2014 letter from **SFMade** and **Citi Community Development**

San Francisco as a Lab for US Urban Manufacturing

An over 100-year old mattress manufacturer welcomes a menswear designer to share its retail showroom; a design-manufacturer of a new, affordable desktop CNC machine offers a solution for high school youth and inventors alike; a producer of ceramic tile clads the J. Paul Getty museum in Los Angeles; the originator of the configurable messenger bag opens a retail store in Singapore, supplied entirely by its San Francisco factory; two former technology executives found a successful chocolate-maker and secure the future of their local manufacturing by investing in a 34,000 sqft factory within sight of downtown. From beer to furniture to apparel to technology-driven hardware, San Francisco is home to one of the most diverse manufacturing ecosystems in the country.

Since the last report, SFMade's more than 550 member manufacturers continue to demonstrate creativity, growth, and valuable lessons on how to balance competing needs in a dense urban economy. Here in San Francisco, we understand what it takes to both lead in technology and marry it with old world craft and artistry—evidenced by a decade-old jewelry studio now using a 3D printer to make their molds. We are home to and celebrate the Maker Movement but we also appreciate that helping a maker scale to become a manufacturer is no small feat. We recognize that to continue to produce innovative product designs, we also need to understand how products are made—which is why one of our largest apparel brands chose to buck the outsourcing trend by expanding their in-house production capacity last year and even bought their building in the heart of the Bayview to ensure they would always have affordable space, close to their skilled workforce. We appreciate that as a city, our policies need to get creative as we seek not only to retain industrial space in perhaps the most unaffordable urban area of the country, but to build more, perhaps even co-located with the very commercial and residential uses that seek to displace it. Above all, we know the diversity of our people is the fuel for our collective innovation and economic success: from the returning veteran now translating his skill to making furniture; to the Lebanese immigrant applying his family's bookbinding experience to make iPad cases; to an aspiring first-generation college-bound youth from the Mission District who has launched a successful clothing line on Etsy.

SFMade's more than 550 member manufacturers continue to demonstrate creativity, growth, and valuable lessons on how to balance competing needs in a dense urban economy.

As San Francisco's manufacturing sector continues to mature, so it now goes in cities across the US. This is evidenced by membership in the national Urban Manufacturing Alliance (UMA)—which was founded in 2011 by SFMade and the Pratt Center for Community Development (in New York), in partnership with Citi Community Development, SFMade's longest standing corporate partner. From those humble beginnings, the UMA has now grown to represent more than 50 North American cities and 100+ organizations, all working together to grow their respective urban manufacturing ecosystems. San Francisco has become an unlikely national model, a kind of "urban manufacturing lab" of sorts, demonstrating the power and creativity—and jobs—unleashed when manufacturing and the City are linked together. We may not have the largest manufacturing base, but our collective ability to innovate, to create unlikely combinations of people, ideas, and partnerships, and to use our City itself as a platform to implement new models has led our work to be replicated in cities as diverse as Chicago, Portland, Philadelphia, and Montreal.

In the coming years, San Francisco and cities across the US will continue to wrestle with the challenges: the urgent need to strengthen our supply chain; the need to repurpose or even build new industrial space in expensive, constrained urban areas and still have it be affordable; the continued challenge to capitalize smaller manufacturers who may not yet be fully bankable; and the work to inspire the next generation to reimagine a manufacturing career as something profoundly different than manufacturing of the past. While this may seem like a heavy lift, we can accomplish it with the innovative and counter-intuitive work that we are good at, here in San Francisco.

Kate Sofis
Founding Executive Director,
SFMade

Vicki Joseph
Northern California Region Director,
Citi Community Development

2014 State of Local Manufacturing Report

DESIGNED HERE, MADE HERE

San Francisco's local manufacturing sector continues to flourish as shown by the results of this year's *Annual SFMade Survey of Manufacturers* completed by 370 companies, more than double last year's respondents. SFMade membership, at 543 companies—representing over 90% of the local manufacturing sector—is up again by 6% over last year. **San Francisco manufacturers drove $585M in direct sales into the economy, a whopping 32% increase over last year.**

San Francisco continues to be an incubator for new products and new manufacturers with 8% of SFMade's membership launching within the last 18 months, on par with the rate of new manufacturer formation at this time last year. At the same time, companies that are born here are doing their best to grow up here. 43% of companies were established between 5 years and 18 months ago, while exactly half of the companies are over 5 years old. Under 1% of the manufacturers have either failed or moved out of the City since the previous year.

