

# HOME IS WHERE THE SMART IS

Advances in technology aren't just changing how we work – they are set to revolutionise how we live at home. From smart mirrors to robots that can cook, property developments and new products around the world are setting the high-tech bar for the future.

STORY **MAT GALLAGHER**

A swimming pool bedecked with an underwater sound system streams the perfect sunset playlist. Walls lined with ultra high definition screens display a revolving array of artwork. As the evening rolls in, overhead lights dim, blinds roll down and the heating switches itself on as the sun gently vanishes over the horizon. Welcome to a house for the future.

However, you don't have to wait for a home like this. In fact, the above paints a picture of just some of the super high-end technology implemented in Bill Gates' 66,000-square-foot mansion in Medina, Washington DC, which is reportedly worth over US\$120 million and nicknamed Xanadu 2.0. But while Gates and other billionaire tech moguls have led the way in when it comes to so-called smart homes, as companies continue to automate and connect

all the items in our lives, luxury developments around the world are now embracing centrally controlled systems, making simple day-to-day tasks seamlessly digitalised.

"Purchasers expect high-tech features that complement their lifestyle and general day-to-day activity," says Meriam Makiya, partner at property agency

Knight Frank. "We are also increasingly seeing high net worth buyers requiring developers to change or upgrade technology once they take up residence, to suit their personal needs."

While there is no set definition of a 'smart' home, the term is generally applied to a residence that incorporates technology such as hands-free control mechanisms, automated security systems, integrated energy management and HVAC (heating, ventilation and air conditioning) control, entertainment interfaces and

**FAR LEFT**  
A townhouse in Georgetown, Washington DC, features a smart glass front door that can switch from clear to translucent.

**ABOVE AND RIGHT**  
One Tower Bridge in London includes an audio-visual master system for lighting, window blinds, temperature and music.

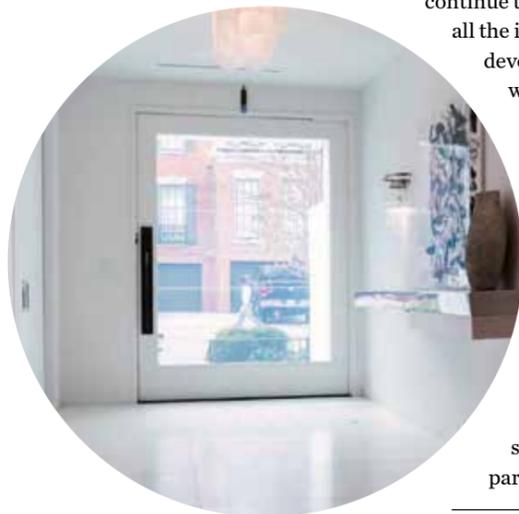
COURTESY SOTHEBY'S INTERNATIONAL REALTY

even health monitoring systems – usually all controlled remotely by smartphone or tablet devices.

## A BURGEONING TREND

In a 2015 report on luxury real estate released by Wealth-X and Sotheby's International Realty, smart homes are highlighted as one of the four main property trends among ultra high net worth individuals globally, with younger individuals particularly keen on seeking properties that have the same level of innovation they experience elsewhere in their lives.

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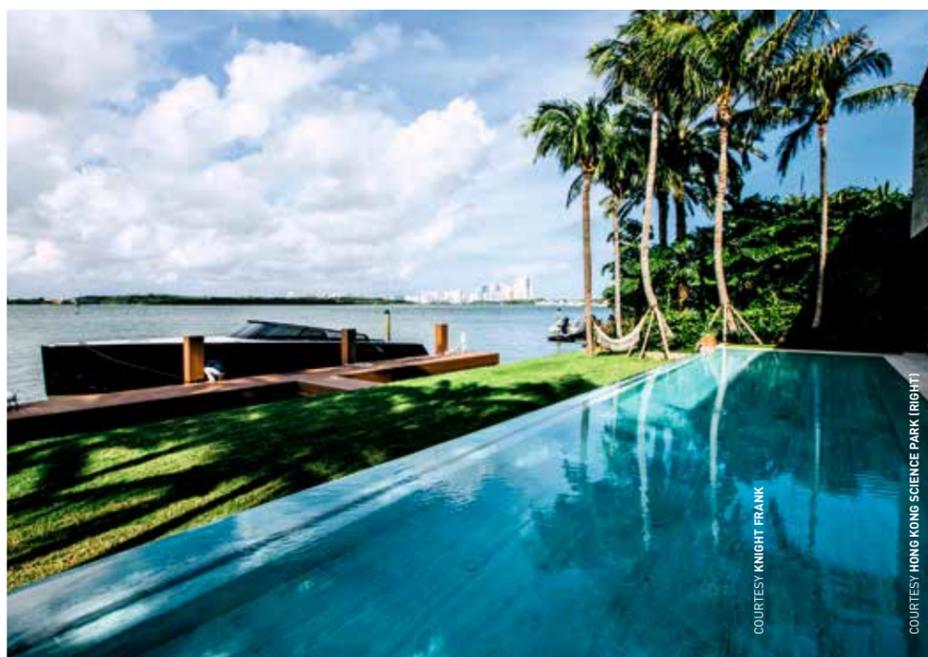




According to research cited in the report, the smart home market will be worth US\$60 billion by 2017. About 65 per cent of realtors in the Sotheby's International Realty network have seen increased enquiries for homes with 'smart' amenities over the past year, according to the report.

