Strategic Plan for San Jose Incubation Programs

Prepared

for the

San Jose Redevelopment Agency

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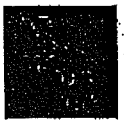

BUSINESS CLUSTER DEVELOPMENT

June, 2007

"The focus of economic development should be on supporting innovation... and innovation will drive the growth of American industry by fostering new ideas and technologies that lead to better jobs and higher wages. America's capacity to innovate will be its most critical element in sustaining economic growth." *David Sampson, Assistant Secretary, Economic Development Administration, U.S. Dept. of Commerce (2004).*

Background

In 1994, the San Jose Redevelopment Agency Board approved the establishment of a business incubator program to support start-up companies in key industry sectors, with the intention of helping these companies locate and grow in San Jose. The Redevelopment Agency's incubator program advances the Agency's objective of revitalizing redevelopment areas by filling vacant office and industrial buildings with corporate tenants, as well as the City's economic development goals of stimulating innovation, new business formation, corporate growth, job creation and economic diversity.

The Software Business Cluster and Environmental Business Cluster were formed in 1994. The U.S. Market Access Center (originally called the International Business Incubator) was formed two years later. In 1998, the three incubators moved under the auspices of the San Jose State University Foundation. In 2004, the San Jose BioCenter (BioCenter) was opened in Edenvale. The Electronic Transportation Development Center (ETDC) is currently in the development stage.

The Redevelopment Agency has traditionally supported the incubators by paying rent for the downtown incubators. In Fiscal Year 2006-07, the Agency's estimated lease payments were approximately $630,000. In the case of the BioCenter in Edenvale, the Agency has invested approximately $7.6 million in tenant improvements and $1.2 million to acquire major pieces of equipment. Recently, the Agency agreed to cover $806,000 of the rent cost at the BioCenter, through June 2008. The Agency has also provided matching funds for a U.S. Economic Development Administration grant to assist in the development of the ETDC.

Software Business Cluster

Founded in 1994, the Software Business Cluster (SBC) provides office space and business development services to start-up companies. The SBC has graduated over 120 companies, almost three quarters of which are still located in San Jose and employ 1500 workers. Since its inception, five companies have gone public – Agile Software, Calico Commerce, eGain Communications, Moscape, and Callidus Software. In 2000,

the SBC received the National Business Incubation Association's "Incubator of the Year" award for excellence.

Environmental Business Cluster

Founded in 1994, the Environmental Business Cluster (EBC) is a technology commercialization center and incubator that specializes in clean and renewable energy and other clean technology. It was the first environmental incubator in the U.S., and it is the largest clean energy incubator in the U.S. today. To date, the EBC has assisted almost 120 companies, with 25 current clients. In 2003, the EBC was selected by the California Energy Commission and the U.S. Department of Energy to provide commercialization services to their grant recipients. The EBC has received over $1 million from these agencies in the last four years to provide technology commercialization services. In late 2006, the EBC was rated first in a British survey of 110 clean energy incubators around the world, based upon the number of technologies successfully commercialized.

U.S. Market Access Center

The U.S. Market Access Center (U.S. MAC) was established in late 1995 to attract international firms to San Jose. The U.S. MAC offers offices and business development services to international clients. The incubator has provided services to 150 clients. Today, the U.S. MAC offers extensive market research and consulting services to international companies. The incubator has been recognized by the National Business Incubation Association as one of three recommended incubators for international business in the United States.

San Jose BioCenter

The San Jose BioCenter opened in 2004. The BioCenter provides wet laboratories, office space, common equipment facilities and business development services to start-up companies in the life science and nanotechnology sectors. The BioCenter currently has 24 companies with over 150 employees, and client companies have raised over $100 million in funding. Technologies under development at the BioCenter have been featured in *The New York Times, The Washington Post, Time, Business 2.0, BioWorld and CNN*. Possible expansion to include an additional floor is under consideration.

Electronic Transportation Development Center

Currently in the development phase, the Electronic Transportation Development Center (ETDC) will be a place for established and emerging Silicon Valley technology companies to collaborate on the design and development of clean energy, hybrid fuel commercial vehicles that also meet homeland security and transportation safety needs. Currently, over 80 potential industry partners have been identified and identification of a facility to house the initial bus technology demonstration project is underway. The

Redevelopment Agency has received a $200,000 grant from the U.S. Economic Development Administration to help with the planning for the ETDC.

San Jose State University Research Foundation

The San Jose State University Research Foundation (SJSURF) manages the four existing incubators on behalf of the San Jose Redevelopment Agency. The SJSURF is the incubators' fiscal and administrative agent, and it helps provide the incubators with connections to San Jose State University faculty and students.

Business Cluster Development (BCD) is assisting the Redevelopment Agency with its incubator program strategy, and has developed this report drawing upon its experience in sector-focused technology business incubation and technology commercialization programs. BCD developed the business plans for the SBC, the EBC, the BioCenter, and the ETDC (the last in partnership with Synergy EV). BCD has assisted in the development of more than 35 business incubation and innovation programs in the U.S. These best practices and our experience are reflected in this report. In addition, Jim Robbins, one of the BCD partners, is the immediate past Chairman of the Board of Directors of the National Business Incubation Association (NBIA) and Carol Lauffer, another partner, is a current Director. Twice yearly, both Carol and Jim teach the NBIA course on Developing a Successful Incubator.

Operation Plan Goals

This Operation Plan will address the following major issues with respect to options for the future:

1. Agency and City financing and return on investment options,
2. The facility options to house such programs,
3. Appropriate management and organizational structure, and
4. Financial sustainability.

