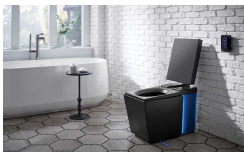


How smart tech is changing the bathroom

Nearly 90 percent of Americans use their phones in the bathroom, according to a June 2015 Verizon Wireless.



Kohler's Numi intelligent toilet with Konnect offers personalized settings that let users fine-tune every aspect of their exact preferences, from ambient colored lighting and wireless Bluetooth music sync capability to the heated seat and fo
credit: Kohler



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Nadia Askar

Nearly 90 percent of Americans use their phones in the bathroom, according to a June 2015 Verizon Wireless survey of 6,000 individuals. Combine this with the fact that, according to Consumer Intelligence Research Partners, 10.7 million U.S. Amazon customers have an Amazon Echo, and a new trend emerges: smart bathrooms.

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“Smart home technology was one of the biggest trends at the 2018 [KBIS] show — and, more than ever before, innovative home automation has found its way into the bathroom,” says **Dan DiClerico**, home expert and smart home strategist at HomeAdvisor.

“That has all sorts of benefits for consumers across all generations. For millennials, there’s now the expectation of technology and innovation; builders are paying attention. For older homeowners, a lot of this technology is part of the strategy that will help them stay in their homes longer. Then the Gen Xers, that’s my generation, who are in prime child-rearing years, these innovations can be a huge help. Look for much more of the same in 2018, with voice control continuing to lead the way.”

On the other end, there are some companies that are staying away from the smart bathroom market on principle. A number of companies at KBIS said they were not going into that market for a few reasons, including that these are luxury items, which is a bit of an upsell for professionals in the field.

“It is important to emphasize not just comfort and convenience, but also the safety and savings” DiClerico says. “Shorter showers, for example, are a great way to reduce energy costs — people forget that the water heater is often the most energy-intensive appliance in the home. Smart controls can also prevent scalding — a real safety issue in homes with small children. So, there’s a clear way to make this technology appealing to consumers.”

[Check out the New Products at KBIS-IBS 2018](#)

Smart toilets

Smart toilets maybe most popular smart product, DiClerico notes. These have been around for a few years, but confusing controls have been one of the barriers to adoption.

“We provide thoughtful design and technologies that offer convenience and functionality to enrich your personalized experiences, making them easier, more comfortable and more enjoyable,” says **David Kohler**, president and CEO of Kohler Co. “Whether you’re getting ready for work, helping your children through their evening bedtime routine or simply in need of some personal relaxation, KOHLER Konnect is the next evolution of our kitchen and bathroom innovations that help make these everyday moments better.”

Kohler’s **Numi intelligent toilet with Konnect** offers personalized settings that let users fine-tune every aspect of their experience to their exact preferences, from ambient colored lighting and wireless Bluetooth music sync capability to the heated seat and foot warmers. It delivers hands-free control, personalized cleansing functionality and water efficiency. The features can be controlled through voice command, motion control or the Konnect app.

Kohler also offers a PureWarmth heated toilet seat with a slim design and integrated night light to enhance the user’s experience with any toilet. The app offers users control over the temperature, timing of the heat, duration and lighting with the ability to program and set all features to the user’s preference.

Niagara’s products are intentionally not smartphone- or Alexa-compatible/controlled.

“Rather than investing in technology to support these options, Niagara prefers to invest in developing technologies and products that conserve natural resources,” says **Bradly Egan**, director of marketing at Niagara Conservation. “There is a continual push to improve current products or develop revolutionary new ones — to ensure that toilets, shower heads and aerators can be used easily and save water.

“We focus primarily on conserving our natural resources when we begin developing a new product,” Egan continues. “You could say that our secondary focus is consumer acceptance and usability. The sheer cost of a smart fixture alone is already a significant jump over the average product. Plus, there’s a learning curve that’s typically an obstacle to overcome.”

An overwhelming number of U.S. residents have been leaning toward renting and leasing instead of owning, which also affects the market, Egan adds.

“This means that they do not have control of the items in their homes,” he says. “An apartment is pretty ‘set as they come,’ and they make efforts to lower their operating costs and their renters’ costs. But a device that would require a maintenance call is something they would typically avoid — not to mention a maintenance call that requires a screen share to troubleshoot the problem.

