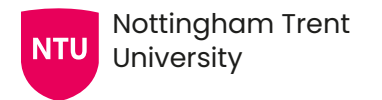




VISILEAN CASE STUDY

Implementation of Lean Flow Management in a Hospital Project
Wuhan Central Hospital Yangchunhu Campus

Academic Research Project by Nottingham Trent University with VisiLean



Project Overview

Wuhan Central Hospital Yangchunhu Campus is a modern general hospital with a construction area of around **230,000** sq.m. to host **1,000** beds.

The complexity of hospital projects often leads to a high degree of planning uncertainty and relatively late changes in the project life cycle, which contribute to significant interruptions in the project delivery workflows. With time being of the essence, any coordination and communication issues between stakeholders can significantly impact the timely delivery of such complex projects.

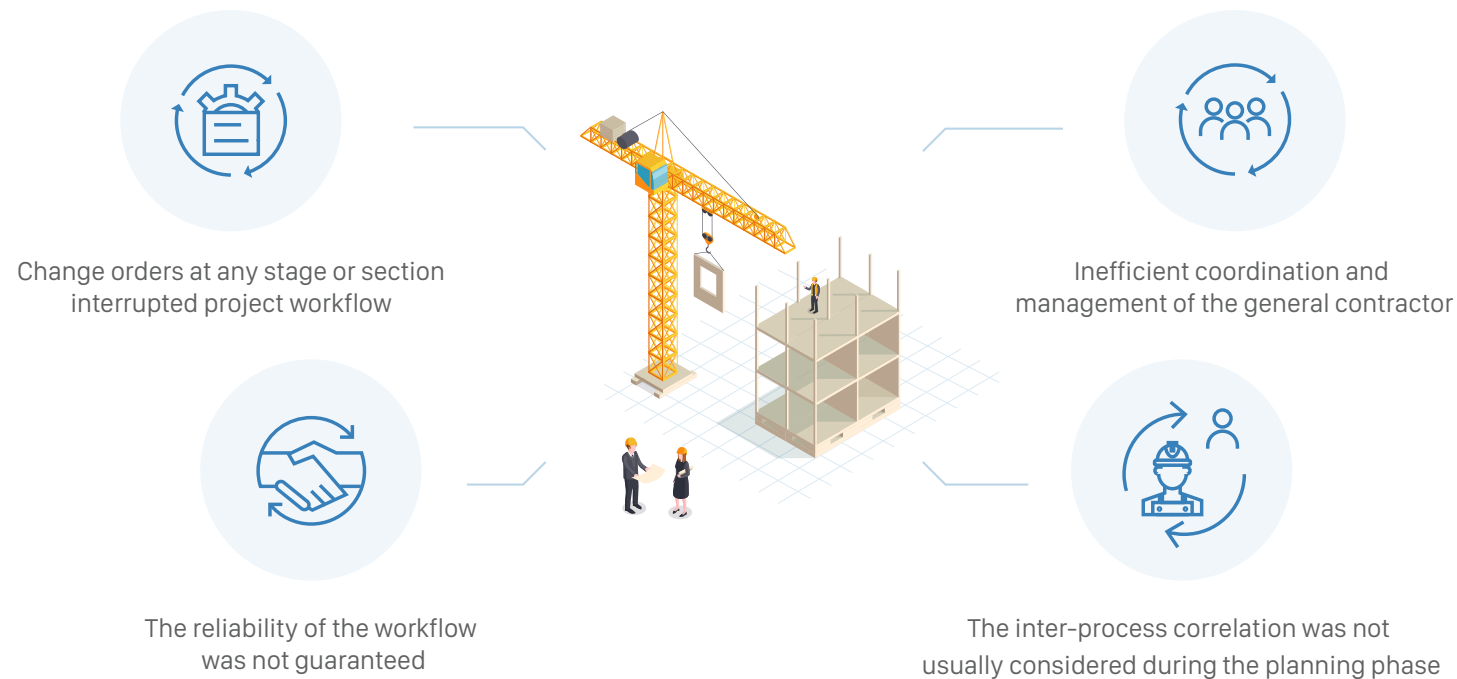
VisiLean was deployed on the project by the research team at Nottingham Trent University for 6 months, to test a digital method for the implementation of the Last Planner® System (LPS) on the project to help understand and overcome the challenges faced during the execution of the project



As-Is Process

The hospital project was managed according to conventional construction management practices that consisted of extensive manual workflows. Due to this, frequent changes in design and operational development were accounting for significant cost and schedule overruns.

