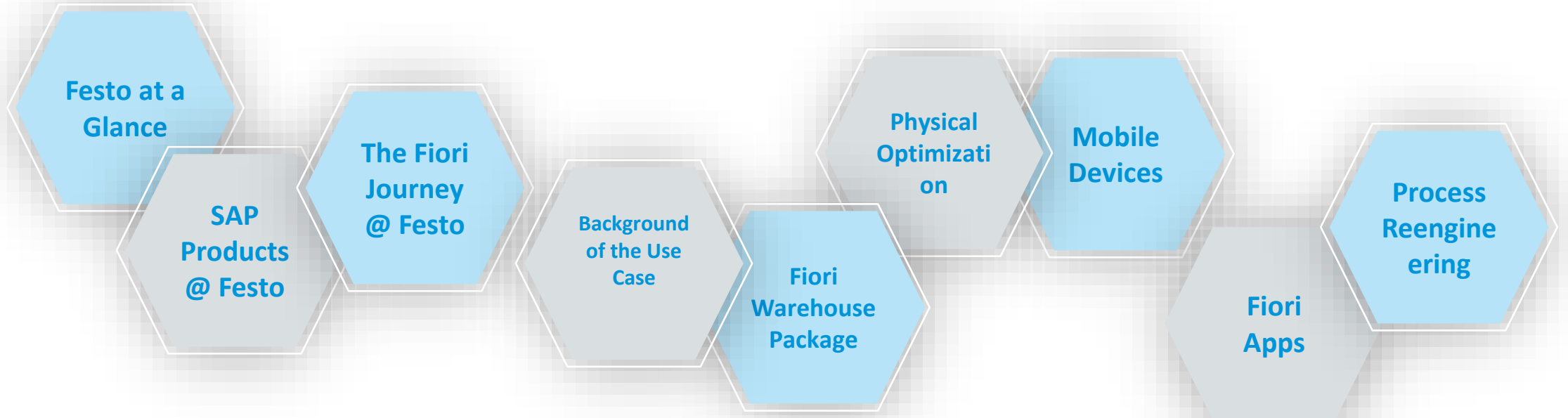# Festo Fiori Enabled Warehouse Light Solution

Tracy Zhu
IT Applications Manager
Festo IT Competence Center Americas

FESTO

Agenda

Festo at a Glance

FESTO

Companies in **61** countries

After-sales Services in **176** countries

Over **250** branch offices

Customers Automation **> 300,000**

Customers Didactic **> 56,000**

Employees worldwide: **21,200**

Turnover: **3.2 billion Euro**

Our Business Sectors

Process
Automation

Automation

Didactic

Training and
Consulting

Factory
Automation

Learning
systems

Automation – Our Portfolio

> 10.000
individualised
solutions

24 h
delivery
service

> 30.000
catalogue
products

**Customer
Solutions**

**Pneumatic
Automation**

**Electric
Automation**

Industry Segments

BiotechPharma and Cosmetics

Food and Packaging

Electronics and Assembly

Medical Technology

Technical Education

Automotive Industry

Chemicals

Water Technology

Laboratory Automation
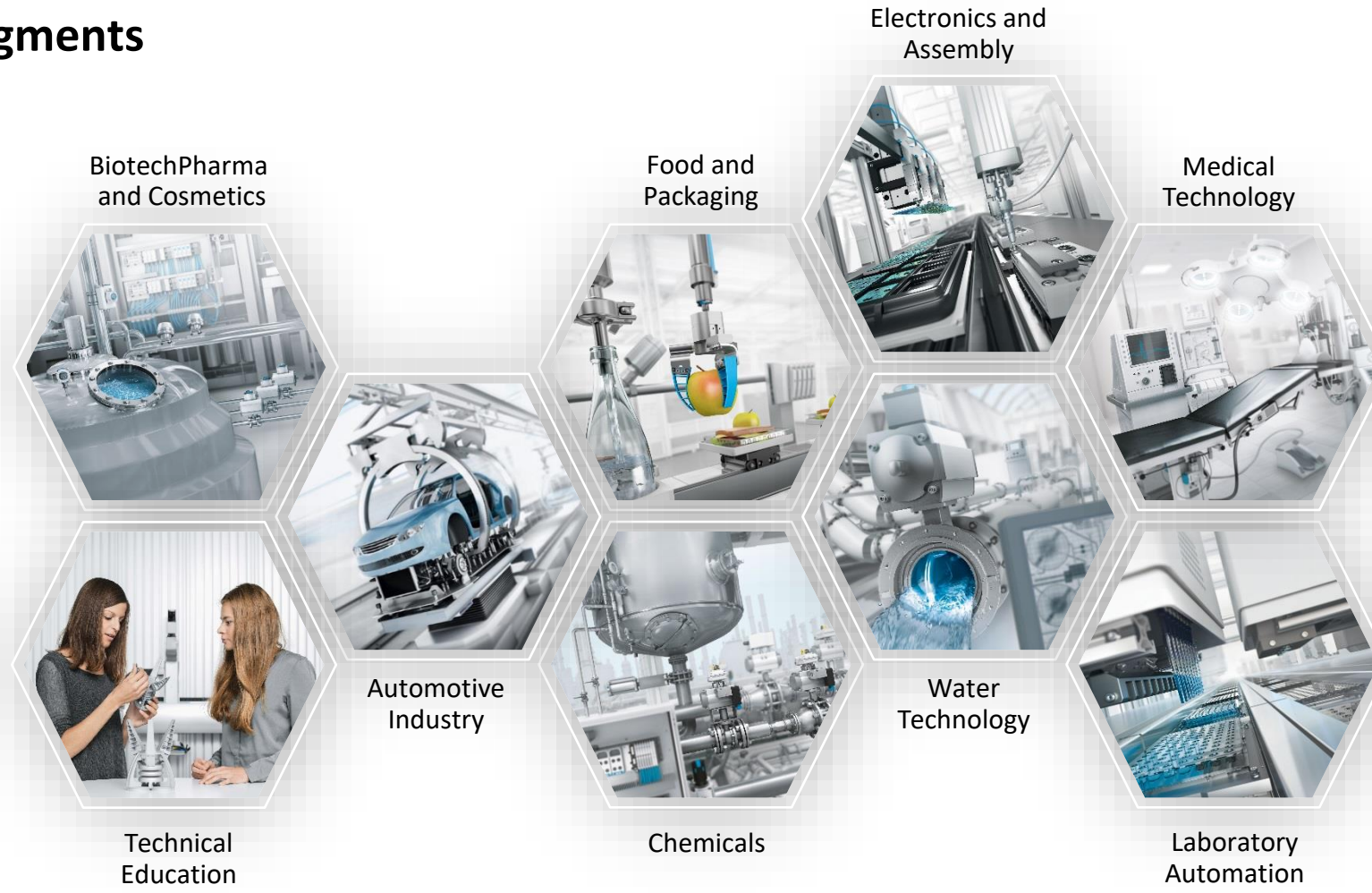
Global IT Organisation and Regional Centers

