McCarthy & Stone
The UK's leading retirement housebuilder

EMBARGOED UNTIL 00:01 MONDAY 27 FEBRUARY 2017

PRESS RELEASE

HOME SMART HOME: THE SHAPE OF THINGS TO COME

- In-depth report commissioned by McCarthy & Stone, the UK's leading retirement housebuilder, predicts intelligent 'Cognitive Homes' of the future will be able to assess and manage our needs and desires in later life
- First research of its kind to look into how emerging smart technologies will revolutionise how older people live at home, and deliver transformative benefits to health and wellbeing
- Power suits, robotic assistants, self-stocking fridges, intuitive health care and virtual GPs may all be provided in the comfort of the home – just some of the 'out of this world' features to look forward to in our smart Neighbourhoods of the Future

Home Smart Home:
The shape of things to come continued

Almost 32 million people will be aged 60 or over in the UK by 2039. But what sort of living environment do older people face when they leave the workplace and embark on the next chapter of their lives?

McCarthy & Stone, on the 40th anniversary of the opening of its first ground-breaking retirement development, has commissioned a far-reaching report into how smart technologies in the home could transform independent living for future older generations.

'Neighbourhoods of the Future' is authored by the Agile Ageing Alliance (AAA) – a campaigning social business committed to accelerating development of innovations that improve health and wellbeing in later life.

The in-depth investigation concludes that, within the next 20 years, older people are likely to be living in an intelligent 'Cognitive Home' that is almost human, and which is able to assess and manage individual needs and desires. It is the first ever report commissioned by the housing sector to look at the role new technologies could play in helping to manage the challenges and opportunities presented by a rapidly ageing population.

Chief Information Officer at McCarthy & Stone, Tracey McDermott, said: "According to the recent housing white paper, helping older people to move at the right time and in the right way could enable them to live independently for longer and improve their quality of life, at the same time as freeing up homes for other buyers and reducing costs to the social care and health systems.

"The government wants to address the many barriers that exist to building more age-friendly housing, but to make sure the right type of properties are being developed, we need to draw on the know-how of a wide range of expert stakeholders to help deliver outcomes that are better for older people. New forms of technology and 'big data' present possibilities for everyone, especially older adults. However, their impact on those in later life is relatively unexplored. This is of great interest to us, and government, particularly how to support this age group to live better at home.

"We commissioned this report to influence our thinking, and the thinking of other housing providers. Our aim has been to summarise in one place, perhaps for the first time, what technology is on the horizon and consider how it could empower older adults. Looking to the future, we want technology to be inclusive – for the benefit of everyone – and ultimately to facilitate the creation of new homes that will support happier, healthier and, hopefully, longer lives."

WELCOME TO THE COGNITIVE HOME

The report indicates how future retirees are open to the idea of a cognitive and empathetic home with human qualities. They also anticipate smart non-intrusive, secure connections with friends, family, GPs and/or carers who keep an eye on those who look after them. They expect transparency in relationships and information. They look out for value for money.

They also want IT companies to think about consumers' service experience and the journeys they go on. They love people competing for their business and do not like monopoly suppliers. They are getting used to and want more cool tech and, perhaps most importantly of all, they want providers to focus on them as 'customers', not as patients, end users, or care clients.

THE HOME THAT WELCOMES, UPDATES AND WARNS YOU

When we enter our smarter houses and apartments of the future, we'll expect an update on what's going on, in and around our home, and share them with those who help us, should we need to. When problems are imminent, whether in our home or outside, we'll expect to be alerted, in a way which goes far beyond the warnings about open doors or undone seat belts offered to us by our (current) cars. Technology will update us on news and events in the neighbourhood and when the bus will arrive, all managed via our mobile phone. Even our fridges will talk to us and make sure we don't run out of ingredients by automatically keeping stocks topped up.

KEEPING AGILE AND ROBOTS PROVIDING DOMESTIC SUPPORT

With an active lifestyle acknowledged to improve wellbeing during retirement, mobility issues can affect independence, but advances in technology may well address this. The introduction of assistive bodysuits and exoskeletons will remove the strain of undertaking tasks around the house and in the local environment for older adults. Intelligent walking aids that combine intuitive sensors and e-drive functionality will support those keen to get about, and contact carers if someone falls, while the advent of a personalised mobility assistive robot could see it programmed to provide domestic service within the home.

