LIBRARY BASED BUSINESS INCUBATORS: A MODEL FOR LIBRARIES TO PROMOTE ECONOMIC DEVELOPMENT IN THEIR COMMUNITIES

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INTRODUCTION

This paper presents the rationale for library based business incubators. It draws upon studies of existing incubators to gain insights into the operation and usefulness of business incubators, and to develop practical strategies for a model that libraries could use.

WHAT ARE BUSINESS INCUBATORS?

The concept of *business incubators* developed in the 1980's to help start-up businesses establish themselves with the help of low-cost facilities, mentoring arrangements and networking capabilities, to give them a better chance of survival. Small and medium-sized enterprises are crucial to most economies, particularly in creating employment. In Canada, approximately 85% of all new employment is created by small businesses. However, 75% of all new firms fail within three years of start-up.[1] Entrepreneurs face many constraints. Although they may have a terrific product or a really great service, there may be barriers to entry, a lack of business and managerial skills, no means of raising affordable finance, inability to market products or services, lack of skills to locate professional help when necessary and insufficient knowledge of laws, registration procedures and government regulations. Ideally, business incubators should provide a protective, yet stimulating environment to enable their clients establish themselves and prepare them to eventually cope independently in the fiercely competitive world of business. Business incubators should be entrepreneurial units themselves, aiming at efficient operations and financial self-sufficiency.

HOW SUCCESSFUL ARE BUSINESS INCUBATORS?

Various studies indicate that business incubators have been very successful in: helping start-up firms establish themselves, providing an excellent return on investment, and contributing to community economic development by generating employment and increased tax revenue[2]. For example, summary statistics from NBIA's 1998 survey of business incubators show that:

- North American incubators have created nearly 19,000 companies, which are still in business, and more than 245,000 jobs.
- Incubators overall each served an average of 20 entrepreneurial firms in 1997 (the median number was 12).
- Incubator companies experience very healthy growth. The average firm's sales increased by more than 400 percent from the time it entered until the time it left the incubator.
- Business incubation programs produce graduate firms with high survival rates. A reported 87 percent of incubated companies that fulfilled program graduation requirements are still in business.
- Business incubation programs create new jobs for a low subsidy cost and a good return on

[1] Newton, Keith. 1995. Industry Canada Occasional Paper Series. Number 13. Management skills development in Canada. Industry Canada. 1995.

[2] Markley, D.M. and McNamara, K.T. 1995. *Economic and fiscal impacts of a business incubator.* **Economic Development Quarterly.** P 273-278.

investment. The return on investment was estimated to be, on average, $4.96 for every dollar of public operating subsidies in the jobs and local taxes they produced

C. An average of 84% of firms that graduate from business incubators remain in their communities.

Business incubators are not all alike. Although some impacts were similar regardless of incubator type, other impacts related directly to an incubator's mission and goals. For instance, firms in all types of business incubators had similar average increases in their annual gross revenues. But firms from technology incubators created more jobs than other types of incubators. Incubators that are focussed on low-income people were rated high by their community stakeholders in assisting minorities and women business owners, and for enhancing the business climate.

NUMBERS, TYPES AND FOCUS OF BUSINESS INCUBATORS

Worldwide, there are estimated to be 1,500 business incubators, with about 250 in developing and emerging economies. Although a majority of business incubators support manufacturing firms, many new incubators are providing for the diverse needs of specific target groups[3]. According to the NBIA's 1998 survey the following are some statistics of North American incubators:

C. 51% of incubator facilities are sponsored by government and non-profit organizations, and are primarily for economic development, whose mission includes job creation, economic diversification and /or expansion of the tax base.

C. 27% of facilities are affiliated with universities and colleges. Besides helping start-ups succeed in business, they offer additional benefits to faculty with research opportunities, and alumni, faculty and associated groups with start-up business opportunities.

C. 16% are hybrid, joint efforts among government, non-profit agencies and/or private developers. These partnerships may offer the incubator access to government funding and resources, and private sector expertise and financing.

C. 8% of incubators are run by investment groups or by real estate development partnerships. Their primary interests are economic reward for investment in tenant firms, new technology applications and other technological transfers, and added value through development of commercial and industrial real estate.

