# UX Research Report

CES October 2019
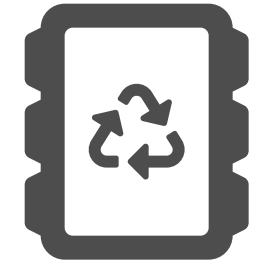
Acompani // Mauricio Perez
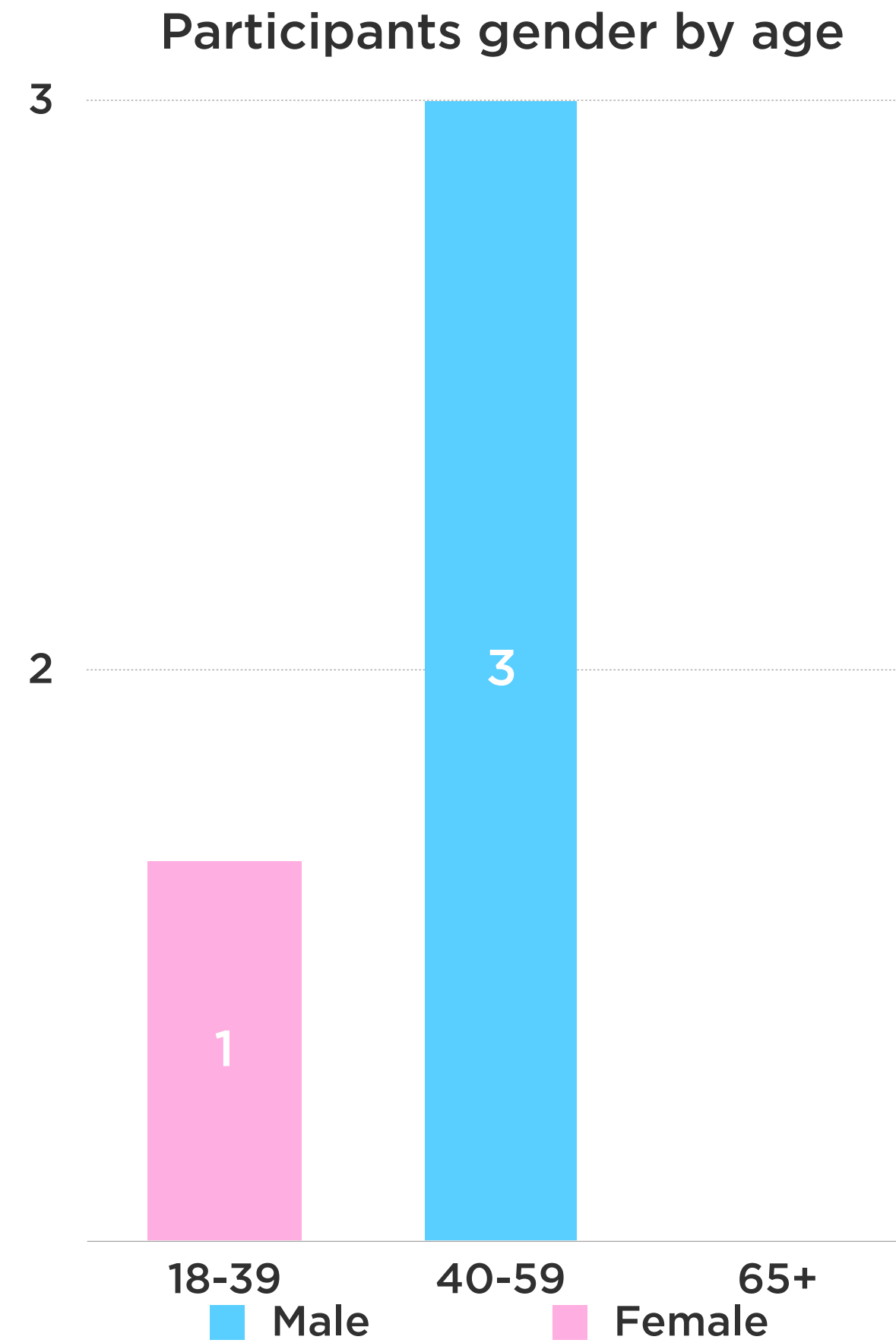
mo@acompani.com.au // 0405 419 059

# Agenda

- POS Task completion
- POS Ease of use
- POS Challenges
- CRP Portal Task completion
- CRP Portal Ease of use
- CRP Portal Challenges
- Accessibility

- Support
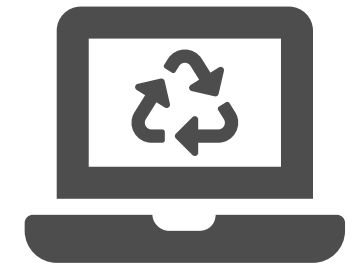- Next steps
- Q&A

# POS Test Participants

## 4

| | |
|---|---|
| **1** | 18 - 39 years |
| **3** | 40 - 59 years |
| **0** | 65+ years |

**Participants gender by age**



18-39    40-59    65+

■ Male    ■ Female

We recruited internal CES staff who have had minimal use of the systems with either little or no training.

# CRP Portal Test Participants
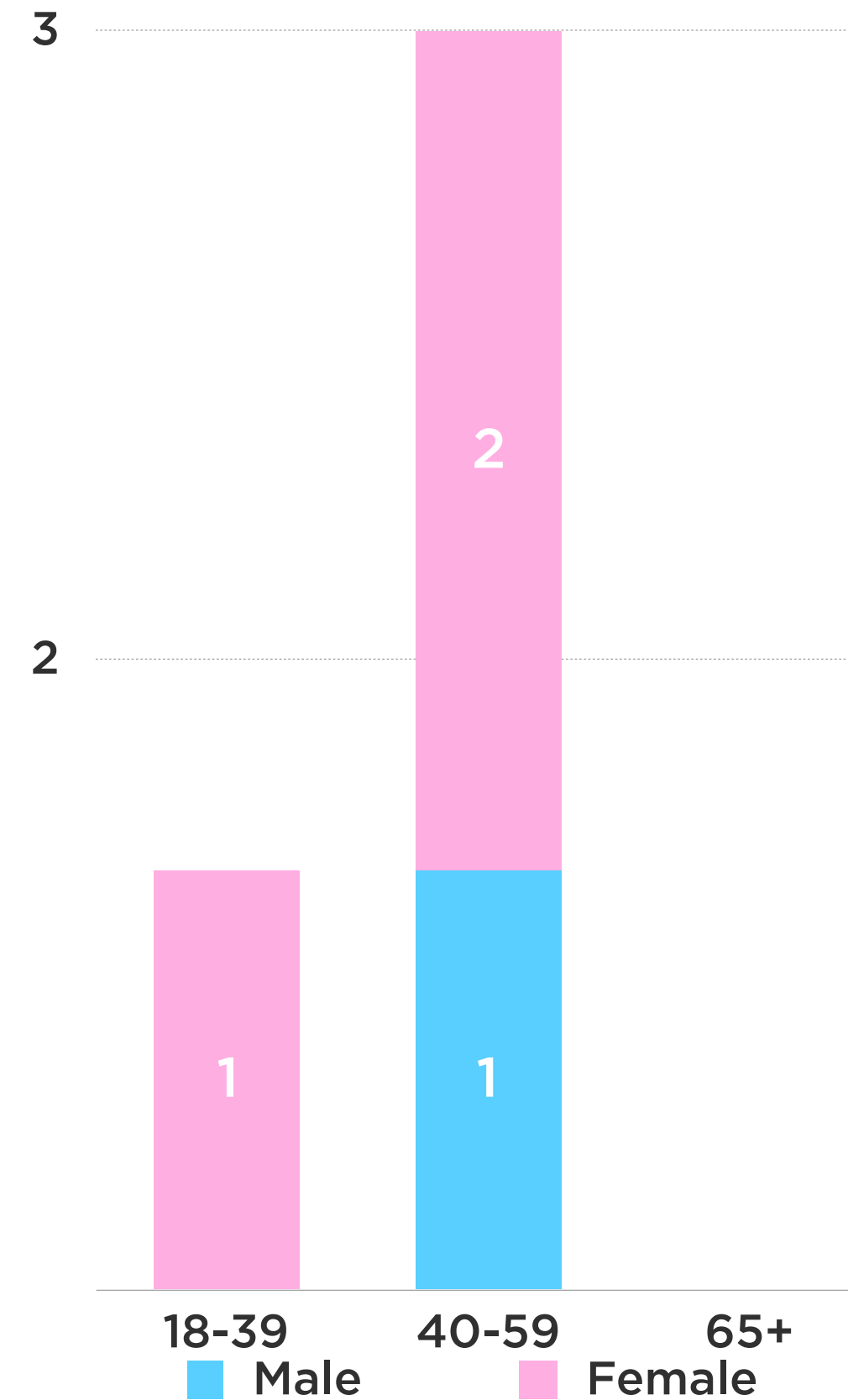
4

| | |
|---|---|
| **1** | 18 - 39 years |
| **3** | 40 - 59 years |
| **0** | 65+ years |

**Participants gender by age**



We recruited internal CES staff who have had minimal use of the systems with either little or no training as well as CRPO staff who were unfamiliar with some parts of the systems.
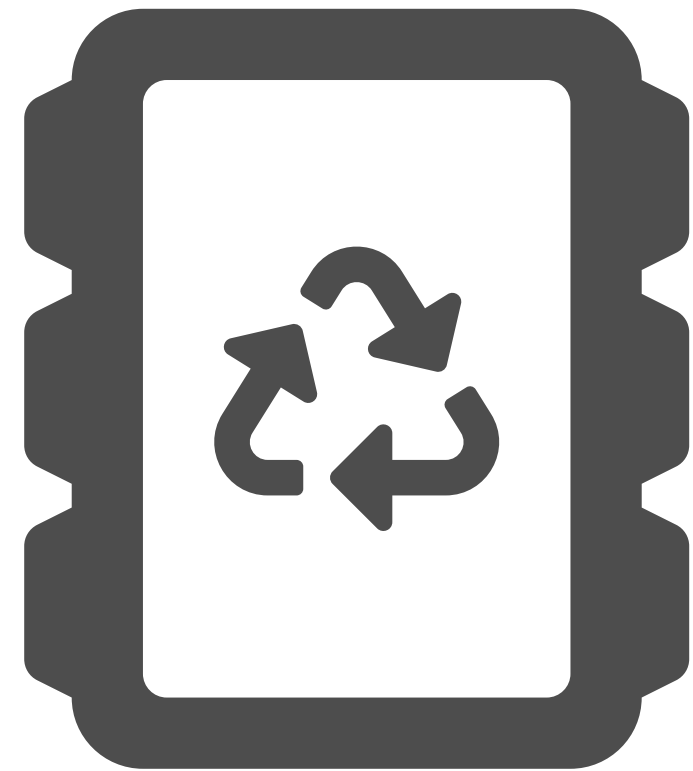
# POS

# POS Task completion

Completion rates are the fundamental usability metric:

A binary measure of pass and fail (coded as 1 or 0) provides a simple metric of success. If users cannot complete a task, not much else matters with respect to usability or utility.
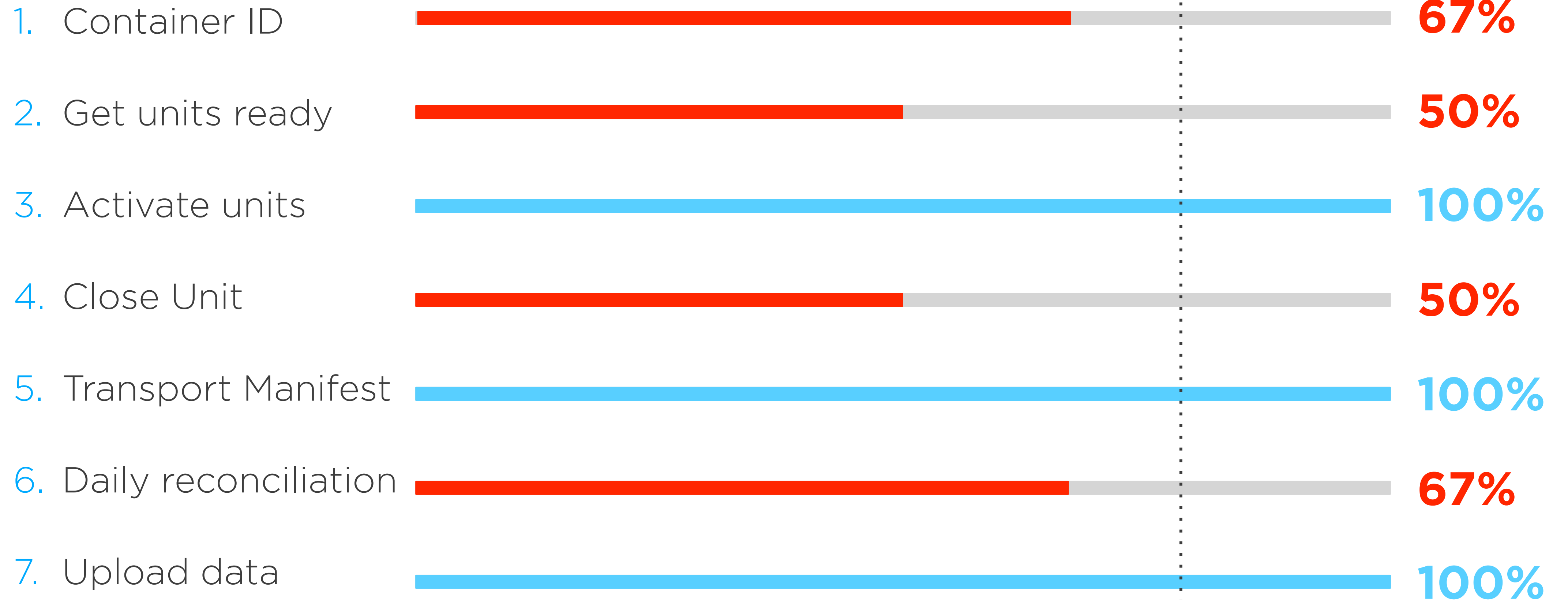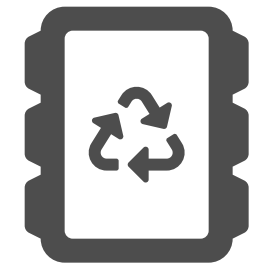
# POS Task completion score

Acompani // UX Research Report of POS + CRP Portal

# 76 %

**78%** is the average from a database of almost 1200 software and website tasks across several products and domains.

# POS tasks

1. Container ID — **67%**
2. Get units ready — **50%**
3. Activate units — **100%**
4. Close Unit — **50%**
5. Transport Manifest — **100%**
6. Daily reconciliation — **67%**
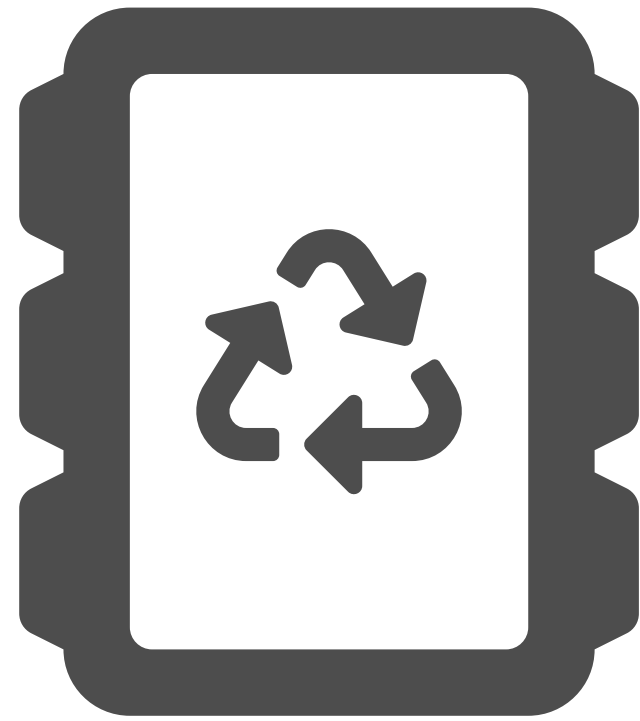7. Upload data — **100%**

# POS Ease of use

The SUS is an ease-of-use score. It has been tried and tested since 1986 and has proven itself to be a dependable method of evaluating the usability of systems which is internationally recognised.

# POS. Ease of use

## 58% D

The average System Usability Scale score is **68%**. If your score is under 68%, then there are probably serious problems with your website usability which you should address.
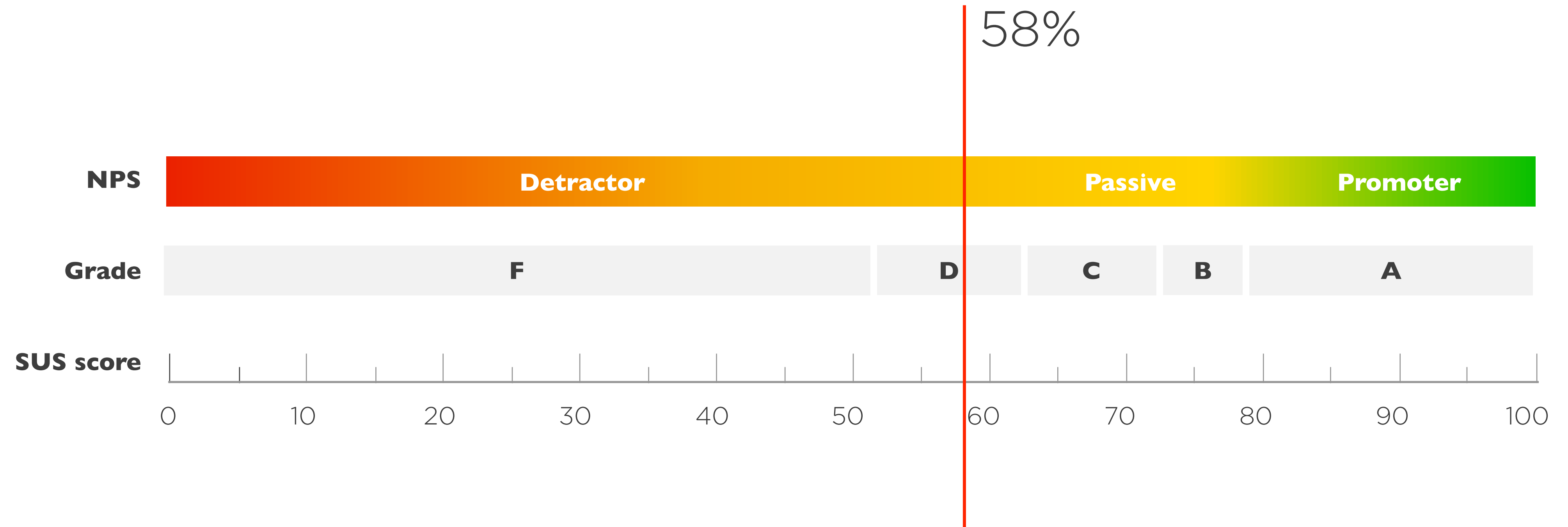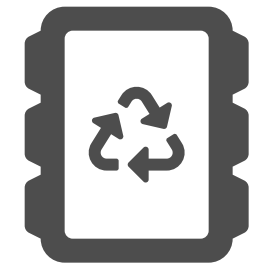
**F** — 51%
Make usability your priority now and fix this fast.
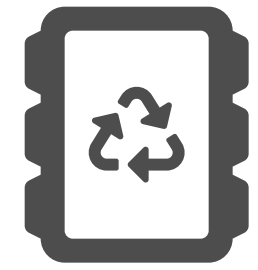
**C** — 68%
You're doing OK but could improve

**B**

**A** — 80.3%
People love your system and will recommend it to their friends

# POS SUS interpretations

**58%**

| | | | | | | |
|---|---|---|---|---|---|---|
| **NPS** | Detractor | | | Passive | Promoter | |
| **Grade** | F | | D | C | B | A |
| **SUS score** | | | | | | |

0    10    20    30    40    50    60    70    80    90    100

https://measuringu.com/interpret-sus-score/

# POS - Why they rated it so...

**P1** ★★★★☆

It would be helpful if we could have transaction details before/after uploading the claim for verification purposes. In addition, it would be great if the full name of each material type is available for customer to understand to improve the accuracy.
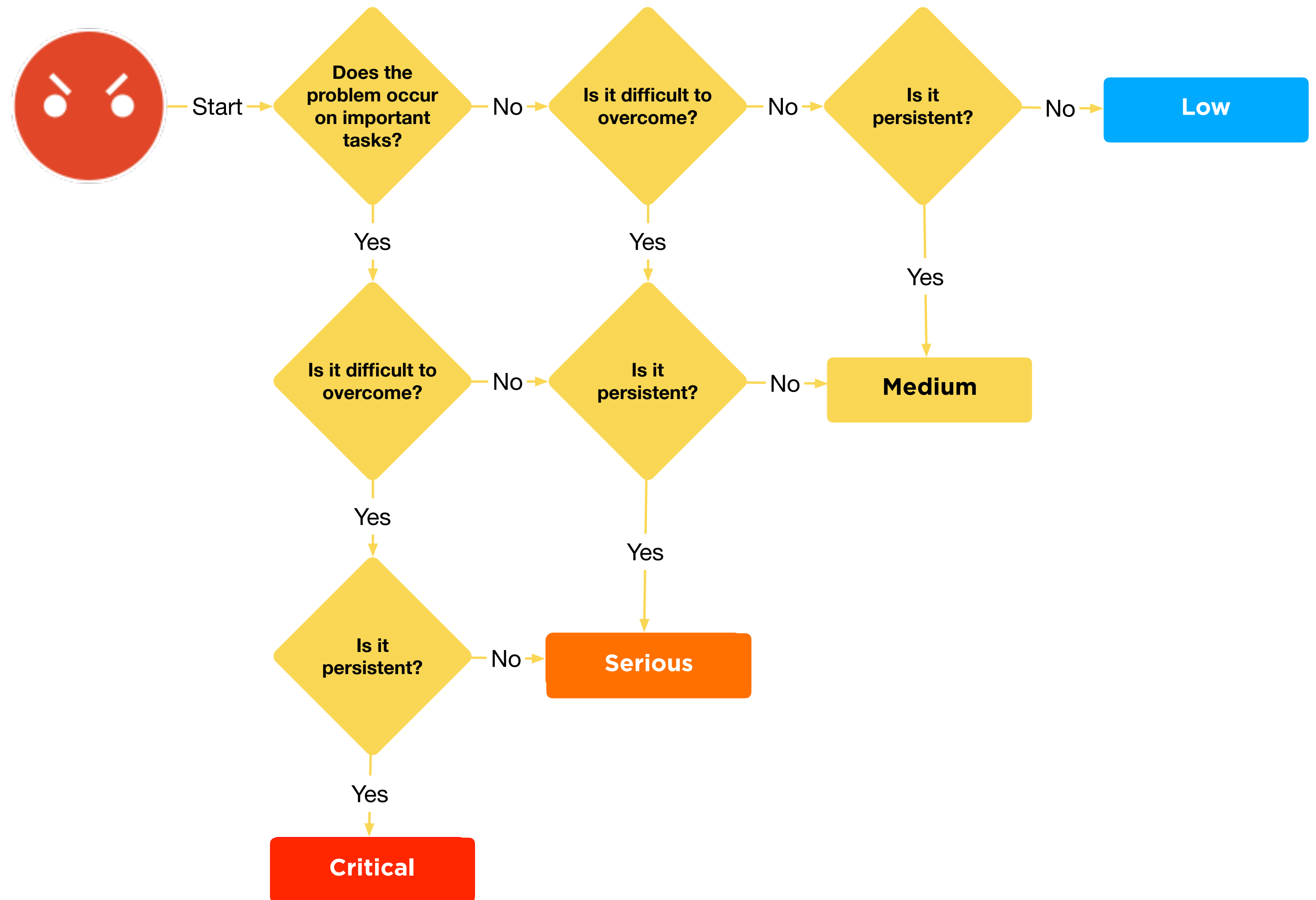
**P3** ★★★★☆

A couple of visibility after processed issues. Once I had processed the Manifest I could not see the detail.

**P4** ★☆☆☆☆

Not intuitive to use. Unnecessarily messy.

