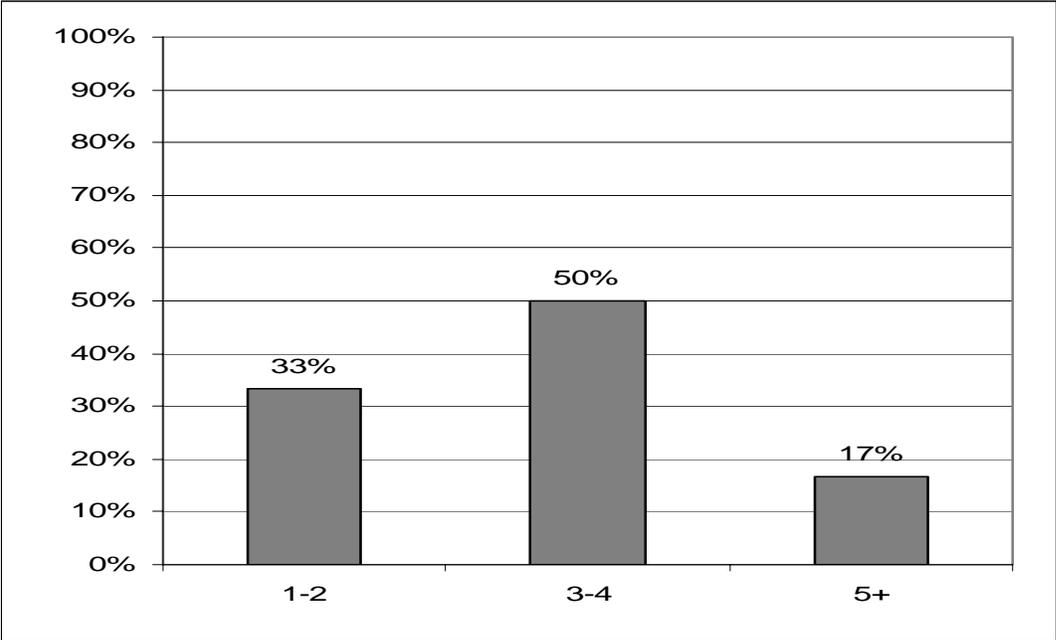
For most incubators, achieving their strategic goals will require the development of new products or services, additional capabilities (e.g. employee training) and/or the ability to respond to new constituencies. A major concern was that in taking on a new performance management initiative, some employees will have an inclination to become excessively "process oriented." The BSC system may mitigate this tendency. The scorecard will focus attention on innovation and continuous training for more complex tasks. At the same time, employees will readily see how their activities contribute to the institution's strategic goals.

During periods of accelerated growth key internal processes and/or employee skill base may prove to be inadequate, and failure to plan ahead and monitor leading outcomes can result in morale problems or a breakdown in quality service standards. To guide the operation through such periods, managers are often unable to determine what organizational elements to change, how to modify them or how quickly to do so (Slevin and Covin, 1997). A functioning BSC would help ease such problems by ensuring that the incubator's capabilities will be one step closer to accommodating new opportunities, in this manner avoiding prolonged transition periods.
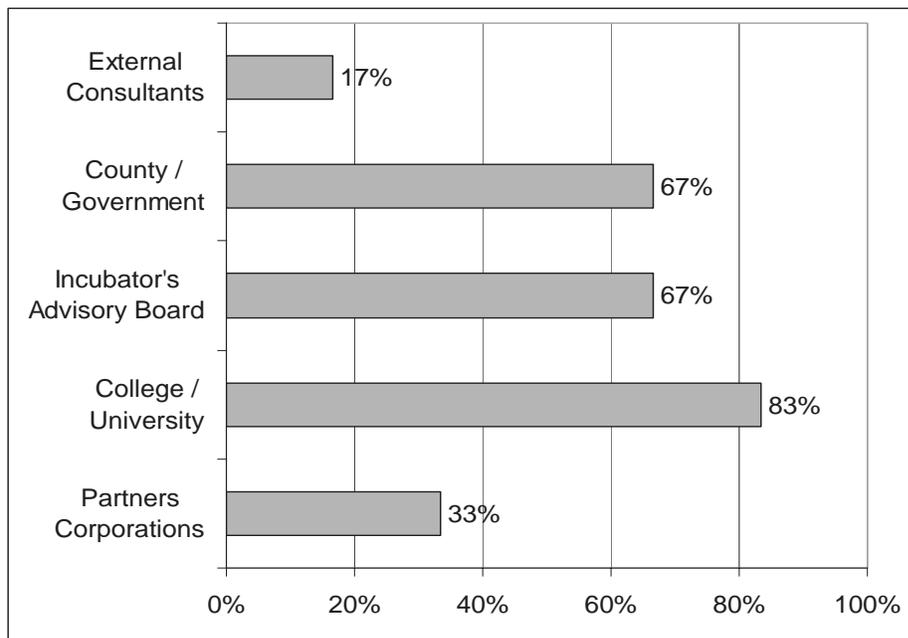
APPENDIX A
INTERVIEW ANSWERS

	1. How many employees work in your incubator?
Interview 1	Six
Interview 2	Two and a part time, nobody works full time because the majority of business we do is to tie to the small Business Development Center at SCC. That is one funding mechanism and in this way the help we provide is not all located only to the incubator; our efforts are divided.
Interview 3	Three and a part time
Interview 4	Two
Interview 5	Three
Interview 6	Two

Range (# of employees)   # of
                                                       Incubators
1-2   2

3-4   3

5+   1

       Average   **3.2**   Employees

	2. Who defined the statements of Vision and Mission for the incubator?
Interview 1	I have to start it but I didn't do it exactly. I had something in mind and I received input from a group of: Orange County representatives, partner's corporations, clients, Dean of College of Engineering, probably 8 to 9 people and running through the Incubator Advisory Board.
Interview 2	Original business plan, the college in conjunction with Seminole County, Seminole Port Authority. We put together a business plan that outlines mission and vision of the incubator.
Interview 3	It was defined in '95; however, our main sponsor, UF Research Foundation, was involved in the definition.
Interview 4	Myself and an advisory group: a CPA, a City of Gainesville representative, Senior entrepreneur (somebody that has experience in our business), investor capitalists, a Bank, CBA, other incubator manager, representative from the UF, representative of the University of North Florida, one attorney.
Interview 5	Myself and city council
Interview 6	Advisory board, UCF business incubator

	# of Incubators	Frequencies
Partners Corporations	2	**33%**
College / University	5	**83%**
Incubator's Advisory Board	4	**67%**
County / Government	4	**67%**
External Consultants	1	**17%**

	3. Did you do a SWOT analysis of your incubator?
Interview 1	NO
Interview 2	We did it at the time we did the business plan.
Interview 3	NO, a formal… Certain issues get discuss to time to time…we did some when we did our business plan.
Interview 4	Yes, we did, with the Advisory Group…
Interview 5	Yes, two years ago by myself
Interview 6	yes, informal

	# of Incubators	%
Yes	2	**33%**
NO	2	**33%**
Yes, Informal	2	**33%**
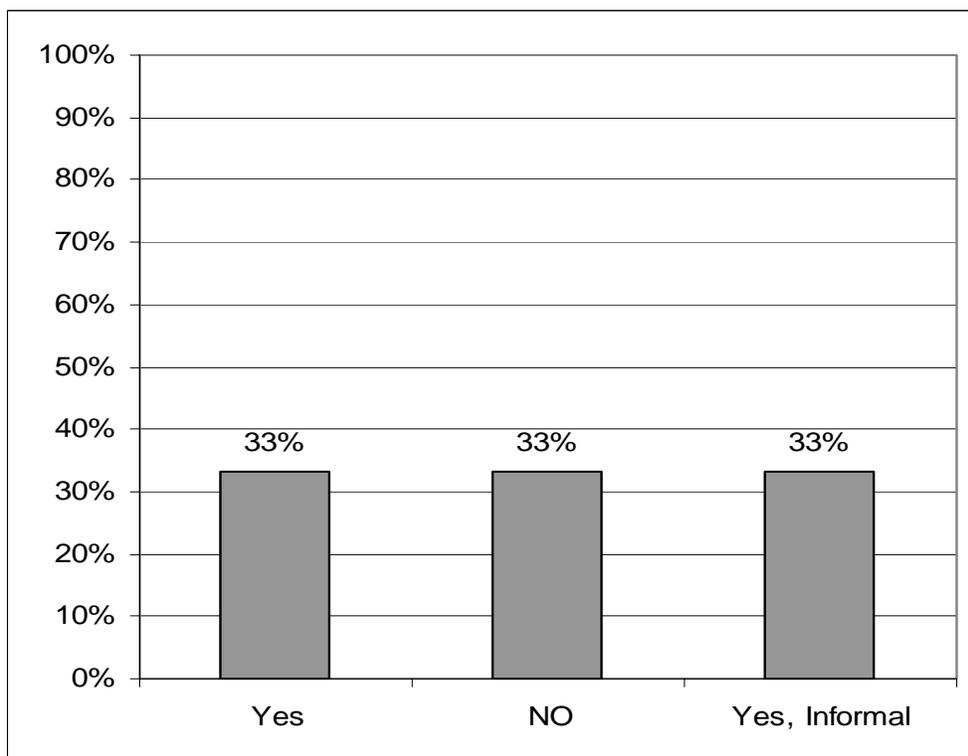
	4. How does your Incubator define its value proposition?
Interview 1	Creating successful high growth companies. Creating a high bunch of added value jobs.
Interview 2	We tell people that we have an environment that is surrounded by people in similar circumstances, our location receives a huge amount of traffic internationally, access to our staff (open door policy) we bring instantaneous services.
Interview 3	State of the art biotech facilities – it will include scientific equipment and business support services
Interview 4	Here we have an entrepreneurial ecosystem. A full network of people, which assists businesses in our facilities. Businesses that helps one to another plus the interaction with us.
Interview 5	This was a warehouse where local people were stack. What we are looking for is to build a place where people can came in with a rather low overhead cost for and startup business and a lot of one on one assistance that the tenant will not get if they were on their on.
Interview 6	It is to assist the technical transfer from university to companies, (to match communities needs)

