

RAXEO

The data centre company

27th August 2019

**Uganda's First Carrier-Neutral
Data Centre**

Current Landscape in Uganda

Market Environment Data Centre Space in Uganda

1. Absence of a Carrier & Cloud Neutral Data Centre in the Market.
2. Absence of a Certified Data Centre in the Country
3. Telco's Currently Leasing Surplus Space in their Switch Centers MTN & Airtel
4. ISPs Offering Colocation in their Relatively Small Server Rooms
5. Government Agency (NITA) Providing Cloud and Colo for Public Sector
6. One IXP in the country struggling with Politics, Government Interference & in a Sub-Standard Location(Power & Air Conditioning)

Market Drivers in Uganda

Macro Data Usage and Storage Trends

Regulatory Framework

Demand for Content

Govt e-services

Value Proposition For a Carrier & Cloud Neutral Data Centre

Strategic **disaster recovery** location

High security
with 24/7 access

Redundant &
Diverse Fibre
Connectivity Options

Colocation via
flexible and scalable
configuration

Shift and stack
services for
stress free migration

Large **boardroom**
and **customer breakout** area
available

Fast and easy
cross connects

Remote support
24/7

IXP/NAP
Presence

Site Location in Uganda



- 15km outside Kampala CBD
- Ideal for disaster recovery
- Within the Uganda Investment Authority Industrial and Business
- Along Kampala-Jinja road for optimal fibre access and connectivity



