



City of Lawrence
Douglas County
PLANNING & DEVELOPMENT SERVICES

Meeting Agenda

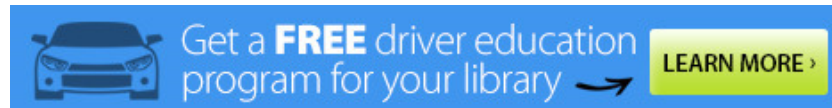
Planning Commission Mid-Month
City Hall, 6th & Massachusetts St - City Commission Meeting Room
February 11, 2015
7:30 - 9:00 a.m.

TOPIC ONE: General Discussion – January PC Recap & February PC Review
7:30-7:50am

TOPIC TWO: Entrepreneur Incubator Spaces
7:50-9:00am

Attachments provided at meeting:

1. What is a Makerspace – Article
2. These 5 spaces take coworking to a new level - Article
3. Terms, Definition, Purpose of Makerspaces
4. Current Use Definitions
5. Lexington Kentucky Case Study
6. Milwaukee Wisconsin Case Study
7. San Francisco California Case Study



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What is a Makerspace? Creativity in the Library

Submitted by Caitlin A. Bagley on December 20, 2012 - 11:06am

Editor's Note: This is the first in a series of posts by Caitlin A. Bagley. Learn about the makerspace at Carnegie Public Library (Pittsburgh) in our free webinar Monday, January 7, 2013 at 2:00 p.m. Eastern. [Register.](#)

I first heard of makerspaces when, as I sat in my office, a colleague called me over to see if I wanted to join a webinar on makerspaces. Listening over her shoulder, I heard phrases like DIY, and tools kept popping up. Not the usual web-based tools talked about in webinars, physical tools... y'know, wrenches and pliers? Real tools. I've always seen libraries as community centers for people to gather and work together, but this? It stretched my imagination.

When most people think of libraries, they naturally think books. Anyone working in a library today, however, knows that we are so much more than *just* books. Libraries are places of community engagement. Recently many libraries have begun to develop spaces for design and activities that both teach and empower patrons. The learning in these spaces varies wildly--from home bicycle repair, to using 3D printers, to building model airplanes. Fittingly, they are called makerspaces.

Makerspaces have evolved from hackerspaces and [Maker Faires](#). Defining a makerspace can be somewhat difficult due to the differences among spaces and activities, but the emphasis is on creating with technology. STEM education (science, technology, engineering, math) has been quick to embrace these spaces and technologies, but it is important to stress that makerspaces are not for STEM activities only. Jeff Sturges of Detroit's [Mt. Elliott Makerspace](#) said in ALA TechSource's December 3 makerspace webinar, "Beyond engineering and STEM, this is about creating creative people." He's absolutely right. The maker movement in libraries is about

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teaching our patrons to think for themselves, to think creatively, and to look for do-it-yourself solutions before running off to the store. In short, a makerspace is a place where people come together to create with technology.

So who uses makerspaces? Anyone! Already libraries of all types have found a way to create makerspaces. Most of these early makerspaces are in public libraries, each with a different focus, some working only with children, and others with adults. Academic libraries also are developing makerspaces, as are school libraries. Early experiences show that the potential users of makerspaces are not limited to a specific demographic. If you have patrons and you're looking for a unique method of outreach, a makerspace might be the course for you.

Odds are high that you're a maker yourself. When I think of skills I taught myself or learned growing up, they align well with what many makerspaces are doing today. Didn't my mother teach me how to knit? Didn't my father teach me to fix a flat tire? Didn't I spend hours as a teenager teaching myself HTML to build my first Web pages and blogs? Makerspaces are about encouraging our patrons to take initiative and to learn and create. When those patrons walk out our doors, they will know about a project, yes, but they will know also that they are capable of doing more and that the library will help them accomplish it.

The use of library services has blossomed during this economic downshift, and I think that makerspaces are a reflection of the times. Here we have people coming together as a community to fix things, creatively and cheaply, and to continue to maintain and create, including those who lack individual purchasing power. This is true library form: accepting and helping everyone, together, as a community.

In the next several months, I will be collecting stories about our library makerspaces for a book to be published by ALA and LITA. As I explore and learn, I will write occasional posts to the blog. Do you have a makerspace in the works?

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Urbanful

These 5 spaces take coworking to a new level

What's happening today in the cities of tomorrow.

by [Njaimh Njie](#) October 31, 2014

17 35



The Nickel Tour: Tired of working from home? These spaces could encourage you to join a coworking space.

Everyone who is anyone is up on the latest coworking trends (cliff notes: they're growing by the day) knows that the spaces are a hip way to spend the 9 to 5. But not all coworking spaces are the same. Here are five places we hope push coworking spaces into the future.

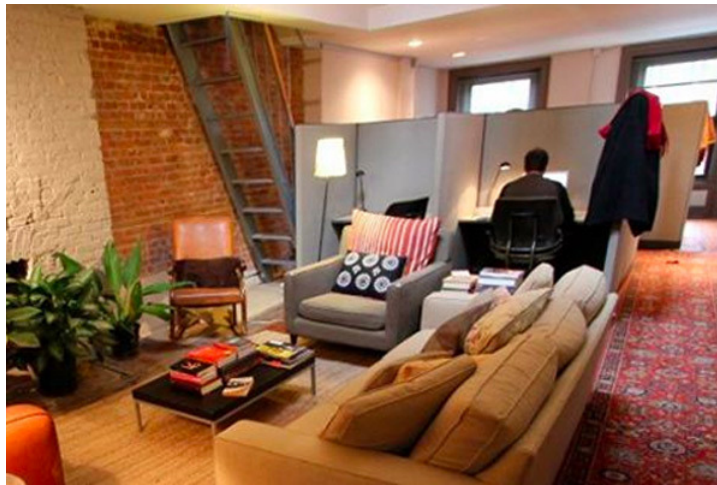
The Startup Incubator: Thrill Mill-Pittsburgh, Pennsylvania



Thrill Mill is representative of the big presence startups have in the coworking world. As an incubator and accelerator, Thrill Mill accepts applications from entrepreneurs looking to grow their business. Thrill Mill provides 24/7 access to a lofty workspace, seed capital, access to networks and additional funding sources, mentorship and potentially entry to an entrepreneurship boot camp.