**P5** ★☆☆☆☆

Not intuitive, poor navigation and explanations, nowhere to go for help, clunky and unnecessarily complicated

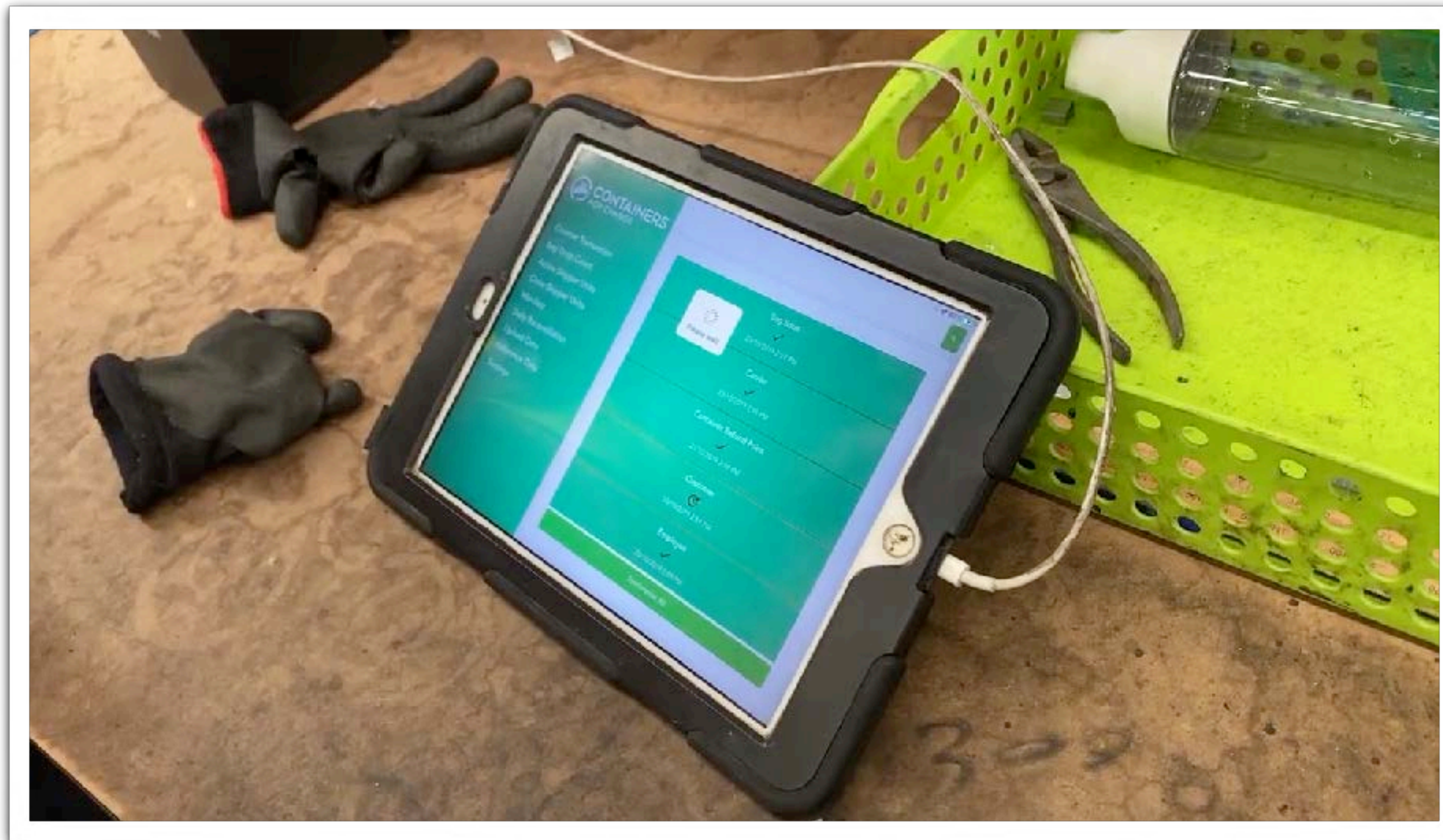# Identifying problems and severity

**Critical**

**Serious**

**Medium**

**Low**

Start → **Does the problem occur on important tasks?** —No→ **Is it difficult to overcome?** —No→ **Is it persistent?** —No→ **Low**

**Does the problem occur on important tasks?** —Yes↓

**Is it difficult to overcome?** —Yes↓

**Is it persistent?** —Yes↓ **Medium**

**Is it difficult to overcome?** —No→ **Is it persistent?** —No→ **Medium**

**Is it difficult to overcome?** —Yes↓

**Is it persistent?** —Yes↓ **Serious**

**Is it persistent?** —No→ **Serious**

**Is it persistent?** —Yes↓ **Critical**
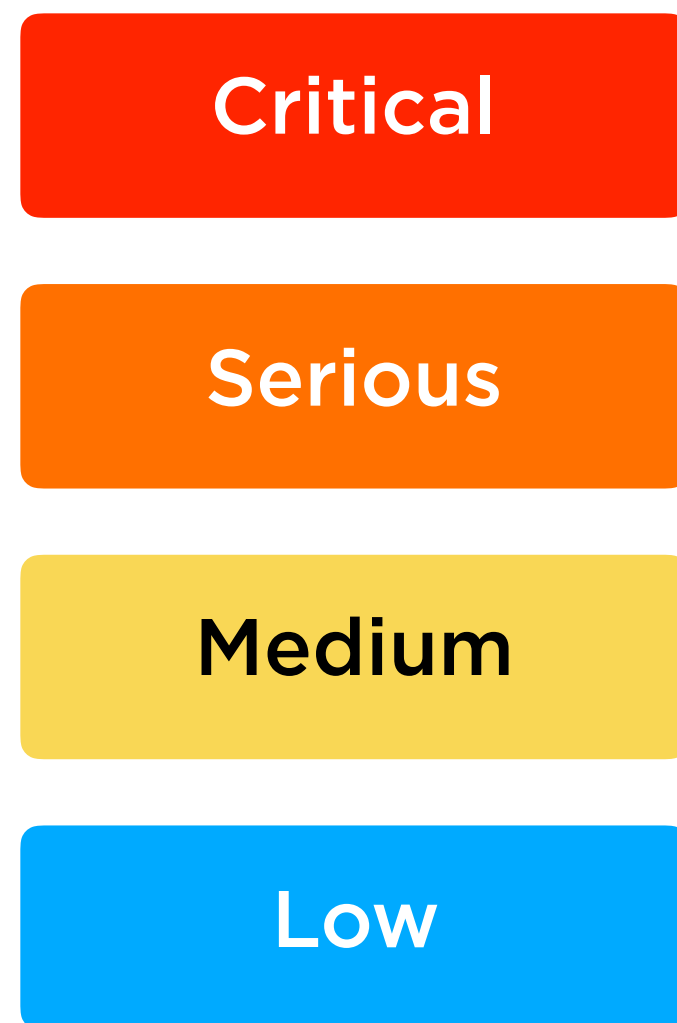
# Employee ID set-up

Users need to set up new employee on every single device the employee might be using

◉ Sync feature for new user may take up to 24 hours to appear on POS

◉ No feedback to identify the problem

**Recommendations**

✓ Implement error alerts for unknown user ID

✓ Suggest next steps in error alerts
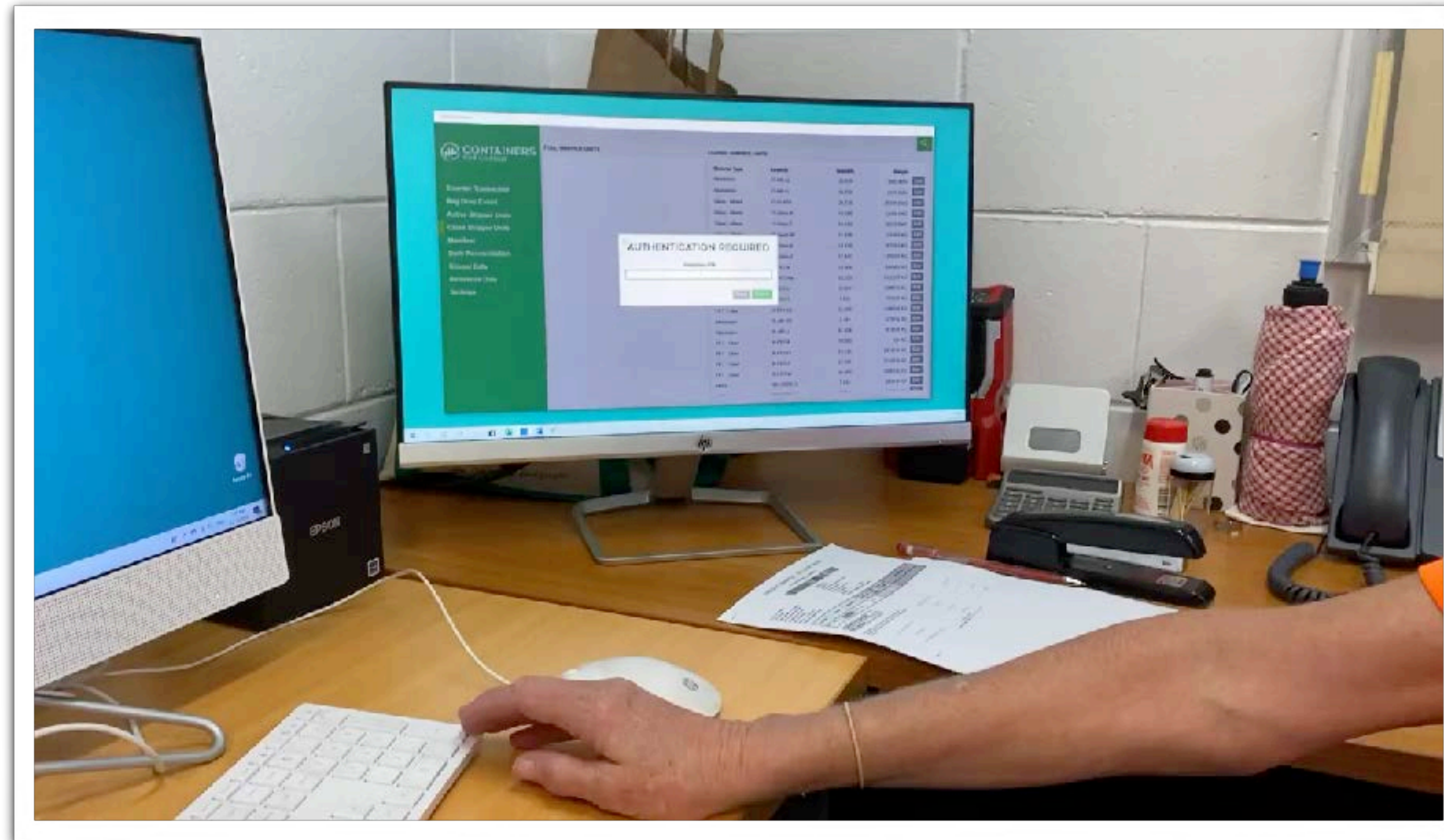
✓ Allow user feedback to report bugs and errors

# Employee ID code

User has to enter Employee ID more than once sometimes to be able to access the system

◉ Same PIN needs to be entered multiple times intermittently to access the system

**Recommendations**

✓ Investigate and de-bug

✓ Allow user to control frequency of PIN prompt

✓ Explore alternative and more accessible methods to identify employees

✓ Allow user feedback to report bugs and errors

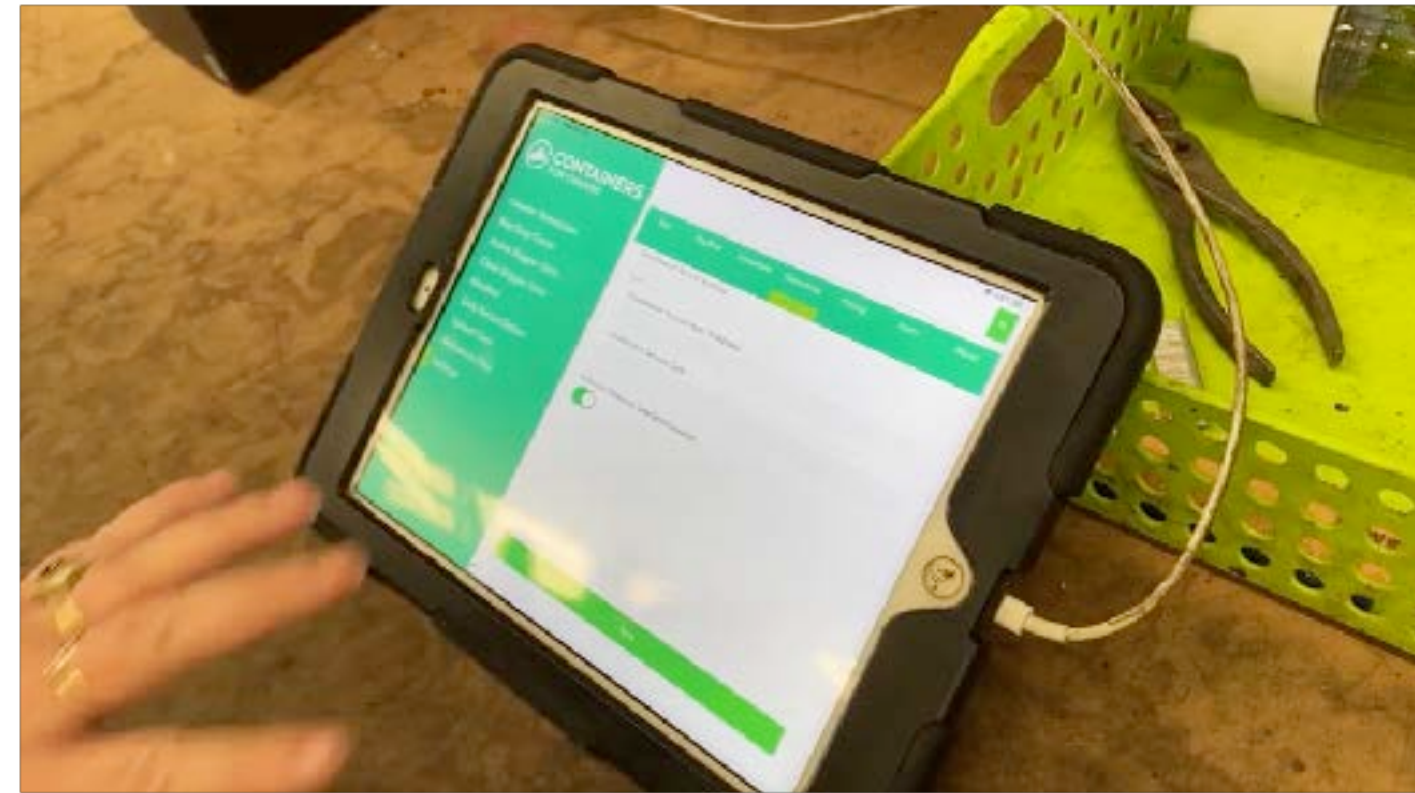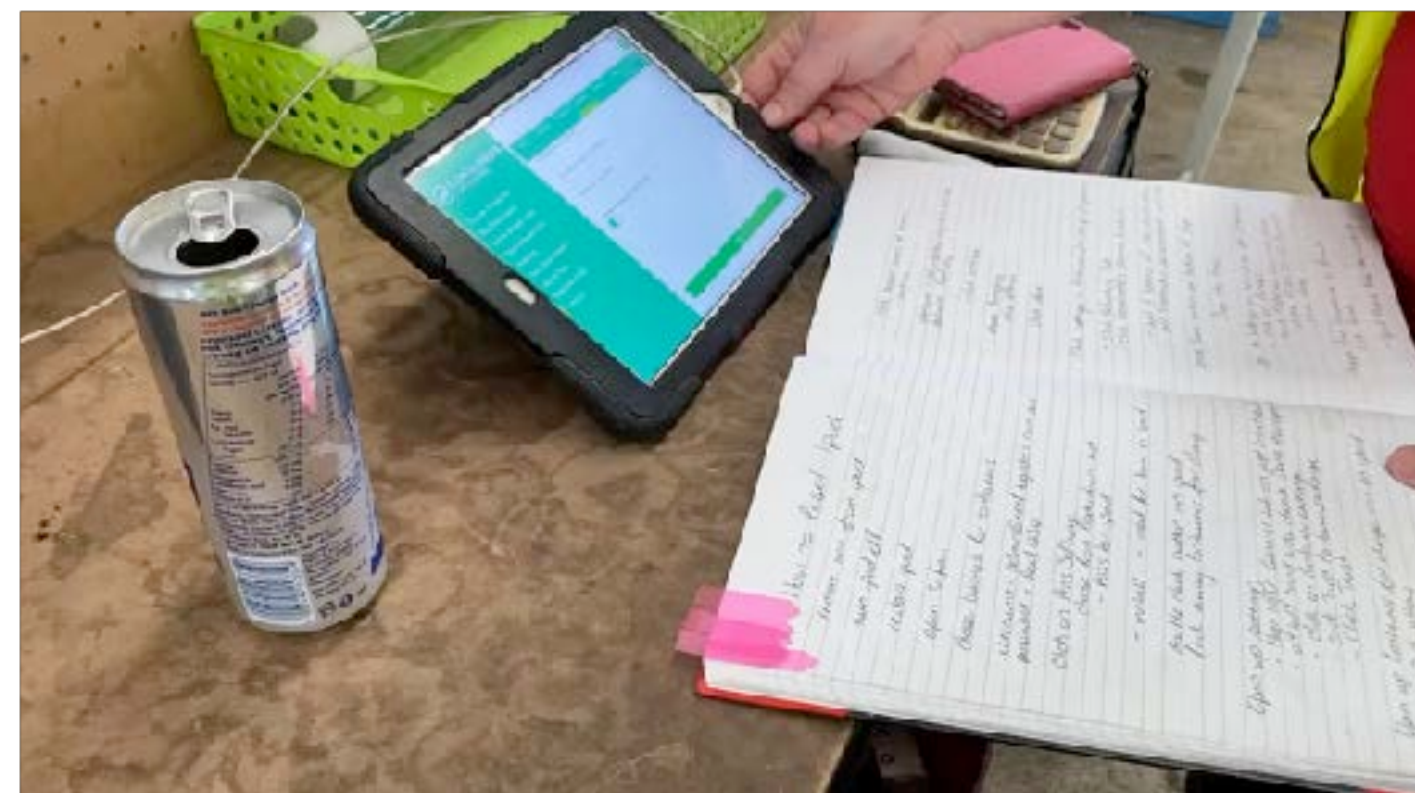# POS set-up

Users miss steps in setting up a new POS on an iPad and has to troubleshoot what is wrong



Users refer to written notes to get Coordination Settings code but needs to confirm an updated code from experts

◉ When POS resets, customised settings are lost, customer needs to reconfigure Coordination Settings.

◉ New POS installations do not indicate how to fix errors and sync issues

**Recommendations**

✓ Implement instructions for simple set-up

✓ Implement system status to give clues when things go wrong

# First impressions

P3 finds that the pages are overcrowded with a lot of information fighting for attention

⊙ Cognitive load on some pages

**Recommendations**

✓ Minimise the information on each page while still allowing quick and easy access to other pages
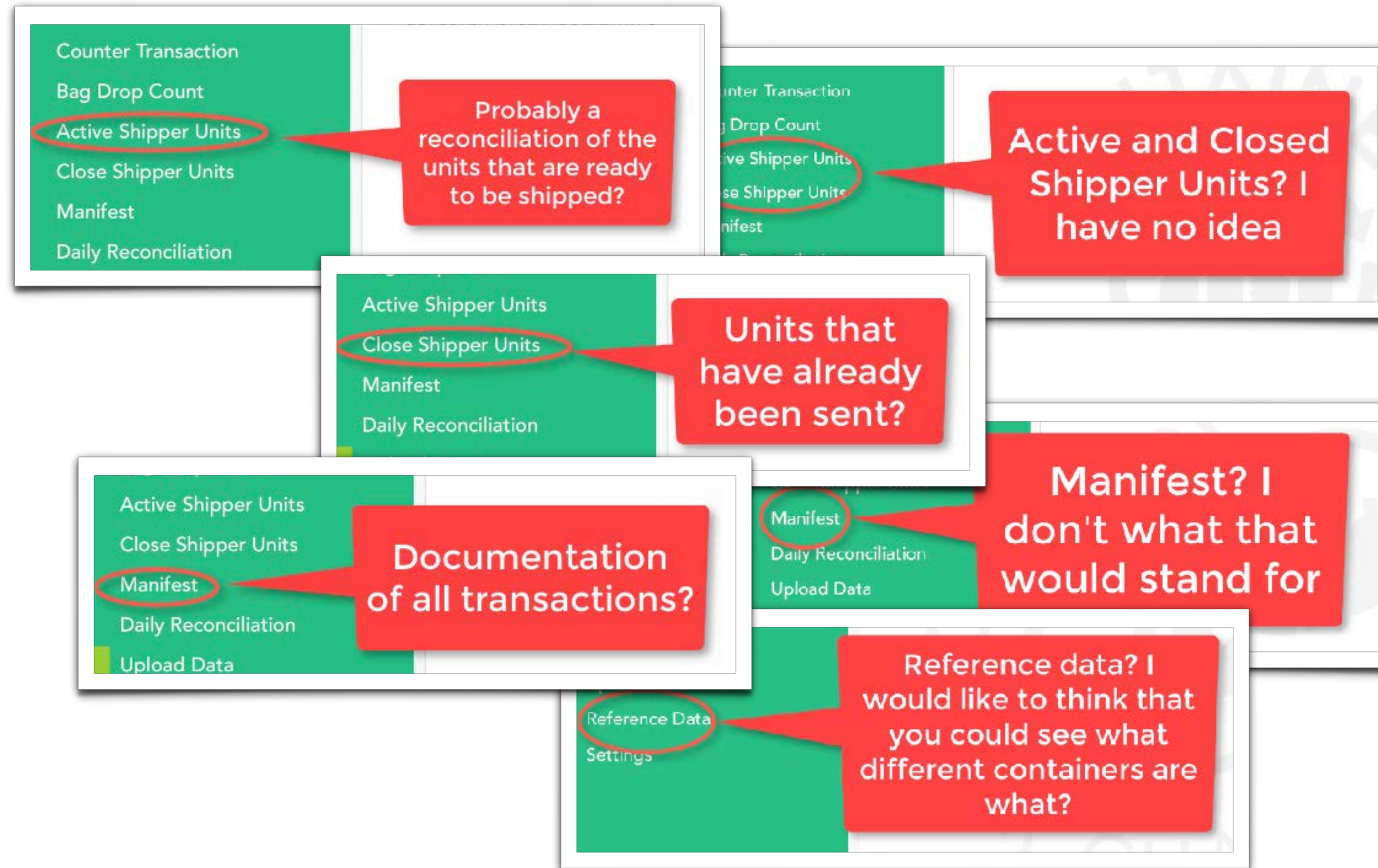
# Navigation

Low        Medium        Serious        **Critical**



◉ Labels are ambiguous to first time users

**Recommendations**

✓ Re-label navigation items so that they will be understood by first-time users

✓ Consider the use of icons with labels which enhances comprehension of functions

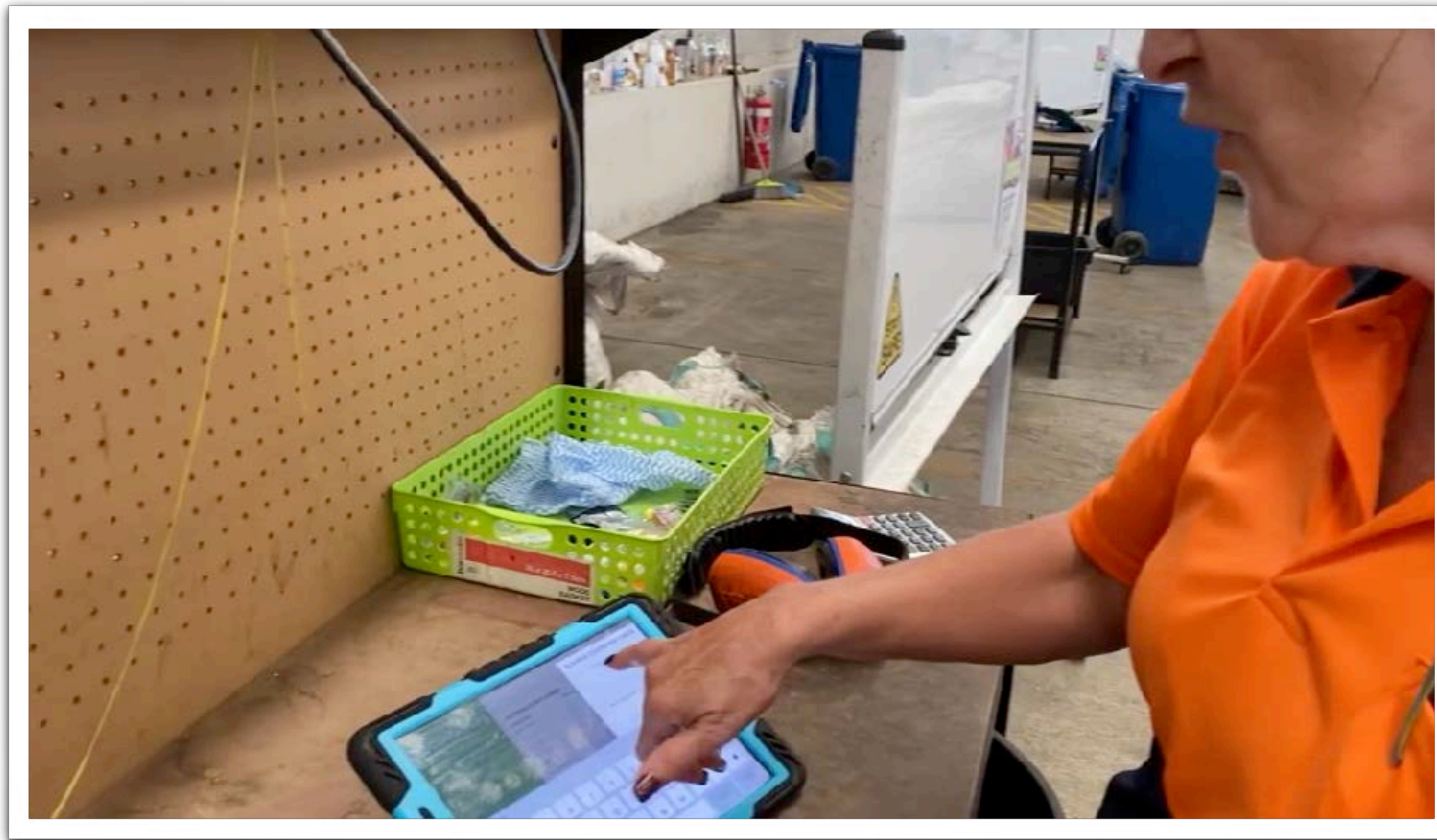First time users were not sure what the meaning of each of the labels were

# Container eligibility search

| Low | Medium | Serious | **Critical** |



Users explain why they only use the barcode in the search

◉ Search input by product name is overwhelming, confusing and time consuming

◉ Search by barcode number entry is more accurate but still time consuming

◉ Search input and auto-complete results are truncated by keyboard height

**Recommendations**

✓ Explore solutions that will allow new users to quickly and easily determine container eligibility.

✓ Design Search input and results to maximise results display
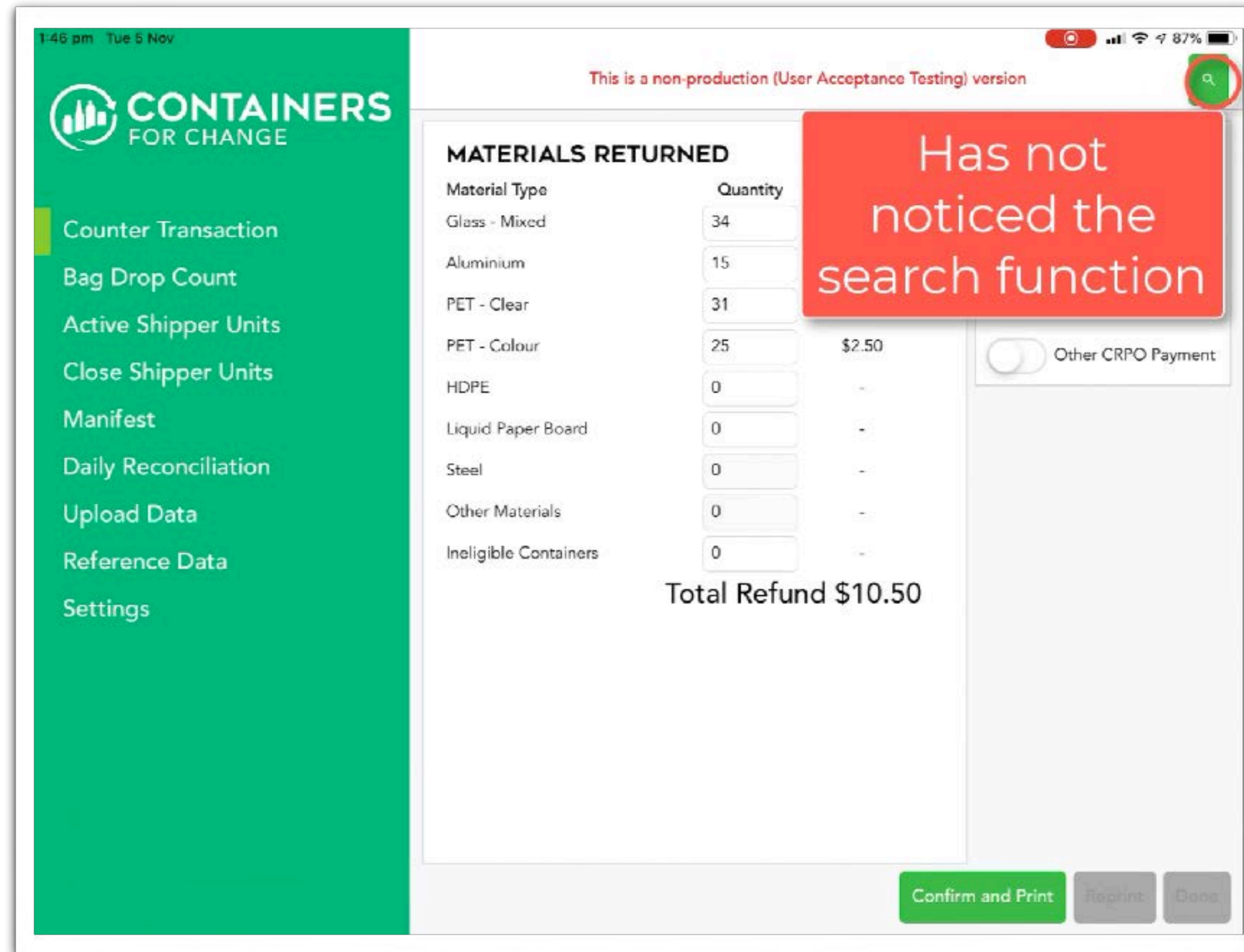
✓ Make text bigger to increase readability

# Finding search

First time users did not notice the search button hidden in the top right

◉ Search function was not perceived

◉ Search was mistaken for another function (eg. FAQ or global search)

**Recommendations**

✓ Label Search as clearly with function and expose field with example inputs

✓ Include reason why some products are ineligible: eg. Not eligible in QLD, WA, etc.

