

Crowdfunding for Infrastructure Projects Financing: Lesson Learned for Asian Countries

Presented for:

Specialty Conference

“Fintech to Enable Development, Investment, Financial Inclusion, and Sustainability”

24 September 2020

Nika Pranata, Nur Firdaus, Erla Mychelisda, Achsanah Hidayatina

Economic Research Center, Indonesian Institute of Sciences

OJK Institute, Indonesia Financial Services Authority (OJK)

INTRODUCTION

Benefits of Infrastructure Projects



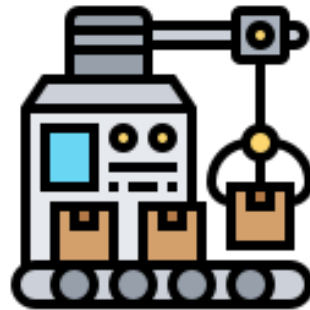
Cost reduction



Enhance competitiveness



Jobs creation



Increase productivity

Gaps



Requires a lot of capital investment

- USD 57 trillion up to 2030 (McKinsey)
- USD 1-1.5 trillion of financing gap in infrastructure (G20)



Unbankable:

- High risk (macroeconomic and political risk)
- Long payback period
- Mismatch between offered investment instrument and the requirements of investors
- Etc.

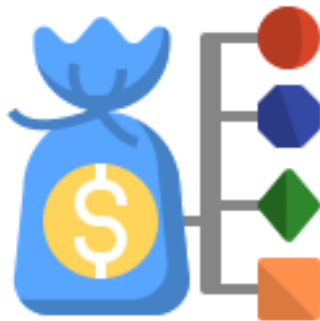
THE NEEDS FOR ALTERNATIVES SOURCES OF FINANCING



Alternative
source of
funding



Diversified
investors

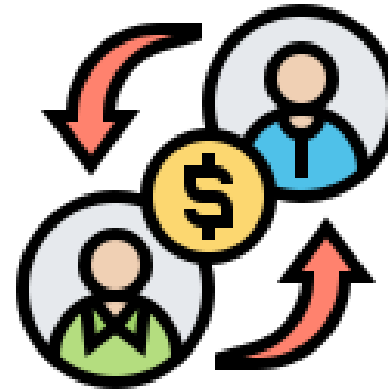


Various types of
investment
instrument

THE EMERGENCE OF FINTECH



- Innovative
- Digital technology
- Borderless
- Minimize asymmetric information



Remarkable development of P2P lending
in Asia:

- In Indonesia it has grown more than 15,000% in only 3 years (2016-2019)

HOWEVER,

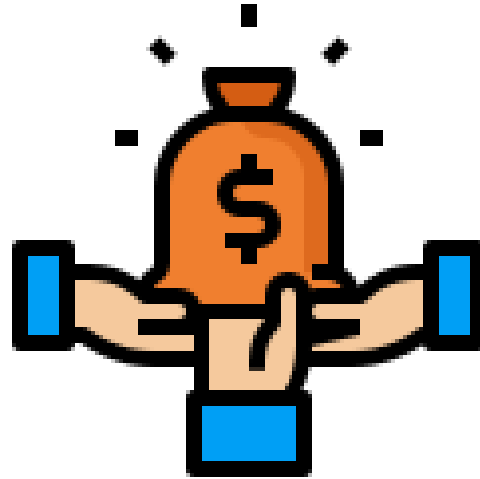
Crowdfunding is not popular in Asia especially for commercial/productive purposes.