SAFE AND WELL

Specific health-related concerns, such as the effects of dwindling hearing or sight loss, or the growth of conditions such as dementia, will be supported through 'sensory-loss' technologies that make homes safer, easier to manage, lighter and more adaptable. Sensitive design solutions using enabling technologies will help prevent incidents from occurring and address, for example, cookers being left on, baths overflowing or people becoming confused about their whereabouts. Our personal digital assistant may help us to self-diagnose, sparing trips to the GP, or we may be able to talk to our doctors remotely. And 'holorportation' may allow users to see, hear, and interact with others remotely as if both are present in the same physical space, via the use of 3D cameras.

HOME SMART HOME

The report explores how 'cognitive living clusters' will provide an energy efficient solution. Constructed through the integration of unconventional building fabrics with a preinstalled technical membrane, the homes will be independent from external energy supply requirements, and will even be able to produce additional energy to feed into the grid. Technology will be able to sense the target room temperature, pressure and lighting to create the right environment. And as for entertainment, we won't need our TV or tablets as programmes may be beamed directly onto our retinas or glass eye wear.

FLEXIBILITY IS ESSENTIAL

Homes may also increasingly become intergenerational living spaces. Co-living may become more common, with younger couples needing affordable housing and older generations nearby to offer and receive support as required. Good inclusive design and technology can help to create modern, flexible spaces that can be adapted in the event that adult children need to care for frail parents.

Tracey McDermott, added: "It is clear from this report that advances in smart technology will play an increasingly pivotal role in how we look to support those entering retirement living over the coming decades.

"As the UK's leading retirement housebuilder, we recognise the potential of the concept to revolutionise our industry and we hope this report will inform the thinking of all residential developers as well as the related service and product suppliers. We will be reviewing how its findings will impact our next generation of developments and look forward to the infinite possibilities that 'Cognitive Homes' offer for older adults."

The future is closer than we think
Ian Spero, founder of the Agile Ageing Alliance which has been leading the Neighbourhoods of the Future project, said: "Some of the ideas covered in our report could be mistaken for science fiction, but they are all based in reality. In the words of science fiction author William Gibson: *The future is already here – it's just not very evenly distributed.*

"If housing providers are willing to listen and act, we can look forward to the growth of a new breed of smarter homes in our Neighbourhoods of the Future. Enabling our older selves to enjoy more meaningful, healthy and creative lives, which will in turn facilitate life affirming opportunities for personal development and social engagement."

AgileAgeing Alliance

THE HONDA WALKING ASSIST
A device that reduces the load on leg muscles and joints utilizing an easy-to-use structure consisting of a seat, frame and shoes.
https://ontheroadtoinnovation.wordpress.com/