The main bottlenecks in the current process:

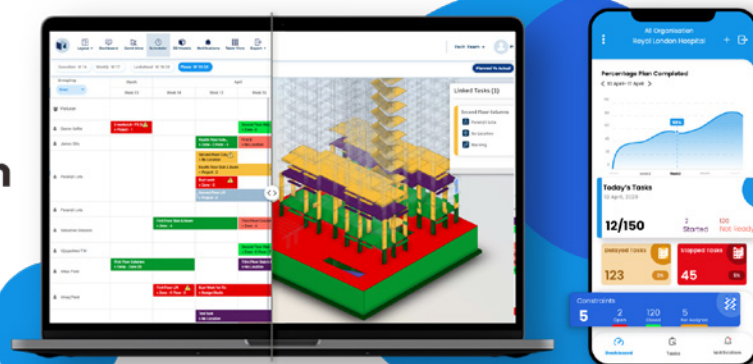


The need for a Digital Collaboration Platform

The Research Team at Nottingham University, in association with the General Contractor of the project, was looking for a production management system that could overcome the limitations offered by existing manual workflows to improve the reliability of the current planning process.

VisiLean being a production management system where planning, scheduling, and control operations can be performed on a single platform, was adopted to improve the efficiency of the construction management process and offer a unified communication platform for all stakeholders of the project.