It is widely used for charity purposes

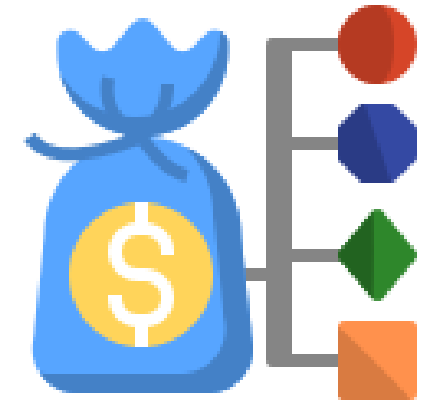
The characteristics of Fintech +



Raising small
number of
funds



Raised from many funders to many
individuals/businesses/projects



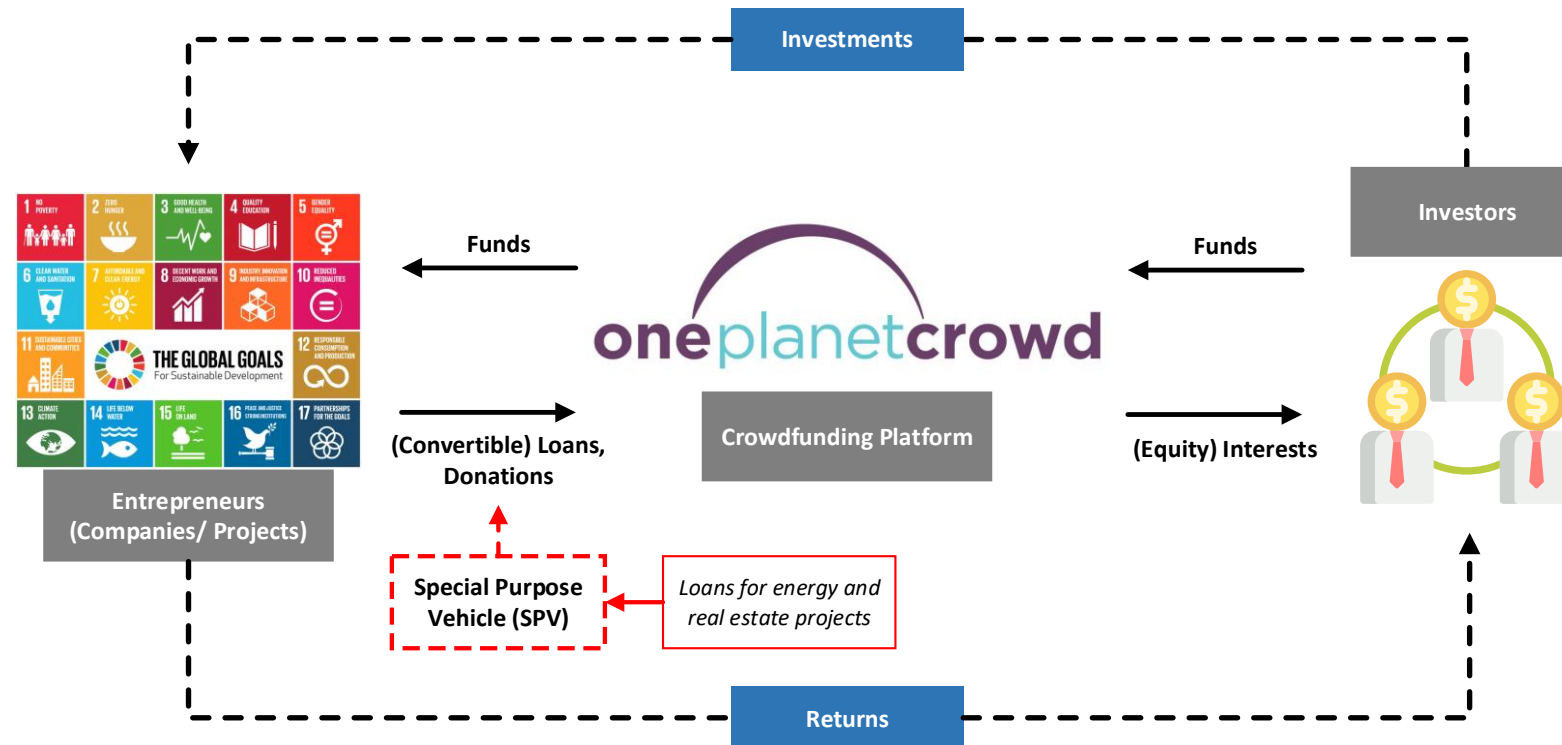
Various types of
investment instruments
including:

- Donation based
- Reward based
- Equity
- Debt
- Hybrid



CROWDFUNDING PLATFORMS FOR INFRASTRUCTURE PROJECT IN THE EUROPE AND AMERICA

1. oneplanetcrowd



- 1) Based in the Netherlands, founded in 2012
- 2) Projects related to social sectors and/or sustainable development goals (SDGs)
- 3) One of the pioneers and the largest in Europe
- 4) 'Impact investing' with attractive financial returns
- 5) Investors target: individual and business investors
- 6) Offering two types of investment with different return and risk:
 - a. Loan (interest rate: 4-10% p.a.), Duration: 1-10 years, Repayment Mechanism: linear, bullet, annuity, Purposes: SME loan, Energy and infrastructure loan
 - b. Convertible loan (equity based): high return and high risk Discount (15%-30%) for conversion Purpose: a young, fast-growing company (start-up)

Source: Oneplanetcrowd (2020)

