

The background of the image is a deep purple gradient. Overlaid on this are several bright, glowing lines in shades of cyan and magenta that intersect to form a series of diamond shapes, creating a dynamic, high-tech geometric pattern.

AVEVAWORLD

ACCELERATE INDUSTRIAL INTELLIGENCE

Calcamite

SANITATION + WASTEWATER



Building a Sustainable Water Future for Developing Nations

On-site, modular wastewater treatment plants, connected and controlled.

To enhance the lives of people and protect the natural environment where communities are remote, sewage systems are overloaded, water is scarce and skills are limited.

Sebasti Badenhorst – Calcamite COO

Wilhelm Swart – Chief Operational Technology Officer - 4Sight





About Us

Our manufacturing facility is based in Gauteng, South Africa. From here we export to the rest of Africa.

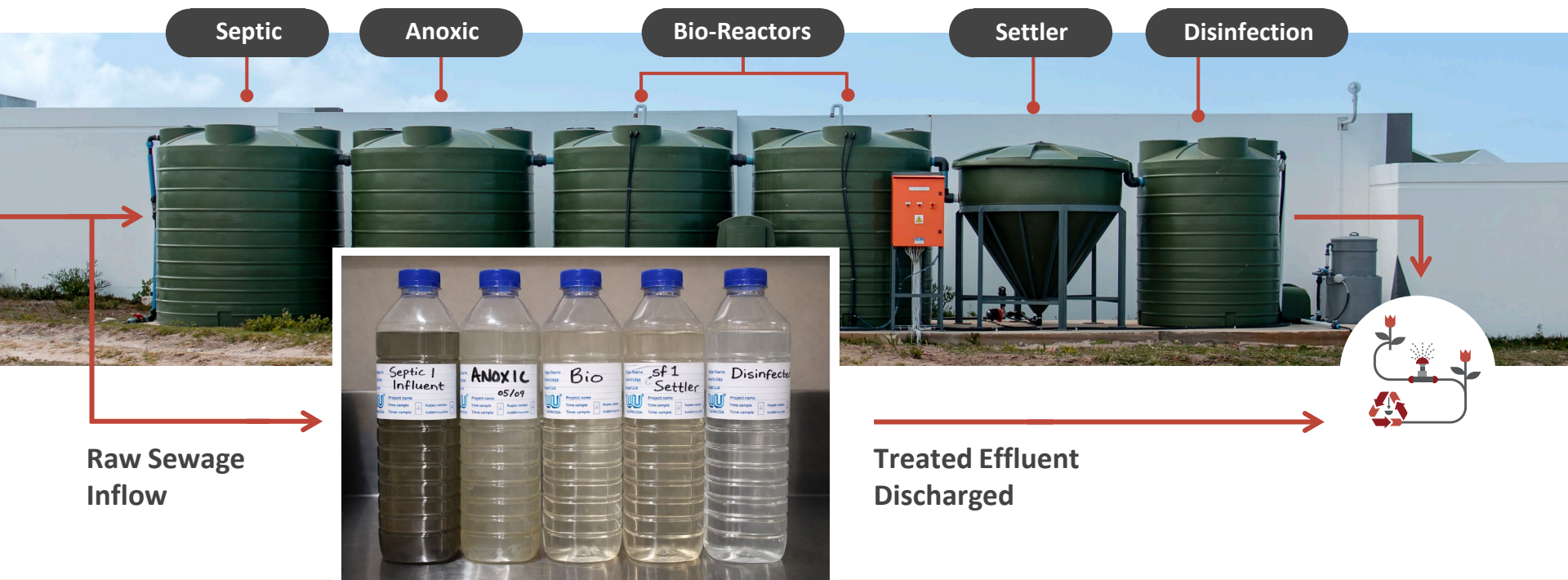
2,000+ Small-scale Wastewater
Treatment Plants Installed



2.3 million m³

Total treatment capacity
over 20 years

Treatment Phases Similar to Large Municipal Plants



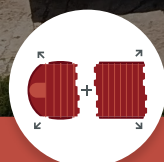
The Benefit of Decentralised Sewage Treatment

To Clients and Communities



Development Autonomy

Independent of municipal sewer constraints.



