

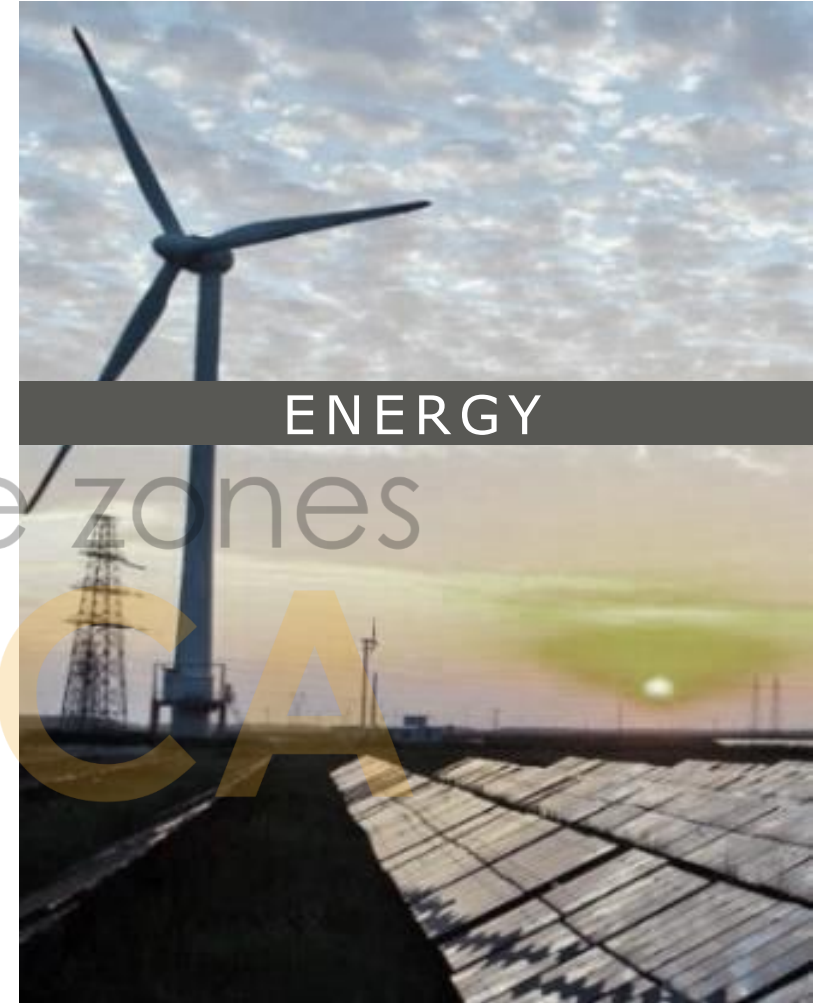
# SYSTEMIQ

2018



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**SYSTEMIQ is a combined investment and advisory company focused on building sustainable businesses and supporting the transition to sustainable economic systems**



**We take a systems level approach whereby we work across stakeholders to build solutions that are grounded in commercial reality and can be scaled once demonstrated**

**BUILDING COALITIONS**

We build and advise coalitions of leaders to drive policy and industry changes

**ADVISING COMPANIES**

We design innovative business models for multinationals, governments and NGOs

**INCUBATING BUSINESSES**

We partner to create, launch and demonstrate commercially viable and replicable business models

**DIRECT INVESTMENT**

We invest in disruptive technologies and deploy flexible capital as mission-driven investor

**SCALE UP CAPITAL**

We attract large-scale capital to nurture and grow commercially-viable solutions





**Founded in 2016, we now have over 90 team members including a broad range of senior leadership covering industry, investment, consulting and sustainability**

**Track record**  
leading world-class institutions

**Diversity** of experiences and perspectives

**Shared mission** and impeccable values



**Jeremy Oppenheim**  
Founding partner, former Senior Partner McKinsey



**Martin Stuchtey**  
Founding partner, former Senior Partner McKinsey



**Gail Klintworth**  
Africa lead, former Chief Sustainability Officer and CEO Unilever South Africa



**Janez Potočnik**  
Policy lead, Co-Chair of UNEP International Resource Panel



**Morten Rossé**  
Indonesia and Natural Resources lead, former Affiliate Partner McKinsey



**Irena Spazzapan**  
Energy lead, former Executive Director at Goldman Sachs

FULL-TIME PARTNERS



**James Bilefield**  
Serial digital entrepreneur



**Tom Heller**  
Founder of CPI, one of the authors of landmark IPCC report



**Jean-Michel Herrewyn**  
Former CEO of Veolia Water



**Sir David King**  
Former Chief Scientific Advisory to the UK government



**Stef Kranendijk**  
Former CEO Desso



**Lord Adair Turner**  
Former Chair of UK's Financial Services Authority

AFFILIATE PARTNERS



**Juliano Assunção**  
Leading agro-economist



**Michael Braungart**  
Scientist, inventor of the Cradle-2-Cradle concept



**James Cameron**  
Founder Climate Change Capital



**Paul Fletcher**  
Chairman of actis, the world's largest emerging markets PE firm



**Tom Jensen**  
Serial entrepreneur



**Peter Matrai**  
Senior Investment Advisor



**David Nabarro**  
former advisor to the UN Secretary-General



**David Nelson**  
Executive Director CPI – Energy Finance



**George Polk**  
Managing Partner, Tulum Trust (cleantech PE)



**Armin Reller**  
Professor, Chair of Resource Strategy, Augsburg University



**Tove Stuhr Sjøblom**  
Former UK upstream head Statoil

SENIOR ADVISORS



**We take a systems approach in creating and developing commercially viable businesses and investment opportunities that positively impact the Sustainable Development Goals**

