



 **AUTODESK** Construction Cloud


**Milton Keynes
University Hospital**
NHS Foundation Trust

Harnessing Data and Technology to Redefine The Milton Keynes' Patient Experience

Milton Keynes University Hospital (MKUH) offers a wide range of acute hospital services and an increasing number of specialist services to Milton Keynes' growing population. As part of the UK Government's New Hospital Programme (NHP)—the biggest hospital building programme in a generation—MKUH was granted seed funding to improve their hospital estate. With the adoption of Autodesk Construction Cloud™, MKUH opened the door to cross-functional collaboration and digitisation efforts, ultimately delivering an enhanced patient experience.

Customer Snapshot

FIRM SIZE: >1000
FIRM TYPE: OWNER
REVENUE: N/A
FOCUS AREA: INSTITUTIONAL
HQ: MILTON KEYNES, UK

PHASE:



CAPABILITIES:

- Project Management

OUTCOME:



Redefining Data Strategy with Building Information Modelling (BIM)

Determined to improve patient outcomes and experiences, MKUH has made significant investments in its site over the past ten years, developing several new services and pathways. Yet they still felt like there was room to grow.

In 2020, MKUH's Head of Digital Innovation, Claire Orchard, partnered with the Trust's Strategic Estates team to oversee the hospital's NHP improvements. "We quickly realised that there were inefficiencies in how we were working due to the gaps in our current building data. For example, during the build of our Cancer Centre, many of the external project collaborators held the data that we needed in their project Common Data Environment (CDE). Unfortunately, some of the data didn't exist," said Claire.

For guidance, they approached Symetri, an Autodesk partner, to identify ways to optimise their working methods and increase the quality of their project delivery. Symetri recommended BIM, and together, they worked side-by-side to redefine their data collection processes—inclusive of an Employer's Information Requirements (EIR) and Asset Information Requirements (AIR)—to better reflect their operational needs.

Claire and the team also took a retrospective look at their BIM processes and discovered the Trust also lacked an 'as built' representation of their assets. Approaching Symetri once again, Claire requested help to build a proof of concept for using COBie data—a standard that defines asset information that is delivered as part of a facility construction project and, documents the data for the BIM process.

"We had a particular example where we needed to replace a glass window in the centre and, although we had the specifications of the window, we didn't have the information we needed about the tint of glass used," reflects Claire.

Leveraging tools within the Autodesk Construction Cloud, MKUH began testing this proof of concept. "It was important that we took learnings from the construction of our Cancer Centre to understand where we have gaps and how we can improve our BIM strategy for future projects," says Claire.



Creating A Common Data Environment

Using Autodesk Construction Cloud, MKUH created a CDE to house all the 3D models, 2D drawings, and an assortment of operations and maintenance manuals from the planning, design, and build process of the Cancer Centre.

“Using this environment to capture all of our common data means we can facilitate version control and align with ISO 19650, an international standard for managing information over the whole life cycle of a built asset,” says Claire.

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-Claire Orchard

Head of Digital Innovation,
Milton Keynes University Hospital

Then, MKUH used Autodesk Docs, Autodesk Tandem, and Autodesk Revit to develop their COBie model to store relevant project documents—dynamically linked to each asset and visualised within a 3D model—generating an early digital twin.

“Traditionally, NHS Trusts do not collaboratively contribute to the Common Data Environment or BIM process,” Claire comments. “Our experience on this project showed us we could do better if we owned a CDE and contributed to the building of processes within. This would allow us to get more readily involved in future builds and ensure we are collecting useful data to our Trust.”

Designing an Informed Estate Strategy

For MKUH, incorporating new Autodesk Construction Cloud solutions improved their ways of working across projects. Now, they can collaborate more effectively with project and supply chain partners and digitize efforts in the iterative development of their estate’s portfolio.

Claire concludes: “We’re planning to use and test our workflows in real-time on the build of future projects,” says Claire. “I’m excited to be working in this collaborative way, learning more about how we can harness building data and IoT technology to improve the care and experience that we deliver to our patients.”