A modern six-bedroom townhouse in Georgetown, Washington DC, features a 100-pound smart glass front door that switches from clear to translucent at the touch of a button. Its media room includes a hi-tech 4K (ultra high definition) projector. Featuring a glass elevator and a number of top-of-the-range furnishings, Sotheby's International Realty has listed

**THIS PAGE**  
A property in Bal Harbour, Miami features facial recognition in place of a traditional door key; the residence includes an infinity pool and private dock.



COURTESY KNIGHT FRANK

COURTESY HONG KONG SCIENCE PARK (RIGHT)

the home with an asking price of US\$9.995 million.

An around 17,000-square-foot eight-bedroom harbourside property in Miami's Bal Harbour designed by architect Chad Oppenheim features facial recognition in place of a traditional door lock and key. The property features a bay-front infinity pool, a roof deck with a jacuzzi and a private dock. Listed by Knight Frank, 252 Bal Bay Drive has an asking price of US\$36 million. For US\$43 million, it's being offered along with an Andy Warhol work, a Jaguar XK120, a Vandutch yacht, plus designer interiors and furnishings.

In London, One Tower Bridge is an eight-building complex that has residences ranging from about £1.48 million (HK\$16 million) to £14.5 million. As well as featuring a communal virtual golf simulator, each home comes pre-fitted with a Vantage audio-visual system, providing a master control

## "ENTERTAINMENT IS THE DRIVING FORCE FOR PEOPLE TO INNOVATE"

— Peter Yeung, Hong Kong Science Park

for lighting, window blinds, temperature and music. Homes can be further customised to allow residents to create presets for various lighting and temperature settings for different times or seasons. The building has also removed the need for lift controls; instead providing residents with fobs that, when tapped on to the control panel, take them directly to their floor. "Electronic blinds, mood lighting and surround sound would [now] all be considered as necessities in London's prime developments," says Makiya.

### THAT'S ENTERTAINMENT

Closer to home, the Smart Living exhibition Hong Kong Science Park is showcasing smart home products and innovative concepts from Hong Kong-based innovators until the end of this year. The Cybertecture Mirror by James Law Cybertecture features a touchscreen-enabled mirror with widgets and apps, providing news reports, social media feeds and health data from a set of smart scales.

"Entertainment is the driving force for people to innovate", says Peter Yeung, head of the IT and telecommunications cluster at Hong Kong Science and Technology Parks. "People want the smart technology we have on display here because it amuses them, it is entertainment." An exhibition highlight is an ultra high definition 4K 3D television that doesn't require special glasses. Created by Marvel Digital, it uses auto stereoscopic technology to give the impression of 3D images.

One of the premium smart entertainment offerings now available is Bang & Olufsen's

BeoLink Multiroom system, which connects a range of its products to allow music to stream music between devices or from your smart phone. Released last year, unlike many other multi-room systems, B&O's also includes its TVs, allowing you to listen to music or sound from the TV in other rooms.

In the world of television, high definition (HD or 2K) systems are now the standard, so high end users are looking to ultra high definition (UHD or 4K) devices for the future. Screen sizes are also continuing to rise. Samsung's new 170-inch concept TV makes it suited for large-scale TV and cinema-style viewing. Some companies are even looking beyond 4K. LG's new UH9800 is a 98-inch 8K television due for release later this year. These are all of course smart TVs, offering internet connections and interaction with other home systems.

### SAFE AND SECURE

With any high-value property, security naturally remains a top concern. "We have a number of clients coming into our market to purchase second, third and fourth homes, and the ability to view security cameras and access alarm settings and home controls remotely has become the new norm for the ultra high net worth individual," says Ruthie Ravenel, sales and marketing director at Daniel Ravenel Sotheby's International Realty, in the 2015 report by the company and Wealth-X.

The very latest door locks feature fingerprint recognition, iris scanning and smart phone control. Kwikset's second generation Bluetooth-enhanced Kevo lock, which was recently previewed at this year's Consumer Electronics Show in Las Vegas, looks like an ordinary lock from the outside, but can lock and unlock with the touch

**BELOW**  
Currently exhibited at Hong Kong Science Park, the Cybertecture Mirror includes a range of touchscreen apps.



of a finger when an authorised device is in range. E-keys can be set to allow different entry times and duration for guests and the advanced SmartKey technology is designed to resist forced entry. The Kevo can also be integrated with a range of home control systems, such as smart thermostats and video doorbells, while the upcoming Premis unit ties in with the Apple Homekit, allowing you to use Siri voice activation to lock and unlock your doors.

