



# ASUG - Chicago Chapter Meeting June 2023

## Barcode Automation for Inventory Control with SAP – IM & WM

Brief educational session on SAP Mobile (RF) Scanning & Pallet Barcode Label Printing

**Customer Example – SAP Production Automation for Pregis (EverTec) Packaging**

Applicable for SAP ECC 6.0, Suite on HANA, and S/4HANA environments.

*June 15<sup>th</sup>, 2023*



# About the Presenting Companies



For over 20 years, BCC Distribution has been the premier provider of complete data collection solutions that integrate barcode scanning and barcode printing automation into SAP ERP business systems. BCCD offers clients best-of-breed mobile terminals, scanners, printers and wireless infrastructures along with the 'state of the art' software and technical services to deliver best practice solutions. By bringing all of our strengths to the table – hardware distributor, software developer and systems integrator, BCCD is able to deliver optimized barcode and RFID solutions that meet the unique requirements for inventory control and tracking in manufacturing, warehousing and/or distribution business operations.

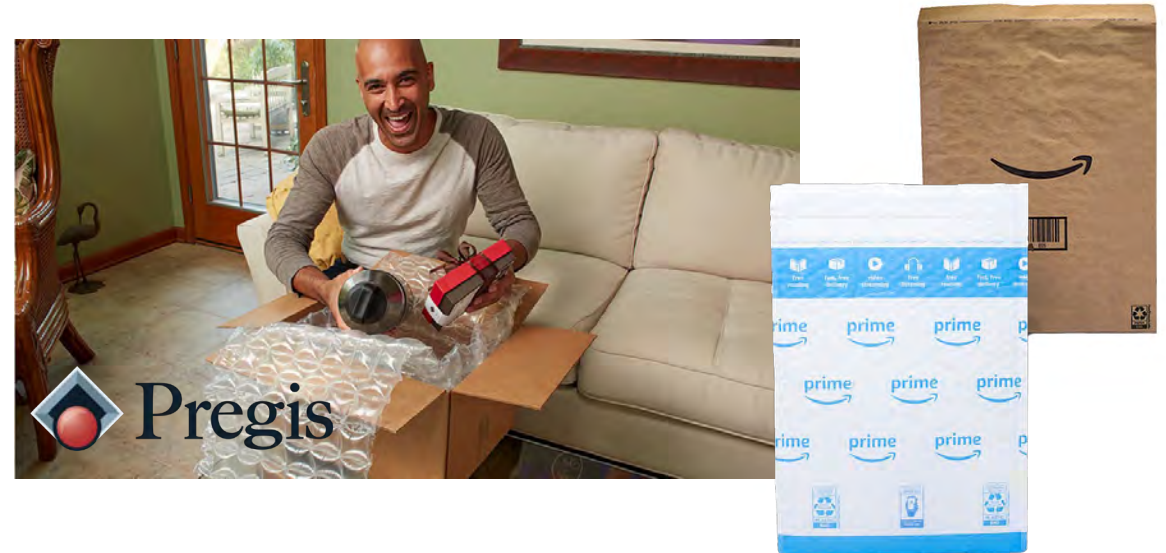
**Delivering and supporting ALL aspects of a turn-key IM/WM/EWM barcoding solution for SAP ECC & S/4HANA.**

- **SOFTWARE** | Solutions & Development
- **EQUIPMENT** | Distributor & Integrator
- **SERVICES** | Software & Equipment
- **SUPPORT** | All System Deliverables



## Pregis is Not Just in the Packaging Business – We're in the "Wow" Business

Pregis is a leading manufacturer and provider of innovative packaging and protective products.



**Pregis solves the toughest business challenges with packaging.**



# BCCD Video Illustration



**Click the Zebra SAP Barcode Scanner to Launch Video**



# Barcoding Room Survey

## SAP-Based RF Barcode Scanning & Label Printing

**1D/Linear Barcode Examples**

<b>Code 128</b>	<b>GTIN</b>	<b>UCC/GS1</b>
<b>ITF-14</b>	<del><b>UPC</b></del>	<b>EAN</b>
	<del></del>	

**2D Barcode Examples**

<del></del>	<b>Data Matrix</b>	<b>PDF417</b>
<del></del>		
<b>MaxiCode</b>	<b>Grid Matrix</b>	<b>iQR Code</b>

