

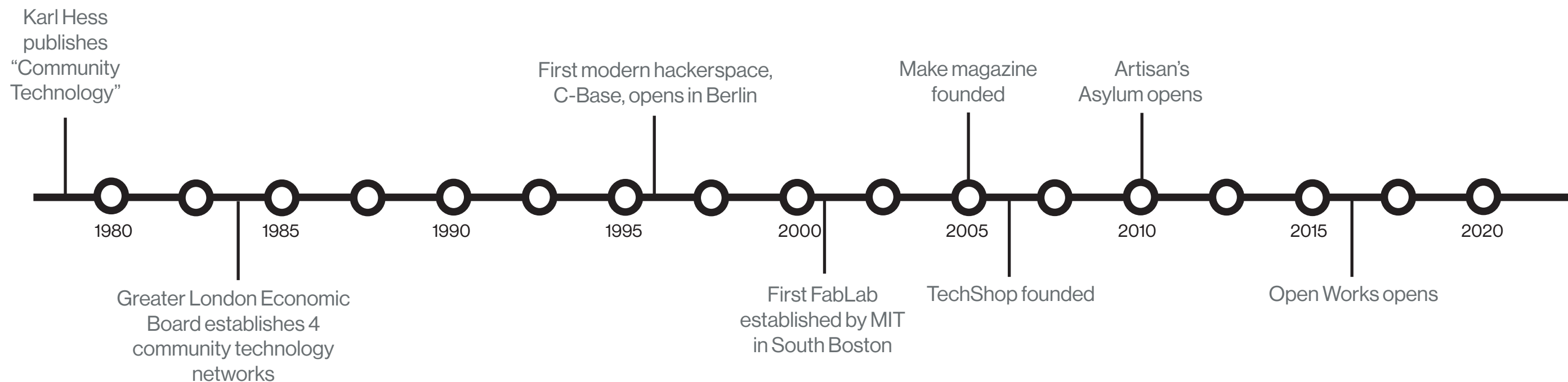
Makerspace as Civic Infrastructure: A Case Study of Open Works

