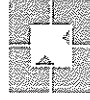




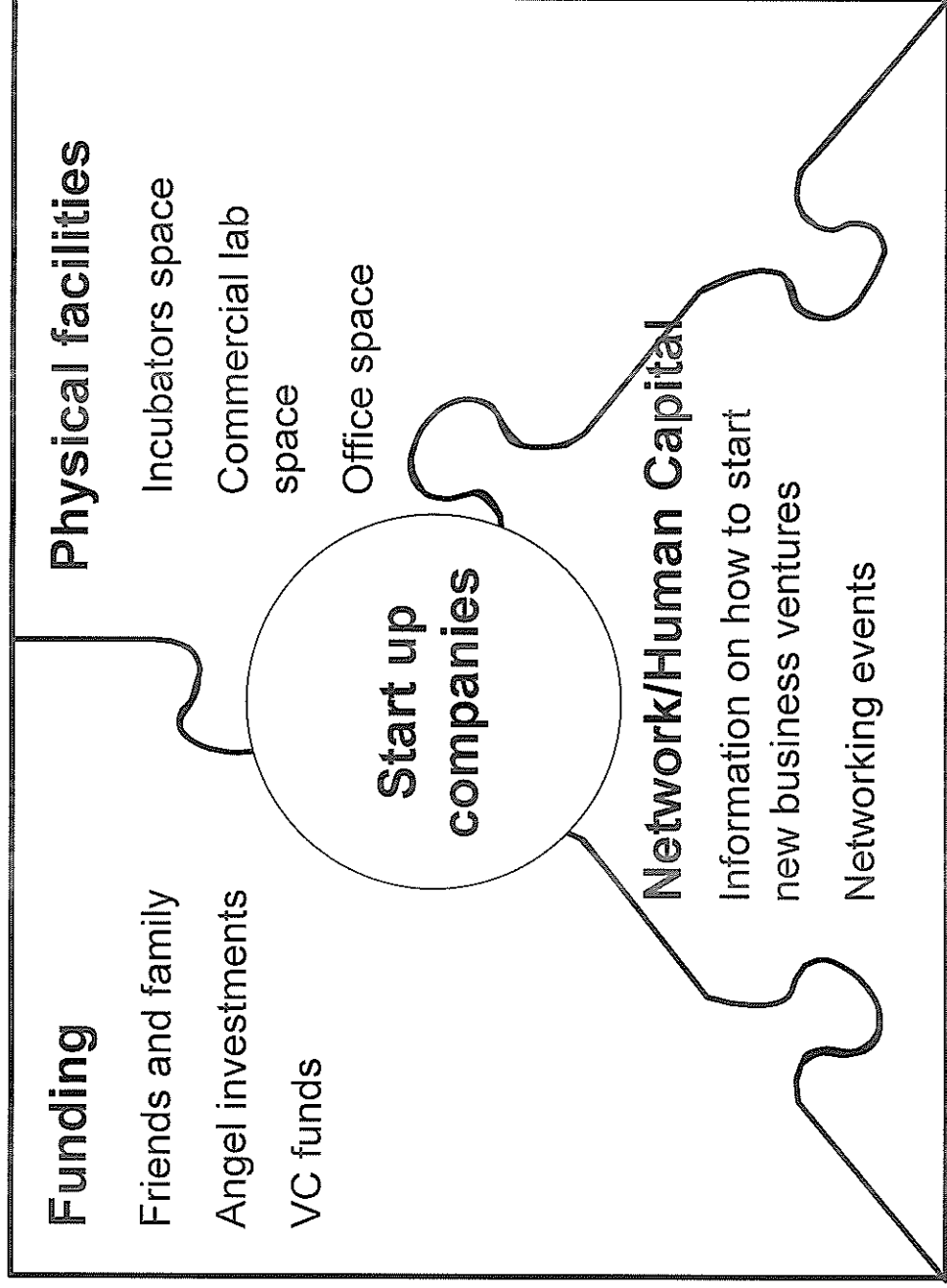
New York City Council Committees on Economic Development and Small Business Oversight Hearing

**Testimony by Steven Strauss
Executive Vice President, NYCEDC
October 27, 2008**

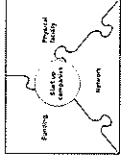


**New York City
Economic Development
Corporation**

Potential components of a successful entrepreneurial center



Stages of venture capital investments



- Seed/Start-up stage**
 - Company has a concept or product under development, but is probably not fully operational. Time under 18 months.
- Early stage**
 - Product or service in testing or pilot production. Product might be commercially available. Perhaps generating revenues. Time under three years.
- Expansion stage**
 - In production and commercially available. The company has significant revenue growth, may or may not be showing a profit. Time more than three years.
- Later stage**
 - Product or service is widely available. Company generating on-going revenue; probably positive cash flow. More likely to be profitable.
- Buy-out/Acquisition**
 - Company ready for IPO
 - Investment banks step in

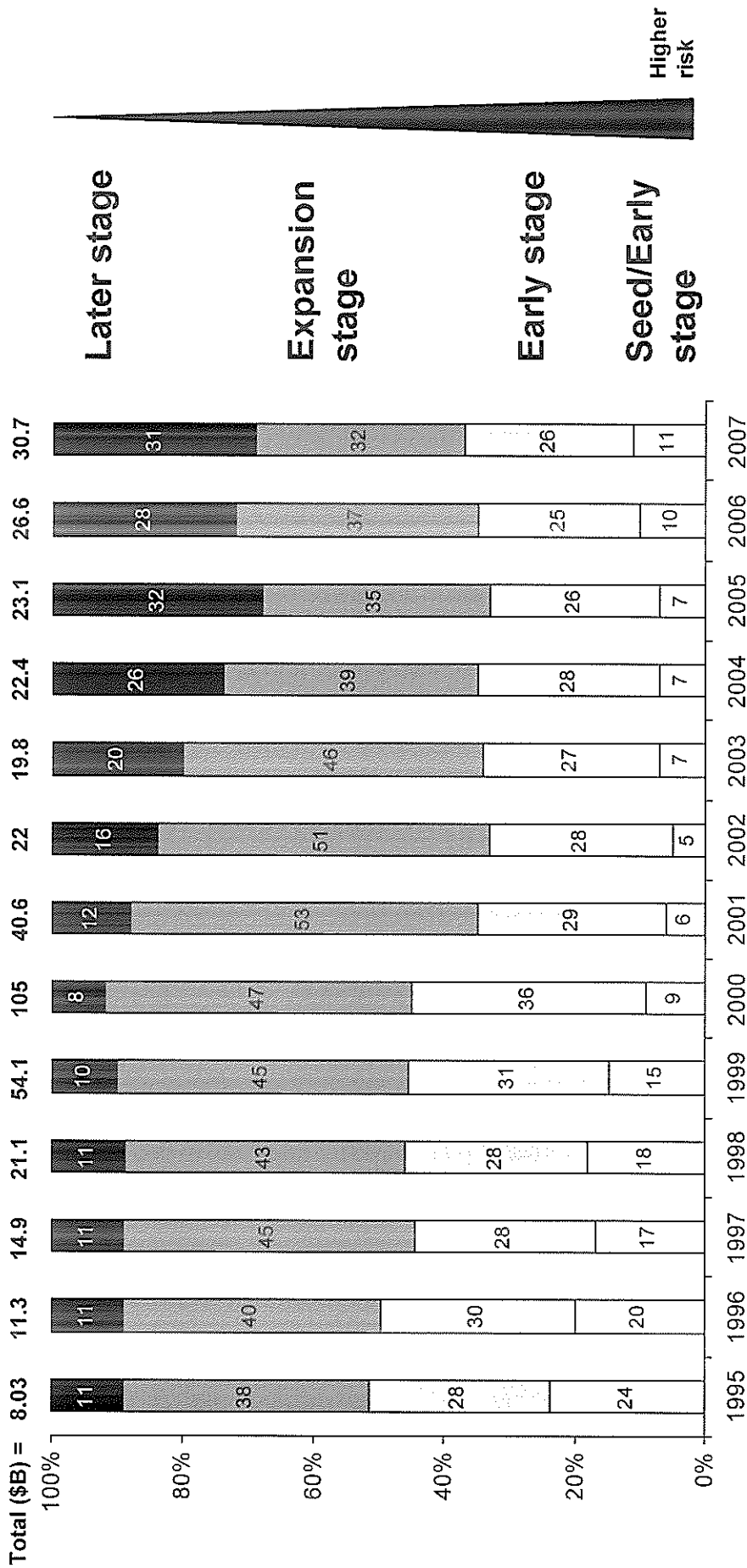
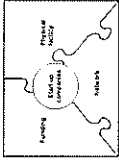
Higher risks

