



MINISTERIAL INTERACTIVE SESSION WITH WATER AND SANITATION SECTOR

10 November 2018 • Birchwood Hotel, Boksburg GP

WATER IS LIFE - SANITATION IS DIGNITY



water & sanitation

Department:
Water and Sanitation
REPUBLIC OF SOUTH AFRICA





WATER
INNOVATION



AIRTOWATER

AirtoWater.co.za supply water harvesting solutions for Home to Industrial requirements. From as little as 12ltrs to 100,000 ltrs per day we can build a system for your water demands. Systems are scalable and 24/7 365 days reliable. Creating your own healthy water alternative is the only way to secure independence from our conventional water sources. Stock available from R19,500 and delivery within 72 hours.

079 882 3614
alec.carte@gmail.com
www.airtowater-africa.com



SAND WATER EXTRACTION

A system to effectively extract water from the sandy river beds has been developed and perfected. Added benefits is that the whole system, including pumps, pipes and cables, is covered and not exposed to flood water, whilst the water thus extracted is clean and could be used for irrigation without any fears of contaminated water effecting crops irrigated negatively.

(+27) 082 338 3994
tephan@lmp-consulting.co.za
www.swesystems.co.za



EDC TANKS

Rainwater Harvesting and Greywater Harvesting.

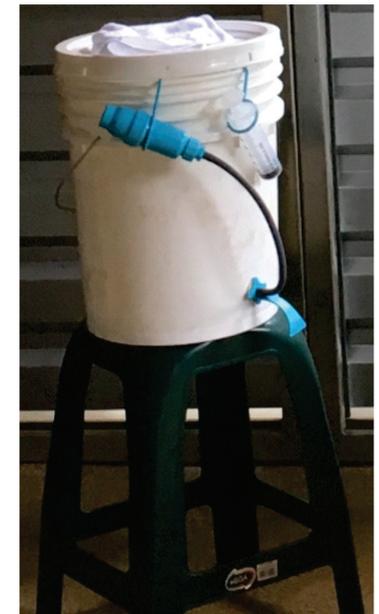
+27 82 568 7683
a.singh@edctanks.co.za



FUTURE STRATEGY

Supply water filters and other water treatment products to households, schools and clinics.

079 810 4797
darin@futurestrategy.co.za
www.futurestrategy.co.za



WATER INNOVATION



HIPPO ROLLER

Hippo Roller is an important 'last-mile' solution for improving access to water, particularly in rural areas where water infrastructure is so limited ... so much so, that Hippo Rollers become defacto, mobile infrastructure!

+27 83 634 3640
darren.smith@hipporoller.org
www.hipporoller.org



AQUASOLV

Aqua Solve water dissociation process is an electrically operated process which can be integrated with any wastewater treatment or water purification plant and is suited for local municipal and industrial bulk waste water and drinking water treatment plants.

+27 84 894 6387
randall@aquasolv.co.za
www.aquasolv.co.za



OZONE GREEN HOLDINGS (PTY)

Casing a Hot Water Bypass System that saves purified water.

074 292 6590/ 061 500 8519
omboweni@gmail.com
mziziherman@gmail.com
www.ozonegreen.co.za



VULAMANZ

The VulAmanz Rural Water Filter (VA-RWF) is a point-of-use household water treatment unit aimed at providing safe drinking water to 'off-grid' rural communities.

+27 21 808 4728
pillayvl@sun.ac.za
www.chemeng.sun.ac.za





KWAZI ZWE ZWE

School Child 14 years old. South African Youth Water Prize 2018 National Winner.

083 21 68131

lindahzwezwe@gmail.com



TDBC

Water demand and conservation management solutions (Smart water metering, water purification plants & close circuit grey water recycling system).

079 991 3057

0799913057@vodamail.co.za

klmofokeng@tdbc.co.za

[Kenny Lefa \[leqetho@gmail.com\]](mailto:Kenny Lefa [leqetho@gmail.com])

www.tdbc.co.za



AQUATRIP

The AquaTrip is a Patented Permanently Installed Water Leak Detection Systems which is a family run business, the AquaTrip systems monitors the flow of water into a property and in the event of a burst geyser, pipes, taps left running, dripping toilet cisterns, urinal's and vandalism the AquaTrip will automatically switch off the water. (Various Reset Options) The AquaTrip will protect the entire plumbing system and we have different products to suit most properties.