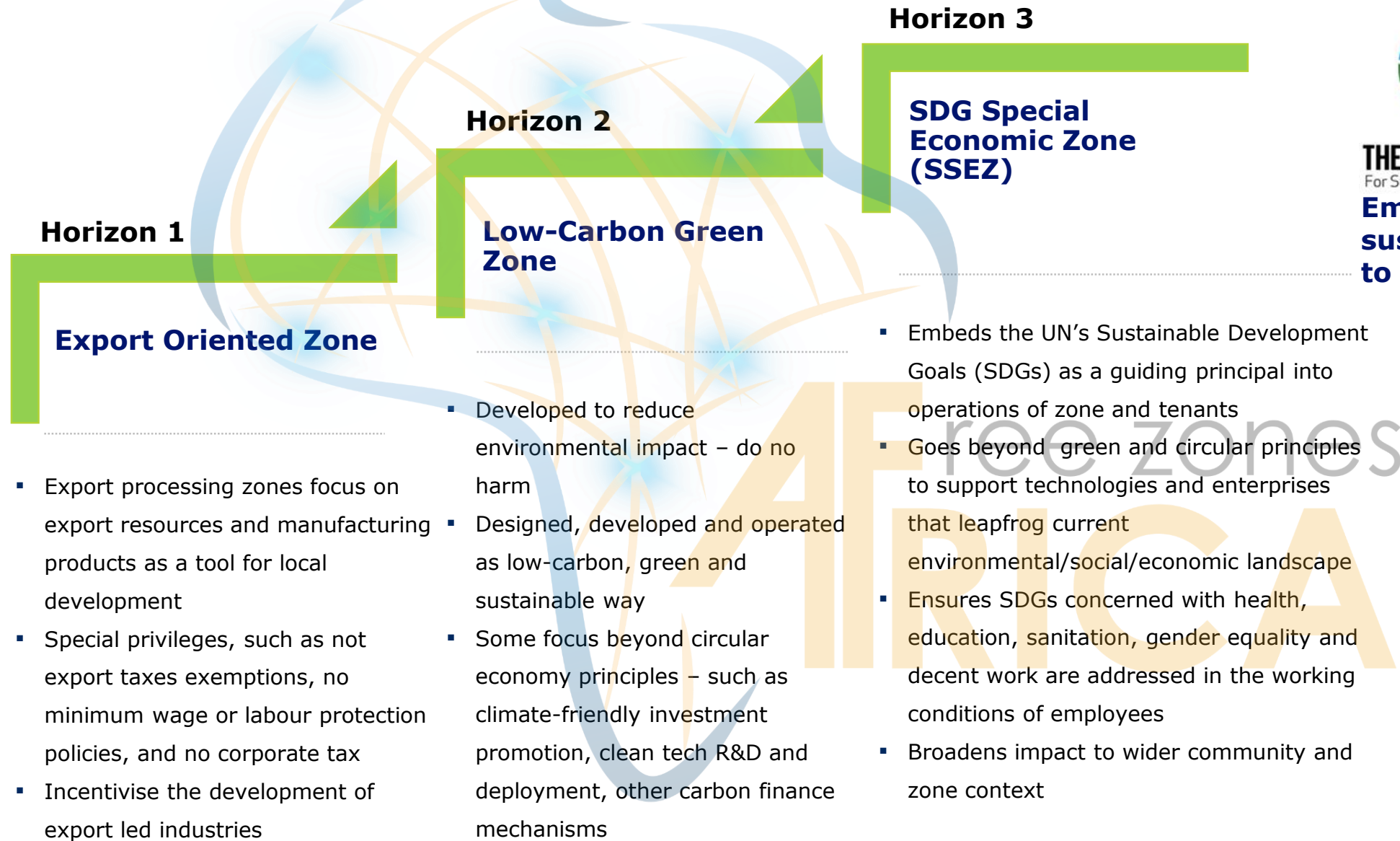




# How we think about Sustainable Special Economic Zones...

Free zones  
**AFRICA**

# Sustainable SEZs represent the next horizon in industrial development – Moving beyond “do no harm” to using industrialisation to drive positive commercial, social and environmental impact



**THE GLOBAL GOALS**  
For Sustainable Development  
**Embedding sustainability to create value**



# A Sustainable Economic Zone actively drives attainment of the SDGs by mandating sustainable operating principles, supporting inclusive businesses and developing impact orientated synergies

