



Saving the planet and saving customers' money

One flush at a time

propel^{air}[®]

Why Propelair?

Propelair exists to reduce flushing away increasingly scarce drinking water

Water use has been growing more than 2x the population growth in the last century

An increasing number of regions are **chronically short of water**

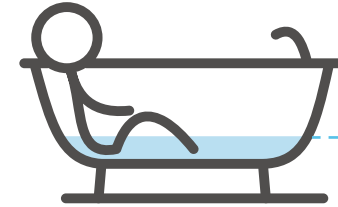
As the effects of **cost and water supply issues** have emerged, water saving initiatives have come into focus in both the regulatory environment and business



1 in 10

783 million people do not have access to **clean and safe water** worldwide

The UN predicts a



40% shortfall

in global water supply by 2030

Water demand globally is projected to **increase by**

55%

between **2000** and **2050***



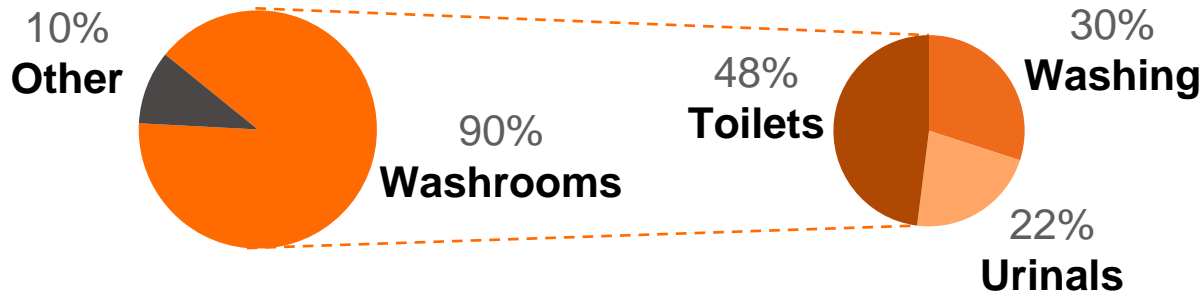
90%

of the increase in the urban area population will be in **Asia** and **Africa**

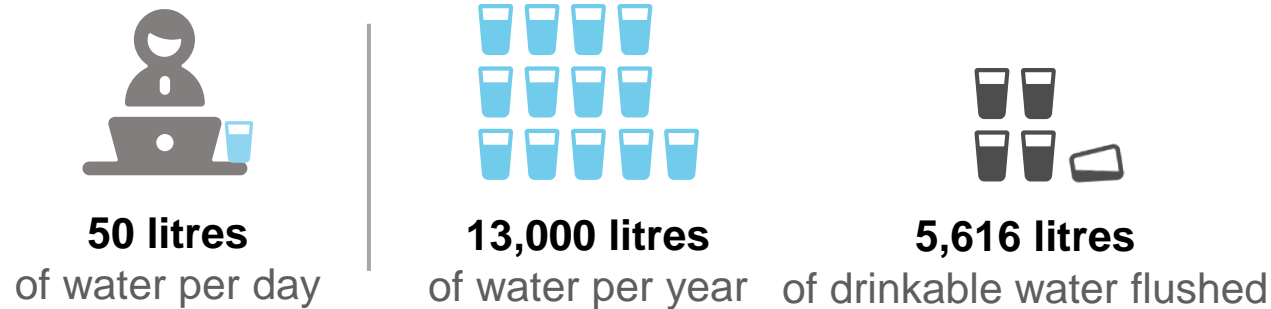
Why Propelair?

Problem: toilets waste vast amounts of clean water








Water usage in commercial premises*



On average, an employee 'at work' uses*



Conventional toilet system issues

-  **Drinking water price inflation**
-  **Currently inefficient – 6 to 9 litre flush**
-  **Poor hygiene**
-  **High maintenance costs**
-  **Unreliable drainage systems**
-  **Waste water costs**
-  **Slow refill / toilet queues**

Why Propelair?