RAXIO

Raxio Data Centre - Front

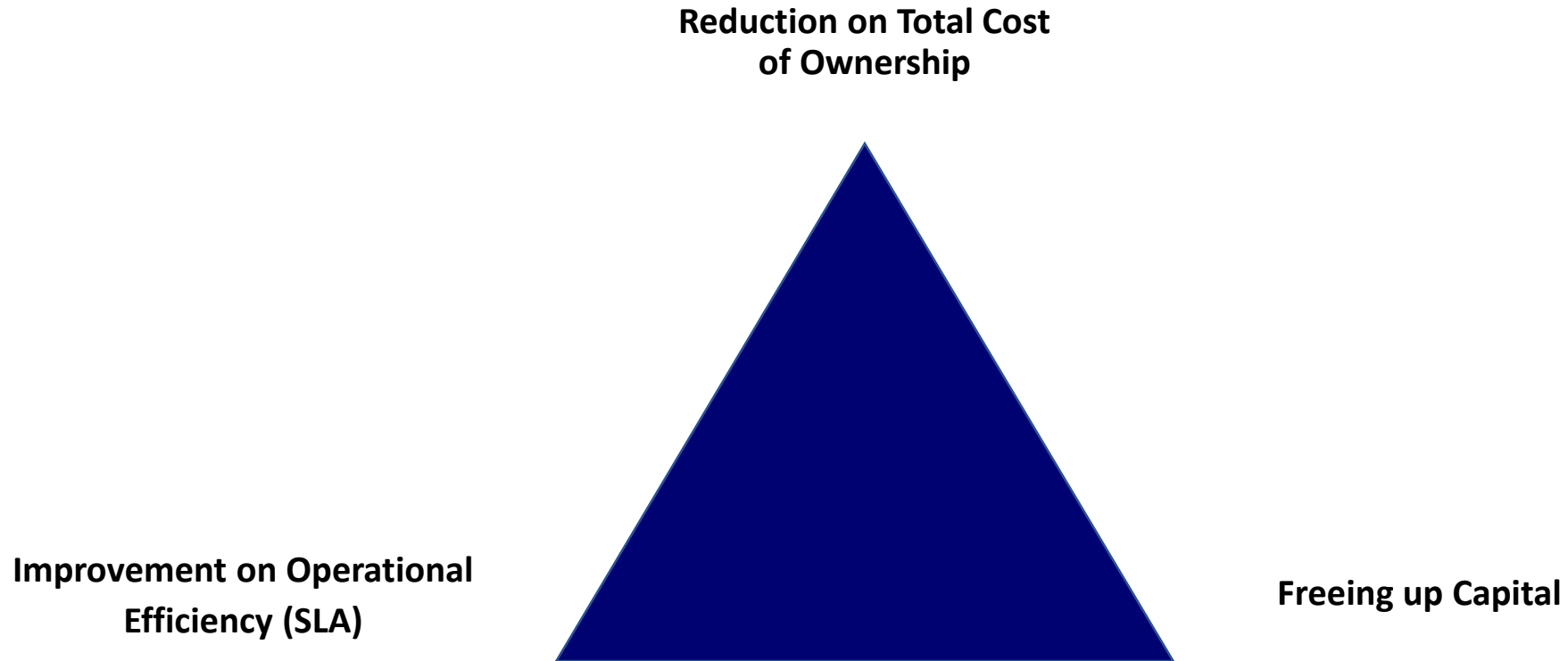


Raxio Data Centre
– Rear View



Top View

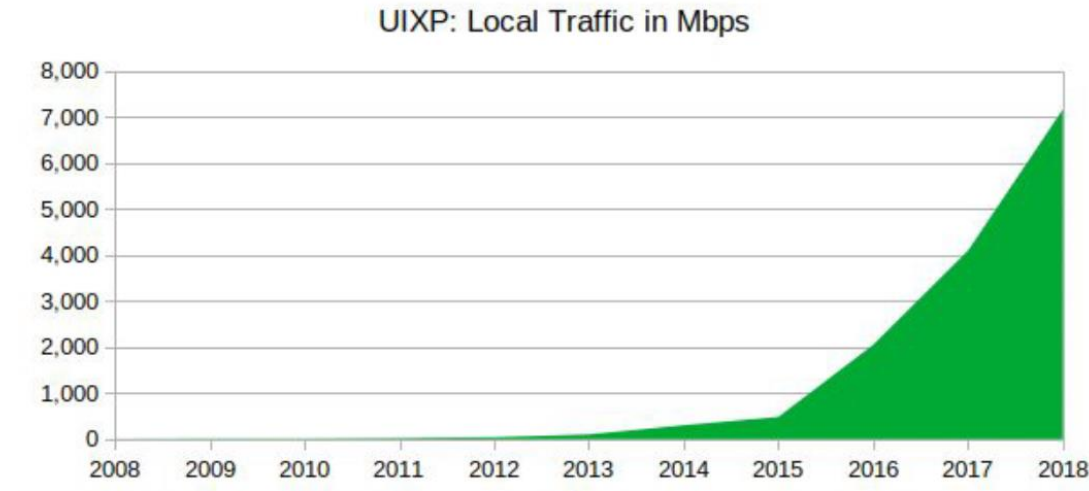
What impact will we have on Uganda's Enterprise Market?



A case for Colocation (Total Cost of Ownership)

	In-House DC	Raxio Colocation DC
Investments	<ul style="list-style-type: none">• Significant investments to ensure:<ul style="list-style-type: none">• Power• Cooling• Cabling & networking• Connectivity needs & redundancy of IT equipment are met.	<ul style="list-style-type: none">• All investments in infrastructure already made by Raxio• Full redundancy and resilience ensure maximum uptime• Optimized for a much larger installation than individual needs
Operating Costs	<ul style="list-style-type: none">• Power to run IT equipment• Power to run cooling equipment• Staff to manage and operate the DC• Maintenance & insurance• Rent/opportunity cost of using prime floor space for IT equipment• Additional security/procedures	<ul style="list-style-type: none">• All operating costs borne by Raxio• Highly energy efficient equipment reduces power need• Bulk buying reduces cost• Dedicated facility staff shared across customer base

Review of Current IXP (UIXP)



