



San Diego Innovates

A Proposal to Grow the Tech Startup Ecosystem in
Downtown San Diego



Introduction

While the San Diego Region has long been known as an important tech hub, demographic shifts dictate that Downtown San Diego must become an important focus of the region's innovation economy. Furthermore, the competitive landscape of the tech industry has shifted with ever more cities vying to set themselves apart as the most tech-friendly city in the country. With this increased competition, San Diego must be thoughtful and deliberate as to how it will develop its tech ecosystem and take advantage of its natural and hard-fought competitive advantages so that it will be known as the best city for tech startups.

It is a critical moment for San Diego and it is essential that civic and business leaders embrace the innovation economy and become champions of the tech ecosystem. The embrace of San Diego leaders and influencers will ensure that San Diego is positioned to foster and grow the tech ecosystem that is necessary to building a true technology cluster, which, in turn, is key to attracting new companies and talent to the region.

The good news is that San Diego is already an established leader in telecommunications and life sciences, and it also has competitive advantages in a variety of cutting-edge and emerging technology clusters, including:

- Wireless Health
- Digital Media Marketing
- Renewable Energy
- Analytics
- High-tech Hardware
- Stem Cell Research
- Internet of Things
- Cybersecurity/Defense
- Smart Grid

Below are several areas identified as opportunities for San Diego to begin attracting a new generation of tech entrepreneurs. The following categories will be discussed:

- 1) Accelerators and Incubators
- 2) City Support and Incentives
- 3) Infrastructure
- 4) Civic Innovation Center
- 5) Talent Retention and Attraction
- 6) Availability of Capital



1) Accelerators and Incubators

Goal 1: Develop a plan to temporarily reuse the former Downtown library as co-working space with value-added tech programs such as mentorship and community events.

Goal 2: Attract or develop a nationally recognized accelerator program as a way to lure tech entrepreneurs and venture investment to the area.

The Issue:

Accelerators and incubators are critical components of any startup ecosystem. While each model is different, incubators generally provide some form of low-cost collaborative work space, amenities such as internet and equipment and some provide access to mentors. Accelerators go a step further by offering a limited number of spaces to promising start-up firms and in addition to space and amenities, provide instruction, coaching, and mentoring in exchange for an equity stake in each participant firm. Both of these models add value to the startup community and often are used by firms in different stages of their evolution. Each program is different; however, every program provides the following benefits:

- They attract startups from around the country to participate in the program. Most of these firms end up setting up shop in the city where they participated in the program.
- They foster collaboration among startup and non-startup tech firms.
- They provide a supportive environment and create a mentality of innovation and excitement within their communities.
- Accelerators provide some form of seed funding to firms accepted into the program.
- They attract venture capital to the area.
- They promote awareness of the presence of a strong tech community.
- They develop businesses that create jobs and add to the tax base.
- They contribute to serendipitous encounters that result in spin-off products and companies that perpetuate the regions tech industry.

The Challenge:

San Diego has several co-working and incubator facilities in and around downtown. EvoNexus, Co-Merge, CyberHive and the soon-to-open iHive are successful examples of incubators in our region. Similarly, Plug and Play is a national accelerator with a local presence. While these are valuable resources to San Diego's burgeoning tech scene, each individual incubator is not large enough to create the hub of community and concentration needed for a thriving tech



ecosystem. In addition, many experts believe that our current slate of incubators and accelerators do not deliver all of the benefits offered by a top-rated accelerator such as Y Combinator or TechStars.

The Opportunity:

The single most beneficial thing San Diego can do to cultivate its tech startup community is attract or work with local business organizations to develop a top-tier accelerator program to locate in Downtown. Highly successful and well-known accelerators such as TechStars and DreamIt Ventures have franchise business models that allow them to place accelerators in cities across the country and in some cases, the world. TechShop, a makers place where would-be entrepreneurs can quickly and inexpensively build out prototypes, is also in the midst of franchising its operations and has recently expanded to such cities as Phoenix, Pittsburgh and Austin. Executives recently visited San Diego and are interested in locating in Downtown.

Some cities have also created their own large-scale incubators/accelerators. Austin is also home to Capital Factory (<http://capitalfactory.com/>); New York City's Economic Development Corporation has partnered on a number of incubator/accelerators, including the DUMBO Incubator (<http://www.nycedc.com/program/dumbo-incubator>); Boston has MassChallenge (<http://masschallenge.org/>), Chicago has 1871 (<http://www.1871.com/>) and San Francisco Runway (<http://runway.is/>). This list goes on and on. The presence of these types of incubator/accelerators or the ability to attract organizations like TechStars or TechShop would create a powerful attraction to San Diego for high-potential startups from around the country.