More specifically, the BCD team has developed a proposed Operation Plan for the future that addresses:

- *Sustainability*

  A strategic model for sustainability incorporating incubator best practices, based upon BCD extensive knowledge of the current San Jose incubators and based upon our experience with sustainability issues at incubators across the U.S.

- *Management and organizational structure*

  A review of the Agency's current approach to management and organizational structure and specific recommendations for improvements, as needed, to accomplish the Agency and City's long term incubation strategy.

- *Financing strategy and return on investment*

  A review of the current financing approach and recommendations for a specific and pragmatic future Agency and City financing strategy, with clear implications for the return on investment.

- *Potential facility options*

  A review of the current facilities approach and a discussion of possible future facility options within redevelopment project areas.

The project will not address the details of budgets for individual incubators, make specific facility site recommendations, or present a detailed staffing plan for each of the incubators. BCD was not retained to interview incubator directors, Redevelopment Agency staff or SJSURF personnel. Rather, the report is intended to be a draft strategic plan with recommendations that are intended to stimulate future discussions, led by the Redevelopment Agency, with all interested parties.

Incubator Program Strategy

It is important at this point to review San Jose's strategy with respect to incubation. The San Jose Redevelopment Agency has consistently invested in incubators that focus on specific sectors and has used the incubators to build new technology/industry clusters that strengthen and diversify San Jose's economy. This vision has been developed incrementally over time - one incubator at a time. While the strategy has largely been successful, the Redevelopment Agency has decided to review this approach to determine if opportunities to maximize the return for its investment exist and whether the incubators are organized in the most effective and efficient manner.

While numerous individuals, as well as the San Jose State University Research Foundation, play a role in the operation of the incubators, the San Jose Redevelopment Agency is the primary financial sponsor. Most important, the purpose of these incubators is to further the Redevelopment Agency's objectives and the City of San Jose's economic development goals. In fact, this is the one aspect of the San Jose incubation effort that is unique in the country – multiple incubators have been established to strengthen separate technology sectors supported by a single government entity. However, a review of the entire program by the Agency has not

taken place before. The goal of this plan is to build upon the success of the current incubation process in San Jose.

In general, the redevelopment and economic goals of the Redevelopment Agency and the City of San Jose with respect to incubation can be described as aiming to create synergistic and dynamic hubs of activity in San Jose which:

- Help to diversify the economy by establishing new industry sectors,
- Help to fill vacant office and industrial buildings in redevelopment areas with new corporate tenants,
- Foster a culture of entrepreneurship and technology innovation in San Jose,
- Create successful new businesses and spur job growth in San Jose,
- Stimulate the development of new technology and products by targeted sector,
- Enhance the opportunities for technology commercialization and assist in bringing new products to market,
- Develop high quality services and programs and build strong networks of sector expertise which will improve the success rate of emerging growth companies, and
- Increase partnering opportunities with businesses, universities, and other agencies.

Sector-Focused Incubation as an Innovation Tool

It is appropriate to review the basis for San Jose's sector-focused incubation strategy as an innovation and economic development tool. The City's economic development strategy has focused upon creating innovation clusters in emerging technology sectors. According to Joint Venture/Silicon Valley, "Innovation drives the economic success of Silicon Valley. The ability to generate new ideas, products and processes is an important source of regional competitive advantage."[1]

Recently, there has also been increasing recognition that small businesses are the engine of innovation and economic change. Small businesses represent a growing share of the country's highly innovative firms (defined as those with 15 or more patents), increasing from 33 percent of the pool in 2000 to 40 percent in 2002. Small businesses

[1] 2007 Index of Silicon Valley, (Joint Venture Silicon Valley Network, 2007)

also represented 65 percent of the companies in a recent U.S. Small Business Administration report's list of the most highly innovative companies.[2]

This SBA report finds that small firms' contributions to technological innovations are best measured industry-by-industry. Their impact has been found to be particularly significant in emerging research and technology-intensive fields. In biotechnology, for example, small firm research and technologies are said to be used by large firms at a rate 60 percent higher than expected, and 41 percent of all biotech patent citations go to small firms. In fact, 66 percent of patent citations from large biotech companies and 79 percent of those from small companies are associated with the earlier work of small firms. This finding conforms to the generally held notion that small firms lead the creation and technological growth of emerging industries before larger firms take on dominant roles through consolidations, mergers and acquisitions.[3] Thus, efforts to stimulate and improve innovation efforts within small technology start-ups are key to making innovation work and helping Silicon Valley to thrive.

Innovation, or industry, clusters may be defined as geographic concentrations of interconnected companies, suppliers, service providers and others in a particular industry or sector.[4] Many economists have studied the impact of industry clusters on regional innovation and economic development. These economists often recommend and conduct research on evolving technology clusters in a region and on how to link economic development investments to such technology clusters in order to help shape innovation in that region. Economists such as Michael Porter at Harvard and Doug Henton from SRI have developed research methods to identify innovation clusters and measure their growth in metropolitan regions throughout the United States and internationally.

Cluster-based analysis has been used as the basis for regional economic studies in many of these metropolitan regions across the country. As economic cluster opportunities are identified in city or regional planning studies, sector-focused incubation has become an effective tool for stimulating the growth in the targeted cluster(s). San Jose has become a national leader in this approach.