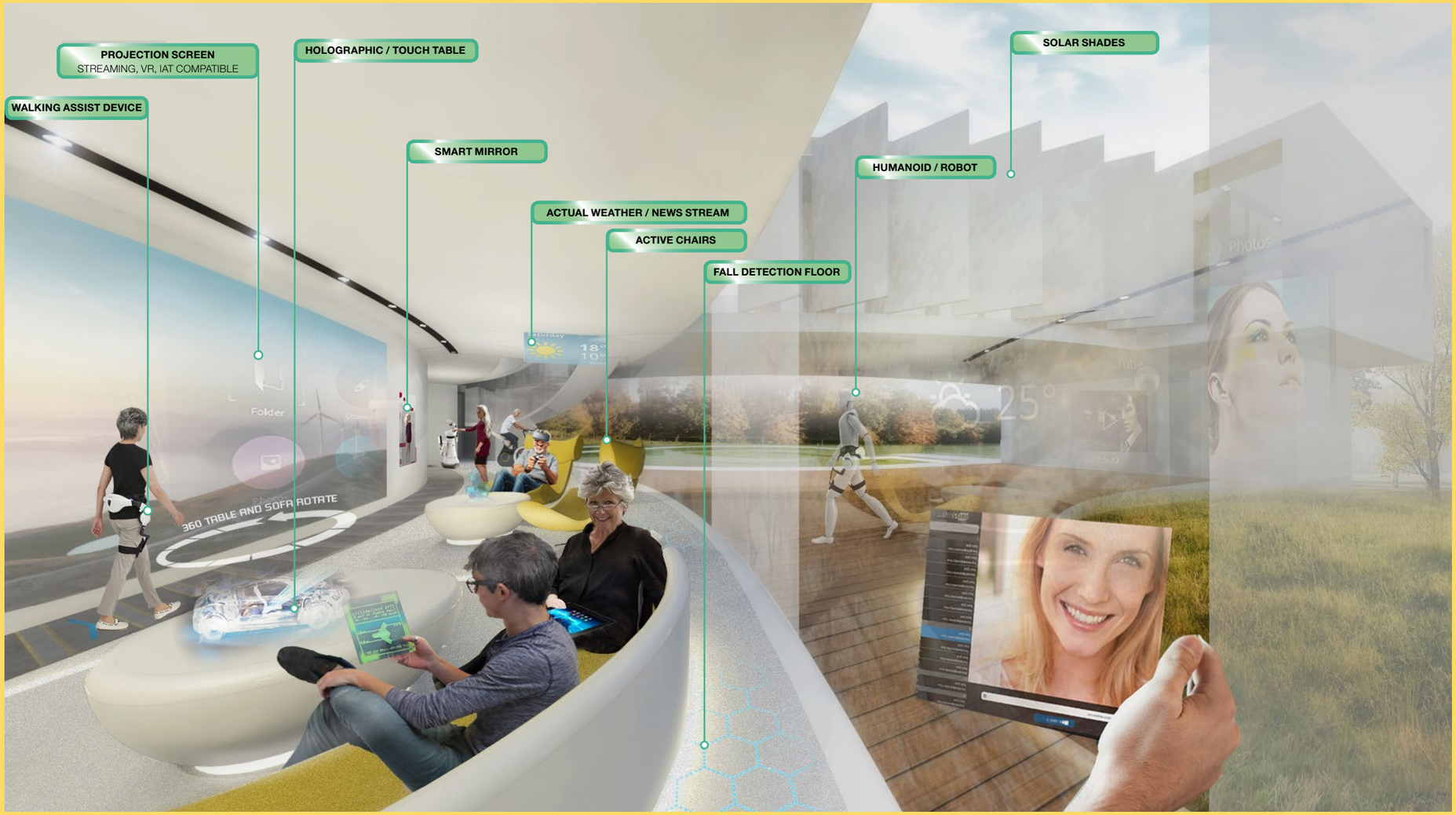
THE EBIQ ELECTRIC BICYCLE
A battery supported electric bicycle that allows the docking of IT devices, tablets, laptops etc.
http://www.coroflot.com/yujifujimura/concept

SONTE – SOLAR SHADED GLASS
Digital technology applied to glass – Sonte can alter the levels of transparency or opaqueness of windows either automatically or remotely (eg. through an app).
http://sonte.com/findoutmore

DRONE SECURITY
Here are some of the best personal drones available now:
https://www.youtube.com/watch?v=_qGMBiez4os

EXTERIOR

As we near home, our personal drone(s) will fly ahead to ensure there are no surprises waiting in store. We will have kept up to date via the screen mounted to our electric bike, or our smart watch as we stroll with assistance from our friendly smart walk assist device. If it's been a particularly hot day, our thermostat has adjusted accordingly and our solar shaded windows will have recalibrated to let in just the right amount of light.



COMMUNAL LIVING SPACE

Rather than being isolated in technically gilded apartments we envisage an open lounge where you can meet with neighbours, friends and family. Or maybe you may just want to hang out quietly catching up on your favorite hologram series. If you are feeling more energetic you could take a virtual cycling tour in the country or around your favorite city. And do this knowing that should anything untoward happen if you are alone, someone in the vicinity will be immediately alerted.