- 27 directly connected networks
- Mix of including Carriers, ISPs, Government agencies, private sector, CDNs (Akamai, FB..)
- Traffic has grown dramatically to 7/8 Gbps daily peak
- Works on a port-fee model
- Subsidized by UCC
- Governance has always been tricky/ Historical Issues
- Exacerbated due to recent service level issues
- Space constraints
- Unclear outcome due to Government Interference

Raxio Planned Approach on IXP

Direct Peering

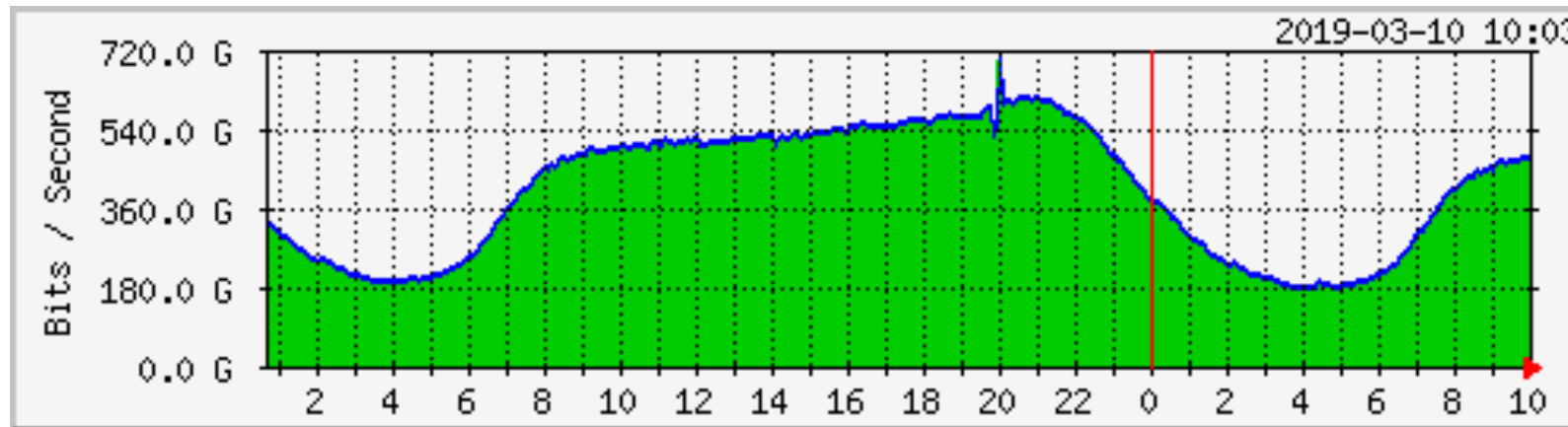
- Set up direct peering to existing UIXP from Raxio
- Allows access/connectivity for Raxio tenants to UIXP at minimal cost