Sector-focused incubators target business opportunities in a specific industry sector -- for example, life science, software, communications technology, clean energy, advanced transportation, international expansion, etc.—and then concentrate their mission, operations, activities and services on the unique challenges and opportunities

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[2] Small Firms and Technology: Acquisitions, Inventor Movement, and Technology Transfer, (U.S. Small Business Administration, 2005, U.S. Gov't. Printing Office)

[3] Small Firms and Technology: Acquisitions, Inventor Movement, and Technology Transfer, (U.S. Small Business Administration, 2005, U.S. Gov't. Printing Office)

[4] Devol, Ross, Blueprint for a High-Tech Cluster, (Milken Institute, 2000, Los Angeles, CA)

that face emerging young companies in that industry. A set of incubation center programs typically facilitates networking among all of these various participants. The combination of the services and the network of expertise and relationships foster the creation of successful technology companies. As mentioned in the background section, the San Jose incubators utilize this model with great success.

This approach has also been studied elsewhere with positive results. "Technology incubators have proved they can catalyze the formation of technology clusters.....In more urbanized regions, these outcomes increased the competitive advantages that already existed.....These findings underscore arguments that public support of technology incubation facilitates the formation of technology clusters."[5]

In a sector-focused incubator, each new company is screened to determine that they are both related to the sector and not directly competitive with other businesses in the incubator. These criteria foster collaboration and synergies between the businesses, and because all are in the same industry, they often leverage one another's technologies and cross-sell products By directing their efforts in a particular industry, incubator managers can provide a greater depth of assistance and resources that are more specifically tailored to the needs of a company.

Sector-focused incubation concentrated on an emerging industry sector attracts investors, business executives, professional service providers, faculty and others with expertise in the area of focus. It also increases the opportunities and interest in technology collaboration and partnership by corporations. Therefore, a sector-focused incubator can provide the focal point from which groups with the best expertise can meet and help move innovation from early stage technology development to full commercial scale. The best incubators recognize that networks are the basic unit of innovation and include members both inside and outside of the technology start-up that is engaged in technology innovation.[6] The Agency's cluster model helps to ensure such network involvement at the early stages of market development.

More established corporations also benefit by creating technology partnerships with emerging young technology companies and by mining incubators for innovations and potential acquisition opportunities. Increasingly, corporations are using relationships with incubators as part of a distributed research portfolio, hoping to identify and take advantage of cutting-edge technologies.

Research has shown that "Quality incubation significantly contributes to the growth of client firm employment and revenues, and thus compensates for lack of regional capacity. The effects of quality incubation last, enhancing graduate survival rates,

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[5] Lewis, David A., *The Incubation Edge: How Incubator Quality and Regional Capacity Affect Technology Company Performance*, Project on Regional and Industrial Economics, Bloustein School of Planning and Public Policy, Rutgers University (NBIA Publications, 2005).

[6] Davila, T., M. Epstein and R. Shelton, Making Innovation Work, (Wharton School Publishing, 2005, Upper Saddle River, N.J.)

though these results are measurably improved in regions with a higher quality of life... Incubator longevity was not necessarily essential to growth of client firms, either. Younger programs that implemented best practices accelerated client firm growth as well as some long-established programs."[7]

Perhaps the greatest beneficiaries of technology incubators are the communities in which they are located. A study by the National Business Incubation Association indicates that businesses which participate in an incubator program have a success rate of approximately 80% over a five year period, compared to a success rate of 20% for non-incubated businesses. In addition, more than 85% of the businesses locate within 5 miles of the incubator site after graduating from the incubator program.[8] For example, the SBC and EBC have been tracking their companies for over 10 years. Seventy percent of the companies indicate they would not have started their companies in San Jose except for the presence of the incubators, and over 70% of graduates stay in San Jose. A significant per cent stay in the downtown, while others sometimes locate in San Jose, but more than 5 miles from the incubator. Clearly, hundreds of companies have moved into the downtown incubators and helped to support redevelopment goals, and the incubators have been an important part of the City's attraction and retention policies.

Thus, as a redevelopment and economic development strategy, it makes sense for the Agency and the City to continue to support sector-focused incubation efforts since they will promote innovation, stimulate new business formation and job creation in relatively new growth sectors for San Jose and help establish each sector as a meaningful center of excellence within the city. On the other hand, the very nature of this economic strategy argues for Agency or City investment that is greatest as emerging technology clusters are being formed in San Jose and that diminishes over time as the technology clusters become well-established and have created a strong new technology cluster in San Jose. Once sectors are well-established, it makes sense to review the appropriate role for future Agency or City investment in that sector. BCD will suggest ways to better manage this process later in the report.

Current Operations

The Redevelopment Agency and the City of San Jose have one of the strongest set of technology incubators in the nation. The SBC has helped attract and grow a base of over 90 software companies in San Jose. San Jose has the largest clean tech commercialization center in California, which continues to grow as the clean tech market has started to boom. The City has the premier location for international

[7] David A. Lewis, *The Incubation Edge: How Incubator Quality and Regional Capacity Affect Technology Company Performance*, Project on Regional and Industrial Economics, Bloustein School of Planning and Public Policy, Rutgers University (NBIA Publications, 2005)

[8] Molinar, Lawrence, Business Incubation Works, (NBIA Publications, 1997)

companies to locate as they move into Silicon Valley: the U.S. Market Access Center. San Jose has some of the only new, wet laboratory space available in substantial volume for biotech start-ups in northern California, and has attracted a strong cluster of such companies to the Edenvale Technology Park in South San Jose.

