

包括

Fab Kākou

Fab Todos Incluídos

आत्मनिर्भर

Fab pour tous

Kaikenkattava

सबै भित्र

เอกภาพ

Fab per Tutti

Luq'u nitghe shesh q'a ch'ghetnuh nitu nqezhada

FAB
All-In

9:00 Welcome: Sherry Lassiter, Megan Smith, Joel

Cutcher-Gershenfeld

9:05 Collaborative exercise: Beno Juarez

9:15 Look Ahead to the Solutionspolooza: Megan Smith

9:20 Systemic All-in Impact

- Gender Inclusion: Nuria Robles, Fab Lab León, Spain
- Neighborhood Outreach: Dan Meyer, Chicago MSI, United States
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All-In = Anyone/ Everyone + All Topics Belong

Scout/Surface & Scale...



Beno Jaurez, Fab Lab Peru: He was a happy professor in a Peruvian university, then he was a happy architect in Lima until some friends told him that there were great opportunities in learning 3D printing and digital fabrication. So he had to make the decision that took two years of a commitment to learning because his knowledge was limited in that realm. So he took the risk and did it. In 2009, Beno started a FabLab and has been working there ever since, expanding his reach and influence to labs all over South and Latin America. He also likes exploration, experimentation, and discovering new worlds inside our planet.

Nuria Robles Miguélez, Fab Lab León: She is a mechanical engineer and has been working at a private company for 13 years in corporate social responsibility (CSR). She is a mother of 2 and is very family-oriented. Her dad told her "If you want to you can, all you have to do is try," which inspired her to tackle any challenge. She has been working with Fab Labs for ten years. She started the fab lab in León and wanted the company to reflect what she learned in her work in CSR.



Rico Kanthatham, Fab Lab Kamakura: He was born to Thai and Filipino parents in northern Thailand and moved to Camp Hill, PA with his family at 10 years old. He worked on Wall Street and lived in Hong Kong for ten years before setting foot in Japan. But, in Kamakura, Japan, Rico found this beautiful building while biking and to discover that it was a Fab Lab. Inspired by the people he met there, he did FabAcademy, which was transformative for him. He ended up leaving his cushy finance job and pursued a life in the Fab Lab to redeem himself after being a "bloodsucking finance guy" and to instead be a part of something more meaningful.

Felicity, FabAcademy: Electrical engineering and communications engineering background. Did FabAcademy in University of Nairobi and then became a Fab Lab Instructor at gearbox. Was a mentor at the Kisumu Fab Lab (Fab Lab Winery), there is a shortage of local instructors but has been all faced with four fab labs in Kenya. She has a day job at Africa's Talking local IT firm that bulks communication tools. Fab Lab is a once a week affair and not a full-time job. She contracts herself for a need to basis.



Frosti Gislaason: The Project Manager for two Fab Labs in Iceland, one run by the Innovation Center the other called Fab Lab Vestmannaeyjar in which he is also the founder. He is an Icelandic engineer by education and the chair/manager of the Nordic Fab Lab Network. He is part of the committee, Nordic Atlantic Cooperation, an intergovernmental organization under the Regional Cooperation Program of the Nordic Council of Ministers that brings together Greenland, Iceland, Faroe Islands and Coastal Norway.

Dan Meyer, Chicago Museum of Science and Industry: Degree in manufacturing technology and management from UI. Basically took a job quickly after college. His main interest is optimizing design for manufacturing. Kim and his spouse will live together in Chicago and like to make a bike with a car designed and manufactured. He likes making custom and making things. He started making computers in 8th grade. He's really involved in 3D printers and in Chicago. He was in a computer controlled machinery. He worked how to work with a 3D printer and a 3D printing and a 3D printing company. He had had experience with digital fabrication before Fab. He is into fabrication and community and held a summer camp that in Chicago via a partnership. He is currently a job and a senior manager at Museum of Science and Industry, Chicago.



Enrico Bassi, OpenDot: Enr graduated with a degree in Design & Engineering and Product Design at the Polytechnic University of Milan, and later went on to manage the first Italian Fab Lab (digital manufacturing laboratory) in 2011. He founded the first Italian FabLab, at the Polytechnic University of Milan, in 2011. He is currently the Project Manager of the first FabLab in Italy (FabLab Milano) and the first FabLab in Europe (FabLab Berlin). He is also the head of the first FabLab in Italy (FabLab Milano) and the first FabLab in Europe (FabLab Berlin). He is also the head of the first FabLab in Italy (FabLab Milano) and the first FabLab in Europe (FabLab Berlin).

