



Lecture: Making Makers

How?

Best practices in 3D Projects in FABLAT network!
Carlos Valladares / Captain Co-Founder Poliédrica Agency & Co-Founder FABLAT

A few years ago:

- **FAB 7**, Lima (2011)
- **65 Fab Labs** in 35 countries
- 1 Fab Lab in **Latam** (Lima)



2010-2025

- **3 Fab conference**
- **5 Academany participants** (Fab Academy & Fab All In)
- **7 Fab Labs** in 21,000 kms²





Purpose

Making makers







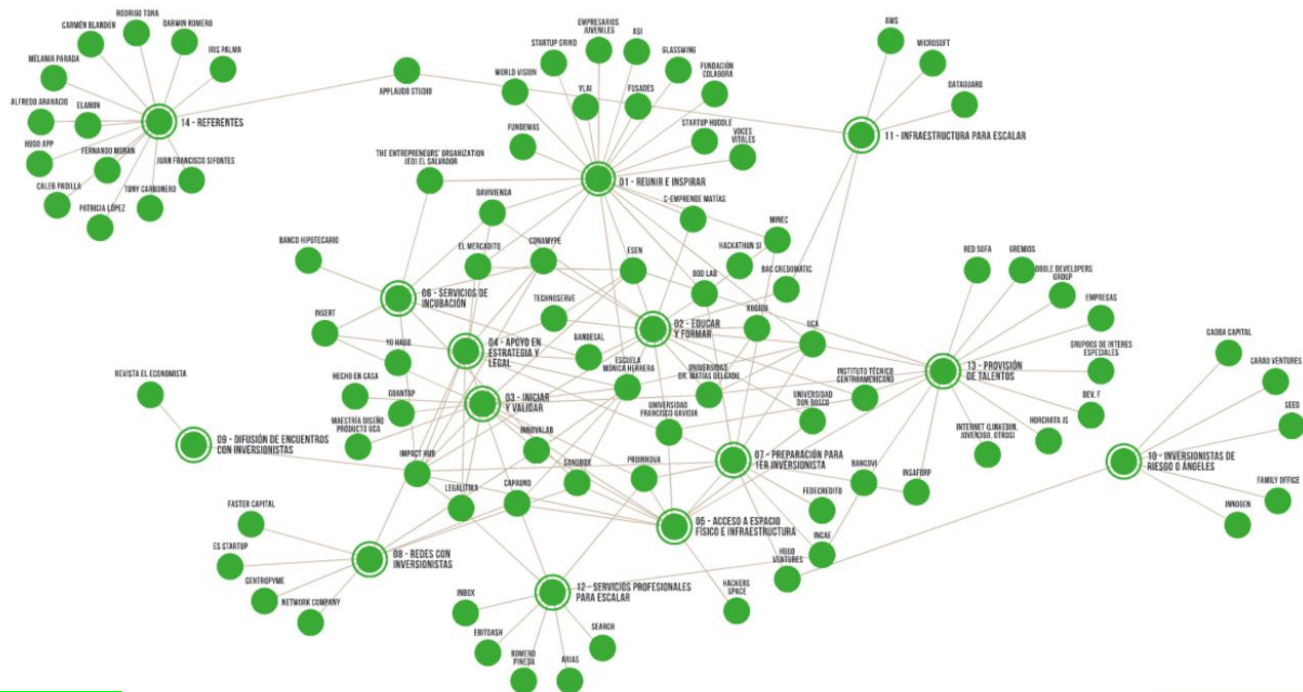
Ninja Makers

2

Key points

1. *Innovation?*

Figura N°20: MAPEO DEL ECOSISTEMA DE EL SALVADOR. EN EL MAPEO DE ACTORES.



Credits: [Estudio SNA X El Salvador 2022](#)

FUENTE: ELABORACIÓN PROPIA.

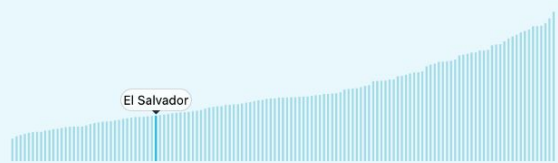
El Salvador GII rankings

El Salvador ranking in the Global Innovation Index 2024

Download PDF report

El Salvador ranks **98th** among the 133 economies featured in the GII 2024.

The Global Innovation Index (GI) ranks world economies according to their innovation capabilities. Consisting of roughly 80 indicators, grouped into innovation inputs and outputs, the GI aims to capture the multi-dimensional facets of innovation.



El Salvador ranks **31st** among the 34 upper-middle-income group economies.



