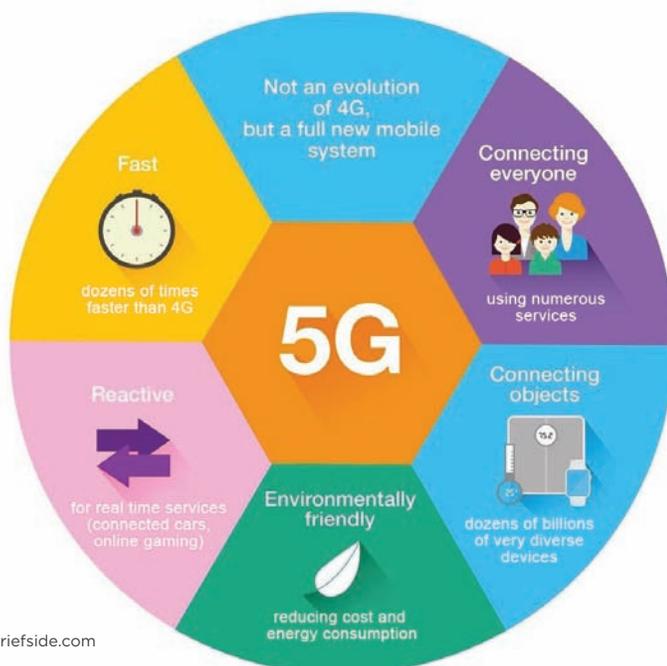


# Trend: The Future Home is CONNECTED

One of the most significant trends to hit the housing market in 2019 is the smart home. New advances in networking technology (5G) and miniaturized computing power have launched an explosion in Internet of Things (IoT) connected devices that personalize experiences across every aspect of our lives—including the place that we live. Fueled by a significant drop in tech manufacturing costs and major advances in Machine Learning (ML) and Artificial Intelligence (AI) some reports suggest<sup>1</sup> that the smart home market will double or even triple by 2022.

IoT investment is expected to pass the \$1 trillion mark by 2020, funding a 30 percent annual growth rate in cellular IoT connections.<sup>2</sup>

This ever-increasing need for cellular connections is one of the reasons that 5G will become ever more important in the housing market. We've nearly maxed out our capacity for creating new cellular connections using existing technologies. 5G encompasses a new set of tech tools that allow us to fit a lot more connections into the available airspace (spectrum) which in turn will make room for the forthcoming explosion in smart homes.



## Convenience (and Consistency) are Key

While talking toilets drive novelty and fill press releases, the bulk of current IoT home gadget buying is about convenience. It begins at the door, with smart locks and security monitoring, moves inside with voice applications that turn on lights and entertainment, and travels on to the workplace in the form of home security (as well as nanny and pet) monitoring. Dwellers love their home gadgets, yet can quickly find themselves overwhelmed by too many hubs, remotes and interfaces. Many builders are shying away from the business of building or managing these interfaces and are turning to major platforms using smart speakers (like Alexa, Google Home and Apple Homekit) to unify the interface and tie all the pieces together. Unfortunately, not all apps work equally well on each of these platforms. Over the coming months, builders will be looking closely to see which of these platforms come out on top.

## Connected and Compatible — Is WiFi the new Home Automation Standard?

While competing IoT standards like Z-Wave, ZigBee, DECT, ULE and even Bluetooth duke it out in the smart-home industry, one format seems to be full-steam ahead. That format is WiFi. Dubbed the surest way to the Internet, WiFi speaks directly to the router over a home network. WiFi has challenges—it is notoriously power-hungry and devours batteries, the signals have to compete with tons of other traffic online, and WiFi devices stop communicating if the network goes down. However, as WiFi is nearly ubiquitous in modern homes, WiFi-enabled smart devices are easy to set up and tend to work right out of the box. Thus, many of the top Smart Home device application manufacturers have turned to WiFi for their initial product offerings, and this format appears to be in the lead at least for the moment.

## The Digital Doorman

Market penetration for keyless entry and ignition fobs for passenger vehicles has been growing at a healthy clip, so naturally people are seeking the same sort of convenience for their homes. Traditional lock companies have teamed up with IoT smart hubs like Alexa and Google Home to allow a grocery-laden dwellers to enter their home at the sound of her voice or the proximity of their smart phone. The digital doorman is also responsible for another key job—that of managing packages. Home deliveries from companies like Amazon and Walmart currently make up nearly 10 percent of all retail sales. Unfortunately, a rise in package deliveries has also driven a rise in package thefts.

