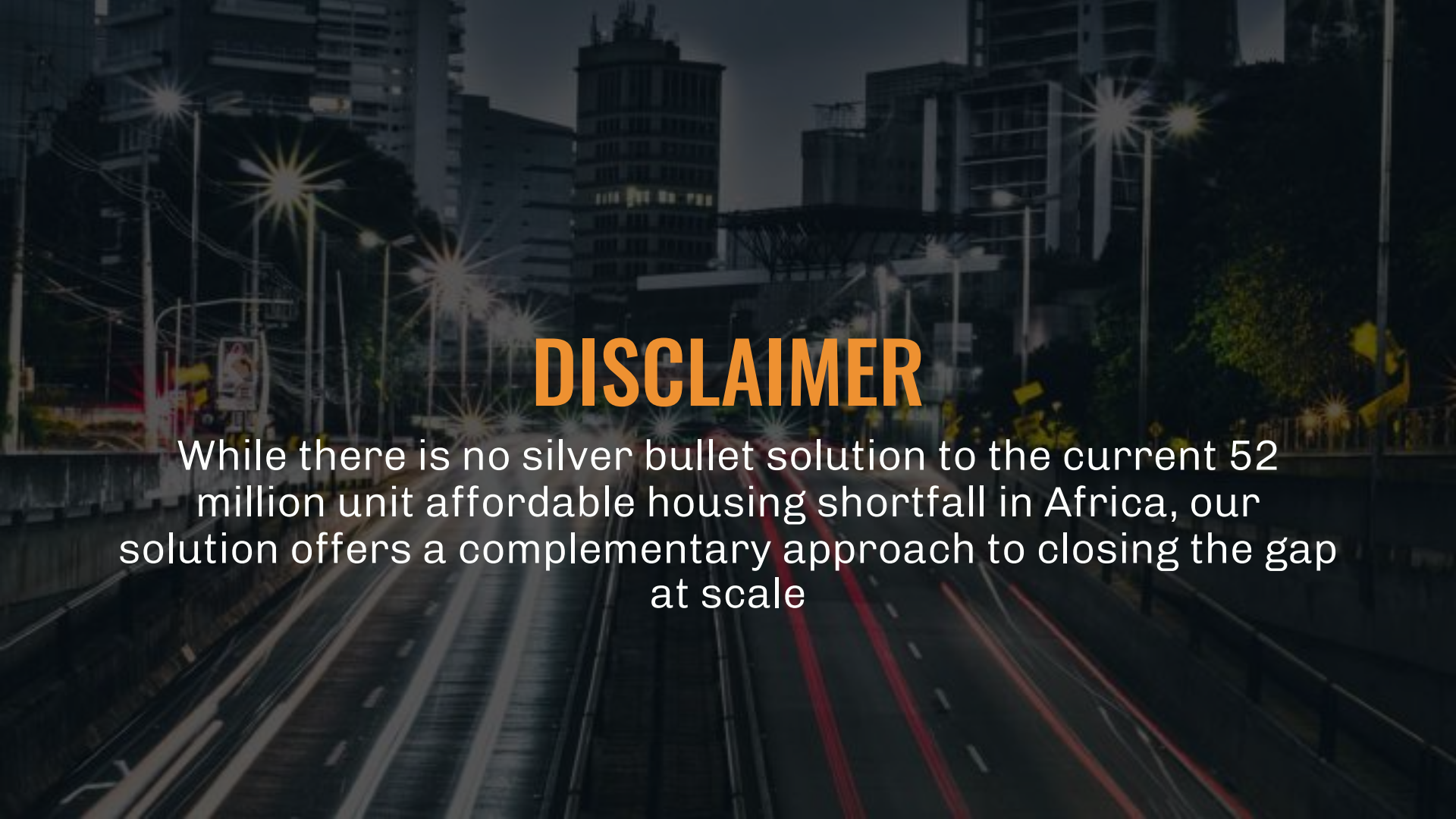


PAL HOMES SPV

Construction On-Demand Starup That Utilizes Technology To Scale Up Infrastructure Development

Project Finance
3DCP



DISCLAIMER

While there is no silver bullet solution to the current 52 million unit affordable housing shortfall in Africa, our solution offers a complementary approach to closing the gap at scale

Agenda

USD$1.8 Million
Capraise for
construction on demand



Highlights and key updates, about Tivane Investment Group, PAL Homes SPV, and Affordable housing market.