El Salvador ranks **14th** among the 20 economies in Latin America and the Caribbean.



Credits: WIPO, EU Banking 2024

The new wave!



Línea Ruta Polígono ruta de acceso en 3D polígono en 3D

Mide la distancia entre distintos puntos en el suelo.

Longitud: 300.18 Kilómetros

Mostrar perfil de elevación

Navegación con mouse

Guardar Borrar

Own elaboration: Google Earth Pro

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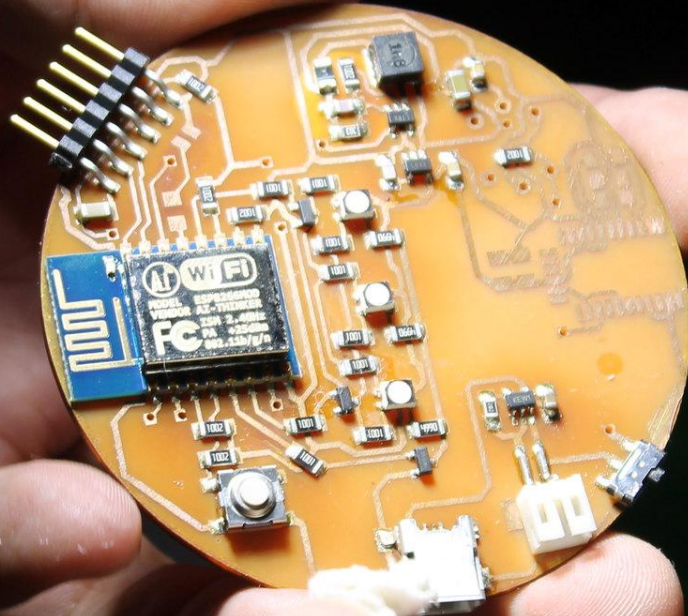
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Image Landsat / Copernicus
Image © 2024 TerraMetrics

Google Earth

The new wave!



Tech Hub?



1ST VIDEO



REACCIÓN KIDS / rho - air quality sensor for kids [VOL 0.1]

Environmental care with Data & Actions by kids and Youth!



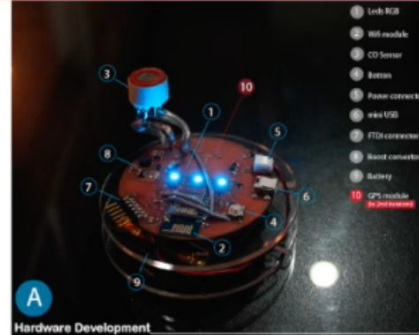
A project by
Carlos Valladares

DESCRIPTION

The scope of this project intends to make a bridge between rural and urban communities in a real exchange of kids and youth of different social status. The intention is to start a dialogue to connect the new generation of kids and youth. Additionally it looks to reduce the social exclusion and try together to solve environmental problems like air pollution and 'Explore, Measure and Make Awareness' to find better ways to make solutions to this big challenge in El Salvador, Latin America and globally.



rho is an open hardware device designed for children to ingest to begin scouting children and youth in the woods and also in cities. The objective of the project is to reconnect with the environment. The CO sensor allows you to make comparisons between the air quality of natural reserves such as forests, mountains or rivers; Being able to contrast it with what happens in the cities with the pollution of the automobiles and the industries. This Internet device of things is a usable that connects to upload information with Wi-Fi and allows to share geolocated information of air quality among children, youth and adults. Through different projects like 'Kids Making Things' that Fablab El Salvador Association create in 2016 and others like Fablat Kids this project can will scale and impact in the region.



- FAB ACADEMY CENTROAMERICA SST EDITION
- NODE
- FAB LAB VERITAS
- VÉRITAS UNIVERSIDAD
- FABLAB COSTA RICA
- FAB FOUNDATION
- FABLAT™
- Kä Träre
- FABLAB EL SALVADOR
- This project is a Creative Commons License
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-SKILLS APPLIED-
Processes / Assignments / applications and implications