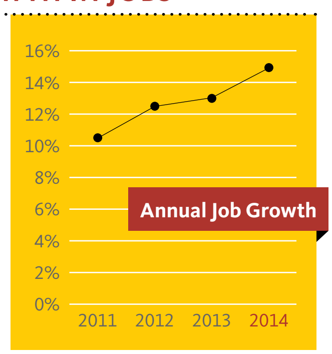
Once again, companies making sewn products—including apparel and accessories such as bags—remain a powerhouse sector, accounting for just over a third of member companies (31%). Food and beverage remains second (18%), followed closely by Home and Garden, and Furniture (16%), Jewelry (11%), Accessories (10%), and a diverse "Other" category which includes advanced manufacturing companies making technology-enabled products, as well as a diverse range of other categories including sporting goods, toys and print/media.

San Francisco manufacturers drove $585M in direct sales into the economy, a whopping 32% increase over last year.

Manufacturing supply chains remain locally concentrated but layered. While 81% of companies produce some or all of their products in house, 50% of the companies also rely on a web of contract manufacturers (a majority local) and a full 10% of companies produce products *exclusively* using local contract manufacturers. Sourcing is further distributed, although still largely local, with 39% of companies sourcing some components in San Francisco proper. These diverse local supply chains are reflective of one of the benefits of urban manufacturing: access to a flexible mix of production partners which in turn enables particularly young manufacturers—who are testing and refining their product mix, to scale more quickly than if they owned all their own production capacity themselves.

There is a cautionary tale to the region's highly decentralized supply chains however. The potential flight risk is higher for existing San Francisco manufacturers who rely largely on contract manufacturing: moving out of the city is as easy as switching suppliers. On the supply side, San Francisco also has a more limited network of suppliers and contract manufacturers in the first place, compared to other parts of the Bay Area. **The lack of robust local supply chains in certain sectors, like food and beverage co-packing and hardware (metal, plastic, glass) and electronics fabricators, limits the growth of early-stage manufacturers and would-be manufacturers who invent products here, but then fail to find adequate local partners to establish production in the City.** Strengthening local supply chains and networks must remain a focus here in San Francisco, and nationally, to ensure that more of what is designed here can also be made here.

UNPRECEDENTED 15% GROWTH IN JOBS



New job creation in the manufacturing sector rose for the fourth year in a row with a 15% rate of increase in net new jobs, as compared with 10.5% in 2011, 12.5% in 2012, and 13% in 2013.

Of these new jobs, the food and beverage sector was responsible for 45% of the job growth, adding over 100 jobs. Apparel and bag manufacturers accounted for 27% of new jobs, while furniture, home and garden accounted for 15%.

San Francisco's local manufacturing sector now employs well over 4,000 individuals, over 70% of whom are from lower-income households and diverse communities representing immigrants, veterans, and youth. Of the new jobs created in 2013, 55% were in production. The sector continues to pay well above minimum wage for most entry-level positions and offers a wide variety of jobs, real opportunity for advancement, and alternative entry points for individuals with less advanced education or other barriers to employment. SFMade companies also are strongly predisposed to hire from their local neighborhoods, making them even more important community assets.

A sole dark spot on the sunny outlook of manufacturing jobs—for a second straight year—remains the lack of affordable housing for workers. Commensurately, there was again a drop in the percentage of manufacturing workers residing in San Francisco, from 75% last year to 65% this year. Companies also expressed some frustration around employee turnover attributed to workers being forced to endure unreasonably long commutes as some are priced out of the City.

GETTING GROUNDED: RISING STAR OF BRICK AND MORTAR RETAIL

From a generation of manufacturers raised on the Internet, there is now a strong counter-trend to establish more brick-and-mortar retail sites by San Francisco's manufacturers. While many younger companies first enter local retail via temporary "bridge" selling opportunities (pop-ups, markets, and fairs), we see a clear trend as companies age towards establishing a more permanent space. At the same time, many local manufacturers are either pulling back from or declining to engage in wholesale distribution. In particular, selling to a major big box retailer, while tempting for the scale, often proves to be overly onerous for many smaller manufacturers. Even for established brands, maintaining product positioning and brand via a mass-market retailer is an ongoing challenge. In response to these hurdles, driven by the opportunity to capitalize on local demand for local goods, and perhaps ultimately as a recoil to the crowded space of the Internet, the number of **retail outlets operated by member companies have more than doubled in the last two years,** taking the form of standalone stores, branded or co-located "store within stores," or on site at their production space, thanks to the zoning allowance for accessory retail.

