CASE STUDY · DIVERSYS · 2025

Shipper Mobile App

Designing how shippers fulfill shipments at hauler sites on a rugged Zebra handheld: the first step before a driver picks up.

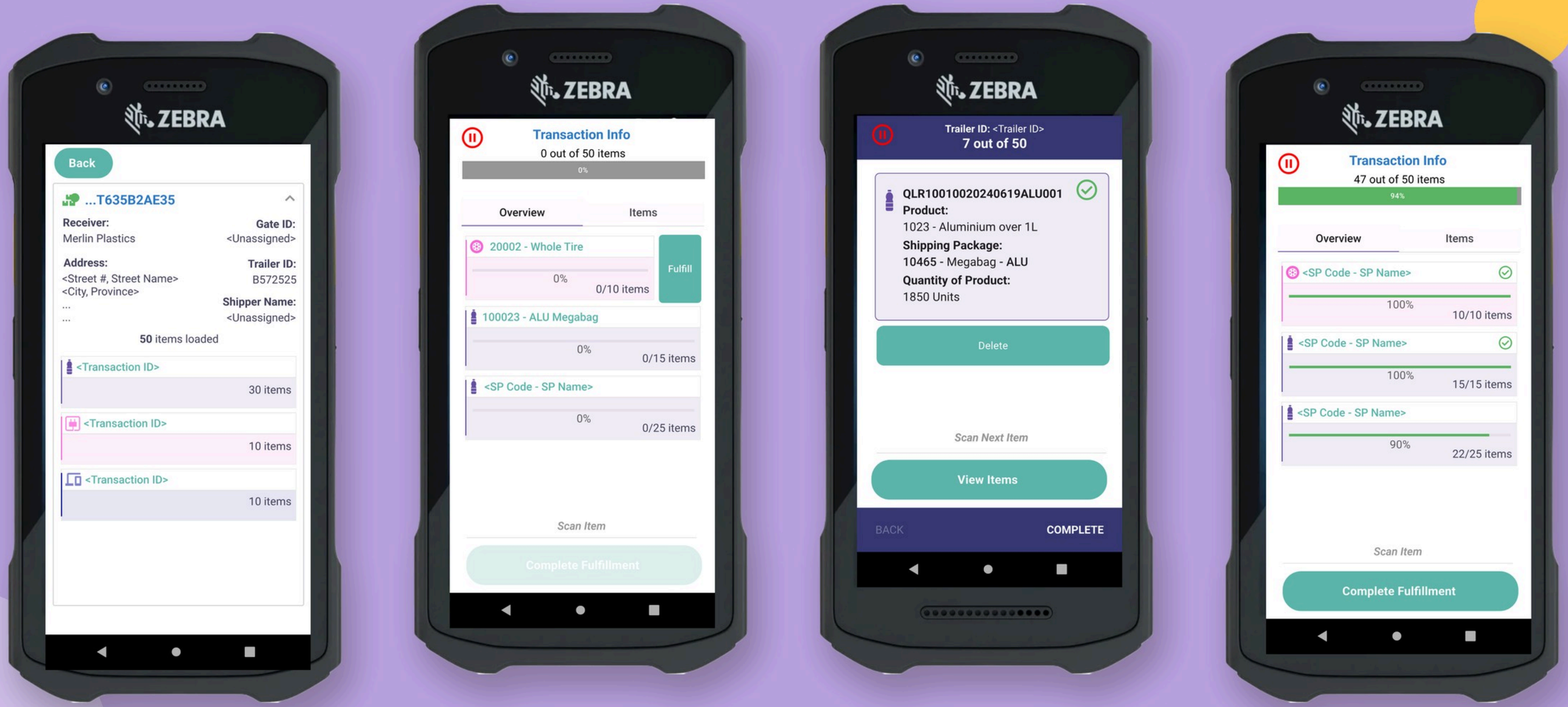
Product Designer: Solida Sar

COVERED SECTIONS

1. Context, persona and user flow
2. One main screen, two roles
3. The fulfillment flow
4. Progress and quantity checks
5. Error states
6. Shipping supplies
7. Design decisions
8. Releases and process

SHIPPER MOBILE APP · DIVERSYS

Every shipment starts with the shipper



Who the app is for

BUSINESS VALUE

“As a shipper in the Consolidation site, I want to be able to prepare a shipment record to be sent to a processing facility (using the Diversys mobile app).”