First-time users and even veterans get confused with recognising container types

# Container eligibility

Container eligibility is often questioned by customers which may cause confusion and distrust.
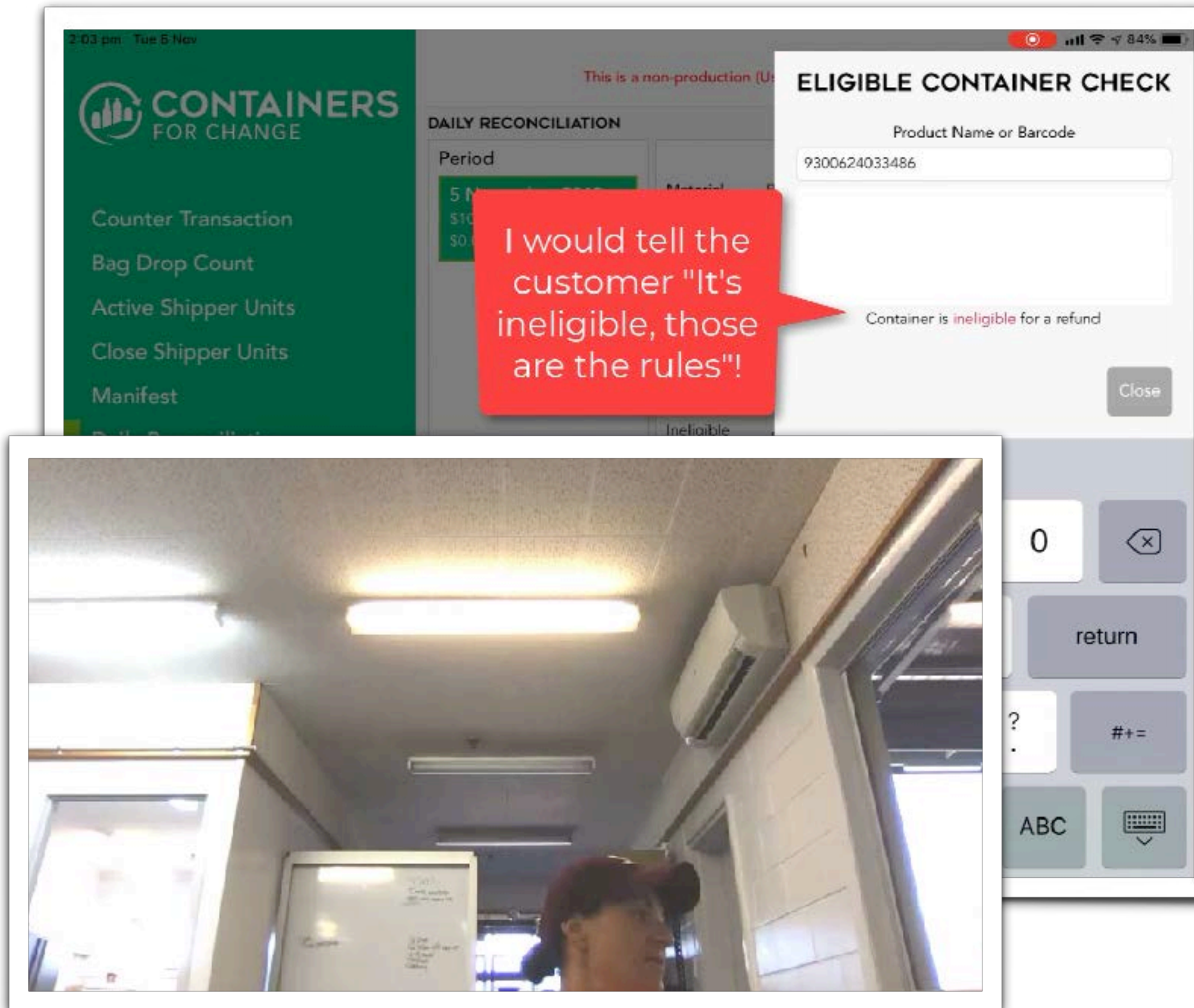
- ◉ Container eligibility is sometimes ambiguous to staff and customers
- ◉ Search input will determine eligibility but not container type (eg. PET, HDPE etc)
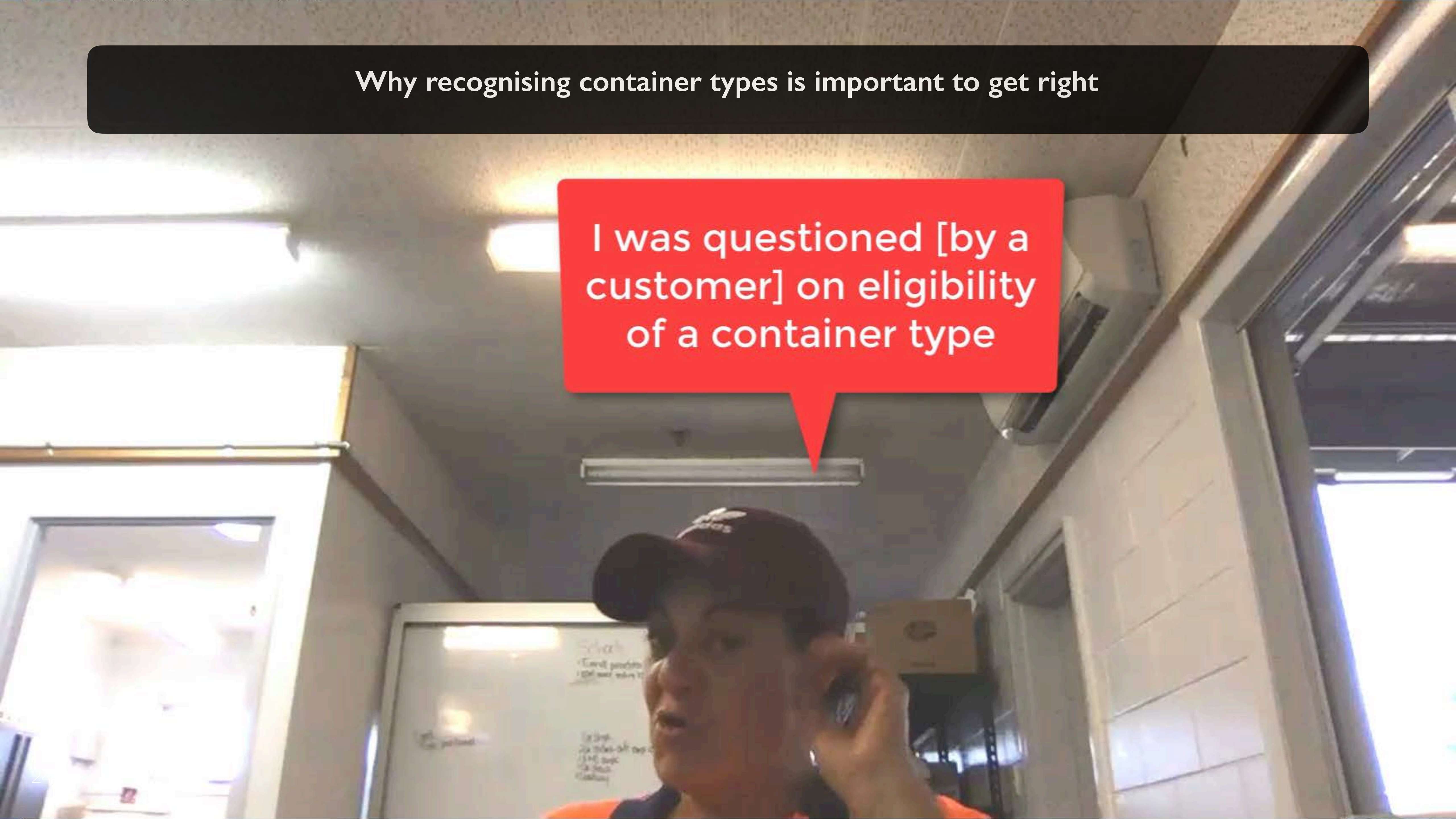- ◉ This affects trust customers have in the operators and the scheme

**Recommendations**

✓ Explore methods to make eligibility and type easier and quicker to adopt and use

✓ Confirm results with pictures of container types

# Container labels

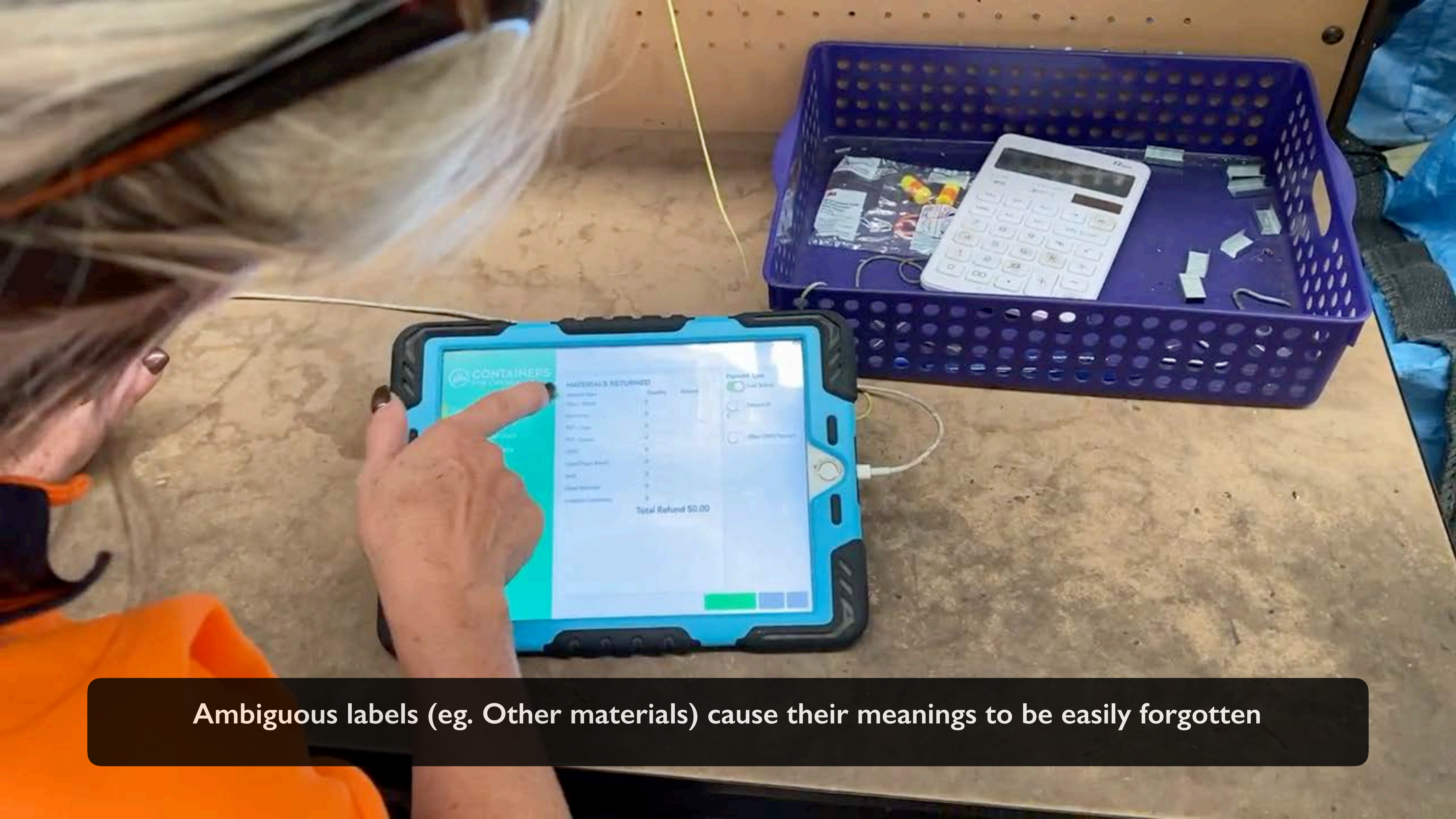P2 finds some of the labels ambiguous (Other materials) or confusing (PET, HDPE, Liquid Paper Board)

⊙ Labels for container fields are either confusing or ambiguous for first time users

**Recommendations**

✓ Provide pictures and / or intuitive labels for each field label

Ambiguous labels (eg. Other materials) cause their meanings to be easily forgotten

# Contaminated containers

P1 does not know how to report contaminated containers
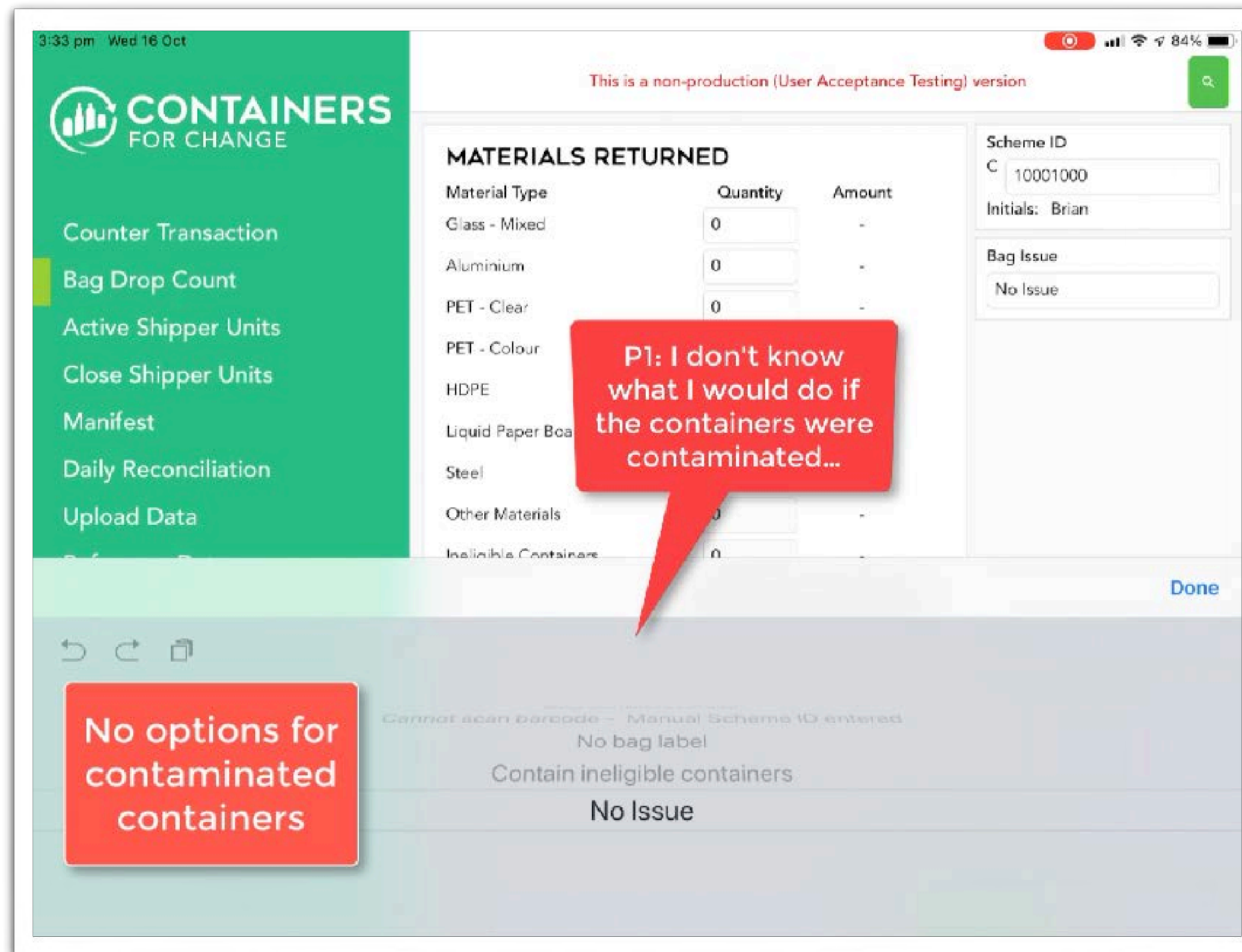
◉ Users may not know what to do if containers are contaminated or how to report other issues

**Recommendations**

✓ Implement "Other issue" and allow a free form field to ensure users can input why some containers cannot be refunded.

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# User interface obscured

People were entering values but could not see the forms
underneath the keyboard
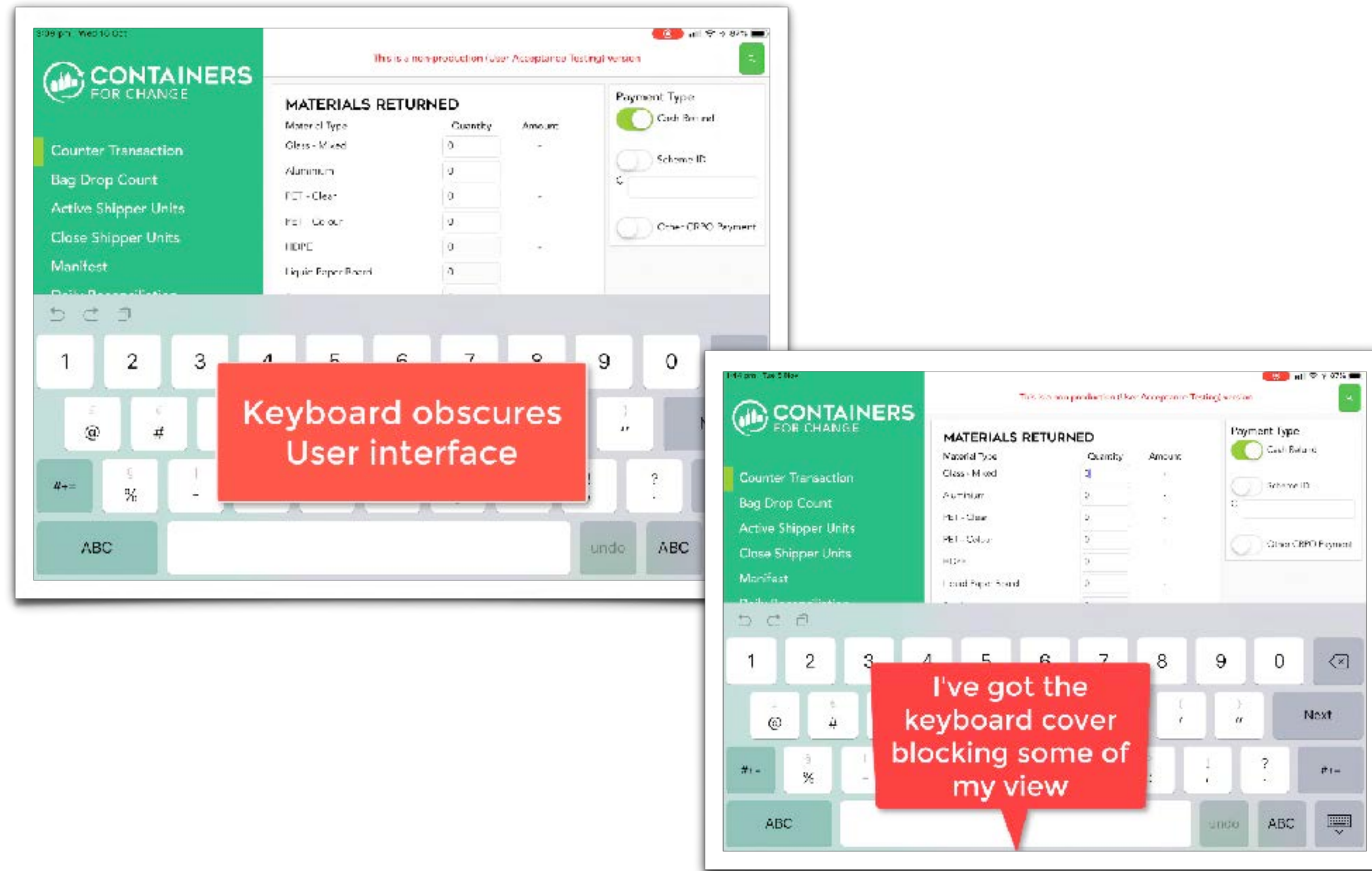
⦿ iOS keyboard obscures form inputs

⦿ There are no obvious controls to scroll down

⦿ Some users will miss the keyboard "minimise" control

**Recommendations**

✓ Make controls minimal and numeric only

✓ Allow all forms to be displayed when inputting data

# Forms disabled

Users try to enter values into disabled form field

⦿ Disabled forms (locked) appearance is that they are editable

⦿ There is no feedback as to why fields are disabled

**Recommendations**

✓ Make disabled forms appear locked

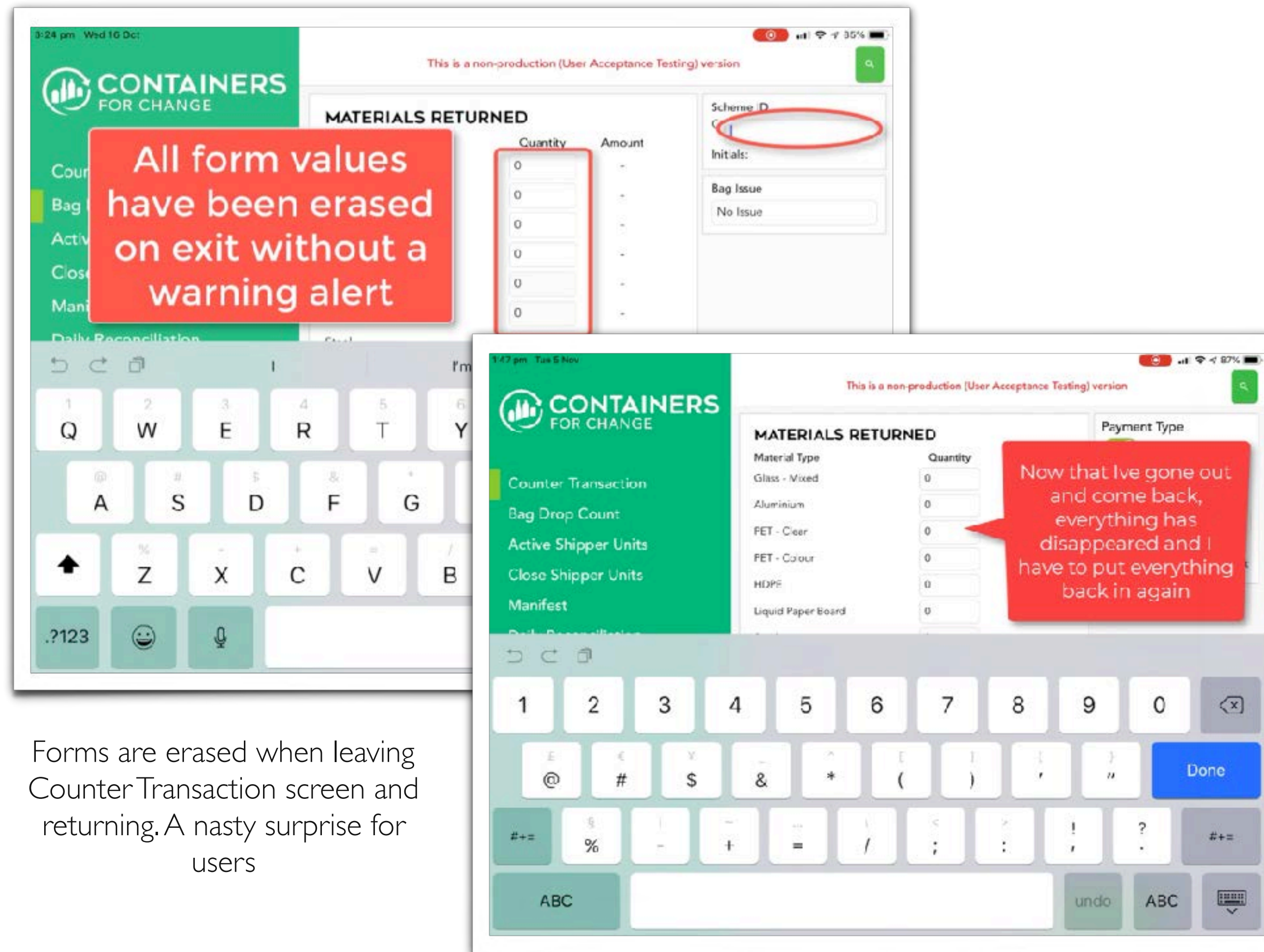✓ Implement tooltips and / or notifications to help people understand why forms are disabled (eg. Shipper unit needs to be made active)

# Form input loss

Forms are erased when leaving Counter Transaction screen and returning. A nasty surprise for users

◉ Form inputs are erased upon screen exit without warning

**Recommendations**

✓ Allow autosave on screen exit

✓ Implement user alerts before data input is about to be lost

# Performance

| Low | Medium | Serious | **Critical** |
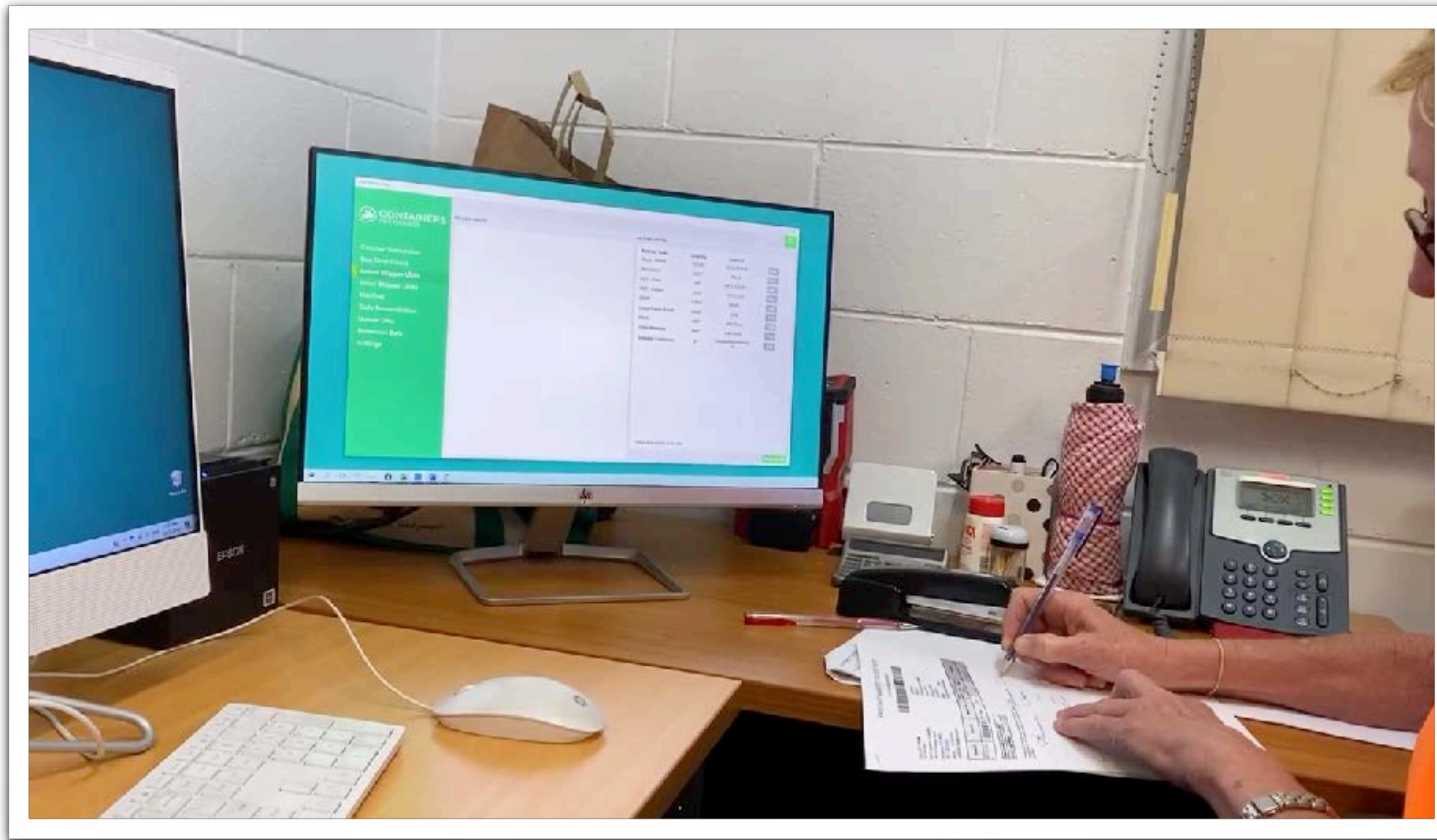


User's biggest frustration is the performance of the systems

- ◉ Speed of pulling data is slow and frustrating for users
- ◉ People do not know if it is normal or if the system / operating system needs resetting

**Recommendations**

✓ Investigate and optimise performance

✓ Implement feedback progress bars for system delays

✓ Implement user feedback channels to report performance issues

# Desktop App Instability
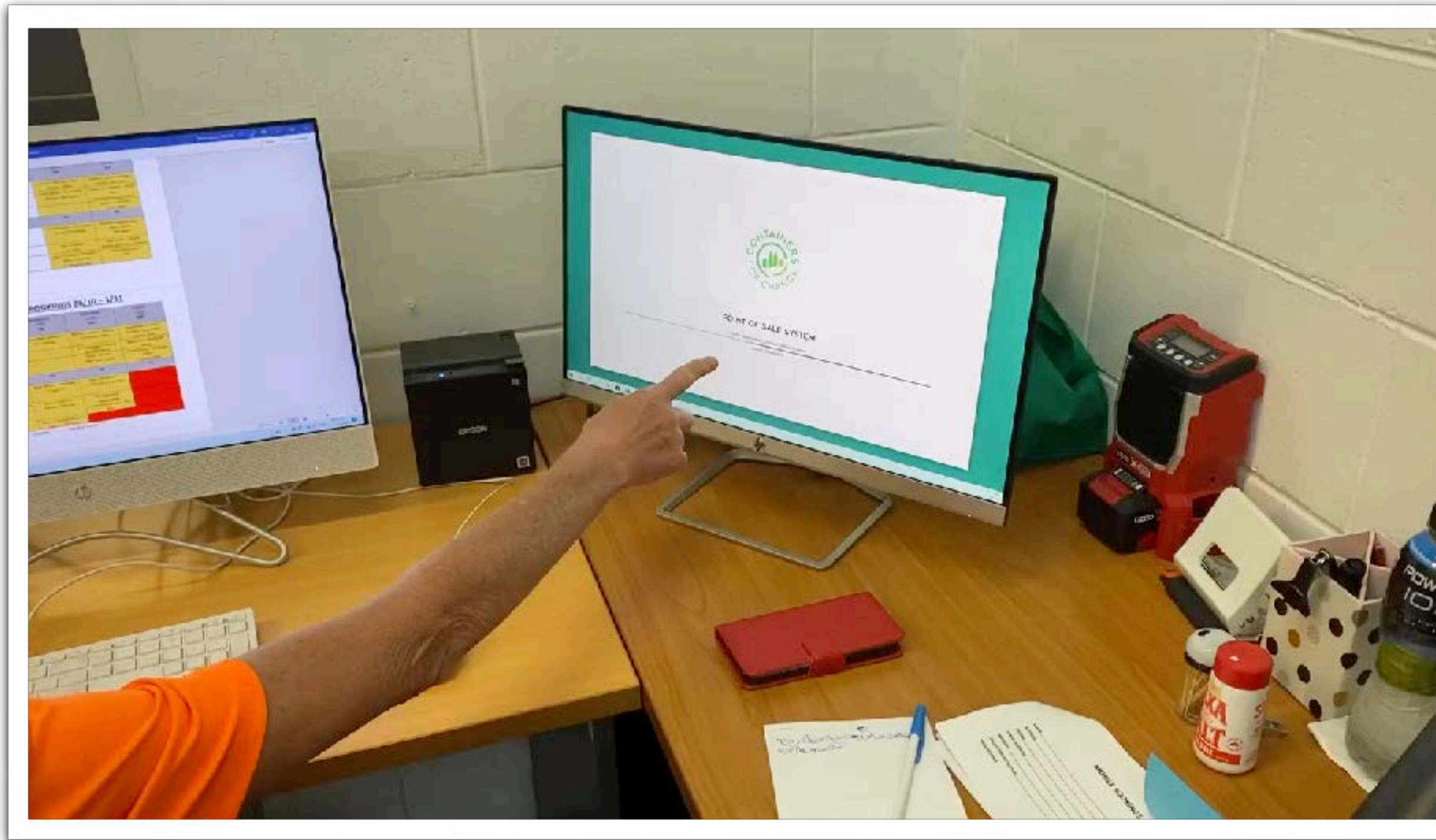
Windows 10 app crashing and attempts to resolve the problem

◉ POS app crashes do not indicate any support options or diagnostics for user

**Recommendations**

✓ Investigate and de-bug

✓ Allow user feedback to report bugs and errors

# iOS App Instability

User login action with persistent POS app crashes.

