



## **Renewable Energy Finance: Concentrated Solar Thermal**

**Marc Immerman**

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# Introduction

- Solafrica is a CSP development company funded by the principals of Lereko and Metier and the IDC. Marc Immerman and Michael Goldblatt are developers and shareholders.
- Lereko Metier Sustainable Capital Manager (or “LMSC”) is targeting R250 million of investment committed for clean technology projects and businesses encompassing renewables, energy efficiency, waste and water management in Southern Africa.
- Expected returns >25% IRR.
- Development stage investment.
- The Metier Principals and teams have a seven-pool, twenty year track record in private equity transactions achieving 36% gross annual IRR’s from R6.5b across 85 investment transactions.
  - Thierry Dalais, Anthony Hewat, Paul Botha
- LMSC will leverage the M&A and private equity skills of Metier and the environmental, empowerment and sustainability reputation of Lereko.
  - Valli Moosa, Popo Molefe, Lulu Gwagwa



# LMSC Team

## Michael Goldblatt

- BSc Medical Science, MSc Geography, MSc Economics (environmental & natural resources)
- Authored the World Bank SA CDM strategy , integral in SA REFIT and Designated National Authority establishment
- Relevant experience in water and waste consulting to government and municipalities
- CDM and RE experience with leading SA corporates
- Developer and shareholder in Solafrica

## Marc Immerman

- B Comm and Masters (Finance)
- Investment banking, software and media executive experience
- Exposure to numerous cleantech projects and deals
- Developer and shareholder in Solafrica

## Marius Hugo

- B.Eng (Elec), MBA.
- Engineering design on energy harvesting technologies including solar & vibration energy harvesters, electronic amplifiers, energy efficient micro valves and environmentally responsive smart clothing
- Relevant Private Equity experience includes MBO, LBO and infrastructure investment in water and waste sectors

## Paul Jessiman

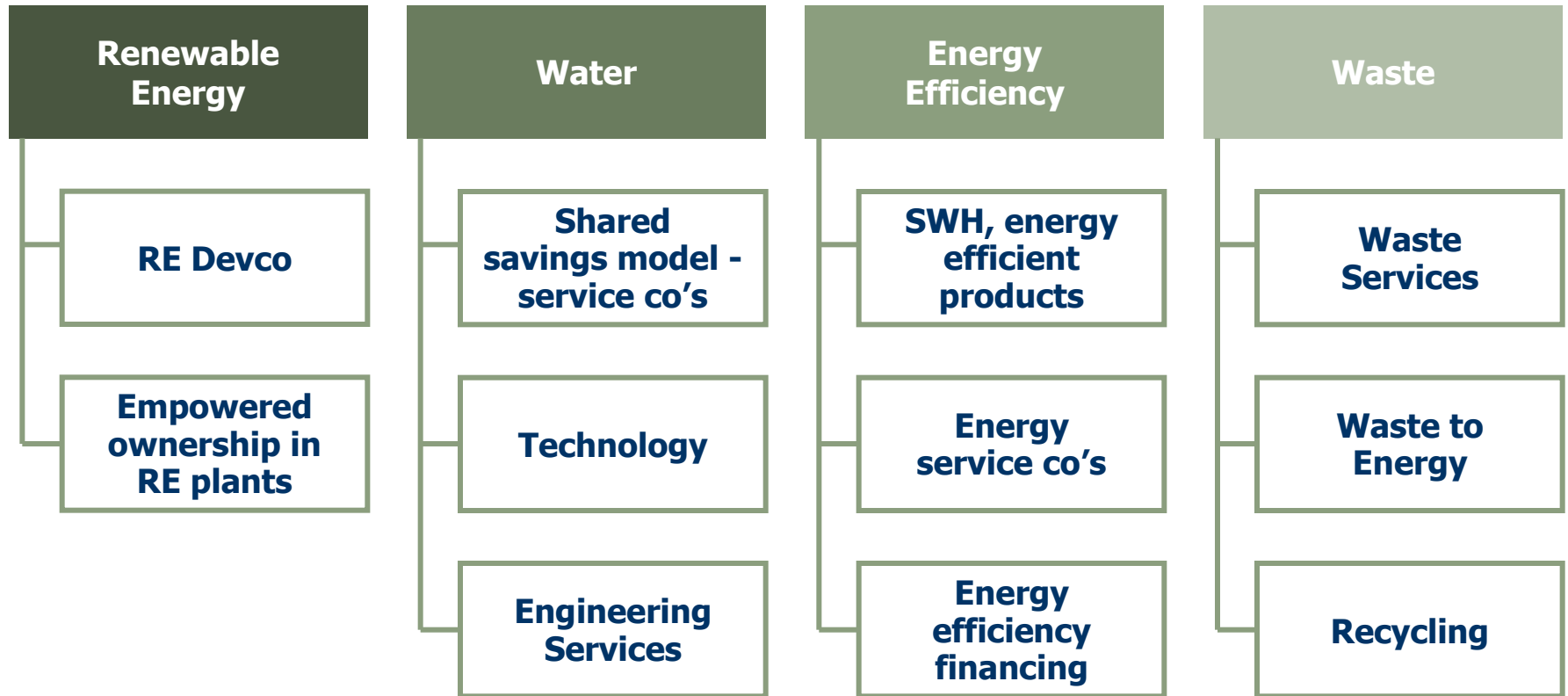
- B. Bus Sci, LLB, MFA
- 23 years PE experience including early stage and start-ups

