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Reducing water use
in hotel rooms has the
highest potential impact
in water savings.



Photo by Derek Liang on Unsplash

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CHALLENGE

Sustainability is a leading factor for customer purchase decisions.

4 WINS FOR HOTELS:

- Meeting Customer Demand
- Saving Utility Costs
- Avoiding Regulatory Fines
- Social Responsibility

Public awareness of the global water crisis is growing. Today 1.5 billion people are considered to be living under extreme water stress, and that number is expected to more than double by the year 2020. For hotels this means that environmental sustainability is a leading factor in purchasing decisions and customer demand. A TripAdvisor survey found that 79 percent of travelers look for eco-friendly accommodations.

Water used in hotels and other lodging facilities accounts for approximately 15 percent of the total water use in commercial and institutional buildings in the United States, making it an industry with growing regulations. As the price of water and wastewater services continue to increase – and drought conditions spur water restrictions and conservation mandates – Hotel owners and operators can save on utility costs and avoid regulatory fines by implementing water-efficient technologies and practices.

The simplest way to start saving water is in hotel rooms, accounting for 30 percent of the total water usage in hotels.

66%

“In its 2015 Nielsen Global Corporate Sustainability Report, Nielsen found that “66% of global consumers say they’re willing to pay more for sustainable brands.”

82%

Yet, a majority of companies (82%) say they lack the tools and strategies to turn insight into actionable insights.

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SOLUTION

Same Tap – 98% Less Water.

In a regular tap water gushes out at around 10-12 L/Min. Most of it just passes your hands, meaning you only use the water that touches your skin. This results in billions of gallons of fresh water running straight down the drain every day.

Through our patent pending technology, the Altered:Nozzle atomizes the water, breaking the water up into millions of drops. Creating a high speed heavy mist shooting out of your tap. This drastically increases the surface area of the water, making it possible for you to get in contact with every single drop of water coming out of your tap.

“Atomization - Breaking the water up into million of droplets so we use every single drop of water coming out of the tap.”

This is how we all can wash our hands, brush our teeth, do our dishes etc with only 2% of the water used in a regular aerator.

2%

Is all we need to wash our hands, brush our teeth, do our dishes etc compared to a regular aerator.



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SOLUTION

Two solutions for different situations.

DUAL FLOW – optimized for hospitality and home use

The Altered:Nozzle dual flow atomization is perfect for washing hands, brushing teeth etc, saving an incredible 98%. A simple turn of the handle switches over to a regular spray, perfect for filling a glass of water, rinsing etc. Still saving 85% but giving the user all the water they need.



- Dual Flow Mist, 0.22 L/Min.
Spray 1.8 L/Min.

- Optimized for home and hospitality use.

- Working from 2 BAR.

- Simple 60 sec installation

- Universal fitting with adaptors for most taps.

SINGLE FLOW DOME[®] – optimized for public areas

Altered:Nozzle Dome[®] is optimized for areas where you need a single flow, high efficiency wash with maximum savings. Our Dome[®] Technology creates a water dome that diffuses into a water spray. Giving you a full experience washing hands with only 0.42 L/Min or 96% savings.



- Single Flow Dome[®],
0.42 L/Min.

- Optimized for public areas.

- Working from 1.5 BAR pressure.

- Simple 60 sec installation.

- Universal fitting with adaptors for most taps.

