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ISWA 2024
WASTE TO WEALTH:
SOLUTIONS FOR A SUSTAINABLE FUTURE
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Circular Sustainable Solutions for Liquid Waste

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The Current State of Water

Water Scarcity

Water scarcity is a pressing issue in South Africa.
- Challenges include climate change, population growth, and pollution.

Causes of Water Scarcity		
	Physical Water Scarcity	Climate variability leads to inconsistent water availability
		Pollution from industrial activities limits clean water access
	Economic Water Scarcity	Financial constraints restrict access to water resources.

Impacts of Water Scarcity	
Economic Consequences	Adverse effects on agricultural productivity and rural livelihoods.
Health Risks	Increased risk of waterborne diseases due to poor water quality.

Current State of Wastewater Treatment Plant in South Africa

Water Quality

Quality of Water not compliance with the Water and Sanitation Standards

Maintenance

Many facilities are in poor condition; about 67% nearing failure.

Technological Advancements

Lack of technical and management capacity in treatment plants.

Interwaste Group Effluent Treatment Plant

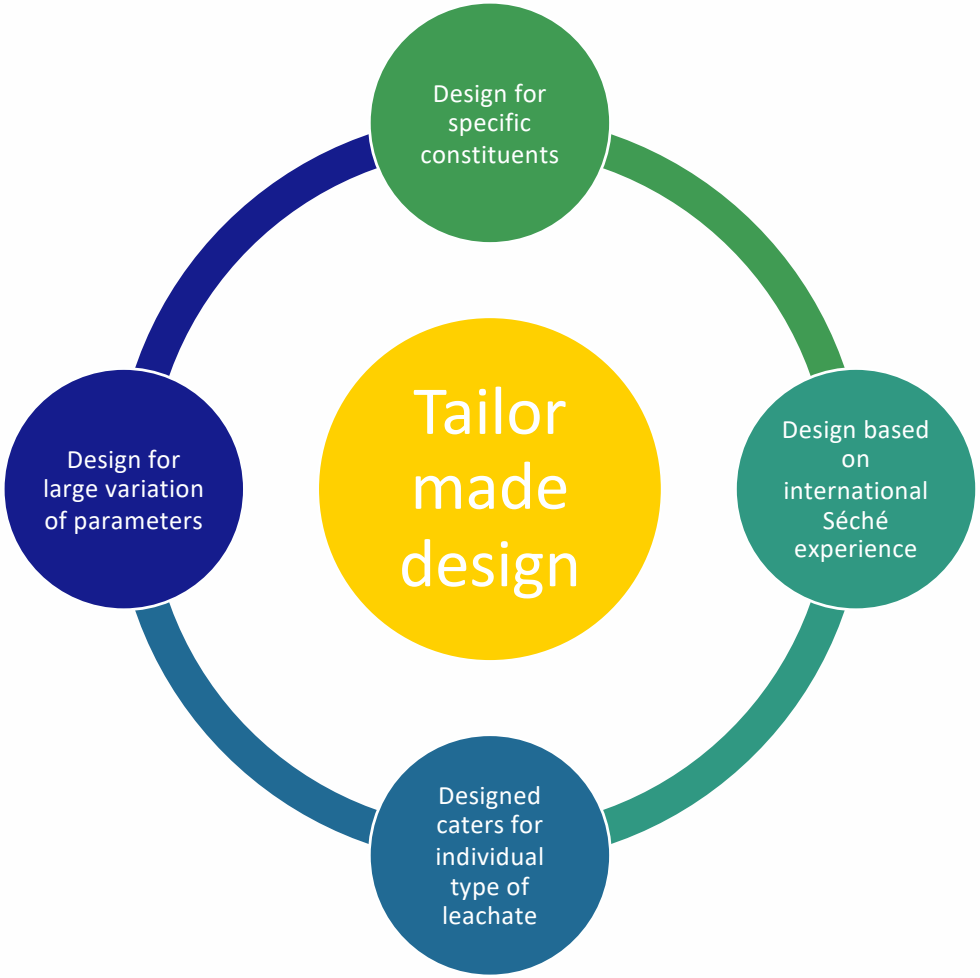
The Facility

Effluent Treatment Plant is situated in Delmas Klinkestene between East of Gauteng and Mpumalanga