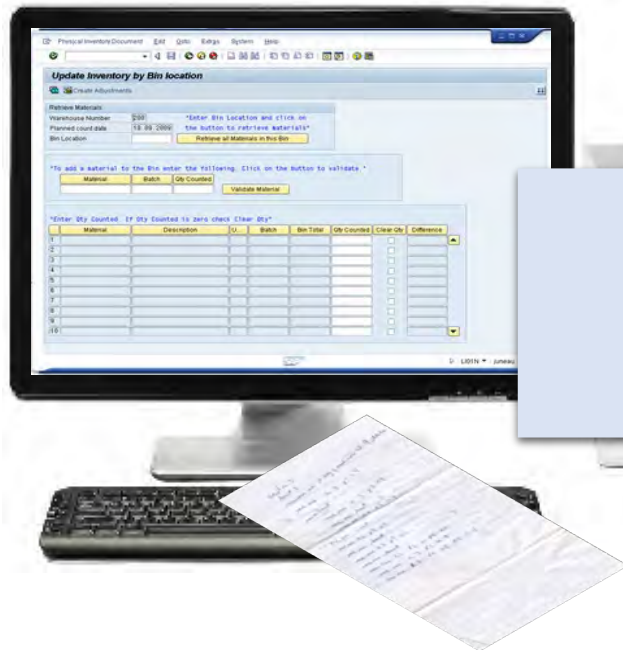


# TranASAP™

by BCC Distribution, Inc.

## Mobile [RF] Software Transactions for SAP® ERP Business Systems

- **Native** SAP design, **real-time** and direct SAP integration, using **SAP's recommended ITSmobile connectivity**.
- Designed for **ease-of-use** in the Warehouse and on the Shop Floor.
- Automated to optimize error proofing, **process efficiency** and inventory accuracy.
- Library of **300+ existing software transactions** built on inventory and warehouse management standards.



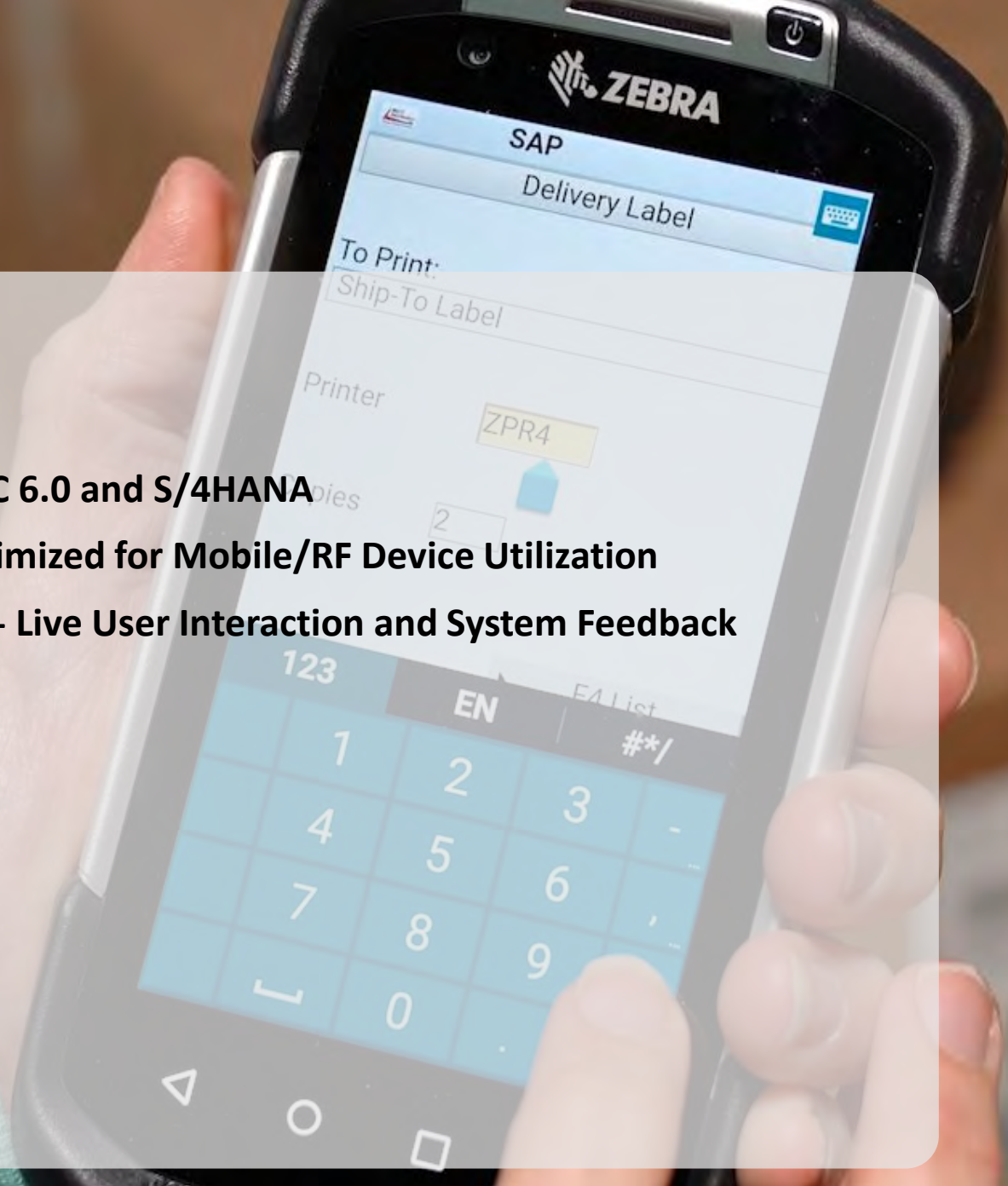
- ✓ Less Words
- ✓ Fewer Screens
- ✓ No Pen & Paper





