

# Workshop

## Fab Labs and Sustainable Development Goals

### The Next Round

FAB15 – 15<sup>th</sup> Annual International Fab Lab Conference, ElGouna / Cairo,  
Egypt, 28 July – 4 August 2019

**Enrico Bassi (Italy)**, **Nagwa ELnwishy (Egypt)**, **Vaneza Caycho Ñuflo (Peru)**, Neville Govender (South Africa), Arundhati Jadhav (India), **Beno Juarez (Peru)**, **Ted Hung (Taiwan)**, Yogesh Kulkarni (India), Noksy Letsoalo (South Africa), Jean-Baptiste Natali (New Zealand), Wendy Neale (New Zealand), **Pieter van der Hijden (Netherlands/Suriname)**

**Name in bold** = Workshop Facilitators

# Agenda



**Wednesday 31th of July 2019**  
**16:30-18:30 h. – room F47**

- A. Intro on SDGs and MDBs (P)
- B. Enhance our SDG experience
  - Propagate the SDG message (T1)
  - Let your SDG profile work (T2)
- C. Start working with MDBs
  - Express your interest (T3)
  - Prepare your proposals (T4)
  - Run your projects (T5)
- D. Wrap-up and evaluation (P)

(P) = Plenary

(Tn) = Teamwork

# **A. INTRO ON SDGS AND MDDBS**

# U.N. Sustainable Development Goals

- 17 goals
  - 169 targets
- Time horizon 2016-2030
- Signed by 193 countries
- Unique socio-economic program for the whole earth
- Global frame of reference for development issues



# Fab Labs align with SDGs

SDG Planning Board			
EXAMPLE FAB LAB XXX		Determine the SDG-profile for your fab lab	
	4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.	Many activities in this field information and demonstration to general public at events, workshops for different age groups, courses for 2D design and laser cutting, 3D design and 3D printing, fab academy, etc.	 Plan a better match with your SDG profile
	8. Promote sustained, inclusive and sustainable economic growth, full and productive employment, and decent work for all.	Two staff members with expertise in organizational health and safety, not only important internally, but we include it in many projects as well.	 Identify new opportunities for the fab lab network
	9. Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation.	Especially young professionals and technopreneurs: all is about new products and services, especially software and connectivity is very popular in our lab	
	17. Strengthen the means of implementation and revitalize the global partnership for sustainable development.	Partnerships with local organizations, especially the support chain for new startups, active member of fab region and global network.	

Sample: Outcome of local fab lab workshop

## Our Workshop Format for Local Fab Labs

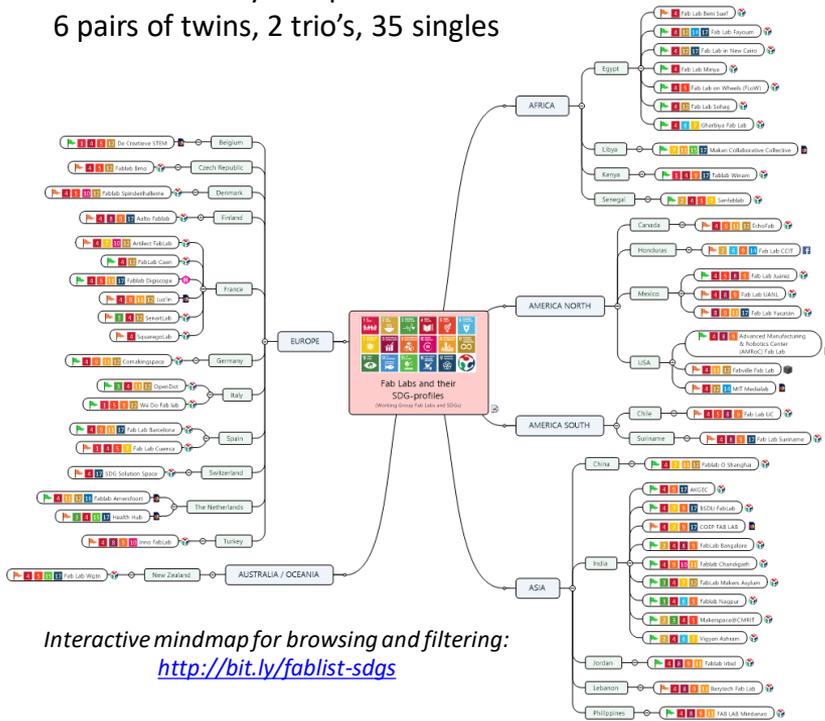
A. Determine the SDG Profile for your fab lab