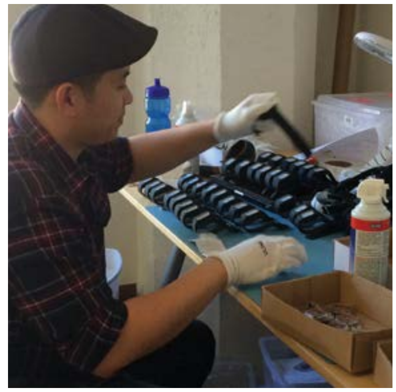
The number of retail outlets operated by member companies have more than doubled in the last two years.

Manufacturers who own their own retail outlets reap powerful benefits. First and foremost, the margins are higher than wholesale channels and better enable local manufacturers to sustain comparatively higher costs and still be profitable. Establishing a physical retail presence—especially in their "home" city—also pays dividends in solidifying their individual brand identity and consumer loyalty. And the benefits aggregate across the SFMade community—as SFMade member-owned stores tend to stock other locally-made brands and other American-made goods. Going further, many of the shops which host other local brands offer more favorable financial terms than a traditional retail-wholesale arrangements, helping to ground younger companies who otherwise might not have retail space. New spaces include Humphry Slocombe's expansion to the Ferry Building, Marine Layer, and Spicer Bags launching their first store in the Dogpatch with an array of SFMade products.

Overall, leveraging the SFMade brand continues to be among the top reasons that companies engage with the organization. Interesting, **irrespective of company age, increasing brand visibility is reported as the number one concern for local manufacturers**. Clearly, at the heart of the success of local manufacturing is the San Francisco community itself.

BREWING LEADS THE WAY IN FOOD AND BEVERAGE GROWTH

The food and beverage sector added the highest number of workers in 2013–14 with over 100 new jobs. Leading the way were the breweries:



San Francisco is starting to reap the benefits of the nationwide trend of growth in craft brewing, after arguably being the birthplace of the modern craft brewing movement half a century ago with the transformation of Anchor Brewing. This year alone, three breweries started producing in San Francisco—Triple Voodoo, Fortpoint, and Cellarmaker. The San Francisco Brewer's Guild, a collaborative non-profit of brewers self charged with the mission to restore and preserve San Francisco's brewing history, counts that **as many as 10 breweries could open in the next year, a 70% increase to the number of breweries currently producing in San Francisco**. Significantly, existing breweries also expanded last year, most notably Magnolia Brewing's new larger production space and restaurant and Speakeasy's new taproom. There are still serious hurdles to owning and operating a brewery in San Francisco, not least of which is contending with the hot real estate market that every manufacturer faces, heightened by the desire for many to be in a location that has high foot traffic (to increase customer interaction and allow for product sampling). There are opportunities to continue to evolve the Planning Code to keep pace with the needs and realities of small breweries being co-located near housing or other commercial uses. For instance, existing alcohol restrictions in two of the main PDR neighborhoods—intended to limit liquor stores and other undesirable uses—also inadvertently prohibit tasting rooms and thus prevent breweries from establishing themselves, and bringing jobs, into the neighborhood.

In spite of the challenges, it appears that new brewers are willing to jump through many hurdles to make their craft in San Francisco, bolstered by the renewed viability of craft brewing which has created a ramp for investment and new growth.

ADVANCED MANUFACTURING COMES OF AGE

Since the *2013 State of Local Manufacturing Report*, which identified an early digital-advanced manufacturing trend emerging in the Bay Area—the so called "advanced manufacturing" sector—companies that design and build products that incorporate emerging materials and manufacturing technologies—has grown, both locally and nationally. Within the SFMade community, advanced manufacturers themselves—including several new hybrid companies such as Moddler, a 3D printing provider offering contract manufacturing services, and Quirky, who is opening their West Coast facility in the coming months and will offer and end-to-end crowd-sourced design, manufacturing, and distribution for consumer products—now make up 4% of the sector (up from less than 1% in 2013). This growing but still small number of companies understands the impact of new technology on existing manufacturers—traditional makers of jewelry, apparel, accessories, and even food—that now incorporate elements of advanced manufacturing into their processes. **Advanced manufacturers are bringing with them new models of**

production, ways of organizing supply chains, and new opportunities for rapid on-the-job training of workers.