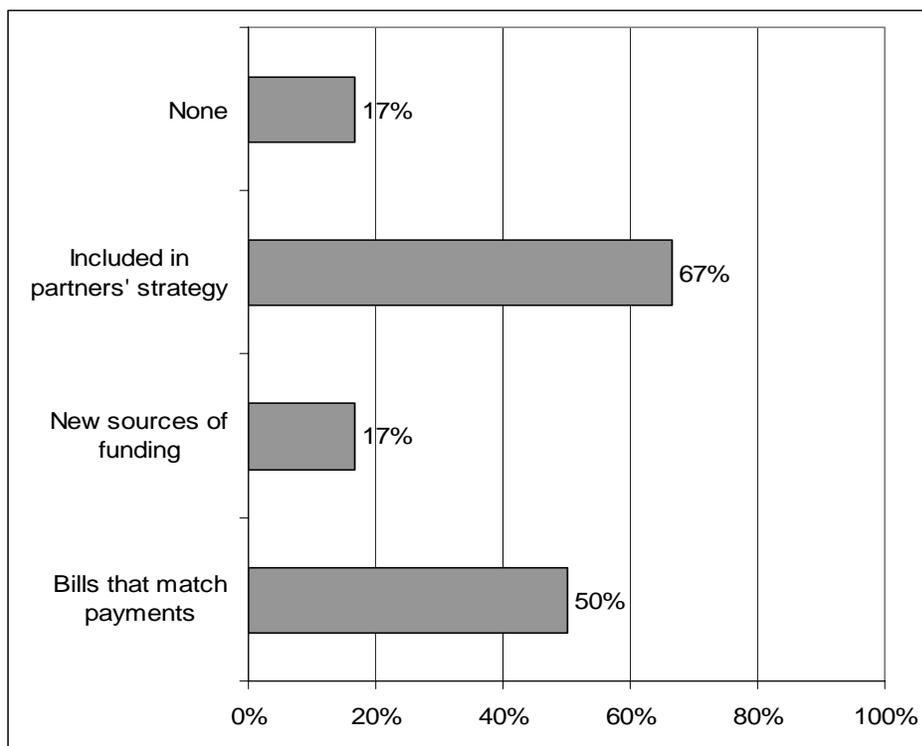|	# of Incubators	Frequencies
Provide state of the art facilities	1	**17%**
Create successful high growth companies	1	**17%**
Create high number of jobs	1	**17%**
Business assistance	5	**83%**
Entrepreneurial environment	2	**33%**

	5. What financial measures are considered in your incubator, especially those related to growth and productivity?
Interview 1	The only financial consideration is to pay the bills. Once a year, a budget and a monthly cash flow. We are too young and trying to balance how to serve our 15 clients. We measure the finance for our clients if they can pay the rent. We provide assistance to companies. We help to figure out what their needs are and try to satisfy them. We provide this help at least once a month.
Interview 2	Annual budget and plan of funding: We are the business agent of the Community College and depend from their outside partners and the College is the fiscal agent.
Interview 3	Amount of private investment in our incubating companies and graduated companies, the amount of awards received, and job creation. Budget, track cash flow and inner reserve balance. We are subsidized but the operation operates in the black and our reserves increase every year (we have profit).
Interview 4	Budget, (240K) we primarily relay in rent income, approximately 90% to breakeven… We do cash flow and P&L… The state does them for us.
Interview 5	We do a touch base measurement with tenants. And go to all their financial information: sales vs. plan, expenses, Net operating income, capital investments, then we have a sense of where they are going and they we have a sense of when we will have vacancies. We check the budget in our business plan.
Interview 6	At this moment we are thinking in 1: how we build up, our new facilities, and 2: how we retain what we have. IS to find the financial resources to be able to operate the incubator and remain within budget.
	# of Incubators	Frequencies
Budget	5	**83%**
Cash Flow	1	**17%**
Capability to pay bills	1	**17%**
Capability of tenants to pay rent	2	**33%**
Plan Funding	1	**17%**
Amount of money awards received	1	**17%**
P & L	2	**33%**

	6. What is the current financial strategy followed by your incubator? Why?
Interview 1	Our strategy is to get bills that match the rent residents pay for. Because with this strategy we can stay a long term rather that had been depending on government budget. We can always maintain ourselves if we can collect the rent that pays our bills. We always are looking for new sources of funding, every time we write a proposal we include money for the incubator on it. We also try to include commercialization and overall requirements for the incubator's in the overall strategy of the University.
Interview 2	Is to get close to the partners that are committed to the development of the incubator's effort. We start the incubator in response of the request of the county to coming and administer an incubator project.
Interview 3	We used to be a subsidized operation, our revenue come for two sources: small line item in the state budget and fees we collect for the companies in our building for space. We follow this strategy because the nature of our business, we can not survive just being subsidized.
Interview 4	The City of Gainesville provided the first 2 years of operating expenses, money for operations and repair expenses. The idea is to use their funding until we can sustain ourselves. The building is free; then, we just need money for operations, and secure repairs and new capital for investments. Where is looking to a sustainable model for certain issues: building equity now that we have a proven track record, we do not take any equity position until now. The biotech incubator that is run for the university does. Therefore, we are looking for attract business in our facilities that help us. And we expect to show equity of 1 or 2 % in the next two years.
Interview 5	Look what we can do to maximize the use of the property. We have a master plan for complete utilization of our facilities and new facilities. Our incubator is a service and light industrial incubator.

Interview 6	Continue to provide services to the existing incubating companies and expand to the new level (3 more companies) and provide the services and the space in the new building at the end of the year.

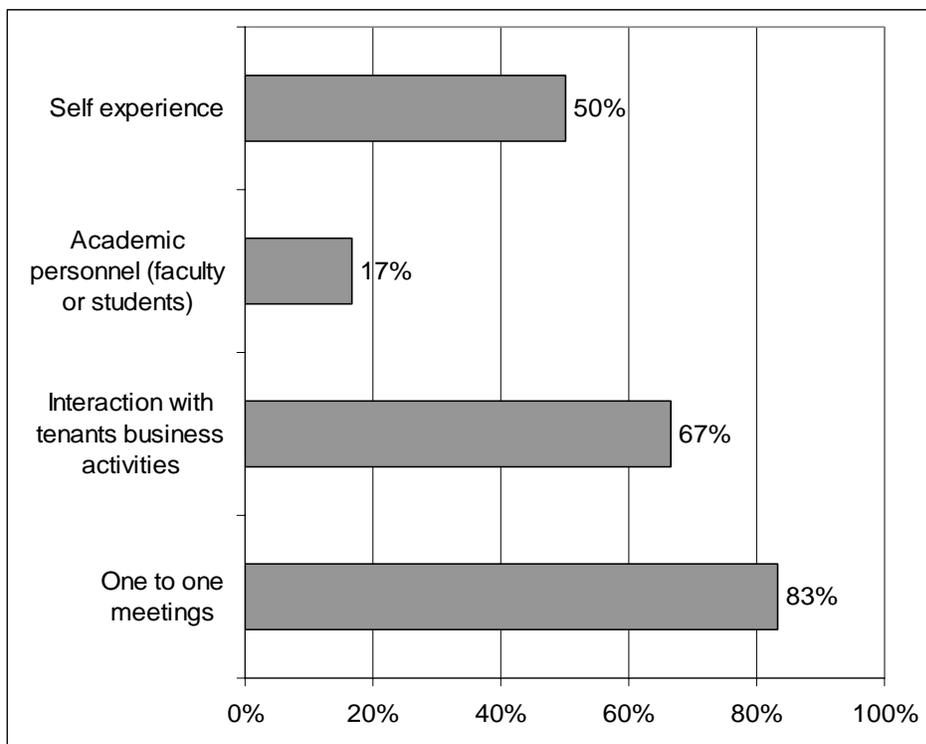| Bills that match payments	# of Incubators	Frequencies
		50%
New sources of funding	3	
		17%
Included in partners' strategy	1	
		67%
None	4	
		17%
	1	

	7. Could you tell what are the needs and preferences of your clients? (clients: current residents and/or prospects)
Interview 1	They want to be profitable, generate enough revenue to at least pay their bills; they want us to provide the contact for funding (investors) and for sale activities.
Interview 2	Client are a hands on approach, develop personal relationship with clients.
Interview 3	They want to be in the building and they need to renew each year, primary we have web lab space that it is almost impossible to find in the Gainesville area outside of the university.
Interview 4	Yes. Basically they are looking for money and also we help them in management.
Interview 5	Come of a result of our keeping in touch. Quarterly tenants meetings we have. They have specific needs like workshops and facilities space.

Interview 6	They need to strength their business plan, management team, and probably funding

	# of Incubators	Frequencies
Be profitable	1	**17%**
Contacts for funding	2	**33%**
Contacts for sale activities	1	**17%**
Facilities	1	**17%**
Help in management	2	**33%**
Personal contact	2	**33%**
Business plan	1	**17%**
Workshops	1	**17%**

Workshops	17%
Business Plan	17%
Personal Contact	33%
Help in management	33%
Facilities	17%
Contacts for sale activities	17%
Contacts for funding	33%
Be profitable	17%

0%   20%   40%   60%   80%   100%

	8. Are you using any tools to know clients' needs and preferences?
Interview 1	Resources like accountants or other consultants, getting in their business plans and financial statements and talking to them. Basically, interviewing them based on our experience.
Interview 2	We respond to client requests, personal contact.

Interview 3	Our pipeline comes from the University of Florida, we have a captive audience, we assess them when we meet with them at the university and see if they are good for the incubator.
Interview 4	Constant interaction with the businesses and experience in the industry for 15 years and using a model that is defined in the industry as services offered. Basically is what is defined in the business plan.
Interview 5	They expressed directly what they feel they need. Others things they need but they do not know they need is provided by the one that is in this chair.
Interview 6	One on one meeting, mentors that help the companies and faculty and students that also help the companies.

	# of Incubators	Frequencies
One to one meetings	5	**83%**
Interaction with tenants business activities	4	**67%**
Academic personnel (faculty or students)	1	**17%**
Self experience	3	**50%**

	9. Do you work with and specific customer segment?
Interview 1	Not specifically, simulation, engineering, not oriented to any segment just we have this kind of companies that match the current expertise with UCF.
Interview 2	We consider a single sector, the biotech.

