Brightly

Client Success Story

New South Wales Land and Housing Corporation embraces predictive maintenance to deliver quality social housing

Client

New South Wales Land and Housing Corporation

Vitals

- Owns and maintains social housing properties across NSW
- Part of the NSW Department of Planning and Environment
- Manages over 125,000 properties — the largest portfolio in Australia
- Properties valued at AU$62 billion

Challenges

With cost-of-living pressures impacting many across New South Wales (NSW), those who can't afford to house themselves turn to NSW Land and Housing Corporation (LAHC) for short- or long-term social housing. To manage the upkeep of over 125,000 properties, LAHC wanted to shift away from reactive maintenance and take a preventive approach.

Results

The NSW Land and Housing Corporation utilise Brightly Assetic™ and Brightly Predictor software to support the planned maintenance of its social housing properties. Combining the world-class software gave LAHC the power they needed, providing powerful, real-time insights via a centralised asset register and applying predictive modelling for short- and long-term decision-making and for generating compelling business cases.

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Background

As the demand for housing continues to outpace supply, those who can't afford to house themselves can turn to NSW Land and Housing Corporation, one of the largest social housing providers in the southern hemisphere. LAHC provides safe short- and long-term rental housing for those in need. LAHC owns 125,000 properties, valued at around AU$62 billion — the largest property portfolio in Australia. Management of the properties falls into two groups:

1. 94,000 public housing residential dwellings directly managed by LAHC

2. 31,000 LAHC owned and managed by community housing providers

To manage its geographically extensive range of properties, LAHC divides its asset portfolio into three regions — North West, Western Sydney and South East — which are further divided into 15 areas to manage the maintenance of the properties.

Challanges

The upkeep of such a large number of properties is considerable, with LAHC receiving over 600,000 work requests annually. To keep its properties in good condition and squeeze more out of every dollar, LAHC wanted to reduce reactive maintenance jobs — scheduling repairs when something breaks — to predictive or planned maintenance that resolves issues before they become problems.

To do this, LAHC needed to be able to better visualise and make sense of the significant amount of data it captured, from the asset location, status, and cost to its usage and current condition, as well as functional and compliance assessments.

It also needed to draw insights from the data to predict future asset needs and develop realistic maintenance programs to ensure its dwellings are clean, safe, and habitable in compliance with the Residential Tenancies Act.

Solution

To make evidence-based asset management decisions and plan different maintenance work based on real-time insights and predictions, LAHC decided to implement Brightly's Assetic asset register to help capture and visualise their data in one spot; and Brightly Predictor for scenario modelling to support their short- and long-term investment decisions

First, LAHC went about integrating numerous sources of data into the Assetic asset register. These include:

→ **Property Assessment Surveys** (PAS) on dwellings, buildings and common areas to store essential condition and defect data at a point in time

→ **Detailed Property Assessment Surveys** (DPAS), which cover sewers, stormwater, other building data and estate-related data

→ **Historical data** from the various surveys and inspections of each dwelling over time

The PAS and DPAS asset data is stored at different levels of hierarchy in the Assetic asset register, and then different dashboards are used to view the asset portfolios. DPAS are engineering inspections where they select around 25-35 complexes each calendar year. This helps them see how the condition is changing as it ages. LAHC staff assess this property condition data against historical maintenance data, allowing them to assess how quickly or slowly a property has aged or deteriorated.

LAHC uses the Predictor optimisation model to guide its day-to-day work by understanding the outcome that different decisions would have — such as varying the investment, treatment, or time the work is scheduled. It also uses Predictor to analyse its asset maintenance programs annually across its three regions, sharing the results with each area to ensure all programs work as designed.

Evaluating how maintenance impacts the condition and functionality of property assets is essential in determining whether the program planning and delivery is well structured, resourced, and managed.

Results

LAHC have found that Predictor is a great tool for everyday work and strategic planning, as it presents data in easy-to-understand visuals to show stakeholders the long-term impact different funding decisions can have. Recently, they used Predictor to seek additional funding from the NSW Treasury. Not only were they awarded the funding, but they also won an honourable mention for the business case in the 2022 Premier's Award.

Furthermore, LAHC use the dashboard functionality to quickly and easily see all their property management and maintenance information. The asset hierarchy tree is especially handy as it can be seen at different levels — by the agency managing the property, by estate, or by asset component, asset ID, category, and type — even the property's condition, such as the paint or windows can be seen in the asset register. When an asset is selected in the hierarchy tree, it takes the user to the location of the asset on a map, which is very useful when planning maintenance jobs.

Using data from the asset register, LAHC creates models in Predictor that enable it to assign different treatments for components at various intervention levels. LAHC knows that interior components are more important for tenant satisfaction and can pose as greater safety risks if not maintained, so with Predictor, they can set different intervention levels for interior repairs.

Predictor is also great for longer-term strategies such as 10-year planning. It is easy to ask questions of the data such as: What happens to the portfolio if LAHC does not receive any funding? If LAHC receives additional funding, where should that money be invested to have the greatest impact? Also, what would be the split between reactive and planned maintenance at different funding levels? These questions help to understand what decisions will lead to the best outcome, both in terms of the portfolio conditions score and value for money.

LAHC now benchmark its properties based on different criteria, allowing it to see which properties are well maintained and which are not. They can easily visualise where excellent properties can be found and where they need to spend more money via a simple map visualisation.

As LAHC manages an increasing number of social housing properties, the asset management system is critical to their ability to deliver best value outcomes and ensure the life of social housing properties is maximised to provide a safe and comfortable environment for more people in need in their communities.

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