In the afternoons, when you put your ID in, it spins on the "Verifying" screen

Persistent crashes forces users to use another POS

◉ POS app crashes become more prevalent as the day progresses

◉ Users report it happens from 3 to 5 times every day

**Recommendations**

✓ Implement error alerts on time outs

✓ Include actions a user can take to resolve

✓ Investigate and de-bug errors
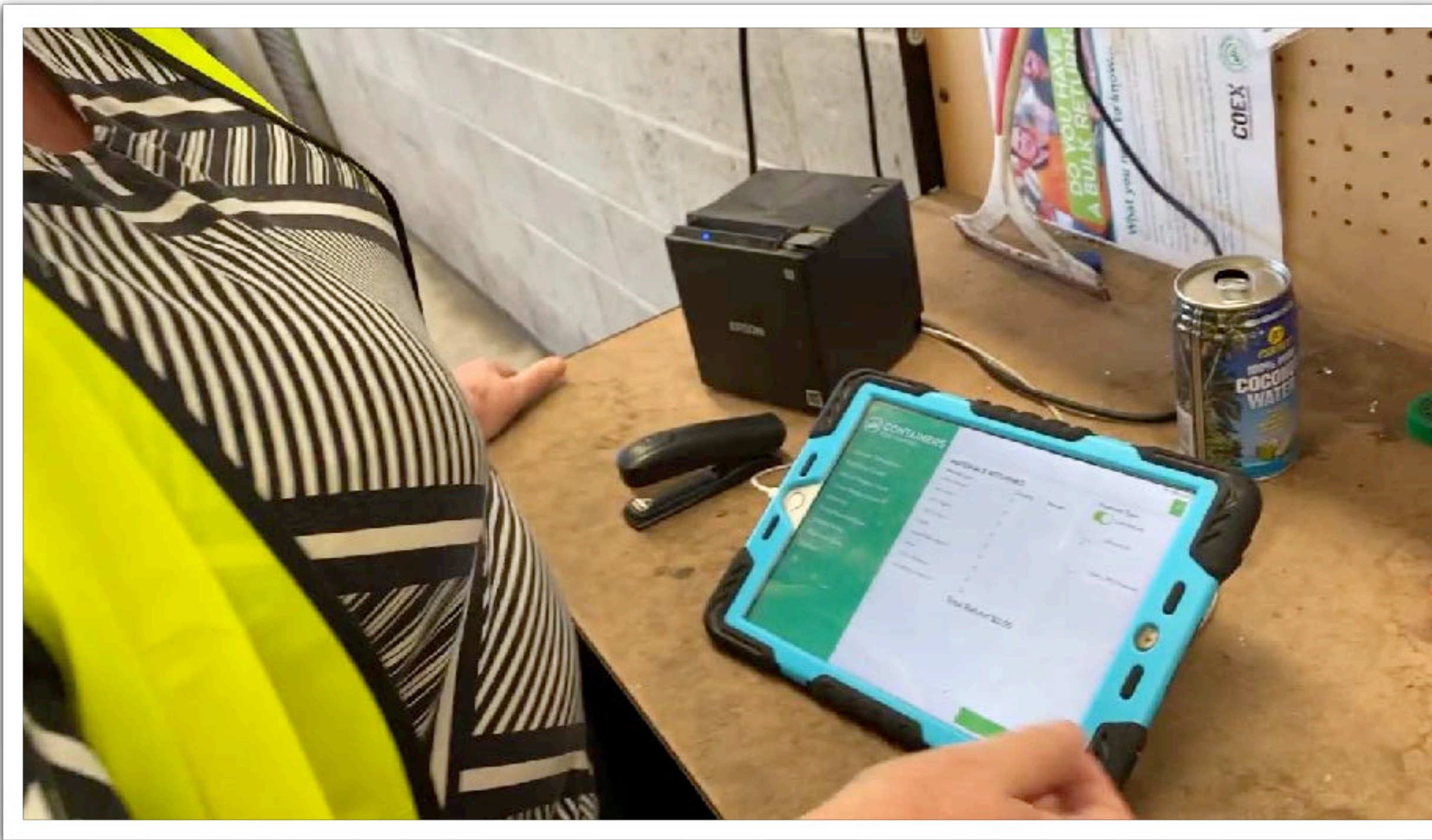
✓ Allow user feedback to report bugs and errors

# Customer Identification

Why customers prefer cash and what happens when refunds are over certain amounts

- Drivers ID needed at $82.50+
- Refund Declaration needed at $150+
- Identification is invasive to customers who are on Centrelink benefits.
- Reef Logistics modified their stat dec to only capture suburb instead of full address

**Recommendations**

✓ Explore benefits and communications strategies to promote benefits of Scheme ID usage to both customers and CRPO staff.
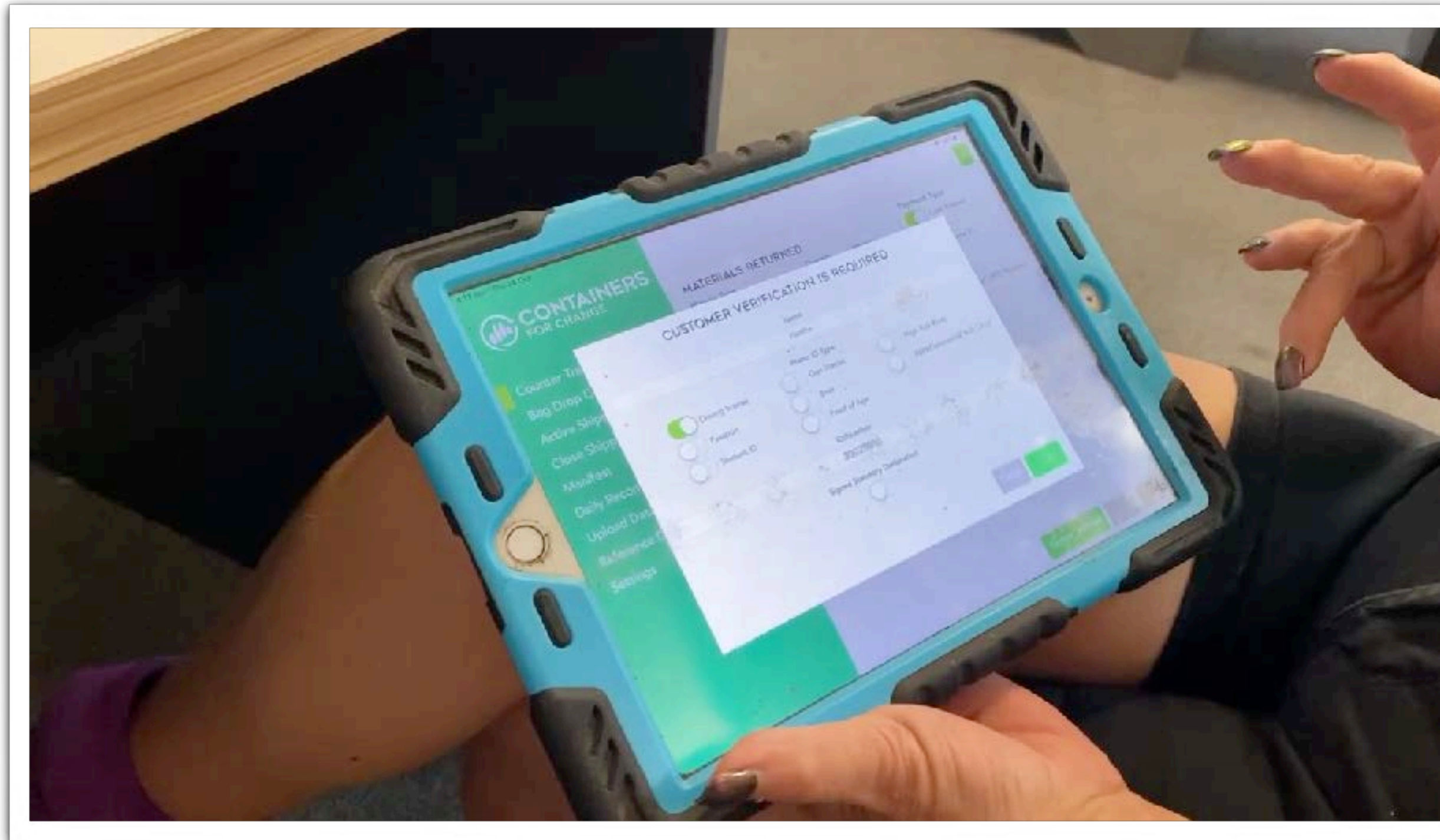
# Refund Declaration

What happens when a transaction reaches $150+ and the user needs to input a Refund Declaration toggle

⊙ There is no indication that a user needs to input the "Signed Refund Declaration" toggle in order to continue

⊙ iPad keypad obscures the "Signed Refund Declaration" toggle

**Recommendations**

✓ Display "Signed Refund Declaration" toggle as mandatory with alert message if "Continue" button is tapped.

✓ Ensure controls are not obscured by device UI elements (eg. iPad keypad)

# POS Reset

Users attempting to reset POS



- POS tended to crash 3-4 times per day (more in the afternoons)
- Gloves needed removal for swiping and complex interaction gestures
- People did not know how to restart the POS app

**Recommendations**

✓ Investigate and de-bug stability issues

✓ Implement metrics to capture frequency of crashes

✓ Tips for how to reset app

# Replace a shipper unit

Low       Medium       **Serious**       Critical



First-time users struggled to understand what the labels meant and the functions assigned to actions would do

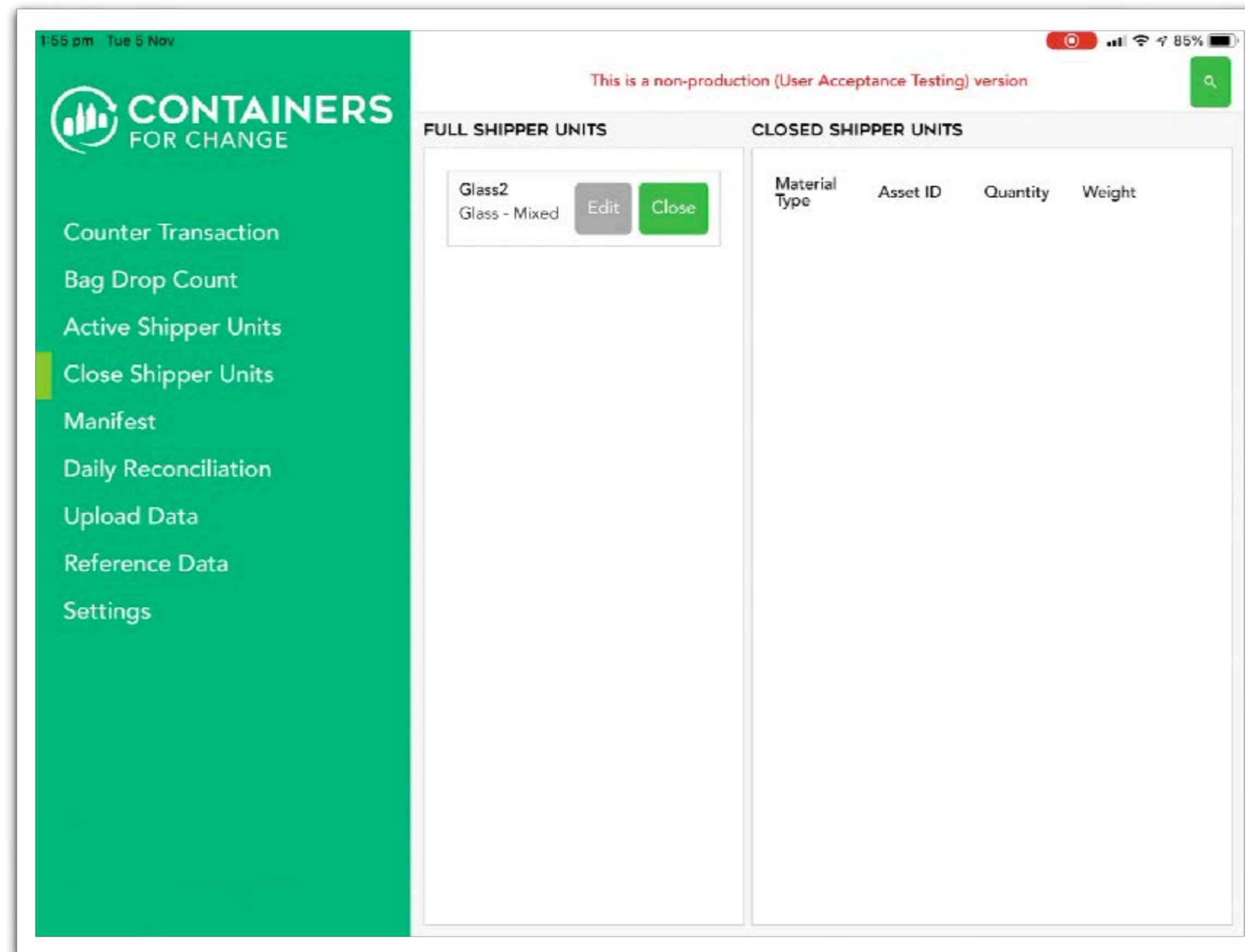◉ First time users struggled to understand how to replace a shipper unit

**Recommendations**

✓ Make steps intuitive for replacing units

✓ Provide clear information to guide users to understand functions without having reference a manual or written notes.

# Close a shipper unit

First-time users struggled to understand what the labels meant

⦿ First time users struggled to understand how to close a shipper unit

**Recommendations**

✓ Make steps intuitive for replacing units

✓ Provide clear information to guide users to understand functions without having reference a manual or written notes.

# Transport manifest

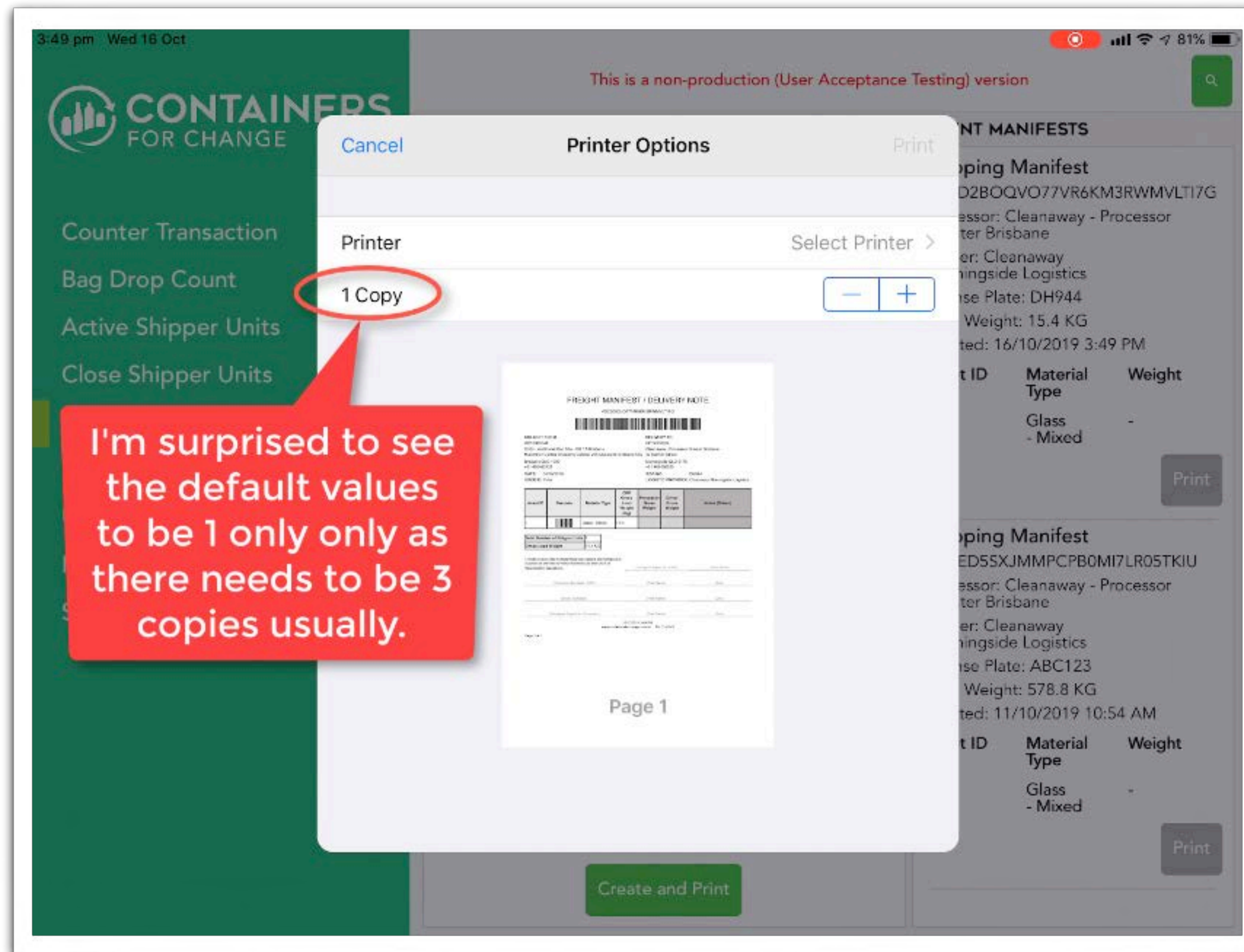P1 printing a Transport Manifest

◉ Users have to print 3 x copies

## Recommendations

✓ Make 3x copies the default value
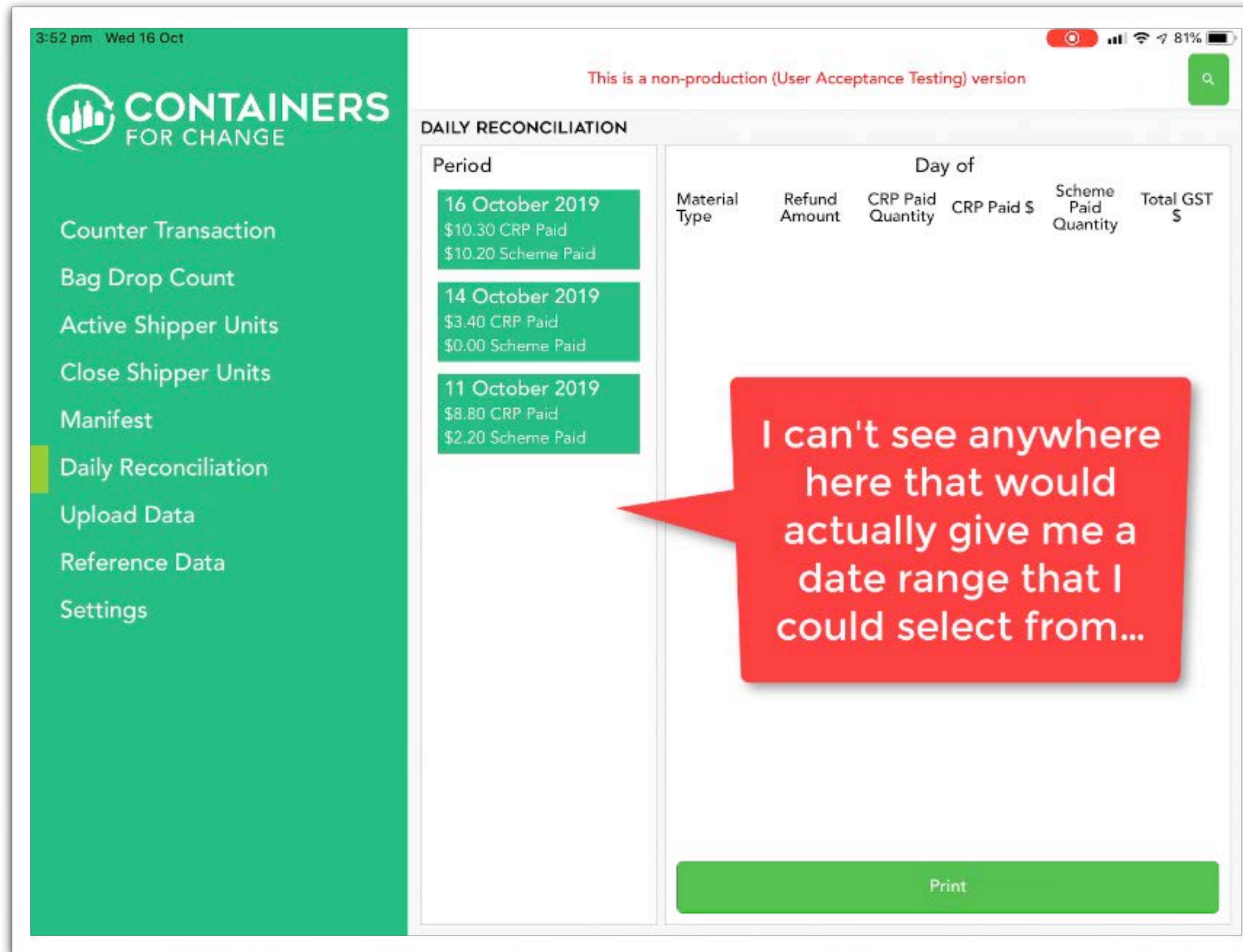
✓ Allow user feedback to report bugs and errors

# Daily Reconciliation

P1 cannot find any way to see records from last month

◉ No controls to see records over a month old

**Recommendations**
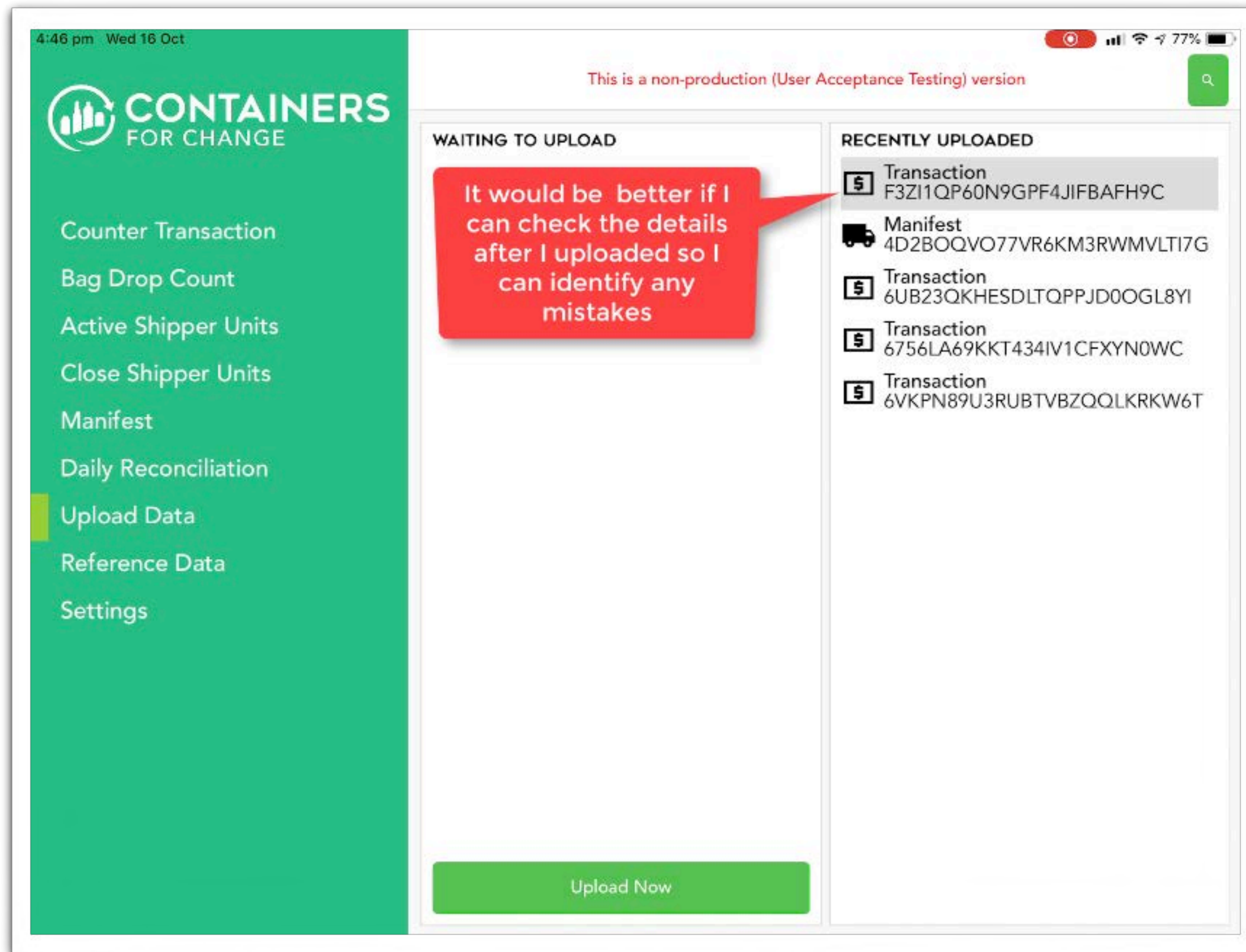
✓ Explore user needs for this

# Data upload

P2 would like to see details of uploaded data

⊙ Some users like to access details of data uploaded, eg Material type, quantity and amount