US

CCA Regional Centre — 33

BR

DE — 281

CCE Regional Centre

LT — 74

CCP Regional Centre — 32

CN

SG

420 — Total Headcount Global IT
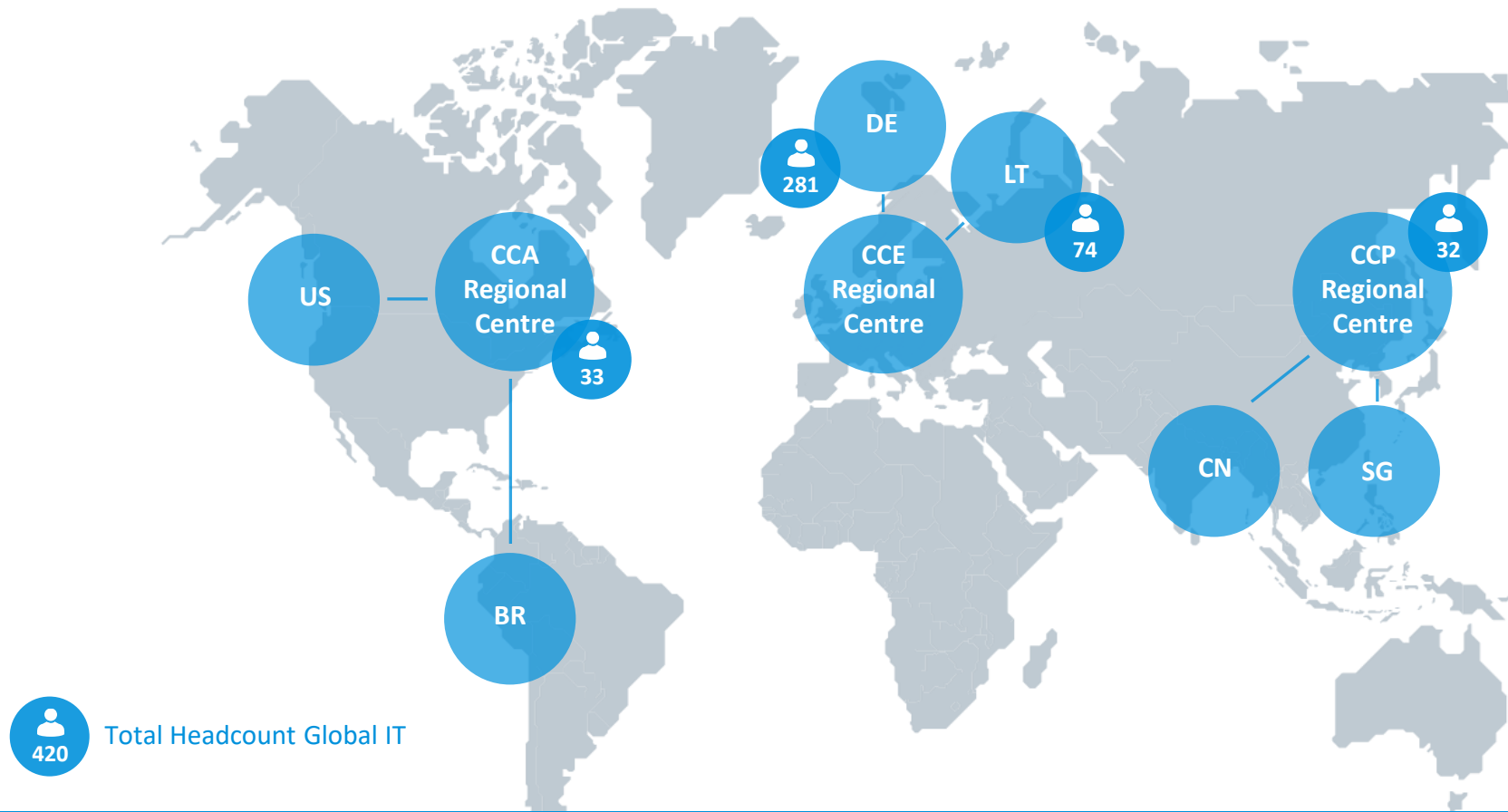
Global IT Organization Established in 1994

SAP Products @ Festo

SAP SuccessFactors

SAP C4C

SAP BW

SAP ECC/ S/4 HANA

SAP Ariba

SAP EWM

SAP Fiori

SAP SAC

The Fiori Journey @ Festo

2016
- 1st Standard App
- Dozen users in SAM
- Mobile Deployment

2017
- UMS Integration
- 1st Festo Custom App
- 3 Dozen of users in SAM
- Developers only in CCA

2018
- Standard Apps HCM & PPM
- 2 first Apps in DE
- First Global App
- Fiori upgrade

2019
- First Fiori Training HQ
- New Developers in HQ and CCS
- Complex Apps for HQ CUP2 & xPLM

2020

2021
- Warehouse Light Package for NAM
- Established Fiori Support

2022
- Fiori upgrade
- S/4 Sandbox Prep.
- 30 to Festo Custom Apps
- 120 SAP Standard Apps

2023
- S/4 HANA Development system preparation
- Code migration process started

SAP Fiori 2.0

SAP Fiori 3.0

Evaluation of BTP on going

General Background of the Fiori Use Case

Paper is still the main tool to guide physical warehouse work in over 60 Festo companies, including some small plants in Festo North Americas

