
Alp Technologies'

**Mega-BRIC
Battery System**

World's Most Maintainable and
Affordable Clean Energy System



Backup Power from Diesel is Expensive

Grid energy cost:

UK (reliable): \$0.12-0.42/kWh

Africa (intermittent) : \$0.05-0.1/kWh

Backup energy cost:

Fuel cost = Price (\$1.2-1.8/L) / Efficiency (2.5kWh/L) = \$0.48-0.72/kWh

*Plus equipment and maintenance, the levelized electricity cost is ~\$0.7-1.0/kWh

Theoretical PV/battery energy cost:

Energy capture:

0.5-1kWh/Day/m²

PV (200W, 1m²) = \$60

20-year = ≥3,650kWh

Cost = ≤\$0.016/kWh

Energy storage:

M-BRIC = ~\$300/kWh

80% DoD; 6,000 cycles

Cost = \$0.0625/kWh

Business opportunity

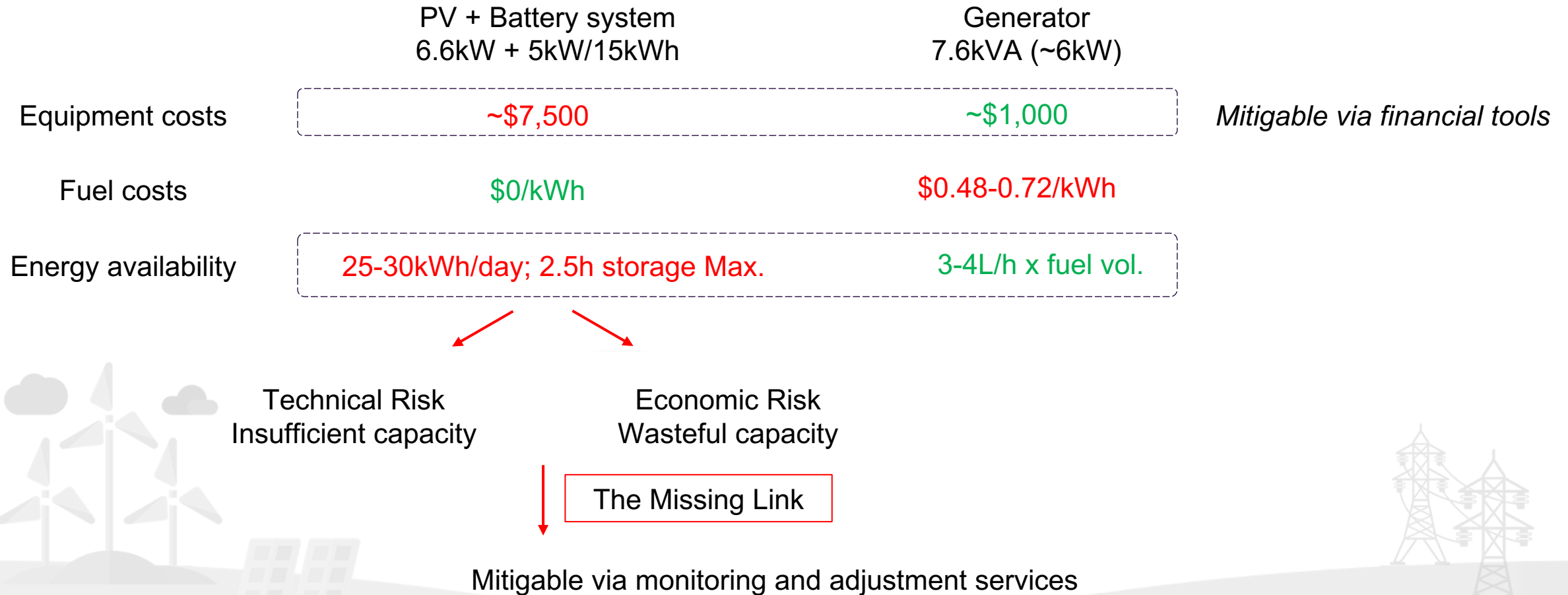
If only material costs are considered:

Levelized electricity cost

SUM= ~\$0.08/kWh

The Market Challenges to PV/Battery Deployment

High Adoption Costs & Poor Versatility



M-BRIC: Renewable Energy as a Service

Smart and Modular Equipment



Data

Action

Analysis

Continuous Data Collection

- Energy supply data
- Energy consumption data
- Environmental data
- Performance data
- System failure data

Advanced Data Network



Local Engineering Support



Delicate Energy Management

- System redundancy scoring
- Energy shortage forecast
- Appliance-based priority ranking
- Temporal energy rationing
- Project-based costs evaluation

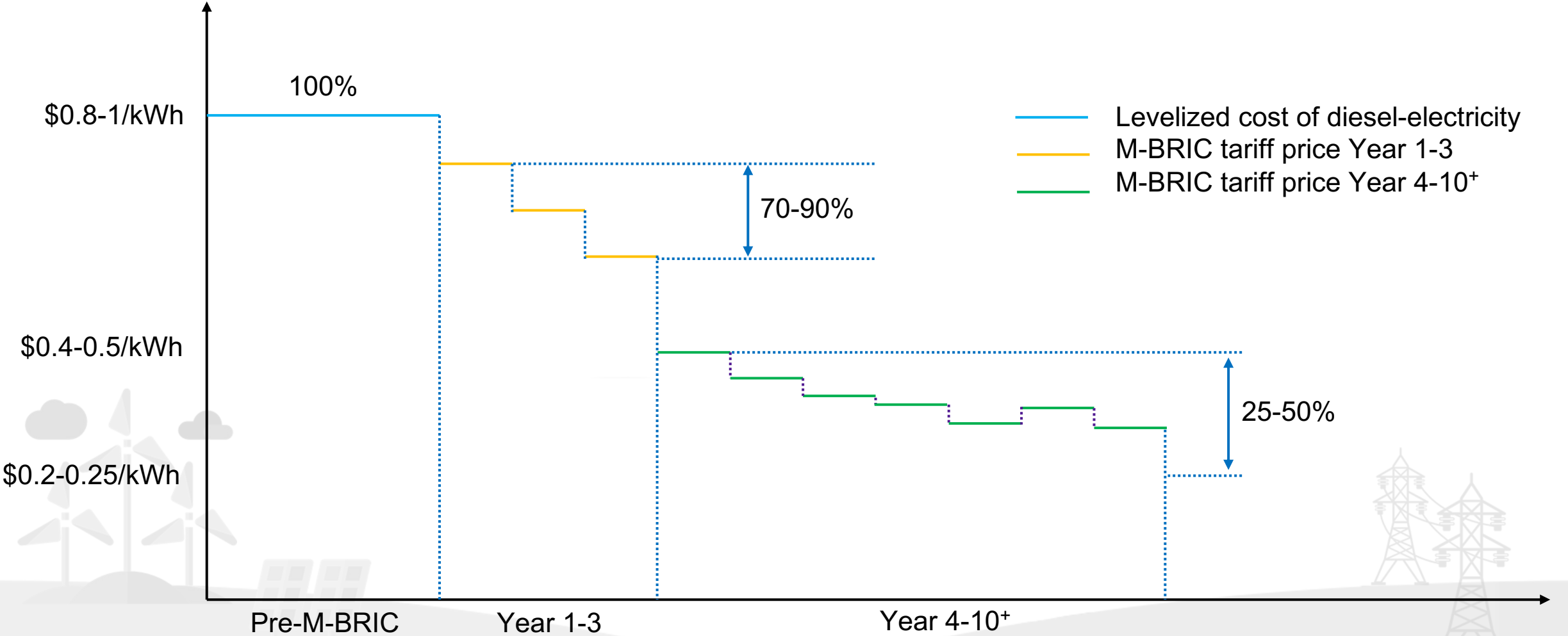
Dynamic Asset Management

- Case-by-case system design
- Periodic system optimisation
- Proactive maintenance & repair
- Emergency energy supply



