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FULL COMMITTEE HEARING ON BUSINESS INCUBATORS AND THEIR ROLE IN JOB CREATION

HEARING

BEFORE THE

COMMITTEE ON SMALL BUSINESS
UNITED STATES
HOUSE OF REPRESENTATIVES

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FULL COMMITTEE HEARING ON BUSINESS INCUBATORS AND THEIR ROLE IN JOB CREATION

Wednesday, March 17, 2010

U.S. HOUSE OF REPRESENTATIVES,
COMMITTEE ON SMALL BUSINESS,
Washington, DC.

The Committee met, pursuant to call, at 1:00 p.m., in Room 2360 Rayburn House Office Building, Hon. Nydia Velázquez [chairwoman of the Committee] presiding.

Present: Representatives Velázquez, Dahlkemper, Clarke, Bright, Graves, Fallin, and Luetkemeyer.

Chairwoman VELÁZQUEZ. I call this hearing to order.

In recent weeks, our economy has started showing signs of economic recovery. Gross domestic product has swung from negative 6.4 to 5.7 percent growth, the biggest nine- month swing in nearly 30 years. While indicators like these are promising, we are still not seeing the kind of job creation Americans deserve.

When it comes to creating new jobs, small businesses are always central to the equation. Following the recession of the early 1990s, small firms created 3.8 million jobs. After the recession of 2001, micro-businesses alone generated one million jobs. Entrepreneurs will be just a important to bringing our nation out of today's downturn as they were during those previous recoveries.

Business incubators have long been a powerful tool for helping new businesses launch and existing firms grow. In 2005 alone, incubators assisted 27,000 start-up companies that provided full-time employment for over 100,000 Americans and generated $17 billion in revenue.

Beyond promoting business growth, business incubators also bring proven benefits to the communities in which they are located. Nearly eight out of ten incubator graduates stay in their local communities, meaning job opportunities and economic development remain in that region for the long term.

Today, the role of incubators is changing as the business world evolves. Although many of us think about traditional incubator services, like office equipment or meeting space, contemporary incubators offer everything from technical assistance to financing options, to marketing and manufacturing advice.

One promising trend has been the emergence of incubators that are especially tailored to an industry located in their community. For example, we have seen the development of a fashion focused incubator in New York City. Agribusiness incubators have sprouted

up in areas with a high concentration of food production. In other parts of the country with a history of technological innovation, software business incubators are taking root.

These industry-specific incubators allow new firms to tap into local knowledge and business networks that are already in place. By leveraging a town or city's existing assets, these incubators can accelerate economic development and create local jobs.

After all, that is what today's hearing is really about, putting Americans back to work. We already know the job creating potential of small, growing firms. Now the question becomes how to create conditions that maximize the chances for budding enterprises to get off the ground. Business incubators have a proven track record in this area. In fact, 80 percent of firms that graduate from these institutions remain in operation to this very day.

During today's hearing, we will hear from some of the most innovative business incubators from around the nation. I look forward to your testimony, and I take this opportunity to thank you for coming today and participating in this hearing.

It is my hope that this discussion will not only highlight their success stories, but also identify how we can replicate those stories in communities across the nation.

With that, let me thank our witnesses for being here, and I yield to the Congress Member Ms. Fallin for an opening statement. The Ranking Member will be joining us at a later point.

Ms. FALLIN. Thank you, Madam Chairman. I appreciate that.

And I am sitting in for Congressman Graves right now, and so it is a pleasure to be able to help out on this hearing.

And I think this hearing is very timely, Madam Chairman, as we are very concerned about our national economy and certainly about our local states and the recession that we have experienced, but we, as you just said, heard some better numbers, and I hope that we can continue to climb out and help our businesses grow and flourish.

I want to thank all of our participants here today for coming to this hearing. We know that you all are very busy. You have businesses and companies and associations that you are running. So we appreciate you taking time to lend your expertise and to talk about a very important topic with us today, and that is how we can create more jobs and opportunity and capital and investment and encourage our economy to grow. It is all about jobs right now, and that is what people need to have in America is jobs. We are very excited to hear your expertise about incubators and small business and what our small business owners needs and entrepreneurs need so they can grow.

Our Committee has actually held several hearings, numerous hearings on the credit crunch, on access to capital, on lending, and I know that small businesses are finding it harder and harder to come by the capital that they need to be able to create those jobs and to expand their businesses, and not to even mention the purchasing of inventory, making payroll, expansion of their businesses or even just to pay the rent. And so this is a very important topic for us.

I know that the Small Business Committee is very anxious to learn how we can further help support our small business incuba-

tors and help you be successful in the local communities and in the capacities in which you operate.

So we are looking forward to hearing from you and taking your recommendations, hopefully hearing some what I call the best practices around the industry, and that we can further share and take back to our individual states.

So thank you so much for coming today, and Madam Chairman, I yield back my time.

Chairwoman VELÁZQUEZ. Thank you.

Our first witness is Mr. David Monkman. He is the President and Chief Executive Officer of the National Business Incubation Association based in Athens, Ohio. The National Business Incubation Association is the world's leading organization in advancing business incubation and entrepreneurship, focusing on early stage companies.

Welcome, and you have five minutes to make your presentation.

STATEMENT OF DAVID MONKMAN, PRESIDENT AND CEO, NATIONAL BUSINESS INCUBATION ASSOCIATION

Mr. MONKMAN. Thank you, Madam Chairperson, Representative Fallin, and the Committee for giving us a chance to speak about business incubation.

As you have introduced, I am President of NBIA. The National Business Incubation Association is perhaps the leading business incubation association in the world, with 1,900 members in 65 countries. We have 1,400 members in the United States alone.

I also represent entrepreneurs. I have started ten companies in different countries, and I think I have something to say about entrepreneurs and their interests in incubators. Thank you for the opportunity.

Indeed, I think business incubation does have an important role to play in creating jobs, and I am delighted that you are thinking about this.

Entrepreneurs are the secret to creating jobs, as we will talk more about soon, but as you know, starting a business is not easy. There are many obstacles entrepreneurs face in their process of starting companies. That is where incubators come in to play a role.

You could think of an incubator as a university of a kind where the incubator manager is very careful in selecting the right companies to come in and gain access to comprehensive services that help improve the sustainability of these firms. Incubator clients usually stay for about a two or three-year period of time, depending on the industry they operate in. They expect to graduate, having internalized the assistance over time, too. They are going to graduate, and there are strong indications that they stay also in their industry; they stay in their communities for time afterwards. So it is an important consideration.

The institution is 50 years old here in the States. We developed it out of upstate New York, the Batavia Industrial Center is still in business today.

The institution is growing as local residents recognize that it is easier to build businesses locally than to chase smoke stacks from

elsewhere. That is part of the reason why the industry has grown to now have more than 1,100 incubators in the United States.

Business incubators do create jobs, as you have summarized. In a recent study, we have seen that in 2005, 27,000 businesses were assisted by American incubators, creating nearly 110,000 jobs, and it is worth repeating, $17 billion worth of income was produced.

In a study that was conducted for the EDA, we see that relative to other infrastructure projects that were supported, business incubators created 20 times more jobs than infrastructure projects like sewer and water projects.

Now there are 7,000 incubators around the world. Unfortunately, the United States is beginning to trail behind the growth in incubation overseas where over the last 30 years alone, we have seen 16 percent growth on a year-on-year basis of incubators in the States. We see that growth overseas is closer to 25 percent.

Also we see that today the U. K. and Germany have between 40 and 45 percent more incubators per capita than we do in the United States, despite our having an early lead in this. One of the largest sources of federal funding for business incubators is the EDA. Unfortunately EDA allocates funding to business incubation only through its public works program. In other words, they finance the bricks and mortar aspect of a business incubator, which is tantamount to building a university without covering the professors and the programs that make an education experience rich.

But the story is not over yet. I would like to make some policy recommendations that I think are important here. I would like to recommend that we consider widening the scope of funding support that is offered to business incubators. I think that we need to include the support for their operations. So I would implore you to think about that.

Also, I suggest that we also not consider business incubation as a tool for serving only distressed areas. In today's economic crisis, this is a time we need to consider a much larger set of sectors and locations than before.

Now, you are going to hear today that business incubators that follow best practices out performed those that do not. So we are hoping to help develop legislation that encourages incubation programs to use best practices. Indeed, we expect responsibilities associated with any additional funding that is made available to business incubators.

Also we find that incubators that network and collaborate together are in a better position to out perform others. They share best practice and they understand each other's businesses more effectively. So we would like to see more support allocated to the development of new state associations where local work programs can be developed.

We would also like to see that we standardize outcome measures and develop better ways to monitor return on investment for incubation programs, increase the frequency of data collection, and synthesize and act upon the lessons we learn from the process.

And NBIA is prepared to help. We can convene a panel, an advisory panel, comprised of some of the leading experts in the United States, advising on better ways to disseminate best practices, iden-

tify better proposals and proposal funding models, and develop evaluation criteria that improve federal funding allocations.

We can play a continued and larger role in business incubation education, and we can, most importantly perhaps, mobilize our members to respond to and act on recommendations and queries that are required to make more important legislation.

There are a couple of points I would like to highlight. High risk start-ups are instrumental in creating jobs, and business incubators play a role in making and leveraging the investments these entrepreneurs make. We have to recognize these entrepreneurs often have these barriers. They may be experts in a particular product or service area, but in the commercialization of this, this is where they face challenges. The roles that incubators play both on the technical assistance side and the network assistance side are crucial for commercialization.

Chairwoman VELÁZQUEZ. Mr. Monkman, the time has expired.

Mr. MONKMAN. Thank you.

Chairwoman VELÁZQUEZ. But you will have an opportunity to expand during the question and answer period.

Mr. MONKMAN. Thank you.

Chairwoman VELÁZQUEZ. Thank you.

[The prepared statement of Mr. Monkman is included in the appendix.]

Chairwoman VELÁZQUEZ. Our next witness is Mr. Lou Cooperhouse. He is the Director of Rutgers Food Innovation Center based in Bridgeton, New Jersey. The center is a university-based business incubation program that supports start-up and established food and agricultural companies throughout New Jersey and the northeast region with business, technical and operational expertise.

Welcome.

STATEMENT OF LOU COOPERHOUSE, DIRECTOR, RUTGERS FOOD INNOVATION CENTER

Mr. COOPERHOUSE. Chairwoman Velázquez and distinguished members of the Committee, thank you for giving me the opportunity to address you today.

As you mentioned, my name is Lou Cooperhouse. I am Director of the Rutgers Food Innovation Center, a university-based incubation program located in rural southern New Jersey, which has been globally recognized for our economic development impacts, including the award of Incubator of the Year by NBIA.

I speak to you as a practitioner of a leading business incubation program and as an individual that has extensive leadership experiences in new business start-ups, gained in both an entrepreneurial and corporate environments.

There are some common misconceptions about business incubator programs. So it may be best if I begin my comments today by describing what an incubator is not. An incubator is not a program that offers one-time or episodic business and financial assistance to aspiring entrepreneurs. Also, an incubator is not a building or research park that simply offers cheap, subsidized space for tenants or shared administrative resources.

The heart of a true business incubation program is the ongoing, personalized, and comprehensive services that are provided to clients. By following best practices, an incubator will customize its mission, clients targeted, services provided, and infrastructure that is required in order to integrate its program into the fabric of the community and the broader economic development goals of the region.

A best practice incubator will provide the expertise, networks, tools, and a social capital environment that will dramatically enhance the success of a new entrepreneurial venture. An incubator can become the catalyst for the creation of a business cluster in a community, county, state or region by creating concentrations of interconnected companies, suppliers, service providers and associated institutions.

As a case in point, our Rutgers Food Innovation Center has created a statewide food industry cluster where we have aggregated the entire food industry value chain, and where we have also aggregated a network of resources to meet the diverse needs of our clientele.

Because of the depth and breadth of their services, business incubators do not duplicate any programs administered by the SBA or any other federal agency, but instead utilize and integrate a number of federal, state, and community agencies as part of their comprehensive resource network strategy.

With your help, we now have an opportunity to enhance and expand our nation's business incubator programs which will serve as a catalyst for effective and efficient economic development in regions across our country. With strong conviction, I feel that what is needed first is a dedicated federal program that specifically supports existing incubator programs nationwide and also supports new incubator programs under consideration. Currently there is no dedicated federal program that supports business incubators and very few state agencies have this capability either, and the situation at the state level is only getting worse.

Incubators today must create a continually evolving patchwork of funding programs every single fiscal year in order to enhance and in some cases even continue their operations. Ongoing operational funding for existing incubation programs is critically needed and will sustain and leverage our nation's established infrastructure and enable these programs to do so much more.

Funding should also be available for the development of feasibility studies and business plans for entities considering establishment of new incubator programs so that we can proactively develop a continual pipeline for new innovative companies in the years ahead. In my opinion, our objective should be twofold: substantially increase the already compelling impacts of our existing incubator programs and double the number of incubator programs in the U.S. during the next five years. We must take a leadership position globally in our support of business incubation.

I also feel strongly that federal support to incubators should not be biased to distressed communities or to urban or rural or technology or any other industry sector, but instead focus on the programs that exhibit best practices and can create the greatest potential impacts.

Second, I suggest that a series of targeted programs be developed that result in collaborations between business incubation programs and our nation's universities and colleges. In doing so we can foster experiential learning among students who represent our next generation of entrepreneurs and dramatically improve the technology transfer capacity among our nation's faculty.

In addition, I propose that programs be developed to benefit statewide or regional incubator networks which will result in enhanced collaboration and synergy at the local level and sharing of best practices.

Third, we need to create new programs for entrepreneurial client companies. We need to target, identify, attract and retain existing and potential gazelle companies which are responsible for the majority of the total net new jobs to maximize their potential for success by nurturing them with our incubator resource networks.

In addition, we need to provide a mechanism for increased access to risk capital for entrepreneurial companies that show strong potential for business success. Federal funding that supports business incubators will yield a significant return on investment and result in enhanced regional economies across our nation.

Thank you very much. I would be happy to answer any questions you may have and participate in any further discussions over the weeks and months ahead.

[The prepared statement of Mr. Cooperhouse is included in the appendix.]

Chairwoman VELÁZQUEZ. Thank you, Mr. Cooperhouse.

Our next witness is Dr. David Lewis. He is an Assistant Professor in the Department of Geography and Planning at SUNY Albany in New York. Dr. Lewis has taught economic development planning, regional economic development, and metropolitan structures and function for nearly a decade. Dr. Lewis has also conducted over 12 years of research on business incubation.

Welcome.

STATEMENT OF DR. DAVID A. LEWIS, ASSISTANT PROFESSOR, DEPARTMENT OF GEOGRAPHY AND PLANNING, SUNY ALBANY

Dr. LEWIS. Thank you, Chairman Velázquez and the other distinguished members of the Committee.

I am honored to share with you my experiences and knowledge that I have gained from 15 years of research and my public interest in research has been I went to the School of Planning because I was interested in helping communities to effective invest their scarce resources in creating sustainable economies.

My work has guided policy from the local level, including the Rutgers Business Incubator, as well as working with the State of New Jersey, as well as the Ministry of Economic Trade and Industry in Japan on developing technology business incubation policy.

My testimony today will work on five interrelated themes. We have already heard some definition about what a business incubator is. I am going to link that to the theory of why they work, and then talk about what best practices are available, then think about the efficacy. Do we have any evidence that they really do work? We have heard pretty good numbers on that. A little bit

about the gaps in the research, and I would like to support the policy recommendations that have already been made by Lou and David ahead of me.

So in thinking about what a business incubator is, there is really a distinction between a business incubator and a business incubation program. In my view, and the research has always defined a business incubator as a multi-tenant facility with on-site management that delivers an array of entrepreneurial services to clients that are collocated in that facility.

Incubation is a broader definition which includes clients that may not be located in the facility but may be known as the virtual incubation or incubation without walls, and where their clients are not collocated and they receive services indirectly that way.

From the reason to the point of view of talking about why small businesses have such difficulty in remaining in business, the literature on business suggests that it is three primary reasons. One is the lack of access to capital. One is that they lack managerial skills, and the third is that they lack knowledge about how to estimate their markets and to gauge growth and potential, business basics essentially.

Incubators are the only economic development tool that I know that specifically address these three issues. They do this through the best practices program, and I will talk a little bit about that now.

And so the consensus opinion in the literature is that successful incubation programs have capable staffing, have program stability, and policies and procedures and things such as entrance and exit criteria.

But what really happens is the delivery of entrepreneurial services, as Lou has suggested. It is the periodic meetings with the manager and the client. It is also the peer-to-peer relationships that develop within the incubator, the delivery of basic services such as how do you actually incorporate a business; what are my legal issues; how do you do intellectual property protection; how do you do basic accounting and cash flow; how do you do business presentations. Those kinds of skills are what are transmitted as part of the incubation process.

In this there is also significant cost savings for businesses, the things that economists refer to as transaction costs. The cost of the time, money and effort to locate the correct services for your business is actually helped through the management in sort of identifying the problems that small business has and then also identifying the service provider that can help them meet their needs.

This also results and many of these services are provided at either reduced cost or no cost at all to that business. We have heard before another thing about getting capital, is that the evidence within the academic literature is that incubator clients actually have been successful in attracting venture and in-fill capital relative to other non-incubated firms.

And so with that in mind, another thing is that the reduced cost for rent, the shared services are, again, a capital savings for these small businesses.

In terms of efficacy, we have heard some great numbers. A range of literature has suggested that there is a very low public sector

cost per job created in investment in a business incubator, roughly between $144 per job to 11,000. Relative to the State of New Jersey, their industrial recruitment and retention program was costing about $44,000 per job that was created. This was work that I did with my colleague Sea DiGiovanna.

EVA research was already mentioned. We mentioned how these business incubators anchored their businesses in their local communities. This means a really high return on investment for the local community in terms of the taxes paid by the firms, by the client firms, and their employees. It ranges from about one dollar to 1.2 returned in tax investment to one dollar to seven dollars returned in tax payments.

I would also say that based on the limited research, and this is one of the gaps in our knowledge, they do compare quite favorably to other economic development investments that we have made.

Still we do have some gaps in our knowledge which I will be more than happy to talk about in the question and answer period, and the one piece of policy that I would like to also mention is that any kind of public support needs to be linked to the implementation of best practices as well as the collection of outcome data, which has been a gap in our knowledge.

Thank you for your time.

[The prepared statement of Dr. Lewis is included in the appendix.]

Chairwoman VELÁZQUEZ. Thank you, Dr. Lewis.

Our next witness is Mr. Timothy Early. He is the President and CEO of Hampton Roads Technology Council in Hampton, Virginia. Hampton Roads Technology Council is the technology center for the Southeastern Region of Virginia in Hampton Roads. This not- for-profit is dedicated to fostering growth, education and communication within the region's high tech community.

Welcome.

STATEMENT OF TIMOTHY J. EARLY, PRESIDENT AND CEO, HAMPTON ROADS TECHNOLOGY COUNCIL

Mr. EARLY. Thank you, Chairwoman Velázquez and other distinguished members of the Committee, for the opportunity to appear before you.

My colleagues noted a number of the things that I intended to mention. So I will skip forward to save time and talk specifically about our incubator. The Hampton Roads Technology Incubator System was started in 1998. It's a division of the Tech Council. It was a three- year NASA grant requiring matching funds.

We have graduated 27 clients, resulting in 35 companies, and advised over 400 others. Typically it takes three to six years for a client to graduate, and that depends on whether they have certain federal regulations to hurdle. Existing clients and graduates have annual revenues in excess of $200 million with over 650 employees. Of our current clients, 60 percent are minorities, 20 percent are disabled vets, and 33 percent are women-owned. It just happens that way. It's not something we focus on.

Others have already talked about what Incubators do. So I won't go through that, but I will add what perhaps is most important we

try to prevent companies from needless spending. Only in incubator environment can entrepreneurs get this vast array of services customized from one client to the next, from one organization that is truly invested in their success.

The Hampton Roads Technology Incubator System each year creates the following tax impacts: for Hampton Roads, $1.5 million; for the State of Virginia, $6 million; and for the federal government, $18 million. Yet our only investor is the City of Hampton. Fortunately, they are very forward thinking. We run the incubator on an annual budget of $185,000 when it usually takes around 400,000. This can only be done because of our association with the Hampton Roads Tech Council.

Could we do more with more money? Absolutely. Our plans, however, are to be self- funded one day through the establishment of a for-profit. We have tried everything else, and incubators are just not sustainable without some sort of government subsidy.

