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# CREATIVE COMMUNITY SPACES

Spaces That Are Transforming  
Cities into Innovation Hubs



# ACKNOWLEDGMENTS

The authors of this report are Victor Mulas, Anastasia Nedayvoda, and Ghia Zaatari. Hallie Applebaum contributed to this report through ideation, concept creation, and research. Marta Khomyn also contributed with research. Jane Sunderland edited this report and Jimena Vázquez produced the design. The report received comments from Natalia Agapitova, Jon Kher Kaw, Ilari Lindy, Megha Mukim, and Carlo Maria Rossotto.

# ABBREVIATIONS & ICONOGRAPHY

All dollar amounts are U.S. dollars unless otherwise indicated.

### Abbreviations

- BF+DA** *Brooklyn Fashion + Design Accelerator*
- CBA** *Center for Bits and Atoms*
- CCS** *creative community spaces*
- iF** *ideas Factory*
- NYCEDC** *New York City Economic Development Corp.*
- ROV** *remotely operated vehicle*

### Services

- M** Mentorship
- ES** Event Space
- A** Acceleration
- CF** Connections to Funding
- T** Training
- AT** Access to Tools

### Interactive Environments

- CW** Coworking Space
- MS** Maker Space
- I** Incubator
- A** Accelerator
- CS** Community Space
- FL** Fab Lab
- HS** Hacker Space



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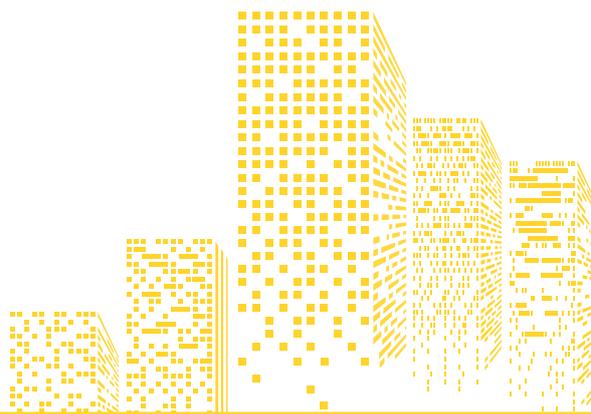
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# Executive Summary



Communities of entrepreneurs are creating positive impacts on local economies. When they establish new businesses and innovate across industries, they bring about economic growth and employment. Entrepreneurs are generally drawn to cities because of their available resources and networks, specifically access to knowledge and sector-specific needs, and the exchange of information that occurs when an entrepreneurial community is brought together. Central to these ecosystems are creative community spaces (CCSs)—a range of physical spaces that enable innovation by creating a convening point for a community of entrepreneurs and start-ups. CCSs serve to anchor entrepreneurial communities and influence the urban economic and physical landscape.

This report showcases a selection of 13 CCSs around the world that contribute to building a community that is sustainable and entrepreneurial and/or is helping advance an industry-specific or sectoral community. The represented spaces include coworking spaces, accelerators, maker spaces, community spaces, incubators, fab labs, and hacker spaces (see the glossary for descriptions of each). This presentation is not an exhaustive analysis. In fact, the featured spaces are a few among many that stand out for their unique impact on the ecosystem based on the services they offer, their networking assets, type of space, and business model, among other variables. These spaces were part of the World Bank Group's fieldwork or were otherwise learned of through knowledge shared by city innovation practitioners and researchers. This analysis also builds on previous research and programs of the Bank and infoDev on accelerator and community spaces<sup>1</sup> and takes into account global research on this topic.<sup>2</sup> Together the 13 spaces represent a cross-section of inspirational examples spanning cities across the globe, ranging from leading metropolises such as New York to growing cities such as Nairobi; each caters to either a general entrepreneurial community or a more industry-specific or sectoral one. **This report's only intent is to showcase inspiring examples and models being implemented in diverse environments across the world.** We hope this will help catalyze a conversation about the role of creative spaces in urban ecosystem development and provide policy makers as well as city innovation practitioners and private investors a better understanding of these spaces and how to leverage them effectively.

Each profiled space has been chosen because it represents an inspiring example of a way to support the growth of entrepreneurial communities and boost innovation. To deepen understanding of the mechanisms and models followed to create such impact, **this report describes each space's impact, financial model (funding and revenue sources), and operational model (services and interactive environments).** These defining features are contextualized in the background and forming history of each space as well as in its operational function and objectives.

Their impacts are measured across four categories: 1. entrepreneurial communities building, 2. business acceleration, 3. urban regeneration, and 4. industry innovation. Each space fulfills at least one of these dimensions.

Each profile elaborates on the effect of the space, giving specific examples of ongoing programs with demonstrable impact on the community and/or the surrounding urban landscape, often built through collaborations with industry-specific partners, city government, and educational institutes, among other influential entities. In some instances, spaces have revitalized their neighborhoods by refurbishing and/or reusing old buildings and creating a new entrepreneurial community in previously economically depressed areas. In other instances,

city governments have specifically created CCSs to revitalize the social fabric and a specific neighborhood. For instance, in Lisbon the municipality used a fab lab to revive an old downtown neighborhood; and in Málaga, the municipality has been kick-starting the social tissue of new developed areas through these spaces. Moreover, these selected spaces have given rise to a diversity of businesses and ideas: digital educational outreach programs, a revolutionary bone reconstruction company, a self-driving car company, submersible remotely operated vehicles to be used in partnership with local schools and science foundations, new fashion lines, food businesses, and much more.

**These spaces are building stronger bridges between industries and start-ups and are contributing to local economies by offering platforms for new ideas to be tested, leading to innovation within long-standing sectors of the economy and gradual job generation.**

In many instances, these spaces bring together grassroots innovative communities, entrepreneurs, and established companies in the same building, creating mixing spaces that result in natural collisions and an exchange of ideas that boosts innovation. Through closer analysis of the different characteristics of each of the spaces—impact, funding model, interactive spaces, and services (revenue model)—relevant and informative trends become apparent: (a) Subsidies are the most frequently used form of funding, followed by private ownership; (b) spaces that contribute to entrepreneurial communities building are partly or completely privately owned, while the spaces that have an impact on business acceleration are often subsidized; and (c) the pure subscription model is the most common model among thematic spaces, while hybrid models are more common among general spaces. These trends—just some of the ones highlighted in this report—lend insight into how these spaces operate and help decipher ways they can grow local economies through job generation and urban revitalization.

**NOTES:** 1. See, for instance, *The Business Models of mLabs and mHubs* (infoDev 2014), the Lebanon mobile Internet ecosystem project ([www.mie-p.org](http://www.mie-p.org)), and activities in Colombia and Chile supporting innovation ecosystems (<http://innovatingcities.org/innovatingcities/chile/en/>). 2. Capdevila (2013).

# GLOSSARY

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**Accelerator:** A space that provides later-stage start-ups with access to mentorship and a larger network to further develop their business ideas over an intensive and limited time frame of a few weeks to months. Often times the start-ups give equity in return for mentorship and small seed investment.

**Angel investor:** A person who supplies starting or growth capital for seed-stage and early stage companies in exchange for convertible debt or ownership equity.

**Bootcamp:** An immersive and technical training program focused on up-to-date trends in technology, entrepreneurship, coding and design, and professional skills development.

**Community space:** A space that is designed to be inclusive of all members of a community, often providing learning activities and a space to recreate and exchange ideas.

**Coworking space:** A membership-based work space that allows diverse groups of independent creative professionals and individuals that work remotely to work in a shared setting. Coworking spaces aim to help those with common values develop potential synergies.

**Incubator:** A space designed for early stage start-ups that provides a shared space as well as access to mentors and a variety of services (for example, business literacy programs, market research, marketing assistance, business coaching, and so on).

**Innovation hub:** A space that as community managers that integrate many of the other functions of creative community spaces. Innovation hubs' main function is to coordinate all actors of the ecosystem and help manage the community of tech-innovators and entrepreneurs to grow sustainably. Many of these innovation hubs enjoy the participation of the most relevant actors of the technology innovation ecosystem, including entrepreneurs, universities, private sector, creative community spaces, and government — particularly city government.

**Fab lab:** A space that specializes in digital fabrication (a type of manufacturing that uses computer-controlled machines), which includes a range of additive manufacturing technologies, with 3-D printing being the most common.

**Hacker space:** A space that is operated by a community of like-minded individuals, often with a strong interest in technology, science, and digital fabrication, with an aim to provide a ground for collaboration and socialization for the members of the community.

**Hub:** An effective focal point and generator of activity for a given sector. It applies to spaces, regions, and networks.

**Maker space:** A space for creative production in art, science, and engineering where people of all ages and career paths integrate digital and physical technologies to learn technical skills and create new products.

**Venture capital:** Capital that is provided to seed-stage and early stage companies by professional investors if these companies are seen as potential high-growth ventures.

# INTRO DUCTION

Start-up ecosystems are emerging across the world in what is primarily an urban phenomenon. Fueled by technology-led cost reductions and increased access to resources, entrepreneurs are establishing start-up hubs in cities, developing new industries and jobs, disrupting traditional businesses, creating new communities, and impacting the urban economic and physical landscape.<sup>1</sup>

The drive of start-up entrepreneurs provides an opportunity for positive impact on both the local economy and the urban landscape. Policy makers are increasingly focusing on these communities of entrepreneurs to leverage their drive and funnel it toward local industry and job creation as well as urban regeneration.<sup>2</sup> What are the internal dynamics of these ecosystems and how can they be leveraged to increase their positive impact?

Previous research by the World Bank shows that tech start-up ecosystem components can be summarized in five categories: 1. human capital, 2. infrastructure, 3. economic assets, 4. enabling environment, and 5. networking assets.<sup>3</sup> The latter function as the connectors of all the other elements and holds the ecosystem together by creating communities of entrepreneurs and like-minded individuals.

**Table 1.1** Networking Assets

Community-Building Events	Skills Training Events	Collaboration Spaces	Collaboration Spaces / Networks of Mentors	Network of Mentors
Meetups	Bootcamps and technology training linked to community building	Collaboration and community-building spaces (e.g., coworking spaces, maker spaces, fab labs)	Accelerators (network value)	Angel investors (network value)
Tech community events/conferences	Rapid technical & entrepreneurial skills programs		Incubators (network value)	Venture capital (network value)
				Networks of mentors and start-up "alumni" networks (if different from accelerators, incubators, angel investors, and venture capital)

**Source:** Mulas, Mingos, and Applebaum 2015. **Note:** See glossary for definition of terms.

There are multiple categories of networking assets, from events and meetups to networks of mentors and rapid skills training programs (Table 1.1). Some of these networking assets (for example, coworking spaces, fab labs, accelerators, and so on) are integrated into physical spaces that also serve as platforms for other networking assets, such as events, meetups, competitions, and trainings. These spaces provide an anchor for the entrepreneurs and support people to connect and form communities. In this report, these spaces are referred to as creative community spaces, physical spaces that enable innovation by creating a convening point for a community of entrepreneurs, start-ups, and otherwise like-minded people. Prime CCS examples include hubs, accelerators, coworking spaces, maker spaces, and fab labs. As the core of a networking asset, a CCS serves as one of the main influencers of the start-up ecosystem and enables various elements that cause the ecosystem to come together.<sup>4</sup>

**NOTES:** 1. See Katz and Wagner (2014); Florida (2013); Florida (2014). 2. See Vardy, Kleinhans, and van Ham (2015); Audretsch and Belitski (2016); OECD (2005). 3. Mulas, Mingos, and Applebaum (2015). 4. Networking assets are central to urban technology innovation ecosystems, playing a critical role in the growth and success of these ecosystems (Mulas, Mingos, and Applebaum 2015).



This publication showcases a variety of creative and innovative spaces that contribute to building a community that is sustainable and entrepreneurial and/or are helping advance an industry-specific or sectoral community.

This account provides lessons and inspirations regarding the diversity and distinguishing factors that can be found among the plethora of creative spaces worldwide. Its purpose is to offer inspirational examples for policy makers whose goals are to support start-up ecosystems and, more generally, for those looking to similarly contribute to such a community by delineating the spectrum of services offered, the industry-specific connections that are bridged, and the skills that can be generated.