B. Plan a better match with your SDG Profile

C. Identify new opportunities for the Fab Lab Network

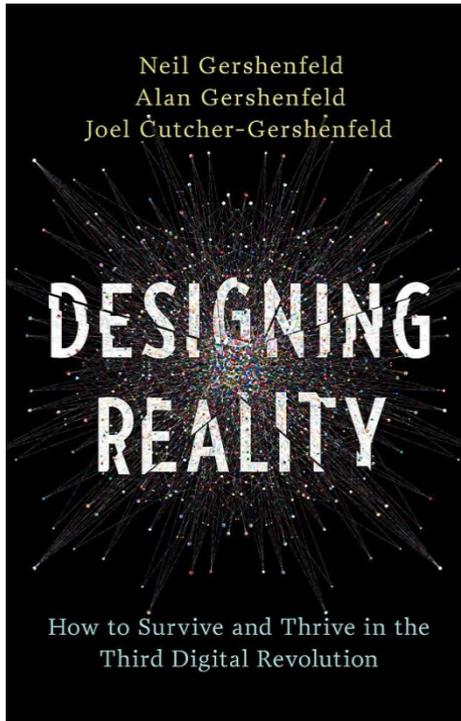
# First results: 53 SDG Profiles

Collectively Independent  
6 pairs of twins, 2 trio's, 35 singles



SDG	Title	Count	%	Rank
1	No poverty	4	8%	
2	Zero hunger	5	9%	
3	Good health and well-being	6	11%	
4	Quality education	49	92%	1
5	Gender equality	12	23%	
6	Clean water and sanitation	4	8%	
7	Affordable and clean energy	10	19%	
8	Decent work and economic growth	12	23%	
9	Industry, innovation and infrastructure	24	45%	2
10	Reduced inequalities	4	8%	
11	Sustainable cities and communities	15	28%	4
12	Responsible consumption and production	19	36%	3
13	Climate action	0	0%	*
14	Life below water	3	6%	
15	Life on land	3	6%	
16	Peace, justice and strong institutions	1	2%	
17	Partnerships for the goals	15	28%	4
		N =	53	100%

# However ...



- "Just because there is a conceptual fit with the UN sustainable development goals doesn't mean that it is the reality on the ground."
- "For the third digital revolution to truly become a revolution, it will need to do more than demonstrate exponential gains in technical performance. **The technology must clearly address enduring societal needs with models that can be replicated and locally adapted for broad-based impact.**"
- Tom Kalil, former deputy director of the White House Office of Science and Technology Policy and a strong advocate of the maker and fab movements: "**the ability of the maker or fab communities to help solve particular societal problems is a key yardstick to measure progress.** It is not just about self-expression."