External Warehouse Management System			SAP ECC Basic Inventory Management (IM) with Bin Concept	
Witron	EWM	VTR	MM-IM	LE
CSC,RSC Mason	Asia Hub	GPCs	Over 60 Festo Companies	
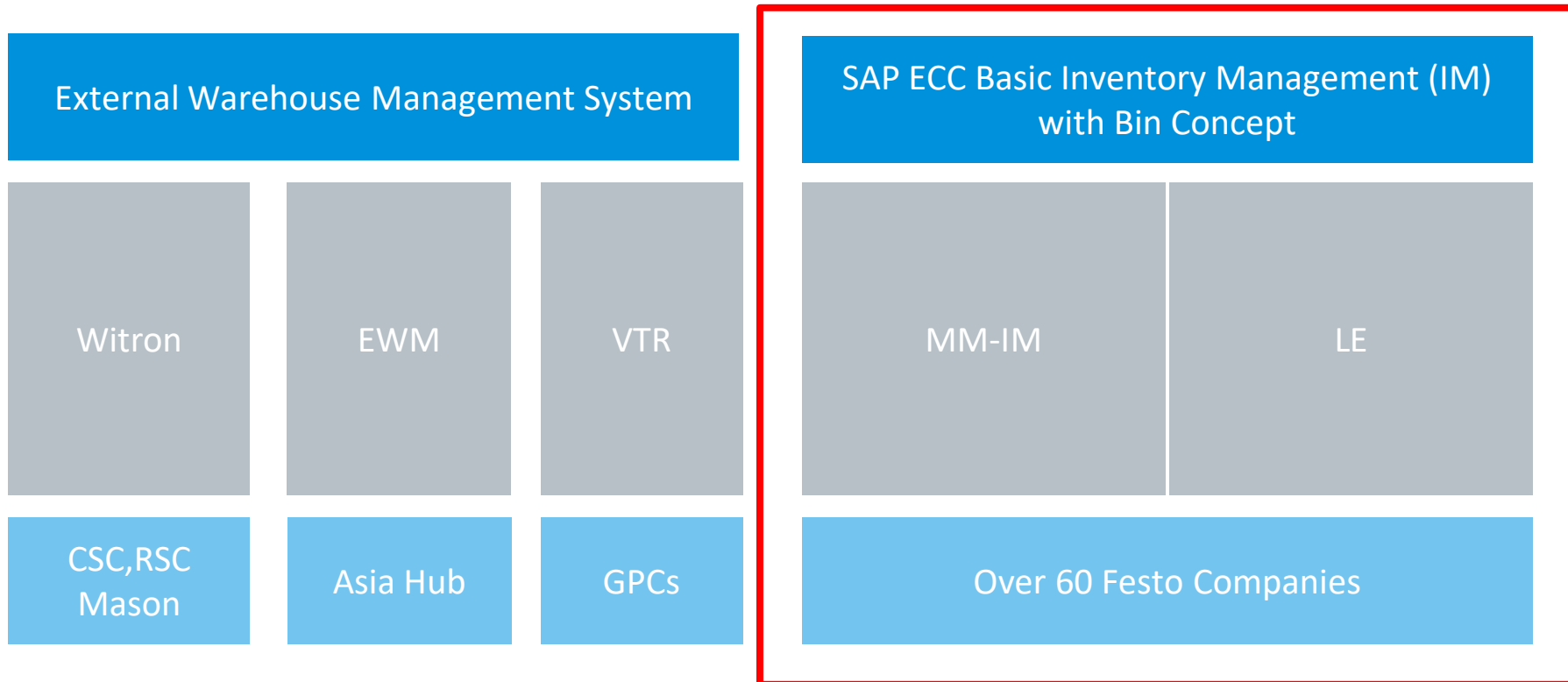
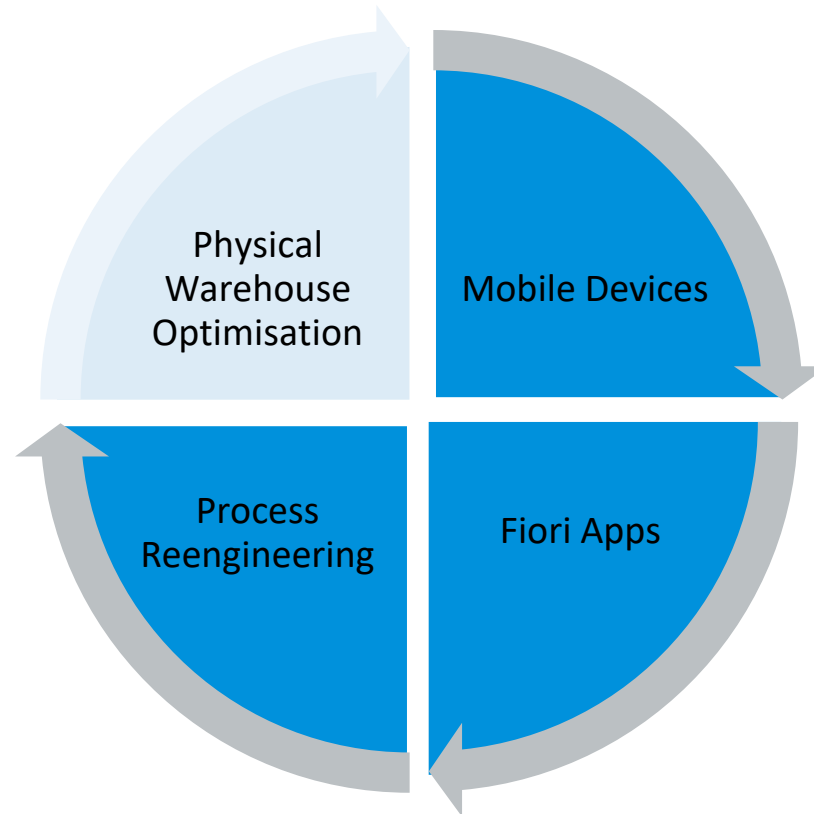# Fiori Enabled Warehouse Light Solution Architecture

