RESOURCE

The Internet of Things meets CRE: what's happening and what's coming

If you're not thinking about the Internet of Things, it's time to start. Whether you realize it or not, IoT is already impacting your day-to-day life, and if you're a CRE professional, it will soon impact your industry and your job as well.

What is the
Internet of Things?

The Internet of Things (IoT) refers to the growing ecosystem of everyday objects embedded with computing devices that allow them to interface with the internet and with one another. Through IoT technology, you can use a smartphone, tablet or computer to close your window shades or adjust your thermostat from across the room, or even across the globe. Even if you don't yet have IoT technology in your home, there's a good chance you interact with it regularly. If you've ever used an app like Uber or Lyft to hail a ride, you've experienced the power of The Internet of Things firsthand.

Gartner estimates that by 2020, there will be over 25 billion IoT connected devices, and in the not so distant future, every object with an on/off switch will become part of the Internet of Things. Soon, we'll live in a world where every object will provide data about itself and its surroundings to a network that will both observe, and send instructions for that object to follow. As IoT technology advances, the line between the physical world and the virtual world will become increasingly blurred, and eventually, it could disappear altogether.

The current state and future potential of the IoT

Let's take a closer look at that IoT example it seems everyone is currently buzzing about: ridesharing. If you regularly use apps like Uber or Lyft to get around, you might take them for granted, but the way they operate is quite amazing. The moment you open a ridesharing app, location sensors in your smartphone and the smartphones of nearby drivers allow you to see all the cars that particular service has available in your neighborhood. Then, you simply tap the screen to request a ride, and an actual vehicle appears right in front of you within minutes. You can watch its path on your smartphone's screen the entire way, from the time it changes course to pick you up until it drops you off at your destination.

Ridesharing apps use a virtual representation of a car operating in a virtual world to connect riders with cars and drivers in the physical world. These connections are effortlessly coordinated and optimized by the devices that operate them and the networks that connect them, and they're the perfect illustration of where IoT tech stands today.

But as impressive as ridesharing services like Lyft and Uber and smarthome technologies like Nest and Lutron might be, these current IoT technologies only scratch the surface of what's possible with The Internet of Things.

IoT it is still in its infancy, and its true potential has yet to be realized. Most IoT projects fail—75 percent to be exact. Excitement about the technology is often the main force driving these projects, which can lead to a lack of focus on the human factors that influence their success. And as with any new technology, a phase of experimentation should be expected before adoption becomes widespread.

"As IoT technology continues to move toward that kind of future, every industry will feel its impact, but perhaps none will feel it more than CRE.

The IoT ultimately "creates value through efficiency" and as it matures, IoT technology will begin to change the world. Once all the objects in our lives are connected, we'll reduce all kinds of waste, from time waste to energy waste. In fact, Google predicts that the IoT will have a net negative power consumption. It will also make us safer. Consider one simple example: a building fire. At the first sign of smoke or heat, IoT-connected sensors could detect that fire, deploy water and put down fireproof barriers to contain it. At the same time, they could trigger personal devices like smartphones and watches to send individual alerts and direct everyone in the building to their nearest exit.

As IoT technology continues to move toward that kind of future, every industry will feel its impact, but perhaps none will feel it more than CRE.

How the IoT will affect the **CRE industry**

If you work with office or multifamily properties, you're probably already seeing an interest in smart office or smarthome technology among your clients. But thanks to advancements in IoT, it will soon become an important part of every property type in commercial real estate.

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Distribution centers will be transformed by IoT technology over the next several years. IoT-enabled smart warehouses are already a reality, and soon, they'll be the expectation and the norm. Retailers and consumers alike are constantly demanding faster production and delivery of the items they sell and buy, and the companies that succeed will be the ones that equip their warehouses and distribution centers with robust IoT technology.

One company already embracing IoT in its industrial facilities is Lids, which relies on robots to ship items. When an order is placed, robots in the Lids warehouse wirelessly receive a list of items that need to be shipped. Then, the robots retrieve these items from storage and coordinate with Lids employees to manage each shipment efficiently. At every step along the way, the condition of the items, their location, and their progression through the shipping process are "tracked through sensors by a centralized remote monitoring unit." Lids has greatly reduced its shipping time thanks to this technology.

Buyers who want to fully realize the efficiency benefits of smart distribution centers will be looking for warehouses in "last-mile" locations optimally positioned for faster delivery to major urban hubs and suburbs. To meet the demand, new buildings will likely need to be developed near urban areas, and older industrial structures will need to be updated. To maximize value for your clients, make sure you understand their needs and can recommend either a new industrial building or an older one that can be updated to work well with IoT technology.