Belonging, Impact, Composition,
Infrastructure, Engagement, Fun,
Decentered/All-In/Anyone-centered
(already in our network)
....solution making through inclusion



Michael Stone, STEM School Chattanooga: Michael has more than 11 years of diverse experience in public and private education and expertise in classroom professional development, instructional technology integration, project based learning, specialized program development, project management, and maker-ed. Michael co-founded dew following an 11-year career in both the public and private sectors. He has served as an Albert Einstein Distinguished Educator Fellow at the National Science Foundation, project based learning and fabrication laboratory director at STEM School Chattanooga, advanced and remedial mathematics teacher in a traditional public school, and physics and chemistry teacher in an accredited private school.

Kamau, Gearbox: Dr. Kamau Gachig is the founding executive director of Gearbox, Kenya's first open marketplace for rapid prototyping, based in Nairobi. Gachig also co-founded the Africa Innovation Ecosystems Group (AIEG), a company that focuses on creating and managing real-estate-based innovation centers of varying scales. Before establishing Gearbox, Gachig headed the University of Nairobi's Science and Technology Park, where he founded a Fab Lab full of manufacturing and prototyping tools in 2009. Gachig is a member of the Global Council on the Future of Production and the World Economic Forum and of the consultative advisory group of the World Bank's Partnership for Skills in the Applied Sciences, Engineering and Technology.



Nadine Tuhaimeer, Fab Lab Techworks: Nadine stumbled into 3D printing and digital fabrication by accident, meeting the founder of a small social enterprise called 3Dberna in her final year of university. She then joined Fab Lab Berlin as a manager and focused primarily on startups and prototypes. Currently, Nadine is the Deputy Director at Techworks, the crown Prince Foundation's flagship platform, which focuses on bringing together youth, ideas, and resources to jumpstart successful innovations and strengthen local innovation capabilities.



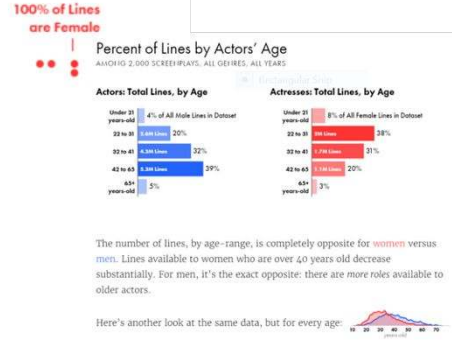
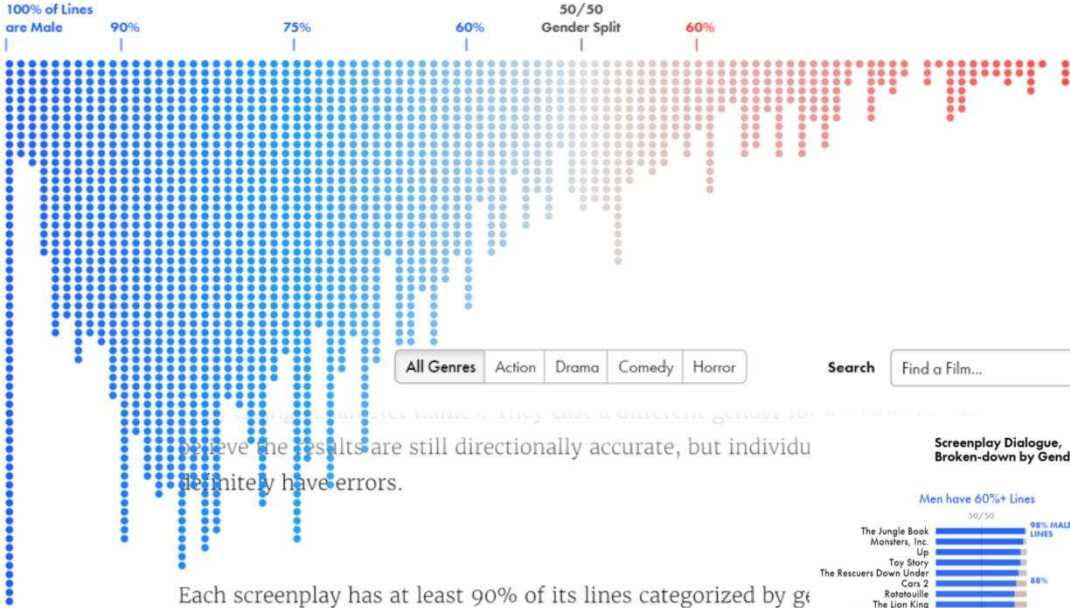
Data: Unconscious and Institutional Bias in Media example

Screenplay Dialogue, Broken-down by Gender

2,005 Screenplays: Dialogue Broken-down by Gender

Only High-Grossing Films: Ranked in the Top 2,500 by US Box Office*

SOURCE: <http://polygraph.cool/films/>



The number of lines, by age-range, is completely opposite for women versus men. Lines available to women who are over 40 years old decrease substantially. For men, it's the exact opposite: there are more roles available to older actors.