No middleware WM System compared to SAP EWM/EWM (Embedded)
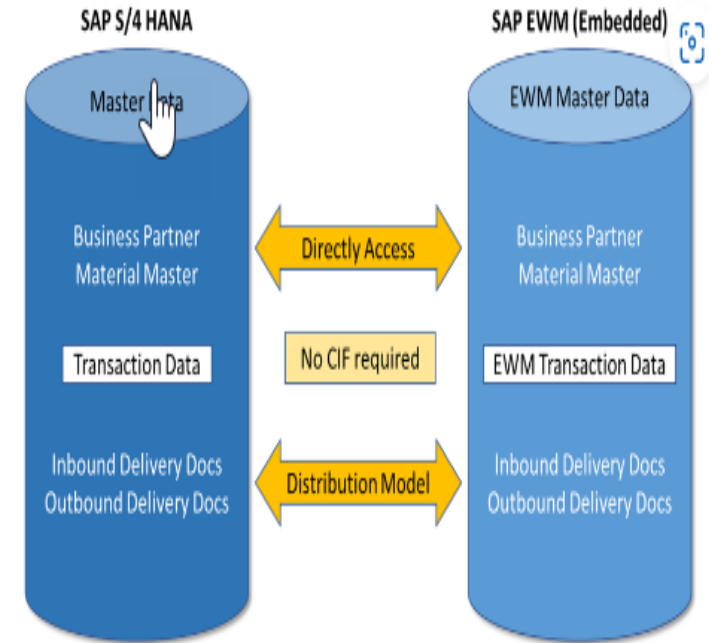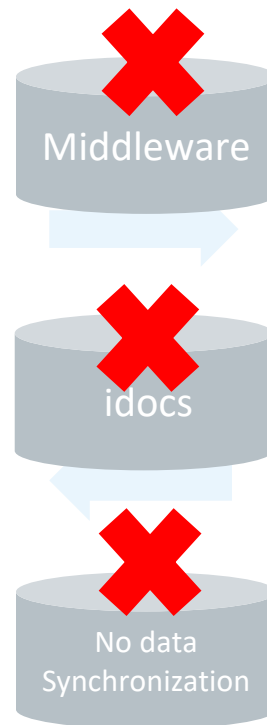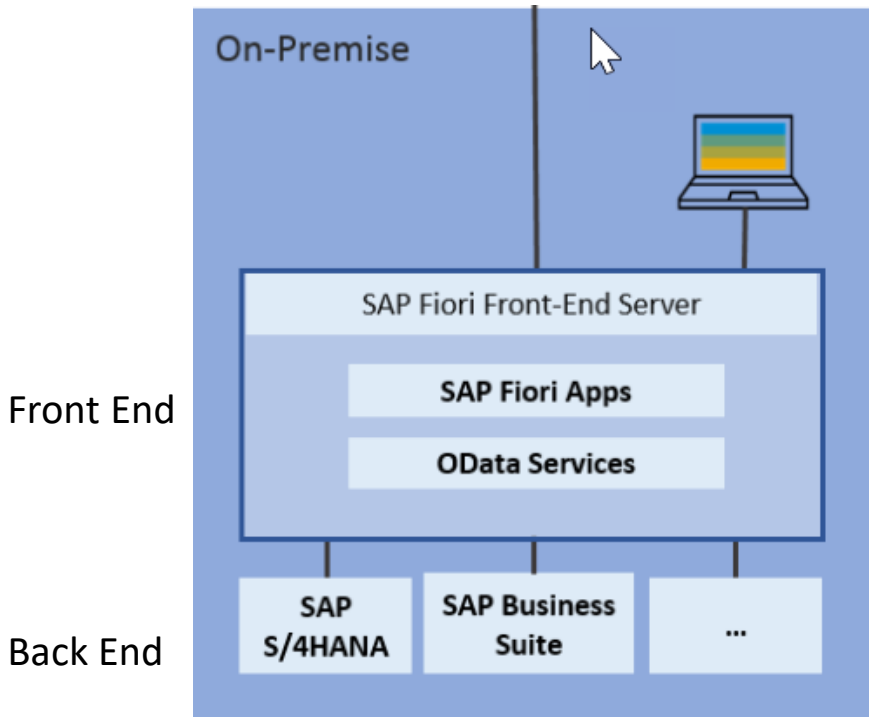
Data Transfer between SAP S/4 HANA & Embedded EWM

Fiori Enabled Warehouse Light Solution Core Components

These four components go hand-in-hand for the success

Physical Warehouse Optimisation

Mobile Devices

Process Reengineering

Fiori Apps

Physical Shelving Improvements

Bay labelling

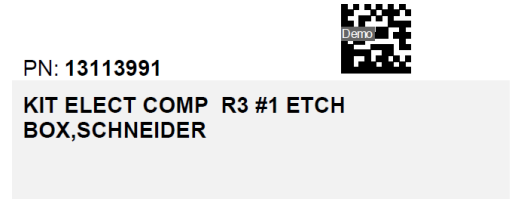**Regular stock Bay**

8" x 6" White Background, Black lettering

Overstock Bay

8" x 6" White Background, Red lettering

Rack labelling

Rack Numbers

3" x 2.5" Dark blue Background, white lettering

Rack levels

2 x 1.5" Yellow background, black lettering

Fixed Bin Label

PN: 13113991

KIT ELECT COMP R3 #1 ETCH BOX,SCHNEIDER

Receiving Material Label

Material # 11917166

CF–R.TO–INSTALL

SensCode 002

Date: 2019–10–24 16:12:37

Material Picking Label

Prod. Order # 1361072045
Material # 13106134
3/4" STEEL HOLE PLUG,
71995K82, McMASTER
Pick Qty: 3 User: US0XAZ
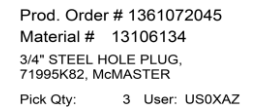
Warehouse New Physical Shelving Improvements

One material one storage bin

New Fix Bin Labels
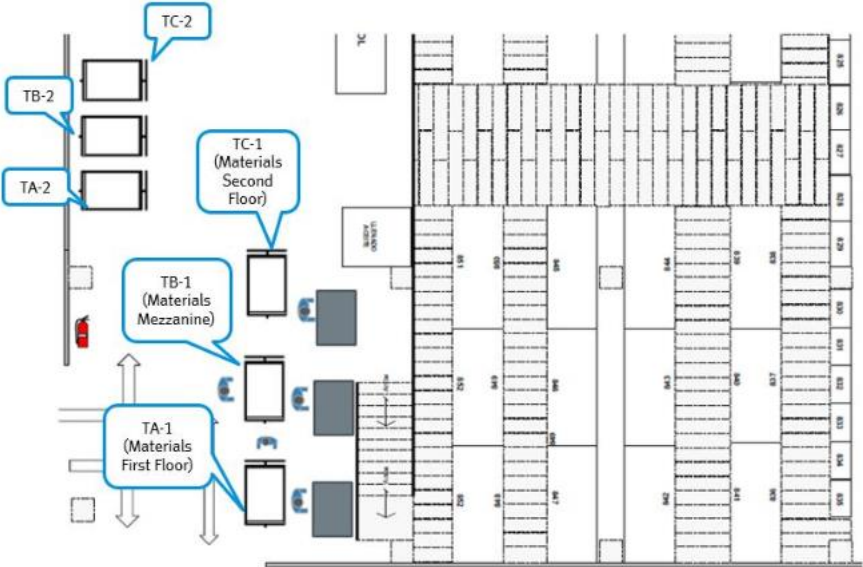
Barcode Scanning to ensure quality