082 575 2114

weaver@motheogroup.co.za

www.aquatrip.co.za

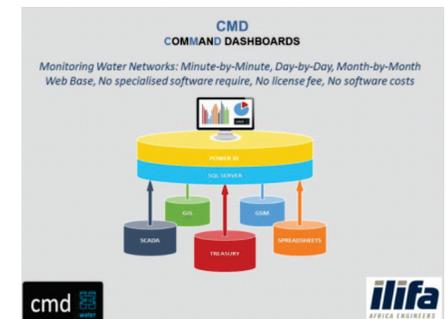
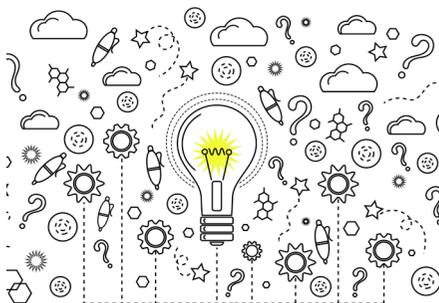


ILIFA ENGINEERING

Water Management Module to identify priority water loss zones . Supports No Drop compliance reporting .A Web based product.

082 572 1490

abk@ilifa.biz



WATER INNOVATION



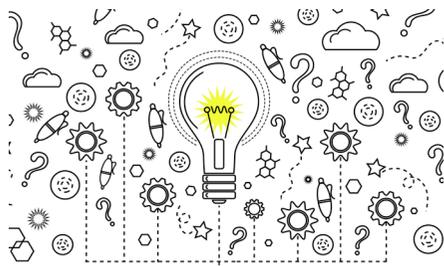
LEBO EMERGING

Two Water tank Managements Systems:

1. single mains supply with rain water harvesting and backup water: The purpose of the tank management systems is to provide flexible level controls and logic in order to manage a single tank for the dual purpose of backup water and rain water harvesting. 2. Dual water supply with rain water harvesting and backup water: The purpose of the tank management system is to manage a dual water source-municipal mains and a bore hole (or well point) - and allow the user to control the tank on two levels to enable rain water harvesting.

072 359 9304

l.s.c.mdhluli@gmail.com



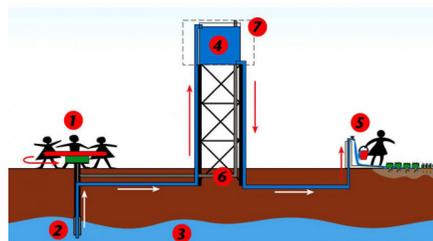
ROUNABOUT PUMPS

Kids roundabout that pumps water.

011 543 7931

colin@roundabout.co.za

www.playpumps.co.za



SAFE WATER AFRICA

The SafeWaterAfrica consortium have a R45 Million grant from the European Commission to develop a autonomous water purification solution for rural areas using advanced oxidation technology. The development will be completed Nov 2019, first demo unit in operation at ERWAT Waterval abstracting water from Klip River.

083 227 0797

bondrj@tut.ac.za

<https://safewaterafrica.eu>

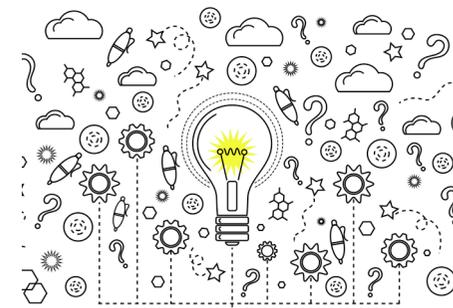


TAG

TAG Innovate developed a fail safe float valve for toilet cisterns that is, contrary to all existing cistern float valves, closed by default. It was tested internationally as an unique float valve that prevent leaks through toilet cisterns.

072 959 2835

[gerhard@taginnovate.com](mailto:gerhard>taginnovate.com)

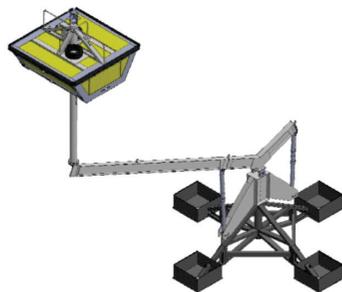




IMPACT-FREE WATER (PTY) LTD

Wave Powered pump for desalination, mariculture and power generation. Wave energy is harnessed and used to prefilter and pressurise seawater to the requisite pressure and flow for Reverse Osmosis desalination.

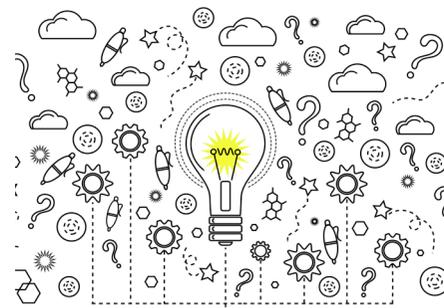
071 891 7221
simon@impact-freewater.com



TOUCH TAP

Invented by a handicapped person (Stephanie) for easy opening of a tap. Low cost plastic tap that only releases water when touched at the spout. Water saving tap that cannot be left running.