For example, roughly 80 percent of TechStars companies raise venture capital or a significant angel funding round. Companies that have graduated from TechStars have raised an average of \$1.1 million upon finishing the program, across all the TechStars locations (<http://www.forbes.com/sites/tomiogeron/2012/04/30/top-tech-incubators-as-ranked-by-forbes-y-combinator-tops-with-7-billion-in-value/>). In the case of Y Combinator, the startups that have gone through its programs are estimated to have a combined value of \$7.78 billion, for an average of \$45.2 million per company. More importantly to the San Diego region, a large percentage of startups remain in or near the city where they participated in the program.

San Diego is in a unique position to attract or develop a nationally recognized incubator/accelerator because of its location on a thriving bi-national border. Increasingly, tech startups are moving from a purely software-based product to software/hardware product combinations. With the Internet of Things (IOT) movement, hardware will play a bigger and bigger role in the tech industry.



San Diego has a unique value proposition due to its proximity to Mexico and the associated low-cost, quality manufacturing that the Baja region is becoming known for. Due to increasing supply chain costs associated with Asian manufacturing, more companies are near-shoring the production of their products. Additionally, the ability for a startup to have its manufacturing partner a short drive away, versus an ocean apart, is a game changer for early-stage firms. By promoting this differentiator and the following additional strengths that San Diego boasts, San Diego has a significant chance of attracting or developing a top-tier accelerator for a number of different reasons, including:

- Existing tech economy and military R&D presence – San Diego is already known for its tech and life science sectors and its strong military presence (including the supporting military R&D facilities). This existing competency is an advantage when attracting accelerators and the talent necessary for companies to thrive. This is especially important to the emerging cybersecurity cluster in San Diego, which increasingly will play an important role in San Diego’s ability to protect its military economy through the upcoming BRAC process and serve as a differentiator to other regions.
- San Diego also is ahead of the game with design resources per capita.
- Superior quality of life – San Diego’s temperate climate and superior quality of life is perhaps for what our city is most well-known. Not only do founders want to live here but so do a huge pool of software and hardware engineers.
- Creation of talent through world-class universities – San Diego is very fortunate to have many world-class educational institutions. These institutions develop highly educated and creative individuals. Currently it is not uncommon for recent graduates to relocate to the Bay Area or elsewhere due to a perception that more opportunities exist outside of San Diego. By attracting or developing a top-tier accelerator program, San Diego will foster a regional tech ecosystem that creates jobs and retains the world-class talent our universities are producing.

Next steps:

- Explore using the City-owned former Downtown Library (on a short-term basis) to offer low-cost co-working space as well as potentially house local incubators/accelerators including those that focus on important clusters such as cybersecurity as well as a fablab to support tech companies already Downtown as well as attract new startups to the city. (See Attachment A for a proposed



stakeholder structure that will allow for the transition in use of this space, and take advantage of the capabilities each stakeholder brings to the table.)

- With the expectation that the former Downtown library will be redeveloped within three years, the City should work with the tech community to identify a long-term home in Downtown where young tech workers increasingly want to live and work.
- The potential reuse of the former Downtown library provides the City to work with stakeholders to develop a system that allows for collaboration, not only within the library, but also throughout the industry. The primary goal is to foster openness in communication between the various existing startup programs. This has been done very well on a world-wide scale by the founder of TechStars. By open-sourcing its model, TechStars has helped launch other accelerators and has connected them through the Global Accelerator Network, a web-based resource for the founders of accelerators, incubators and tech startups. This model can be replicated here in San Diego. The provision of a one-stop resource where various incubator, accelerator and fab lab facilities can learn from one another would aid in collaboration and limit competition among these organizations, which in turn would ensure that all stakeholders benefits from the growth of the tech startup industry. This network resource could be developed by the City's Startup Ambassador (as discussed below), or perhaps, more appropriately by a consortium of local incubators and accelerators.

2) City Support and Incentives

Goal 1: Position the Mayor as the region's leading voice on innovation through a comprehensive program to support San Diego's tech ecosystem.

Goal 2: Create a Startup Ambassador position in the City of San Diego's Economic Development Department.

The Issue:

A constant refrain from tech entrepreneurs is that they need to know the city supports their efforts. This means everything from helping clear any regulatory hurdles to making tech companies feel welcome in San Diego.