Nationally, both in terms of actual companies/initiatives and in the psyche, advanced manufacturing has also taken hold. In 2013 the Obama Administration launched the pan-agency National Network for Manufacturing Innovation Initiative, which will fund up to 15 National Manufacturing Innovation Institutes (NMII's) across the country. To date, four have been established, in Chicago, Detroit, Akron, and North Carolina. Other Institutes—including photonics, advanced fabrics, and flexible/wearable electronics—will be offered up for RFP in the coming years. The Bay Area—with our technology prowess, major research institutes and universities, and capital—is well positioned to compete for one of these, and San Francisco should ensure it plays a powerful role in the regional partnership. In particular, San Francisco—with our strong product design capacity, our consumer product marketing and manufacturing experience, and our diverse workforce—has a unique capacity to ensure that any regional institute successfully translates emerging manufacturing technologies into jobs and true economic benefit for a broad spectrum of people and businesses.

> Advanced manufacturers are bringing with them new models of production, ways of organizing supply chains, and new opportunities for rapid on-the-job training of workers.

Finally, with the promise of emerging advanced technologies and business models also comes responsibility. Advanced manufacturing tools and techniques hold the potential to enable the smallest and craftiest of our manufacturers to improve efficiencies, to empower their skilled workforce by removing repetitive, tedious elements of their jobs, and to help them compete with increasingly global competition. But the **potential for advanced manufacturing to drive equitable economic gains will only be realized if we build explicit pathways—including education and capital—to support the incorporation of new technology into existing "low-tech" manufacturers**. Get this right, and the power of advanced manufacturing will be far more amplified throughout our economy than if only resident in a handful of "advanced" companies. Ignore this responsibility, and we risk mirroring the current economic divide exemplified by our technology sector in our manufacturing sector as well.

ON THE JOB: TRAINING THE NEXT GENERATION

Emerging technology continues to refine the production process across sectors, from food to apparel and furniture, actually creating a lower training barrier to entry for a qualified workforce. The technology interfaces in most manufacturing facilities of today are more intuitive and streamlined, which creates opportunities for workers to learn on the job rather than needing years of study and apprenticeship in order to qualify for positions. While specific skill requirements vary from company to company, on average the trend reflects an increase in the use of technology, which actually creates fresh access points for job seekers. In fact, companies are increasingly interested in training employees on site for the specific job and technology being utilized. Rather than wanting applicants with particular qualifications, many manufacturers seek job applicants with a basic STEM education and the desire to learn. **Might this turn on its head the traditional flow of workforce development dollars to stand alone training organizations and instead inspire the redirection of funding to industry-led organizations and businesses to further develop their own in-depth training?**

There are ample opportunities to grow on the job training. SFMade's flagship youth apprenticeship program *YouthMade*, which places San Francisco high school youth from low-income families into paid internships at member companies, saw a 40% increase this year in internship placements, with the addition of a second youth-serving partner. Even more telling: while not required nor expected, at internship completion, several manufacturers offered their interns regular paid work, illustrating just how much the companies value employees they have been able to train. This new form of "maker-apprenticeship" has growth potential nationally. Just this past summer, in New York City, SFMade in partnership with Southeast Brooklyn Industrial Development Corporation, replicated the program, placing 40 low-income high school students into paid internships with urban manufacturing companies across Brooklyn.

CRAFT CAPITAL: CONNECTING INDIVIDUAL INVESTORS WITH LOCALLY-MADE COMPANIES

Urban manufacturing in San Francisco—and in other US cities—clearly holds the potential to be a sustainable economic driver, adding jobs for diverse inner city residents and building a more vital and sustainable local urban economy. And nowhere is this growth better reflected than by the sector's appetite for capital: **in the past year, San Francisco manufacturers secured over $41M in new capital, up from $35M in 2013**. Notably, the capital raises were fairly evenly split between debt and equity. Also of mention, while still a relatively small component of the total at $1M, crowd-funding continues to increase in significance. A majority of start-up manufacturers in San Francisco have used or plan to use a crowd-funding campaign as a key vehicle to scale their companies, with Kickstarter and IndieGogo respectively being the top platforms utilized. In 2015, **companies surveyed plan to raise an additional $6M through crowd-funding, which if realized would represent an 89% increase**.