Scalability

Modular design enables phased expansion as demand grows.



Low Capital & Operating Costs

Modular, energy-efficient systems reduce costs.



Reduced Infrastructure

Localised reticulation system.



Water Security & Re-use

Enables reuse and reduces potable water demand.

The Benefit of Decentralised Sewage Treatment

To the Environment



Groundwater Recharge

Returns treated water to soil, supporting recharge & vegetation.



Lower Energy & Emissions

Treatment at source reduces transport & overall energy demand.



Nutrient Recycling

Systems manage nutrients, with reuse supporting natural fertilisation.



Reduced Pollution Risk

Decentralised treatment limits impact & reduces risk of leaks.

Water Safety and Security Remains a Challenge in Africa



Water Insecurity

Unpredictable droughts and floods lead to water shortages and damage to infrastructure.



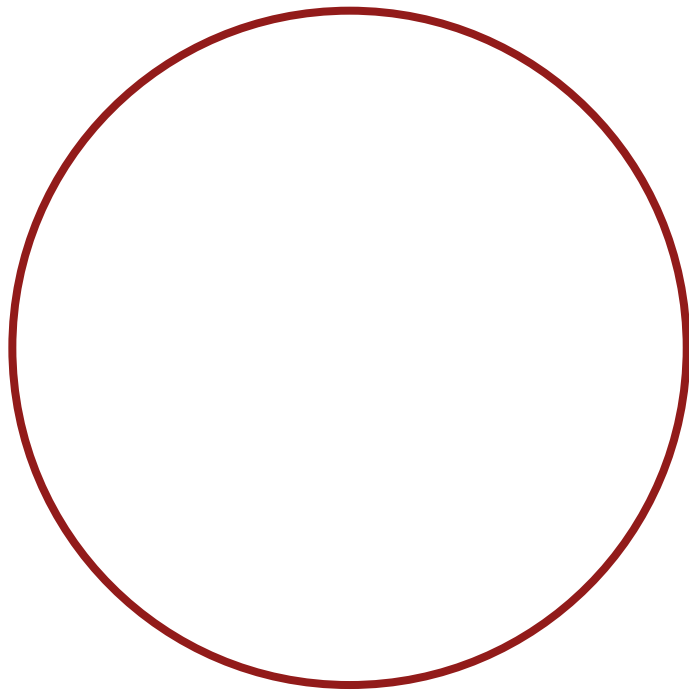
Lack of Water and Wastewater Treatment Facilities

Pollution in rivers and groundwater, combined with inadequate treatment systems, results in unsafe water and disease outbreaks.



Overloaded Bulk Infrastructure

Aging and overburdened bulk systems cannot keep up with demand, leading to environmental and service challenges.



The Funding Gap

The funding gap is the largest constraint to infrastructure development in Africa.

The Magnitude of the Problem

R400bn

(\$23.5bn)