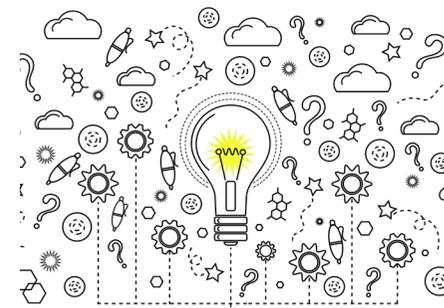
084 245 0780
Stephanie@beautiful-u.co.za



WATER 4 ALL

Electro Chemical activation These are both innovative and patented technologies that are gaining traction in various markets. They provide viable alternatives to traditional chemical and large footprint interventions in the delivery of water treatment solutions, that are low on infrastructure cost whilst equally quick to implement on existing infrastructure increasing capacity throughput and improving the quality of outputs.

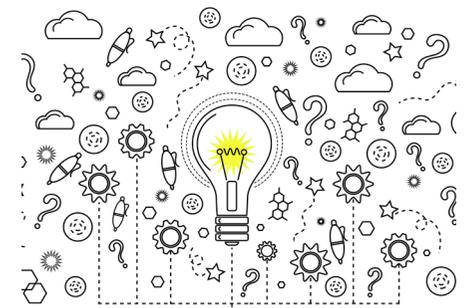
083 518 7510
keith@theideasfactory.co.za
www.water4all.org



LEROTHODI (PTY) LTD

A prototype of a water treatment plant built by Dr Monamme Tlotleng is currently running in a small section of Lotlhakane, 2785 area of Mahikeng, which requires a missing component known as a Mechanical filter to be fully and completely functional. The technology aims to provide continuous access of clean water to rural households using boreholes as a water source.

076 242 6721
daopase@gmail.com



WATER INNOVATION



BN AQUA

Use a metallurgical waste product to treat AMD to potable stage. This slag is from a steel-making company which is locally produced in large quantities and cheaper.

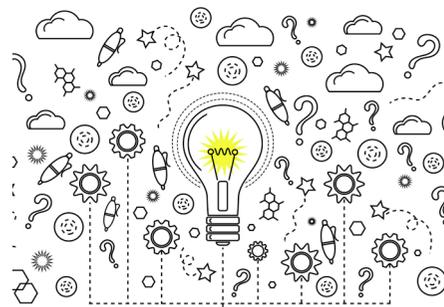
082 361 4737
boitumelonkatlo@gmail.com



ECOTAP

School children Winners of SAYWP 2018.

078 330 7419
jabu1964@gmail.com



CSIR

The continental scale river router is software that models how fast and in what direction water moves from the land surface to the ocean. This process of modelling the motion and discharge rate of water from land to ocean is known as routing. This software can be used in a standalone capacity but is, however, primarily intended to be used in conjunction with a global climate model (GCM) and was specifically designed to integrate with the Conformal Cubic Atmospheric Model (CCAM). CCAM is a GCM developed by the Commonwealth Scientific and Industrial Research Organisation (CSIRO). The routing model presented here has already been successfully implemented into the CCAM model and has shown a significant improvement in predicting river and river mouth locations.

078 390 0627
RMahomed@csir.co.za
tmophosho@csir.co.za



THANDA MANDZI

Water Saving Divert system Patented.

082 705 6803
juan.kleynhans@gmail.com
hgrundlingh@yahoo.com



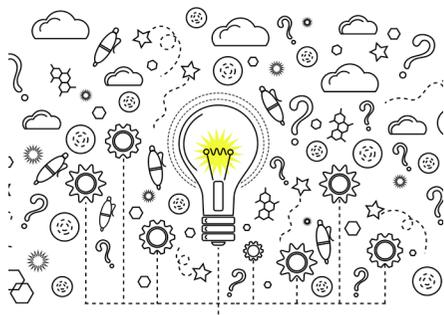


MICRO FOOD LAB

Water quality (E.coli) tests for the African context. The tests are microbiological analyses - looking specifically for E.coli (faecal contamination of water sources) but without the need to send the samples to a laboratory. This makes them cheaper and faster. A further test which is in final stages of development will also be showcased that has the potential to send quantitative results for E.coli in water automatically to a database, with results being available in some cases in less than 24 hours.

081 043 3506

neil@microfoodlab.co.za



A photograph of a public restroom with yellow stalls and white toilets. The text "SANITATION INNOVATION" is overlaid in the center. The restroom has white tiled walls and floors. The stalls are yellow with black frames. The toilets are white with white tanks. The text is in a bold, white, sans-serif font, enclosed in white brackets.

**SANITATION
INNOVATION**

SANITATION INNOVATION



TNM INNOVATIONS

Improved toilet technology products.

+27 76 308 1765

rorim@tnminnovations.co.za

www.tnminnovations.co.za



ENVIROLOO

Dry sanitation ventilated toilet.