## Joni Warburton

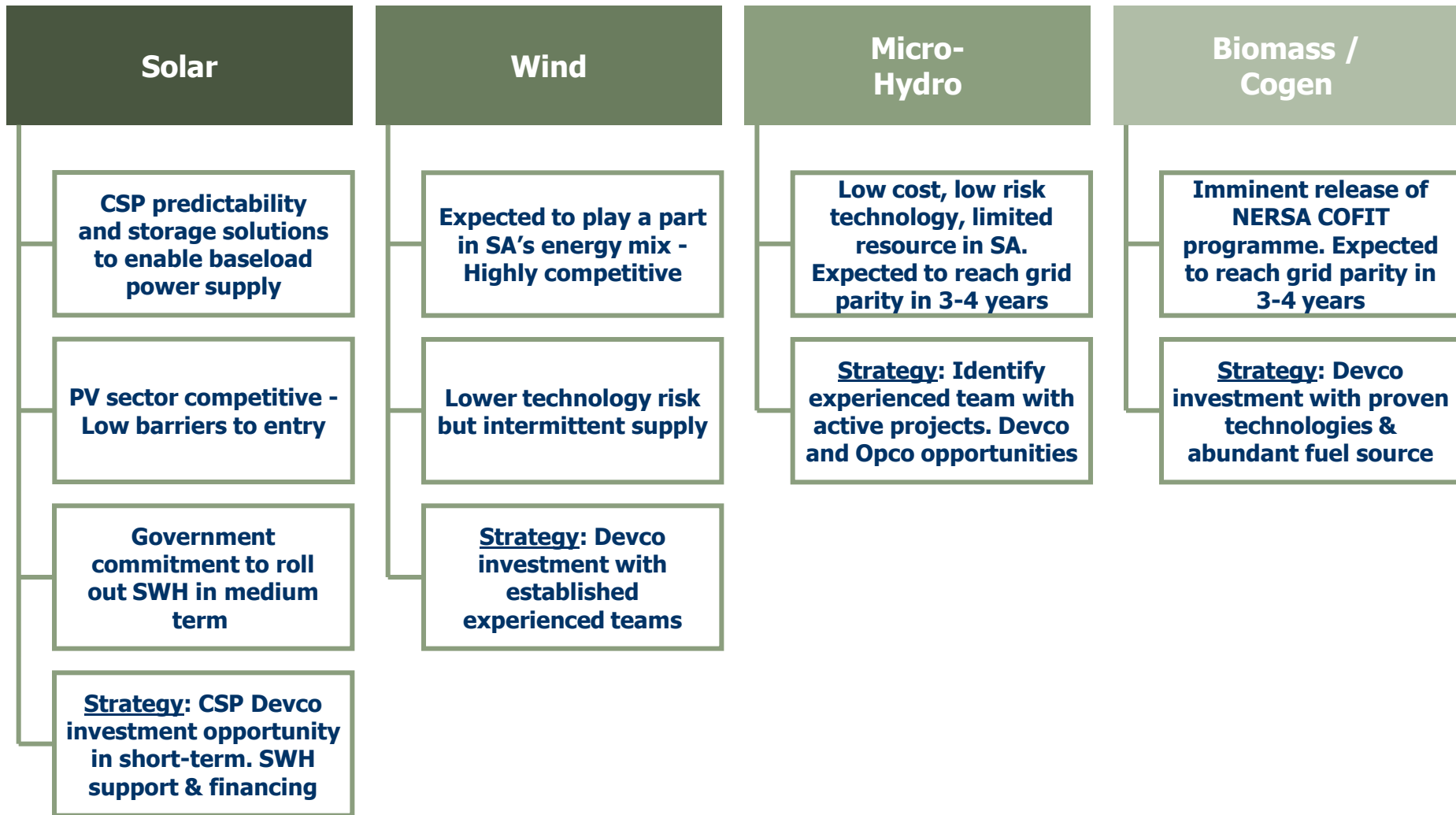
- CA(SA)
- 2 years Private Equity CFO financial experience



