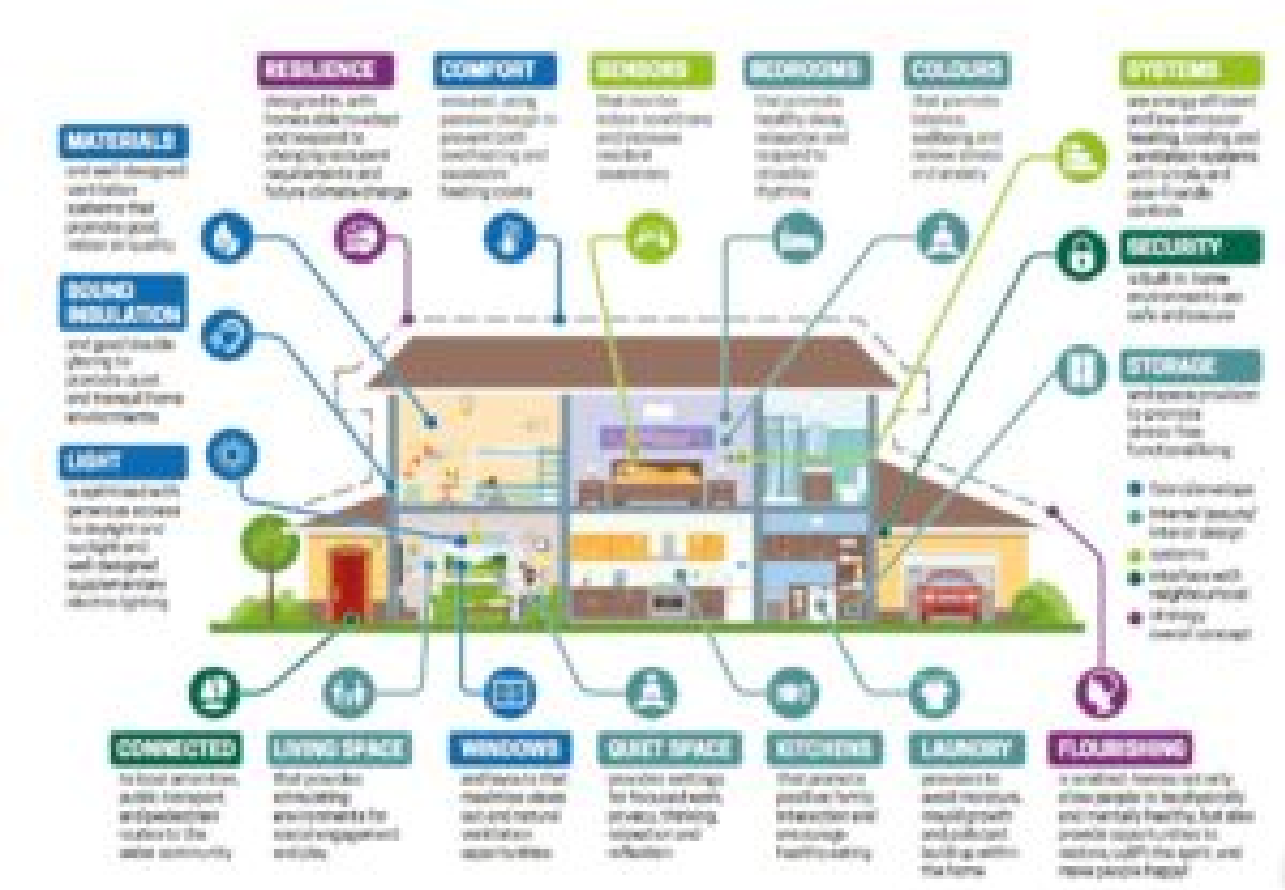
Blog – Building the Business Case for Healthy Residential Buildings

Building the Business Case for Healthy Residential Buildings*by Elspeth Holland and Colin Powell Posted July 26, 2016*

With the recent release of the UKGBC report entitled Health and Wellbeing in Homes, we saw a much needed examination of the different aspects that make up healthy homes and communities.



What is a healthy home? Photo from: UKGBC Report on Health and Wellbeing in Homes.