Shipper · Hauler site

Fills bags with end-of-life products, creates the inventory available for pickup, loads and lists the contents of spot trailers, and creates work orders.

Shipper and Receiver

Some people hold both roles, so one main screen shows their outgoing and incoming loads side by side.

Devices: Zebra rugged handhelds with a physical scan button, plus Start Scanning buttons on regular phones.

01 · USER PERSONA

Meet Maya, a shipper at a hauler site

M

Maya

Shipper · Hauler site warehouse

Device: Zebra handheld with a physical scan button

Also: sometimes holds the Receiver role

Proto-persona, built from the roles and scenarios in my design files

Goals

- Fill each request exactly
- See what's left at a glance
- Hand drivers a complete load

Frustrations

- Items reserved by someone else
- Not knowing why an item can't ship
- Wrong counts, found too late

A typical shift

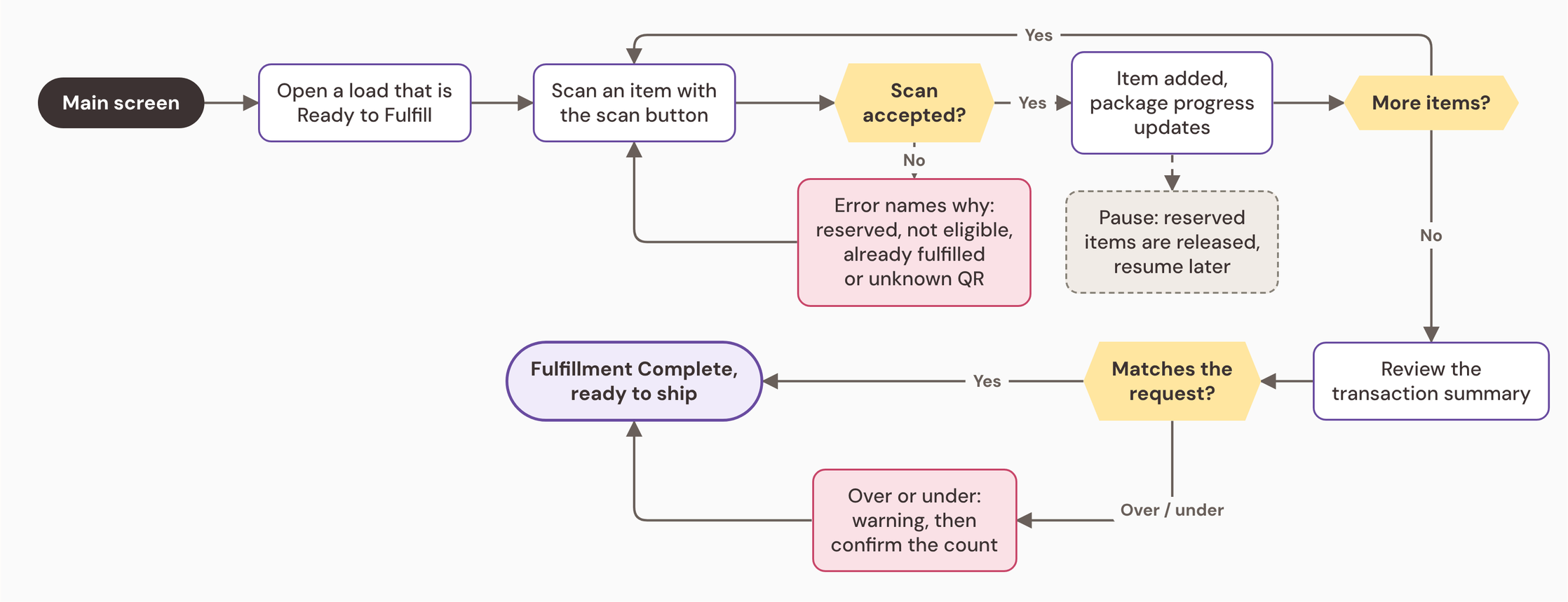
- Fills bags for pickup
- Loads and lists spot trailers
- Creates work orders