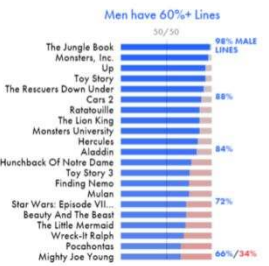
Believe the results are still directionally accurate, but individual definitely have errors.

Each screenplay has at least 90% of its lines categorized by gender. If you notice a missing character from the analysis, their lines may be remaining 10%. If a character was cut from the film but is present in the screenplay, we inferred his or her gender based on the script's

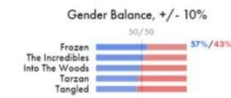
Across thousands of films in our dataset, it was hard to find a subset that didn't over-index male. Even romantic comedies have dialogue that is, on average, 58% male. For example, *Pretty Woman* and *10 Things I Hate About You*

Search

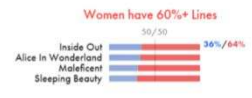
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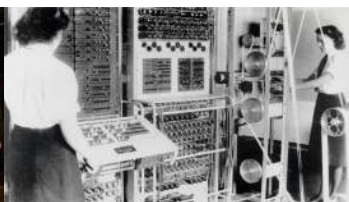
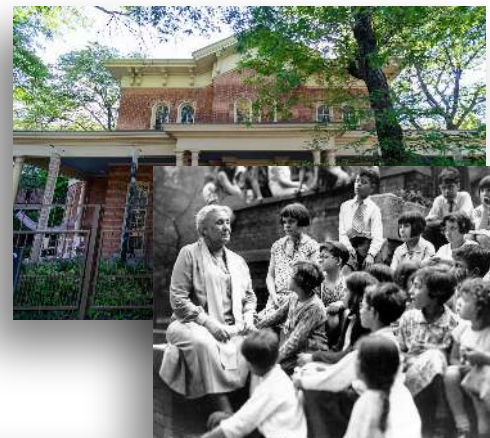
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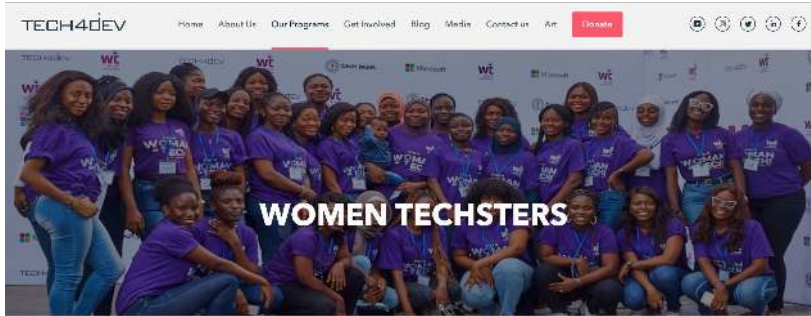
<https://www.goodreads.com/en/book/show/24694140-ada-byron-lovelace-and-the-thinking-machine>