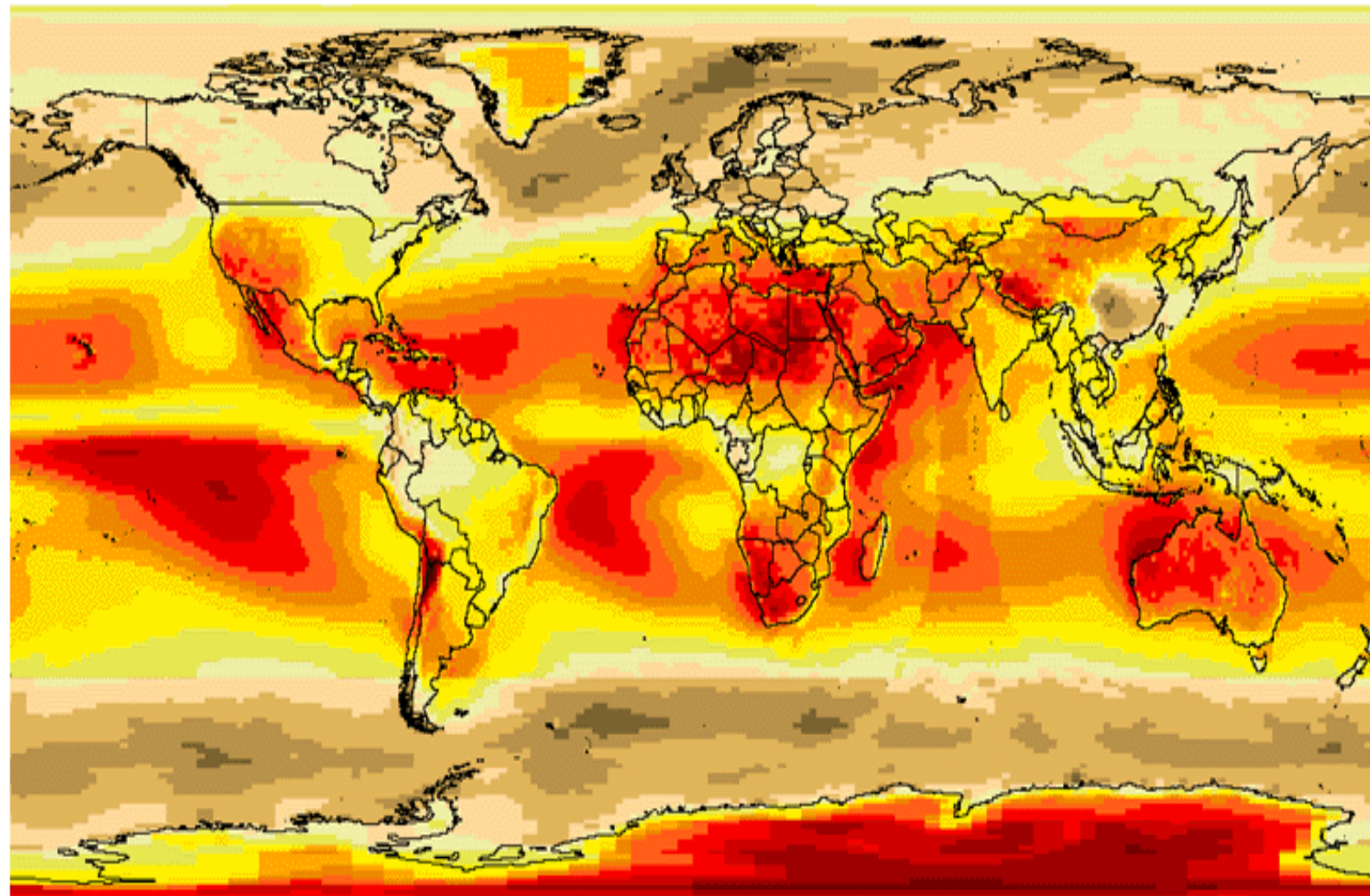
# Investment Sectors targeted



# Overview: Renewable Energy



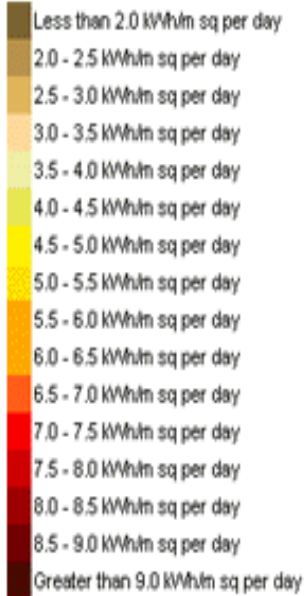
# Why CSP in SA



## Global

Direct  
Normal  
Irradiance

Annual  
Mean

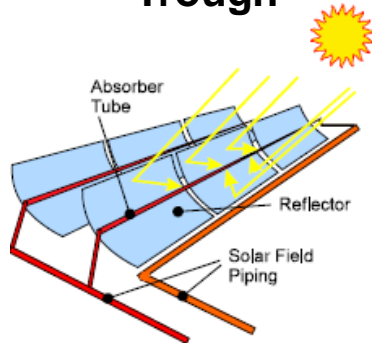




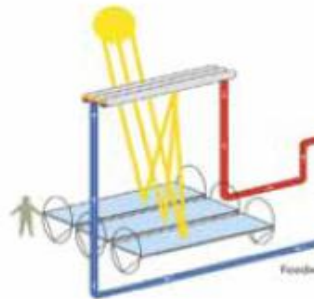
# Technology: CSP



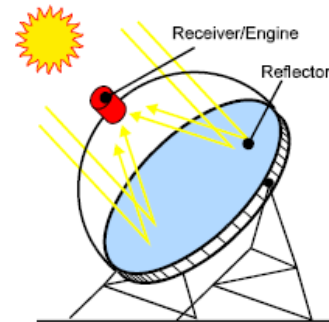
**Trough**



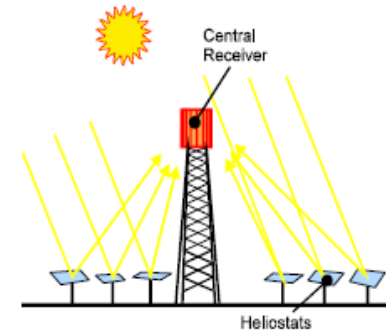
**Linear Fresnel**



**Dishes**

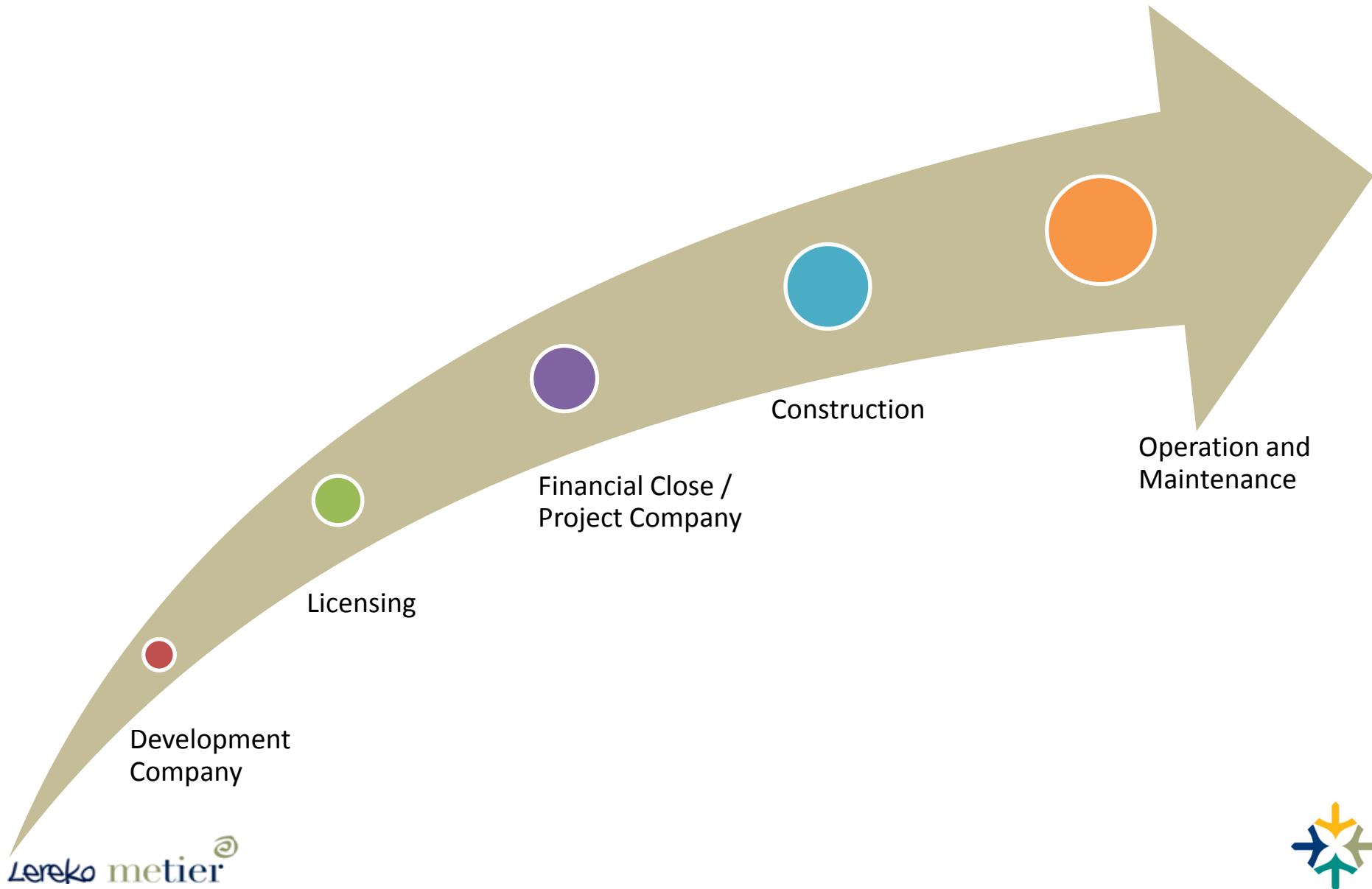


**Tower**





# Lifecycle of CSP / RE Projects



# Development Company Funding

- Sources of Funding
  - Private equity / Venture capital funds
  - High net worth individuals
  - Self-funded / Bootstrapped
