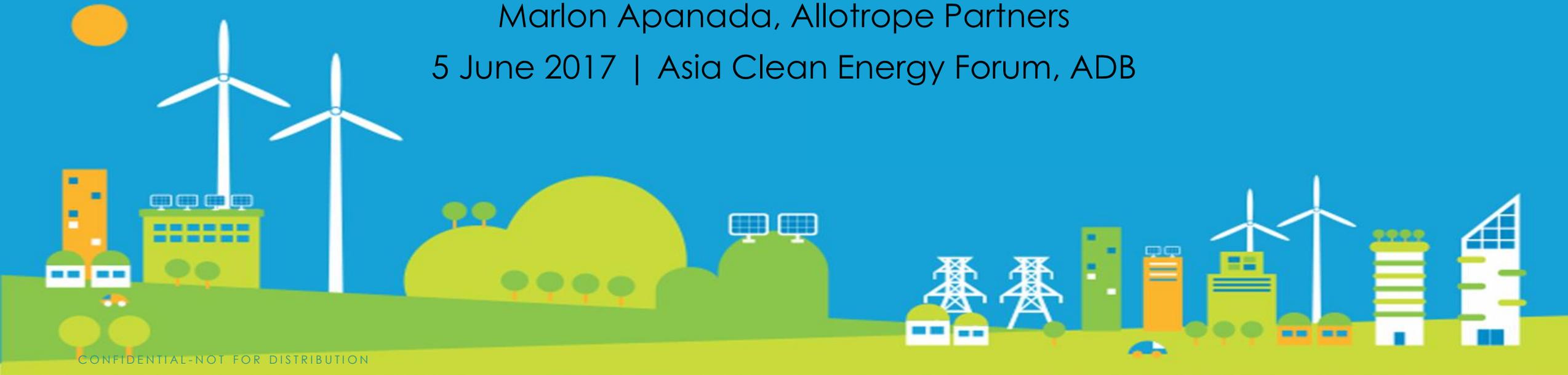




# MICROGRID INVESTMENT ACCELERATOR

## ACCELERATING IMPACT AND RETURNS

Marlon Apanada, Allotrope Partners  
5 June 2017 | Asia Clean Energy Forum, ADB



SPRING 2017

# SCALING INVESTMENT IN ENERGY ACCESS:

ACCELERATING IMPACT AND RETURNS

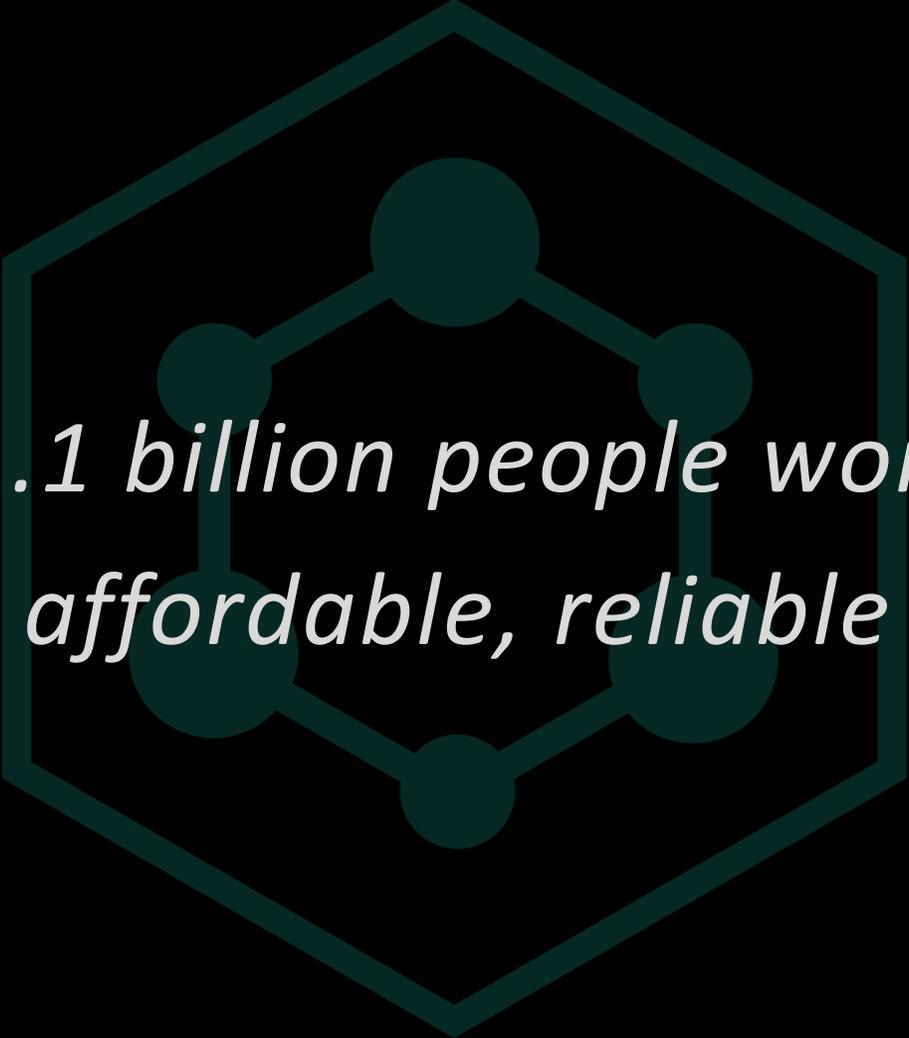
MICROGRID

INVESTMENT ACCELERATOR

CONFIDENTIAL-NOT FOR DISTRIBUTION



Photo Credit: Electric Vine Industries



*Currently 1.1 billion people worldwide lack access to affordable, reliable electricity*



“These 1.1 billion people spend an estimated **\$27 billion annually** just on lighting and mobile-phone charging with kerosene, candles, battery-powered flashlights, and other fossil fuel powered technologies”

Source: BNEF / Lighting Global

# UN 2030 Sustainable Development Goals



“Energy is crucial for achieving almost all of the Sustainable Development Goals, from its role in the eradication of poverty through advancements in health, education, water supply and industrialization, to combating climate change.”