## In practice this means three things

### 1) Mandating sustainable operating principles

- Circular principles are applied to core facilities and design of base
- SDG policies are mandated for all companies on site to ensure social and environmental protection

### 2) Supporting inclusive businesses

- Sectors are targeted that enhance social and environmental outcomes
- Companies are supported to develop sustainable and inclusive supply chains

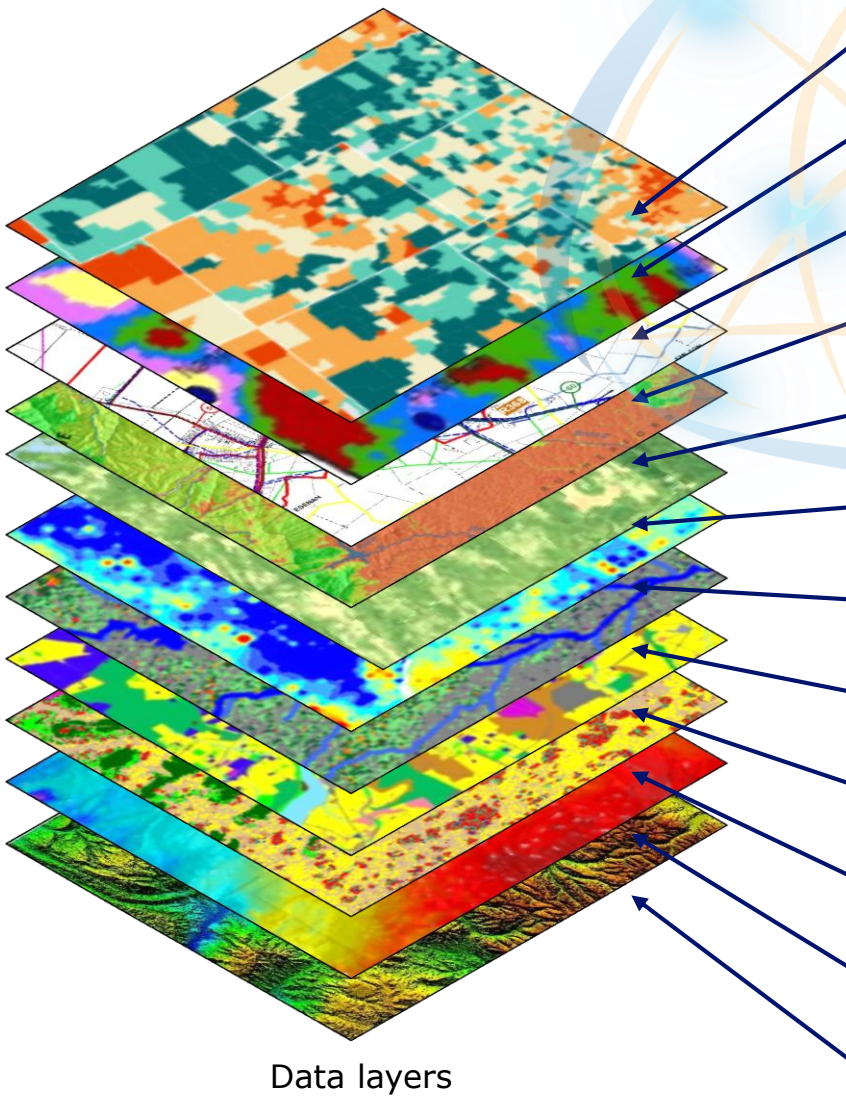
### 3) Developing impact orientated synergies

- Assets and auxiliary businesses are developed to encourage inclusive business, support social mobility and facilitate resource optimisation



# A Sustainable Economic Zone moves beyond pure economic development planning to take an integrated landscape approach so we can drive local social and environmental value

Combing geo-spatial and economic/social data layers creates more accurate and useful applications



- 12. Socioeconomic
- 11. Industrial hubs & corridors
- 10. Infrastructure
- 9. High Conservation Value
- 8. High Carbon Stocks
- 7. Soil categorisation
- 6. Water catchments
- 5. Land ownership
- 4. Land cover
- 3. Climate
- 2. Digital Elevation Model
- 1. Base maps

**Indonesia:** Working closely with local ministries to **aggregate and centralise up-to-date data**, such as people movements, employment and education to best inform strategy

**Mozambique:** **Mapping Special Economic Zones (SEZs)** and identifying potential SEZs around **existing infrastructure** that can enable a thriving sustainable economy

**Southern Africa:** Using **third party research** that has identified and prioritised High Conservation Value areas and forest fragments to develop economic and conservation action plans

