



all party parliamentary group
for healthy homes and buildings

Building our Future
**Laying the Foundations for
Healthy Homes and Buildings**

July 2017

Foreword from Jim Shannon MP

When we established the All Party Parliamentary Group on Healthy Homes and Buildings in May 2016, we did so with the intention of highlighting the compelling health and cost benefits of delivering homes and buildings that are healthy, comfortable and energy efficient too.



As most of us typically spend 90% of our time inside, it is critical that our homes and buildings should first and foremost be designed and built for people. Creating healthy and comfortable living and working conditions is critical to our general happiness, health, wellbeing and education.

Over the past year we have examined the huge spectrum of health risks suffered by many living and working in poor accommodation, shining a light on this burgeoning public health problem which too often affects the most vulnerable in our society.

We know that whilst it is important to ensure that new homes and buildings are built to a high standard, it is also crucial that we address the buildings that already exist too; over 85% of existing homes are over 20-years-old so there is much work to be done in relation to renovation and retrofitting.

The APPG for Healthy Homes and Buildings want to encourage holistic and innovative solutions to make sure that everyone has the right to live in homes, and has access to buildings, which are healthy and contribute to their wellbeing. The Group seeks to raise standards and improve building regulations to ensure that every home and building is fit for purpose and does not create, compound or intensify health problems.

Legislators need to recognise the significant health problems made worse by unhealthy homes and buildings and encourage smarter and more efficient design and development to deliver homes and buildings that are warm, dry, energy efficient, well ventilated, acoustically comfortable and well-lit.

Government needs to ensure it has a public health focus that properly considers the indoor environment as much as the external environment.

For example, recognising that improving indoor air quality is just as much a health priority as tackling outdoor air quality, is a critical first step in the right direction.

We believe that the enormous financial savings and cost benefits which could be accrued by raising building and environmental standards and/or retrofitting homes and buildings are compelling.

Healthy homes and buildings mean:

- lower costs to the health service and a healthier population
- better educational attainment and higher productivity
- reduced emissions, lower energy bills and a lower carbon footprint
- improved wellbeing and comfort
- greater life chances, independent living and care

The work of the APPG is far from done, we will continue to build the evidence base for positive policy change, to bring together the key stakeholders and decision makers and to provide solutions that Government and industry can adopt, in order to deliver better health and wellbeing for us all.

Jim Shannon MP

Chairman of the All-Party Parliament Group for Healthy Homes and Buildings

About the All Party Parliamentary Group for Healthy Homes and Buildings

The APPG for Healthy Homes and Buildings provides a forum to bring together MPs, Peers and stakeholders to discuss the key health problems being caused through poor quality, damp, noisy, poorly ventilated and inefficient homes and buildings. The APPG provides a strong platform within Parliament to demonstrate robust, holistic and innovative solutions to make our homes and buildings both fit for purpose and healthy.

To find out more about the work of the All Party Parliamentary Group visit healthyhomesbuildings.org.uk

The Political, Economic and Business Case for Healthy Homes and Buildings

The APPG believes, based on the evidence it has heard from a range of experts across industry, public health and academia, that there is an overwhelming political, health and economic case for delivering healthy homes and buildings.

Houses and buildings that do not offer their inhabitants sufficient health protection and cause or exacerbate health conditions, cost the economy and our society each and every year: in healthy life years, reliance and use of healthcare services, educational attendance and attainment and work productivity and absenteeism.

What is a Healthy Home or Building?

Healthy homes and buildings are not simply those where there is a lack of ill health, but homes and buildings that promote the occupants physical, mental and social wellbeing¹. It is important to consider that the built environment touches almost every aspect of our lives:

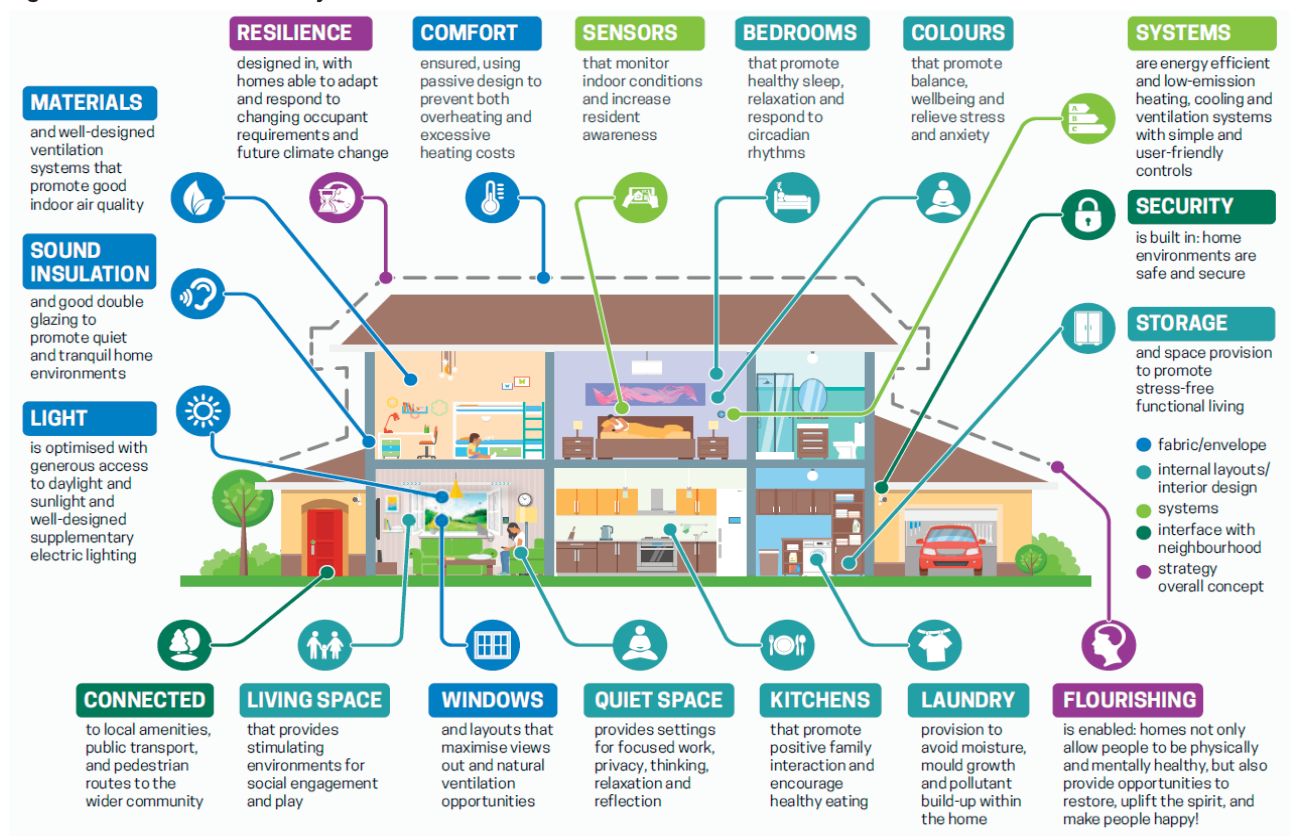
“ From how well we sleep, to how often we see friends, to how safe and secure we feel. If we want to improve the health and wellbeing of individuals, families and communities, there can hardly be a more important place to start than the home: it is where most people spend most of their life.

UK Green Building Council 2016

Public Opinion

In a 2016 survey of 3000 UK homeowners and renters, 90% said they wanted a home that would not compromise their health and wellbeing and 30% said they would be willing to pay for a healthy home⁸. Occupants now have access to ever more information on their homes and buildings, through technological advancements, which will allow information on poor building quality to be more easily accessed, shared and acted upon.

Figure 1: What makes a Healthy Home?



Source: Green Building Council, Healthy and Wellbeing in UK Homes, 2016.

Homes and Buildings: The Nation's Health

In England, the effects of poor housing on the NHS in 2010 were originally estimated by BRE to be around £600m in first year health treatment costs². However, following further research, BRE revised this figure to £1.4bn per year in the poorest housing in England and to £2.5bn per year when considering all housing throughout the entirety of the UK. BRE suggest therefore, that if £10bn were invested to upgrade the 3.5m poorest quality homes, it would not take long before the savings to the exchequer were recouped.