How the design responds

- Progress for every package
- Errors that name the reason
- Pausing frees reserved items

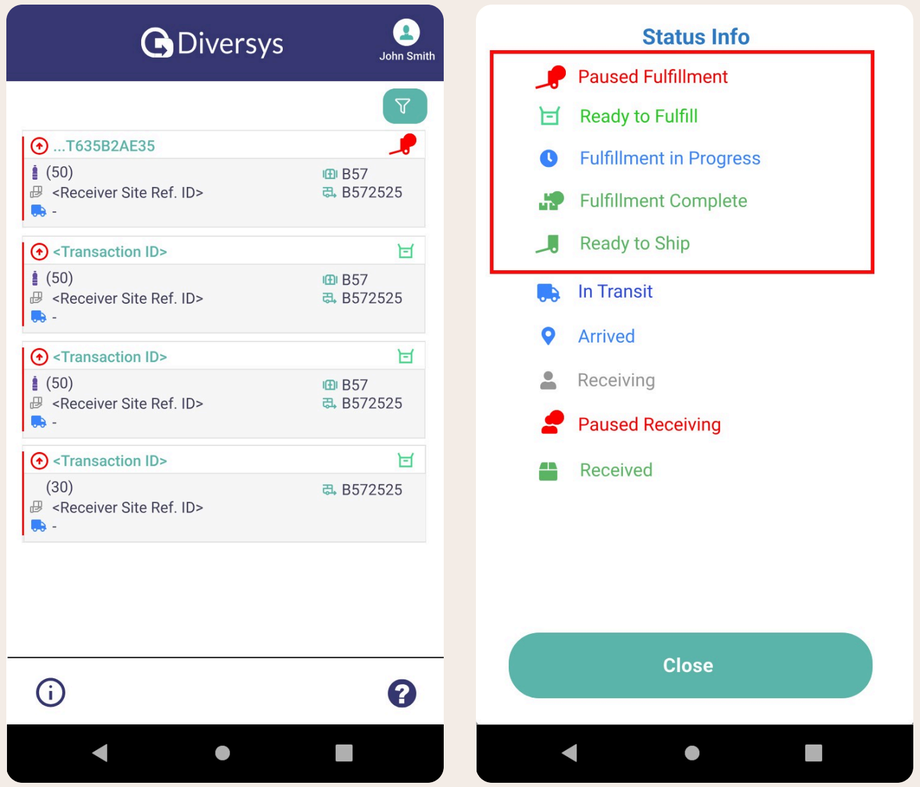
01 · USER FLOW

One fulfillment, start to finish



02 · THE MAIN SCREEN

One main screen for two roles



Built on the Receiver app

The main screen shipped for receivers in R2.18, then extended to shipping.

Tabs only when needed

Shipping and Receiving tabs appear only for people with both roles.