These anecdotes do not capture long-term impacts but instead reflect on spaces that have provided direct or indirect value to their communities. These spaces function across the spectrum of creativity and innovation—from focusing on incremental business process improvements to aiming for fundamental transformations of entrepreneurial communities in their cities. This cross-section of CCSs also speaks to different revenue and funding models, caters to various interests and industries, and upholds various networking assets and partnerships.

The CCSs showcased were each chosen for their role in either creating a new urban ecosystem or contributing to the existing ecosystem in a valuable way. They come from developed and emerging economies and cities of varying sizes, so the sample is not limited to a given region or economic performance index. They represent a variety of funding and revenue models and a diversity of services, which can be cross-analyzed to better understand how these factors enable the spaces to sustain themselves and be effective and impactful in spite of their settings. This sampling captures a selection of growing industries—from fashion to fishing, from food to robotics—and it highlights ways in which these spaces influence their given sector. Together, this catalog of spaces is intended to present insights to practitioners and policy makers and to reflect on the different models available for implementation around the world (World Map - Page 4).

While the spaces featured in this report use different business models, they all are part of a movement that is bringing practical knowledge across and within industries. By drawing on the disciplines of open innovation and cross-sector collaboration, these CCSs are reducing the barriers to access of resources and markets for start-ups and enabling faster realization. Sector-specific CCSs have situated themselves in cities, and often in a particular area of a city that is well connected to other active spaces and entities that have a long history in driving traditional industry. For instance, New York has been a long-standing hub for medical research and life science companies as well as venture capital (VC) firms geared specifically toward biotech companies. Incubator spaces in this industry have been incentivized to establish themselves in this ecosystem given the connections the space could build and the innovations for which it could obtain support.

In other instances, spaces have located themselves in new urban areas, ones that are undergoing industrial shifts; through their presence, these CCSs are creating new anchors for industries, such as the secondary anchor for the fashion industry of New York City growing in Brooklyn. These spaces are constantly restructuring in manufacturing, marketing, and new methods of tech innovation to respond to the rapidly evolving demands of the industry.

Sector-specific CCSs also often emerge in areas where there is a preexisting network established within a predominant sector. In Boston, for example, creative spaces specifically driving robotics have an advantage given the natural leadership and strengths Massachusetts has in this field overall. And by having sector-specific CCSs in rapidly evolving sectors such as robotics, Boston ensures that the city and surrounding area maintains this lead in the field, with start-ups building off of and benefiting from the presence of other institutions and large companies working on similar ideas.

Exclusion of any CCS from this report is not intended as a comment on the quality of their work or the impact they are achieving. This report's intent is to showcase inspiring examples and models being implemented in diverse environments across the world. The research has involved interviews with the founders of the spaces, survey sampling, site visits, and revision of their published material (Appendix A).

This publication aims to catalyze a conversation about the role of creative spaces in urban ecosystem development.

# CHARACTERISTICS OF CREATIVE COMMUNITY SPACES

## 2.1

# METHODOLOGY

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The analysis of the CCSs represented in this catalog focuses on three areas:

1. the impact the spaces have on the socio-economic urban landscape of cities
2. their financial models
3. their operational models

To analyze the impact that the spaces have had on the socioeconomic urban landscape, a scope-by-impact matrix was introduced (see Matrix 2.1). The paper investigates financial models applied by CCSs through two elements: capital expenditure (initial funding) and operating expenditure (revenue) of the spaces. A similar approach was used to examine the spaces' operational models, with interactive environments (that is, the essence of the spaces) and services offered being the elements for analysis.

In this publication, two approaches were used to effectively identify insights. The scope and impact of spaces were cross-referenced with each element of the financial and operational models individually to examine the characteristics of CCSs. The spaces were categorized using Matrix 2.1, which helped to identify emerging trends across different financial and operations models. Combined, this analysis creates a comprehensive representation of the nature and specifics of these CCSs.

## 2.2

# OVERVIEW

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The majority of the spaces featured in this study fall under more than one impact category. **The most common impact category represented in this study is entrepreneurial communities building, followed by business acceleration and urban regeneration, with industry innovation the smallest impact category.** This does not imply that the smaller represented impact categories are less common, but most likely that their impact is only starting to emerge now.

This study features spaces that differ in their scope: general and thematic, with a slightly higher number of general spaces in the sample. **The general spaces have more impact on entrepreneurial communities building and urban regeneration, while the thematic spaces contribute to business acceleration and industry innovation.** In the majority of the cases, the featured creative spaces that contribute to urban regeneration also contribute to entrepreneurial communities building; only in a quarter of the cases do the spaces that contribute to industry innovation also have an impact on entrepreneurial communities.

**We analyze the CCS financial models from a twofold perspective: 1. fixed funding, and 2. variable revenue.** These two different types of funding have implication on the operational models of the spaces. Fixed funding serves as base funding to cover fixed costs, while variable revenue serves to conduct additional activities and other variable costs. From the fixed funding perspective, the spaces featured in this study used three forms of funding: **1. private ownership, 2. private donations, and 3. subsidies;** with two types of funding models: pure (only one source of funding used) and hybrid (more than one source of funding used). Pure funding models are being used slightly more often than hybrid. Analysis of the forms of funding shows that **subsidies are the most frequently used form of funding, followed by private ownership.** The spaces that contribute to entrepreneurial communities building are partly or completely privately owned, while the spaces that have an impact on business acceleration are often subsidized. We observe that **all spaces that have attracted private donations fall under the business acceleration impact category.**

From the variable revenue, the featured spaces use pure and hybrid revenue models. **The pure subscription model is the most common among thematic spaces; hybrid models are more common among general spaces.** The subscription revenue model is the most common among the spaces featured in this study, while the consulting, rental/events, and acceleration revenue models are usually used to complement the subscription model and are less common. **Consulting and rental/events revenue models are used only by general spaces with a strong entrepreneurial communities building impact—that is, the spaces that are more mature and**

have well-established networks. Spaces funded solely through subsidies more often use the pure subscription revenue model, while spaces that are privately owned tend to use a hybrid model—a mix of subscription, consulting, and rental/events revenue models.

The CCSs presented seven different types of interactive environments for their communities:

1. coworking space 2. accelerator 3. maker space 4. community space 5. incubator 6. fab lab 7. hacker space (see the glossary for definitions of these terms).

Typically, these interactive environments are not mutually exclusive. The most common type of interactive environment among the featured spaces is coworking space, followed by community space, incubator, maker space, accelerator, and fab lab; the rarest type presented in this study is hacker space. Spaces that consider themselves a hacker space identify with a community space and a maker space more often than with other types of spaces. In the group of featured CCSs, the number of incubator spaces is higher than that of accelerators, highlighting that more flexible business development programs are more common among the creative spaces featured in this study. While maker spaces, community spaces, accelerators, and incubators are equally common types of spaces among general and thematic spaces, coworking spaces, fab labs, and hacker spaces are more common among thematic spaces featured in the study. The featured CCSs that identify themselves as community spaces contribute to urban regeneration and entrepreneurial communities building, as do the majority of hacker spaces. All accelerators analyzed in this study are privately owned, and half of them receive private donations as part of their funding; a funding model based on “pure” subsidies is only used for incubators and fab labs. Hybrid revenue models are more typical for places marked as accelerators and incubators.

Creative spaces are able to contribute to their sustainability through the range of services they provide, which also serve as additional networking assets for their ecosystems. In all cases, the listed services are complementary; however, the priority and combinations of the services used vary.

## 2.3

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# IMPACT

The CCSs featured here broadly fall into one of two categories: **general or thematic**. Creative spaces in the general category welcome start-ups with a diversity of objectives and across sectors; the spaces in the thematic category tend to focus on specifically unifying start-ups within a combined space and lending industry-specific services. This report aims to present a balanced selection of spaces, though there are more general spaces featured.

The majority of these featured spaces fall under more than one impact category (see Exhibit 2.1 for definitions of the four categories). Typically, each space combines two or three impact categories. The most common category is entrepreneurial communities building, followed by business acceleration and urban regeneration, with industry innovation the rarest impact category represented in this study.

## Exhibit 2.1. Impact Categories



### Entrepreneurial Communities Building

This impact category is characterized by the space contributing to catalyzing the entrepreneurial community where there was none or where the existing community was weak. Spaces that have this type of impact provide access to tools, knowledge, and the best talent of a broader population, thus giving entrepreneurs and corporations an opportunity to benefit from collaborative innovation programs and innovative tools, as well as connecting people, ideas, and resources to actualize ideas across industries. Many of the spaces use membership structure as a means of building a sense of community and accountability. These spaces are proactive in using various educational platforms to ensure the quality of the talent and to attract more attention from the private sector. Workshops, courses, office hours with industry leaders, and competitive initial selection are some of the attributes of the spaces put in this category. Spaces that have this impact often also offer elaborate training programs for the private sector, aiming to enrich the community by bringing in different business perspectives. Many of the spaces included in this category might be characterized as the pioneers of the innovative spaces field: Whether they are well-established centers of ecosystems in European cities or recently launched trailblazers all around the world, they showcase the business models, the tools, and the strategies that help make the first step in building entrepreneurial communities.



### Urban Regeneration

CCSs with this impact category are best characterized by their contribution to revitalizing areas through their presence. The majority of featured spaces that have had an impact on urban regeneration have started by catalyzing ecosystems in the city, thus serving as triggers for a neighborhood's transformation. In other cases, the spaces were launched with a goal to start this urban revitalization. A neighborhood's transformation might take form by the space kick-starting the commercial activities and creating new work opportunities in an area that otherwise was lacking it; it also might include the development of new or the expansion of existing high-quality business infrastructure to support local talent. Put on a municipality's map by the evidence of a growing community and positive changes in a neighborhood's demographics, these spaces often get the support of the city government, whether in the form of subsidies or public-private partnerships.



### Industry Innovation

This impact category includes spaces that have an industry focus and demonstrate new ways to innovate within that industry. The creative spaces within the industry innovation category optimize the costs of doing business in a specific industry by providing entrepreneurs with access to the tools, space, and human capital (coaching sessions, workshops, consulting) otherwise too expensive for an individual start-up. The spaces often complement industry-specific services with general trainings. The focus of trainings varies from digital literacy to graphic design. Some of the spaces in this study have successfully capitalized on regional- or city-level advantages by tapping into their area's leading industries. This category tends to emerge in areas with well-developed and distinct ecosystems with multiple stakeholders. The spaces featured under this category usually have strong connections with the private sector and academic institutions, which lead to strengthening intra-industry collaborations and reveal a potential for highly targeted disruption.



### Business Acceleration

Creative spaces that fall into the business accelerator category compress the timescale for starting up a new business by operating as a type of bootcamp and a "one-stop shop" for a specific type of business. These spaces reduce the time needed for a company to launch, lower the barriers to entry, and accelerate growth for businesses by providing entrepreneurs with tailored consulting services and educational programs; they also create strategic shortcuts for the general entrepreneurial community. The latter solution is easier to achieve for spaces that work with accelerating business in a specific industry. One important characteristic of the spaces with this impact is their focus on helping entrepreneurs to scale their businesses. In this scenario, educational programs and consulting services tend to be complemented with connection to funding and an extensive network of investors. This category of spaces rarely has a range of public partners; in some instances, they are affiliated with academic institutions; and in either case, they are well connected with the business communities.

The general and thematic spaces are impactful in different categories. The general spaces have more impact on entrepreneurial communities building and urban regeneration, while the thematic spaces contribute to business acceleration and industry innovation (Matrix 2.1).

**Matrix 2.1. Scope-by-Impact Matrix**

	SCOPE	IMPACT			
		Entrepreneurial Communities Building	Urban Regeneration	Industry Innovation	Business Acceleration
Fab Lab Barcelona	G	■			■
Factory	G	■	■		
iF (ideas Factory)	G	■	■		
iHub	G	■	■		
NUMA	G	■	■		■
Promálaga I+D	G	■			■
Promálaga Urban Incubators	G		■		■
Steel House	G	■		■	
BF+DA*	T			■	■
Fab Lab Lisbon	T	■	■		■
Harlem Biospace	T		■	■	
MassRobotics	T			■	■
Union Kitchen	T	■			■

\*Brooklyn Fashion + Design Accelerator.

