CONSUMER
BRANDS
ASSOCIATION

IS LOGISTICS READY FOR CONTACTLESS PICKUP & DELIVERY?

Ensuring health, safety and efficiency through technology and collaboration

THE MISSION

Through collaboration with the Consumer Brands Association Contactless Pickup and Delivery Task Force, create an industry standard that enables shippers, carriers, 3PL's, and retailers to execute contactless freight pickup-and-delivery workflows.

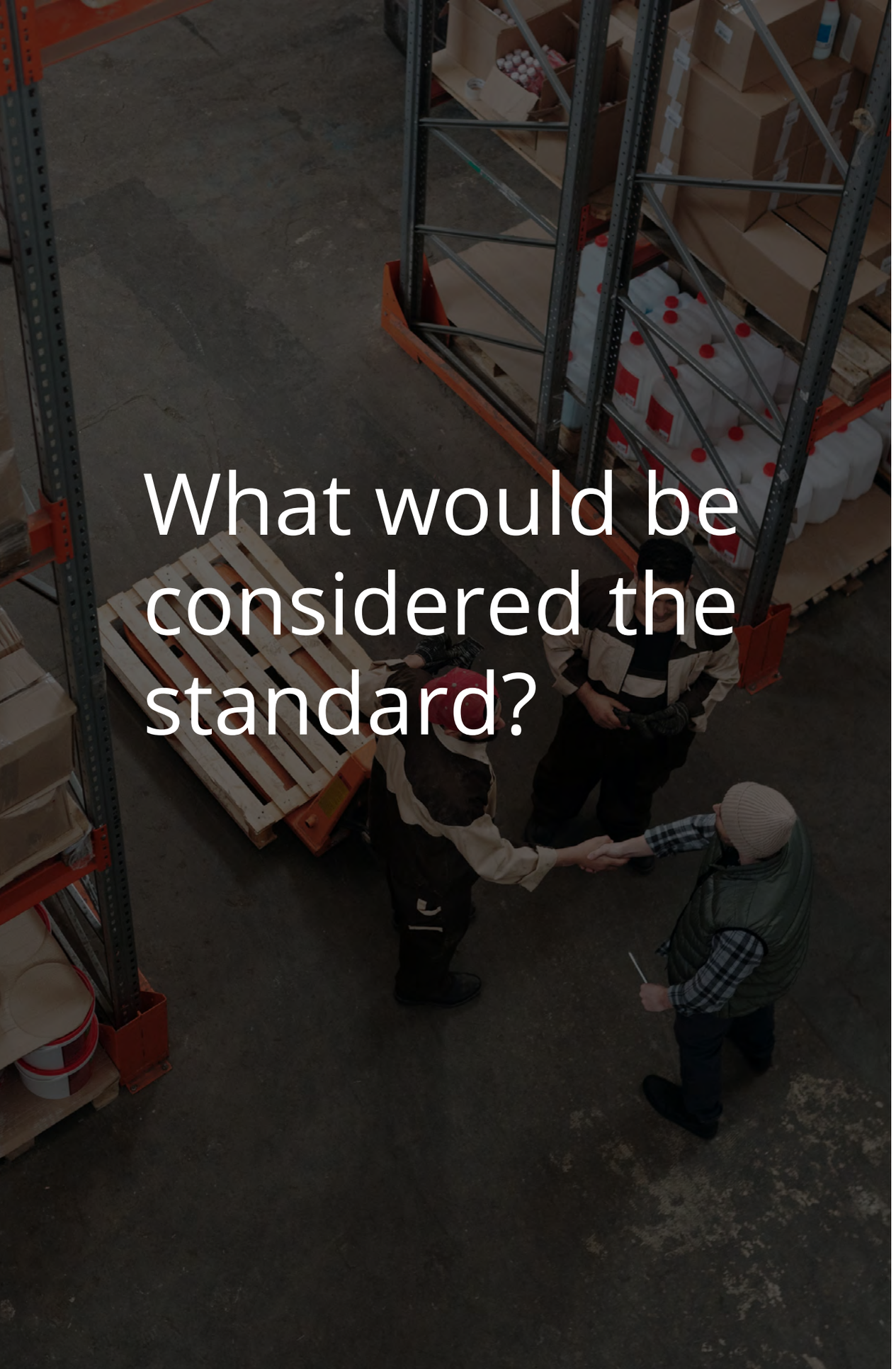
COYOTE

accenture

CONSUMER BRANDS ASSOCIATION

GS1

vector



What would be considered the standard?

A standard would consist of two parts:

1) A guideline for a set of processes that shippers, carriers, 3PLs, and retailers would implement to streamline operations for the safety of all.

2) A combination of information, data, and technology requirements for how to implement a solution that can support the process guidelines.

OVERVIEW

The global COVID-19 pandemic has posed new and unforeseen challenges to supply chains around the world, prompting carriers, shippers, and retailers to adjust processes and implement new protocols to ensure the health and safety of workers while keeping the flow of goods and services moving. This evaluation of processes and how to conduct business has also prompted renewed consideration of how to accelerate technology deployments, collaborate with trading partners, and think outside-the-box to enhance efficiency and ensure on-shelf-availability during a period of unprecedented demand for CPG products.

The Consumer Brands Association, Coyote, Accenture, and Vector convened 25 shippers, 19 carriers, and eight retailers, along with representatives from CSCMP and GS1, to develop a contactless pickup and delivery standard and to pilot a working technology solution. The learnings of this Contactless Pickup and Delivery Task Force will be shared at the end of the project to enable rapid adoption of contactless delivery, at scale, based on input from many of the most important voices in the supply chain. The feedback granted through the task force process should empower the development of contactless solutions, driven by the task force standards and the understanding of what is needed from a technology solution to meet the needs of diverse supply chain stakeholders.