To wrap up their year in the incubator, companies get to showcase their work at the Thrival Innovation + Music Festival, an opportunity to present to local stakeholders and thought leaders about their work, in the context of a weekend music festival.

The Writers Room: Paragraph-New York, New York



This 24/7/365 Paragraph is “dedicated to providing an affordable and tranquil writing environment for writers of all genres,” founded by two writers who were hankering for a peaceful but collaborative atmosphere to create.

The 2500 sq. ft. loft space is divided into a writing room and a separate kitchen and lounge space. They have both full time and part-time memberships, and payment plans within each to satisfy different budgets and time needs. Beyond providing writing space they host readings, roundtables, and speaking engagements to enhance the creative and networking elements of the center.

The (Almost) Free Model: Gangplank-Chandler, Arizona



On the surface, Gangplank is a free workspace. Start peeling back the layers however, and you'll see it's a whole lot more. Membership at **Gangplank** won't cost you any money—just a bit of your time. In exchange for free workspace members can volunteer, network and cultivate relationships to earn their keep.

Gangplank is a community of entrepreneurs that promotes a number of different initiatives. It has an educational component that presents classes on topics ranging from business to music. It hosts programming specifically geared towards startups, promotes healthy living through various opportunities to get out and be active, feature a "Junior" division devoted to promoting student entrepreneurship and offers labs and studios for more hands-on work. With locations in Arizona, Virginia and Ontario, the broad scope seems to be catching on quickly.

The Workshop: Fort Houston-Nashville, Tennessee



Nashville has developed a strong crop of coworking spaces to support and further cultivate its creative class. A particularly cool space among the bunch is **Fort Houston**, a space dedicated to a range of art disciplines and trades. Occupying a full 10,000 sq. ft., there is plenty of room to meet, mingle and roll up your sleeves to create here.

Fort Houston has a wood shop, print shop, bike shop, photography studio and desk space. According to its site, put simply, "You pay a monthly fee, and you get to make things here." Memberships range from \$125 for an individual using one type of workshop space, to \$400 or more for a team of three or more people looking to use a variety of spaces.

The Socially Conscious Bunch: Hatch-Portland, Oregon



Per the Hatch website, "It's a place where local and social entrepreneurs can imagine, launch, and scale enterprises that improve communities." Noting the isolation that many entrepreneurs feel, they work to provide mentoring, consulting, and support to individuals and companies at various stages of their entrepreneurial journeys.

Hatch leases spaces including offices, conference rooms, classrooms and even garden space to people and groups with a demonstrated desire to have a positive social impact. Plans range from \$95 to \$275 per month and include access to must-haves like workspace and WiFi, but also perks like workshops and networking with in house experts.

Images courtesy of Hatch, Fort Houston, Gangplank, Paragraph, Thrill Mill

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About Njaimeh Njie

Njaimeh is a multimedia producer based in Pittsburgh, PA. After graduating from Washington University in St. Louis, Njaimeh taught high school English for three years while earning a master's degree in Secondary Education. She's since backpacked solo through Europe and Africa, and currently works as a freelance videographer, producer, photographer, and writer. Her work focuses on documenting efforts for diversity and inclusion in a rapidly evolving city.

[View all posts by Njaimeh Njie](#) →

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Comment



Jennifer Thomas Arthurs · Works at Mogul Real Estate Partners

Check out The Reef in Los Angeles for you next post. Thx for sharing!!

Reply · Like · November 3, 2014 at 3:27pm



Debra Morgano Stine-Magrann

Oops! Found a typo: The Nickel Tour: Tired of working < form > home? These spaces could encourage you to join a coworking space.

Reply · Like · November 1, 2014 at 4:35am

Facebook social plugin

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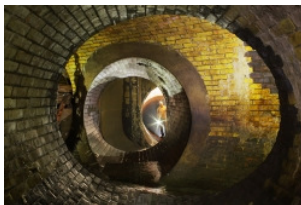
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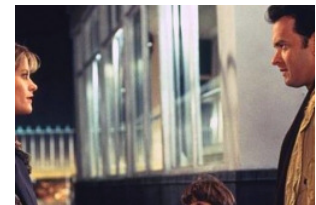
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The 6 American cities where every on-screen romance is filmed



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Names or Terms Used for Makerspace?

- Makerspace
- FabLabs
- Hackspace
- Art Centers
- Inventors Clubs
- Community Workshops
- Digital Fabrication Labs
- Creation Clubs
- TechShops
- Learning Labs
- A FAIRE
- Art Communities
- Innovation Labs
- Community Labs
- MetaLabs
- MakerMedia

Typical Uses?

Uses for Makerspaces typically include (3) or more of the following defined uses:

- Limited Mfg.
- General Retail
- Assembly Space
- Office Use
- Commercial Kitchen
- Live/Work Units
- IT (Tech, Machines, Digital Arts, Electronic Arts)
- Art Studio (Kiln, Glass Art, Furniture, Fiber Arts)
- Storage

Makerspace Definition?