In almost three-quarters of the cases, the creative spaces that contribute to urban regeneration also contribute to entrepreneurial communities building, while only a quarter of the spaces that contribute to industry innovation also have an impact on entrepreneurial communities. This implies a connection between developing entrepreneurial communities and urban cohesion in line with experience shown in New York, Barcelona, Nairobi, Berlin, and Paris. The lesser impact of industry innovation-focused spaces on entrepreneurial communities may be because of the industry focus and the acceleration of thematically focused start-ups rather than on generic community building.

This suggests that there are two groups of impact areas:

1. entrepreneurial community building and urban regeneration, and
2. industry innovation, with the later focused on creation and absorption of innovation by the local industry.

The creative spaces mix models and impact focus depending on their local environment and objective (Matrix 2.1). This suggests that CCSs are a flexible tool that can be adapted to local circumstances as needed to address the desired impact among the categories identified.



## Box 2.1. How CCS Are Transforming and Revitalizing Neighborhoods in Practice

Creative community spaces have a diverse impact on neighborhoods, resulting in urban regeneration through the repurposing of abandoned buildings, the development of new economic activities, and the strengthening of social cohesion. Here are some examples of where and how CCSs have impacted urban regeneration.

Both the Factory in Berlin and iF in Santiago revitalized their neighborhoods by repurposing old industrial buildings and creating a new entrepreneurial community in previously economically depressed areas. **The Factory** was a catalyst for the regeneration of the Mitte district—the central district of former East Berlin where the wall was once placed—and its conversion into the heart of Berlin’s start-up ecosystem. The Factory repurposed an old factory (the Oswald Brauerei), revitalizing the area by attracting and creating a community of entrepreneurs through events, coworking space, and an accelerator. Similarly, **iF** refurbished an old hat factory and created (starting with a grassroots maker space) a community of entrepreneurs and business links that revitalized Santiago’s Barrio Italia and attracted more innovation and creative stakeholders to the area, including a fab lab. Both Mitte and Barrio Italia had a base of creative communities that these two spaces leveraged in attracting and developing their entrepreneurial communities. **iHub in Nairobi** had a similar effect in the Bishop Magua Center, revitalizing the neighborhood and transforming it into the epicenter of tech community in the city. Interestingly, these three CCSs are private-led initiatives.

Fab Lab Lisbon and Promálaga Urban Incubators, on the other hand, were specifically created by their city governments to revitalize the social fabric and economy of specific neighborhoods. **Fab Lab Lisbon** refurbished the abandoned slaughterhouse of a municipal market in a decaying inner-city neighborhood that is home to a large number of old-aged and low-income migrant people. Fab Lab Lisbon initially focused on revitalizing the occupations of the neighborhood population, most of which are related to arts and crafts. By providing training on digital fabrication and building a community of creative artisans and entrepreneurs, Fab Lab Lisbon expanded the opportunities of the neighborhood population. Moreover, Fab Lab Lisbon resulted in a new hub of innovation, attracting a creative community to a previously decaying neighborhood. **Promálaga Urban Incubators**, in contrast, is designed for newly created neighborhoods, where the social and economic fabric does not exist yet. By accelerating the deployment and operation of basic neighborhood retail businesses, **Promálaga Urban Incubators** rapidly create anchors for local social activity, connecting the population to the neighborhood through active street life. This results in a higher social cohesion and local economic activity than would otherwise naturally occur.

## 2.4

### FINANCIAL MODELS

Understanding the different financial models allows us to see what is needed to launch a CCS and what makes a CCS financially sustainable in the longer term. We analyze the CCS financial models from a twofold perspective: fixed funding and variable revenue. These two different types of funding have implication on the operational models of the spaces. Fixed funding serves as base funding to cover fixed costs, while variable revenue serves to conduct additional activities and other variable costs.

#### Fixed Funding

The spaces featured in this study use three forms of funding:

1. private ownership, 2. private donations, and 3. subsidies (Exhibit 2.2).

These forms of funding are not unique, and they can be used together as well as separately in pure or hybrid models. A pure funding model relies on a single form of funding, while a hybrid model uses two or more forms in various proportions.

There are two pure models used in the spaces featured in this study: 1. the space is funded solely through subsidies, and 2. the space is privately owned (each pure model is used by almost a third of the CCSs featured). The rest of the featured CCSs use one of two hybrid models: private ownership + subsidies, and private ownership + private donations + subsidies.

## Exhibit 2.2. Forms of Fixed Funding

- 1. Private Ownership:** The space is owned by managing partners/was funded by its founders without any help from the government or any private companies.
- 2. Private Donations:** A large portion of funding comes from private corporations in the form of donations or advanced partnerships that include material support. Donors are interested in innovation development; they might be interested in the space's consulting services (goes to revenue models).
- 3. Subsidies:** The space receives financial support from any government agency/municipality and/or support in the form of international aid. Usually spaces are supported at the city level, sometimes at the state/national level.

Subsidies are the most common source of funding (in the majority of cases, the funding was provided by city-level government organizations), either alone or in combination with other funding sources, suggesting a direct or indirect policy intervention. Interestingly, some of the CCSs are funded through private ownership only, with the sole purpose of commercialization of space or services. Private donations act as a complement to other sources of funding and never appear as a pure source of funding (Table 2.1).

For those CCSs using subsidies, the source of subsidization varies. Often, direct government subsidies are offered through programs—designed to boost employment and innovation—which can be offered indefinitely or otherwise over a specific duration of time through grants. In other instances, subsidies are extended through university affiliations, often having established the space directly through this affiliation and cross-bridging resources. Of the spaces that receive subsidies, two-thirds receive direct government subsidies (mainly on a municipal level) and one-third get funding through university-affiliated subsidies.

## Variable Revenue

From the variable revenue perspective, the featured CCSs use both pure and hybrid revenue models almost equally. The only model applied by the CCSs in its pure form is subscription. This revenue model is most common among thematic spaces, which tend to have a more focused audience.

Hybrid models, on the other hand, are more common among general spaces, which have a broader audience and an array of services.

The subscription revenue model is the most common among the spaces featured in this study. Consulting, rental/events, and acceleration revenue models are usually used to complement the subscription model. Interestingly, consulting and rental/events revenue models are used only by general spaces with a strong entrepreneurial communities building impact, which tend to be spaces that are more mature and have well-established networks. (See Exhibit 2.4 for definitions of the types of variable revenue.)

## Exhibit 2.4. Types of Variable Revenue

- 1. Subscription:** A revenue model where a customer must pay a membership fee to have access to the services offered by the space. *It might include the following services: mentorship, access to tools.*
- 2. Acceleration:** A model where start-ups working with a space agree to give the space an equity stake in their start-up. *It might include the following services: mentorship, connections to funding, acceleration.*
- 3. Consulting:** A model where other private or public organizations make a one-time payment to a space to create and deliver courses/seminars/workshops on the topic of open innovation or to provide industry-specific services. *It might include the following services: training, access to tools.*
- 4. Rental/Events:** A model where private or public organizations make a one-time payment to a space to rent its facilities and to get other forms of physical and informational support for an event (hackathons, lectures, knowledge exchanges, and meetings with experts). *It might include the following services: event space, access to tools.*

The spaces funded solely through subsidies more often use a pure subscription revenue model, while the spaces that are privately owned tend to use a hybrid model that is a mix of subscription, consulting, and rental/events revenue models.

**Table 2.1. Financial Models**

	Fab Lab Barcelona	Factory	iF	iHub	NUMA	Promálaga I+D	Promálaga Urban Incubators	Steel House	BF + DA	Fab Lab Lisbon	Harlem Biospace	Mass Robotics	United Kitchen
<b>Fixed Funding (kick-start)</b>													
Private ownership		■	■	■	■			■	■			■	■
Private donations					■				■				
Subsidies	■			■	■	■	■	■	■	■	■		
<b>Variable Revenue (sustainability)</b>													
Subscription	■	■	■	■		■	■	■	■	■	■	■	■
Acceleration					■								
Consulting			■	■	■			■					
Rental/events		■	■		■			■				■	

## 2.5 OPERATIONAL MODELS

CCS operational models have two main categories: interactive environments (the essence of the space where the community is formed), and services.

### Interactive Environments

This study identified seven types of interactive environments: 1. coworking space, 2. accelerator, 3. maker space, 4. community space, 5. incubator, 6. fab lab, and 7. hacker space (Exhibit 2.5).

Typically, these types of interactive environments are not mutually exclusive: The majority of the CCSs featured here represent more than one type. The most common interactive environment is the coworking space, followed by community space, incubator, maker space, accelerator, and fab lab. The rarest type represented is the hacker space.

In this study, maker spaces, community spaces, and incubators are equally common interactive environments in both general and thematic spaces, as are accelerators; however, coworking spaces, fab labs, and hacker spaces are more common among thematic spaces. CCSs that identify themselves as community spaces contribute to urban regeneration and entrepreneurial communities building, as do the majority of hacker spaces.

All of the accelerators analyzed in this study are privately owned, and half of them receive private donations as part of their funding; only incubators and fab labs use a funding model based on “pure” subsidies. And hybrid revenue models are more typical for places designated as accelerators and incubators.



## Box 2.2. How CCSs Connect Industry and Start-ups and Allow Absorption of Innovation by the Local Economy

Creative community spaces connect industry and start-ups through different services and mechanism. These connections vary, ranging from designing the space to naturally allow collisions<sup>a</sup> among industry staff and start-ups to developing events for cross-collaboration (for example, hackathons or open innovation competitions) to more hands-on approaches, such as mentoring and acceleration programs for start-ups by local industry, which can lead to acquisition or recruitment of talent.

CCSs have developed creative services for these industry-entrepreneur links. **iF in Santiago** hosts grassroots innovative community, entrepreneurs, and established companies in the same building, mixing spaces that result in natural mingling and collisions.<sup>b</sup>

**The Factory in Berlin** designed its space so that established companies, such as Lufthansa, could host their innovation teams in the same space as the start-ups supported by the accelerator program. Company staff and entrepreneurs must share the same common spaces, such as the kitchen, resulting in natural fraternization and cross-fertilization of culture and ideas. **NUMA in Paris** offers an intrapreneur support program for companies that want to develop internal innovation capabilities.

**Steel House in Rockland** connects entrepreneurs and local industries (particularly the fishing industry) to co-design and test solutions to industry challenges, prototyping and testing new products jointly. **Harlem Biospace** provides a similar connection with New York's health industry, including tailored mentorship programs for the program's entrepreneurs from industry. **MassRobotics in Boston** also acts as an active link between the program's entrepreneurs and industry to design demand-based solutions by start-ups.

a. Collisions are random encounters with people one would normally not meet. The theory of collisions argues that these encounters bring new ideas, perspectives, and value for creating opportunities and innovation. The more collisions individuals have with people with different ideas, the more creative and innovative these individuals may become. Hence, the potential for collisions stimulates innovation and entrepreneurial opportunities (Mulas, Mingos, and Applebaum 2015; Kaplan 2012). b. Kaplan (2012).

## Exhibit 2.5. Types of Interactive Environments

- **Coworking Space:** A membership-based work space that allows diverse groups of freelancers, remote workers, and other independent professionals to work together in a shared setting. Coworking spaces aim to help those with common values develop potential synergies.
- **Accelerator:** A space that provides later-stage start-ups with access to mentorship and a larger network to further develop their business ideas over an intensive and limited time frame of a few weeks to months. Often times the start-ups give equity in return for mentorship and small seed investment.
- **Maker Space:** A space for creative production in art, science, and engineering where people of all ages and career paths integrate digital and physical technologies to learn technical skills and create new products.
- **Community Space:** A space that is designed to be inclusive of all members of a community, often providing learning activities and a space to recreate and exchange ideas.
- **Incubator:** A space designed for early stage start-ups that provides a shared space as well as access to mentors and a variety of services (e.g., business literacy programs, market research, marketing assistance, business coaching, etc.).
- **Fab Lab:** A space that specializes in digital fabrication (a type of manufacturing that uses computer-controlled machines), which includes a range of additive manufacturing technologies, with 3-D printing being the most common.
- **Hacker Space:** A space that is operated by a community of like-minded individuals, often with a strong interest in technology, science, and digital fabrication, with an aim to provide a ground for collaboration and socialization for the members of the community.