Design School & the Industry Turn
Design Museum, London, UK
19 June 2017

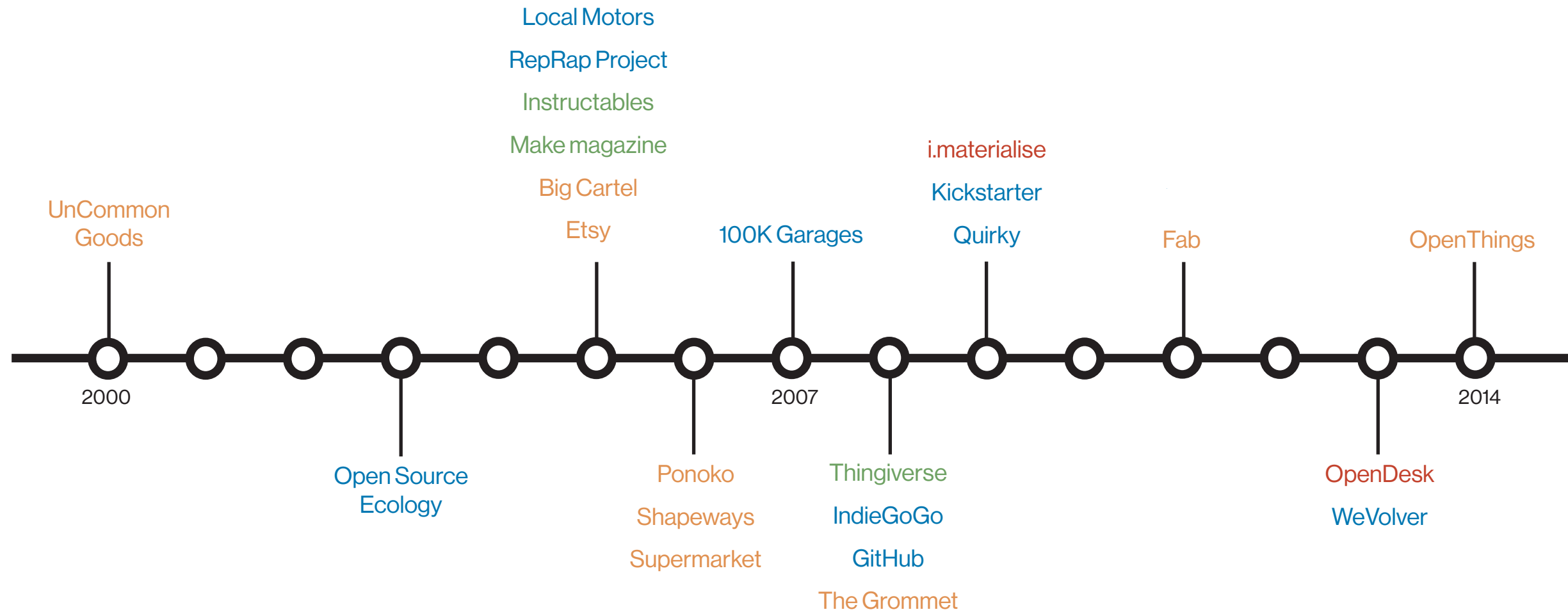


RESEARCH





Modern makerspace development



Distributed manufacturing



Crowdsourcing/co-creation

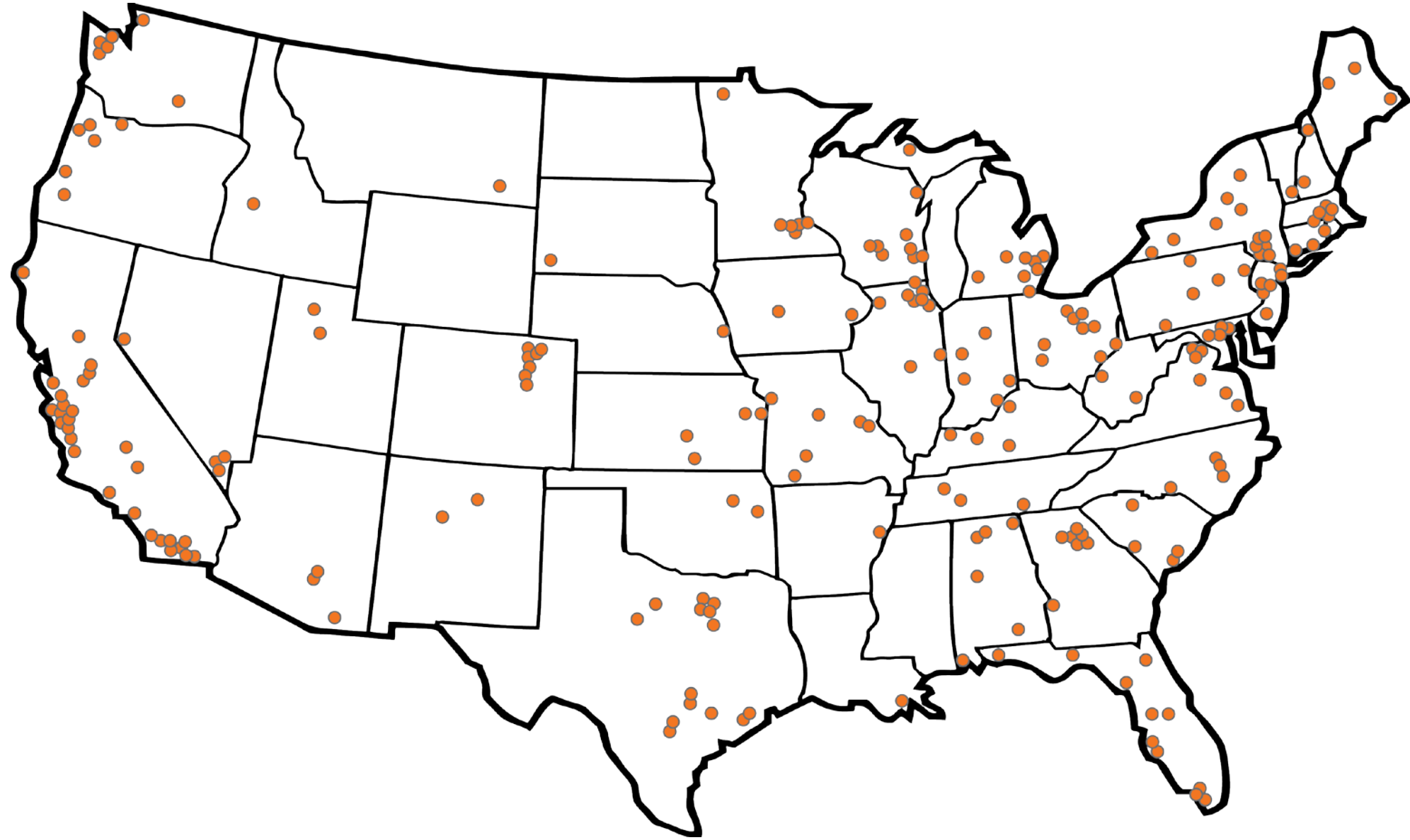


How-to community



E-commerce

Design platform development



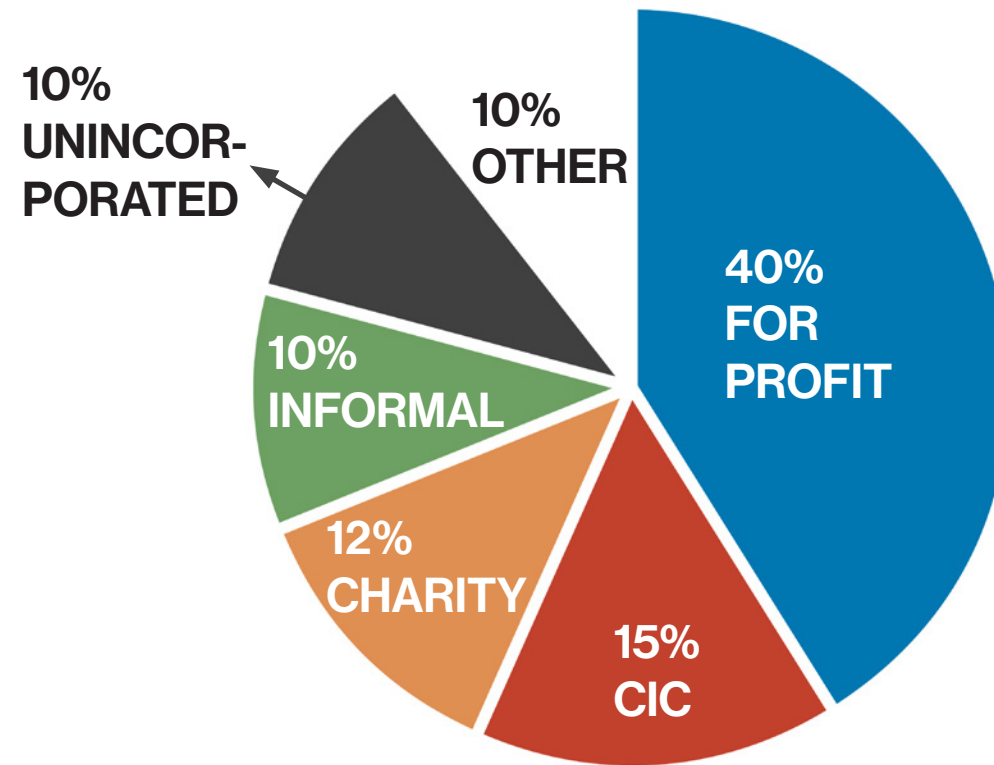