TOTAL
Maintenance
Backlog



The Current Annual Revenue



R21bn

(\$1.4bn) From Sewage



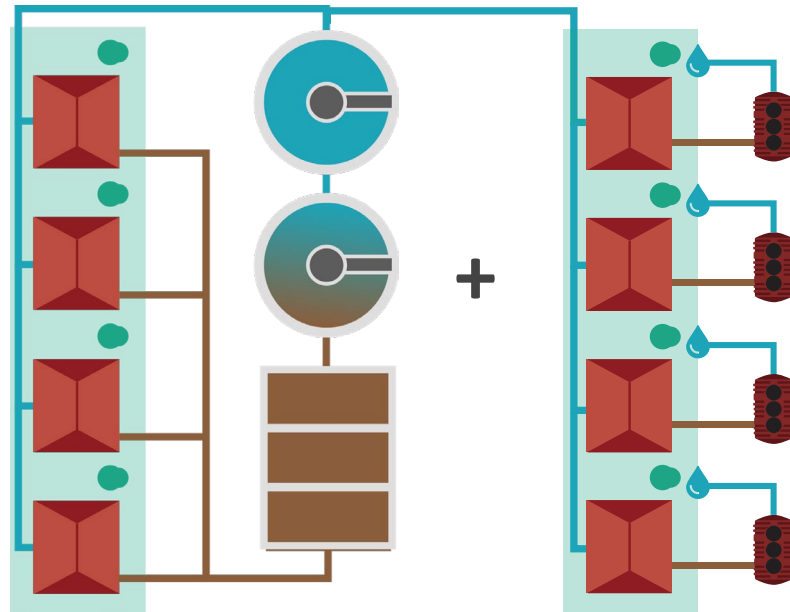
R64bn

(\$3.76bn) From Water

The Pivot

- Privately funded, decentralised plants can reduce pressure on centralised networks
- DWS supports this shift with new regulations enabling on-site sanitation

The Future of Infrastructure Development



Decentralised Infrastructure



Risks

Compliance
& Operational Hurdles

- **Maintenance Gaps:** Poor O&M remains the biggest risk
- **DWS Regulations:** Maintenance plans and records are now mandatory
- **Personnel Mandates:** Registered process controllers required for oversight
- **Penalties:** Stricter enforcement of effluent compliance



Opportunities

The Strategic Advantage
for Calcamite

- **Market Demand:** Growing regulatory pressure creates demand for compliant solutions
- **Long-term Value:** Ongoing monitoring and support services create recurring revenue
- **Calcamite Edge:** Positioned to provide cost-effective, turnkey compliance services

Business Challenge

Calcamite WWTP Performs Optimally when:

1. Operated within design capacity
2. Routine, preventative maintenance performed
3. High uptime of electrical & mechanical equipment

The Current Challenge:

1. Limited real-time visibility → reliance on on-site staff
2. Reactive maintenance after breakdowns
3. Automation historically too costly for small plants

Client's Constraints:

1. Limited funding → undersized installations
2. Shortage of specialized on-site skills
3. Remote sites increase service costs



The Pilot Project Gourikwa Nature Reserve



Gourikwa Nature Reserve

Overview

The pilot was initiated in response to client concerns around maintenance costs. To mitigate this, Calcamite covered all maintenance costs for the first year of operation.

This de-risked the project for the client while allowing Calcamite to build experience and reduce travel, with site visits limited to biannual servicing.



Location:

Buffelshoek, Gouritz. 1,380km from our factory



Plant Size:

Treats 15 m³/day

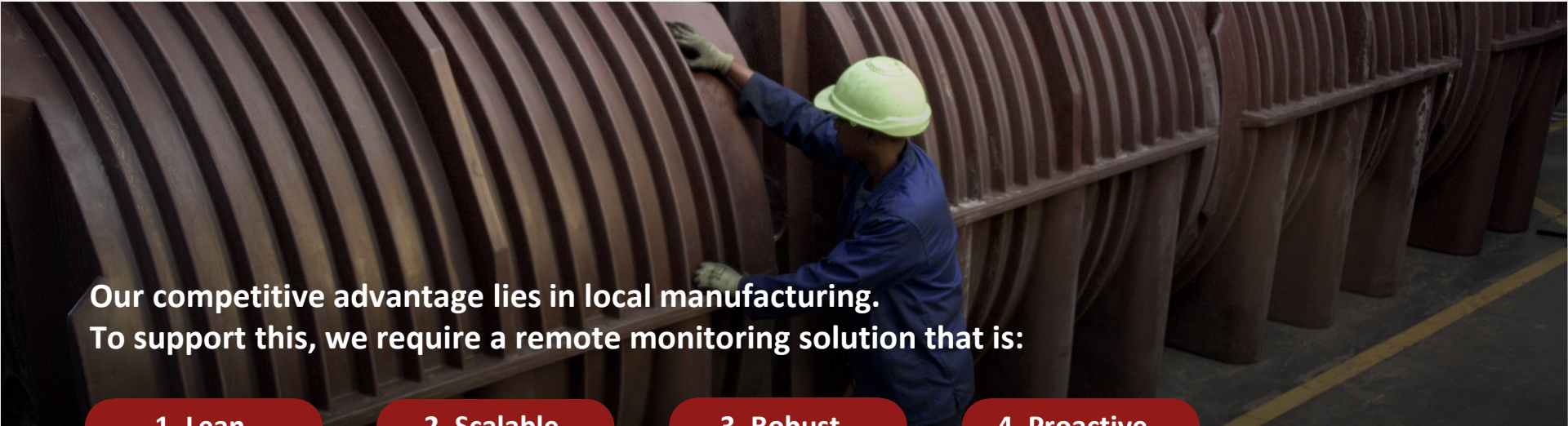


Project Completion Date:

4Sight was given 5 weeks to implement the solution



Brief to 4Sight on the Project



Our competitive advantage lies in local manufacturing.
To support this, we require a remote monitoring solution that is:

1. Lean

Efficient, cost-conscious systems

2. Scalable

Modular like our WWTP plants

3. Robust

Reliable in remote environments

4. Proactive

Fewer call-outs,
OPEX competitive with CAPEX

An Introduction to



4Sight's Clusters

4Sight is a **JSE Listed**, Multi-National, Diversified Technology Group

IT

Information Technologies

Enables Digital **AI** Transformation of ERP, accounting, HR and payroll, CRM, reporting and business process automation.



ERP



HR & Payroll



Fixed Assets



CRM



Business Intelligence & Reporting

OT

Operational Technologies

Offers essential industrial OT simulation, automation, and optimisation solutions, along with cutting-edge **AI** technologies, to support our industrial customers.



Optimisation



Automation



Simulation

BE

Business Environments

Converges IT and OT environments, using Enterprise Data for more informed decision-making.



Modern Digital Enterprise



Adoption & Change Management



Data Enablement



Cybersecurity



Intelligent Automation



Software & Application Dev

CP

Channel Partner

4Sight's 100% partner focused ecosystem, distributing and supporting **AI** solutions on behalf of international software vendors including Microsoft, Sage as well as a wide range of vertical and horizontal ISV applications.



Cloud Solution Provider



Channel Partner



Independent Software Vendor

Technical Overview

AVEVA

DASHBOARDS

Microsoft



- Agentic **AI** / Copilot
- **AI** Analytics
- **AI** Assistant

- Power BI
- Data Reporting
- Data Monitoring
- Central Data Logging
- Data Reporting

EcoStruxure
Innovation At Every Level

Gourikwa WWTP

Syferfontein WWTP

Acornhoek WWTP

- Open software Defined Automation
- Scheider Electric EAE (EcoStruxure Automation Expert)
- Open Automation Standards
- Distributed Control Automation