+27(0)11 762 1624

info@enviroloo.co.za;

mark.latrobe@enviro-loo.com

www.enviroloo.co.za



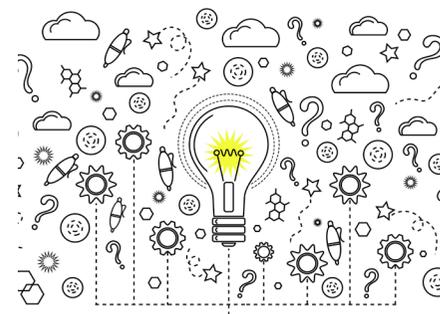
ECOSAN

The ECOSAN Toilet is a waterless, dehydration / evaporation system that provides a safe, non-polluting and cost effective solution to the worldwide sanitation problem. It offers a standard of respectability and convenience, comparable to a waterbourne system, yet without the prohibitive costs and obvious strain on precious water resources.

012 807 5002; 082 557 4979

info@ecosan.co.za

www.ecosan.co.za



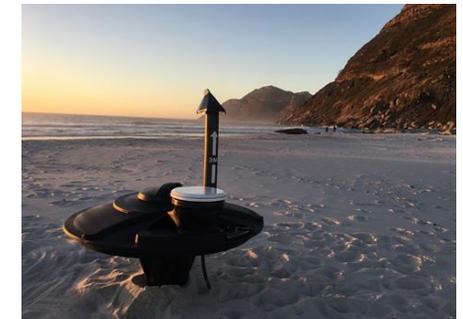
ZERHO

This is a Waterless Toilet. ZerH2O is a compact (1,6mØ x 0,6m), sealed, self-contained unit using an airflow drying process, effectively isolating the faeces from man, animals, insects, nature and weather, which prevents the spread of pathogens (harmful organisms).

(0)72 819 2060

janice@zerho.co.za

www.zerho.co.za



SANITATION INNOVATION



ENVIROSAN SANITATION SOLUTIONS

Toilet pedestals, doors etc . Our company uses the most technologically advanced plastic injection moulding machinery and superior plastic injection moulding techniques.

+27 83 657 0179
tim@envirosan.co.za
jacques@envirosan.co.za
Tebogo@envirosan.co.za
www.envirosan.co.za



NULEAF

Waterless Urinals; Non-electric/battery auto switch-off taps – saving up to 80%/90% of water; Water Ionizers, killing about 99% of possible bacteria in water; Eco- showers – saving up to 70% water; Energy/Power Efficiency Technologies; Leak detection systems.

+27 73 398 3275
anthony@nuleafprojects.co.za
www.nuleafprojects.co.za



ALAN HALL

Water-less Sanitation, killing all pathogens and parasites and efficient use of urine as a harmless fertiliser.

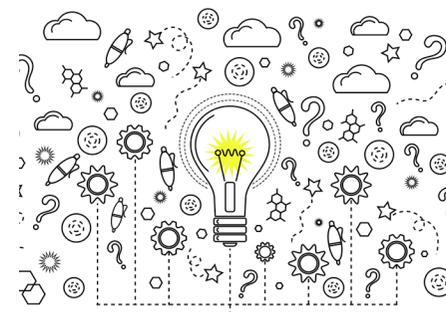
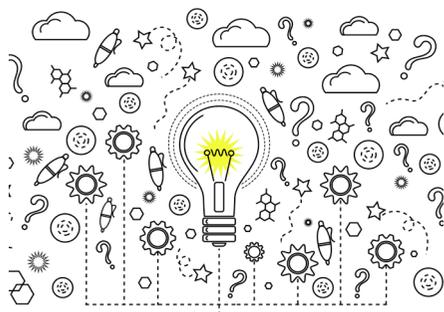
082 602 3046
shorty@megawifi.co.za



BLUE GOLD HOLDINGS

Blue Gold Holdings is a company bringing two innovative wastewater treatment technologies to South Africa. (1) MS CATOXI – an advanced electrochemical oxidation process (AEOP) technology .(2) ARVIA PROCESS – The Arvia Process is the first technology that combines oxidation with adsorption in a single water treatment process.

081 360 8947
khanya@bluegoldholdings.co.za
https://bluegold.co.za



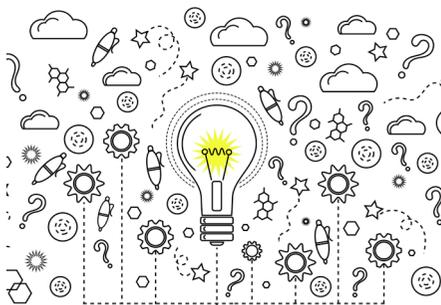
SANITATION INNOVATION



DOO DROP INN

Protecting ground water by using carbon to absorb nutrients from urine. Cooking on a Moses kiln with an open fire produces carbon – bio char. Bio-char is mixed with Urine from the night before and left for 6 weeks inoculation period. The next step is to put the bio-char into the garden as a high quality fertilizer and the grey water is used to water the plants. This protects ground water from urine contamination and contributes towards significant food production in rural areas.