C. 5% are sponsored by a variety of non-conventional sources such as art organizations, American Indian tribal governments, church groups, chambers of commerce, port districts, etc.

MODEL OF A LIBRARY-BASED BUSINESS INCUBATOR

The model is based on that of existing incubators, but is different in that a library based business incubator would use the library's strengths in finding, organizing, and using information, to sponsor start-up *service* businesses, with heavy information needs, that have need of such resources and skills. Examples of such businesses are service firms, like: business consultants, advertising agencies, legal service firms, business research organizations, health services organizations, market research firms and desktop and newsletter publishers, to name a few. Such firms are generally not considered for incubator participation. The focus of most incubators, as will be discussed later, is on manufacturing and technology firms. This may be so because the needs of service firms are diverse and poorly understood, and therefore hard to provide for. Also a

[3] Lalkaka, Rustom. 1997. Lessons from international experience for the promotion of business incubators in emerging economies. Paper commissioned by the small and medium industries branch. November. # 3. UNIDO. SME Programme. http://www.unido.org

majority of incubators are run by science parks and technical education/training institutions who would be able to help and benefit from new technology and manufacturing enterprises.

The service industry is a growing sector in Canada - in Ontario, for example, the goods producing sector employs 27% of the workforce, and the service-producing sector, 73% of all jobs.[4] Trade in services is an important and growing contributor to the Canadian economy and to the economies of most of Canada's trading partners. The government of Canada recognizes this, and will enter into negotiations in the year 2000 with the European Free Trade Association, and the Free Trade Area of the Americas to promote freer trade in services. Delegations will also participate in negotiations to further liberalize trade in services in the World Trade Organization. [5]

Furthermore, the following was an article in Inc. Magazine, December 1994[6]:

The service economy is where the most start-ups are betting their money according to a survey by AT&T Capital Corp. and the American Institute of Certified Public Accountants. The group polled 1,000 businesses founded in 1992 through 1994. Service companies made up 46% of the start-ups in 1994, up from only 19% two years earlier. Manufacturers accounted for 54% of new businesses in 1992 but dropped to 15% by 1994.

Not only is that indicative of an ongoing fundamental shift in the U.S. economy, but it also reflects the preferences of those supplying the capital. "Service companies don't take as much money to start, so there's often less capital at risk before you know the outcome," says Marty Sutter of the Woodlands Venture Partners, in the Woodlands, Texas, a firm specializing in health care. "Successful service businesses give a return on investment sooner than successful manufacturing businesses, and there's tremendous pressure in venture capital right now to get short-term rewards for less risk."

Still, survey respondents whose companies were founded in 1994 identified inadequate

funding as their biggest hurdle -- and they blamed lenders. Twenty-eight percent said lenders were too conservative, 16% reported being unable to find investors, and 12% claimed a lack of collateral. Looking homeward, 19% financed the businesses either themselves or with family money.

Here are all the obstacles cited as the "biggest hurdles" by the start-ups surveyed:

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[4] Ontario Ministry of Finance, Unadjusted employement by industry, 1996.

[5] Department of Foreign Affairs and International Trade, Trade Policy Planning Division. 1999. Background document on Service Issues. http://strategis.ic.gc.ca/SSG/sk00032e.html

[6] Hise, Phaedra. 1994. *Start-up News: Service-Industry Starts on the Rise*. **Inc Magazine**. December. P. 034. http://www.inc.com/incmagazine/archives/12940342.html

Inadequate funding 31%
Competition 13%
Nothing 13%
Lack of business experience 13%
Time demands 8%
Other 7%
Marketing/advertising 7%
Building a client base 4%
Bad location 4%