Over 300 makerspaces across the U.S.



Nation of Makers

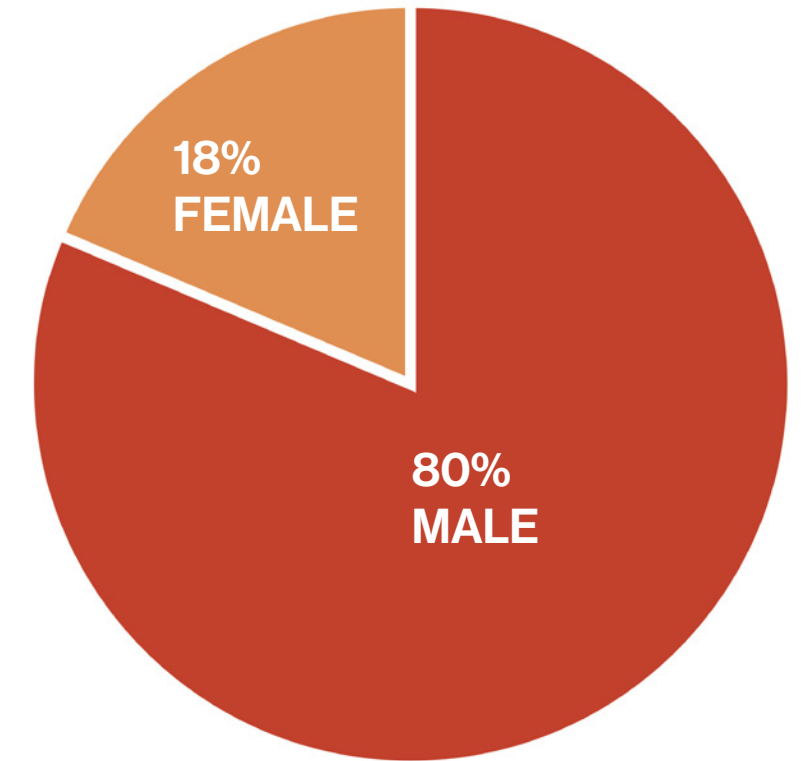


Global FabLab Network



TYPOLGY

97 Total makerspaces in U.K.

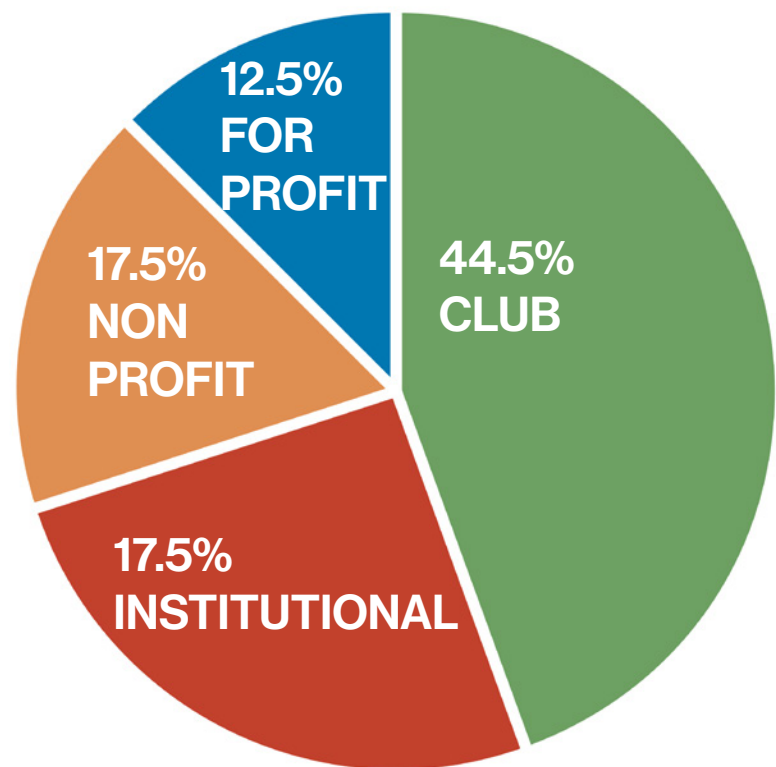


GENDER

889m² Average footprint

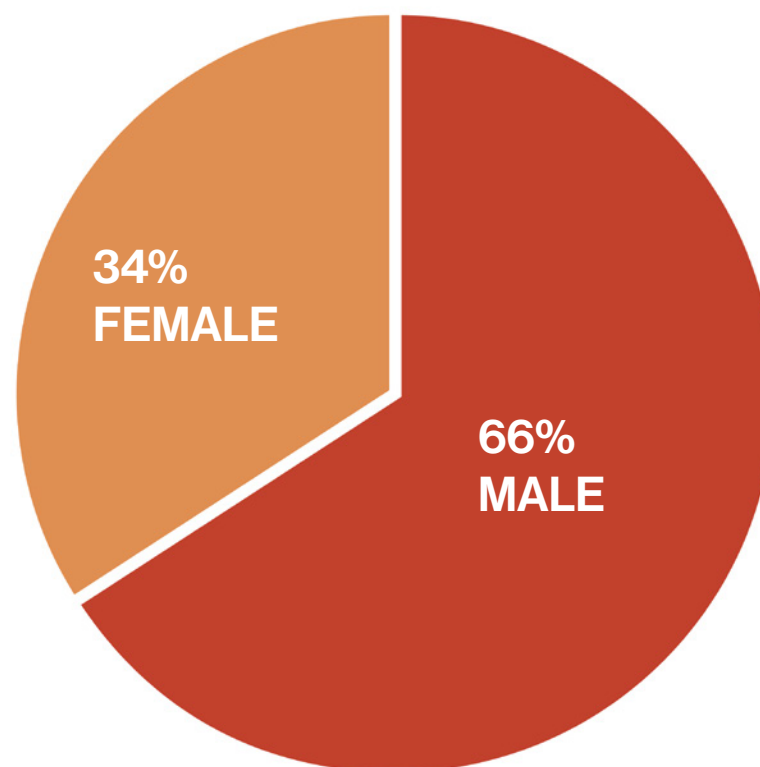
U.K. makerspace characteristics

SOURCES: Nesta, <http://www.nesta.org.uk/blog/top-findings-open-dataset-uk-makerspaces>