Market recap; Affordable housing backlog in Zimbabwe and growing trends, 3DCP market



PAL Homes business model, structure, roll out strategy, and key partners

Financials
Cost Analysis
Asset Profile
Balance Sheet
Cashflow
DCF

Tivane Investments Group (pvt) limited t/a PowerAfrika Labs

Tivane Investments Group, also known as PowerAfrika Labs, is a Zimbabwe-registered infrastructure projects preparation company that focuses on building sustainable, smart, inclusive, and climate-resilient infrastructure.

Tivane is currently building accessible housing for persons with disabilities and older adults under the PAL Homes program, with funding from the Infrastructure Development Bank of Zimbabwe. Tivane also owns 72% of PASIE, a sustainable furniture manufacturing company that received seed capital from POTRAZ.



Market Recap

According to the Ministry of National Housing the Zimbabwean housing backlog is ever expanding, **currently standing at 2 million units.**

A growing Affordable Housing finance market in Zimbabwe with more participation by institutional investors such as Shelter Afrique, Reall, Old Mutual CABS, IDBZ, FBC and more in the past 5years.

A high **informal population, unbanked (UTM banking) and** inconsistencies in building structure resulting **in a high labour bill.**

A 2020 study by the Zimbabwe Diaspora Remittances and Investment Survey found that about 60% of remittances are used for household consumption, such as food, education, and healthcare. The remaining 40% is used for investment, including construction.

The biggest challenge fo the diaspora is leakages through inflated BOQs

3DCP Industry

According to the World Economic Forum the industry grew from USD$3million in 2019 to USD$1.6 Billion in 2023

There are currently over 200 printed houses, commercial buildings, schools and public infrastructure globally

Kenya has printed over 52 houses, Malawi 1 school, Angola - 2houses, and South Africa 1 house under Lafarge Holcim 3D construction printing SBU 14Trees





Key Activities

1. Design Construction
2. Project Management
3. Furnishing

Categories

- Architectural designing
- Quantity surveying
- 3D Construction Printing (3DCP) of Building

Value Propositions

1. Green, accessible and affrodable housing
2. Reduce BOQ by 20-50%
3. Timely construction schedule
4. Sustainable - reduces GHGE and wastage of materials by up to 40%

Key Resources

3DCP

2 x 3D Construction printers are a key resources in the construction printing of affordable homes. The printers to be procured from CyBe a dutch based 3DCP manufacturer. PAL Homes hosted a roadshow in May 2022 with COBOD being the technical partner and in 2023 visited CyBe 3DCP factory

DESIGN STUDIO

Design is a key element in success of 3DCP printing of affordable homes as design will inform the printing process. PAL Homes will use in-house leading sustainable design studio PowerAfrika.

DRY MORTAR/ CONCRETE MIXES

Materials make up more than 70% of the BOQ costings. With the primary material being either DMM or concrete mix PAL Homes is establishing offtake agreements with locally leading infrastructure inputs manufacturers.

PAL HOMES PROJECTS

Affordable housing is more than just building houses; it also requires supporting infrastructure such as water and energy. That's why, in our first year, we will focus on printing concrete water pipes and power line poles using our 3D construction printers. This will not only provide supporting infrastructure for affordable housing, but it will also mitigate the risk of permitting delays on built houses. Additionally, we will offer training programs on 3D construction printing to create a skilled workforce.