- Makerspaces and maker groups are new and rapidly evolving hotbeds of innovation, which have been facilitated by the latest in prototyping technology while rooted in traditional pillars of manufacturing: engineering, design, science, and art. Coworking environments, such as innovation centers, accelerators, incubators, and hackerspaces, have begun to proliferate. Out of hackerspaces, so-called 'hardware' innovators have carved out a subgroup for makers. Making has always been a part of hackerspaces, whose walls are often stacked with racks of spare electronic parts for repurposing. In makerspaces, however, hardware innovation is primary and programming is secondary (Foertsch, April 2013).
- Makerspaces display different legal structures, different projects and tools, and different mentorship programs. The scope of a makerspace is driven by its members and their creative needs. The interests of makerspace users vary and include electronics, knitting, machining, crafts, scrapbooking, woodworking, ceramics, sewing, design, and much more. Makerspaces allow members to pursue their creative needs in a collaborative environment. Many of the makerspaces provide numerous learning opportunities through classes and demonstrations (Kalish, November 21, 2010).
- Makerspaces are places where like-minded persons gather to work on personal projects, share tools and expertise as well as learn from each other (Tweney, March 29, 2009).
- Learning environments rich with possibilities, Makerspaces serve as gathering points where communities of new and experienced makers connect to work on real and personally meaningful projects, informed by helpful mentors and expertise, using new technologies and traditional tools (Spring, 2013).

Purpose of Makerspace?

- The creative industries are grabbing the attention of policymakers as powerful engines for job creation and competitiveness (Kauffman.org, 2015).
- The driving principle of "makerspaces" is that users enjoy sharing tools, equipment, expertise and ideas rather than working by themselves in the garage or basement (Roush, May, 22, 2009).
- Economic growth requires continued entrepreneurial innovation and expansion. Places that foster innovation and creativity can adapt faster to the new economy and sustain economic growth. In order for communities to remain competitive in the global economy, technological improvements require an increased knowledge base for industrial innovation. In this regard, nurturing innovation and entrepreneurship is a central component of the strategy of any community, regardless of the existing growth patterns. Communities need to invest and foster a talented workforce in order to stay competitive in the global economy. (Kauffman Foundation, 2013; Schwab, 2012).

Where Do Makerspaces Form?

Typically Makerspaces form by location of the founder and access to membership. High populations of engineers, designers, artists or creative individuals drive the participation rate of public and private "Makerspaces".

Having a close proximity to university, colleges or technical colleges ensures continued growth of the "Maker" movement (Benton, Mullins, Shelley, Dempsey, 2013).

Trending Applications

Arts /Entrepreneurial Spaces

Lawrence Creates

9th & Penn

Pohler District

Center for Entrepreneurship

Terms & Definitions

LIBRARY MAKERSPACES

- Typically focus on the young adults and Science, Technology, Engineering and Mathematics (STEM) hands on curriculum experiences.
- World Economic Forum's Global Competitiveness 2013-2014 ranking dropped the United States to fifth place (The Global Competitiveness Index). It has been argued that the U.S. education system is in crisis due to the relative decline in science, technology, engineering and math (STEM) proficiency, fewer young people are interested in STEM fields, and decline in measured creativity (Cognizant, n.d., Institute of Museums and Library Services (IMLS), 2012).

FABLAB (fabrication laboratory):

- Fab Lab provides digital technologies and machines that allow users to develop products and move ideas to products (Gershenfeld, 12; Mott Community College).
- FabLabs are a network of spaces started by Neil Gershenfeld at the Center for Bits and Atoms in MIT's Media Lab around 2005, inspired by an MIT course called How to Make (Almost) Anything. The founding principle of a FabLab is that there is a core set of tools (including basic electronics equipment, a lasercutter, a vinyl cutter, a CNC router, a CNC milling machine, and more) that allow novice makers to make almost anything given a brief introduction to engineering and design education. FabLabs have a very specific set of space requirements (often sufficing with 1,000- to 2,000-square feet), required tools (specified exactly by model and type), supporting software for said tools and curriculum, and can be thought of as a kind of franchise (though MIT retains little to no control over the actions of local spaces). FabLabs are required to be open to the public for little or no cost for recurring periods through the Fab Charter, frequently teach children, and are most often run by local non-profit organizations, (Benton, Mullins, Shelley, Dempsey, 2013).

TECHSHOP:

TechShop (Franchises that are expanding into for profit models) a commercial venture that combines the concepts of hackerspace, Fab Lab, prototyping studio and learning center. The TechShop provides member access to a significant list of equipment and software, in general over \$1 million worth of professional equipment and software, locations are in CA, MI, TX, AZ, PA, and VA (Torrone, March 10, 2011).

MAKER FAIRES

- Maker Faire is primarily designed to be forward-looking, showcasing makers who are exploring new forms and new technologies. These events are not just for the novice in technical fields; Maker Faire features innovation and experimentation across the spectrum of science, engineering, art, performance, and craft. (Kauffman.org).
- Maker Faires showcase maker projects as well as celebrate innovation and the do-it-yourself culture. Annual Maker Faire events take place across the U.S., including at the Henry Ford Museum in Dearborn, MI and San Mateo, CA (the original event). These events attract a diverse audience and present projects ranging from traditional crafts to advanced technology and robots geared to attract all ages (Makezine.com).

HACKERSPACE

- Hackerspaces largely focus on repurposing hardware, working on electronic components, and programming. While some spaces work with more media and craft, typically tools and spaces dedicated to those craft were often seen as secondary to the mission of the space. To some extent, hackerspaces have tendencies toward collectivism and/or democratic membership process operation model that can be attributed to an inheritance from European hackerspaces and early American hackerspaces like Noisebridge and NYC Resistor. "Hacking" or to "Hack" refer to the traditional act of programming or act of working with physical parts. (Makezine.com May 20, 2013).
- Hackerspace – A hackerspace or a hack space can feature workshops, tools, and people; it is a location where people with common interests, usually in computers, technology, science, digital and electronic art can meet, socialize and/or collaborate. Many hackerspaces participate in the use and development of free software and alternative media. Hackerspaces have been a self-forming organic concept. European hackerspaces are places where local programmers meet and collectively work (Borland, August 11, 2007).

