

BIM

How can retailers create highly effective new retail spaces that keep up with changing consumer trends, while simultaneously driving time and budget savings during build? **Lindsay Clark** explores the benefits of building information modelling

## Building on

# KNOWLEDGE



**“As retail goes forward, there is a push to make stores more of an experience”**

In the four years between Oxford City Council starting the planning process for the city’s £400m Westgate shopping centre and its expected opening in autumn 2017, UK ecommerce sales will have grown by at least 38%, according to figures from Ecommerce Foundation.

The council started work on the current scheme in 2013, although backing from a joint venture between The Crown Estate and Land Securities began in 2010.

While planning retail development is lengthy and complex, anticipating changes to shopping behaviour is just as troublesome. Are buildings suited to click-and-collect? What about accepting online returns? Are they able to offer an engaging experience to customers who are glued to their smartphones?

One solution is to make buildings that are easier to change in response to consumer trends. Architects and construction firms promote the concept of building information modelling (BIM), which allows details of a building to be stored in a computer model.

More than a three-dimensional design of the building, the model stores detailed information about every aspect of a building, including where each component came from, how it was installed and when it needs to be serviced.

As building owners and occupiers take ownership of the model, they can keep it up to date, making redesigning and refitting cheaper and quicker (at least in theory), says Sean Collins, director at architects Child Graddon Lewis, which has used BIM on retail projects for Vision Express and David’s Bridal.

“When we design a refit for a store, the first thing we have to do is survey it to make sure the building information they have is accurate,” he says. “Nine times out of 10, you find they have done five different initiatives in that store, but no one has recorded them against the base files.

“As retail goes forward, there is a push to make stores more of an experience. An accurate digital model of the building will improve speed to market and the procurement process. Contractors will spend less time on site as they can do more prior planning,” he adds.

However, most retailers are not ready to accept a live building information model from their architects or construction contractors for building servicing and maintenance, he says.

Even if retailers do not use BIM for ongoing management, the approach does offer them



significant advantages earlier in the development process as well. It speeds up and simplifies the development of complex projects, says Neil Hayward, associate with architecture firm BDP, which created the master plan for Oxford's Westgate project.

Using BIM helped to steer the development through the planning process, co-ordinating four other architecture firms and the city council.

"It was a very short design period," Hayward says. "Oxford is a very sensitive location, in terms of architecture and history, and it was a large development. The planners set a lot of complex parameters before designing the buildings and we were able to put them into the model, which each architect could work from. It was much easier to monitor and ensure everyone was working within the parameters."

## Clear advantages

Neil Read, Land Securities project director for Westgate, says some retailers were able to benefit from BIM at this early stage. John Lewis, one of the anchor retailers in the development, gained early access to the model of its store to help it finalise how to fit it out, for example.

"John Lewis embraced the technology right at the start. We gave them access to the model, and they were able to adapt and amend the shopfit design," he says.

BIM promises a great deal of improvement in building service and maintenance, especially across multiple sites. When a specific ventilation component fails, for example, imagine the advantage of knowing exactly where all the identical components are employed across a whole retail estate – at the push of a button.

However, retailers attempting to realise this promise have found that their software for asset management is not ready to accept data directly from BIM, says Graeme Forbes, chief executive officer of Clearbox, a software company that aims to ease the sharing of data between different systems.

"Retailers need to ask themselves whether the information is in a form that they can easily use," Forbes says. "Do the tools in asset management allow me to get the value out of this digital information? And can they offer it up into a smartphone or a tablet so it can become useful to people maintaining and operating buildings?"

**"This is an area full of promise and it is fast becoming the new way work will happen in future"**



## FOCUS ON: Waitrose

James Franklin, BIM manager for construction firm Kier, used BIM to help with the redevelopment of the King's Cross Midland Goods Shed, which is now hosting a store for Waitrose.

"The construction phase was streamlined and clashes identified before we got to site. The clients benefited from a better build process," he says.

However, on this occasion, Waitrose did not start to use BIM for future maintenance, servicing and development.

"What we like to do is hand over the asset information model to the client, but that did

not happen at that stage, although they did receive an 'as built' model to see how space is used, to visualise and inform store design," Franklin says.

Andy Smith, general manager of future planning at Waitrose, believes BIM offers greater benefits for ongoing store management, and servicing and maintaining buildings, than for the initial build.

"We're starting to push into these areas: to make what traditionally was a construction tool work for the business," he told a BIM event at the University of Westminster.

"It is an area still full of promise and theory, and it is very fast becoming the new way this work will happen in the future," he says.

Some retailers are already rising to this challenge. Using BIM to help design and build its £10m Clacton-on-Sea store, which opened in October 2016, Asda and its supplier City Facilities Management are already taking asset data derived from the model.

Richard Oldfield, framework director with construction firm ISG, which built the Clacton store, says: "Our team on site used BIM in a construction environment. Now Asda has been able to rewrite some facilities management systems to take advantage of the data.

"In the current form, the information is more accurate and up to date, rather than using the old approach, which relied on lengthy data sheets that may not be specific to what is in the store," he says.

"Now we know what was installed, who installed it and when it was installed. Asda has

had facilities management people working with construction teams and model teams to develop their systems to almost seamlessly use data from BIM. They have a forward-thinking approach."

However, maintaining accurate BIM for every store also puts retailers at a considerable advantage when they want to respond to changing consumer behaviour, Oldfield says.

For example, retailers could improve how they service click-and-collect by knowing exactly what is in store, drawing from sets of components already defined in the computer model. They can also test the look and feel of different ideas before they make changes to existing stores.

Retailers developing new stores may not fully understand how current technology trends will change consumer behaviour in the time it takes their plans to reach fruition. However, those prepared to develop internal systems and processes to better exploit BIM could be better placed to compete in the future.