The Challenge:

Startup technology companies can be naïve in how city government works and are unable to identify ways the city can help them prosper. Conversely, city governments are often not nimble enough to respond to tech companies' needs. This can make it difficult to effectively support tech startups.

The Opportunity:

A city that both understands the needs of tech startups and is willing to formulate ways to effectively assist them would have a competitive advantage over other cities.

Next Steps:

- The City should create a Startup Ambassador position to provide outreach to the startup community and troubleshoot any issues they may have, including permitting and regulatory issues. This position could also help oversee the programming at the former Main Library, including tech support and mentoring events, as well as develop the city's civic app challenge and other programs.
- Develop and/or support a robust calendar of civic technology-focused events, including app development challenges, hackathons, meetups between tech startups and city department heads, and quarterly meetings with local tech startup leaders.
- Support the development of identified emerging clusters such as cybersecurity, Internet of Things, renewable energy, smart grid with tailored strategies to grow these clusters.
- Perhaps simplest of all, City leaders should use every opportunity available to display support for the tech community, and especially for tech startups. Very often startups locate where there is a perception that they are going to be supported and valued. The simple act of cheerleading for the tech startup industry will go a very long way in attracting and keeping tech startups in San Diego.

3) Infrastructure

Goal: Bring an affordable gigabit network to Downtown and the City of San Diego.

The Issue:

In cities such as Kansas City, Austin and Provo, Utah, Google has entered the marketplace and built gigabit networks that offer eye-popping Internet speeds for a **very affordable monthly cost**. Google's Gigabit Fiber initiative, which was officially announced in 2010, is credited with beginning an arms race among cities to offer these high-speed, affordable networks as a technological differentiator and economic development tool.



A couple of recent examples:

In North Carolina’s Research Triangle, the North Carolina Next Generation Network, or NCNGN, was formed to develop a request for proposals to bring a next-generation network to the area. Recently, the NCNGN announced it was in final negotiations with AT&T to deliver 1 gigabit per second broadband over a new fiber network – beating Google to the punch. (<http://ncngn.net/>; <http://time.com/57060/att-north-carolina-google/>. Also attached.)

- The City of Los Angeles is in the process of developing a \$5 billion request for proposals to develop a gigabit network along with a robust wireless hotspot network component both to serve the burgeoning tech startup ecosystem as well as help bridge the digital divide for its most underserved neighborhoods.

The Challenge:

Google and other telecommunications companies have shied away from cities and counties that make it difficult to build networks and/or impose onerous fees.

To expedite its build out process, Google created a “Google Fiber City Checklist” (<https://static.googleusercontent.com/media/fiber.google.com/en/us/about/files/googlefiber-citychecklist2-24-14.pdf>) to help cities determine if they are eligible to be considered and provides a framework for streamlining the City of San Diego’s ability to help telecommunication providers deliver affordable, gigabit-speed networks. The three main components include:

Provide information about existing infrastructure: A city must be able to provide accurate information about local infrastructure like utility poles, conduit and existing water, gas and electricity lines so the company knows where to efficiently place every foot of fiber.

Help ensure access to existing infrastructure: A city must help ensure that Google, and other providers, can access and lease existing infrastructure. Google says it would be wasteful and disruptive to put up duplicate utility poles or to dig up streets unnecessarily, when we could use existing poles or conduits.

Help make construction speedy and predictable: A city must ensure efficient and predictable permit and construction processes appropriate for a project as large as a Google Fiber network build.

The Opportunity:

For the City of San Diego to compete with other cities in the United States and around the world, it must be able to offer these high-speed networks at a very competitive cost.



Researchers for the 2014 [Global Entrepreneurship and Development Index](#) recently suggested that the expense of broadband Internet service in the United States is hampering would-be entrepreneurs and that the United States now has lower Internet usage rates than countries such as the United Kingdom and France.

Tech industry observers put it this way: If San Diego can bring a high-speed, affordable gigabit network to market in one year, it would be ahead of other competitive cities. If it takes more than three years, San Diego will be lagging behind.

The lesson is this: Without an affordable, gigabit speed network, San Diego could lose out on an essential competitive advantage. When tech startups are deciding where to set up shop, an affordable gigabit network is a major consideration. If San Diego doesn't move quickly to develop its own gigabit network, it will begin to lose out against other locations across the country. The City of San Diego must work with all telecommunications providers to make affordable, gigabit-speed networks available.

One advantage that San Diego can exploit is that during the dot-com boom, miles of fiber were placed in the ground in Downtown in the expectation of an exponential increase in Internet usage. That usage failed to materialize as the dot-com bubble burst and much of the fiber, known as "dark fiber," lays dormant in the ground.