Samsung SmartThings Multipurpose Sensors feature door and window sensors that detect abnormal activity. "The added peace of mind of [having extra control over security] allows jet-set homeowners to [enjoy their home] from anywhere in the world," says Ravenel.

**REDEFINING DAILY LIFE**

Increasingly sophisticated technology is also replacing the manual performance of daily tasks. Kitchens are seeing a big increase in connectivity, with products like the recently released Samsung Family Hub smart fridge, which features cameras that monitor your food and a touchscreen on the outside to allow you to call up recipes, restock on products or watch a TV programme. Moley Robotics' robotic arms, integrated with a stovetop and oven, can be pre-programmed with recipes and left to prepare restaurant-quality meals by itself. The project is still being tested, but is due for sale by 2017.

When it comes to cleaning, robot vacuum cleaners have been all

the rage. Neato's Botvac Connected is a Wi-Fi enabled robot navigates its route using laser-Slam technology – which is also used in Google's self-driving cars. An app lets users connect to the device and direct the unit wherever they are.

Bathrooms, too, are seeing an increase in smart technology. Though the Japanese-style smart toilet has been around for a while, the latest models, such as those from Kohler, are both smart and stylish. The Veil features automatic opening and closing, warm water cleaning, air-drying and a self-cleaning system that uses UV light to eliminate germs.

One of the most advanced multi-purpose systems heading to market this year is Sony's Multifunctional Light. Due for initial release in Japan, it's much more than just a ceiling light. Designed to connect with smartphones, it has built-in sensors for motion, humidity and temperature and can turn on air conditioners, act as an alarm system and even play music.

Innovations that can improve the urban environment are



**THIS PAGE**  
Bang & Olufsen's BeoLink Multiroom system wirelessly connects audio-visual products.

**OPPOSITE PAGE FROM TOP**  
Kwikset's Kevo lock appears to be an ordinary lock but is Bluetooth-enhanced and can be unlocked with the touch of a finger; Samsung's Family Hub smart fridge; Kohler's hi-tech Veil toilet.



also on the rise. Currently on display at Hong Kong Science Park, Envac's automated refuse collection system allows users to select the type of waste (such as metal, food, etc) on a touchpad and place waste into a system, where the material is sorted and then transported via the appropriate pipes into a collection point. Meanwhile, Xamax International has developed an atmospheric water generator, which can extract water from the air before filtering it and feeding it into a tap to provide drinking water.

**THE CENTRE OF IT ALL**

At the heart of luxury smart homes is the control system. High-end systems offer complete control over everything from entertainment to lighting and security from a single remote, touchscreen or app. Almost any situation, from opening the curtains and streaming a favourite song before you wake up in the morning, to remotely opening the garage door for a weekday delivery, or simply ensuring the hot tub is ready before you get home, are all possible with such a control system and offer particular peace of mind for multiple home owners, who can keep tabs on their properties from afar.

The Savant Pro system is specifically designed with luxury properties in mind, with controls for amenities such as pools, wine cellars and home cinemas, while Crestron's home automation solution also caters for luxury yachts, private planes and limousines. Samsung's new SmartThings system is a more general consumer-focused. Featuring a compact central hub, it is controlled by an app and can connect to a large range of other smart devices such as Kwikset's smart locks, Sonos audio systems, D-link Wi-Fi cameras, Osram's smart bulbs and of course a range of Samsung devices.

Tech giants Apple and Amazon are, naturally, involved in the wave of smart integration. Apple's HomeKit allows you to use Siri on your iPhone or iPad to adjust devices and fittings within your home and Amazon's Echo, which has been around for just under a year, is also voice activated.

It's not just shiny, newly-built properties that feature the latest cutting edge technologies. It is in fact possible to integrate smart home capabilities into older homes, although there are additional challenges, thanks to factors such as heating systems that lack wireless compatibility. Without significant renovation, easier options include wall-mounted smart lighting systems or plug-in sockets such as the LightwaveRF that allow devices to be switched on and off remotely.

The Friary in Annapolis, Maryland, for example, is a 26,000-square-foot, 10-bed property on the market for US\$28.8 million. The red brick former monastery, which sits within a historic, 20th-century estate, has been adapted to include a central control room for the property's temperature and lighting, as well as humidity in the spa and water temperature in its pools. Along with old-world charm, it now includes state-of-the-art entertainment systems and a network of security cameras.

From lighting and heating to appliances and security, there's already little that can't be controlled from a keypad, iPad or smart phone, using technology being rolled out globally at a rapid pace. Later, luxury homes may even be able to think for themselves. In the meantime, like a good valet service, smart home technology should make your life easier and leave you with more time to enjoy yourself. And that's perhaps what luxury living should, ultimately, be all about. Ⓐ