Lower risks

Source: PWC MoneyTree

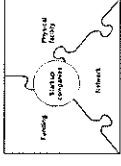
Nationwide, there has been a decline in early stage funding, although the trend has been reversing recently

Total Venture Capital Investment Dollars by stage of investment (1995 – 2007) - Percent of total annual investment dollars

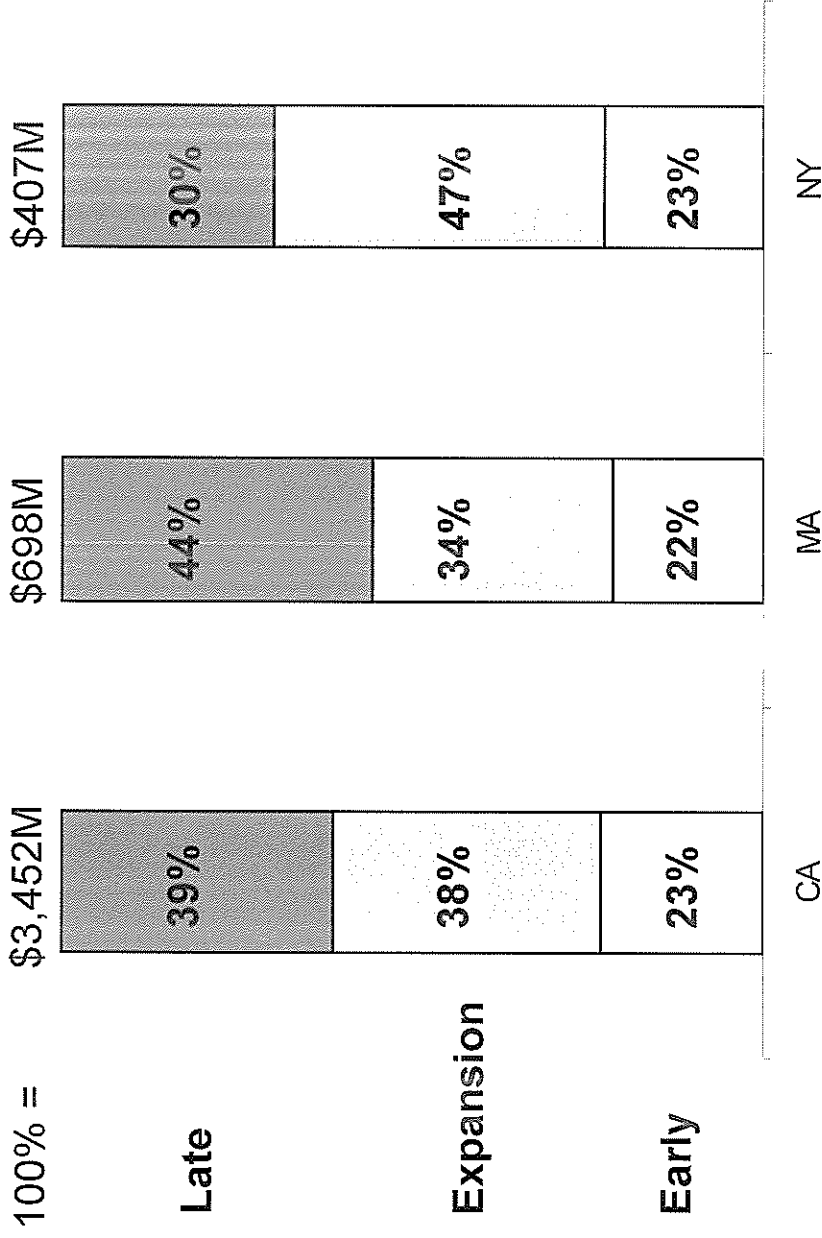


Source: PWC MoneyTree, Q1 2008

NY State has about the same breakdown of investments by stage as other areas

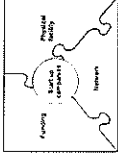


Total VC Investments received, by stage

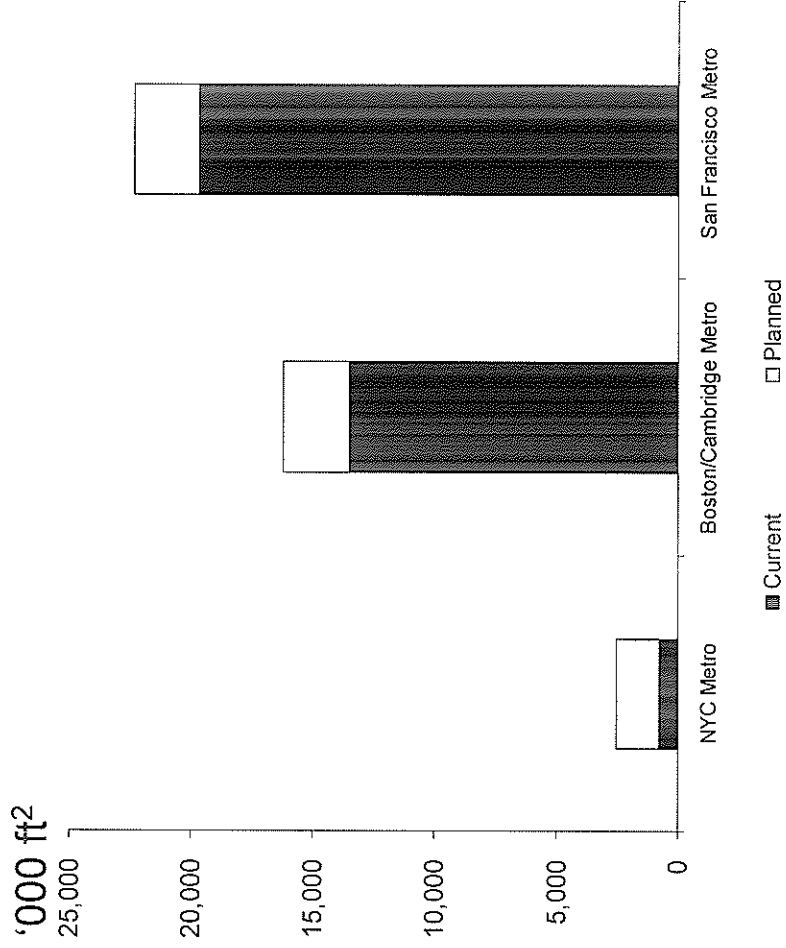


Source: PWC MoneyTree, Q1 2008

East River Science Park will add a significant amount of commercial wet lab space to New York City