**Recommendations**

✓ Explore user needs for this

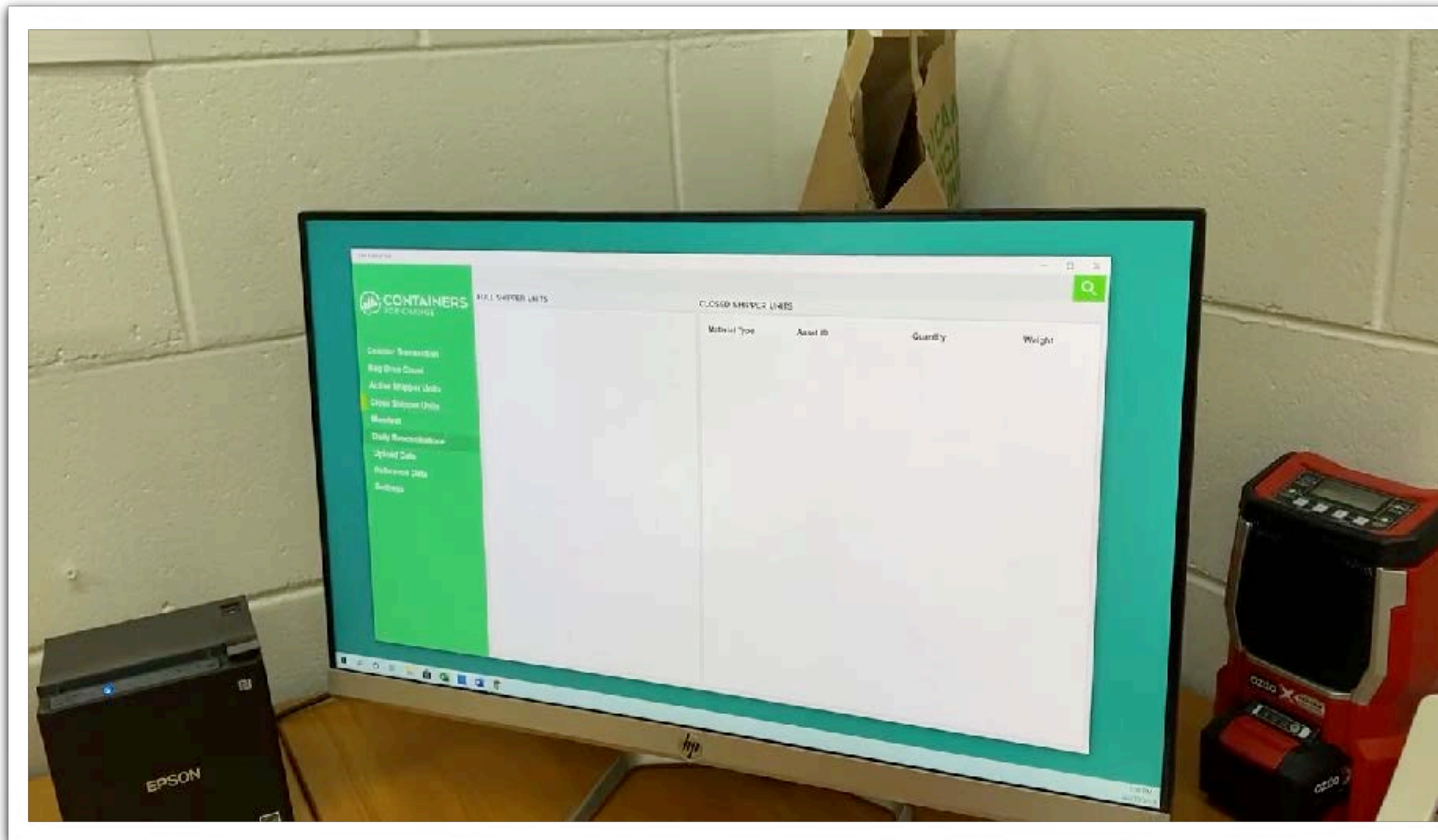# Data re-appearance

User demonstrates how closed shipping data keeps re-appearing throughout the next few days

◉ Data that was deleted, kept reappearing in the few days following.

**Recommendations**

✓ Investigate and de-bug

✓ Allow user feedback to report bugs and errors

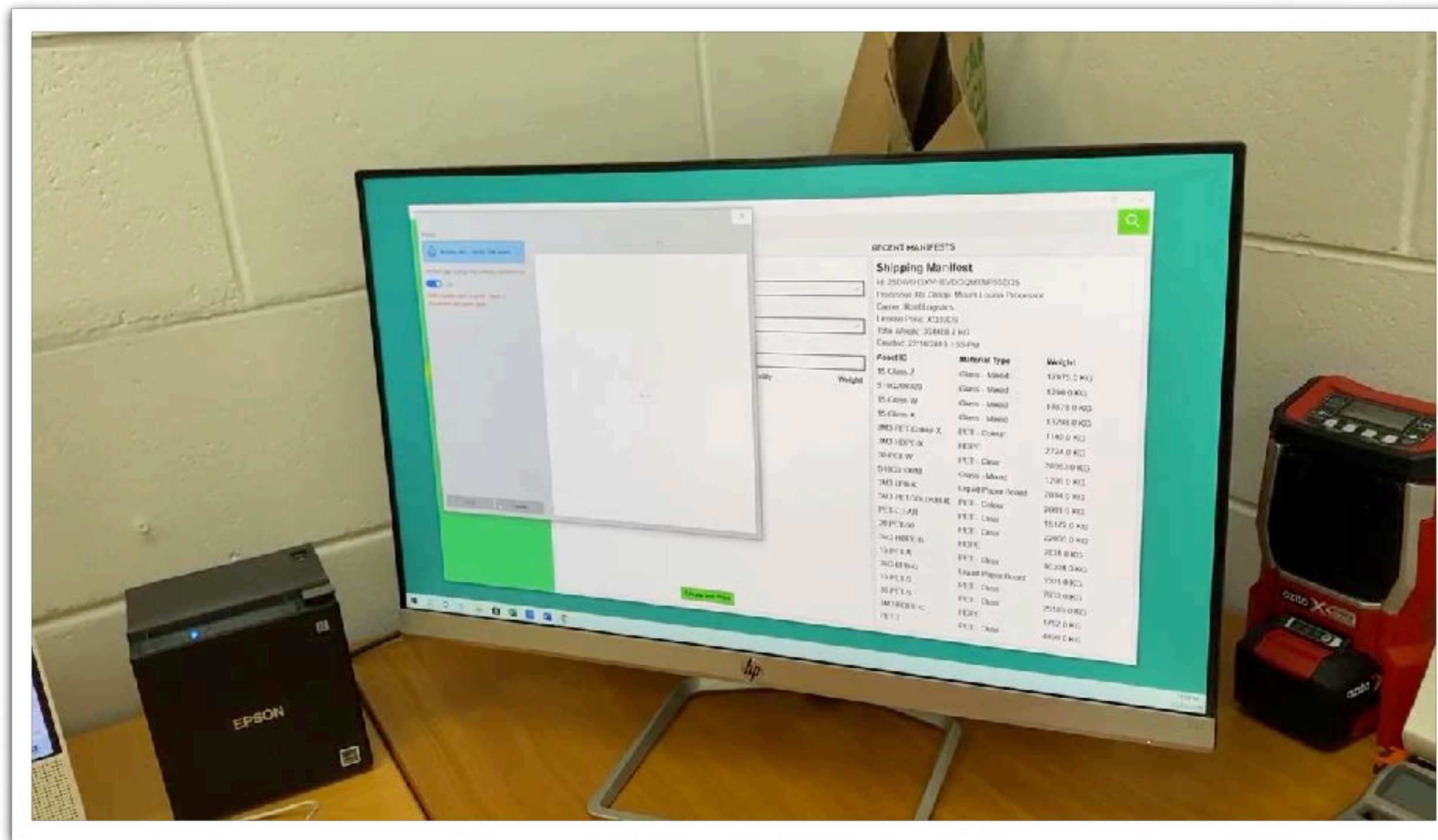✓ Implement Reset Coordination Services function in the event that there is a data corruption to purge data.

# Manifest printing

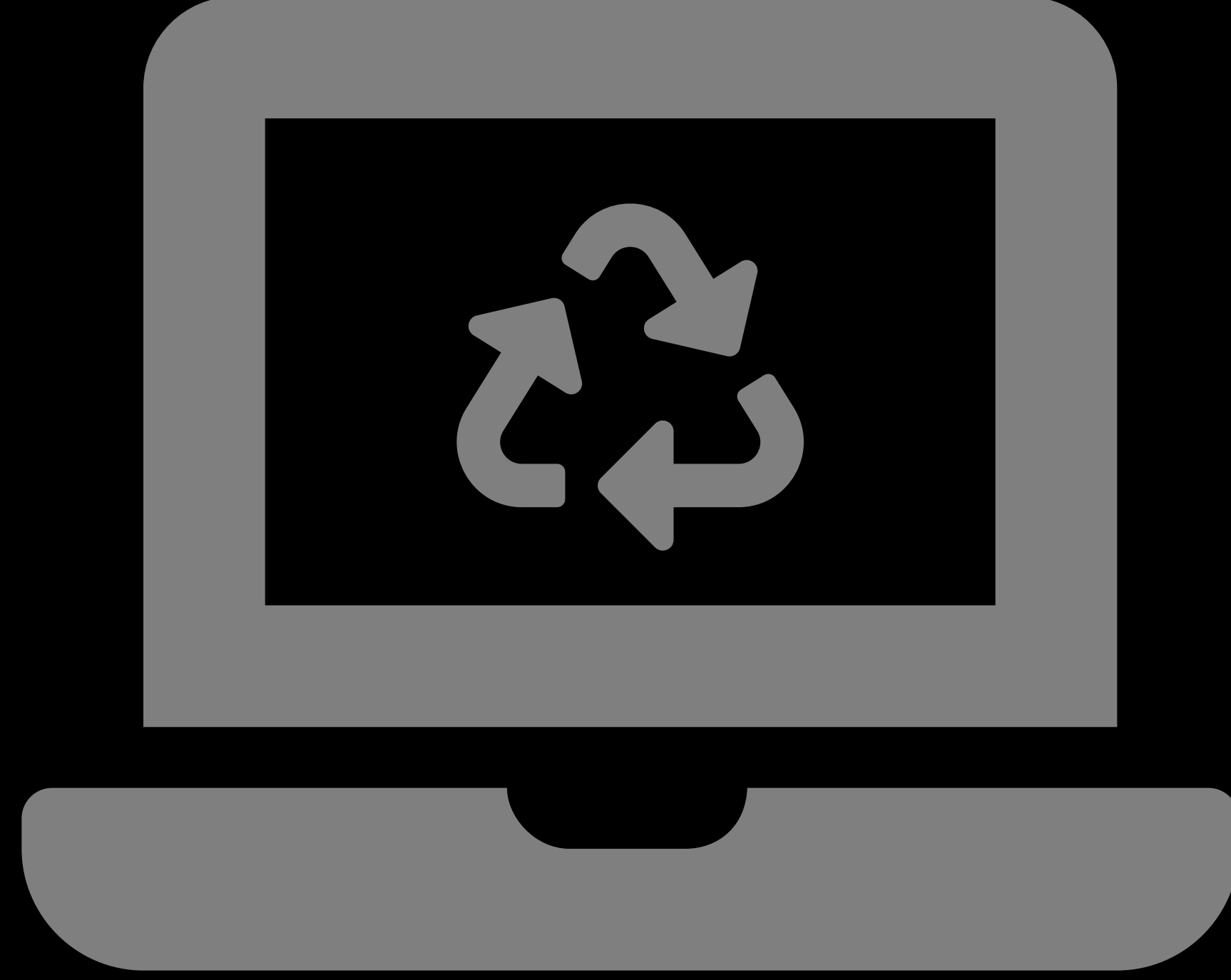Demonstration of the Manifest printing bug

- ◉ Primary "Create and print" function fails
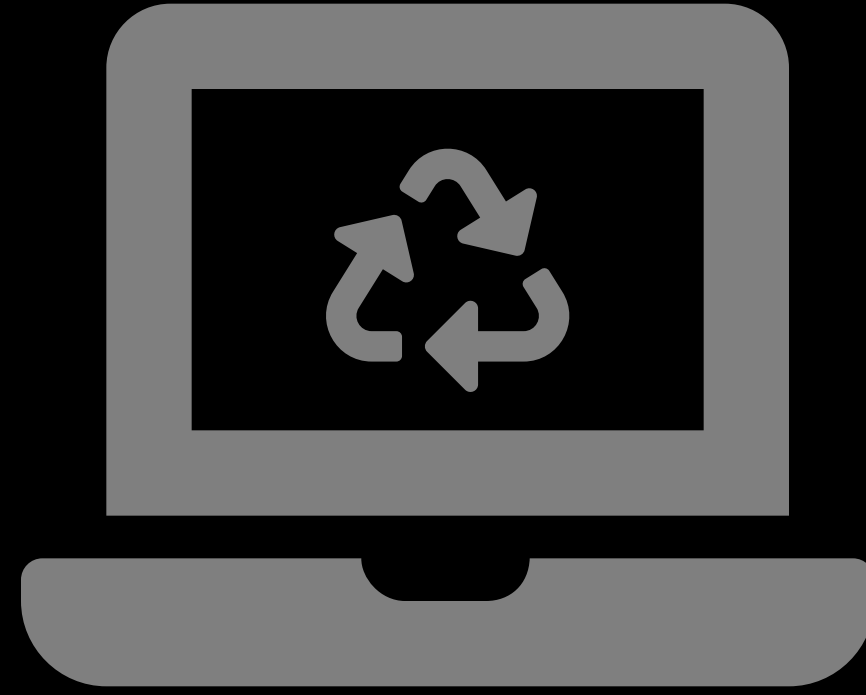- ◉ Workaround is to reprint using the Recent Manifest print button

**Recommendations**

✓ Investigate and de-bug

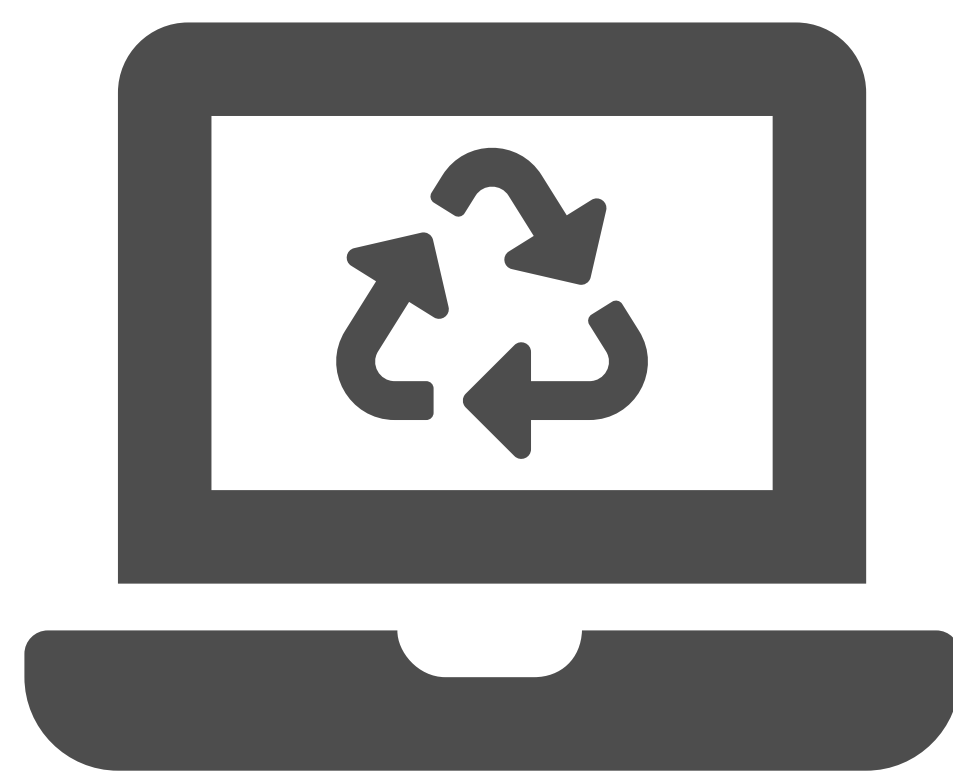✓ Allow user feedback to report bugs and errors

# CRP Portal

# CRP Portal Task completion

Completion rates are the fundamental usability metric:

A binary measure of pass and fail (coded as 1 or 0) provides a simple metric of success. If users cannot complete a task, not much else matters with respect to usability or utility.

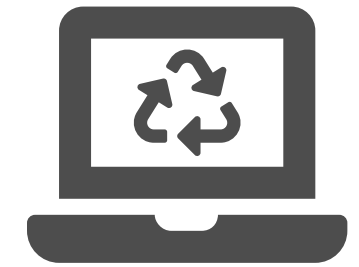# CRP Portal. Task completion score

53 %

**78%** is the average from a database of almost 1200 software and website tasks across several products and domains.

# CRP Portal tasks

1. Submit claim

   **25%** (1 of 3 participants succeeded)

2. Check claims

   **67%** (2 of 3 participants succeeded)

3. Update stock

   **50%** (1 of 3 participants succeeded)
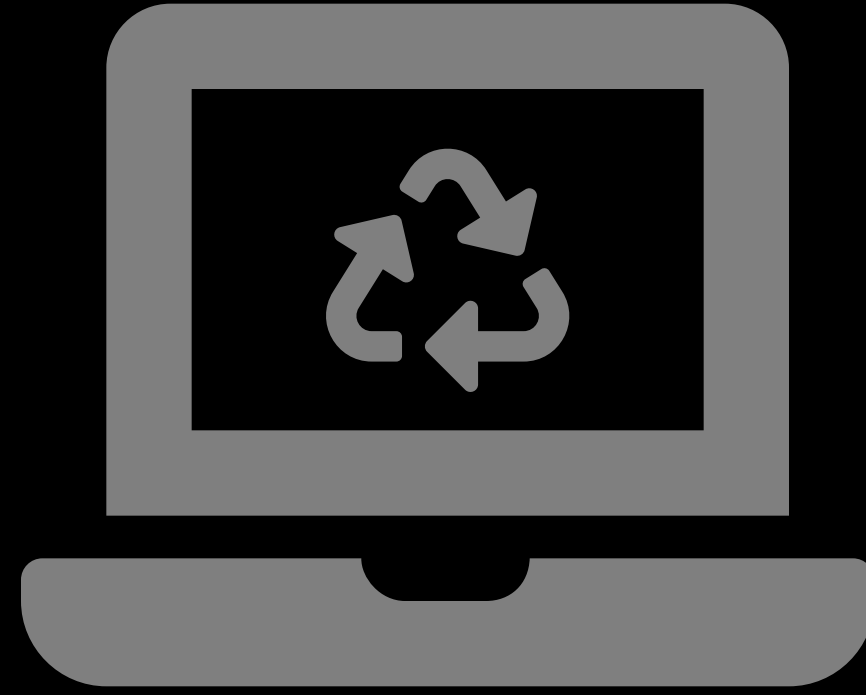
4. Update POS

   **25%** (1 of 3 participants succeeded)

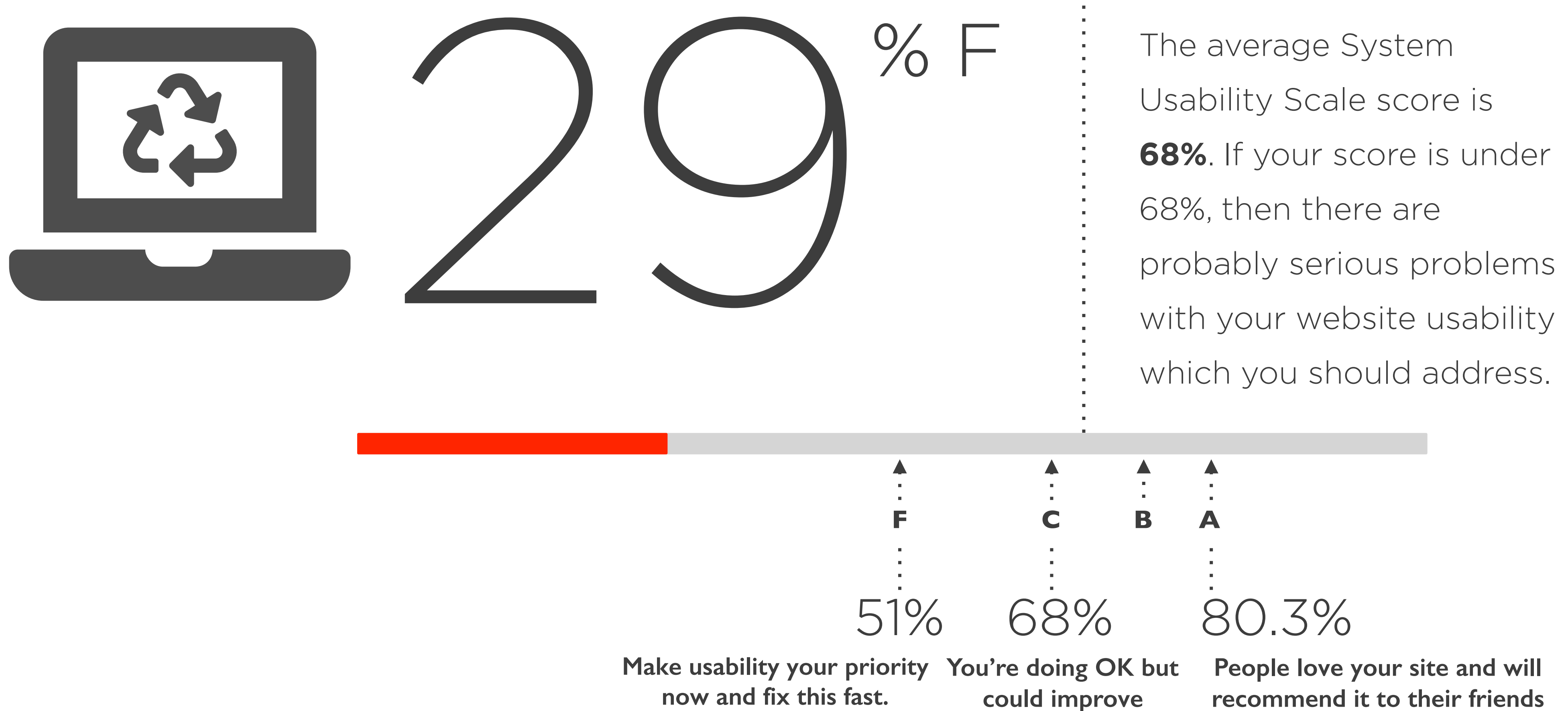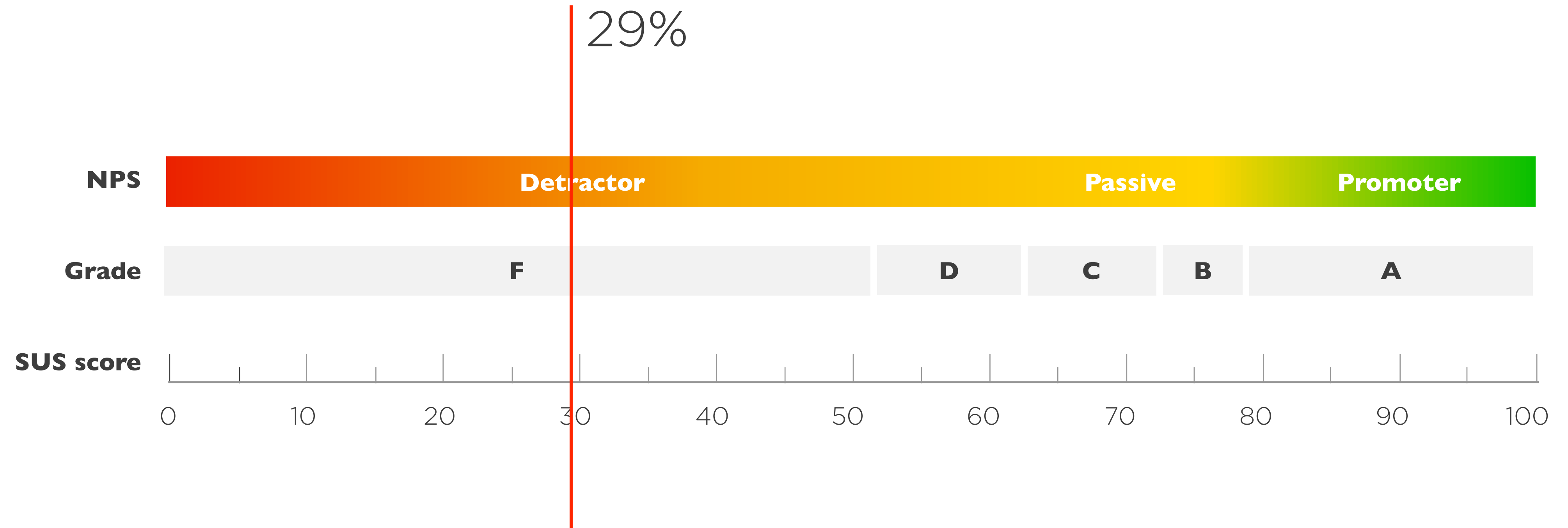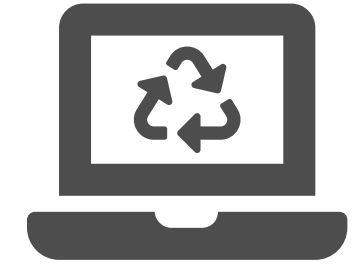5. Add employee

   **100%** (3 of 3 participants succeeded)

# CRP Portal Ease of use

The SUS is an ease-of-use score. It has been tried and tested since 1986 and has proven itself to be a dependable method of evaluating the usability of systems which is internationally recognised.

# CRP Portal. Ease of use

29<sup>% F</sup>

The average System Usability Scale score is **68%**. If your score is under 68%, then there are probably serious problems with your website usability which you should address.