2. *Fablabs*





DIY

revolution

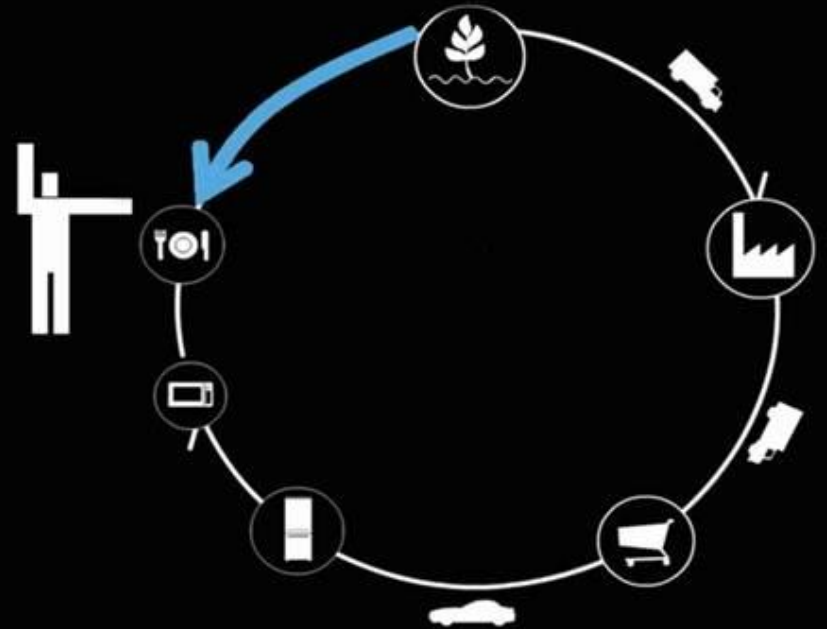
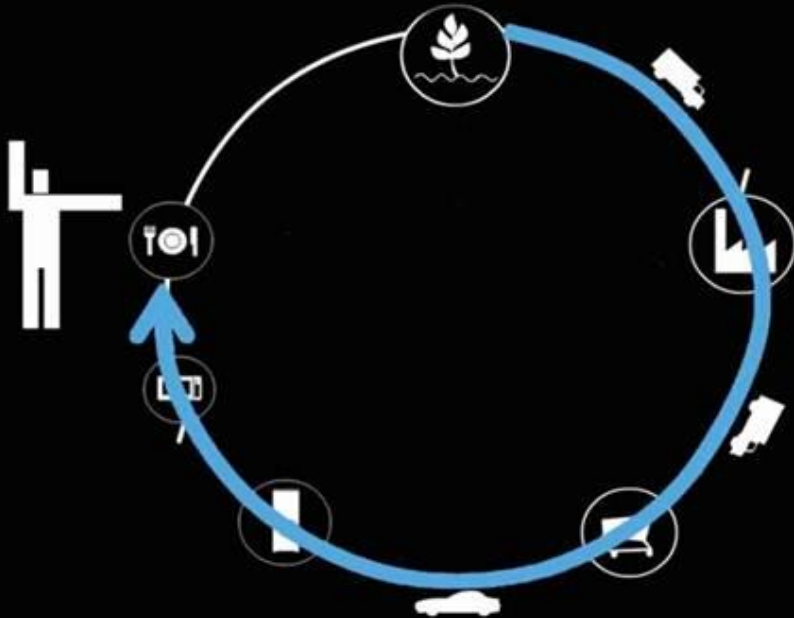
2005 | DIGITAL FABRICATION

1955 | DIGITAL COMPUTATION

1945 | DIGITAL COMMUNICATION

DEL CONSUMIDOR

AL PROSUMIDOR



The beginnings



Credits: Benito Juárez

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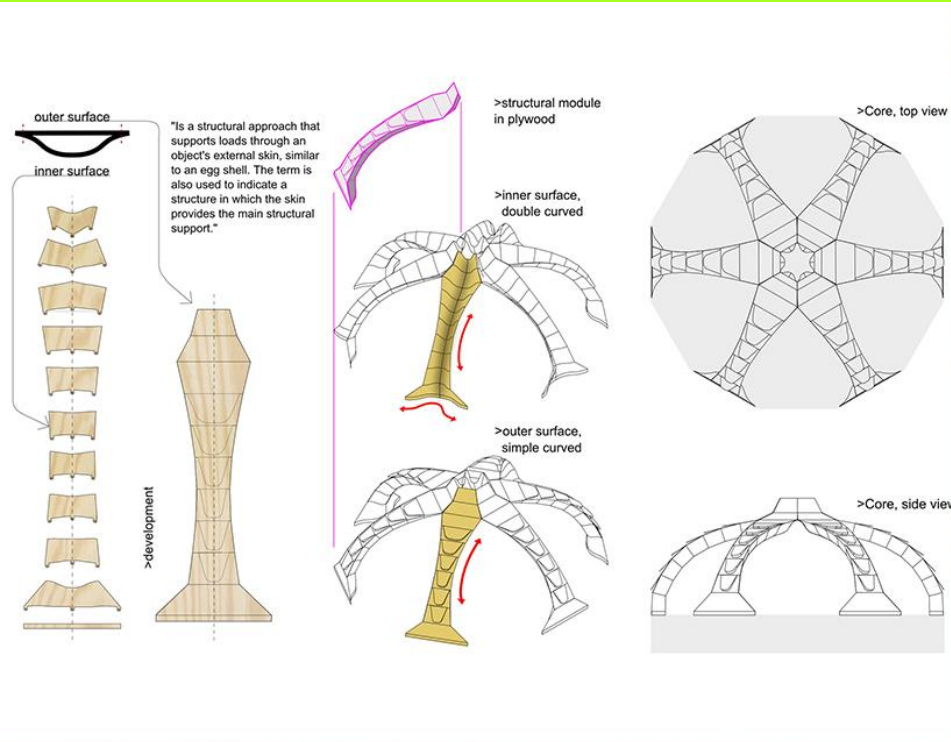
Purpose

