

TECHNOLOGY'S ROLE IN LEAN CONSTRUCTION

What Is Lean Construction?

It's a philosophy incorporating specific ideologies and principles into the design and completion of a construction project to maximize output.

Principles of Lean Construction



Identifying the customer's values



Defining the value stream



Reducing time, materials, cost, etc.



Eliminating waste



Achieving workflow processes



Determining optimal plan & schedule



Maximizing efficiency and profit



Improving continuously

Results of Lean Construction



- A study of general contractors revealed that — after implementing intensive lean construction methods — **73%** reported final costs were lower than the original budget.
- **80%** were able to finish on time or ahead of schedule.
- Additionally, **66%** said their projects were safer than previous projects.
- Utilizing cloud and mobile technologies in lean construction has shown to help drastically **reduce** waste.

Barriers to Implementing Lean Construction

- Limited management commitment
- Lack of motivation and leadership
- Undefined roles and responsibilities
- Insufficient or ill-suited tools
- Inadequate financing
- Deficient technology



Technologies Used in Lean Construction

- **Planning and documentation management software**
Standardizes workflows and minimizes time spent on nonessential planning, change requests and routine updates
- **Scaffold management software**
Provides real-time electronic management processes to better track resources, labor and materials for a project's scaffolding demands
- **Mobile communication apps**
Facilitates real-time data and information transference to minimize communication delays and complications