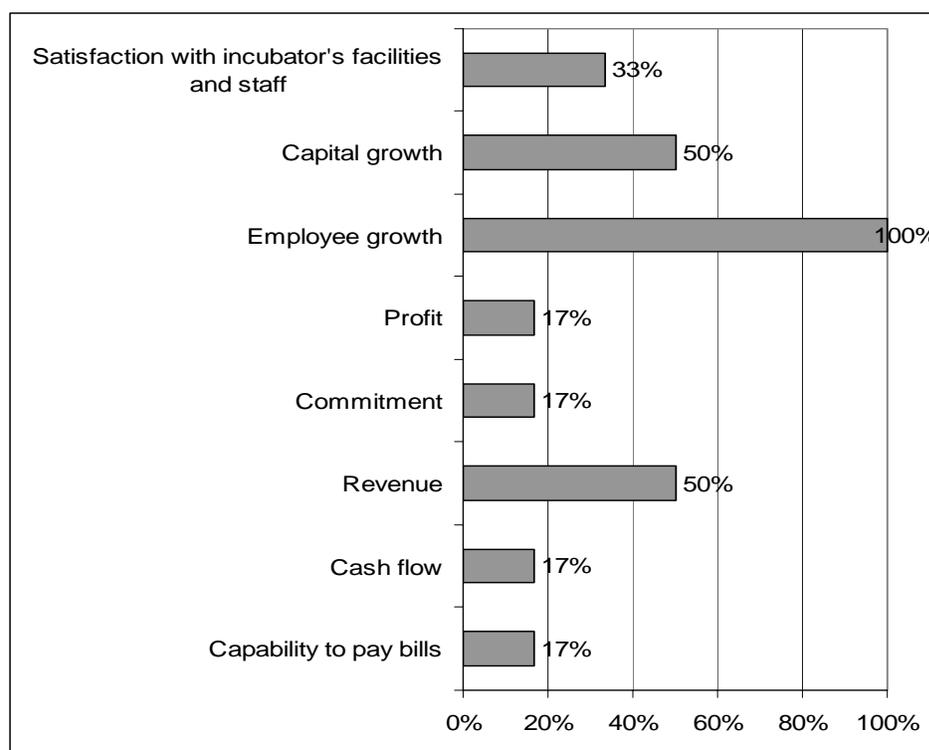|	
Interview 3	Yes, there is a study done for a firm with base in Atlanta, they identified medical devices, telecommunications, and electronic devices, and biotechnology (but we do not focus in this area, there is other incubator that does that in the area).
Interview 5	Tenants have to be in light industrial or services.
Interview 6	Yes, we are very focus on the biological sciences, biotech, and information communications.

	# of Incubators	%
Yes	4	**80%**
No	1	**20%**

	10. How do you measure the impact of the Incubator over your clients?
Interview 1	We measured if they are doing well, check their policy and if they can pay their bills, we stop by and see how they are doing. We check revenue and cash flows. Measure commitment and financial staff. Leading measures: cash flow and lagging, profit. Also our technology is leading and customers and sales are lagging, manufacturing capability as lagging, cash is always lagging, and we focused more into measure that. It is a difficult balance not to growth to fast to go out of business and how to manage growth.
Interview 2	Sales growth, employment of more people, occupied commercial real state, growth of capital. In 1 to 3 years.
Interview 3	With the success of our companies, we will like to add market cap, beginning to track patterns, probably an issue. Satisfaction with the incubator facilities and staff. And with the ones in our installations, walk to their offices and talk to them. We will use our new web base software to do this.

Interview 4	Every quarter in term of # of employees, sales, dollar attracted and the number of milestones they reach according to their business plan. We measure customer satisfaction in monthly bases, we send out and ask the top 3 needs to get some ideas of what they needs are and whether we are meeting them, and a quarterly we ask what can be we doing to improve our value to you?
Interview 5	By seen how many graduates we have. (how much they growth)
Interview 6	We do not have any measure tools in place. However, we do sit down with tenants and check how well they are meeting they benchmark.

	# of Incubators	Frequencies
Capability to pay bills	1	**17%**
Cash flow	1	**17%**
Revenue	3	**50%**
Commitment	1	**17%**
Profit	1	**17%**
Employee growth	6	**100%**
Capital growth	3	**50%**
Satisfaction with incubator's facilities and staff	2	**33%**

	11. How do you contact your clients?

Interview 1	We do not contact them they find us. We do marketing and networking, we send our bulletin and newsletter, and, also, we try to get interviews in newspaper and related media about what we are doing.
Interview 2	Direct mail, education programs, seminars, web site. Marketing on campus to recruit entrepreneurs. Participate in a counsel of campus to provide information for faculty that requires information for entrepreneurs. In fact we do not need to market, or recruit customers they come us. Companies are required to have an association with UFL to be in our facilities and most of our companies come through the university. Therefore there is a limit of the effect of marketing because there is just a certain limit of faculty or professors that need to be considered and basically the pipeline develops on campus. The office technology that is on campus does the job to recruit companies and that is pretty much all done on campus.
Interview 3	By walking around, and if somebody come like a chamber of commerce we contact them by e-mail. Formally we contact our clients every 2 weeks, informally constantly. For external we use the UFL they send to us every entrepreneur that come to the UFL. Secondary is the entrepreneurial training that we provide, generally through the chamber of commerce we marketing the programs. Finally we connect to potential clients through CPA, law firms, and Banks.
Interview 5	Speaking around town in various clubs. Promotion of the place and marketing did not do a good job. Therefore we focalize in the speeches.
Interview 6	basically we meet demand from university

	# of Incubators	Frequencies
They find us	4	**67%**
Networking	2	**33%**
Newsletter	1	**17%**
Bulletin	1	**17%**
Media	1	**17%**
Direct mail	1	**17%**
Education programs	4	**67%**
Web site	1	**17%**
Seminars	1	**17%**
Chamber of commerce	4	**67%**

	12. How do you define productivity in your incubator?
Interview 1	Number of new jobs created, increased level. I will measure with how well the companies are doing.
Interview 2	Measure clients contacts and outcomes: sales of clients and economic indicator of the success of the business they are incubating, do they start the business, sales they have, changes on capital positions, they review cash flow if they are ask to but they review just gross sales
Interview 3	Probably not in the sense your are looking for, but we look at it in terms of the progress of our companies toward commercializing of their products, whether it be increase investment, progress in clinical trials, or corporate relationships that they are forming with pharmaceutical companies or biotech companies, strategic alliances.
Interview 4	Reach the goals I have. 1. Entrepreneurial series do it in one year; 2.graduates a year; 3. Add 12 additional resources values to the businesses for a year; 4. At least 4 seminars or workshops per year as part of the entrepreneurial series; 5. Attract 6 new businesses per year; 6. Visit 6 universities or colleges per year; 7. Visit 10 corporate business to see if they need technologies we could fulfill in next business; 8. Provide CPA; 9. Maintain the retention rate we have in the business.
Interview 5	We don't. Probably if we growth we will need more people but the staff will not growth as fast at tenants. We have 17 tenants.
Interview 6	no defined

Number of jobs created by tenants	# of Incubators	Frequencies
	1	**17%**

119

Tenants contacts and outcomes	2	**33%**
Tenants sales	2	**33%**
Tenants capital growth	2	**33%**

	13. Could you articulate the desired balance between growth and productivity in your incubator?
Interview 1	That what we are right now. I think there is not a point from where the Incubator is balance; you are always looking at it. We don't know if we are balanced.
Interview 2	Goal is to be 95% full; we can hold 45 companies total and currently we have 27. That is on both incubating programs, Technology side we can hold around 20 companies. 400 total clients, but in are just a portion of that. They run in a small budget.
Interview 3	Consider we have been a relatively full incubator and progress toward the market place. 15 companies that will be full capacity, we have 19 web-labs. Probably we will run out of space and we are looking for possible expanded. I do not feel is adequate 3.5 people to handle those 15 companies, I feel probably we need 4.5 people.
Interview 4	12 business max 15 companies per 2.5 employees
Interview 5	For us reaching occupancy level percentages and workshops and people who attend workshops and the number of graduates. Also, people that we need to remove because they will not succeed in their ventures.
Interview 6	Seven companies can be handled by one full; time incubator's employee.

	# of Incubators	%
Don't know	2	**33%**
1 incubator's employee per 4-6 companies	3	**50%**
1 incubator's employee per 2-3 companies	1	**17%**

	14.1 What are the objectives and measures of your internal business processes?
Interview 1	We are not very organized, we measure things but I am not sure we get all. Basically we try to make sure everybody does what is expected to do. We measure our progress toward our 5 years goals. We meet at least once every six months to check how we are doing with that.
Interview 2	We have goals to meet every year as part of our contractual; we need to create 15 new business per year and 50 employees.
Interview 3	We do not have this kind of measures.
Interview 4	we do not track them
Interview 5	Cost performance imposed by the director of the incubator. City just wants us below budget.
Interview 6	We do not use...

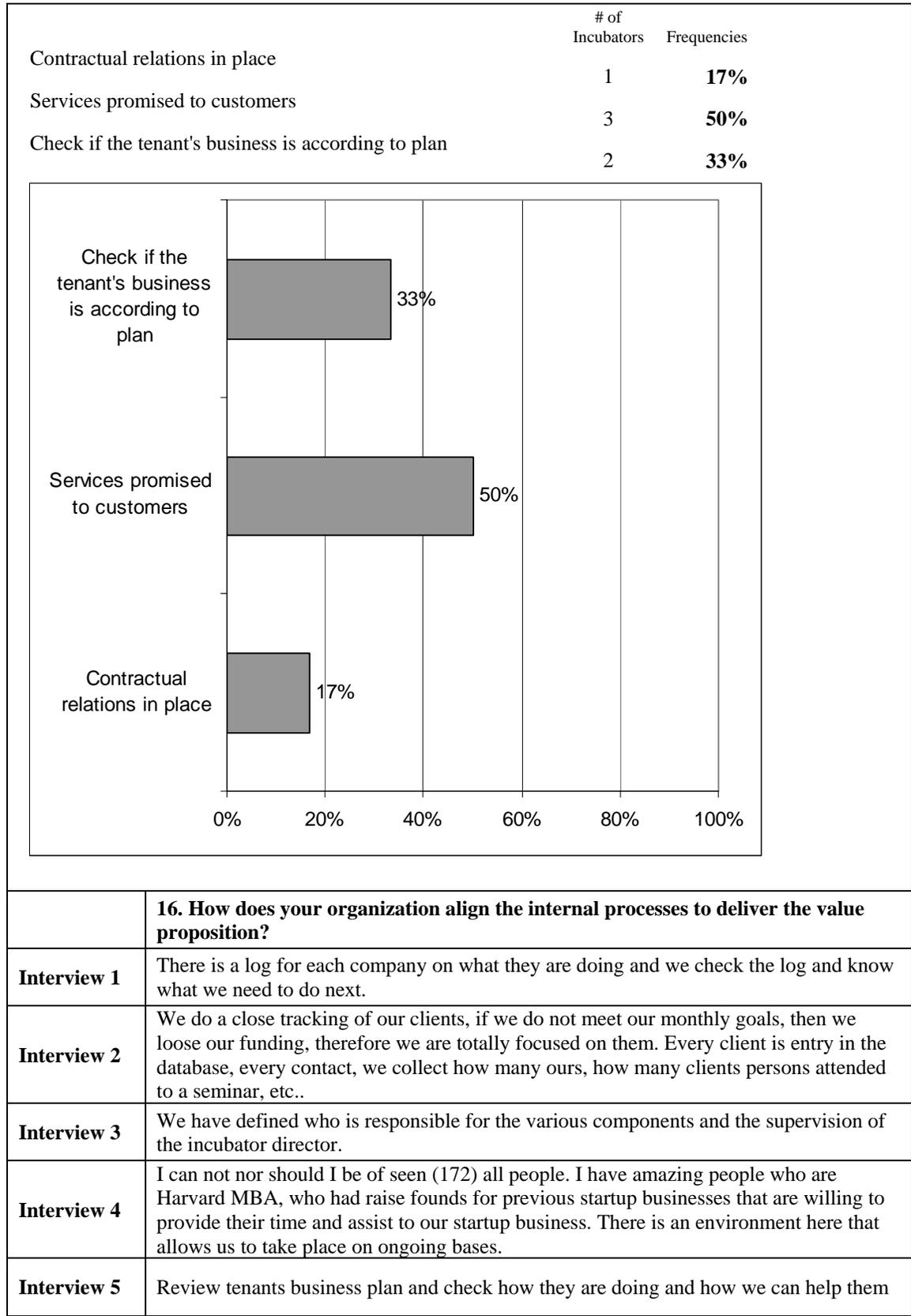|	# of Incubators	%
Business plan goals	3	**50%**
Don't have	3	**50%**