# SAP's ITSmobile

- Direct, Real-Time SAP Connectivity
- **SAP's Recommended RF Framework**
- Native SAP (ABAP) – Designed for SAP ECC 6.0 and S/4HANA
- Actual SAP Transactions and Screens, Optimized for Mobile/RF Device Utilization
- Immediate Data Validation w/ Each Field - Live User Interaction and System Feedback
- Stateful SAP Connection
- Standard Locking of Objects
- Industrial Web Browser, per Device
- HTML SAP Screens
- Touch Screen & Physical Key Use
- Support for Windows & Android OS
- Supports RFID & Voice Enabling



# SAP® ITSmobile Infrastructure – Connectivity

(SAP's Recommended RF Framework for ECC & S/4HANA)



**Dedicated Network Connectivity from SAP® Server to the Facility(s) WLAN/LAN**

- On-Premise
- Hosted
- Cloud+



## SAP ITSmobile Certified RF Terminals



### Certified Operating System

- Android Ent. (Mx)
- Windows® 10\*
- Windows® Mobile
- Windows® CE

### Certified Industrial Web Browser

- Zebra EB
- Velocity
- Naurtech

### Staged & Configured for Direct, Real-Time Connectivity to SAP

- OS/Firmware Version
- Utilities & GMS Disable
- I.P. Settings
- SSID
- Sys. Access/Passcode

### SAP® Login Credentials

### Laptop or Workstation PC

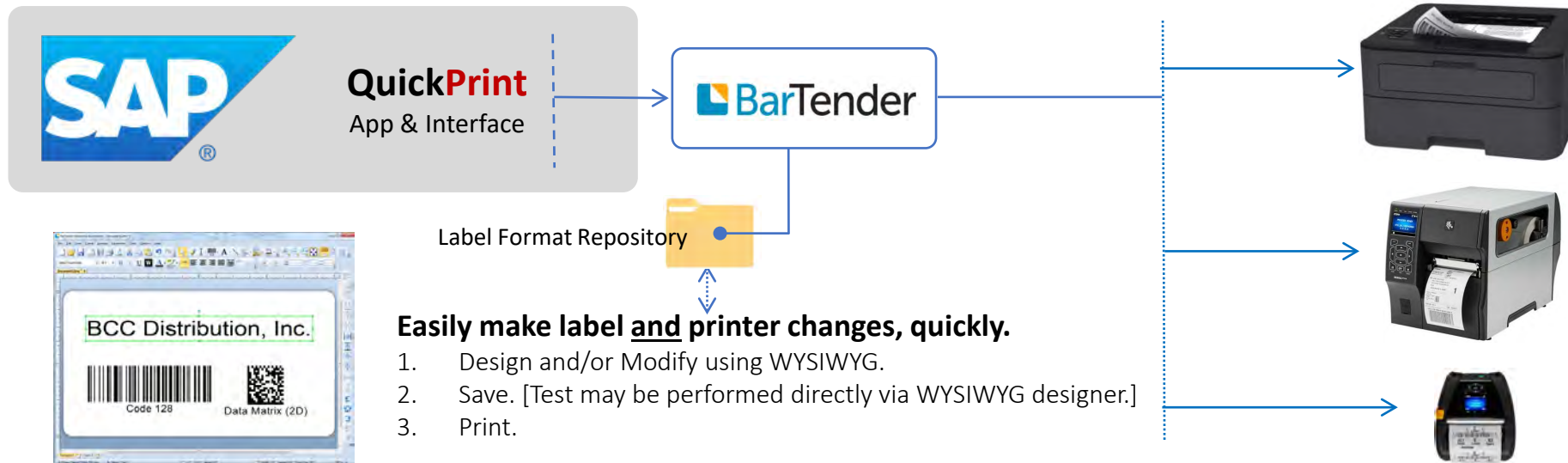
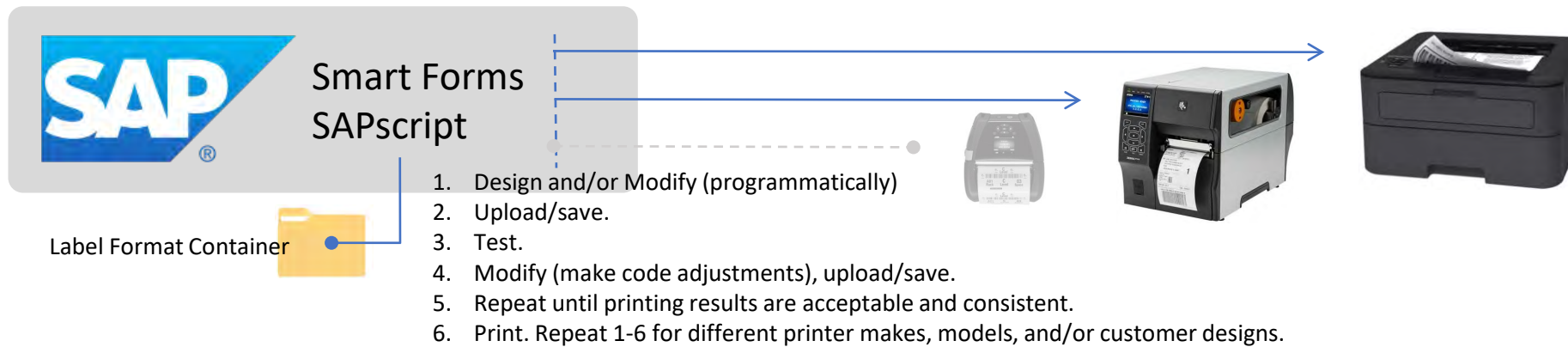
- SAP GUI
- BarTender UI