072 257 2525
enots1@icloud.com



ASADURU

The TreeWell is a compact wastewater treatment system which uses plants and bioengineered microbial processes to treat wastewater for on-site re-use in irrigation and landscaping. It is low energy consumption, low maintenance and produced no organic sludge. Finally it is aesthetically pleasing as the only visible component is plants used in the system's processes.

073 298 4840
OK@AsaDuru.com



BORDA

DEWATS is an innovative approach to wastewater treatment that will enable more South Africans to gain access to desirable waterborne sanitation. DEWATS is not a specific wastewater treatment technology, but rather a modular approach to treating wastewater at or near the source. DEWATS are based on the principles of decentralization, simplicity, and reuse of the treatment products. Treatment is achieved without electrical or chemical input, and the process requires relatively low maintenance.

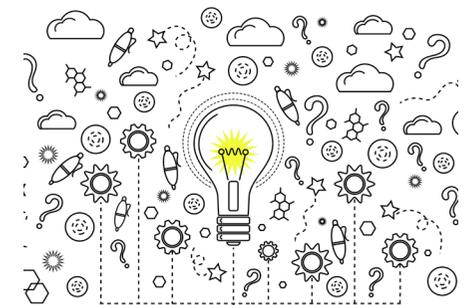
031 940 4102
truyens@borda-africa.org
www.borda.org



GALTECH

BioNzyme – Pit latrine and septic tank environment friendly cleaner (chemical free). i-flow low cost gravity filtration bucket system no electricity required (Water sources example-Borehole, Dam, River, Stream) to potable water. Galtech Pro – whole house in-line filter.

079 846 9090
Info@galtech.co.za



SANITATION INNOVATION



ECOLATRINE

Waterless Sanitation – Sawdust used as cover material.

082 807 8033
henriv@ecolatrine.co.za



ANDYLOO

Sanitation Technology that burns faecal matter into ash.

081 513 1307
043 735 4718
benmfazwe@hyperlink.co.za



ZAMAZONDO CONSTRUCTION

Dredging technology for silted dams.

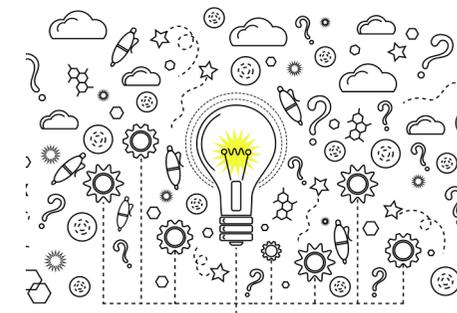
073 954 1162
swecy@zamazondo.com



HYGIENE COMPLETE SOLUTIONS

Unique incinerator toilet that burns waste immediately after use no additional infrastructure needed. Energy used is a biomass briquette with a patent.

081 388 2927
082 290 5053
benmfazwe@hyperlink.co.za



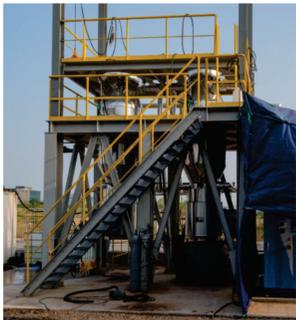


TRUSENSE

Enhanced Hydrothermal Polymerisation PCS
Technology for Processing Wastewater Solids.

082 459 7979

info@trusense-eu.com



A wide-angle photograph of a water treatment plant during sunset. The scene is dominated by a series of long, parallel metal channels filled with water. In the foreground, a channel shows turbulent water with white foam, likely from an aeration process. The sky is a mix of orange, yellow, and blue, with scattered clouds. The sun is low on the horizon, creating a strong reflection on the water. A blue metal walkway with railings runs along the top of the channels. The overall mood is industrial yet serene.

WATER & SANITATION INNOVATION

WATER & SANITATION INNOVATION



BANNOW

Sanitation package plant and water shortage solutions.