The first step in the Contactless Pickup and Delivery Task Force was to convene a series of breakout sessions with participating companies. During these sessions, members discussed the live outbound facility process and what they were looking for from the project.

Based on the breakout sessions, it is evident that a standard process is feasible, and that there is an overwhelming interest in leveraging technology to enable a contactless workflow both for safety and efficiency reasons. While there are a wide range and various levels of technology adoption across logistics partners, due to the ELD mandate, every carrier should have the minimum technology requirements to support a contactless pickup and delivery standard. However, it will require systemic participation and collaboration across all supply chain partners to drive industry-wide standardization.

The objective of this position paper is to engage volunteers from the task force to participate in a pilot or series of pilots. The outcome of these pilots is to define the workflows and solution requirements for a standard contactless pickup and delivery process.

BENEFITS ACROSS THE SUPPLY CHAIN

CLEARER

Improve visibility and collaboration across shippers, carriers, receivers

BETTER

Less errors, rework and catch discrepancies earlier

SAFER

Reduce health and safety risks of facilities shutting down

FASTER

Get drivers in & out to maximize HOS and meet delivery deadlines

SPECIFIC BENEFITS

SHIPPERS & 3PLS

Minimizes physical interactions between warehouse employees and drivers

Eliminates the exchange of physical paperwork between logistics partners

Enables back-office teams to work remotely from the safety of their homes

Provides real-time visibility into pickups and deliveries across supply chain partners

CARRIERS

Drivers get in and out of facilities faster, less dwell time

Drivers spend less time on paperwork and more time on the road

Back office teams can invoice their customers faster to improve cash flow

Digitize and turn any document into a custom workflow; save, file and search for it later

RETAILERS

Minimizes physical interactions between warehouse employees and drivers

Gain real-time notifications when loads are picked up and ETAs for drop off

Allows for better resource planning, know what is coming in and when

Enables back-office teams to work remotely from the safety of their homes

CHALLENGES

CARRIERS

Wide range and various levels of technology across carriers

Drivers do not want to download or learn how to use another app, especially owner-operators

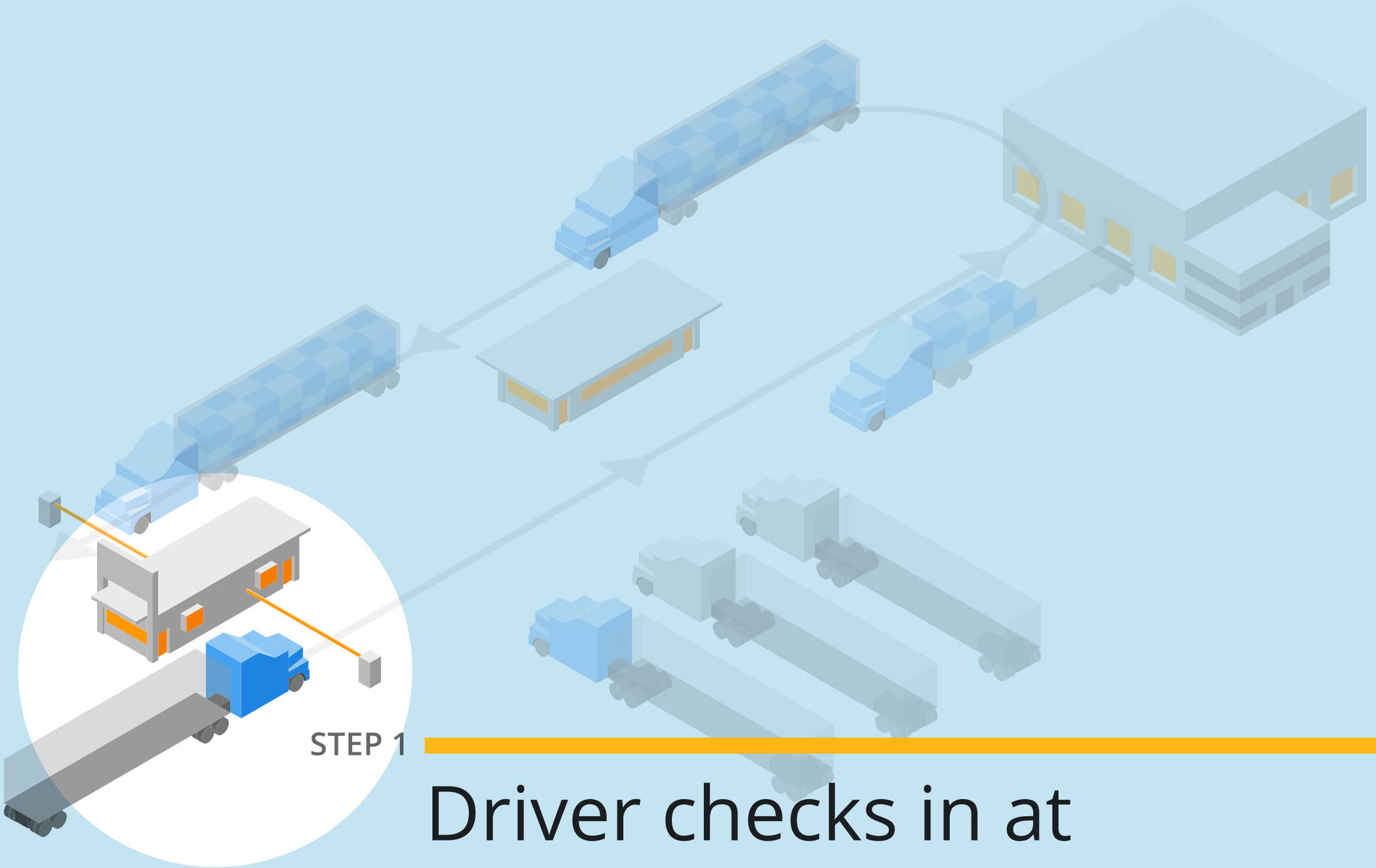
Weighing the benefits of an eBOL solution vs the cost of implementation/adoption