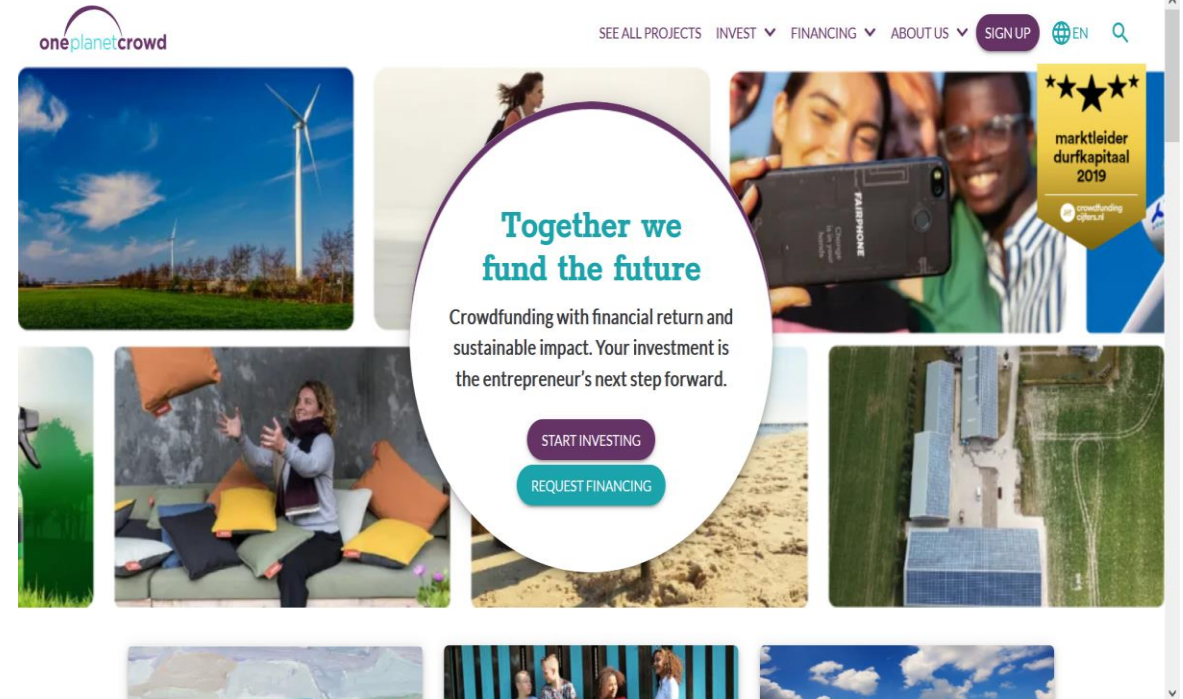
ONEPLANETCROWD SELECTED PROJECTS



Finance type	Project			
	Name	Successfully funded (in EUR)	No. of investors	No. SDGs
Convertible loan	Citi Hub Utrecht	0.7 million	448	8, 9, 11, 13
	Solease – solar energy	1.0 million	291	7, 13
	Solesta Zonneboiler	0.2 million	45	7, 13
	Qugo	0.1 million	88	7, 13
	PowerPlane® van Ampyx Power	0.3 million	272	7, 13
Loan	Agradu B.V.	0.6 million	270	7
	Donkey Republic	0.7 million	515	3, 11, 17
	BeGreen Arenapark B.V.	0.5 million	299	7, 9
	Windcentrale II	0.9 million	833	7, 13
	de Windcentrale	0.7 million	421	7, 13
	Enie.nl	0.1 million	92	7, 13
	Blue Current	0.2 million	141	11, 13
	Enie.nl	0.2 million	162	7, 13
	ECONNETIC	0.3 million	187	7, 13
	Peters Biogas	1.2 million	542	7, 9, 12
	Kuster	0.5 million	202	7, 13
	Van Eijck	0.1 million	37	9, 12
	Energy Floors	0.2 million	169	9, 11, 13
	Agro Giethoorn	0.6 million	334	7, 9
	Zonnepark Apeldoorn	0.2 million	181	11, 13
	Amarenco Crowd	0.1 million	106	7, 13

Source: Oneplanetcrowd (2020)

No.	Finance type	Description (in EUR)	
1.	Loan	Total balance loans	32,099,614
		No. of loans	104
		Total sum mediated	27,164,396
		Total interest	4,935,218
		Total repaid	9,512,661
		Total outstanding	21,910,092
		Total written off (> 90 days)	676,861
		In the restructuring process	175,347
		No late payment (up to 45 days)	21,533,505
		45 to 75 days late payment	201,241
		75 to 90 days late payment	0
2.	Convertible loan	Total balance convertible loans	30,587,147
		No. of convertible loans	32
		Total sum mediated	24,911,079
		Total interest	5,676,068
		Total repaid	688,559
		Total conversion completed	7,716,195
		Total outstanding	19,586,880
		Total written off (> 90 days)	32,778
		In the restructuring process	5,069,210
		No late payment (up to 45 days)	14,517,670
		45 to 75 days late payment	0
		75 to 90 days late payment	0



Source: Oneplanetcrowd (2020)

Performance per March 2020

2.