The Solution – Propelair

The lowest water flush toilet in the world

Uses air to propel **just 1.5 litres of water** into existing drains, fully cleaning the bowl and removing all waste

How it works:

A **two-section cistern**; one for **air** and one for **water**

Before flushing, the lid is closed to **form a seal**

Refills in **only 20-30 seconds**








When flushing, **water washes the pan**, and **air from the unique patented pump pushes out the pan contents...** the remaining clean water fills the 'water trap' at the bottom of the pan

Flushes in only 3 seconds – powerful and reliable, leaving a clean bowl




Why Propelair?

Efficiency without compromise

Business benefits

-  1.5 litre flush
Up to **84%**
less water
-  Up to **80%**
carbon reduction
Supports CSR policies 
-  Strong, durable design
Significantly **reduces maintenance costs**
-  Total building water and sewage **bills reduced by up to 60%**

User experience

-  1 **Flush performance superior** to a standard toilet
Quieter than a conventional toilet
-  2 Quick refill time **reduces queues**
Fewer blockages means **fewer washroom closures**
-  3 **Reduces airborne germs by 95%**
Superior waste removal
Increased hygiene assurance with SteriTouch®
-  4 **81%**
of users **valued the water saving** of the toilet



The Propelair toilet was chosen because of [our] commitment to carbon and water reduction. The toilet offers substantial water savings and feedback from our clients was positive. The design has been well received by our customers.

Why Propelair?

Big financial savings

Usual payback: less than 3 years

Propelair saves vast amounts of water, so **saves operational costs**

In addition, in the UK Propelair is listed on HMRC's Water Technology Product List as qualifying for an **Enhanced Capital Allowance (ECA)**

100% tax deduction in the year of expenditure - reducing the cost by 19%
(the UK corporate tax rate)

We plan to launch low-capex and Savings-as-a-Service options imminently

Example of potential savings (based on website calculator and assumed parameters)			
Assumed parameters		Per toilet (per year)	All toilets (per year)
Number of toilets	60		
WC flushes per day	70	25,200 flushes	1,512,000 flushes
Current flush volume	9 litres	189,000 litres water saved	11,340,000 litres water saved
Building utilisation	360 days	196 kg 7.77g CO ₂ saved per year	11,748 kg CO ₂ saved per year
Cost per m³	£3.20	£605 saving	£36,288 saving
Full cost of investment repaid after 1.6 years*			
* Standard installed price per unit		£1,225	£73,500
After ECA saves 19% → net cost		£992	£59,535

Why Propelair?

Now is the right time to install the Propelair solution

Water saving is on the agenda and becoming ever more urgent

Forms part of most big businesses' **CSR policies**

Constantly in **media coverage**

Businesses are actively looking for **incremental cost savings** from their buildings

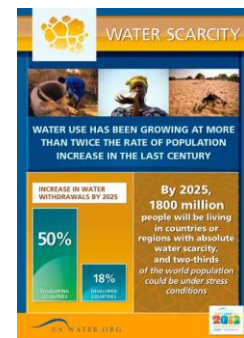
No other toilet solution is so conclusive

“ *California will begin to enact new state-wide water conservation laws.* ”



A project in Durham, run by The Water Hub, which itself is a collaborative project on Durham's Heritage Coast between Durham University, Northumbrian Water, Environment Agency and Durham County Council, aims to build an eco-friendly building with water-saving solutions.

Goldman Sachs dedicated \$1.2 billion to green buildings and green tech in 2018 alone. This was 60% of its overall budget for the green investments category by 2020. Yet, they only improved their energy efficiency by 10% compared to 2015 levels. Progress in water use reduction also slowed down in 2018.



“ *The UK government has pledged to implement the recommendations set out by the Committee on Climate Change (CCC), creating a legally binding net-zero carbon target for 2050.* ”



“ *Australia brought in a water-savings act in 2007/2008.* ”

Dubai readies building rules to save water and power
Existing developments may have to adapt Municipality to review proposals with the accuracy in mind, not wanting to impose regulations that might impede development.