Should you wish I would be happy to answer any questions you might have on incubators or their associated programs.

Thank you very much.

[The prepared statement of Mr. Early is included in the appendix.]

Chairwoman VELÁZQUEZ. Thank you.

Our next witness, Dr. Robert Strom. He is the Director of Research and Policy at the Ewing Marion Kauffman Foundation, located in Kansas City, Missouri. This foundation promoted innovation and research and awards grants to advance entrepreneurship and improve youth education.

Welcome, sir.

STATEMENT OF DR. ROBERT STROM, DIRECTOR OF RESEARCH AND POLICY, THE EWING MARION KAUFFMAN FOUNDATION

Dr. STROM. Thank you, Chairwoman Velázquez, and thank you for the opportunity to testify to this Committee on the role that small businesses, entrepreneurs, and business incubators play in job creation.

If there is a silver lining to the economic crisis our country faces, it is the tremendous attention now paid to job creation and economic growth from policy makers and academics as well as everyday citizens. For far too long the sources of job creation in our economy have been taken for granted. The Ewing Marion Kauffman Foundation has been interested in these questions for many years, and we welcome the renewed focus on the issue of job creation.

Today's conversation is particularly exciting to us because it moves the discussion of job creation to the level of new firms. Much of the debate regarding job creation in the past has focused on large, mature firms, but young, growing firms actually create the vast majority of jobs in this country.

The Kauffman Foundation research has found that young firms, less than five years old are responsible for virtually all net new jobs. Absent start-ups, net job creation would have been negative for 22 of the 29 years between 1977 and 2005. When start-ups are included there are only three years of net job loss.

Entrepreneurs alone cannot lead us out of our current economic problems, but economic recovery and job creation will not happen without them. In fact, a minority of firms generate a majority of new jobs in this country. The top five percent of companies is measured by employment growth, create two-thirds of the new jobs. Even more impressive, the top one percent of companies generate 40 percent of new jobs. Most of these companies are young firms, less than five years old.

It is true that new businesses have higher failure rates than older firms, contributing significantly to job destruction and churning of jobs and businesses. While this churning does lead to a great deal of turbulence in the economy, it is also very important to the health and productivity of the overall economy. Less productive businesses fail, leaving strong businesses with the greatest potential for future growth. The firms that survive and growth more than make up for the companies that fail.

But how are young, small, and growing firms created? Economists have elucidated a great deal about firm and industry dynamics. That is how firms and industries are born, grow and die. Incubators provide one important way that young, small firms may be born and start to grow.

Others on this panel have first-hand experience in dealing with incubators. So I am going to not comment a great deal about the business incubators and the business incubation process, except to say that it is critically important in the early stages of a firm's life.

What I do want to do though in conclusion is to say that it is important to remember that as important as incubators are, they were one piece of the entrepreneurship and job creation puzzle, albeit a very important piece of that puzzle. There are many ways that firms start and grow, and institutions and public policies that support entrepreneurship are vitally important to the young, small, growing firms within incubators, as well as the much larger group of new businesses growing outside of incubators.

Among others, these policies include immigration policies that welcome talented, potential entrepreneurs and even favor those immigrants who plan to start innovative, new business in the U.S.: regulatory frameworks that do not impose onerous compliance requirements on small businesses; intellectual property laws that strike the right balance between giving sufficient incentives to inventors and imposing legal roadblocks to new entrants; bankruptcy protection that mitigates the risk of business failure; antitrust laws that allow for healthy competition; marginal income tax rates that do not discourage entrepreneurial endeavors by minimizing their economic rewards; and finally, and very importantly as we have talked about already, financial systems that offer access to both debt and equity capital for new firms. Policies in these arenas and others can work together to create environment that is conducive to the birth and growth of new companies and will help incubators, accelerators, and other organizations be even more successful in their work.

Thank you.

[The prepared statement of Dr. Strom is included in the appendix.]

Chairwoman VELÁZQUEZ. Thank you, Dr. Strom.

Our next witness, Mr. Peter Linder. He is the Chair of the Mid-Atlantic Angel Group Fund and a Board Member of the Angel Capital Education Foundation in Malvern, Pennsylvania. Mr. Linder has invested his own capital in numerous start-up companies, has been a limited partner in 15 private equity funds, and has been a director of several start-up companies.

Welcome.

STATEMENT OF PETER LINDER, CHAIR, MID-ATLANTIC ANGEL GROUP FUND; BOARD MEMBER, ANGEL CAPITAL EDUCATION FOUNDATION

Mr. LINDER. Thank you, Chairwoman Velázquez, Ranking Member Graves and all of the members of the Committee. Thank you very much for holding this hearing on business incubators and their role in job creation.

I am please to discuss for a few minutes how Angel investors support innovator start-up companies, many of which got their start in business incubators and accelerators. I am a long-term Angel investor in the Philadelphia area. I have invested in 17 start-up companies as an individual and 14 companies through my Mid-Atlantic Angel Group Fund, which in itself brings together 90 Angels investors.

I am also a member of the foundation of ACF's sister organization, the Angel Capital Association, which is a professional alliance of 150 Angel groups in 44 states, representing about 1,600 active Angel investors.

Innovative, high growth, start-up companies are critical for job growth and economic vitality in any year, and even more so during this bad economic times. A 2009 Census Bureau study funded by the Kauffman Foundation found that start-up companies create new jobs at a higher rate than all other companies as a whole. On other words, if you excluded the new jobs each year in a normal years from small business start-ups, overall employment in this country would probably be negative.

I know from my own investment and mentoring activity in Pennsylvania that the entrepreneurs that will create jobs, innovations and companies in our future need support from a large community of experts and organizations, and clearly, the services and facilities of incubators and private accelerators are very, very helpful to the start-up and growth of these businesses.

Let me share a few examples of incubators and companies that came out of incubators in Pennsylvania. In Pittsburgh, Carnegie Speech, a developer of spoken language assessment and training software, was incubated at the Language Technology Institute at CMU. My Angel Investment Fund, the Mid-Atlantic Group, made two investments in that company. I am personally active with the company providing business advice and attending board meetings, and Carnegie Speech is a healthy, young business that employs 17 people and has been growing.

Morphotek, a Philadelphia company that develops therapeutic antibodies for treatment of cancer, began at the University City Sinai Center incubator, received capital from local economic devel-

opment organization and later from Angel investors. The company now employs 130 people, is building a 60,000 square foot plant.

From my personal standpoint, I have used my own background to help companies that I have invested in. Of the 31 Angel investments that I have been involved in, I have served on the boards of seven of those companies. The CEOs of those companies appreciate the fact that I have been through what they have been through since I built two companies of my own, and that is the kind of advice they generally look for.

In the seven companies where I serve of boards or have served, I work with the CEO or his team usually once a month over a three to five-year period and we tackle many problems, many issues, from detailed planning to cash shortages when sales are slower than forecast, and insuring the right leadership that was on the board to help the company and the community to grow.

I would like to take just a minute to point out some issues of public policy that are of great concern to the Angel community in the United States. Specifically, there are threats to the health of Angel investment in the Senate Financial Reform Bill. Specifically, the bill calls for increases in the requirements to be an accredited investor, which is not necessary and which could significantly reduce the number of Angel investors in this country.

In addition, the bill opens the door to the elimination of federal regulation of the accredited investor rules to states, potentially meaning that different states could have different rules, and it would impede cross-state business deals.

I want to thank you for the opportunity to describe the unique role and the significant impact that Angel investors have in our economy supporting the innovative start-ups that create important new jobs in this country. Angel investors enjoy being part of the ecosystem for these companies, along with incubators, accelerators, and other private partners. Angel investors are very, very passionate about helping build great new companies in their own communities.

I would be happy to answer any questions you have, and I thank the Chair for the invitation to appear today.

[The prepared statement of Mr. Linder is included in the appendix.]

Chairwoman VELÁZQUEZ. Thank you, Mr. Linder.

Dr. Lewis, the number one challenge that we have today is job creation, and we know that if we want to get this economy growing again, job creation is a very important component for that. In preparing myself for this hearing, I was just impressed by the Commerce Department report that found that they need between $144 dollars and $216 to create one job. This is in terms of incubators.

Compared to infrastructure projects that cost up to close to $6,000 per job, can you discuss how these facilities create jobs so efficiently?

Dr. LEWIS. I think that in part, as we know, small businesses tend to grow a little bit faster than larger businesses. This is partly just a relative game in terms of if you have two employees and you add two, then they have 100 percent growth.

But in aggregate jobs, they actually do add quite a few jobs to the economy as a whole. The efficiency is because, I believe, that in the design of best practices that tailor services to individual companies, they really are addressing what the academic business literature says are the reasons for business failure.

So SBDCs cover one part of it, and often SBDCs are a large part of the incubation programs. That is where entrepreneurial services as through an SBDC, and they are joint, and it optimizes the SBDC investment as well.

I do think that it is the collocation that is also very important. Entrepreneurs, I mean, it is sort of like going to college. You do not just learn from your instructors. You learn from your peers. You form study groups, and for me I sort of think of the incubation period as being a period of we talk about graduates. They have learned; they have internalized these lessons; and so when they go out and they hit the stiff market forces in the real world, they are better able to adapt to changing economic environments due to the lessons that they have learned while they were in the incubation program.

This also explains their high survival rate. The SBA has estimated that roughly about 51 percent of firms survive after five years. Relative to incubator firms that number reaches in some regions up to 86 percent of them are surviving after graduation.

Chairwoman VELÁZQUEZ. Thank you.

Dr. Strom, during economic expansion employment rates from business incubators have been high, and in 2005, some of you mentioned 100,000 jobs were created through incubators, and in the last year and a half what we have seen is the economy has contracted and has only recently begun to recover.

Can you discuss how effective incubators are at creating jobs? Do you have any data in terms of the type of job creation during this economic downturn?

Dr. STROM. Certainly. All excellent questions, and I will try to summarize and address all of the points.

Yes, job creation is vital, and the key thing is young, growing firms. Most firms that start, the majority will fail within five years. Of those that succeed, most of those will employ a few people, but not many. The minority of firms that grow rapidly are the ones that account for most of the job growth.

And the reason is that those firms are able to either reach a new market or be more productive than existing firms in industry and, therefore, out compete those firms. And to the extent that incubators could assist those firms in understanding the markets and in enhancing their productivity, incubators will then enhance job growth.

The focus though, I believe, needs to be on potentially if the key is job creation rather than firm creation, the focus needs to be on firms that are in those industries or with the kinds of technologies or with the kinds of innovative processes that are potentially high growth firms. So focusing more narrowly on the high growth firms will pay rewards in job creation.

Chairwoman VELÁZQUEZ. Thank you.

Mr. Cooperhouse, incubators like the one that you run at Rutgers are increasingly specialized in specific industries. What are the benefits and the drawbacks of this type of specialization?

Mr. COOPERHOUSE. An excellent question as well. Correct. Historically there have been quite a few mixed use incubators that provide a variety of services to a diversity of industry sectors. I think we are, in fact, now seeing more and more specialization; whether the sector is life science, telecommunications, biotechnology, food and agriculture or, particularly today, environmental technologies.

The advantages of focusing on a specific sector are that we can provide much more specific services to clientele. In our case, as I mentioned, we can also provide a cluster opportunity to really aggregate all of the elements of a particular industry together, the whole value chain, as well as aggregate resources that could provide the expertise that is needed, whether it is business marketing, production development, quality assurance, technology, and so forth to really meet the need of small businesses.

So in terms of service, what has been quite evident in our discussions today is that best practices are all about service, not about space. Providing services to clients is critical to an incubator's success in their model of excellence. So, in fact, a sector-based program does, in fact, enable that to occur.

On the other hand, mixed use incubators are certainly very powerful in many parts of the country where there is not a particular sector that is as well defined as might be in a particular region.

Chairwoman VELÁZQUEZ. Okay. Mr. Monkman, you mentioned that SBA does not have a specific incubator program, or I do not recall, but I think that you were the one who mentioned it. However, there are some who might say that SBA provides support, and that there are different program that could fill the basis of an incubator program.

What is your views on that? And if Congress were to establish a national incubator program, how would it differ from the services already being provided by SBA?

Mr. MONKMAN. I think that is a very good question and one that is worth exploring in detail. SBA does have some interesting small business development support that is offered through such programs as SCORE and the Small Business Development Centers. That network, the SBDC network, is extensive, and I believe that it extends into over 1,000 or maybe even 1,100 points of presence around the country.

The difference between what business incubation is about perhaps and what SBDCs are about is SBDCs provide episodic support in a very equal way to people who come choosing to avail the services. It can be a very light type of intervention. It can be more comprehensive than that, but SBDCs are measured in terms of their effectiveness on how much outreach they have accomplished, how many people they have served.

Business incubation is a longer programmed approach. It is something that extends over a period of two and in some industries maybe seven years, where an incubator manager is packaging technical assistance and networking assistance as it is required by the clients that are being served.

I think that there is still a very important role for SCORE programs and SBDCs and, indeed, many incubators are making use of them today. However, I think we need to look at incubators to provide more concentrated, comprehensive, tailored support that is packaged. That is where I would say the distinction is at.

Chairwoman VELÁZQUEZ. Thank you.

Mr. Graves.

Mr. GRAVES. Dr. Strom, you mentioned as far as job creation, obviously focusing on those high growth areas or those areas, I guess, that are going to explode, for lack of a better term, what sectors right now if you can?

Dr. STROM. Picking winners is always a dangerous job.

Mr. GRAVES. Yes.

Dr. STROM. You know, but certainly the—

Chairwoman VELÁZQUEZ. Especially around here.

Dr. STROM. Yes, yes, yes.

[Laughter.]

Dr. STROM. But certainly the high technology sectors, the life sciences, the biological sciences are the key areas where there is potential for high growth. Those also require a much longer gestation period in many cases, and much more concentrated research, and kind of combining the kind of scientific research that goes on in the academic community with the kind of entrepreneurial and commercialization capabilities that many organizations have, including some incubators and other organizations as well.

So the key is really the industries and in some cases geographic clusters as well as industries. So those are probably the two most important factors.

Mr. GRAVES. And all of those areas obviously take a lot of capital, too.

Dr. STROM. Yes, yes, both human intellectual capital and financial capital.

Mr. GRAVES. Mr. Linder, I am fascinated by the whole Angel investor idea. Is it normal practice—and I am just asking out of curiosity—is it normal practice to always sit on the board?

Obviously if your firm has a stake in it, you want to have some—I mean, are there firms out there or companies out there that you see that you just give funding to or do you always provide mentoring, I guess you might say, or help or kind of oversee everything sitting on the board and kind of moving forward?

I also would by very curious on how you pick and, you know, what goes into that process because you are risking dollars. You obviously want to try to pick the winners, anyway, the ones that have the most potential.

Mr. LINDER. Thank you very much, Congressman, for asking me that question.

First of all, I think the straight out answer is we never make an investment from our fund, from our Angel fund where we do not either take a seat on the board or act as an observer to the board. Some of our members do not want the liability of board seats, but there is never a case where we make the investment and do not do that.

Some of our members are more active; some are less active, depending on the strength of the board itself.

I want to point out, too, that this year, which was a bad economic year for everybody, we did not really miss a beat in our Angel investing. We have invested in as many deals this year as we did in any year. So I think our field is very, very healthy at this point in time.

I do not think I addressed your second question. What was, that Congressman Graves?

Mr. GRAVES. Just as far as making the determination. I mean, do they come at you with obviously a very detailed business plan? You probably want that. I mean, I am just curious on how that works.

Mr. LINDER. Yes, in a way sometimes it is a mixed bag. They things come with very detailed business plans. Sometimes they come with a couple of pages worth of summary. We never read more than a summary anyway.

I think the key for us usually in a presentation by an entrepreneur is very subjective. It is our view of how we feel we can relate to this entrepreneur because everybody has got a great idea. Everybody is looking for money. And if I could pick one point out that we were discussing earlier before the hearing started, that was many of our people try to look and see if we believe the entrepreneur is coachable because if everything is going fine, it is not a problem. But if the business gets in trouble, will they listen?

So I think that is the first thing we look for in reviewing a business plan, talking to the entrepreneur.

Mr. GRAVES. Well, I love the idea that this is, you know, obviously in a time when it is hard to find capital in many cases, and particularly with the regulators requiring more of the banks, which means the banks have got to require more of the folks that are looking for capital, but I think this is fantastic. I mean, you have got a good idea and you work hard at it. You are going to be able to find investment dollars out there or capital to work with.

Out of curiosity, what is your success approximately?

Mr. LINDER. I never measure it, sir.

[Laughter.]

Mr. LINDER. It is very hard because I think I would say that in the 15 years I have been doing it, all I will say to you is that I am cash flow positive, and cash flow positive enough for my family not to rise up against me. But it is very hard because a lot of the deals really just get lost along the way. I do not do it for fun, but it is really hard to measure the ROI sometimes.

Thank you for asking that question.

Mr. GRAVES. That says a lot, absolutely.

Chairwoman VELÁZQUEZ. Mr. Bright.

Mr. BRIGHT. Yes, ma'am. Thank you, Madam Chairman.

Let me commend you on having this hearing today and also thank the gentlemen for being part of the panel. You have been very informative for me.

You know, I come from an old vintage point as being a mayor of some of the cities out there. So I am very familiar with your small business incubators.

Dr. Lewis, you mentioned something that really threw me. What is a gazelle company? Did you mention that or Mr. Cooperhouse? What is a gazelle company? I had never heard that before.

Mr. COOPERHOUSE. Perhaps the best answer should come from Dr. Strom from Kauffman Foundation, but a gazelle company is what he referred to as the high growth company. I will briefly respond to that in that all incubator managers, as they look at companies, do the same thing that an Angel network might do. They are measuring their success by impacts. They are looking for the most qualified company that can, in fact, become a gazelle. They are looking for companies where there is a strong management team, strong financial backing, a great idea, a differentiated business concept, and a strong potential for success.

And those gazelle companies statistically are generating the majority of the net new jobs in this country.

Mr. BRIGHT. Good. Thank you very much.

Dr. Strom, anything?

Dr. STROM. As far as a narrower definition, it is typically companies that grow at a rate of 20 percent or more, three or four successive years.

Chairwoman VELÁZQUEZ. By 20 percent?

Dr. STROM. About 20 percent a year.

Mr. BRIGHT. Twenty percent. Thank you very much. That just caught my attention, and I had not heard that terminology.

Let me ask you something, and the incubators are really key in success as far as starting up companies. We found that they were so successful that we many times had difficulty deciding who could be asked to leave the incubators. In fact, some of the smaller businesses become so attached that they are so dependent on the incubator that they never want to terminate that support.

How do you determine when a small business or a business is ready to turn out into the real world? Mr. Monkman, you look like you want to answer that. So go ahead.

Mr. MONKMAN. It is actually difficult. It is difficult for incubator managers often to come to closure on a relationship that they have had for some time, especially in successful instances where a company is continuing to grow.

But at some point a very successful company actually begins to antagonize an incubator's performance because it is taking space away from another organization that needs to be there. And in most instances, incubators are nonprofit organizations. Maybe 85 to 90 percent of them are nonprofit organizations. It is important to make sure that you are spreading the wealth, making sure that you are making equal access to as many people as you can at the time.

Mr. BRIGHT. Sure.

Mr. MONKMAN. So a lot of it has to do with the absorption capacity of the local community to provide graduate spaces. Indeed, one of the types of policy recommendations that we would make is making provisions for graduate spaces.

Mr. BRIGHT. Good. That has been a major issue in our small business incubator, and I just did not know if you all had a standard practice throughout the industry that you know of.

Let me thank you for what you are doing. You are key into our economic recovery in what you are doing out there. Continue your good work. There is a tremendous number of success stories out

here and not just from you, but from other people who are doing what you are doing out there.

So thank you very much, and Madam Chairman, I yield back my time.

Chairwoman VELÁZQUEZ. Thank you.

Mr. Luetkemeyer.

Mr. LUETKEMEYER. Thank you, Madam Chairlady.

Thank you, gentlemen, for being here today.

Just a quick question. I know that in going through the reading materials here on the issue of the day here, I was struck by the for-profit and the not-for-profit incubators. Can you give me a little insight as to the benefits, the pluses and minuses of each one of those?

Mr. MONKMAN. If you do not mind, may I?

Mr. LUETKEMEYER. It seemed Mr. Monkman was going to answer that questions as the association man.