VIRTUAL SCREEN
A virtual, see-through touch screen or keyboard display that, when 'touched' in mid-air by the user's finger, transmits that signal directly to the computer or mobile device.
https://www.asme.org/engineering-topics/articles/technology-and-society/virtual-touch-screen-floats-midair

FUTURE HUMANOIDS
The new generation of 'robots' – being developed to assist – not replace – humans in their everyday tasks.
https://angelnjuly.wordpress.com/2011/02/03/the-unthinkable-humanoids-will-think-for-you-in-the-future/
http://www.intechopen.com/books/the-future-of-humanoid-robots-research-and-applications

HOLOGRAMS – MICROSOFT HOLO LENS
Microsoft HoloLens is a self-contained, holographic computer, potentially enabling one to engage with digital content and interact with holograms in the world around you.
https://www.microsoft.com/microsoft-hololens/en-us

HOLOGRAPHIC / TOUCH TABLE
A multipurpose table which can be used for holographic projections or its surface used like a giant tablet. Doodles produced on the table can be 'selected', saved and sent to someone. Sony's Future Lab demonstrated an interactive table top concept at the USA's SXSW festival in 2016, employing sensors and motion tracking to know when objects are placed on the table.

SMART MIRROR
If you are not up for a trip to the city and want something a bit more bespoke than on-line shopping, a 'smart mirror', will let you shop virtually and try different clothes. Alternatively, it can also be used for motivational purposes – for example it could show you a potential new body shape after sticking to an exercise routine. Here you will find some of the best smart mirror concepts to dream about.

SMART WEATHER STATION
Everything you could possibly want to know about the weather in real time. Here are 10 of the best wireless weather stations for home reviews.

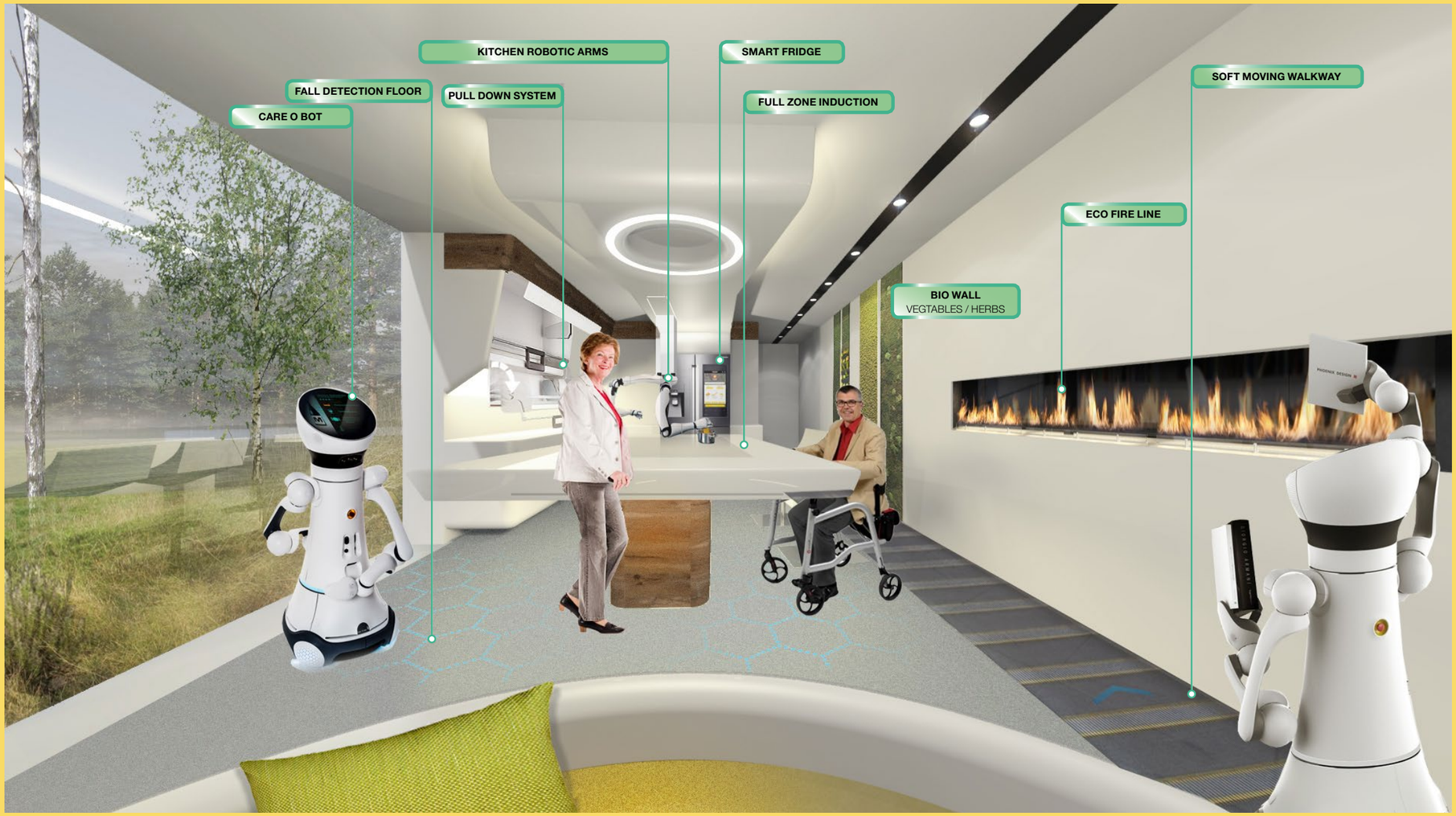
SOLAR BUILDING SHADES
Shades that adjust automatically to the time of the day and aspect – to maximise views and daylight, but limit the amount of solar glare in summer months to avoid overheating are already in use. In future they will become the norm rather than the exception.