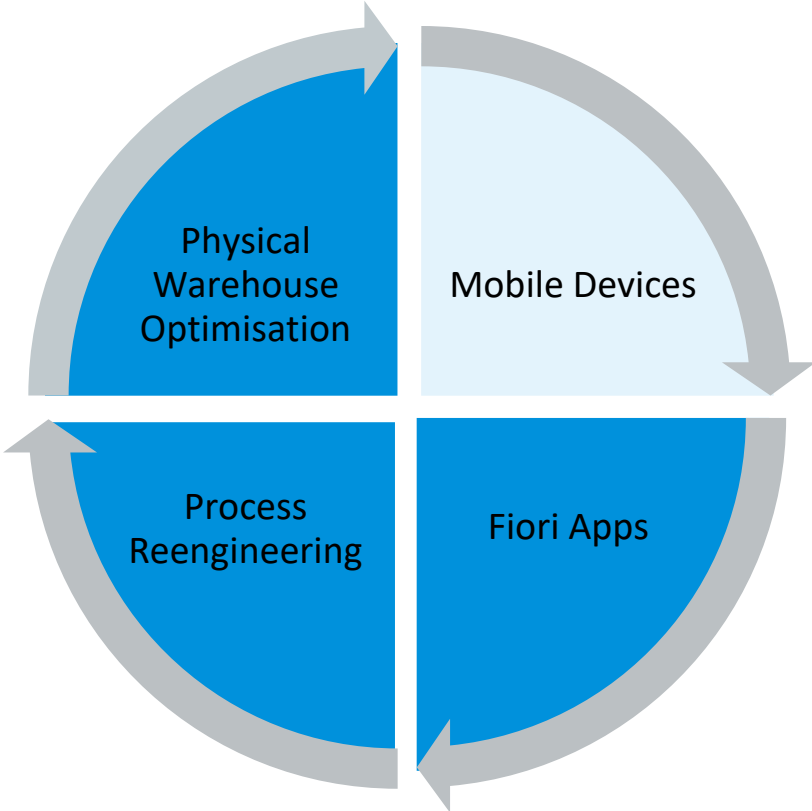Material labels

Location Labels

Put-away Trolley

Container barcode help manage the put-away effectively and efficiently

Fiori Enabled Warehouse Light Solution Core Components

These four components go hand-in-hand for the success

Using Industry Standard Mobile Devices

Honeywell Voyager 1602g

iPad 9.7

Zebra mobile printer

ProGlove Scanner

Wireless Communication via Bluetooth

Fiori Enabled Warehouse Light Solution Core Components

These four components go hand-in-hand for the success

Physical Warehouse Optimisation

Mobile Devices

Process Reengineering

Fiori Apps
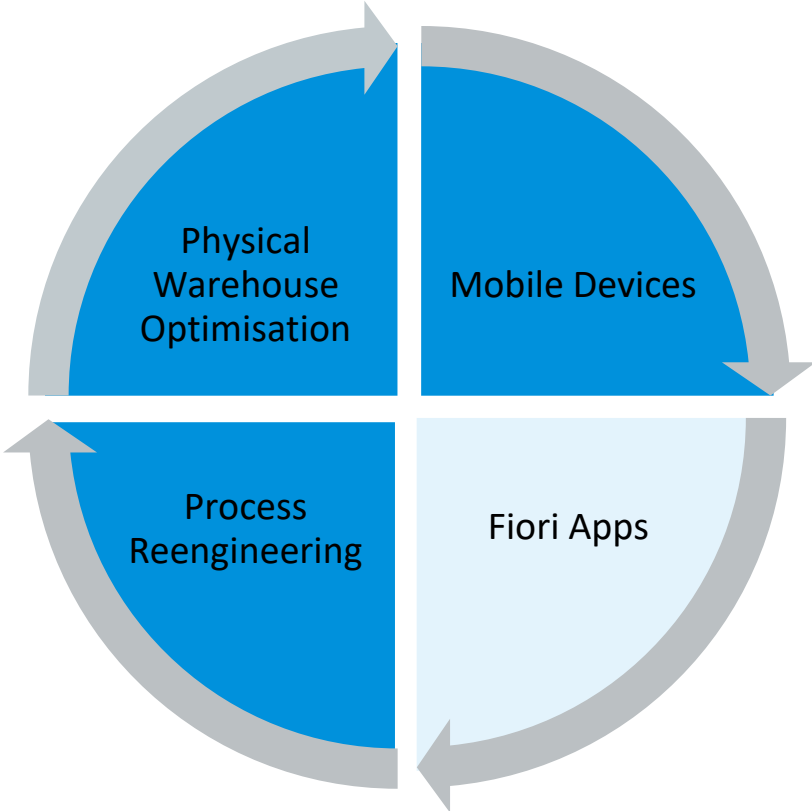
