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Creating Economic Development Opportunities

By Gary Jackson, Ph.D. and Arthur Rubens, Ph.D.

THE CASE FOR REGIONAL MULTIPLE-SITE BUSINESS INCUBATOR NETWORKS

Currently, we are beginning a recovery from an unprecedented 18-month economic recession that was the longest since World War II. Many communities are seeking ways to help add jobs and diversify their economies and are looking to implement change through economic development. Increasingly, we are seeing business incubators as part of a larger business incubator network that provides a cohesive, integrated targeted network to promote the strategic economic development goals of a region and the state. This article presents the findings of a literature search and interviews with eight managers of regional business incubator networks in the United States. It describes the benefits, advantages, disadvantages, and common practices of these regional incubator networks.

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INTRODUCTION

Over the last few years, we have been faced with an unprecedented economic downturn and recession that has not been seen since World War II. This long and deep recession has resulted in communities exploring ways to grow and diversify their regional economies. It is during times such as this that business and community leaders think creatively about ways to stimulate the economy. The Chinese have a term called *weijj*, which means "crisis." This word is literally taken from "wei" for danger and "ji" for opportunity, thus from crisis comes opportunities (http://www.living-chinese-symbols.com/chinese-symbol-crisis.html). Henry Ford (Opportunity Quotes, 2009) once said that: "failure is the opportunity to begin again, more intelligently." One of the means used to stimulate entrepreneurship and innovation and grow new businesses is the creation of community business incubators.

This article briefly summarizes the literature on the reasons for adopting a multiple-site incubator network, outlines the method used to survey a selected sample of regional incubator network managers, and presents the findings on the general purposes, advantages, and disadvantages of regional incubator networks as reported by the managers.

The first documented business incubator began in 1959 in Batavia, New York, but the concept of providing network services grew slowly with only 12 business incubators operating in 1980. The National Business Incubation Association (NBIA) was formed in 1985 to act as a clearinghouse for information concerning incubator development and management and offers conferences and training. Since this time, the number of business incubators has grown dramatically in the United States and internationally. By 2006, there were approximately 1,115 incubators in the United States and 7,000 incubators worldwide (NBIA, 2009).

The 55,000-square-foot Purdue Technology Center of Indianapolis is located in Purdue Research Park at AmeriPlex-Indianapolis.

Although the number of local community incubators continues to grow, recently there has been a trend towards state and regional economic development organizations grouping their community incubators into more integrated, targeted, and comprehensive networks, which are part of a greater regional or state economic development plan (NBIA, 2004). According to a study conducted by the accounting firm PricewaterhouseCoopers (1999), networked incubators are:

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THE CASE FOR REGIONAL MULTIPLE-SITE BUSINESS INCUBATOR NETWORKS

Currently, we are beginning a recovery from an unprecedented 18-month economic recession that was the longest since World War II. Many communities are seeking ways to help add jobs and diversify their economies and are looking to implement change through economic development. Increasingly, we are seeing business incubators as part of a larger business incubator network that provides a cohesive, integrated targeted network to promote the strategic economic development goals of a region and the state. This article presents the findings of a literature search and interviews with eight managers of regional business incubator networks in the United States. It describes the benefits, advantages, disadvantages, and common practices of these regional incubator networks.

Incubators which operate in formal cooperation with other incubators, either under common ownership or management or through the common provision of services or sharing of information.

Developing a network of sponsors and partners is critical to the provision of value-added services and may push programs to consider a broader geographic area that can help support the network (NBIA, 2004):

The best business incubation programs are integrated into their community networks, resources, and economic development plans and strategies. Gone are the days of stand-alone programs, lacking support from economic developers, academics, and the business community. More and more, incubation programs are the nexus of significant angel equity investing networks, publicly sponsored seed funds, technology infrastructure development and commercialization programs, entrepreneurial campuses, or youth entrepreneurship programs.

Compared to isolated, individual business incubators operating independently in a region, a regional network of incubators may be able to leverage a larger more diverse network of partners to assist the regional network. There may be economies of scale allowing cost savings by offering group insurance or purchasing plans. Training programs can be coordinated across a region and a network is more likely to be able to support the hiring of specialized staff.

