

UPS DIAD V Usability Testing Findings

Post-session analysis and recommendations from moderated usability testing

Executive Summary

Usability testing of the UPS DIAD V identified several opportunities to improve the efficiency, discoverability, and overall usability of the driver's workflow. While experienced drivers were generally able to complete core delivery tasks, many relied on familiarity with the device rather than an intuitive understanding of the interface.

The most significant issues were concentrated around navigation, information hierarchy, delivery-status workflows, error recovery, and the number of interactions required to complete routine tasks.

The testing revealed an important distinction between a system that is technically functional and one that truly supports drivers in a fast-paced operational environment. Drivers were often able to accomplish their goals, but some workflows required unnecessary mental effort, repeated actions, or knowledge gained through experience.

Key Findings

1. Experienced drivers compensate for usability problems through learned behavior.
2. Important delivery information is not always presented at the point where drivers need it.
3. Some workflows require too many steps for repetitive, high-frequency tasks.
4. Terminology and navigation patterns can create hesitation.
5. Error recovery is not always obvious or forgiving.
6. Scanning and delivery confirmation need stronger feedback.
7. The interface prioritizes system requirements where drivers need task-oriented guidance.

Findings

Finding 1**Driver Experience Masks Usability Problems****High**

Experienced drivers were generally successful at completing tasks, but success was often based on familiarity with the DIAD rather than the interface being inherently intuitive. Participants with extensive experience moved through screens quickly and appeared to know where functions were located without reading labels or considering alternatives.

Less-experienced users were more likely to pause, scan the screen, backtrack, or question whether they had selected the correct option.

WHY IT MATTERS

A system can appear highly usable when evaluated only with experienced users, because users develop workarounds and muscle memory over time. This creates a hidden usability cost: the more experience a driver has, the less visible the underlying usability problem becomes.

UX OPPORTUNITY

Design workflows around the driver's mental model rather than assuming prior knowledge of the device.

Finding 2**Information Hierarchy Does Not Match Driver Priorities****High**

Participants frequently looked for information based on what they needed to accomplish at the current stop. The information the device presented did not always follow that same priority.

Drivers naturally wanted to answer:

- Where am I?
- What package am I delivering?
- Who is receiving it?
- What special instructions apply?
- What do I need to do next?
- Has the delivery been successfully recorded?

When this information was distributed across multiple screens or required additional navigation, participants had to remember information while completing the task.

WHY IT MATTERS

Drivers operate in an environment where attention is divided between the device, packages, customers, vehicles, and addresses. The interface should minimize the amount of information the driver has to hold in memory between screens.

UX OPPORTUNITY

Organize information around the delivery workflow:

Stop → Package → Recipient → Action → Confirmation

Rather than around system functions.

Finding 3

Routine Tasks Require Unnecessary Interaction

High

Participants were able to complete standard delivery workflows, but several steps appeared unnecessarily repetitive. Because these actions are performed repeatedly throughout the day, even small inefficiencies accumulate significantly across a full route.

A workflow that takes a few additional seconds may appear insignificant during a single usability session. Across an entire route, however, those seconds add up.

WHY IT MATTERS

The DIAD is a high-frequency operational interface. A useful measurement for this environment is:

Time per stop × number of stops × number of drivers

Rather than simply whether a task can be completed.

UX OPPORTUNITY

Reduce unnecessary screen transitions, repeated confirmations, redundant data entry, back-and-forth navigation, and actions that can be automatically inferred from context.

Finding 4

Drivers Hesitate When Choosing Delivery Statuses

Medium-High

Participants occasionally paused when determining which delivery status or exception option best matched a scenario. The challenge was not the underlying business logic. The interface required drivers to translate a real-world situation into the system's terminology.

The driver's mental model:

"Nobody answered the door."

The system may require them to identify the appropriate operational exception code.

WHY IT MATTERS

This translation increases cognitive load and creates opportunities for inconsistent data entry across drivers and routes.

UX OPPORTUNITY

Use driver-centered language and contextual guidance. Rather than presenting a list of operational codes, present options based on the situation the driver is experiencing.