- Multiple widely distributed WWTP's



M262 dPAC
Schneider Electric



M262 dPAC
Schneider Electric



M262 dPAC
Schneider Electric



AVEVA
CONNECT

Microsoft

Schneider
Electric

4Sight OT Automation
Waste Water Treatment
System architecture

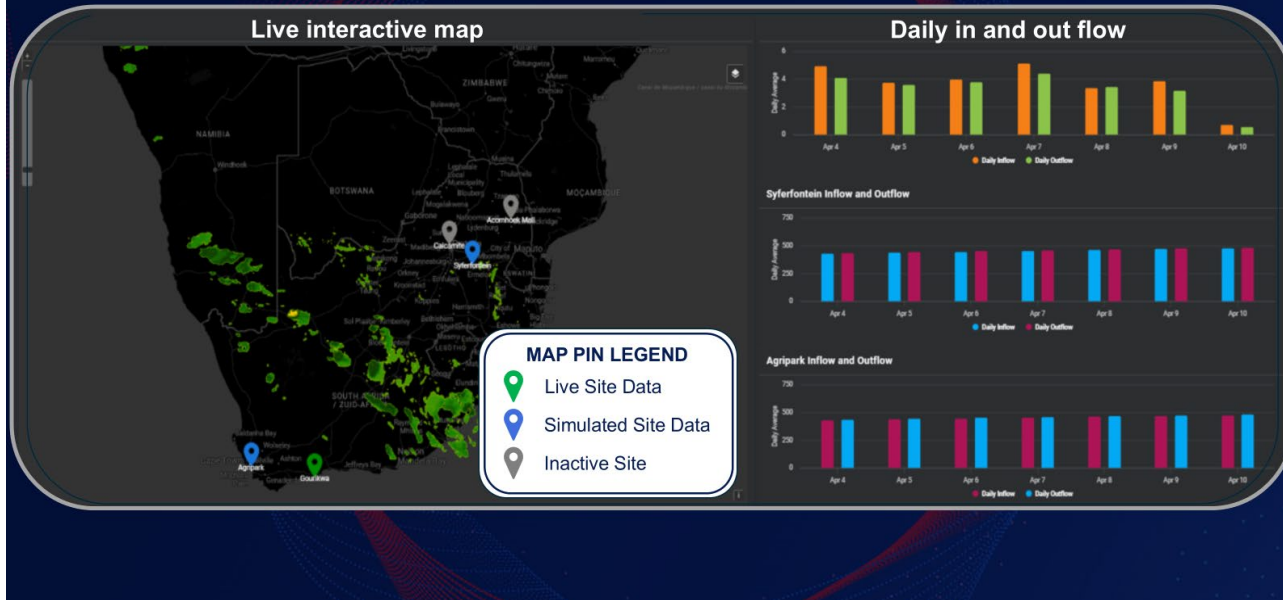
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4sight | 4AI