“ *A prototype “off-grid” toilet system developed by researchers at RTI International, in partnership with Duke University and Colorado State University, began being tested in Durban, South Africa, in 2017.* ”



Why Propelair?

COVID-19 will stimulate demand for greater hygiene

The fallout from COVID-19 will emphasise the need for more hygienic and sustainable solutions

Improved hygiene has been the major news trend

Washrooms have been identified as a potential transmission area

Long term behavioural changes expected with regards to hygiene, as demonstrated by Hong Kong's behaviour post SARS in 2003

Propelair toilets reduce airborne germs by 95%

*While scientists have warned that COVID-19 can be spread by fecal-oral transmission...the disease can also be spread through what is known as "**aerosolized feces**" which means that it's more important than ever to close the lid of the toilet while flushing, according to experts. **Forbes April 02 2020***



*Noteworthy percentages of the respondents self-reported increased frequencies of practicing favorable health-seeking behaviors in June 2003, as compared with the pre-SARS period. The community in Hong Kong responded to the SARS epidemic by practicing more favorable health-seeking behaviors. **Preventative Medicine Aug 2005***

*Because of a phenomenon known as toilet plume, stool or urine can escape from the toilet into the air and spread disease, according to the **Association for Professionals in Infection Control and Epidemiology***



*The experience of SARS traumatized Hong Kong, and the memories have endured in the territory's collective consciousness... The experience also brought about a rise in public-health awareness and a sense of civic responsibility toward preventing illness, as well as an increased investment in health care and research... **The Atlantic March 2020***