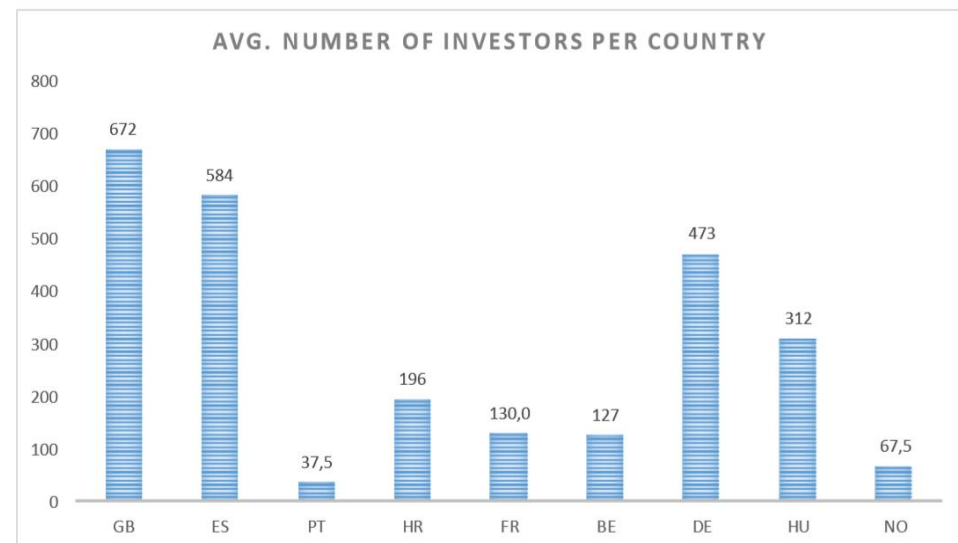
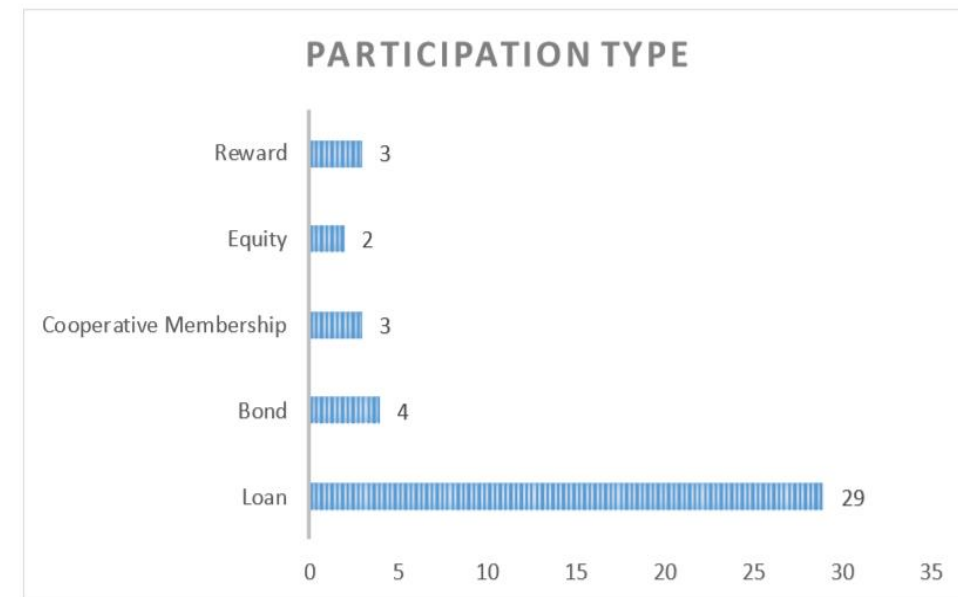
- Initiated in 2012, established in 2014
- Co-founded by the Intelligent Energy Europe Programme of the European Union
- The first European crowdfunding platform for European citizen investment in renewable energy source (RES) projects.
- Cooperates with platforms that working to promote sustainable energy projects
- Until now, there are 33 companies in 20 countries having a coalition
- Coverage: EU (cross-border)
- Offer investment opportunities with various financial instruments to firms and individuals (citizen)

Source: Citizenenergy (2017)

No	Business Model	Description	Risk Level	Return Type
1	Cooperative: Equity	A company that is jointly owned by its members. It can finance the project with a combination of debt and equity from their members as well as from outsiders (bank loans, grants, etc.).	Medium	Dividends or interests in the case of deposits
2	Corporate Firms or Companies: Equity	Investors provide funds to the project in exchange for shares.	High	Dividends and growth of capital invested
3	Cooperative: Equity/ Customer	Cooperatives sell green energy to their members in which the members (customers) financing with the price they paid for the energy.	Low (the deposit/ stock is refundable)	Green energy (no monetary return)
4	Mezzanine Financing	A hybrid funding that combines features of debt and equity, mostly through subordinated debt and less frequently, preferred stocks.	Medium-high	- Coupons (interests) - Dividend
5	Debt: Bonds	fixed-income securities that incorporate a part of a collective credit constituted by a corporation.	Medium	Coupons (interest)
6	Debt: Loans	Investors lend their money to the project and get paid in return over a period of time.	Low-medium	Interests
7	Donation	Investment of money to a project by individuals for charity, without expecting a material reward.	Negligible	Non-material reward
8	Reward	Donors/ funders receive a material reward as an acknowledgement of their support but in a lower amount than the money they donate.	Negligible	A material reward, prize or gift
9	Crowdsourcing	A person or institution participate by voluntary to complete a task (not with money)	Negligible	Material or non-material reward