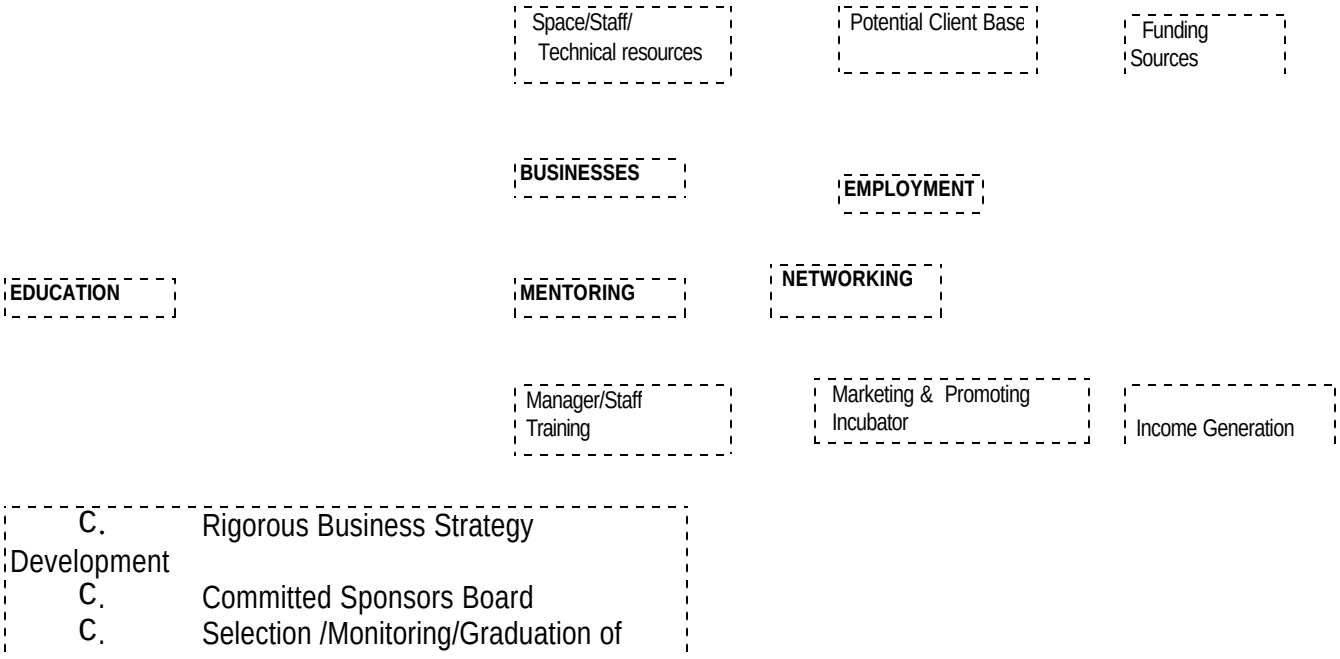
Although the initial financial needs of entrepreneurial service firms may be lower than manufacturing firms, they face the same start-up constraints, as we can see above. However, very few business incubators cater to service start-ups. According to the NBIA 1998 survey, only 6% of incubators catered to service organizations. There clearly is a need for more focus on service organizations, when the trend seems to be toward a greater increase in start-up service companies in the future.

Libraries can fill in the gap and provide incubator facilities for start-up service organizations that are information based. Most service companies do not have extensive space requirements, which makes them easier to host. The library incubator could provide some space, communications facilities, networking opportunities, research services, and education and training services using their own resources and by employing the services of appropriate business partners in the community. If space is a problem, current technology enables setting up a "virtual incubator", where all communication, consultation, training, research requests, and discussions take place online. All services should be provided at cost or at a small margin over cost, to enable the incubator self-financing.

Libraries are service organizations themselves and understand the basis for assessing and providing for client needs. Libraries already have print, proprietary electronic, Internet, and other resources, which they can use to help start-up service firms with extensive research needs. Many libraries already have fee-based services, and are beginning to understand the commercial and entrepreneurial side of providing for information needs. A library-based incubator would complement this aspect of library service - synergies would provide for enhanced service to both the incubator as well as to the fee-based service. *In other words, libraries are the ideal candidates for this type of incubator and should take a leadership role in developing one*. An incubator with a focus on information based, service organizations could make itself very useful, given the statistics of service firm start-ups and the number of incubators in existence that provide services to them. If libraries do not act to provide this service, and establish themselves as leaders in provision of incubation for, and as mentors to, service based start-ups, other organizations eventually will.