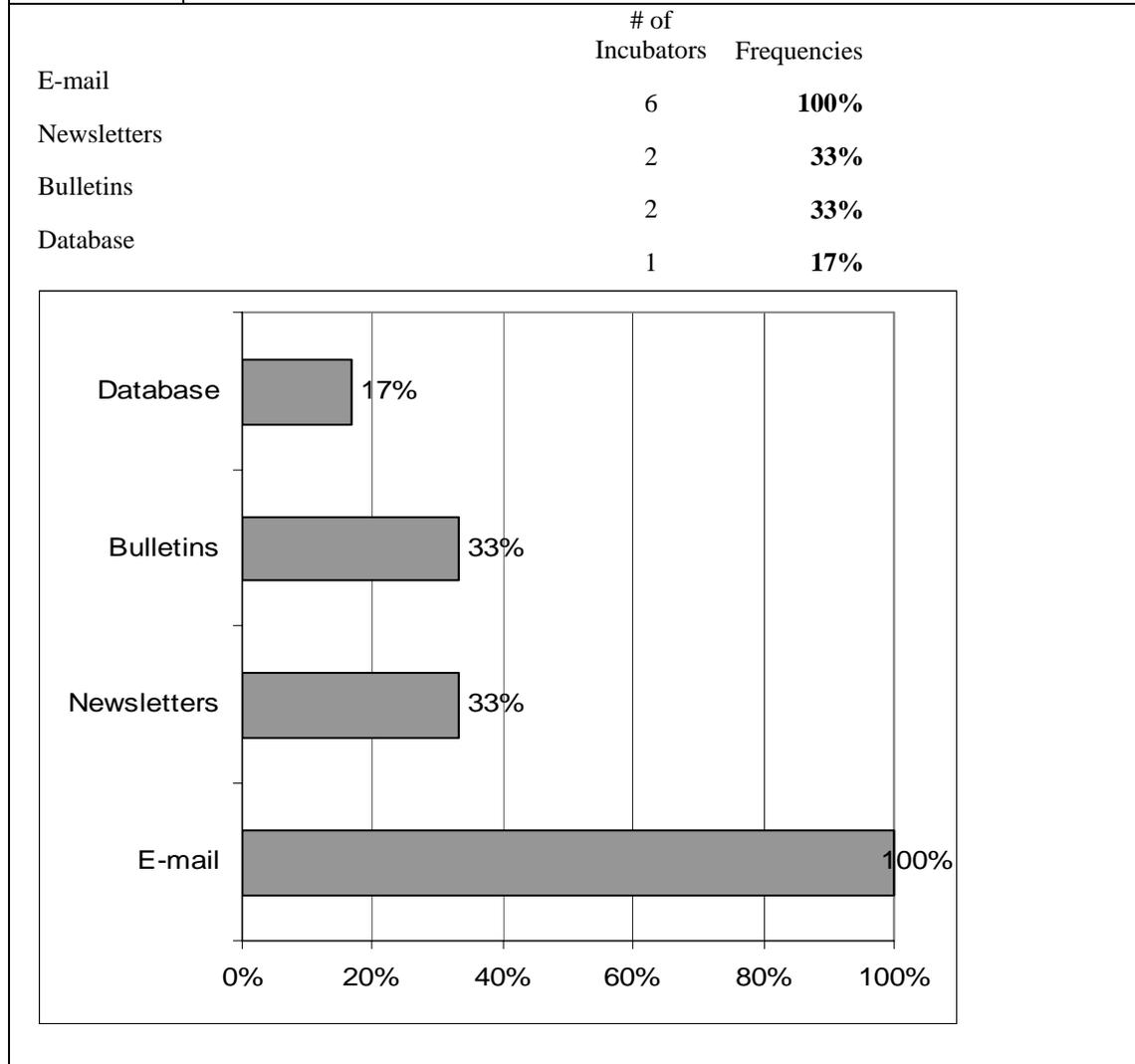|	14.2 How does your incubator define these objectives and measures? (Productivity, cost, quality, etc.)
Interview 1	We meet and spend the all day setting them. One of goals is to have a building paid for, other goal is to hire high quality staff, other goal is to increase our company base from 1 to 5 and we certainly pass that. One goal was to create and incubator that spun off from the university. Try to be with enough money to do our job, we try to do efficient thing to do staff that matter and we measure the quality we provide if the company is successful. We define goals from our business plan.
Interview 2	Setup by the sponsors and the incubators personnel.
Interview 3	We don't.
Interview 4	Those, I think, were key to maintain a healthy program. I develop those by main own and the advisory approved, and we review them in every meeting. Every month check balanced sheet and cash flows and check how we are doing.
Interview 5	Defined by myself considering city situation.
Interview 6	Myself and through experience

	# of Incubators	%
Internal strategic meetings	2	**33%**
Sponsor setup	1	**17%**
Incubator's manager setup	3	**50%**

	15. Could you identify the critical internal processes needed to deliver your value proposition?
Interview 1	Not really, there are many different internal processes that vary according to each client. Some could be provide finance advice, strategy and tactical advice, as well as follow – up during the execution of the business plans of each company
Interview 2	I can't. Most of our clients come from recommendation from recommendations from existing clients. We obviously are meeting client needs and wants if they are recommending us to others.
Interview 3	We at the minimum need to make sure all of our contractual relationship are in place, not only initial contract but annual renewal, insurance and complains with regulation to run the laboratories. We provide library services, and external service providers that we introduce to the companies.
Interview 4	According to a study of the NBIA, provide service to your residents running your incubator as a business itself. Providing the services they want or need, provide direct links to venture funding, make sure they businesses plan are well done and somebody will want to invest on it.
Interview 5	The most critical process is working with a potential tenant in a construction of their business plan. If tenants are meeting their business plan goals..
Interview 6	Don't know

	# of Incubators	Frequencies
Contractual relations in place	1	**17%**
Services promised to customers	3	**50%**
Check if the tenant's business is according to plan	2	**33%**

	16. How does your organization align the internal processes to deliver the value proposition?
Interview 1	There is a log for each company on what they are doing and we check the log and know what we need to do next.
Interview 2	We do a close tracking of our clients, if we do not meet our monthly goals, then we loose our funding, therefore we are totally focused on them. Every client is entry in the database, every contact, we collect how many ours, how many clients persons attended to a seminar, etc..
Interview 3	We have defined who is responsible for the various components and the supervision of the incubator director.
Interview 4	I can not nor should I be of seen (172) all people. I have amazing people who are Harvard MBA, who had raise founds for previous startup businesses that are willing to provide their time and assist to our startup business. There is an environment here that allows us to take place on ongoing bases.
Interview 5	Review tenants business plan and check how they are doing and how we can help them

Interview 6	Don't

		# of Incubators	%
Proactive		3	**50%**
Reactive		3	**50%**

	17. How does the information flow inside your incubator? (CRM databases, knowledge databases, process documentation, etc.)
Interview 1	E-mail is the main source of flow, we also have newsletter and bulletins that help us communicate with our clients as well as internally. We not have a centralized source for our information, certain records are paper based, other in electronic format, and there is not a predetermined process of filing. Each person knows how to file client's information or the information they need to perform their jobs.
Interview 2	Database, and files, we first filed out in papers and then input in the database, we used papers as backup of the database.
Interview 3	E-mail. Internet. Distribute mail to their mailbox...meetings...website to get info about our customer…and marketing materials that we produce.
Interview 4	We use the knowledge network in the website. We do not provide contact information there, because I try to manage the relationship between the residents and that database, so I know it is properly take of. And also the knowledge network is not getting been not too much with a person with a lot of requests. Most of the information is using e-mail and we have everybody in the address book. There are several ideas but not. We have articles in the chamber of commerce newsletter.
Interview 5	We are three people and is fairly easy, between myself and the staff with e-mail. Also with the city and some tenants we use e-mail. Pretty unsophisticated and not real formal