Our clients' combined savings in 2020

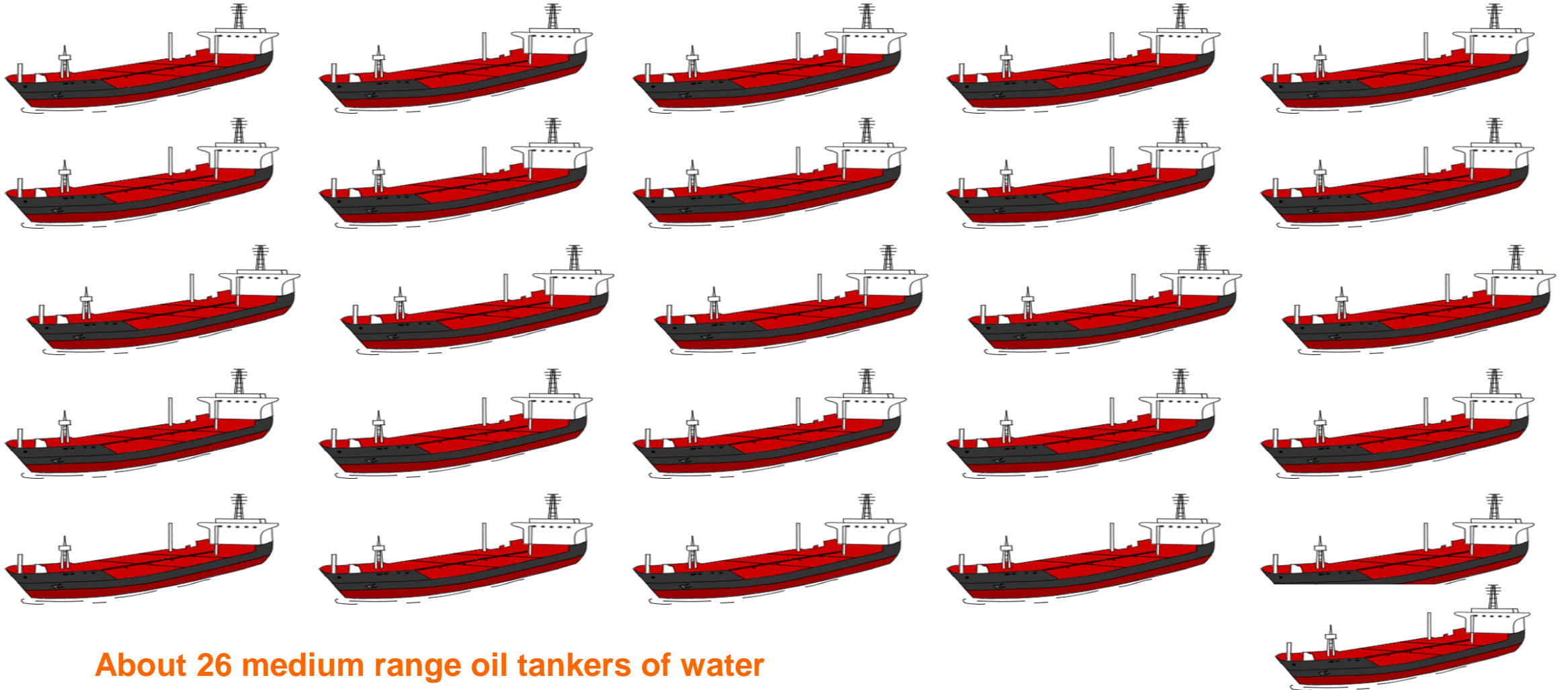
**1 billion
litres**
of **water**

**£8
million**
savings from **water &
sewage bills**



Customers saving more than 1 billion litres per year

Confidential



About 26 medium range oil tankers of water

Financial Overview

Case studies



Motorway services

Fast food franchisee

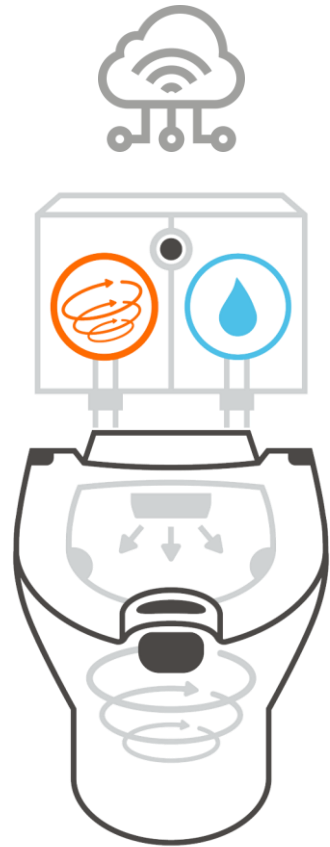
International bank

	2,000 units	300 units	1,000 units
Estate potential			
Units installed	865 units	9 units (first trial)	121 units
Water saving achieved	82%	81%	81%
Water saved per year	180,000,000 litres	1,848,647 litres	14,314,300 litres
Lifetime savings (based on a 10-year duration)	>£4,000,000 >£400,000 annual saving in water bills	>£1,200,000 (whole estate)	>£3,300,000 (whole estate)

Significant reduction in operational costs – fewer broken seats & blockages

Company Overview

The future is a smart, connected WC solution



Flush counter

Monitor usage and calculate savings in real time.

This will inform maintenance and cleaning schedules and **facilitate the introduction of a “Savings as a Service” model.**



Block detection and prevention

Sensors and valves in plumbing infrastructure will alert maintenance team to impending issues and control flows.



Diagnostics and repair alerts

Multiple sensors monitor key functions allowing for fast diagnosis of issues without any dismantling.

Notifications will alert maintenance teams to issues in real time to drive **rapid response** and **improved parts provision.** Link to the BMS or remote platform.



Additional benefits

Future additional benefits could include user messaging, advertising opportunities, resource/performance management etc.

A high-speed photograph of a water splash on a blue background. The water is captured in mid-air, creating a crown-like shape with many small droplets. The splash is centered in the upper half of the image.

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Contact Dee

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