

How Toyotetsu America’s Onboarding Reduced the Use of Real Lift Trucks by 50% with Training Simulation

About Toyotetsu America

Toyotetsu America Incorporated (TTAI) was established in 1995 as a subsidiary of the global automotive parts supplier *Toyoda Iron Works* based in Toyota, Japan.



Its first plant was opened in Somerset, Kentucky as shown above.

Today, this is the largest plant, with over 1,000 employees, and serves as headquarters for all the Toyotetsu plants in Canada, the U.S.A., and Mexico.



TTAI’s Lift Truck Operations

TTAI operates more than 100 lift trucks to support their automotive parts manufacturing. As shown above, they are counterbalance lift trucks from Toyota Material Handling with four levers.



(The 4th lever changes the separation of the forks, since the loads to be moved come in many sizes.)

TTAI’s Forklift Personal Simulator

TTAI became a Simlog customer in 2018, with help from Simlog’s Value Added Reseller in Kentucky, Technical Training Aids.

As shown above, the Forklift Personal Simulator is equipped with a Simlog Operator Chair and four “big screen” displays: three provide a panoramic front-facing view.

The fourth display is positioned behind the Operator Chair, to teach new hires to turn their head when moving backwards but for this photo, the display was moved to the left side of the setup.

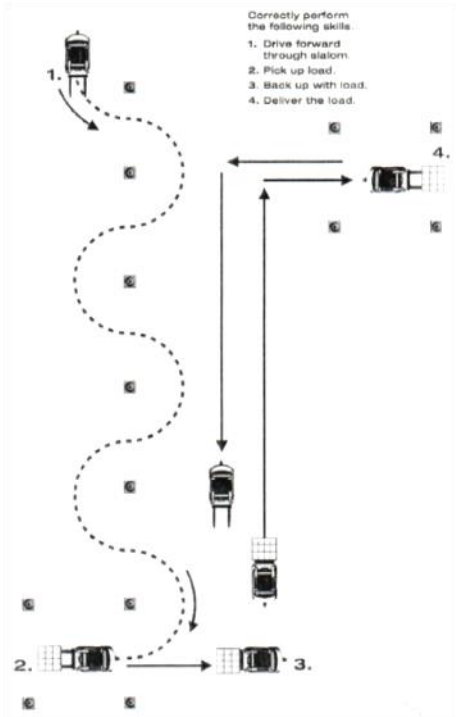
About Training (new) Lift Truck Operators

Ali Ait Benelmadani, TTAI’s Conveyance Regional Trainer, is responsible for lift truck operator training. (TTAI calls new hires “team members”.)

The onboarding program has three steps:

- 1. two days of classroom “orientation”
- 2. half-day of training simulation
- 3. half-day of “obstacle course” work at the controls of a real lift truck.

In particular, the “obstacle course” resembles the National Safety Council’s “Lift Truck Operator Assessment”, as shown here.



There is driving forwards and backwards through a “slalom” course defined by traffic cones, and picking up and placing standardized loads with stacking and unstacking.

Since 2018, about 600 people have been trained in this way.

The training simulation (step #2) is key to introducing lift truck operations in a way that’s completely safe (mistakes at the simulator only have simulated consequences). In this way, new hires learn to master the operator controls and prepare for the (real world) “obstacle course”, all the while gaining self-confidence in their newly-acquired skills.

According to Benelmadani,

“Simlog’s simulator is greatly useful, as it helps us reduce the time that it takes to get team members [new hires] familiar with the lift truck controls by more than 50%.

The simulator also makes it easier to cover all the safety concerns and visualize them from different angles, while explaining different key points in detail.

In general, I have noticed that team members are less anxious and more confident when they go on to operate our [real] lift trucks after their simulator-based training.”

In addition, when an incident occurs on the shop floor and the “root cause analysis” points to a lift truck problem, the Floor Manager can send the operator back to the Forklift Personal Simulator for “refresher” training, to help improve the operator’s skills.

Return on Investment

Here Simlog provides an estimate of TTAI’s return on investment.

We begin by combining typical industry costs associated with

- having the lift truck (leasing costs)
- putting the lift truck to work (space requirement costs, insurance costs, operating costs, maintenance and repair costs)
- having an instructor supervise the work (salary costs)

for an approximate total hourly cost of USD\$75.

In this way, using a real lift truck (instead of simulation) for the half-day (4 hours) on Day 2 of TTAI's onboarding program for each "team member" (new hire) would cost about USD\$300.

And now it's easy to see that the savings associated with onboarding 600 people would be $600 \times \text{USD}\$300$ per person = USD\$180,000 for an ROI of more than 300% (taking into account the simulator purchasing).

Other Benefits

Of course, there are many other kinds of benefits worth noting.

For example, making simulation a key part of lift truck operator training has enhanced TTAI's "brand perception" by helping to make the company appear "tech savvy", especially in the eyes of the younger people who are always considering other kinds of employment.

Of course making training simulation a *required* "stepping stone" to real lift truck work communicates another message, namely that TTAI is particularly concerned with *safety*, especially when training *new* operators.

More generally, in both cases, TTAI signals that as a forward-looking company, it is investing in its employees and their career advancement, both by helping *new* hires develop the necessary operating skills more safely, and by helping *experienced* operators improve their current operating skills.

Concluding Remarks

Based on the success at TTAI's' plant in Somerset, another Forklift Personal Simulator was purchased by a "sister" plant nearby in Owensboro, Kentucky. Operator training there will begin in 2023, after installation and setup in December 2022.

In this way, the two plants will be able to establish company-wide lift truck operator training standards for the simulation step when onboarding new hires.

To learn more,
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