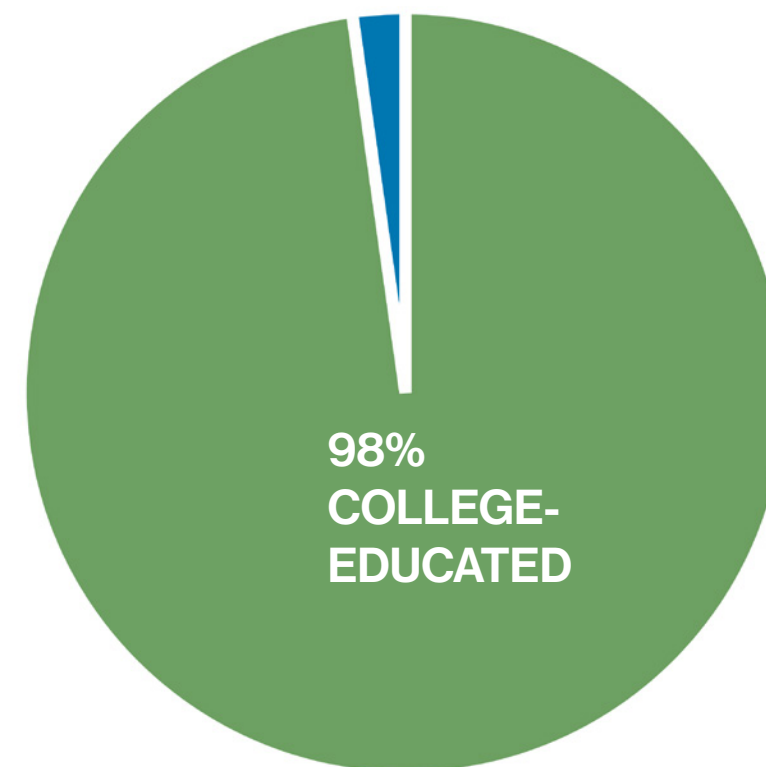
TYPOLGY

\$50 *Average monthly cost*



GENDER

889^{m2} *Average footprint*

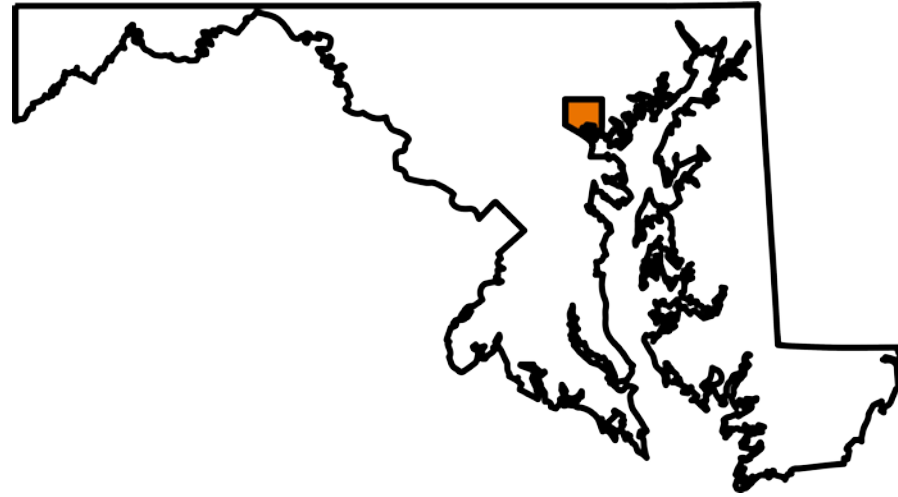
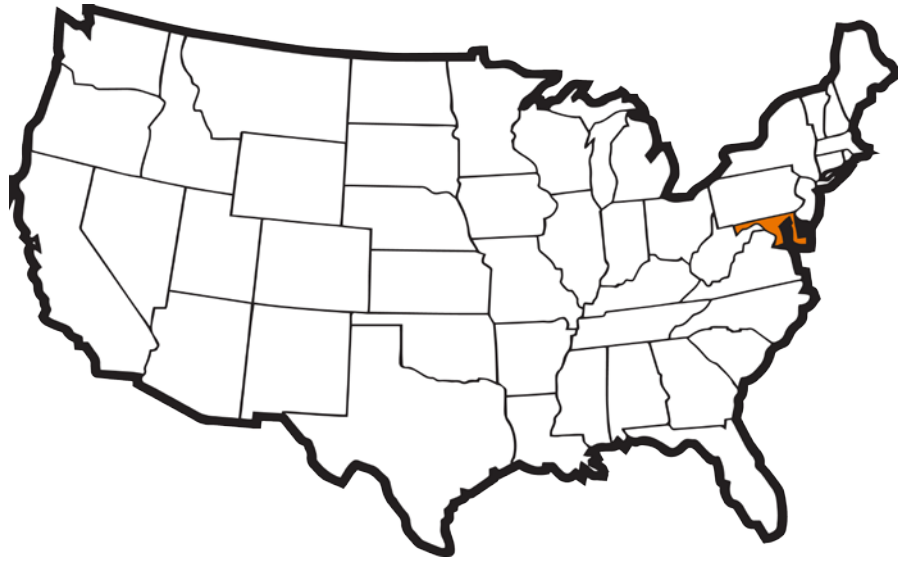