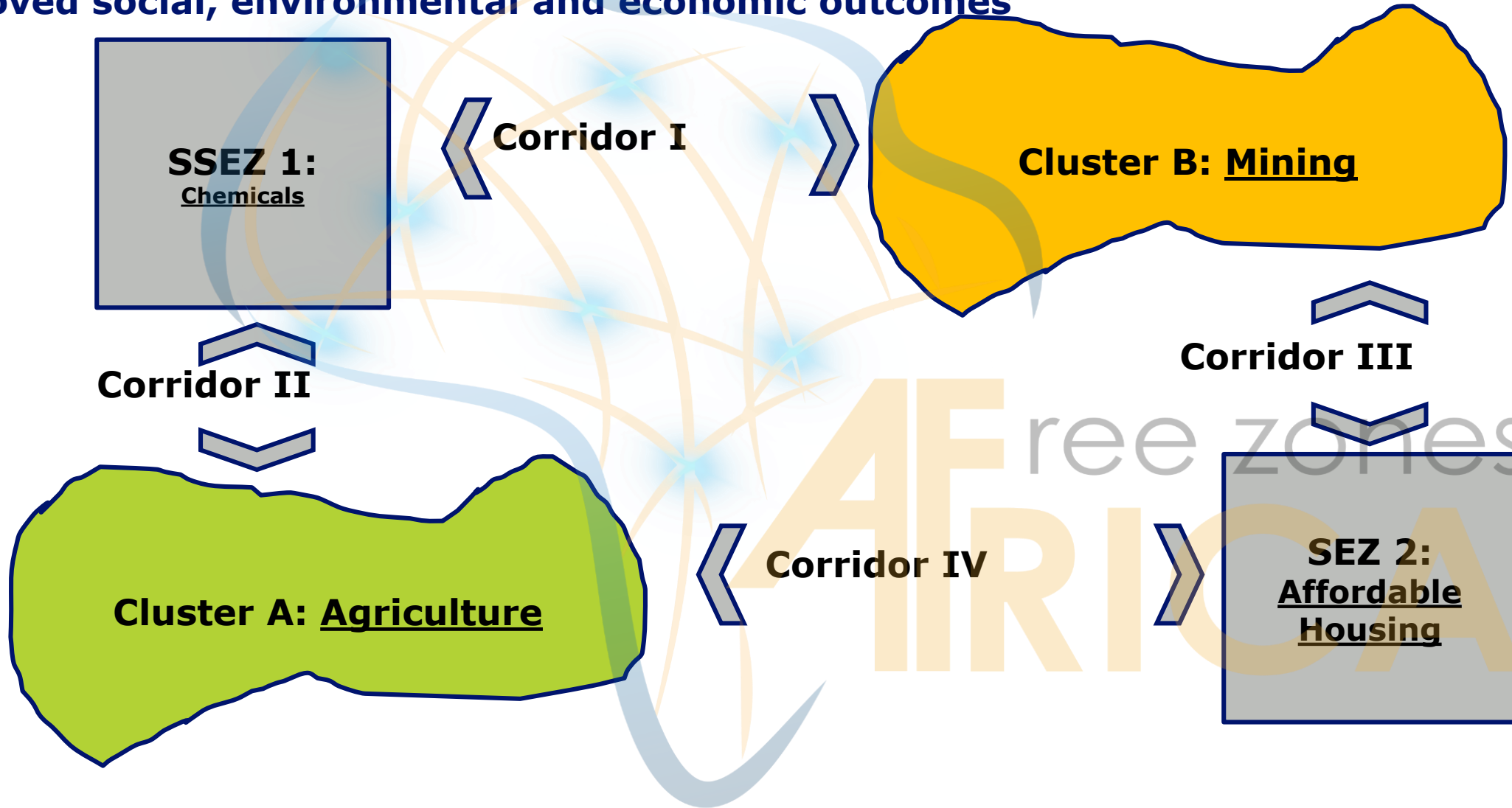
**Malaysia:** Working with **innovative technologies** to accurately measure biomass density and identify High Carbon Stock areas to inform regenerative land strategies

**China:** Updating soil datasets with **state-of-the-art ground sensors and extrapolation methods**, like VanderSat is doing in China, to feed into self-learning algorithms that inform agriculture and forestry management and monitoring

**South Kalimantan:** **Conducting ground-truthing on data** aggregated from local ministries to **validate the accuracy** of concession boundaries

**Zimbabwe:** **Sourced up-to-date, high resolution multispectral remotely sensed imagery** from satellites and airborne vehicles to form a base map for dataset overlays

This allows us to create economic clusters, where SSEZs act as the hub and conduit to drive improved social, environmental and economic outcomes



# SSEZs catalyse inclusive, sustainable development by providing a trusted landing space for investment, and supporting the growth of key sectors capable of stimulating system change

## SSEZs overcome 6 barriers to development:

- 1) Non-inclusive development and linear growth models** - We identify sectors with outsized SDG impact. We take a systemic approach linking sector impact into regional context and local assets
- 2) Unsustainable and destructive operating practices and procedures** - We support the design of policies and procedures to enhance the SDGs at the zone level, going beyond baseline environmental management to include social components such as upskilling, professional development and gender empowerment.
- 3) Lack of support for local champions** - We develop innovative and aligned tenants, bringing in international best practice and local champions, focusing on technology transfer and local content development.
- 4) Access to funding/Foreign Direct Investment (FDI) attraction** - Governments are usually poor at attracting investors and often don't understand private sector needs. Investors often overestimate risk in investing in Africa. We create a platform in our zones comprising trusted assets reducing perceived and actual capital risk, and plan to develop blended finance models to further crowd in investment and de-risk projects.
- 5) High operating costs** - We curate tenant selection to maximise industrial symbiosis to improve operating conditions and reduce costs. Applying circular design principles, we work with technical partners to support master planning, digitisation and waste utilisation.
- 6) Lack of coordinated and aligned effort** - We build networks of support to ensure long term viability. Working with global and local stakeholders we align policy, cluster development and communities, building on local and national development priorities to guide zone development plans.