This report is not intended to be a criticism of the incubators or a statement that anything is "broken". Clearly, many things have been done well by the incubators, the City of San Jose and the San Jose State University Research Foundation over the years. The Agency requested that BCD look at the Agency's potential future investment in the incubators and recommend ways to maximize the Agency's return on its investment. The Agency has also asked BCD to determine whether the incubators are operating in the most efficient and effective manner possible. After substantial success and growth, it is an appropriate time to look at opportunities for continued improvement.

There is general agreement among the incubator directors concerning the following issues:

- Historically, the incubators have developed in an iterative manner, without a master plan. Each incubator has been and continues to be an individual response to a different sector opportunity.
- Initially, most of the incubators were highly entrepreneurial endeavors. Most were not originally operated by the Agency or the Foundation. They all have affiliated with the Agency and the SJSURF over time and for different reasons, with some loss of entrepreneurial opportunities in each case.
- Decisions about policy and management tend to be "stove-piped", with little coordination between incubators, or at times, between the Agency and the SJSURF. Differences over appropriate management practices exist.
- Communications between incubator directors historically have been limited. The SJSURF has attempted to start more coordination recently, but the focus has tended to be on marketing, measurement and fiscal controls. Collaboration by the incubators on vision, policy or mutual opportunities is rare.
- All the incubators have had at least temporary budget shortfalls at some point, and exploration of opportunities for efficiencies of scale between incubators that would improve each incubator's fiscal status has been rare (except between the EBC and SBC).

The Redevelopment Agency's incubation program might best be described as working reasonably well, but lines of authority are blurred and each party's distinct responsibilities are not always clear. The program would benefit from a more unified approach. Aspects of this type of structure are positive, as it tends to reward the entrepreneurial behavior of incubator directors, which is a fundamental prerequisite for

strong incubation programs. However, this approach has left many opportunities unaddressed, and the overall incubation program is due for thoughtful improvements and change.

Opportunities for Improvement

The SJRDA has asked BCD to identify opportunities for improvement. Fortunately, the opportunities can build upon the solid and well-respected incubation programs that have been built over the years. The Redevelopment Agency has been visionary in its development and support of the incubators, and the SJSURF has embraced the incubators as a positive force within the University structure.

This report is not meant to be an in-depth evaluation of the performance of the individual incubators, the Redevelopment Agency or the SJSURF. Rather, BCD will attempt to identify the opportunities where we believe widespread agreement could exist. These areas could provide the Agency with a better return on its investment, while improving overall efficiency and effectiveness and promoting a more sustainable incubation program in San Jose.

At this point, it is important to emphasize clearly that all the incubators being discussed are, in fact, part of the City's redevelopment and economic development programs. Although they did not all start this way, the City has recognized the economic benefits of the sector-focused incubators and has become their primary financial sponsor. This fact may best represent the incubation program's strength and future, but it is necessary for everyone to understand that the incubators are no longer a reflection of the individual visions of their founders, nor are they driven by the goals and objectives of the San Jose State University Research Foundation. Increasingly over the years, the incubators have become a key method to implement some of the Redevelopment Agency's major goals and objectives, evidenced by the Agency's continued financial support and direct discussions with the SJSURF and the incubator directors about the role the facilities play in job creation. If this fact can be embraced by all involved and utilized to guide future decisions, it will lead the way to a more powerful and effective incubation program – an economic model for technology innovation and growth that is not likely to be matched by any other U.S. city.

Developing a More Sustainable Model for City Incubation

Several opportunities exist for developing a more sustainable incubation model. The circumstances are unique with four, and soon five, separate programs supported by the Redevelopment Agency. BCD believes that all the areas we have been asked to address logically fall under the concept of sustainability, and that this is the appropriate

time to make San Jose's incubation program more sustainable and take it to the next level.

What is lacking is a strong financial strategy, an even better return on investment for the Redevelopment Agency and the City of San Jose, an improved management and organizational structure, and better facility options. The following recommendations are identified in the hope that it will begin the discussions and decisions needed to develop a more powerful incubation model.

A) A Unified Organizational Structure

BCD recommends that the overall goal should be to move the organizational model from a series of "stove pipe" sector-focused incubators to one unified organizational structure. All the incubators should be merged into one organization containing different sector programs, and better integration and leveraging of their services should occur. For example, the City should be able to market a broader range of incubation services for technology entrepreneurs. A start-up should be able to receive services from multiple incubator programs when that is beneficial. Currently, most of the incubator directors do not know the clients in other incubators and their needs. The incubators are treated as separate organizations, although they all technically report to the SJSURF. For example, the BioCenter may have client companies developing software or focused upon environmental issues, but the incubators are not currently organized to share services. Companies in the EBC might benefit from market information on Northern California, but the U.S. MAC is not currently organized in a way that makes such services readily available, nor does the EBC request such services from the U.S. MAC. Multiple opportunities to improve assistance to San Jose start-ups are lost. Also, the Redevelopment Agency and the City of San Jose are not marketing their programs as strongly as possible, although some progress has been made on marketing in recent years as the Redevelopment Agency and SJSURF have begun to develop some group marketing materials and radio and newspaper ads. However, if the incubator programs are combined, marketing can be better organized and the whole program promoted more often and more efficiently.

Because each incubator is organized as a separate entity, opportunities for joint policy development, joint staff meetings, joint marketing and shared services are often not realized. In addition, both the Redevelopment Agency and SJSURF interact with the incubators on an individual basis 90% of the time. Although the SJSURF has attempted to unify some aspects of the incubator operations under its management in recent years, SJSURF is organized in a manner that often makes its attempts ineffective. SJSUF is organized and primarily focused upon SJSU research programs and is not viewed as entrepreneurial, visionary or a policy leader for incubation. At the same time, the Redevelopment Agency lacks the experience to work such issues. Finally, the

incubator directors have not historically initiated such efforts toward a unified approach on their own. The current approach needs to be revisited by all and restructured.