Mr. MONKMAN. There was a time during the late 1990s, during the dot.com period, when there was a large growth in for profit incubators. I think at one point they became as great as maybe 25 or so percent of the number of incubators operating in the states.

I think you might want to think about it from the entrepreneur's perspective. An entrepreneur does not have access to deep pots for them to be making great investments in education, though they would like to as much as they can afford dynamic programs. So almost by definition, much of the incubation process is to try and make the cost of residency and participation as practical as possible.

So what might happen is you might have a relationship with a local sponsor that may have provided at a discount or for free a building that is available for collocation, that space that entrepreneurs can share. But to fund programs, incubators might look to charge market rates for the space, and those rates are going to, in large part, pay for the services that are offered.

We do not want to give the information and the support away for free to the entrepreneur. They need to have some skin in the game. But I think that we are seeing that there is probably only so far for profit incubators can go before they run into long term problems because the incubation process tends to be longer, two years, three years, in some instances five years.

That is a lot of time to carry support to an incubatee client.

Mr. LUETKEMEYER. Just very quickly, would you define your business as an incubator or more of an investor into existing businesses that you see have already gone past this incubation stage?

Mr. LINDER. Yes, we are clearly an investor that usually sees deals that in many cases have been through incubators and have been through a friends and family fund raise. They look a little more like a company before we see them.

Mr. LUETKEMEYER. I have another quick question for you. Do you maintain an interest in the business forever or do you get rid of it after a certain period of time? Is there a structured agreement so that you will stay until they get, you know, a certain amount of revenues or certain amount of assets?

How do you do that?

Mr. LINDER. Well, usually three or four seconds after we cut the check we ask them what the exit strategy is.

[Laughter.]

Mr. LINDER. That is as partial answer.

I think on the average if it is a good deal, we are in the deal five, six years before either a venture capital for larger dollars comes about and takes us out, or there is an acquisition.

Mr. LUETKEMEYER. Your intention, though, was not to own the business forever or be a part of it forever.

Mr. LINDER. Oh, no.

Mr. LUETKEMEYER. Your intention is to get them off the ground and be able to get in and get out?

Mr. LINDER. One hundred percent.

Mr. LUETKEMEYER. Okay.

Dr. LEWIS. Can I comment or follow up a question?

Mr. LUETKEMEYER. Yes.

Dr. LEWIS. Two of the Angel investors in my fund in Philadelphia have actually started what is called an accelerator, and I hope nobody asks me the difference between an incubator and an accelerator. I will let the faculty members do that.

But in any case, to respond to the earlier question about how long in an incubator, this group has decided that the entrepreneur will have a four-month window with a lot of resources applied, kind of high, intense resources, and at the end of the four months, the entrepreneur either has an opportunity to present to Angel Investment or they are out.

We will see how the experiment works, but I wanted to respond to the other side of the coin.

Mr. LUETKEMEYER. Okay. Dr. Lewis, did you have a comment a minute ago?

Dr. LEWIS. In terms of the differences between the public or the for-profit incubators is that the goals are really different. A for profit incubator really has an interest in exercising the business for their own profit, where a not for profit incubator is interested in growing a local economy.

And so from the point of view of a public sector investment in terms of what it means for local jobs, if you acquire a company through venture firms, you might sell and license that technology to Japan or South Korea and Americans might never enjoy the benefit of that, and their time line for success is much shorter, and this is what I believe has led to the failure of so many of the for profits that grew up in the late 1990s, is that they were anticipating profits in, you know, six to 18 months. It takes three years to incubate a firm on average, and so they were unreasonable in their expectation.

Mr. LUETKEMEYER. So you are telling me that there are very, very few for-profits left out there right now?

Dr. LEWIS. Roughly about ten percent is out there at this point.

Mr. LUETKEMEYER. I understand. Okay. Very good.

Thank you, gentlemen. Thank you, Madam Chairman.

Chairwoman VELÁZQUEZ. Thank you.

I do have some other questions. Mr. Early, we have not seen in recent memory a downturn like the one that we are witnessing in terms of the difficulty of small businesses accessing credit, capital.

How has this downturn affected the decision—and this will be for Mr. Linder, yes—the decisions of Angel investors?

Mr. LINDER. Thank you for letting me answer that question. Truthfully, we have not witnessed the downturn in Angel investing. At least I can speak certainly for eastern Pennsylvania. We are investing at the rate of in my group three or four deals a year. That did not change throughout 2009. I guess we were all hoping that we would have recovery at some point because we will not be able to exit if we do not, but I can tell you the industry right now is very, very healthy and has not really seen the disastrous effect as other people in the country are seeing.

Chairwoman VELÁZQUEZ. And can you comment on the differences between businesses developed in an incubator versus those that are not?

Mr. LINDER. The truth of the matter is I am not the best to comment on that because I do not really keep track of that. In fact, preparing for this hearing actually made me go back and look and realize that I saw a lot of incubator deals that we invested in, but I wasn't really giving them that name at the time because there was usually some other small investment round ahead of it and between us and the incubator. So I am sorry I cannot answer that question more accurately for you.

Chairwoman VELÁZQUEZ. Anyone who would like to comment on that question?

Dr. LEWIS. Again, statistically there is research that suggests that business incubated firms actually get higher investment rates from Angel and venture capital. In part it is because they have received much of that managerial training. They have had the ability to develop business presentation skills, and they have learned how to be coached, which is something that venture and Angel capital firms are interested in.

And it is that bridge money between I am self-investing to I am going to be an IPO and need $20 billion to build a factory; it is that Angel Fund; it is those kinds of seed investments that really make the difference for the entrepreneurial firms.

Anecdotally, looking at state seed fund capital in New Jersey and Michigan, those people who have the responsibility for selecting clients have given testimony to that. Incubator clients that they are managers serve as the first round of evaluation that managers tend to be, and that gives them a leg up on firms that have not had that kind of association with the training and managerial skills, and so they see that as a big benefit and tend to invest in them more.

Chairwoman VELÁZQUEZ. Okay. Thank you.

Yes, Mr. Early.

Mr. EARLY. Yes. In our community we do not have a known Angel network. They are not publicized. They are hidden. They do come to me to find out what deals are available out there, and the reason we probably have a higher percentage is because I have vetted them pretty carefully. It is my reputation on the line, and I cannot waste their time.

Chairwoman VELÁZQUEZ. Okay. Mr. Early, transaction costs often determine whether small businesses survive in a down economy, and in terms of their operational costs and productivity, how

do incubators make small businesses more competitive during this time?

Mr. EARLY. I do not think that we actually make them any more competitive during this time or good times. An incubator client is at the beginning of their life. They cannot go out and get bank loans. No conventional lenders are going to cover them. You have to go Angel investors, and they are just not at that point.

But we do things. We do their bookkeeping. We do accounting for them. We take a lot of that stuff off of them. We want them to focus, since we are technology, on their technology and improving it and sales. We will handle everything else for them.

Chairwoman VELÁZQUEZ. Yes, Mr. Cooperhouse.

Mr. COOPERHOUSE. Just to add to that comment, as I stated, incubators do not necessarily make your company more competitive, but an incubator team is really skilled at identifying what it takes to be successful, and many entrepreneurs do not know what they do not know, and the incubator staff's role is to really make them aware of what it takes to be successful, how to have a really differentiated, unique selling proposition for their business and stand out and really provide value to their customers.

So in doing so, we are making them more competitive by really opening their eyes, and frankly, we all measure our impacts by our successes, but we also do something that is not measured. We also, frankly, tell a lot of people in a nice way that maybe their idea is not necessarily the greatest. It is not really special enough, and perhaps they should not make that investment just yet and really do a little more research.

So there is an awful lot that goes on behind the scenes for the many, many entrepreneurs that we serve. In many cases, we actually save them money by not having them expend it to an idea that really is not proven.

Chairwoman VELÁZQUEZ. Thank you.

Dr. Lewis, I believe that you were the one who mentioned how in Germany and England—

Dr. LEWIS. U. K.

Chairwoman VELÁZQUEZ. —the U. K., 45 percent of the number of incubators compared to the United States. What is it that they are doing differently compared to us?

Mr. MONKMAN. Well, I have been in both Britain and Germany. I have talked to the head of the German Business Incubation Association. I think that part of their approach is they are a bit more centralized.

We have conceived of a business incubation community based on a bottom-up, grassroots approach. There is a lot of individualization and tailoring of an incubation program to serve the community in which it was conceived. We could have an arts incubator program, for example, that is about getting 90, artists together, and it will help to feature and showcase the art they produce.

There, there is a lot more standard national level programming, like let's have a large biotech or an aerospace incubator. We are a lot more organic in our approach. I think that is part of it.

Also, by nature, there is a different funding model in European countries than we have here, but there is a far greater role the larger states play in programming business incubation.

Chairwoman VELÁZQUEZ. Obviously, we know that here you can access some type of grant from EDA and USDA, and of course, that will in some way affect the number of incubators and incubation created in this country. So how does this type of funding, you believe, impact the incubators?

Mr. MONKMAN. You are referring specifically about the EDA support that is currently offered?

Chairwoman VELÁZQUEZ. EDA and USDA. I believe that USDA also provides some type of funding.

Mr. MONKMAN. I cannot speak about the USDA program in any detail. Perhaps others can, but in terms of the funding support that is currently offered through EDA, right now it is offered to distressed communities, and there is a very particular type of location that qualifies for economic funding from EDA for brick and mortar investments.

I think one of the opportunities for us is to look at an initiative that is being promoted by Tim Ryan in the House. Also, Senator Sherrod Brown has introduced a Business Incubator Promotion Act that is looking to, in the reauthorization of EDA, widen EDA's scope of support. So that it is looking at more programmatic opportunity, as we have discussed earlier.

I would like to hear what USDA can do.

Chairwoman VELÁZQUEZ. yes, Mr. Cooperhouse.

Mr. COOPERHOUSE. If I can add on both fronts, our center has actually received funding from both USEDA and the USDA. And to add on to Mr. Monkman's testimony, the EDA funding through the public works infrastructure program particularly provides some tremendous funding opportunities for newly established programs for bricks and mortar. However, incubator funding is very limited in the scheme of the EDA's total budget. It is a tremendous program, but it is very limited in the amount of new incubators that can be created.

Fortunately, we were a recipient of EDA funding. In addition, the USDA has programs that support business incubators, actually about half a dozen programs, that support various activities and with operations grants.

There was actually a one time USDA program that awarded one million dollars to ten different programs throughout the country called the USDA Rural Development Agricultural Innovation Center Demonstration Grant Program. We were the recipient of one of those ten grants as well.

However, it was a one time program, all meant to be spent in one year with no ongoing support. So it was not necessarily designed for long-term sustainability of a program. Fortunately, it was really the seed funding that enabled us to then leverage that and receive in total about $14 million in grants since then.

But what is really lacking today is operating funding to any incubator program. So what we have instead is limited funding for new programs. What is really needed is a tremendous amount of funding to really subsidize the incubator programs around the country today that rely heavily on their sponsor and who, in turn, is heavily funded through the state. As states are providing cutbacks, it is having effect to all incubators across the country, and we are quite concerned about what June 30th of this year might bring to

the number of incubators around our country that might have some funding in jeopardy.

Chairwoman VELÁZQUEZ. Since you have been lucky since you have gotten grants from both USDA and EDA, I just would like for you to share with us if you sense that there is coordination or do you feel that there is a lack of coordination between the existing federal resources that exist today and a lack of strategy in terms of long-term strategy regarding the purpose of promoting incubators?

Mr. COOPERHOUSE. I cannot necessarily speak to how much the two agencies interrelate. To the best of my knowledge, they are operating independently to satisfy their particular objectives. As was mentioned, this includes the USEDA focusing particularly on revitalization of distressed economies, and the USDA funding in particular rural development. So each has identified a particular bar, if you will, that needs to be met in order for funding to be in place.

So, again, we have very limited funding and very restrictive funding. In our case, we are in a distressed community and in a rural area. We are the second poorest city of 566 in New Jersey in the city of Bridgeton and have the lowest per capita income by counties as well. So we are in a federal empowerment zone, and it made a lot of sense in our case to fund our particular program.

But those who are in urban areas and in other areas that do not meet these criteria, they are not qualifying.

Chairwoman VELÁZQUEZ. Mr. Monkman.

Mr. MONKMAN. I would like to add that in addition to USDA and the SBA and EDA and the types of organizations that indirectly play a role in business incubation, there is even the Federal Labs Consortium. Federal Labs across the country are developing technologies that could be, for example, licensed to entrepreneurs, who operate businesses in EDA-funded incubators to improve the opportunities for entrepreneurs in a particular community.

And I know that right now, the FLC is looking at ways to improve linkages to organizations like ours. The Association of University Research Parks and the like are entering into memoranda of understanding with FLC.

But I think there needs to be a lot more integration and a lot more coordination between organizations.

Chairwoman VELÁZQUEZ. Thank you.

Mr. Graves, any more questions?

Mr. GRAVES. No, Madam Chair.

Chairwoman VELÁZQUEZ. Well, again, thank you very much. We will continue to study the issue of incubators in our country and how can the federal government best assist the work that you do.

With that I ask unanimous consent that members will have five days to submit a statement and supporting materials for the record. Without objection, so ordered.

This hearing is now adjourned. Thanks.

[Whereupon, at 2:21 p.m., the Committee hearing was adjourned.]

NYDIA M. VELAZQUEZ, NEW YORK
CHAIRWOMAN

SAM GRAVES, MISSOURI
RANKING MEMBER

Congress of the United States
U.S. House of Representatives
Committee on Small Business
2361 Rayburn House Office Building
Washington, DC 20515-6315

STATEMENT
Of the Honorable Nydia M. Velázquez, Chairwoman
United States House of Representatives, Committee on Small Business
Full Committee Hearing: *"Business Incubators and Their Role in Job Creation"*
Wednesday, March 17, 2010

In recent weeks, our economy has started showing signs of economic recovery. Gross Domestic Product has swung from negative 6.4 to 5.7 percent growth—the biggest 9 month swing in nearly 30 years. While indictors like these are promising, we are still not seeing the kind of job creation Americans deserve.

When it comes to creating new jobs, small businesses are always central to the equation. Following the recession of the early 1990's, small firms created 3.8 million jobs. After the recession of 2001, micro-businesses alone generated one million jobs. Entrepreneurs will be just as important to bringing our nation out today's downturn as they were during those previous recoveries.

Business incubators have long been a powerful tool for helping new businesses launch and existing firms grow. In 2005 alone, incubators assisted 27,000 start-up companies that provided full-time employment for 100,000 Americans – and generated $17 billion in revenue.

Beyond promoting business growth, business incubators also bring proven benefits to the communities in which they are located. Nearly eight out of ten incubator graduates stay in their local communities – meaning job opportunities and economic development remain in that region for the long term.

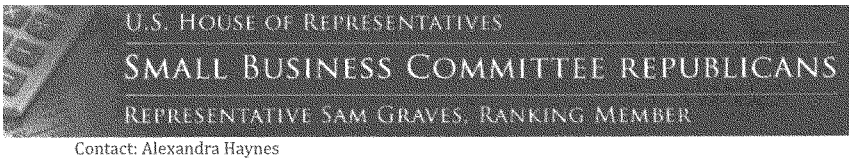
Today, the role of incubators is changing as the business world evolves. Although many of us think about traditional incubator services – like office equipment or meeting space – contemporary incubators offer everything from technical assistance, to financing options to marketing and manufacturing advice.

One promising trend has been the emergence of incubators that are especially tailored to an industry located in their community. For example, we've seen the development of a "fashion focused" incubator in New York City. Agribusiness incubators have sprouted up in areas with a high concentration of food production. In other parts of the country, with a history of technological innovation, software business incubators are taking root.

These industry-specific incubators allow new firms to tap into local knowledge and business networks that are already in place. By leveraging a town or city's existing assets, these incubators can accelerate economic development – and create local jobs.

After all, that is what today's hearing is really about – putting Americans back to work. We already know the job creating potential of small, growing firms. Now the question becomes how to create conditions that maximize the chances for budding enterprises to get off the ground. Business incubators have a proven track record in this area. In fact, 80 percent of firms that graduate from these institutions remain in operation, to this very day.

During today's hearing, we will hear from some of the most innovative business incubators from around the nation. I look forward to their testimony. It is my hope that this discussion will not only highlight their success stories – but also identify how we can replicate those stories in communities across the nation.



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Opening Statement for Hearing:
"Business Incubators and Their Role in Job Creation"
Sam Graves
Ranking Member
House Committee on Small Business
United States House of Representatives
Washington, D.C.
March 17, 2010

I would like to thank the Chairwoman for holding this hearing to examine the impact that small business incubators have on job creation. I also would like to thank our witnesses for taking the time out of their busy schedules to be here with us today.

Small business incubators serve many purposes. Not only do they bring life to once abandoned neighborhoods throughout the country, they also assist startup businesses by providing them with important support services like management advice, clerical assistance, business planning, and broadband communications. Entrepreneurs who are trying to get their business off the ground often look to incubators for help and resources that may otherwise be out of reach. After receiving assistance from an incubator, a small business can often stand on its own, healthy and self-sufficient.

Now more than ever, Americans need the services offered by small business incubators. The economic downturn has shuttered many businesses, leaving once bustling communities with empty storefronts and warehouses. Employers are hesitant, if not completely unable, to expand their operations or hire new workers, and would-be entrepreneurs are putting future initiatives on hold. Small business incubators can help provide stability in an unstable environment, encouraging growth and development.

As we have seen over the last year, injections of government capital and stimulus spending are not able to adequately address the problems that many American businesses face in this difficult economy. Rather than spending more federal dollars, we should consider whether the private sector can provide the services of incubators. For example, angel investors might see an opportunity to establish incubators for a greater share of a small business' equity. At a time when our nation is faced with an unsustainable budget and mountains of debt, every effort must be made to ensure that taxpayer funds are being used wisely and any government intervention in the private sector is streamlined and limited.

In the wake of this recession, small business incubators will continue to play a critical role in addressing the needs of both small businesses and struggling neighborhoods across America. Once again, I thank the Chairwoman for holding this timely and important hearing and I look forward to hearing our witnesses' testimonies.

Statement of

David Monkman
President & CEO
National Business Incubation Association

Athens, Ohio
www.nbia.org

Written testimony before the
Small Business Committee
U.S. House of Representatives

Hearing on
"Business Incubators and Their Role in Job Creation"

March 17, 2010
Washington, D.C.

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Chairman Velázquez, Ranking Member Graves and other Members of the Committee, my name is David Monkman, and I am president & CEO of the National Business Incubation Association. Founded in 1985, NBIA is the world's leading organization advancing business incubation and entrepreneurship. Our organization represents nearly 1,900 individual members worldwide – including more than 1,400 in the United States. This group, which includes business incubator managers and developers as well as others interested in the business incubation industry, includes some of the most knowledgeable and experienced professionals in entrepreneurship support. Thank you for the opportunity to appear before you today to share some of their stories to underscore the importance of business incubators as effective tools for assisting entrepreneurs and creating jobs.

Like many incubator managers who work with new and emerging businesses, I am an entrepreneur myself. Because of my experience starting companies, I am drawn to business incubation. Recently I set up an economic development agency for the Government of Pakistan for emerging and small enterprises that is now credited with creating thousands of jobs. I also have personally set up or helped set up 10 private companies. I consider myself a specialist in entrepreneurship and small business development, and I have worked as an advisor for the Asian Development Bank, the European Commission and the U.S. Agency for International Development on projects that were in large part designed to build dynamic, high-growth companies and create jobs.

Overview of business incubation

As the Committee examines the best way to create new jobs to help turn around the struggling U.S. economy, I'm pleased to know that you're considering business incubators – the foremost creator of jobs in our nation – as an attractive option. For 50 years, incubators have been helping entrepreneurs turn their ideas into viable businesses, promoting innovation and creating jobs by providing emerging companies with business support services and resources tailored to young firms to increase their chances of success.

Business incubators nurture the development of entrepreneurial companies, helping them survive and grow during the start-up period, when they are most vulnerable. These programs provide their client companies with business support services and resources tailored to young firms. The most common goals of incubation programs are creating jobs in a community, enhancing a community's entrepreneurial climate, retaining businesses in a community, building or accelerating growth in a local industry, and diversifying local economies.

As you're surely aware, starting a new business isn't an easy task. Most business owners know every detail of their product or service, but many lack all of the skills they need to turn their ideas into successful firms. Business incubation programs are uniquely positioned to help entrepreneurs access resources through the incubator, business community, local colleges and universities, and other business assistance programs to help them develop the business skills they need to grow successful firms that can help turn around struggling economies.