Current Use Definitions

COMMUNITY FACILITY USE DEFINITIONS:

20-1719 CULTURAL EXHIBITS AND LIBRARIES

Museum-like preservation and exhibition of objects in one or more of the arts and sciences, gallery exhibition of works of art, live performances, art centers, or library collection of books, manuscripts, etc., for reading, studying and research.

Local Examples: Watkins Museum; Lawrence Public Library

COMMERCIAL USE DEFINITIONS:

20-1714 BUSINESS SUPPORT SERVICES

Provision of clerical, employment, protective, or minor processing services to firms rather than individuals. Storage of goods other than samples is prohibited. Typical uses include secretarial services, telephone answering services and blueprint services. Also includes business or trade schools that do not involve any outdoor storage or manufacturing processes. Business or trade schools that do involve outdoor storage or manufacturing processes are classified as "Limited Manufacturing and Production."

Local Examples: Texon Engineering; Minuteman Press

20-1744 OFFICE, ADMINISTRATIVE AND PROFESSIONAL

Professional, governmental, executive, management or administrative offices of private organizations or government agencies. Typical uses include government offices, administrative offices, legal offices and architectural, engineering or other professional consulting firms.

(1) Administrative and Professional

Professional, governmental, executive, management or administrative offices of private organizations or government agencies. Typical uses include government offices, administrative offices, legal offices and architectural firms.

(2) Financial, Insurance and Real Estate Services

Financial, insurance, real estate or securities brokerage services. Typical uses include banks, insurance agencies and real estate firms.

(3) Other

Office uses for businesses that primarily provide administrative, consulting or other professional services that do not include construction space or equipment/storage yards.

20-1749 PERSONAL IMPROVEMENT SERVICE

Informational, instructional, personal improvement, and similar services of a nonprofessional nature. Excludes services classified as "Spectator Sports and Entertainment", "Sports and Recreation, Participant" or "Transient Habitation." Typical uses include fine arts studios, martial arts centers, yoga meditation or diet centers.

20-1755 REPAIR SERVICES, CONSUMER

Provision of repair services to individuals and households but not to firms. Excludes "Automotive and Equipment" use types. Typical uses include appliance repair shops, locksmiths, shoe and apparel repair and musical instrument repair.

20-1756 RETAIL SALES AND SERVICE

Companies or individuals involved in the sale, lease, or rental of new or used products, or providing personal services or entertainment to the general public.

Current Use Definitions

INDUSTRIAL USE DEFINITIONS:

20-1735 INDUSTRIAL, GENERAL

Production, processing, assembling, packaging or treatment of food and non-food products; or manufacturing and/or assembly of electronic instruments and equipment and electrical devices. General Industrial uses may require Federal air quality discharge permits, but do not have nuisance conditions that are detectable from the boundaries of the subject property. Nuisance conditions can result from any of the following:

- (i) continuous, frequent, or repetitive noises or vibrations;
- (ii) noxious or toxic fumes, odors, or emissions;
- (iii) electrical disturbances; or
- (iv) night illumination into residential areas.

(1) Exceptions

Noise and vibrations from temporary construction; noise from vehicles or trains entering or leaving the site; noise and vibrations occurring less than 15 minutes per day; an odor detected for less than 15 minutes per day; noise detectable only as part of a composite of sounds from various off-site sources.

Local Examples: Pur-o-zone, Hallmark, Allen Press

20-1739 MANUFACTURING AND PRODUCTION, LIMITED

Establishments generally employing fewer than 20 persons, do not involve outside storage of materials, do not require Federal air quality discharge permits, are compatible with nearby residential uses because there are few or no offensive external effects, and are primarily engaged in one of the following:

- (1) On-site production of goods by hand manufacturing involving use of hand tools or light mechanical equipment. Products may be finished or semi-finished and are generally made for the wholesale market, for transfer to other plants, or to order for customers or firms. Goods are generally not displayed or sold on-site, but if so, this is a subordinate part of total sales. Typical uses include instruction studios, ceramic studios, woodworking and cabinet shops, custom jewelry manufacturing, and similar types of arts and crafts or small-scale manufacturing; or
- (2) Manufacturing or assembling of electronic components, medical and dental supplies, computers, computer components, or other manufacturing establishments with similar characteristics. Goods generally are not displayed or sold on-site, but if so, this is a subordinate part of total sales.
- (3) Manufacturing, processing, or packaging of small-scale food production operations with limited on-site retail sales. Typical uses include caterers, bakeries, bottling and beverage manufacturing operations.

Local Examples: cabinetry,

20-1740 MANUFACTURING AND PRODUCTION, TECHNOLOGICAL

Production, processing, assembling, or packaging of products that rely upon research and technological innovation. Typical uses include manufacturing research instruments, electronic products, and surgical and medical instruments. This use type does not include uses that require Federal air quality discharge permits.

Local Examples: Martin Logan, Impact, Microtech, Scanning America

Lexington, KY



PICTURE CAPTION:
The North Limestone Vibrancy Map is a guide to the business, non-profit, and cultural anchors of the North Limestone Corridor.

<http://www.artplaceamerica.org/articles/luigart-makers-spaces-4/>

THE PROJECT

The proposed project is the first of its kind in Lexington, Kentucky. The recently approved PUD has established an innovative, live-work zone designed to support “maker-spaces” and related businesses in the North-End of Lexington’s urban core. The proposed Text Amendment to Article 22 of Lexington’s Zoning Ordinance was designed to establish a Planned Unit Development-2 (PUD-2) ZONE for the construction of the LuigART Maker’s Spaces in downtown Lexington.

The LuigART \$5 million development is a three-block area bounded by North Limestone Street, Maple Street, and R.J. Corman Rail Line, and West Seventh Street.