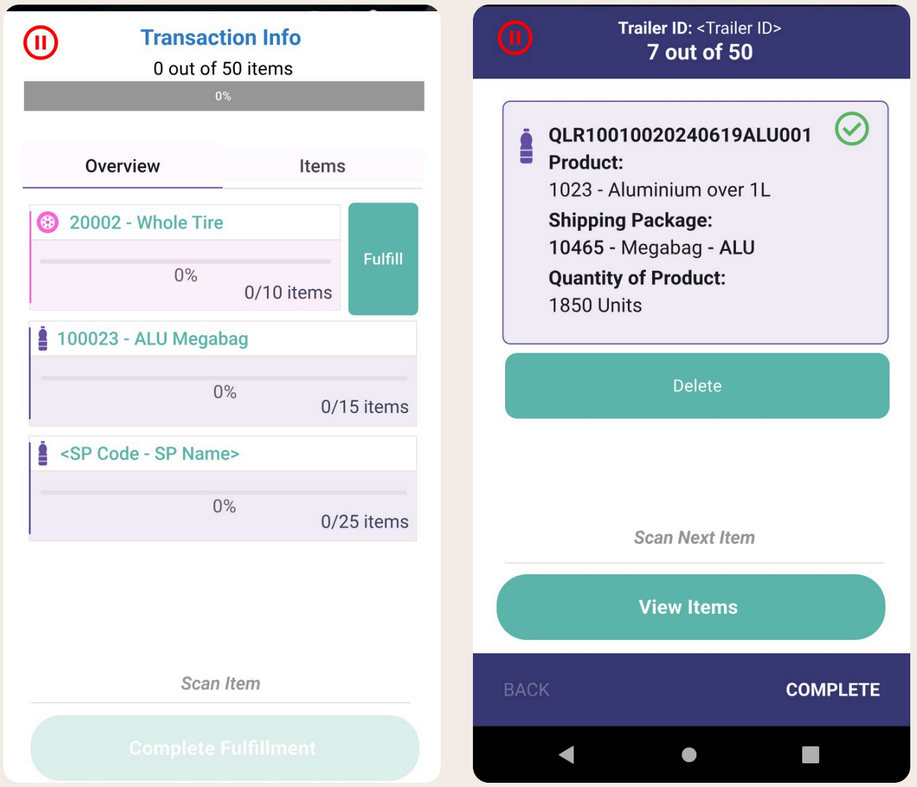
Direction at a glance

Outgoing and incoming icons beside each load ID, with a coloured left bar.

New shipping statuses

Ready to Fulfill, Fulfillment in Progress, Paused, Complete and Ready to Ship.

From a request to a loaded trailer



01 Select a shipping transaction that is Ready to Fulfill

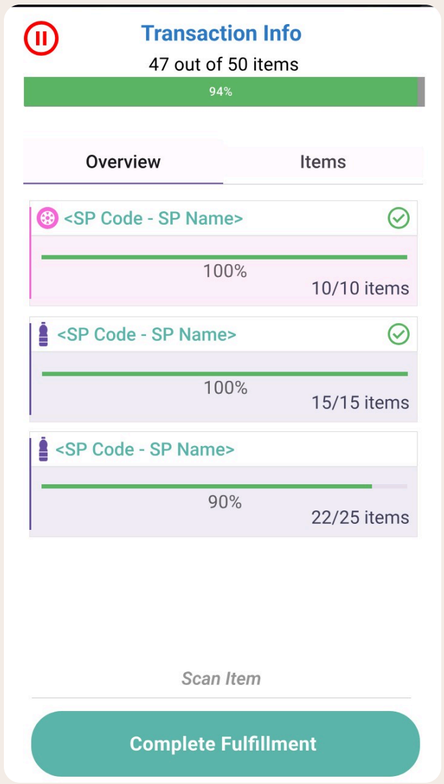
02 Start adding items with the physical scan button

03 Review the transaction summary

04 Confirm completion: the load becomes Fulfillment Complete

Or pause: back to the main screen, and the shipper can resume later where they left off.

Progress for every shipping package



Each package tracked

A bar and count per package, a percentage for the whole load, and a green check when a package is fulfilled.

Over the request

A warning icon, the bar and text turn red, and the shipper confirms: “Total 15 out of 10 items.”