New IXP/NAP @Raxio

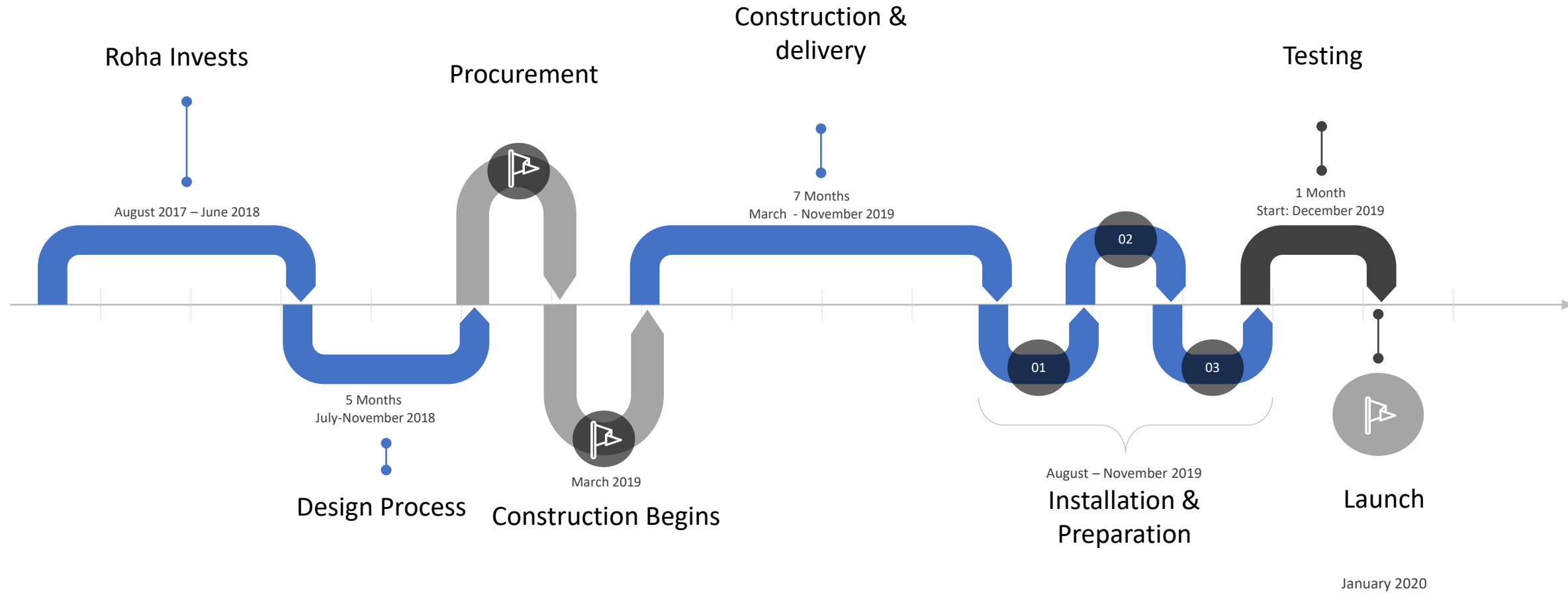
- Neutral
- Commercial Model – NOT for profit.
- Multi-lateral Peering – networks selectively peer with other networks of their choice for Scalability
- Business model – No Port Fee, but X Connect Applies
- CDN consolidation to increase on Local Content/Switching

Motivation Case: NAP Africa @ Teraco DC/DE

- Age: 10/11 years
- Model:
 - 100% free peering: no membership or port fees;
 - Multi-lateral peering arrangements available;
 - Bi-lateral peering arrangements available
- 3 City Data Centre Lay Out
- Peers: <https://www.napafrika.net/who-is-peering/#who-is-peering>



Project Timeline – Raxio (Uganda)

