



# Fab Nomad

Democratizing access to the tools and knowledge for technology invention



fabfoundation MIT

(left) Field fabrication of high-gain long-range FabFI network.  
(right) Fab lab solar house, Institute for Advanced Architecture of Catalonia.

10x\$1M ~ \$10M



10x\$100k ~ \$1M



10x\$10k ~ \$100k



~ \$1k



~ \$100



The personal fabrication movement began at MIT under the Center for Bits and Atoms (CBA). CBA now teaches one of the most popular classes at MIT.  
**MAS.863/4.140/6.9020 How To Make (almost) Anything.**

**How To Make (almost) Anything**

MIT sponsors and provides:  
- access to state-of-the-art equipment  
- 400+ specialized computer-aided design (CAD) software licenses  
- 100+ open-source hardware designs  
- 100+ open-source software designs  
- 100+ open-source mechanical designs  
- 100+ open-source electrical designs  
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The promise of personal fabrication

Fab Labs are **community spaces** set up to facilitate project-based, hands-on STEM education. At their core, they are digital fabrication laboratories with cutting-edge tools and technologies.



Field fabrication of high-gain long-range FabFI network.

2,700 Fab Labs in 135 countries



Mobile fab lab at the White House.



Haakon



Kalbag



Mel

Community leaders gather in Fab Labs to engineer local solutions locally, marrying native knowledge with global best practices.



## Roadmap

Shenzhen, China

Bhutan

Pabal, India

Kamakura, Japan

Amazon Rainforest

Barcelona, Spain

Amsterdam, The Netherlands

Northern Norway / Iceland



## Shenzhen, China

manufacturing, intellectual property, open source development, *shanzhai*, democratization of technology (& art)



PCB Manufacturing



Dafen Art Village



Huaqiangbei Electronics Marketplace



Component Reels



Malcolm Clarke and Han Yi, ARTeFACT

# Bhutan

mindful development, sustainability, nascent R&D ecosystem, long term thinking/SAR “playground” for courageous new paradigms



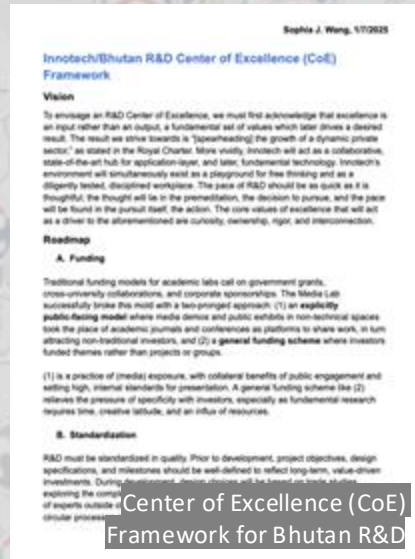
Innotech and JNWSFL



Dungkar Dzong



Skilling Programme with Chef William Yosses



Center of Excellence (CoE) Framework for Bhutan R&D



Royal Academy FabLab



## Pabal, India

Self sufficient “Fab City”, smart agriculture, energy, water, education, and entrepreneurship – scaled to a village.