# MICROGRIDS:

## FROM HUMANITARIAN ASPIRATION TO MARKET OPPORTUNITY

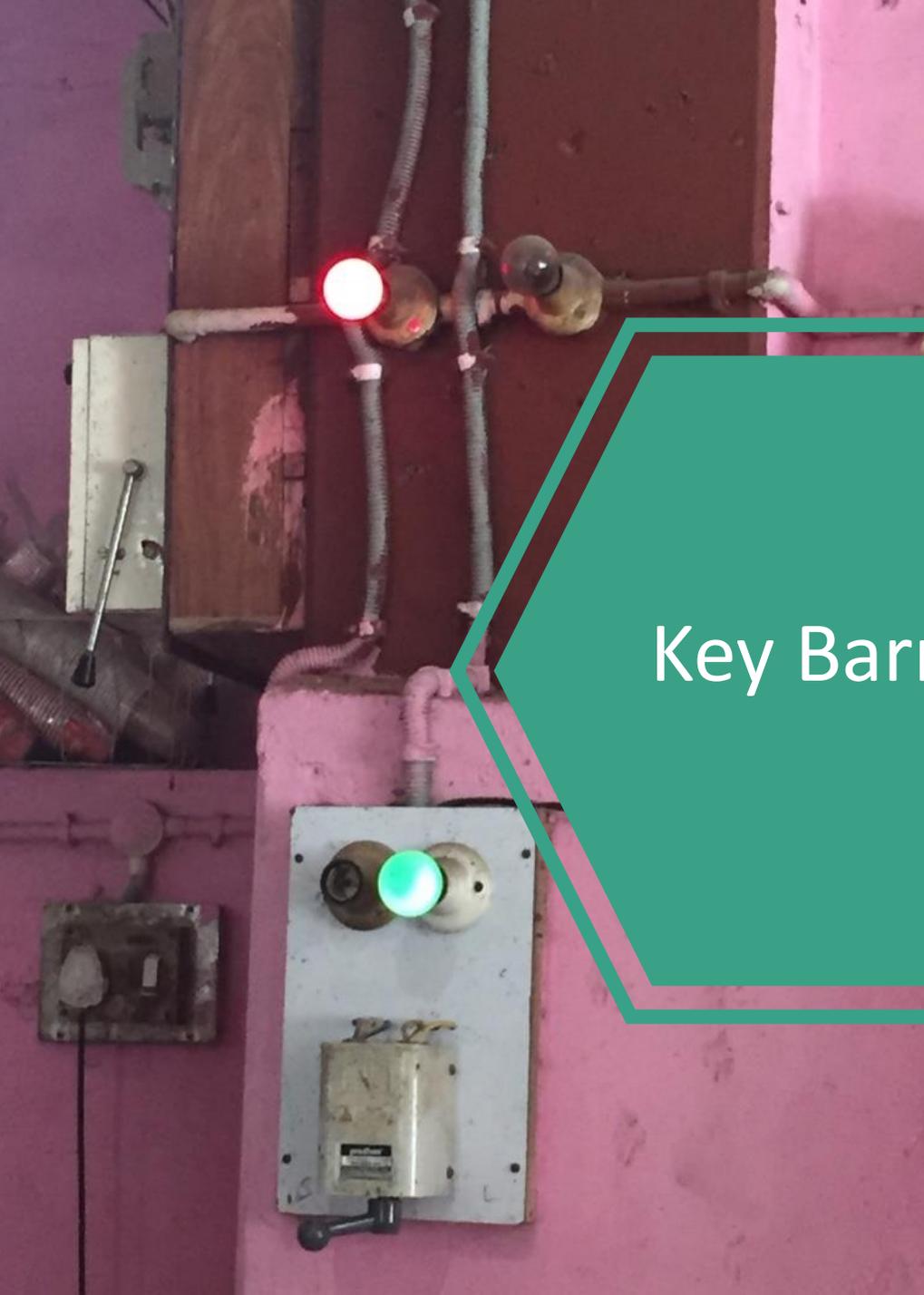
### CHANGING ECONOMICS ARE OPENING NEW FRONTIERS

In developing countries, electrification has largely been the domain of government, but the rise of affordable, clean, distributed generation is opening new opportunities for the private sector

### COMMERCIALLY VIABLE CLEAN ENERGY

Microgrids can bring affordable electricity to these underserved populations faster and more reliably than extending centralized transmission grids





THERE ARE SIGNIFICANT BARRIERS TO SCALING PRIVATE  
SECTOR INVESTMENT IN MICROGRIDS

Key Barriers

- Unproven Business Models and Technology
- Poor Market Data and Lack of Standardization
- Small Ticket Size
- Emerging Market and Regulatory Risk
- **Lack of Access to Affordable and Risk-Tolerant Capital**

The Microgrid Investment Accelerator (MIA) will address these challenges through new public private partnerships



# Microgrid Investment Accelerator Goals

## MOBILIZE CAPITAL

By leveraging and blending different types of capital



## BUILD THE ECOSYSTEM

Through a network of partnerships



## CATALYZE PROJECTS

In East Africa, India, and Indonesia



## MAKE THE BUSINESS CASE

Capture and analyze key data through rigorous monitoring and evaluation systems



# MARKET MAKING



MIA will:

- Test the commercial opportunity for renewable energy access
- Demonstrate how concessionary finance can unlock progressively larger proportions of private capital as risks are discovered, priced, and mitigated

# Blending Capital to Scale the Market

MIA is an innovative energy access investment vehicle that provides both for-profit and non-profit capital management services. This unique structure enables us to:

- Move seamlessly from a largely concessionary investment strategy to a commercial strategy as the market matures
- Engage in “market making” activities such as investor education, data analysis and dissemination, and capacity building
- Conduct a range of charitable and for -profit activities that accelerate poverty alleviation, economic and social development, and financial returns
- Take high-risk positions in the capital stack

A man wearing a plaid shirt and glasses is standing and working on a laptop. The laptop is on a table covered with a light blue cloth. In the background, there are various pieces of electronic equipment, including a fan and some boxes, suggesting a technical or office environment.