Next Steps:

- Create a plan to identify the City's existing technology infrastructure, including the amount, location and condition of existing fiber in the ground.
- Call on the City Council and other City leaders to work quickly to bring a gigabit network to San Diego, using recommendations on Google's Fiber City Checklist as a basic framework. City leaders in Portland successfully lobbied to make Portland one of the next Google Fiber Cities; San Diego should do the same and provide the opportunity for all qualified telecommunications companies to develop an affordable, gigabit network.
- Establish a working group to develop a Request for Proposals for the deployment of an affordable, gigabit network in Downtown and other key neighborhoods.
- Streamline permitting processes while instituting a "dig-once" policy that requires contractors to inform communications companies when they are cutting open a street so the communications companies can install their networks. If the communications companies fail to install the infrastructure when they have the opportunity, then they will not have access to the road until the next time work is done beneath the street.



4) Civic Innovation Center

Goal: To develop a state-of-the-art Civic Innovation Center in Downtown.

The Issue:

Show – don't tell. It's what they tell you in any writing class. The same goes for the City of San Diego. If the City wants to tell its story effectively, it must have the ability to show its commitment to innovation. Current facilities in Downtown – the City Administration Building, for instance – hardly communicate that San Diego is on the leading edge of innovation. A possible solution could be to create a corporate-branded Downtown Innovation Center that could serve both as an economic development tool and a high-tech visitor center.

The Challenge:

This is not an inexpensive proposition and it would require the right location as well as robust corporate sponsorship.

The Opportunity:

Done correctly, this Downtown Innovation Center could serve as the place where economic development meetings happen, it could help lure a high-profile tech company to Downtown, and it could serve as an experiential tourist attraction demonstrating San Diego's life-changing innovations.

Recently, Cisco announced it had selected four cities including Toronto, Rio de Janeiro, Songdo, South Korea and a yet-to-be-named city in Germany in which to build an "Internet of Everything" civic innovation center that would display and support the creation of cutting-edge; experiential technology.

<http://www.yongestreetmedia.ca/innovationnews/cisco20140312.aspx>

But it's not just tech companies that see the value in harnessing innovation centers to tell their story. For instance, Northeastern University recently opened a new visitor center that includes three large multi-touch activated displays that offer interactive content that allows self-directed exploration of the university as well as a state-of-the art 110-seat theater for presentations.

Next step:

- The City should establish a task force to develop the concept, budget, sponsorship opportunities and timeline for the creation of a state-of-the-art Downtown Innovation Center.



5) Talent Retention and Attraction

Goal: Create and implement a robust talent retention and attraction campaign and program.

The Issue:

Ask any tech entrepreneur what one of the key challenges is to starting and growing a company in San Diego and he or she will tell you that it is a lack of talent. That might seem counterintuitive considering San Diego is home to world-renowned universities such as UC San Diego and San Diego State University. The problem is that many of those students choose to leave San Diego for cities known for their thriving tech ecosystems such as San Francisco, Seattle and Austin. Those cities hold more allure because a software engineer can hop from one startup to the next if the startup fails or the job doesn't otherwise work out. In San Diego, the perception persists that there are not enough tech companies to provide career mobility – especially among mid-level tech managers.

The Challenge:

In fact, cities such as San Francisco do have healthier tech ecosystems with more opportunities for career mobility. Any talent retention and attraction must work to promote what is here as well as make it easier for startups to establish themselves in San Diego.

The Opportunity:

As previously mentioned, San Diego is home to universities that are world leaders in technology and entrepreneurship, providing an excellent foundation to grow the talent needed for a healthy tech ecosystem. There is a huge opportunity, through the use of a comprehensive retention and recruitment program, to keep the local technology talent, especially that San Diego produces while attracting new talent, as well as to tap into programs that are designed to help train the emerging workforce. We can also highlight:

Next steps:

- Partner with the local universities and business organizations to hold tech-focused job fairs in Downtown that include panels on tech entrepreneurship and incentives for starting a business in San Diego.
- Partner with local universities on civic-minded app challenges where the prize could be startup space and/or seed money for their app, with a focus on important industry sectors such as cybersecurity and the Internet of Things.
- Advocate and work to establish a local university, technology-focused satellite campus in Downtown, or attract a well-known international technology university to locate a



satellite campus Downtown. San Diego is the only major city without a university presence in its downtown.