As the incubators have increased in size and number, their challenges have become more sophisticated. As new issues and challenges arise, the current organizational structure creates inherent conflicts and constraints that the best of intentions cannot overcome. For example, the single most important factor that would help the incubators attract more start-ups is a seed equity fund. When the City of San Jose put out an RFP for development of such a fund, SJSURF would not allow the EBC and SBC to present their proposal to the City, stating that management of this type of fund created unacceptable liability risks for the SJSURF and was inconsistent with their primary charter.

While the SJSURF has been trying to unify the overall incubation programs over the last several years, its own organizational structure and perceptions about appropriate levels of risk – including a Board that is not focused on the private-sector or familiar with business incubation practices – have often limited opportunities for innovation and improvement of the incubator programs. Also, their efforts to regulate communications between incubator directors and the Redevelopment Agency have highlighted differences in perceptions concerning how the incubators should operate.

Thus, while SJSURF's organizational structure and mission are appropriate to serving the purposes of the greater university, SJSUF is not specifically configured to create a culture conducive to operating entrepreneurial incubation programs, especially as these programs continue to expand. As the number of incubators and the size of their budgets have grown, the SJSURF has become more concerned about financial risks and legal liabilities of managing the budgets and the organizations. At the same time, as the Redevelopment Agency's incubation program has expanded and its financial commitments have grown, the Agency has become more focused upon assuring appropriate economic benefits. A new organizational structure is needed to address these issues and ensure future success.

Recommendation 1: A New Organizational Structure

Create a new non-profit incubator organization and Board of Directors for the sole purpose of operating all of the Redevelopment Agency-sponsored incubators. The new organization needs a single, focused mission of enhancing the success of San Jose's incubation programs. The number of incubators and the size of the financial commitments require this focus.

BCD believes that neither the Redevelopment Agency nor the SJSURF, as currently organized, are the most effective organizations to manage the large number of incubators now being funded by the Agency. A new non-profit corporation could be

created by either the City of San Jose or San Jose State University. The City of San Jose has the legal authority to establish such a corporation, and San Jose State University already has such a model with its Research Foundation. However the organization is created, BCD strongly recommends a separate non-profit be established for the sole purpose of managing the incubation programs and establishing the prerequisite organizational structure to move the Agency's incubation programs to the next level.

Obviously, the creation of a new quasi-independent, non-profit corporation will require significant discussion and review. Regardless of the final structure, a new organization is necessary to more closely align the incubators with Agency objectives and City policy, while still allowing the entrepreneurial freedom and private sector initiative needed to make a broad-based sector-focused business incubation program successful. A new structure is a fundamental building block to a stronger and more successful program in the future. This new organizational structure will place all of the incubators within a single entity and can bring the incubators and their staffs together to more effectively pursue some of the issues discussed later in this report.

In order to ensure that the new incubator organization will represent the redevelopment and economic development policies of the Agency and the City, the Agency and the City should have the power to select the Board of Directors of this new non-profit corporation and should have the power to remove and replace Board members. BCD recommends that the Board of Directors be small enough to operate in an entrepreneurial and efficient manner and that it not exceed 11 members. In addition, BCD recommends that each of the incubator directors (including a new ETDC director in the future) be appointed as Board members to ensure that the incubators and incubator best practices are effectively represented at all times. The remaining Board members should be Agency or City, business, or higher education representatives committed to the success of the incubation program. The majority of the Board members should also have significant business experience in recognition of the private sector focus needed in order for incubators to succeed. Each incubator should continue to have its own sector-focused Advisory Board, reporting to the individual incubator director.

The primary responsibilities of the new Board of Directors should be:

a) Budget approval and fiscal oversight for incubators,

b) Fundraising strategy,

c) Approval and oversight of private management contracts (see below),

d) Interface with Redevelopment Agency and City officials,

e) Other responsibilities as set forth in a Board of Directors policy (to be developed).

The new foundation would be staffed by a small team. We recommend the hiring of a professional director with fundraising skills (an issue which is addressed later in this report), along with consideration of services that might be jointly offered to all of the incubators, such as accounting and marketing.

Recommendation 2: Private Management Contracts

The new non-profit corporation should operate all the incubators under a private management contract (or multiple private contracts). This is similar to the arrangement currently used by the SJSURF with the San Jose BioCenter. The other three incubators are staffed primarily as employees of the SJSURF. BCD believes that a private management contract offers several advantages. First, it allows the maximum flexibility for staffing. As staffing needs change, it is much easier for the private management company to change staffing than it is for a foundation with full-time or part-time employees. With a single unified incubator organization and private management contracts, significant opportunities also exist to consolidate staff across incubators for functions such as accounting, market research, fundraising and administration.

Second, the contract can be put out for bid on a regular basis, which will increase competition and tend to help keep costs competitive. However, BCD does not recommend the bid be awarded based upon lowest cost alone. Experience and management qualifications are key determinants. Private management contracts also allow the non-profit corporation to change management more easily if there are performance issues. Third, private management contracts tend to allow the incubator management more freedom, within their budgets, to arrange for performance-based incentives and attract the most highly qualified individuals.

This approach allows San Jose State University more flexibility in decisions about their role in the future. The University may not want to create the new non-profit corporation, but it could choose to bid for the management contract. The University might be more interested in creating the new non-profit corporation if it did not have to assume employment responsibility for the incubator staffs in the future.