Cost Savings from Day-1

Staircase pricing mechanism



M-BRIC Case Study 1

Standard Module (equivalent to Tesla Powerwall + PV)

Module = 15kWh batteries + 5kW inverter + 6.6kW PV

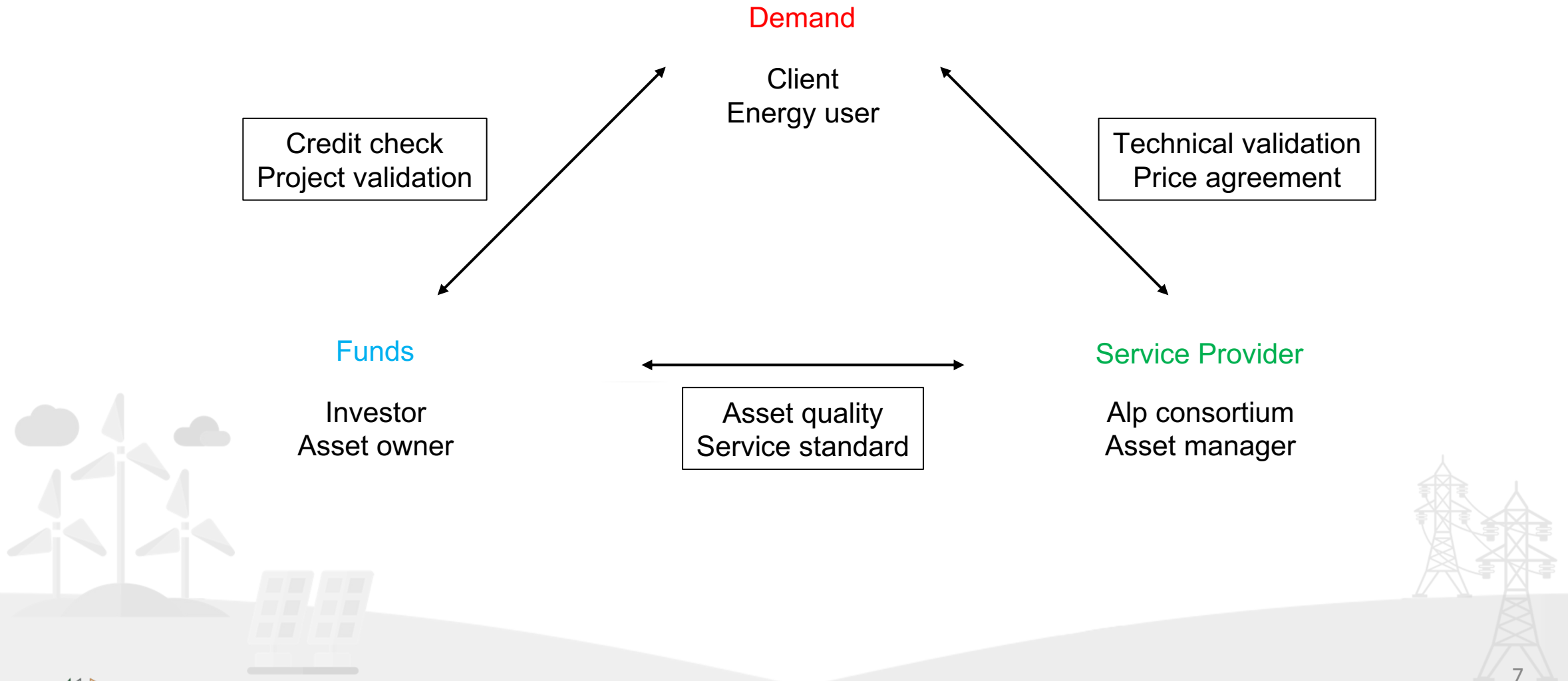
Cost = ~\$6,000-8,000USD (materials, logistics and import to Nigeria)

Output = 25-30kWh/day, 10 years.