LIBRARY BASED INCUBATOR ENVIRONMENT

C. Supportive Local / /National Government Policies
C. Community/Business Partnerships and Support
C. Supportive and Pro-Active Library Management



STEPS IN SETTING UP A LIBRARY BASED INCUBATOR

Start-Up

A feasibility study should be conducted to assess: demand, need, capacity, physical location, and community awareness. The process encourages discussion, forges consensus and motivation among civic leaders and organizations and helps identify obstacles and develop creative ways of dealing with potential problems. The process of determining feasibility can increase community education and awareness of business incubation. A feasibility study is also useful as it records the early history and activities of the project, and thus provides a reference point for future staff and board members. The process should culminate in a strategy for funding and applications to funding organizations.

Facility renovation and initial development

This involves setting up the facility, as well as the staffing and the policies and rules under which the incubator must operate, including selection guidelines for incubator clients, progress review processes, and graduation deadlines. In a library setting space may be a set of cubicles with some office furniture, communication ports for computers, telephone etc. The idea of a "virtual incubator" is new, but developing technologies have made that a possibility.

Business development stage

In this phase, incubator managers work with potential and current tenants to design and implement a sound business plan. Competent staff must be hired and trained to work with clients. Educational and training opportunities should be developed and promoted, and the features and services the incubator provides must continually be adapted and refined to meet client needs.

STAGES IN INCUBATOR DEVELOPMENT

(*From Lalkalla, Rustom. 1997. UNIDO.* http://www.unido.org)

The diagram is a useful visual depiction of the incubator development process - it estimates timelines, activities and indicates where supplementary help may be used by an incubator.

SERVICES, FEATURES AND PROGRAMS PROVIDED BY EXISTING INCUBATORS - Perspectives of Incubator Clients and Incubator Managers.

A 1998 study by the National Center for Research in Vocational Education (NCRVE)[7] surveyed incubator clients and managers about incubator services. The results are based on the response of 160 clients and 74 incubator managers.

What Clients Thought

53% of respondents really valued business space and infrastructure that business incubators provided and 17% rated clerical and office services highly. In rating the features provided by incubators, 46% valued the low rental fees low fees for services the most. However, 23% rated the support "to reduce business stress" and networking opportunities as the features that incubators provided most effectively.

Education and Training Services:

30% indicated that on-site training consultation was the format most frequently used and 28% used seminars offered periodically. 17% attended workshops developed upon request from clients and 16% indicated that they attended seminars offered on a regular basis by the incubator.

What Incubator Managers Thought

23% of surveyed incubator managers felt that business space and infrastructure were the most effective service provided by incubators, 29% felt it was management assistance and entrepreneurial development, 13% thought it was education/training, and 18% thought that clerical and office support was the most effective service provided to entrepreneurs.

When promoting the incubator, 26% emphasized business services, 25% promoted the entrepreneurial environment, 23% emphasized the low rent and good facilities, and 13% stressed the educational opportunities the most.

On Education And Training

35% managers indicated their incubator offers seminars on a regular basis and 32% offered individual on-site training/consultation. 35% of incubator managers reported that education and training services in their incubators were provided or facilitated by staff from educational institutions and 24% indicated that incubator staff provided the education. 20% of managers reported that education and training were provided by a combination of sources and 15%

[7] NCRVE MDS-893. http://ncrve.berkeley.edu/MDS-893/MDS-893-BACKGROU.html

indicated that professional training services were offered by community businesses.

These statistics give a useful picture of what matters to entrepreneurs and what incubator managers think of the benefits they provide. Since there are no library-based incubators, and not many incubators that host service start-up companies, the statistics above should used for insight, rather than to model library incubator features and services.

BUSINESS INCUBATOR TRENDS[8]

The discernible trends are that technology orientation will continue. Exponential change in informatics, microelectronics, and communications systems will create opportunities for blending advanced techniques with traditional processes, as in agribusinesses, textiles, and environment technology. E-commerce is increasing in importance, yet many small firms do not have the expertise to exploit the new commercial medium. Technological help will be an increasingly useful service to offer incubator clients.

Now that the basic incubator model has proved successful, special purpose incubator designs for women entrepreneurs, for international business (i.e. the San Gabriel Valley Incubator, whose focus is the promotion of Asian-Pacific and Latin American Trade) and specific target entrepreneurial groups are in the process of being set up. Enhanced professionalism will be expected in incubator design and operation, including development of sustainability, benchmarking and monitoring of performance.