PERFORMANCE PER MARCH 2017

Performance Indicator	Amount
Number of RES projects registered	41
RES promoters	16
Energy cooperatives	5
National crowdfunding platforms	11
Countries where project were initiated	11
Project location countries	15
Number of projects in Europe	11
Number of projects in Africa	4
Total investment	EUR 184.113.487,00
Total crowd investment target	EUR 27.350.832,00
Successfully crowdfunded	EUR 14.797.071,00
Total power capacity	111.200 kW
Total expected energy generation	243.263.296 kWh/yr
Number of investors	9.487
*Data for 32 projects	
Average investment per citizen	EUR 1.891
Average period for project to be funded	135 Days
*Data for 33 projects	



Source: Citizenergy (2017)

STRATEGIC OBJECTIVES AND LONG TERM IMPACTS

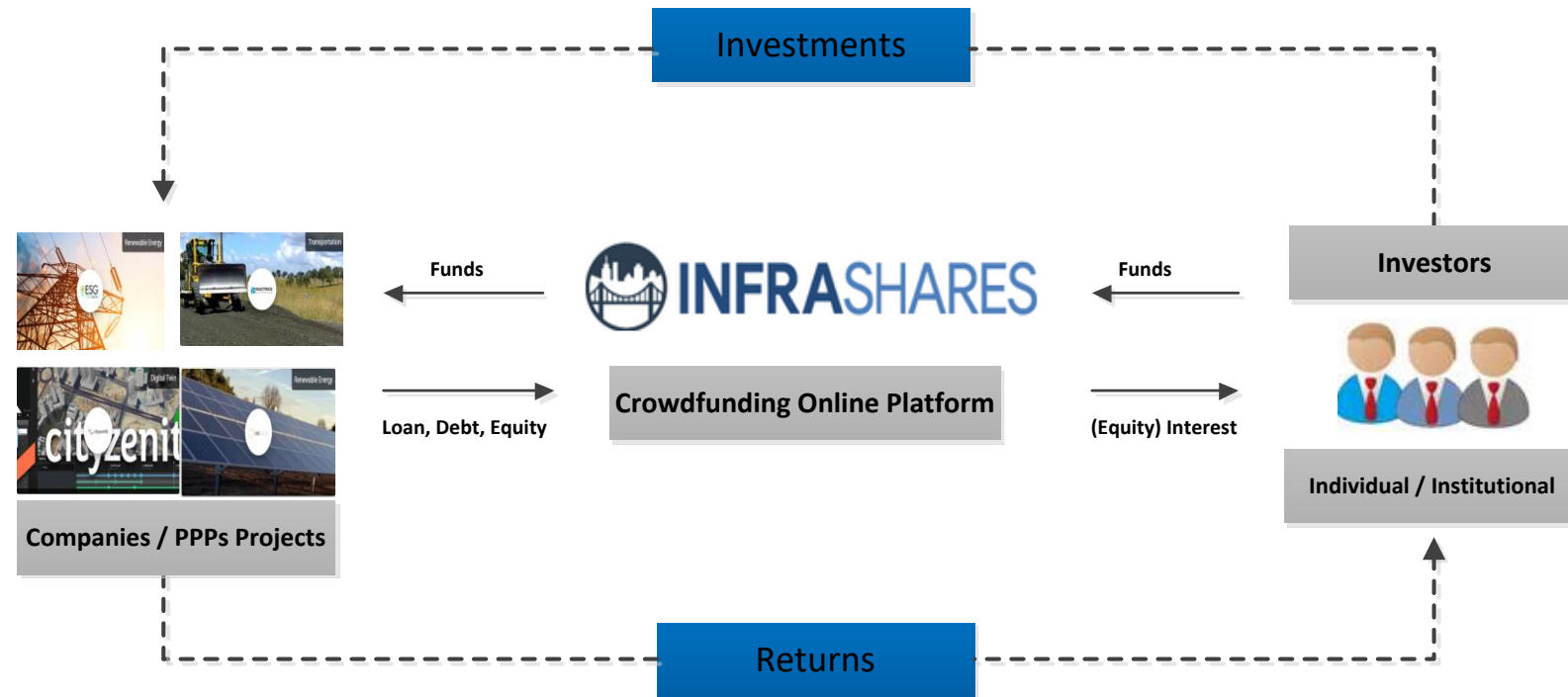


citizenenergy
Platform

No.	Strategic Objectives	Expected Impact by 2020	Citizenenergy's Direct Contribution
1	Contributing to achieving EU 20-20-20 target	282 MW of installed capacity from the projects funded by citizens through the platform	77.851 MW of installed capacity projects (27.6%)
		Generate 522 GWh green electricity	106,327 MWh green electricity (20.4 %)
		Reduce emission for 161,820 tCO ₂ /year	32,961 emission reduction (20.4%)
		The project will give a significant impact on increasing RES project promotion	Number of CF platforms in Europe increase from 19 in 2014 to 37 in 2016 (an increase of 194%)
2	Preparing the creation of an EU framework for CF investment	288 new energy projects are registered in the platform	14 new projects registered (14.2%)
		Similar initiatives in other aspects are created, from crowdfunding in general to environmental safeguard or social projects.	
3	Developing a long-term investment culture	EUR 351 million amount of investment from project registered in the platform	EUR 35 million invested in the project (10%)
		Citizens will be more aware of the sustainability and real added value of long-term investments	4,039 citizens directly informed about Citizenenergy in over 40 events with more than 25,000 visitors (offline); 12,880 new visitors online
4	Creating jobs through the implementation of a greener economy	1,147 green jobs are created directly during the project's implementation period	313 jobs created
		399 long-term green jobs are created as the need of O&M of the projects	108 long term jobs created