	means of communications.
Interview 6	E-mail

	# of Incubators	Frequencies
E-mail	6	**100%**
Newsletters	2	**33%**
Bulletins	2	**33%**
Database	1	**17%**

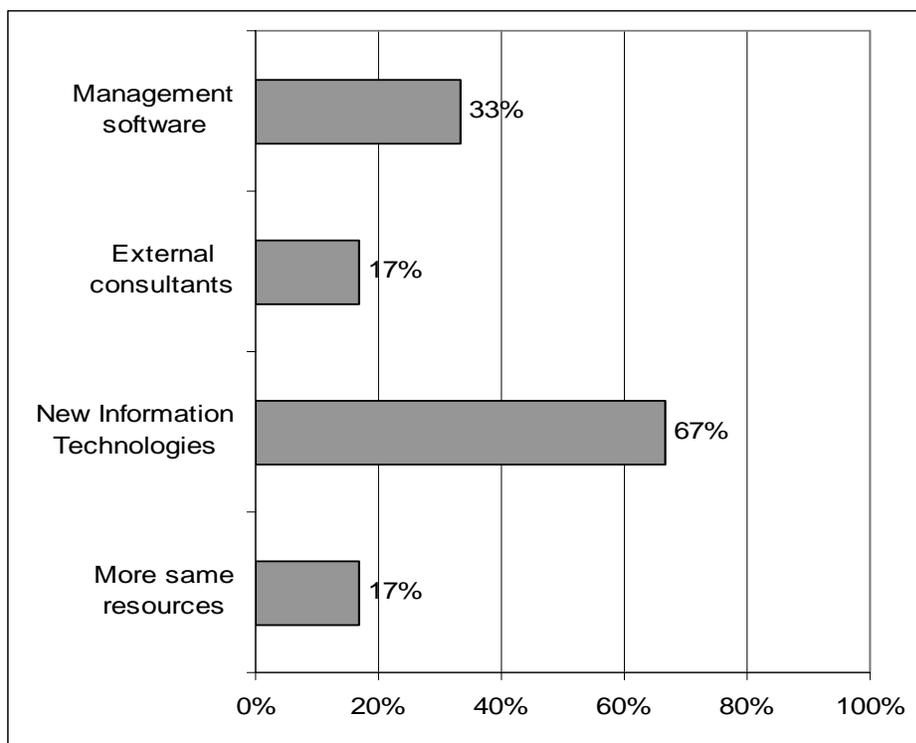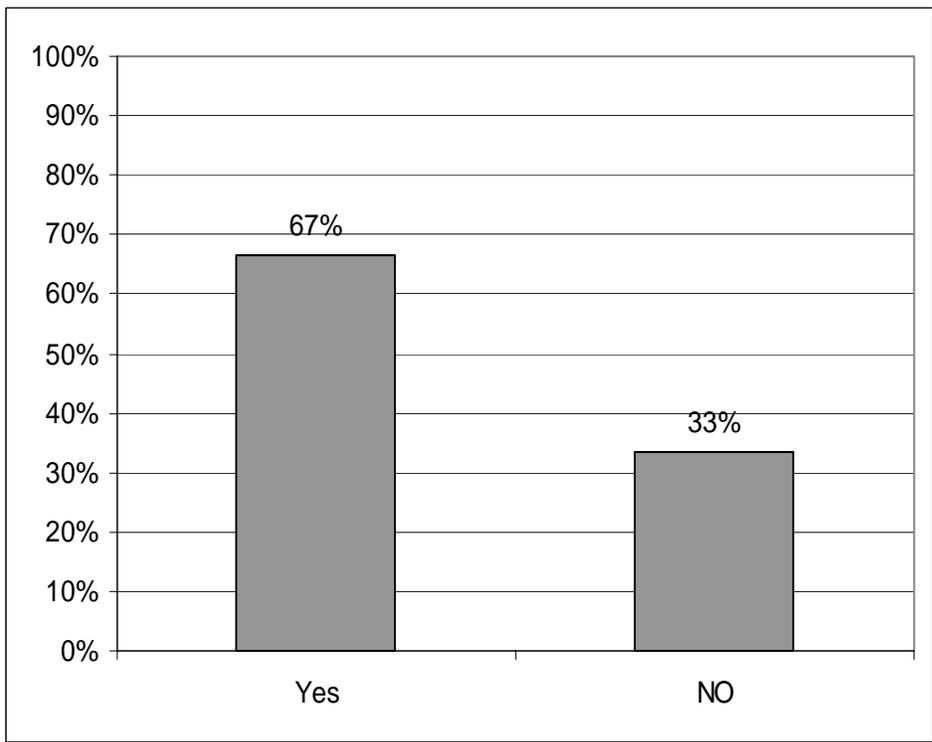|	**18. What other technology is needed to run your incubator?**
Interview 1	For this incubator probably just installations and common office supplies, however other incubators, i.e. related to biotechnology will have different requirement in facilities, such us labs.
Interview 2	Wireless, wife. Technology, plasma screens in conference rooms, mostly related to electronic.
Interview 3	Consultant business advisors that work for us and help our companies..
Interview 4	Internet access, business equipment, lab space, web labs, I like to have a national database to track what is going on in every incubator in the country to improve our operations.

Interview 5	I love to have a computer lab for our tenants to show them what they can do with them, and to show them that computer can be tools. Also, a conference room that allow us to do long distance conferencing and learning.
Interview 6	A CRM and scheduling software tailored for incubators.

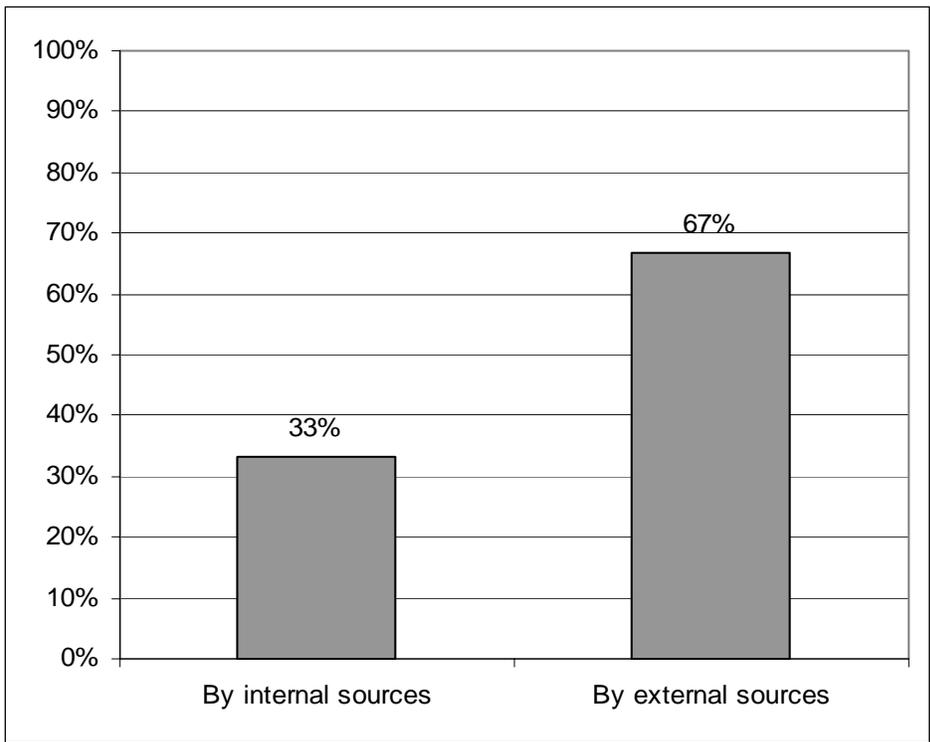|	# of Incubators	Frequencies
More same resources	1	**17%**
New Information Technologies	4	**67%**
External consultants	1	**17%**
Management sofware	2	**33%**

	19. Are the core competences needed to be mastered by your employees documented?
Interview 1	We not have all the competences documented. There are different skills of sets if we need some competence we hire the person.
Interview 2	We currently have documented, and tasks are divided.
Interview 3	We have a job requirements documentation of each position.
Interview 4	The advisory group, the ones that hired me.
Interview 5	Yes

Interview 6	NO

	# of Incubators	%
Yes	2	**33%**
No	4	**67%**

Documentation of Core Functional Competences

	# of Incubators	%
Yes	4	**67%**
NO	2	**33%**

Job Requirement Documentation

	20. What process is followed to determine those competences?
Interview 1	We hire an advisor and define what the competences we need.
Interview 2	We develop with the companies what are the competences and work with an outside consultant what are the competences needed.
Interview 3	When there is a need and nobody can satisfied, also the competences need it are defined by the manager.
Interview 4	Was predefined by the chamber of commerce.
Interview 5	The city provided it. The city provides training.
Interview 6	We defined according to incubators needs

	# of Incubators	%
By internal sources	2	**33%**
By external sources	4	**67%**

	21. How are the competences measured?
Interview 1	We not measure activities we measure accomplishments. We heard our customers in what we are most useful and we try to do that.
Interview 2	We do assessments for the professional background that is need. We do our practices based in our strengths. We have a database where we track our activities with clients; we have a contractual agreement in which 75 % of our time needs to be spending in supporting activities. We also survey the clients. What we call impact (federal form).
Interview 3	Performance review at the end of the year.
Interview 4	The chamber of commerce gives me the position and I never receive a review of my position. Maybe the result I have with the incubator.
Interview 5	We do have an annual performance appraisal that measures our performance.
Interview 6	No

	# of Incubators	%
Yes	2	**33%**
No	4	**67%**

	22. Do you use performance appraisals?
Interview 1	Yes it is more by exception than formalized. Problem or reaction.
Interview 2	Mandated by the college, evaluated every 6 months and in annual bases.
Interview 3	Yes, every year.
Interview 4	No
Interview 5	Yes
Interview 6	No

	# of Incubators	%
Yes	4	**67%**
NO	2	**33%**

	23. Do you have any formal communication system in place?
Interview 1	Newsletter, e-mail newsletter, and a biggest newsletter every quarter, we are in the newspaper at least once a week to communicate what we are doing.
Interview 2	Private site where they get information, internal intranet, e-mail, and their database.
Interview 3	PB: E-mail, website.
Interview 4	E-mail database and the meeting.
Interview 5	Not really, just our website.
Interview 6	E-mail and website

	# of Incubators	Frequencies
E-mail	5	**83%**
Meetings	1	**17%**
Newsletter	1	**17%**
Web	3	**50%**

	24. Currently, on how many goals is your incubator working on?
Interview 1	Six
Interview 2	They work in 3 main goals that are in their currents business plan.
Interview 3	Four goals
Interview 4	Nine
Interview 5	Five
Interview 6	More than nine goals

