

Ecomedes & Cloud Apartments

Scaling Sustainable Workforce Housing with Prefabrication



CASE STUDY



Ecomedes
Technology Provider

[Website](#)

2025

The Challenge

Affordable housing faces a dual crisis: it takes too long to build and often relies on conventional materials that fall short of sustainability standards. Cloud Apartments set out to tackle both challenges—speed and sustainability—by pioneering a prefabricated model for multi-family workforce housing.

The Approach

Cloud Apartments created a new methodology for assembling affordable buildings using prefabricated units. This process enables rapid on-site assembly and, critically, provides control over the actual materials used, not just what's specified on paper.

Partnering with Ecomedes, Cloud Apartments developed a green bill of materials (BOM) for the factory assembly process. Leveraging the Ecomedes platform, they screened materials across multiple sustainability factors to create a practical, category-level roadmap for product selection.

Using Ecomedes' filtering and comparison tools, the team could quickly assess how many available products met specific sustainability criteria within each of ten key product categories. This ensured the criteria weren't so restrictive that sourcing would be impossible, while still maintaining a high sustainability bar. The platform made it "very easy" to visualize compliance rates, refine criteria, and identify example products that met requirements across all categories.

CMF Connection

Ecomedes and Cloud Apartments applied elements of the Common Materials Framework (CMF) to ensure their BOM addressed all five impact areas: Human Health, Ecosystem Health, Social Health & Equity, Embodied Carbon, and Circularity.

Rather than treating the CMF as a compliance checklist, they used it as a guide for balanced decision-making across product categories—prioritizing different impact areas depending on

CMF IMPLEMENTATION TOOLKIT RESOURCES



[Technology Provider CMF Implementation Toolkit](#)



[2025 Data Ecosystem Report](#)



[CMF Prioritization v1.0](#)



[CMF Prioritization v1.0 Applicability Considerations](#)

available product data and material relevance. For example, embodied carbon considerations were emphasized for structural components, while human and environmental health took priority for finishes and interiors.

This approach produced a transparent, aggregated “green report card” that clearly communicates material attributes in plain language—helping investors, developers, and tenants understand impact without needing technical expertise.

Unique Aspects

- **Prefabrication Advantage:** Factory-built units give the project team full control over which materials are used, eliminating on-site substitutions.
- **Ten Product Categories:** Ten initial material categories were reviewed against CMF impact areas, with sustainability criteria refined through Ecomedes’ data insights. This established a scalable model for future prefabricated projects.
- **Investor Incentives:** Aligning with CMF principles strengthens the project’s positioning for green financing opportunities—linking sustainability with long-term investment value.
- **Accessible Communication:** The BOM and its report card format were designed for non-technical audiences, expanding sustainability literacy among investors, developers, and tenants alike.

Lessons in Progress

The first project in Los Angeles (Phase 1) revealed critical learning opportunities—certain products weren’t yet available to meet the Version 1 standards. The Phase 2 San Jose project, now approved for development, is refining the green BOM and the materials vetting process to address those gaps.

A key takeaway: Don’t get bogged down in data gathering. Start with tools that already integrate the CMF, like Ecomedes, to accelerate alignment and progress.

For the LA pilot, the team doesn’t yet have feedback on material implementation. However, the San Jose project—where Cloud Apartments is now both the technology owner and developer—will provide greater visibility into which vetted products are actually used, and how those choices affect outcomes.

Expected Outcomes

While metrics are still in development, the approach promises:

- Faster delivery of affordable workforce housing through controlled prefabrication.
- Lower embodied carbon and improved material health via vetted BOMs.
- Increased investor confidence and access to lower-cost green financing.
- A repeatable model for scaling sustainability in the affordable housing sector.

Future success will be measured by a combination of speed, cost, embodied carbon, and overall material health outcomes—tying sustainability directly to operational performance and affordability.

Key Takeaway

Ecomedes and Cloud Apartments are proving that sustainability, speed, and scalability don't have to compete. By embedding CMF principles into the prefabrication process and using Ecomedes' platform to guide material selection, they're creating a replicable model for sustainable workforce housing—aligning investor value with healthier, greener homes.

"By embedding the CMF into prefabrication, Ecomedes and Cloud Apartments are scaling sustainability in workforce housing—aligning investor value with healthier, greener homes."

— Kathleen Egan, Ecomedes