CICLOTTE STATIONARY BIKE
The first exercise bike to use an electromagnetic resistance system with a transmission that replicates the effort of pushing on pedals when riding on the road.
http://oneappsgroup.com/the-future-fitness-machine-ciclotte-stationary-bike/
https://www.youtube.com/watch?v=ZZqPWjQb0rc

FALL DETECTION FLOOR
A smart floor that detects falls and immediately sends an alarm signal to a designated carer. In future, these systems are likely to be able to identify scenarios that will help to avoid and softer falls.
http://www.silvereco.eu/sensfloor-a-smart-floor-to-detect-falls/

ACTIVE CHAIRS
Hospitals are stressing the importance of smart chairs on elderly care wards to ensure that patients are encouraged to remain active during their hospital stay. The chairs allow older patients to spend more time out of bed thanks to their built-in pressure management cushions and adjustable back and leg rests.

Looking to the future, active chairs will not only support and empower older adults in their own homes, they will also look great.



KITCHEN LIVING SPACE

If you want to give your robotic chef the night off, you will find it much easier to reach your pots and pans thanks to spring-mounted, pull-down shelves, while your smart fridge makes sure you don't run out of ingredients by automatically keeping stocks topped up. And you will be able to grow your own herbs and vegetables on your very own indoor biowall.

SOFT MOVING WALKWAY
Modelled on the principle of an airport moving walkway we envisage a smart walkway in the home environment providing a convenient and safe means of moving about.

PULL DOWN SHELVES
Existing technology – allows users to literally pull down storage without the use of a step stool – making is safer for both older adults and young people.
http://www.solmer.co.uk/kitchen-accessories/pull-down-two-tier-wire-shelf.html
http://www.independent4life.co.uk/vibo-pull-down-two-tier-wire-shelves-for-600mm-width-wall-units.html

ECO FIRE LINE
In the future, there will be more ways to enjoy the aesthetic pleasure of a fire, safely yet realistically. According to Plankia "Creating a long line of real fire wouldn`t be possible without Burning Ethanol Vapours (BEV) technology, which ensures the highest level of safety, fuel combustion efficiency and allows the presentation of a unique fire – natural, golden flame with ideal shape and height.

SMART FRIDGE
This is one of the more advanced IoT enabled development solutions. A smart fridge can communicate with personal digital assistants and alert users to foods needing replacement or even order directly with the supplier if so desired. When connected with health monitoring devices, the fridge can even advise you to stay away from that whipped cream!
http://www.dailymail.co.uk/sciencetech/article-1341190/Revealed-The-hi-tech-fridge-future-tell-dinner.html

CARE-O-BOT 4
Modular service robot assistant to support humans in their daily life tasks.
http://www.care-o-bot-4.de/

BIOWALL
Biowall is a hand-woven structure that can be crafted into lace-like surfaces of any dimension and form providing a vertical support system for growing plants, vegetables etc. According to one of the leading company's working in this area is Biotecture "Sustainable living walls are a truly flexible, modular system that help transform any built environment bringing a new level of sustainability through intelligent water management and stable system dynamics."