This Planned Unit Development zone is established to support infill and redevelopment that maintains neighborhood character, preserves housing affordability and strengthens opportunities for new applied arts and skilled crafts businesses and jobs, which are vital to the 21st century economy of Lexington-Fayette County. Live/Work districts such as this Planned Unit Development zone provide a desirable housing option to creative professionals and a benefit to the surrounding community when located to be compatible with existing uses. The new regulations were established in addition to the applicable regulations contained in Zoning Ordinance. Where there were conflicts between the regulations and those contained elsewhere in the Zoning Ordinance, the use, dimensions and other requirements were amended on December 4, 2014 with Ordinance No. 154-2014.

MAKERSPACE DEFINITION

A “maker space” is a physical location where people gather to share resources, work on projects, network, and build.

GOVERNANCE

- Pre-Application Meeting June 5, 2014
- August 4, 2014 Text Amendment Application Submitted
- October 23, 2013 - ZOTA 2014-7: AMENDMENT TO ARTICLE 22 TO ESTABLISH A PLANNED UNIT DEVELOPMENT-2 (PUD-2) ZONE – petition for a Zoning Ordinance text amendment to establish the Luigart Planned Unit Development-2 (PUD-2) zone in a new Appendix 22B. OUTCOME: Public Hearing Held and a 10-0 vote by Urban Planning Commission to recommend APPROVAL of the Revised Text to be submitted to LFUrban County Council.
- December 4, 2014 Passed Urban County Council
- December 11, 2014 Ordinance No. 154-2014

CITY OF MILWAUKEE DEFINED USES FOR LuigART Maker’s Space

1. Live/Work Space - A dwelling unit that is also used for non-residential uses permitted herein such as, but not limited to, the production, showing and sale of art; both visual and performing arts; office uses; and related uses.

2. Artist Studio – A studio working in all art forms, including, but not limited to, painters; sculptors; authors; screenwriters; playwrights; filmmakers; dancers; potters; weavers; jewelers; exhibitors; printers; costumers; musicians; and photographers.

3. Artisan Food and Beverage Production - On-site production of food and beverage products, involving small batch processing. Typical uses include, but are not limited to, coffee roasting; ice cream; bakery; candy, and other foodstuffs; and alcoholic beverage manufacturing. This may include on-site sales and consumption.

4. Artisan Manufacturing - On-site production of goods by hand manufacturing, involving the use of hand tools and small scale, light mechanical equipment.

Typical uses include, but are not limited to, wood working; ceramic studios; jewelry manufacturing; and uses that have no negative external impacts on surrounding properties. Welding is also permitted.

5. Digital Makerspace – A facility for digital design and fabrication utilizing hardware and software tools.

6. Urban Agriculture - The production and distribution, including on-site sales, in an urban neighborhood of agricultural or horticultural crops, including, but not limited to, poultry; poultry products; grain; hay; pastures; soybeans; timber; orchard fruits; vegetables; flowers or ornamental plants. This use does not include livestock or livestock products.

7. Visiting Artist Housing – A dwelling unit or living quarters made available for visiting artists that may be rented or occupied for less than one week at a time. A maximum of one such housing unit shall be permitted per lot.

8. Accessory Dwelling Unit (ADU) - A separate and complete dwelling unit that is contained on the same lot as the structure of a single-family dwelling or business. Such a dwelling unit shall be clearly incidental and subordinate to the principal use of the lot.

Lexington, KY

DESIGN STANDARDS

All new structures and alterations or additions to existing structures shall be constructed to a height, scale, proportion and gross volume compatible with the existing structures that are within two hundred (200) feet or are substantially related to them visually. The existing rhythm created by existing building masses and spaces between them should be preserved.

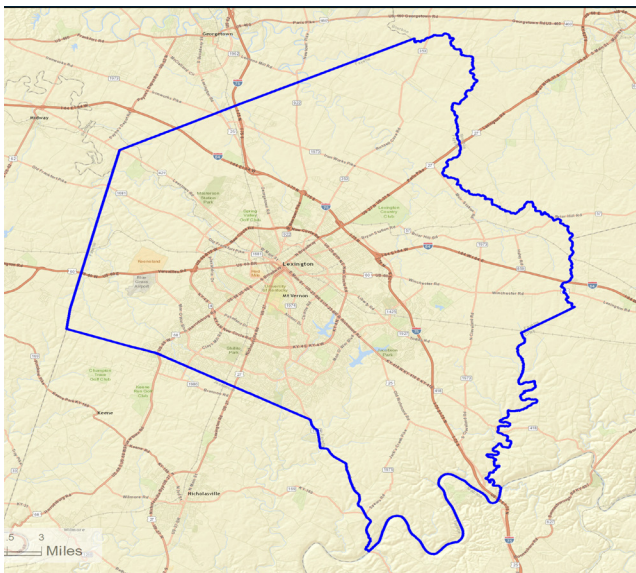
The following table shall establish what standards and what process is required for each project or parcel. If all of the standards of Column A can be met by the applicant and/or property owner, then no development plan shall be required. If any one or more of the standards in Column A can not be met by the applicant and/or property owner, then the standards established in Column B shall apply and a development plan shall be required to be filed for consideration by Planning Commission, or by the Division of Planning staff under the provisions of Article 21-7, herein.

22B-6(a) OFF-STREET PARKING – No off-street parking shall be required except for where the Planning Commission or Board of Adjustment may establish off-street parking requirements, as needed.

22B-6(b) VARIANCES – Requests for variances to the dimensional requirements of Article 22B will only be considered for the standards established above in Column B.

