

# Connected Healthcare

Care delivered smarter  
- with a digital twin.

Powered by:

**VAULT**  
3D SPATIAL INTELLIGENCE



# Deliver Optimal Care... Smarter.

Imagine being able to walk through your virtual 3D hospital. Peel back walls to reveal pipes or foundations. Explore plant rooms. Fly through wards.

See hospital 'built information' modelled and represented spatially with crisp graphics. Locate spaces, medical equipment and even smoke detectors, digitally.

Add IoT, (Internet of Things) Artificial Intelligence and Machine Learning into the mix and you can monitor people, environments (temperature, noise, air quality) and plant (digitally tag equipment, or operate predictive maintenance) to take control of operational information like never before.

**We make it easy to create a digital twin of a hospital (a spatial model) which:**

- Provides live insights
- Connects all stakeholders to ONE digital source of data certainty
- Provides a platform for next generation intelligent technologies
- Reduces operational expenses
- References site data captured.

2 Intensive therapy  
CH

LOCATION:  
Cardio Unit 1  
TEMPERATURE:  
22°

PHYSICIAN:  
Sam Smith  
CURRENT LOCATION:  
Ward 12,  
Cardiology

#549-479  
Triage Set  
MAINTENANCE DUE:  
17 Oct 2021  
WARRANTY: Valid

## What is Connected Healthcare?

Every aspect of the hospital's physical infrastructure is digitised (via laser scanning and other capture technologies) to deploy a digital twin.

asBuilt can then add IoT connectivity, Artificial Intelligence and Machine Learning to take live insights to the next level and turn the hospital into a 'connected' living, learning and communicative smart building.

## Why do it?

A digital twin of a hospital makes it easy to see and store property and plant information in the cloud. Digitisation leads to more efficient hospital operation...

### One Source of Certain Truth

Healthcare providers more than anyone, need to rely on certainty of information. Yet in the busy, pressured health sector floor plans and blueprints typically go missing, or go out of date (as staff or property maintenance suppliers turn over, or as computer systems become obsolete and/or extensions or renovations take place). A digital twin provides the certainty of ONE source of digital truth – spatially mapped.

### Improve Operational Efficiency

A digital twin saves time (finding up-to-date blueprints for example) and money. When 88% of the cost of a building over its lifetime comes from its ongoing operation – the savings can be significant. Redirect Opex budget to frontline healthcare.

# VAULT

## 3D Spatial Intelligence Platform

As digital engineering experts and software developers, asBuilt work with district health boards to capture, model and integrate digitised hospital building data into a common data environment.

Powered by Microsoft Azure, Vault is a simple-to-use platform built as the hospital's digital twin. The entire healthcare supply chain can connect together on one unified hub.

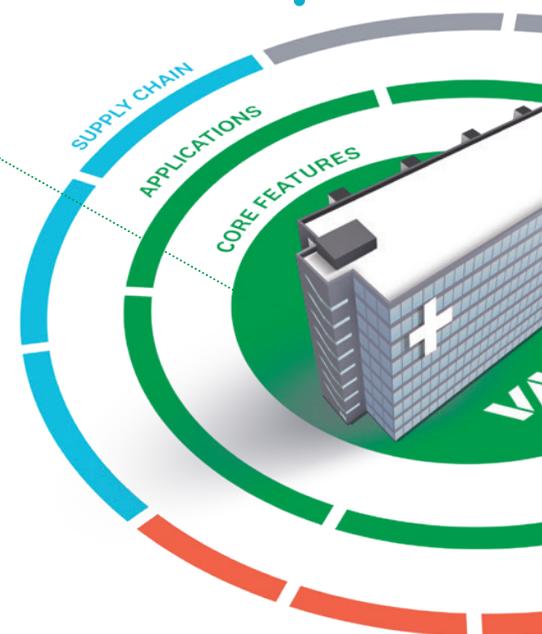
### SUPPLY CHAIN

- Hospital Facilities & Administration**
  - Facilities Management
  - Administration Personnel
  - DHB C/Suite
- Construction**
  - Main Contractor
  - Designers/Architects
  - Quantity Surveyor
  - Project Manager
- Clinical Teams**
  - Doctors
  - Nurses
- Hospital Users**
  - Patients
  - Visitors

### VAULT CORE FEATURES

#### Visualisation + Storage + Apps

- Multi user viewer
- Real time spatial intelligence tool
- 3D model viewer with data mapped spatially
- 360 degree photo viewer
- Point Cloud manager
- Drone viewer
- File manager
- Microsoft Teams integration



Vault provides a robust, **cloud-enabled solution** for Connected Healthcare. Core **spatial intelligence** and **customisable applications** connect the whole supply chain.