Locally fabricated earthquake-resistant housing



Animal husbandry



Polyhouse



Black Soldier Fly composting



BioLab – nutrition, agro, tissue

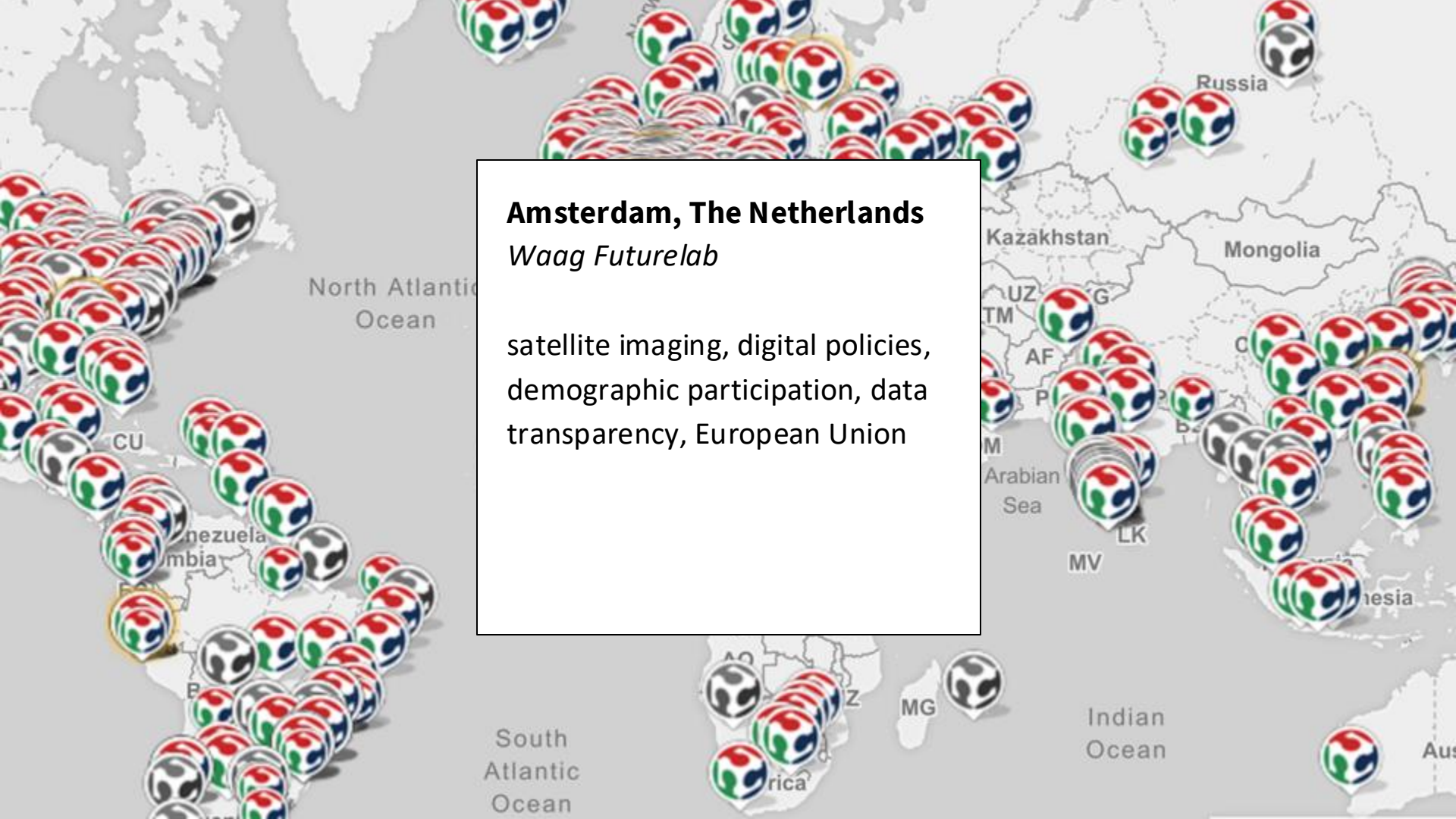
A world map with numerous floating globe icons, each featuring a red, white, green, and blue design. The icons are scattered across the continents, with a high concentration in North America and Europe. A white text box is overlaid on the map, containing text about the Amazon Rainforest Floating FabLab.

**Amazon Rainforest**  
*Floating FabLab*

natural capital accounting,  
genetic biodiversity bank,  
reaching indigenous makers