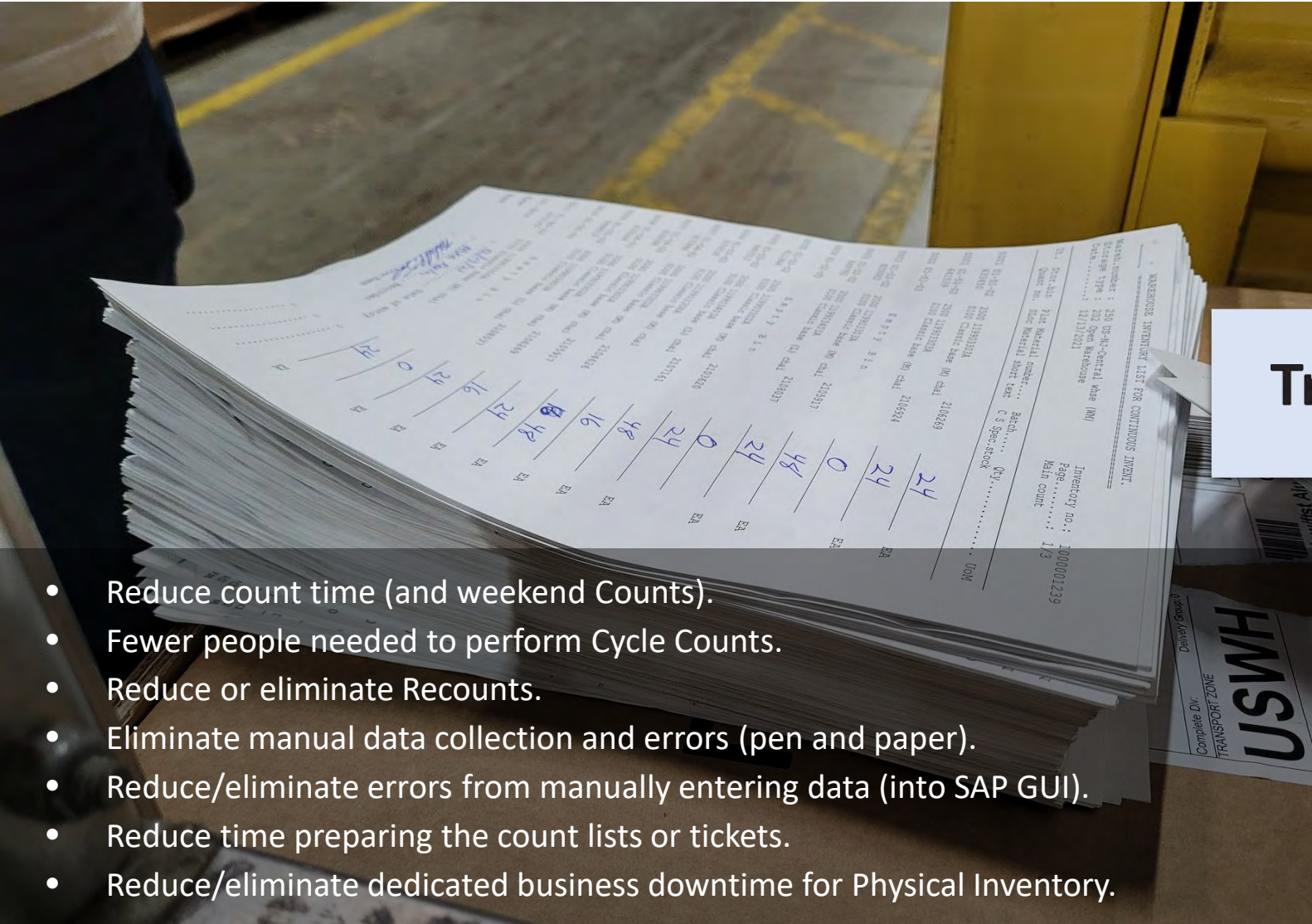
# SAP-Integrated Printing Comparison



# Business Case/ROI – SAP Mobility & Barcoding

## Inventory Counts – Manual vs Real-Time Mobility

Easy to Use  
Real-Time Entry & Validation



- Reduce count time (and weekend Counts).
- Fewer people needed to perform Cycle Counts.
- Reduce or eliminate Recounts.
- Eliminate manual data collection and errors (pen and paper).
- Reduce/eliminate errors from manually entering data (into SAP GUI).
- Reduce time preparing the count lists or tickets.
- Reduce/eliminate dedicated business downtime for Physical Inventory.