SUMMARY AND CONCLUSION

Business incubators have proved to be a viable tool to help economic development by helping start-up business survival, while providing a good return on investment compared to other economic development programs. In today's world, true competitiveness requires entrepreneurial businesses that can establish strong positions in niche markets through innovative products and services. Such businesses in their start up stage are good candidates for incubation systems.

The main features that incubators successfully provide are space, mentoring and networking capabilities, education and training facilities and access to business services at a low cost. The benefits are many. New firms get help starting out, communities benefit from increased jobs and taxes, and the hosts benefit from being involved in innovation, or practical experience and student internships (which matters in University settings), or profit (in the case of for-profit incubators).

A library-based incubator could also be a mutually beneficial relationship for start up firms and for the library that takes a leadership role in mentoring, hosting and encouraging local business. The library needs the backing of local community leaders to undertake the project, it needs to identify good funding sources (especially for the initial stage) and must maintain strong community partnerships to enable provision of a variety of services to their clients.

Life in the next century will require a renewed infrastructure of information highways, rapid transportation and smart cities. This infrastructure will have to be built based on today's reality and tomorrow's needs, relying on a partnership between state and private sectors. This smart infrastructure will be a network of human, technological and financial links, to facilitate access to

[8] Lalkaka, Rustom. 1997. Lessons from international experience for the promotion of business incubators in emerging economies. Paper commissioned by the small and medium industries branch. November. # 3. UNIDO. SME Programme. http://www.unido.org

information and resources.[9] Libraries are already part of that smart networkÿ but they can do more.

[9] United Nations International Development Organization. (UNIDO). Encouraging More Entrepreneurship - The Challenges. http://www.unido.org/doc.cfm?did=38

BIBLIOGRAPHY

The National Incubator Association Website : http://www.nbia.org is a portal site that has useful infoirnation on various aspects of incubators and maintains links to its members. For an international flavour, look at : http://www.nbia.org/intl.htm, which contains links to international incubator organizations.

Agoston, Jennifer., Gerl, Ellen., and National Business Incubation Association. 1997. **Business incubation : building companies, Jobs, & wealth.** Athens, Ohio : National Business Incubation Association, c1997.

Allen, D.N. 1988. *Business incubator life cycles.* **Economic Development Quarterly**. 2(1). P 19-29.

Brown, N. B. 1992. **Demonstrations and technology transfer: the case of the TVA/SBA mobile small business assistance center program.** *Econ Dev Rev*. 10: 1 pp. 48-53. (Winter 1992).

Burr, S. G. and Strickland, M. 1992. **Creating a positive business climate for women: an approach to small business development.** *Econ Dev Rev*. 10: 1 pp. 63-66. (Winter 1992).

Center for the Utilization of Federal Technology (U.S.)**Directory of federal & state business assistance : a guide for new and growing companies.** [Washington, D.C.] : The Center ; Springfield, Va. : For sale by the National Technical Information Service

Davenport, S., Lynch, J., and Douglas, R. A. 1991. **Country towns and fluctuating rural fortunes--is there a case for assistance.** *Rev Mark Agric Econ*. 59: 3 pp. 255-270. (Dec 1991).

Green, G. P. 1994. **Is small beautiful? Small business development in rural areas.** *J Community Dev Soc* 25: 2 pp.155-171. (1994)
Abstract: Over the past decade local, state and federal governments have adopted a variety of policies promoting small businesses. A wide array of technical and financial assistance programs have been developed to address the special needs of small businesses. Proponents of these programs have argued that small businesses generate a disproportionate share of the new jobs created, provide higher quality jobs than do large firms and inject a source of innovation into the economy. These issues are assessed by analyzing recently collected data from 1,700 firms in rural Georgia. Medium-size firms consistently provide more benefits than do small firms. In addition, medium-size firms are more likely than small businesses to hire minorities, and to innovate and adopt new technology. Contrary to much of the existing evidence, small firms are not necessarily more closely linked to the local economy than are medium-size firms. Additional community development programs are needed to improve the benefits of employment in small businesses.