Source: Citizenenergy (2017)

3. INFRASHARES



- Based in the US, founded in 2017
- Investment crowdfunding platform specifically for infrastructure projects
- Including smart cities technologies, infrastructure assets, and renewable energy
- Allows individual investors to participate with low cost capital
- The scheme is through Public-Private Partnerships (P3s)
- Commercial orientation
- Investment instruments: private equity and debt
- Coverage: The US and Canada
- Types of investors:
 - Accredited investors:
 - Earn > \$200,000 per year,
 - Consistent combined > \$300,000 per year, Individuals having net worth > \$1 million,
 - Can be institutions
 - Non-accredited investor. Other than above conditions
- Investment instruments :
 - common stock
 - preferred stock
 - convertible preferred stock

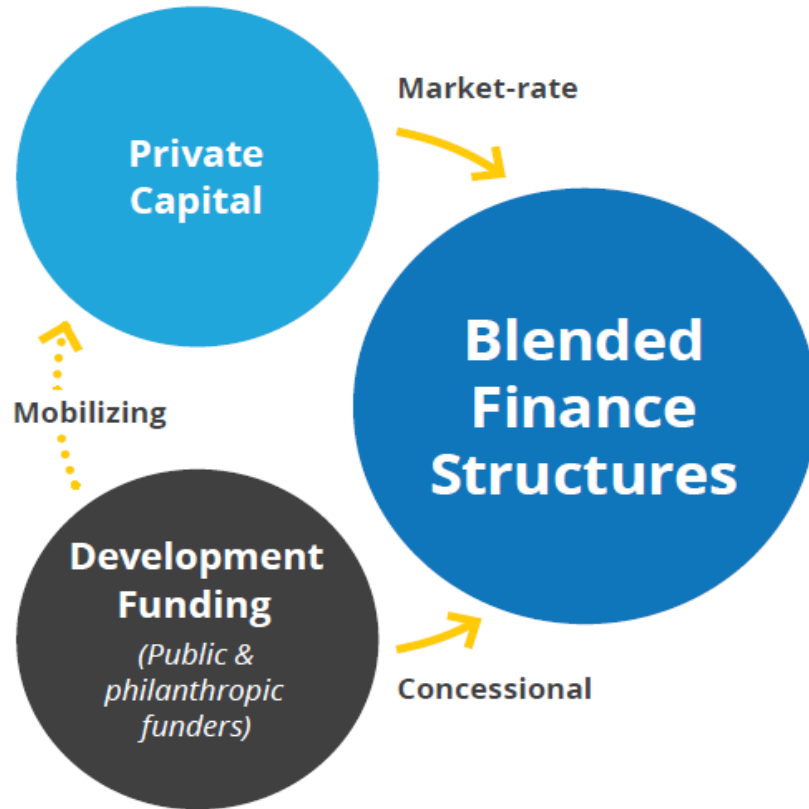
INFRASHARES EXISTING PROJECTS

No	Project	Sector	Cost (in USD)	Minimum Investment (in USD)	Project Status	Outcome
1.	SDSF Solar Fund IV	Renewable Energy	5 million 506(c) Offering	25,000	Still offering	Solar Fund offers a triple play of benefits: it lowers taxes, offsets dirty fossil fuels, and helps mission-based organizations acquire clean, cost-effective solar.
2.	ESG Clean Energy	Renewable Energy	5 million 506(c) Offering	25,000	Still offering	Attractive and predictable income returns included electricity sales, transmission, capacity and alternative energy credits
3.	Cityzenith	Digital Twin	33 thousand 506(c) Offering		In Progress/ Under Construction since 2020	Advanced Digital Twin Solution for Infrastructure
4.	The Gateway Opportunity Fund	Real Estate Development	33 million 506(c) Offering	100,000	In Progress/ Under Construction since 2020	Using a crowdfunding platform as a part of their fundraising enables individual community members to actively participate in the economic and physical redevelopment of their city.
5.	Matrix Materials	Transportation	40 thousand 506(c) Offering		In Progress/ Under Construction since 2020	Working Capital Loan for Fairfax County Pilot Project

Source: Infrashares (2020)

4. CONVERGENCE

BLENDING GLOBAL FINANCE



- Based in Canada, founded in 2015
- Launched and designed by Canada's Department of Foreign Affairs, Trade and Development (DFATD), the WEF, Dalberg Global Development Advisors, and the Global Development Incubator
- USD 18.5 million from DFATD for catalytic funding
- The global network platform for blended finance
- Aims to reduce the funding gap of UN Sustainable Development Goals (SDGs) → USD 2.5 trillion annually
- Most of its fund beneficiaries are developing countries.
- Using grant from governments or philanthropic organizations as catalytic to lower investment risk and improve the financial return in order to attract investment funds from private institutions.
- Networking and collaborations of several actors from the public, private, philanthropic funds, and sponsors
- The member includes Melinda Gates Foundation, the Government of Ethiopia, MasterCard, Standard Chartered, Rockefeller Foundation, and other stakeholders