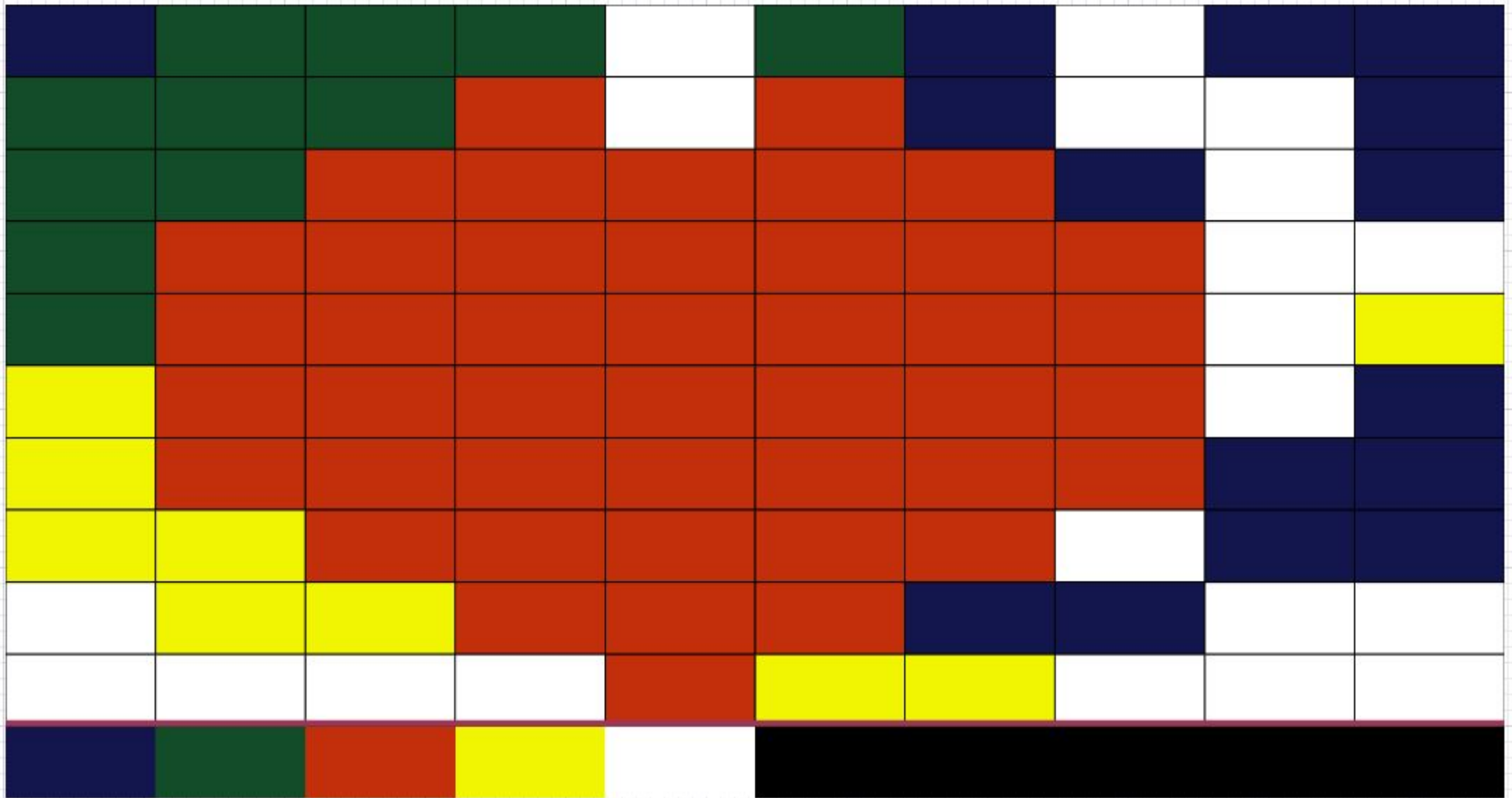


“...one thinks of all the hands, that are raising dingy shared, in a thousand furnished rooms.” (imbalanced industrial ages)

<https://www.poetryfoundation.org/poems/44214/preludes-56d22338dc954>

"In Effort There is Joy"expand our frameworks, capacity, listening, acceleration of others





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Gender inclusion : still much to do

SUSTAINABLE DEVELOPMENT GOALS

4 QUALITY EDUCATION
 HEI P FOUNDATE THE CHILDREN IN YOUR COMMUNITY.
 EIT makes quality and affordable learning available to all, regardless of gender, race, or social class.

5 GENDER EQUALITY

GENDER EQUALITY: WHY IT MATTERS

In 2019, women only held 28 per cent of managerial positions worldwide

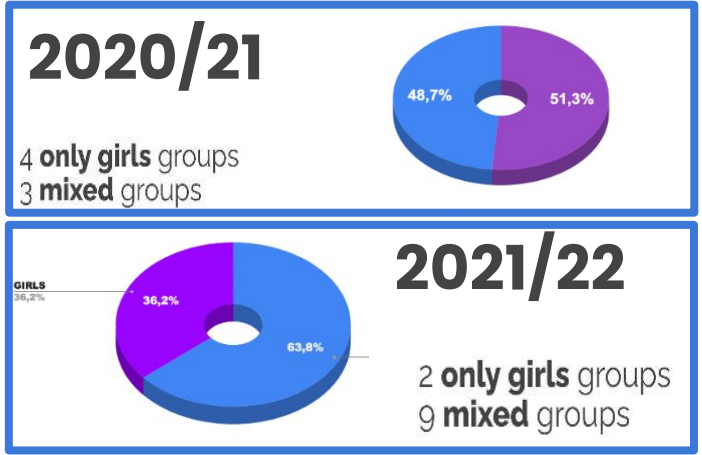
What's the goal here?
 To achieve gender equality and empower all women and girls.

Why?
 Women and girls represent half of the world's population and the other half of its potential. It's a global gender inequality persists across ethnic and regional social groups. Women continue to be underrepresented at all levels of political leadership. Across the globe, women and girls continue to face gender inequality.

How much progress have we made?
 International commitments to advance gender equality have largely failed. International commitments to advance gender equality have largely failed.