- Establish an internship component to the incubator/accelerator programming at the former Downtown library. This could take the form of a partnership with the e(3) Civic High, which focuses its curriculum on internships. It could mean asking startups to participate in the Connect to Careers program, which is a summer employment program for young adults, or it could mean requiring tech startups at the former Downtown library to mentor at local underserved schools during certain hours each month, or it could be a combination of the three.
- Work with City College and the local workforce development system to create certificate programs for in-demand tech jobs in emerging clusters such as cybersecurity, Internet of Things, renewable energy, smart grid and mobile health that do not require a four-year college degree.
- Support and highlight existing mentoring programs being run by tech incubators and accelerators and work develop or attract a nationally recognized accelerator program.
- Create and support a program that highlights San Diego’s technological entrepreneurs and their innovations, especially in key emerging clusters such as cybersecurity, Internet of Things, mobile health and renewable energy.
- Support current efforts to brand San Diego as a “smart city” internationally to attract talent to the region.
- Create a national app challenge open to local tech companies and those around the country. Finalists from outside of San Diego would be flown in to demonstrate their apps. The event would highlight San Diego’s commitment to innovation while showing off the city’s unique quality of life, and would allow City officials and business organizations the chance to pitch tech companies about the benefits of starting their business here.
- Support and participate in events such as San Diego Startup Week, which are designed to highlight the city’s emerging tech ecosystem.
- Support the creation of a technology-focused TED Talk, and other high-profile educational events that are held in Downtown.

6) Availability of Capital

Goal: Create a climate to encourage a healthy investment base in San Diego.

The Issue:

Discussions with the startup community in San Diego and elsewhere have revealed that availability of capital is one of the top three considerations when a startup is deciding where to locate. Not all cities are created equal when it comes to the presence of sophisticated, risk-familiar investors. Places such as the San Francisco area and New York City offer a significant advantage to startups in search of funding. The goal is to place San Diego on that list.



The Challenge:

While venture capital is not as prevalent in San Diego as it is in other tech hubs such as San Francisco, San Diego does have some revenue streams. Angel investors (those who provide a one-time injection of seed money or ongoing support to carry the company through difficult times) have some presence in San Diego. However, there is simply not enough funding to grow a vibrant tech ecosystem.

Venture banks are also an important part of the startup capital world. Venture banks are a unique type of bank that offer services primarily to venture capital-backed firms. They get most of their clients through venture-capital deals and venture capitalists often make having a relationship with a venture bank part of their investment requirements. San Diego does not have any local banks that specialize exclusively on venture-backed firms; however, two of the most influential venture banks in this space, Silicon Valley Bank and Square 1 Bank both have a local presence.

For any entrepreneur, exit strategy is an integral piece of the business model. Startups often make an effort to locate where there is a large number of acquirers. Locating in close geographical proximity to well-known acquirers increases the chances of realizing a large disposition. San Diego is not a location known for its population of large acquisition companies. It can be argued, however, that San Diego's location in California (in relative proximity to Los Angeles and the Bay Area) places it in a better position from an acquisition perspective than many other locations across the country.

The Opportunity:

San Diego is home to many highly successful tech businesses and to an even larger number of sophisticated investors with access to large amounts of capital. The problem with both of these is that for the most part, they are unaccustomed to the startup industry and unfamiliar with the startup business model. Due to this, there is a lack of the appetite for risk that is essential to the growth of the tech startup industry.

While the City of San Diego doesn't have the ability to directly improve access to capital, it can support the growth of this sector in other ways. One thing that startups value greatly when deciding where to locate is the actual or perceived support of local leaders.

Next Steps:

- The City should support the effort to bring together prominent businesses, investors, and the tech startup community through value-add seminars and networking events



that focus on education and fostering innovation. This would be beneficial for two reasons:

- It would visibly promote the City’s support for the tech startup community, which is valuable to early founders,
- It would promote to potential investors the benefit of high-risk, high-reward investing, such as venture capital, and provide a look at the tech startup investment opportunities currently out there locally.

Events such as these should not be organized by the City, but rather promoted and supported by the City. The support from and promotion by the City and City leaders would give these events enhanced credibility while showing the City’s commitment to growing the tech industry.

- The City could create a relatively small municipal venture fund of between \$2 million and \$3 million per year. This fund should be reserved for “co-investing” ventures in which the City puts stipulations on the use of the funds. These stipulations could include using the funds once an investment round is 70 percent or more complete or funding local startups with a requirement that they stay in San Diego for a set amount of time. The City would work with a noted professional co-investing partner such as top-tier venture capitalists to help ensure an acceptable return on investment. This limits the City’s risk while incentivizing investment in local startups and projecting a concrete show of support for the local tech startup industry.