# Trillions USD needed, billions available

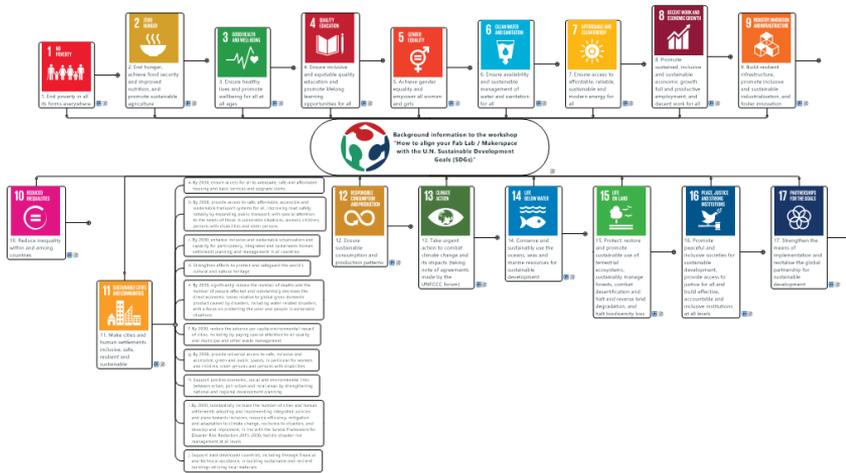
- Multilateral Development Banks (MDBs) only have billions

- E.g. African Development Bank, World Bank, Islamic Development Bank, etc.

- SDG programs and projects need trillions

- New MDB policy:

- “Use billions to unlock the trillions”



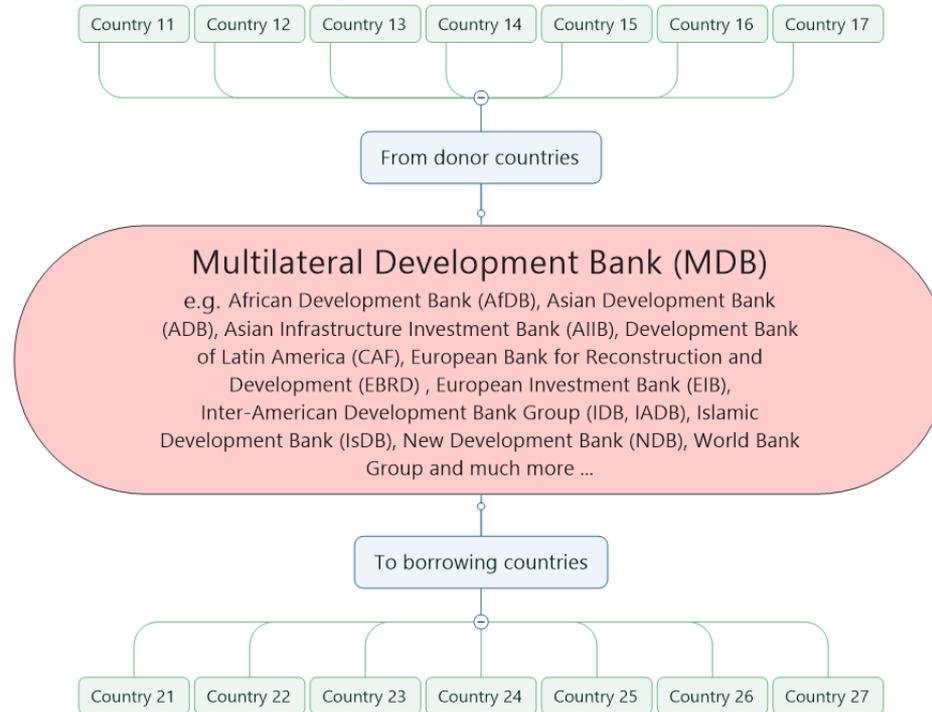
Interactive mindmap for browsing and searching all SDGs and underlying targets  
English: <http://bit.ly/fab14-sdgs-mindmap> Spanish: <http://bit.ly/SIMBIO2018-ODS>

