

Assessment of Second-Life Reuse Value of Pixelframe’s Precast Concrete

Project Overview

Pixelframe is an MIT-born startup developing a modular precast concrete structural system designed for both up front material efficiency and construction in the circular economy. Their “smart kit of parts” allows for efficient assembly, disassembly, and reuse, reducing construction waste and embodied carbon while offering design flexibility. Pixelframe sought support from the Bard Consulting team on the following items:

1. Define the business model that best captures the long-term ROI of Pixelframe’s circular building elements.
2. Determine the business case of the reuse of Pixelframe’s precast concrete (pixels).
3. Identify Pixelframe’s ideal client.

Methodology

1. Conducted 21 stakeholder interviews within the building industry to understand building ecosystem, design, and building materials reuse.
2. Performed extensive desktop research on federal and state policies, building standards, case studies, and target client.
3. Conducted business model analysis that best captures long-term ROI of Pixelframe’s circular building elements.
4. Developed cost benefit analysis for second life pricing model.

Key Findings

