“30% cheaper chemicals, 140x less CO\textsubscript{2} emissions”

<table>
<thead>
<tr>
<th>Drinking water treatment</th>
<th>Resource recovery of treatment chemicals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selective recovery</td>
<td>Recover 90% of chemicals with 95% purity</td>
</tr>
</tbody>
</table>
## The Problem

<table>
<thead>
<tr>
<th>Category</th>
<th>Problem Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legislative changes</td>
<td>Dumping at landfill &amp; evaporation ponds</td>
</tr>
<tr>
<td>Environmental</td>
<td>Hazardous waste &amp; high CO2 emissions</td>
</tr>
<tr>
<td>Economically prohibitive</td>
<td>Cost of land &amp; oligopoly with chemical manufacturers</td>
</tr>
<tr>
<td>Trade</td>
<td>Ores imported. Limited circular economy</td>
</tr>
</tbody>
</table>
The Solution

(FOR) Links sustainability to financial returns

Circular economy
- Reduces reliance on imported raw material

Reduces Costs
- Up to *30% saving on opex

Improves environmental impacts
- Reduce chemical waste by up to *15%

Supports global sustainability
- Reduce up to 140x CO2 emissions
**Sustainability Impact**

**11 SUSTAINABLE CITIES AND COMMUNITIES**

100kg/day of waste removed per US$ invested

**13 CLIMATE ACTION**

32kg/day of CO2 removed per US$ invested

---

**Waste and CO2 emission reduction**

![Bar chart showing waste and CO2 emission reduction over years from 2025 to 2030.](chart.jpg)

- **Sludge reduction** (tonnes/year):
  - 2025: 34,490
  - 2026: 73,584
  - 2027: 1,954,075
  - 2028: 2,697,370
  - 2029: 3,852,145
  - 2030: 5,518,800

- **CO2 reduction** (tonnes/year):
  - 2025: 106,544
  - 2026: 267,009
  - 2027: 1,243,008
  - 2028: 1,740,211
  - 2029: 2,253,414
  - 2030: 2,983,218

---

**11 CLIMATE ACTION**

32kg/day of CO2 removed per US$ invested
Market size & Go-to-market

Primary Market - England
- Privately owned - 11 water utilities
- Strong investment appetite VCs
- R&D sites opportunity for mass uptake

Adjacent Market - South Africa
- 9 water boards
- Similar treatment to primary market
Validation

<table>
<thead>
<tr>
<th>3 water treatment plants (lab scale)</th>
<th>Study for global mine</th>
<th>Water Research Commission</th>
<th>International Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Recover up to 90% chemicals</td>
<td>• Valorise copper from wastewater</td>
<td>• Published reports</td>
<td>• Global water summit</td>
</tr>
<tr>
<td>• 95% Purity</td>
<td>• Additional US$800 000 revenue</td>
<td>• Industry experts evaluation</td>
<td>• Smart Water magazine</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Water Action Platform</td>
</tr>
</tbody>
</table>

Validated over 7 years

- Recover up to 90% chemicals
- 95% Purity
- Valorise copper from wastewater
- Additional US$800 000 revenue
- Published reports
- Industry experts evaluation
- Global water summit
- Smart Water magazine
- Water Action Platform
Product and Technology

Summarised (FOR) Treatment Process

1. Leaching
2. Donnan Dialysis
3. NF & RO
4. Neutralisation

Laboratory Results

1. Raw (sludge)
Water Treatment Residuals

2. Leached (sludge)
Water Treatment Residuals

3. Final Alum Recovered

Electrical energy

Recovered chemicals

Neutralised waste

Recycled acid
Founders & Advisors

**Founder & CEO**
- Moletsane
  - Masters Chemical Engineering
  - Engineering Council SA
  - Water Research publications

**Co-founder**
- Rethabile
  - Honours Actuarial Science
  - FASSA
  - Passed CFA Level 1

**Market Entry**
- Stuart
  - Experience in UK clean technology
  - Emerging technology expert
  - Deal advisor

**Business Strategy**
- Christoph
  - Seasoned entrepreneur
  - 5 Ventures, 2 exist, 2 in pipeline
  - Stanford LEAD, OUBS MBA

**Legal**
- Kuena
  - Seasoned commercial Lawyer
  - Co-Founder of Federation of Woman Lawyers
  - Former Chairman of NUL Council
<table>
<thead>
<tr>
<th>Value Network</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Water Innovation Living Labs</strong></td>
</tr>
<tr>
<td>- University of Brescia</td>
</tr>
<tr>
<td>- Cohort participants</td>
</tr>
<tr>
<td>- Technical experts</td>
</tr>
<tr>
<td><strong>African Impact Challenge</strong></td>
</tr>
<tr>
<td>- Universities of Cape Town &amp; Toronto</td>
</tr>
<tr>
<td>- Clayton Christensen Institute</td>
</tr>
<tr>
<td>- MasterCard Foundation</td>
</tr>
<tr>
<td><strong>Isle Utilities</strong></td>
</tr>
<tr>
<td>- Investor outreach</td>
</tr>
<tr>
<td>- Client outreach</td>
</tr>
<tr>
<td>- Technical industrial experts</td>
</tr>
<tr>
<td><strong>United Nations Industrial Development Organisation</strong></td>
</tr>
<tr>
<td>- Global CleanTech Innovation Programme</td>
</tr>
<tr>
<td>- Technology Innovation Agency</td>
</tr>
</tbody>
</table>
### Next Steps (Piloting)

#### Target Outcomes
- Secure US$500 000 to construct pilot plant
- Move from lab scale to pilot scale
- Strategic Investors and Strategic Clients

#### Planned Milestones

<table>
<thead>
<tr>
<th>Planned Milestones</th>
<th>Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pilot stage</td>
<td>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18...</td>
</tr>
<tr>
<td>Raise US$500 000</td>
<td></td>
</tr>
<tr>
<td>1. Government grants</td>
<td></td>
</tr>
<tr>
<td>2. Accelerator funding</td>
<td></td>
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<tr>
<td>3. Strategic partners</td>
<td></td>
</tr>
<tr>
<td>Ordering of equipment</td>
<td></td>
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<tr>
<td>Construction &amp; testing</td>
<td></td>
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<tr>
<td>Demonstrations to potential clients</td>
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</tr>
<tr>
<td>Build team for commercialisation (phased)</td>
<td></td>
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</tbody>
</table>
Thank you