Again, the details will take careful discussion. They must be done within the context of the SJSURF's current management contract period and recognizing that, currently, SJSURF employees are working at the incubators. However, some of the employees of the EBC, the SBC and the U.S. MAC are approaching possible retirement age. It is an ideal time to start addressing any transition issues and to bring new staff perspectives into the organizations.

Any private management contract proposal should clearly address the following items:

1. Annual management fees,
2. Measurable performance goals, including:
    a. Recruitment goals
    b. Proposed annual operating budget, including revenue sources
    c. Responsibilities of the management company
    d. Programs to be offered
    e. Staffing levels
    f. Performance incentives, if any,
3. Performance evaluation measures

Each incubator management team should be responsible for obtaining the funding needed to cover all incubator operating expenses, including its management fee. Those revenue opportunities should be clearly identified. Staffing should follow private industry compensation models. Incubation best practices make it clear that salaries should be commensurate with the private sector, not the government or university sector, in successful technology incubators. In fact, individual compensation and the division of labor among employees of the management company should be within the private management company's control as long as they meet budgets. If possible, financial incentives should be encouraged that benefit both the incubator and the management company. By this, we mean that the exception to the flat management fee should be an incentive that would bring additional funding to the incubator if awarded. The most common example is usually related to the ability of the management company to bring in revenue in excess of the approved budget. For example, if a balanced budget was presented, and the management company was able to procure a grant of $500,000 above the forecasted budget revenues, it would be consistent with incubation best practices for the incubator staff and the management company to be awarded a bonus based upon a pre-arranged formula.

Recommendation 3: Review the Viability of Each Incubator

The Redevelopment Agency has consistently invested in incubators that focus on specific sectors and has used the incubators to build new technology/industry clusters that strengthen and diversify San Jose's economy. The Agency and the City should continue to invest in new cluster development over time. But, Redevelopment Agency program support should also phase-out as sectors become mature and City policy is

achieved for that sector. More mature sectors where the City of San Jose has achieved a major presence may be a better place for traditional market forces and real estate developers to take-over. Sectors that move from an ascending to a descending cycle over a long term may also no longer warrant Agency investment. In other words, an Agency-supported incubation focus should not necessarily last forever. With a more unified incubation program, individual sectors can be added or eliminated more efficiently, while the overall incubation program continues.

As part of the proposed restructuring, each of the current sector-focused incubators should be reviewed to ascertain whether it is still meeting redevelopment and economic development goals. BCD believes that the SBC needs the most careful review. The SBC has been in existence for 13 years. The sector has experienced boom and bust cycles, but most importantly San Jose has moved from a total of 5 software companies to 90 software companies within its city limits, thanks in large part to the SBC. The software industry itself has also changed in significant ways. The SBC has been an outstanding success, producing multiple IPO companies and attracting over $600 million in venture investment. But, much of this success is historic, not current. Perhaps a subsector of the software industry with more sector growth potential can be identified, or perhaps the software incubation strategy should be recognized as successful and phased out.

A careful review of the SBC and the other incubators would be desirable. It appears that both the U.S. MAC and the EBC have "morphed" into niche markets that are timely and potentially productive for San Jose, but this should be confirmed. The San Jose BioCenter is still in its early stages, but also appears successful.

The founding principle of the incubation program is still most important: San Jose's incubation program should support start-ups in emerging or high growth sectors that promote current Redevelopment Agency and City goals. In recent years, this appears to be how the Agency's and City's incubation strategy is evolving.

B) A New Financing Strategy

The Agency's financial investment is critical to the success of the incubation programs and is consistent with its redevelopment goals. We have suggested linking the incubator operations even more strongly to redevelopment and economic development goals. At the same time, as the program grows it becomes increasingly important to have a clear and pragmatic financing strategy that is sustainable and will help maximize the Agency's return on investment. BCD feels the primary opportunities to improve the financing strategy can be achieved by reducing facility costs and finding ways to supplement traditional Agency funding through increased use of state, federal and private grants. Finally, the Agency and the City should consider building an incubator

program reserve fund to protect the incubators, the Agency, and the City from unexpected budget shortfalls.

Recommendation 4: A Consolidated Incubator Facility

The opportunity exists to explore a consolidated incubator facility as the new Electronic Transportation Development Center (ETDC) program is created. The possible development of an ETDC facility offers the potential opportunity to move the incubators into a City-owned or controlled facility. The new foundation is also one option as the facility operator, with the building as a foundation asset. The key is to provide a building that is rent free to the incubators but that does not require the Redevelopment Agency to subsidize the rent paid to a private landlord, as it currently does.

The ETDC development plan calls for a 30,000 square foot facility, combining office space and manufacturing space. The EBC, SBC and USMAC could be consolidated into the same ETDC facility if it were slightly enlarged. This consolidation could save at least $700,000 per year for the Redevelopment Agency in rent subsidies.

A possible and timely opportunity to accomplish this consolidation is through an U.S. Economic Development Administration (EDA) facility grant for the ETDC construction or retrofit. As EDA is a strong supporter of incubators and a primary funder of their construction or retrofit, the Redevelopment Agency could add the space needed for the other three incubators to their grant request. Approximately 20,000 square feet would need to be added to the current proposed 30,000 square foot ETDC facility, it the three other incubators were to be included at the site. As efficiencies of scale for all the incubators and the ETDC - such as shared conference, kitchen and reception space – would be created, the space needed would be significantly less than the 40,000 square feet currently occupied by the three incubators now occupying two different locations. Any reduction or elimination of space caused by a possible phasing-out of the SBC would further reduce the space demands, but some space for a new sector-focused incubator in the future might be desirable.