CONVERGENCE INVESTMENT SCHEMES

No	Structure	Description
1	Concessional capital	Public or philanthropic investors provide funds on below-market terms within the capital structure to lower the overall cost of capital or to provide an additional layer of protection to private investors. In this scheme, concessional fund acts as seed capital to attract private investment.
2	Risk insurance	Public or philanthropic investors provide credit enhancement through guarantees or insurance on below-market terms. This scheme aims to lower the risk for private capital.
3	Technical assistance funds	The transaction is associated with a grant-funded technical assistance facility that can be utilized pre- or post-investment to strengthen commercial viability and developmental impact. Grant funding from public or philanthropic used for investment capacity building to improve project quality.
4	Design-stage grants	Transaction design or preparation is grant-funded (including project preparation or design-stage grants). The concessional fund is used for designing projects to attract private funds from institutions.

Source: Infrashares (2020)

CONVERGENCE PORTFOLIO STATS

Solutions Supported

18

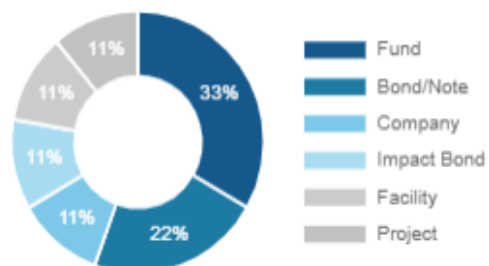
Funding Awarded

\$6.2M

Capital Mobilized

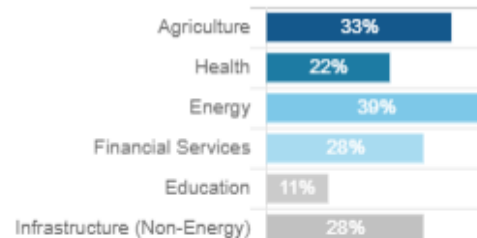
\$600M

Vehicle



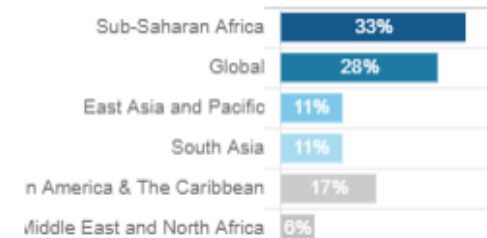
Last Updated: June 11th,
2020 at 11:44 PM

Sector



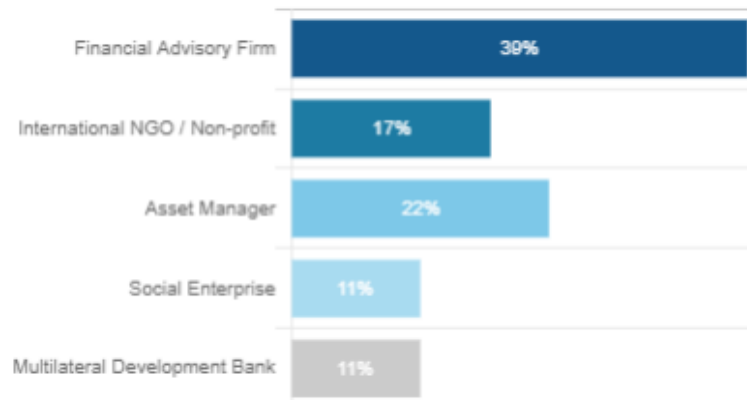
Last Updated: June 11th,
2020 at 11:44 PM

Region



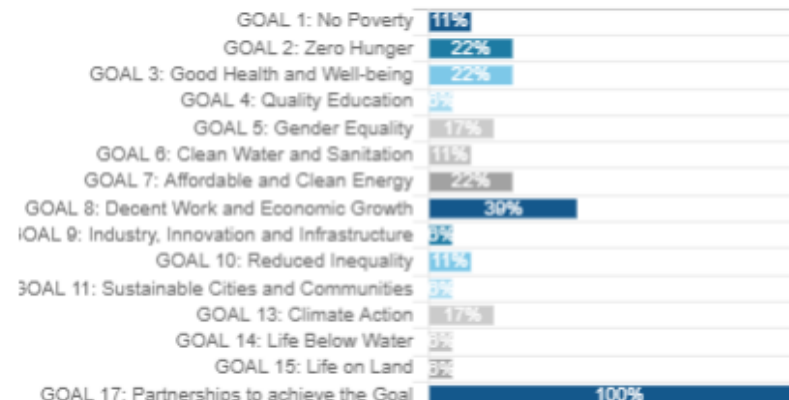
Last Updated: June 11th,
2020 at 11:44 PM

Grantee Type



Last Updated: June 11th, 2020 at 11:44 PM

SDGs



Last Updated: June 11th, 2020 at 11:44 PM

A large orange circle is positioned on the left side of the slide, partially cut off by the edge.

