



Stuart Bonthrone suggests how a geospatial data-driven approach can revolutionise the way we tackle the nation's housing crisis

Technology has come on leaps and bounds since the Town and Country Planning Act was first introduced in 1947 – and most people will agree that the planning system hasn't quite kept pace with the technological advancements that have followed, being largely reliant on 20th century technology and legacy software.

It's also no secret that the UK is currently in the midst of a housing crisis, with an estimated 345,000 new homes needed in England per year to address the backlog and fulfil new need.

Good intentions

Despite good intentions from those in central and local government, slow progress has been made on addressing this crisis. Some of the biggest frustrations for those in planning come from trying to navigate disparate data sets, as well as a range of policies and guidance that are laid out across multiple documents, websites, and statements. With so much data stored in multiple formats across archaic systems, it's no wonder that much of this data currently fails to be utilised to its full extent during the planning process.

However, there are glimmers of hope that the planning system will get the digital revolution it deserves. Over the summer,



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the Government published its 'Planning For The Future' White Paper – where it outlined radical reforms to digitise the system.

Data-driven approach

As part of these reforms, the White

Paper recognised the vast potential of geospatial technology to improve the way planning is done in the UK, noting that local plans should be "visual and map-based, standardised, based on the latest digital technology and supported by a new standard template". It also states that planning should move from being "a process based on documents to a process driven by data".

Those of us working in GIS know just how revolutionary geospatial technology can be when it comes to bringing together disparate data sets and policies. The technology allows us to layer up a number of variables, and knit them together with the one thing they all have in common – their location.

To my mind, there are three key areas where geospatial technology can revolutionise housing developments in the UK.

Assessing supporting services: One of the big issues faced by local authorities is the scarcity of suitable land for them to build on. It's not only about space but about the supporting local infrastructure. Which utilities serve the area? What's local transport like? Is there any special wildlife needs to be aware of? How high are the air

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The Government White Paper recognises the potential of geospatial

pollution levels? Nearby noise? There are so many factors to consider, and by using location intelligence, you can visualise not only space – but what the supporting infrastructure is like.

Rapid evaluation: Effectively meeting housing demand requires rapid evaluation of potential new schemes and projects to select the options that will maximise the usage of existing land and deliver the most appropriate new developments.

Geospatial technology brings together geographic and demographic data with local planning policies and rules to create visualisations, analysis and financial

reports that enable rapid evaluation and comparison of proposed schemes without costly and time-consuming traditional processes. The technology also makes it possible to determine the optimal layout and density for development to meet local needs cost-effectively. Where this would have traditionally taken months, location intelligence technology means it can now be done in days or even hours.

Maximising space: 3D visualisations can help local authorities to look through a different lens when it comes to assessing housing capacity and identifying new areas for development. For instance,

property consultancy Knight Frank used 3D visualisations to determine where new homes could best be built across London Boroughs. In the City of Westminster alone, the analysis uncovered 13.5 million square feet of unused space.

It's clear that addressing the UK's housing crisis means we have to embrace data to its full potential – and utilise technology throughout the process. Increasing the use of geospatial technology will not only help to speed-up the process, it will also enable more informed decisions to be made – and ultimately lead to better developments being built.



Above left: Knight Frank 3D assessment of site utilisation that observes height restrictions. Above right: Knight Frank analysis of under-developed sites in a London Borough