We also observe a growing trend among existing manufacturers to utilize crowd-funding to test new products and build brand—as Rickshaw Bagworks recently did with the launch of its Amazing Reflective Backpack product, which at the time of this report had already secured over $82K of pledged capital against their original goal of $10K.

However, crowd-funding, which basically constitutes for a manufacturer "pre-selling" of a product, is not a replacement for other forms of capital, in particular equity. Equity investors—especially individual investors with "patient" capital—are playing an increasingly important role in closing the capital gap between what a growing manufacturer can qualify for in loans—and their true capital needs. This gap is particularly evident in our food and beverage manufacturing sector, where even a modest expansion of a relatively small brewer, winery, or granola manufacturer can require a capital infusion 5x the current revenue of the business to simply finance equipment and construction costs. The need is heightened by the fact that modern manufacturers increasingly have adopted "lean manufacturing" approaches where inventory is minimized—and, combined with the reality that only 15% of San Francisco manufacturers own real estate, have as a result commensurately "lean" balance sheets against which to secure debt.

The great opportunity now is equity investment: specifically, connecting growing local manufacturers with our increasingly affluent community of residents and workers in technology and other burgeoning sectors in San Francisco, as well as capitalizing on new direct public offering platforms (enabled by federal legislation enacted in 2013 that now permits small businesses to openly solicit investment). Authentic local manufacturers have already proven to be particularly attractive to individual investors looking for a different way to get engaged in their local community—by investing in a grounded, local company with a strong local brand and an innovative, physical product. In the past several years, we have seen a co-founder of Twitter help launch one of the City's newest coffee roasters, groups of small investors driving more than $1M into the expansion of a local brewery, and several angels providing capital to expand a young, hip apparel brand. And unlike institutional equity—which generally requires rapid growth trajectories and a clear exit—"craft capital" investors are in it for the long haul. The perfect storm: an investment that produces a return on capital and community.

LACK OF INDUSTRIAL SPACE: THE CITY STEPS IN

The perhaps greatest threat—and constraint—to the continued growth of manufacturing in San Francisco remains a worrisome lack of available and affordable industrial space. Since last year's report, the trend towards limited availability and rising rents has only accelerated. **Rents are the highest since SFMade launched in 2010**, with local manufacturers reporting rents that range from $1–$2 per square foot in the Bayview and $2–$3 per square foot in the Mission and SoMa, up from just under an average $2.00 in 2013. For manufacturers with on-site retail, the rents do include a blended retail/manufacturing rent. Placement rates through SFMade's *Places to Make Program* are down again from last year. And the consequences of the challenging market are real: in 2013 the City lost its first and only 3D printer manufacturer to San Leandro and Tcho Chocolate to Berkeley. Combined, the two companies alone sustained more than 60 jobs at their time of departure. For companies with a deeper operating history, credit and business plan, the placement rate into space is higher, but still remains weak at just 30%. Appropriate, accessible space is truly just hard to come by especially as zoning speculation continues to occur further driving up already pressed pricing.

In the past year, San Francisco manufacturers secured over $41M in new capital, up from $35M in 2013.

The City has heeded the warning though, and through our partnership with them, some positive progress can be reported. In early 2014, the Planning Commission and Board of Supervisors approved legislation to create an innovative new zoning solution that allows for the cross-subsidization of new industrial space via the development of co-located new office space on previously underutilized industrially zoned parcels (a concept of cross-subsidization borrowed from affordable-market rate housing). This carefully controlled pilot project—only available for 18 designated parcels and with a 2-year sunset clause—already has traction with projects in various stages of planning, and is being avidly watched by other strong-market cities across the US as potential way for new industrial space to pencil. Following on to these efforts, in October 2014, Mayor Ed Lee announced a more comprehensive **Five Point PDR (Production, Distribution, Repair) Work Plan** to increase, preserve and create industrial space. Finally, in late 2013 SFMade launched a new non-profit industrial development capacity—called PlaceMade—to enable both public and private sector projects to tap into subsidies and other benefits to empower industrial real estate projects.

What remains clear is that not all industrial users are alike. A prototyping firm has different space considerations than a furniture manufacturer. In the food and beverage sector, more and more companies are graduating from commercial kitchen incubator spaces like La Cocina and are unable to find next phase spaces in San Francisco. The City's efforts are laudable and it is imperative to keep focused on solutions to support a critical component of urban manufacturing success—the space to make.