# **Sustainable Special Economic Zones in practice...**

Free zones  
**AFRICA**

# We apply a three phase approach, which moves from commercial development, technical development and promotion support for tenants and funder acquisition

Phase	Key activities	Outcomes
<p><b>1) Commercial Development</b></p>	<ul style="list-style-type: none"> <li>• Macro assessment of country/regional economic drivers and SDG opportunity</li> <li>• Zone level analysis of competitive advantage, key sectors to target and potential tenants</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Detailed zone business plan allowing for commercial decisions</b></li> </ul>
<p><b>2) Technical Development</b></p>	<ul style="list-style-type: none"> <li>• Detailed technical masterplan allowing for infrastructure and capex forecasting and planning</li> <li>• Zone level sustainable policy and procedure mapping</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Zone masterplan allowing for engineering and capex planning</b></li> <li>• Policy &amp; procedure resource</li> </ul>
<p><b>3) Zone Promotion and Investment</b></p>	<ul style="list-style-type: none"> <li>• Support with key tenant engagement and acquisition</li> <li>• Support with approach and access to funding</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Zone development roadmap/plan</b></li> <li>• <b>Tenants</b></li> <li>• <b>Investment</b></li> </ul>

# We are developing the world's first SSEZ in Lagos, transitioning from a record breaking O&G logistics base to a diversified platform for SDG enhancement



- **Nigeria's largest 100% privately owned Special Economic Zone**, at circa 142 ha
- **US\$500m investment mobilised to date**, circa 30% land utilised
- **Focused mainly on maritime services** housing world class logistics terminal (LILE), fabrication and ship yard (Samsung JV) and drilling pipe coating facility (Africoat)
- **Prime location in Lagos Harbour** – 5 min boat ride from mainland, 100% secure, with strict access control
- **100% indigenous Nigerian leadership**
- **Largest ship ever part-fabricated in West Africa**, the EGINA FPSO with USD 3.3 billion in capex





**In Nigeria we are targeting sectors that enhance attainment of the SDG's through improved social and environmental outcomes from the products or services created**





# Affordable Housing



free zones

AFRICA

**Issue:** 17 million unit housing deficit in Nigeria, estimated to grow to 23 million units by 2020

**Opportunity:** A modular housing fabrication site to service the regional affordable housing market

**SDG impact:** Potential to fabricate 9,000 homes annually, leading to an ~\$90 million local annual value creation



# Bamboo Fabrication



**Issue:** Over 60% of Nigeria's forest reserve area had been lost by 2000, due to agricultural encroachment, illegal logging, planned agricultural development and urbanization.

**Opportunity:** A bamboo fabrication facility that drives a sustainable supply chain and local materials production

**SDG impact: Provide sustainable alternative to forest based timber avoiding deforestation and supporting land reclamation**