# Fab Labs and SDGs: The Next Round

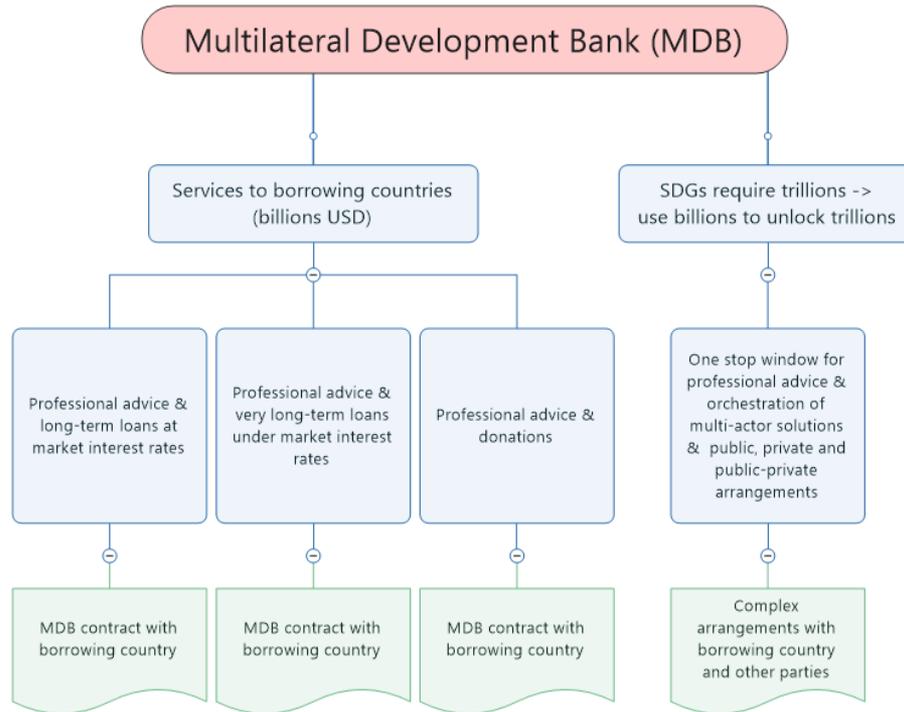


- Focus on our mission & learning path
- Move from pitching to helping
- Contribute to real-world challenges
- Learn to work with MDBs
- Stay collectively independent and survive!

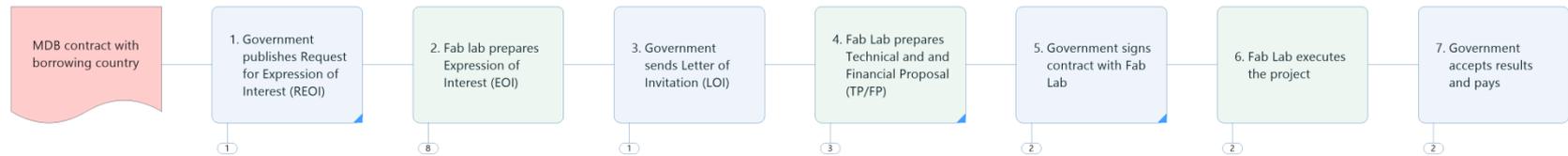
# Multilateral Development Banks (MDBs)