Experts believe however, that this is still an under-estimate of the true picture as this figure is based on first year treatment costs relating to specific hazards. There will be other losses to society of leaving people in poor housing, such as the impact on educational attainment and economic performance and early estimates suggest that this would add at least two-and-a-half times the first-year treatment costs². Further, these estimates do not take into account the potential savings of preventing or not exacerbating chronic illness. For example, warm dry homes are likely to provide a significant saving by preventing the development of respiratory and circulatory diseases and the associated healthcare burden.

“ The costs to the NHS of substandard housing... suggests that the quality of people's housing has a similar impact on health as does smoking or alcohol.

Graham Jukes OBE CFCIEH

Chartered Institute of Environmental Health
Commenting in the BRE Briefing Paper on The Cost of Poor Housing to the NHS 2011

Deaths from unhealthy buildings are also both prevalent and preventable. In the winter of 2014/15 an estimated 43,900 excess winter deaths occurred in England and Wales⁵ and the impact of cold housing specifically was estimated to cause a fifth of these excess deaths¹, claiming more lives than road accidents, alcohol or drug abuse⁷.

Furthermore, cold homes are responsible for wide-ranging health issues⁵. Children in cold homes are more than twice as likely to suffer a respiratory problem than those living in warm homes. More than 1 in 4 adolescents living in cold homes are at risk of multiple mental health problems, compared to 1 in 20 in warm housing and cold homes are also associated with increased incidence of colds and flu, which are known to worsen existing conditions such as arthritis and rheumatism.

While ambient (outdoor) air quality attracts a considerable amount of political, public and media interest, lack of effective ventilation and poor indoor air quality (IAQ) is now becoming a major issue for our nation's health too. Poor IAQ has been linked to allergy and asthma, lung cancer, chronic obstructive pulmonary disease, cardiovascular disease^{10,11} and more recently even investigated for its links to dementia¹². Poor IAQ is reported to have an annual cost to the UK of over 204,000 healthy life years³, with 45% of those lost to cardiovascular diseases, 23% to asthma and allergy, and 15% to lung cancer. The Royal College of Physicians warned in 2016 that indoor air pollutants cause, at a minimum, thousands of deaths per year and are associated with healthcare

costs in the order of "tens of millions of pounds"⁴. In 2015, Professor Hazim B. Awbi predicted that by 2050, without action to tackle indoor air pollution, there could be an 80% rise in those suffering asthma symptoms and total volatile organic compound concentrations could rise to 60% above WHO 24-hour limit levels⁹. Previous research by Professor Awbi also showed the reduced performance of educational attainment in children in poorly ventilated classrooms¹³.

Damp buildings are also a key concern. The World Health Organisation¹⁴ has warned that people living or working in damp or mouldy buildings are at an increased risk of respiratory symptoms, respiratory infections and exacerbations of asthma. Damp and mouldy buildings also increase the risk of allergic symptoms such as coughing, sneezing, red eyes, skin rash, rhinitis and eczema¹⁵. The issue is not small either: around a third of people living in the UK report that they have mould in their homes¹⁶.

Another issue is overcrowding. Overcrowded homes are authoritatively linked with impaired educational attainment; child health and development issues, including meningitis, respiratory conditions and slow growth rate; accidents in the home; stress, anxiety and depression; and poor adult health⁵. Using the Bedroom Standard as a measure, there are more than half a million overcrowded households, affecting one child in ten in England, with over one third in London¹.

There is also widespread research on the health benefits of daylight and sunlight¹. In offices, natural light has been shown to improve quality of life measures, quality and quantity of sleep, and reduce sick leave. In healthcare settings, it has been shown to improve recovery times of long-stay patients and reduce anxiety and medication.