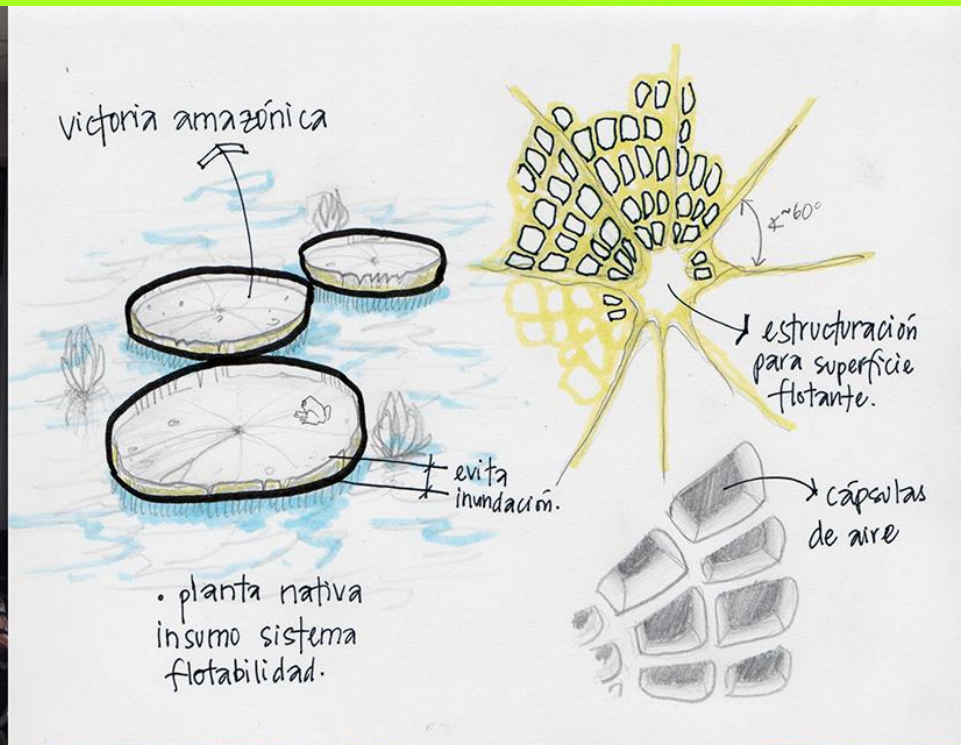


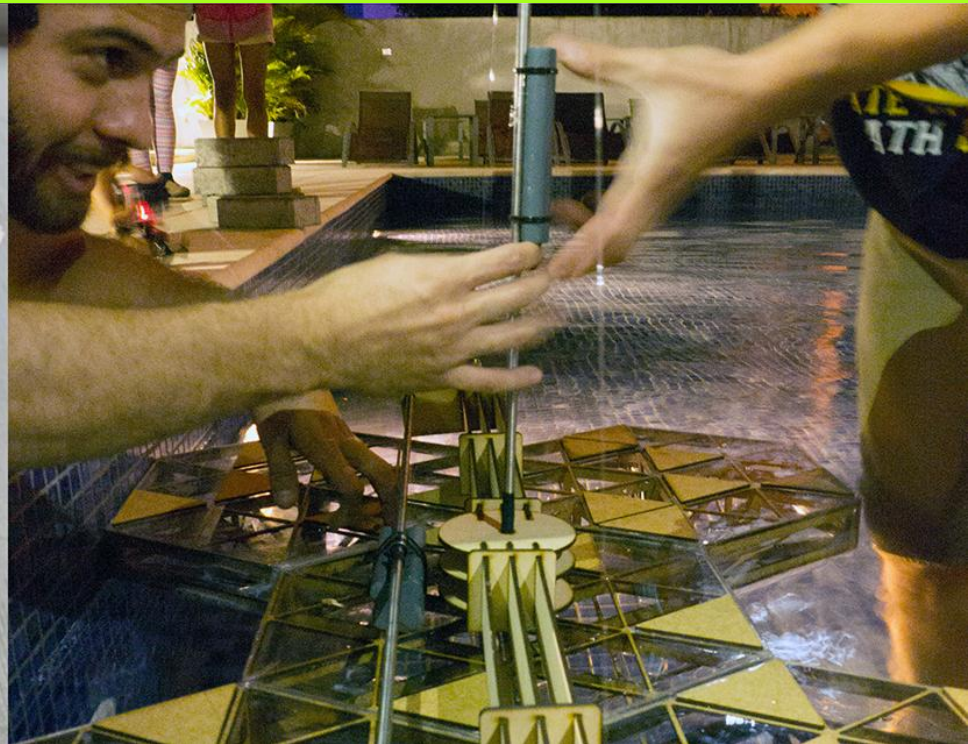
Making makers...

Selected by Solutions Summit 2015 :