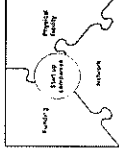
Total lab space available, commercial and private



* Inventory numbers for Boston and SF include only biotechnology-research type real estate regardless of owner occupancy status. Does not include other office, research and production space occupied by companies engaged in biotechnology research

Source: NYCIF (for current NYC lab space) and *Elements 2007* by Collier International

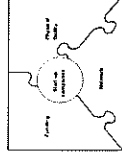
Select Real Estate Options for NYC Startups (non-exclusive)



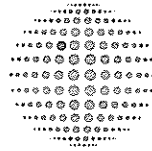
Lab Spaces	Office Space
<ul style="list-style-type: none"> ▪ Advanced Biotechnology Incubator ▪ Audubon Business and Technology Center ▪ Brooklyn Enterprise on Science and Technology (BEST) ▪ East River Science Park ▪ Pace University's SCI2 ▪ Pratt Design Incubator 	<ul style="list-style-type: none"> ▪ Bevmax Office Centers ▪ Cacophony ▪ Corporate Suites, LLC ▪ eEmerge ▪ Executive Workspace ▪ HQ Global (49 locations in NYC) ▪ Manhattan Business Center ▪ Micro Office ▪ Office Links ▪ PowerSPACE & Services ▪ RoseTech Ventures ▪ Sunshine Suites ▪ Techspace

Total estimated space, MSF ~>3.2

Network/Human Capital



- Networking opportunities from the private sector, Universities and NGOs
- 11 Leading Universities, 110 Academic and Research Institutions and over 500,000 college/university students
- Technology workforce of 620,000
- New York City area Receives USD 1.3B in NIH Funding



New York City Investment Fund
A Partnership for New York City Organization

**TESTIMONY BEFORE THE NEW YORK CITY COUNCIL COMMITTEES ON
ECONOMIC DEVELOPMENT AND SMALL BUSINESS**

**ENCOURAGING THE GROWTH OF THE CITY'S TECHNOLOGY BASED
BUSINESS SECTOR**

MONDAY, OCTOBER 27, 2008

**MARIA GOTSCH
PRESIDENT & CEO**

NEW YORK CITY INVESTMENT FUND

Good afternoon Chairman White, Chairman Yassky and members of the Committees. Thank you for the opportunity to present testimony on growing the technology based business sector in New York City.

The New York City Investment Fund (NYCIF), the economic development arm of the Partnership for New York City, is a privately capitalized civic fund. Our goal is to help build a stronger and more diversified local economy through strategic investments in growth sector businesses and not-for-profit initiatives. We provide loans, equity investments and business development assistance to promising business and social entrepreneurs who are seeking to build and diversify the economy of the city and its neighborhoods.

New York offers many unique strategic advantages to technology businesses, particularly in its research universities and medical centers and its world class media and financial services companies. But these assets have been underutilized and we have not done enough to use them to support the development of new, technology based businesses.

In order to grow its technology based sectors, the City must make itself more attractive to entrepreneurs. Small but important measures such as setting up a seed funding program for technology startups is an important step in growing our economy and the technology industry in New York.

NYCIF, in partnership with EDC, NYSTAR, the Industrial & Technology Assistance Corp., and PolyTechnic University, has created the NYCSeed program which funds seed-stage information technology and digital media companies in New York City. Beyond initial funding, the program provides guidance to startups from industry experts, helps connect companies to potential initial customers, and helps companies move to their next stages of development.

This program could offer an opportunity for New York City to effectively support technology businesses. If the NYCSeed board is able to find interesting and viable companies to support, the City could provide funding alongside the other investors if a second tranche of funding is raised.

Biotechnology is an area where New York City is poised to grow its technology based businesses. The city has the intellectual and creative capacity and the resources to support a thriving bioscience industry cluster but does not have enough state-of-the-art scientific research and development space. The East River Science Park, currently under construction and set for completion by early 2010, will become the city's first major commercial science park and will encourage bioscience companies to locate in New York. Building on the strengths of the city's academic biomedical research institutions, the 1.1M square foot project will establish New York as a leader in the commercial bioscience sector. NYCIF is working with the City and the developer to make the project a success and has established a \$15M loan program for bioscience companies looking to establish headquarters and principal operations at the East River Science Park. As this project moves forward, continuing support from the City will be a necessary component to ensure its success.

One of the largest problems for scientists who have ideas they want to bring to market is the challenge of securing funding, especially in the current difficult fiscal environment. NYCIF has begun holding breakfast meetings that introduce scientists with ideas for new products to venture capitalist looking to invest, but much more needs to be done as these networking events are a key step in supporting scientists looking to create companies in technology based industries. The City could begin sponsoring business plan competitions and other technology based networking events, particularly in the biotechnology sector where there are few venues that exist to connect scientists with entrepreneurs and funding.

While New York is a leader with respect to green policies and incentives that support energy efficiency and a cleaner environment, the majority of these initiatives encourage the adoption of cleantech products rather than the creation of new companies or projects. To encourage this development, the City could create a beta testing program for products developed by New York City based companies. A successful beta test with a reputable customer is often the key to securing additional customers and venture funding. Offering to test technology at the early stages, through an expedited process, will put the city in a position to attract entrepreneurs who are eager to market the fact that their products have been successfully piloted in America's largest city.

Additionally, the City, as a consumer of technology and cleantech products, could establish a requirement of local presence by the vendor company for major purchases. This would give a competitive advantage to New York City based technology companies and encourage others to move or begin operations here.

Finally, the City must ensure that there is a network of resources to help connect financial services workers to technology based companies. State Comptroller Thomas DiNapoli recently estimated that there could be as many as 40,000 jobs lost in the financial services industry because of the economic downturn. By providing networking events and identifying and publicizing retraining or certificate programs at local universities, the City can be proactive in retaining this highly educated and productive labor force while diversifying and strengthening our technology based business sector.

Thank you.

Charlie O'Donnell (charlie@path101.com)

Co-founder & CEO of Path 101 (www.path101.com), Founder, nextNY (www.nextNY.org), Blogger (www.thisisgoingtobebig.com), #71 on 2007 Silicon Alley Insider Influentials list, Adjunct Professor of Entrepreneurship - Fordham University, Instructor - ITAC FastTrac

First, I'd like to say thank you to the Council members who continue to have a strong interest in the NYC technology community. Having a critical mass of influential people committed to maintaining and improving New York City as a place for innovation is half the battle.

Unfortunately for an organization as large as the New York City government, the other half of this battle is a ground war. The ideas that will have the most impact on the local technology community are those that go house to house, school to school, wifi node to wifi node. The stumbling blocks to improving our area's ability to promote innovation aren't simple--they're nuanced.