Also, multiple-site incubators add a geographic complexity to the operation and the need to manage the incubators and their locations so that they are not competing for clients and resources but support the overall network and its goals.

In many ways, individual incubators can assist each other with clients or refer clients to more specialized programs. On the other hand, there may be additional costs related to items such as travel, management, decision-making, and communication that would be associated with a larger geographically-based network. Also, multiple-site incubators add a geographic complexity to the operation and the need to manage the incubators and their locations so that they are not competing for clients and resources but support the overall network and its goals.

One example of a multi-site incubator network is the Southwestern Pennsylvania Economic Development District (SPEDD), which has a network of 18 incubators in Pennsylvania and has focused on becoming more efficient, capturing the cost savings of economies of scale (Barrow, 2001). It has a special unit looking after buildings and operations-related functions. Management of key operations is centralized, and SPEDD has created a Passport Program which offers services at four different stages or levels, with an ultimate aim to maximize "value-added" services and products to the clients. In pursuit of this, SPEDD has network partners deliver the products and services within a managed environment to ensure quality. This approach frees up the incubator management team to focus the majority of its efforts on high value-added activities such as managing the system and developing and delivering new services and products.

In another example, the University of Central Florida has a technology and mixed-use-based network that includes a partnership with the city of Orlando, Orange County, the Florida High Technology Corridor Council, Seminole County government, and the city of Winter Springs. This program currently lists 157 business partners that are grouped into: (1) business consulting, (2) financial institutions, (3) financial services, (4) insurance, (5) legal services, (6) funding services, (7) government contracting, (8) media, (9) office supplies/services/furniture, (10) other, (11) real estate/housing, (12) human resources, and (13) telecommunications. The program began in 1999, has served over 90 emerging companies, and is part of the university's Office of Research & Commercialization (http://www.incubator.ucf.edu/).

University of Maryland-Baltimore County (UMBC) Technology Center in Baltimore, MD.

In support of business incubator networks, Andrea Gibson, director of the Office of Research Communications at Ohio University (NBIA, 2004), states that

There are many circumstances in which multiple sites offer the best deal: expanding the service reach of an incubation program, providing more space when a first site overflows, diversifying the types of clients a program can service, or creating an industry cluster. Additionally, multiple sites can provide opportunities to maximize employee skills and create revenue streams required to hire more specialized staff. It can also increase the programs' overall sustainability by impacting a wider geographic area and increasing sponsorships and champions of all types.

She goes on to discuss the need to look for economies of scale such as discounts with contractors, group discounts, and professional services with a goal to pool resources and share specialized facilities. Regional leaders in Southwest Florida were interested in learning more about the potential benefits and costs of multiple-site regional incubator networks.

Historically, the Southwest Florida region has grappled with how to diversify the region's economy from a predominately construction and tourism-based economy. With this goal in mind, community leaders and planning administrators requested a study of the best practices for establishing a regional business incubator network. The study was administered by the Southwest Florida Regional Planning Office and funded by the region's economic development organizations, private firms, and matched by a grant from the U.S. Department of Commerce, Economic Development Administration. The study was conducted by the Regional Economic Research Institute at Florida Gulf Coast University.

The Long Island High Technology Incubator is part of Stony Brook University and Stony Brook Medical Center

The study included a literature review, interviews with managers of regional incubator networks, regional focus groups of community leaders, and in-depth interviews with key community stakeholders (FGCU, 2009). However, one of the most beneficial and key methods used in the study was interviewing managers of regional incubator networks. Twenty-five regional incubator networks were identified in the United States and a selected sample of managers was interviewed.

METHODOLOGY

Using an Internet search, the study team identified a total of 25 regional multiple-site incubator networks in the United States. For the purposes of the study, a regional incubator network was defined as a central organization comprised of multiple incubator sites and networks. From the original 25 networks identified, the study team contacted eight that represented a sample of the different types of networks.