Current Apps Overview

Inbound Logistics

Goods Receipt

Outbound Logistics

Delivery Picking

Internal Logistics

Production Order Picking

Cycle Counting

Count Stock
Festo

Manage Stock Counting
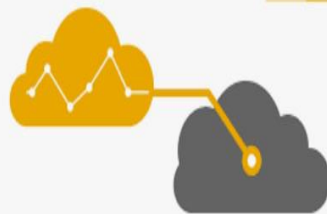Festo

Quality

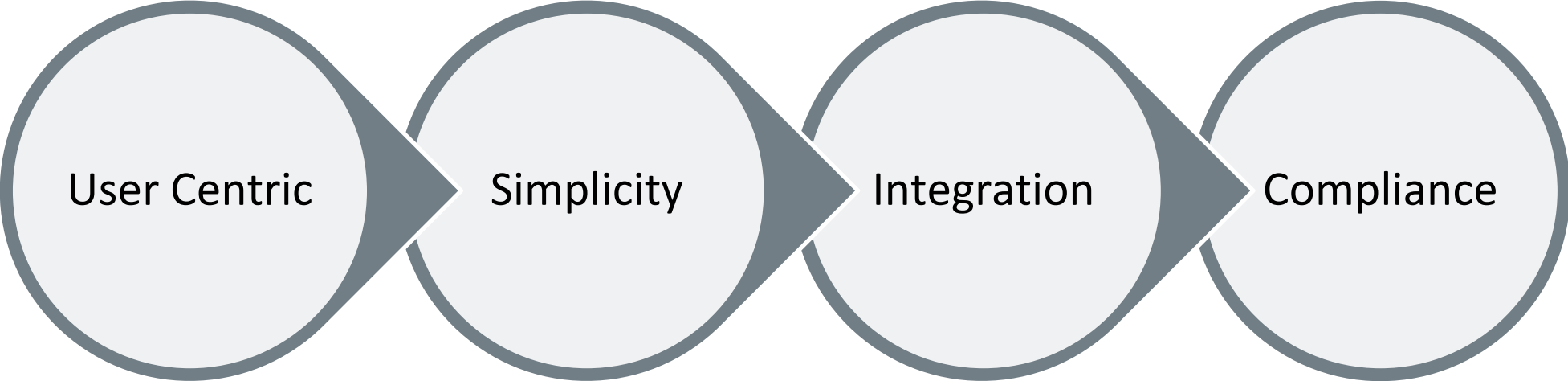Report Quality Issue

Packing Processes

SAP Systems SSO

Performance Dashboard

SAP® Analytics Cloud

Design/Development Guiding Principles

Design Thinking

User Centric → Simplicity → Integration → Compliance

Lessons Learnt/Experience Sharing
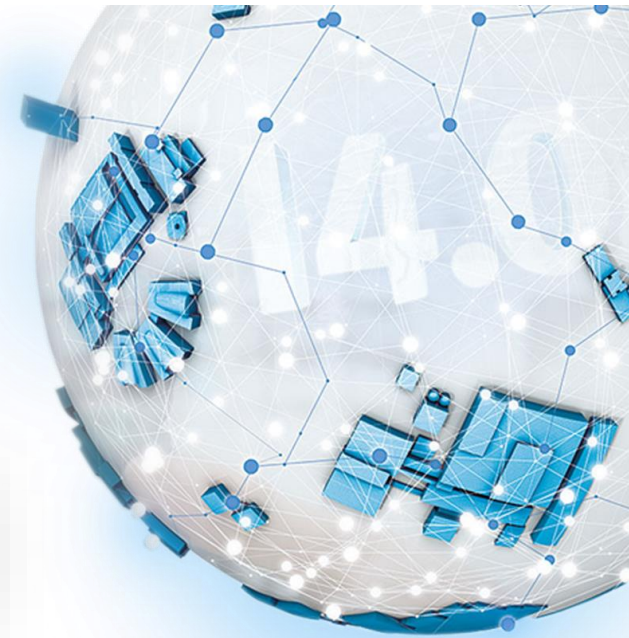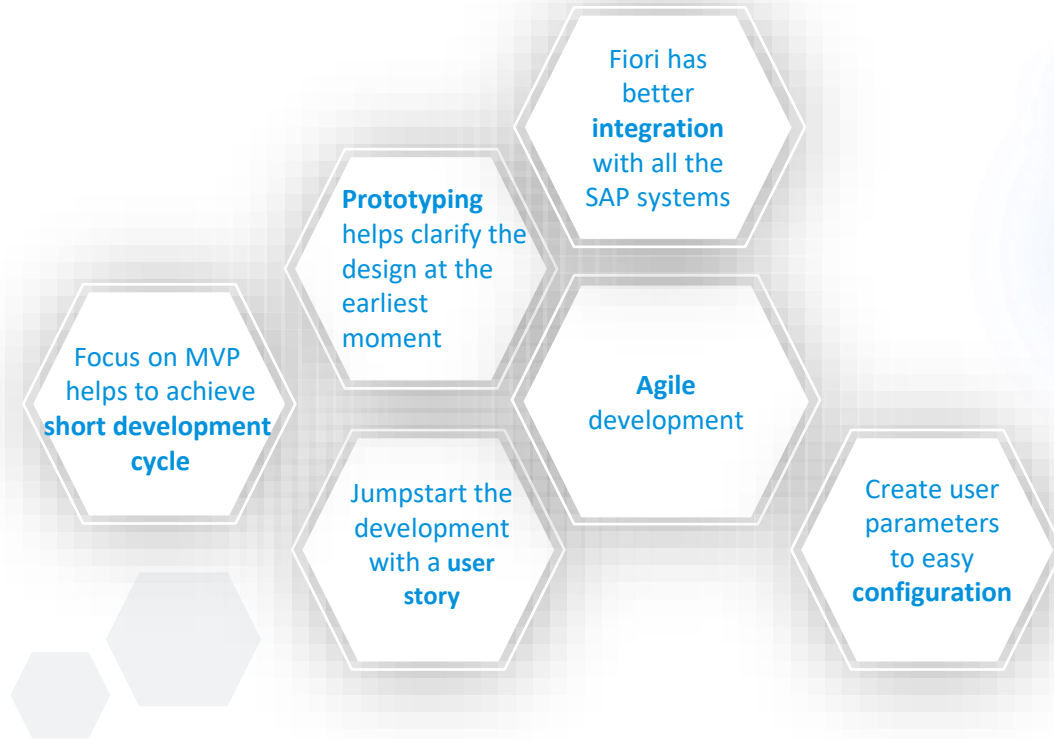
Focus on MVP helps to achieve **short development cycle**