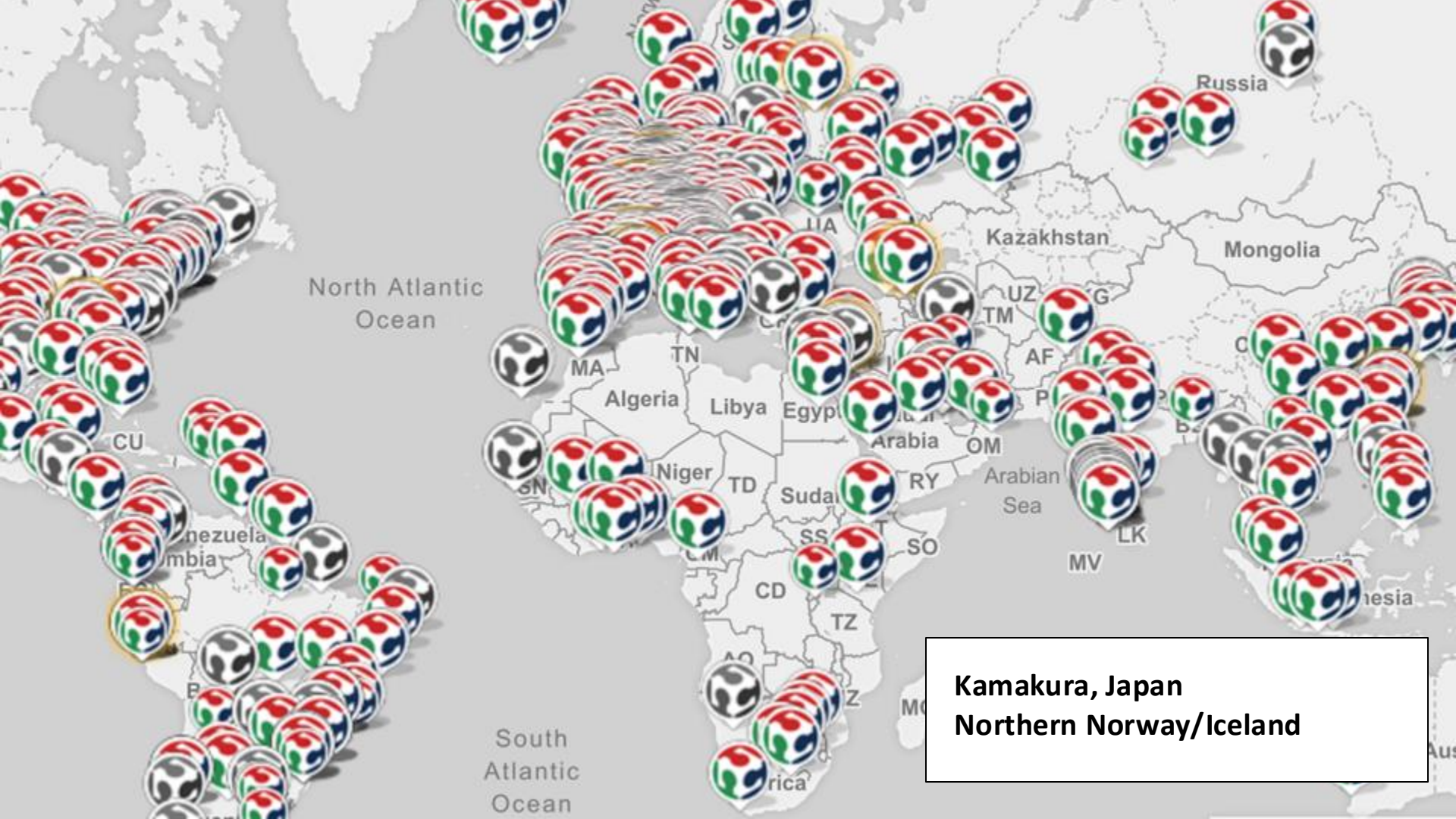


## **Amsterdam, The Netherlands**

*Waag Futurelab*

satellite imaging, digital policies,  
demographic participation, data  
transparency, European Union





North Atlantic Ocean

South Atlantic Ocean

**Kamakura, Japan**  
**Northern Norway/Iceland**







Alþingi, Parliament House of Iceland  
Barcelona City Council  
City of Amsterdam  
CLICKNL  
DaFen Village Art Studio  
Dassault Systems  
De-suung Skilling Programme (DSP)  
Department of Employment and Entrepreneurship,  
Bhutan  
Department of Sciences and Technology,  
Government of India  
Druk Holding and Investments (DHI)  
Druk Gyalpos Institute (DGI)  
European Commission  
European Union Agency for the Space Programme  
Fab City  
Gelephu Mindfulness City (GMC)  
Global Alliance for a Sustainable Planet

Grant for the Web  
Institute for Advanced Architecture of Catalonia  
(IAAC)  
UNICEF  
Materiom  
Ministry of Education, Culture and Science, The  
Netherlands  
Norwegian University of Science and Technology  
Praj Foundation  
Seed Studios  
Space Iceland  
Southern University of Science and Technology  
(SUSTECH), Shenzhen, China  
Symbiocreacion  
Tsinghua University  
United Nations Sustainable Development Group  
WASP