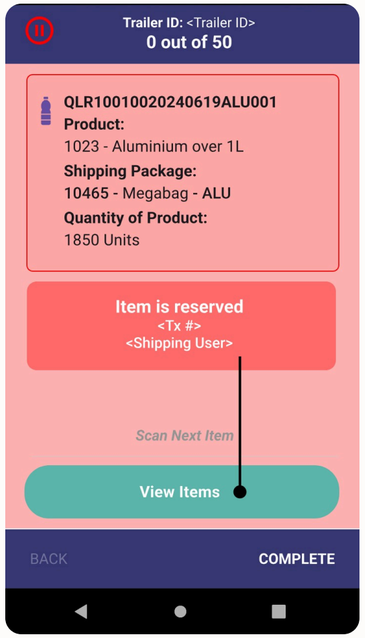
Under the request

A warning icon, and a confirmation before moving on: “Total 8 out of 10 items.”

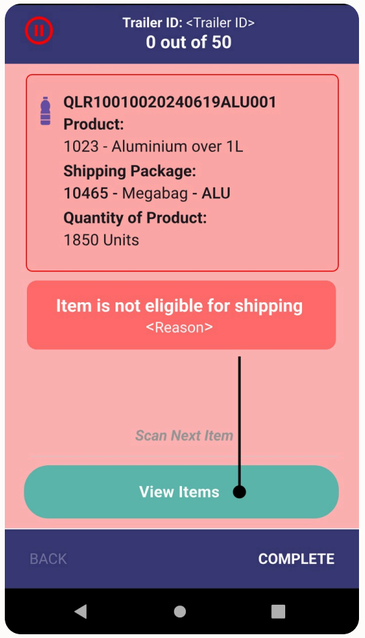
Ready when it’s ready

Complete Fulfillment turns on once at least one package has been fulfilled.

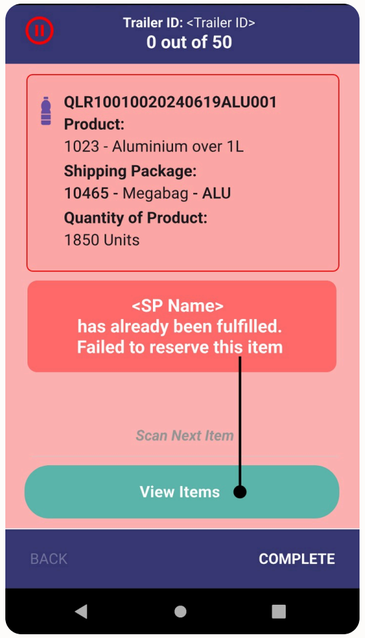
Every scan error says what went wrong



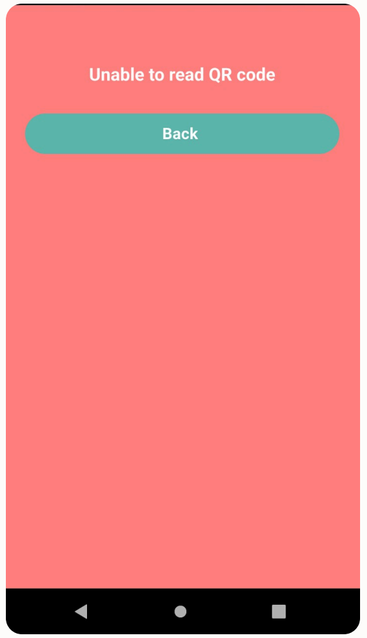
Reserved by another transaction, with who reserved it