# Services

Creative community spaces provide a wide range of services that complement the initial interactive environment, allowing for financially sustainable development (Exhibit 2.6). Not every space offers the same services, with some more common in—and suited to—certain environments than others. The most common type of service revolves around providing event space for external actors, followed by training and mentorship offerings, with acceleration being the least common type in the sample—only half of the CCSs offer this type of service. Table 2.2 illustrates the operational models of the 13 featured CCSs.

## Exhibit 2.6. Types of Services

- 1. Mentorship:** Offering access and pairing with professional counseling and advisory to individuals and business that correspond with specific needs, including either industry-specific or general advisory
- 2. Connections to Funding:** Offering access to a network of potential financial providers and support in various forms of grants, loans, and/or seed money
- 3. Event Space:** Extending a space in which thematic and business events are held for the space’s community and in some instances the larger community. A space for individuals and business to host their own events and gatherings
- 4. Training:** Customized and general access to learning opportunities pertaining to business development and specific technical skills adhering to given industries
- 5. Acceleration:** Intensive access to mentorship and resources (capital, technology, hardware) to boost start-up business growth within limited periods of time
- 6. Access to Tools:** Access to hardware, software, or techniques, such as industry-specific equipment

**Table 2.2** Operational Models

	Fab Lab Barcelona	Factory	iF	iHub	NUMA	Promálaga I+D	Promálaga Urban Incubators	Steel House	BF + DA	Fab Lab Lisbon	Harlem Biospace	Mass Robotics	United Kitchen
<b>Interactive Environment (kick-start)</b>													
Coworking		■	■	■	■			■	■	■	■	■	
Accelerator		■	■		■				■			■	
Maker space		■	■		■			■	■	■			
Community space		■	■	■	■				■	■			
Incubator			■			■	■	■			■		■
Fab lab	■		■						■		■		
Hacker space		■								■			
<b>Services (sustainability)</b>													
Mentorship	■	■	■		■	■	■	■	■		■	■	■
Connections to funding		■	■	■	■	■	■		■		■	■	■
Event space	■	■	■	■	■	■	■	■	■	■	■	■	■
Training	■	■	■	■	■	■	■		■	■	■	■	■
Acceleration	■	■	■		■				■		■	■	■
Access to tools	■	■	■			■		■	■		■	■	■

# PROFILES OF CREATIVE COMMUNITY SPACES

## ■ GENERAL SPACES

**Fab Lab Barcelona**  
Barcelona, Spain

**Factory**  
Berlin, Germany

**iF (Ideas Factory)**  
Santiago, Chile

**iHub**  
Nairobi, Kenya

**NUMA**  
Paris, France

**Promálaga I+D**  
Málaga, Spain

**Promálaga Urban Incubators**  
Málaga, Spain

**Steel House**  
Rockland, ME, USA

## ■ THEMATIC SPACES

**Fab Lab Lisbon**  
Lisbon, Portugal

**Harlem Biospace**  
New York City, NY, USA

**MassRobotics**  
Boston, MA, USA

**Union Kitchen**  
Washington, DC, USA

**BF+DA  
(Brooklyn Fashion + Design  
Accelerator)**  
New York City, NY, USA

## ■ OTHER SPACES STUDIED\*

**01. Butter & Bake**  
Singapore, Singapore

**02. CO+HOOTS**  
Phoenix, AZ, USA

**03. Cohere Bandwidth**  
Fort Collins, CO, USA

**04. FoodRoom**  
Montreal, Canada

**05. Karkhana**  
Kathmandu, Nepal

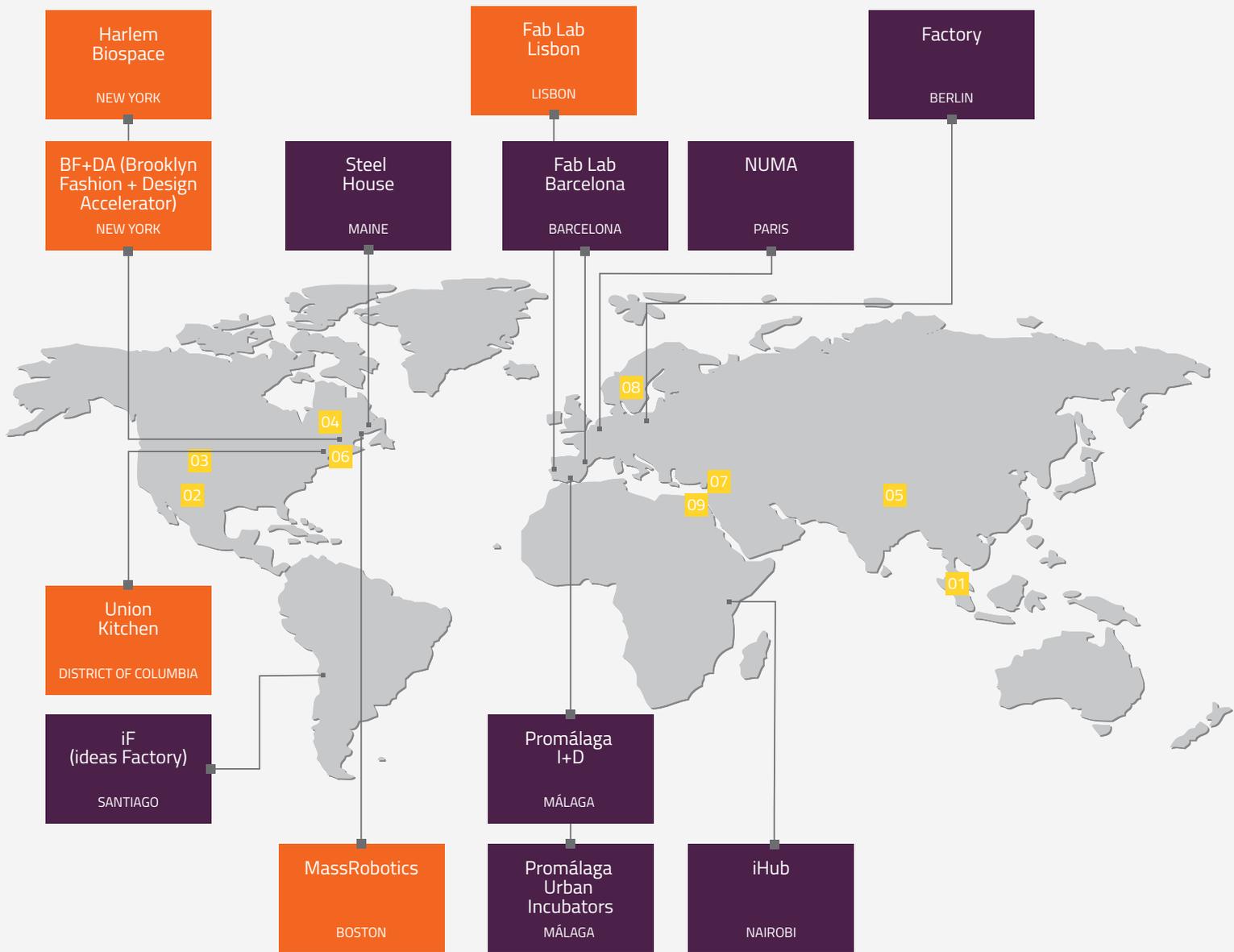
**06. New Lab**  
New York City, NY, USA

**07. Onomatopoeia**  
Beirut, Lebanon

**08. THINGS**  
Stockholm, Sweden

**09. WMN**  
Tel Aviv, Israel

*\*These spaces were studied for the report but were not selected to be featured as a profile.*





SPAIN  
Barcelona

# FAB LAB BARCELONA

## GENERAL/THEMATIC

LAUNCH DATE 2007

Fabrication Laboratory (Fab Lab) connected to academia. The space provides digital manufacturing tools for testing and prototyping as well as training (including accredited Fab Lab network academy training).

### FINANCIALS

BUDGET  
\$860,500

#### FUNDING MODEL

- Private Ownership
- Donations
- Subsidies

#### REVENUE MODEL

- Subscription
- Acceleration
- Consulting
- Rental/Events

### OPERATIONS

TEAM  
12

NUMBER OF EVENTS  
25 per year

NUMBER OF USERS  
N/A

#### SERVICES



#### INTERACTIVE ENVIRONMENTS



### IMPACT



Building  
Entrepreneurial  
Communities



Urban  
Regeneration

## BACKGROUND

Fab Lab Barcelona, part of the Institute for Advanced Architecture of Catalonia, supports a variety of educational and research programs at various scales of human habitat and needs. It is one of the more than 1,000 fab labs found in approximately 60 countries. This global network was created with the extensive support of academia as an outreach project of MIT's Center for Bits and Atoms (CBA) and further supported by the Fab Foundation—affiliated with CBA—which facilitates the development of regional capacity-building organizations and the accessibility of technology and digital fabrication tools to all. The fab lab defines itself as a personal digital fabrication workshop for artists, scientists, engineers, educators, students, amateurs, and other professionals of all ages, primarily serving community organizations, educational institutions, and nonprofit concerns. It has strong partnerships with public and private entities.

## IN ESSENSE

Fab Lab Barcelona is a general fabrication lab (please refer to glossary for definition) that serves as a center for research, production, and education. As a fab lab, it provides at low barriers to entry a wide range of fabrication tools that are needed both for prototyping and for testing new technologies or arts and crafts products. This space does not influence the sort of products fabricated on-site; it just makes it and its tools accessible so that members of the community can develop products at different scales, and it charges a service fee rather than a membership fee. In addition, Fab Lab Barcelona provides access to mentorship, acceleration, and training services. It invites the creation and fabrication of ideas and products that have a positive impact on society and improve livelihoods. It takes part in developing projects and products at various scales, ranging from smart devices for improved data collection to new labs testing systems and models of self-sufficiency.

## IMPACT

Fab Lab Barcelona extends the tools, the knowledge, and the financial means to educate, innovate, and invent using technology and digital fabrication. It seeks to catalyze the entrepreneurial community by supplying the broader community with the resources to advance ideas and products that can have positive implications for the greater interest of the future of society and the environment. It does not specify the range of the products to be created but rather provides its users with access to advanced tools, knowledge, and talents, thereby creating indefinite opportunities for collaborations and innovative projects to be developed. It reduces barriers to entry by having no membership fee, sustaining itself instead through service fees.

Fab Lab Barcelona stands out for the various educational platforms it generates and helps maintain. These help sustain a quality of talent while also enriching the broader community and developing a way to introduce to them entrepreneurial ideas. Fab Lab Barcelona also serves as the headquarters of the Fab Academy, a platform of education and research that turns every fab lab into a classroom, creating further opportunities to reach out to the larger community and teach new generations about the principles, application, and implications of digital manufacturing technology. Furthermore, it works toward scaling up the impact of fab labs in the urban environment through the Fab City project, which was started in 2011 and aims to shift activities toward dynamic and applied research in collaboration with companies, other universities (through EU-funded programs), and the city council.

## IN PRACTICE

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### PROJECT IN FOCUS

Smart Citizen (<https://smartcitizen.me>) is a platform to generate participatory processes of people in cities. Its objective is to connect data, people, and knowledge, thereby serving as a node for building productive and open indicators and distributed tools to enable inhabitants to better communicate about their own cities. The project was co-founded by the director of Fab Lab Barcelona and further grew within the space. The fab lab provided the space, knowledge, contacts, and materials needed for Smart Citizen to form. Today, Smart Citizen is supported by the European Union through Horizon 2020 programs (that is, EU-wide competitively awarded public funds); it has also received innovative project awards in the Smart City Expo and World Congress in Barcelona.



GERMANY  
Berlin



# FACTORY

## GENERAL/THEMATIC

LAUNCH DATE 2012

Privately-funded innovation hub that utilizes organic acceleration business model. The space provides training in open innovation and acceleration services and it also functions as an event space.