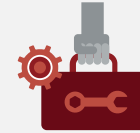
GOURIKWA
COASTAL NATURE RESERVE

Our Current Plants being Monitored

Calcamite **CONNECT** Home Page



Since the pilot plant
In Nov 2025

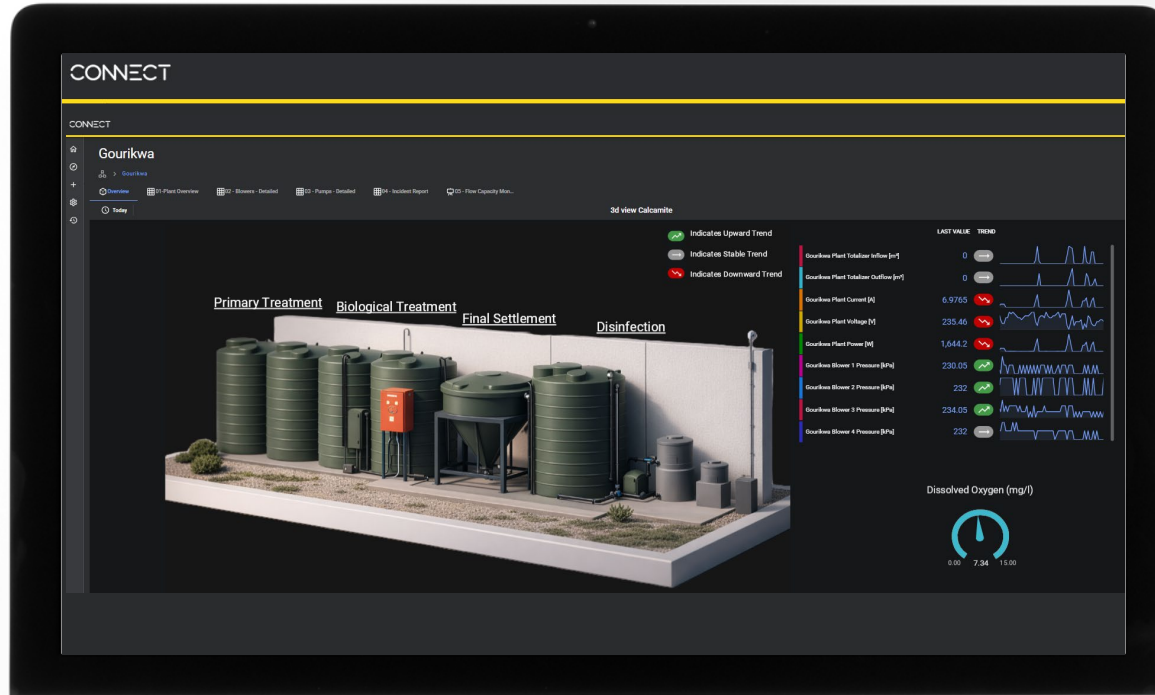


**3 more
plants**

are being implemented

Overview of Plant Configuration

Calcamite
SANITATION + WASTEWATER



With many modular plants in operation, it is essential to have visibility of each plant's specific configuration when assessing data.



Sustainability Impact

Remote monitoring and control enabled higher effluent standard of onsite treatment at lower maintenance costs.

Saved

22 656,00 km by treating the sewage on-site
27,21 tons of CO₂ & **\$20 363** in transport fees
85% on maintenance costs per month

Recovered

2 123m³ of water for local groundwater recharge
63kg of nitrogen
6,3kg of phosphates

Prevented

400m² of land loss
6 000m³ of soil pollution



The Scalability Vision

From One to Thousands

The Platform

CONNECT provides the platform to add the 2nd, 10th, and 1000th plant with ease.