	# of Incubators	%
1 to 3	1	**17%**
4 to 5	2	**33%**
6 or more	3	**50%**
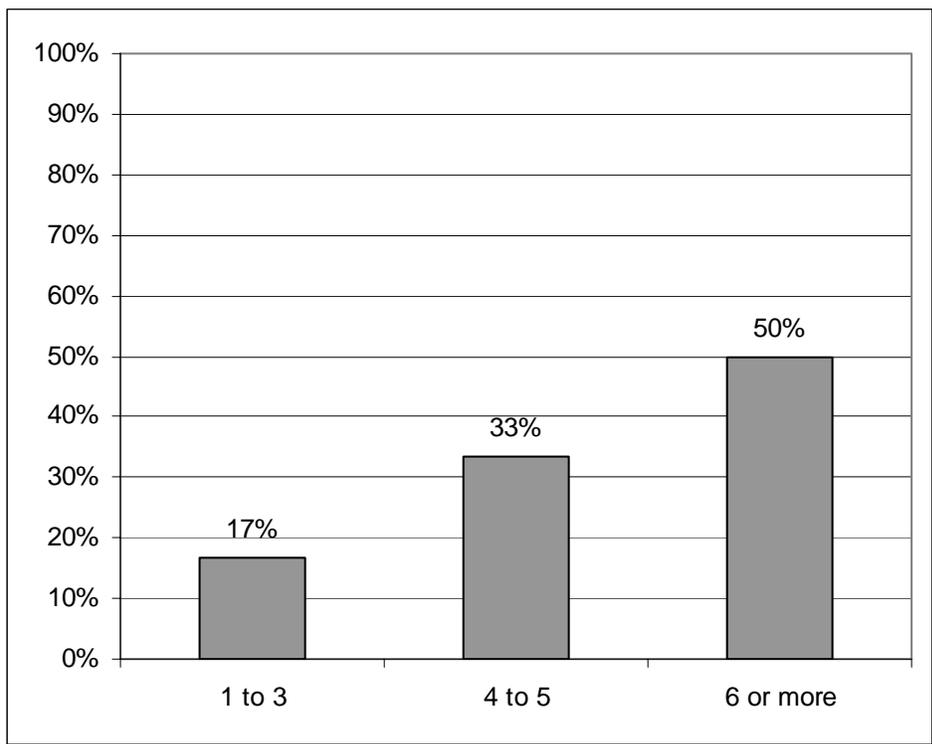
	25. Are there individual goals among the employees?		
Interview 1	We know what every body needs to do next year to meet our 5 years goals and then let go do it. We know what every body is responsible to do.		
Interview 2	Yes		
Interview 3	Yes and defined to achieve our main 4 goals		
Interview 4	Yes and also are the team and organization goals.		
Interview 5	Yes, everybody has specific thing that they need to do that related to the incubators goals.		
Interview 6	No, we use our incubator's goals.		
		# of Incubators	%
Yes		5	**83%**
NO		1	**17%**

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	26. Are there team-based goals in your organization?
Interview 1	We try to function like a team but we are 6 people in different locations, we all are doing what is their part of the pay.
Interview 2	Yes, are the 3 of the business plan, and we all focus on them. Each one is accountable for those goals.
Interview 3	The same as in the organization.
Interview 4	Too small we are a team of two.
Interview 5	Yes and align with our individual, mainly thing that we need to do as a team to reach our incubators goals.
Interview 6	No

		# of Incubators	%
Yes		1	**17%**
No		5	**83%**

	27. Do you have any reward system in place? How does it tie to attainment of objectives by employees?
Interview 1	Not money, the reward is to see how you help the companies to be successful, nobody complies about that, we have some retreats. Goals are not tied reward, we just celebrate success, and there is not formal system.
Interview 2	No, money, but internal recognition, informal recognition program. We are not attaining to objectives, just informal, we try to create a positive work environment here, where everybody is respected and consider. In immediate recognition over success.
Interview 3	No, informal congratulations.
Interview 4	Not
Interview 5	There is no way to reward financially, but yes we do some informal things to stimulate my staff. I even do informal reward with the tenants, if there is a story that runs in a paper or TV news, we try to do a big issue.
Interview 6	No, but personal congratulations and thanks are used.

	# of Incubators	Frequencies
Yes	0	**0%**
No	6	**100%**
Informal internal recognition	5	**83%**

	28.1 Meetings: How frequent do you hold a meeting? b. What levels are involved?
Interview 1	Once a week all staff besides me, except a meet once a month as a CEO with the incubator operations manager.
Interview 2	No staff meeting because we are really small, formal communications are done via e-mail
Interview 3	Every day at morning all staff..
Interview 4	Once a month with advisors
Interview 5	About every two weeks with the all staff.
Interview 6	Once a day, me and my secretary.

	# of Incubators	%
Once a day	1	**17%**
Once a week	1	**17%**
Once every two weeks	1	**17%**
Once a month	1	**17%**
Never	1	**17%**

	Never	17%
	Once a month	17%
	Once every two weeks	17%
	Once a week	17%
	Once a day	17%

0% 20% 40% 60% 80% 100%

	28.2 Meetings: What is or are the purpose/s of those meetings?
Interview 1	Once a week to work over day to day staff problem solving and once a month myself to see strategic issues.
Interview 2	None.
Interview 3	To do troubleshooting, potential problems, main changes, etc.
Interview 4	Make sure we are still together on what the calendar says. And to check all the formalities. Really our meetings are very informal because we are three people.
Interview 5	None.
Interview 6	Follow status reports.

	# of Incubators	%
Problem solving	2	**50%**
Follow up	2	**50%**

	100%
	90%
	80%
	70%
	60%
	50% 50%
	...

(Bar chart: Problem solving 50%, Follow up 50%)

	29. How frequent does your incubator provide training to the internal front line and middle managers?
Interview 1	At least once a year during the Annual incubators national Conference (4 days).
Interview 2	To provide a service to the clients of this incubator you have to be a certified business analyst, and that requires a minimum of 45hrs of professional training per year, mainly we attend conferences to meet this requirement.
Interview 3	Training is available through the university, in average 2 days per year.
Interview 4	NBIA, and City of Gainesville, 4 days average per year.
Interview 5	Training to the staff is available every week two or three ours through the city. Around 10 full days per year and for me 7 days per year.
Interview 6	2 day and 5 days.

	# of Incubators	%
1 to 4 days per year	3	**50%**
5 or more days per year	3	**50%**

	30. Is there anything you want to add that you feel will be useful in this research? (Please define what a successful incubator is?)
Interview 1	That there are still different definitions of what is a successful incubator. For us a successful incubator is the one that can graduate high growing companies. For example high growing means companies that at least can pass in two years from 2 to 60 employees or have revenue between 1 to 5 millions per year.
Interview 2	The number one issue is to get funding.
Interview 3	Our new web based database will help us to consolidate and to increase our productivity... Our success is defined by the success of the companies we host. We are lacking here is the resources to maintain the scientific equipment.
Interview 4	Job creation of high paying technology jobs, creating an entrepreneurial environment in the community, create jobs in residents companies that pays more in average than the jobs that are in the community outside the building. The challenge was to get 80% of occupancy between 4 to 5 years; at we are at 85% in less than 3 years. This is a goal that is driving me. As conclusion, the manager of the incubator can not satisfy all needs of all people, but to fill the necessities of the resident companies getting the best help possible to them. One time the incubator manager happen to be all things, write business plan, read the financials, and I think is just not appropriate, I believe the role of the manager is to create the entrepreneurial environment for the startup companies.
Interview 5	Occupancy level we have and the time of payment of tenants and other activities we charge to generate revenues. This kind of incubator is very different from a high tech incubator. We do things that are basic and down to earth with our tenants. We don't create work; we focus in doing what is right and helpful for the tenants. The fewer people we have the better performance we have in our incubator. Tenants pay rent to the city therefore we can not include in our financial. The city provide me a report of who pays they rent. I made an issue for myself to speak urgently to those people who not pay

	they rent on time because that is a signal to me that something is wrong. The tenants rent are not enough to cover our operating costs and we our far away for being self sustaining. Which is why adding facilities for us is important and maintaining incubator's overhead lower is important.
Interview 6	An Incubator manager must remain totally open minded and the second is the positive actions to reactions that the manager should take, and last but not least is to balance resources (dollars, people, sponsors, and the community involved with the incubator). Successful incubator is the one that provide high value jobs and economic development. One that not close its doors. The one that utilizes resources effectively. The six most important word is: I made a mistake, the five is: I did a good job, the fourth is: what is your opinion, the third is: Thank you, the second is: We and the least is: Team.

APPENDIX B
INCUBATORS' PROFILE

University of Central Florida, Technology Incubator

(http://www.incubator.ucf.edu)

Mission:

A University-driven community partnership providing early stage technology companies with the enabling tools, training and infrastructure to create financially stable high growth enterprises.

Success:

The Incubator, opened in 1999, has since grown from 12 to over 30 emerging technology companies, which have generated more than 400 new jobs and more than $100 million in revenues from sales and research and development grants.

Facilities:

With locations in the Central Florida Research Park, adjacent to the UCF campus in East Orlando, and in Downtown Orlando, the Incubator consists of over 70,000 square feet.

Services:

The UCF Technology Incubator provides a variety of services such as:

- Adaptable space and flexible leases

- Business guidance from on-site counselors in areas such as accounting/tax, human resources, organization, government contracting, international trade, marketing and PR, financing, and grant preparation, business and strategic planning, record keeping,

insurance and risk management, and legal counsel-Networking, mentoring, and conferencing opportunities with peer groups, area professionals, University faculty, and support organizations

- Shared reception, secretarial services, conference rooms, and other support services

- Access to office equipment, University labs, test equipment, library, and support systems including high-speed internet connection

- Access to sources of seed and expansion capital

- Access to high-level executives through the Entrepreneur in Residence program

The Incubator provides client companies with the experience and insight needed to create successful companies through relationships it has created with partners such as The Central Florida Innovation Corporation, UCF Small Business Development Center, its network of community advisors, professional business development partners, community outreach programs, as well as a dedicated staff.

With the wealth of talent and resources developed by UCF and the benefits of its prime locations, the UCF Technology Incubator is poised to make a significant contribution to the economic development of the region's high technology sector. Combined with efforts by other organizations such as: the Florida High Tech Corridor Council; City of Orlando; Orange County Government; the Technology Research and Development Authority (TRDA); the Economic Development Commission of Mid-Florida, Inc; The Central Florida Technology Partnership; and others, the region will soon become one of the nation's premier locations for high-tech enterprises.

Seminole Technology Business Incubation Center (STBIC)

(http://www.seminoleinc.com)

Mission:

To provide a nurturing environment for technology based companies in the early stages of development.

The Seminole Technology Business Incubation Center (STBIC) is dedicated to growing technology based businesses. We provide an array of services to benefit growth companies. Located in the High Technology 1-4 Corridor we have not only desirable office space but a host of networking possibilities.

Company Profile:

The STBIC is a joint venture of Seminole County, Seminole County Port Authority and Seminole Community College. This joint venture is supported by grants from the National Aeronautical and Space Administration and the Technological Research and Development Authority.

The STBIC is participating as a member of the TRDA/NASA network of incubators. They are a funding member of the Florida Business Incubation Association and an active participant in the National Business Incubation Association.

The STBIC includes a full time office of the Small Business Development Center in support of STBIC clients and small businesses through out Seminole County.

Benefits of working with STBIC

- Located in the I-4 High Technology Corridor

- Focused on Technology Based Business

- State-Of-The-Art-Space-Available

- 12' x 12' individual office (larger sizes available)

- Every office with internet access

- On site management

- Secretarial Support

- Bookkeeping Support

- Management Consultants

- Human Relations Consultants

- Financial Consultants

- Access to a Complete Business Support Network of Mentors

- Technology Cooperative Agreements with Technological Research and Development Authority and the National Aeronautical and Space Administration (NASA)

The University of Florida's Sid Martin Biotechnology Incubator

(http://www.biotech.ufl.org)

The University of Florida's highly acclaimed Sid Martin Biotechnology Incubator is a statewide and national   resource for growing promising companies from   university-based discoveries. Wet labs, office space, conference rooms, high bandwidth internet access, greenhouse, pilot fermentation and small animal facilities, plus extensive scientific and business equipment combine to create an unparalleled setting for biotech startups. To date, our companies have raised $40 million in equity investment and have attracted more than $15 million in grants.