This has driven innovative technologies designed to thwart package theft like smart lockers as well as entry systems that work with traditional locks and garage door openers that give delivery people codes to unlock cars, garages or even the front door to place packages inside.

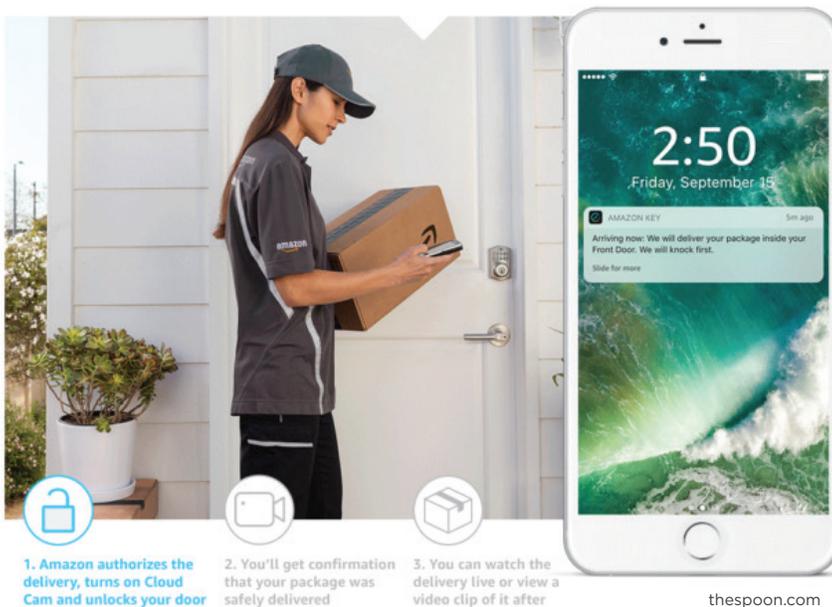


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But while the digital doorman can prevent unwanted package thefts, there is also a risk (however slight) of security breaches caused by the technology (representing a unique potential legal risk for builders). Smart builders (and dwellers) will need to educate themselves on good digital security techniques including proper management of passwords to ensure that nobody “bribes” the digital gatekeeper at the door.



## The Digital Security Guard

Aside from opening the door to dwellers (and their packages) smart homes are utilizing a variety of smart surveillance tools and cameras to keep the bad guys out. These cameras have become so pervasive that some are now calling the IoT the “Eyes of Things.” Amazon recently paid over \$1.1 billion to acquire leading video doorbell supplier Ring. And a recent study indicates<sup>3</sup> that all-in-one smart home security systems are expected to increase from \$3.4 billion at the end of 2018 to \$4.8 billion by 2025. These security systems which can contain everything from iPhone app connections allowing you to watch nannies and pets while you’re away to drone surveillance systems, allow home owners peace of mind without requiring expensive installations or costly monthly fees.

## The Digital Entertainer

With both men and women working longer hours than ever, dwellers are increasingly turning to technology to curate a home experience. Smart lighting manufacturers and their partners can create the perfect mood with a simple swipe on the smart phone or audio command to a smart speaker. Roller shades can automatically raise or lower based on time of day or voice commands. Screens lit by short throw projectors may descend from the ceiling, and entertainment systems may automatically play your favorite music, news or TV show.

Wondering who’s in the kitchen? Chances are, you’ll have significant digital help in there as well. Many major home appliance manufacturers have created spectacular digital kitchen suites that do far more than remind you when to buy more milk. These systems are designed to recognize the food you put in the oven (that’s asparagus) learn the way you like to eat it (crisp tender) and automatically cook the food without external output or programming. Won’t be long before digital home systems are also mixing up martinis and walking the dog!

“We get insights from the fridge. It has a friggin’ camera in it. ... Wow, this guy really loves onions. He’s Shrek! Let’s give him more things with onions!”

– Lisa Fetterman,  
Founder/CEO, Nomiku<sup>4</sup>