Property type
Industrial

IoT technology
Smart warehouses

Impact
Faster production and delivery times for retailers and consumers

Example of IoT technology's impact on CRE

Property type
Retail

IoT technology
Sensors and camera-based tracking

Impact
Stores operating without checkout lines

Retail real estate presents a prime opportunity for IoT technology and the easy in-and-out, cashier-less store concept is already getting a lot of attention. Soon, every store will operate without checkout lines thanks to sensors and camera-based tracking. Amazon Go, while still not perfect, is today's most visible example of the future of IoT retail technology––and that technology is now expanding into Whole Foods following Amazon's recent acquisition.

As retail-focused IoT technology matures, cameras and sensors will begin to interface with predictive technology applications and automated delivery vehicles to ensure that stores never run out of the items people want to buy. This will prompt retailers to seek smaller storefronts with minimal stock storage space, which you need to be ready to sell. You should also be prepared to recommend nearby warehouses and storage facilities to the same clients who are interested in small storefront properties.

But storefronts aren't the only kind of retail property that will be affected by the growth of IoT technology. Parking garages will also feel the impact. Thanks to camera-based IoT tech, drivers will be guided to open parking spaces the second they enter a parking garage, and they'll never have the occasion to forget where they parked again. IoT-enabled cameras can also recognize license plates and help owners to keep track of who is parking in their lot and when. These functions allow parking garage owners to optimize their properties for security and convenience for drivers, and they're already becoming a reality through companies like Park Assist.

As IoT parking technology becomes more widespread, parkers will come to prefer locations with these conveniences, which will increase their value for your buyers and drive their interest in parking lot investment––at least until driverless cars take over.

Soon, all the best multifamily buildings will be customized with IoT-connected light switches, electrical outlets, door sensors, motion sensors, thermostats, door locks, ceiling fans and more. Companies like IOTAS and Stockrose are already paving the way.

IOTAS was designed specifically for multifamily building owners to customize each resident's home environment. IOTAS uses sensors and machine learning to note daily resident patterns and adapt to them, which allows buildings to automatically reduce their footprints and lowers utility bills for residents. In Swedish apartment buildings, Stockrose uses the IoT to monitor utility use by individual tenants and divvy up payments, meaning that tenants who use less hot water or air conditioning pay less.

If multifamily property owners implement IoT technology and innovate at a faster rate than single family homes can keep up with, we're sure to see a boom in multifamily real estate. As a CRE professional, you need to be ready to help your buyers understand what today's multifamily market is looking for when it comes to smarthome tech. You also need to guide them through how those preferences will evolve in the future.

Example of IoT technology's impact on CRE

Property type
Multifamily

IoT technology
IoT-connected thermostats that monitor utility use

Impact
Property owners divvy up payments so tenants who use less air conditioning pay less

Example of IoT technology's impact on CRE

Property type
Office

IoT technology
Cameras that
use biometrics to
recognize faces

Impact
Seamless security at
entrances and exits of
office buildings

IoT technology has a nearly endless array of applications in office environments. At some smart offices, cameras use biometrics to recognize faces and allow for seamless security at entrances and exits. Apps make it easy to book open spaces for impromptu meetings and voice recognition and transcription through IoT connected devices have turned meeting notes into a thing of the past.

Take a look at what Intel is doing to advance its offices into the future for even more illustrations of the power of office IoT.

CoWorkr is another powerful example of the IoT at work in an office setting. CoWorkr's platform uses sensors to analyze how each individual workspace in an office is used, which allows owners and tenants to optimize offices for peak productivity.

As in multifamily, office tenants will be seeking buildings that are equipped with smart IoT technology, and owners and investors will need to take advantage of these advancements to entice tenants. As a CRE professional, discuss with your clients whether they'd like to buy an office building with this technology already in place or if they'd like to customize a building with their own IoT preferences in mind. If your clients choose customization, you'll need to be ready to help them understand what makes an existing building a viable option for the IoT integrations and devices they have in mind.

Your takeaways as a CRE professional

Through the IoT, your job requirements will expand. Instead of selling a single property, you'll be marketing and selling how that property connects to the rest of the world, and that change will require you to rethink the way you talk about and market properties. Education will become an even more important part of your job, and keeping up with the latest advancements in tech will become absolutely critical.

Additionally, once the world is entirely connected through IoT tech, you'll have greater access to data and analytics than ever before. As a result, you'll be able manage more clients and ultimately close more deals in less time.

Thanks to the Internet of Things, the future is bright for CRE.

If you want to learn more about how technology will impact and improve your job as a CRE professional, subscribe to our blog or contact us today.

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