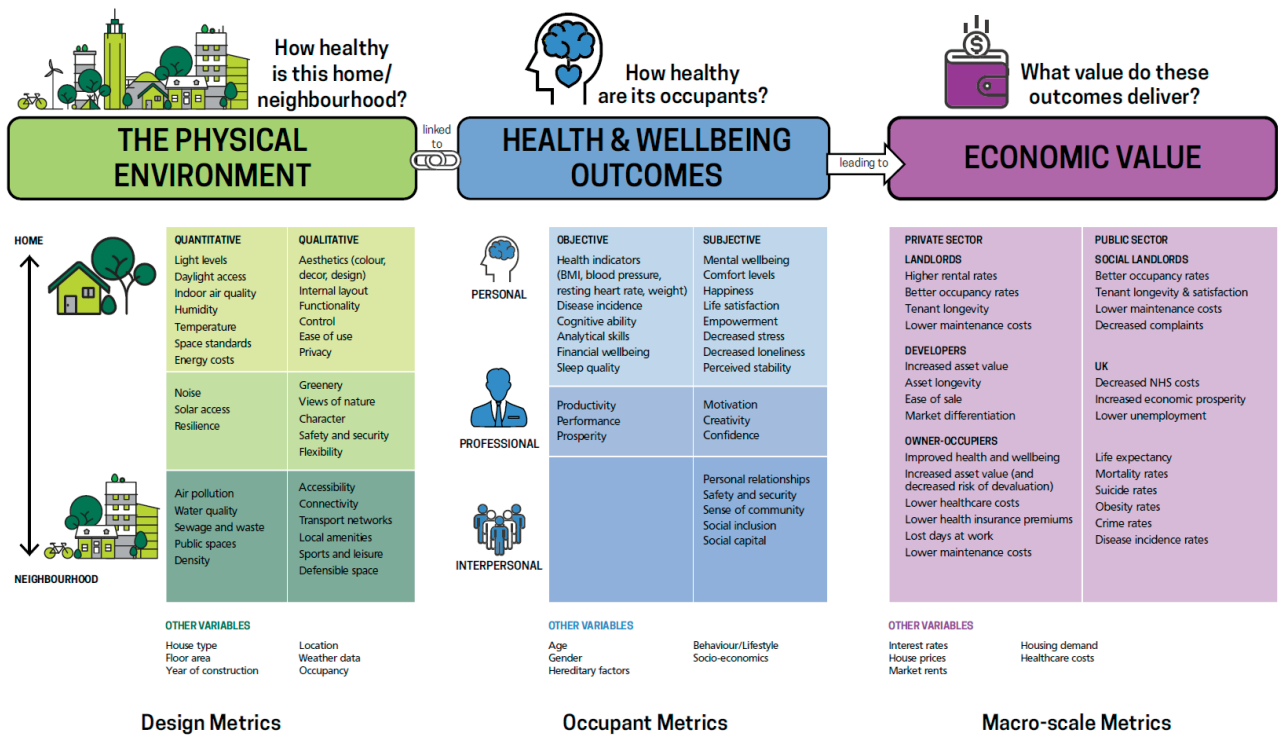
Homes and buildings can also be affected by noise pollution and poor acoustic performance. There is evidence that the presence of noise can cause long-term health issues¹: increasing levels of stress hormones, and increasing the risk of cardiovascular effects (heart disease and hypertension). The distress caused by poor sound insulation between homes is also a key issue and a national survey found that an estimated 37 per cent of the population were bothered, annoyed, or disturbed to some extent by neighbour noise¹.

“ Good housing is essential to health and wellbeing. It also plays a crucial role in supporting other determinants of good health such as educational attainment, employment prospects and social interaction. There is a strong case to be made for prevention through core housing improvements.

Professor Kevin Fenton

Public Health England
Commenting in the BRE Homes and Aging in England Briefing Paper 2015

Figure 2: The Economic Case for Healthy Homes and Buildings



Source: UK Green Building Council, Health and Wellbeing in UK Homes, 2016

In the Work Place

When it comes to business, the potential for economic gains are great. Staff costs typically account for around 90% of a business's operating costs⁶. The World Green Building Council's Health and Wellbeing Report Year⁶ reports that even a slight variance in a staff member's health or productivity could have a significant implication on business's finances: a modest 10% variance in staff economic performance could impact operating costs by 9% - either by making the situation worse due to poor performance and absenteeism, or by improving it by enhancing performance and reducing absenteeism.

The report illustrated the effects of just some of the variances in performance and employee behaviour when specific factors were considered. For example, effective ventilation was reported to achieve potential gains in performance by up to 11%, variances in thermal comfort were shown to vary performance by 10% and a poor acoustic environment, demonstrated by distracting noises, could reduce employee performance by a staggering 66%.

The Political, Economic and Business Case for Healthy Homes and Buildings

The culmination therefore of all the potential health and economic gains reaffirms the importance of taking a holistic approach to healthy homes and buildings; otherwise we risk making gains by tackling one issue, simply to lose them again by failing to tackle another. It is essential that we continue to strive for energy efficient homes that reduce carbon emissions and energy bills, as well as ensuring that we are reducing the health burden too.

