

# PROJECT PROFILE

## PLUSPUU HOMES



### DIGITAL TECHNOLOGY IMPLEMENTATION FOR WORKFLOW IMPROVEMENTS

Pluspuu Homes is a log home builder based in Fredericton, New Brunswick. They own the home building process from design to on-site general contracting services to provide their customers with a white-glove customer-centric experience from initial consultation to project construction and completion. The mission of the organization is to offer a unique alternative building solution in the residential home construction industry, and disrupt through technology, innovation, process, design, and a vertically integrated business model.

#### PROJECT BACKGROUND

Pluspuu Homes, as it exists today, leverages the expertise of external individuals and companies to meet the needs of the project delivery workflow. The design phase through to the manufacturing phase is completed by third-party companies, with limited use of advanced digital technologies and automated equipment to streamline the process. The goal of this project was to understand the current state of the business, map out the ideal future state, and identify digital technologies that could advance the organization in the desired direction. This would enable a vertically integrated organization and improve the processes through a digital transformation of the business to facilitate automation in their workflows. The ideal future state included the design and manufacturing processes moving in-house to Pluspuu Homes, so the project focused on technologies that could facilitate this shift and support automated manufacturing with CNC machinery.

#### RESULTS

The outcomes of this project were:

- A process map of current state workflow including process participants, stakeholders, technology, and data generated
- A summary of workflow improvement opportunities, including estimated time to implement, and a prioritization strategy
- Technology research for a digital design workflow to enable automation and the identification of software alternatives
- A comparative summary of software alternatives
- A process map of the potential future state of the workflow
- A summary of workflow and software implementation recommendations
- A summary of organization-level considerations for workflow changes
- A summary of next steps for Pluspuu Homes

#### RECOMMENDATIONS

To vertically integrate and prepare for the adoption of automated machinery, Pluspuu Homes needs to implement several changes to their current digital design workflow. Based on the results of the project, the OCRC has the following recommendations:

- Support of the design and manufacturing process should move internally to Pluspuu Homes
- Continued use of Revit as the BIM model authoring tool, with the option to further investigate the use of SEMA as a standalone BIM/CAD tool
- Implementation of SEMA as the CAD software to enable automated manufacturing