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THE BUSINESS CASE

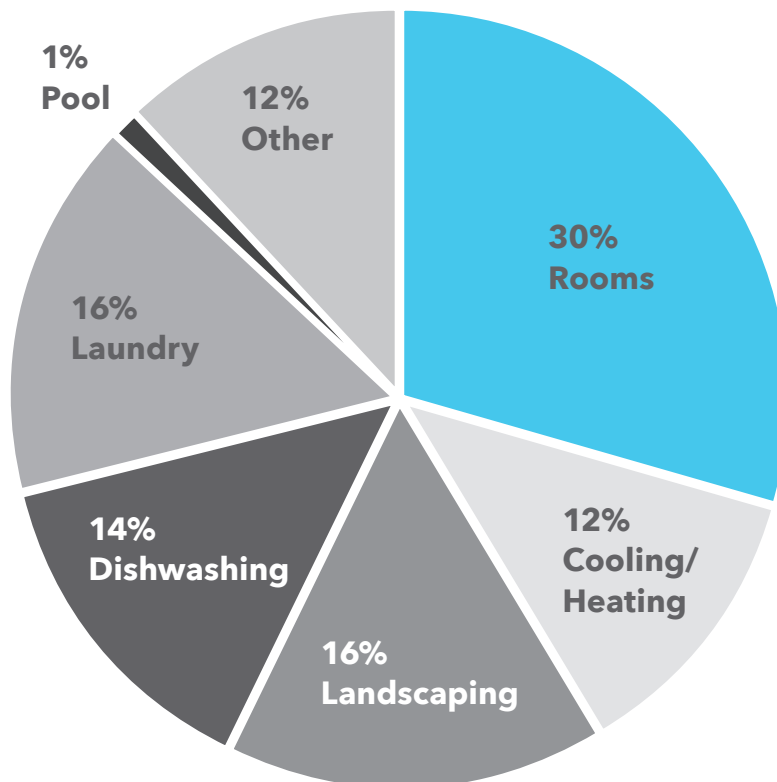
A 30 second installation that saves millions of liters of water every day.

In a regular hotel around 30% of the fresh water is used in the Hotel Rooms and 7.23% in wash-hand basins.** With a total use of 300 to 600 liters per guest and stay, that means around 30-45 liters of water per day through taps.

With the use of the Altered:Nozzle the Hotel will save 85-98% of that every day. At least 25.5 liters and up to 44 liters per stay. For a hotel with 100 rooms that means 900,000 liters of water saved every year.

**30-
45
liters**

of water per day
through taps.



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THE BUSINESS CASE

Financials – Save \$12,823 and 260,000 liters of water every year.

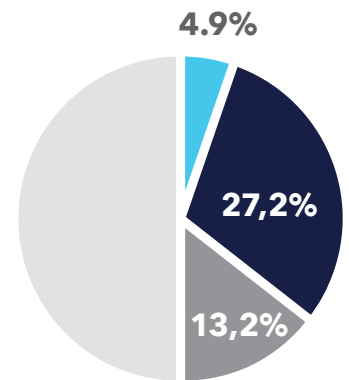
If we look at an EPA case study of a water efficiency project in The Holiday Inn San Antonio, Texas, we see that a saving of 1% of water equates a monetary savings of \$1,943/year in reduced utility and energy bills. If we estimate that the Altered:Nozzle is run 50% in Mist Mode and 50% in Spray Mode, the installation of the Altered:Nozzle means a Net water saving of 6.6%.

7.5 Months ROI \$12,823/year 260,000 Liter

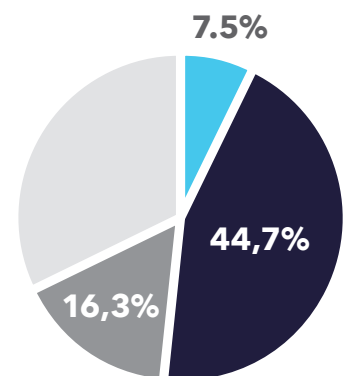
According to this case study that would mean a monetary saving of 12,823 \$/year and water savings of 260,000 liters of water/year. With a potential investment of \$7,940 that means a payback period of 7.5 months. Excluding the added value in customer demand, CSR and future regulatory costs.

