DISTRIBUTION CENTER YARD SCHEDULING BOT

Bots helping humans to plan, manage and schedule yard shipments.

RPA OPPORTUNITIES

Many yards still use manual processes and controls. The lack of system integration between yard tracking and warehouse management solutions offers opportunities to improve yard efficiencies via automation.

Automated check-in. Automated bots can be triggered from activities at the gate to immediately enter and validate trailer information into the appropriate system of record.Using automation reduces the information lag and greatly improves data accuracy.

Optimized trailer slotting. Slotting a trailer requires evaluating multiple variables including available slots, projected arrivals and departures, projected time to dock, and travel distances. Automated bots can quickly analyze a multitude of factors and recommend the optimal slot for a trailer in the yard.

Automated communication and alerts. As events are recorded in a system of record, bots trigger notifications to dock, yard jockeys, gate personnel, and others.

Automated appointment scheduling. Requests for appointments can arrive via email, web portals, phone calls, and EDI. A common automation bot can format unstructured data, gather information from structured sources, and record appointments in the appropriate system of record. If no system of record for appointments exists, the bot can record the appointment in a common database for use in other automation streams.

OVERVIEW

*The process used to direct inbound / outbound trucks, shipments, personnel, and assets moving around an operational (distribution center, manufacturing facility, or warehouse) yard is called yard management. Despite growing complexities, **60% of companies still use manual processes** to manage their yards. Half of companies surveyed admitted automation of yard activities could reduce overall expenses by at least 5%.*

CHALLENGES

According to industry experts, a trailer shipment between facilities takes 3 days *on average*.

Over 80% of that time, that trailer is stationed in the yard in an idle state -- either empty or loaded. Effective communication between all parties is needed to move trailer assets and reduce the overall idle time.

There are numerous challenges associated with managing an operational yard.

Lack of trailer visibility. Trailers are often checked in to a facility at a guard house manually. The guard house logs this information and calls the center to inform when a trailer arrives. The time-lag between the arrival of the trailer, and visibility to staff making shipping decisions is often significant.

Lack of in-bound and out-bound visibility. The team managing the yard needs to be up-to-date on incoming trailers, trailers needed for fulfillment, and trailers loaded that are ready for shipment (out-bound). Delayed information leads to congestion at the gates, slower fulfillment, and shipping delays.

Asset utilization. The trucks and their assigned drivers used to pull and park trailers are called "yard jockeys." Trailer spaces in a yard are limited. To optimize efficiency and reduce costs, yard jockeys must operate on the most up-to-date information and be aware of the location of requested trailers.

BUSINESS DIFFERENCE

Platform agnostic, nuTAN automates all aspects of yard scheduling including: significantly reducing processing time; increasing visibility and communication; reducing labor; and improving overall transit times. PLUS...nuTAN helps bridge the gap between the YMS and your warehouse management system (WMS).

TYPICAL PROCESS

The yard scheduling process is depicted in this diagram.

Yard scheduling focuses on the balance of dock schedules and two types of available trailers-- those containing product needed to fulfill orders, and empty ones to be filled and moved to the next location (warehouse or store). Arrivals / departures to the yard are verified at the gate. Arriving trailers are assigned a "slot" where they sit until needed. Often, shipping companies use yard appointments to ensure a trailer has an available slot before arriving.

Distribution center staff is required to look at available slots, anticipate dock demands, plan departures, and plan arrivals to make a slotting decision.