“Hotels have a very similar reality to deal with, as well. Maintenance is a huge factor for them. Plus, they want to ensure their guests’ stays are as comfortable as possible. Maybe some higher-end and luxury hotels provide these types of fixtures, but the vast majority do not. Rental properties, apartments and

hotels make up a huge number of the water-using fixtures outside of single-family homes.”

“Lower price points should help drive consumers to the [smart toilet] option,” DiClerico says. “Putting on my futurists cap, I think we’re at the just the beginning of the smart-toilet technology. There are all sorts of health possibilities here — for example, with toilets that can monitor things like weight and body mass and even do an analysis of human waste.”

But smart and connected bathroom products benefit contractors and installers as well as end users.

Zurn Industries has introduced QR Codes to connect specification, marketing and e-commerce for their products. By placing the QR Codes on the ZTR Sensor Flush Valves and other products, facility managers can scan the code and quickly identify the product. The scan will instantly bring you to the product page containing a list of product details and repair parts. Facility maintenance professionals can do all of this from their smartphones to access Zurn e-commerce partners and buy replacement parts.

In addition, by placing QR Codes on labels, installers and potential customers have more access to product information and installation instructions. Future enhancements are to include the date of manufacture to identify revision level. This trend will be a quick and easy way for facility maintenance professionals and managers to access product info, replacement parts and installation instructions.

Although Geberit currently does not use smartphone- or Alexa-compatible/controlled technology to contribute to a smart bathroom, they do offer a wireless programming unit to quickly and easily match the operation of an electronic, hands-free Geberit system to a facility’s unique needs.

“The Geberit Service Remote puts maximum control right in the palm of your hand,” says **Ronn Jefferson**, marketing product manager at Geberit. “It offers tool-free adjustment. Without touching the Geberit controls or toilet system, you can change toilet settings like sensing range and flush volumes. Users can turn auto flushing on or off for comfort or water savings. They also can keep track of the number of flushes for maintenance planning or use to develop proof of water usage and/or savings.”

Smart showers and tubs

Last year at KBIS, Moen showed off their U by Moen Shower. This year, they added Alexa compatibility. It offers Wi-Fi mobile connectivity and personalization, providing users countless ways to create their ideal shower with the push of a button as well as the sound of their voice. Users will know the commands have worked as the Alexa device will reply, indicating the desired activity has been completed; the app on their smartphone and the controller in the shower will respond by lighting up, changing color and reacting to the specific command.

“Consumers are interested in ways to personalize their space and smart home technologies,” says **Michael Poloha**, senior product manager at Moen. “It’s all about elevating their daily routines and making tasks easier. At Moen, we thought, why not give consumers connected water? By allowing consumers to

integrate their shower with automated systems, Moen takes the digital showering experience to the next level. Homeowners can have the shower incorporated into their smart home ecosystem and enjoy the ease and convenience of a totally connected lifestyle.”

There are no installation differences needed on the contractor’s behalf, as the voice activation is a software update that gets pushed to existing controllers for integration with Amazon Alexa. There is no increase in the price of the system to enjoy these new features and benefits.

Kohler also upgraded a smart shower they had in place. Many aspects of DTV+ can be controlled with voice commands through Konnect to produce a customized showering experience. Users can adjust water temperature and control shower heads, body sprays, music, lighting, steam and shower duration using voice commands, the DTV+ interface or their mobile device. Consumers who already have DTV+ systems in their home can upgrade by having a bridge module installed in their existing system.

Putting voice activation aside, there are many shower systems that are smartphone-compatible.

“We have two products that allow home owners to remotely control their MrSteam System,” says **Martha Orellana**, vice president of marketing at MrSteam. “The first is HomeWizard. It connects any home automation system to any of our home SteamShower system. It lets homeowners activate their steam shower from almost any location, leveraging the advanced functions of an existing home automation system. Installers simply connect the single interface module cable to any of our E-Series generators and program the unit on the home automation systems console. HomeWizard also pairs with the wireless iGenie for handheld remote-start function.”

The second option for remote operation is SteamLinx Mobile System. It turns any smartphone or tablet into a seamless control essential steam room functionality. The system works with any MrSteam E-series generator and is compatible with all the company’s home steam shower controls.