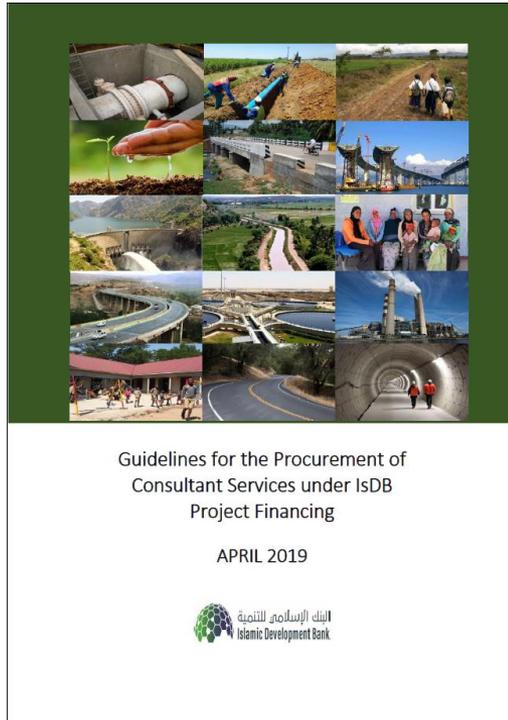
# The changing role of MDBs



# MDB financing process



# Misunderstandings regarding MDBs



- ✘ Only the Fab Foundation can do business with MDBs
- ✘ Fab Labs can come up with initiatives for projects themselves
- ✘ Fab Labs only have to stick to their own project description
- ✘ Fab Labs determine how the project budget is spent
- ✘ Fab Labs demonstrate their work in practice and not on paper

# **B. ENHANCE OUR SDG EXPERIENCE**

# Propagate the SDG message

How to align your Fab Lab / Makerspace with the U.N. Sustainable Development Goals (SDGs)

Manual for the Fab Lab Manager

This document describes a generic workshop format for use in the fab labs, follow-up of the Workshop: Fab Labs and Sustainable Development Goals (SDGs); FAB14 – 14th Annual International Fab Lab Conference, Toulouse, France, 16-22 July 2018

Authors: Pieter van der Hijden (The Netherlands & Suriname) plus global team: Enrico Bassi (Italy), Vaneza Caycho Ñuflo (Peru), Neville Govender (South Africa), Arundhati Jadhav (India), Yogesh Kulkarni (India), Nokay Letsoalo (South Africa), Jean-Baptiste Natali (New Zealand), Wendy Heale (New Zealand) – contact [psvdh@sefio.nl](mailto:psvdh@sefio.nl)

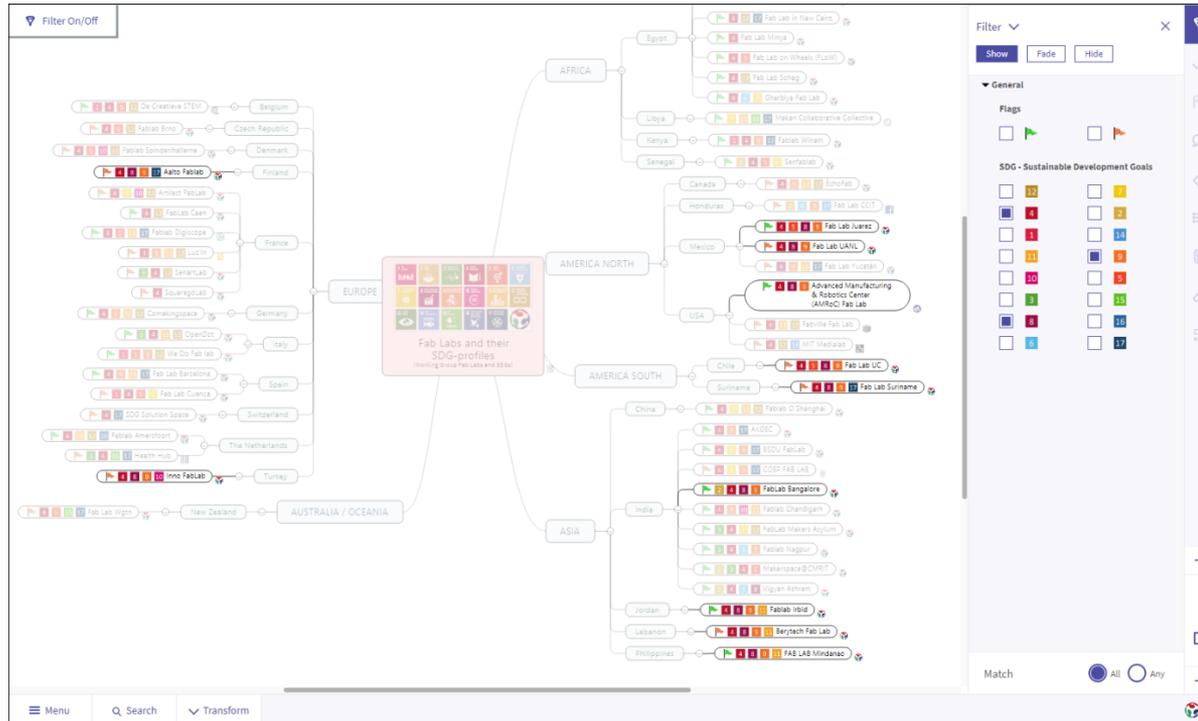
Keywords – united nations, un, sustainable development goals, sdgs, sdg, global goals, fab lab, fablab, makerspace, innovation centre, maker movement, future, policy, vision, mission, SDG Profile