	Column A	Column B
	Without Development Plan Approval	With Development Plan Approval
Lot Coverage	50%	100%
Maximum Vehicular Use Area (VUA) Coverage	30%	50%
Building Height	Average of Principal Structures on Immediately Adjoining Lots	75 Ft.
Lot Size	Max: 7,500 Sq. Ft.	No Maximum
Floor Area Ratio (FAR)	0.5	2.0
Yards		
Front	Min: 7 Ft.	No Minimum
	Max: 20 Ft.	Max: 20 Ft.
Side	No Minimum	No Minimum
Rear	No Minimum	No Minimum
Side Street Side	1/2 the established Front Yard	
Open Space	None Required	
Signage	As Permitted in 17-7(o)	

Lexington, Kentucky Quick Demographics:



Population: 305,331 Median Age: 34.5

Education Institutions:

University of Kentucky, Sullivan University, Transylvania University, Spencerian College, Bluegrass Community College & Technical College, Med Tech, Midway College, Indiana Wesleyan University, Strayer University and Lexington Theological Seminary.

2014 - 25+ by Education Attainment:

Some College: 21.2 % Associates Degree: 6.9%
 Bachelor's Degree: 22.7 % Grad/Professional: 16.8%

Total Businesses: 25,277

Average Per Capita Income: \$29,236

(ESRI Community Analyst Demographic Data)

Milwaukee, Wisconsin

Milwaukee, Wisconsin is home to several entrepreneurial communities which is contributed to the State of Wisconsin's Economic Development efforts to create an "Entrepreneurial Renaissance" working to stimulate and foster innovation. Entrepreneurial incubator, accelerators and makerspaces in Milwaukee, Wisconsin include:

- VetTransfer Inc.
- Gener8tor
- Victory Spark
- BizStarts Milwaukee
- Bucketworks
- Sector 67
- Milwaukee Makerspace



Milwaukee MakerSpace - Independent Non-Profit



PICTURE CAPTION: <http://milwaukeemakerspace.org/>
 Milwaukee Makerspace Equipment: Hand-tools, Welder, Ceramic Kiln, Computers, Vertical Mill, Hydraulic Press, Bench Grinder, Bench Saw, Metal Finishing Area, Chop Saw, Metal Lathe, Band Saw, Induction Furnace, Bench Top Lathe, Planer, 3D Printer

THE PROJECT



Milwaukee Makerspace was founded in 2009, opened as an independent non profit and in April 2011 relocated to brick & mortar location. Milwaukee Makerspace is a member-based organization and membership include artists, engineers, designers, scientists, software developers, hardware hackers, builders, tinkerers, and the curious.

Milwaukee Makerspace prides their establishment on being a hacker/builder community where ideas are shared, innovation is fostered, and the maker experience is hands-on. They coined the term "skill collector" that is used to describe their membership and those that love to learn new skills and add another item to their list of things they can do.

DEFINITION/USES

Currently no definition exists for the City of Milwaukee in regards to Makerspaces per city or land development code. Translations are made by planning staff and the governance process is followed if an application request is considered a Special Use Permit.

The Milwaukee Makerspace was permitted as a matter of right per zoning and land development code. The Makerspace uses were defined as an Artist Studio with a Light Manufacturing space under 3,600 square feet.

MILWAUKEE MAKERSPACE'S DEFINITIONS PER CITY TRANSLATION VIA CODE

1. Artist Studio- means work space for one or more artists or artisans, including the accessory sale of art produced on the premises. This use is permitted in all zoning districts as a matter of right subject to all performance standards.
2. General Retail Establishment: The use shall not be operated between 12 a.m. and 5 a.m. if it is located within 150 feet of a residential district. This limitation shall not apply to a convenience store which is open between the hours of 12 a.m. and 5 a.m. and regulated by s. 84-7.

3. Light Manufacturing - (Met permitted use as a matter of right and have to meet the following conditions :

- t-1. The gross floor area devoted to the use shall not exceed 3,600 square feet
- t-2. The use shall not operate between the hours of 9 p.m. and 7 a.m.
- t-3. The use shall not generate noise or odors in violation of ch. 80.
- t-4. All manufacturing activities shall occur within an enclosed building.

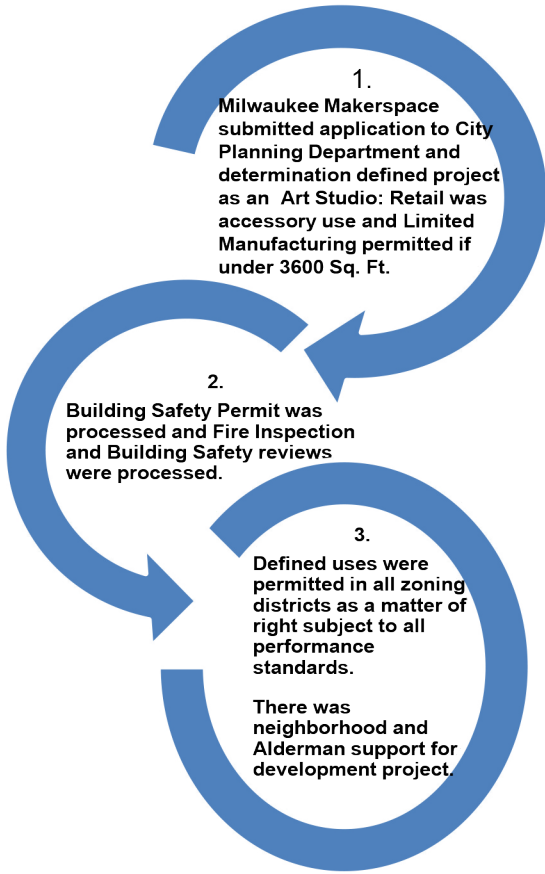
u. Contractor's Shop. All of the contractor's activities, including those activities that are accessory to the principal use, shall be conducted entirely within a building.