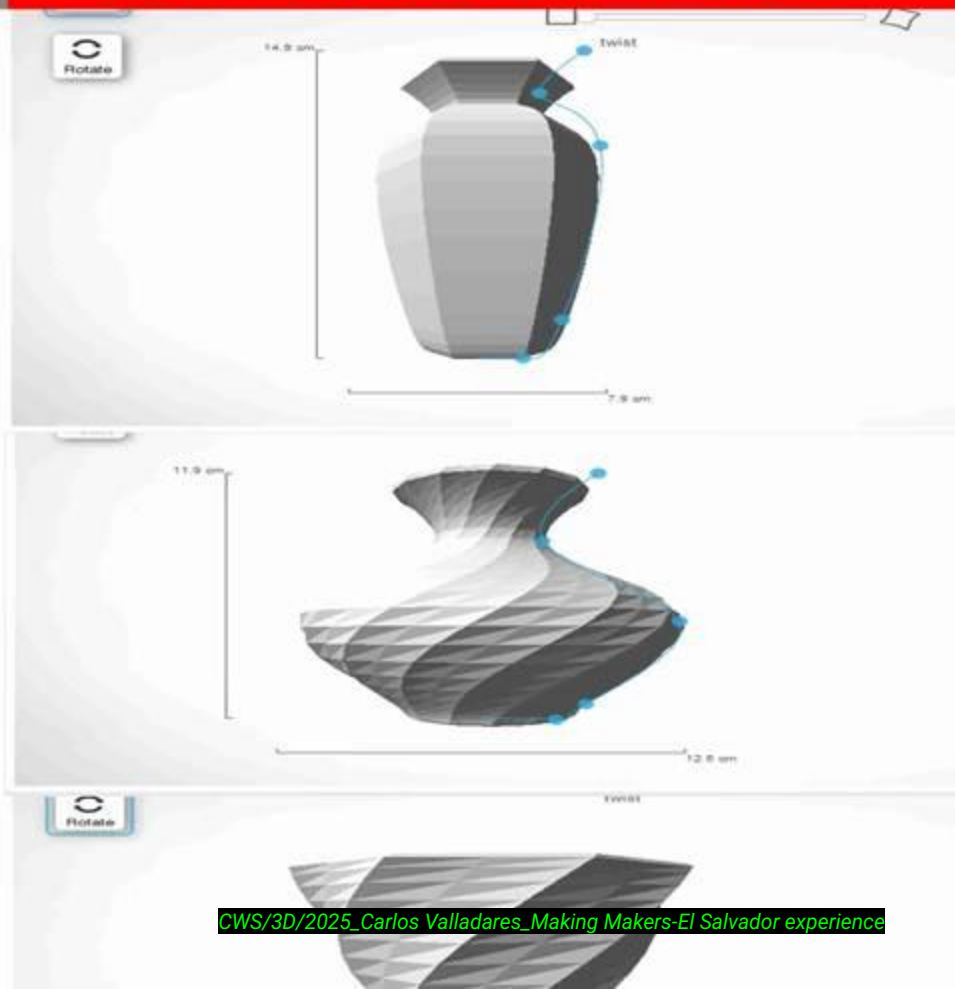
2ND VIDEO

FRANCISCO
CHAMAN

DE LO ESTANDARIZADO



A LO PERSONALIZADO