# Clean Technology



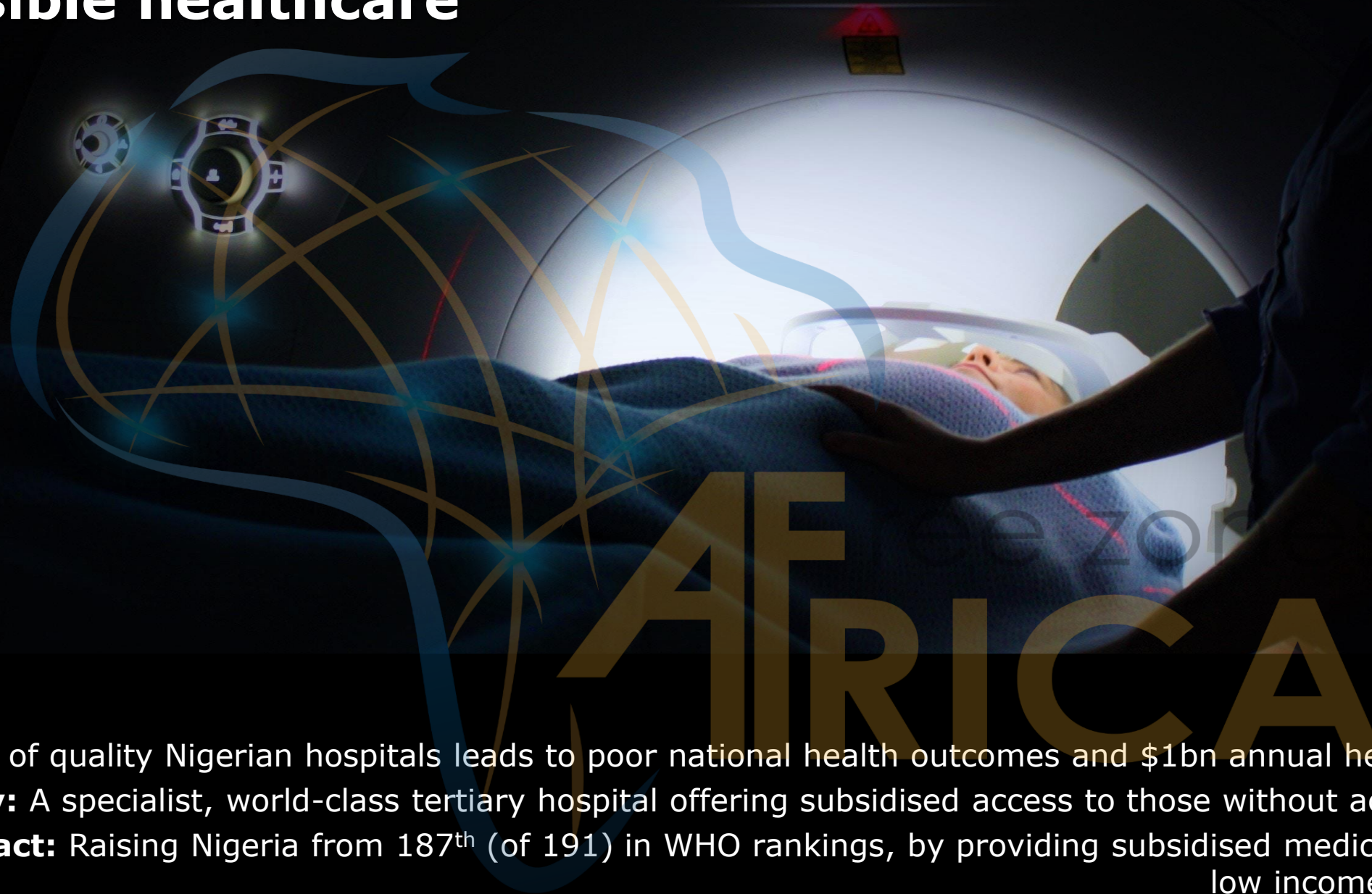
Free zones

**Issue:** National electricity generation capacity is 40,000 MW short of demand, thus +45% of Nigerians live without power

**Opportunity:** A Clean Tech Hub driving energy access through local assembly, manufacturing & innovation

**SDG impact:** ~100,000 off grid solar units produced annually leading to a \$71 million local annual value creation

# Accessible healthcare



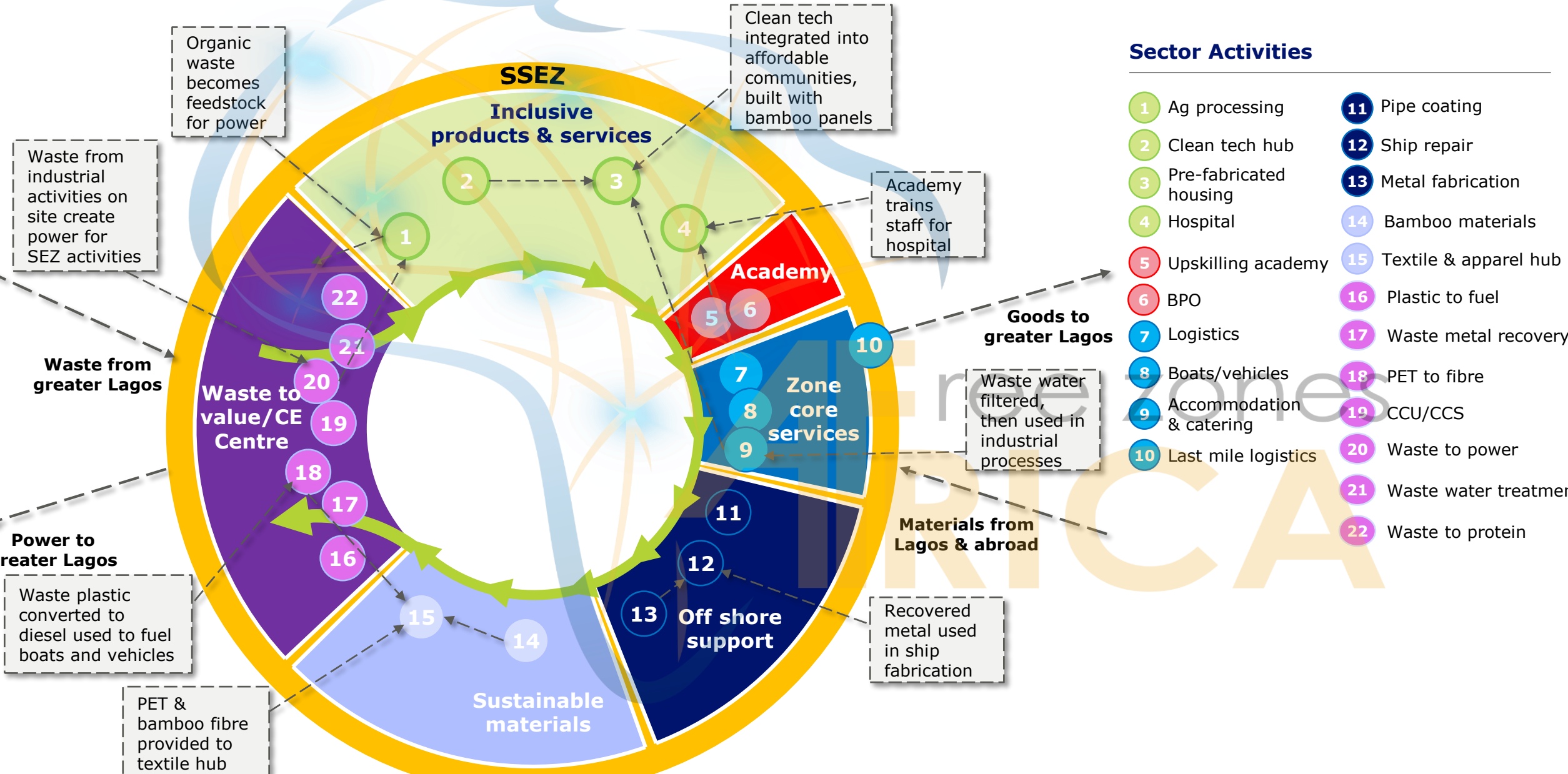
**Issue:** Lack of quality Nigerian hospitals leads to poor national health outcomes and \$1bn annual health tourism