- Important Elements
  - Team credentials and experience
  - Resource strength
  - Legality of site acquisition
  - Grid capacity
  - Ancillary requirements (water)
  - Licensing and regulatory progress
  - Team to have 'skin in the game'
  - Credible financial model



# Financial Close / Project Company Funding

- Sources of Equity Funding
  - Private equity / Infrastructure funds
  - Pension funds
  - DFI's
- Sources of Debt Funding
  - Local commercial banks
  - International banks
  - Concessionary finance is available
- Important Elements
  - PPA
  - Regulatory approvals ~ EIA, WULA, Waste, CAA, Rezoning, Subdivision (70 of 1970)
  - Legality of site acquisition
  - Financial model & level of profitability
  - Engineering study (BFS)
  - Resource measurement
  - Lenders DD
  - O&M experience



# CSP Specific Factors

- Profitability
  - Strength of resource (N.Cape)
  - Dry vs. Wet Cooling
    - Water availability
  - Size of plant
  - Price paid for electricity
  - Carbon
- Debt
  - Proven technology – 12 months commercial operation
  - Can expect 70/30 debt equity ratios
  - Likely term of debt 10 yrs
  - 12 months physical, validated on-site measurement
  - Concessionary finance available IFC, DBSA & others
- Equity
  - Ownership required returns 15%-20%
  - Preference to join at financial close and not bear development risk
  - Infrastructure and PE funds