DE LOS BITS

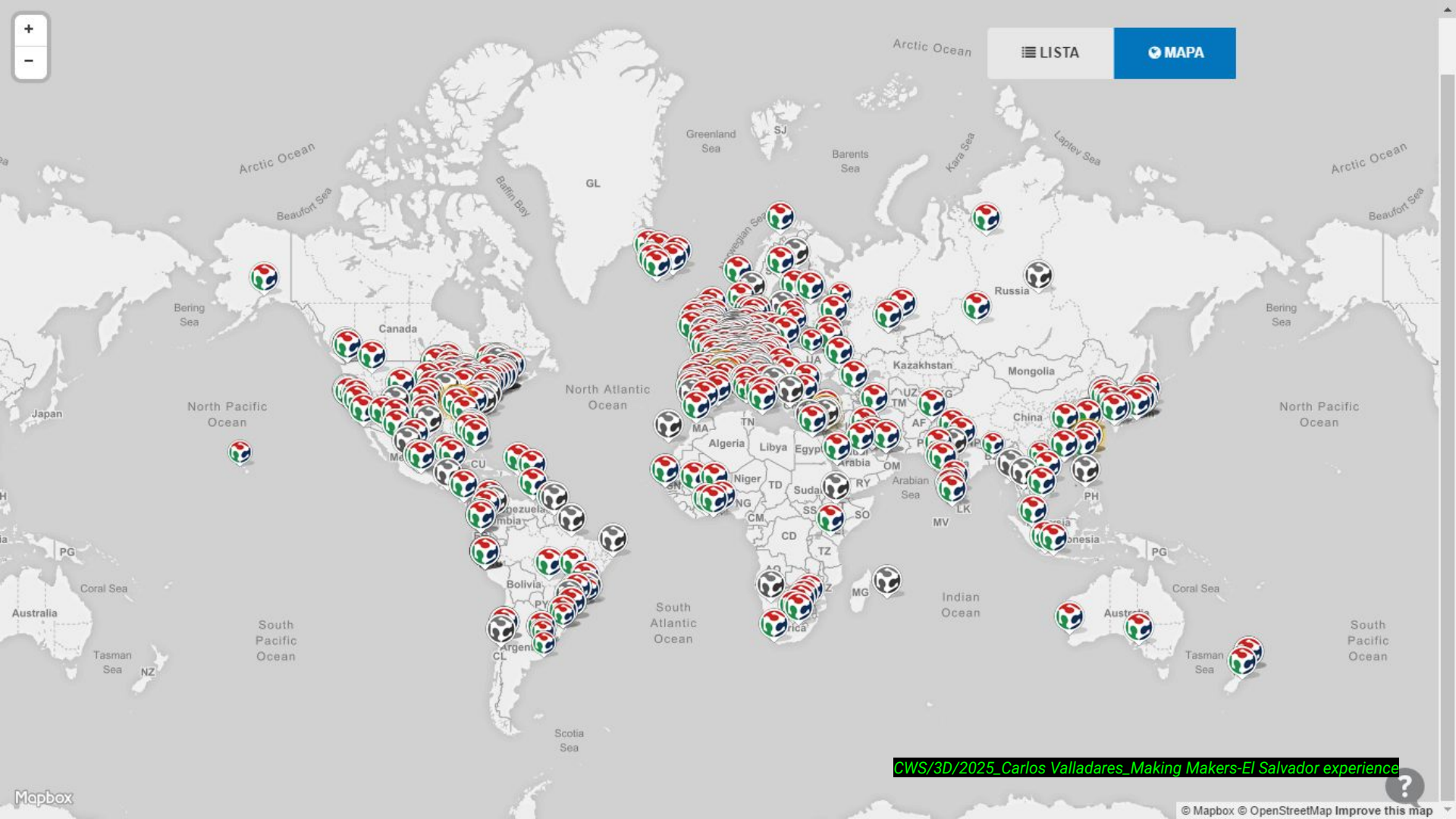
A LOS ATOMOS

Sake Set Creator

more creators