Guichelaar, Sarah and Sharp, Crystal. 1997. *Library-based business incubators.* **Feliciter.** October. Vol 43. N. 10. P 22-28.

Gulotta, C. and McDaniel, G. 1993.. ***A regional incubator program: the case of the Northeast Mississippi Business Incubation System***. *Econ dev rev*. 13: 4 pp.71-73. (Fall 1995).

Hayhow, Sally and National Business Incubation Association. 1996. **A comprehensive guide to business incubation.** Athens, Ohio : National Business Incubation Association, c1996. xiii, 381 p.: Includes index.

Hilchey, Duncan., Lyson, Thomas., Gillespie, Gilbert W., and Cornell Farming Alternatives Program. 1995. **Farmers' markets and rural economic development : entrepreneurship, business incubation, and job creation in the Northeast.** [Ithaca, N. Y.] : Farming Alternatives Program, Department of Rural Sociology, Cornell University, c1995. 12 p. Title from cover. Includes bibliographical references.

Hise, Phaedra. 1994. *Start-up News: Service-Industry Starts on the Rise*. **Inc Magazine**. December. P. 034. http://www.inc.com/incmagazine/archives/12940342.html

International Venture Capital Institute. **1993 directory of business incubators in the United States and Canada.** Stamford, CT : International Venture Capital Institute, [1993] 26 p.: Includes index.

Kasten, R. W. 1992. **The importance of business incubators.** *Am Fam.* 15: 4 pp.14. (May/June 1992).

Lalkaka, Rustom. 1997. *Lessons from international experience for the promotion of business incubators in emerging economies. Paper commissioned by the small and medium industries branch*. November. # 3. UNIDO. SME Programme. . http://www.unido.org

Lalkaka, R. and Bishop, J. 1995. **The role of business incubators in economic devlopment**. Tianjin Workshop Report. UNDP-UNIDO-OAS November.

Lalkaka, R. 1994. **Incubating small entrepreneurial businesses in economies in transition. Small Enterprise Development**. London, September, 1994.

Lichtenstein, Gregg A., Lyons, Thomas S., and Aspen Institute. Rural Economic Policy Program. 1996. **Incubating new enterprises : a guide to successful practice.** Washington, D.C. : The Aspen Institute, Rural Economic Policy Program, c1996. 242 p. Includes bibliographical references.

Markusen, A. and Oden, M. 1996. **National laboratories as business incubators and region builders.** *Journal of Technology Transfer* 21: 1/2 pp.93-108. (Spring/Summer 1996).

Markley, D.M. and McNamara, K.T. 1995. *Economic and fiscal impacts of a business incubator*. **Economic Development Quarterly.** P 273-278.

Markley, D. M. and McNamara, K. T. 1995. ***Business incubators: a local economic***

development option. Choices. 10: 3 pp.13-16. (Third Quarter 1995).

McLean, Mary L., Allen, David N., and National Council for Urban Economic Development. 1985. **Creating jobs by creating new businesses : the role of business incubators : survey report and case studies.** Washington, D.C. : National Council for Urban Economic Development, 1985. viii, 71 p. : ill., tables:

Neck, P. and Nelson, R.C. (eds) 1989. **Small Enterprise Development: Policies and Programs**. ILO,Geneva.

NBIA, 1992. **The State of the Business Incubation Industry**. NBIA. Athens, Ohio. October.

NBIA. 1996.**What Incubators Can and Can?t Do.** A Comprehensive Guide to Business Incubation. P: 7-10

Five rules are suggested for working within the realistic boundaries of an incubator: 1) Don?t put pressure on a community that is averse to the idea; 2) Integrate an incubator into a community through the delivery of assistance services; 3) To be a solid part of an economic plan, an incubator must be sizable enough to have an impact; 4) Having clusters of businesses which all focus on a particular field can be good for an incubator and for the community; 5) Following proven time cycles for the development of an incubator will help ensure success. Two addenda follow, one which illustrates that an incubator can persevere in an economically depressed town, and another which describes the five main stumbling blocks to a successful incubator. (4 pp.)

NBIA. 1996. **Economic Development 101.** A Comprehensive Guide to Business Incubation. P: 3-6.