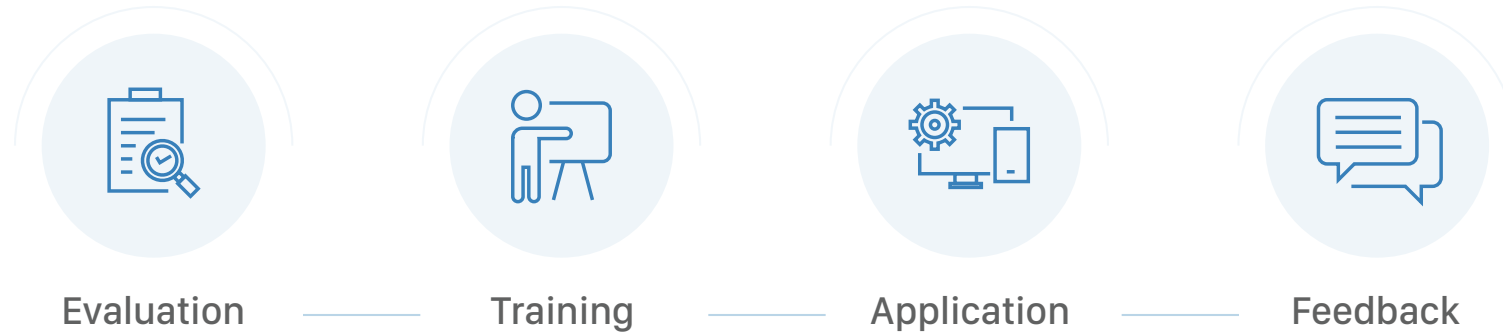
Plan



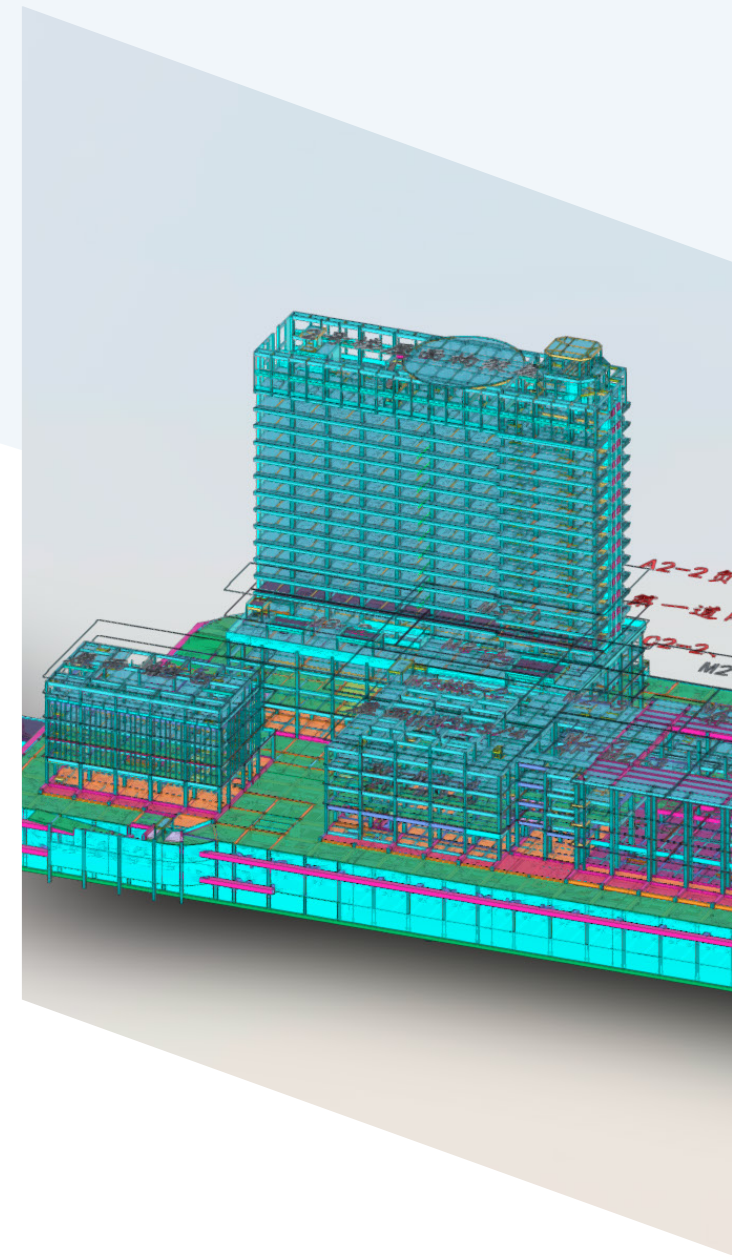
Do

Duration	Status	Location		Week 31	Week 32
	Started		+	[Bar]	
	Started	地下室	+	屋面工程	
	Stopped	地下室	+	门诊医技楼屋面工程	
	Stopped	地下室	+	住院楼屋面工程	
	Started		+	砌体抹灰工程	
	Started	地下室	+	医疗区地下室砌体及抹灰	
	Compl...	地下室	+	-3F...	
	Compl...	地下室	+		-3F...
	Compl...	地下室	+		-3F...
	Compl...	地下室	+		-2F...
	Started	地下室	+		-2F...
	Compl...	地下室	+		-2F...
	Compl...	地下室	+		-3F...
	Started	地下室	+		-2F...
	Ready	地下室	+		-2F...
	Started	地下室	+		-3F...

Implementation



The Research Team, along with VisiLean support, evaluated the existing project workflows and designed the pilot implementation plan. A total of 20 managers and operators were trained from the contractor's team to use VisiLean. Through the introduction of the web-based interface as well as the VisiLean Mobile App – LiveSite, the participants were able to quickly grasp the functions and tools offered by the production management system. The functionalities were then successfully aligned with the project workflows throughout the pilot implementation period.



Results



Improved Coordination

With the ability to raise constraints, the sub-contractors were able to hold each other accountable for resolving blockers in real time. This enabled efficient problem resolution and hence, better risk management.



Streamlined Documentation

Real-time progress updates allowed valuable information flow in the form of photos and other attachments to enable a better understanding of deadlines and issues on the ground to offer better visibility to the entire team.



