



# CREATE FLOW. PREVENT WASTE.

## HOW MUCH CAN WE SAVE IF WE WORK TOGETHER TO BOOST PRODUCTIVITY FOR THE ENTIRE PROJECT? NOW WE'RE TALKING LEAN.

It was the end of WWII and Japan was re-building. Taiichi Ohno was the new engineer working for Eiji Toyoda. At that time, Japanese manufacturing productivity significantly lagged the United States and Ohno's task was to fix it. He traveled to the United States and visited their auto factories. He had an opportunity to start with a clean slate so that's exactly what he did.

Ohno was impressed by American supermarkets where the consumer triggered production by removing goods from the shelves. Thus, the idea of pull was born. Ohno declared seven wastes: defects, overproduction, transportation, waiting, inventory, motion and processing. He then built a production system designed to systematically eliminate these wastes.

The need to empower the people doing the work was key for Toyota. As a result, the foundation for the last planner system was laid. In the construction business, the idea is that we get the last planners together in a room to do pull planning for a given scope of work. The objective of this method is to eliminate the seven wastes as a means of creating "flow" for the work.

Measuring the execution of the pull plan using planned percent complete is critical for continuous improvement. If we planned to be 80% complete on Friday and we're only 60% done, what did we learn? And how do we have to change the plan to get back on track?

When planned percent complete is below plan, we need to know why. What if we recorded the first installation with a GoPro camera? Then, the next morning, review the "game tape" with the crew and have THEM tell us how they can be more productive. These are called first run studies and we use them to drive continuous improvement on the job site.

The potential is immense. Take a \$20 million project for example. Let's assume that labour is roughly 40% of the number. If we increase average labour productivity by 20% we save \$1.6 million! Our productivity relies on your productivity. We all need to work together! That's why we pool costs with a simple mechanism to allow each of our partners to share in the savings.

When you hear the explanation for status quo, keep asking why. The solution lies in the disciplined pursuit of a better way to build. Lean construction is about rigor. And it's about process. Our own experience tells us that productivity gains in excess of 20% are very realistic. Nothing worth doing is easy. The rewards are great for those who persist.