Current regulations prohibit the digitization of hazmat documents

Breaking down the five steps of a typical outbound live load process

Based on GS1 guidelines for standardization, each step of the outbound live load process will be documented in the following format:

- Questions raised by the task force members
- Critical tracking events (CTE) - events that must be recorded in order to allow for effective traceability
- Key data elements (KDE) - pieces of information that are mapped to each critical tracking event
- Minimal technology requirements - the minimum technology required to process the CTEs and KDEs
- Process options



STEP 1

Driver checks in at the guard shack

QUESTIONS RAISED BY TASK FORCE MEMBERS

How do we solve for shippers that operate in remote locations where WiFi and cell service is limited or non-existent?

In this situation, the facility would have to provide WiFi for its carriers.

Is there the ability to capture the QR code earlier in the life of the load to start collecting information in earlier stages of the process?

Instructions for downloading the app and training can be done well in advance for routine pickups and deliveries in a phased rollout approach.

What if our facilities don't have a guard shack?

This process could be managed at the welcome center or by the warehouse personnel.

At what point are the drivers considered checking in? If they are first in line vs 15th in line, what does this do for the guard shack?

This would be a decision each shipper would have to make for their facility. The platform could support either, the vendor could configure the system to support different processes at each facility.

During the check-in process, the driver needs to state what they are delivering. How is this verified?

In the beginning, as this rolls out, the process that is happening today will remain the same. As adoption spreads, the BOL can be shared with the facility in advance to validate the freight that is coming in.

CRITICAL TRACKING EVENT

Driver pulls up to facility's security checkpoint

Based on the breakout session conversations:

100%

of companies have a guard check-in process at some their facilities

61%

of companies have an unmanned check-in process at some of their facilities

45%

of companies need a way to verify what is in the trailer before it enters the facility

28%

of companies expressed interest in moving to an unmanned check-in process

Key Data Elements

Based on the breakout session conversations, these would be the required pieces of information needed at Step 1 in the process.

- **Shipment Identification** (BOL, order, load, etc.)
- **Appointment Information** (If applicable)
- **Carrier Identification** (MC, DOT, SCAC)
- **Tractor / Trailer Numbers**
- **Driver Identification** (Potential privacy concerns)
- **Driver Contact Information** (Potential privacy concerns)

Disclaimer Percentages are based on the total number of companies who shared information at this step in the pickup and delivery process. Percentages could be higher, but only the companies who shared information were included in the calculation.

USE CASES, PROCESS OPTIONS AND TECHNOLOGY REQUIREMENTS

CARRIER USE CASE

As a driver, I need to be able to identify the shipment to be picked up by providing an order number, BOL number, or appointment information in addition to carrier and driver contact information.

SHIPPER USE CASE

As a guard, I need to be able to review at arrival the shipment information, carrier information and driver contact information.