Around the world, entrepreneurs are playing an increasingly important role in transforming economies. Rather than relying solely on efforts to attract existing businesses from other locations, many communities are recognizing the need to help local residents build new businesses from the ground up through business incubators. By focusing on developing a new generation of entrepreneurs – most of whom have ties to the local area – communities are helping to build companies that will create jobs and spark economic growth in their region for years to come.

David Monkman testimony, "Business Incubators and Their Role in Job Creation"

Business incubation programs throughout the world play an important role in stimulating economic growth in local communities. Because these programs provide needed assistance to young firms at their earliest stages of development – when they're most vulnerable – business incubators increase their chances of success by providing them with a broad range of business assistance.

This business assistance – particularly the high-value-added services required to accelerate the growth and success of new companies – represents the essence of business incubation. In fact, the quality of the business assistance services offered by incubator staff and outside service providers will directly impact the success of the incubator's clients. The range of services offered by incubation programs depends on the type of clients served. But at the root, all services are aimed at strengthening the business knowledge of the clients' management team and sharpening its understanding of the company's market and financing needs.

NBIA has identified three characteristics that distinguish a business incubator:

1) The program must have a mission to provide business assistance to early-stage companies.
2) It must have staff that delivers and/or coordinates business assistance to client companies.
3) It must be designed to lead companies to self-sufficiency. Companies usually stay in an incubation program for two to three years, although biotech firms, which often have a longer research and development cycle, sometimes spend more time in an incubator. After that time, incubator clients graduate and move out of the incubator facility – in many cases into other local facilities that they lease, purchase or build. To operate successful programs, incubator staff must expel clients that don't achieve benchmarks or who fail to thrive or meet other graduation criteria.

History of business incubation

The business incubation industry has experienced rapid growth over the last 30 years, but the first business incubator started more than 50 years ago in New York. The Batavia Industrial Center, which opened its doors in 1959 in an old Massey-Ferguson farm implement manufacturing plant, is widely recognized as the world's first business incubator. When the plant closed, the Mancuso family purchased the 850,000-square-foot facility in hopes of attracting a single tenant to rent the space and to bring new jobs for the nearly 2,000 people who lost their jobs when Massey-Ferguson closed. Joseph Mancuso eventually gave up on that effort and instead decided to divide the building up into smaller spaces for use by small companies. He also provided these firms with accounting help, assisted them with raising capital and provided other business assistance services. And thus, the business incubation industry was born.

By 1980, there were 12 to 15 incubators operating in the United States – all of them in the industrial Northeast, Middle Atlantic or Midwest regions. Since then, the industry has since grown to include more than 1,100 incubation programs in the United States alone and more than 7,000 worldwide.

Business incubation in the United States tends to be tailored to the specific economic development needs of individual communities rather than applied as a bureaucratic solution from above. While some federal funds are available to help organizations build or renovate facilities into new incubators, each community or institution sponsoring an incubator must

develop its own operational plan, mission and goals. This individualization of U.S. incubation programs means that there is wide variation in incubator types, funding methods and quality from one program to the next. In fact, the entrepreneurial nature of the U.S. business incubation industry is marked by the many different types of incubators that have started here.

Business incubators as job creators

With the help of targeted business assistance services, entrepreneurs are better prepared to turn their innovations and business ideas into successful new ventures that have a greater-than-average chance of success. Research conducted by NBIA, the University of Michigan, the Southern Technology Council, and Ohio University has shown that business incubators reduce the risk of business failures. Historically, NBIA member incubators have reported that 87 percent of all firms that have graduated from their incubators are still in business. Data from the U.S. Small Business Administration show that in the general U.S. population, 69 percent of new firms survive at least two years, and half survive five years or more. It is important to note that these figures are not directly comparable, due to differences in survey methodology, time frame, and other factors. However, looking at them side by side does strongly suggest that business incubation reduces the risk of business failure and offers a valuable comparison.

Funded by a $300,000 grant from the U.S. Department of Commerce Economic Development Administration (EDA), the research project conducted by NBIA, the University of Michigan, the Southern Technology Council, and Ohio University examined the impacts of incubator investments on client firms and their communities. Subsequently published by NBIA as *Business Incubation Works*, the report emanating from this research also revealed that business incubation programs create new jobs for a low subsidy cost and a substantial return on investment. The estimated public subsidy cost per job created was $1,109.

Other important findings of the study – which enlisted incubator companies, graduates, managers, and stakeholders – show how effective business incubators are:

- Incubator companies experience very health growth. For example, the average annual growth in sales per firm was $239,535.
- Most incubator graduates provide employee benefits.
- Incubation programs contribute to their client companies' success and expand community entrepreneurial resources.
- Business incubation programs improve local community image.

A 2008 study conducted by consulting firm Grant Thornton for the U.S. EDA told a similar story about the success of business incubation programs as a means of creating jobs. The report, *Construction Grants Program Impact Assessment Report*, found that business incubators are an effective public-private approach that produces new jobs at a low cost to the government. According to the study, for every $10,000 in EDA funds invested in business incubation programs, an estimated 47 to 69 local jobs are generated. As a result, business incubators create jobs at far less cost than do other EDA investments, such as roads and bridges, industrial parks, commercial buildings, and sewer and water projects. The Grant Thornton study found that incubators provide up to 20 times more jobs than community infrastructure projects (e.g. water and sewer projects) at a federal cost per job of between $126 and $144, compared with between $744 and $6,972 for other infrastructure projects.

NBIA's 2006 *State of the Business Incubation Industry* report found that North American incubators, on average, served 25 client companies. And these firms reported that their businesses were going well. NBIA asked respondents to report combined client revenues for both in-house and affiliate clients for the most recent fiscal year. The average figure was more than $16 million – an impressive tally for firms that are just starting out. Clients of technology incubators, in particular, fared well. In 2006, the average combined revenue of clients at technology incubators was $23 million per incubation program.

Although business incubation is still a relatively new industry, programs around the world have racked up impressive results that demonstrate the important role incubators play in stimulating economic growth and creating jobs. For example, NBIA estimates that in 2005 alone, North American incubators assisted more than 27,000 start-up companies that provided full-time employment for more than 100,000 workers and generated annual revenue of more than $17 billion. NBIA also points to research showing that every dollar of public funds devoted to an incubator generates approximately $30 in local tax revenue.

The international experience

NBIA estimates that there are now more than 7,000 business incubators worldwide. We expect that number will continue to grow as other nations also are looking to business incubators as a way to stimulate economic growth. For example, InfoDev – an arm of the World Bank Group – is actively promoting business incubator development in less developed countries through its Business Incubation Initiative. It currently supports a network of 40 incubators. Also, the United Nations Industrial Development Organization (UNIDO) oversees more than 500 incubator projects in developing and transitioning economies. Both the InfoDev and UNIDO business incubator networks are growing.

In Europe alone, NBIA estimates there are more than 1,800 business incubation programs today. The European Commission provides funding to nearly 160 business incubation programs, referred to as "Business Innovation Centres." In 2008, the EC invested just over $8,500 for each job created by a BIC. As referenced previously, the cost per job created by business incubators in the United States tends to be much lower.

In the United Kingdom, more than 300 business incubation programs operate today. These programs directly support 12,000 companies; 40,000 additional firms experience indirect benefits from this support. Business incubators in the U.K. are credited with creating more than 50,000 jobs.[1] Figures from ADT, the German incubation association, reveal that Germany currently has approximately 7,500 clients within its approximately 300 incubators. These firms have created about 56,000 jobs. Germany's 9,000 graduate firms also employ 90,000 – not including people hired after these firms graduated from the incubator. Based on statistics from incubation associations in the United Kingdom and Germany, there are more incubation programs per capita in these nations than there are in the United States.

Size and scope of domestic investments

The largest source of federal funding for business incubators comes from the U.S. Department of Commerce Economic Development Administration. EDA's investment policy is designed to establish a foundation for sustainable job growth and the building of durable regional economies

[1] "Business Incubation in Challenging Times", NESTA Policy Briefing, BI/29 (2008).

throughout the United States. Unfortunately EDA allocates only a fraction of it's roughly $250 million annual budget to business incubation.

By contrast, USAID – with a similar economic development mandate, although focused on developing and transitional countries around the world – has an annual budget nearly 10 times that of EDA. Although USAID and EDA may not be directly comparable, it does suggest that federal investments in job creation and economic development feature differently at home.

The dollars EDA does invest in the incubation industry are geared only toward Public Works projects – constructing or renovating facilities for use as business incubators. And EDA typically requires communities to match a 50 percent local match of federal funding on such projects, allowing a lower cost-share only on a case-by-case basis. We believe that in these extraordinary times, the agency shouldn't be reviewing proposals and their match on a case-by-case basis. This will not result in a speedy injection of these funds, and this policy also will fail to benefit the communities that most need stimulus.

While co-locating and clustering businesses is an important ingredient in the business incubation process, it's widely understood that it's the provision of business assistance services that improve business incubator clients' chances of success. And yet, there currently is no federal funding mechanism to support business incubator programming in the United States. As you continue to look at ways to create jobs in America, I urge you to support funding that is truly flexible and can benefit the existing network of U.S. incubators, as well as the development of new incubation programs to create jobs and generate wealth in communities across the country.

Already in this country, we have many long-running best-practice incubation programs that have proven track records and are eminently qualified and willing to expand their services to new entrepreneurial populations, if funding were available. And as communities look for new ways to support local business development during these tough economic times, more and more organizations are considering developing business incubators. We want to ensure that these agencies have the funds they need to develop best practice programs that offer innovative programming to help entrepreneurs succeed. Now – while many out-of-work Americans are starting new companies – is not the time to let these foremost job creators wither away. With clear economic gains possible from high-growth new firms – such as the creation of jobs and new markets – there is a sound rationale for improving the supply of public funds to support business incubators.

To this end, Sen. Sherrod Brown, D-Ohio, has introduced the Business Incubator Promotion Act – the most significant assistance to date to the business incubation industry. Rep. Tim Ryan, D-Ohio, also is investigating similar legislation. The Business Incubator Promotion Act acknowledges the effectiveness of business incubation to job creation and specifically requests that the U.S. Department of Commerce Economic Development Administration fund incubators through eligible activities. If approved, the legislation would:

- Give EDA the authority to provide operating funds to support activities that will help incubators work toward self-sustainability.
- Support and specify EDA funding of programmatic and technical assistance activities for new and expanding incubators (not just bricks and mortar and early-stage operations).
- Specify EDA authority to fund incubator feasibility studies and plans for construction of new or expansion of existing business incubators, as well as the implementation of those studies and plans (acquisition of property, new construction, renovation of existing buildings, etc.).

- Modify the current scales used by the EDA to make it easier for regions to qualify for increased funding (a greater federal share) based on a shorter duration of unemployment rate (from 24 months to 12 months) and decreased unemployment rate average compared with the national unemployment rate.
- Reduce the non-federal share of project costs to 20 percent in designated areas of "special need."
- Require the Secretary of Commerce to publish criteria used in making awards and specifying certain criteria.

These types of support for our nation's incubation programs are both unprecedented and much needed.

Policy implications

Like many other Americans, I have faith in the ability of entrepreneurs to jumpstart our nation's sagging economy by generating revenue and creating new jobs. But many times, they need a guiding hand to help them turn their ideas into viable businesses, particularly during times of economic crises. The nation's existing network of business incubation programs – and the many new incubators under development – can assist entrepreneurs in growing new businesses that can help put many Americans back to work. But while business incubation programs have a proven track record of helping new businesses succeed, more can be done to ensure that these economic development tools are most effective. To that end, NBIA has developed a set of policy recommendations for you to consider as Congress continues to investigate ways to stimulate job creation in the United States.

Specific business incubation policy recommendations:

- **Widen the scope of federal funding programs to support incubators.** Currently, federal funding for incubation programs focuses almost exclusively on bricks and mortar – the facilities themselves. But successful incubators provide much more than shared space. I urge you to consider ways to also provide operational funding for incubators committed to developing innovative programming and following industry best practices, which will allow them to provide continued and expanded services to high-growth companies. This way, even more entrepreneurs can get the help they need to launch successful new businesses – businesses that create jobs, revitalize neighborhoods and commercialize new technologies, thus strengthening local, regional and even national economies. Also, although distressed communities perhaps need the most assistance in this area, I urge you to not restrict incubation funding to those areas. Arguably, given the nation's economic crisis, most regions of the country could be considered distressed and in need of stimulus dollars today.

- **Ensure that incubators follow best practices.** I'm asking you today to consider ways to provide additional funding to help incubators create new jobs, but those funds should not come without restrictions and responsibility. NBIA research has consistently shown that incubation programs that adhere to the principles and best practices of successful business incubation generally outperform those that do not. To ensure that incubators are making the best use of the public funds they receive, I believe that incubation programs receiving federal funding should be required to implement industry best practices and serve as dynamic models of sustainable, efficient business operations – much like they expect their clients to do. Also, NBIA has found that encouraging networking and collaboration among incubators plays a role in their success, so we

support building the capacity of state incubation associations and developing networks of business service providers that may be used by members within each state.

- **Standardized outcome measures across the industry.** To assess whether incubators that receive federal dollars are reaching their goals, I ask that you consider implementing ways to monitor return on investment by requiring programs that receive public support to collect the data about their program, clients and graduates on a regular basis. The amount of taxes paid by client firms and their employees, the number of jobs created by incubator clients and graduates, and other similar data points could be used as measures of the return on public investment created by incubation programs.

Complementary policy recommendations:

- Improve state, regional and national support for seed, angel and venture capital funding
- Consider spending and taxing policies that help foster innovation and reduce costs for new high-growth businesses
- Encourage recipients of federal research and contracting dollars to form collaborative agreements with business incubation programs that operate within their region
- Commit outreach funds to help first-time entrepreneurs prepare a competitive proposals for SBIR/STTR funding
- Ensure that appropriate services and space are available for incubator graduates and other second-stage companies in all communities where incubation programs operate

As you move forward with your discussion of business incubators and ways they can be used to stimulate job creation, NBIA – as voice of the business incubation industry – can assist the federal government by helping to:

- Determine how best to leverage existing best-practice incubators
- Create programs aimed at developing new best-practice incubators
- Establish criteria for funding proposals and metrics for evaluation
- Monitor implementation efforts
- Develop programs to educate incubator managers and disseminate best practices
- Encourage incubators to support other Administration goals, such as working with clean technology and alternative energy start-ups
- Obtain congressional support for these efforts by mobilizing our members and supporters

NBIA is prepared to convene a study group comprising the nation's best minds in incubation to work with appropriate members of Congress and the Administration. The group will be prepared to develop immediate, short-term and long-term transformative measures to inspire American ingenuity, build the nation's innovation capacity and continue our legacy of entrepreneurialism. Americans are looking to entrepreneurial businesses to rebuild our economy; business incubation can help fulfill their expectations, instilling hope across America and rebuilding confidence in our communities.

Summary

In closure, I would like to reiterate the key elements of my testimony today. Business incubators play a vital role in job creation, economic recovery and economic development during this time of challenge and opportunity. Speaking for NBIA and our nearly 1,900 members engaged in supporting the development of new high-growth businesses, I believe it is critical to recognize business incubators for their ability to commercialize new technologies, help create new jobs and ensure the United States remains the leader in global competitiveness. Federal funding support should be extended to help incubator managers leverage the resources already provided at local, municipal, county and state levels. Business incubation is a proven model for economic development and enterprise development and is widely practiced around the world. European states invest more than we do in business incubation, despite our early lead in establishing the industry. Europe now has more – and better-funded – incubators than we do. I believe that any stimulus or job creation legislation before you should take operational funds for business incubation into account. I thank you for your attention to these issues and hope the committee will consider and incorporate them into your deliberations as you address job creation and economic recovery. I would be happy to answer any questions now or in the future.

Appendix A: Resources

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Wolfe, Chuck, Dinah Adkins and Hugh Sherman. *Best Practices in Action: Guidelines for Implementing First-Class Business Incubation Programs*. NBIA Publications, 2001. (Please note: A revised and updated version of this publication is in development now, slated for publishing in early 2010.)

Appendix B: Principles and Best Practices of Successful Business Incubation

In 1996, NBIA's board of directors developed a set of industry guidelines to help incubator managers better serve their clients. Since that time, NBIA research has consistently shown that incubation programs that adhere to the principles and best practices of successful business incubation generally outperform those that do not. The following industry guidelines are replicable and broadly applicable to incubation programs around the world, regardless of their focus or mission.

Two principles characterize effective business incubation:

1. The incubator aspires to have a positive impact on its community's economic health by maximizing the success of emerging companies.
2. The incubator itself is a dynamic model of a sustainable, efficient business operation.

Model business incubation programs are distinguished by a commitment to incorporate industry best practices. Management and boards of incubators should strive to:

- Commit to the two core principles of business incubation
- Obtain consensus on a mission that defines the incubator's role in the community and develop a strategic plan containing quantifiable objectives to achieve the program mission
- Structure for financial sustainability by developing and implementing a realistic business plan
- Recruit and appropriately compensate management capable of achieving the mission of the incubator and having the ability to help companies grow
- Build an effective board of directors committed to the incubator's mission and to maximizing management's role in developing successful companies
- Prioritize management time to place the greatest emphasis on client assistance, including proactive advising and guidance that results in company success and wealth creation
- Develop an incubator facility, resources, methods and tools that contribute to the effective delivery of business assistance to client firms and that address the developmental needs of each company
- Seek to integrate the incubator program and activities into the fabric of the community and its broader economic development goals and strategies
- Develop stakeholder support, including a resource network, that helps the incubation program's client companies and supports the incubator's mission and operations
- Maintain a management information system and collect statistics and other information necessary for ongoing program evaluation, thus improving a program's effectiveness and allowing it to evolve with the needs of the clients

Developed by NBIA, with credit to the book, *Growing New Ventures, Creating New Jobs: Principles and Practices of Successful Business Incubation*, Rice M. and Matthews J., 1995.

Appendix C: Detailed Findings From
Construction Grants Program Impact Assessment Report

Grant Thornton conducted a study for the U.S. Department of Commerce Economic Development Administration examining the economic impacts and federal costs of EDA construction program investments. In that study, researchers found that business incubators are the most effective means of creating jobs – more effective than roads and bridges, industrial parks, commercial buildings, and sewer and water projects. The study was announced in early 2009 in an EDA newsletter. Below are some detailed findings from the report. The entire report is available for download at www.eda.gov/PDF/EDAConsImpactStudyVolume1FINAL.pdf.

- In a recurring theme throughout the study, the authors note that "EDA's strategic focus on innovation and entrepreneurship makes sense, in that investments in business incubators generate significantly greater impacts in the communities in which they are made than do other project types."
- According to the study, EDA investments, on average, produce between 2.2 and 5.0 jobs per $10,000 in federal spending, for a federal cost per job of between $2,001 and $4,611.
- The results of the investments vary greatly, depending on the type of project (see table below). Business incubators produce the greatest number of jobs per $10,000 in EDA investment (between 46.3 and 69.4), while community infrastructure projects (e.g., sewer and water projects) create the least number of jobs (between 1.5 and 3.4 per $10,000 in federal investment).
- As a result, business incubators create jobs at far less cost than do other EDA investments. Incubators have a federal cost per job of between $144 and $216, compared with $744-$1,008 for commercial structures, $1,291-$2,293 for roads and other transportation projects, $1,377-$1,999 for industrial park infrastructure, and $2,920-$6,972 for community infrastructure.
- The report notes that, by dollar invested and by number of projects funded, business incubation programs have historically been the least well-funded of EDA's public infrastructure projects.

Local Jobs Generated Per $10,000 EDA Investment and Federal Cost Per Job Project type	Estimated local jobs created (per $10,000 EDA investment)	Federal cost per job
Business incubators	46.3-69.4	$144-$216
Commercial structures	9.6-13.4	$744-$1,008
Roads & other transportation	4.4-7.8	$1,291-$2,293
Industrial park infrastructure	5.0-7.3	$1,377-$1,999
Community infrastructure	1.5-3.4	$2,920-$6,872

Source: "Construction Grants Program Impact Assessment Report," prepared by Grant Thornton for the U.S. Department of Commerce Economic Development Administration and announced in a January 2009 EDA newsletter.