To fully determine the advantages, disadvantages, and key issues and concerns with incubator networks, the study team developed a comprehensive in-depth interview form. The 12-page form featured questions covering a broad range of topic areas to gain insight into the background, processes, and measures of success of the benchmark networks. The general topic areas included:

- Organization Information;
- Interviewee Background Data;
- Network Views/Actions Regarding Strategic Planning;
- Recommendations for Creating Incubator Networks;
- Measures and Views of Success;
- Funding & Technology Transfer;
- Advantages/Disadvantages and Role of Organization;
- Network Components and Development;
- Internal and External Constituents;
- Affiliations and Relationships;
- Network Partner Engagement;
- Network Structure, Relationship, and Information Sharing;
- Decision Making Tools Used;
- Strategic Leadership; and
- Network Future.

The eight identified managers were contacted via email that introduced the interviewer, the purpose of the study, our desire to schedule a phone interview, and a note that we would be following-up our email with a phone call to schedule our phone interview. In addition, a brief one-page summary of the study was attached to the email. Upon contacting the manager, an email was sent to confirm the time and date of the in-depth phone interview and after the interview was conducted, a follow-up "thank you" email was sent to the managers.

The interviewers were two Florida Gulf Coast University faculty members from the research team, with extensive experience in qualitative research. They interviewed managers of the eight regional incubator networks shown in Figure 1 (see the sidebar on the following page for more detailed information on the networks).

FIGURE 1
BENCHMARK ANALYSIS: LIST OF REGIONAL INCUBATOR NETWORKS

	Incubator
1	**Applied Technology Development Centers** (ATDC) (Maine)
2	**Ben Franklin Technology Partners of Northeast Pennsylvania** (BFTP/NEP)
3	**Business Incubation at Purdue Research Parks** (Indiana statewide network)
4	**Central Valley Business Incubator** (California)
5	**Emerging Technology Centers** (Baltimore, Maryland)
6	**St. Louis Enterprise Centers** (SLEC) (Missouri)
7	**Stony Brook University Incubators** (Long Island)
8	**University of Central Florida Incubation Program** (Central Florida)

BUSINESS INCUBATOR NETWORKS

Applied Technology Development Centers (ATDC) (Maine)

These incubators are part of the Office of Research and Economic Development at the University of Maine and include four incubation centers, six incubator sites, one student incubator-like facility on campus, and four affiliated incubators. The primary incubators are:

- Target Technology Incubator (information technology firms, opened in 2002),
- Maine Aquaculture Incubator (includes marine sciences),
- Composite Technology Centers (three sites, advanced materials), and
- Foster Student Innovation Center (January 2008).

Ben Franklin Technology Partners of Northeast Pennsylvania (BFTP/NEP)

BFTP/NEP is a state-funded economic development initiative created in1983 that provides funding and support to both early stage and established companies. In addition to providing loans, BFTP supports Centers of Excellence at various universities and colleges. BFTP also supports the Ben Franklin Incubator Network that includes:

- Ben Franklin TechVentures®,
- Bloomsburg Regional Technology Center,
- Bridgeworks Enterprise Center,
- Greater Hazleton Business Innovation Center,
- Carbondale Technology Transfer Center,
- East Stroudsburg University Business Accelerator,
- Pottsville/Schuylkill Technology Incubator,
- Scranton Enterprise Center,
- Enterprise Center, and
- Innovation Center @ Wilkes-Barre.

Business Incubation at Purdue Research Parks (Indiana statewide network)

These research parks are developed by the Purdue Research Foundation or in partnership with development companies. Companies can graduate from the incubator and relocate within the research park. With the goal of accelerating business growth, the Purdue Research Foundation-developed incubation model is expanding across the state with mixed and technology-based incubators in West Lafayette, AmeriPlex (Indianapolis), Northwest Indiana (Merrillville), and Southeast Indiana (New Albany).

Central Valley Business Incubator (CVBI) (Fresno, CA)

A non-profit organization representing a public-private partnership, CVBI was created in 1996 to foster economic development through entrepreneurship and job creation. CVBI offers business development services and houses five on-site members at each of its two facilities in Fresno, California. The key stakeholders are the area's university, businesses, government, and entrepreneurial and community leaders. The incubators include a special focus on water technology and represent two primary entities: Launching Pad and Claude Laval WET Incubator.