EDUCATION

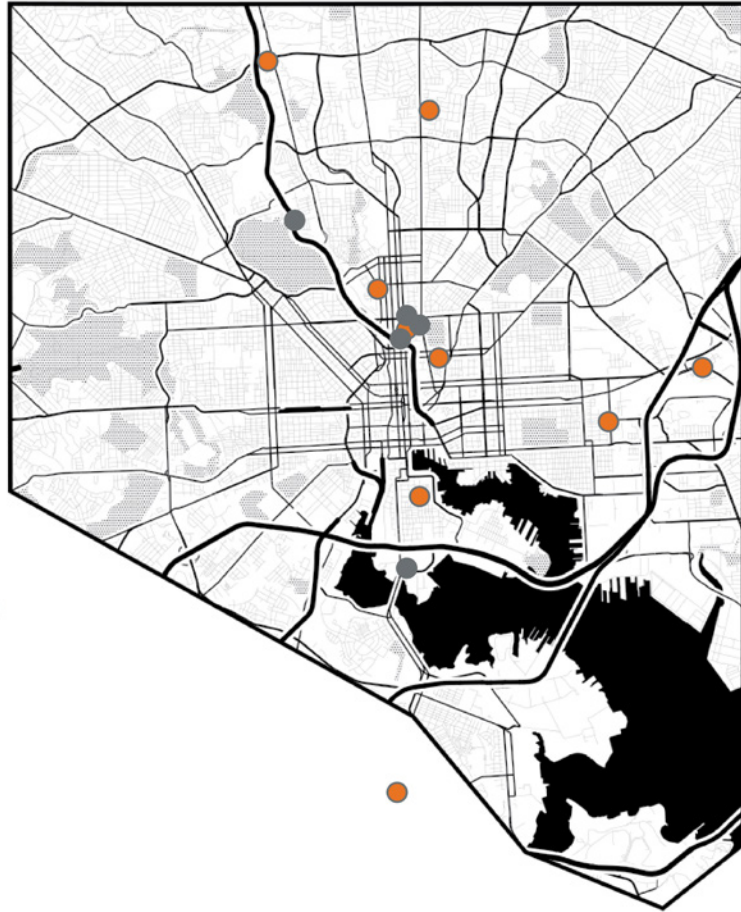
150 *Average membership base*

U.S. makerspace characteristics

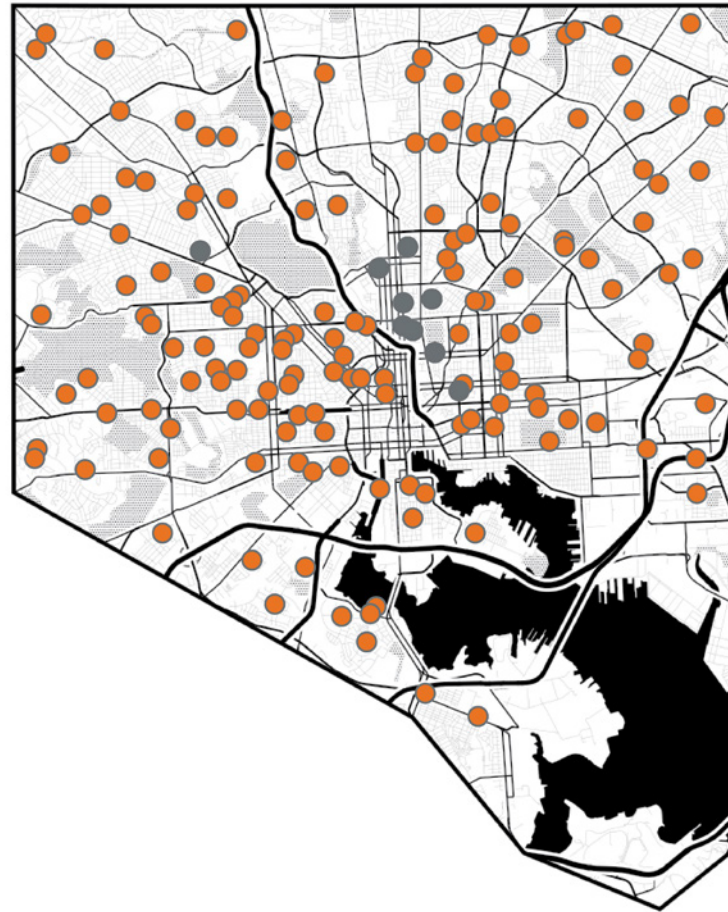
SOURCES: *Maker Faire Bay Area 2012 Attendees // Online research, June 2015*



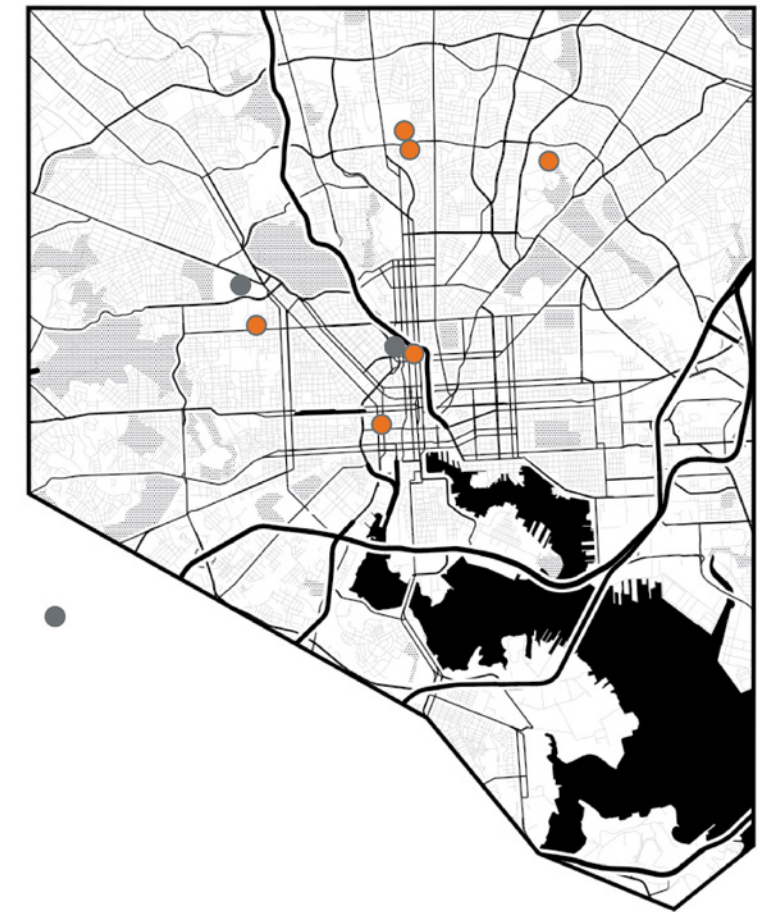
Baltimore



MAKERSPACES (15)



PUBLIC SCHOOLS (181)



UNIVERSITIES (11)