- SDG 4 and 5 help to bridge the gap
- % girls decreases in mixed groups
- start early (7 years)
- involve families
- connect with the rest of the world

% girls & boys



SheMakesEU

FABLAB León

sh=makes

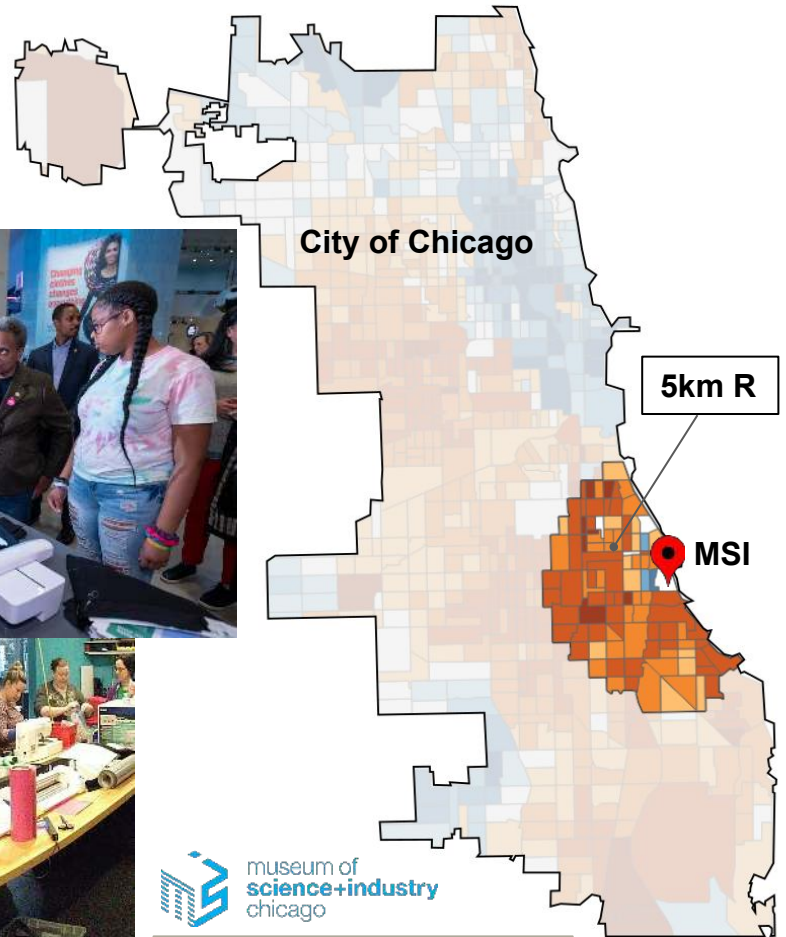
15% 4th-8th graders

Poderosas	Fabricademy For Kids	Rosin Biocomposites	3D printed potatoes	Alginate B
PODEROSAS	FABRICADEMY FOR KIDS	ROSIN BIOCOMPOSITES	BIOPRINTING	ALGINA BIOPLAS
Micro-bootcamp for educators	Voodoo Lapins	Leather Moulding Bag	E-textile Bag	Modular Fo
MICRO-BOOTCAMP FOR EDUCATORS	VOODOO LAPIN	LEATHER MOULDING BAG	E-TEXTILE BAG	MODU BAG
Bioshades	Mycellum	Bacterial Cell		

Neighborhood Outreach


Museum of Science and Industry, Chicago Fab Lab

- Education Department
- 5 km Radius: Highest Priority
 - Make_X Program
 - FabYOUth (Students)
 - ProDev (Educators)
- Connect with community
 - Walk to schools
 - Meet Principals and Educators
 - Lunch time demos (FabYOUth)
 - Inform of ProDev (Educators)



 museum of
science+industry
chicago

Median Household Income


\$1,380 \$60,000 \$120,000



Rural sustainability (Connect, innovate, inspire)



- 1) Distributed rural Fab lab
- 2) Skill development training program
- 3) Accreditation by Indian Govt NSDC
- 4) Livelihood training center
- 5) Self employed
- 6) Teacher training program based on digital fabrication