Take, for example, the NYC Seed program. There has never ever been a lack of capital in New York City--for any kind of investment. Many startups have been funded by people in the financial or real estate industries, when they're not funded by traditional venture capital firms. No, money is not the issue, as I have written about before. The issue is that there are not enough dedicated institutions that are economically incentivized to build community and business infrastructure here. Owen Davis, at the end of the day, is one guy with \$2 million who will get the chance to help 10 companies over the next year. That's fantastic, but what if policy changes lead to the abandoning of this program. Other than those 10 companies, which early stage statistics assume that at least half probably won't make it anyway, what will be the permanent impact of his work?

If he had, let's say, a four year window, as most venture capital firms do, he'd have the time to build the necessarily relationships with all of the places where innovation comes from here in the city. If he had a staff member or two, he'd be able to spend time not just investing, but working to create permanent channels to schools, businesses, professional groups, and technology centers--and he'd have the time horizon to accept longer term return on investment from building these relationships. Institutional investors give their VCs a four year mandate to make investments across economic cycles--there's no reason why NYC Seed shouldn't have the same runway.

At the end of the day, longer commitments and more people on the ground are needed because innovation comes not from technology, but from people--and New York City technology has a people problem. Local schools, with few exceptions, are not consistently developing students focused on creating value through entrepreneurship and technological innovation. You can build all the incubators you want--unless you're seeding students as early as high school or junior high with the idea that they could build the next Google here in New York, and giving them the learning tools to accomplish that, it's never going to happen.

Here are two suggestions I'd make for New York City to make a bigger people impact:

First, I'd create the position of a technology community manager. Large websites have community managers to make sure that they're aware what's going on in their communities, and that their communities are aware of all of the site's resources. I'm as involved in the local community as any entrepreneur, and I still can't tell you the difference between what the NYC Council's mandate is related to technology and how that

differs from the EDC, the Department of Small Business Services, how they relate to NYSTAR, etc. A community manager would be a single point of contact whose mandate would be to familiarize themselves with all city services, local university programs, community groups, large businesses interested in working with the local tech community and other initiatives. For example, nextNY is looking to run an event on business development best practices for startup companies. We're looking for some space to run the event for between 50-100 people. We have no budget. I know there's probably some big company with a sizable conference room who'd love to have a bunch of startups come in and talk about business development one night. I just don't know who that is and how to contact them. A tech community manager could do that--and significantly help with these types of issues that involved local entrepreneurs try to solve on their own all the time in addition to their day jobs.

The second thing I would do would be to refocus on technology education in not only the public school system but also work with private schools and universities as well. It needs to start early, too. We can't have all our creative and talented youth thinking that their only opportunity for success in NYC is to work for a Fortune 500 company, because small business and entrepreneurship is what drives the growth in our economy. How about a charter school built around information technology entrepreneurship--one that works with the best local computer science programs to provide scholarships to students trying to create their own businesses? We need better answers to the question, "Where do world class developers come from in NYC?" Right now, the school system isn't the answer to that question.

More than anything else, though, I think it's important that our local government--the individuals--lead by example and participate in the local technology community. The local community is hyper connected through blogging, social networking sites, and a quirky but rapidly growing service called Twitter that ties people together one 160 character short form message at a time. There are currently almost 2000 up and coming technology and digital media professionals on the nextNY listserv--are any of you on it? Sure, it's kind of geeky in its content, but you can set it to provide a daily digest. If you're not on it, and can't spare the time to read the one daily digest e-mail of the group's activities, I'm not exactly sure how you're really going to be able to be supportive of the local tech community. Communities are growing organically on these sites--like the 500+ people who have attached themselves to the Shake Shack Twitter account, mostly local tech folks, in order to navigate the long lines at our favorite local food establishment. These communities are growing largely without the participation of local government leaders. How many of you have a blog on your own websites that gets at least one posting a week, or a social networking profile that you yourself actually login to with similar frequency? If you're not doing this, you're really not going to be in the flow of the needs of the local community.

**The Council of the City of New York
Committee on Economic Development
jointly with the Committee on Small Business
October 27, 2008**

Oversight: Encouraging the Growth of the City's Technology-Based Business Sector

Testimony of David S. Rose, Chairman of New York Angels

Good afternoon. My name is David S. Rose, and I am a serial entrepreneur-turned-early-stage-investor who has been founding and financing technology companies in New York City since 1983. I testify today as Chairman of New York Angels, the largest and most active organization of professional technology angel investors in New York City. Our 75 members, including many of the best-known high-tech investors on the East Coast, have invested over \$35 million into more than four dozen early stage technology companies during the past six years.

The question being addressed by the Committees today, how to encourage the growth of the City's technology-based business sector, is an extremely important one...although I must say that this hearing is reminiscent of the movie 'Groundhog Day'. This is not the first time that I, or other witnesses at today's hearing, have appeared in this room testifying on this same issue before one or both of these committees. My first time came over a decade ago, at the dawn of the dot com boom. At that hearing, I and others spoke about the need for a technologically skilled workforce, early stage financing support, technology transfer initiatives, IT venture incubators, and more. Over two years ago, the Committee on Technology had a similar hearing, with much the same speaker list. One year ago this week, the Committee on Economic Development held a hearing on this same exact topic. Unfortunately, the results of all these hearings have, to put it mildly, been disappointing. Today, however, New York City's economy is in a different place, and perhaps the body politic, in both its legislative and executive incarnations, is at last ready to take action, and the action that needs to be taken is very simple and straightforward.

Let us start by analyzing the basic conditions necessary for a thriving early-stage technology environment in any city: (1) a base of entrepreneurs with high tech experience; (2) educational institutions supporting both entrepreneurship and state-of-the-art technology programs; (3) access to early stage capital to fund new ventures;

(4) affordable work spaces for startups, and the infrastructure supporting them; (5) access to a technologically skilled workforce; and (6) coordination, integration and promotion surrounding all of the forgoing. This is, indeed, a daunting list.

Now let us see how New York City rates on these criteria.

One, Entrepreneurs: New York has over 12,000 high-tech enterprises, plus an additional 34,000 self-employed high tech workers. The New York Tech Meetup, a self-organized, informal group of technologists and tech entrepreneurs that meets monthly, has over 7,500 members. New York City has more technology entrepreneurs than any other place in the world, outside of California's Silicon Valley. Entrepreneurs are not a problem!

Two, Educational institutions: New York has over 75 universities and colleges within the city limits, more than any other city in the world. These include some of the finest business school entrepreneurship programs in the country at NYU, Columbia and Baruch, as well as engineering and technology programs from the pioneering Interactive Telecommunications Program at NYU, to the Brooklyn Enterprise on Science and Technology at Polytechnic, to award winning departments and programs at Columbia, CUNY, Cornell, Cooper Union, New York Institute of Technology, and more. Education is not a problem!

Three, Funding: New York City has over 300 venture capital firms and half a dozen angel investment groups, more than any place in the world except Silicon Valley. Even before the establishment of NYC Seed, the City's own startup fund, there were dozens of venture funds specializing in seed and early stage technology companies, and in the years since the dot com crash, members of New York Angels have invested over \$35 million into technology startups. This year alone there have been over 120 VC and organized angel financings of seed and early stage tech deals. Access to capital is not a problem!