**Opportunity:** A specialist, world-class tertiary hospital offering subsidised access to those without access to care

**SDG impact:** Raising Nigeria from 187<sup>th</sup> (of 191) in WHO rankings, by providing subsidised medical access for low income households



# Embedding circular design principles into the selection of sectors and tenants helps drive resource, product and commercial synergies



## Sector Activities

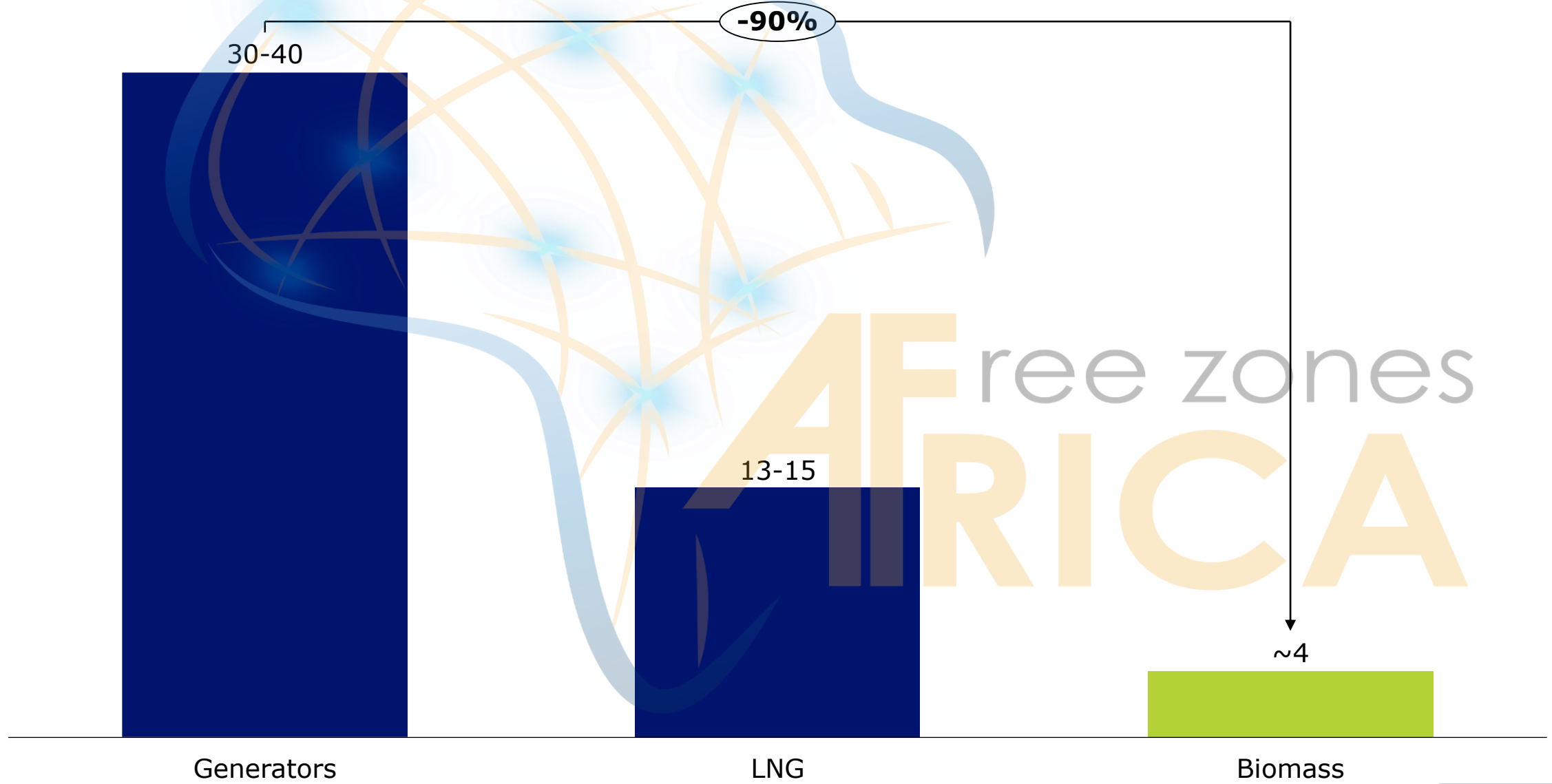
- |                            |                          |
|----------------------------|--------------------------|
| 1 Ag processing            | 11 Pipe coating          |
| 2 Clean tech hub           | 12 Ship repair           |
| 3 Pre-fabricated housing   | 13 Metal fabrication     |
| 4 Hospital                 | 14 Bamboo materials      |
| 5 Upskilling academy       | 15 Textile & apparel hub |
| 6 BPO                      | 16 Plastic to fuel       |
| 7 Logistics                | 17 Waste metal recovery  |
| 8 Boats/vehicles           | 18 PET to fibre          |
| 9 Accommodation & catering | 19 CCU/CCS               |
| 10 Last mile logistics     | 20 Waste to power        |
|                            | 21 Waste water treatment |
|                            | 22 Waste to protein      |