Not eligible: no weight, QC required or package not allowed

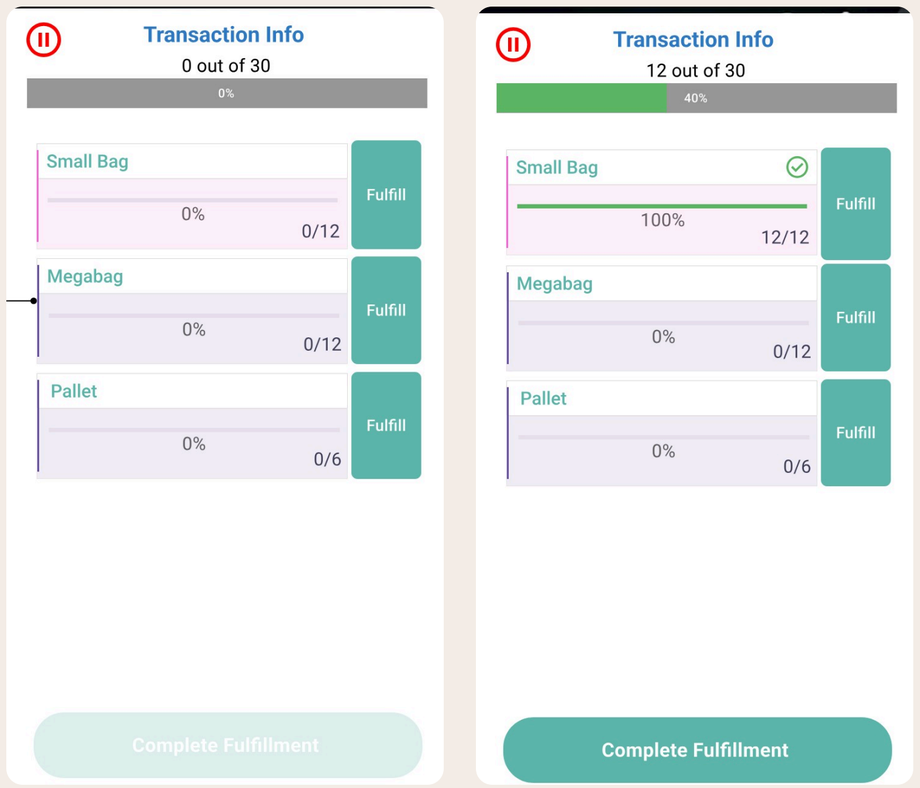


Already fulfilled, so the item isn't reserved



Unknown QR code, with one way back

Shipping supplies, not just materials



Requests for containers

Processors and haulers ship bags, megabags and pallets to the sites that need them.

Two ways to fulfill

Containers with a unique ID are scanned by ID or bundle ID; the rest use a Fulfill button.

Over or under, flagged

Orange when under the requested quantity, red when over.

A summary by container

The transaction summary lists shipping containers instead of packages.

Decisions written down, with the reason

No manual entry for scannable items

If a label is damaged, it should be regenerated before the item ships, so typing an ID in was taken out.

Pausing releases reserved items

Items scanned into a paused shipment become available to other shippers again.

Cards follow the package type

Standard packages lead with the product name; custom ones with the package code and name, each with the right unit.

Quiet confirmations

An “Item loaded” notification disappears on its own after 2–3 seconds, so scanning never stops.

From a proposal to two releases

Phase 1

Proposed screens for preparing a shipment record at a consolidation site, kept in the file as archived reference

R2.21

Shipping at a hauler site on Zebra, extending the Receiver app’s main screen with shipping statuses, tabs and filters

R2.25

Fulfilling shipments of supplies from processors and haulers, by container

Design marked complete; the file was last updated in December 2025.

09 · HOW I WORKED

One living design doc per feature

Select shipping transaction → Start adding items → Transaction summary → Finalized

Before the screens

Rationale, IA and workflows, and working files for the new icons.

Explorations kept

Earlier proposals stay in the file, labelled as archived, so the team can see how the design got here.

Annotated for build

Every step labelled, with the rules for each screen: sorting, what shows for each role, and every error.

UX observations flagged for engineering, such as the keyboard covering fields and the button on the login screen.



Thank you

Solida Sar · **design + code**

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