Intentional Inclusion



**Assess
Needs**

Set goals

Engage

Collaborate

Measure



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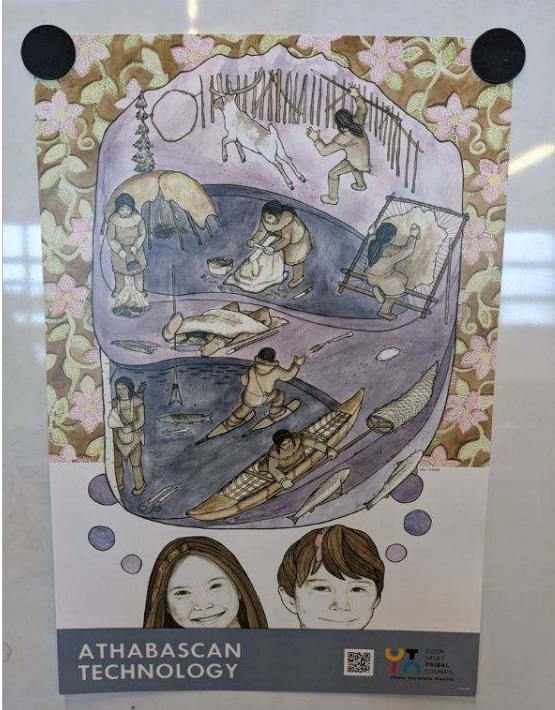
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ThriveAbility is not about abandoning the past in favor of a new way. It's about...picking up the tools of the modern world to bring forward the wisdom of our past.