Emerging Technology Centers (Baltimore, Maryland)

These are under a nonprofit corporation, Baltimore Development Corporation (BDC), chartered by the city of Baltimore with two incubators including: The Emerging Technology Center at Canton and The Emerging Technology Center at Johns Hopkins Eastern.

Resources are focused on early-stage technology and biotechnology companies. The technology companies include those working on alternative energy, engineering and product development, information technology, and life sciences. Incubators in Maryland are assisted by the Maryland Technology Development Corporation, created by the state legislature in 1998.

St. Louis Enterprise Centers (SLEC) (Missouri)

The St. Louis County Economic Council manages and operates five incubators including one in partnership with the St. Louis Development Corporation. The five Enterprise Centers include Midtown (1994), West County (1997), South County (2000), Wellston (2005), and Helix Center (being renovated for early-stage businesses in the plant and life sciences industry).

Stony Brook University Incubators (Long Island)

This is a 501 (c)(3) corporation created by the Foundation of SUNY and the Stony Brook Foundation with three incubators including:

- Long Island High Technology Incubator (LIHT opened in 1992),
- Stony Brook Incubator at Calverton (agriculture, aquaculture, and environmental industries), and
- Stony Brook Software Incubator.

The software incubator is managed by Stony Brook University in partnership with Computer Associates, with 11 on-campus partners and three off-campus partners. The Long Island High Technology Incubator is affiliated with Stony Brook University and the Medical Center and houses over 70 companies.

University of Central Florida Incubation Program (Central Florida)

This university-driven community partnership features five mixed-use and technology-driven incubators including:

- Downtown Orlando Incubator,
- Orlando Business Development Center/ District 2 Incubator,
- Photonics Incubator,
- Technology Incubator, and
- UCF Incubator – Seminole County/Winter Springs.

The program includes a partnership with the city of Orlando, Orange County, Florida High Technology Corridor Council, and Seminole County government (in the city of Winter Springs).

REGIONAL INCUBATOR NETWORK PROFILES

The eight regional incubator networks selected and interviewed ranged from networks that were recently formed (in the last 10 years) to those that were formed over 25 years ago. The size of the eight networks ranged from four incubator locations up to 15, with each location having multiple member businesses (ranging from 25 to 160). The types of clients served were diverse and represented a broad range of industries and professional services including technology, professional services, hospitality, service, finance, light assembly, manufacturing, construction, aquaculture, energy, and several other environmentally-related services.

(L-R) Brothers Irfan and Nick Sinanovic, co-owners of Vega Transport, with St. Louis County Executive Charlie A. Dooley. The Bosnian brothers set up offices at the St. Louis Enterprise Centers – South County in 2005 and graduated in 2010. Vega Transport continues to grow in the community with a new facility built across the street from the Center.

St. Louis Enterprise Centers – West County. The Centers are known for their number of high-tech, high-growth companies.

Each of the networks had a designated manager or director, with additional managers or coordinators for the individual incubators that were part of their network. All of the networks had a board or advisory group and most had partnerships with local, regional, and, in some cases, state agencies. These partnerships included affiliations and linkages with organizations and agencies such as city and county governments, economic development offices, small business development centers, chambers of commerce, etc. In addition, almost all of the networks had a direct or indirect affiliation (formal and informal) with a regional university or college. Although the ownership structure of the eight networks included public, private, and non-profit, most represented a combination of some type of public and private partnership.

The services provided to the clients were typical of incubators: business plan development, mentoring services, marketing assistance, legal assistance, copyright and patent assistance, business management training, office support (phone, fax, reception, copy, etc.), and Internet. Other services included utilities (electricity, water, etc.), custodial, accounting, capital and access to venture capitalists, government contracting, security, and networking assistance with the community and other businesses.

> In almost every interview, it was reported that there was some type of link to the greater regional economic development plan, or in some cases, to state economic development strategies.

The in-depth interviews ranged from just less than one hour to almost two hours. In total, the two research members interviewed seven regional incubator network managers and one director of membership services, which the incubator staff recommended that we interview because the manager was relatively new and the director had a longer institutional history with the network.