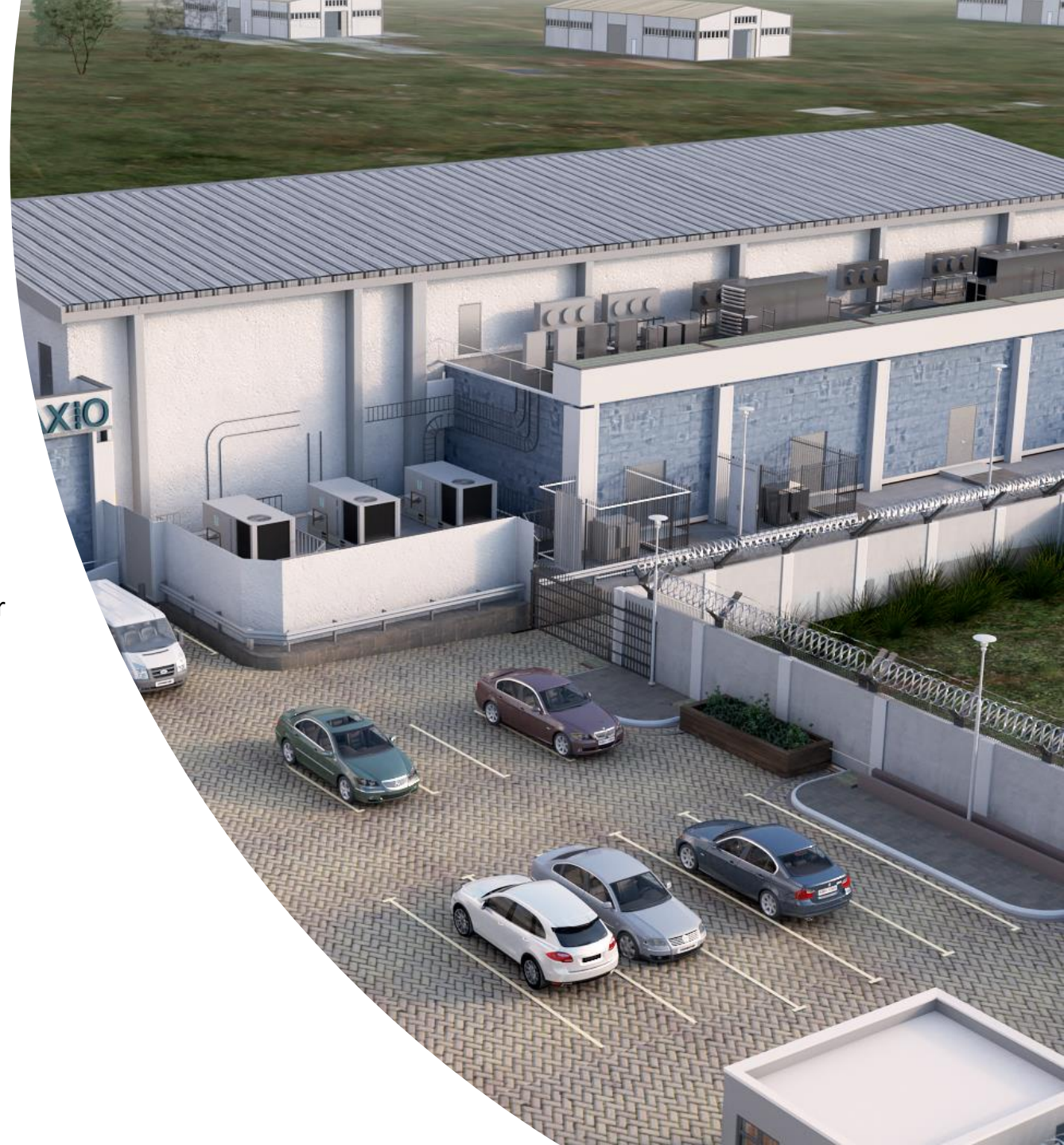




Uganda Site Status

First Brick Holdings

- Pan – African network of Tier III colocation data centers (fistbrick.io) operating as Raxio Data Centre with first site under construction in Uganda (raxio.co.ug)
 - **Committed capital to building five Tier III** enterprise-grade colocation data centers across Africa to cater for inadequately addressed demand for state-of-the-art carrier neutral data center facilities in the region.
 - **Construction started on first site** in Uganda in April 2019 with a “go-live” date set for December 2019.
 - **Operating team in-place and pre-sales process on-going.** First clients signed up.
 - Planned commencement of construction on **2 new sites before end of 2019.**
 - Potential sites:
 - 2019 - Ethiopia, Rwanda
 - 2020 - Tanzania, Mozambique, Uganda II, Rwanda II



About Roha

Mission: To responsibly build profitable businesses

- We see an **abundance of opportunities** in African markets that **do not fit the private equity (growth capital)** mold
- We build new companies that **address latent demand** in African markets
- Our model of **greenfield** development and investment **mitigates risks and** allows us to **deploy significant capital** while generating **strong returns**
- With Roha II and in the future, we will **build on our experience** in East and Southern Africa