How is MIA  
Different?



# MIA Investment Focus

Metric

Microgrid Characteristics

|   |  |
|---|--|
| <b>Indicative WB Household Electricity Supply Tiers</b> | Tiers 3-5  |
| <b>Relative System Size</b>                             | 5 kW+  |
| <b>Typical Applications</b>                             | Integrated household (lighting, refrigeration, etc.) and business electricity use (e.g. milling, machinery, cold storage, etc) |
| <b>PAYG enabled?</b>                                    | Yes (Not necessarily a requirement)  |
| <b>Customers</b>  | Microgrid developers / ESCOs, EPCs   |
| <b>Financing Offered</b>                                | Corporate and project-level debt and equity  |
| <b>Impact</b>   | Projects must include: renewable energy, energy access, productive end use, and poverty alleviation components                 |



## AN ECOSYSTEM APPROACH TO DEVELOPMENT FINANCE



**MICROGRID**  
INVESTMENT ACCELERATOR

# RIGOROUS DATA MANAGEMENT AND ANALYSIS WILL INFORM THE MARKET

Relevant documents and data from MIA  
will be made publicly available wherever  
possible



# THE MARKET TODAY:

## AVERAGE PROJECT PROFILES OF DEVELOPERS INTERVIEWED

|                  | AVERAGE SYSTEM SIZE | AVERAGE # HOUSEHOLDS SERVED | AVERAGE COST PER INSTALLED KW |
|------------------|---------------------|-----------------------------|-------------------------------|
| <b>INDIA</b>     | 29 KW               | 250                         | \$3,500                       |
| <b>INDONESIA</b> | 18 KW               | 191                         | \$8,100                       |
| <b>TANZANIA</b>  | 30 KW               | 220                         | \$6,700                       |
| <b>RANGE</b>     | <b>3-75 KW</b>      | <b>74-1000</b>              | <b>\$1.5K - \$15K</b>         |

Source: Allotrope Partners, 2017



What is the size of potential investment opportunity between 2017 and 2020?