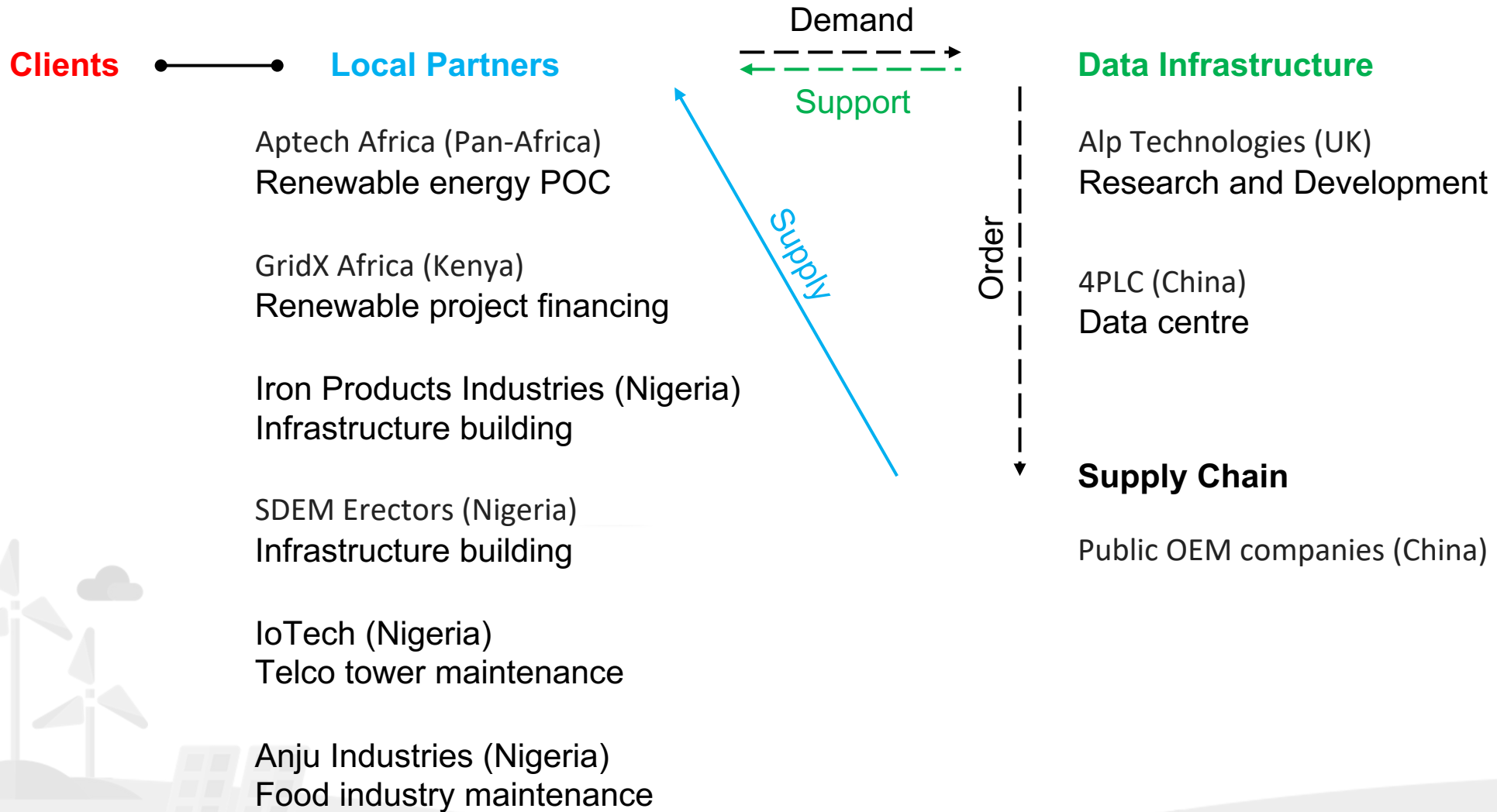
Invest a Module

	Year 0	Year 1	Year 2	Year 3	Year 3+ →
Investment (Investor)	\$8,000				
Client payments		\$6,387/year @\$0.7/kWh	\$5,475/year @\$0.6/kWh	\$4,562/year @\$0.5/kWh	\$2,737/year @\$0.3/kWh
Operating costs (Alp)		\$1,500	\$1,000	\$1,000	\$1,000
Net	-\$8,000	-\$3,113	+\$1,362	+\$4,924	+\$1,737/year
Summary				61% (3-year)	21%/year