# In Nigeria, we have managed to bring down planned power costs by ~90% by developing a combination of sector synergies and renewable energy

Benefits of switching to biomass, price per KWh \$c



## As well as driving social and environmental benefits, smart SSEZ design is leading to improved commercial benefits for both tenants and the zone

- 1) High quality & reliable utilities**, in difficult operating environment where access to power is paramount
- 2) Lower cost core utilities**, driven by sector synergies for example power which can be as low as a 10<sup>th</sup> of the price
- 3) Improved working conditions**, tenants are supported with upskilling support while employees professional development support
- 4) Lower cost access to capital**, interest from investors who see SSEZs as a form of trusted asset developer and operator

AFree zones  
AFRICA





**Where we are today...**

free zones  
**AFRICA**

# The concept is scaling with opportunities being explored across the world both for country SDG assessments and zone development with national and international partners



- Bangladesh
- Bolivia
- Columbia
- Ethiopia
- Honduras
- Indonesia
- Italy
- Kazakhstan
- Kenya
- Mozambique
- Netherlands
- New Zealand
- Nigeria
- Panama
- Rwanda
- Sri Lanka





# Partnering with P4G...



**Operational Lead**



**Investment Lead**



**Strategic Lead**

free zones  
**AFRICA**

# We envisage three options for SSEZ engagement in Ethiopia; i) textiles/apparel; ii) agri-processing; and/or iii) an SDG-impact zone

## Zone opportunities

### 1) Textiles / Apparel

- Transforming existing textile-focused zones from 'do no harm' zones to best in class, circular SSEZs
- Boosting upskilling/training component – shifting garment workers up the value chain into better quality jobs

### 2) Agri-processing

- Increasing value capture in country from simple primary processing to maximising vertical integration (cotton, sugar, sesame, niger seeds)
- Identify and build the northern star of agri-processing zones in Ethiopia; an 'agricultural Hawassa'

### 3) SDG impact zone

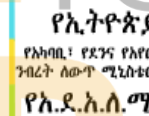
- Identify the 3-4 key sectors that could catalyse a transformative shift in the Ethiopian economy
- Sectors TBC, but could include affordable housing, healthcare, upskilling, tech, plastic-to-value

## Potential Partners

### 1) Programmatic Partners



### 2) Government Partners



### 3) Zone-specific Partners



# We envisage three options for SSEZ engagement in Kenya; i) agri-processing/aquaculture; ii) textiles/apparel; and/or iii) an SDG-impact zone

## Zone opportunities

### 1) Agriculture / Aquaculture : Mariakani/Lake Victoria

- **Mariakani:** 500 acre site focused commercial production of cashew nuts, coconut, cassava, mangoes, pineapples
- **Lake Victoria:** Africa’s first water-based SEZ; transformational and unique case study of a sustainable aquaculture economy

### 2) Textiles / Apparel

- Transforming existing textile-focused EPZs from ‘do no harm’ zones to best in class, circular SSEZs
- Boosting upskilling/training component – shifting garment workers up the value chain into better quality jobs

### 3) SDG impact zone

- Identify the 3-4 key sectors that could catalyse a transformative shift in the Kenya economy; Sectors TBC, but could include affordable housing, healthcare, upskilling, tech, plastic-to-value, textile

## Potential partners

### 1) Programmatic Partners



### 2) Government/National Partners



### 3) Zone-specific Partners







**SSEZ SDG Fund**

**SSEZ Private Sector Coalition** free zones

**AFRICA**

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