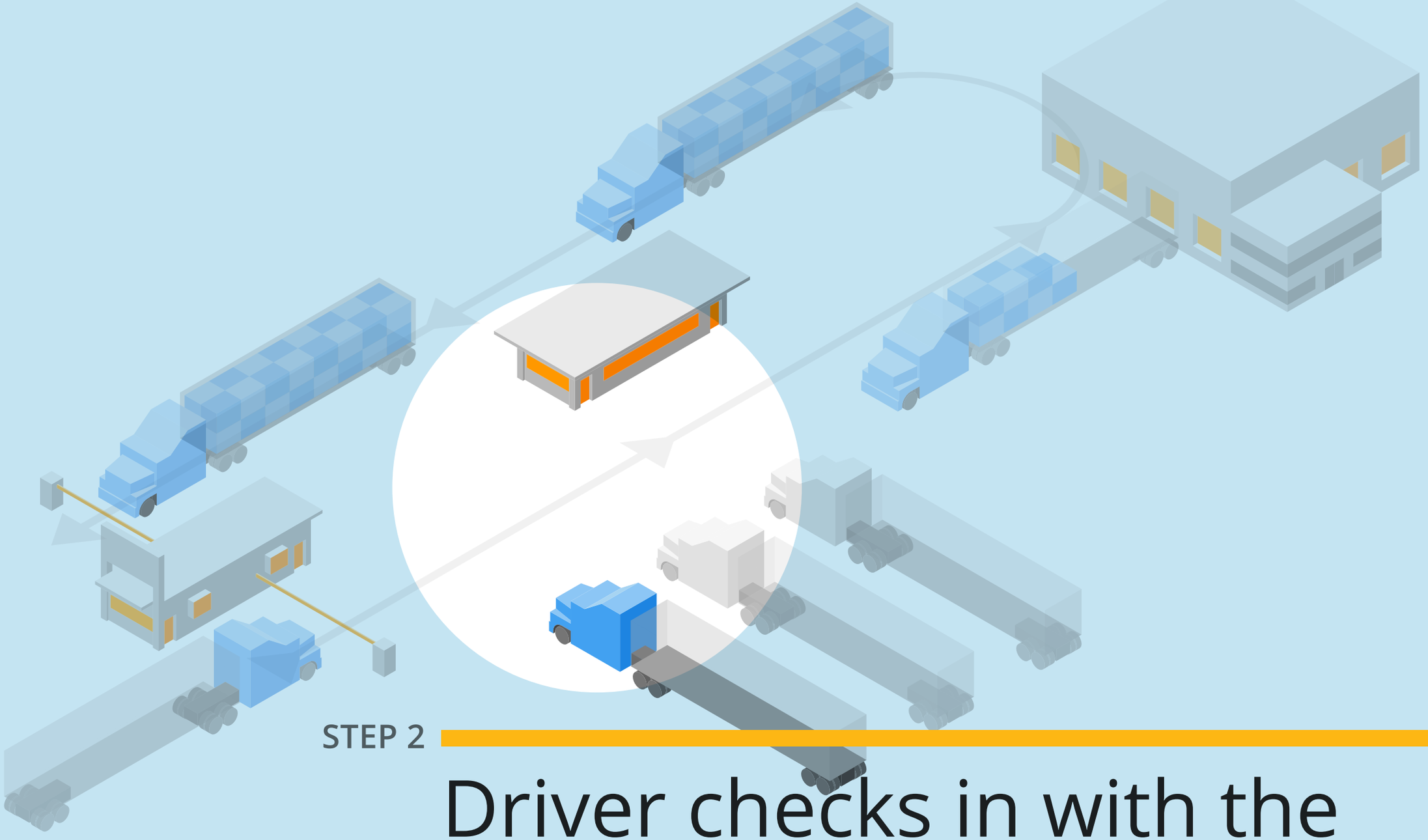
PROCESS OPTIONS

There are a few ways of managing the check-in processes which a contactless pickup and delivery platform would have to support.

- Manned check-in process starts at a gate
- Unmanned check-in process starts in the yard
- Geofencing check-in before arrival for manned or unmanned gates

TECHNOLOGY REQUIREMENTS

The guard shack would require a smartphone or tablet. The driver would need a smartphone, tablet, ELD, or telematics device. The contactless pickup and delivery platform would need to integrate with any TMS, WMS, or be able to read the data off a PDF or paper BOL. If the facility is in a rural area the shipper will need to provide WiFi for the carriers.



STEP 2

Driver checks in with the shipping clerk at the welcome center

QUESTIONS RAISED BY TASK FORCE MEMBERS

What if there is no door to be assigned or appointment time was pushed out?

The welcome center or the warehouse can communicate directly with the driver through the app once the driver has checked in.

We have tubes similar to bank teller drive-throughs, how would the software support this process?

The solution would ultimately replace the tubes.

How do you handle shift changes between personnel?

The solution would have to keep track of the communication between drivers and personnel so that if anyone needs to step in or if there is a transition, the new personnel will have immediate context.

CRITICAL TRACKING EVENT

Driver checks in at the welcome center to receive load/unload instructions

Based on the breakout session conversations:

100%

of companies have a welcome clerk assignment process at some of their facilities

73%

of companies physically exchange paper between the driver and welcome clerk

64%

of companies expressed interest in reducing the wait time to assign drivers to doors

Key Data Elements

Based on the breakout session conversations, these would be the required pieces of information needed at Step 2 in the process.

- **Pickup or Delivery Method** (Trailer Drop/Hook, Live Unload/Load)
- **Location Assignment** (Dock door or yard location)
- **Trailer Identification** (For trailer hook scenarios)
- **Shipment Identification** (BOL, order, load, etc.)

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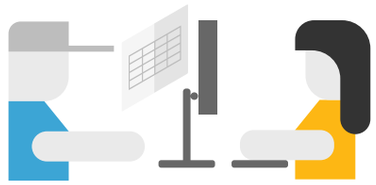
USE CASES, PROCESS OPTIONS AND TECHNOLOGY REQUIREMENTS



CARRIER USE CASE

As a driver, I need to be able to identify the shipment to be picked up and obtain the loading instructions such as dock door or yard assignments.

SHIPPER USE CASE

As a shipping clerk, I need to be able to review the submitted information and provide the loading instructions.