~\$200 Million

MIA  
FOUNDING AND

IMPLEMENTING  
PARTNERS



facebook



MORRISON  
FOERSTER

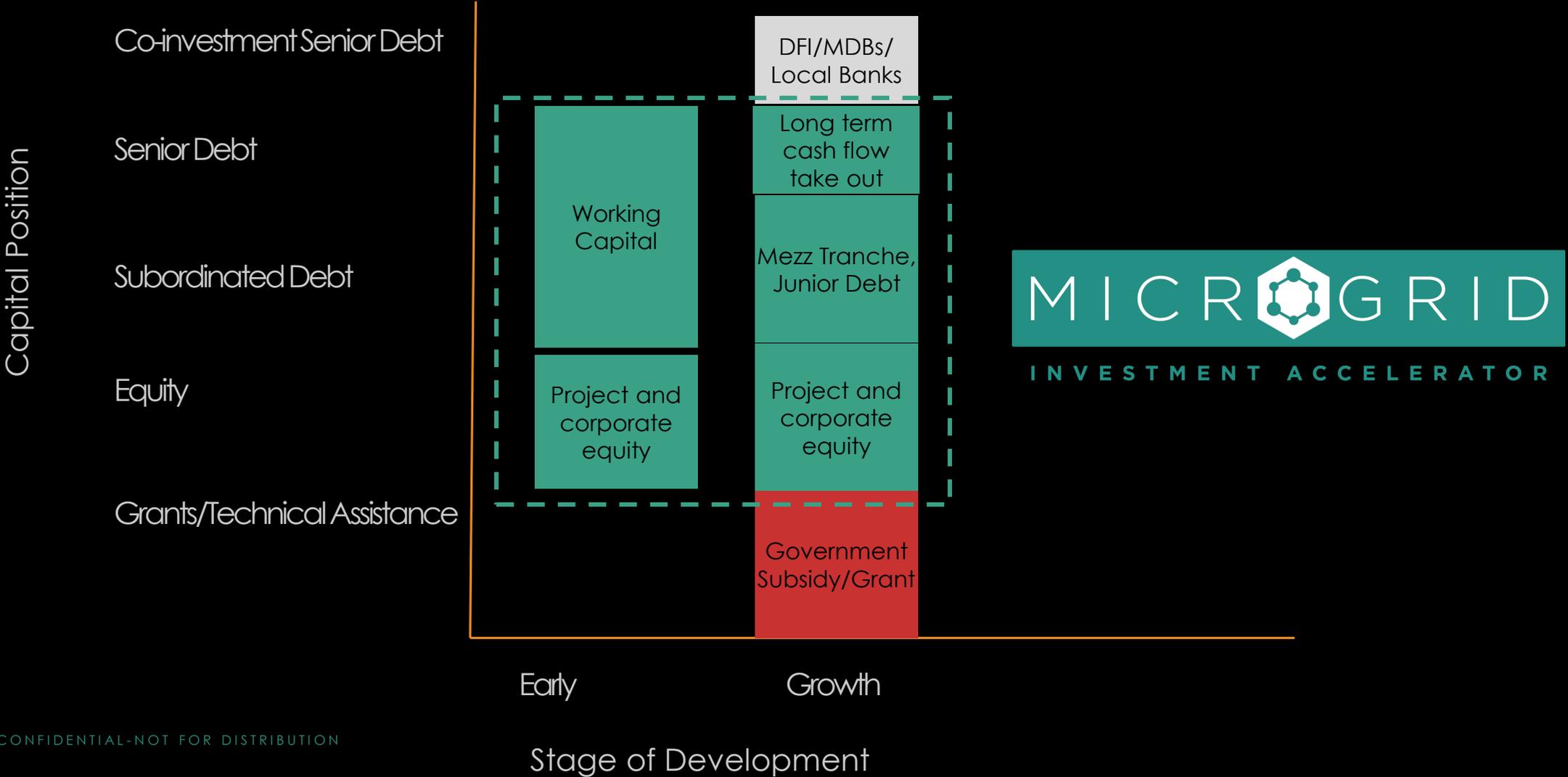


# THE MIA ADVISORY COMMITTEE

- Multilateral and Bilateral Institutions
- Impact Investors
- Fortune 100 Corporations
- Microgrid Developers
- New Technology providers
- Philanthropies



# Where MIA Plays in the Capital Stack



# TIMELINE

|   | 2016 |    | 2017 |    |    |    | 2018 |    |    |    |
|---|------|----|------|----|----|----|------|----|----|----|
|   | Q3   | Q4 | Q1   | Q2 | Q3 | Q4 | Q1   | Q2 | Q3 | Q4 |
| Project Initiation                      |      |    |      |    |    |    |      |    |    |    |
| Constitute Advisory Committee           |      |    |      |    |    |    |      |    |    |    |
| Conduct In-Depth Market Analysis        |      |    |      |    |    |    |      |    |    |    |
| Host First Advisory Committee Meeting   |      |    |      |    |    |    |      |    |    |    |
| MIA Announcement and Formal Launch      |      |    |      |    |    |    |      |    |    |    |
| Secure LOIs with Developers             |      |    |      |    |    |    |      |    |    |    |
| Secure In-Principle Capital Commitments |      |    |      |    |    |    |      |    |    |    |
| Finalize Legal Documents                |      |    |      |    |    |    |      |    |    |    |
| First Project Solicitations             |      |    |      |    |    |    |      |    |    |    |
| Operationalize MIA Pilot Facility       |      |    |      |    |    |    |      |    |    |    |



# MICROGRID

INVESTMENT ACCELERATOR

For Additional information:

[www.microgridinvest.org](http://www.microgridinvest.org)

Alexia Kelly, CEO

[ack@microgridinvest.org](mailto:ack@microgridinvest.org)

+1.541.514.3633