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- What we did
  - Spread the SDG word to fab labs
  - Offer workshop format to local fab labs
  - Collect the SDG profiles, put them on the map and give feedback to the lab
- The result
  - 53 / 1500 labs
- **TEAMWORK 1 (discuss and report)**
  - **What was good in what we did so far?**
  - **How can we improve our score (53/1500) and our impact?**
  - **Which other suggestions do you have?**

# Let your SDG profile work

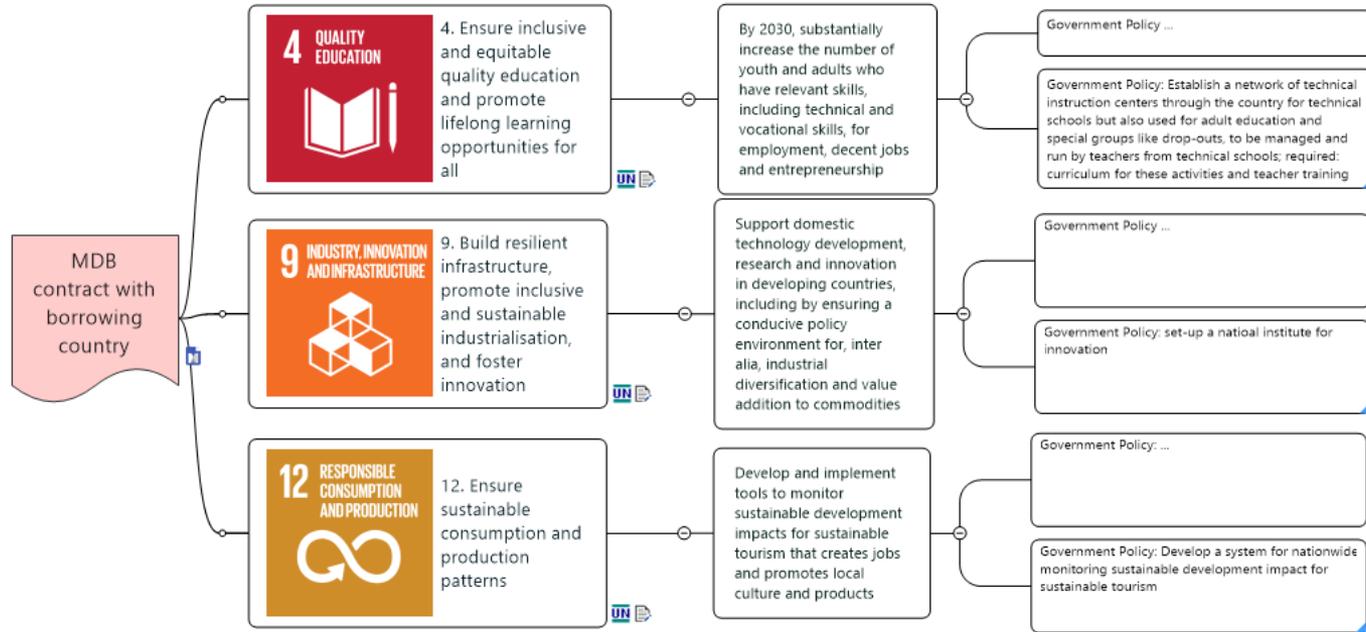


- The map gives us new insights in the identity of the fab lab network
  - It shows what we have in common
  - It shows what is different
  - Can we find twins, trio's and quartets?
- **TEAMWORK 2 (discuss and report)**
  - **What can a fab lab do with the map?**
  - **What could the network do with the map?**