**F**     **C**     **B**     **A**

51%     68%     80.3%

**Make usability your priority now and fix this fast.**     **You're doing OK but could improve**     **People love your site and will recommend it to their friends**

# CRP Portal SUS interpretations

29%

| | | | | | | |
|---|---|---|---|---|---|---|
| **NPS** | Detractor | | | Passive | Promoter | |

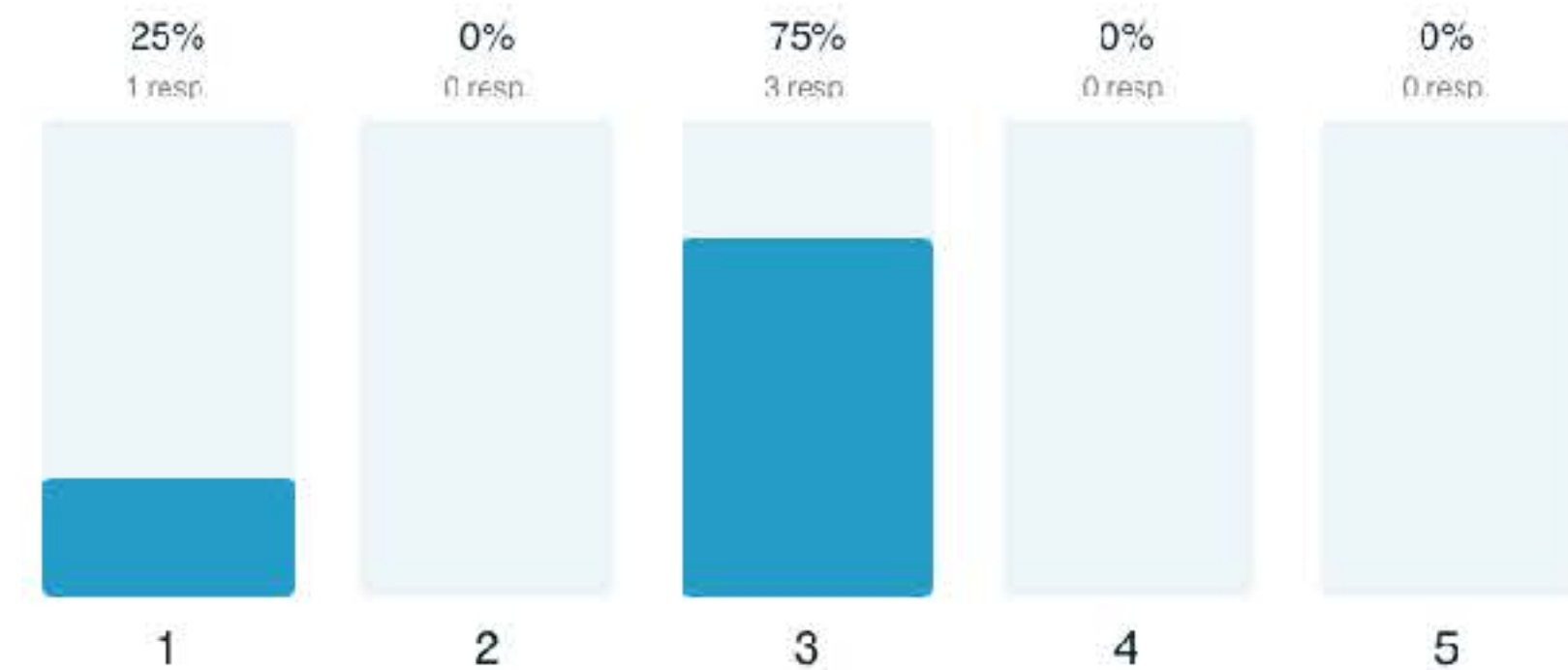| **Grade** | F | | D | C | B | A |
|---|---|---|---|---|---|---|

**SUS score**

0    10    20    30    40    50    60    70    80    90    100

# CRP Portal Net Promoter Score
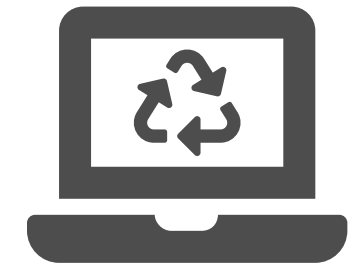
# 2.5 / 5

★★★☆☆

How would you rate this website?

(1 = Terrible, 5 = Excellent)

| 25% | 0% | 75% | 0% | 0% |
| 1 resp. | 0 resp. | 3 resp. | 0 resp. | 0 resp. |
| 1 | 2 | 3 | 4 | 5 |

# CRP Portal - Why they rated it so...
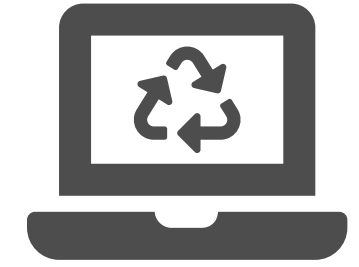
P1 ★★★★★

I found the system very confusing to navigate. I was under-confident in inputting the data. It seems like a very simple process, but this tool feels unnecessarily complicated.

P3 ★★★★★

training requires work sheets or access to online tutorials

P4 ★★★★★

SYSTEM SLOW AT TIMES AND CRASHES FREQUENTLY

P5 ★★★★★

Very complex, little guidance and help points available. Difficult to navigate and understand the terminology
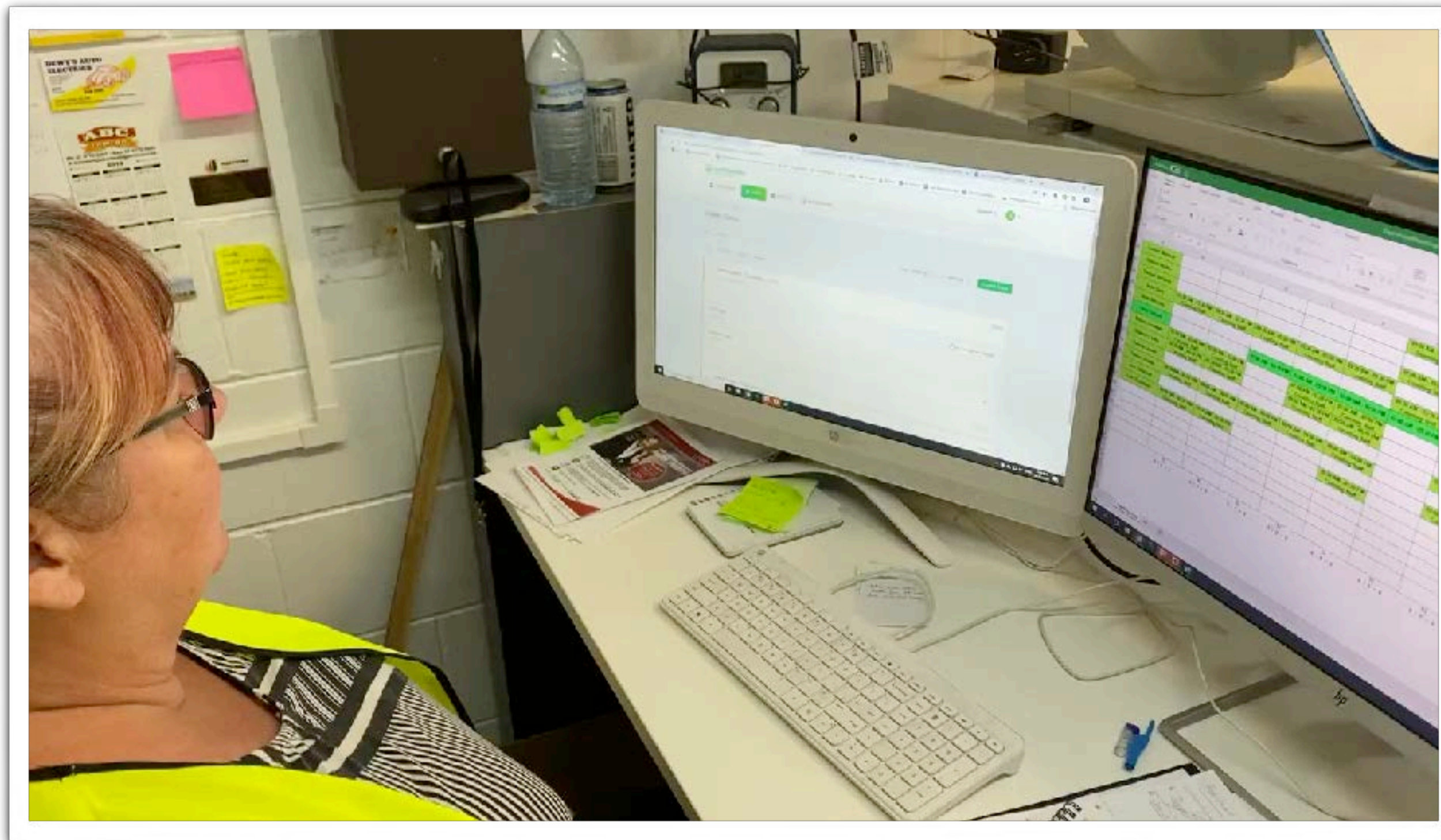
# Employee ID code

Low          Medium          **Serious**          Critical



Frustration at the frequency of login prompts

⦿ Same PIN needs to be entered multiple times intermittently to access the system

**Recommendations**

✓ Investigate and de-bug

✓ Allow user to control frequency of PIN prompt

✓ Explore alternative and more accessible methods to identify employees
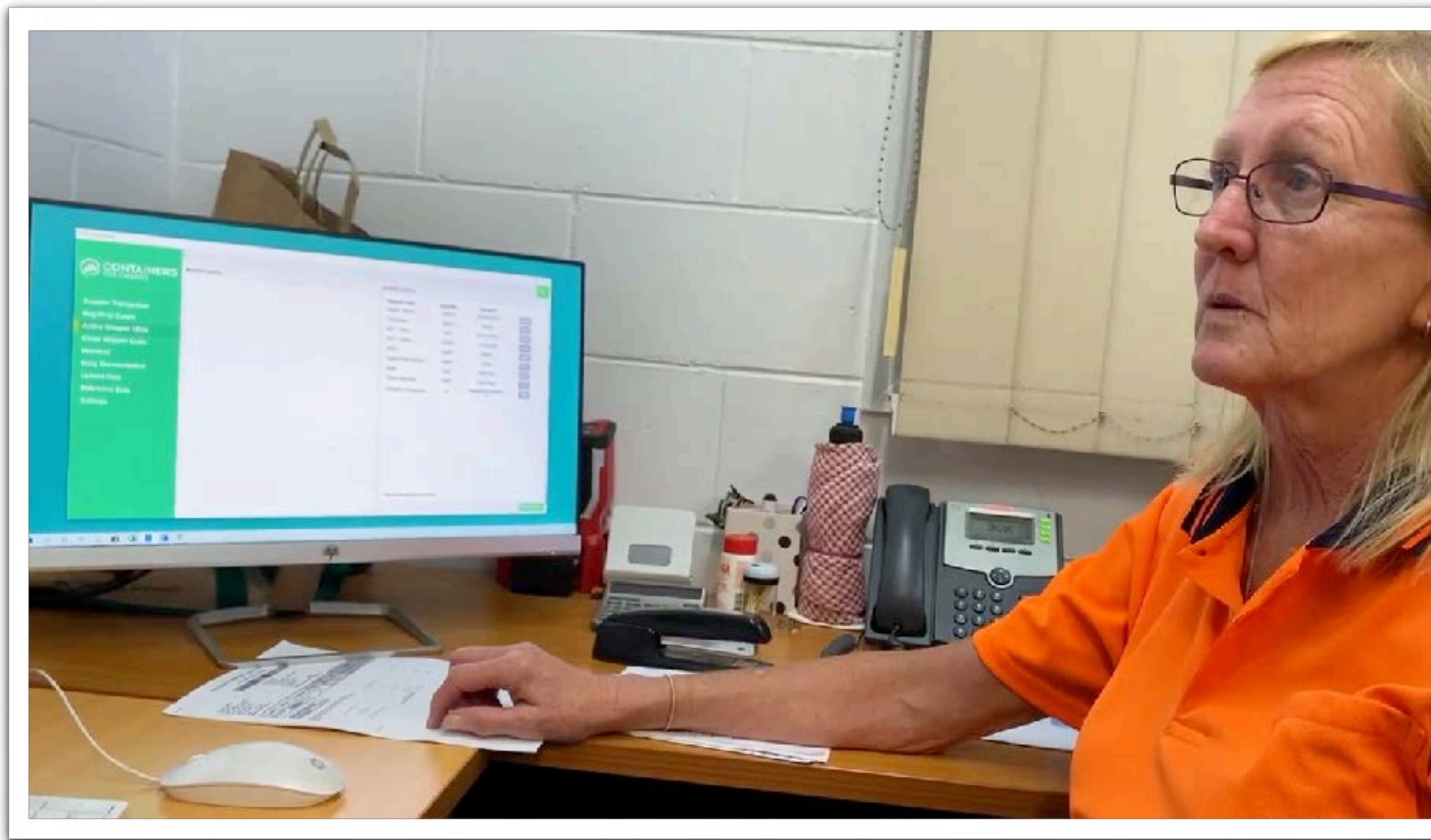
✓ Allow user feedback to report bugs and errors

# Learnability

User describes the challenges with internal training

⦿ Learning the CRP Portal functions is not easy for new starters

**Recommendations**

✓ Implement into the portal tutorials, support documentation, tooltips and walk-throughs and support channels.
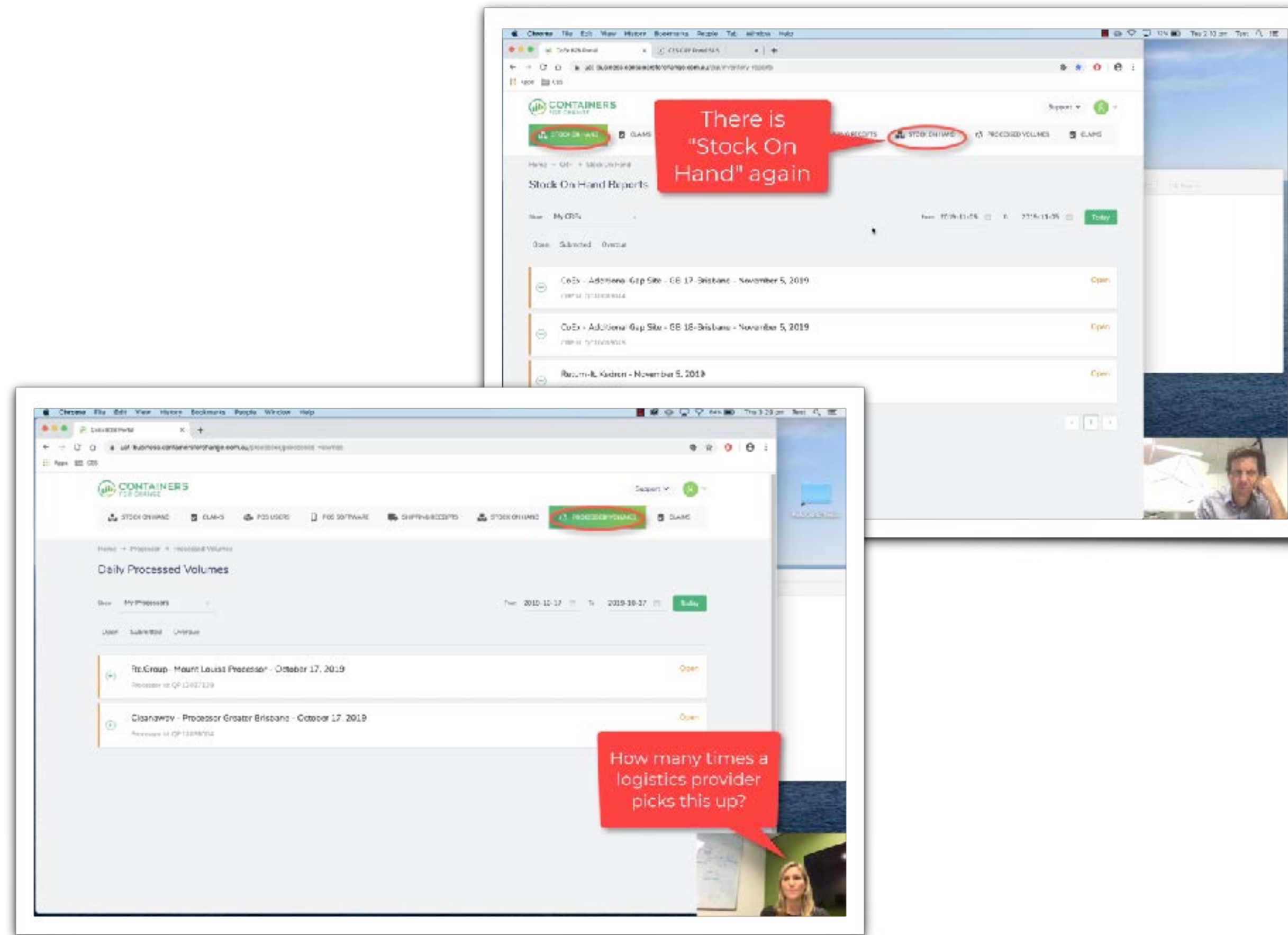
# Navigation

Low          Medium          Serious          **Critical**



⦿ Some labels are ambiguous to users

⦿ Users get confused with duplicate navigation items

**Recommendations**

✓ Re-label navigation items so that they will be understood by first-time  users

✓ Reconsider the use of different icons with labels which helps differentiate similar areas

✓ Make primary navigation stick to the top when scrolling

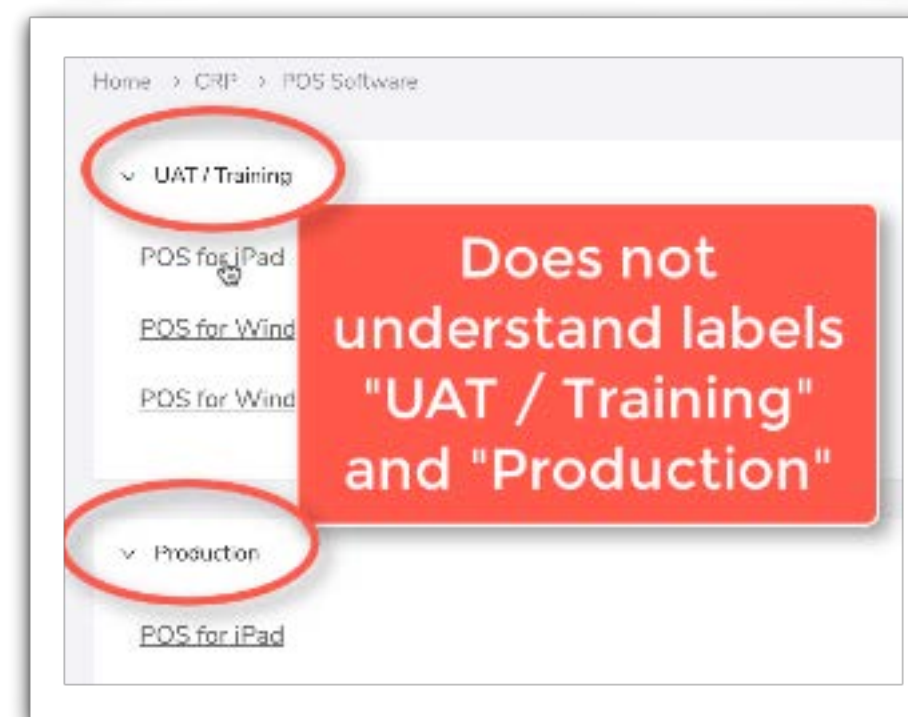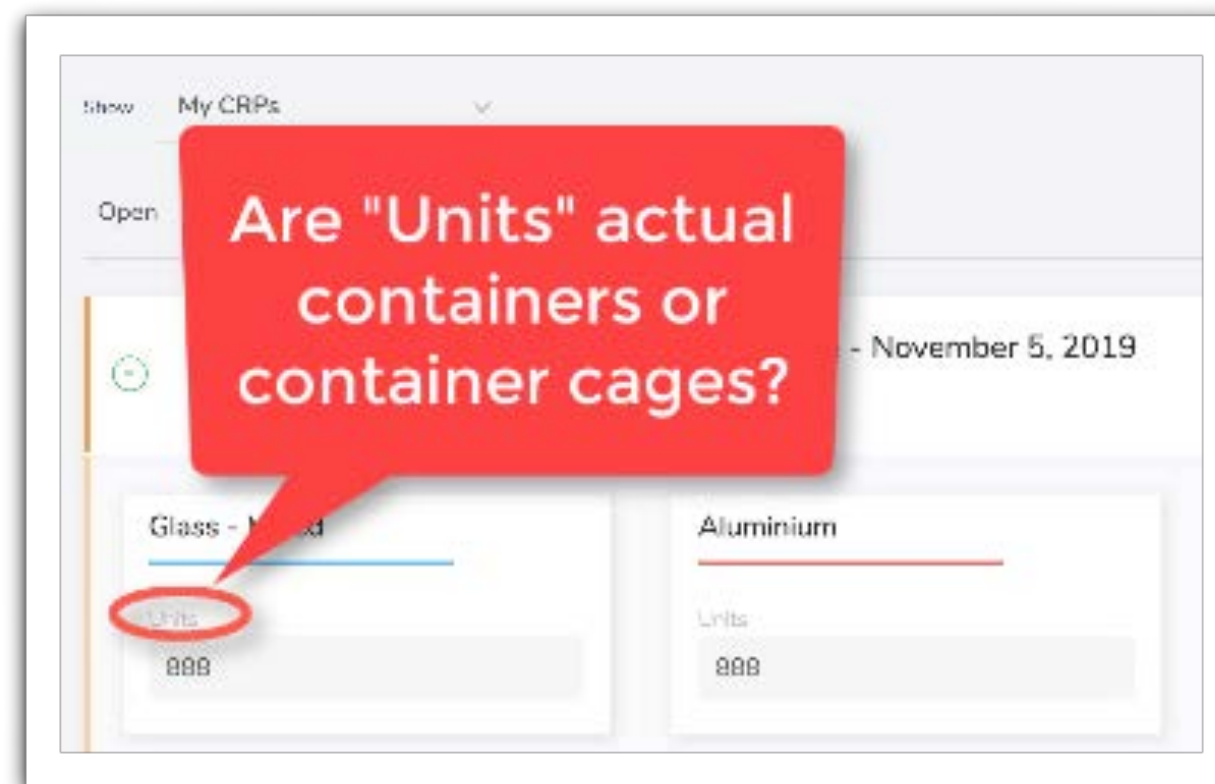First time users were confused why there some navigation items were duplicated

# Interface labels

First time users were not sure what the meaning a majority of labels meant

◉ Labels are ambiguous to first time users

**Recommendations**

✓ Re-label navigation items so that they will be understood by first-time users

✓ Consider the use of icons with labels which enhances comprehension

# Date picker



Calendar is so difficult to operate that it causes severe cognitive load
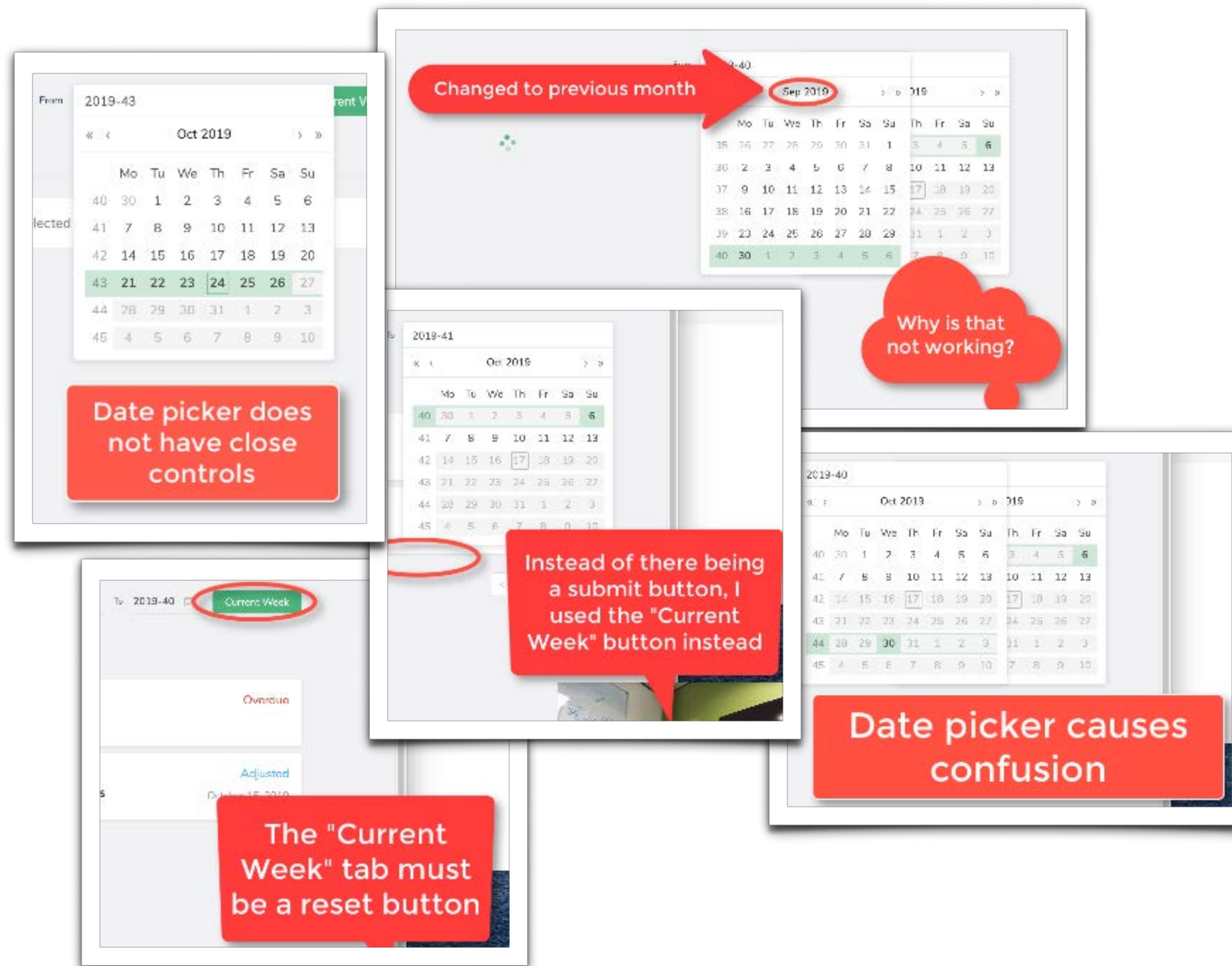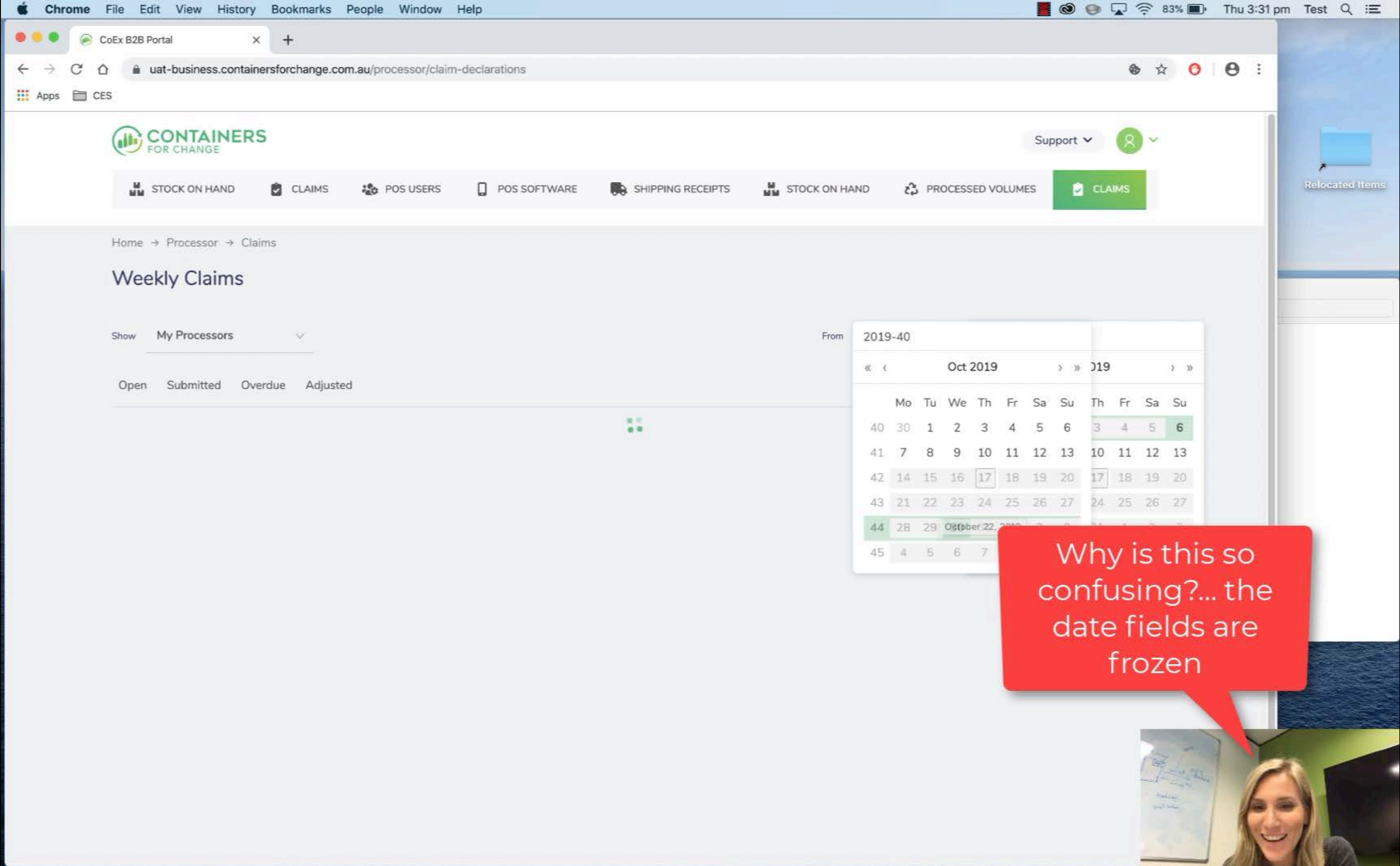
- Intermittently failed to respond or reset to previous month
- Users confused the button for a tab
- Labelling was needed for week number indicator
- Overlapping of modal windows caused confusion

