

CASE STUDY · AEROSPACE MANUFACTURER · PRODUCTION

# Issue material by scanning, not typing

A handheld app that lets operators issue material to work orders and move stock between locations by scanning, with first-in, first-out lot control and a full audit log.

Handheld scanners

Barcode workflow

ERP integration

Traceability

**INDUSTRY**

Aerospace manufacturing

**TEAM**

Production and stockroom

**DELIVERED AS**

Scan-only app for rugged handheld scanners

**CONNECTED TO**

ERP transaction API, two plants

## THE PROBLEM

## What was getting in the way

- Issuing material to a work order meant walking to a terminal and keying the work order, operation, part, quantity and lot.
- Each keystroke was a chance for a wrong lot or a wrong work order, which undermines first-in, first-out and traceability.
- Transfers between locations had the same problem, and there was little record of who moved what.
- Work order travelers differ from plant to plant, so a one-size-fits-all screen did not work.

## HOW WE SOLVED IT

## What we built

- A handheld app where the whole happy path is scanning: badge, work order traveler, part, then a rescan to confirm.
- The traveler barcode carries the work order, lot, split and, at one plant, the operation, so the app can jump straight to the correct requirement line.
- For traced parts the app shows a first-in, first-out lot list and requires a scan of each lot label, so the wrong lot cannot be issued.
- Transactions post to the ERP through its API, and every scan is written to a log table for audit.
- A location transfer flow follows the same scan-first pattern.
- Each plant runs the same code with its own connection and traveler format settings.

# Zero taps on the happy path

1

**Badge**  
The operator scans their badge to sign in.

2

**Traveler**  
Scanning the work order barcode loads the job.

3

**Part**  
Scanning the part finds the requirement line.

4

**Confirm**  
A rescan confirms the quantity to issue.

5

**Lots**  
For traced parts, scan each lot label in first-in, first-out order.

## On the handheld

Large targets, one action per screen, and a scanner button as the main input.

**Issue Material**  
Step 1 · Scan the traveler

Operator  
Badge 4471

✓

Scan work order  
barcode

The work order, lot and operation come from the barcode. Nothing to type.

Waiting for scan...

**Confirm issue**  
Step 2 · Scan the part

Work order  
WO-2060 / op 10

Part  
SAMPLE-2040

Required  
24 EA

24 EA

Rescan the part to confirm

Rescan to confirm

**Pick lots (oldest first)**  
Step 3 · Scan each lot label

Lot A-0412 · received Jul 02  
10 EA

✓

Lot A-0439 · received Jul 19  
14 EA

scan

Lot A-0502 · received Aug 30  
40 EA

First-in, first-out is built into the list.  
Wrong label? It will not accept it.

14 of 24 picked

Three screens from a real issue. Scan the traveler, confirm the part, then scan lot labels in first-in, first-out order.

Illustrative screens rebuilt with sample data. No customer, supplier or employee information is shown.

## WHAT CHANGED

# The difference on the floor and in the office

### Nothing to key

Scanning replaces typing, which removes a whole class of keying mistakes.

### First-in, first-out enforced

The lot list is ordered for the operator and rejects the wrong label.

### Full audit trail

Who issued what, to which job and from which lot is recorded for every transaction.

### Faster at the point of use

Material is issued at the shelf or the machine instead of at a desk.

### Fits each plant

Traveler formats and system connections are configuration, so a second plant reuses the same app.

### One app for issue and transfer

Operators learn a single scan-first pattern for both jobs.