The estimated ETDC budget anticipates a construction budget of $4.5 million, of which 50% could be supplied by EDA. However, EDA facility grants of up to $3 million are possible. For example, the Alameda Life Science project received a $3 million EDA grant several years ago. Increasing the EDA request to $3 million, along with a corresponding match, could cover the anticipated cost of retrofitting a facility large enough to house the additional incubators.

Since manufacturing space is needed, the location would presumably need to be in a redevelopment area outside the downtown – potentially on the North First Street corridor near the airport or at the Las Plumas city-owned facility. These would be a good location for the EBC, SBC and perhaps the US MAC because it adds parking. Parking is an issue at all these locations. The timing of the lease expiration for the downtown

locations and the development of the ETDC facility could dovetail nicely. The current downtown location is especially problematic for the EBC and SBC. This block of North First Street has deteriorated badly since the last lease was signed. Most of the buildings on the block have been deserted for some time, causing numerous problems. A new location in a business or industrial park would certainly improve the ability to attract new start-ups.

The Agency may also become aware of other facility options in the future that offer both the Agency and the incubators rent relief. Any changes would need to be coordinated with the current lease expirations, or the leases would need to be terminated early. Both the EBC/SBC facility and the US MAC facility lease terms expire in the last quarter of 2009.

The investment in the BioCenter wet labs makes it impractical to include them in any facility consolidation, and expansion is also currently being considered for that facility, subject to funding availability. The BioCenter rent will increase to near-market rates in two years under the current lease. Serious consideration should be given to re-negotiating the lease for the BioCenter to more favorable terms.

Recommendation 5: Increased Grant Funding for the Incubators

The incubators are managed by individuals with business, sector and start-up experience, but none of the incubators has a staff person that is skilled at raising funds from state, federal or private grants. The new non-profit organization should hire a person (or agency) skilled at obtaining such grants and dedicated to raising funds for all of the incubators. BCD believes that millions of dollars in grant opportunities are being missed because the incubators do not have the staff qualified to identify and pursue them. The U.S. Dept. of Energy, U.S. Environmental Protection Agency, the National Science Foundation, the National Institutes of Health are a few examples of federal agencies. Private foundation grants are also available if the incubators were better equipped to understand foundation priorities and funding practices. An individual with hands-on experience and success at fundraising would be invaluable. Combined with better use of the City's state and federal lobbyists, the opportunities for a Silicon Valley-based set of technology incubators to capture funds for clean energy, life science, advanced transportation, homeland security, and international sectors seem quite feasible. A skilled fundraiser could quickly cover the costs of retaining their services.

This opportunity needs to be discussed carefully and supported by the incubator directors and others. BCD believes that with a new rent-free facility and improved fund raising capacity, the city-wide incubator program could become sustainable without an annual Agency rent subsidy.

The cost burden for services associated with managing such grants should be reduced. Currently, the SJSUF charges each incubator 8-10% of annual expenses for their

services. However, the SJSUF charges 26% on project specific grants, which are just the type of grants we are recommending be increased substantially for all the incubators. As the organizational recommendations are being considered and fundraising capacity is being improved, this cost burden should also be addressed. Any new system needs a lower burden in order to be financially sustainable. For example, the EBC and ETDC anticipate grants in the $2 million range in 2008. If they receive these grants, the 26% fee charged by SJSURF would be approximately $500,000. If fundraising escalated into the $3-4 million range annually for all the incubators under a system with more effective fundraising capacity, this figure would double. Historically, the current system operated at lower grant-funded levels, but over the last several years such funding has increased significantly, and further increases are desirable. Therefore, a new system for calculating a reduced burden to be charged by the new non-profit entity being proposed will need to be developed.

An increase in grant-related funding of approximately $250,000 each annually for the EBC, SBC and US MAC (after fundraising and expenses are deducted) would eliminate the need for an Agency rent subsidy. Similar efforts for the BioCenter would reduce its rent burden. It is still assumed that the Agency and the City would support certain grant proposals through matching funds or in-kind matches, when they endorsed the purpose and potential impact of such grants as consistent with redevelopment and economic development goals.

Recommendation 6: Establish a Reserve Fund

At times, the incubators have suffered from cash flow shortages. The SJSURF has typically advanced the incubators operating funds in those situations. This approach has been extremely helpful to the incubators, but it has caused concern at the SJSURF about appropriate limits. No clear limits exist on the extent to which an individual incubator will be assisted through such cash flow emergencies. SJSURF has also raised issues about who should be liable for covering such shortages.

Some shortfalls have been made up by the incubators over time; other shortfalls appear too large for the incubators to cover. For example, the Redevelopment Agency has just agreed to pay for approximately two years rent at the San BioCenter for a total of $806,000. However, this shortfall was related primarily to initial start-up costs that were not covered by rent and sponsorship as anticipated. The BioCenter and SJSUF have agreed to develop a fundraising plan to cover future costs.

Once the need for annual Agency rent subsidies can be eliminated through the other steps recommended here, BCD proposes that the Agency or the City provide the new non-profit corporation being formed the amount of one year's current Agency rent subsidy for the incubators, or approximately $1,000,000, as a reserve fund that the corporation Board of Directors can use for unanticipated temporary cash flow shortages

and, over time, for capital reserves for improvements at the incubators. These shortfalls should be largely eliminated in the future as the other steps in this plan are taken to reduce budgets and increase revenue.