**Recommendations**

✓ Investigate, debug and optimise performance

✓ Redesign with clear labels and actions in user interface elements

✓ Implement progress indicators for slow performance periods

Date picker not responding to action
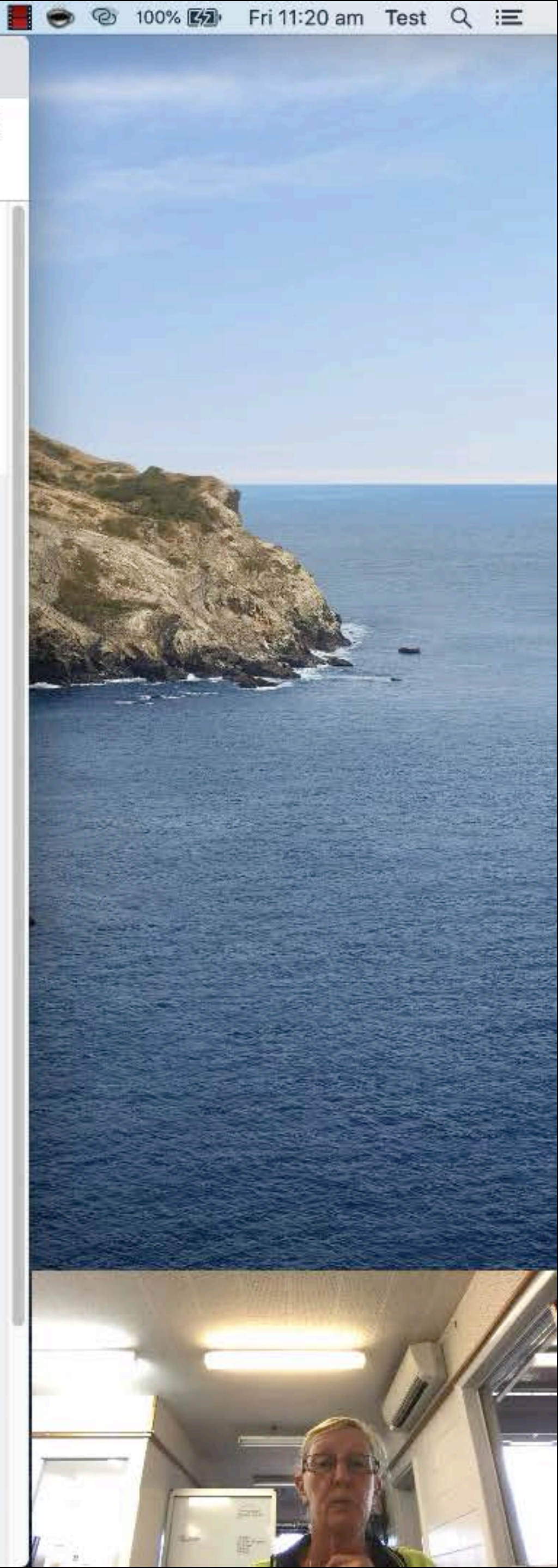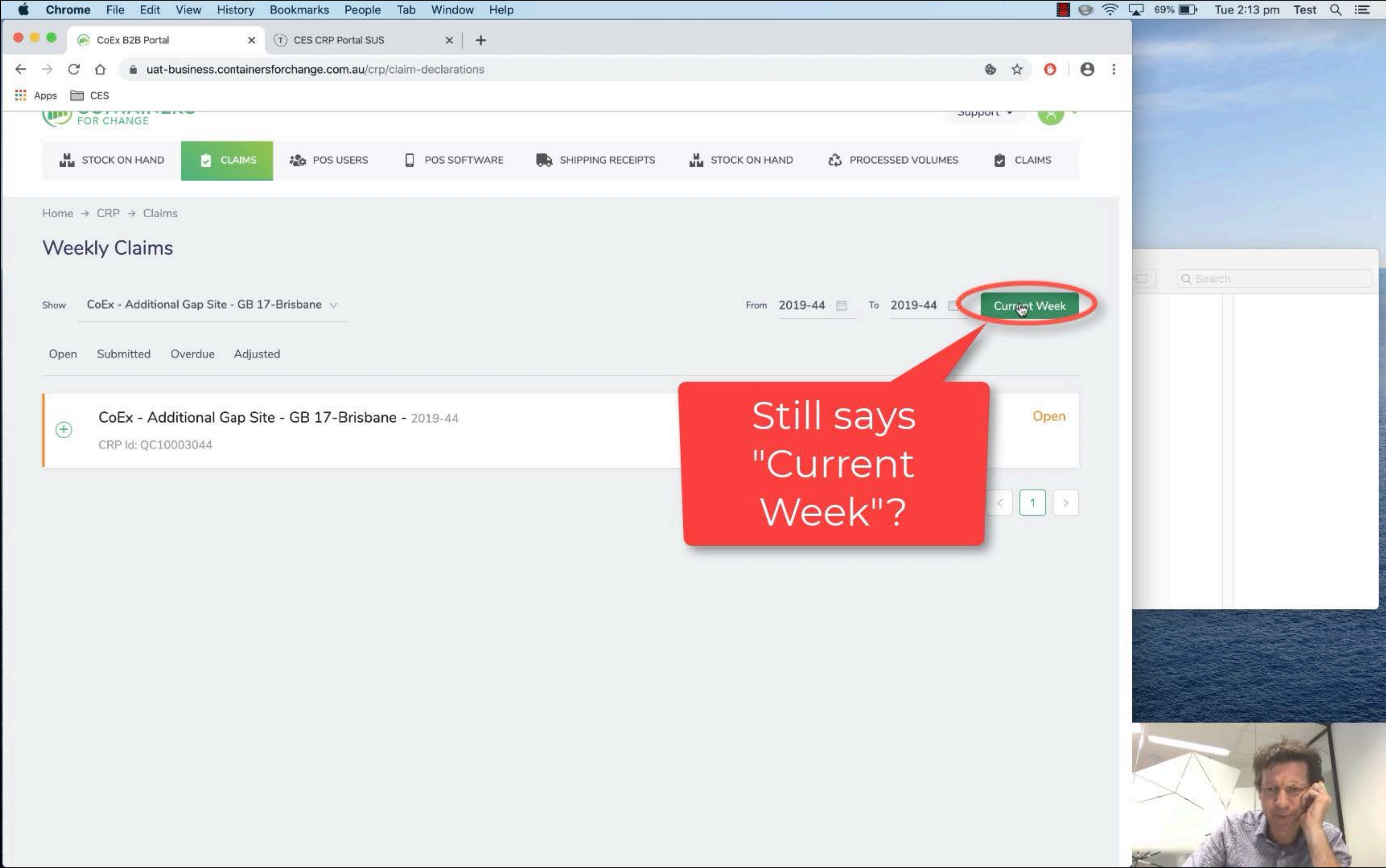
# Intuitive filters and labels

Users struggled to understand the way that the filters worked
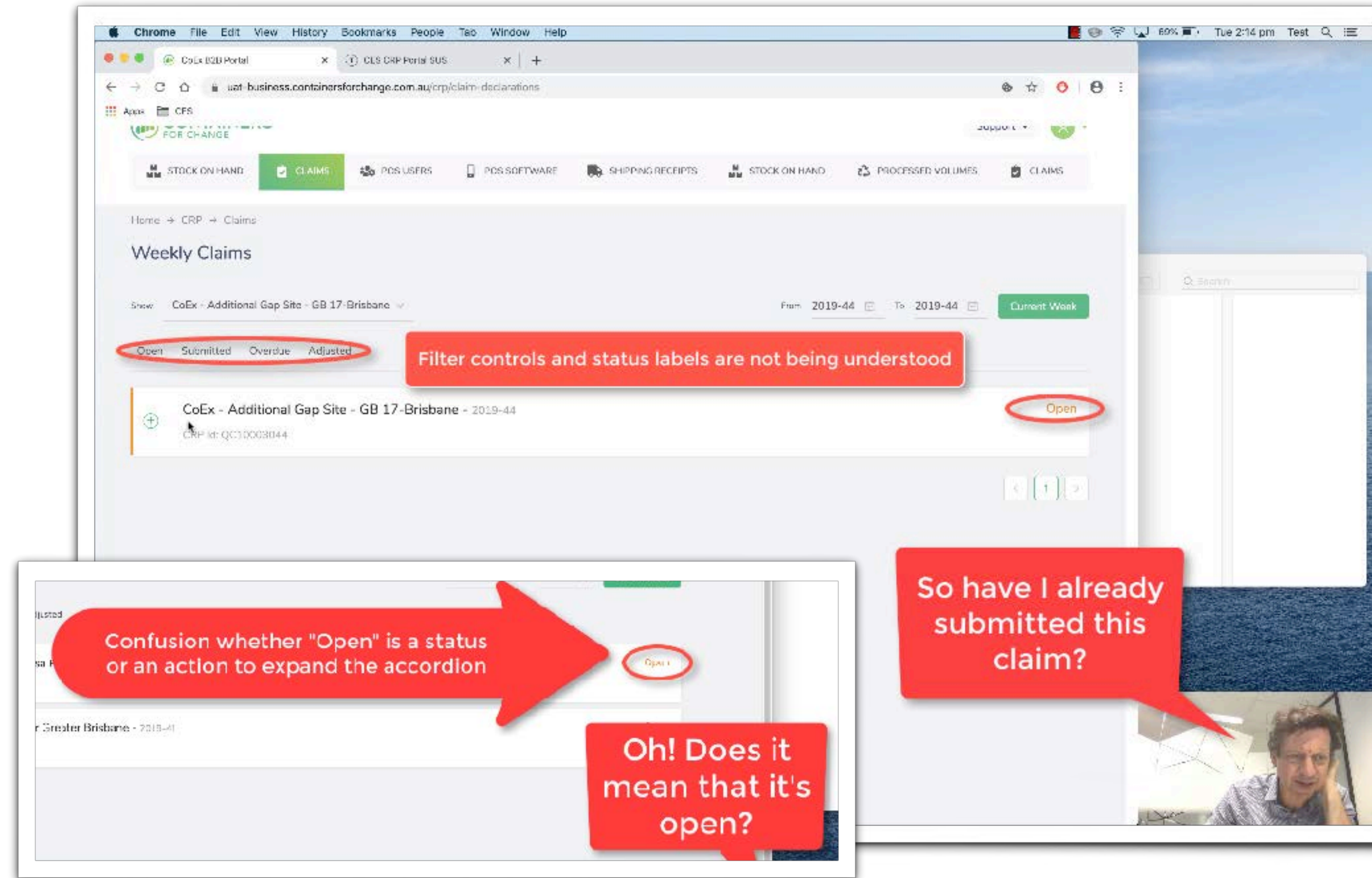
⦿ Users did not easily perceive and understand the filters and associated status of each claim container

**Recommendations**

✓ Redesign filters and accordion with clear labelling

# Claims

Claims were difficult for users to understand
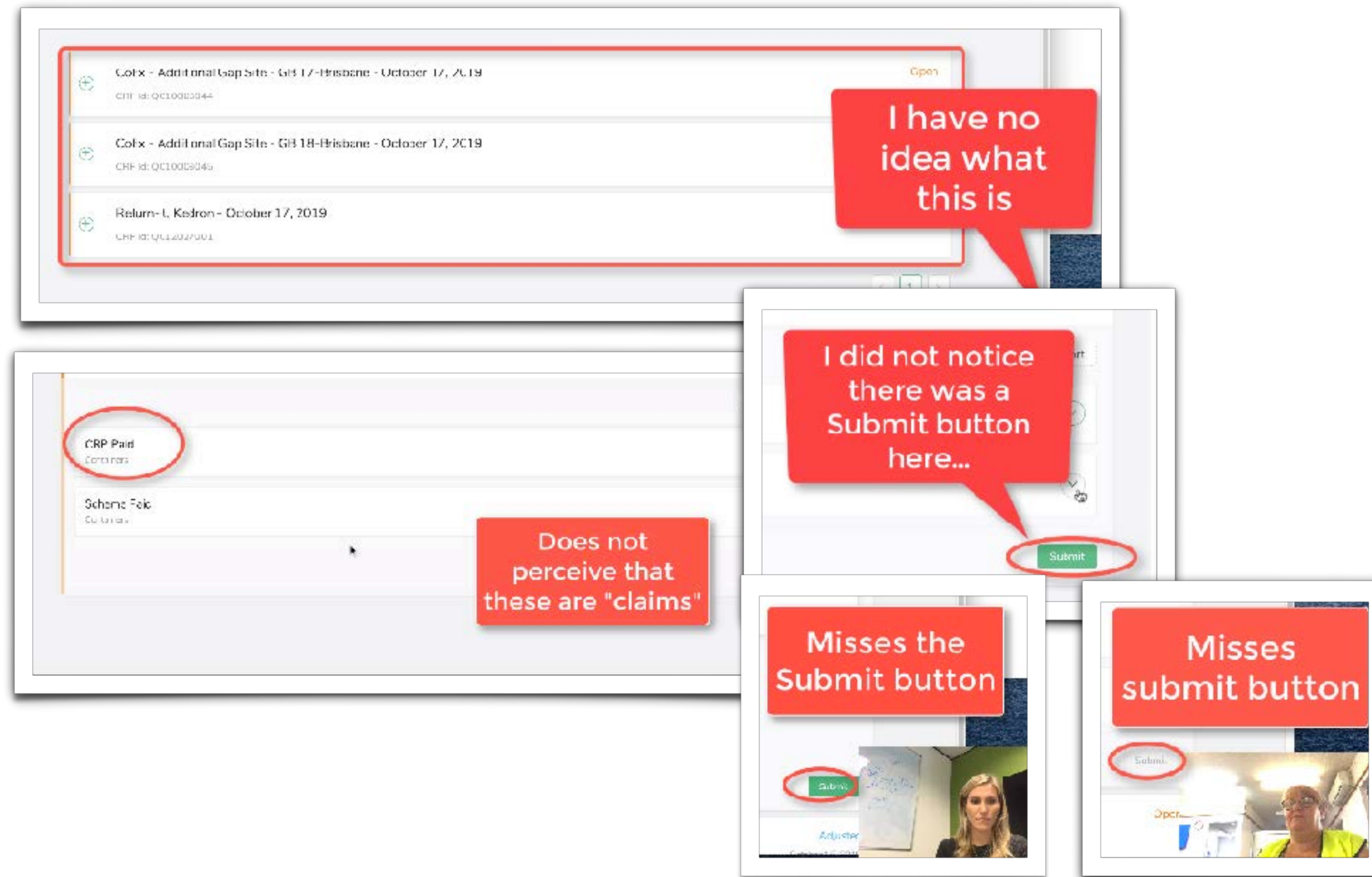
◉ "Choose CRP" step was not perceived

◉ Accordions were difficult to understand and operate

◉ Submit button was not perceived

◉ Its not clear when users can submit a claim

**Recommendations**

✓ Present default screen with selected CRP

✓ Redesign accordion content with clear labelling

✓ Relocate and re-label button to "Submit Claim"

Does not read instructions to choose a CRP
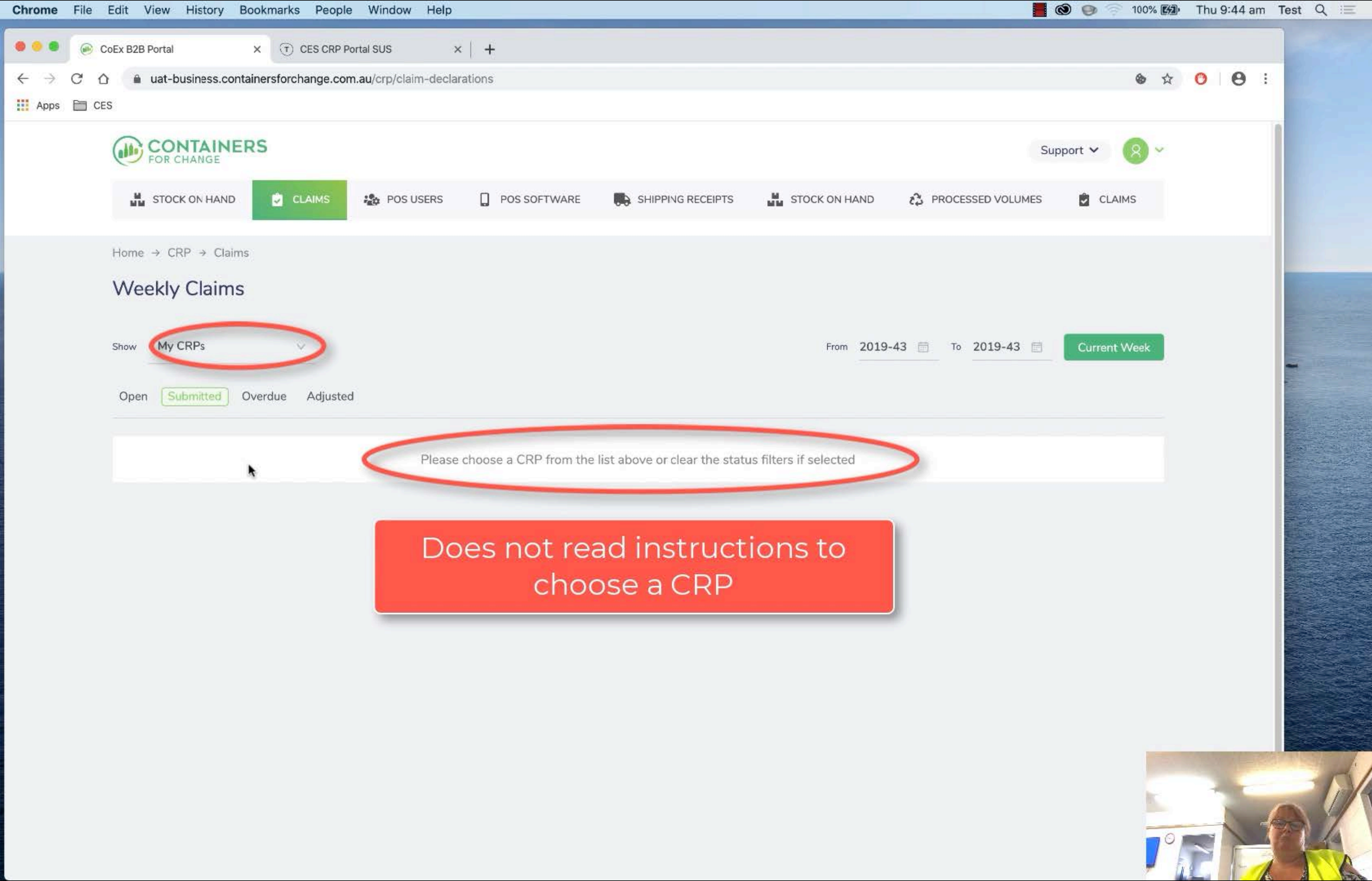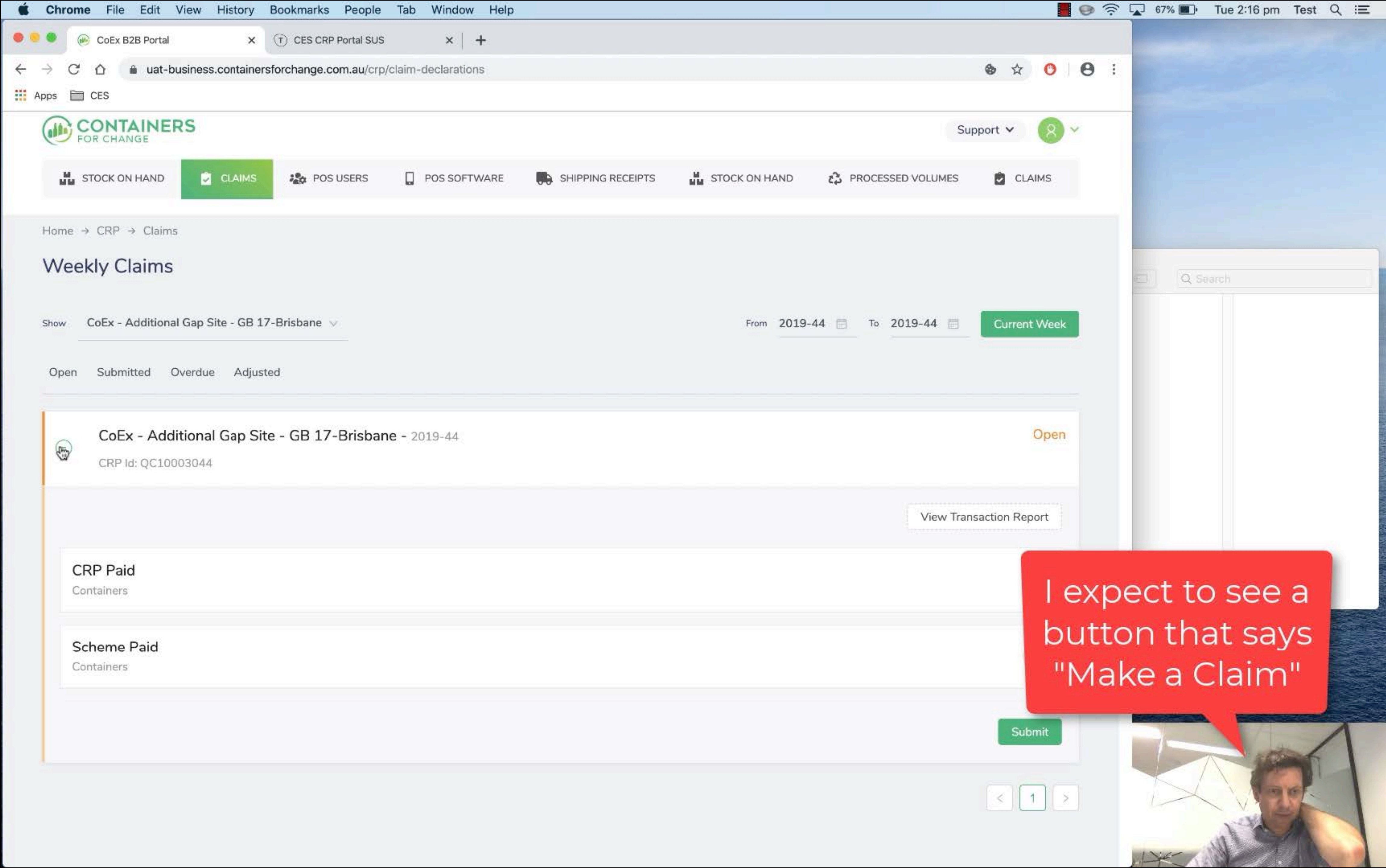
I expect to see a button that says "Make a Claim"

# Performance

Users thought that the system had crashed or failed when there
were delays or infinite loaders
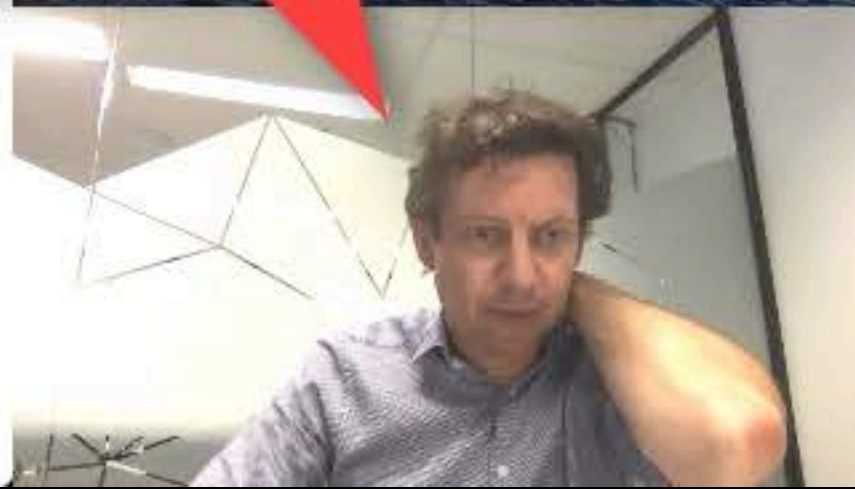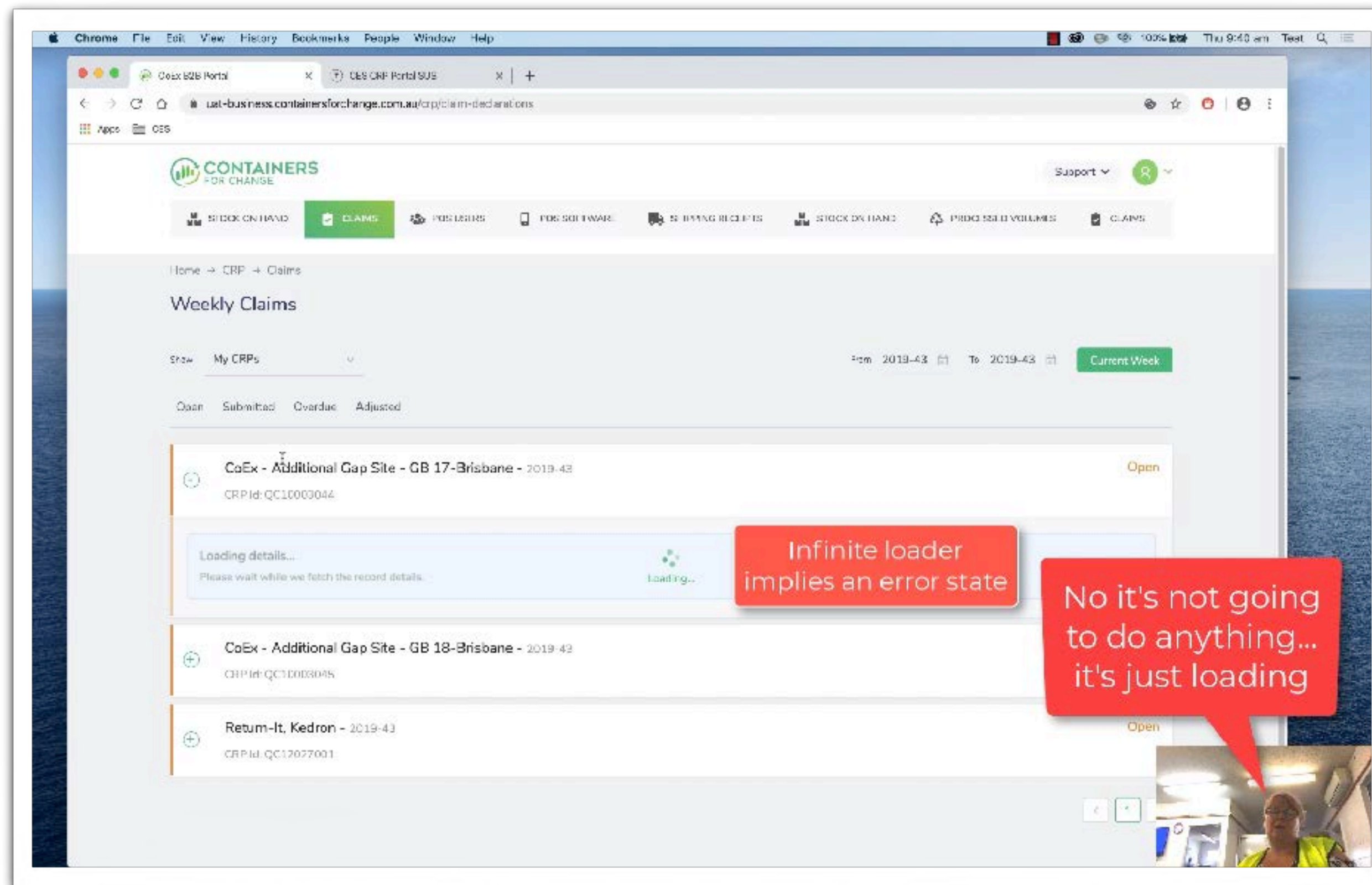
◉ Some data pulling
took a long time to
process