Local Context



BARCLAY

Population: 2,158

Med. Home Value: \$133,557

Median Income: \$35,788

Unemployment: 7% or more

High School Compl.: 61%

GREENMOUNT WEST

Population: 1,250

Med. Home Value: \$158,100

Median Income: \$38,755

Unemployment: 7% or more

High School Compl.: 75%

JOHNSTON SQUARE

Population: 1,600

Med. Home Value: \$87,900

Median Income: \$32,821 or less

Unemployment: 7% or more

High School Compl.: 61%

Neighborhood indicators

DEVELOPMENT





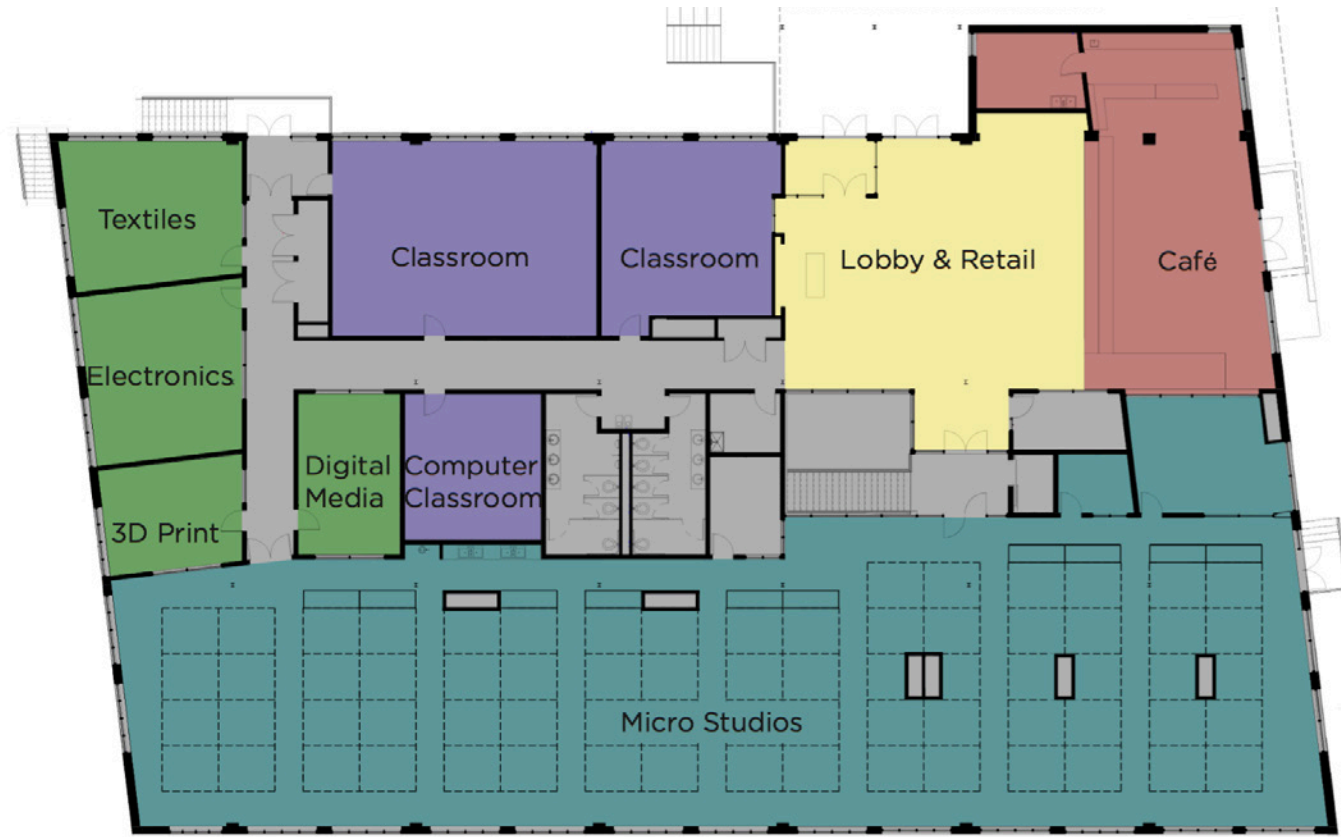
2013-15



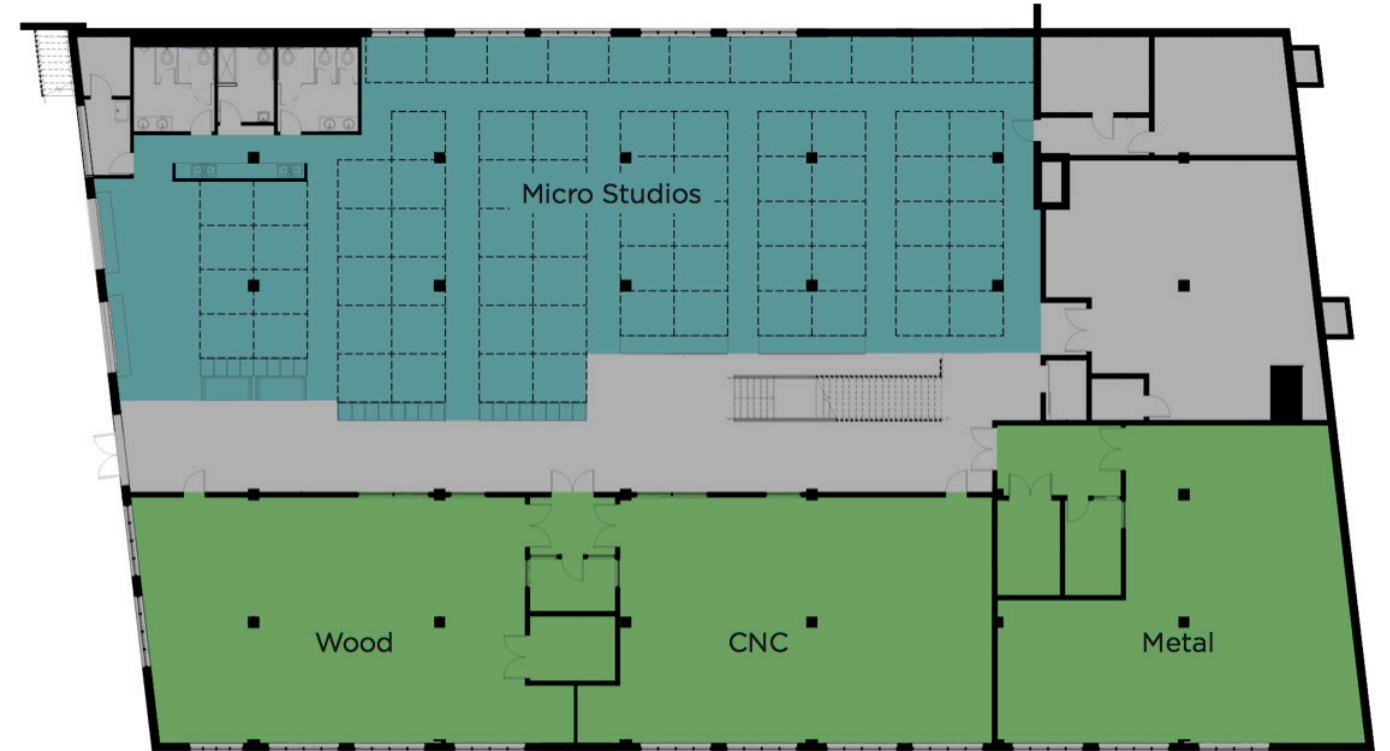
2013-15



Design evolution



UPPER LEVEL



LOWER LEVEL

Floor plans



Rendering



Construction



Opened Sept. 28th, 2016



7 workshops + computer lab



144 micro-studios



Greenmount Coffee Lab

IMPLEMENTATION



**Our mission is to make
tools, technology, &
the knowledge to use
them accessible to all.**



INSTITUTIONAL PARTNERS

*Universities
Baltimore City Public Schools*

EDUCATION

*Partner organizations
Contract teachers*

RWD FOUNDATION

Primary Funder

OPEN WORKS

Nonprofit makerspace

FABRICATION

Technicians

BARCO

*Nonprofit Developer/Landlord
Business support/fiscal sponsor*

MEMBERSHIP

*Member Service Associates
Ambassadors*

PRIMARY FUNDERS/PARTNERS

DEPARTMENTAL STRUCTURE

Organizational Structure

OPEN WORKS

Nonprofit makerspace

EDUCATION

*Partner organizations
Contract teachers*

*University partnerships
Adult classes
Grant funding*

FABRICATION

Technicians

*Contract services
Hire-an-expert
Material sales*

MEMBERSHIP

*Member Service Associates
Ambassadors*

*Studio rentals
Maker member: \$70/mo.
Builder member: \$90/mo.
Pro member: \$125/mo.
Group memberships
Event rentals*

Business Model

MAKE-YOUR-OWN

Project-based classes

OPEN WORKS MOBILE

*Off-site maker programming
primarily K-5 audience*

JOB TRAINING

*Cut-and-sew job training pilot
program*

CRASH COURSES

Skill-based classes

TEEN MAKER SHOP

*After school cohort of 15 teens
from neighboring high school*

SENIOR CLASSES

*Scholarship classes for sewing
and woodworking*

SAFETY + CERTIFICATION

Required for shop access

YOUTH MAKER SHOP

*After-school / Saturday
mornings*

COMMUNITY BENEFIT

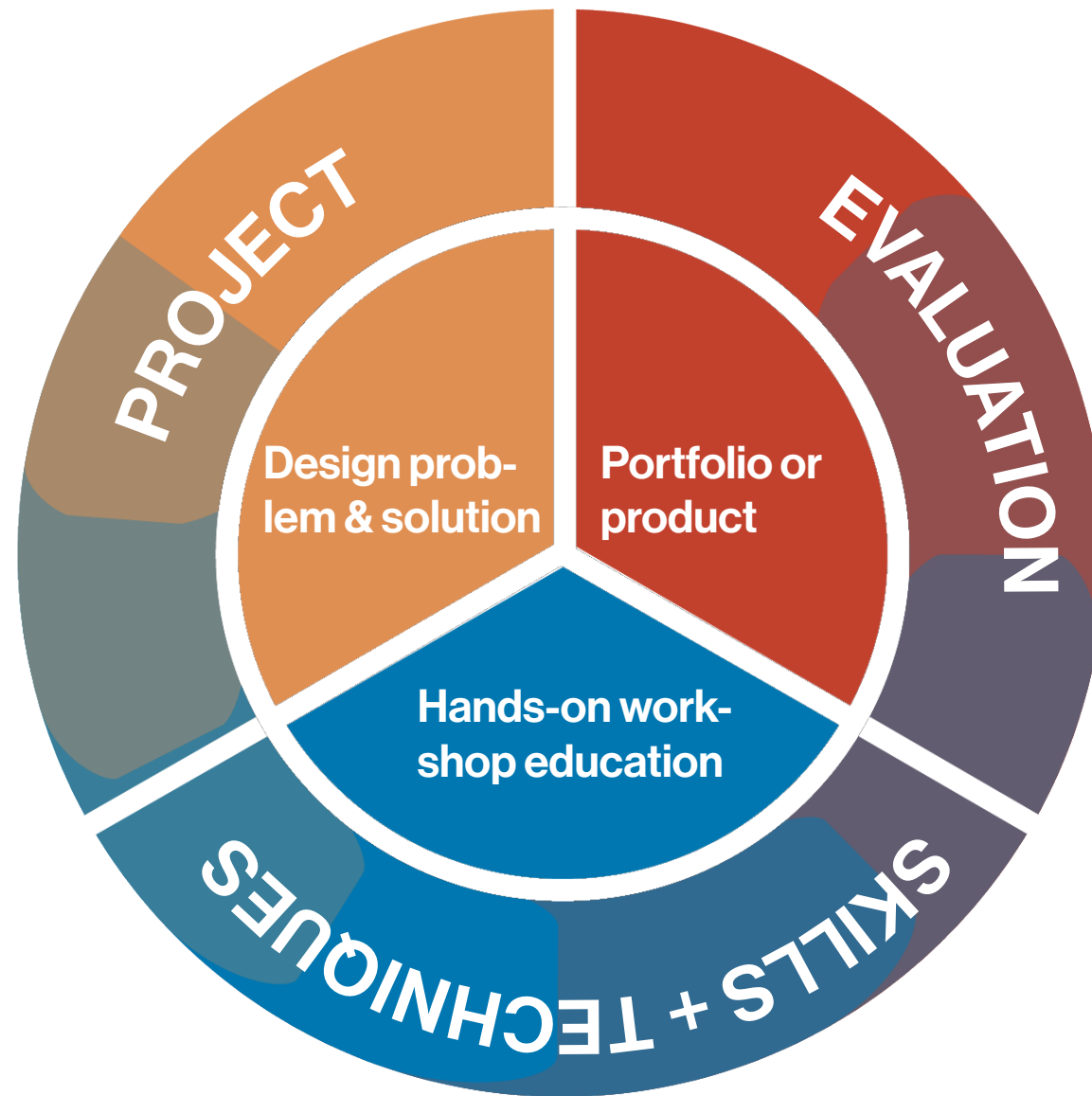
*Weekly farmer's market, coffee
shop, drone race*