Most of the managers had been with the incubator network for five years, although some of the managers had a much longer history and a few others were relatively new to the system (less than one year). Although many of the managers had a business background and either an undergraduate or a graduate degree in business (two had doctorates), three had degrees in non-business fields, such as public relations, or were relatively new to the entrepreneurship and economic development field. All of the eight managers were supportive of the research being conducted and were forthcoming in their responses and answers to the interview questions.

FINDINGS

There were many lessons learned and insights gained from our interviews with the managers of the selected business incubator networks. Some of the information we learned from our interviews confirmed our previous literature review of incubator networks. Other information obtained from the interviewees added to our insight and understanding of incubator networks.

All of the eight networks had a stated vision and mission statement, as well as generally well-formed objectives. The development of the vision, mission, and organizational value statements was, in most cases, done by committee. Most frequently, this committee involved its network advisory group. However, in some instances, it also involved outside entities and stakeholders such as a university administration, economic development offices, state workforce development officials, and local government officials.

The managers were asked how their network fit into the broader economic development strategy in their region. In almost every interview, it was reported that there was some type of link to the greater regional economic

Front entrance of Ben Franklin TechVentures at night

development plan, or in some cases, to state economic development strategies. In several cases, the concept and inception of the network were originally developed because of local, regional, and state economic policies. Most of the respondents strongly encouraged that anyone wanting to develop a regional incubator network needs to link it to a greater economic policy.

To better understand how the incubator networks view success, several questions probed the managers on how they measure success and what factors contribute to the success for the overall community and economy. They responded to these questions from the viewpoint of the network and organization, as well as the network members and community. As one would expect, the primary success measures were jobs created, salary rates, and overall contribution to the economy through increased number of businesses and tax revenues. In addition to these standard measures of success, other measures included venture capital and angel investors, technology development and transfer, new patents, and copyrights.

The managers commented extensively on what they saw as the perceived advantages, disadvantages, and role of the network and organization. Generally, the advantages of the incubator network were economies of scale (training, marketing, etc.), sharing best practices, and very importantly, developing economic opportunities, especially in depressed areas.

Generally, the advantages of the incubator network were economies of scale (training, marketing, etc.), sharing best practices, and very importantly, developing economic opportunities, especially in depressed areas.

Disadvantages or challenges primarily included geographical distances and dispersion that affected the effective management and running of the larger network. Other challenges included getting all of the individual members of the network to operate with a shared vision and direction. Figure 2 shows some of the specific advantages and disadvantages of the network cited by the interviewees.

Generally, the interviewees stated that the primary roles of the incubator network are to set policy, communicate and share information, and ensure that the members work as strategic partners. However, more specifically, they said the roles of the incubator network are to:

- Serve as a trainer and coordinator,
- Enhance skills of members and to promote communication across the network,
- Create guiding vision and direction for network,
- Provide assistance to network incubators and promote information sharing,
- Be a good strategic partner and share best practices, and
- Assist with funding and overall management of network.

The managers were queried about their use of virtual networks (networks without walls) and sister networks or soft-landing partners (network partners of firms that want to relocate to the U.S. and their region). Many of the interviewees said that they make very minimal use of virtual networks. Also, although a few had tried sister networks or soft-landings with foreign companies, their efforts in this regard were very minimal and overall they have not seen much success in this area.

The interviewees were asked several questions regarding communication and the overall level of engagement across their network. Generally, they rated their own individual communication with their network incubators as very high (4 out of 5, with 5 being highest). However, several felt that the communication channels directly between and among the network incubators were used less.

FIGURE 2
ADVANTAGES/DISADVANTAGES OF REGIONAL INCUBATOR NETWORK

Advantages	Disadvantages
• Best practices	• Geographical distances/dispersion
• Sharing solutions	• Stress of any start-up
• Management across network region	• Own agenda by members of the network
• Public relations	• Insufficient economies of scale
• Grow economically depressed areas	• Too much talk
• Being part of greater regional economic plan	
• Economies of scale	
• Referrals and training	

The most frequently used method of communication down and across the network was electronic (emails). Most of the managers held weekly and/or monthly meetings, while many stated that they have annual or semi-annual meetings with their member networks. Although it was only briefly addressed, it did not appear that most of the networks utilized some of the newer technology mediums such as texting, chat rooms, bulletin boards, tweets, etc. to communicate with their network incubators.