**Recommendations**

✓ Implement progressive feedback on
lengthy system processes

# Claims inconsistency

Frustration at inconsistency of data display depending upon the day of the week

◉ Claims does not display data consistently on Sundays

◉ User must set date fields as a workaround

**Recommendations**

✓ **Investigate and de-bug**

✓ **Allow user feedback to report bugs and errors**

# Support

Acompani // UX Research Report of POS + CRP Portal
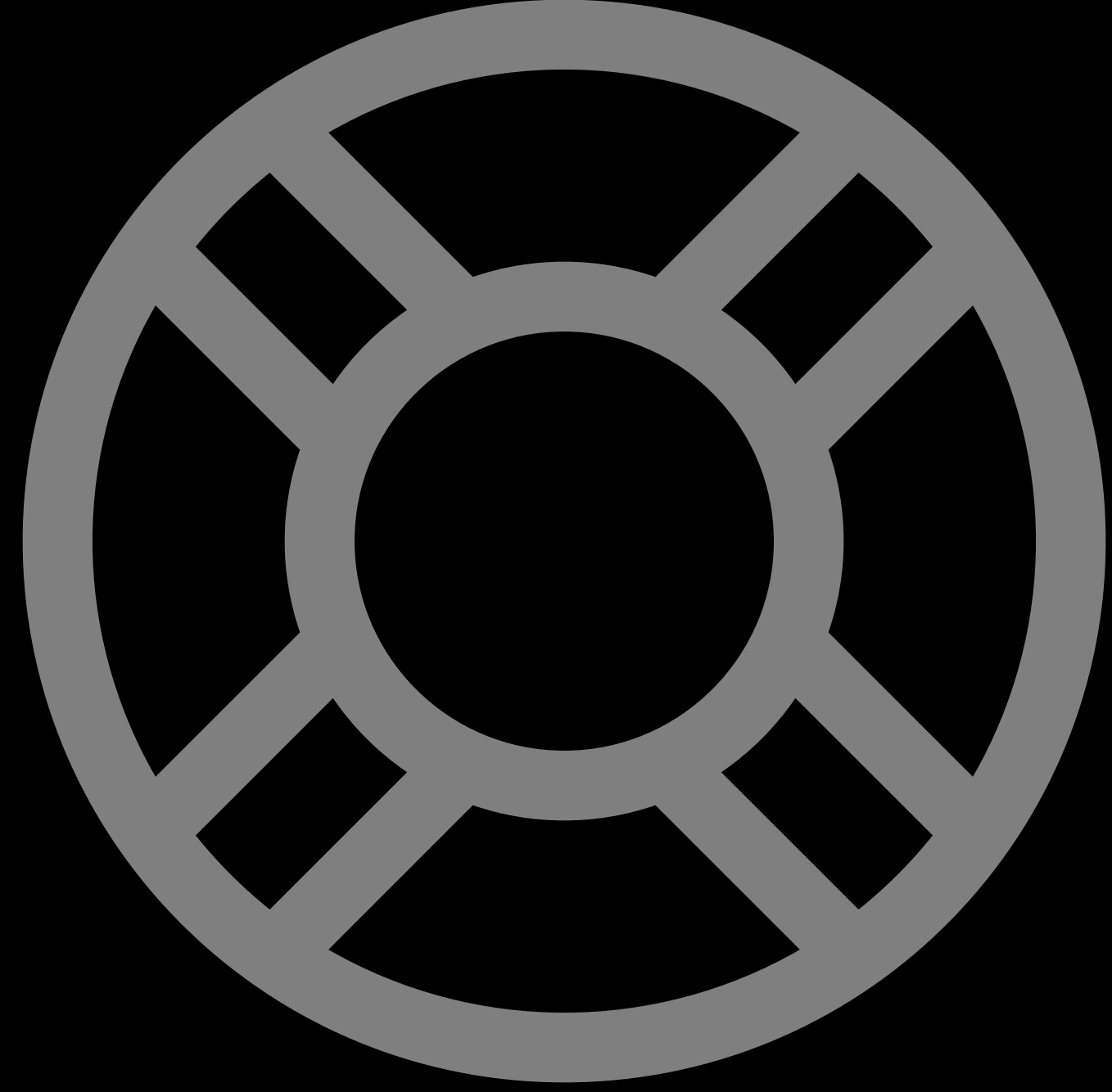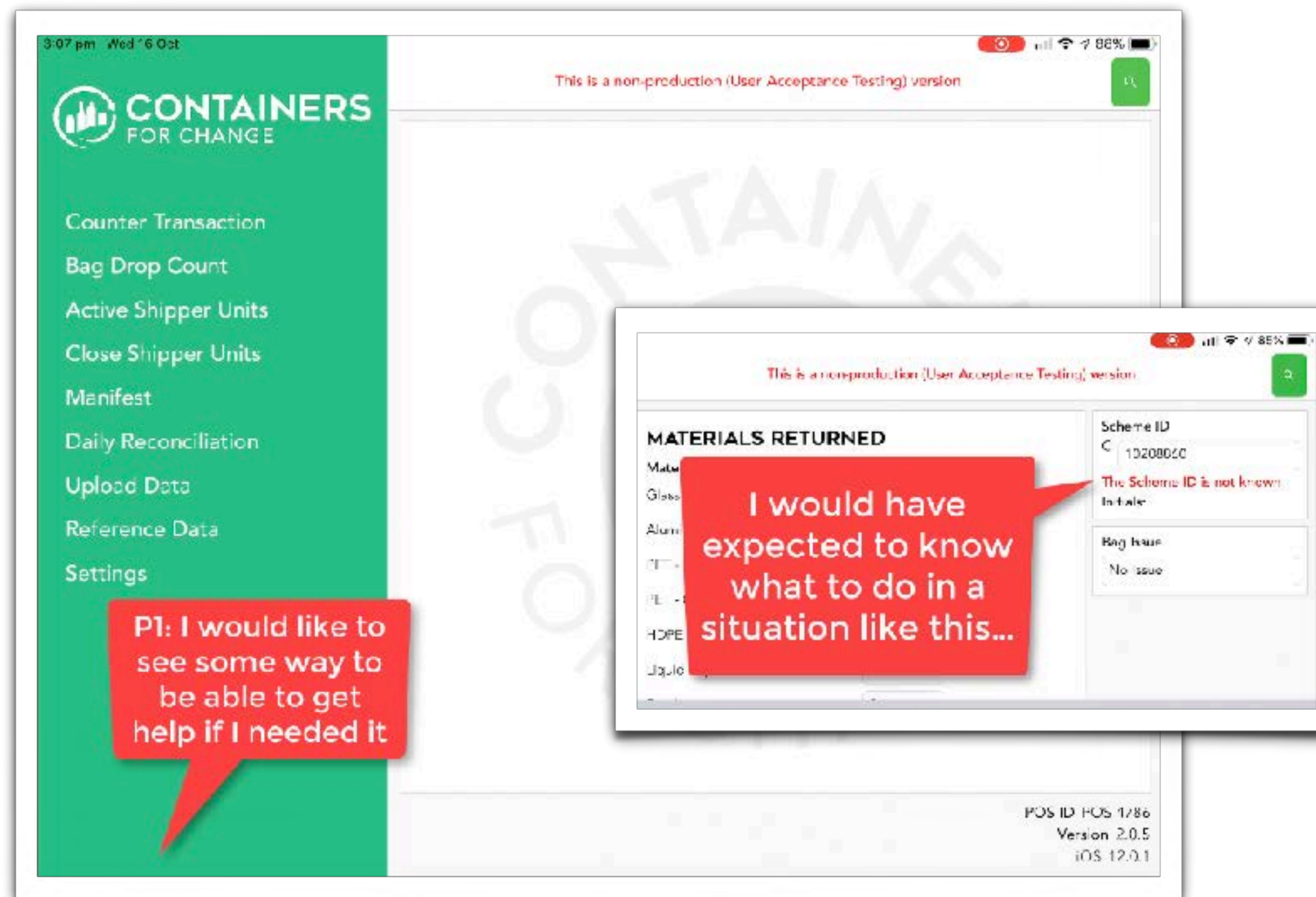
# Support in POS

Users would like to see a way to get support in the POS

◉ There is a lack of support channels visible in the POS

◉ This would be useful for first timers or when technical issues arise

**Recommendations**

✓ Implement support channels options in the user interface

# Support in CRP Portal

Users need to be presented with intuitive information and
supported with step-by-step instructions
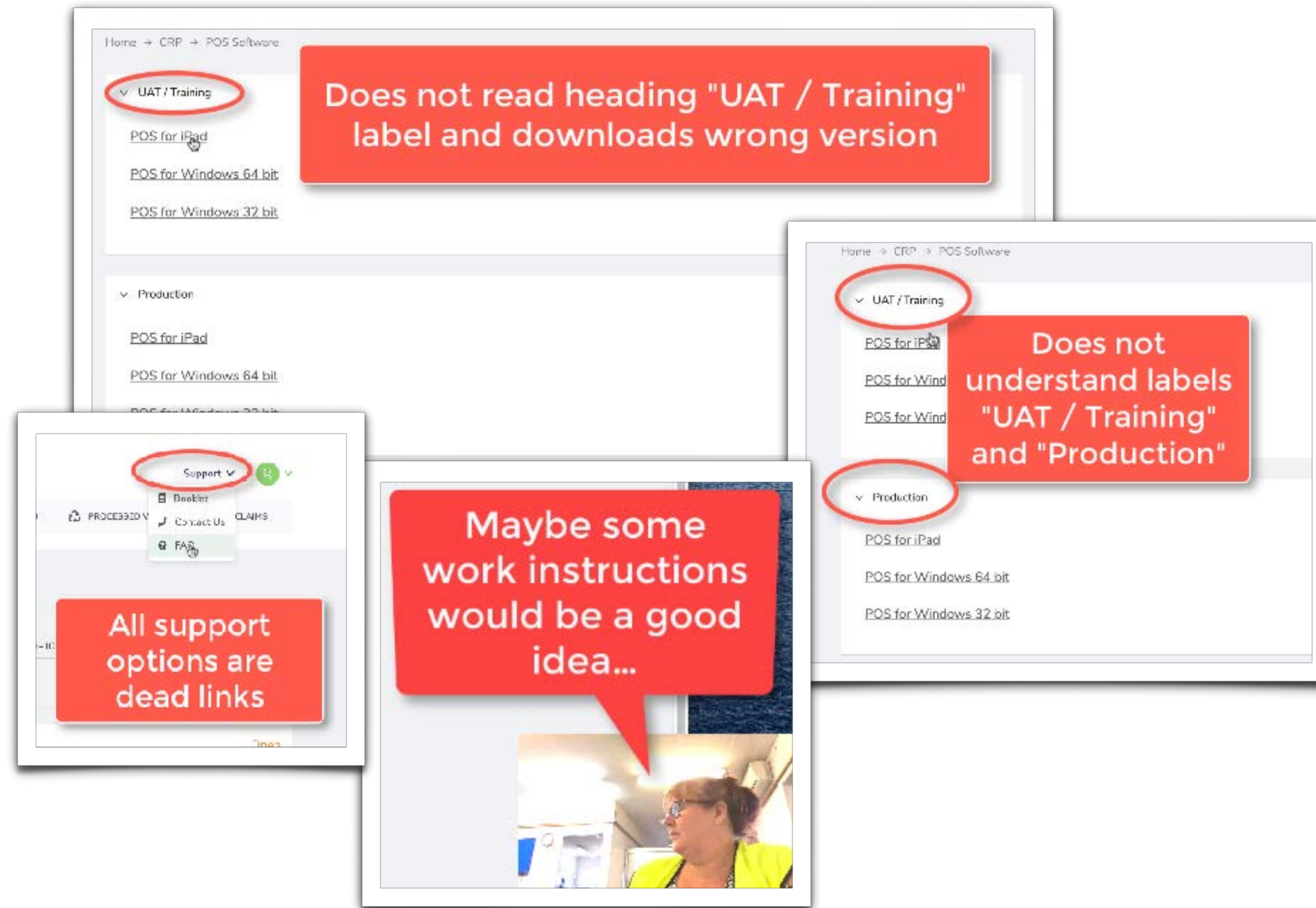
◉ Support links were all
dead

◉ Users would turn to
colleagues for support or
an expert when they
struggled

**Recommendations**

✓ Implement support channels options in the user
interface

# POS Accessibility

# Users and technology

It was a bit nerve wracking at the start...


So working one of those things for me is like *gasp*...


I wouldn't do this without instructions because I would lose all my data
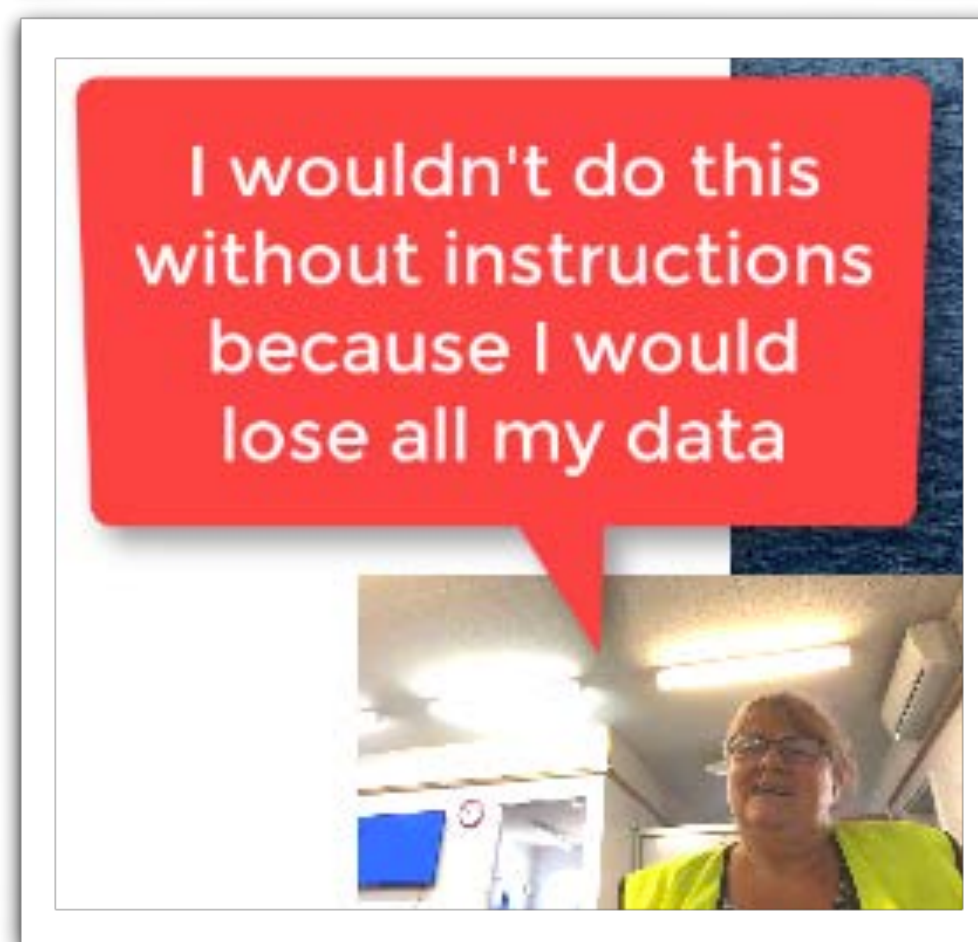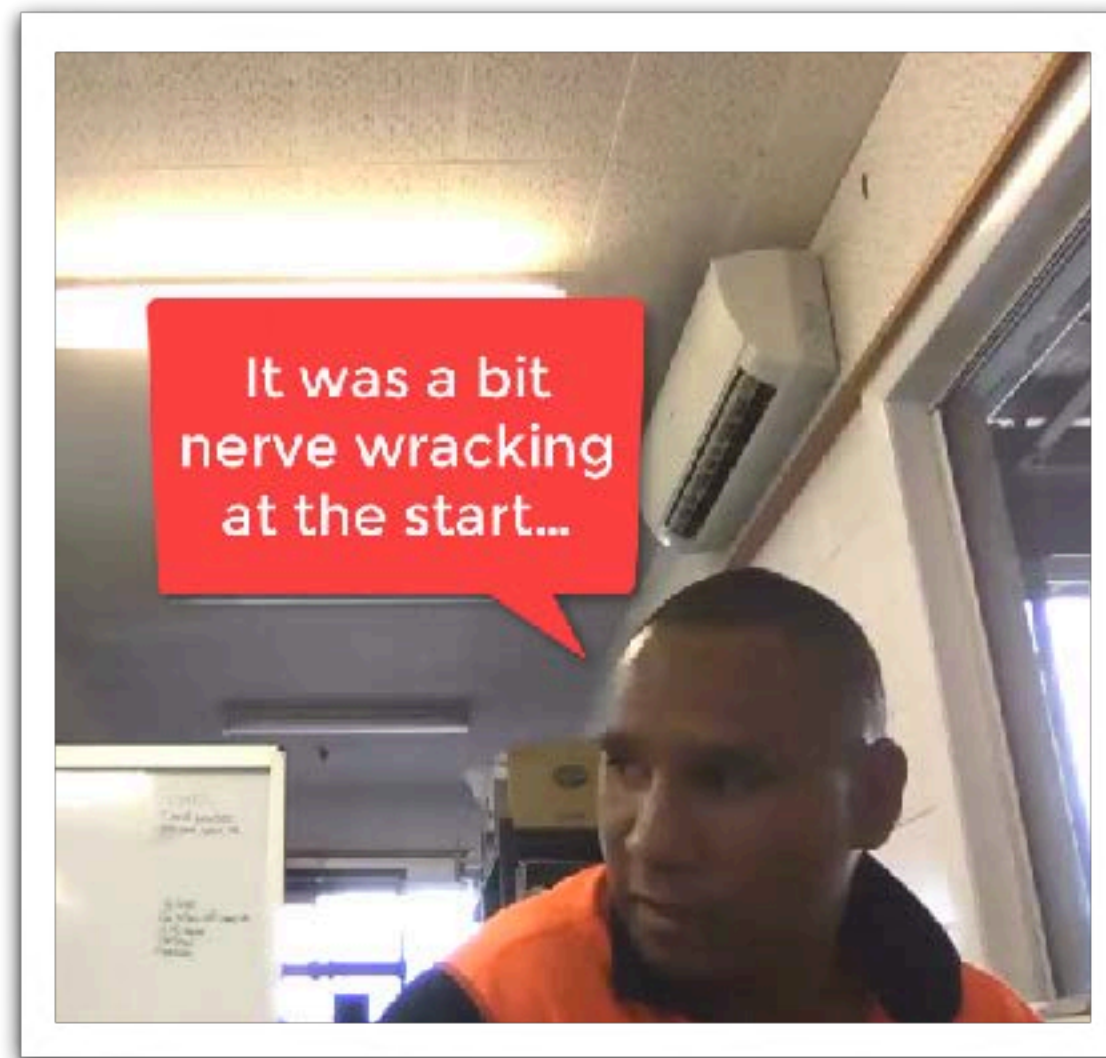
Some users tended to experience anxiety when dealing with new technology

- Some POS users do not have a high technical ability
- All users would like systems to be more user-friendly

**Recommendations**

✓ Design inclusive systems to be accessible for people of all technical abilities.

# Next steps

# How might we...?
## **HUMAN CENTRED** DESIGN PROCESS

**FINDING THE RIGHT PROBLEM**

**DESIGN THE RIGHT SOLUTION**



DISCOVER    DEFINE    DESIGN    DELIVER

RESEARCH    SYNTHESIS    IDEATION    IMPLEMENTATION

LOOKING OUT    LEARNING    EXPERIMENTING    TESTING

PRIMARY RESEARCH    CREATE

EMPATHISE / PROBLEM DEFINITIONS / CONTEXTS

SEVERITY / JOURNEY & SERVICE MAPPING

OPPORTUNITY AREAS

HMW

DEFINING SUCCESS    ALIGNING GOALS    IDEATION    EVALUATION

PROTOTYPE / TEST / LEARN / PIVOT / ITERATE

BACKLOG / PLAN / BUILD / TEST / ITERATE

BUILD / TEST / ITERATE

RELEASE

B

SECONDARY RESEARCH    CREATE

LOOKING IN    INSIGHTS    INNOVATING    ITERATING

SHOULD BE

...TION, ...ENGE ...T BRIEF

UNSTRUCTURED RESEARCH FINDINGS

FINAL BRIEF HOW MIGHT WE PROBLEM STATEMENTS

IDEAS HYPOTHESIS SOLUTIONS

ANSWER PRODUCT SOLUTION

**DESIGN THINKING**    **LEAN START-UP**    **AGILE**

## **Activities**

1. Prioritisation of problems
2. Problem statement workshops
3. Co-design sessions
4. Prototype & test

# Where problems occurred

Acompani // UX Research Report of POS + CRP Portal

View large journey map

# POS UX Priorities

◉ Critical    ✦ Serious    ✷ Medium

**Navigation**

◉ Ensure navigation labels are intuitive

◉ Explore usage of icons to enhance understanding

**Shipper unit flows**

◉ Create user flows for shipper unit procedures

◉ Redesign UI for intuition in setting up / creating units / closing / replacing units

**Container eligibility search**

◉ Redesign larger search field with clear labels

◉ Redesign search results to include images, material types and details why certain containers are not eligible

◉ Exploration of barcode recognition technology

◉ Configure screen layout for iOS keyboard input (Search, Counter transactions, Customer Verification)

◉ Increase text size

**Counter Transaction**

◉ Inclusion of additional help for material types

◉ Forms disabled states need to be noticeable

◉ Error states for disabled form states to set-up 'units'

◉ Form alert to confirm destruction of input on page exit

✦ Design flow and UI for contaminated containers

**Performance**

◉ Investigate system lags

◉ Implement progressive feedback UI

◉ Implement performance analytics

✷ Implement user feedback channels

**Support**

◉ Implement tutorials, support documentation, tooltips and on-boarding walk-throughs

◉ Implement user support channels.

# CRPO Portal UX Priorities

◉ Critical     ✦ Serious     ✳ Medium

## Navigation

◉ Re-label navigation items for intuition

✦ Differentiate icons that convey meaning

✳ Explore benefits of sticky navigation

## User Interface labels

◉ Audit UI for ambiguous meanings

## Date Picker

◉ Redesign date picker for intuition

◉ Investigate, debug and optimise performance

## Filters and accordions

◉ Redesign accordions for intuition

◉ Redesign filters for intuition

◉ Re-label UI for clarity of function

## Performance

◉ Investigate system lags

◉ Implement progressive feedback UI

◉ Implement performance analytics

✳ Implement user feedback channels

## Employee ID

✦ Facilitate user control frequency of Authentication

## Support

◉ Implement tutorials, support documentation, tooltips and on-boarding walk-throughs

◉ Implement user support channels.

# Problem statement workshops

**What**

What is the issue? What are the boundaries of the problem

**Who**

Who does the problem affect? Specific groups, organizations, customers, etc.

**When**

When does the issue occur? When does it need to be fixed?

How might we...?

**Where**

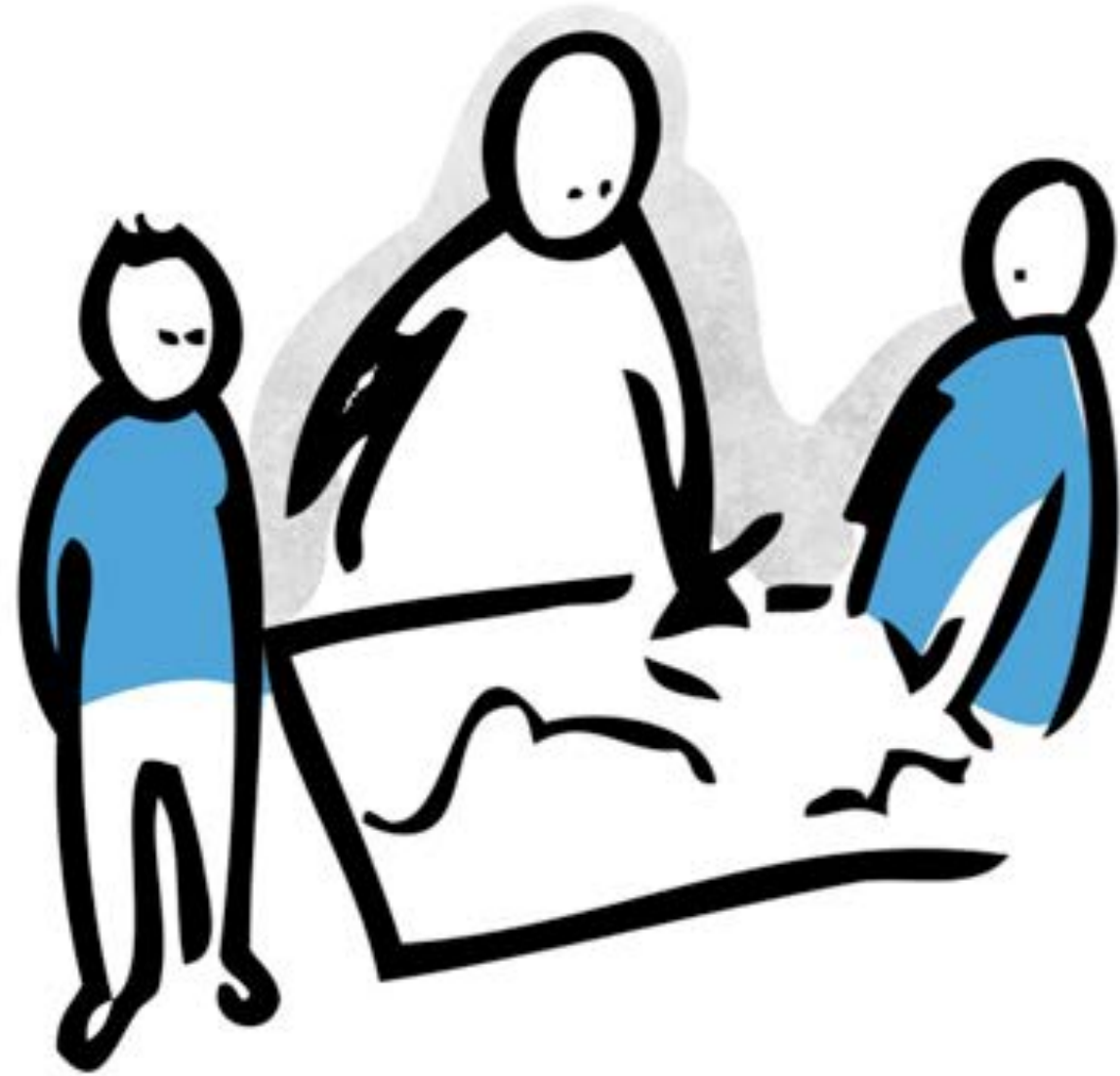Where is the issue occurring? Only in certain locations, processes, products

**By**

What are the actions needed to try to solve the problem?

**So that**

What are the outcomes desired by people and organisations?

# Co-design sessions



We will hold collaborative sketch sessions in a design sprint which will aim to understand the contexts of our users and solve the problems identified together before we go to test them with users.

# Prototype and test

To ensure we are solving the problems identified, we will always test with our users when we are getting it right and learn when we need to do better.

# Q&A

Acompani // Mauricio Perez

mo@acompani.com.au // 0405 419 059