FULL ZONE INDUCTION
Allows you to take advantage of any part of a worktop surface for cooking – without specific 'hob' zones. Looking to the future we envisage that surfaces and counters will be multi purposed. Here is a video for an early Gaggenau system.

KITCHEN ROBOTIC ARMS / ROBOTIC CHEF
A compact stationary robotic device that can prepare meals to any digitally acquired recipe.
http://www.ibtimes.co.uk/robotic-chef-can-cook-michelin-star-food-your-kitchen-by-mimicking-worlds-best-cooks-1496168
https://arstechnica.com/gadgets/2015/04/the-worlds-first-robotic-kitchen-prepares-crab-bisque-for-ars-technica/

Home Smart Home:
The shape of things to come continued

NOTES TO EDITORS

McCarthy and Stone

McCarthy & Stone is the UK's leading retirement housebuilder, with a c.70% share of the owner-occupied market[1]. The Group buys land and then builds, sells and manages high-quality retirement developments. It has built and sold more than 51,000 apartments across more than 1,100 developments since 1977.

McCarthy & Stone's Retirement Living and Assisted Living developments offer one and two bedroom apartments across the country in a wide variety of locations, from city centres to rural villages and coastal locations. Retirement Living developments offer the independence of retaining home ownership while living in an apartment specifically for the over-60s, as well as greater peace of mind and companionship. Assisted Living developments for the over-70s offer all of this, plus a helping hand through flexible care and support packages that make life that little bit easier.

In addition, 2015 saw McCarthy & Stone launch its Ortus Homes offering. Exclusively for over-55s, these bespoke properties are intelligently designed for downsizing to enhance a homeowner's leisure years.

The first Ortus Homes development at Scarlet Oak in Solihull won the Best Retirement Scheme at the annual Housebuilder Awards in November 2015. At the same awards in November 2016, we were pleased to again receive Best Retirement Scheme for Ramsay Grange and Lyle Court, our combined Assisted Living and Ortus Homes development in Barnton, Edinburgh, as well as Best Customer Satisfaction Initiative for our approach to ensuring that we deliver a five-star service for our homeowners.

McCarthy & Stone's commitment to quality and customer service continues to be recognised by homeowners. For the eleventh year running, the Company has been awarded the full five stars for customer satisfaction in an independent survey conducted by the Home Builders Federation (HBF). For further information, visit www.mccarthyandstone.co.uk

There is a growing demand for specialist retirement housing, with the number of people aged 85 and over in the UK expected to more than double between 2015 and 2035 from 1.5 million to 3.2 million, and the number of people aged 65 and over expected to increase by more than 50% from 11.6 million to 17.2 million[2]. According to research by Demos, 1 in 4 over 60s are interested in retirement living[3], yet only c.141, 000 units of specialist retirement housing for homeowners have been built

Agile Ageing Alliance

Compiled by the Agile Ageing Alliance under the technical authorship of Professor Merlin Stone. The Neighbourhoods of the Future report is based on the outcomes of a 12-month pan-European roadshow, made possible by the European Commission, during which the Agile Ageing Alliance (AAA), working in partnership with Utrecht University, listened to the needs, achievements and plans of the public sector, together with hundreds of inspirational businesses, NGOs and institutions. The report is also informed by interviews with some of the leading commercial and academic stakeholders, an extensive literature review and the AAA's own research comparing the needs of current older adults with those of the next generation.

Neighbourhoods of the Future can be downloaded from www.agileageing.org

For further information contact info@agileageing.org

McCANN
PR & SOCIAL

Tel: 0121 713 3621

Follow us: twitter.com/mccannpr
www.mccannbirmingham.co.uk

[1] Based on 3,453 registrations of cross tenure properties specifically designed for the elderly with the NHBC during calendar year 2015, of which 2,672 were registered by McCarthy and Stone.
[2] Population projections by the Office for National Statistics (2014 based).
[3] Demos – Top of the Ladder (2013)