Four, Startup Spaces: With over 350 million square feet of commercial real estate within the City, New York has affordable, functional office space for startups at every conceivable price point. In addition to typical office, industrial and loft space throughout the five boroughs, there are a host of shared work spaces designed specifically to support high tech startups. From Tech Space, Sunshine Suites and New Work City in Manhattan, to Williamsburg CoWorking and Ditmas Workspace in Brooklyn, to Poly's BEST

incubator, Columbia's Audubon incubator, and my own SparkPlace technology center, startups can move in tomorrow to ready-to-go workspace for as little as \$500 a month. Real estate is not a problem!

Five, Technology Workforce: Last year's study by the New York Industrial Technology and Assistance Corporation found that the New York metropolitan area employs over 620,000 people in technology jobs, generating earnings of over \$12.5 billion, making it the world's largest center of high-technology employment. Tech workforce is not a problem!

Six, Coordination, Integration and Promotion: Supporting and coordinating and promoting all of these breathtaking resources, New York has...oh, right. Nothing. Nada. Zip. That, I suggest, is the problem.

It certainly isn't for lack of trying from within the industry. Many programs have been started by smart, energetic people, and have done great things. These include ITAC's FasTrak Tech program, the New York Software Industry Association's myriad programs, the New York City Partnership's technology efforts, the erstwhile New York New Media Association, the incubation and tech transfer initiatives at NYU, Poly, Pace, Columbia and the New York Institute of Technology, the technology and web MeetUps, Gary Sharma's weekly calendar of all the City's high tech events, the numerous independent self-help organizations in and around the tech sector...and New York Angels, our early stage investment consortium. The problem, however, is that although we all know and support each other, there is no central, City-sponsored, pro-active coordinating entity to leverage all of these independent activities. Why? Because the City has yet to make this a priority and commit itself to answering the challenge.

This brings us to point number two: funding. Here we are in New York City, the economic capital of the world, and despite paying lip service to the goal of supporting its startup technology sector, the City has not allocated any funds at all to back such an initiative. We are not talking about hundreds of millions of dollars, let alone the billions that the large venture capital firms invest. We are talking about something more than lip service and the reallocation of existing programmatic funds. Realistically, an initiative of this sort, in a city the size of New York, will require an investment of single-digit millions of dollars annually, dedicated to this goal. This is a drop in the bucket compared

to the overall City budget, but, a drop with a potential hundred-fold payoff in the overall economic future of New York.

If the political will to undertake such a venture exists, let us consider how it should be organized and what should it entail. It needs to be a dedicated, high-profile, independent activity of the New York City Economic Development Corporation, established and funded with consistent, vocal and visible support from the Mayor and the City Council. It should have a small, dedicated staff reporting to a dynamic, entrepreneurial executive with direct, hands-on experience in the technology sector.

The venture—let us, for the sake of simplicity, call it “New York Tech”—would have the mission of encouraging the growth of the City’s technology-based, early stage business sector. It would not deal with large, established entities or major employment or real estate programs. Those are important, but should be handled elsewhere within EDC. New York Tech’s target constituency should be the small, high-potential tech entrepreneurs, who will become tomorrow’s Googles or Microsofts. New York Tech would carry out its mission through five strategic programs:

1) Establishing a directory and web site that will serve as the central coordinating locus for everything happening in, around and about New York’s technology community. It will provide one-click access to resources, guides and services, from work spaces to funding sources, from educational courses to government programs. It will have a calendar of everything happening in the sector, a comprehensive How To section, and answers to frequently asked questions about starting and developing a tech business in New York City.

2) Sponsor and organize real world events and online communities that bring together all of the constituents that make for a vibrant, growing technology sector. New York Tech should be a ubiquitous brand name at every tech networking event in the City, from MeetUps to Expos, from financing pitches to ITAC’s FastTrak Tech, from the nextNY mailing list to InternetWeek (which should build on this year’s success to become a permanent Spring event.)

3) Convene semi-annual summit meetings of all the major institutional constituents in the sector, including universities, venture funds, angel groups, corporations and government agencies. These would be both strategic planning sessions to guide future

support efforts, as well as networking sessions among industry leaders to ensure that one hand knows exactly what the other is doing. Each constituent group would thus know when, where and how to get additional support for companies with which they were involved.

4) Serve as the promotional and publicity arm for New York's tech sector, blowing the City's entrepreneurial horn and standing up as the focal point for anyone seeking to start or develop a high tech company here. It should not be possible for any would-be tech entrepreneur within the five boroughs to NOT know that New York Tech is the first place to turn, right after the spark of 'startup genius' strikes.

5) Finally, undertake an ongoing recruiting effort throughout the national technology community heralding New York's position as the nation's second largest, and most supportive, environment in which to start a high tech business.

Taken together, these five activities have the potential to effect a sea change in the way New York City plays, both in perception and in reality, on the world technology stage. They will leverage the truly phenomenal resources that are already in place here, and will ensure that New York's future economy is not dependent on a few giant financial services companies, but rather by hundreds—if not thousands—of true New York technology entrepreneurs who will be building the world of the future.

I strongly urge the two Committees here today to work with the Administration to appropriate and invest several million dollars to create a New York Tech under the NYCEDS, that will take full advantage of the extraordinary resources, including local and state, public and private, that this great City of ours has to offer the 21st century.

Thank you.

David S. Rose, described by *Red Herring* magazine as "patriarch of New York's Silicon Alley" and by *Crain's New York Business* as "the father of angel investing in New York", is an entrepreneurial executive and investor with extensive experience in high technology, venture capital investing and government. He was named by *Inc.* magazine to the 1998 Inc 500 list as CEO of one of the fastest growing private companies in America, and *Crain's* named him one of New York's 25 most influential technology executives.

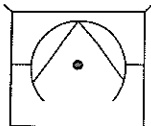
In 1984, *Time* magazine profiled him in its "Computer as Man of the Year" issue; in 1997 he was honored as a finalist for Ernst & Young's Entrepreneur of the Year Award in the New York New Media category, and he has been the subject of numerous interviews and articles in print and electronic media. During the course of his career, Mr. Rose has supervised the creation of an intellectual property portfolio of issued patents appraised at over \$100 million and negotiated both domestic and international corporate acquisitions.

Mr. Rose is Chairman of the Board of the New York Angels, Inc., the leading angel investment consortium in New York City, whose 75 members have invested over \$35 million into more than four dozen early stage technology companies. Through his own investment fund, Rose Tech Ventures, and technology incubator, SparkPlace, he provides capital and management expertise to promising early stage companies.

With over two decades of hands-on experience in founding, managing and funding diverse companies in New York City and around the country, Mr. Rose is actively involved in mentoring and advising other entrepreneurs and corporate executives. He was a Founding Member of the New York New Media Association and is a frequent guest speaker at graduate business schools including Harvard, Yale, Columbia and NYU. As a regular lecturer for New York's Industrial Technology Assistance Corporation he has taught the Venture Financing and Deal Negotiation section of the FasTrak Tech course since 1997.

Mr. Rose is CEO of Angelsoft LLC (the global platform for early stage angel investing), and a Director of CE-Interactive, Magnify! Networks, Pond 5 and Panjiva, all based in New York. Prior to founding AirMedia Corporation in 1988, for which he served as CEO for over ten years, his career included over fifteen years in real estate development, government, teaching and urban planning. Mr. Rose was co-founder and Chairman of The Computer Classroom, one of the world's first computer training firms, and spent over ten years developing technology-enhanced commercial and residential real estate in New York, Washington, DC and Boston with the firm of Rose Associates, Inc. Earlier, he served as Deputy Director of the New York office of US Senator Daniel Patrick Moynihan, where he was the Senator's Special Assistant for high tech and urban planning.