Projects

Housing
Water & Infrastructure
Energy
Waste Management
Social Infrastructure

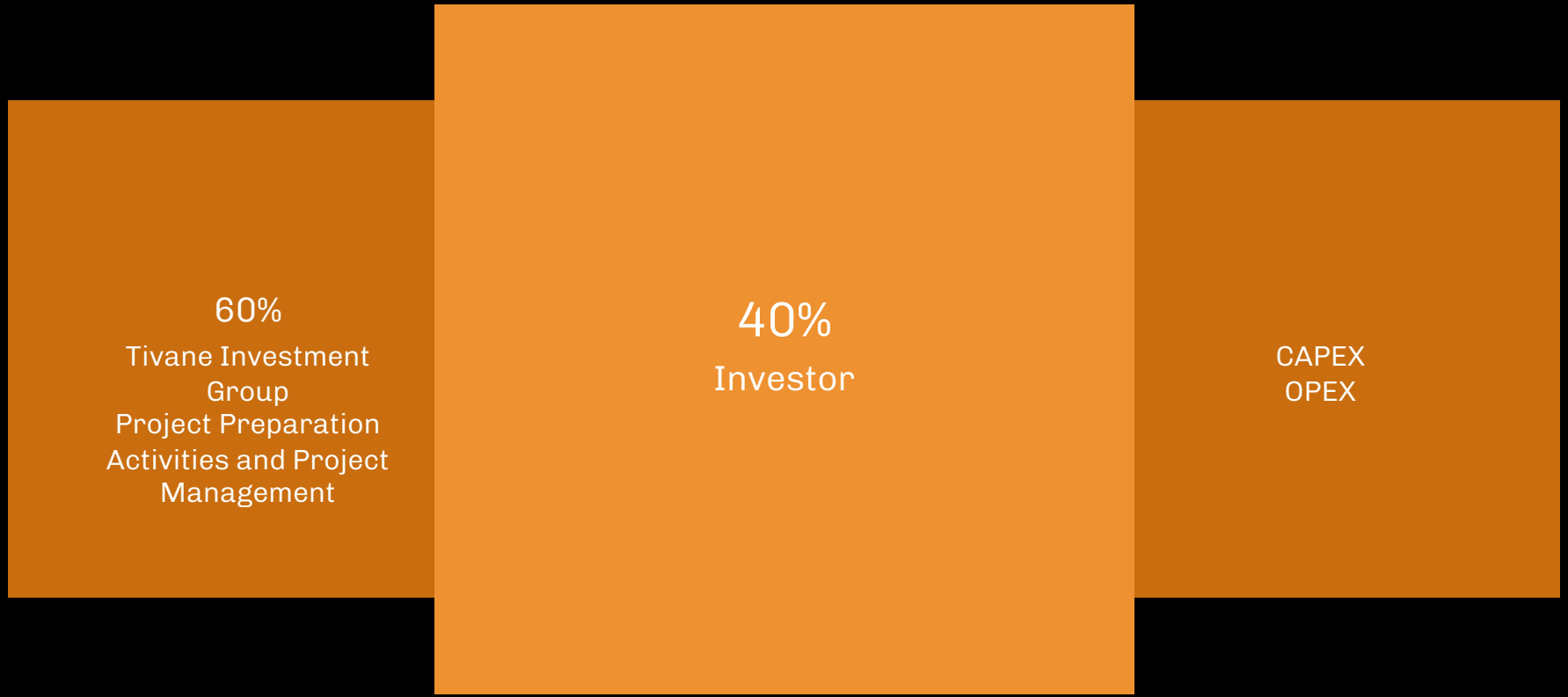


Our Ask

Tivane Investment is seeking USD1.8 million with 60% debt and 40% equity.



USD$1.8 Million





Leonard Muyambo

Founder & CEO

Biomedical scientist turned sustainability researcher, SaMuyambo studied Biomedicine. After university, he attended Cornell University as a teaching fellow for Critical Thinking. There, he honed his critical thinking skills, which allowed him to venture into entrepreneurship with an eye for sustainable infrastructure development. SaMuyambo then attended Lund University in Sweden, where he obtained a Diploma in Sustainable Cities. He holds a certificate in Business Finance from EBU Luxemburg.



Patience Muchawa

Co-Founder & CSO

A passionate sustainability engineer, Ruvimbo studied Civil Engineering and obtained a Master's in Sustainable Cities from Leeds University as a Chevening Scholar. Ruvimbo is an accredited IFC- EDGE Expert. She has worked in various industries, including energy, residential development, and sustainability-related projects. She is also a 2021 Local Pathways Fellow. Ruvimbo heads PowerAfrika Labs as the Chief Sustainability Officer, responsible for ensuring that the lab meets the needs of its clients and the environment.