Circular Economy with Natural Materials

Using organic waste to make local biomaterials



FABLAB
AUSTRAL

 materiom

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How to Run a *Noodle Shop*



niniwanted

Niniwanted/Jenny Lelong

Applying Small Business Principles
to Sustain a DEI+ Community Fablab

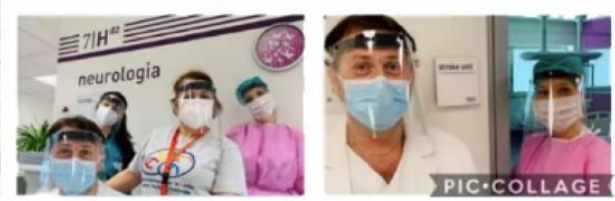
The *Skylab Workshop* Experiment

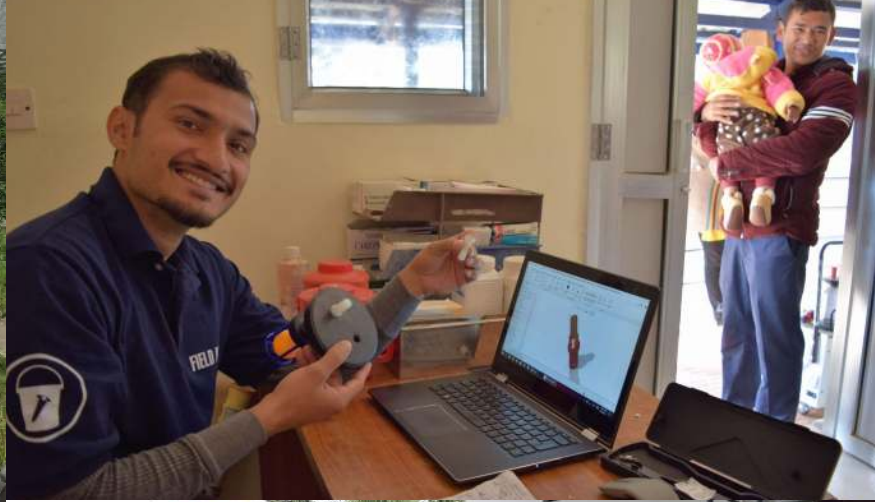




Make in Italy

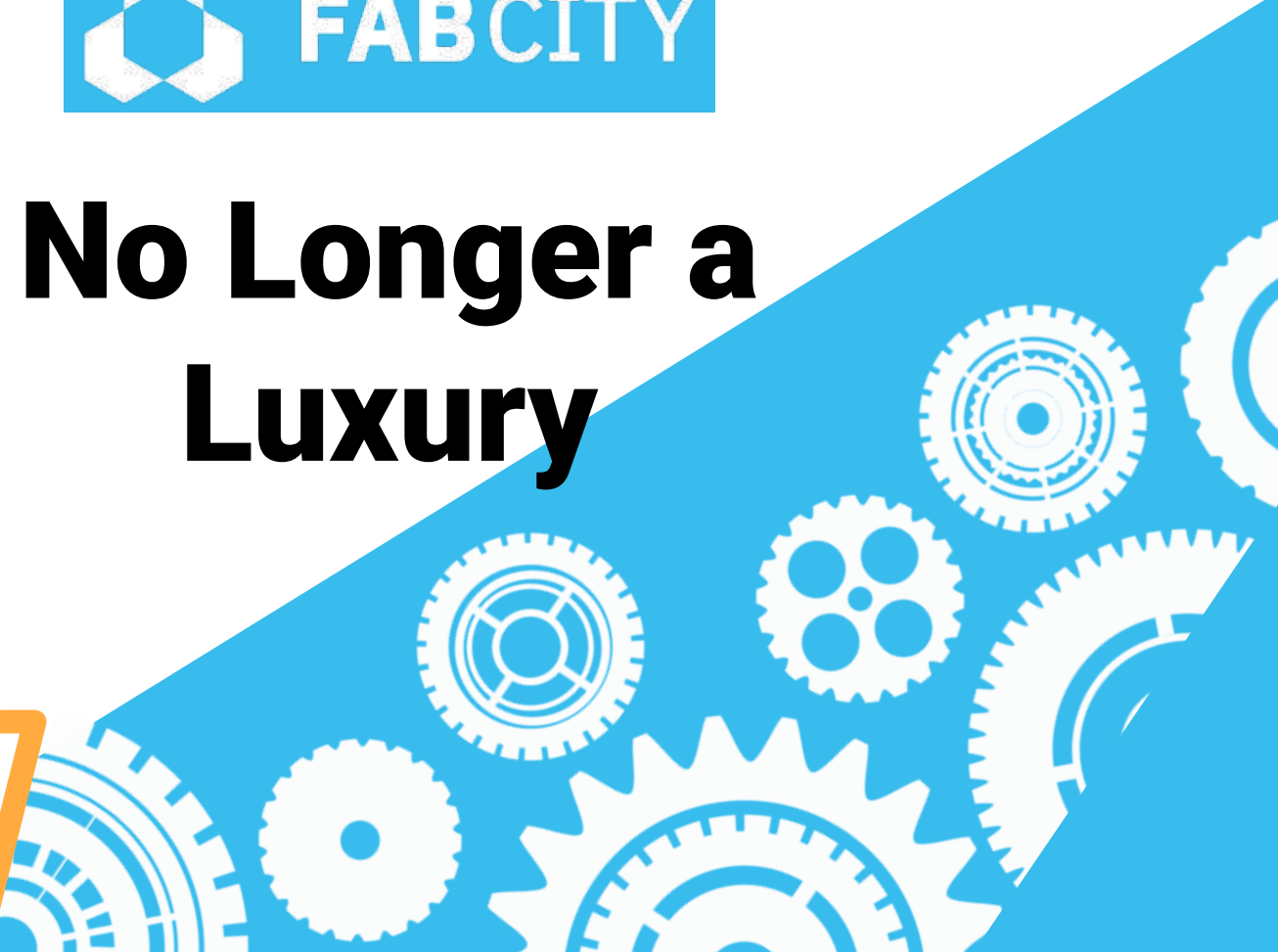
MAKERS FOR COVID-19 EMERGENCY

The graphic features the 'Make in Italy' logo with a gear icon containing the letters 'in'. Below it is a blue banner with a gear icon and the text 'MAKERS FOR COVID-19 EMERGENCY'. The banner also contains several smaller 'in' logos.





No Longer a Luxury



Distributed program at the intersection of Textiles, Digital Fabrication and Biology.

Founded in 2016 by Anastasia, Cecilia and Fiore with the goal to expand the fab lab infrastructure, skills and audience to textiles, bioengineering, arts and crafts.



FABRICADEMY TEXTILE & TECHNOLOGY ACADEMY



85% FEMALE
15% MALE

- 55,14% EUROPE
- 7,57% ASIA
- 4,32% MIDDLE EAST
- 1,08% AFRICA
- 14,59% NORTH AMERICA
- 17,3% SOUTH AMERICA



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#WHTechMeetup



Girl Develop It



Code Crew NYC



Rec2Tech



Digital Nest



Red Hook Initiative



All Star Code



Albuquerque, Anchorage, Atlanta, Baltimore, Billings, Boise, Boston, Boulder, Charleston, Chicago, Columbus, Detroit, Hoboken, Huntsville, Iowa City, Kansas City, rural Kentucky, Las Vegas, Lexington, Martinsburg, Minneapolis, Myles, Nashville, NYC, Omaha, South Orange, Watsonville, Wilmington

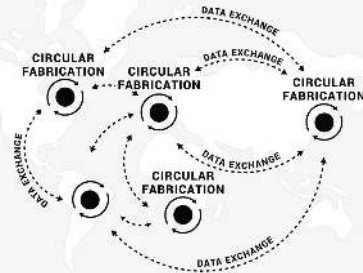
WebDev * UX * Mobile * TechWomen * Design * Enterprise * etc!