<https://www.epa.gov/sites/production/files/2017-01/documents/ws-commercial-casestudy-holiday-inn-sanantonio.pdf>

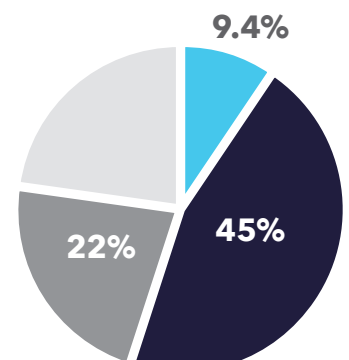
5 Star Hotel



4 Star Hotel



3 Star Hotel



Wash Basin:  Shower:  Toilets: 

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THE BUSINESS CASE

Reduced Carbon Footprint.



A hotel with 100 rooms use approximately 900,000 liters of water per year. Since much of the water in taps is hot water, energy saved from reducing the amount of water will not only save money, but also substantially reduce the building's carbon footprint as well. Many hotel managers are subject to sustainability goals, which can be met by decreasing water and energy use.

900,000 liters of water =
45,000 kwh =
26 ton CO₂ or emissions from
7 cars one year

On average it takes 5 kwh of energy to heat 100 liters of water. Of course CO₂ emissions per kWh may vary greatly in accordance with the amount of clean energy in the energy supply. But if we calculate according to EPA's eGRID emission factors, 1 kwh will on average emit 592 gram of CO₂. For our example company this will mean a reduced carbon footprint of 26 Tons of CO₂. Since a mid sized cars emits an average of 3.8 tons of CO₂ per year. This equates to the emissions of 7 cars driven on gasoline a whole year.

Likewise, water-efficient practices can assist with achieving green certifications and demonstrating leadership in environmental management. Because bathroom plumbing fixtures account for a significant portion of water use in office buildings, it is smart to assess the age and functionality of existing fixtures.

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Conclusions

Saving water is not enough any more. We need to find solutions that makes us only use what we need. And when it comes to faucets, in many cases that is only 2% of what we are using today. Installing the Altered:Nozzle is one of the easiest way for your company to make a difference.

- **Sustainability matters to consumers and employees.**
- **Retrofit, rather than buying a new faucet, is cheaper, faster and saves resources.**
- **Saves more than 9,000 liters of water per room and year.**
- **Has a financial ROI of less than 7.5 months.**
- **And reduces your company's carbon footprint.**

To find out more visit www.alteredcompany.com.

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1. <https://sustainabledevelopment.un.org/>
2. <http://www.nielsen.com/us/en/insights/reports/2015/the-sustainability-imperative.html>
3. <http://www.circleofblue.org/2017/water-management/pricing/price-water-2017-four-percent-increase-30-large-u-s-cities/>,
4. <http://www.straitstimes.com/singapore/singapore-budget-2017-water-prices-to-increase-by-30-from-july-1-in-two-phases>
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6. <https://www.theclimategroup.org/what-we-do/news-and-blogs/we-mean-business-coalition-and-report-launched-at-climate-week-nyc/>
7. <https://www.theclimategroup.org/what-we-do/news-and-blogs/we-mean-business-coalition-and-report-launched-at-climate-week-nyc/>
8. Percentages calculated compared to standard aerators with a flow of 12 Lit/min.
9. The Altered:Nozzle comes with adaptors to fit Standard, Junior and Tom Thumb faucets with detachable sockets. For further specifications see www.alteredcompany.com
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11. <https://www.eia.gov/consumption/commercial/reports/2012/water/>
12. <http://www.mwi.gov.jo/sites/en-us/Best%20Managment%20Practices/Office%20Buildings%20Water%20Efficiency%20Guide.pdf>
13. <https://www.eia.gov/consumption/commercial/reports/2012/water/>
14. Percentages calculated compared to standard aerators with a flow of 12 Lit/min.
15. Estimated cost of retrofitting the Altered:Nozzle in the example company.
16. <https://www.goteborgenergi.se/Kundservice/Energispartips/Lagenheter/Varmvatten>
17. https://www.epa.gov/sites/production/files/201510/documents/egrid2012_summarytables_0.pdf
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