An incubator can expand its role to impact the total economic development picture in the area in which it is located. The incubator?s role in the four activities of economic development?creation, attraction, retention and expansion?is described. The author delineates seven types of incubator clients and explains the services an incubator can provide for them. The author also discusses the benefits and drawbacks of the expanded definition of an incubator, and brings up the idea of the mobile incubator. Page 6 includes two charts: ?The Incubator?s Economic Development Role,? and ?Incubator Services: Expanding the Scope.? (4 pp.)

NBIA. 1996. **A Service Package That Pays.** A Comprehensive Guide to Business Incubation. P. 215-220

The author outlines the highly successful ?Passport? program at the SPEDD Incubator Network in Pennsylvania. The program offers services to businesses both outside and inside the network?s incubators. The author describes the Passport booklet, and explains how the its attention-grabbing techniques let an interested client know what services are available and the possible benefits to his or her company. The author also explains how the Passport program stresses the services?not the rental space?available; relates a story about how one client became interested in the Passport; explains how the document helps incubator managers perform better and in a more relaxed way; points out the benefits of marketing

services as well-defined products; and explains the usefulness of catch-phrases in marketing services. (6 pp.)

NBIA. 1996. **How to Beg, Borrow, and Barter for Your Incubator.** A Comprehensive Guide to Business Incubation. P 120-124.

In this chapter, tips are provided for ?creative budget stretching??how to keep your incubator going when money is tight. The advice covers three stages in an incubator?s life: organization, capitalization, and operations. Numerous subjects are covered, with real-life examples, including the following: completing initial studies in-house; using already-published economic development research; how to save money when writing grants; the concept of ?fundraising?; how to watch for freebies and discounts; leveraging your money; finding money for ?continuing operations?; using volunteers and how to find them; recycling; implementing creative money-making schemes; and proactive building maintenance. Two sidebars are included: ?Where to Start? and ?Fundraising with Class.? (5 pp.)

NBIA. 1996. **Improving Cash Flow and Avoiding the Cash Crunch.** A Comprehensive Guide to Business Incubation. P: 125-129

The author discusses things an incubator manager can do when suddenly caught in the midst of a cash crunch, outlining four important questions that the manager should ask him- or herself. The author provides nine specific ways to increase cash flow, and seven general ways to improve cash flow. Two sidebars are included: ?Greenwood?s Cash Flow Projection System? and ?Advice on Dealing With Clients.? (5 pp.)

NBIA. 1996. **How to Maximize Operaing Revenue.** A Comprehensive Guide to Business Incubation. P. 54-56

The author addresses the funding problems that incubators face as they move beyond the building construction or renovation stage. Cost-savings approaches are suggested to combat those funding problems. Tips are provided for controlling operating costs during renovation; looking for grants that will fund operating costs; controlling operating expenses after renovation; deciding which types of services will be cost-effective if offered. The author also discusses facility size in relation to financial viability. (3 pp.)

NBIA. 1996. **On the Way to Self-Sufficiency** A Comprehensive Guide to Business Incubation. P 57-59.

With the idea that incubators need to move toward self-sufficiency in mind, the author describes how her program, the Birmingham Business Assistance Network (BBAN)?achieved its funding. The author explains how her organization explored funding options, and tells of problems they encountered while applying for grants from the Economic Development Administration. The author explores the concept of self-sufficiency, and illustrates the importance of being ready for changes that can greatly affect an incubator (funding cuts, for example). (3 pp.)

NBIA Review. 1995. **Bank-Rolling Business: How are incubators doing?** Ch. Vol.11 No.6 Nov/Dec 1995

The latest Fax Back survey on funding for entrepreneurs and the incubators that assist them indicates that they are answering their clients? needs for funding. One chart in this article

shows that fifty percent of all the responding incubators (or their sponsors) are offering revolving loan funds. More than one fourth (28%) have loan guarantee programs. Other sources of funding include Angel Equity Investors, Seed Capital Fund, and Venture Capitalists. This article, with some helpful charts and graphs, describes the different ways incubators are helping their clients find the financial support they need

Petrzelka, P., Korsching, P., and McNamara, K. 1991. **Business incubators: an idea that has hatched.** *Rural Dev News*. 15: 3 pp. 1-2, 13. (July 1991).