RUTGERS
New Jersey Agricultural
Experiment Station

Testimony of

H. Louis Cooperhouse

Director
Rutgers University Food Innovation Center

http://foodinnovation.rutgers.edu/

Before the

Congress of the United States House of Representatives
Committee on Small Business

Hearing on

"Business Incubators and Their Role in Job Creation"

March 17, 2010
Washington, D.C.

Chairwoman Velazquez, Ranking Member Graves and distinguished members of the Committee, thank you for this opportunity to address you today. My name is Lou Cooperhouse, and I am director of the Rutgers University Food Innovation Center, a university-based business incubation program located in rural Southern New Jersey, that is sponsored by the Rutgers New Jersey Agricultural Experiment Station. Our incubation program supports start-up and established food and agricultural companies throughout New Jersey and in the Mid-Atlantic and Northeast regions with business, technical and operational expertise. I also serve on the Board of Directors of the National Business Incubation Association, am president of the New Jersey Food Processors Association, and am past president of the New Jersey Business Incubation Network.

I speak to you today as a practitioner of business incubation, and as an individual who has studied worldwide best practices in business formation and expansion, as well as business models that result in entrepreneurship and leadership development, differentiated and globally competitive new products, and the creation of higher-paying jobs in value-added industries. I also speak to you as an individual who originates from the private sector, with extensive business and technology experiences in both entrepreneurial settings, in larger corporate environments, and in numerous consulting assignments worldwide.

Although a relatively young incubator program, the Rutgers Food Innovation Center has been recognized by:

- National Business Incubation Association as its 2007 Incubator of the Year among its global membership
- USDA CSREES with its Partnership Award, based upon a national innovative program model, effective and efficient use of resources, mission integration, and multistate efforts and impacts
- USDA Rural Development as an Agricultural Innovation Center Demonstration Program, based upon a demonstrated track record of achieving value-added successes through use of highly qualified and experienced personnel, a well-developed work plan with an emphasis on economic development, and a commitment to community partnerships
- PlanSmart NJ with its Economic Development Achievement Award, based upon sound land use planning, regional cooperation, and impacts in economic development.
- Rutgers University with its Rutgers Presidential Award for Service to New Jersey, for contributions to the health and economic well-being of communities across New Jersey

There are some common misconceptions about business incubator programs, so it may be best if I begin my comments by describing what an incubator is *not*. An incubator is *not* a program that offers one-time or episodic business and financial assistance to aspiring entrepreneurs. Also, an incubator is *not* a building or a research park that simply offers cheap, subsidized space for tenants or shared administrative resources.

So, what is an incubator, and why is it unlike any other business assistance program? The heart of a true business incubation program is the *ongoing*, *personalized* and *comprehensive* services that are provided to clients. With over 7,000 programs worldwide, business incubation is a *globally proven model* for business growth, economic development, and regional revitalization that is both extremely effective and extremely cost efficient.

Why are incubators such a successful strategy for communities and regions across the world, and how can an incubator program be most effective? By following the *best practices* of the National Business Incubation Association, an incubator program will obtain consensus of their mission, and integrate their program into the fabric of the community and the broader economic development goals of the region. An effective incubator program will build an effective board of directors or advisors, develop strong stakeholder support, and stress *service* that results in company success and wealth creation.

I can speak first-hand and say that an incubator can truly become the catalyst for the creation of a *business cluster* in a community, county, state or region by creating concentrations of interconnected companies, suppliers, service providers, and associated institutions. As a case in point, our Rutgers Food Innovation Center has created a statewide food industry cluster. To date, the center has served over 1,000 food and agribusiness companies in every county of New Jersey. We also have attracted our first international client, a company that chose to locate their first U.S.-based manufacturing operation specifically at our incubator facility. We are now helping this company in its search to locate or build an approximately 40,000-square-foot facility as it plans to graduate from our incubation program next year.

Within our food industry cluster, we have created vertical and horizontal linkages among our *clients* by aggregating:

- Farmers and cooperatives looking to create new businesses based on value-added agricultural products
- Start-up entrepreneurs who seek to develop, manufacture, and market new, innovative and differentiated products
- Established food companies seeking to enter new markets or upgrade their operations
- Retail and food service establishments seeking to purchase locally grown or manufactured products

Furthermore, we have created vertical and horizontal linkages among our *resource network*, as we have aggregated:

- Local, state and federal agencies committed to the food and agricultural industry and to overall economic development
- Food industry trade associations
- Industry service providers and consultants
- Faculty and students across a number of departments within Rutgers University
- Community colleges that provide workforce development in the region
- Linkages to other food incubation programs worldwide

The Rutgers Food Innovation Center began operations in 2001 in Bridgeton, N.J., within an Urban Enterprise Zone and a federal empowerment zone, in a city with the second-lowest per capita income of 566 municipalities in the state. Since we opened our 23,000-square-foot incubator facility just 18 months ago, regional impacts have grown exponentially. Because of our Center and the strong food industry heritage of our region, the city of Bridgeton has determined that it will focus on the food industry as the key theme of its revitalization strategy. It has created a downtown culinary district and has renamed its two business parks as food industry parks. In addition, Cumberland County, where we are located, recently was recognized with an Award of Excellence from a leading real estate and site selection magazine for successfully recruiting, retaining, and growing businesses in the food industry.

An incubator clearly can be the catalyst for economic development throughout an entire region, and there are over 1,000 business incubators in existence right now throughout the United States. Some incubators are mixed-use programs that serve a variety of client company types; others specialize in biotechnology and life sciences, environmental technologies, defense technologies, medical technologies, food and agribusiness, telecommunications, fashion, the arts, or in other areas. Some examples of how these programs have affected their regions follow:

- In Pennsylvania, the Ben Franklin TechVentures technology incubator has graduated 44 successful companies since 1983, and these companies have:
    - Grossed more than $675 million in annual revenue last year
    - Created more than 4,000 jobs
    - Raised more than $293 million in additional outside investment capital

- In Florida, the University of Central Florida Business Incubation Program has assisted more than 140 companies since opening in 1999. It currently hosts 90 companies, and has graduated 38 companies from the program. In 2009, these companies generated more than $500 million in revenue, and produced more than 2,000 jobs with an average salary of $59,000. The investment made by the local governments was returned at a ratio of 5.25:1 in terms of taxes generated by clients and graduate companies that remained in the area, compared to their investment. These companies secured more than $200 million in external investment.

- In Louisiana, clients of the Louisiana Business & Technology Center at Louisiana State University have secured over $125 million in equity, grants, and loans to date. The incubator has graduated 139 tenants that have created 2,278 jobs since 1989, and the program provided training to almost 2,000 companies in the Small Business Innovative Research (SBIR) grant program.

- In Kansas, clients of the Enterprise Center of Johnson County created 770 net new jobs, raised $67.8 million in debt and equity financing, and generated over $66 million in sales over the past 10 years. In addition, this incubation program started an angel investor fund of $2.9 million (from 1999-2002) and an angel network that has invested over $6.5 million in 17 businesses since August 2006.

- In California, the Environmental Business Cluster and co-located Software Business Cluster have assisted more than 225 start-ups that have created over 2,300 direct jobs in the first ten years of the incubators' existence. These start-up companies attracted over $600 million in private investment. The Software Business Cluster helped San Jose jump from five software companies to a cluster of over 90 software companies, with over 60% of these firms originating from the incubation program. Five of these firms issued IPOs. In addition, the Environmental Business Cluster has been selected as *the* top clean-tech commercialization center in a worldwide study of 110 such centers.

Business incubators provide the expertise, networks and tools that entrepreneurs need to make their ventures successful. There is no cookie-cutter methodology for business incubation that will work everywhere. In fact, the opposite is true. All incubators are different, as their missions are based on the specific needs of their communities and regions. An incubator may be located in a rural or an urban setting. They may be focused on increasing employment in economically distressed communities, in commercializing technology from university research, or something altogether different. They may be mixed-use or sector-specific. They may focus on early-stage entrepreneurs still in the idea stage or businesses in their initial years of development when they are most vulnerable.

Incubators offer client companies a full range of services that may include:

- Significant networking opportunities
- Entrepreneurship development and mentoring
- Corporate development and governance
- Marketing and consumer research
- Business planning and milestone tracking
- Product, manufacturing and sales strategy
- Product and process development
- Organization assessment and personnel recruiting
- Access to finance, accounting, and capital resources
- Access to customers
- Access to academic resources

- Grant training and writing support
- Navigation through government agencies
- Access to R&D, prototyping, and quality assurance
- Intellectual property assessment and licensing assistance
- Legal, regulatory, and compliance support
- Workforce development and training
- A professional business environment, that may include:
    - Equipped offices and administrative services
    - Laboratory space and equipment
    - Pilot testing and product commercialization/manufacturing capabilities
    - Conference rooms
    - Flexible, affordable leases or rentals

The impacts of business incubators are significant. Impacts include:

- Market acceptance testing and validation
- New businesses created
- Businesses that are sustained in the community, region, and state
- Direct and indirect jobs created and retained
- Increased revenue and profits to client companies
- State, federal, venture, and private equity funding for clients
- Business attraction to domestic and international companies
- Commercial space leased in community by incubator graduates
- Training for the unemployed and for existing industry workforce
- Experiential learning opportunities for high school and college students
- Increased community wealth and revitalization of rural or urban regions

Entrepreneurs need more than just financial capital to develop viable businesses. The significance of social capital cannot be underestimated. An incubator's network offers access to critically needed resources and know-how that entrepreneurs often do not have, but definitely need. Incubation programs create this social capital environment that enhances ideation, innovation and collaboration. They create a culture of entrepreneurship that results in a quicker speed-to-market, and their more efficient and effective process results in a significantly greater chance for market success.

A preponderance of evidence indicates that business incubation is an extremely cost-effective economic development policy, particularly when best practices are implemented. Most recently, an independent research study conducted for the U.S. Department of Commerce Economic Development Administration found that business incubators provide up to 20 times more jobs than community infrastructure projects at a lower cost per job.

Business incubators do not duplicate *any* programs administered by the Small Business Administration or any other federal agency. As mentioned previously, an incubator is unlike any other business assistance program, and it is the only program that provides the ongoing, personalized and comprehensive services — as well as the expertise, networks and tools — that entrepreneurs need to make their ventures successful. All incubators are different, and those that follow NBIA best practices base their mission on the specific needs of their region to create a community or cluster that serves as a catalyst for regional economic growth.

In conclusion, what can and should be done to leverage the tremendous business incubation infrastructure that exists in our country, in order to maximize its impact? In my opinion, this includes the following:

1. **Stimulate sustainable job creation at minimum cost, by supporting existing incubator programs nationwide, that follow the best practices as defined by NBIA.**

   During the presidential campaign, President Obama recognized the value and impacts of business incubators and promised to "invest $250 million per year to increase the number and size of incubators in disadvantaged communities throughout the country."[1] Despite the broadly recognized successes of business incubators, there is *very little* federal or state support nationwide for business incubation programs. The little funding that exists today is typically focused on bricks-and-mortar construction of new incubators within highly competitive programs like the U.S. EDA's Public Works and Economic Development Program.

   What is critically lacking and desperately needed nationwide is *ongoing operational funding* for already-established business incubation programs. Incubation programs inherently require an ongoing subsidy in order to maximize their impacts; very few programs today are financially self-sustaining. As a result, incubators today must create a continually evolving patchwork of funding programs *every single fiscal year in order to continue their operations*. This funding typically originates from three sources:

   - Capital, staffing, and operating support from an incubator's parent institution
   - Client fees associated with office leases, business mentoring, facility usage and educational programs
   - Any funding that can be achieved from federal, state, or community grant programs

   In the case of our Rutgers Food Innovation Center, we have needed to apply for dozens of grants, and we are fortunate that we have been awarded approximately 30 grants for our capital and operating needs since 2001 – this patchwork approach to funding means that we are nervous every year on our fiscal year-end of June 30, as

[1] http://www.barackobama.com/pdf/SmallBusinessFINAL.pdf

are each of our fellow incubators in our statewide association - the New Jersey Business Incubation Network. We are fortunate in New Jersey to have a modest amount of state funding support from the New Jersey Commission on Science and Technology, although funding is at risk in each year's budget, and the amount provided doesn't allow us to hire any personnel.

Sadly, as many states are now dealing with extremely difficult financial decisions during their fiscal budgeting processes, cutbacks are being made to many worthy programs — including business incubators, which can in fact create the very jobs that are so badly needed, and can do so in a very cost-effective way.

Ongoing operating funding support to existing business incubation programs that adopt best practices will have a relatively immediate impact. Such funding would enable the hiring of full-time and temporary staff that can create critically needed mentoring infrastructure, client support, program expansion, and new program development, resulting in long-term sustainability for the incubator, and efficient and effective job creation in the community.

2. **Create a series of targeted programs that foster linkages with existing business incubation programs and enable enhanced development of industry clusters.**

   - **Leverage the assets of our universities and colleges** to foster entrepreneurship and dramatically improve their technology transfer capacity by enhancing linkages with regional business incubation programs. This could include funding programs that support:

     - **Students**, via entrepreneurship training and experiential learning programs in high school, vocational schools, colleges, and universities. This would enable the development of interdisciplinary student teams that can interact with clients from regional incubation programs and create the next generation of American entrepreneurs.

     - **Faculty**, via linkages between incubation programs and university and college faculty. This would enable, for example, training in entrepreneurship for faculty, and processes to assess the market potential of intellectual property. As a result, existing assets can be better leveraged, which can dramatically enhance technology transfer capacity and the launch and commercialization of new businesses that originate at American universities.

   - **Foster connectivity, networking, regional cooperation, and cluster development via creation and support of statewide and regional entrepreneurial programs and statewide and regional incubator networks.** Innovation often emerges from synergistic ideas that result from simple networking. One way to facilitate these connections would be to promote

statewide or regional sector-based networking programs (e.g. in food and agribusiness, environment, life science, defense technologies, healthcare, and telecommunications) that link business incubators to relevant university programs and departments, relevant state and federal partners, trade associations, service providers, angel networks, and the like as a means to connect entrepreneurs and innovators. In addition, regional advisory boards and statewide and regional business incubation networks can efficiently assist a multitude of client companies and provide access to a wide array of resources.

3. Create new programs that provide small businesses access to seed capital.

- **Target, identify, attract, and retain existing and potential "gazelle" companies,** which are responsible for a majority of the total net new jobs, to ensure that they are mentored by incubation programs as part of their overall networking strategy. In addition, create statewide advisory boards specifically to support gazelle companies and provide access to resources to ensure their success

- Provide a mechanism for **increased access to risk capital for entrepreneurs**, and foster the creation of more angel and venture capital networks. Banks, state and federal agencies, and other loan providers are typically focused on companies with a substantial amount of assets — middle market and later-stage companies. Federal and state agencies need to increase the amount of financial solutions available for early-stage companies. This includes the continuance of programs like the Small Business Innovation Research Program (SBIR) and the development of new funding programs for companies that can demonstrate a strong potential for business success.

Among the Office of Advocacy's first reports was a 1979 study by a task force on small business and innovation, which offered a fundamental principle: "Innovation is an essential ingredient for creating jobs, controlling inflation, and for economic and social growth. Small businesses make a disproportionately large contribution to innovation. There is something fundamental about this unusual ability of small firms to innovate that must be preserved for the sake of healthy economic and social growth." Nearly 30 years later, innovation remains vital to economic growth and continues to make the U.S. economy more competitive in an increasingly globalized marketplace. Risk-taking entrepreneurs are often the generators of the innovations that drive the American economy forward.[2] The 1,000+ business incubators in the U.S. today are the catalyst for innovation and entrepreneurship, and for new company formation and job creation. Federal funding that supports business incubators, and enables these programs to leverage their existing infrastructure and expand their programs, will yield a positive return on investment and result in enhanced economies across our nation.

[2] http://www.sba.gov/advo/research/sb_econ2009.pdf

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TESTIMONY OF DR. DAVID A. LEWIS
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U.S. HOUSE OF REPRESENTATIVES COMMITTEE ON SMALL BUSINESS

"Business Incubators and Their Role in Job Creation"
1:00 p.m., Wednesday, March 17, 2010
2360 of the Rayburn House Office Building

Chairwoman Velázquez and other distinguished Members of the Committee, I am here today to testify regarding the efficacy of business incubation to create jobs in the American economy. My expertise on the subject stems from over twelve years of research on business incubation, ranging from feasibility planning and implementation of a single incubator to national empirical studies of the industry as a whole. This includes my doctoral dissertation on technology business incubators and an ongoing study for the U.S. Department of Commerce, Economic Development Administration, on the contemporary status and performance of the industry. My research has informed policy development regarding business incubators for a number of local communities across the U.S., the State of New Jersey, and the Japanese Ministry of Economics, Trade, and Industry. Furthermore, I have been teaching economic development planning, regional economic development, and metropolitan structures and functions for nearly a decade at two nationally-accredited Masters in Regional Planning programs in the United States. Currently, I am tenured faculty at the University at Albany in the Masters in Regional Planning Program, however, this presentation was prepared by me, in my personal capacity, and does not in any way represent the views of the University at Albany, the State University of New York, or the State of New York.

I am honored to be invited to offer this testimony to inform the Committee and the broader Congress on the state of knowledge in the scientific research community regarding business incubation. This testimony will focus on four themes: (1) what are the critical components of business incubation that have demonstrable positive impacts on client firms; (2) what is the value of public investment in business incubation; (3) how does business incubation compare to other

more traditional economic development instruments; and (4) how can public policy support business incubation. I will also discuss the gaps in our knowledge regarding business incubation.

In an increasingly competitive global economic system, with hyper-mobile capital, it is essential that local and regional communities develop strategies to attract and retain innovative entrepreneurial firms. Proactive action can help buffer a community from the *creative destructive* forces of the system. New growth theory, which is supported by empirical evidence, clearly indicates that innovation is essential to regional economic vitality and sustainability. One potential option to ensure the development of innovative enterprises is to "incubate entrepreneurship and innovation," (Scillitoe and Chakrabarti 2010; Grant Thorton 2008; Lewis 2003) which depends, in part, on public investment in business incubators.

Defining Business Incubation

Business incubation programs are designed to support entrepreneurship. They endeavor to accelerate the successful development of start-up firms by providing entrepreneurs with an array of targeted resources and services. The incubator manager develops and orchestrates the delivery of the support services to client firms. To leverage the assisting assets in the community, the business services are often provided by a college or university, a Small Business Development Center (SBDC), a network of local business services firms, or a combination of these and other organizations.

A business incubator is defined as multi-tenant facility, occupied by entrepreneurial client firms, with onsite management that delivers an array of support services. Some incubation programs operate both "within the walls" and deliver entrepreneurial support services to offsite client firms. Offsite firms are referred to as affiliate or virtual clients. Other incubation programs have only a virtual presence, without any physical space for tenants. This is typically referred to as incubation "without walls" or virtual incubation.

The goal of business incubation is to produce successful firms that will leave the incubation program as financially viable and freestanding companies. In theory, these incubator graduates have the potential to create jobs, revitalize neighborhoods, commercialize new technologies, and stimulate an entrepreneurial culture in the host community.

The Growth and Maturation of the Business Incubation Industry

The incubator industry has matured into an international economic development tool, boasting nearly 5,000 programs in over 100 different countries. The United States is the leader in the industry with approximately 1,115 incubators in 2006. This is up from merely 12 in 1980 and approximately 400 in 1992. The exponential increase in the number of programs is the result of strong governmental support. It is estimated that 90% of incubators have public sector leadership.

Deindustrialization inspired the first handful of incubators, which were located in Northeast communities that had lost a major employer. Once incubators demonstrated potential for community revitalization, they spread to the Midwest, before jumping to the West Coast and eventually populating every state in the nation.

Through trial and error, coupled with innovative thinking, practitioners of business incubation discovered some of the key features of more successful programs. These "best practices" are primarily related to the management of the program and the effective delivery of entrepreneurial support services (see table 1). Academic research and industry experts agree that successful program management requires capable staffing, program stability, and policies and procedures such as entrance and exit criteria, periodic meetings with clients (both one-on-one and in group settings), networking with area business service providers, and marketing the program beyond the entrepreneurial community. An incubator's affiliation with an institution of higher education offers a range of benefits, including name recognition, student employees, library access, faculty expertise, and access to specialized equipment and laboratories. Higher educational resources are particularly critical for technology business incubation. Most recently, Scillitoe and Chakrabarti (2010) conclude that the interactions with the incubator manager and program stability have statistically significant positive impacts on clients in technology business incubators. This echoes prior research by Lichtenstein (1992), Rice (1992), and Lewis (2003) and Hennedaz-Gantes et al. (1995) which documents that co-location, client-to-client interactions, program stability and manager-to-client interactions improve client firm outcomes.