### FINANCIALS

BUDGET  
N/A

#### FUNDING MODEL

- Private Ownership
- Donations
- Subsidies

#### REVENUE MODEL

- Subscription
- Acceleration
- Consulting
- Rental/Events

### OPERATIONS

TEAM  
16

NUMBER OF EVENTS  
50 per year

NUMBER OF USERS  
72,000 per year

#### SERVICES

M CF ES T A AT

#### INTERACTIVE ENVIRONMENTS

CW A MS CS I FL HS

### IMPACT



Building  
Entrepreneurial  
Communities



Urban  
Regeneration

## BACKGROUND

Founded in 2012 when the real estate market in Berlin was depressed, Factory introduced a unique business model based on organic acceleration. It began when a group of real estate developers purchased an old factory and started to rent out its facilities to tech start-ups and to actively promote the space as a venue for innovation-related events, soon bringing on board teams working for major tech companies. Now Factory concentrates on bringing together in one place the best of technology and their programs to nurture innovation, supporting the ecosystem. The space relies on the intrinsic motivation of the start-up culture to support one another in order to improve the chances of entrepreneurs to succeed.

## IN ESSENCE

Factory is a coworking space that creates a worldwide ecosystem for start-ups and tech companies. To positively impact the change that is happening in society through technology and entrepreneurship, the space fosters and accelerates innovation around the globe. The space serves as a platform for a large number of events and offers its members unique access to the latest trends. While some events, such as fireside chats or hackathons, are open to the public, others are reserved for the member entrepreneurial community—for example, knowledge exchanges and VC office hours. Factory often invites leading business figures to the members-only events. It also offers its members access to mentors and an array of workshops; these services are designed to help founders navigate challenges typically faced by start-ups. With its objective of flexible use, Factory continuously expands and adapts its space by adding communal spaces and large event spaces to boost the ecosystem. It has also incorporated “Factory coworking,” which provides high-quality office space for freelancers and start-ups as well as project teams and employees from corporations. Other Factory assets are its sponsored residency program, which helps entrepreneurs entering the Berlin ecosystems, and its supporting amenities and recreational facilities for the purpose of its community.

## IMPACT

Factory is a general space that helped catalyze an urban tech ecosystem in Berlin. The space contributes to urban regeneration and entrepreneurial communities building in the city. Factory continues to play a central role in the latter by virtue of its extensive partnerships with private companies, unique high-quality events organized for Factory’s members, and successful strategy of corporate-start-up relationship building. Factory presents one of the best examples of a space that started as an ecosystem catalyzer and then embraced an element of urban regeneration. Because of its economically sustainable rental model and strategic relationship management, the space successfully attracted many corporate innovation teams that now are members of the community and are based at Factory.

## IN PRACTICE

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### PROJECT IN FOCUS

Factory supported the creation of the Lufthansa Innovation Hub (<http://hub.lh.com/>). After exploring the idea of identifying new business potentials through start-ups, Lufthansa decided to launch its own Innovation Hub and placed the team at the Factory, which resulted in the launch of several innovative services. Factory greatly contributed to the project’s development by being able to nurture the wider network to support the development of the service. With the Lufthansa Innovation Hub, Factory demonstrated its business model’s sustainability and its potential to attract large firms as clients and partners.



CHILE  
Santiago

# IF (IDEAS FACTORY)

## GENERAL/THEMATIC

LAUNCH DATE 2014

Innovation hub connected to academia and private companies. The space provides digital training and access to a network of mentors as well as other incubation services.

### FINANCIALS

BUDGET  
N/A

#### FUNDING MODEL

- Private Ownership
- Donations
- Subsidies

#### REVENUE MODEL

- Subscription
- Acceleration
- Consulting
- Rental/Events

### OPERATIONS

TEAM  
16

NUMBER OF EVENTS  
120 per year

NUMBER OF USERS  
72,000 per year

#### SERVICES



#### INTERACTIVE ENVIRONMENTS



### IMPACT



Building  
Entrepreneurial  
Communities



Urban  
Regeneration

## BACKGROUND

Santiago's iF, launched in 2014, was born out of entrepreneurs' need for a one-stop shop where they could give shape to their ideas, look for funding, carry out tests and experiments, share knowledge, and get professional advice. At iF, individuals, collaborators, social organizations, innovation organizations, thematic incubators, businesses, start-ups, entrepreneurs, investment funds, and universities all work together to make this business model a reality—and one that benefits the country's development.

## IN ESSENCE

iF positions itself as an ideas factory for innovation and entrepreneurship where collaboration inspires entrepreneurs to focus on what they know best how to do while the community provides the means to make their ideas happen. The space works with private companies, academic institutions, and the government. iF offers its members a customized innovation approach, providing them with a space to collaborate, exchange ideas, and look for new solutions among people from different organizations, backgrounds, and aspirations on a day-to-day basis. The space highlights that this approach is transforming the traditional way of working in Chile. To expand its community reach, iF also partners with private companies and universities that support innovation and entrepreneurship.

## IMPACT

iF is an example of a general space that has been actively investing its resources into promoting urban regeneration and building entrepreneurial community around it. iF uses both subscription and rental/events business models and, as is evident from usership rates, it successfully uses its space to fuel the project's growth. It also implements diverse educational mechanisms to harvest local talent and develops partnerships with private companies and academic institutions to create a stronger ecosystem around the space's activities.

The space's urban regeneration impact is evident through iF's role in reshaping Barrio Italia, a previously residential neighborhood now transformed into a center for art, design, and gastronomy for the local community. iF is located in a former hat factory that is a rare extant example of Santiago's early 20th-century industrial architecture. Closed for a long time, the building later became associated with the city's nightlife. iF successfully repurposed the building, opening it to a wider community and providing citizens with a public space while also conserving the historical value of the space.

## IN PRACTICE

### PROJECT IN FOCUS

The iF-backed Academia de la Felicidad (<http://www.academiafelicidad.org/>) uses new forms of student-teacher relationships and new ways of delivering knowledge in its programs. First tested in a workshop in 2014, the Academia now functions as an independent educational facility. It offers workshops, courses, and coaching sessions focused on providing Chileans with new business skills and help in unlocking their entrepreneurial potential.



KENYA  
Nairobi

# iHub

## GENERAL/THEMATIC

LAUNCH DATE 2010

Innovation hub supported by public grants and private donations. The space provides digital training as well as research and consulting services for corporations.

### FINANCIALS

BUDGET  
N/A

#### FUNDING MODEL

- Private Ownership
- Donations
- Subsidies

#### REVENUE MODEL

- Subscription
- Acceleration
- Consulting
- Rental/Events

### OPERATIONS

TEAM  
10

NUMBER OF EVENTS  
180 per year

NUMBER OF USERS  
28,800 per year

#### SERVICES



#### INTERACTIVE ENVIRONMENTS



### IMPACT



Building  
Entrepreneurial  
Communities



Urban  
Regeneration

## BACKGROUND

iHub is a coworking space whose objective is to catalyze the growth of Kenya's tech community. The idea of developing an urban tech ecosystem in Africa inspired many people, and many public and private grants supported the space's launch. Shortly after it opened, iHub started renting the space for events and offering design and engineering consulting services. Seventy percent of iHub's budget comes from internally generated revenue. Currently, the space is reinventing itself. iHub's team is moving to a new building and will launch three product lines that focus on locally relevant technical training, corporate co-location, and investments in entrepreneurs.

## IN ESSENSE

iHub praises its engineers' serendipity and builds upon its space expertise. The space has corporate partners, grant funding, and its own revenue generation models through consulting services offered via the iHub UX Lab, iHub Research, and iHub Consulting initiatives. The iHub UX Lab's mission is to develop a design-thinking culture and a user-centered approach in solving problems. The UX Lab helps start-ups, social entrepreneurs, not-for-profits, and business corporations put people at the center of all products and processes. Its services include user research, ideation sessions, graphic design, usability testing, user experience and/or design-thinking training, wireframing, prototyping, interaction design, and more. iHub Research conducts qualitative studies on technology innovation and entrepreneurship, as well as on the intersection between governance and technology in Africa.

## IMPACT

iHub is a general space that aims to catalyze a tech innovation ecosystem and contributes to entrepreneurial communities building and urban regeneration. The space's investments in identifying and harvesting local tech talent have created a diverse and skilled community. iHub fosters a number of start-ups and organizes vibrant networking activities through meetings, events, and presentations to connect start-ups with each other as well as with investors. iHub's urban regeneration impact is evident in the transformation of the Bishop Magua Center into the new heart of Nairobi's tech ecosystem. When iHub was launched in 2010, the center consisted predominantly of retail shops, but within a few years the building became a desirable location for techies. The presence of iHub has attracted other tech spaces to the Bishop Magua Center (m:lab, Savannah Fund, the GSM Association's regional headquarters for East Africa, and more), catalyzing synergies and filling the building with the elements essential to the tech ecosystem: collaboration spaces, start-ups, labs, incubators, accelerators, tech firms, industry associations, and venture capitalists.

## IN PRACTICE

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### PROJECT IN FOCUS

iHub supported the Kids Comp Camp (<http://www.kidscompcamp.com>), a project that helps young learners in marginalized communities gain a competitive edge in today's digital driven society. Enrollment in the project is 500 students; it covers 12 counties at the moment and the numbers keep growing. iHub gave Kids Comp Camp the opportunity to collaborate with other start-ups based in the space and to benefit from those associations. For example, LiveLuvo and Y-Kusudi have helped Kids Comp Camp grow their volunteer numbers and build their profile.



FRANCE  
Paris

# NUMA

GENERAL/THEMATIC

LAUNCH DATE 2000

International innovation hub pioneering open innovation approaches. The space also provides training and mentorship services and serves as an equity accelerator.

## FINANCIALS

BUDGET  
\$5,000,000

### FUNDING MODEL

- Private Ownership
- Donations
- Subsidies

### REVENUE MODEL

- Subscription
- Acceleration
- Consulting
- Rental/Events

## OPERATIONS

TEAM  
62

NUMBER OF EVENTS  
1,000 per year

NUMBER OF USERS  
80,000 per year

### SERVICES

M CF ES T A AT

### INTERACTIVE ENVIRONMENTS

CW A MS CS I FL HS

## IMPACT



Building  
Entrepreneurial  
Communities



Urban  
Regeneration

## BACKGROUND

NUMA, which started as the Silicon Sentier association, has constantly evolved over its lifetime. Silicon Sentier, named after the Sentier neighborhood of Paris' 2nd arrondissement, was launched in 2000 with subsidies from the city of Paris and the surrounding region and with private donations from interested corporations. The association started transforming the existing garment district into a tech hub by renovating an old factory building and turning it into one of the first coworking spaces in Europe. NUMA grew from a coworking space with a living lab into a full-service creative community space. It added services and offerings when there was grassroots demand and then discontinued them when they were no longer needed or there were sufficient offerings from third parties. NUMA has expanded to seven cities around the world (Barcelona, Bengaluru, Berlin, Casablanca, Mexico City, Moscow, and New York). NUMA is an example of the organic development of a CCS together with its community/ecosystem, which later moved beyond its natural ecosystem in Paris.

## IN ESSENSE

NUMA promotes the idea that start-ups, corporate teams, small and medium enterprises, communities, and public institutions can grow together and become mutually beneficial. NUMA offers assistance in organizing conferences, roundtables, hackathons, and barcamps (open, participatory workshop events, primarily focused on technology, where the content is provided by the participants). It also stages two- to five-day workshops to help entrepreneurs learn about new working methods inspired by lean start-up, user-focused design and design thinking to develop new services or improve existing ones through user research, rapid prototyping, and testing. NUMA also provides a range of unique corporation-facing innovation services. Its "intrapreneur" support program stretches over several months to accelerate the development of new products. Currently, more than half of NUMA's budget is paid for by private sponsors, with the rest covered by revenue from projects and innovation programs offered to corporations, events management, and a 5 percent equity in each start-up accelerated.

## IMPACT

In Paris, NUMA functions as a general space: It provides an array of services for entrepreneurs, start-ups, and corporations and is open to participants from any industry. The space is characterized by its evident success in building entrepreneurial communities. NUMA pioneered many of the innovation services available in Europe and now has expanded to offering activities for big corporations. Being a catalyzer of a tech urban ecosystem, NUMA has also influenced urban regeneration in Paris by transforming the declining garment district into the city's tech center. Created by entrepreneurs in 2000 as a digital cluster, NUMA (then the Silicon Sentier association) jump-started the "digitalization" of the neighborhood by vocalizing and promoting the space's activities. By 2008, the space was actively building a wider community around it and opened the community space La Cantine; three years later, NUMA began experimenting with new business models by launching one of the first start-up accelerators. In 2013, NUMA changed location, moving its newly formed lab closer to the city center, but the impact the space has had on the Sentier neighborhood is lasting: The neighborhood, full of start-ups, VCs, and corporate tech labs, is already functioning as an independent urban tech ecosystem.