Business Relationships



The Alp Consortium



Business Priorities in Nigeria

Project category 1: Telco towers

- 70% Telco sites in Nigeria are powered by diesel generators.
- Monthly diesel costs >\$35M USD
- Client 1 owns 16,700 sites (~100kWh/site).
- ~1.67GWh installation potential, ~\$544M investment to implement.

Clients in dialogue: American Tower, IHS Towers

Project category 2: Factory backup power

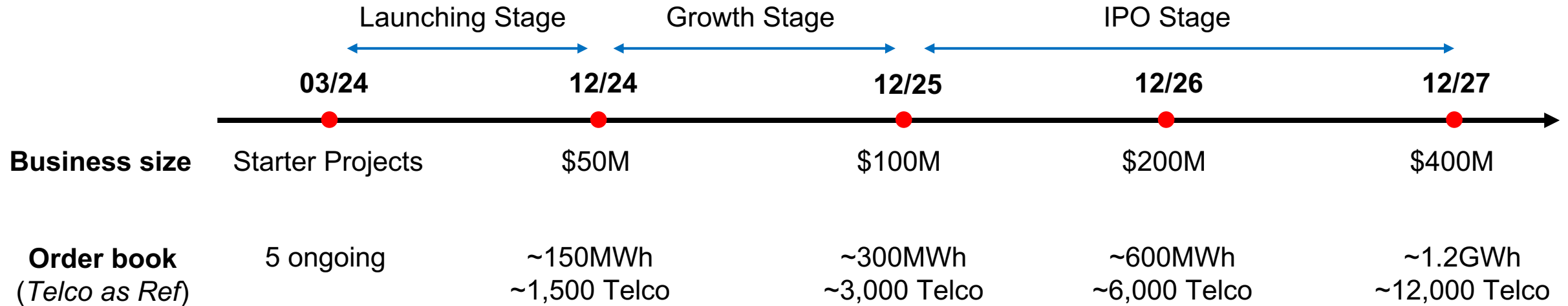
- Most factory owners are interested to adopt M-BRIC to mitigate daily blackout.
- We are in dialogue with a major beverage bottling companies (>5MWh installation), a company that owns >100 cold storage facilities (>100kWh/site) and various factories in the iron and plastic industries (>100kWh/site).
- ~20MWh installation potential, ~\$6.5M investment to implement.

Clients in dialogue: Pepsi Co., Olem Group, TAK logistics

Project category 3: Energy infrastructure

- Critical infrastructures, such as hospitals and banks require Uninterruptable Power Supply (UPS).
- We are building connections to participate infrastructure projects.

Business Traction



Fundraising: *Matching investments to projects.*

History

1. Alp Technologies Ltd is a renewable energy solutions company established in 2017, London England.
2. Our core objective is to develop energy infrastructure in the emerging markets.
3. We specialise in developing affordable smart renewable energy solutions to improve energy reliability.
4. We have won multiple UK grants to conduct research on repurpose mobility batteries for energy storage.
5. Our first products are launched in Africa in 2023.



James Kong
Founder & CEO

James served his early career at Black Rock until VP level. He then served as CFO at Entrade Energiesysteme AG before founding Alp Tech.



Michele Chiamanti
CTO

Michele was James's friend and colleague at Black Rock. He then worked with SpaceX and the nuclear engineering industry as an underwriter.



Sandra Colucci
Senior Consultant

Sandra participated the UN World Food Programme in Africa. She then served as a senior product manager at HBO and Apple.



Matt Willis
Senior Consultant

Matt is a senior consultant at Carbon Trust, specialised in the deployment of renewable energy and carbon trade policies.

Company Structure