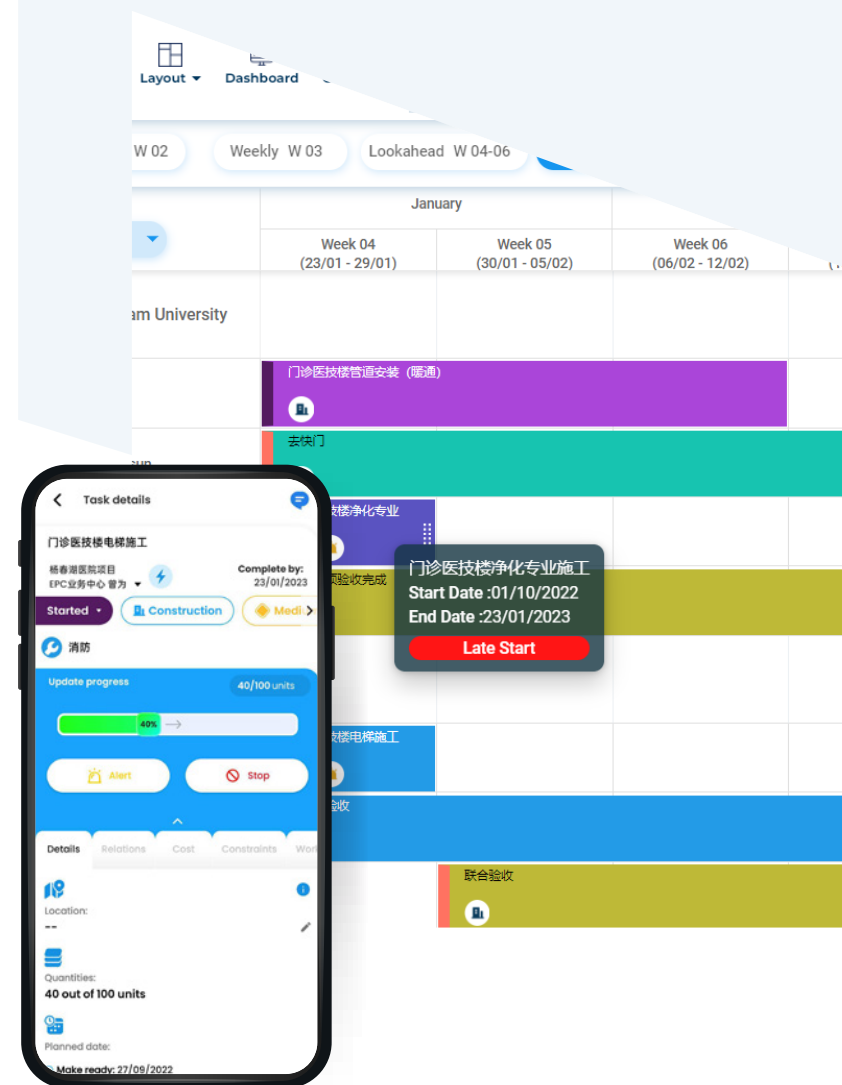
Project Control and Reporting

With the added advantage of customised dashboards, the team could review the information as needed to effectively deploy better project controls.



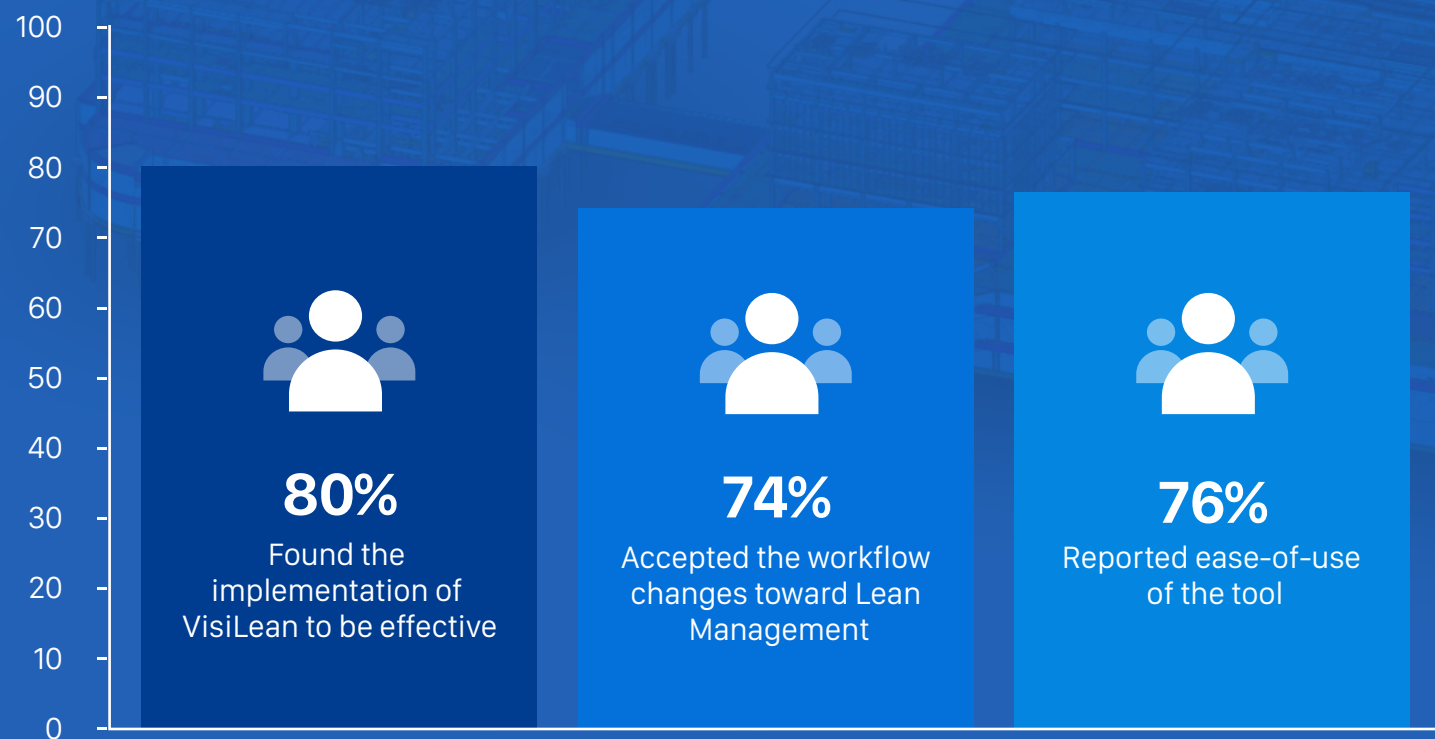
Better Plan Reliability

Look-ahead planning made the schedule more realistic as the plan moved closer to execution with fewer last-minute revisions. The on time start rate increased and rework was significantly reduced.



User Feedback

Post the completion of this pilot, a survey was conducted by the research team to get feedback from the contractor's team to evaluate the implementation of VisiLean on the project.



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