Prototyping helps clarify the design at the earliest moment

Jumpstart the development with a **user story**

Fiori has better **integration** with all the SAP systems

Agile development

Create user parameters to easy **configuration**

Fiori Enabled Warehouse Light Solution Core Components

These four components go hand-in-hand for the success

Physical Warehouse Optimisation

Mobile Devices
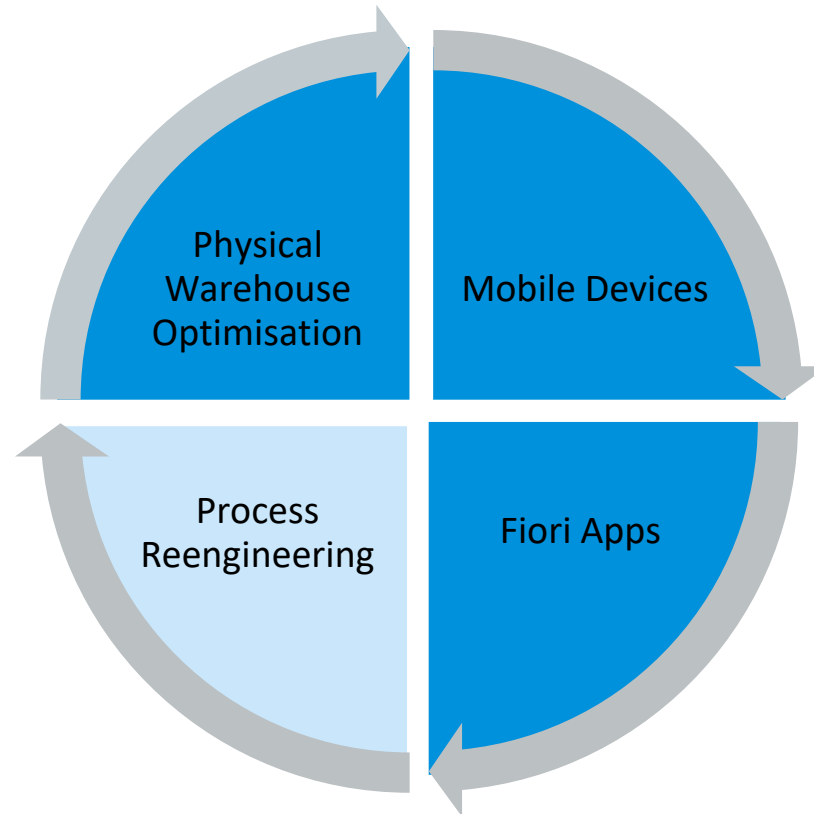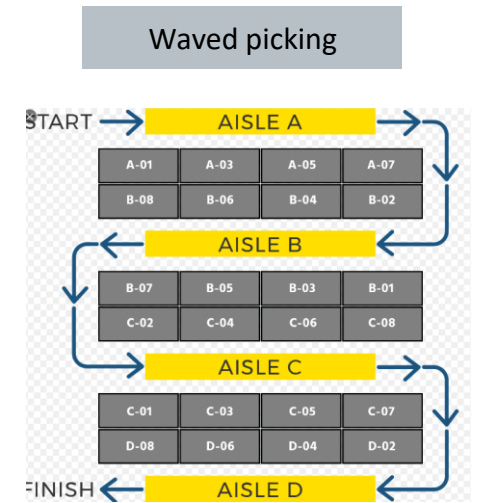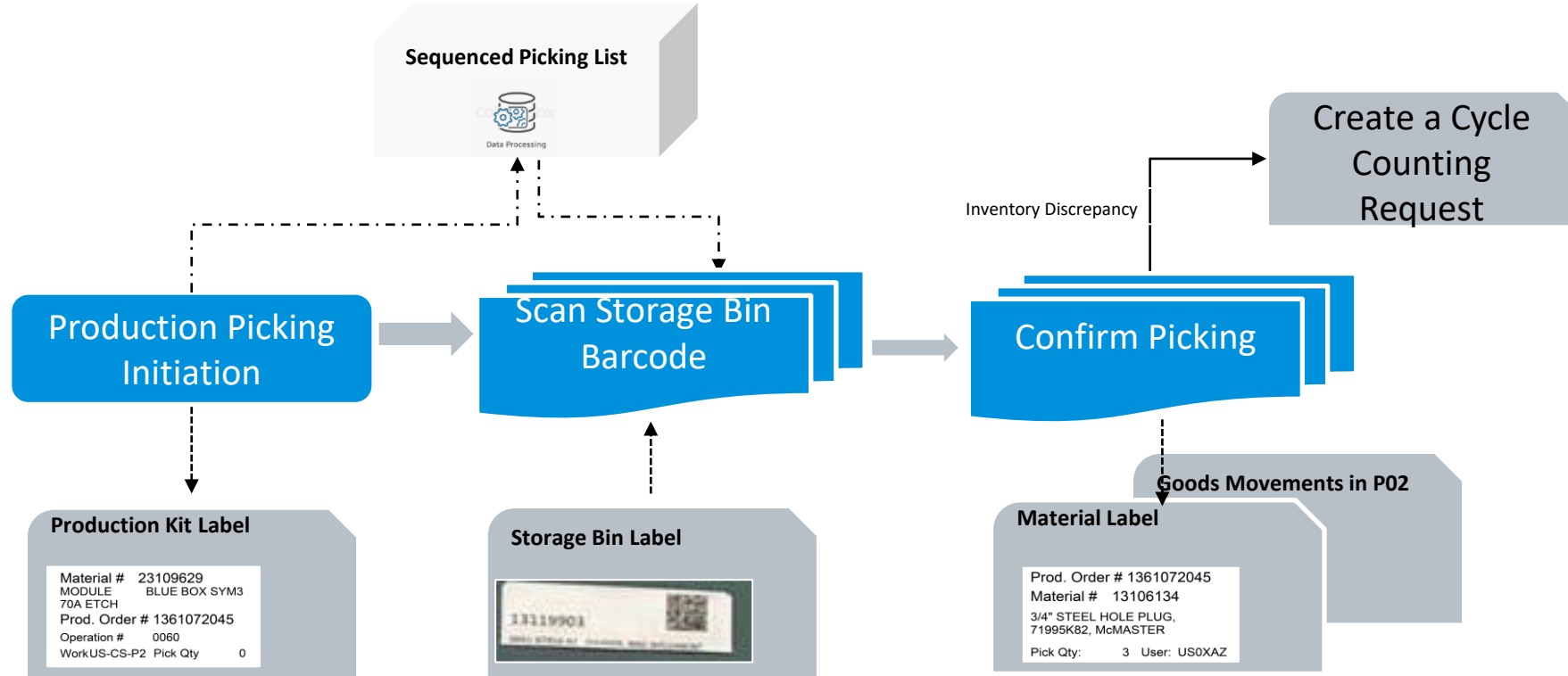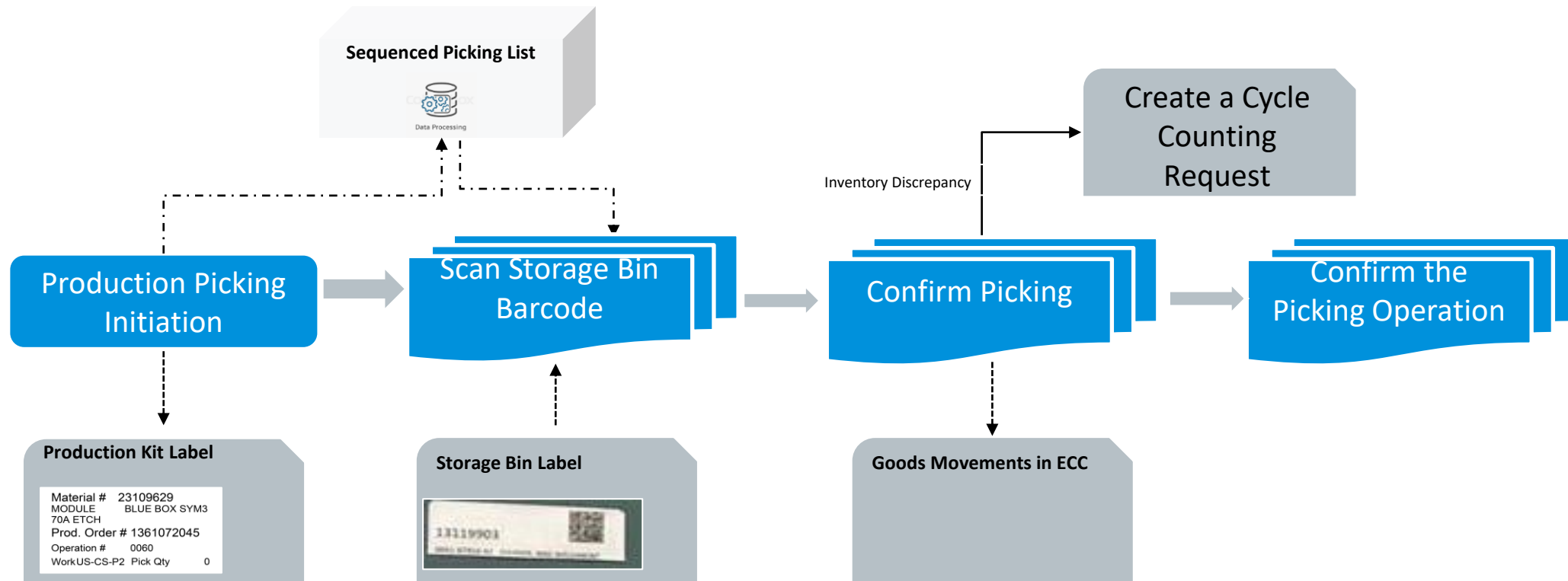
Process Reengineering