## Auckland Hospital – Spatial Intelligence brought to Life

**At Auckland Hospital, asBuilt has conducted one of the largest digitisation capture projects in the country.**

asBuilt surveyed existing buildings using mobile cameras, drones and 3D laser scanners to create an accurate 3D model of each and every part of the entire hospital, from wards to medical equipment, to plant rooms and tunnels. This spatial foundation not only aligns stakeholders through design, construction and maintenance tasks, but also provides a digital footprint of all the

hospital's physical assets. It captures data from intelligent IoT devices and hosts it on a secure and accessible Azure cloud platform.

### Benefits

Administration teams, facilities teams, clinical teams, suppliers and contractors can now unlock the power of spatial intelligence from ONE real-time source of up-to-date digital truth.

No more piecemeal blueprints lying forgotten in a filing cabinet or desktop computer and no need for an architect's brain and imagination to understand flat drawings.

### Outcomes

- Accurate 3D spatial model in place for risk-free future renovations
- Improved physical resource management capability
- Healthcare supply chain can access ONE digital source of truth
- Platform for IoT and connected healthcare in place
- Asset visibility and greater operational efficiency.



## The Future of Connected Care

asBuilt has a vision to usher in a new era of **spatially intelligent healthcare** – making it easy for hospitals to operate a virtual replica hospital in the cloud.



**Digitisation is the first step on a path to optimised hospital operations. Even more exciting is what can come next in the form of transformational IoT technologies:**

- Smart technology can monitor how spaces are being used and simulate different scenarios to optimise care. In future this will inform decisions, streamline scheduling, reduce downtime and make more effective use of each space.
- Medical equipment can be digitally tagged for predictive maintenance. Link financial systems for more accurate depreciation scheduling and digital storage of warranties or guarantees – spatially.
- New staff, maintenance workers or decision-makers can ‘walk through’ a virtual hospital for training purposes.
- Maintenance workers can perform a digital reconnaissance in order to make more accurate job costings and perform job planning.
- Autonomous robots can be mobilised to deliver drugs and medical supplies across the hospital – freeing up valuable human resources.
- A digital hospital (or extension) can be built without a spade of dirt being turned. Instead of interpreting two dimensional drawings, stakeholders can immerse themselves in the virtual space, testing thinking and ideating together.



## We're passionate about creating a smarter built world, digitally.

asBuilt are digital engineering experts and software developers with proven solutions to improve the design, construction and management of built assets. Our ultimate goal is to improve the way people interact with the built world.

We engineer clever solutions that reduce the impact of construction, while connecting people to their built assets and importantly, each other.

### asBuilt Connected Healthcare

We provide a continuum of Digital Twin technologies and services to allow Healthcare providers to better manage their complex assets – at every stage of their lifecycle.

This provides the digital foundation for better patient care and outcomes through spatial intelligence.



#### DESIGN & CAPTURE

Digital survey and capture workflows provide the platform for accurate 3D modelling of every facet of the hospital – from wards to medical equipment.

#### CONNECT & ENABLE

Smart hospitals can access a host of digital transformation technologies to optimise performance. asBuilt offer a range of services to create a true digital twin and connect all stakeholders to ONE ecosystem.

#### MANAGE & OPERATE

88% of the cost of a built asset is in its ongoing maintenance and operation. asBuilt enable the efficient ongoing management, performance and operation of smart hospitals to reduce OPEX and CAPEX.

Call us or email us today at [info@asBuiltdigital.com](mailto:info@asBuiltdigital.com) to speak to one of our connected healthcare specialists.

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