Rice, Mark P., Matthews, Jana B., and Kilcrease, Laura. 1995. **Growing new ventures, creating new jobs : principles & practices of successful business incubation.** Westport, Conn. : Quorum, 1995. xxii, 154 p. : ill. Includes bibliographical references (p. [147]-148) and index.

Rushing, R. W. 1995. **Business incubator: a rural development tool.** *Bluepr-econ-dev*. Stillwater, Okla. : The Service, [1991-. Jan 1995. (1259) 2 p.

Schuyler, Gwyer. 1997. *Business Incubators: A Review*. Digest number 97-4. CELCEE, Kaufman Center for Entrepreneurial Leadership. April 29.
http://www.celcee.edu/entre.html

Smilor, Raymond W. and Gill, Michael D. Jr. 1986. **The New Business Incubator Linking Talent, Technology, Capital and Know-How**. Lexington, Massachusetts: Lexington Books, 1986

Smilor, Raymond W. 1986. **The new business incubator : linking talent, technology, capital, and know-how.** Lexington, Mass. : Lexington Books, c1986. xiii, 199 p.

Smurthwaite, M. 1987. **A comprehensive approach to rural revitalization in South Carolina.** *Responding to the crisis in the rural South : highlights of selected public and private sector initiatives*, Atlanta, Georgia, May 18-20, 1987 / Farm Foundation.Southern Rural Development Center ; CSRS/USDA ... [et al.]. Mississippi State, MS : Southern Rural Development Center, [1987]. p. 25-31. pp.

Tornatzky, Louis G. 1996. **The art & craft of technology business incubation : best practices, strategies, and tools from more that 50 programs.** Research Triangle Park, NC : Southern Technology Council ; Athens, Ohio : National Business Incubation Association, c1996. x, 174

Tornatzky, Louis G., Waugaman, Paul G., Casson, Lucinda., and Southern Technology Council. Southern Growth Policies Board. 1995. **Benchmarking best practices for university-industry technology transfer : working with start-up companies.** [Research Triangle Park, NC : Southern Technology Council, 1995] 35 p. : ill.: Includes bibliographical references.

Torok, S. J. and Schroeder, A 1992. **A comparison of problems and technical assistance needs of small agribusiness and nonagribusiness firms.** *Agribusiness*. 8: 3 pp.199-217. (May 1992).

UNFST. 1994. **Guidelines on establishment of technology business incubation centers.** UNFSTD. New York. September.

United Nations International Development Organization. (UNIDO). *Encouraging More Entrepreneurship - The Challenges*. http://www.unido.org/doc.cfm?did=38

Weinberg, M.L. Lyons, T.S., and Shook, M. *State government support of business incubators*. **Economic Development Commentary**. Spring. P 19, 17-21.

Weinberg, M. L. 1987. **Business incubators give new firms in rural areas a head start.** *Rural-Dev-Perspect-R-D-P*. Washington, D.C. : U.S. Department of Agriculture, Economic Research Service. Feb 1987. v. 3 (2) p. 6-10. ill. pp.

Wittig, Tim. 1996. **The Picatinny Technology Transfer Innovation Center : a business incubator concept adapted to federal laboratory technology transfer.** Sequim, WA : Federal Laboratory Consortium for Technology Transfer, Management Support Office, [1996] v, 17 p.: "October 1996." "A project partially funded by the Federal Laboratory Consortium, Washington D.C."

Young, R. C. and Francis, J. D. 1993. **The role of self help, private help, and community assistance for small manufacturing firms.** *J Community Dev Soc*. 24: 1 pp.15-29. (1993).
Abstract: A study of small manufacturing firms in a New York county revealed that owners of small firms place a great deal of reliance on their own resources. Most contribute to their financing. They work long hours, are involved in marketing, research and development, and initially draw little salary. They also depend on private sources of help, both paid and freely available, such as lawyers, accountants, and trade shows. A third important source of help is the community. Over half have contact with one or more public organizations and almost a quarter get some public funding. Marketing is a major consideration for them, yet this problem is complicated by their status as suppliers to larger firms for whom they do special or custom work under just-in-time inventory conditions.