



Building a futureproof healthcare system

Today, the British healthcare system is faced with multiple pressures.

An uncertain political landscape poses questions about future availability of funding and staff. And, while Philip Hammond claimed an end to austerity in his latest budget; availability of resource still remains tight.

Within this context, the healthcare system must also face the reality of an ageing population. That population is expected to reach more than 74 million by 2039; and, as it grows, its demographic proportions are shifting.

The construction industry has a vital role to play in helping to support the UK's healthcare sector – but needs to work smarter. Keith Hayes, Healthcare Director at GRAHAM, looks at how the built environment can help deliver in times of need.

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18% of us are now aged 65 and older and 2.4% are aged 85 and older. By 2066, it is predicted that this last group will make up 7% of the UK population, totalling well over five million people.

This is already having a direct impact on the healthcare sector.

As Age UK points out; of the 18.7 million adult hospital admissions between 2014–2015, around 7.6 million (41%) were aged 65 and over. And, the charity's Later Life research stresses that, if nothing is done about age-related disease, there will be more than 6.25 million older people with a long-term life-limiting illness or disability by 2030.

These numbers clearly show that we need to respond quickly. And that is why we need to look to other sectors to assess how we can both improve and help futureproof vital healthcare services.

A more-strategic, transformational approach that integrates a number of skills to help alleviate the strain wherever possible is required. And collaboration is key.

The built environment can help address these challenges through well-executed estate planning that embraces innovative technology and a flexible approach. By utilising the potential of modern methods of construction (MMC) and harnessing the power of the latest digital construction technology, time and cost savings can be delivered across the board.

Firstly, BIM must play a central role in projects as it allows for more-detailed planning and more-informed, multi-personnel decision-making processes. This enables architects, contractors, engineers and healthcare professionals to benefit from a literal vision of the project from the outset.

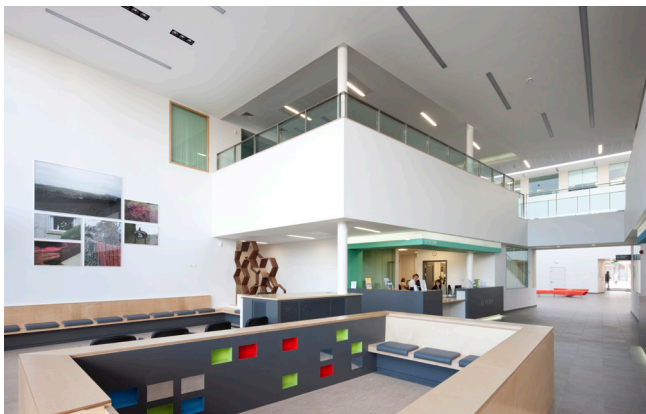
Approaching the healthcare sector's built environment in this way can help secure the support of key stakeholders early in the project and ensure plans are meeting the needs of the local community. The collaboration fostered by this approach also means existing examples of successful approaches, and the lessons learned from them, can be shared and incorporated to help minimise project risk.

In conjunction with this, MMC are considered by some as one of the key ways in which the UK construction industry will meet the targets set out in the Government's Construction 2025 Industrial Strategy.

In this document the Government set out several ambitious goals, including delivering projects 50% faster for both new-build and refurbished assets, reducing construction costs by 33%, and lowering emissions by 50%.

There are good reasons to believe wider-scale adoption of MMC can help achieve these goals. In the context of healthcare, these construction methods could help the British healthcare system by delivering increased capacity more swiftly.

Offsite manufacturing can offer more certainty in adherence to project timescales, with variables such as weather and staffing making less of an impact.



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An offsite approach also allows for efficiencies to be gained when units of the same specification are required at scale, as may be the case for bedrooms in a residential care home, or wards in a hospital.

Vitality, the mass production capabilities associated with MMC can still be combined with a bespoke approach, creating buildings that can adapt to meet the changing needs of health professionals and patients.

Contrary to the early post-war modular buildings, whose poor standards led to long-lasting negative perceptions of pre-fab construction, the modern offsite construction system means panels can be delivered to site completely ready for build, with internal and external finishes, insulation, windows and first fix electrics already installed.

This is hugely positive from a sustainability perspective.

Bringing together MMC and innovations in digital construction can produce buildings that are more economical to build – and more economical to run. Construction taking place in a factory allows the opportunity for waste materials to be recycled more easily and means less time on site. This, in turn, reduces the impact on existing healthcare buildings which must continue to operate while construction work is undertaken.

It is an altogether-more-streamlined approach, which has a clear supply chain and set of procedures, essential for reducing time on sign-off and ensuring the flow of capital remains steady so that progress does not stall.

“By working collaboratively, skills can be brought together to ensure that construction in the healthcare sector is streamlined from planning, through preparation, to build.”

This will enable the creation of hospitals and care homes that are high quality, tech ready, bespoke and flexible, in order to adapt to the ongoing changes the industry will yet face.

The built environment can help address these challenges through well-executed estate planning that embraces innovative technology and a flexible approach. The use of BIM can also ensure that a data-rich digital representation of the healthcare estate is created. This can then form the basis of an effective facilities management system, providing crucial details on material and spatial dimensions that can be used to inform efficient decisions on refurbishment and renovation beyond the initial construction phase.

By embracing these working practices and realising their potential, those of us working in the built environment can play an important role in supporting the needs of the healthcare system.

With rising demand for first-class healthcare services unlikely to subside – the time to step up to the challenge is now.