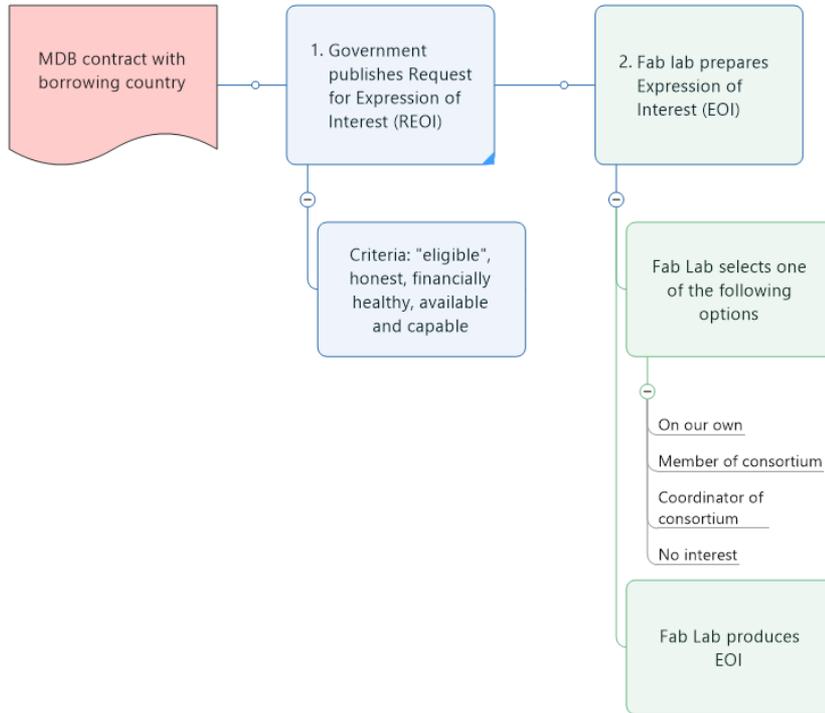
# C. START WORKING WITH MDBS

# Express your interest

Government specifies policies to lead to programs and projects



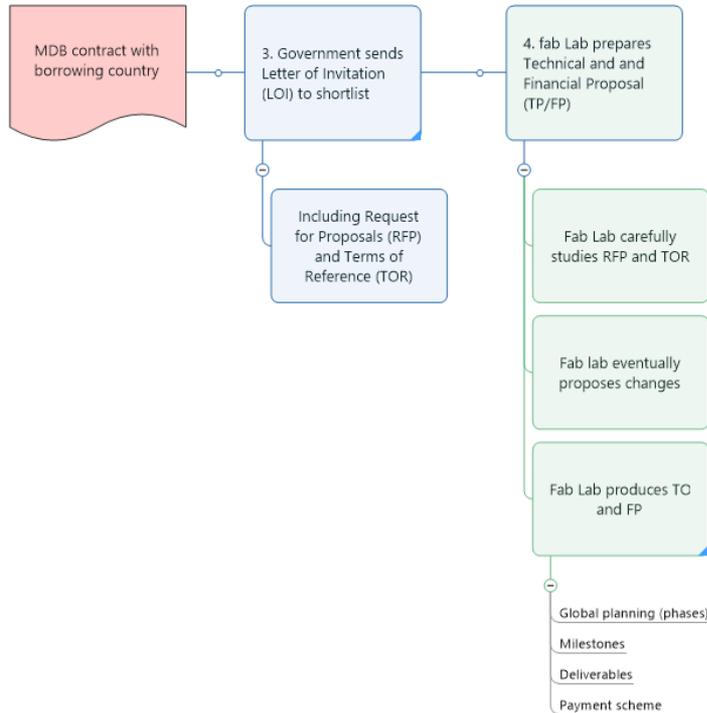
# Express your interest



Example: Government request for Expression of Interest for their policy:

- Establish a network of technical instruction centers through the country for technical schools but also used for adult education and special groups like drop-outs, to be managed and run by teachers from technical schools; required: curriculum for these activities and teacher training
- **Teamwork 3 (discuss and report): Suppose you as a team manage a fab lab together. Would you respond to the above request? Why, why not? Do you meet the stated criteria? Which option do you choose?**

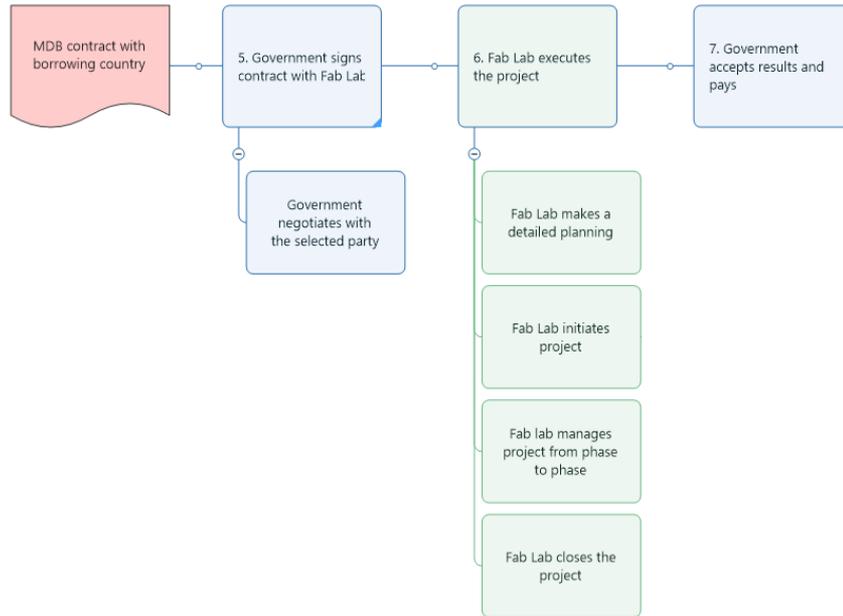
# Prepare your proposals



Yes, your EoI has been accepted. You now are invited to prepare a proposal.

- **Teamwork 4 (discuss and report): Prepare a proposal (one sentence). Indicate: 1) what will you do yourself, 2) what will you outsource? 3) how are you going to organize that?**

# Run your projects



- **Teamwork 5 (discuss and report): Congratulations, you have your contract.**
  - Prepare a global work breakdown structure for your project
  - Make a short risk inventory for this project
  - How are you going to deal with these risks?

# **D. WRAP-UP AND EVALUATION**

# Wrap-up and evaluation

Wrap-up – highlights from the teams:

- A. Intro on SDGs and MDBs
- B. Enhance our SDG experience
  - **Propagate the SDG message**
  - **Let your SDG profile work**
- C. Start working with MDBs
  - **Express your interest**
  - **Prepare your proposals**
  - **Run your projects**
- D. Wrap-up and evaluation

Evaluation of this meeting:

1. What was good?
2. What could we improve?
3. Which other suggestions do you have?

# Bonus

During FAB15, all Fab Labs that have registered their SDG profile will receive a lapel pin with the SDG wheel in 17 colors (1 per fab lab) 😊



*SDG Manual for Fab Lab Managers: <http://bit.ly/fab14-sdgs-fablabmanager> - SDG Profile Submission Form: <http://bit.ly/fab14-sdgs-form>*

# Thank You !

## We will keep you informed by email!

Workshop

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ONE LINK for ALL FILES: <http://bit.ly/fab15-sdgs>