# SAP Mobility & Barcoding – Key Considerations

## Data Collection Terminals

Handheld, Vehicle, Stationary



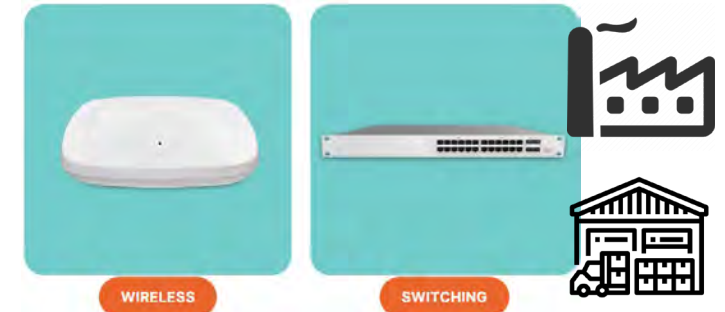
## Enterprise Printing Equipment

Mobile, Thermal, Laser, Automation



## Wi-Fi & Connectivity

802.11 WLAN and/or Outside 4 Walls (offline)



## Location & Product Identification

Materials and Warehouse/Bin Locations



## SAP (and Physical) Environment

Version, Modules, Upgrades, Migrations



## RF Barcoding System Software

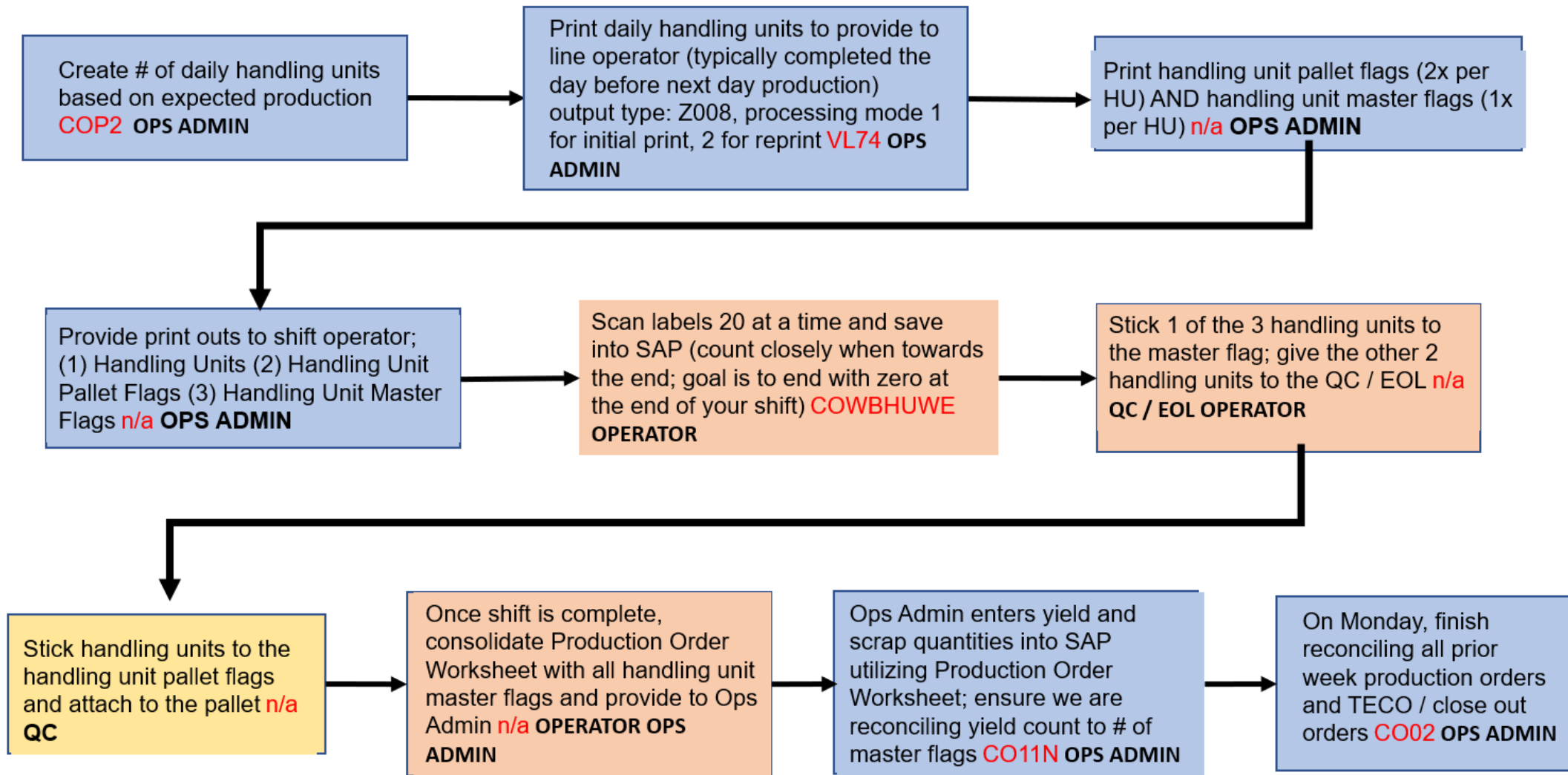
SAP Integration of System Components



+Services – Design, Configure, Implement, Test & Train, Support



# Before – System Procedure





Refo

Title	Shift Production Sheet		
Document ID	F.04	Revision	C
Revision Date	APR-01-2022	Page Number	Page 1 of 2

Operator Jorge / Ricardo Date 8/2 Line (#) 1 Shift 2

Order Number 2167502 Product M8 Mailer Count  SAP Pallet #  EPIX Gallons  Seam Glue Gallons  EPIX tote # 1 Weight lbs.  EPIX tote # 2 Weight lbs.

PM Time (minutes) \_\_\_\_\_