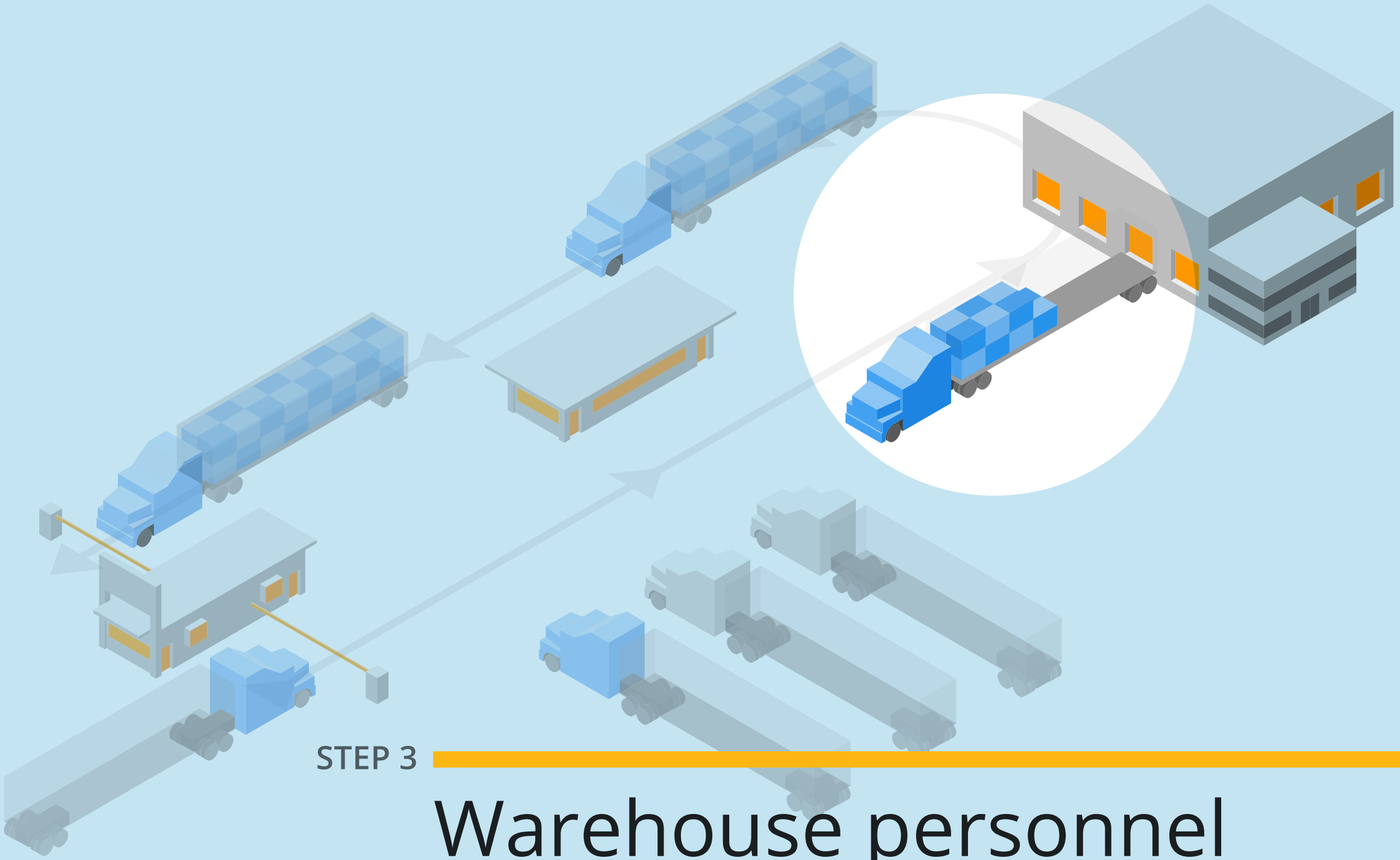
TECHNOLOGY REQUIREMENTS

The shipping clerk would require a desktop, laptop, or tablet. The driver would need a smartphone, tablet, ELD, or telematics device so that communication between the clerk and the driver can happen digitally. If the facility is in a rural area the shipper will need to provide WiFi for the carriers.

PROCESS OPTIONS

There are a few options for assigning door or yard locations.

- Driver remains in the truck, communication between clerk & driver happens through app
- If there is no guard shack, the shipping clerk would handle check-in and door assignment through the app
- If shipping clerk is unavailable, door assignment would be handled by warehouse personnel through the app



STEP 3

Warehouse personnel drops off pick sheet

QUESTIONS RAISED BY TASK FORCE MEMBERS

As we build a pallet, would it be possible to share pallet information with the carrier?

Yes, you can document the license plate information from the pallet.

How do we manage the packing list and the barcode on the pallet so when they receive the freight they can verify everything is there?

The solution would have to capture the barcode information from the packing list and the receiver can then scan the barcodes from the pallets using the app to make sure that the barcodes match.

Where do you document and capture the temperature of the trailer in the app?

This can be done by taking a picture of the control panel or entering the information through the app which will automatically timestamp the event.

How do we verify food safety compliance?

The solution would have to capture photographs of the temperature tales or monitoring information at pickup and unload for bulk or liquid transport, the solution needs to capture and document tank washes.

CRITICAL TRACKING EVENT

Truck loading followed by generated BOL based on warehouse pick sheet

Based on the breakout session conversations:

100%

of companies need a 3-way match to verify the seal to the BOL and notify the shipper, carrier, and receiver that the document has been originated

42%

of the companies need a way to verify the temperature of the trailer at pickup and delivery

Key Data Elements

Based on the breakout session conversations, these would be the required pieces of information needed at Step 3 in the process.

- **Shipment Information** (Number, trailer, status, date)
- **Bill of Lading** (Document and number)
- **Pick Sheet** (Document and number)

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USE CASES, AND TECHNOLOGY REQUIREMENTS

CARRIER USE CASE

As a driver, I need to be able to verify the Shipment Number, Shipment Trailer Number as well as obtain the BOL, Pick Sheet, and other shipment information.

SHIPPER USE CASE

As a shipping clerk, I need to be able to review and update the shipment information and provide the BOL, Pick Sheet, and other shipment details.

