Digital twins in real estate - Humanizing the building in the age of Industry 4.0

In a time when technology-laden smart buildings have become an industry standard, “digital twins” are poised to deliver the next stage of real estate innovation. A digital twin is the digital representation of a physical asset, process, or system that allows for predictive modelling in order to deliver proactive adjustments for assets. This technology-enabled process can deliver greater strategic value for the real estate industry as a whole. But while digital twins are similar to smart buildings in the age of Industry 4.0, they facilitate social interactions, foster more productive people.

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Breaking down the digital twin
Creating a complete digital twin that can deliver this is a complex journey. Rather, it is better to break down a project into smaller, modular “digital twins” that can be built and integrated together over time. This allows the development of the twin to progress, rather than try to incorporate everything at once. A digital twin can be structured and dynamically reorganized, with the latest insights into how the industry is currently focused on delivering short-term value, and the space will need to be small and react to the world around it. And these large-scale changes, enabled by the predictive capabilities of a digital twin, will drive change in the built environment.

The next industry-wide disruption
Though real estate has been getting more sophisticated for decades, the digital twin represents the next major driver of change due to its powerful predictive capabilities. Given the complexities involved with creating a complete digital twin, the industry is currently focused on delivering smaller, more specific digital twin use cases. And while these aren’t big enough to completely disrupt buildings, as an example, self-assembly of an entire digital twin, companies will be able to optimize entire buildings, precincts, and portfolios at every stage of the lifecycle.

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The health sector will use simulations of staff and patients to minimize infection and bottlenecks, allocate medical supplies more efficiently throughout the space, and optimize the workflow of staff to meet the current and predicted needs of patients.