

AI predicts what workplace bathrooms could look like in 2050

2 years ago



Smart technology is making its way through our entire homes and workplaces – and the bathroom is no exception. From smart speakers and voice-activated mirrors to tankless water heaters and automatic toilets, technology is already transforming the modern-day bathroom. It's no longer a functional washroom, but a luxurious wellness suite. And it seems the nation is on board with this change.

Collecting worldwide data on bathroom features using Google Patents and Google Search, and pairing this industry expert insights, [Direct365](#) have predicted what features we are likely to find in our bathrooms of the future.

In total, 139,282 Patents have been filed for the 22 future bathroom features predicted to be commonplace in our bathrooms in the future.

Sustainable smart technology is set to be the focus of future workplace bathroom designs

Some of the most popular smart features include appliances that are designed to use less energy and conserve water. These include, tankless water heaters, smart thermostat and water recycling.

Feature	Total Google searches & no. of patents
Tankless water heater	212,866

Smart speaker	84,600
Smart thermostat	81,241
Smart mirror	66,450
Water recycling	63,419
Smart bathroom	3,313

While these features are designed to help reduce overall energy bills, they will also significantly reduce a household's carbon footprint. For example, tankless water heaters are designed to heat water on demand, reducing standby energy losses.

Additionally, 'water recycling' methods which have a staggering 49,047 active patents and which are searched for 14,372 times each month by individuals include advancements in smart toilets and smart sinks. These appliances are designed to promote water conservation by being able to adjust flow rate and monitor water usage. They will have digital displays to provide real-time feedback on how much water your business is consuming.

Commenting on the water saving technology we are likely to see in our future bathrooms, Brad Gall, founder and owner of BG Electrical & Air Con said:

"In the future, a smart bathroom should have advanced water management, which means, for example, using hot water on-demand as you need it, when you need it, but not more (or less!) than you need. Predicted AI advancements would be able to detect and predict your usage patterns."

Smart speakers and smart mirrors are likely to become commonplace within bathrooms, with 60,000 existing patents

Additionally, while smart technology will be incorporated into bathrooms to reduce overall carbon emissions within a business, it will also provide a level of entertainment and ambiance for employees. Rather than being a purely functional room, future bathrooms will be fitted with smart speakers and smart mirrors.

Currently over 51,000 patents exist for 'smart speakers', and 8,533 patents for 'smart mirrors'. Demand is certainly there for both of these features, with combined Google searches of 91,380 each month.

While both of these features currently exist in 2024, as technology advances it will become commonplace to be able to control water flow and temperature through voice activation and even watch a TV programme while washing your hands.

Additionally, many features within workplace bathrooms are likely to become touchless such as hand dryers, taps and toilet flushes, to reduce the spread of germs. For example taps alone have up to 6,267

bacteria per square inch^[1]. While germs are present in all bathrooms, workplaces especially should consider an upgrade to touchless appliances as multiple different people use these daily.

Jim Garrett, Managing Director at Core Tech commented: “Smart technology in all areas is becoming an expectation in today’s world and bathrooms are no exception, From touchless hand dryers to increase cleanliness to audio and TV solutions to help relax, these can be enhanced with mirrors with hidden screens to notify of weather and your days schedule so you can face your day fighting prepared.”

Smart toilets will act as a digital doctor, monitoring people’s health

As well as acting as water saving appliances, it is predicted that future smart toilets will be built with technology that will be able to detect people’s level of health. Technology built into the toilet is predicted to be able to detect medical conditions through people’s urine and stool analysis.

A study from Stamford University revealed that technology built into toilets will be able to detect health conditions including cancers, ICS, kidney failure. Once the toilet detects an abnormality, hypothetically it will be able to alert the person’s healthcare provider^[2].

Karl Bantleman at [Direct365](#) commented: “Reduced carbon emissions is a topic at the heart of all governments, industries, businesses and individuals. However, while the adoption of current solutions to help cut emissions is crucial, future technological advancements will become paramount in supporting society to become more green.

Within homes and businesses, and more specifically bathrooms, future design and adoption of smart technology will become crucial in reducing energy and water consumption. Additionally, as advancements in technology within bathrooms will also be designed with people’s health in mind, future bathrooms are set to drastically improve both the health of our climate and society.”