ADULT EDUCATION

YOUTH EDUCATION

COMMUNITY PROGRAMMING

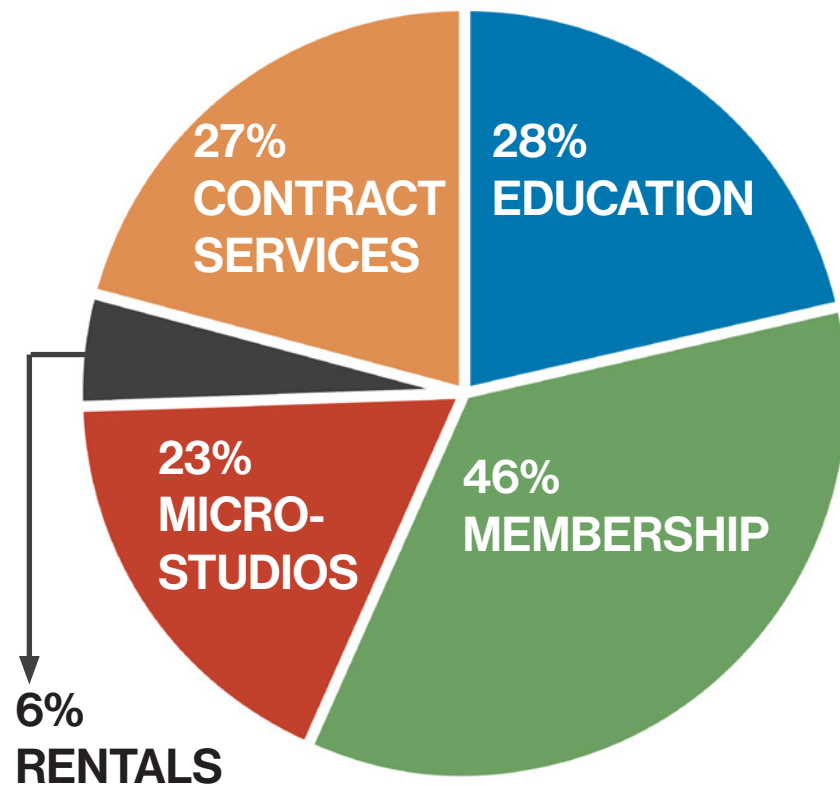
Programming Structure



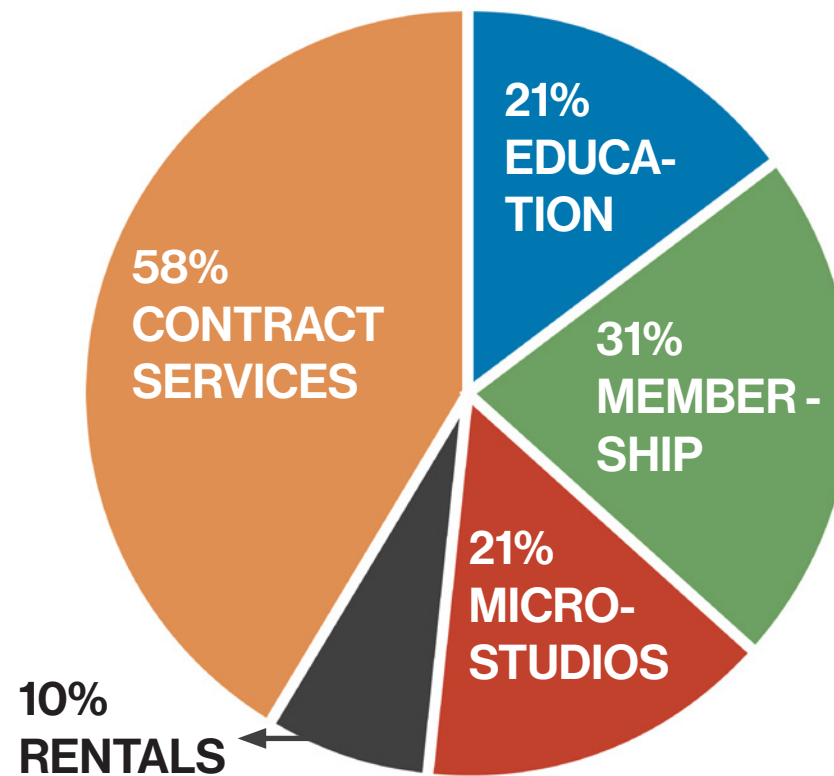
Learning Cycle

RESULTS





PROJECTED



ACTUAL TO DATE

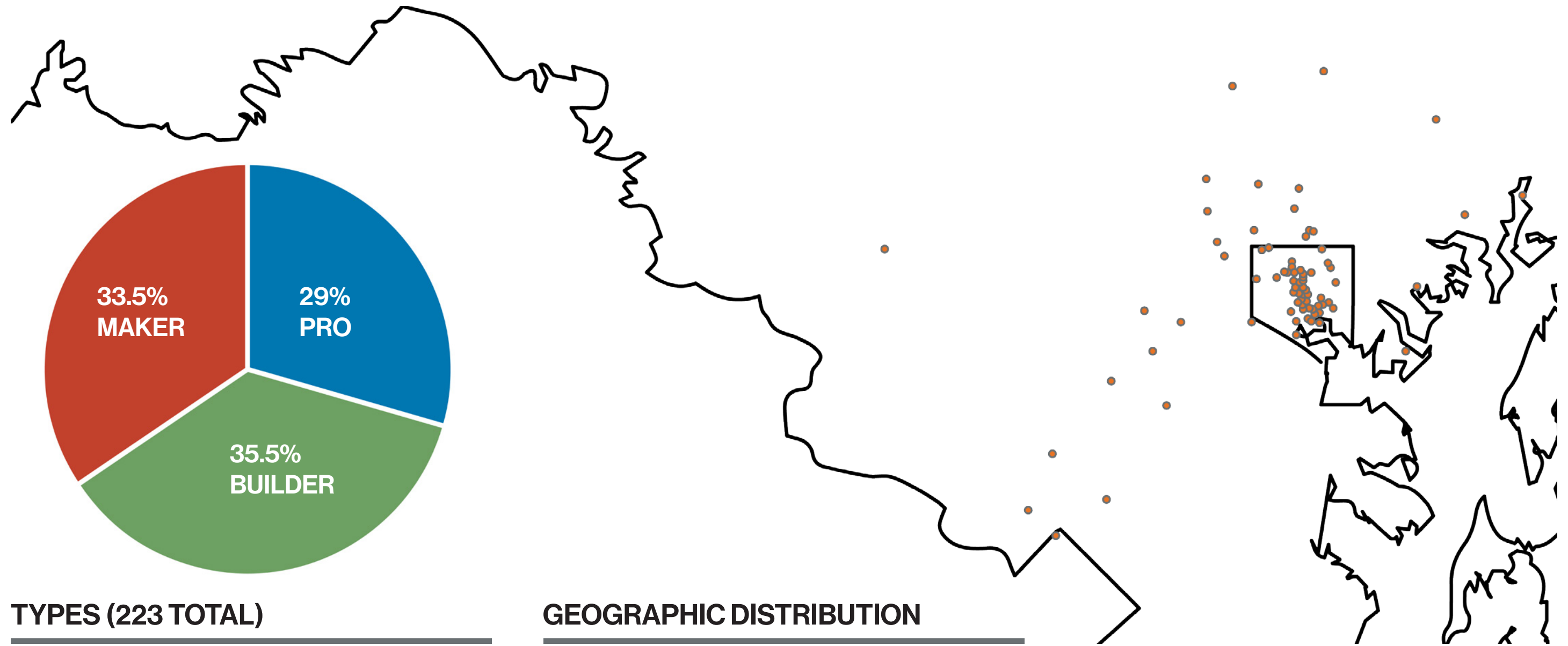
\$95 *Average Monthly Membership Fee*

\$75 *Hourly Contract Services Rate*

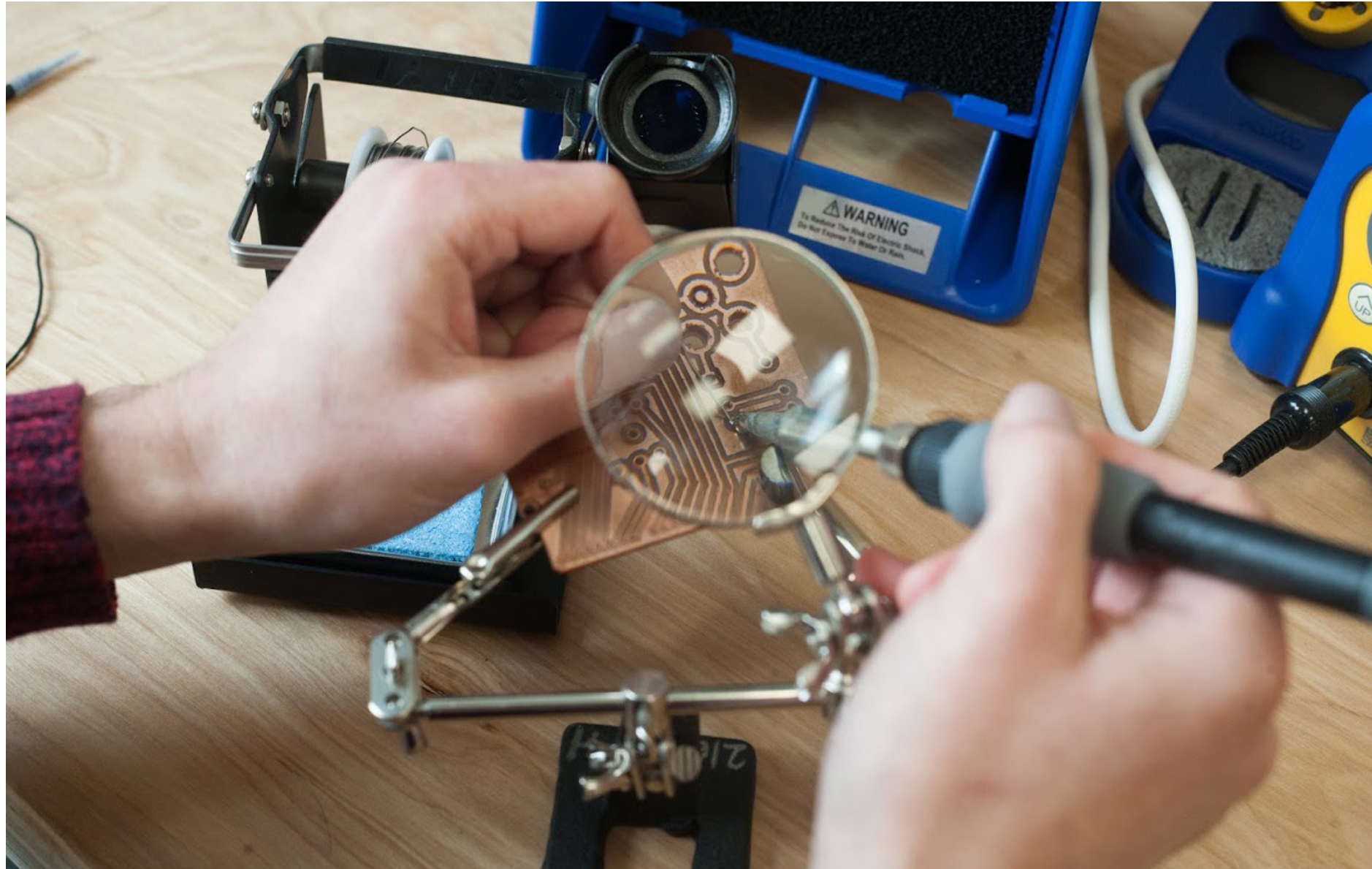
\$22 *Average Hourly Class Fee*

400 *Projected Member Capacity*

Business Model



Membership



598 *Safety class participants
since opening*

121 *Elective class participants
since opening*

292 *Youth class participants
since opening*

46 *Open Works Mobile site visits*

Education



SIGNAGE

69 *Jobs complete*



OPEN DESK

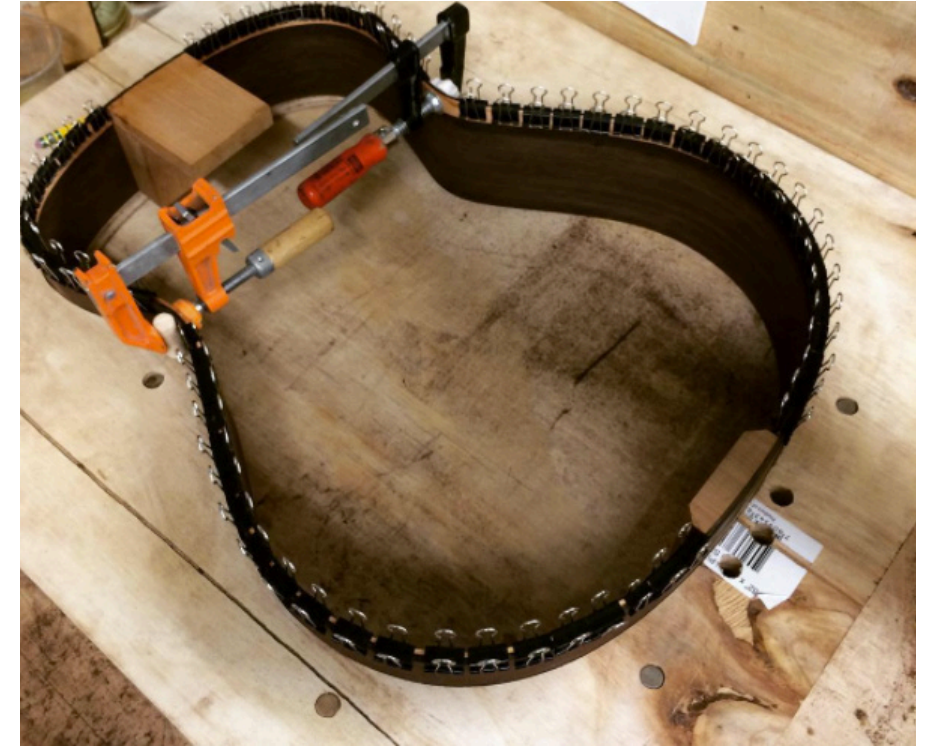
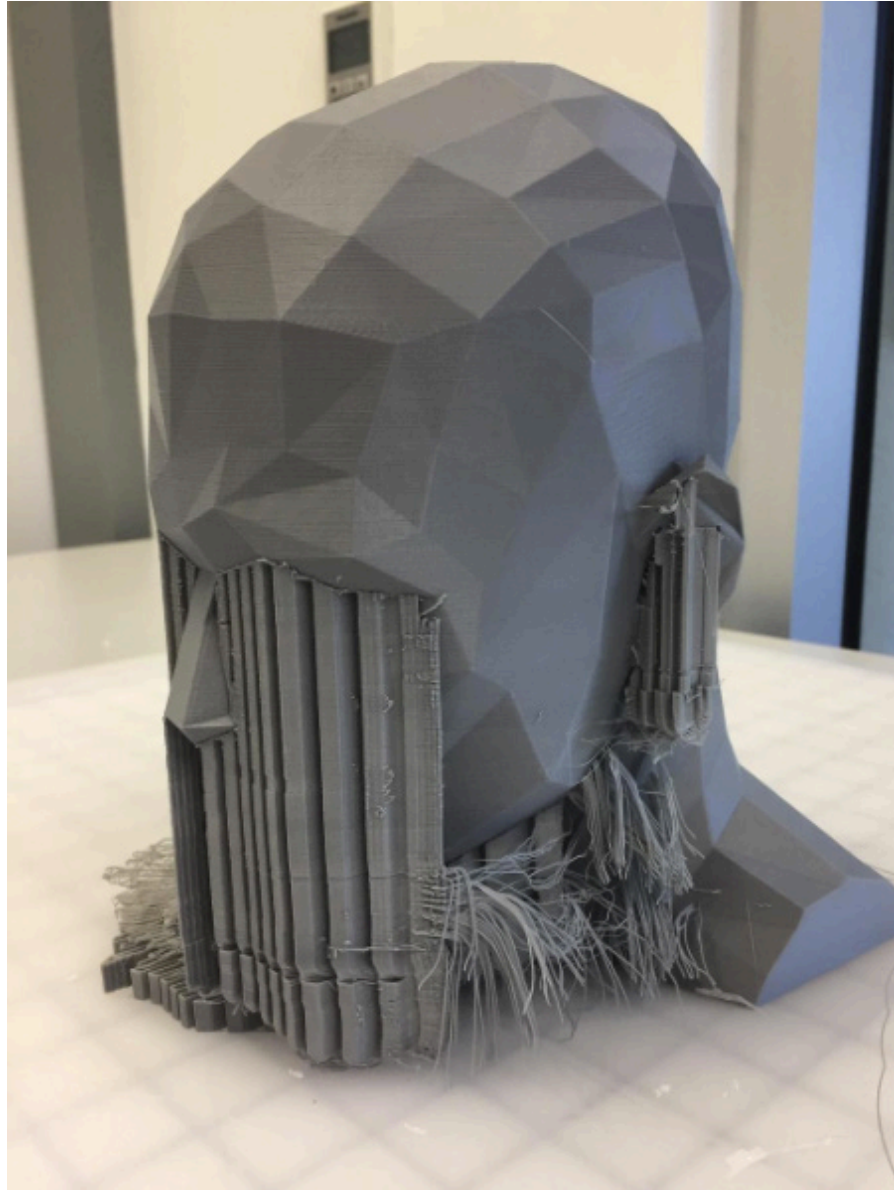
2 *Open Desk distributed manufacturing jobs*



DIY VACUUM-FORMER

\$3,035 *Avg. job*

Fabrication



Member projects



Community

NEXT



**What does this
mean for the future
of design?**





The smile curve

SOURCE: *Stan Shih, founder of Acer, Inc.*



19% *U.S. share of global
manufacturing output*

53M *Number of U.S.
contractual workers*

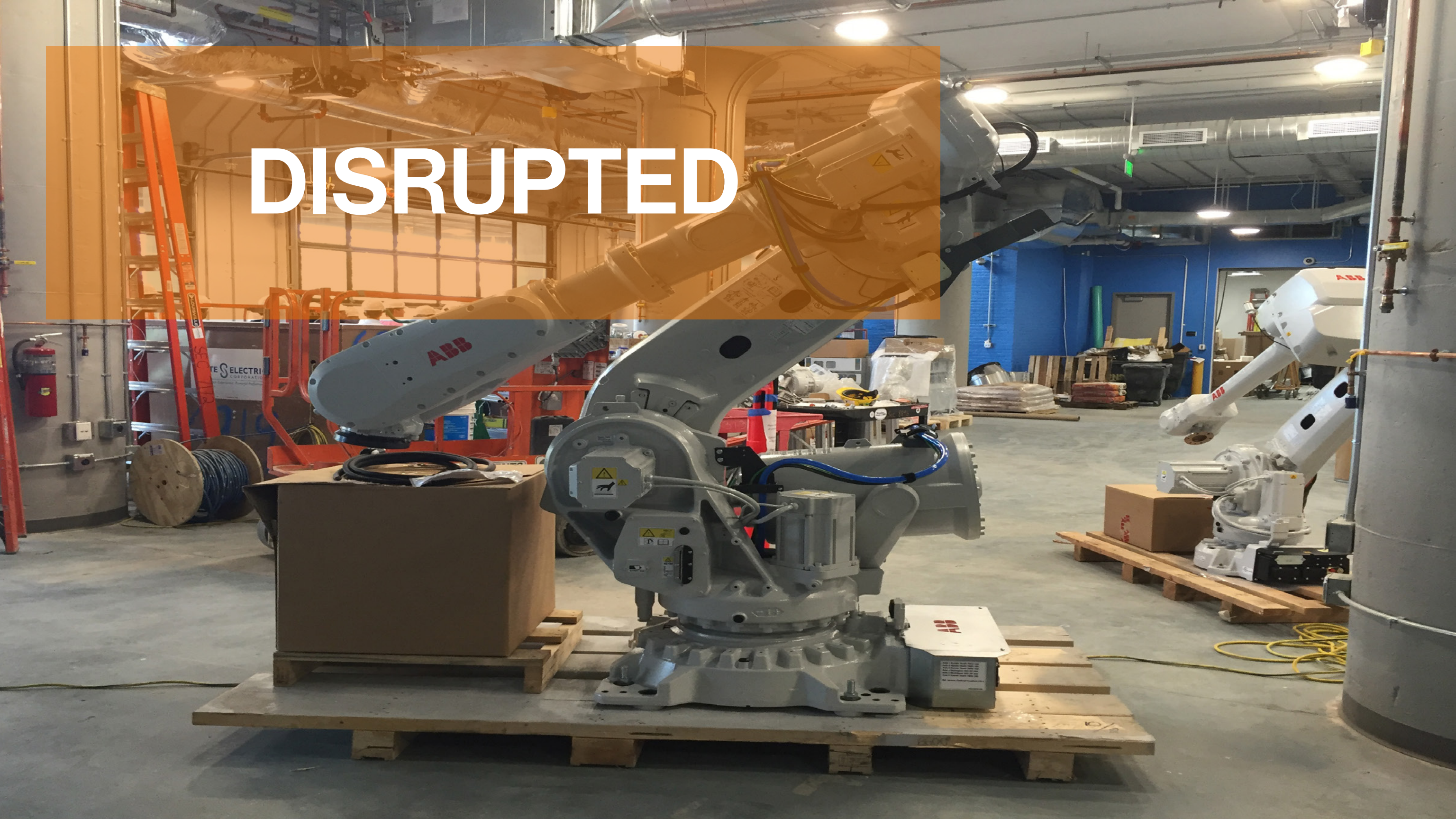
55% *Jobs vulnerable to
automation*

63% *Growth in local single-
employer manufact-
urers since 2003*

Manufacturing + employment trends

SOURCES: Bloomberg (<https://www.bloomberg.com/news/articles/2017-06-08/factories-won-t-bring-back-the-american-dream>), Entrepreneur (<https://www.entrepreneur.com/article/275362>), The Atlantic (<https://www.theatlantic.com/business/archive/2017/05/the-parts-of-america-most-susceptible-to-automation/525168/>), Baltimore City Department of Planning Made in Baltimore initiative

DISRUPTED



DEMOCRATIZED



DECENTRALIZED

The background image is a blurred, colorful, and pixelated representation of a human head and neck. The colors are vibrant and varied, including shades of orange, yellow, red, green, blue, and white. The image has a low-resolution, blocky appearance, reminiscent of early digital art or a heavily compressed image. A semi-transparent orange rectangle is overlaid on the upper left portion of the image, containing the word 'DECENTRALIZED' in white, bold, sans-serif capital letters.

DESTABILIZED



THANK YOU!



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objectguerilla.com



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