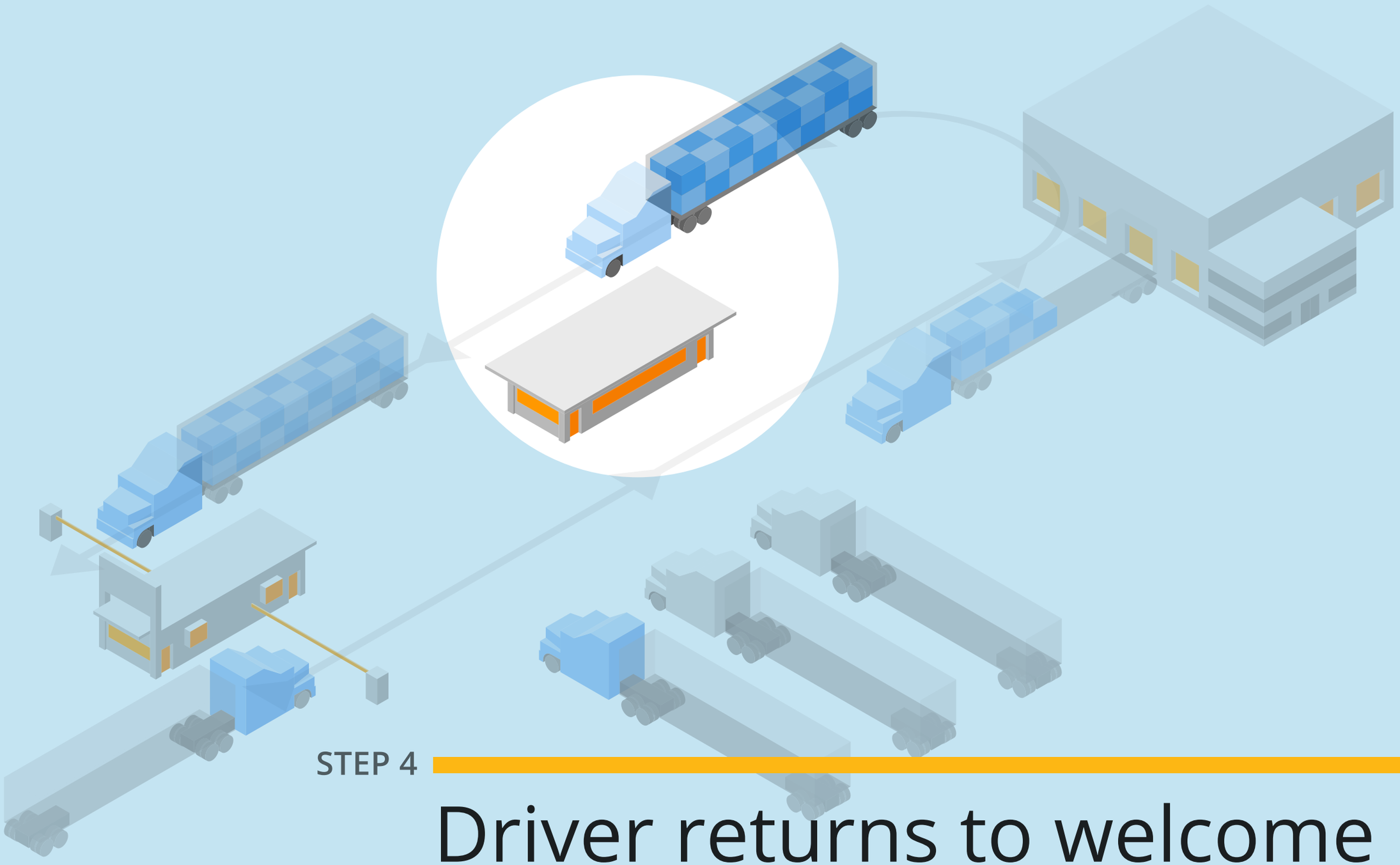
TECHNOLOGY REQUIREMENTS

The shipping clerk and warehouse personnel requires a desktop, laptop, or tablet. The driver would need a smartphone, tablet, ELD, or telematics device. The platform will integrate with the TMS or WMS to digitize the pick sheet and BOL for transmission to driver. If the facility is in a rural area the shipper will need to provide WiFi for the carriers.

PROCESS OPTIONS

There are different ways for managing the eBOL origination process which a contactless pickup and delivery platform would have to support.

- After the truck has been loaded, the driver would remain in the truck while warehouse personnel share the pick sheet information digitally with the welcome center. The welcome clerk would then send the eBOL to the driver. Then the driver would go back to the welcome clerk to get the seal.
- After the truck has been loaded, the warehouse personnel would originate the eBOL, add the seal to the trailer, verify the seal and BOL match and then share the information with the driver via the app - consolidating steps 3 and 4 into one process.



STEP 4

Driver returns to welcome center to pick up BOL and trailer seal

QUESTIONS RAISED BY TASK FORCE MEMBERS

Can shippers take pictures while loading the freight to document each item or SKU level detail while it's being loaded?

Yes, this is possible but if they are doing it for every SKU it could take a while to document.

Every shipper has its own format for a BOL which could be different at each location, so how does your system know how to read from the various formats to normalize and standardize the information?

Whether the BOL is in paper or PDF form, the app can read the information off of it and extract the data and populate it in the correct fields. This can be done with no code nor EDI or API integration.

In regards to safety, how does the driver know when the loading begins and ends?

Vector can send the driver a notification letting them know that loading has started. When loading has completed, the BOL is transmitted to the driver. The driver gets notified via the mobile application that the BOL has been transmitted to them through an in-app notification and text message or email.

CRITICAL TRACKING EVENT

eBOL transmitted to driver, driver picks up trailer seal

Based on the breakout session conversations:

33%

of companies, the driver does not have to return to the welcome center, the documents are printed and seals are provided at the warehouse.

Key Data Elements

Based on the breakout session conversations, these would be the required pieces of information needed at Step 4 in the process.

- **Trailer Seal Number**
  (As printed on BOL)
- **Trailer Seal Photo**
- **Trailer Seal Photo Number**
  (OCRed via mobile app)
- **Trailer Seal Verification**
  (Check for value match)

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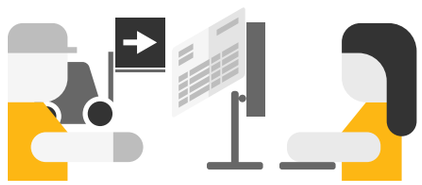
USE CASES, AND TECHNOLOGY REQUIREMENTS



CARRIER USE CASE

As a driver, I need to be able to obtain the Trailer Seal and verify that the Seal Number matches the number printed on the BOL.

SHIPPER USE CASE

As warehouse personnel, I need to be able to provide the Trailer Seal, verifying the Seal Number matches the number printed on the BOL and seal the trailer.