## IN PRACTICE

### PROJECT IN FOCUS

NUMA offers its visitors access to the Open Innovation Studio, where companies have the opportunity to work with NUMA's entrepreneurs to identify new business opportunities and create a start-up to test innovative products or services. Assisted by a product owner, a dream team of entrepreneurs (business, technical, and design) will develop and test the solution until a product/market fit is found. Corporate teams are offered the same benefits as start-ups accelerated by NUMA: work spaces, meeting experts, mentoring, and method coaching sessions. NUMA's team suggests that by departing from the usual working environment and thinking outside of the box, teams work together more effectively on a new product launch.



SPAIN  
Málaga

# PROMÁLAGA I + D

## GENERAL/THEMATIC

LAUNCH DATE 2003

Publicly-subsidized incubator focused on local entrepreneurs. The space creates private-public partnerships across sectors to connect entrepreneurs with industry actors.

### FINANCIALS

BUDGET  
\$243,000

#### FUNDING MODEL

- Private Ownership
- Donations
- Subsidies

#### REVENUE MODEL

- Subscription
- Acceleration
- Consulting
- Rental/Events

### OPERATIONS

TEAM  
8

NUMBER OF EVENTS  
28 per year

NUMBER OF USERS  
2,184 per year

#### SERVICES



#### INTERACTIVE ENVIRONMENTS



### IMPACT



Business Accelerator



Building Entrepreneurial Communities



Urban Regeneration

## BACKGROUND

Promálaga I+D is managed by Promálaga, the innovation agency of the city of Málaga. Promálaga focuses on local economic development and innovation as well as social inclusion. Promálaga contributes to the research and development of all areas of the technology business and industrial sector by providing office and lab space for research and innovation. Promálaga specifically services the needs of entrepreneurs in new city developments with low-income populations. Such incubators are designed to enable business opportunities for the local population while boosting the development and increasing the livelihoods of the neighborhood. Promálaga has established a series of private and public partnerships across sectors to help advance its mission.

## IN ESSENCE

Promálaga I+D is an incubator for industry start-ups, catering to digital manufacturing techniques, biosciences, and other industrial sectors. Unlike traditional incubators and accelerators that provide office space for tech or other white-collar-related office environments, Promálaga I+D offers industrial space. Located in an industry park in the city outskirts, Promálaga I+D extends a combination of industrial and lab space with dock access to start-up companies with various industrial needs. Promálaga I+D incorporates the business/industry license for most industry activities (for instance, basic biotech can be conducted under Promálaga's license, but more hazardous activities, such as biohazard, are not included), as well as the utilities requirements of industrial activities. Promálaga I+D offers common spaces and meeting rooms as well as shared facilities, including a cafeteria and a gym, where entrepreneurs can meet frequently and out of which build a community.

## IMPACT

Promálaga I+D contributes to entrepreneurial communities building while also, by virtue of its location in a major industrial zone, connecting innovative entrepreneurs with the city's industrial fabric. Promálaga I+D bolsters the entrepreneurial community both by providing the needed services and advice to facilitate initiation and implementation, and by hosting events aimed at promoting and developing activities leading to job creation in the city's socioeconomic environment. Collaboration and close transfer of knowledge is facilitated among entrepreneurial community and traditional industry.

## IN PRACTICE

### PROJECT IN FOCUS

Promálaga I+D hosts a broad range of companies operating in multiple sectors, including food production, development of technology for industry needs (for example, recycling batteries, lighting technologies), manufacturing of goods and machinery (for example, surfboards, smart bicycles), and biosciences and labs (for example, vet genetic lab). Begun in 2009, the start-up Badennova (<http://www.badennova.com>) grew out of Promálaga I+D. Badennova has developed a dynamic and smart speed bump that will only affect vehicles traveling above a designated speed limit. The company patented the invention and produced its minimum viable prototype and its more advanced prototype on the Promálaga I+D premises. Supported by Promálaga I+D, the start-up partnered with local universities and the national Center for the Development of Industrial Technology to continue investigating and developing new systems of road safety.



SPAIN  
Málaga

# PROMÁLAGA URBAN INCUBATORS

GENERAL/THEMATIC

LAUNCH DATE 2011

Publicly-subsidized incubator focused retail. The space provides ready-to-use street-level commercial space for retail businesses.

## FINANCIALS

BUDGET  
N/A

### FUNDING MODEL

- Private Ownership
- Donations
- Subsidies

### REVENUE MODEL

- Subscription
- Acceleration
- Consulting
- Rental/Events

## OPERATIONS

TEAM  
8

NUMBER OF EVENTS  
28 per year

NUMBER OF USERS  
960 per year

### SERVICES



### INTERACTIVE ENVIRONMENTS



## IMPACT



Business Accelerator



Urban Regeneration

## BACKGROUND

Promálaga Urban Incubators are managed by Promálaga, the innovation agency of the city of Málaga. Promálaga's goals are to generate local economic development and innovation as well as social inclusion. As part of these goals, Promálaga designed an incubator to cater to the subsistence entrepreneurs (as opposed to high-innovative or tech entrepreneurs, who tend to be opportunistic) in new city developments with low-income populations. The goal of this new incubator concept was to develop business opportunities for the local population while developing the social tissue of the new developments, reducing criminality, and increasing the livelihoods of the neighborhoods.

## IN ESSENCE

Promálaga Urban Incubators are placed in newly created neighborhoods specifically to speed up the opening of the type of small retail businesses that help develop the social fabric of a neighborhood and the development of organic communities (for example, grocery stores, bakeries, cleaners, neighborhood bars or cafés, hardware stores, and so on). Promálaga Urban Incubators provide entrepreneurs with ready-to-use, street-level commercial spaces, varying in size from 15 to 25 square meters; each space includes the business license and utilities. The incubators also provide mentoring and advice to the business founders. Promálaga Urban Incubators are based in three locations.

## IMPACT

Promálaga Urban Incubators have a clear urban impact: They catalyze the creation of the social tissue of new development neighborhoods. These spaces accelerate the development of basic-needs retail businesses in new development areas, compared to the organic creation of the business retail fabric. The incubator fosters entrepreneurship in low-income populations; it provides mentorship and training to new business owners while their business is in operation and offers social inclusion and business opportunities. Promálaga Urban Incubators result in the faster creation of social tissue in new development areas, increasing the livability of new areas and anchoring them as neighborhoods.

## IN PRACTICE

### PROJECT IN FOCUS

Promálaga Urban Incubators are in several locations. The following list shows the type of small businesses incubated in two Promálaga Urban Incubator locations.

PROMÁLAGA TEATINOS		PROMÁLAGA SOLIVA	
NAME	TYPE OF BUSINESS	NAME	TYPE OF BUSINESS
Ultramarinos Carmen	Grocery store	Mery Business Consulting	Real estate services
Estetica Lunabel	Beauty center	Pelaguay	Dog groomer
Maria Carmen Torres (individual)	Barbershop	De La Rosa	Training center
Neurodefna	Therapeutic center	Rafael de Castro Sanchez (individual)	Computer equipment repair
Clinica del Pie Marta Catalan	Podiatry clinic	Clinica del Pie Falgorya	Clothing store
Corte y Cose	Taylor	Floristeria Sara	Flower shop
Rafael Zalabardo Badia (individual)	Real estate services	Fruteria Soliva	Fruit shop
Javisito	Pet shop	R. M. Estetix	Nail salon
Network Formation	Training center	La Peluqueria de Yoli	Hairdresser
Laboratorio Dental Dengona & Paris	Dental doctor	K9 Málaga	Dog training center



USA  
Maine

# STEEL HOUSE

## GENERAL/THEMATIC

LAUNCH DATE 2014

Maker space revolved around regional expertise in fishing. The space provides digital and industry-specific tools for prototyping as well as trainings for school students.

### FINANCIALS

BUDGET  
\$62,000

#### FUNDING MODEL

- Private Ownership
- Donations
- Subsidies

#### REVENUE MODEL

- Subscription
- Acceleration
- Consulting
- Rental/Events

### OPERATIONS

TEAM  
4

NUMBER OF EVENTS  
10 per year

NUMBER OF USERS  
2,960 per year

#### SERVICES



#### INTERACTIVE ENVIRONMENTS



### IMPACT



Building  
Entrepreneurial  
Communities



Industry  
Innovation

## BACKGROUND

Steel House is a coworking space that aims to build a community of students, artists, and designers connecting with and adapting to Rockland's oldest commercial enterprise, fishing. The space's coastal location has allowed Steel House to prototype projects such as submersible ROVs (remotely operated vehicles). The space also permits light industrial applications and flexible programming. The space derives revenue from a range of models: The team offers individual memberships as well as consulting services and events assistance.

## IN ESSENCE

Steel House positions itself as a collaborative work space, a design and prototyping studio, and an interdisciplinary cultural and educational environment. It has three major areas of focus: educational programs related to design and technology, a collaborative maker space for members, and individual work spaces for start-ups and small businesses. Steel House offers a residency program for artists, designers, technologists, and scientists. The space invites young professionals to spend one to three months in their studio developing a self-initiated project. The residents are invited to collaborate with other members and to use the equipment, and they are asked to devote four hours per week to Steel House projects. Many activities at Steel House engage the city's younger population. For example, its internship program (open to local high school students and recent college graduates) introduces young people to a range of disciplines, from industrial design to letterpress printmaking and computer programming. The interns work side by side with Steel House members, gaining insights into creative and professional practices. Another program, "Multimedia Storytelling," is an after-school, hands-on workshop that introduces students to multimedia production, script writing, camera operation, audio engineering, and video editing, among other things.

## IMPACT

Steel House is a general space that has an impact in the areas of entrepreneurial communities building and industry innovation. The space provides a wide range of services in design and engineering, but it also capitalizes on Maine's regional expertise by providing fishery-related trainings. The space's regional focus and attention to youth development have resulted in successful partnerships with the city's public schools. Steel House's model of industry-specific services combined with training in other disciplines is what makes this business model unique and more financially sustainable.

## IN PRACTICE

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### PROJECT IN FOCUS

The space interacts with both industry (fishing, in particular) and students to gain and impart digital skills. Two projects showcase Steel House's impact in these two communities:

**Local Industry:** The space is currently developing a series of submersible ROVs to be used in partnership with local schools and science foundations. While there are many commercially available submersibles, Steel House is interested in inspiring students to design, tinker, and build their own variations based on the space's platform. The student-designed ROVs will be used to explore the marine scene, ecology, and aquaculture in local communities.

**Local Students:** Tech Club is a weekly gathering of students and adult mentors to explore topics in technology and create technological solutions (both hardware and software) for a wide range of problems and challenges. Past projects have included a machine to convert plastic pellets into 3-D printer filament, a device to alert a homeowner when someone enters their driveway, and an algorithmic generator for mazes in a video game.



USA  
New York

# BF+DA

## GENERAL/THEMATIC

LAUNCH DATE 2014

Accelerator focused on industrial innovation. The space provides access to design-related tools and services.

### FINANCIALS

BUDGET  
N/A

#### FUNDING MODEL

- Private Ownership
- Donations
- Subsidies

#### REVENUE MODEL

- Subscription
- Acceleration
- Consulting
- Rental/Events

### OPERATIONS

TEAM  
15

NUMBER OF EVENTS  
40 per year

NUMBER OF USERS  
100+ per year

#### SERVICES

M CF ES T A AT

#### INTERACTIVE ENVIRONMENTS

CW A MS CS I FL HS

### IMPACT



Business Accelerator



Industry Innovation

## BACKGROUND

BF+DA (Brooklyn Fashion + Design Accelerator), a Pratt Institute initiative, is both an accelerator and a coworking space and hub for fashion and design entrepreneurs. BF+DA offers a wide range of production services and technologies and work spaces in its 21,000-square-foot location. It promotes better integration of local manufacturing and emphasizes and provides access to ethical sourcing, labor, and production techniques in the supply chain. Its services include business mentorship, sustainable strategies consulting, materials sourcing, small-run apparel production, no-minimum computerized knitting services, and digital fabrication services. Close to 30 emerging design businesses (not limited to Pratt students) are selected to work at the accelerator. The production facilities can accommodate small to midsize operations with productions of small batches as well as more established businesses with orders of 500 or more. Each year, BF+DA also serves more than 70 apparel production clients, 300 digital fabrication clients, and 5,000 event, tour, and educational program attendees.