By tackling the numerous health and wellbeing issues in UK homes and buildings, we have a real opportunity to create and use buildings to promote positive health and wellbeing, savings in healthcare costs, increase educational attainment, improve productivity and allow our citizens to lead longer, healthier and happier lives.

Issues identified by the APPG

The APPG for Healthy Homes and Buildings has discussed in detail the problems and potential solutions to creating homes and buildings which deliver improved health and wellbeing during the sessions it held through the 2016/2017 Parliament. This section is not an extensive list of every issue identified and nor is it exhaustive, instead we aim to identify the key themes of the areas that require attention.

Leadership

It has been recognised that leadership over the issue is disjointed within Government, for example building regulations are controlled via the Department of Communities and Local Government and energy efficiency and renovation schemes via the Department for Business, Energy and Industrial Strategy, whereas many of the benefits such as improved health outcomes are of consequence to the Department of Health, Department of Education and others.

This not only means that much of the policymaking for the construction sector is done without full consideration of the implications to health and wellbeing, but also that the economic case for improved housing and buildings is not fully realised. Recommendations from the group's members have included appointing a new Ministerial position with explicit responsibility for coordinating and delivering a new approach to housing and how it interacts with other policy areas, such as health, or the creation of a cross departmental committee for health and buildings recognising the interaction between buildings, health, education and the economy. Public Health England could play a leading role in making this happen and providing a common goal to improve health via our homes and buildings.

Devolution and Localism Agenda

The transfer of decision making to a more local level means that the leadership on housing and building standards is increasingly complex and disjointed. Any new ministerial positions or committees will need to effectively link into the local decision-making processes and provide coordination for the many different local groups. Plans and policies for existing as well as new housing should be integral parts of local, regional and combined authorities' strategies for economic and social development. Local housing strategies should address how both the existing housing stock and new housing supply can contribute to achieving better health and wellbeing, increased productivity, etc. Comprehensive guidance to help local authorities to improve standards and build healthy housing stock is required. NICE guidelines, such as those being developed for indoor air quality, could be a solution and used to encourage health and wellbeing boards to take action. It will also be essential to ensure that where policies or regulations are devolved, we learn from best practice and aim to achieve better standards all over the country as health and wellbeing is equally important to the citizens in all four of our nations.

The move by a number of Local Authorities and regions to drive increased building and energy efficiency standards of course offers an opportunity to also engage on the health and wellbeing agenda and aid the gathering of reliable evidence. Also, utilising city deals and local growth plans for better achieving health and wellbeing in accordance with local needs offers major potential.

Research and Evidence

Despite the evidence summarised above, we still have gaps in research and knowledge which need to be addressed and are therefore missing the justification for changes in some areas. Being able to demonstrate actual building projects which can be linked to measured improvements in health and wellbeing, particularly providing the evidence linking reduced ill-health, increased productivity and economic outcomes, would be a good starting point to engaging policy makers and their advisors and bring about change. Current schemes, like NHS England's 'Healthy New Towns', could be used as an ideal starting point to gather the evidence, demonstrate effectiveness and influence the regulatory framework.

Building Design and Delivery

Building design and delivery should be holistic, considering elements of energy efficiency, indoor air quality and ventilation, lighting, acoustics, etc. Considering the wider infrastructure and community, and optimising resident's comfort, health and wellbeing should be placed at the heart of good building and neighbourhood design. Building regulations for new and renovation of existing buildings should be reviewed to ensure they reflect the best standards to enable improved health and wellbeing rather than minimum safety levels. More robust standards are required; more monitoring, compliance testing and better enforcement to ensure that we close the gap between what is designed and the actual performance. There is also a risk that the 'Great Repeal Act' will lead to a reduction in standards.

Both existing and new housing should be treated as part of the infrastructure crucial to strengthening economic development and, through its impacts on health and education, improving productivity.

Climate change, increasing air pollution, changing demographics, amongst other factors are increasing the need for adaptability and flexibility to future proof buildings for longer term health and wellbeing. Buildings should be designed for the long-term, with any renovations addressing unintended consequences, such as overheating and poor indoor air quality.