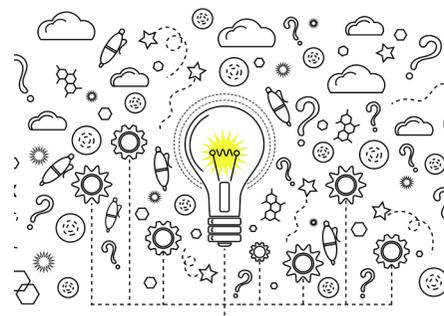
+27 12 364 2549
africa@bannow-africa.com
mervin.may6@gmail.com
www.bannow



VELOLOR APPLICATIONS (PTY) LTD

We specialize in industrial coating and combatting corrosion such as: Galvanic, pitting and crevice corrosion, Microbiologically influenced corrosion (MIC), Accelerated low water corrosion (ALWC), Bolt system protection, Conveyor bearing protection, Sweating pipes, Water ingress, All forms of corrosion associated with moist, humid and salt-laden atmospheres.

072 252 7466
siv.mafanya@gmail.com
mlungisilulujohnson@gmail.com



AFRICA UTILITY SOLUTIONS

The company prides itself on professionally delivering quality turnkey solutions in a number of key market sectors within South Africa.

082 446 7803
kzn@afriaut.co.za
www.afriaut.co.za



ROCLA

Community based manufacturing system for sanitation and water products.

+27 84 607 4240
Andre.Labuschagne@isgroup.co.za
www.rocla.co.za



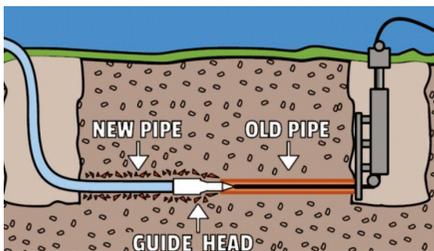
WATER & SANITATION INNOVATION



SASTT

All trenchless technologies from mapping, condition assessment, replacement, rehabilitation, refurbishment and new pipeline installations using No-Dig pipeline construction methods. Trenchless pipeline installations/replacement being non-disruptive pipeline construction methods, can ensure all leaking municipal water pipelines in CBDs, urban built-up areas as well as environmentally sensitive areas are renewed at a lower cost and all sewers are rehabilitated in non-disruptive and environmentally friendly manner while creating high level of skills and technology transfer and job creation to previously disadvantaged communities and business entities.

074 080 0960
motseko@trenchless.co.za



AVERDA

Service solutions to pipeline failures.

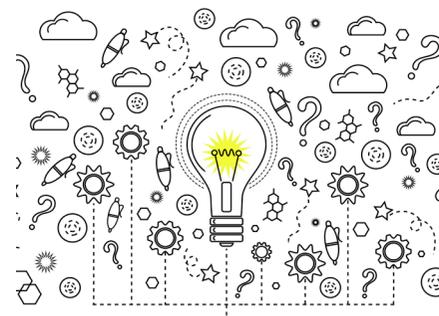
082 371 6181
claude.marais@averda.com
averda.co.za



LIQUID GOLD

Liquidgold Africa is an exciting high growth company in a circular economy for sanitation waste and unique dry sanitation solutions. Our focus is to reduce our customers operation costs and create new products from toilet resources (human waste) in a simple and cost effective manner.

+ 27 83 583 8770
conrad@liquidgold.earth
www.liquidgold.earth



IX ENGINEERS

+27 (0)82 902 5942
lebo.l@ixengineers.co.za
www.ixengineers.co.za



WATER & SANITATION INNOVATION



UHAMBISO

The Internet of Things will play an important role in the Fourth Industrial revolution, which is set to fundamentally alter the way we live, work and relate to each other. While the water and wastewater industries are realigning themselves with IoT to improve efficiencies and reliability of service, this comes with its own unique hardware, software and skill requirements.

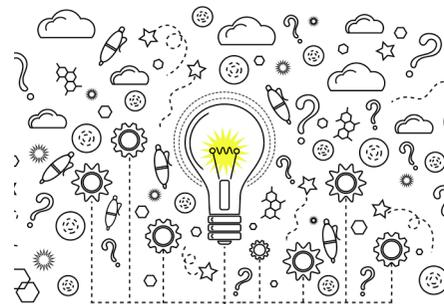
079 626 0382
george@uhambiso.co.za



NAME TBC

Acid Mine Drainage Solution.

connie.molusi@vodamail.co.za



SLIGHTLY GREENISH

Water reuse gadget.

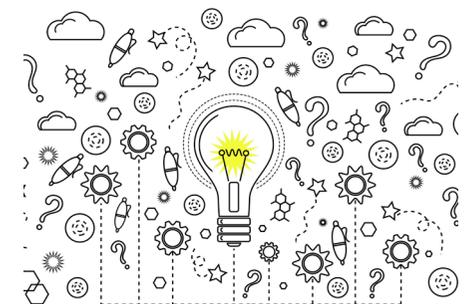
079 522 5257
bonolo@vtlaw.co.za



NTINGA CONSULTING

NtINGA Engineering Investment have been appointed in the Panel of Professional Engineers for three years by Department of Water and sanitation (DWS).