Milwaukee, Wisconsin

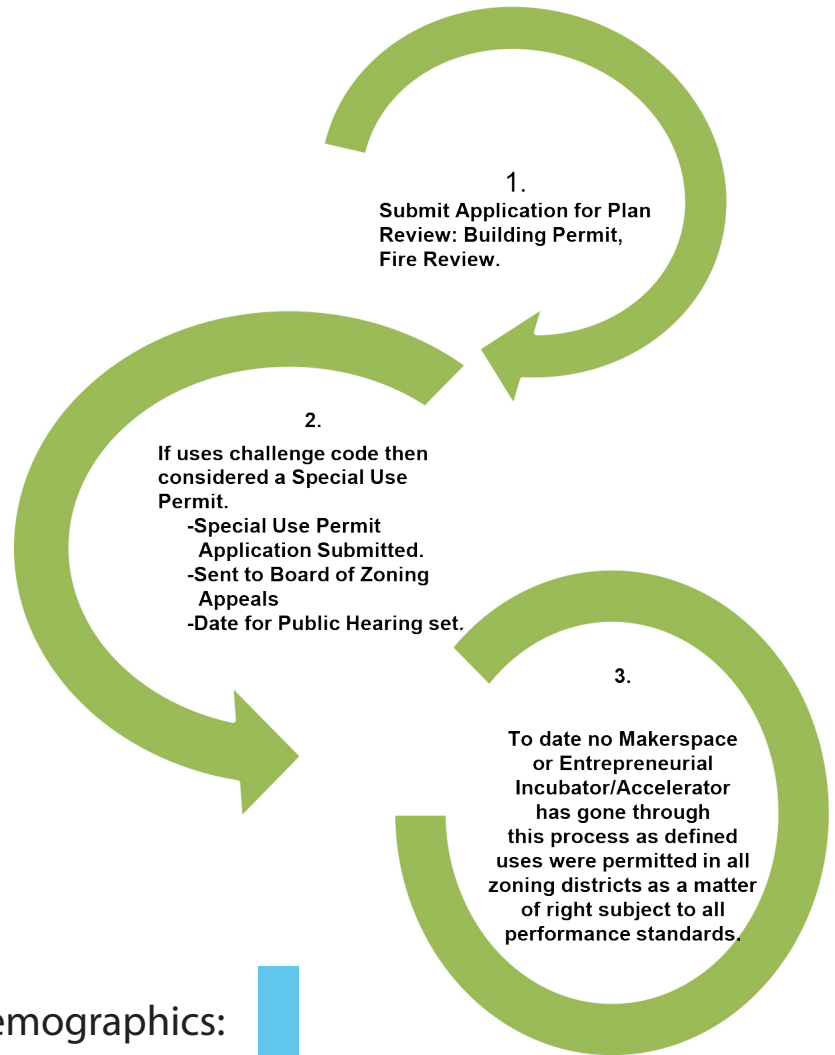


Currently no definition exists for Makerspaces via city or land development code. Translations are made by planning staff and project applications will undergo governance process if considered a Special Use Permit.

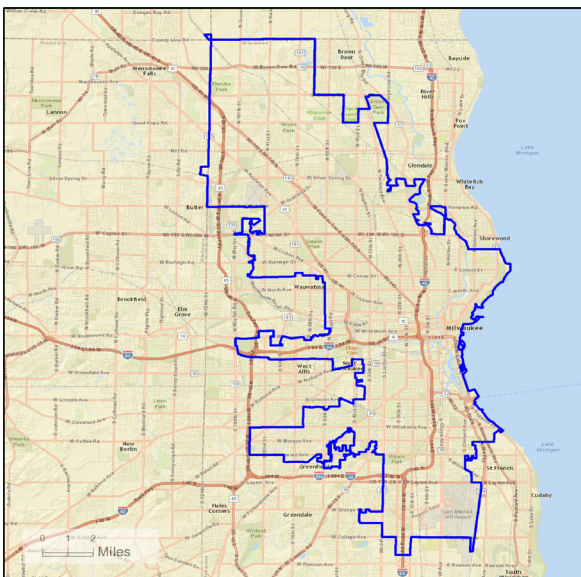
Governance Process For Milwaukee Makerspace



Governance Process For New Makerspaces



Milwaukee Wisconsin Quick Demographics:



Population: 590,485

Median Age: 30.9

Education Institutions:

University of Wisconsin-Milwaukee, Marquette University and also served by- Alverno College, Cardinal Stritch University, Medical College of Wisconsin, Milwaukee Area Technical College, Milwaukee Institute of Art & Design, Milwaukee School of Engineering, Mount Mary College and Lakeland College.

2014 - 25+ by Education Attainment:

Some College: 22.1% Associates Degree: 6.4%
 Bachelor's Degree: 14.2% Grad/Professional: 7.6%

Total Businesses: 28,481

Average Per Capita Income: \$18,100

San Francisco, CA

Fuse Project - 1401 16th Street

THE PROJECT

The essence of Fuseproject's business model is to develop new designs and technologies to set their customers apart in their respective industries. Fuseproject's efforts have created new technology, changed industries, and have resulted in numerous patents being granted for their products. The company's research and development areas have many similarities with an engineering or development laboratory.

The FuseProject upgraded property located at 1401 16th Street to accommodate its homegrown multi-use business. Infrastructure improvements were made to a two-story building that housed a total of 20,540 sq. ft. of space. Property was vacant prior to purchase but previous tenant was a furniture company. The FuseProject turned into a destination art and design shop (nationally and internationally) that led to a business expansion acquiring more property locations off-site. This project included the following mixed uses:

- **Retail store and Gallery:** It displays and sells customized goods made both on- and off-site. This dedicated space is also reserved for exhibitions by nearby California College for Art's students. The design store sells limited editions created in the Fab LABs, as well as a curated selection of designed objects from around the world.
- **Fabrication Labs ("Fab Labs").** The core activities of Fuseproject's business is conducted in the Fab Labs, which includes:
 - (1) space for re-tooling and personalization of commercial products by Fuseproject for sale both on- and off-site, to be displayed in museums, or distributed for promotional or charitable purposes;
 - (2) space for development and testing of new preproduction materials, ergonomic designs and fabrication methodologies. Noisy and messy tools are used in all functions and are sequestered within enclosed interior machine shops. Project-by-project work benches are provided areas where teams gather to develop product designs and formally apply the output of the prototyping facilities and machine shops.
- **Accessory Office Space.** A portion of Fuseprojects space would be devoted to administrative functions, computer stations, and other office components of Fuseproject's operation. The Accessory Office Space is where client development, marketing, industry research, and supportive computer-based activities would occur. Accessory office functions will occupy up to 1/3 of the building's total area (approximately 2,500 sq. ft. on the second floor, and roughly 4,320 sq. ft on the first floor). (2011)