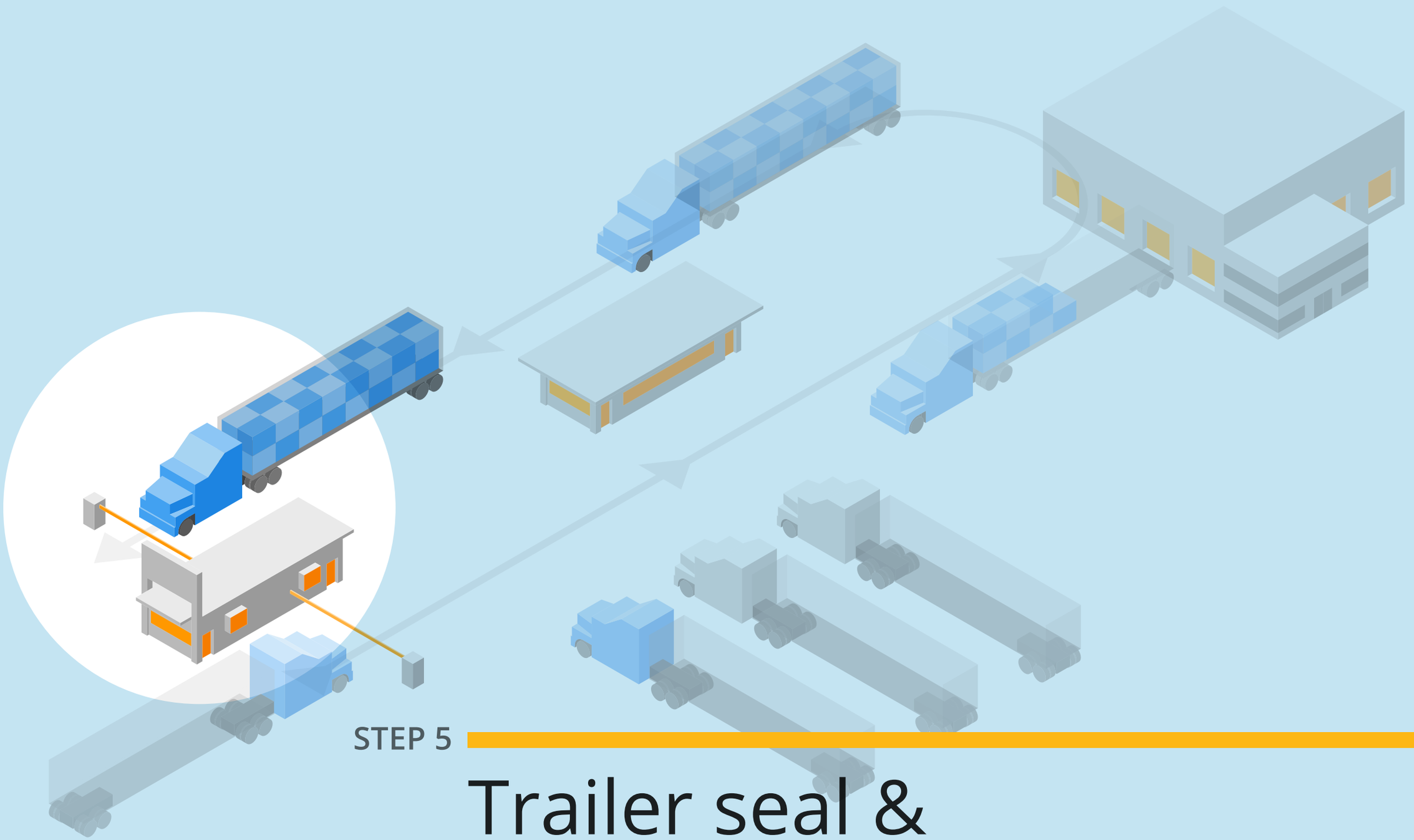
TECHNOLOGY REQUIREMENTS

The shipping clerk and/or warehouse personnel would require a desktop, laptop, or tablet. The driver would need a smartphone, tablet, ELD, or telematics device. The platform would need to integrate with the TMS or WMS to digitize the pick sheet as well as originate the eBOL so it can be transmitted to the driver.

PROCESS OPTIONS

There are several different ways to manage the transmission of the eBOL and trailer seal handoff which a contactless pickup and delivery platform would have to support.

- Warehouse personnel sends pick sheet information digitally to the welcome center. The welcome center would send the eBOL to the driver as well as notify the back offices of the carrier and receiver that the documents have been originated. The driver would still have to get out of the truck to pick up the trailer seal from the welcome center.
- Warehouse personnel sends pick sheet information digitally to the welcome center. The welcome center would send the eBOL to the driver as well as notify the back offices of the carrier and receiver that the documents are available. The driver would remain in the truck and the warehouse would seal the trailer.
- Warehouse personnel creates the pick sheet information digitally, originate the eBOL and send it to the driver as well as notify the back offices of the carrier and receiver that the documents are available. The driver would remain in the truck and the warehouse would seal the trailer. This would consolidate Step 3 and Step 4 into one step.



STEP 5

Trailer seal & security check out

QUESTIONS RAISED BY TASK FORCE MEMBERS

Can we send an ETA message to the receiver about the shipment being picked up and when they should receive it?

Receivers can be notified automatically as transactions happen or updates are made to the eBOL, all with timestamps.

How does ASN come into play?

In addition to the ASN that is currently being sent, you can send receivers contextual information about the load including the BOL, and trailer seal photograph.

How does this support CTPAT compliance?

The system will make it easier for auditing, verification, provide eSignature timestamps and contextual pictures, making it easier to triage issues.

What happens when the seal is broken in transit?

The driver can document that the trailer seal is broken in-transit and provide a reason why, e.g. roadside inspection. This information will remain associated with the shipment

What happens if the seal and BOL do not match upon drop off?

We can provide an alert notifying all the relevant parties via email and/or text message. That information is associated with the shipment and can always be referenced at a later date.

How are OS&D's reported?

OS&D is reported through the app. Simply take a picture and use voice to text to annotate the issues.

CRITICAL TRACKING EVENT

Sealing of the trailer followed by driver checking out with security guard

Based on the breakout session conversations:

70%

of companies have a mix of personnel attaching the seal and verifying that it matches the BOL

36%

of companies do not want anyone but the warehouse personnel handling the seal

18%

of companies require CTPAT compliance

Key Data Elements

Based on the breakout session conversations, these would be the required pieces of information needed at Step 4 in the process.