0137525623
projects@ntingaengineers.co.za



WATER & SANITATION INNOVATION



NANO WATER TECHNOLOGY

Compact waste water treatment unit ideal for Schools, clinic's, cluster housing, etc.

082 453 6505
graupe@mweb.co.za



EMPIRE POWER INDUSTRIES PTY LTD

The Empire Water Power Tower is an innovative approach towards assisting our fellow South Africans transport water from a river, dam or the ocean back to their homes, Its key feature being the ability to filter and purify whilst heating it.

031 826 5631
admin@empire-pi.co.za



ADONELE INNOVATIONS

It is a dual pipe metering system with the capability of saving +75% of water with minor leaks in an hour and savings of more than 1 000% of losses in light of major leaks in half of the day and furthermore has pressure calibration.

+27 76 354 8112
adoneleinnovations@gmail.com

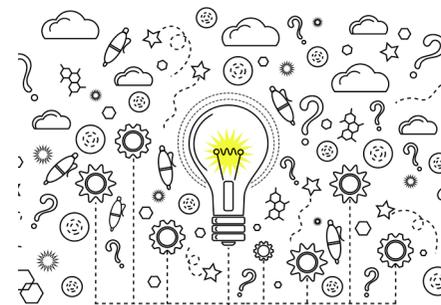


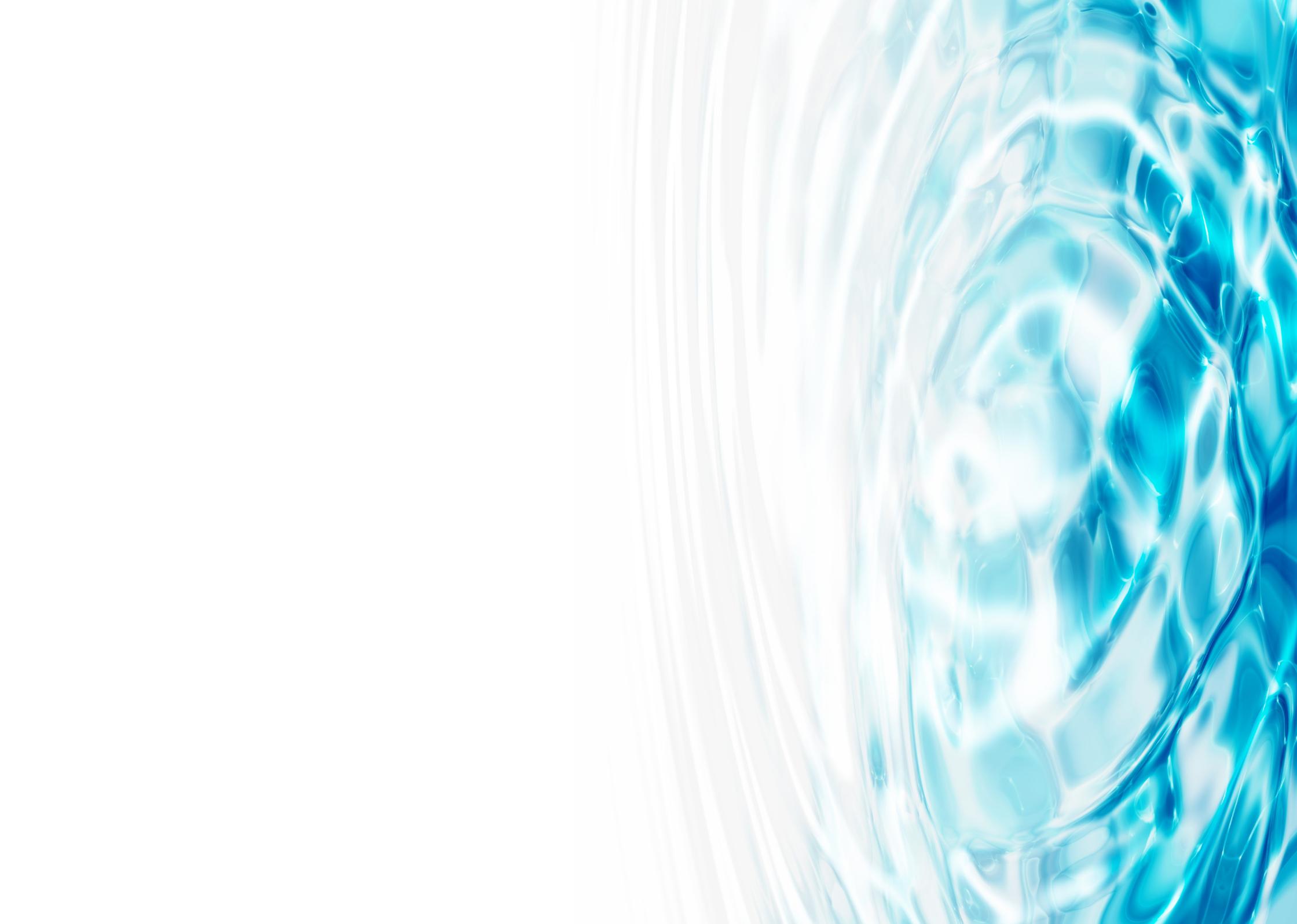
Sanitation Solutions
sanitation and hygiene for all