A native New Yorker, Mr. Rose has a B.A. from Yale University and an M.B.A. in Finance from Columbia University Business School. He is a graduate of the New York City public school system and Horace Mann High School. He is profiled in Marquis Who's Who in America, Who's Who in the World and Who's Who in Science and Industry.



ELIA Life Technology, Inc.
354 East 66th St. Suite 4A, New York, NY 10065
(212) 327 2550

October 27, 2008

Dear New York City Council,

My name is Andrew Chepaitis, I am President & CEO of ELIA Life Technology, an engineering firm that develops products for the blind and visually impaired. I greatly appreciate the opportunity to speak before you to discuss the needs of small technology companies here in New York City.

America is a pioneering country. It has always been the destination for people willing to work hard, seize opportunity and the risk therein, and make a better life for themselves. Right now, with the current economic crisis, small tech companies are in need of some support. We encourage the City Council to provide additional support for ITAC and small business resources here in NYC. I will focus my comments on the entrepreneurial community and ITAC, though there are other agencies and communities involved in the small business community.

More than 80 percent of businesses employ fewer than 20 employees — and small employers have less reserves to withstand economic turmoil.

Yet we small businesses make large employers and the economy flexible. Cohorts of mine have contracts with Avon, MTV, the New York Fashion show, IBM, Microsoft and the City of New York. They provide on-demand solutions that these large employers leverage to meet new market demands. Again, we provide the flexibility that stabilizes the current economy and allows large employers to remain in business and react to market conditions.

Additionally, we drive economic growth. A recent study estimated that while small company employees generate an average of 30% more innovations per person than large companies, large companies attract three times as many government R&D and tax incentive dollars. 30% of the New York workforce is freelancing or working in a small business already. They are hard to find and serve. Aside from approving a seed fund administered by an organization like ITAC there is little government is able to do to provide new funding. I realize that tax breaks and other economic incentives are unlikely to flow to small tech companies from City government. However, supporting those portions of the city and state government on which we rely is critical in these times. ITAC is one of them.

When I, as an entrepreneur, visit a new business contact in Boston or Silicon Valley they say "So, what does your company do?" When I visit a new business contact in New York, the most common initial question is "So, you are starting a company, eh?" and they look at me as a curious anomaly, like I have three heads. Because people in New York are not regularly exposed to start ups and they don't understand them. I know a lot of entrepreneurs here in New York, but not nearly as many as I know in Boston and Silicon Valley. Because there is not an established community and support for us. And I must say that I have heard that those institutions on which we depend, such as ITAC, are facing budget cuts. That is very frustrating.

Peter Drucker wrote that Government planning is "incompatible with an entrepreneurial society and economy" because "innovation is by definition decentralized, ad hoc, flexible and autonomous." That said, New York City's support for ITAC's programs is actually very effective. ITAC's assistance drives much of small high tech companies' progress.

In New York, dozens of companies start every year.

One of them may be very close to a major breakthrough that will lead to a cure for cancer. Another may have solved a problem that will enable us to recycle plastics that are currently chocking our landfills. Yet another, may have just created a software algorithm for more efficient wind power generation that will allowing smaller tubine windmills to generate energy from lower wind speeds. It could reduce the price of wind power by 15% and reduce our dependence on foreign oil.

But the chances of these advances coming to market are slim. And I have to say, if those companies happened to reside in New York City, and if those companies are not sitting on a lump of funding, it is unlikely that those companies will succeed, because they are largely on their own. There are few resources here in New York that they can leverage and those that they could leverage are facing reduced budgets. There are many reasons, in this economy, that small company failures are likely. Only one can be influenced by the City Council. The council can help sustain and grow the entrepreneurial economy and community in New York.

I have to impress upon you that this is ill advised. Small businesses receive and ask for very little. Yet give so much. All we ask for is the assistance of those agencies that help us grow, and in this economy, survive. ITAC is the one place I regularly turn to for help. They have helped my company win and execute several research and development contracts, find funding sources, talent, office space, university collaborators and not for profit partners. They have put me in contact with the relevant government officials and helped my company to navigate regulations that are critical for our success. Again, I recommend that you increase their funding.

I'd like to end my statement with an analogy. As I've delineated, New York's entrepreneurial community is in need of assistance. And ITAC is a critical agency on which we rely. More generally, if you want to help entrepreneurs in this great city, help us build an entrepreneurial community.

I don't know how many of you have seen the movie "Charlie Wilson's War" about congressman Charlie Wilson and his support for the Afghan rebels fighting the soviet union. At one point, Representative Wilson insisted on increasing the miniscule budget for support of the rebels, and with those additional funds, the rebels were able to halt the Russian's campaign in Afghanistan and eventually defeat the Russians. Dramatically increasing ITAC's funding would have a similar effect on the growth and stability of the entrepreneurial community in New York City. ~~It~~ such an effort could not come soon enough.

Thank you for your time and attention.

Sincerely,

Andrew Chepaitis
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Testimony presented to the Committee on Economic Development and the Committee on Small Business, The Council of the City of New York, October 27, 2008

ENCOURAGING THE GROWTH OF THE CITY'S TECHNOLOGY-BASED BUSINESS SECTOR

Presented by Colleen Gibney
ITAC

My name is Colleen Gibney, and I am the Technology Practice project manager for ITAC, The New York City Industrial & Technology Assistance Corporation. ITAC is an economic development organization with 21 years of helping NYC small businesses to grow and to create high-value jobs. ITAC is funded by New York State Foundation for Science, Technology and Innovation (NYSTAR) as the designated Regional Technology Development Center (RTDC) for the NYC Region. It is also a Manufacturing Extension Partnership (MEP) Center under a nationwide National Institute of Standards and Technology Program. And thanks to the generous support of the City Council, we are able to assist many NYC manufacturing firms to relocate or more efficiently use their space through our Move Smart/Stay Lean Program.

ITAC's technology practice functions as a virtual incubator. This means that we nurture startup companies to help them to bring their products to market. We are a member of the Business Incubator Association of New York State, along with five others incubators in Brooklyn, Manhattan, and Queens.

Through our FastTrac Entrepreneurship program, and our SBIR grant support program, we have been able to assist over 270 entrepreneurs and early stage firms, helping them to develop their business plans, access grants and capital, and to identify partners. Through our work we have

encountered many entrepreneurs with promising technology but no access to early stage funding. This recognition led us to publish our fall 2007 report, *Buried Treasure: New York City's Hidden Technology Sector*. In this report, ITAC confirmed the existence of a viable, yet largely unrecognized, high-technology corridor operating within the five boroughs of New York City. Since our report, other studies have confirmed our findings. On October 10th of last year, a hearing was held jointly by the Technology and Economic Development Committees to discuss these recommendations. While there has been progress during the past year, this progress could be threatened by the current business cycle. As a city, we are now seeing the dangers of overdependence on the financial services sector. We continue to feel strongly that in order to create a balanced portfolio of wealth creation over the long term, The City of New York needs to cultivate its technology sector; and should specifically address five priorities:

- 1) Like other global technology capitals, New York City needs a public/private partnership to provide collaborative leadership to drive investment in advanced technologies.
- 2) To show our commitment to technology-based economic development, New York City will require multiple early stage capital funding mechanisms like NYCSeed. ITAC was pleased to be involved in the birth of NYCSeed and the energy and excitement surrounding this fund has been terrific. I am here to tell you, however, that the need for more such funding is critical, not only in the software sector, but in the clearly critical areas of biotechnology and energy technology. If you could see the range of exciting early stage discoveries fighting to commercialize in this city, you would be impressed, but also saddened, because without seed funding, these born-in-New York medical cures and power grid solutions will simply cease to be, or they will go elsewhere.