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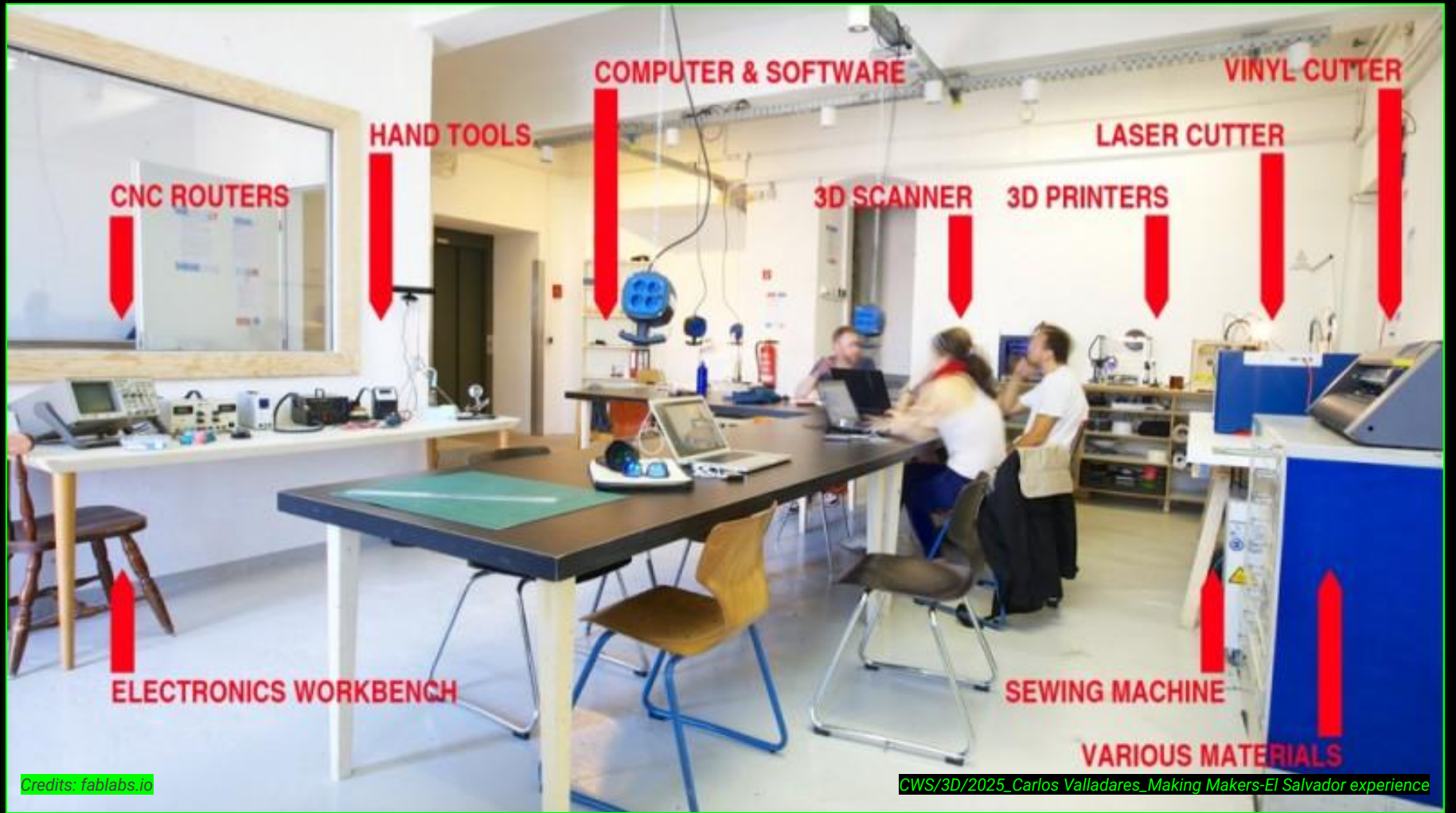
FAB LAT : THE LATIN AMERICA FAB LAB NETWORK