Over time, the type of entrepreneurial firms receiving the benefits of business incubation has expanded. Initially, the majority of incubators' clients were from a mix of different industries, prompting the term "mixed use" incubators. Today, incubators come in all shapes and sizes, some specializing on a single industrial niche such as biomedical, software development, agriculture and specialty foods, or retail. Currently, the incubator industry is composed of 54% mixed use, 39% technology, 3% manufacturing, 1% services, and 4% other types of client base.

The Efficacy of Business Incubators

From the perspective of public investment designed to foster economic development, the best criteria for measuring incubation success includes: (1) the number of jobs produced by client firms, particularly by graduate firms; (2) the growth of revenue by client firms (again graduate firms should be dominant); (3) the survival rate of graduates firm; (4) the retention of graduate firms in the host region; (5) the number of graduates per year; and (6) the number of new patents produced by client firms, which may be an indicator of future growth. The taxes paid by clients firms and their employees can be used to measure the return on the public investment. While some questions remain unanswered, the preponderance of evidence indicates that business incubation is a cost-effective economic development policy when best practices are implemented and there is sufficient oversight of the public investment. Furthermore, the success of business incubation has been statistically significantly correlated to the delivery of quality entrepreneurial services, peer-to-peer interactions, program stability, and regional economic context.

Table 1: Incubation Industry Best Practices

Category			
	Management of the Program		
		Conduct a feasibility study before starting a program	
		Develop a consensus-driven mission statement	
		Establish client entry & exit criteria	
		Collect outcome data	
		Provide networking opportunities between client firms	
		Establish effective tools to deliver support services	
		Build networks with area business services providers	
		Market incubators beyond the entrepreneurial community	
			i.e. embed the program in the fabric of the host community
	Key Entrepreneurial Support Services		
		Business plan writing and business basics	
		Legal assistance, including but not limited to	
			General legal services
			Intellectual property protection
			Incorporation or other legal business structure
			Import/Export requirements
		Access to capital	
		Marketing assistance	
		Access to broadband high speed internet	
		Mentoring boards for clients with area business service providers	
		Where possible, close ties with institutions of higher education	
		Accounting and financial management services	
		Networking with other entrepreneurs, particularly other clients	
		Networking with area business community	
		Assistance in developing presentation skills	
		Assistance in developing business etiquette	
	Additional Key Services for Technology Business Incubation Programs		
		Technology commercialization assistance	
		Access to specialized equipment and laboratories at reduced rates	
		Intellectual property management assistance	

Sources: Rice and Mathews (1995), Lewis (2001), Tornatzky et al. (1996), Campbell et al. (1988), Clarysse et al. (2005), Hackett and Dilts (2004), Hernadez-Gantes et al. (1995), Lichtenstein (1992), U.S. Small Business Administration (1986).

Notes: The management practices and entrepreneurial support services are not listed in a hierarchical order. Interviews with industry experts and Lewis (2003) document that it is the synergistic combination of these factors that matter. In other words, there is no one or two silver bullet management practice or small set of services that matter.

The literature on small businesses indicates that the number one reason for failure of small entrepreneurial firms is the lack of access to sufficient capital (Lewis 2003). This Committee's statement, released February 26, 2010, shows that this situation has been exasperated by the ongoing economic turbulence. The two other prominent reasons for the failure of small

entrepreneurial firms are a lack of business management skills and a poor understanding of business basics, particularly market analysis.

Business incubators are specifically designed to address, simultaneously, these three problems that challenge start-up firms. Business incubator facilities significantly reduce the costs for operating a small business. These saving include reduced time, effort and money (commonly called transaction costs) spent on identifying quality business services including legal, accounting, production engineering, technology transfer, intellectual property protection, among others. Furthermore, some studies have shown that business incubator clients have increased access to non-traditional capital markets, particularly venture and angel capital (Kang 1991, Lewis 2001). The benefits of co-location also include peer-to-peer learning and moral support from other entrepreneurs struggling with similar challenges and guidance by the incubator manager. In addition, most incubators provide these services for free or at significantly reduced cost. Finally, many incubator clients enjoy the benefits of below market rent, access to expensive specialized equipment, and shared office services and infrastructure.

The entrepreneurial services orchestrated and delivered by the incubator manager (and staff) are designed to target the lack of business managerial skills and other business basics. Studies have indicated that it is the multiple interactions of manager-client and peer-to-peer connections that are critical to the entrepreneurs development of these necessary survival skills. These kinds of interactions are optimized when client firms are co-located together within the incubator.

These value-added benefits are causal in the high survival rates of these firms, the low public sector cost per direct jobs created by these firms, and the high rate of return on public dollars invested in incubation. The Small Business Administration (SBA) has estimated that about 51% of new firms survive for at least five years (SBA 2010). Among firms that receive incubation, the survival rate is estimated to range from 68% to 86% (table 2).

Table 2: Graduate Firm Survival Rates

Study	Type of Incubator(s) Studied	Geography	Number in Study	Survival Rate
Lewis 2003	Technology	US	147	70-80%
RESI 2001*	Technology	MD	6	70%
DiGiovanna and Lewis 1998	Technology	NJ	6	85%
Molnar et al. 1997	All types	US	50	87%
Campbell et all 1988	All types	US	13	86%
Allen and Bazan 1990	All types	PA	32**	68%

Sources: Lewis (2003), RESI (2001), DiGiovanna and Lewis (1998), Molnar et al. (1997), Campbell et al (1988), Allen and Bazan (1990).

Note: Each study calculates the survival rate differently. The minimum standard for survival is that the graduate firm must be operating for at least one-year post graduation.

* The figure presented here is the mid range estimate from the RESI (2001) study.

There are only two studies (DiGiovanna and Lewis 1997; Grant Thorton 2008) that attempt to directly compare the efficacy of business incubation to other public investments in economic development programs (for example, infrastructure projects or providing industrial incentives). Both of these studies document that business incubators have been a good public investment. Grant Thorton (2008) shows that business incubators have a low public cost for each direct job created and a higher return relative to other types of U.S. Economic Development

Administration (U.S. EDA) investments (see table 3). In New Jersey, the public cost per direct job created by technology business incubators was approximately $3,000. This compares favorably to over $40,000 per direct job created from investments in industrial recruitment and retention programs funded by the state government (DiGiovanna and Lewis 1998). Other studies also document the low public sector cost per job created by business incubators (see table 4).

Table 3: EDA Evaluation of Its Investments in Economic Development

Project Type	Est. Local Jobs generated/$10K)	Federal Cost per Job
Business Incubators	46.3 - 69.4	$144 - 216
Commercial Structures	9.6 - 13.4	$744 - 1,008
Roads and Other Transport	4.4 - 7.8	$1,291 - 2,293
Ind. Park Infrastructure	5.0 - 7.3	$1,377 - 1,999
Community Infrastructure	1.5 - 3.4	$2,920 - 6,872

Source: Grant Thorton (2008).

Table 4: Public Sector Cost per Direct Job Created by Business Incubators

Author	Year	State	Public Sector Cost per Job
Grant Thorton	2009	National	$144 - 216
DiGiovanna and Lewis	1998	New Jersey	$3,000
Culp	1996	Georgia	$3,785
Markley and McNamara	1995	Confidential*	$6,580
Human Resource Investments	1994	Ohio	$6,609
Human Resource Investments	1994	random	$11,353
Maryland Department of Economic and Employment Development	1990	Maryland	$3,000
Roberts, at. el.	1990	Iowa	$5,916

Sources: Culp (1996), Roberts et al. (1990), Human Resource Investments (1994), DiGiovana and Lewis (1998), Maryland Department of Economic Development (1990), RESI (2001), Markley and McNamara (1995), Grant Thorton (2009).

Note: Dollars are expressed in current year dollars for year of the study.

* This study used input output modeling to estimate the impacts of one manufacturing incubator. The location of the incubator is intentionally obscured to protect the identity of participating client firms that responded to a survey of all tenants and graduates.

Two more important findings in the evaluative literature indicate that public investment in business incubation has a high return on the investment in terms of taxes paid by incubator clients, incubator graduates, and firm employees (table 5). In addition, there is a high probability that local communities that invest in and host business incubators will capture the benefits in terms of job creation and taxes because incubators tend to anchor entrepreneurial firms in their host communities (table 6).

Table 5: Return of the Public Investment in Business Incubation

Study	Type of Incubator(s)) S	Geography	Number in Study	ROI
Molnar et al. 1997	Multiple	US	4	5 to 1
Markley and McNamara 1995	Manufacturing	One Small Metro	1	1.21 to 1*
Battelle 1995	Technology	Virginia	1	7 to 1
RESI 2001*	Technology	State of Maryland	6	$31.6 m to $151.9 m

Sources: RESI (2001), Molnar et al. (1997), Markley and McNamara (1995), Battelle (1995).

*The figure presented here is the mid range estimate from the RESI (2001) study.

Table 6: Retention Rate for Incubator Graduates Remaining in the Host Region

Study	Type of Incubator(s) Studied	Geography	Number in Study	Retention Rate
Linder 2003	All types	US		84%
Lewis 2003	Technology	US	147	70-80%
DiGiovanna and Lewis 1998	Technology	NJ	6	85%
Molnar et al. 1997	All types	US	50	84%
Campbell et all 1988	All types	US and Canada	13	86%
Allen and Bazan 1990	All types	PA	32*	76%

Sources: Lewis (2003), DiGiovanna and Lewis (1998), Molnar et al. (1997), Campbell et al. (1988); Allen and Bazan (1990).

Note: Retention rate is defined as the percent of graduate firms that locate in the host MSA after leaving the incubator except in the case of Digiovanna and Lewis (1998).

* Allen and Bazan (1990) study population was all incubators receiving funding from the State of Pennsylvania.

Unanswered Research Questions and Related Issues

Measuring success is complex. Since the average incubation period is slightly more than three years and graduate firms have been documented to provide the largest job and revenue growth (and thus taxes), it is important to give programs ample time to produce graduates. In addition, the industry has yet to develop standardized reporting data of their clients firms and the collection of data is uneven across programs. The measurement of outcomes is often anecdotal or based on industry averages and does not tell the whole story. The research on incubators has been criticized for selection bias (looking only at the more successful incubators) and the failure to investigate closed incubators. In addition, until recently, the role of place has been under-investigated in understanding the performance of business incubation (Lewis 2001, 2003)

Furthermore, the research has yet to address some critical issues. Do incubated firms perform better than non-incubated firms in terms of job creation, patent production, and revenue growth? Do incubators increase the level of entrepreneurship in the host region or do they crowd out other start-up firms? How do incubation programs compare to industrial recruitment and retention programs in terms of cost per job or return on the public investment? Is there a market saturation point for business incubators? Why do incubators fail?

Policy Implications

The research evidence and practice of business incubation provide guidance for policy-makers interested in optimizing the public investment in this economic development tool. Policy recommendations derived from the evaluative literature on business incubators include:

(1) Programs receiving public funding for start-up and/or operating revenue should be required to implement best practices and their operating budget should be sufficient enough to ensure programs can provide the entrepreneurial support services demonstrated to catalyze success. Cost savings could be realized by leveraging existing institutional resources, such as an SBDC or institution of higher education, for the delivery of critical services.
(2) Public funding agencies should develop standardized outcome measures to monitor the public investment and require programs receiving public support to collect the data. Some recommended measures are discussed above.
(3) Periodic assessments of the business incubation system and individual programs receiving public support should be conducted by external, independent evaluators. Outcome evaluations need to control for the age of the program and the client base that is served.
(4) A nationwide database of incubator programs, their characteristics, and area of expertise should be developed and made available for public use.
(5) Programs receiving public support should be required to submit annual reports to a central organization to monitor progress toward the funding goals. This should include periodic independent audits of program budgets.
(6) Once adequate data collection and implementation of best practices has been achieved by programs receiving public support, the implementation of complimentary policies is recommended. Such complementary policies may include seed funding, the creation of appropriate graduate space, tax credits for client firms, competitions for best incubator program (by type) and incubator client, support for the development of a business service provider network, and encouragement of institutions of higher education to support business incubation programs.

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Testimony of Robert J. Strom
Director, Entrepreneurship Research & Policy
Ewing Marion Kauffman Foundation
Before the House Small Business Committee
"Business Incubators and Their Role in Job Creation"
March 17, 2010

Chairwoman Velázquez and Members of the Committee:

Thank you for this opportunity to testify to the Committee on the role that small businesses, entrepreneurs, and business incubators play in job creation. If there is a silver lining to the economic crisis our country now faces, it is the tremendous attention now paid to job creation and economic growth from policymakers and academics, as well as everyday citizens. For far too long, the sources of job creation in our economy have been taken for granted. The Ewing Marion Kauffman Foundation, the leading foundation in increasing understanding of and encouraging entrepreneurship, has been interested in these questions for many years, and we welcome the renewed focus on the issue of job creation more generally, as well as the more narrowly focused conversation we will have today.

Entrepreneurship is the engine of job creation in our economy

Today's conversation is particularly exciting to us because it moves the discussion of job creation to the level of new firms. Much of the debate regarding job growth in the past focused on large, mature firms, but young, growing firms actually create the vast majority of jobs in this country. Research from the Kauffman Foundation found that young firms less than five years old are responsible for virtually all net new jobs, as shown in Figure 1 below.[1] As the figure shows, absent startups, net job creation would have been negative for 22 of the 29 years between 1977 and 2005. When startups are included, there are only three years of net job loss. Entrepreneurs alone cannot lead us out of our current economic problems, but recovery and job creation will not happen without them.[2]

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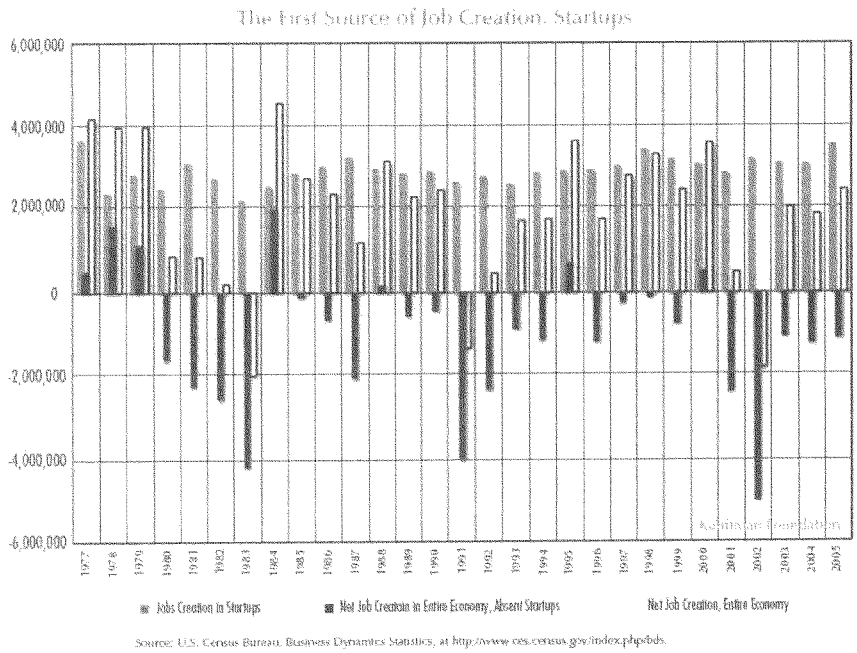
[1] *See* Dane Stangler and Robert E. Litan, "Where Will the Jobs Come From?" Kauffman Foundation, November 2009, at http://www.kauffman.org/uploadedFiles/where_will_the_jobs_come_from.pdf.

[2] Carl J. Schramm, President and CEO, Ewing Marion Kauffman Foundation, speaks in detail about entrepreneurs in the current economic climate in his *State of Entrepreneurship Address*, National Press Club, Washington, DC, January 19, 2010.

Figure 1



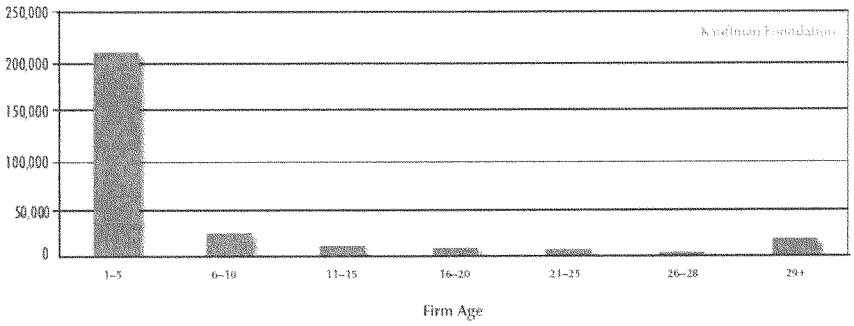
A very small number of firms create a majority of the new jobs

In fact, a minority of firms generate a majority of the new jobs in this country. Additional research on job creation by the Kauffman Foundation shows that in any given year, the top 5 percent of companies (measured by employment growth), or about 273,000 firms, creates two-thirds of new jobs. Even more impressive, the top 1 percent of companies (about 55,000 firms) generates 40 percent of new jobs. Most of these companies are young firms, as shown in Figure 2 below.[3]

[3] *See* Dane Stangler, "High-Growth Firms and the Future of the American Economy," Kauffman Foundation, March 2010, at http://www.kauffman.org/uploadedfiles/high-growth-firms-study.pdf.

Figure 2

Number of Top 5 Percent Growing Firms, by Age



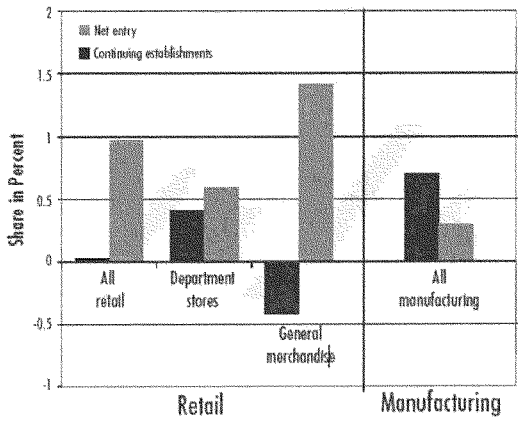
Source: Special Tabulation by U.S. Census Bureau based on Business Dynamics Statistics (hereinafter Special Tabulation).

The churning of firms (and jobs) leads to greater productivity

It is true that new businesses have a higher failure rate than older firms, contributing significantly to job destruction and the churning of jobs and businesses. This churning is typically viewed in a negative light, particularly in times of high unemployment. Job loss is certainly very difficult for individual families and for the firms that are downsizing. While this churning does lead to a great deal of turbulence in the economy, it is also very important to the health and productivity of the overall economy. [4] Research indicates that the less productive businesses fail, leaving the stronger businesses with the greatest potential for future growth. In fact, as seen in Figure 3, these surviving firms are even more productive and achieve higher productivity gains than the mature establishments that characterize the rest of the economy. The churning process replaces lower productivity businesses with new, more productive ones, thereby increasing the productivity of our economy overall. And as our research has found, "High-growth firms…accumulate over time, continuously adding new jobs, subtracting old jobs, and challenging incumbent companies. The firms that survive and grow more than make up for the companies that fail."[5]

[4] *See* Steven J. Davis, John Haltiwanger, and Ron Jarmin, "Turmoil and Growth: Young Businesses, Economic Churning, and Productivity Gains," Kauffman Foundation, June 2008, at http://sites.kauffman.org/pdf/TurmoilandGrowth060208.pdf.
[5] *See* Dane Stangler, "High-Growth Firms and the Future of the American Economy."

Figure 3
Contribution of Net Entry to Productivity Growth
(10-year Horizon)



Source: Tabulations from the Census of Retail Trade and the Census of Manufacturers taken from Foster, Haltiwanger, and Krizan 2001 (Manufacturing), 2006 (Retail Trade).
Note: General merchandise includes warehouse clubs, catalog showrooms, and similar discount houses.