## IN ESSENCE

As a coworking space, BF+DA fosters the exchange of knowledge between its members and network. The space further helps accelerate business by providing intense mentorship tailored to a designer's specific needs. Mentors work one-on-one with the companies, connecting them to a network of industry experts, legal advisers, investors, and strategic advisers who understand supply chains, local resourcing, and life cycles assessment. BF+DA is active in organizing public events for the greater community on subjects pertaining to fashion and technology. It curates educational programs and events that explore the future of production, entrepreneurship, sustainability, and technology, engaging leaders and change agents across industries and communities of practice in the co-creation of new knowledge and critical ideas. BF+DA's accelerator program (the Venture Fellow program) supports founders of fashion, accessories, home, and technology companies grow their business through an ecosystem of labs, including the Production Lab (p.LAB), Sustainability Lab (s.LAB), and Fashion + Technology Lab (t.LAB). p.LAB is a fabrication lab; it provides full digital fabrication services, including laser cutters, 3-D printers, and a lab for textile innovation that boasts a textile printer, knitting machines, and an extensive samples library. S.Lab provides practical mentorship to develop sustainable practices in the life cycle of products and services. t.LAB is a research and development center for advancing the manufacturing of responsible smart garments and functional textiles.

## IMPACT

BF+DA drives industrial innovation by providing a full range of specialized tools, services, and mentorship focused on the fashion and design industry. It provides the space and resources for designers to experiment and explore the possibilities of working with new techniques and textiles that can be produced locally, thereby supporting more sustainable business. Access to the latest technology at reduced shared costs helps drive innovation, as does the crossover and exchanges among designers in the shared studio space. BF+DA's goal is to drive industrial innovation and help businesses accelerate through access to mentors and a business community. It is able to assist these businesses to scale through its fully equipped production services, complete with the machinery required to produce enough units needed to enter the market. In the first two years of the Venture Fellow program, BF+DA contributed to the creation of more than 50 new jobs.

## IN PRACTICE

### PROJECT IN FOCUS

Kirrin Finch (<http://www.bkaccelerator.com/venture/kirrin-finch>), a conscientious clothing company founded by the Brooklyn-based couple Laura Moffat and Kelly Sanders Moffat, is answering the growing demand for gender-defying fashion with menswear-inspired apparel designed to fit a range of women's bodies. Business growth has been constant, enabled by the services of BF+DA, which provided mentorship and assistance in creating effective marketing campaigns aimed at their target audience (the LGBTQ community) and securing production in New York City.



PORTUGAL  
Lisbon



# FAB LAB LISBON

## GENERAL/THEMATIC

LAUNCH DATE 2013

Fabrication Laboratory (Fab Lab) connected to the local municipality. The space provides training and access to digital fabrication tools, it also serves as a platform for local community to get together.

### FINANCIALS

BUDGET  
\$105,670

#### FUNDING MODEL

- Private Ownership
- Donations
- Subsidies

#### REVENUE MODEL

- Subscription
- Acceleration
- Consulting
- Rental/Events

### OPERATIONS

TEAM  
11

NUMBER OF EVENTS  
50 per year

NUMBER OF USERS  
1,120 per year

#### SERVICES



#### INTERACTIVE ENVIRONMENTS



### IMPACT



Building  
Entrepreneurial  
Communities



Urban  
Regeneration

## BACKGROUND

Fab Lab Lisbon belongs to the global network of more than 1,000 fab labs that spans close to 60 countries. The network was created with the extensive support of academia as an outreach project of MIT's Center for Bits and Atoms. This space defines itself as a personal digital fabrication workshop for artists, scientists, engineers, educators, students, amateurs, and other professionals of all ages. This CCS is managed entirely by Lisbon's City Hall Department of Economy and Innovation. The space uses a pure funding model: The team and resources are subsidized from the municipality's budget, which goes toward supplying equipment and materials and supporting other services. The municipality subsidizes Fab Lab Lisbon because it aims to empower Lisbon's creative economy by democratizing access to innovative fabrication tools and collaborative community programs, connecting people, ideas, and resources to actualize ideas across industries. The idea of working across industries has appealed to a number of private partners, who are extending their support and industrial expertise in the form of equipment and mentorship.

## IN ESSENSE

Fab Lab Lisbon is a coworking and community space that seeks to ally digital fabrication resources and creativity under one roof, serving as an open hub for experimentation and collaborative processes. It is a fab lab, a hacker space, and a maker space; thus, it supports a large body of prototyping and designing across industries. As a coworking and community space, it serves to connect people and ideas and democratize access to these innovative fabrication tools. Fab Lab Lisbon offers a range of workshops; some of the most recurring ones are on laser cutting, 3-D printing, and precision milling.

## IMPACT

Fab Lab Lisbon has impacted the urban regeneration of the neighborhood in which it is located. It transformed an abandoned rabbit slaughterhouse into an inspiring community design environment with free access to innovative and artisanal fabrication tools. Aside from the main fab lab, there is space designed for local carpenters, furniture makers, and artisans to craft, produce, showcase, and promote their products. Through such activities and its communal space, Fab Lab Lisbon serves as an anchor in urban regeneration, boosting the local community and more specifically building an entrepreneurial community.

## IN PRACTICE

### PROJECT IN FOCUS

Lisbão Sabão, a soap bar company, is one of the start-ups developed at Fab Lab Lisbon. Access to Lab Fab Lisbon's free-of-charge digital fabrication tools allowed Lisbão Sabão to experiment and prototype rapidly. The space-sharing community provided continuous feedback, which led to quick and different iterations in prototype development. The rented studio space was used to produce a small-scale production mold, with Lisbão Sabão having the use of digital fabrication equipment that would have been otherwise inaccessible. The product was pre-incubated and showcased at Fab Lab Lisbon's community-based events, which enabled feedback, media attention, and networking opportunities. In addition, Fab Lab Lisbon developed partnerships with external entities to provide dedicated workshops and mentoring sessions to Lisbão Sabão, focused on requested fields of interest such as branding and business model.

USA  
New York

# HARLEM BIOSPACE

GENERAL/THEMATIC

LAUNCH DATE 2013

Incubator focused on the healthcare and biotechnology. The space provides access to industry-specific facilities and equipment.

## FINANCIALS

BUDGET  
\$100,000

### FUNDING MODEL

- Private Ownership
- Donations
- Subsidies

### REVENUE MODEL

- Subscription
- Acceleration
- Consulting
- Rental/Events

## OPERATIONS

TEAM  
2

NUMBER OF EVENTS  
12 per year

NUMBER OF USERS  
80 per year

### SERVICES

M CF ES T A AT

### INTERACTIVE ENVIRONMENTS

CW A MS CS I FL HS

## IMPACT



Urban  
Regeneration



Industry  
Innovation

## BACKGROUND

Harlem Biospace is a coworking space and incubator within the health and biotech sector that searches for ways to reduce the barrier for turning biotech ideas into products. By offering access to a shared work space and an equipped bio lab, Harlem Biospace helps innovators overcome the financial strain of expensive equipment and New York City's high rents. It is one of 25 incubators that have received funding from the New York City Economic Development Corporation (NYCEDC).

## IN ESSENCE

Harlem Biospace provides competitively selected, early stage life science companies (including those from local research universities) access to industry-specific facilities and equipment. Unlike software research, biotech research needs a wet lab (a lab where chemicals are handled in liquid or volatile states with direct ventilation and special piped utilities), microbench space, and expensive specialized laboratory equipment. Harlem Biospace offers access to top-of-the-line equipment, including turnkey access to a cell-culture hood, incubators, benchtop centrifuge, autoclave, chemical fume hood, microscopy, freezers, and fridge space. Harlem Biospace members have unlimited 24/7 access to the physical space. As part of its role as an incubator space, Harlem Biospace provides mentorship, business support, and programming expertise. It offers one-on-one mentorship guidance with leading scientific mentors, investors, and practitioners. In its role as a coworking space, Harlem Biospace creates opportunity for like-minded biotech entrepreneurs to share ideas and experiences. Harlem Biospace tenders and hosts a series of events and classes on the business of biotech and launching a small business, covering such topics as the utilization of technology, legal issues, and business pitching. This CCS also hosts open events for the broader community on the future of biotech and other related issues.

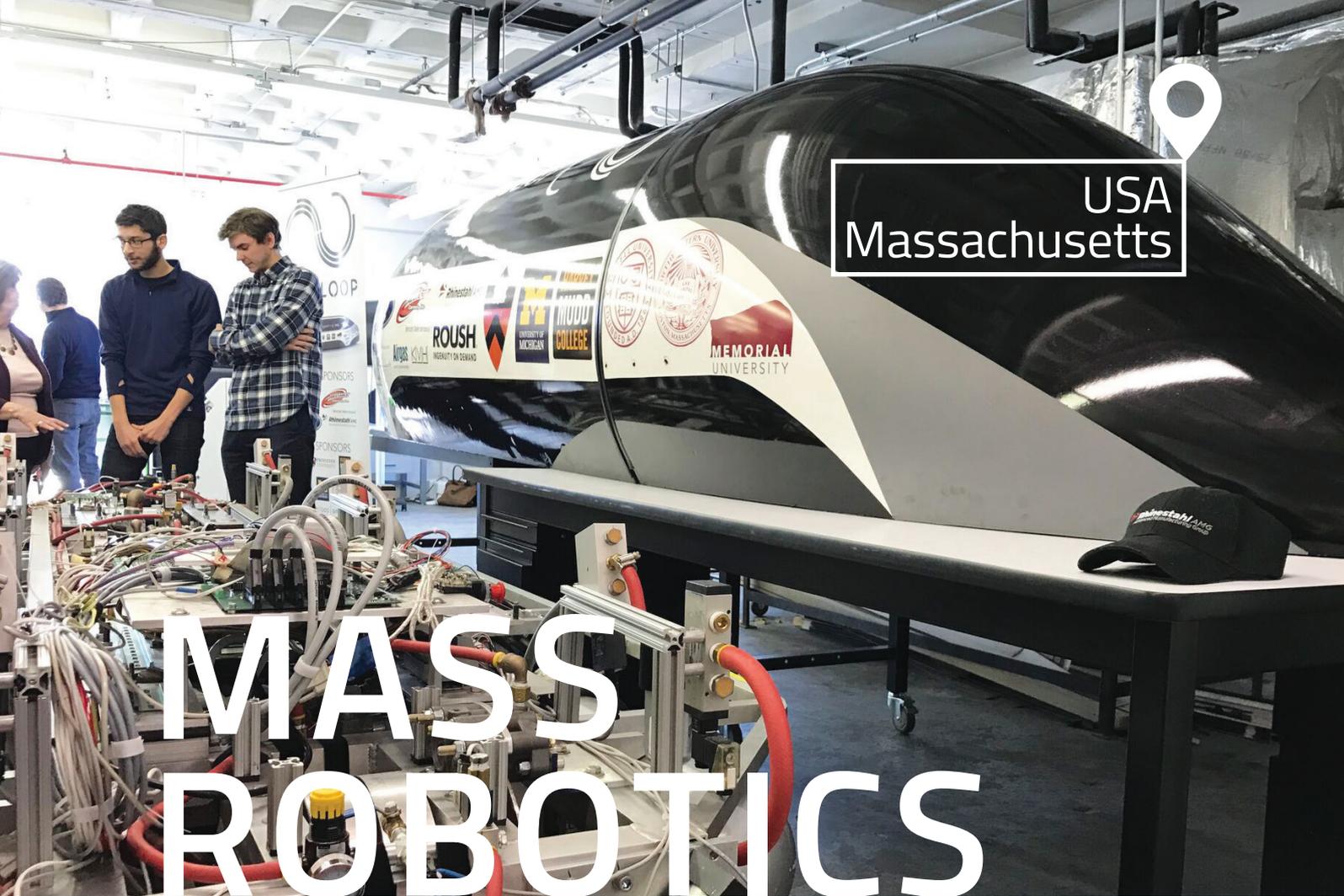
## IMPACT

Harlem Biospace is creating opportunities for innovation within the biotech sector. It helps in part by optimizing the cost of testing ideas, providing start-ups with a scientific lab and its equipment at an affordable price. In addition to having a space catered to industry-specific needs, Harlem Biospace offers general training and business development ideas through access to biotech experts with strong business acumen. Harlem Biospace leverages the city-level ecosystem of medical and health institutions and affiliated universities. Mentorship expertise from such institutions leads to an alignment of product development with local demand. These different forms of engagement and alignments allow Harlem Biospace to contribute to the local health sector innovation and be an active participant in the larger city-level biotech ecosystem. Harlem Biospace is located in a rejuvenated building in an old industrial area in Harlem now undergoing a dramatic revitalization. It is serving as a trigger for neighborhood transformation by providing a high-quality business infrastructure and creating a new node for the city-level biotech ecosystem. The NYCEDC strongly supported and subsidized this incubator on its launch precisely because it anticipated this impact on urban regeneration.