The Biotechnology Program at the University of Florida was launched by a Forward-looking Florida legislature in 1987. It is composed of our campus-based Interdisciplinary Center for Biotechnology Research (ICBR), the Center of Excellence for Regenerative Health Biotechnology, and our off-campus bio-business incubator, the Sid Martin Biotechnology Development Incubator (BDI).

Our mandate is to...

- Energize and strengthen all aspects of molecular life science research at the University of Florida
- Teach Biotechnology theory, techniques, and applications

- Champion the growth and development of Biotechnology research throughout The Florida State University System

- Jumpstart Biotechnology technology transfer from the lab to the marketplace through comprehensive business incubation

Business Development:

A wealth of business development support is available through our specialized BDI library. Our library resources include NERAC, the BioWorld Today website, Dorland's Healthcare and Market Place Guide website, E&Y Online, and Lexis/Nexis for patent searches and printouts, information on markets, competitors, intellectual property, legal and securities issues, grant application assistance (SBIR, STTR), etc. The Incubator Manager and can also serve as Scientific Misconduct Officer at a company's request.

NERAC search service, http://www.nerac.com, is free to BDI Client Companies (we pay the bill). Companies can pick up the phone, or go to NERAC's web site to order special searches - business or technical. Orders can be placed for full patents, including text, images, schematics, formulae, and claims. Tables of content of favorite journals (21,000 to choose from) can be received by email as they are published. NERAC can track customized topics on trademarks, technologies, competitors, regulations, etc. and quickly email new information whenever it appears. There is never a charge unless a journal article is ordered.

A BIOWORLD WEB SITE subscription is provided by the BDI. The site at http://www.bioworld.com provides search and viewing capability for BioWorld publications

including BioWorld Today, BioWorld Financial Watch, BioWorld International, annual Genomics Review, CEO Compensation Report, Phase III Report, and BioScan, an excellent database of biotech companies, their products and their deals.

DORLAND'S HEALTHCARE AND MARKET PLACE GUIDE is available in two volume hard copy or access their website at http://www.mhmgonline.com. It is especially recommended for information on markets, and competitors.

A BUSINESS PLAN TEMPLATE from PriceWaterhouseCoopers is available. Access it electronically with an icon located on the "desktop" of each of the computers in the library.

Gainesville Technology Enterprise Center (GTEC)

(http://www.gtecflorida.com)

Mission:
GTEC's Mission is to help you achieve technology commercialization and create competitive jobs while your business helps diversify the industrial sectors of Gainesville and Alachua County.

About GTEC:
The Gainesville Technology Enterprise Center (GTEC), incubating tomorrow's companies today in Alachua County, is about partnerships. An economic development program of the City of

Gainesville, the facility was funded in partnership between the City of Gainesville, the Alachua County Board of County Commissioners, and the US Department of Commerce, Economic Development Administration. Currently, GTEC is managed through an agreement between the city of Gainesville and the Gainesville Area Chamber of Commerce. Additionally, GTEC represents relationships between the community and the University of Florida. Being one of the top research universities in the southeast, many of the emerging businesses are developed through UF technology. However, GTEC incubates business ideas of many kinds from throughout the community. Part of GTEC's incubation program is to utilize a myriad of business and technical resources to grow resident businesses.

The two-story 30,000 square foot facility is located in the City of Gainesville Enterprise Zone and serves new and emerging technology businesses with the potential for high growth and high wage job creation. Through a comprehensive program consisting of incubation, education, networking and mentoring, the incubator management staff, together with a Board of Advisors, provides basic business assistance to tenants on an ongoing basis. GTEC offers services that add value and speed up a small company's chances for growth and success.

Features:
- Office suites ranging from 200 – 1850 sq. ft. with expansion flexibility.
- Checkout GTEC building floor plan
- Laboratory and/or product assembly areas ranging from 550 - 1150 sq. ft. equipped with water and sewer connections, built-in sinks, countertops and cabinets. Three-phase electric power, compressed air, and air exhaust is available at an additional charge.

- Management assistance through one-on-one mentoring and consulting.

- Educational seminars.

GTEC Comprehensive Entrepreneurial Training: GTEC's core entrepreneurial development program is based on the NxLeveL for Entrepreneurs materials. They have adapted the program in order to meet the unique needs of our resident businesses and other technology-based, emerging entrepreneurs. If you are considering starting an enterprise and would like to explore the feasibility of your concept, they invite you to join us each fall as we deliver this program. You are also invited to join, if you own an existing business, but would like to explore new products, markets, or simply want to sharpen your entrepreneurial skills.

NxLeveL's goal is to help entrepreneurs reach the next level of success.

- Download the NxLevel Entrepreneurial Program Flyer
- Download the NxLevel Registration Form

Community-wide network of organizations and professional service providers, offering access to:

- Management expertise
- Business plan development
- Intellectual property and corporate attorneys
- Sources of capital
- Training and education
- Human resource services

- Accounting and financial services

- Marketing services

- Specialized equipment

- Technical expertise

Services Included:

- Business library and resource center with shared office equipment

- Conference rooms with audio/visual and teleconferencing equipment.

- Basic electric, water and sewer

- Abundant, free parking

- Lobby and visitor receiving area

- Secured entry and exit

- Employee lounge with outdoor patio

- Shipping and receiving area

- NBIA Partner Program

The NBIA Partner Program offers discounted business products and services that can help NBIA member incubators and their client companies with everything from payroll to public relations. A denotes programs that both incubator members and their client companies may participate in.

Fee Based Services:

- Secretarial, duplicating, and word processing support

- Special equipment and supplies

- GRUCom

- Telecommunication

- Internet Connection: T1 Internet Access and 10 Megabit, Ethernet Connection

Enterprise Zone Benefits:

Since the Technology Center is located in the "Enterprise Zone", your company also will benefit from enterprise zone tax saving programs! The City of Gainesville's state-designated "enterprise zone" encompasses a ten-square-mile area targeted for economic revitalization. The Enterprise Zone offers financial incentives to businesses to encourage private investment and increase employment opportunity for the area's residents. Tax savings are offered to businesses located in the Enterprise Zone if they are employing zone residents, rehabilitating real property, or purchasing new business equipment. Companies can receive credits on their state sales tax, corporate income tax, and property tax. In addition, local incentives include a 50% discount on building permits, development fees, and occupational licenses**.**

Technological Research and Development Authority (TRDA)

(http://www.trda.org/fnbic/default.htm)

Mission:

TRDA mission is to accelerate the formulation, growth and success of small, technology-based companies in Brevard County.

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The Technological Research and Development Authority (TRDA), established by the Florida Legislature in 1987, delivers the successful and cost-effective transfer of cutting edge technologies to schools and small businesses throughout the State of Florida. Through strategic alliances with NASA, the federal government, the aerospace industry and state partners - including the Department of Education, Enterprise Florida and the department of Community Affairs - TRDA is giving Floridians the edge to success to compete in the new millennium.

Specifically, the TRDA sponsors programs that enhance education, space research and economic development within the state. By seeking matching funds for visionary projects, TRDA has been able to augment Florida's resources with those of government and private industry, while working diligently to ensure a brighter future for the people of the State of Florida.

The Florida/NASA Business Incubation Center (FNBIC) accelerates the formulation, growth and success of small, technology-based companies in Brevard County. The 10,000-square-foot facility is housed on the Titusville campus of Brevard Community College. By offering affordable space and shared office equipment and services, the Incubator makes it possible to reduce many of the costs associated with establishing and operating a small business. Support facilities and programs help train and nurture the new entrepreneurs in the establishment and operation of their technology-based companies, thereby giving them the best possible chance to succeed. The FNBIC is managed through a joint partnership between the TRDA, Brevard Community College and the NASA-Kennedy Space Center.

City of Fort Myers FL Business Development Center (BDC)

(http://www.cityftmyers.com/departments/BDC/bdc.htm)

Mission:

The BDC is a learning laboratory for entrepreneurial enterprises. The BDC provides reasonably priced rental real estate and services to accommodate the needs of a start up business. In addition, the BDC provides technical assistance to the entrepreneur so that he or she may realize the full potential of their business enterprise and of themselves as business owners and managers.

About BDC:

The BDC is a 7.8 acre facility that is owned by the City of Fort Myers and operated by the Community Redevelopment Agency. The BDC offers professional office and commercial space for small businesses. The BDC nurtures its tenants, enabling growth through support services such as low cost rental space and shared overhead costs, thereby providing the assistance needed to bring various products and services to the Greater Fort Myers marketplace.

The Center has 19 offices (100 sq. ft.), and 28 commercial bays (300 sq. ft.). Multiple offices and bays are available to businesses requiring them.

BDC Offer

- Affordable office or shop space.

- Access to clerical support for development of promotional material for your business.

- On site business consulting at no charge.

- Use of computer lab with printer.

- Access to fax & copy machines.

- Conference room with audio/visual equipment.

- Furnished office, optional.

- Mail and custodial service.

- Creative environment where the business owner can minimize risk.

- Establishes a professional image for tenants.

- Workshops on a variety of issues facing small business owners.

Tenants Application Process

In order to lease space in the BDC a business owner must.

- Submit a business plan for the enterprise to the BDC manager for approval.

- Obtain all appropriate licenses and permits to operate a business within the City of Fort Myers

- Obtain all the necessary insurance coverage (Comprehensive liability, fire legal liability, and workers compensation) appropriate to the type of business in which they will be engaged. The City of Fort Myers must be identified as "certificate holder."

- Agree to abide by terms of the lease document as well as BDC policies and procedures.

The Tampa Bay Technology Incubator (TBTI)

(http://www.incubator.usf.edu/)

Mission:

TBTI provides a single point of contact for businesses and entrepreneurial communities to access many of the resources necessary for success: intellectual property, management expertise, capital partners and support services.

About TBTI:

The Tampa Bay Technology Incubator (TBTI) is part of USF *Connect*, a program tying together the elements of economic development at the University of South Florida. USF *Connect* provides a single point of contact for businesses and entrepreneurial communities to access many of the resources necessary for success: intellectual property, management expertise, capital partners and support services.