- **Trailer Seal verification**
- **Date and time stamp of exit**
- **Load / Tarping Photos** (If applicable)
- **Scale Out** (If applicable)

Disclaimer Percentages are based on the total number of companies who shared information at this step in the pickup and delivery process. Percentages could be higher, but only the companies who shared information were included in the calculation.

USE CASES, AND TECHNOLOGY REQUIREMENTS

CARRIER USE CASE

As a driver, I need to be able to exit the facility after completing the delivery or pickup.

SHIPPER USE CASE

As a guard, I need to be able to verify the Trailer Seal, take load / tarped photos, and record the scale-out, date and timestamp of the driver's check out.

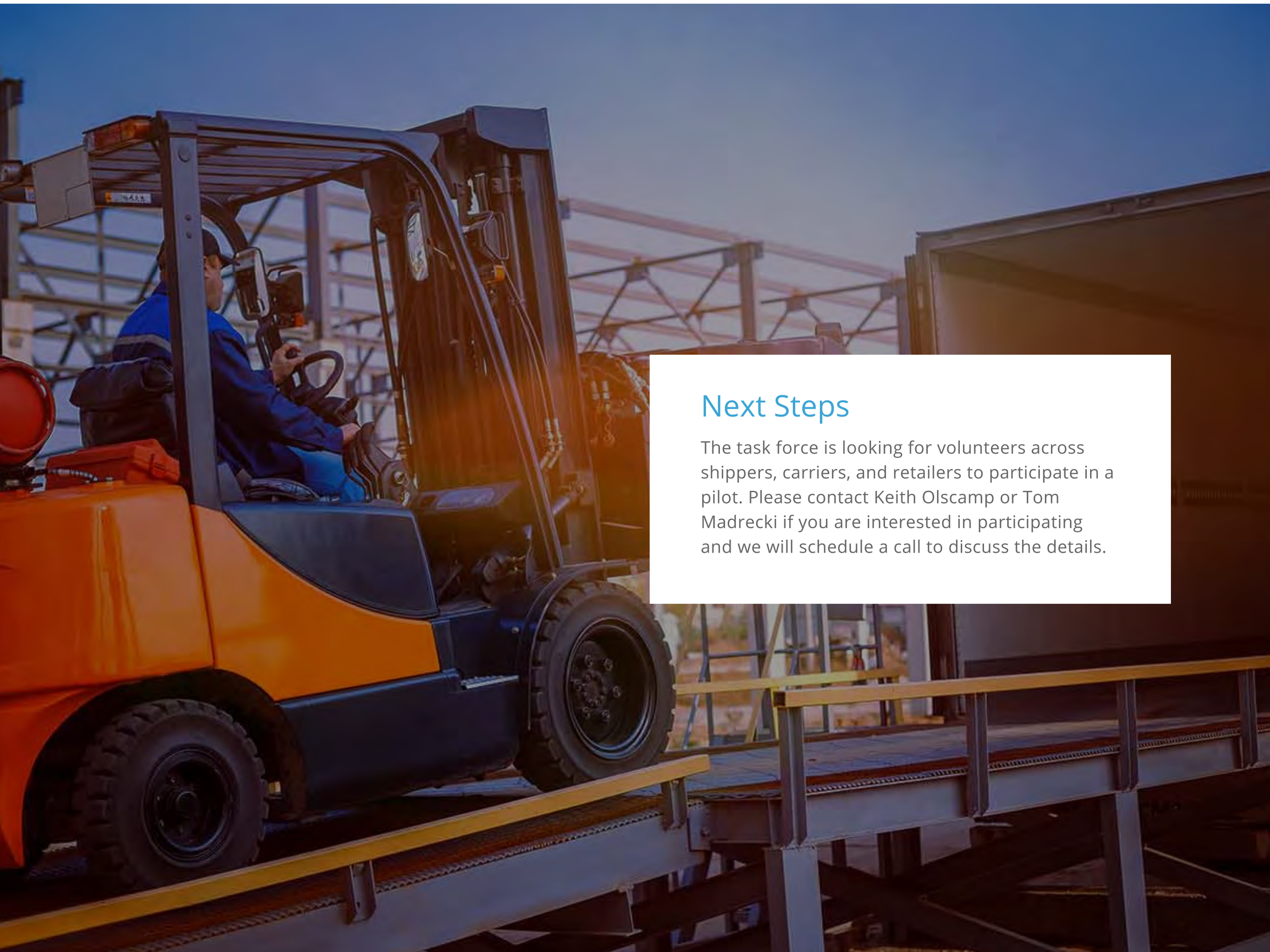
TECHNOLOGY REQUIREMENTS

The shipping clerk, warehouse personnel and/or guard would require a desktop, laptop, or tablet. The driver would need a smartphone, tablet, ELD, or telematics device. The platform would need to be able to take a picture of the seal and verify that it matches the BOL and update the carriers and receivers back offices with the information.

PROCESS OPTIONS

There are two different ways of managing the securing of the seal and security checkout process which a contactless pickup and delivery platform would have to support.

- The driver remains in the truck while the warehouse personnel secures the seal, verifies it against the BOL, and then gives the driver the signal that it is safe to drive off. Checking out would be very similar to checking in. This would consolidate Steps 3, 4, and 5.
- The driver remains in the truck while the warehouse personnel verifies that the seal and BOL match but leaves the seal in the back of the trailer for the driver or the security guard to seal at the checkpoint.



Next Steps

The task force is looking for volunteers across shippers, carriers, and retailers to participate in a pilot. Please contact Keith Olscamp or Tom Madrecki if you are interested in participating and we will schedule a call to discuss the details.