Figure 3 details productivity in the retail industry. Entry of new establishments makes a greater contribution to industry productivity growth than continuing establishments. While productivity growth at continuing establishments makes an important contribution to productivity growth in some retail segments (e.g., department stores), almost all productivity growth as a whole appears to be accounted for by net entry. For comparison purposes, the overall figures for the manufacturing sector also are displayed. Here, the contribution of net entry is more modest (approximately 30 percent), but it remains substantial.[6]

Incubators are one potential source of new, high-growth firms

But how are young, small, and growing firms created? Economists and others have elucidated a great deal about firm and industry dynamics – how firms and industries are born, grow, and die. Incubators provide one way that young, small firms may be born and start to grow. The vast majority of incubators are non-profit entities, primarily supported with public funds. While the first incubator is said to have been introduced in New York in 1959, the business incubation concept grew slowly at first, accelerating in the 1980s and 1990s.

[6] *See* Steven J. Davis, John Haltiwanger, and Ron Jarmin, "Turmoil and Growth: Young Businesses, Economic Churning, and Productivity Gains."

Conclusive studies of business incubation are limited by wide variation among entities defined as incubators and other methodological problems

Studies of business incubation face some limitations. The term incubator is loosely defined and applied to a wide range of entities, and the distinction between incubation as a process and incubators as a facility is sometimes lacking. While incubators share some common features and functions, significant variation exists among the roles and objectives within the genre as a whole. Research suggests a value-adding continuum among incubators, from the least value-adding entities that serve primarily as real estate development efforts to for-profit seed capital incubators that offer the business development and strategic support that lead to firms with high growth potential. Even incubators that fall in the same place along this spectrum may differ significantly. For example, some incubators now only exist only virtually and deliver assistance to new businesses that are not co-located within the incubator.

This problem in defining the phenomenon is compounded by methodological obstacles. Most importantly, the difficulty in creating a control group of non-incubated new companies for comparison purposes impedes research on incubators. And while data on successful incubatees are relatively easy to obtain, data related to failed incubatees are often more difficult to access.

As a result, there is little reliable research on how businesses develop within the incubator and few rigorous empirical studies of incubators' success, which is often measured by survival rates. Sean Hackett, a professor at Drexel University, reviews the existing empirical literature and concludes that studies of firm survival rates at incubators report mixed results.[7] Most importantly for our purposes here today, Hackett cites early empirical research suggesting that incubators and their incubatees are not very good job creators.

The Kauffman Foundation's analysis suggests, however, that there are for-profit incubators at the far end of the spectrum – those that are most intimately involved with the strategic and management decisions of the new firm – that may achieve the growth that will generate new jobs. While most incubators may be more focused on firm survival, this group seeks to foster the high-growth companies that will generate jobs and economic growth. Examples of this model include The Foundry in Menlo Park, California; The Accelerator Corporation in Seattle; TechStars in Colorado; and YCombinator in Mountain View, California and Cambridge, Massachusetts. Research by the Kauffman Foundation in 2007 identified common practices among these incubators, or accelerators, as we called them to distinguish them from the others in the field. These practices include:

[7] *See* Sean M. Hackett and David M. Dilts, "A Systematic Review of Business Incubation Research," *Journal of Technology Transfer*, 29, 2004, pp.55-82.

1. *Competitive selection process.* New businesses compete for slots in the incubator. The incubators are often more interested in the individual entrepreneurs than in their business ideas. Assembling groups of especially talented potential entrepreneurs, they believe, will allow for the creation of more and better businesses.

2. *Partnership throughout incubation.* The incubation process can be characterized as a full partnership between the entrepreneur and the incubator. Going far beyond the contributions of typical incubators, these entities become part of the new firm's management team. They help form companies as legal entities, interview and hire the appropriate initial management team, and lend their own management experience in both business and product development as the small company grows. As most young firms do not require a full-time executive team, the incubator's management team can be shared among as many as five start-ups.

3. *Growth objective.* These incubators seek firms with high growth potential, selecting new businesses that are in particularly high-growth industries or those that have a distinctly innovative product or process.

4. *Industry concentration.* These entities often concentrate within a specific industry or sector, allowing them to build on previous knowledge and achieve the critical mass of people with similar educational and business backgrounds necessary to come up with cutting-edge, commercially successful advances.

5. *Education.* Some of these incubators offer more formal education to their potential entrepreneurs, effectively teaching an intensive, short course in entrepreneurship.

These characteristics, ultimately, mean that the focus of these entities is more on the incubation process than the facility. Recognizing that successful entrepreneurship is more than a good business idea or an interesting new product, they promise guidance and partnership throughout the rocky early years of a company's life.

Incubators are only one piece of the puzzle

It is important to remember that incubators are only one piece of the entrepreneurship and job creation puzzle. There are many ways that firms start and grow, and institutions and public policies that support entrepreneurship are vitally important to the young, small, growing firms within incubators, as well as the much larger group of new businesses growing outside of incubators. Among others, these policies include:

- *Immigration policies* that welcome talented potential entrepreneurs and even favor those immigrants who plan to start innovative, new businesses in the U.S.;
- *Regulatory frameworks* that do not impose onerous compliance requirements on small businesses;
- *Intellectual property laws* that strike the right balance between giving sufficient incentives to inventors and imposing legal roadblocks to new entrants;
- *Bankruptcy protection* that mitigates the risks of business failure;
- *Antitrust laws* that allow for healthy competition;
- *Marginal income tax rates* that do not discourage entrepreneurial endeavors by minimizing their economic rewards; and
- *Financial systems* that offer access to both debt and equity capital for new firms.

Policies in each of these arenas, and others, can work together to create an environment that is conducive to the birth and growth of new companies, regardless of where they begin.

TESTIMONY OF
PETER LINDER
MEMBER OF THE BOARD AND IMMEDIATE PAST CHAIRMAN,
ANGEL CAPITAL EDUCATION FOUNDATION

COMMITTEE ON SMALL BUSINESS
U.S. HOUSE OF REPRESENTATIVES

MARCH 17, 2010

Chairwoman Velazquez, Ranking Member Graves, and all of the members of the Committee, thank you for holding this hearing on business incubators and their role in job creation. I am pleased to discuss how angel investors support innovative start-up companies, some of which work with business incubators and accelerators.

My name is Peter Linder, and I am pleased to represent the Angel Capital Education Foundation, a national source of education and research about angel investing, and the growing community of sophisticated private investors known as "angel investors" who invest money and expertise in high potential start-up companies. I am a long-time angel investor in the Philadelphia area, having invested in 17 start-up companies as an individual and another 14 businesses through the Mid-Atlantic Angel Group Fund, which brings together 90 angel investors to invest in and support promising businesses.

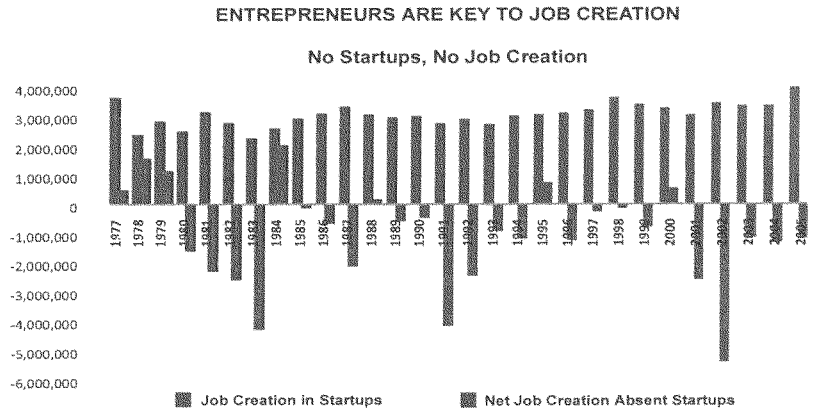
I also a member of ACEF's sister organization, the Angel Capital Association (ACA) the professional alliance of angel groups in the United States and Canada, with 150 member angel groups in 44 states. More than 6,500 accredited angel investors belong to our member angel groups. ACEF and ACA work together to build the skills of angel investors so that they are better mentor capitalists to start-up companies and to increase the number of angels participating in high quality groups in the United States.

Start-up Companies, Job Creation, and Angel Investors

Innovative high-growth, start-up companies are critical for job growth and economic vitality in any year, and are even more so during an economic recession. A 2009 Census Bureau study[1] funded by the Kauffman Foundation found that start-up companies create new jobs at a higher rate than all employers as

[1] John Haltiwanger, University of Maryland, Ron Jarmin, U.S. Bureau of the Census, Javier Miranda, U.S. Bureau of the Census, *Business Dynamics Statistics: An Overview*, 2009.

a whole – in other words, if you excluded the jobs from new firms in normal years, overall employment in the country would decrease. The chart below, from the Census Bureau and Kauffman Foundation, illustrates the importance of new companies (those in operation for five years or less) to net job creation in the United States over a 25 year period:



While angel investors supported only some of these companies, ACEF believes that angel investors were an important element to the growth of early-stage firms. Angel-backed companies have been some of the most prolific job creators and innovators in recent times: Google, Yahoo, Amazon, Facebook, Costco, and PayPal are just a few examples of these businesses. Without the angel investors who helped these companies get started, these businesses might not be around today. Many of these promising firms need capital, mentoring and other support to hire new people and develop new innovations. Angel investors are the source of capital for an estimated 50,000 companies every year. The Center for Venture Research estimates that angels invested $19.2 billion in 55,480 companies in 2008.[2]

Angel investors are high-net-worth individuals who provide money for start-up firms with growth potential. Many of them started, built and sold their own companies and are now in a position to invest not only their money by their time in new businesses. The nation's leading expert on entrepreneurship and founder of ACEF, the Ewing Marion Kauffman Foundation, estimates that angel investors may be responsible for up to 90 percent of the outside equity raised by start-ups after the capital resources of their

[2] Jeffrey Sohl, Center for Venture Research, University of New Hampshire, *The Angel Investor Market in 2007: Mixed Signs of Growth*, 2008.

founders, friends, and family are exhausted.[3] These firms rarely have the collateral to receive bank loans and they are generally too small and too young to receive venture capital.

The best angels provide more than capital to small businesses. These "mentor capitalists" give back to the entrepreneurial economy by making high risk investments directly in early-stage companies in their communities and using their entrepreneurial experience to mentor the companies as they grow. Many top angels got into this type of investment as a way to support their communities – by investing in local companies and providing them with mentoring and connections, they can help create jobs in their towns.

One way in which angel investors are becoming better resources for entrepreneurs is through the formation of angel groups, in which angel investors join together to invest in these companies, share best practices, and bring the power of the group to help make the start-ups successful. There are currently just over 300 angel groups in the United States, with at least one organization in almost every state in the country.[4] These groups add efficiency to capital raising for small businesses because they can be easily located by entrepreneurs, lead to larger investments as individual angels combine their capital with other investors, and provide better feedback as angels work together to evaluate investment opportunities.

Investors, Incubators and Accelerators are Part of Ecosystem for Entrepreneurs

I know from my investment and mentoring activity in Pennsylvania that the entrepreneurs that will create the jobs, innovations, and companies of our future need support from a large community of experts and organizations. Not only are the services and facilities of incubators and private accelerators helpful to the startup and growth of these small businesses, but they also need to connect with a number of experts from the private sector:

- Angel investors, who might invest in them, but who can provide mentoring and coaching from a perspective of having started and grown companies of their own in the past
- Attorneys, accountants, and other private experts who can guide new entrepreneurs through many key business processes and issues
- Successful entrepreneurs and corporate leaders interested in mentoring start-ups
- Venture capitalists, which invest in some of the most successful companies when they have passed the start-up stage and are ready for expansive growth.

[3] Marianne Hudson, Ewing Marion Kauffman Foundation, *Why Entrepreneurs Need Angels – and How Angels are Improving*, Kauffman Thoughtbook, 2005.
[4] Angel Capital Education Foundation database - www.angelcapitaleducation.org/dir_resources/directory.aspx, 2009.

In my opinion, the very best acceleration programs have been successful because they have attracted and partnered with some of the most experienced private investors, entrepreneurs and business experts to provide education, mentoring and coaching to their client businesses on a regular basis. These programs have understood that true experience in building businesses and expertise in the same industries is critical for helping new entrepreneurs think strategically, locate new customers and partners, gain credibility, and avoid problems that can literally kill new businesses.

When you have the combination of incubation and support from the private sector, there are some excellent examples of growing companies and jobs in Pennsylvania:

- In Pittsburgh, Carnegie Speech, a developer of spoken language assessment and training software, was incubated at the Language Technology Institute at Carnegie Mellon University. My angel fund, the Mid-Atlantic Angel Group Fund, made two investments in the company. I am personally active with the company, providing business advice and attending Board meetings. Carnegie Speech is a healthy business that currently employs 17 people (and growing).

- In Wilkes-Barre, a two-person Internet company, PepperJam, began in the local incubator, and then a group local angels provided them seed money and helped them secure a line of credit at a local bank. The company grew to 96 employees and was listed as one of the 500 fastest growing companies by Inc magazine. PepperJam was recently acquired by a public company.

- Morphotek, a Philadelphia company that develops therapeutic antibodies for the treatment of cancer began at the University City Science Center Incubator, receiving capital from a seed fund and angel investors. The company now employs 130 people and is building a 60,000 square foot manufacturing plant. Another angel backed company in the same incubator has grown to 40 people and went public a few years after the angel investment.

- Orasure, an Allentown medical device company, got its start in the TechVentures Incubator. More than $1.5 million in angel investment led to a venture capital round and Orasure subsequently merged with a public company, which now employs 250 people.

While companies started in incubators are a small portion of all angel-funded companies, angel investors appreciate the support those new ventures receive so that they are ready for early-state equity capital. We

will have a good example of the combination of this ecosystem on April 5 and 6th in Philadelphia at the Angel Venture Forum. This event brings together angels and prospective angels to learn about the latest best practices in angel investing but will also include presentations by 20 entrepreneurs seeking funding, with several companies coming from incubators.

Angels Provide Money, but More than Money

Each of the examples of company support and job growth is repeated across the United States every year with different partners of local entrepreneurial support ecosystems. Angels and angel groups provide important financial capital for the promising start-ups, but I want to highlight the intellectual capital provided by these investors as this support was a key reason for the job growth and success of many firms.

From a personal standpoint, I have used my own background to help the companies I have invested in. Of the 31 angel investments I have been involved in, I have served on the Board of Directors of seven of the companies. The CEOs of these companies appreciate the fact that I have been through their issues and where they would like to grow their businesses because I founded and grew two companies (ETHIX, a managed care company that grew to $50 million in revenues and 250 employees, and American Interactive, which specialized in hospital laboratory data processing services).

In these seven companies in which I served on the Boards, I would work with the CEO and his or her team usually once or twice a month over a three to five-year time period. We tackled many problems and issues, from detailed planning for future investments, to auditing and accounting, to cash shortages when sales were slower than forecasted, to ensuring the right leadership was on board to help the company continue to grow.

The Kauffman Foundation and many experts hear regularly from entrepreneurs that the "mentor capital" or "intellectual capital" was as important, if not more, than the equity investment to their success. Here is an example from a California life science company that received investments from angel groups in Nevada and Arizona, particularly related to their angel mentor:

A member of the angel group brought a wealth of relevant expertise to the table, with more than 25 years of experience in the biotech industry, and as an FDA regulatory and compliance specialist in medical devices and pharmaceuticals. She chaired the company's Scientific Advisory Board. "She was one of the

keys to all of this. As a young company, having her background, credibility, and connections helped a lot in seeking additional angel investors. And, she is instrumental in our pursuit of FDA approval of our product."

Angels are Different than Venture Capitalists

Because angels are not as well known as other types of investors, I also want to clarify some differences between angel investing and venture capital. While angel investors and venture capital firms (VCs) are complementary, there are several things about angel investors that make them quite different:

- In general, angels invest in start-up and early stage companies, while VCs provide "growth capital" for companies that are further along in their development. Individual angels are investing $10,000 to $200,000 per company, with angel groups making average investments of $281,000 per company in 2008.[5] This compares to average VC investment of more than $7 million for the last several years.[6]

- Angels, by definition, risk their own personal capital in companies. Given a 2007 academic study in which some of the most skilled and active angel investors lost money in 52 percent of all of their investments, angels take incredible risks in backing start-up companies.[7]

- The estimated overall sizes of the angel and VC markets are roughly the same - $20-$30 billion per year – but the number of companies they invest in is different by a factor of 15. In 2008, VCs made 3,800 investments, while angel investors made an estimated 55,480 investments.[8] And while more than two-thirds of all VC investments were in California, Boston, and New York, and half of all states had only one or no VC deals, angel investments happened in every American state.

Ensuring Angel Investment Stays Healthy

Because of their importance to start-up entrepreneurial businesses and the fact that new firms create most of the net new jobs in the United States, the Angel Capital Association calls your attention to a few public policy issues to ensure the health of these investors:

[5] Angel Capital Association, *ACA Angel Group Confidence Report*, 2008.
[6] PricewaterhouseCoopers MoneyTree Survey, 2006-2009.
[7] Robert Wiltbank, Willamette University, and Warren Boeker, University of Washington, *Returns to Angel Investors in Groups (published by the Ewing Marion Kauffman Foundation)*, 2007.
[8] PricewaterhouseCoopers MoneyTree Survey, 2006-2009 and Jeffrey Sohl, Center for Venture Research, University of New Hampshire, *The Angel Investor Market in 2007: Mixed Signs of Growth*, 2008.

- **Eliminate threats to angel investment in 2010 Senate Financial Reform Bill** – This lengthy piece of legislation introduced by Sen. Christopher Dodd on March 15th – Restoring American Financial Stability Act of 2010 – includes two short sections that could threaten the size of the angel investor pool and complicate the ability for entrepreneurs to attract angel investment from multiple states. The bill calls for increases in requirements to be an accredited investor, which could significantly reduce the number of angel investors. Decreasing the number of angel investors during the economic recession would reduce access to capital for small businesses. In addition, it opens the door for elimination of federal regulation of accredited investor rules to states, potentially meaning different rules for different states, and increasing the level of difficulty for entrepreneurs to syndicate their deals to investors from different states. This would be unfortunate, just as one of the biggest trends in the field is for multiple angel groups in a region to invest in an entrepreneurial company that needs $1.5 to $2.5 million to grow.

- **Minimize capital gains tax rates** – Most ACA member angels tell us that the 15 percent capital gains rate for their successful investments has been one of the most important reasons for the increase in angel investments in the last six years. These capital gains rates have rewarded risky angel investments, but also put more attention on strong investment processes to ensure that the companies receiving the investment had the best chance of success. Any significant increase in capital gains rates will contribute to decreases in this type of risky investment.

- **Consider tax credits for angel investments in qualified entrepreneurial companies** – In the current economic times, Congress may also want to complement a lower capital gains tax for successful early-stage investments with a tax credit for investments in innovative small businesses. Federal ordinary income tax credits for angel investments in small business start-ups could improve the flow of angel capital to small businesses in communities throughout the country. ACA is aware of three bills being drafted on this issue at this time and appreciates the work done by Members of Congress to date on this subject.

Summary and Final Thoughts

Thank you for this opportunity to describe the unique role and significant impact that angel investors have in our economy, supporting the innovative start-ups that create important jobs in this country. We like being part of the ecosystem of support for these companies, along with incubators, accelerators, and many private partners.

As the Committee considers plans for catalyzing new jobs across the country, we hope that the contributions of angel investors and other private sector experts to the survival and growth of promising new companies will be recognized. Angel investors are passionate about helping build great new companies in our communities. Many angel investors enjoy being part of the entrepreneurial ecosystem, along with business incubators, accelerators, attorneys, accountants, venture capitalists and other private experts who can guide new entrepreneurs through many key business processes and issues.

We also encourage you to let entrepreneurs in your districts who are interested in learning more about angel investment to link to every known angel group on the Angel Capital Education Foundation Web site, www.angelcapitaleducation.org, and to review the "Info for Entrepreneurs" section to learn more about the angel investment process. ACEF and ACA also have resources for investors interested in learning more about becoming angel investors and/or in building their capabilities.

I would be happy to answer any questions you have and for the Angel Capital Education Foundation to provide you with additional information when you need it.

144 Research Drive, Hampton Virginia 23666
757-249-1585 www.hrtis.org

Thank-you Mr. Chairman and distinguished members of the committee for the opportunity to appear before you to discuss Business Incubators and how they contribute to today's economy.