Start	8,397,424	1A4	5235	980	
Stop	8,563,138	7270	715.1	1930	

Total = "Stop" - "Start"

Make Ready:  Y  N Size Change:  Y  N

\*Unused SAP Labels can carry over to next shift as long as order number is the same.

Production Start Time	Production Stop Time	Gross	Yield	Scrap	Total Skids	Rolls	EPIX (Gallons)	Seam Glue (Gallons)	Bricks of PSA	Rolls of Release Tape	Rolls of Tear Strip
2pm	10pm	165,714	162,560	3154	127	56	171.6	60	40	5	3

- Notes:
1. Use WPM Cutter continuous counter for start and end numbers for GROSS Impression count
  2. Please write down on this sheet each time you install a new flexo plate. Needed to track inventory and usage.
  1. Record all downtime events longer than 5 minutes

DOWNTIME SUMMARY

Time Start	Time End	Downtime Code	Reason

received Aug 09

DOWNTIME CODES

CG	Cold Glue	NP	Nips
CU	Cutter	OT	Other
DF	Deck/Drive Fault	PQ	Print Plates/Quality
DB	Delivery Belts	PS	PSA
DR	Dryer	RD	R&D
EP	Epix	RQ	Roll Quality
HM	Hot Melt	TS	Tear Strip
LB	Labeler	WS	Web splice/break
MR	Make Ready		