Installation is minimal. A small transmitter module connects to the homeowner’s router, and another module connects to the E-series generator. The homeowner downloads the app for free and they have steam at their fingertips.

As for tubs, the PerfectFill kit with Konnect can automatically fill a bath to precisely the desired depth and temperature, reducing time spent physically monitoring the filling of the tub. Both the auto-fill and auto-drain functionalities can be controlled with simple voice commands or through the app.

As the technologies evolve, **Bill Strang**, president of operations and eCommerce for TOTO USA, says TOTO will continue to innovate to raise industry standards and consumer expectations as to what is possible in the bath space.

“For us, the bath space is a sacred place where people go to disconnect from the connected world — and reconnect with themselves,” he says. “For example, our new Flotation Tub has been proven to put the bather in a meditative, low-frequency brain wave state similar to what is experienced in a deeply relaxed mental state.

“This state of deep muscle relaxation is achieved by placing the body in a specific reclining posture with the buttocks lower than the slightly bent legs, which mimics the position of astronauts sleeping in zero gravity. By releasing the bather from the bonds of gravity to float in a tension-free state of weightlessness, deep muscle relaxation occurs that calms the body, mind and spirit and offers the perfect remedy for the physical and mental fatigue brought about by the stresses of today’s world.”

Smart faucets

Chicago Faucets’ new wireless programming unit, the Commander, is optimized for use with HyTronic and E-Tronic electronic faucets. It is used to program these electronic faucets to match environmental demands or user preferences. It unlocks additional options to reduce water consumption, save power and improve hygiene.

“The Commander provides easy-to-read diagnostics and step-by-step adjustment procedures,” Jefferson says. “The unit will let you know if it needs service — whether it’s a low battery or another easy-to-address maintenance issue. It also allows you to easily take advantage of the unique modes included with your electronic faucet, such as Water Saver or (Surgical) Scrub mode, to allow you to truly match the application. With the optional Commander Desktop software, you can transfer data from the Commander unit to your PC, allowing you to create usage reports and maintenance records.”

“The technology trend in bathrooms continues to pull us to not only to optimize the user experience but to also program, maintain and monitor our electronic fixtures,” he adds. “There is a need to make maintenance easier by being able to control every function of your bathroom fixtures to reduce costly, frustrating downtime. We definitely see mobile, app-based control on the near horizon, along with building automation or integration — active programs that not only tell you when something has gone wrong, but also warn you ahead of time in order to address the issues and eliminate frustrating downtime or reduction of user experience.”

Smart mirror

In addition to controlling products with Konnect and its related personalized experiences, Kohler’s Verdera Voice Lighted Mirror offers users access to tens of thousands of Alexa skills. Users can listen to morning news or music and control the light levels. Verdera design features also include a dual-microphone solution to enhance the accuracy of voice control, speakers housed in hermetically sealed casings to maximize stereo sound quality, and a motion-activated wayfinding nightlight for safety and convenience.

“I saw other smart mirrors at the show, including Mirror Vue, which is a mirror with an embedded TV that vanishes completely when not in use,” DiClerico says. “Here you can watch the morning news, not just listen to it. It can also be integrated with security cameras around the home. I’m seeing this more and more in hotels, which is where a lot of smart technology gets its start.”

Over the past three years, smart-home technology has been adapted more and more. CIRP estimates that among U.S. Amazon customers, awareness of Amazon Echo increased to 86% as of March 2017. It increased from 61% at the same time one year ago and from 20% as of 2015, the first full quarter following its introduction.

“Smart tech is still at the luxury level, but look for the technology to start to trickle down to mid-range price points,” DiClerico says. “We’re seeing that right now with smart toilet seats. It used to be available only on luxury toilets costing thousands of dollars, but you can now buy a retrofit model for a couple hundred bucks. It might not have all the bells and whistles, but it’s proof that there’s appeal here with mass-market consumers.”

“We believe this [smart bathroom] trend will absolutely continue,” Orellana adds. “Even homeowners who are not incorporating smart home systems now indicate they are planning for the possibility of adding one later. They want products now that will easily integrate when they do. Wireless, touchscreen, intelligent controls, innovative steam dispersion and precision temperature control are becoming necessities. Innovative products that harness smart technologies to save time and offer convenience continue to gain in popularity. Technology that makes it easy to incorporate wellness systems into daily life is also a trend with staying power.”

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