PICTURE CAPTION:
Vanity Fair - FuseProject

GOVERNANCE

- Determination of Uses
- Neighborhood Notification
- Change of Occupancy Permit
- Building Safety and Fire Reviews

FABLAB DEFINITION

"Fab Labs" contain unique characteristics that make the application of any single use category problematic. In this case, the operation complies with elements of several use categories, specifically Light Manufacturing, Trade Shop and Laboratory, all of which are principally permitted uses within the UMU Zoning District. Therefore, the proposed "Fab Lab" was considered to be a principally permitted use at the subject property.

CITY OF SAN FRANCISCO DEFINED USES FOR THE FUSEPROJECT:

- **Laboratory Use**
PC § 890.52 defines Laboratory as space within any structure intended or primarily suitable for scientific research. The space requirements of uses within this category include specialized facilities and/or built accommodations that distinguish the space from office uses (as defined in Section 890.70), light manufacturing (as defined in Section 890.54(a)), or heavy manufacturing (including uses listed in 226(g) through 226(w)). Whereas, PC § 890.54 defines Light Manufacturing to include production and custom activities usually involving individual or special design, or handiwork. The proposed space for developing and testing new pre-production materials, ergonomic designs and fabrication methodologies utilizing specialized facilities that are distinct from office uses, and project-by-project work benches where teams can gather to develop product designs and formally apply the output of the prototyping facilities and machine shops, operates as a hybrid Laboratory and Light Manufacturing use.
- **Light Manufacturing Use**
PC § 890.54 defines Light Manufacturing as a nonretail use which provides for the fabrication or production of goods, by hand or machinery, for distribution to retailers or wholesalers for resale off the premises, primarily involving the assembly, packaging, repairing, or processing of previously prepared materials (light manufacturing) uses include production and custom activities usually involving individual or special design, or handiwork. Whereas, PC § 890.124 defines Trade Shop as a retail service use which provides custom-crafted goods and/or

(Light Manufacturing Use Cont.)

directly to the consumer, reserving some storefront space for display and retail service. The re-tooling and personalization of limited runs of commercial products for sale both on- and off-site, to be displayed in museums, or distributed for promotional or charitable purposes, operates as a hybrid Light Manufacturing and Trade Shop use.

- **Office Space-Accessory Use**
PC § 843.66 (Office Uses) and 803.9(h) (Commercial Uses in Mixed Use Districts) prohibit office uses on the ground floor and permit office uses of the second floor of the subject building. However, PC § 803.3(b)(1)(C) permits Accessory Uses (a related minor use which is either necessary to the operation or enjoyment of a lawful principal use or conditional use, or is appropriate, incidental and subordinate to any such use) provided the use does not exceed more than 1/3 of the total occupied floor area.
- **Sales and Service, Retail and Arts Activity- Principally Permitted Uses**
PC § 890.104 defines Sales and Service, Retail as a commercial use which provides goods and/or services directly to the consumer and not for resale and is accessible to the general public" and PC § 102.2 defines Arts Activity to include exhibition and gallery spaces for arts activities. The proposed "FuseShop" with retail showroom, art gallery and potential exhibition space, complied with the definitions of Sales and Service, Retail and Arts Activity, both of which are principally permitted uses within the UMU Zoning District.

San Francisco, CA

Quick Demographics:

Population: 827,589 Median Age: 39.2

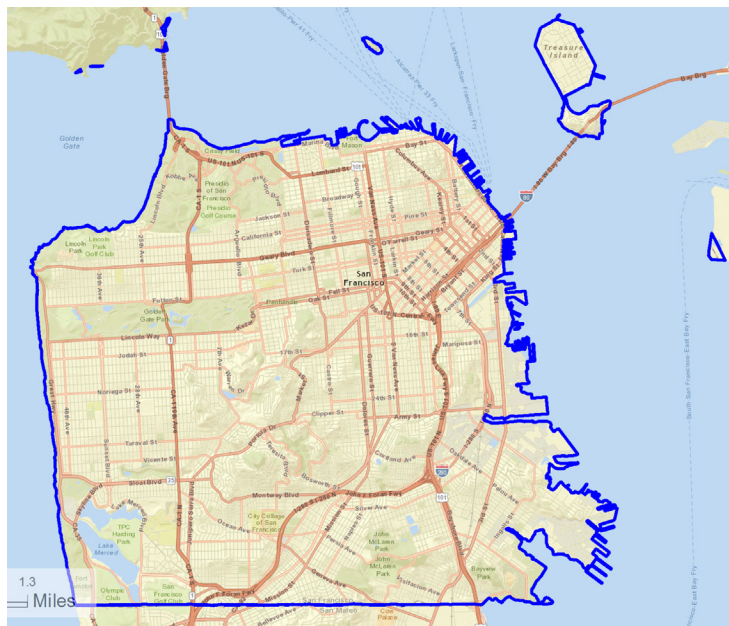
Education Institutions:

City College of San Francisco, San Francisco State University, University of California, University of California, Hastings College of the Law and 21 Private Colleges or Higher Education Institutions.

2014 - 25+ by Education Attainment:

Some College: 14.9% Associates Degree: 5.4%
Bachelor's Degree: 31.4% Grad/Professional: 20.2%

Average Per Capita Income: \$44,555



ESRI Community Analyst



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