Knowledge and Skills

To allow us to build homes and buildings to higher levels of health and wellbeing we need to improve the knowledge and skills for the design, construction and delivery of healthy homes. There is a need to educate the next generation of builders in a more holistic approach and knowledge of building physics. While it is recognised that improved installer standards are necessary, it is important not to blame the many builders, who are working in accordance with regulations, but to work collaboratively with the sector to understand the difficulties, provide solutions and up-skill the work-force to deliver a current and future building sector which is best able to deliver higher standards and enhanced health and wellbeing.

Development of the Energy Efficiency and Renovation Agenda

Energy Policy is focussed on supply, leaving the energy efficiency of many homes unaddressed and their occupants living in fuel poverty. Where efforts have been made to install energy-saving measures a whole house approach, considering improvements in air quality and ventilation, acoustics, lighting and other elements vital to health and wellbeing has rarely been taken. There is a need to address how the government will meet its commitments under the Paris Climate Agreement and create an ambitious Clean Growth Plan. This plan needs to consider wider health and wellbeing aspects, taking a holistic approach to renovation and not simply focussing on energy efficiency. These policies need to also consider how we can ensure people have a decent roof over their heads, allowing for basic renovation measures where required.

Better Public Awareness

There is a need for better public awareness of the link between the built environment and our health and wellbeing and a significant improvement in the understanding of what makes a high performing home. We need to move away from the current model where location and number of rooms defines the quality and value of a home. The government and industry should: undertake public awareness campaigns; showcase best building and design practice; develop improved and clear metrics for measuring and rating homes and buildings in relation to their standard of health and wellbeing; and provide informed guidance and information to help home-owners improve their health and wellbeing.

Private Rented Sector

In some areas, the Private Rented Sector has led to a decline in standards of health. The households most affected by this often include the most vulnerable groups and those most needing secure and healthy housing. Increased capacity to respond to vulnerable households and take the action possible under existing law to deal with unhealthy housing and unlawful landlord actions is also essential.

Additional Issues

Improved planning and procurement practices which consider health and wellbeing are also required.

Recommendations for the APPG and Policy Makers

Addressing all the issues identified will be an enormous task. Many of the steps required to create a future where all buildings are built or renovated to the highest possible health and wellbeing standards will not all be possible without further investigation, research and evidence to justify significant action. Therefore, we suggest starting with a few key tangible actions which the APPG can focus on to begin with:

- Work with Government to establish a cross departmental committee for health and buildings to champion change in the sector, recognising the interaction between buildings, health, education and the economy
- Begin building the research and evidence, starting with a focus on housing and schools, to develop a clear case for further government action on standards for new build
- Make housing (including renovation) an infrastructure priority and develop plans for retrofitting the current housing stock that take a holistic approach to maximising health and wellbeing

Responding to the Green Paper

Building our Future: Laying the Foundations for Healthy Homes and Buildings

The All-Party Parliamentary Group for Healthy Homes and Buildings Green Paper, *Building our Future: Laying the Foundations for Healthy Homes and Buildings* sets out key recommendations on what needs to be done to ensure that all our homes and buildings are healthy and do not create or exacerbate health issues.

We invite you to comment and respond to the Green Paper and in particular give your views on:

- Do you believe the Green Paper covers all the current issues caused by unhealthy homes and buildings? Are you able to provide any further evidence that you think should be included?
- Do you believe the Green Paper has identified the main problems and solutions in creating healthy homes and buildings? Are you able to provide any further issues or solutions that you think should be included?
- Do you support the recommendations made in the draft Green Paper? Are you able to provide additional recommendations, including specific recommendations for specific issue areas?
- What actions do you believe are needed in order to achieve the recommendations in this paper?
- Do you wish to make any further comments on the draft paper or provide any further information, commentary or evidence?

We hope to hold sessions and consult widely on the Green Paper. Your views are welcome.

Your written response should seek to answer the questions above and be no longer than 2 sides of A4 (additional evidence and examples can be submitted separately). Whilst we cannot promise to reflect each and every comment, they will all be read by the authors of the Green Paper and given our serious consideration.

Please send your response to:
hhbappg@devoconnect.co.uk

The deadline for submitting responses to *Building our Future: Laying the Foundations for Healthy Homes and Buildings* is **30th September 2017**.

Please get in contact if you would like further information on how to get involved in the All-Party Parliamentary Group for Healthy Homes and Buildings.

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