In developed countries, we spend upwards of 60% of our day at home and one-third of our lifetime sleeping, so it makes sense that, as part of the report, a survey of over 3,000 homeowners in the UK showed that 90% would like a home that does not compromise health and wellbeing. That same survey showed that *30% of people were willing to pay more for a home that had a positive effect on their health and wellbeing*. The report looked at a

whole host of factors in the home and built the business case for healthy homes by using strong research examples, like:

- **Indoor and outdoor air quality**: if pollution levels were to rise from lower to higher ranges, people have a 13% higher risk of sleep-disordered breathing.
- **CO_2 levels**: sleep quality improves with lower CO_2 levels in the bedroom, along with reported sleepiness and concentration the next day.
- **Noise**: Excess noise has also been linked to poor concentration and cognitive development in children, especially if it is disturbing to sleep.
- **Green space**: Children living near nature have been shown to inhibit impulses better than those living in buildings surrounded by concrete.

As part of the WorldGBC's Better Places for People campaign, we will expand on that research by examining the global body of research on healthy homes. So far, we have encountered some excellent examples, like:

- **Indoor air quality**: Houses that are 13 years or older are shown to have a lesser concentration of indoor air pollutants
- **Energy efficiency impacts**: New occupants of energy efficient homes report improvement over 1 year in symptoms of throat irritation, cough, fatigue
- **Indoor environmental quality**: Approximately 40 % of doctor-diagnosed asthma among children is attributable to exposures to indoor environmental factors at home
- **Thermal comfort**: After retrofits for weatherproofing were made to low-income housing units in the US, adults reported a 0.29 – 1 point improvement in their mean general health scores
- **Green buildings**: Adults living in green certified buildings reported 35 times the odds of experiencing fewer sick building symptoms than those living in conventional units

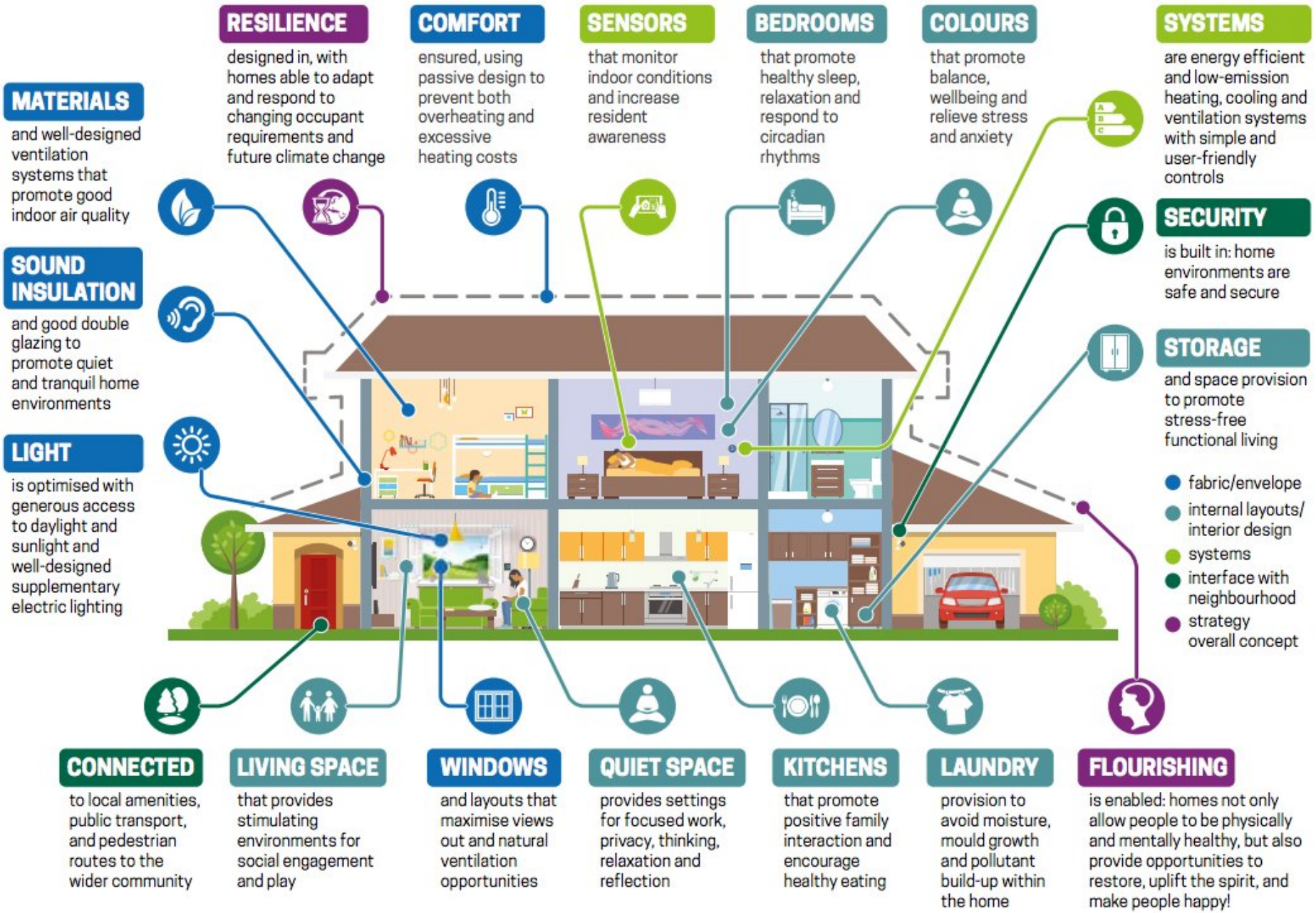
The research is there, is growing, and is helping us build the case that our homes affect our health. And we're now starting to see this research change the way homes are built too.