Demand flow into the distribution center is verified against available product (both inside the facility and on the yard). If products from the yard are needed, the yard staff locates the trailer and instructs a yard jockey to move it to the appropriate bay for receiving. Additionally, empty trailers are pulled to be loaded for outbound shipments. Once filled, they are parked and an outside carrier is notified to pick-up the trailer for delivery.
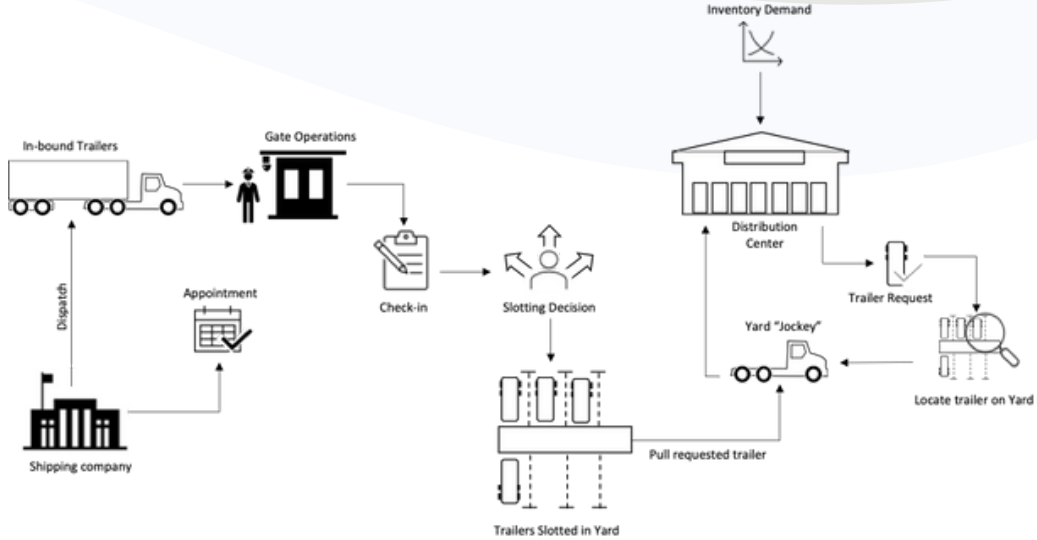
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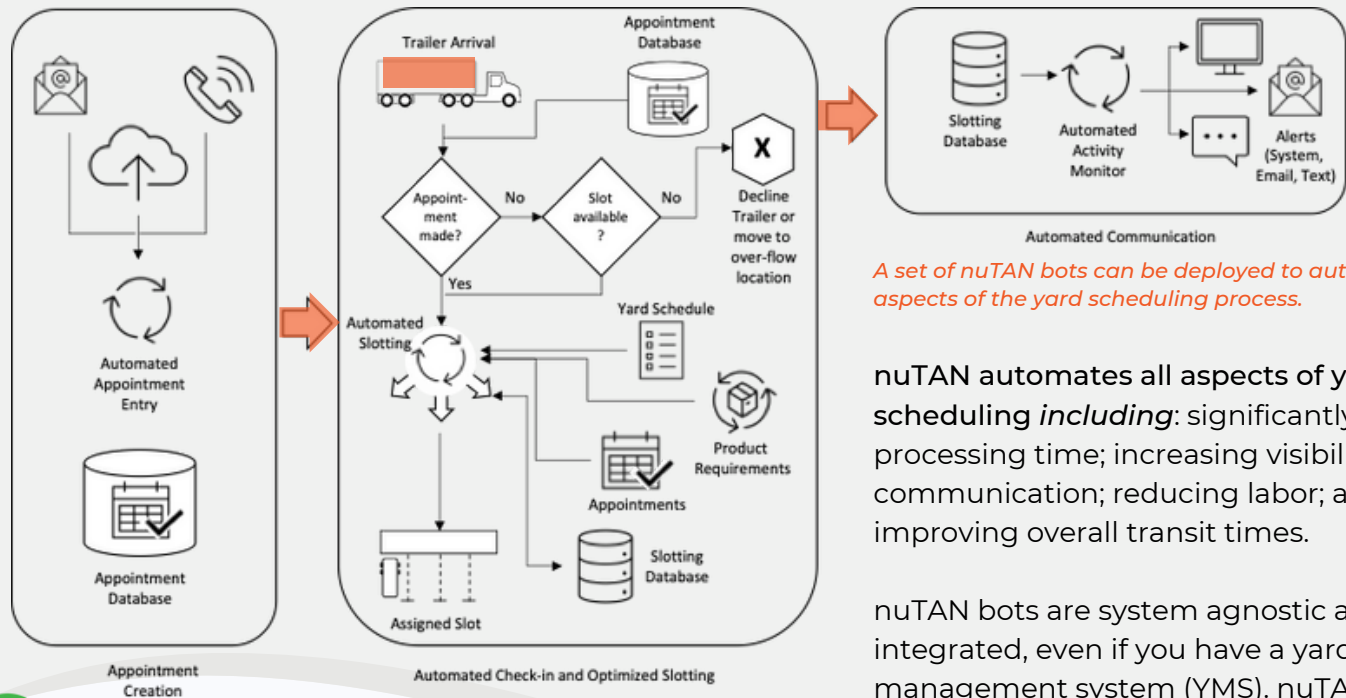
A set of nuTAN bots can be deployed to automate all aspects of the yard scheduling process.

nuTAN automates all aspects of yard scheduling *including*: significantly reducing processing time; increasing visibility and communication; reducing labor; and improving overall transit times.

nuTAN bots are system agnostic and easily integrated, even if you have a yard management system (YMS). nuTAN helps bridge the gap between the YMS and your warehouse management system (WMS).

"For over 11 years, NCS Partners has been improving supply chains and troubleshooting challenges for Global compaines and Fortune 500 businesses. We have developed other productions... and our most recent, nuTAN RPA, offers solutions that support our dedicated innovation to each company's success.

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