3) The City needs a coordinated system for technology and advanced manufacturing innovators to become connected with the City's independent resources, so that they will choose to grow their businesses here in NYC. While Federal, State, and City government have created incentives and programs to support early stage technology firms, it is clear that small firms in particular are not sufficiently aware of the resources available to them, or how to navigate these sometimes complex requirements. These programs include tax incentives, financing and competitive Federal and State R&D grants. Right now ITAC helps technology and advanced manufacturing companies to access assistance programs across the five boroughs. These include, but are not limited to, university research centers, incubators, City programs, Small Business Development Centers, local economic development organizations, and trade associations. In a coordinated system, those of us working independently to help start-ups thrive could use collaborative technology to ensure that our best firms gain all possible program support, leveraging existing program investment at organizations across the City

4) We have world-class universities and research centers in New York, but this research does not necessarily translate into jobs for New Yorkers. These institutions need incentives to work with small companies. ITAC partners with NYSTAR-funded Centers for Advanced Technology (CATs), and works especially closely with these and similar centers here in the five boroughs, such as the CAT in Telecommunications at Polytechnic Institute of NYU, three centers at CUNY (The CAT for Photonics Applications, The Center for Advanced Polymeric Materials, and the CUNY Institute for Software Design and Development) and Columbia's CAT, the Center for Advanced information Management. And we look forward to working with the brand new Center of Innovation for Technology

and Entertainment at Polytechnic Institute of NYU, just launched this morning. The prospect of working with universities and participating in university contracts can prove intimidating to companies. Business-facing centers improve this process significantly, but they need more help.

5) Finally, the quality of technologies created here calls for a system to bring entrepreneurs together with their first customers, including City technology procurement offices. With a tight market for capital, the City should encourage small company and large company interaction as much as possible—we have seen how larger technology users like ConEd are able to find the new technologies they need right on their doorstep.

A focus on these five areas will spur NYC's technology-based economic development into a cohesive, vibrant, and visible local ecosystem, capable of driving robust and lasting job creation. Apart from adding science and technology research and development jobs, technology firms bring the staff support jobs that we also need in the City, such as laboratory technicians and skilled administrators.

In closing, modest levels of investment and coordination can create jobs and assure our City's leadership in the industries of the future.

NY Tech Meetup <http://www.meetup.com/ny-tech/> is the NY Technology community. We are a group of over 7500 members that have formed over the past four years (since 2004) using the Meetup <http://www.meetup.com/about/platform/technology>. Scott Heiferman (CEO, Meetup Inc.) and I hold monthly gatherings of 400 people to showcase the latest, cutting edge technology in a fast-paced, no-frills format to bring the tech community in New York City together and to provide a forum for technological innovation in NY. The community consists of technologists of all kinds and levels - entrepreneurs, investors, web developers, geeks, marketers, business development people, people within large corporations and small companies, managers, CTOs, CEOs, and many in between.

Each month we select 5-7 innovators to demonstrate their new cool technology, be it a company, a website, a web application, a game or other technology tool, in quick succession 5 minute slots, with Q&A from the audience for each.

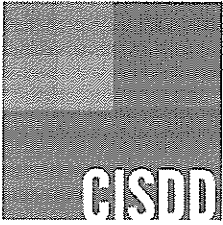
NY Tech Meetup is a self-organized group that has seen tremendous growth and interest in its short four years - see 2006 NYT article 2006 <http://www.nytimes.com/2006/03/12/fashion/sundaystyles/12silicon.html>. In addition to growing to over 7500 members relatively quickly, we've given over 250 promising New York internet entrepreneurs an opportunity to present to our group and gain great exposure to the tech community - they, in turn, go on to get new investments, hire new people or just be inspired, and enjoy being part of our community.

The city could, and should, explore ways to support the growth and success of the NY Tech Meetup community. NY Tech Meetup helps strengthen the internet industry in New York. We promote the development of new technology to serve the industry, the city, and sometimes the country and the world. A strong NY internet industry can make the city's best companies want to stay here, or inspire new companies to come here. We are a powerful group and our strength is good for New York.

Some ideas for ways NYTM and NYC can work more closely to make the city a more welcoming place for technology companies and startups, and work to cultivate the next tech entrepreneurs, to replace some of the lost Wall Street money, help develop technology for the future that will employ people, help the city economy and increase the city tax base -

- The city should explore tax incentives for technology startups to start here or move here.
- The city could and should work to make free wi-fi internet access available throughout the city.
- The city should help NYTM find a venue to accommodate our ever-growing community for more and larger events.
- The city should work with NYTM during Internet Week in the spring to have more city officials and Mayor Bloomberg come out to support our community.
- The city should look into ways city educational institutions can foster more technology programs (a la west coast Silicon Valley)

Dawn Barber
Co-organizer NY Tech Meetup



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ENCOURAGING THE GROWTH OF THE CITY'S TECHNOLOGY-BASED BUSINESS SECTOR

Testimony before the New York City Council Committee on Economic Development and Committee on Small Business

Ted Brown, CUNY Institute for Software Design and Development

10/27/2008

Mr. Chairman and Distinguished Committee Members—

Thank you for giving me this opportunity to speak today.

I am here to suggest that universities can make a significant contribution to the city's economic development by providing innovative help to small businesses.

My name is Dr. Ted Brown. I am the Executive Officer of the PhD Program in Computer Science at the CUNY Graduate Center and the Executive Director of the CUNY Institute for Software Design and Development (CISDD). CISDD was established by the university's Chancellor to promote economic development by supporting the growth of the local software industry through research, workforce development and business development activities. CISDD spans the university; we work with faculty and students in computer science and related disciplines across the entire university. This means that we have more than 250 faculty we can work with.

What I mainly want to speak about is for the city to create more opportunities for the universities in the city to work with small businesses. In particular, one of the projects that CISDD has worked on that I would like to promote as a model for your committees to consider is a partnership-building initiative that CISDD undertook with the support of a grant from the National Science Foundation under its program "Partnerships for Innovation." Under this grant we worked with seven small businesses in the city across a range of sectors to help them with software development projects that were beyond the range of their existing capacity. Student-faculty pairs who had expertise in a relevant area worked with a given company to develop a workplan for the project, and then over the course of about six months, execute the project. All the companies we worked with were small local companies with limited resources and even though the projects were of a relatively modest nature, they often provided a needed boost to the companies.

To give you an idea of scope of projects we worked on I will tell you about a two of them. One of the companies we worked with is an energy management and storage company that makes a battery that stores electricity. The battery can be used for backup power or as a power source for times when costs are high. We helped the company develop smarter software that would improve the battery's ability to store and discharge electricity in a way that would save the customer money.