CONNECT
Industrial intelligence platform



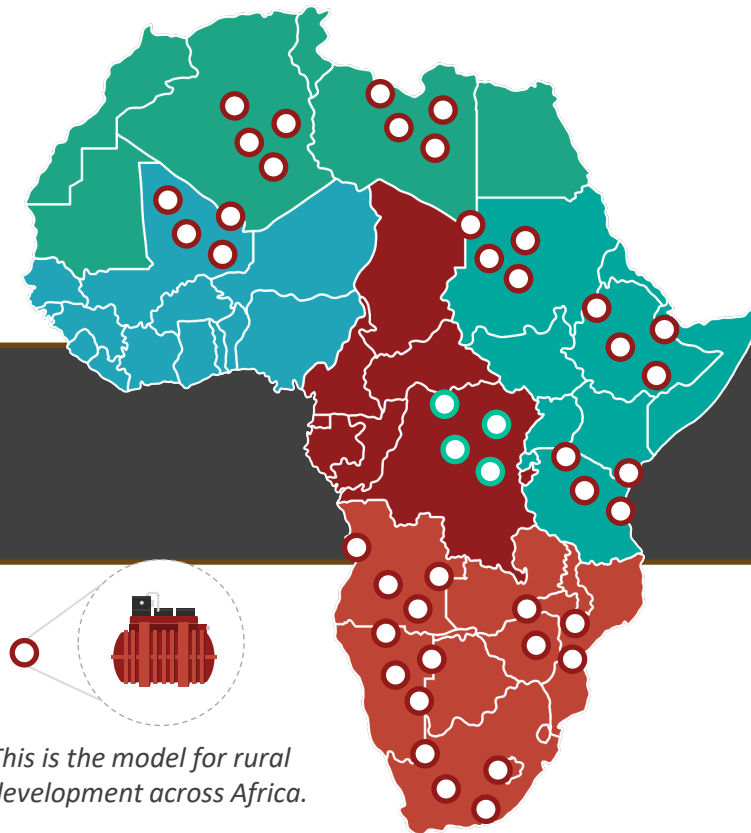
+



The Solution

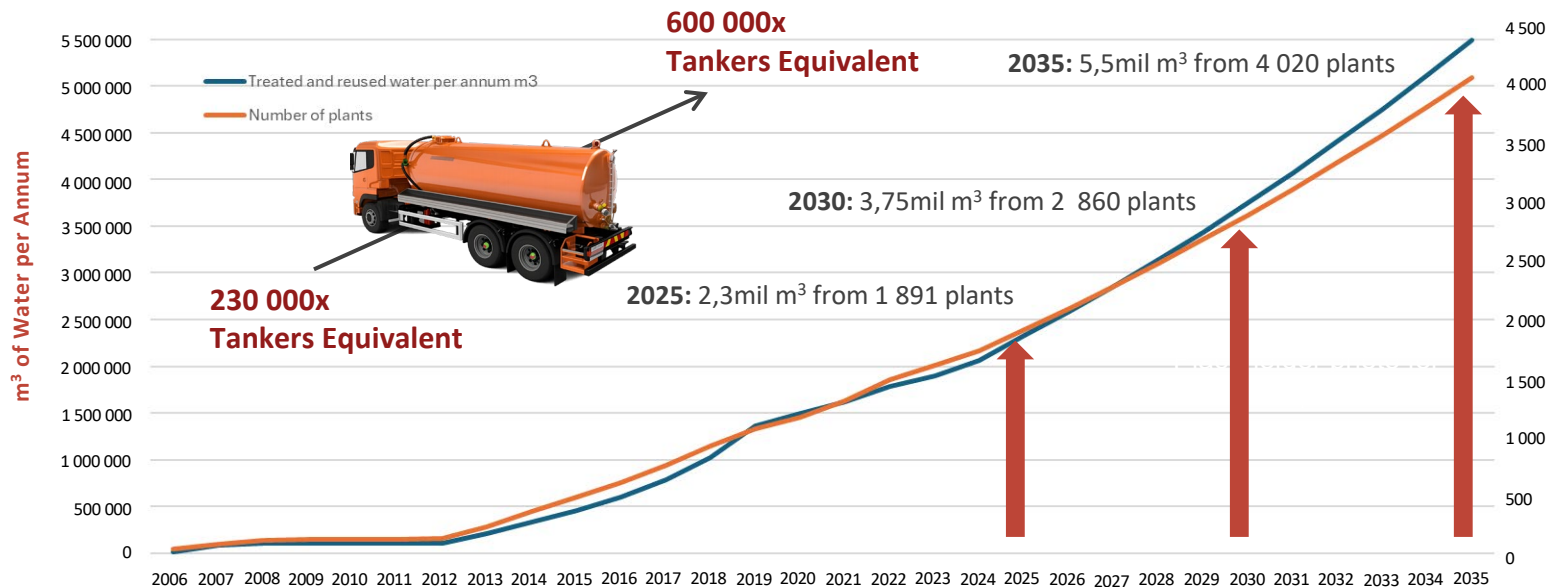
Designed by 4Sight, is built for massive scale.

This isn't just one plant. It's a blueprint.



Calcamite Installed Treatment Capacity and Forecast

Treated and Reused Wastewater per year, m³



Moving 2.3 million m³ of water by truck =
~230,000 trips
~3.5 million litres of diesel
~ 9,380 tons CO₂

Small-scale Plants. Large-scale Intelligence. Infinite Impact.

On-site, modular wastewater treatment
plants, connected and controlled.

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Small-scale Plants.

Please vote for us!

Calcamite
SANITATION + WASTEWATER

Large-scale Intelligence.



Infinite Impact.