



How Internet Of Things Will Shape The Future Of Homes

Thanks to Technocrat invention, IoT is taking over homes at breakneck speed, but questions about security and ownership of data collected have not been discussed, much less answered. □ TN Editor

Thanks to the Internet of Things, it is now common for homeowners to control different aspects of their home with apps. An app to turn off the lights. An app to adjust the thermostat. Another app to turn on the house alarm.

But in the home of the future, all these smart systems might just be connected to each other as well as to various services to make the experience seamless for the user.

“It’s rapidly getting to a point that there are interfaces that make it easier for systems to communicate with other connected devices,” said technology analyst [Maribel Lopez](#). “I know I don’t want 30 apps to manage my home. That’s unscaleable. I expect there will one day be a little community of connected products.”

To billionaire investor [James Dyson](#), that’s just scratching the surface.

The 69-year-old British inventor [told Fortune](#) in October 2016 that he expects homes to eventually react to our actions and desires. Dyson thinks that things like temperature and lighting will come to automatically adjust to our preferences based in part on biometric data.

“We have no need to have the rather basic and crude controls that we have at the moment in the home,” he told Fortune. “There’s no need for it.”

Meanwhile, technology has evolved to the point where camera technologies allow homeowners to basically re-envision what a room in their home could look like.

“You can use a camera to measure a room, take dimensions of a sofa and place it in a different place in the room, and see how it would look on a screen,” Lopez said.

Home improvement retailers are also looking at how to use virtual and augmented reality to help customers with remodeling.

“You’ll be able to see how that tile looks with those color cabinets and that color wall just by putting on glasses,” Lopez said. “You will be able to virtually see how a kitchen would look like, and do room planning.”

Not just inside the home

The outside of your home might also benefit from IoT.

[iRobot](#), which came up with the robotic vacuum cleaner, confirmed it is exploring the lawn category but declined to discuss further specifics. It wouldn’t be the first though.

In July 2015, [WORX](#) launched [Landroid](#), a pre-programmable robotic mower that allows a user to customize daily mowing schedules, cutting heights and yard sizes. WORX says that Landroid can navigate narrow passages and cut with precision while delivering zero emissions.

According to WORX, this robotic, unmanned mowing vehicle is programmed to cut up to one quarter of an acre or 10,800 square feet of lawn unsupervised.

“Unlike conventional mowers, Landroid requires minimal time and effort,” said Brandon Martin, WORX product manager, in a statement. “Once Landroid’s boundary wire is laid, the mower can be programmed to mow every Saturday at 9 a.m., or any other combination of days and times.”

Taking energy monitoring a step further

A 2014 research report by Forrester found that 56 percent of about 4,500 people surveyed were interested in getting a “small, inexpensive device to help monitor home energy use.” That percentage is on par with the percentage of people interested in home security, and is indicative of market readiness for such solutions.

While there are a number of devices designed to monitor various standalone aspects of energy usage in your home (take [Nest](#), for example, knows when the air conditioner is on but not how much electricity is being used or how much it actually costs), Austin-based CURB created a device (that sells for under \$400) that drills down into all aspects of energy consumption and production. Its energy curb complements and integrates with products like Nest.

Basically, CURB offers a hardware solution that goes inside the home and inside the electrical panel. The solution monitors a home’s energy consumption in real-time, down to the appliance or room

Founded by former Boeing rocket scientist [Erik Norwood](#), CURB recently signed a deal with energy giant Schneider Electric. Under the terms of that deal, the startup’s proprietary hardware and software will serve as the intelligence core for Schneider’s Square D smart load centers.

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CURB can bring awareness through push notifications, letting homeowners know when appliances aren’t working as well as they should, according to Norwood. It can tell when an HVAC system may be low on Freon, for example. Besides helping a homeowner conserve energy, it can help prevent an expensive appliance breakdown, he adds.

“You can even see the exact cost of powering your holiday lights every year,” Norwood said.

While some energy companies might claim to do a similar thing, Norwood says their estimates are just that - estimates, because they lack information on individual circuits.

“Smart meter data is not very granular. At best it takes 15 minute snapshots of total consumption,” he said. “Our one device captures real-time behavior patterns across all zones of the house with enough accuracy to know what’s actually going on. When we looked at the macro market, we found that this energy automation was the missing link in smart home automation.”

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