PITO - PRODUCT IN TRASH OUT

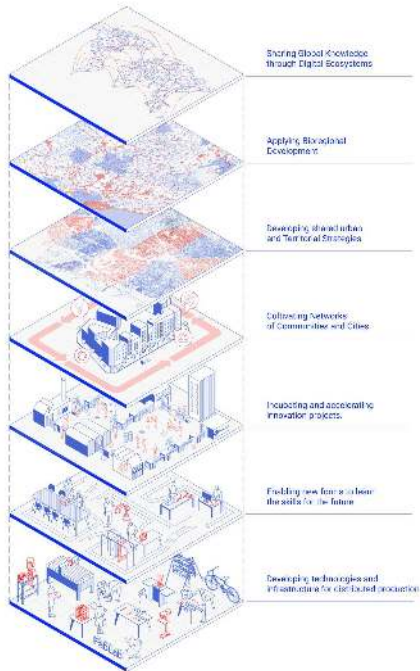


DIDO - DATA IN DATA OUT



THE FAB CITY FULL STACK PROVIDES AN ACTIONABLE FRAMEWORK TO HOW WE WILL MAKE FAB CITIES POSSIBLE

AND BECOME THE CENTRAL TOOL TO DEVELOP STRATEGIC ACTION PLANS FOR CITIES AND REGIONS



41 members from 21 countries

New members pledge to produce (almost) everything they consume by 2054 and join the Network at the annual Fab City Summit.

- Barcelona
- Zagreb
- Thimphu
- Shenzhen
- Georgia
- Curitiba
- Occitanie Region
- Puebla
- Mexico City
- Auvergne-Rhône-Alpes
- Amsterdam
- Cambridge
- Kerala
- Sacramento
- Plymouth
- Hamburg
- Yucatán Region
- Belo-Horizonte
- Ekurhuleni
- Montpellier
- Brest
- Boston
- Toulouse
- Paris
- Santiago
- Velsen
- Seoul
- Oakland
- Somerville
- Detroit
- Kamakura
- Sorocaba
- Rennes
- São Paulo
- Recife
- Zadar
- Valence Romans Agglo
- Bas-Saint-Laurent
- Linz
- Montreal
- Veberöd

Organisation



GLOBAL

Network

Network of cities, regions and settlements that have taken up the challenge to move towards local production by 2054.



GLOBAL

Collective

Individuals and organisations who have been instrumental in establishing the goals and objectives of Fab City.



DIGITAL/ESTONIA

Foundation

Supports the global initiative through the development of projects and educational programs.

The logo for FAB Fest Bali features the text 'FAB Fest' in a bold, black, sans-serif font, with 'FAB' on the top line and 'Fest' on the bottom line. This text is contained within a large, light cream-colored circle. A smaller, solid orange circle is positioned to the upper right of the main circle, containing the word 'Bali' in a white, sans-serif font. The background of the entire graphic is a dark teal color, decorated with abstract, organic shapes in shades of red, orange, and yellow, resembling stylized leaves or petals. A large, dark teal, starburst-like shape is also visible in the background on the right side.

FAB
Fest

Bali

Designing Emergent Realities

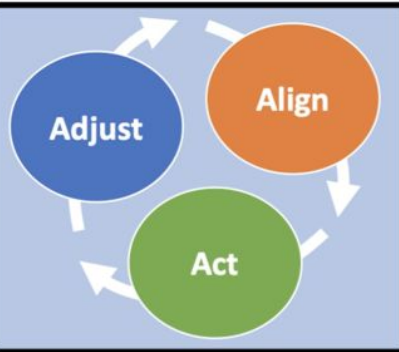
October 12-22, 2022

Stanford **SOCIAL INNOVATION** Review
Informing and inspiring leaders of social change



When Launching a Collaboration, Keep It Agile

By the Stakeholder Alignment Collaborative



MIT Sloan
Management Review

RESILIENCE

The Promise of Self-Sufficient Production

As global supply chains have revealed their vulnerability during the pandemic, digital fabrication technologies demonstrate a new way for work.



In a matter of 18 months, the world has seen the early benefits of the critical, in-person, on-demand, or "local" production, or "digital fabrication" (DF), technology. The local DF technology market is rapidly growing, and the technology is being used to address a wide range of needs, from prototyping to small-scale production. The technology is also being used to address a wide range of needs, from prototyping to small-scale production. The technology is also being used to address a wide range of needs, from prototyping to small-scale production.

Large-scale systems change takes top-down, bottom-up, and a new strategy: middle-across



Fab pour tous

(Fab for everyone)

包括

(Hou katsu; inclusion)

**Luq'u nitghe shesh q'a
ch'ghetnuh nitu nqezhada**
*(We all support our work for our
future)*

आत्मनिर्भर

(aatmanirbhars; self realiant)

**Fab Todos
Incluídos**

(Fab all included)

**FAB
All-In**

เอกภาพ

(unity, oneness)

Fab Kākou

(Fab all of us together)

Kaikenkattava

(All inclusive)

सबै भित्र

(All In)

Fab per Tutti

(Fab for everyone)