Finding 5**Error Recovery Is Not Sufficiently Discoverable****High**

When participants realized they had made an incorrect entry, the path to correcting the mistake was not always immediately obvious. Participants looked for familiar patterns:

- Back
- Edit
- Cancel / Undo
- Correct

When those patterns were unavailable or behaved differently than expected, participants hesitated.

WHY IT MATTERS

Errors are inevitable in a high-volume operational environment. The usability of a system should be measured not only by how easily users complete the ideal workflow, but also by how easily they recover when something goes wrong.

UX OPPORTUNITY

Provide clear recovery mechanisms at the point where the error occurs. The design principle should be:

Prevent → Detect → Explain → Recover

Finding 6**Scanning Needs Clearer Feedback****Medium**

Participants generally understood the purpose of scanning, but confirmation feedback was important to their confidence. After scanning a package, participants looked for evidence that the system had successfully registered the scan and that they could safely continue.

WHY IT MATTERS

A driver should never have to wonder whether a scan registered. Uncertainty leads to repeated scans, unnecessary checking, or incorrect assumptions about whether a package has been processed.

UX OPPORTUNITY

Provide immediate, unmistakable feedback using a combination of visual confirmation, audible feedback, and clear status messaging. The confirmation should communicate both that the scan succeeded and what happens next.

Finding 7**The Interface Is More System-Centered Than Task-Centered****High**

A broader theme across the testing was a mismatch between the driver's workflow and the structure of the interface.

Drivers think in terms of completing a delivery:

Find stop → Find package → Deliver → Record outcome → Move on

The device sometimes requires them to think in terms of navigating the application's structure.

WHY IT MATTERS

Every time users have to stop and think about how the system works rather than what they are trying to accomplish, cognitive load increases. For a delivery driver, that cognitive load competes with the physical and environmental demands of the job.

UX OPPORTUNITY

Reframe the experience around the driver's primary objective:

"Help me complete this stop as quickly and accurately as possible."

Finding 8**The DIAD Supports Experienced Users Better Than New Users****Medium-High**

The testing suggested a meaningful difference between experienced and less-experienced users. Experienced drivers compensated for confusing interactions through memory, familiarity, shortcuts, learned sequences, and knowledge of system terminology. Less-experienced users relied more heavily on visible labels and logical navigation.

WHY IT MATTERS

This has implications for onboarding and training. Training should not simply teach users where buttons are located. It should explain the underlying workflow and provide practice with exception and recovery scenarios.

UX OPPORTUNITY

Design the interface so that users can successfully complete tasks without having to memorize the system.

Overall Usability Assessment

The DIAD V demonstrated that drivers can successfully complete the majority of core delivery activities, particularly once they become familiar with the system.

However, successful task completion does not indicate optimal usability. The primary opportunity is to reduce the cognitive and interaction cost associated with each delivery.

The strongest improvements would come from:

1. Simplifying high-frequency workflows
2. Improving information hierarchy
3. Reducing unnecessary interactions
4. Making system status and scan confirmation more explicit
5. Improving error recovery
6. Using terminology that aligns with drivers' mental models
7. Designing around the complete delivery lifecycle rather than individual system functions

Prioritization

Finding	Severity	Priority
Information hierarchy	High	P1
Error recovery	High	P1
Task-centered workflow	High	P1
Excessive interaction	High	P1
Delivery-status terminology	Medium-High	P2
Experienced-user dependency	Medium-High	P2
Scan confirmation	Medium	P2
Training and onboarding	Medium	P3

Conclusion

The usability testing suggests that the biggest opportunity with the DIAD V is not simply making individual screens easier to use. It is reducing the amount of thinking and interaction required to complete a delivery.

The device should function as an operational assistant rather than a system the driver has to navigate.

A successful redesign would allow a driver to quickly understand:

Where am I? → What am I delivering? → What do I need to do? → Did it work? → What's next?

That shift from a system-centered interface to a driver-centered workflow represents the largest UX opportunity identified through this evaluation.