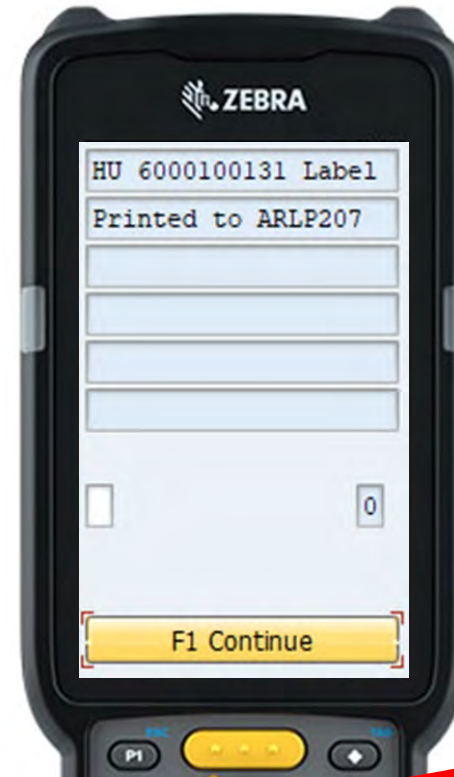
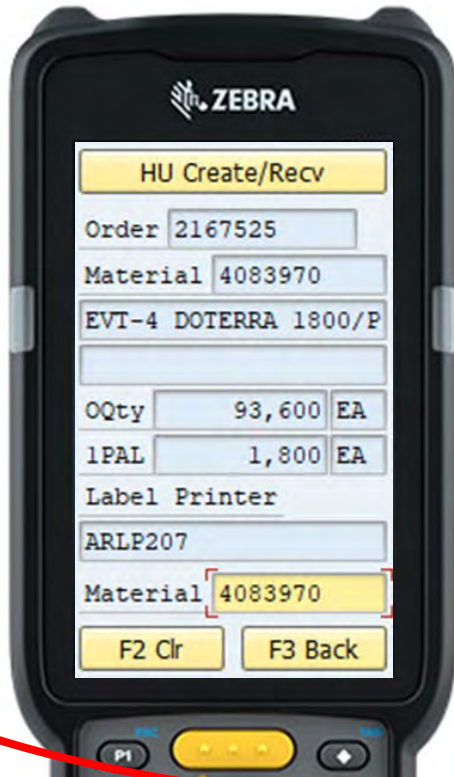
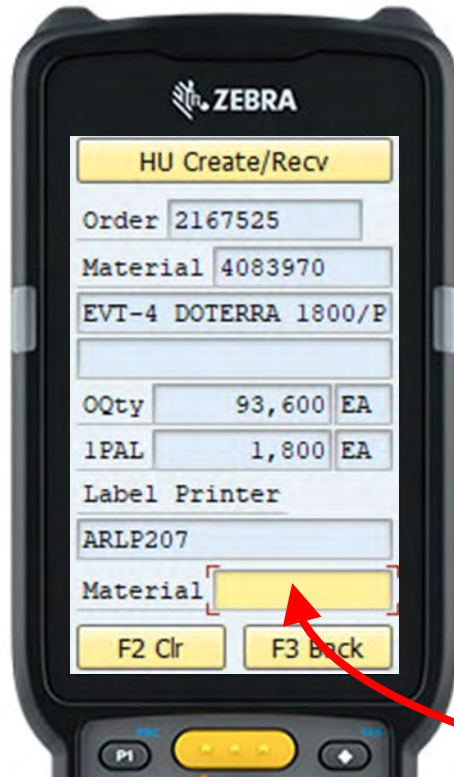
# After – SAP RF/Barcode Automation

Prompt to Scan QR Code (Material#)  
Displays Order Details  
Defaults Printer ID for HU Label

Create, Pick, Pack & Receive the HU  
HU Pallet Label Printed (2 Sides)  
Continue When Ready

QR Code Scan Triggers  
Real-Time Material# Validation in SAP  
& Automated HU Label Creation

Returned to 1<sup>st</sup> Screen  
Scan Another QR Code (Material#)  
to Create Another HU -or- F3 Exit