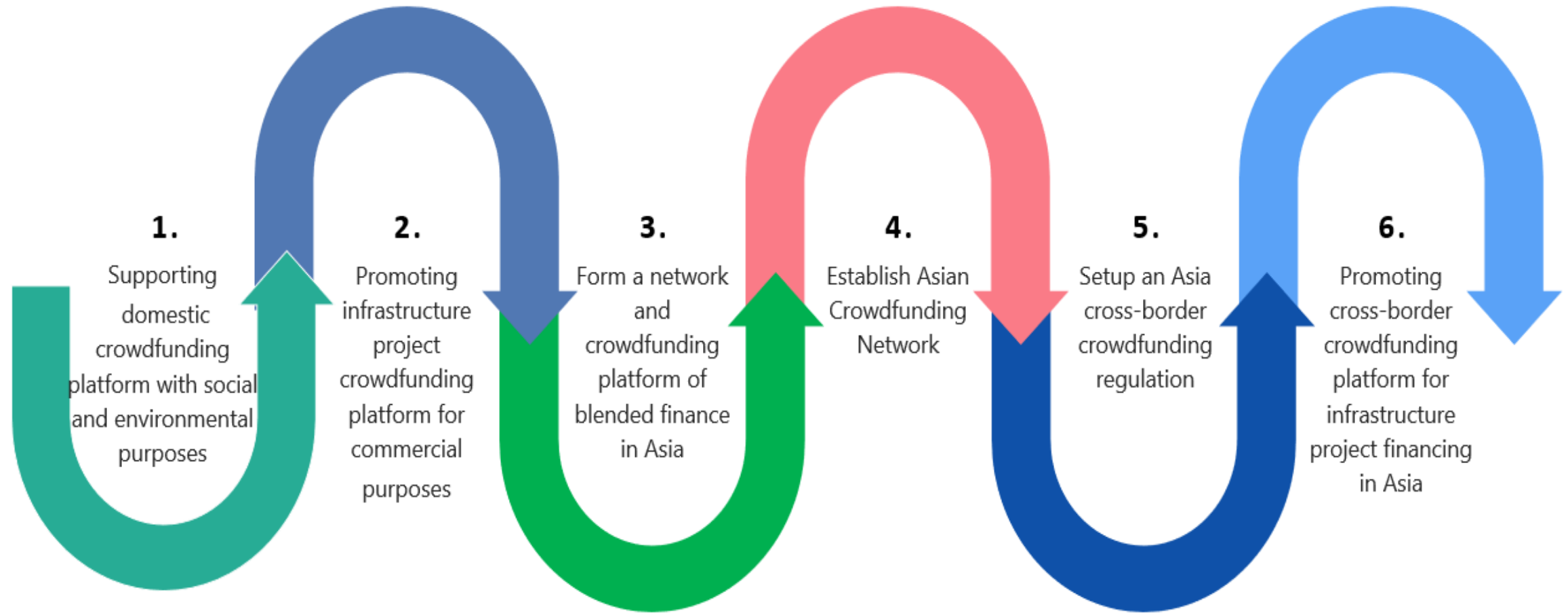
Policy Recommendations



PROMOTING 4 CROWDFUNDING BUSINESS MODELS IN ASIA

Business Models	Uniqueness and Description	Investment Instrument	Targeted Investors	Purpose/ Orientation	Region Scope
Within Country Crowdfunding	Prioritizes domestic funding for domestic infrastructure projects	1. Debt 2. Bond 3. Equity 4. Cooperative 5. Donation 6. Reward	1. Domestic individuals Institutional investors	Combination of: 1. Social so-called impact investing for people and the planet 2. Commercial	Within individual Asian countries
Commercial Infrastructure Financing	Commercially oriented. The main goal is to raise capital for commercially viable infrastructure projects and to provide an attractive financial return for investors.		1. Individuals around the world. 2. Private Institution investors	Mostly commercial	Asia
Cross-border Citizen Funding	The concept is raising small capital from a large number of citizens from all Asian countries to fund infrastructure project in Asia. In short, the concept is "From Asia for Asia"		2. Mostly Individual citizen of Asia	Combination of social and commercial	Asia
Blended Finance	Funding from public investors and philanthropic institutions acts as concessional capital.	1. Grant, in the form of: a. Concessional capital b. Guarantee/ insurance c. Technical assistance d. Design stage 2. Debt 3. Equity	1. Philanthropic Institutions 2. Public investors consisting of: a. Asian countries government b. Multilateral Institution such as ADB, USAID, OECD, etc. 3. Private Institutions	Mostly social that is mixed with commercial purposes for private institutions.	Asia

ROADMAP OF CROWDFUNDING DEVELOPMENT IN ASIA FOR INFRASTRUCTURE PROJECT FINANCING



THANK YOU!