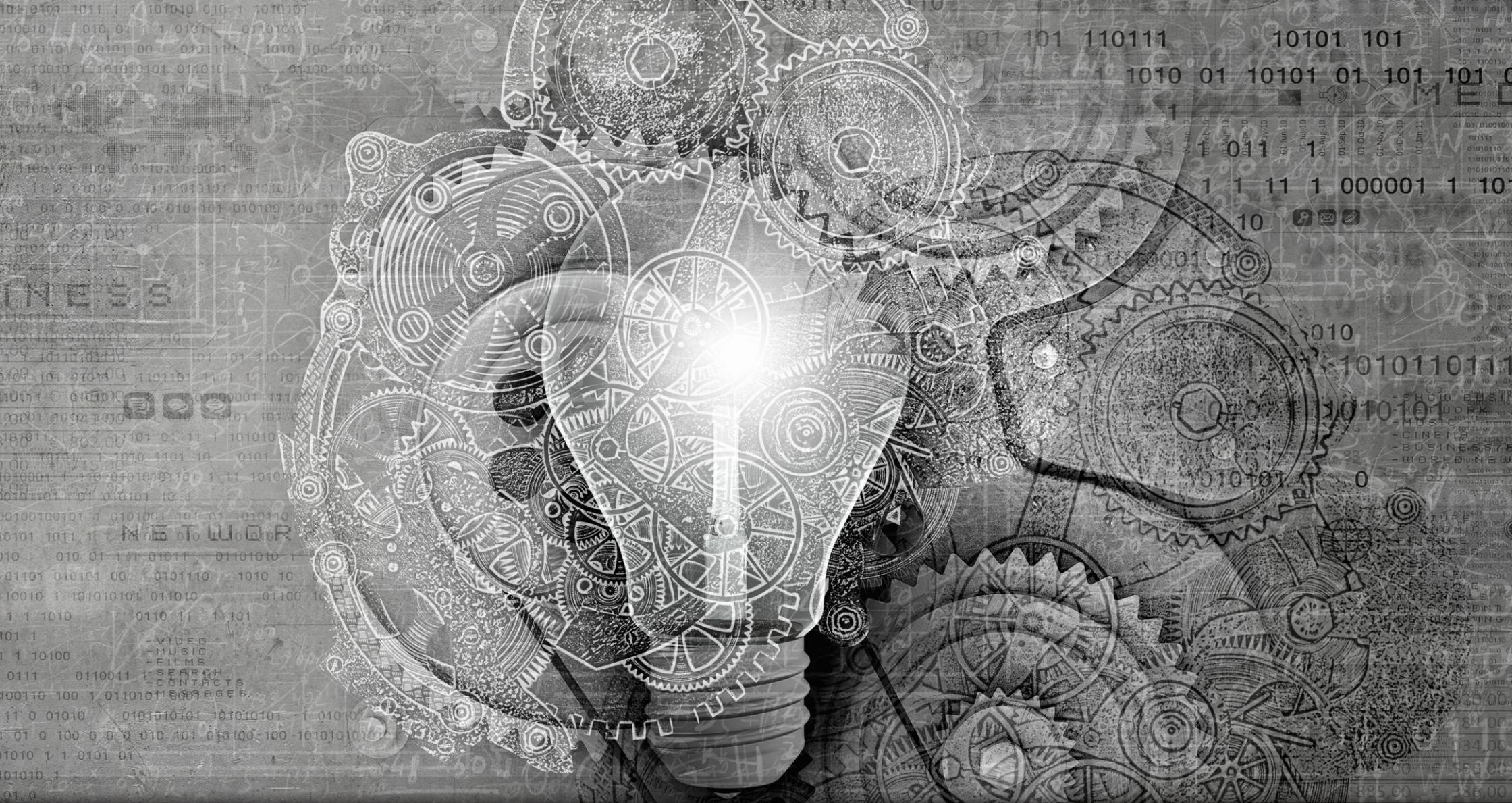
SANITATION SOLUTIONS

Water and Sanitation Solutions.

082 963 5474
nadia@ilaliloo.co.za
tnchamo@gmail.com
www.sanitationsolutions.online







water & sanitation

Department:
Water and Sanitation
REPUBLIC OF SOUTH AFRICA