Business incubators promote regional economic development by providing entrepreneurial companies with an array of business support resources and services. A 2008 study by the Economic Development Administration (EDA) found that business incubators are an effective public-private approach that produces new jobs at the lowest cost to government. For every $10,000 in EDA funds invested in business incubators, an estimated 47- 69 local jobs were generated. The EDA report further noted that incubators provide up to 20 times more jobs than typical community infrastructure projects. Despite the potential for substantial employment creation, business incubators have traditionally been some of the least publicly funded economic development projects. The U.S. Small Business Administration, which provides funding for SCORE and SBDC programs, offers many important programs to help small businesses. However, SBA has no business incubator funding program, and it does not offer intensive, sustained services to the start-up and fledgling companies that are creating our nation's new jobs and commercializing new technologies.

The National Business Incubation Association (NBIA) estimated that in 2005, business incubators supported more than 27,000 start-up companies providing full-time employment to

more than 100,000 workers – generating more than $17 billion in annual revenue. NBIA also points to research showing that every dollar of government funds devoted to an incubator generates approximately $30 in local tax revenue. Today there are proximately 1,000 incubators in the US. Virginia has 30.

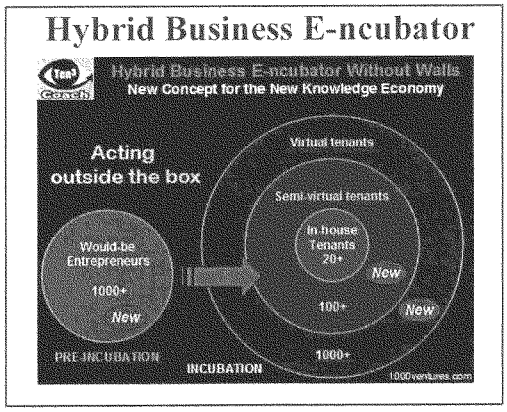
Some small business basic stats are:

- Entrepreneurial "fast growth" companies account for 2/3rds of net new jobs in the US.
- They produce 67% of all inventions and 95% of "radical" innovations

Incubator graduate stats are:

- 85% are still in business after 5 years of graduation
- 85% stay within the community where they were hatched

There are numerous types of incubators. The main ones are Mixed Use, Technology, and Virtual. Some focus on niche areas; such as tourism, government contracting, R&D, IT, Bioscience and other fields. The Hampton Technology Incubator (the anchor for the Hampton Roads Technology Incubator System known as HRTIS) is a hybrid in that it is both bricks and mortar and virtual. Although our specialty is technology, our staff will not turn anyone away who needs basic advice.



Our incubator, the Hampton Roads Technology Incubator System was started in 1998 as a 3-year NASA grant requiring matching funds. HRTIS has graduated twenty-seven clients resulting in thirty-five companies and advised over 400 others. Typically, it takes three to six years for a client to graduate depending on whether they have federal regulations to hurdle. Existing clients and graduates have annual revenues in excess of $200 million with over 650 employees. Of our current clients, 60% are minorities, 20% are disabled vets and 33% are women-owned companies. Our definition of a technology firm for the purpose of acceptance into our program is:

A company whose primary pursuit is the discovery of or application of science or math in new and innovative ways.

They range from cyber security to alternate energy to environmental to bioscience, just to name a few. Let me put it in a more interesting way. We have company who can save 15% of all jet fuel, we have a company that can tell you the air speed of a helicopter going less than a knot, we have a company that can cure certain kinds of fungus using a pulsed light spectrum, and I could go on. I've included a list with descriptors of our clients in your packets. They are all innovative and that's why we have such good numbers. This is true for most Technology Incubators.

At its most base, incubators provide start-ups with economical solutions to rent, broadband, and other back office necessities through subsidies and shared services. While this draws in many potential clients, it is less impactful, especially in the long term, than the many other services we provide. As incubator directors, we offer management and leadership assistance to those companies founded by entrepreneurs or researchers. We help them sharpen their business plans, craft marketing plans, and give strategic direction to their ventures. We actively market the client companies and their capabilities. We work to identify holes in the client companies and how best to fill those holes, whether through staffing, teaming or partnerships. We aid our companies in networking, immediately plugging them in to the business community. We search out funding sources for our clients, earning them opportunities to present to both Angels and VCs alike. We help our clients seek out grants and federal contracts. We provide templates of

operations manuals and other necessary documents which can take hundreds of hours to prepare from scratch. And, perhaps most importantly, we try to prevent client companies from needless spending. Only in an incubator environment can entrepreneurs get this vast array of services, customized from one client to the next, from an organization that is truly invested in their success.

The Hampton Roads Technology Incubator System each year creates the following tax impacts:

- Hampton Roads = $1.5 million
- Virginia = $6.0 million
- US = $18.0 million

Yet, our only investor is the City of Hampton. Fortunately, they are the most forward thinking of all Hampton Roads localities. We run the Incubator on an annual budget of $185,000, when it usually takes around $400,000. This can only be done because of our association with the Hampton Roads Technology Council. Could we do more with more money...absolutely. Our plans, however, are to be self-funded one day through the establishment of a for-profit entity. We've tried everything else and Incubators are just not sustainable without some sort of government subsidy. The case presented to funding groups is that within ten to fifteen years all prior annual investments will be returned and from that point forward a positive cash flow will be generated. But it is in the form of local business license tax revenue; thus continued support is necessary.

Should you wish, I'd be happy to answer any questions you might have on incubators or their associated programs, such as, the SBIR/STTR program or Technology Transfer or Broadband or patent reform or the Business Incubator Promotion Act.

Thank you for your time!

General FAQ's

What are business incubators?

Business incubators nurture the development of entrepreneurial companies, helping them survive and grow during the start-up period, when they are most vulnerable. These programs provide their client companies with business support services and resources tailored to young firms. The most common goals of incubation programs are creating jobs in a community, enhancing a community's entrepreneurial climate, retaining businesses in a community, building or accelerating growth in a local industry, and diversifying local economies. Click here for a more complete description of business incubation.

Is business incubation a new industry?

No. The term "business incubator" gained popularity in the media with the explosion and subsequent demise of so-called Internet incubators between 1999 and 2001, but the business incubation model traces its beginnings to the late 1950s. Click here for more information about the history of business incubation.

How many business incubators are there?

As of October 2006, there were over 1,400 incubators in North America, up from only 12 in 1980. Of those, 1,115 were in the United States, 191 were in Mexico and 120 were in Canada. NBIA estimates that there are about 7,000 business incubators worldwide. The incubation model has been adapted to meet a variety of needs, from fostering commercialization of university technologies to increasing employment in economically distressed communities to serving as an investment vehicle.

What are the different types of business incubators?

Incubation programs come in many shapes and sizes and serve a variety of communities and markets:

- Most North American business incubators (about 94 percent) are nonprofit organizations focused on economic development. About 6 percent of North American incubators are for-profit entities, usually set up to obtain returns on shareholders investments.
- 54 percent are "mixed-use," assisting a range of early-stage companies.
- 39 percent focus on technology businesses.
- About 4 percent focus on service businesses, serve niche markets or assist other types of businesses.
- 3 percent serve manufacturing firms.
- About 53 percent of business incubators operate in urban areas, 28 percent operate in rural areas and about 19 percent operate in suburban areas.

Source: *2006 State of the Business Incubation Industry*

Who sponsors business incubators?

Incubator sponsors – organizations or individuals who support an incubation program financially – may serve as an incubator's parent or host organization or may simply make financial contributions to the incubator.

- About 31 percent of North American business incubators are sponsored by economic development organizations.
- 21 percent are sponsored by government entities.
- 20 percent are sponsored by academic institutions.
- 8 percent are sponsored by other types of organizations.
- 8 percent of business incubators are "hybrids" with more than one sponsor.
- 4 percent are sponsored by for-profit entities.
- 8 percent of incubators have no sponsor or host organization.

Source: *2006 State of the Business Incubation Industry*

What makes a business incubator successful?

To lay the groundwork for a successful incubation program, incubator developers must first invest time and money in a feasibility study. An effective feasibility study will help determine whether the proposed project has a solid market, a sound financial base and strong community support – all critical factors in an incubator's success. Once established, model business incubation programs commit to industry best practices such as structuring for financial sustainability, recruiting and appropriately compensating management with company-growing skills, building an effective board of directors, and placing the greatest emphasis on client assistance.

How do incubators help start-ups get funding?

Incubators help client companies secure capital in a number of ways:

- Managing in-house and revolving loan and microloan funds
- Connecting companies with angel investors (high-net-worth individual investors)
- Working with companies to perfect venture capital presentations and connecting them to venture capitalists
- Assisting companies in applying for loans

How do incubators contribute to local and regional economies?

Incubator graduates create jobs, revitalize neighborhoods and commercialize new technologies, thus strengthening local, regional and even national economies.

- NBIA estimates that in 2005 alone, North American incubators assisted more than 27,000 start-up companies that provided full-time employment for more than 100,000 workers and generated annual revenue of more than $17 billion.

Source: *2006 State of the Business Incubation Industry*

- Business incubators reduce the risk of small business failures. Historically, NBIA member incubators have reported that 87 percent of all firms that have graduated from their incubators are still in business.

  Source: *Business Incubation Works*

Why are business incubators worthy of government subsidies?

Government subsidies for well-managed business incubation programs represent strong investments in local and regional economies. Consider these returns:

- Research has shown that for every $1 of estimated public operating subsidy provided the incubator, clients and graduates of NBIA member incubators generate approximately $30 in local tax revenue alone.

  Source: Extrapolated from data in *Business Incubation Works*

- NBIA members have reported that 84 percent of incubator graduates stay in their communities.

  Source: *Business Incubation Works*

Do business incubators that receive local funding and/or tax abatements compete unfairly with local landlords?

No. Business incubators actually contribute to the long-term viability of the local real estate market. Incubation programs graduate strong and self-supporting companies into their communities, where these companies build, purchase or rent space. Because incubated companies are more likely to succeed than nonincubated firms, landlords of incubator graduates face far less risk than they otherwise would. Also, while they're in the start-up phase, incubator client companies can obtain flexible space and leases that are more appropriate to their stage of growth than they could on the commercial market.

How do business incubators differ from research parks?

Research parks (sometimes called *science parks* or *technology parks*) are property-based ventures consisting of research and development facilities for technology- and science-based companies. Research parks often promote community economic development and technology transfer. They tend to be larger-scale projects than business incubators, often spanning many acres or miles. Research parks house everything from corporate, government, and university labs to big and small companies. Unlike business incubators, research parks do not offer comprehensive programs of business assistance. However, an important component of some research parks is a business incubator focused on early-stage companies.

How do business incubators differ from SBDCs?

The U.S. Small Business Administration administers the Small Business Development Center (SBDC) program to provide general business assistance to current and prospective small business owners. SBDCs (and similar programs) differ from business incubators in that they do not specifically target early-stage companies; they often serve small businesses at any stage of development. Some business incubators partner and share management with SBDCs to avoid duplicating business assistance services in a region.

How do business incubators differ from co-working spaces?

Co-working spaces offer a gathering point for independent contractors and freelancers who want to eliminate the isolation of working from home or wish to collaborate with other freelancers. Some may also offer networking opportunities and basic technical assistance. While the primary value of co-working is the interaction with other professionals, the primary value of an incubation program is its mix of business assistance services specifically targeted to emerging companies. Those services generally extend well beyond networking and basic technical assistance.

How do business incubators differ from business accelerators?

People sometimes use the term *business accelerator* as another term for business incubator in an attempt to differentiate themselves in the market. During the dot-com boom that occurred around 2000, numerous terms like "accelerator" emerged to describe business incubation programs. In the current market, many of these terms have fallen away, but accelerator remains a relatively popular term to describe business incubation programs.

What is a virtual incubator?

NBIA traditionally has defined virtual incubation as the delivery of incubation services solely through electronic means. However, the term may be used interchangeably with "affiliate program" for services delivered to clients that are not in residence in an incubator. "Virtual incubation" also may be used to denote a program that offers services to clients who are located far away from an incubator, when the program does not offer any multi-tenant space.

Hampton Roads Incubator System Clients, Past & Present

(not all collected by submission deadline)

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Blue Cloud Technologies is a mobile software/hardware developer based in Hampton, VA. Our focus is on cross-phone applications which utilize many of the new features of mobile phones, such as hi-speed internet, GPS and Wi-Fi. We also utilize existing proven technologies such as bluetooth. Our software platforms are varied (iPhone OS, SymbianOS, Windows Mobile, etc.). We are actively developing our product line, but also preform custom mobile development work and hardware integration/installation.

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EchoStorm's approach to developing technology puts the power of imagination in your hands. Our products and services are relevant to military commanders in the field, first responders to a disaster, or the head of a Hollywood movie studio managing geographically distributed workers on a production.

We adapt our technology – adLib™ for video and sensor data management; Convene™ for virtual chalkboard analysis and collaboration; or FunnelCloud™ for nomadic, rapid-response infrastructure – to suit your needs.

Now you can collect huge amounts of video and data in near real-time, mark-up the video, analyze it, collaborate with dozens of others and send it out live in any format. Our technology solves the problems of location, bandwidth, and device through multi-layered security and service oriented architecture.

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ENVISION LABS

Envision Labs solves real-world intelligence, surveillance, and reconnaissance (ISR) problems by integrating revolutionary concepts with emerging technologies. Then we create environments in which the solutions we develop can be rapidly applied against real ISR problems.

We also make sure our solutions can be realistically fielded and sustained. By teaming with partners both inside and outside the defense industry, Envision Labs is redefining the economics of the ISR domain. Major research initiatives include: open integration infrastructure, large-scale data management tools, cross-security domain information exchange, information analysis tools, unmanned systems integration, and networked sensors.

Operated as an independent business unit, Envision Labs has the autonomy to exchange ideas freely with government and industry, prove the ideas' usefulness on a small scale, and transition them into broader use. From concepts to prototypes to field service support, Envision Labs is the future of research and applied engineering.

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Keraderm, LLC is dedicated to harnessing the healing power of light to treat a wide variety of skin and nail infections and disorders. Keraderm's proprietary phototherapy treatment has shown potential efficacy in pilot clinical trials and is the only germicidal light nail treatment that has received patents.

Keraderm is in the final stages of commercializing its treatment for onychomycosis. Initial promising research and pilot cinical trials have paved the way for its pivotal clinical trials to establish the safety and efficacy of its treatment. These trials will support an application in 2009 to the FDA for clearance to market its treatment for onychomysis.

http://www.keraderm.com/

LPT
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From R & D to Product

Founded in early 2001, Laser & Plasma Technologies, Inc. (LPT) is an advanced technology firm developing innovative solutions for laser and plasma applications. Currently headquartered in Hampton, Virginia, Laser & Plasma Technologies strives to synthesize the unique capabilities of its research and management teams to deliver practical and cost compliant solutions for advanced scientific and technological challenges. As part of its mission, Laser & Plasma is committed to establishing strong partnerships with government and industry agencies in diverse fields that include energy, aerospace, microelectronics, defense, biotechnology and consumer goods.

LPT's capabilities are based on the scientific inventions of its founder and President Dr. Mool Gupta. Currently a Distinguished Langley Professor at the University of Virginia, Professor Gupta is recognized as a worldwide expert in material fabrication processes and advanced laser and plasma applications. Emanating from this robust and fertile foundation, LPT is focused on developing products and technologies in areas that include laser processing of materials, laser micro-machining and welding, optical sensors and devices, carbon nanotubes, and nano-composites.

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Leira Group LLC offers unique and innovative services that are not available anywhere else in the world. Specifically, all services and training material are designed 'in-house' using the "Leira Method" , a method developed over the past 15 years by Company founder Cristina Leira. This 'Method' has proven to be highly effective in obtaining quick results.

Courses are tailor-made to meet customer specific needs and requirements including vocabulary modules and situational role-plays and scenarios unique to each client. Course offerings include flexible scheduling, mobile training and customized material. Courses are taught by highly trained native or near-native speaking instructors who have been certified in the "Leira Method". Curricula and instruction are currently available in twenty-four languages.

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MARTON
TECHNOLOGIES

Marton Technologies, a Delaware corporation, is an 8(a) / SDB-certified, Service-Disabled Veteran Owned (SDVOB), Woman Owned Small Business (WOSB). Founded in 2005 in Hampton Roads, Virginia by personnel with extensive Federal government, Department of Defense, Department of Homeland Security and private sector experience providing technical products and support services.

Marton Technologies focuses on core competencies in its offering of baseline technical products and services. In its course of operation, Marton Technologies has acknowledged the benefits of working with partners on projects by conducting business with integrity and demonstrating the ability to work as a team member. This integration of management systems, technical expertise and experience brings a unique capabilities based approach to ensure successful execution of projects.

http://www.martontech.com

MyDecisionHelper provides a secure Web-based decision tool to enable businesses, organizations, and consumers make better decisions, more consistently and more reliably. Based on proven decision sciences techniques, MDH puts the rigorous math "under the covers" and permits the user to weigh the importance of decision criteria, enter their options, and walk through an interview-like process to grade each option against each criterion. A patent-pending process expedites the decision process to deliver the best possible solution for the user's unique situation.

My Decision Helper combines both objective and subjective criteria into a single decision. Other features include:

- Professionally developed library decisions ready to use for timely decision-making;
- Hierarchical structure that permits selective levels of decision granularity;
- Ability to create your own unique decisions either online or by simply creating an outline;
- Real-time database link capability to streamline the decision process;
- Sharing decisions to capture the thoughts and opinions of others;
- Teaming of decisions to deliver a collective result;
- Scientifically-proven, patent-pending process that expedites optimal solutions; and
- Decision transparency and defensibility, while maintaining complete confidentiality.

http://www.mydecisionhelper.com

Ostek Power Solutions is a company focused on better utilizing the existing infrastructure by changing how it is currently used and expanding upon it. Ostek Power Solutions is a company that will offer businesses and utilities a more effective way of controlling energy usage and power grid security through smart two-way energy monitoring solutions. Ostek will expand upon existing smart power metering technologies and will create a power monitoring infrastructure that will allow utility customers to automatically monitor and adjust their energy usage and provide constant feedback to the utility.

Perceiva is an industry-leading provider of hosted and integrated communication solutions for small business. Leveraging the power of Web 2.0 technologies, we bring together Voice-Over-IP, groupware, and customer relationship technology in innovative ways, enabling you to improve the level of service you provide to your customers.

We have offices in Alexandria, Virginia and Williamsburg, Virginia. With strategic alliances with companies like Zimbra, SprintPCS, Verizon Wireless, SwitchVox, Polycom, Cisco, HP, Kerio, and RIM we are able to provide a complete portfolio for your small business communication needs.

www.perceiva.com/

PRO-TECH

QuadTech Marine

QuadTech Marine, LLC (QuadTech) is a pre-revenue company in the marine industry serving the high-speed vessel market by licensing the Quadrimaran high-speed ship design possessing characteristics superior to alternative vessel designs. The Company owns the proprietary Quadrimaran design, which uses four hulls to create unique aerodynamic and hydrodynamic forces that provide high operating speeds, shallow draft, stability and reliability. It offers competitive advantages to operators in the growing high-speed maritime markets for fast ferries, fast freight, and high-speed military craft.

StarGenCo™

StarGenCo specializes in developing novel solutions for the world's energy crisis. From wind energy turbines to revolutionary generator design, StarGenCo has an answer for some of industry's biggest headaches.

TAO SYSTEMS
"BALANCE IN TECHNOLOGY"

Tao Systems develops and sells best-of-its-class flow and structural measurement products for the aeronautics/marine engineering industries and the general fluid dynamics community. For over a decade, Tao Systems has rendered engineering research, development, and consulting services to an international customer base. The accumulated experience in aerodynamics, hydrodynamics and measurement electronics has allowed us to provide innovative solutions in the most challenging and diverse environments.

Core areas of expertise include fluid dynamics, structures, mixed signal circuit design, control systems, and aerospace and marine engineering. Products range from high-end anemometers for flow characterization to air speed sensors to high-sensitivity strain gage instrumentation. Projects

range from computational modeling and analysis to prototype fabrication and testing to complete system integration.

www.taosystem.com/

Established in 2008 and located in Williamsburg, VA, Titan Athletic Group, Inc. was formed to bring engineering, bio mechanics, and kinesiology together in developing a monumental product designed to revolutionize baseball and softball at all levels. Our X-10 design concept offers an easy-to-use innovative swing strength trainer that uses repetition and resistance to strengthen every muscle employed in the baseball swing. Unlike the traditional "donut", the revolutionary X-10 allows the athlete to build both strength and muscle memory as they complete a natural swing. Training with the X-10 results in greater efficiency and increased strength. This combination produces a consistent swing that unleashes incredible bat speed, accuracy, and power.

http://www.titanathleticgroup.com

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