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Some conclusions





CNC ROUTERS

HAND TOOLS

COMPUTER & SOFTWARE

VINYL CUTTER

LASER CUTTER

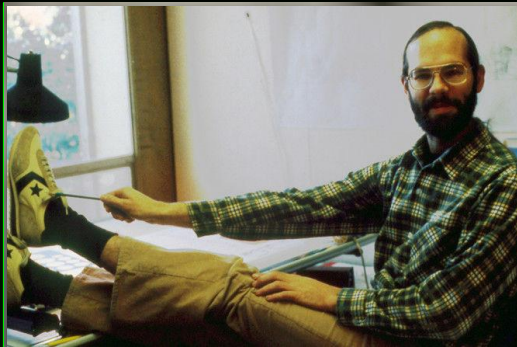
3D SCANNER

3D PRINTERS

ELECTRONICS WORKBENCH

SEWING MACHINE

VARIOUS MATERIALS



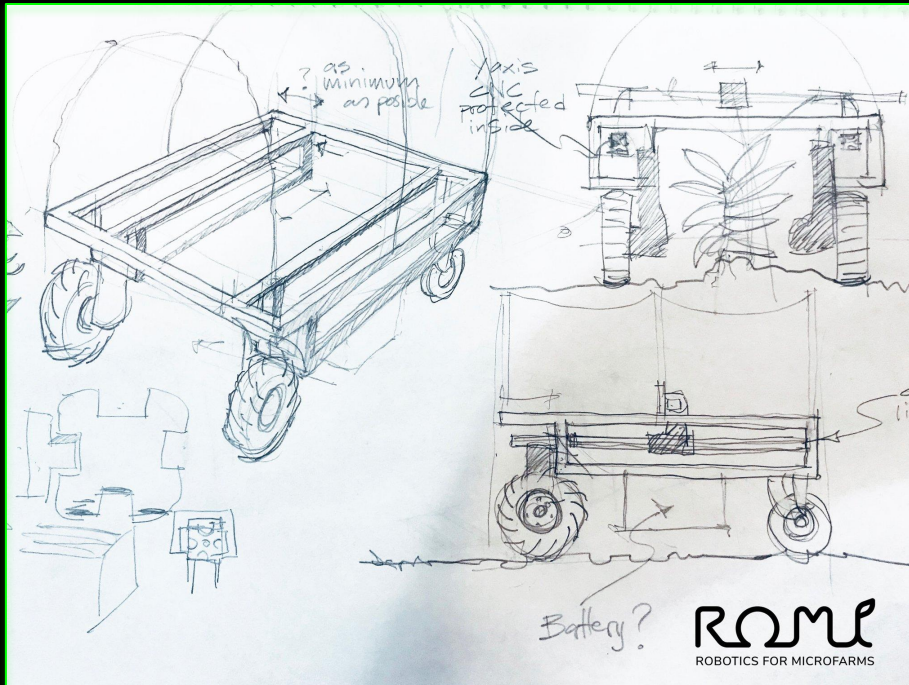
I think a really good designer does

[Credits: youtube.com/IDEO](https://www.youtube.com/IDEO)

[CWS/3D/2025_Carlos Valladares_Making Makers-El Salvador experience](https://www.youtube.com/watch?v=CWS/3D/2025_Carlos_Valladares_Making_Makers-El_Salvador_experience)

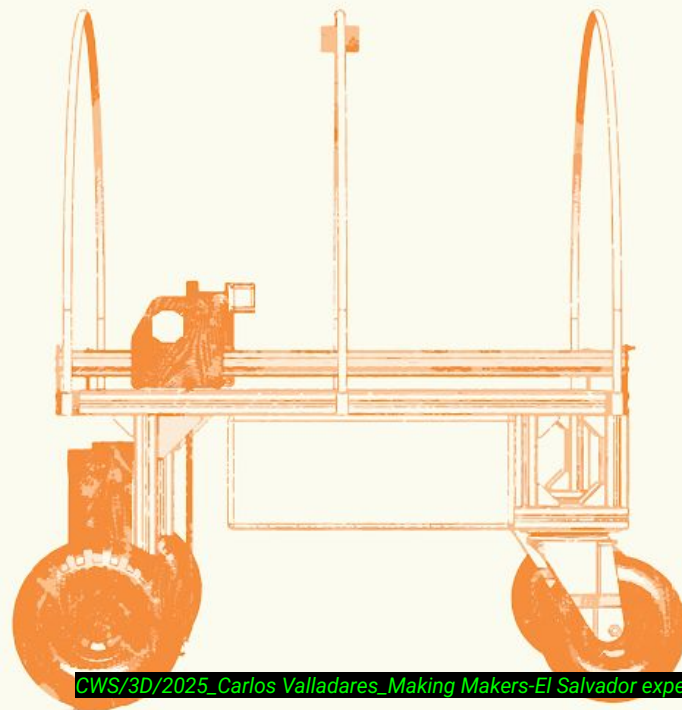
Purpose





Robotics for Micro Farms.

Study Case:
ROMI, Robotics for Microfarms



Credits: fablabbcn.org/projects



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FROM BITS TO ATOMS!



Fabricating Futures!

MAKING MAKERS!

MTP: 1,000,000 Salvadoreans with digital skills in 2045*

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Created by Carlos Valladares, Captain & Founder of Poliédrica Research & Design Agency // Founder de Fab Lab El Salvador & Co Founder de FABLAT.

*Massive Transformative Purpose of Kako Valladares

www.instagram.com/poliedrica_sv

www.instagram.com/fablab_sv

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