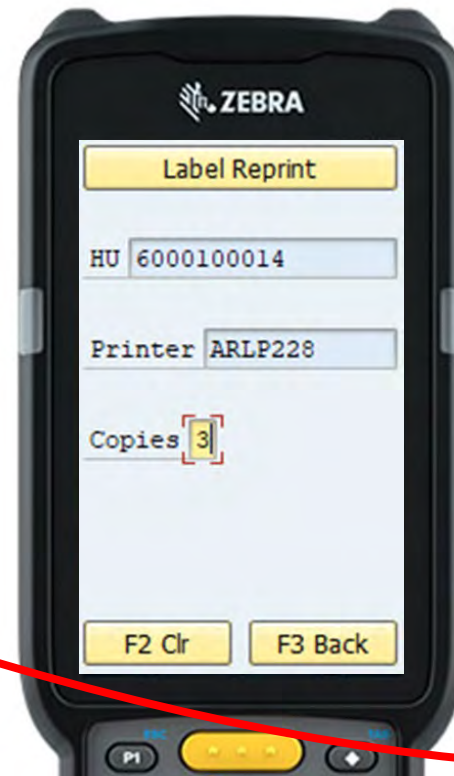
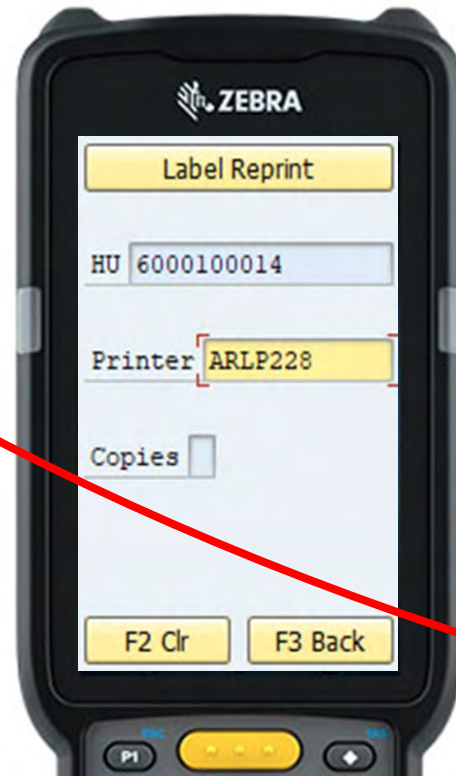
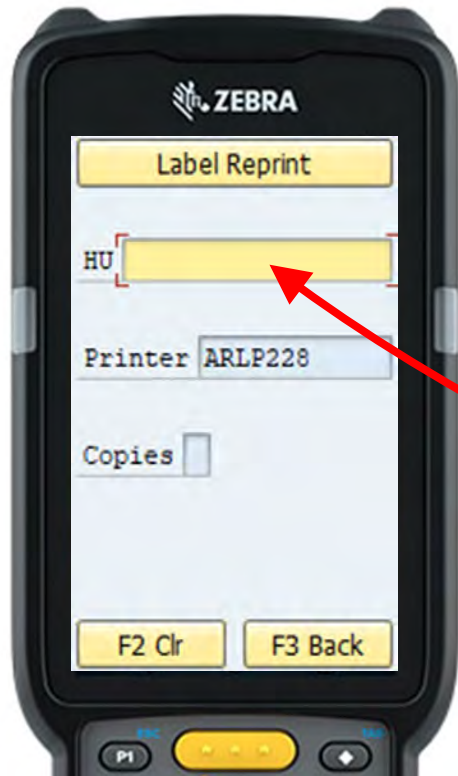
# After – Additional Pallet Label Print/Reprinting

Enter or Scan the Existing Handling Unit (HU) Number to Print/Reprint HU Pallet Label

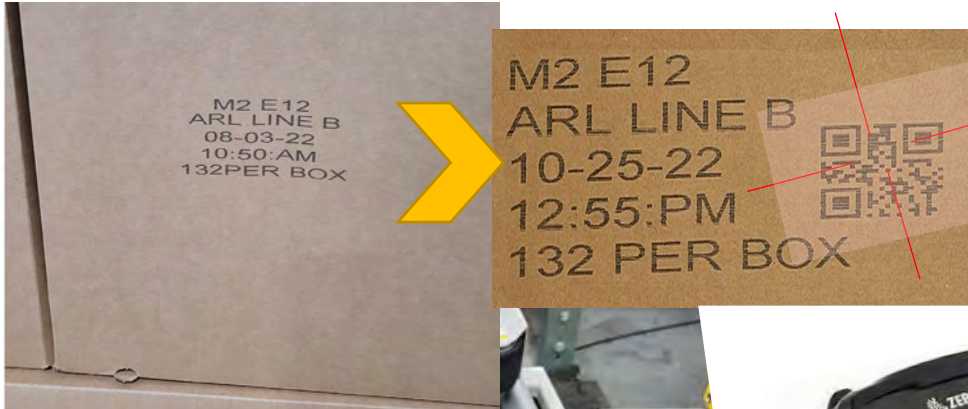
SAP Validates & Displays HU Number  
User Enters Printer to Send Label

HU Number & Printer Displayed  
User Enters Number of Labels to Print / Reprint

Success Message on Print  
Enter Another HU Number to Print Another Pallet Label



# After – In Images





# Lessons Learned

## Bus. Automation, SAP Mobility, Barcode Scanning/Printing Best Practices

- Leverage existing technology or replace/upgrade (hybrid in this case: existing printers + new scanner).
- Considerations for future/other use – design considerations up and down stream.
- Simplified approach to enable rapid additional site deployments.
- Native SAP architecture for long-term maintenance.
- Ease of use for adoption (KISS, reduce steps to improve process, reliable, RF scanning/print speed).
- Solid Project Team (internal and/or external) is essential to implementation success.
  - ❖ Good planning in understanding current business process flow and SAP system utilization.



# Questions

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See more on YouTube

@BCCDistribution

