# PROVIDING ACCESS TO CLEAN, AFFORDABLE AND SAFE DRINKING WATER







# TAKATSO PROVIDES A **UNIQUE** SOLUTION TO ANSWER WATER SCARCITY CHALLENGES FOR CIVIL AND INDUSTRIAL APPLICATION

## Water scarcity is becoming a serious issue worldwide



2.3 billion people live in water-stressed countries



72% of all water withdrawals are used by agriculture, and 12% by industries



450 million children live in areas of high or extremely high-water vulnerability



700 million people could be displaced by intense water scarcity by 2030

Takatso Water Purification and Desalination System is an all-in-one unit fully autonomous and self-sustainable.

The system is powered exclusively by Renewable Energies using solar energy and wind power.



The modular unit has been designed to operate for 20 hours a day in order to produce any water requirement

# The benefits of using TAKATSO'S solution



Mobility and Agility is key. Rapid deployment and erection of the systems where required.



Equipment fits inside a shipping container, easily and safely transported.



Affordable and re-deployable assets serving a large range of applications with a minimum maintenance cost.



Standard systems purify from 1.5m3 to 85 000m3 of water per day.



Fully autonomous, off-grid systems, that are environmentally friendly.



Excess of power can be produced for grid supplementation.

# **Add-Ons**







WIND TURBINES SOLAR PANELS WIFI

# APPLICATION TO PROPERTY DEVELOPMENT & CONSTRUCTION INDUSTRY

Property developers have an opportunity to develop a water-saving culture into the homes they construct by including, and encouraging the installation of, innovative water saving solutions in their offering.

It is essential for leaders in property development to identify feasible opportunities to use alternative water sources.



Rainwater harvesting, borehole water and desalination are some of the avenues to be considered. Greywater is also a great option for non-drinking purposes such as flushing toilets, watering gardens in new developments and washing away building dust on sites. Beyond water sourcing, it is crucial that water be handled and stored responsibly in order to minimise the risk of leaks, evaporation and contamination.

## THE PROCESS



DEFINE CLIENTS REQUIREMENTS



PROCESS DESIGN



QUOTE



FINAL DESIGN & MANUFACTURING OF THE UNIT(S)



INSTALLATION



SUPPORT & MAINTENANCE

## INDUSTRY SPECIFIC INFORMATION

Implementation of Takatso's innovative water purification systems enables properties to attain Green Building ratings, and as a result, enjoy the following benefits:

#### **ENVIRONMENTALLY-FRIENDLY**

Buildings have lower operating costs, are more efficient, future proof, provide a higher rate of return and have been shown to promote wellness, healing and productivity.

#### **LOWER OPERATING COSTS**

Research reveals that Green Star SA Rated buildings enjoy energy savings of between 25% and 50% compared to buildings designed to SANS 204 standards.

The payback periods of energy and water saving practices are becoming much shorter because of increasing utility costs and the wider availability of more affordable green building technology.

#### **INCREASED PROPERTY VALUES**

Decreased operating costs (up to 14%), lease premiums and more competitive, less risky, future-proofed buildings contribute to the value of green buildings.

Valuation premiums have been empirically proven to be up to 12% over non-green buildings, with a median of 7% being recently reported.

#### **ENHANCED MARKETABILITY**

Green building creates a differentiated product in the market, which is viewed as technologically advanced and environmentally and socially responsible. These attributes are positively linked to the company brand and image of the owner and/or the tenant.

#### REDUCED LIABILITY AND RISK

Green buildings are future-proofed against increases in utility costs, potential energy and water supply problems, tightening legislation, carbon taxes and the impact of mandatory energy efficiency disclosure, as well as costly retrofits or even obsolescence.

# RETAINING GOVERNMENT & OTHER MAJOR TENANTS

The Department of Public Works' planned 'Green Building Framework' is likely to include certain green building requirements for government accommodation.

This will increasingly apply to large multinational tenants too.



## INDUSTRY SPECIFIC INFORMATION

#### RESPONSIBLE INVESTING

Investment in green building is an integral part of the worldwide trend to more responsible, sustainable and ethical investing.

#### **INCREASED PRODUCTIVITY**

Improved Internal Environment Quality from increased ventilation, temperature and lighting control, the use of natural light and the absence of toxic materials result in the improved health, comfort and wellbeing of building occupants.

This has been shown to increase productivity – always a significant factor in the profitability of a business.

Studies show improvements in productivity of up to 20%, which easily covers any premium paid for higher quality green space.

#### HIGHER RETURNS ON ASSETS

Extensive studies have shown rental rates in green buildings to be approximately 6% higher than non-green buildings.





#### ATTRACTING & RETAINING TALENT

Skilled staff members are hard to attract and retain. However, educated people, particularly younger graduates, are increasingly aware of sustainability and wellness issues and consequently, may be more attracted to working in a green environment.

#### MINIMISING CHURN

With increased comfort and occupant satisfaction and more flexible spaces, green buildings can minimise the costs and impact of churn.

With lease terms in South Africa typically ranging between 3 and 5 years, churn represents a significant cost to businesses.

#### **COMBAT CLIMATE CHANGE**

Green building practices can have a significant impact on combating climate change and help to create truly sustainable communities.

# PARTNERSHIPS & AWARDS











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