The interviewees were very expressive, both optimistically and pessimistically, regarding the future of their networks and pressing problems that they are likely to face. The predominate concern was the economy and how to survive in this economic downturn. Of the eight interviewed, seven cited resources, capital, and the economy as the primary problems they will be facing. Therefore, financial and economic issues were of primary concern for almost all of the managers and their designees. Other issues involved how to make budget cuts and, in some cases, how to continue managing their operation as the network grows.

Several staff of Ben Franklin Technology Partners of Northeast PA at the ground breaking for TechVentures2. (L to R, Chuck Diefenderfer, Kerry McDonald, Laura Lawrence, Julianne Riedy, Chad Paul, Wayne Barz). These are the staff members most involved in TechVentures. Chad Paul is the CEO of Ben Franklin Technology Partners of NEPA, owner of TechVentures.

Vice President Joe Biden speaking at BFTP groundbreaking for TechVentures2.

RECOMMENDATIONS

The development of regional, multiple-site incubator networks reinforces the need to consider the overall benefits and costs of these networks. This study has helped to classify the advantages and disadvantages of a regional incubator network. Although additional work needs to be done to better quantify the potential benefits and costs, strategic and business plans for regional incubators should address the potential advantages and disadvantages of a multiple-site incubator network. The study addressed the need to understand and follow best practices for incubators.

It was recommended that Southwest Florida consider several new initiatives. Regional discussions brought out the need to develop an educational program for the community members and leaders on entrepreneurship and incubators, including goals, benefits, and costs. Education is a key part of any entrepreneurial or incubator program, and it was recommended that the Southwest Florida region explore the benefits and costs of coordinated, world-class secondary and college level entrepreneurial education programs.

Cooperation could be enhanced by developing an integrated, strategic regional entrepreneurship, mentoring, and incubator network plan. The plan would ideally become a road map for the initiative and be incorporated into the region's economic development plan. There are several research parks being planned within the region and it will be important for the parks to partner with the region's colleges and universities to support technology transfer and potential coordinated use of facilities and laboratories. This would also tie in the faculty and students to the entrepreneurship programs and incubator network. It was recommended that the region develop a regional public-private partnership agreement to support the sequential growth and support of the programs and incubators, and hire an experienced manager in entrepreneurial and incubator programs. Finally, the Southwest Florida region's initiatives need to tie into Florida's High Tech Corridor.

CONCLUSION

The study for the Southwest Florida region focused on regional, multiple-site incubator networks and explored the potential reasons for developing a network along with the potential disadvantages. The literature review showed that there are few such studies that have focused on this growing trend. The literature search revealed four reasons for establishing these incubator networks including larger more diverse networks of partners and support, expanded service reach and programs, more specialized training programs and specialized staff, and economies of scale allowing cost savings.

The managers interviewed stated that the primary roles of the networks are to set policy, communicate and share information, and ensure that the members work as strategic partners. The interviews reinforced many of the earlier findings from the literature search and expanded the discussion to include additional advantages and disadvantages. The advantages included:

- Economies of scale and coordination in areas such as training and marketing;
- Sharing resources and talent;
- Supporting a regional economic development plan;
- Coordinating training, resources, and talent;
- Sharing best practices and solutions; and
- Serving a large geographic area including underdeveloped or depressed areas.

The disadvantages included geographical distances and dispersion that affected the effective management, travel costs, and running of the larger network. Additional disadvantages were associated with growth management issues and timing, stress related to startup of a regional network, and new sites. Other disadvantages include the time and costs associated with individual agendas of network members and getting all to operate with a shared vision and direction.

This study explored the reasons for establishing multiple-site incubator networks, realizing that additional research on the advantages and disadvantages of these networks will be needed. Additional research, both qualitative and quantitative, needs to be conducted on the use and application of business incubator networks as part of a regional economic strategy. However, we are increasingly finding that in order for communities to be competitive in the future, especially in this global economy, the pooling of regional resources and a coordinated economic development strategy would appear to have the promise of creating more value and lower costs.

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