Clear policies for use and repayment of this reserve should be developed, and incubator directors should understand when budget reduction methods are more appropriate. The Agency and the City will also need to decide whether and under what circumstances additional financial support may be desirable for the incubators. However, the goal of these recommendations are to eliminate the need for annual Agency support of established incubators while improving the income streams for the incubators themselves so that shortfalls will become much less likely in the future and so additional reserves can be built from operating surpluses.

C) Maximizing the Agency and City Return on Investment

As a function of sales tax revenues produced and job creation, the incubators have been consistently praised for their impact and return on investment. According to a report jointly published by the Redevelopment Agency and SJSURF in 2006, the incubators have graduated 250 companies, and approximately 70% have remained in San Jose after their graduation from the incubators, in many cases helping the Redevelopment Agency fulfill their goal of filling vacant industrial space in redevelopment zones.

Other than reducing cost as previously mentioned, BCD feels the primary opportunities to further maximize the Agency's and City's return on investment can be achieved by allowing for City equity participation in funded incubator start-ups and by expanding the existing incubation programs to new sectors over time.

Recommendation 7: Provide City Equity Participation

In order to maximize the return on investment, the City of San Jose should participate in equity arrangements with the incubator start-ups. There are two possible ways to improve the current structure:

1) The City needs to be offered an equity share in all start-ups that reside in the San Jose sponsored incubators. The City has a legal opinion that determined they can hold equity positions in these companies under the right conditions. If the new non-profit corporation is organized appropriately as a City – not RDA - organization, the City can take warrants. The warrants provide the City with an economic upside without any corresponding risk. The warrants typically are purchased for a penny a share and provide a pay-out in the case where a start-up is acquired or goes public.

2) Increase the number of equity positions being taken by the incubators. Warrant payments have been rare for the incubators, but no equity positions were being taken during the dot.com boom. It was unusual for incubators to do so then, and it was the dot.com boom itself that created interest in the concept. The SBC now takes warrants, and the BioCenter takes warrants in some cases. The EBC does not take warrants, but is considering doing so, given the increased level of VC participation in the sector. As a group, the incubators, the Agency, and the City need to review the warrant policies to maximize City opportunity. Opportunities to take more warrant positions should be considered carefully by the incubation teams, although different sectors may need different policies due to their different market conditions. Increased warrant participation along with inevitable economic upturns in some of the sectors can provide substantial benefit over time, although individual cases of equity payout will always be the exception.

The equity participation needs to be low if it is to be acceptable to start-ups, and 1% has been the SBC level, with the warrants issued after the first $1 million or more in venture financing. Although equity payouts are infrequent, - perhaps one in 25 start-ups reach some liquidity event, warrants typically produce significant payouts in the $50,000 - $200,000 range when they do occur. Also, the SJSURF receives the equity for current SBC and BioCenter clients, and those agreements should be honored. Issues concerning possible changes for future arrangements will need to be discussed as part of any organizational restructuring that might occur.

Recommendation 8: Create an Incubator Seed Fund

A seed fund typically invests early in a start-up company's history and in relatively modest amounts, generally between $100,000-$250,000. The City of San Jose participates in a type of venture seed fund now, but it is primarily aimed at different types of businesses than those that are clients of the incubators. The City should consider funding, or applying for funds, to provide modest seed investment for technology companies in the incubators. Numerous incubators in other regions have such funds, and they greatly enhance the ability to attract start-ups and help them succeed. For example, the Accelerator, a biotech incubator in Seattle makes seed investments in all their start-ups, and the Defense and Security Technology Incubator in North Carolina has a program to provide $50,000 seed funding to new companies. Early stage seed funding is generally the primary barrier to success identified by incubator start-ups. If the City of San Jose were to create a seed fund, or partner in one where they provided partial funding, they would also be able to take additional equity appropriate to their level of investment in each start-up company.

If a seed fund is created, the City should consider using initial payouts from its equity participation to strengthen the incubator programs. Options would include using it to

subsidize the start of new sector incubators, since all such incubators need development funding; enhancing existing incubators with new equipment; or contributing the funds to the non-profit incubator corporation to increase the reserves or to allow for new initiatives at the incubators supported by the City, such as scholarship funds, internship programs, etc. The City and the incubators should form a task force to review seed fund programs used in other locations and to better understand possible San Jose options.

CONCLUSION

The goal of this report was to develop a plan for sustainability that would provide recommendations to stimulate future discussions led by the Redevelopment Agency with all interested parties and that could lead to a stronger city-wide incubation program.

These recommendations would create a new organization solely focused upon helping the incubators succeed and meeting Agency and City redevelopment and economic development goals. The new organization would have a more entrepreneurial Board, enhanced fund-raising capacity, and a reserve fund. The incubators would be better integrated and organized with a more efficient staffing program that is managed under a private contract. A new facility would consolidate many of the incubators, relieve the Agency of much of its rent subsidy, produce more efficient use of space, and reduce redundant operating costs.

The Redevelopment Agency would eliminate its annual rent subsidy over time and the City would start participating in equity returns on investment. Through a carefully managed sector-focused incubation program, the City could continue to build its reputation as a center of innovation, constantly diversify the city's economy in emerging technology sectors, stimulate new business formation and create more employment.

Finally, the new structure and enhanced coordination with redevelopment goals and City economic development policy will allow the City of San Jose to do a more effective job of marketing its technology innovation advantage while attracting additional funding to continually expand its incubation capacity and increase return on investment through increased sales tax revenues.