A recent article in the Boston Globe showed that people were willing to pay up to $225 more per month to have a healthier and smarter home. Owners in newly-built apartments in Cambridge, Massachusetts, were given the option to purchase a "wellness" package with technologies that include lighting that considers your circadian rhythm, a vitamin C-infused showered, and custom blackout shades, among others.

Lighting in your home that responds to your movements at night can get you a better sleep. Photo from: KEITH BEDFORD, BOSTON GLOBE STAFF

The technologies were integrated by Delos™ to introduce wellness features into multifamily housing. Delos has also collaborated with Mayo Clinic to form the Well Living Lab™, a research lab used to simulate different building environments and test the effect on health of various technologies and building components. This research will leverage and expand upon the WELL Building Standard™ (WELL). WELL is a building certification program focused exclusively on human health and wellness and is administered by the International WELL Building Institute™ (IWBI™), a sponsor of the Better Places for People campaign.

Better buildings and technologies that help produce better health outcomes for people are already here, in offices, in retail, and with growing frequency, residential buildings. While considerations of health and wellbeing in buildings often come at a premium, the business case for Better Places for People is only getting stronger.


RESILIENCE
designed in, with homes able to adapt and respond to changing occupant requirements and future climate change
COMFORT
ensured, using passive design to prevent both overheating and excessive heating costs
SENSORS
that monitor indoor conditions and increase resident awareness
BEDROOMS
that promote healthy sleep, relaxation and respond to circadian rhythms
COLOURS
that promote balance, wellbeing and relieve stress and anxiety
SYSTEMS
are energy efficient and low-emission heating, cooling and ventilation systems with simple and user-friendly controls
MATERIALS
and well-designed ventilation systems that promote good indoor air quality
SECURITY
is built in: home environments are safe and secure
SOUND INSULATION
and good double glazing to promote quiet and tranquil home environments
STORAGE
and space provision to promote stress-free functional living
LIGHT
is optimised with generous access to daylight and sunlight and well-designed supplementary electric lighting
fabric/envelope
internal layouts/ interior design
systems
interface with neighbourhood
strategy overall concept
CONNECTED
to local amenities, public transport, and pedestrian routes to the wider community
LIVING SPACE
that provides stimulating environments for social engagement and play
WINDOWS
and layouts that maximise views out and natural ventilation opportunities
QUIET SPACE
provides settings for focused work, privacy, thinking, relaxation and reflection
KITCHENS
that promote positive family interaction and encourage healthy eating
LAUNDRY
provision to avoid moisture, mould growth and pollutant build-up within the home
FLOURISHING
is enabled: homes not only allow people to be physically and mentally healthy, but also provide opportunities to restore, uplift the spirit, and make people happy!