Fiori Apps

Production Picking App -Warehouse

- The High-Level Process

Sequenced Picking List

Data Processing

Create a Cycle Counting Request

Waved picking

Inventory Discrepancy

Production Picking Initiation

Scan Storage Bin Barcode

Confirm Picking

Goods Movements in P02

Production Kit Label

Material #   23109629
MODULE   BLUE BOX SYM3
70A ETCH
Prod. Order # 1361072045
Operation #   0060
Work US-CS-P2 Pick Qty   0

Storage Bin Label

Material Label

Prod. Order # 1361072045
Material #   13106134
3/4" STEEL HOLE PLUG,
71995K82, McMASTER
Pick Qty: 3   User: US0XAZ

START → AISLE A →
A-01 | A-03 | A-05 | A-07
B-08 | B-06 | B-04 | B-02
AISLE B
B-07 | B-05 | B-03 | B-01
C-02 | C-04 | C-06 | C-08
AISLE C →
C-01 | C-03 | C-05 | C-07
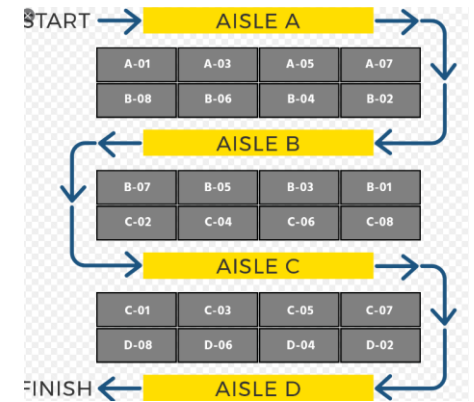D-08 | D-06 | D-04 | D-02
FINISH ← AISLE D

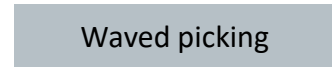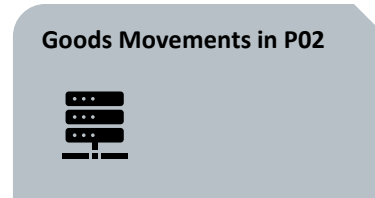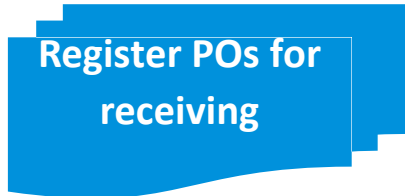# Production Picking App-IntraLogistics (KANBAN)

- The High-Level Process

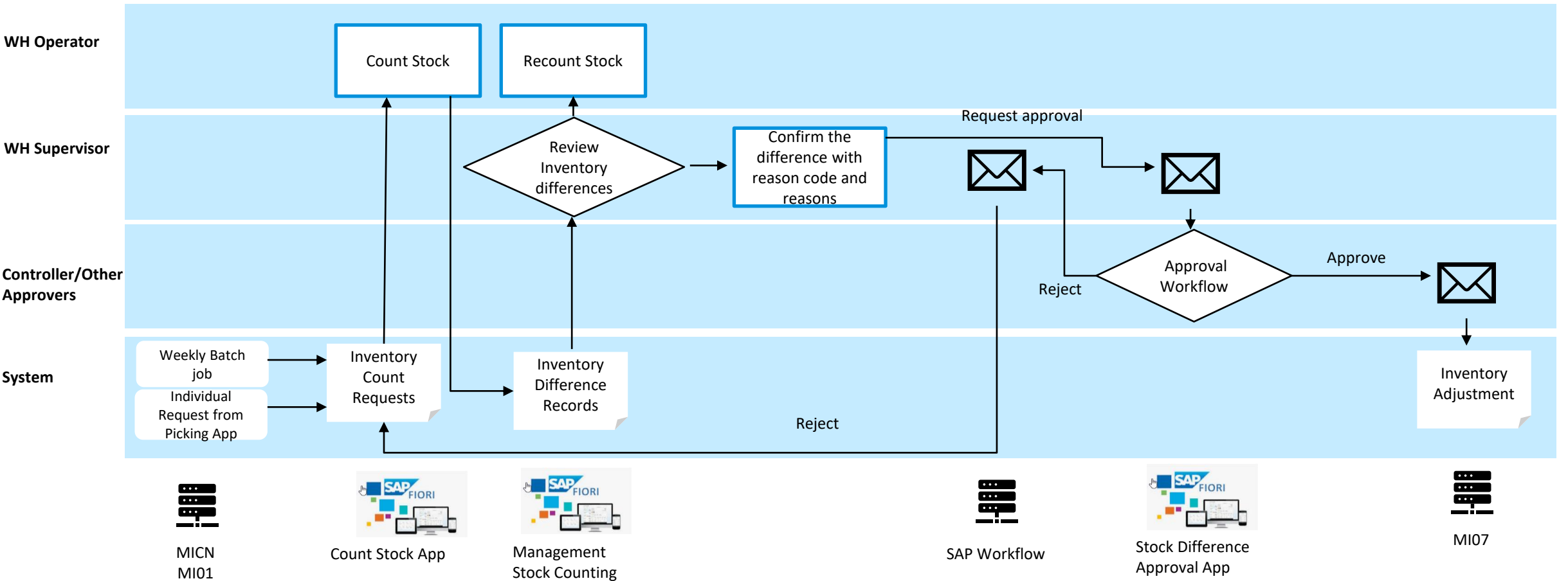# Goods Receiving App

- The High-Level Process

Sequenced Put-away List

Register POs for receiving → Scan Storage Bin Barcode → Confirm Put-away

Waved picking

PO GR Label
Material # 11917166
CF-R.TO-INSTALL
SensCode 002
Date: 2019-10-24 16:12:37

Storage Bin Label
13119901

Goods Movements in P02

Cycle Counting Apps

WH Operator
- Count Stock
- Recount Stock

WH Supervisor
- Review Inventory differences
- Confirm the difference with reason code and reasons
- Request approval

Controller/Other Approvers
- Approval Workflow
- Approve
- Reject

System
- Weekly Batch job
- Individual Request from Picking App
- Inventory Count Requests
- Inventory Difference Records
- Reject
- Inventory Adjustment

MICN MI01 — Count Stock App — Management Stock Counting — SAP Workflow — Stock Difference Approval App — MI07

Outbound Logistics Process Reengineering

Before

Picking Preparation

Delivery creation → Delivery grouping → Print Picking List → Create Invoice

Picking

Packing

Create Festo Labels or COFIDI → Print Paper Documents → CARGO WEIGHT → EXCEL list to forwarders

Estafeta Portal

After

Picking Preparation

Picking

SAP Fiori

Picking App

Waved picking

Picking verification

Packing

CARGO PACKING

CARGO WEIGHT

SAP Logon

Packing Station

Festo Label ✓
Edicom Invoice
Estafeta packing label
Festo packing label with Cofidi code

Warehouse Dashboard

The dashboard was built in SAC using CDS views