New York City Economic Development Corporation:
**New York City Council Committees on Economic Development and Small
Business Oversight Hearing:**
Testimony
by
Steven Strauss, Executive Vice President
Monday, October 27, 2008

SLIDE 1: Good afternoon Chair Yassky and members of the Economic Development and Small Business Committees. I am Steve Strauss, Executive Vice President for Strategy and Policy at the New York City Economic Development Corporation (“NYCEDC”). Our goals are: to improve the general business environment, increase the number of jobs, and create tax revenue by attracting and retaining target industries to New York City. I am very pleased to appear before you this afternoon to testify about the City’s Technology-Based Business Sector. When thinking about the tech sector, it is important to remember that it is really several sectors (such as, Web 2.0, Bio, etc.) which have similar “big picture” issues, but also have sector specific issues.

SLIDE 2: NYCEDC works to promote New York City as a hub of innovation and entrepreneurship. We have done this by producing studies/conducting ground-level research, overseeing discussions with relevant institutions and where appropriate, creating targeted interventions. For example, we have an extensive program of outreach in biosciences to tell our story by attending key conferences,

issuing a monthly newsletter, and so on. Through our research, we have found that, the common thread among the cities most successful at attracting and retaining entrepreneurial talent are: funding sources, facilities, and strong business networks/human capital. I will address each of these points in turn.

SLIDE 3: Funding Sources: There are various stages in which a company can invest in a startup. Investment during the conceptual stage is important for innovation, but carries with it great risk. Only a small percentage of companies that start the venture capital cycle finish, and perhaps as few as 1% of these create a profit for their investors.¹ As these companies progress, they are typically nurtured by venture capital investments. The key stages of the cycle are:

- **Seed Stage:** Company has a concept or product under development, but is probably not fully operational. Time, generally under 18 months. The raw material for this stage is the entrepreneurs themselves. And in this area the City does well. For example, in 2007 we had some 18 startups formed just from research at NYU and Columbia, as a comparison only 6 start-ups were formed from Stanford research in this period.²

¹ Interview with David Rose, leading NYC Venture Capitalist

² Draft Association for University Technology Managers' FY07 data (year ending June 2007)

- Early Stage: Product or service is in testing or pilot production. Product might be commercially available; perhaps generating revenues. Time, generally under 3 years.
- Expansion Stage: Product or service in production and commercially available. The company has significant revenue growth; may or may not be showing a profit. Time more than 3 years.
- Later Stage: Product or service is widely available. Company generating on-going revenues; probably positive cash flow. More likely to be profitable.
- Buy-out: Company ready for IPO or purchase.

Note: this is a cycle which can extend over most of the course of a decade, and many companies fail at each stage.

SLIDE 4: As you can see, after the tech bubble burst in 2000, less money has been available for Seed Stage funding due to the risk associated with this type of investment. However, since 2005, we have seen an increase in these types of funds.³

³ PWC Moneytree, Q1 2008

SLIDE 5: 14% of all Venture Capital firms in the US are located in New York City.⁴ We typically rank third in the Nation on venture funding behind California and Massachusetts.⁵ While all stages of venture funding are important for startup companies, the Early Stage is particularly important to spur innovation. Based on recent PriceWaterhouse Coopers data, roughly 20% of each state's total venture capital goes towards Early Stage funding. New York State attracts \$93MM in startup funding; of that, New York City accounts for more than 90%.⁶

NYCSeed is one example of the startup funds we have in the City, with approximately \$2 Million. While the City does not have a financial stake in the fund, NYCEDC does retain an observer/advisory role on the board. Other sources of 'ultra' Early Stage funding are the business plan competitions at our many fine schools and universities (e.g., CUNY, Pace, Fordham, Columbia, etc.) which provide about \$500,000/year at the earliest stages. Further, many of our Universities have targeted 'Technology Validation Funds,' used to fund technologies that require further validation (prototyping, chemical synthesis, in-silico modelling) before being launched out of the University. Taken together, the

⁴ PWC Moneytree, Q1 2008

⁵ PWC Moneytree, Q1 2008

⁶ PWC Moneytree, Q1 2008

NYC academic medical centers have over \$1 Million to spend in this area every year.⁷

SLIDE 6: Facilities – Prior research showed that New York City could do better at the amount of commercial “wet lab” space available. Hence, the City created East River Science Park which is scheduled to open in 2010, and will provide an additional 1.1 million square feet of commercial “wet lab” space in Manhattan. While the City has made extensive progress, relative to Cambridge, Mass. and San Francisco Metro, we still have significant opportunities for growth.

SLIDE 7: Another facilities issue discovered during our research is the misperception by many companies that New York City lacks sufficient space for their operations. In fact, the City has over 600,000 square feet of commercial office space dedicated to startup companies.⁸ Some examples are listed in this slide.

SLIDE 8: Finally, I would like to address the topics of Networks and Human Capital. The City's greatest resource is its people - their intelligence, drive and

⁷ ???

⁸ NYCEDC BD survey of commercial real estate

enthusiasm. New York City has an extraordinary pool of talent. We are the number 1 metro area in the nation for bioscience employment;⁹ we have 11 leading universities with graduate programs in technology; The New York City metro area has a technology workforce of 620,000 - approximately two and a half times that of Silicon Valley, including over 60,000 that currently work outside of traditional tech firms supporting our other industries (such as, financial services, media, professional services).¹⁰ New York City is home to 18,000 science and engineering graduate students versus only about 11,000 in San Francisco and Boston combined.¹¹

New York City is also extremely strong in the technology and financial technology sectors. We have the largest customer base in the world for financial technology products, accounting for 20% of the US securities industry.¹² We attract top technology firms, such as Google, and have the talent to support the industry with over 110 academic and research institutions, and 594,000 college and university students in New York City.

⁹ "Growing the Nation's Bioscience Sector: State Bioscience Initiatives 2006" A Battelle Technology Partnership Practice report prepared for the Biotechnology Industry Organization (BIO)

¹⁰ ITAC "Buried Treasure: New York City's Hidden Technology Sector", 2007

¹¹ ITAC "Buried Treasure: New York City's Hidden Technology Sector", 2007

¹² The Securities Industry in New York City, New York State Comptroller's Office

The quality of our people is widely recognized. For example, the New York City area receives \$1.3 Billion dollars of NIH funding annually, ranking #2 in NIH funding nationwide.¹³ There are 125 venture capital firms investing in healthcare in the City.¹⁴ Since 2000, the NYC Metro Region has consistently ranked among the top four for venture capital dollars invested in bioscience and medical device companies.

Given the Administration's commitment to a more diverse and sustainable economy and the presence of many components needed to attract and retain talent, I believe New York City is the best place in the world to cultivate and foster innovation. This concludes my testimony. I would like to thank you for the opportunity to appear before the Committees and will be happy to answer questions.

¹³ National Department of Health & Human Services, National Institutes of Health 2007 Funding (http://report.nih.gov/award/trends/State_Congressional/StateDetail.cfm?year=2007&state=NY)

¹⁴ National Venture Capital Association

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I represent: E4A Life Technology, Inc.

Address: 354 East 66th Street, 4A NYC 10065

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I represent: Panjiva, Inc.

Address: 20 W. 23rd St.

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I represent: Golden Seeds LLC

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Name: ~~Steven~~ Ann Li

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I represent: NYCEDC

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I represent: New York City Investment Fund

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Name: Ted Brown

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I represent: Path 101

Address: 304 Park Ave S. 7th Fl., New York, NY 10000

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