The 60,000 sq. ft. incubator facility is located in USF's Research Park on southwest corner of the Tampa Campus. Facilities will include quality office and laboratory space designed for biotechnology and life sciences research. Shared laboratory facilities provide technology businesses with access to critical research equipment that would other wise be cost-prohibitive to most start-up companies.

The Tampa Bay Technology Incubator provides office and laboratory space and professional advice for companies that meet the requirements.

The Tampa Bay Technology Incubator works in partnership with the USF Center for Entrepreneurship at the University of South Florida. The Center for Entrepreneurship provides a wide array of successful entrepreneurial business and technology programs to enhance entrepreneurial education, research and training for both incubator clients and community businesses and private industry, while working diligently to ensure a brighter future for the people of the State of Florida.

The Florida/NASA Business Incubation Center (FNBIC) accelerates the formulation, growth and success of small, technology-based companies in Brevard County. The 10,000-square-foot facility is housed on the Titusville campus of Brevard Community College. By offering affordable space and shared office equipment and services, the Incubator makes it possible to reduce many of the costs associated with establishing and operating a small business. Support facilities and programs help train and nurture the new entrepreneurs in the establishment and operation of their technology-based companies, thereby giving them the best possible chance to succeed. The FNBIC is managed through a joint partnership between the TRDA, Brevard Community College and the NASA-Kennedy Space Center.

APPENDIX C
INTERVIEW QUESTIONNAIRE

Incubators in Florida - Questionnaire

1. How many employees work in your incubator?

2. Who defined the statements of Vision and Mission for the incubator?

3. Did you do a SWOT analysis of your incubator?

4. How does your Incubator define its value proposition?

5. What financial measures are considered in your incubator, especially those related to growth and productivity?

6. What is the current financial strategy followed by your incubator? Why?

7. Do you know what are the needs and preferences of your client? (clients: current resident and prospects)

8. Are you using any tools to know clients' needs and preferences?

9. Do you consider different customer segments?

10. How do you measure the impact of the Incubator over your clients?

11. How do you contact your clients?

12. How do you define productivity in your incubator?

13. Could you articulate the desired balance between growth and productivity in your incubator?

14. What are the objectives and measures of your internal business processes?

    a. How does your incubator define these objectives and measures? (Productivity, cost, quality, etc.)

15. Could you identify the critical internal processes needed to deliver your value proposition?

16. How does your organization align the internal processes to deliver the value proposition?

17. How does the information flow inside your incubator? (CRM databases, knowledge databases, process documentation, etc.)

18. What other technology is needed to run an incubator?

19. Are the core competences needed to be mastered by your employees documented?

20. What process is followed to determine those competences?

21. How are the competences measured?

22. Do you use performance appraisals?

23. Do you have any formal communication system in place?

24. Currently, on how many goals is your incubator working on?

25. Are there individual goals among the employees?

26. Are there team-based goals in your organization?

27. Do you have any reward system in place? How does it tie to attainment of objectives by employees?

28. Meetings:

    a. How frequent do you hold a meeting?

    b. What levels are involved?

    c. What is or are the purpose/s of those meetings?

29. How frequent does your incubator provide training to the internal front line and middle managers?

30. Is there anything you want to add that you feel will be useful in this research?

APPENDIX D
HUMAN SUBJECTS APPROVAL

![University of Central Florida logo]

Department of Industrial Engineering and Management Systems

August 19, 2004

Thesis and Dissertation Editor
UCF Graduate Studies, MH 230

Dear Editor,

At the request of Julio Lujambio, a Master's student in the IEMS Department, I have reviewed his thesis and have answered the following three questions to the best of my ability.

1. Were the rights of the interviewees protected? Were their identities kept confidential?
   Yes

2. Were the subjects asked to engage in anything that violated their physical or psychological safety?
   There is no indication of this.

3. Was the data treated properly? Were personal details/data kept confidential?
   There is no evidence otherwise.

Should you require further information, please contact me personally at 3-5703 here on campus.

Sincerely,

Michael A. Mullens, Ph.D., P.E.
Associate Professor, Dept. of IEMS

LIST OF REFERENCES

1. Autio, Erkko and Magnus Klofsten. <u>A comparative study of two European business incubators.</u> Journal of Small Business Management; Vol. 36 Issue 1, p14-30, Jan 1998.

2. Bossidy, Larry and Ram Charan, <u>Execution: The Discipline of Getting Things Done</u>. New York: Crown Business, 2002.

3. Centre for Strategy & Evaluation Services (CSES). <u>Benchmarking of Business Incubators</u>. Sevenoaks, United Kingdom, February 2002.

4. Cook, Curtis W., Phillip L. Hunsaker, and Robert E. Coffey. <u>Management and Organizational Behavior.</u>   New York: McGraw-Hill, 1997

5. Dalguish, Gerard M. <u>Webster's Dictionary of American English</u>. New York: Random House , 1997.

6. European Commission About <u>http://europa.eu.int/comm/about_en.htm</u>, 6-8-2003

7. Johnsrud, Cristy S., Ryan P. Theis and Maria Bezerra. <u>Business Incubation: Emerging Trends for Profitability and Economic Development in the US, Central Asia and the Middle East</u>. A report prepared for the US Department of Commerce Technology Administration, Office of Technology Policy, Washington, DC, USA, May 2003.

8. Hamel, Gary. <u>Leading de Revolution</u>. Boston, Massachusetts: Harvard Business School Press, 2000. (p 72-113)

9. Hart, Myra. <u>Model E: An Incubated Enterprise.</u> Boston, Massachusetts: Harvard Business School Publishing, 2000.

10. Hoque, Z. and W. James, <u>Linking balanced scorecard measures to size and market factors: Impact on organizational performance</u>, Journal of Management Accounting Research, 12, 1-16, 2000.

11. Jennings, Peter and Graham Beaver, <u>The performance and competitive advantage of small firms: A management perspective</u>, International Small Business Journal, 15 (2), 63-75, 1997.

12. Kaplan, Robert S. and David P. Norton. <u>Double-Loop Management: Making Strategy a Continuous Process</u>. Boston, Massachusetts: Harvard Business School Publishing, Volume 2 number 4, 8-10, August-July 2000.

13. Kaplan, Robert S. and David P. Norton. <u>The Balanced Scorecard: Translating Strategy into Action</u>. Boston, Massachusetts: Harvard Business School Press, 1996.

14. Kaplan, Robert S. and David P. Norton. <u>The Strategy Focused Organization. How Balanced Scorecard Companies Thrive In The New Business Environment</u>. Boston, Massachusetts: Harvard Business School Press, 2001.

15. Kaplan, Robert S. <u>Managing Innovation</u>. Boston, Massachusetts: Harvard Business School Publishing, 2003.

16. Kaplan, Robert S. <u>Mobil USM&R (A): Linking the Balanced Scorecard.</u> Boston: Harvard Business School, 1996. 9-197-025

17. Kaplan, Robert S. <u>The Balanced Scorecard – Measures That Drive Performance</u>. Boston, Massachusetts: Harvard Business Review, 1992.

18. Kaplan, Robert S. <u>The Balanced Scorecard for Public-Sector Organizations</u>. Boston, Massachusetts: Harvard Business School Publishing, 1999.

19. Lewis, David A. <u>Innovation Incubation and Place: an evolutionary theory of the performance of technology business incubators.</u> Dissertation, New Brunswick, New Jersey, May 2002.

20. Lumber, Craig C. <u>Hypothesis Creation in Organizational Behavioral research</u>. Oregon State University, 2001.

21. Merriam, Sharan B. <u>Qualitative research and case study applications in education.</u> San Francisco: Jossey-Bass, 1998.

22. Mount, J., J.Terence Zinger and George R. Forsyth, <u>Organizing for Development in the Small Business</u>, Long Range Planning, 26(5), 111-120, 1993.

23. Nahmes, Isabelina. <u>Dimensions of Service Quality in Home Building.</u> Unpublished master Thesis, Florida: University of Central Florida, 2003.

24. NBIA.org, home page, 4-8-2003

25. NBIA Best Practices http://www.nbia.org/resource_center/best_practices/index.php , 6-8-2003

26. NBIA Updates. <u>What's the State of the Incubation Industry?</u>. Vol. 9, Issue 3 May 2003. 8 June 2003. (http://nbia.org/resource_center/updates/03may/index.php#whats).

27. Pavis, Theta. <u>Incubator Glut</u>. Forbes, ASAP, Vol. 166 Issue 14, p38, 11/27/2000.

28. Philips, Jack J. <u>The Consultant's Scorecard: Tracking results and bottom-line impact of consulting projects</u>. New York: McGraw-Hill, 2000.

29. Rainey & Associates. <u>Vermont Center for Emerging Technologies: a technology Incubator Assessment</u>. Hanover, NH. 2003.

30. Rainey & Associates. <u>New Hampshire Biotechnology Business Incubator Feasibility Study</u>. May 15, 2002. (http://www.nhbiotech.com/Reports/Incubator/05.php)

31. Rucci, A. J., S. P. Kirn and R. T. Quinn. <u>The Employee-Customer-Profit Chain at Sears</u>. Harvard Business Review, January-February 1998. (Pages 82-97).

32. Simon, William L. <u>Beyond the Numbers: How Leading Companies Measure and Drive Success</u>. Hoboken, NJ: Wiley, 1996.

33. Simons, Robert. <u>Levers of Control: How Managers Use Innovative Control Systems to drive Strategic Renewal.</u> Boston: Harvard Business School Press, 1995.

34. Slevin, Dennis P. and Jeffrey G. Covin. <u>Time, growth, complexity, and transitions: Entrepreneurial challenges for the future.</u> *Entrepreneurship Theory and Practice*, Vol. 22, No. 2., 53-68. 1997

35. Treacy, Michael and Fred Wiersema. <u>Customer Intimacy and Other value Disciplines</u>. Harvard Business Review, January-February 1993.

36. United Nations. <u>ECE/TRADE/265.</u> United Nations: Geneva (Switzerland), 2001.

37. The Structural Funds and their co-ordination with the Cohesion Fund. <u>Guidelines for SF programmers for the period 2000-06</u>. 1999.

38. Wolfe, Chuck, Dinah Adkins, and Hugh Sherman. <u>Best Practices in Action, Guidelines for Implementing First-Class Business Incubation Programs.</u> NBIA Publications. Athens, Ohio, 2001.

39. American Productivity and Quality Center, <u>Measure What Matters: Aligning Performance Measures with Business Strategy</u>, Consortium Learning Forum, Best Practices Report, Houston: Texas, 2000.

40. New Hampshire Biotechnology Business Incubator Feasibility Study — May 15, 2002 *Prepared by* Rainey & Associates*(http://www.nhbiotech.com/Reports/Incubator/05.php)*