## IN PRACTICE

### PROJECT IN FOCUS

EpiBone (<http://www.epibone.com>) is a bone reconstruction venture that allows patients to "grow their own bone." EpiBone started at Harlem Biospace; eventually it received more than \$5 million in funding and was able to expand its team to 15. Harlem Biospace enabled the company to get started with just a small team and without a need to invest in lab infrastructure. The company's pioneering technology uses a scan of the patient's bone defect and the patient's own stem cells to construct and cultivate a defect-specific autologous-like bone graft. EpiBone is strategically positioned to provide a superior bone graft that will provide an exact defect repair, a simplified surgical procedure, improved bone formation and regeneration, and shorter recovery times, without the complications of foreign body implantation, to the more than 900,000 patients who undergo bone-related surgeries each year.



USA  
Massachusetts

## GENERAL/THEMATIC

LAUNCH DATE 2015

Coworking space focused on the robotics community. The space provides access to prototyping labs with a diversity of fabrication tools, machines, as well as to testing space.

### FINANCIALS

BUDGET  
N/A

#### FUNDING MODEL

- Private Ownership
- Donations
- Subsidies

#### REVENUE MODEL

- Subscription
- Acceleration
- Consulting
- Rental/Events

### OPERATIONS

TEAM  
5

NUMBER OF EVENTS  
15 per year

NUMBER OF USERS  
150 per year

#### SERVICES

M CF ES T A AT

#### INTERACTIVE ENVIRONMENTS

CW A MS CS I FL HS

### IMPACT



Business  
Accelerator



Industry  
Innovation

## BACKGROUND

MassRobotics is a nonprofit innovation coworking facility that has been active in the robotics sector for a number of years; it launched its coworking space in response to the needs and particulars of start-ups innovating in the robotics sector. Its goal is to help start-ups in the robotics industry accelerate their business and make robotics more accessible to all. Located in Boston, one of the world's leading robotics center, MassRobotics aims to be an innovation hub for the New England robotics community, pulling together the existing players and fostering the next generation of robotics start-ups. The space provides robotics start-ups with the space and resources needed to develop, prototype, test, and commercialize products and solutions. At the same time, it builds connections and working relations between the start-ups and potential investors, services providers, and corporations to better guarantee success.

## IN ESSENCE

MassRobotics provides a comprehensive number of services. In addition to being a coworking space with access to desk and office space, this accelerator provides industry-specific services such as access to prototyping labs with a diversity of fabrication tools, machines, and testing space. It promotes cost efficiencies by sharing services such as prototyping and testing space, maintenance support, IT, and security. The CCS is very active in growing its network so it can better serve the start-ups with business services, investor introductions, and customer acquisitions. MassRobotics has already fostered relations between start-ups and corporations that have served to inform product development and determined the successful outcome of the product design. It is active in creating acquisition opportunities and enabling technology licensing, seeing them as key drivers of innovation. It is also active in building synergies with the robotics entrepreneurial community in the city, including academic institutions (such as labs at MIT and Harvard), organizations, and companies. MassRobotics organizes a series of events to introduce robotics corporations and other entities to the space and the potential of the start-ups to better engender future collaborations.

## IMPACT

MassRobotics contributes to fostering industrial innovation by supporting robotics ventures and their entrepreneurs and innovators. Strategically located in Boston, where there is a distinctive robotics ecosystem, it continues to attract a number of robotics start-ups. MassRobotics makes a competitive selection among these start-ups and helps drive their innovations through access to industry-specific tools and service, thereby optimizing the cost of doing business. It also hopes to inspire the next generation of innovators through in-house, hands-on STEM (science, technology, engineering, and mathematics) collaborations. It fosters the existing robotics ecosystem for academic, private, and public key stakeholders by providing a space for these exchanges to take place. It specifically looks to strengthen intra-industry collaborations and build viable businesses by enabling acquisition opportunities and technology licensing. Through its strong connections with both the private sector and academic institutions, MassRobotics is able to create a hub for innovation in the robotics sector and help generate ideas and products that are more accessible to all.

## IN PRACTICE

### PROJECT IN FOCUS

Optimus Ride (<http://www.optimusride.com>) is an MIT spin-off company based in Cambridge, Massachusetts. It develops self-driving technologies focused on providing safe, sustainable, and equitable mobility solutions. The company is designing a fully autonomous system for electric vehicle fleets, using 30 years of interdisciplinary university research in self-driving technologies, electric vehicles, and mobility-on-demand systems to develop it. The team has a decade of industrial and entrepreneurial experience that combines manufacturing robots, urban design, and shared vehicle fleet management.



USA  
DC

# UNION KITCHEN

GENERAL/THEMATIC

LAUNCH DATE 2012

Privately-funded incubator with a focus on food industry. The space provides access to industry-specific tools and shared working space.

## FINANCIALS

BUDGET  
N/A

### FUNDING MODEL

- Private Ownership
- Donations
- Subsidies

### REVENUE MODEL

- Subscription
- Acceleration
- Consulting
- Rental/Events

## OPERATIONS

TEAM  
50

NUMBER OF EVENTS  
20 per year

NUMBER OF USERS  
113 per year

### SERVICES



### INTERACTIVE ENVIRONMENTS



## IMPACT



Business  
Accelerator



Building  
Entrepreneurial  
Communities

## BACKGROUND

Union Kitchen is a DC-based large commercial kitchen and incubator space for food and beverage businesses at all stages of growth. The founders established the kitchen after facing difficulties themselves in expanding their own food business, given the high expenses of a commercial kitchen. Union Kitchen offers a shared commercial kitchen at affordable rates for start-up companies while also providing a shared space for ideas to be exchanged. Union Kitchen first opened a commercial kitchen facility in the NoMa neighborhood with 7,300 square feet of production space. It then opened a second facility in the Ivy City neighborhood (16,000 square feet of production space) and broadened the model to include grocery outlets and a warehouse for distribution.

## IN ESSENCE

As a food and beverage business incubator, Union Kitchen specifically aims to lower the barriers to entry and growth for food businesses through its integrated model. In addition to offering subscription-based access to kitchen space and utilities, they provide a full-time cleaning team, catering opportunities, distribution services, and access to their own Union Kitchen Grocery retail outlets. These services allow food businesses to develop the operations and distribution needed for them to grow, with all these services priced at a rate that allows the businesses to attain financial stability and growth. Union Kitchen is very adaptive to the requirements of incoming businesses: a large open space can be rearranged and set up to meet hosted businesses needs as necessary. Union Kitchen provides its members with access to capital, employee resources, and discounted production materials required for a food business to grow, in addition to a wide range of services vital for production and distribution. Its members include businesses specializing in bakery and pastry, bar and cocktail, bottled beverages, packaged goods, ready-to-eat, and health and dietary, among others.

## IMPACT

Union Kitchen is distinguished by its membership structure, which builds a sense of community and accountability. Unlike commercial kitchens that charge by the hour, the membership model aims at fostering a strong network of industry peers that can support one another. It builds an entrepreneurial community by allowing food and beverage business members to gain a sense of familiarity and exchange ideas and inspirations with one another within this shared space.

This CCS is able to help food-based businesses accelerate by providing access to capital, employee resources, and other services, such as affordable kitchen space, supplies, and discounted production material. In addition, Union Kitchen provides businesses hosted in this space access to its groceries stores and to an integrated distribution system serving the metropolitan area. So far, its alumni have generated more than 400 jobs and opened more than 70 storefronts (Union Kitchen press release).

## IN PRACTICE

### PROJECT IN FOCUS

Broodjes & Bier (<http://www.broodjesandbier.com>) is a Dutch-inspired sandwich company. It started in a DC bakery, but it proved extremely difficult for it to scale up there. Relocating to Union Kitchen allowed the company to take advantage of the incubator's commercial kitchen space and value add-ons. Union Kitchen's handling of a load of services—such as food safety management, cleaning services, and preventative maintenance—and its provision of office space and business consultation, allowed the Broodjes & Bier team to focus on what is most important to their business: their customers, their employees, and their product. Through Union Kitchen's distribution and catering services, the growth of Broodjes & Bier quickly took off, quadrupling production.

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# APPENDIX A

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## WEBSITES OF FEATURED CCSs

### **Fab Lab Barcelona**

Location: Barcelona, Spain  
Website: <https://fablabbcn.org/>

### **Factory**

Location: Berlin, Germany  
Website: <http://factoryberlin.com/>

### **iF (ideas Factory)**

Location: Santiago, Chile  
Website: <http://www.ifchile.com/>

### **iHub**

Location: Nairobi, Kenya  
Website: <https://ihub.co.ke/>

### **NUMA**

Location: Paris, France  
Website: <https://paris.numa.co/>

### **Promálaga I+D**

Location: Málaga, Spain  
Website: <http://www.promalaga.es/promalaga-id/> [Spanish]

### **Promálaga Urban Incubators**

Location: Málaga, Spain  
Website: <http://www.promalaga.es/red-de-incubadoras/> [Spanish]

### **Steel House**

Location: Rockland, ME, USA  
Website: <http://www.rocklandsteelhouse.com/>

### **BF+DA (Brooklyn Fashion + Design Accelerator)**

Location: New York City, NY, USA  
Website: <https://bkaccelerator.com/>

### **Fab Lab Lisbon**

Location: Lisbon, Portugal  
Website: <http://fablablisboa.pt/>

### **Harlem Biospace**

Location: New York City, NY, USA  
Website: <http://harlembiospace.com/>

### **MassRobotics**

Location: Boston, MA, USA  
Website: <https://www.massrobotics.org/>

### **Union Kitchen**

Location: Washington, DC, USA  
Website: <http://unionkitchenc.com/>

# APPENDIX B

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## OTHER CREATIVE COMMUNITY SPACES

The following is a list and brief description of other CCSs studied for this publication:

### **Butter & Bake**

A cosharing kitchen for food entrepreneurs  
Location: Singapore, Singapore  
Website: <http://www.butterandbake.com.sg/>

### **CO+HOOTS**

A collaborative coworking space  
Location: Phoenix, AZ, USA  
Website: <https://cohoots.com/>

### **Cohere Bandwidth**

A coworking studio for musicians  
Location: Fort Collins, CO, USA  
Website: <https://coherebandwidth.com/>

### **FoodRoom**

A culinary coworking space for food businesses  
Location: Montreal, Canada  
Website: <http://www.thefoodroom.com/>

### **Karkhana**

A maker space for preteens  
Location: Kathmandu, Nepal  
Website: <http://www.karkhana.asia/>

### **New Lab**

An interdisciplinary space for entrepreneurs working in emerging technologies  
Location: New York City, NY, USA  
Website: <http://newlab.com/>

### **Onomatopoeia**

A music hub  
Location: Beirut, Lebanon  
Website: <http://www.onomatopoeia.me/>

### **THINGS**

A coworking space for start-ups in hardware  
Location: Stockholm, Sweden  
Website: <http://www.thingstockholm.com/>

### **WMN**

A community space for women-led ventures  
Location: Tel Aviv, Israel  
Website: <http://www.wmn.co.il/>