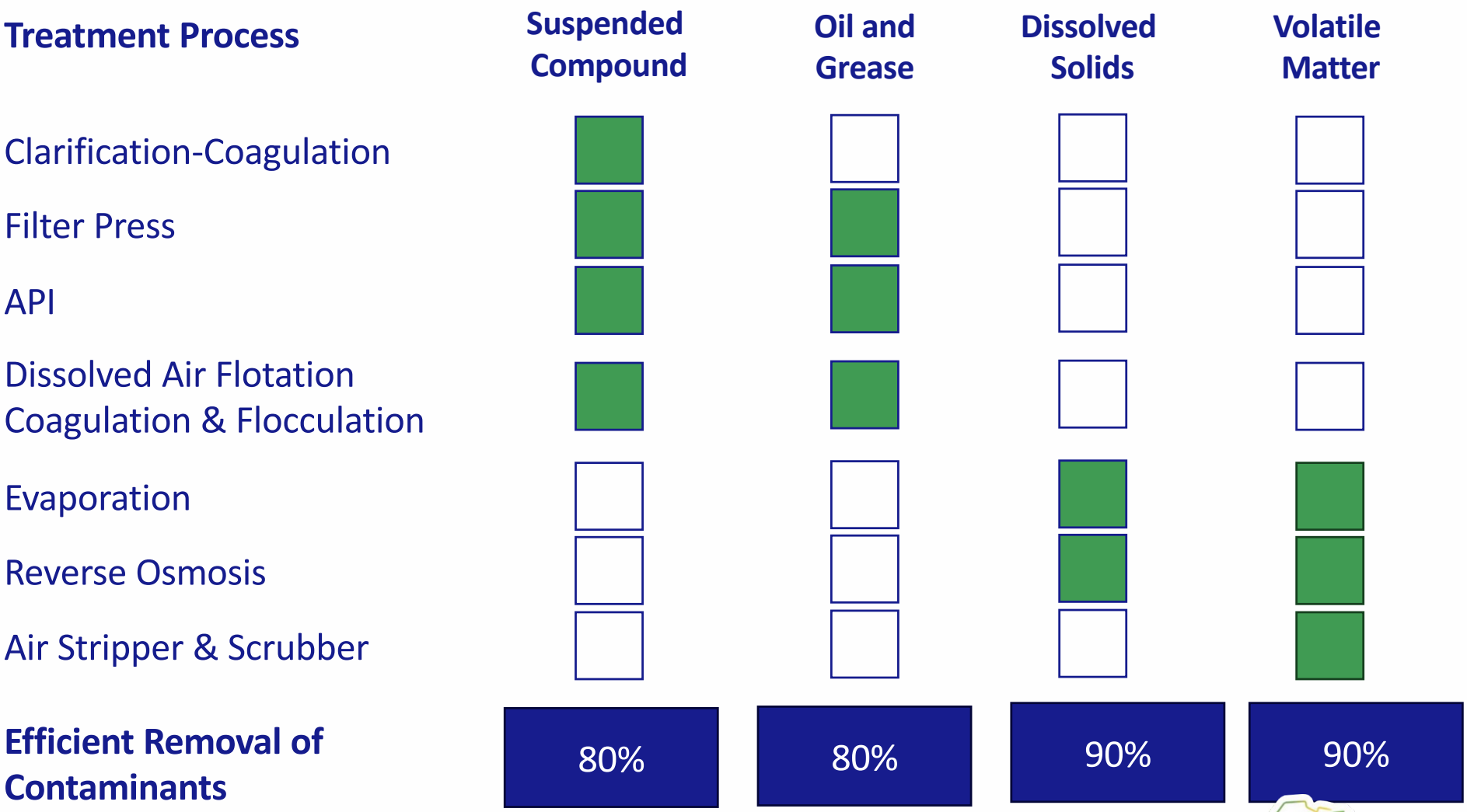
- Launched 10th April 2024
- Regulatory compliance
- Autonomy
- Circular Economy
- support South Africa's water conservation requirements

Environmentally sustainable solutions for leachate treatment

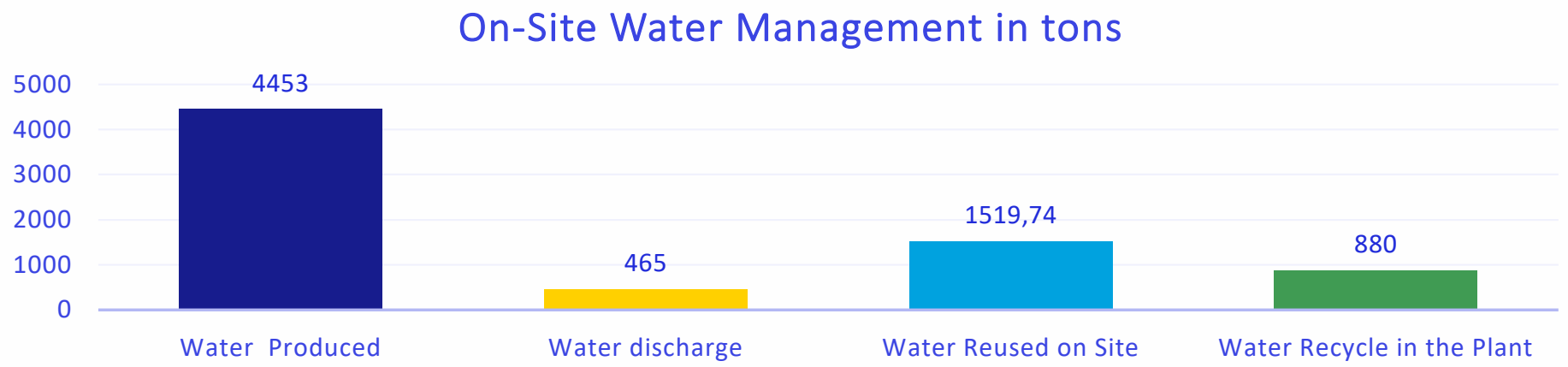
- ➔Approach: start with the composition of the leachate
- ➔Design for specific constituents, max, min,
- ➔Design for variation
- ➔Embedded Long term view and quality of design



Process and Benefits



Circular Sustainable Solutions



Circular solution achieving 80-90% recovery of clean water

Why ETP

Technological Advancements	The Effluent Treatment Plant boasts advanced technologies that not only effectively treat these waste streams (43 million liters of effluent a year) but also recover an impressive 80-90% as clean, reusable water.
Water Standards	The clean water produced by the plant exceeds the Department of Water and Sanitation's safe discharge limits SANAS Accredited, cleaner than the water streams discharged to.
Reduction of Water Supply Pressure	The Facility comes at a time when South Africa is in desperate need of advanced solutions that not only mitigate environmental risks posed by waste liquids but also those that take the pressure off our water supply and diversify the water mix, by reusing wastewater and creating circularity in the system
Circular Economy	This facility is also our commitment to develop circular economy solutions, that contribute positively to protect our precious natural resources, especially, in this case, water.
Benefits	Finally, the ETP solution offers numerous benefits and develops sustainability through the circular economy, reduction of carbon emissions, reduction of water usage and promotion of biodiversity

Thank You!

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