



FOCUS
ONLINE

8 T/M 12 NOVEMBER 2021

Welkom

Innoveren met SAP EWM bij Aviko

Gert-Jan Janssen Reinen, Supply Chain Director

& Laura van Silfhout, Project Manager Supply Chain - Aviko





SAP EWM Implementatie

VNSG Focus Online
woensdag 10 november
13.00 - 13.45 u



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Sprekers



Gert-Jan Janssen Reinen
Supply Chain Director



Laura van Silfhout
Projectmanager Supply Chain

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Agenda

- **Introductie Aviko**
- **Waarom standaardisatie via EWM?**
- **Gefaseerde aanpak**
- **EWM**
- **Wat ging goed?**
- **Advies**
- **Ambitie**
- **Vragen?**

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The background image shows a rural landscape at sunset or sunrise. In the foreground, there's a field of young green plants, likely potatoes, growing in rows. In the middle ground, there are several farm buildings: a prominent red barn on the left and a cluster of buildings with green roofs on the right. A dense forest line is visible in the distance under a sky with warm orange and pink hues.

Aviko, at a glance



Aviko, today

Founded in **1962**, celebrating **60 years of joy** in 2022

Since 2002 part of **Royal Cosun**, powered by **9,000 growers**

Processing **2,000 Kt potatoes** a year

13 production houses, globally spread

Over **100 distinctive potato products** in our portfolio

Active in more than **110 countries**

2,500 colleagues, globally

European market leader in out of home and selected retail markets

No. 4 global brand

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Our purpose is to bring
joy to 3 billion tables
per year by 2025



By improving **customer value**,
impactful branding and **distinctive**
innovation

Being

Close to you, to our growers, our customers, end-users, consumers and colleagues

Rooted for 60 years in the capillaries of the diverse European foodservice markets with
high quality innovative potato products for every customer, adding consumer value

High consultative expert business partner, adding value through **appealing concepts and tailormade advise**, following '**think global and act local**'.



**By serving the most delicious potato
products at the right time at the right
place**

**In close collaboration with our
growers in building future-proof
potato cultivation & business**

Video introductie Aviko

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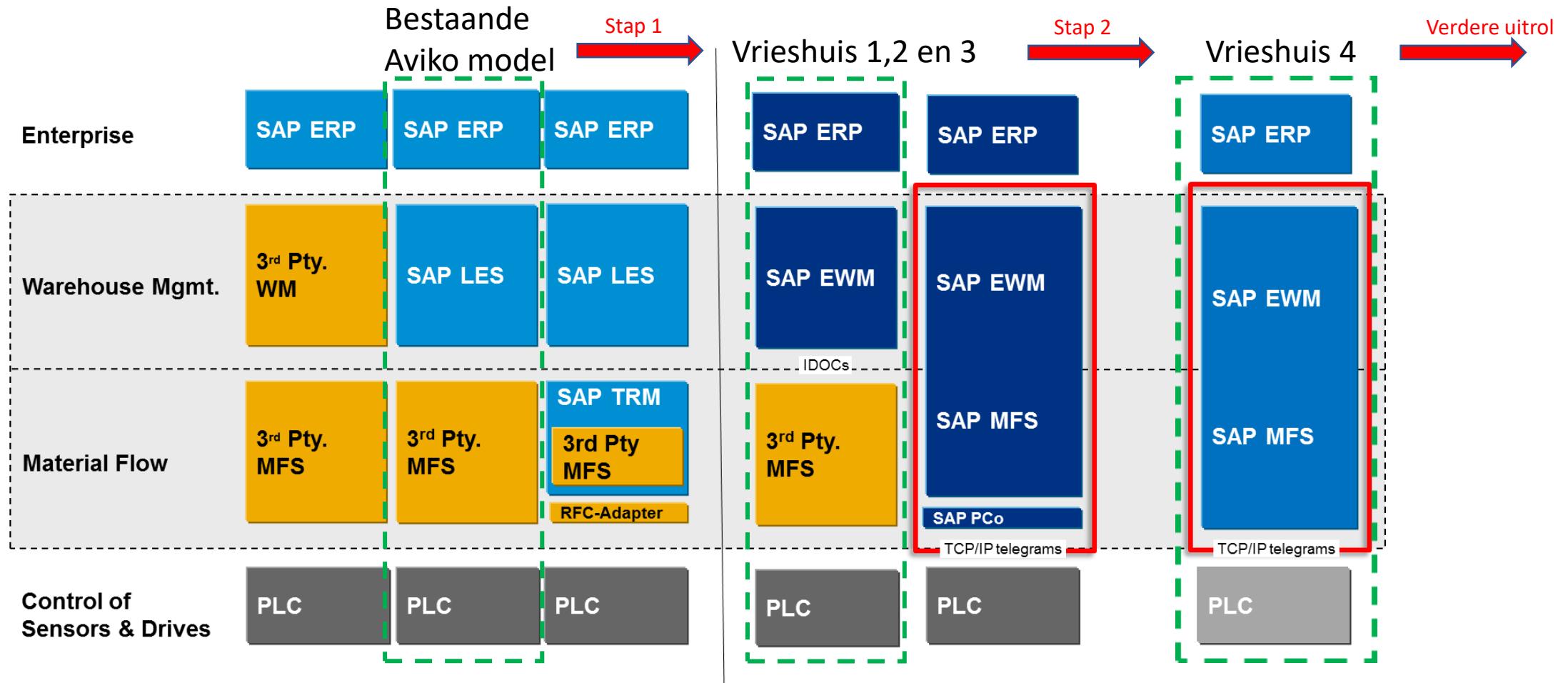
Waarom standaardisatie via EWM?

- Constante kwaliteit
Standaardisatie - makkelijke detectie van fouten
- Kopieerbaar en overdraagbaar
Trainingsmateriaal, procesflows, werkinstructies, autorisatie, training
- Verkorting implementatietijd
Eenvoudiger nieuwe DC's aan te sluiten
- Gebruikersvriendelijkheid
Verhoging van herkenbaarheid – Handige menu's, dashboards etc.
- Minder persoons afhankelijk
Minder afhankelijkheid van experts - kennis borging in de organisatie
- Snelheid
Standaardisatie, automatisering en robotisering
- Hardware onafhankelijk
Niet afhankelijk van het WMS systeem van de leverancier van het geautomatiseerde magazijn systeem
- Snelle innovatie
“Iedereen kan meedenken in het verbeteren van de standaard”

Waarom start in 2018?

- Project Vrieshuis 4 Steenderen (40.000 palletplaatsen) was al gestart
 - *Greenfield – opstart zonder directe koppeling met productie*
- S4/Hana
 - *Ervaring opdoen met nieuwe technologie.*
 - *Eerste stap in de upgrade: minder complex project bij upgrade ECC.*
- Voorkomen dubbele investeringen door gebruik nieuwe technologie.
- Nu betekent direct terugverdienen op alle brownfield projecten in de pijplijn en Project Poperinge (50.000 palletplaatsen).
- Nu betekent stabiel, toekomstbestendig platform.
- Grote leveranciers van MFS schakelen over naar SAP-EWM als standaard voor door hen geleverde installaties.

Gefaseerde aanpak

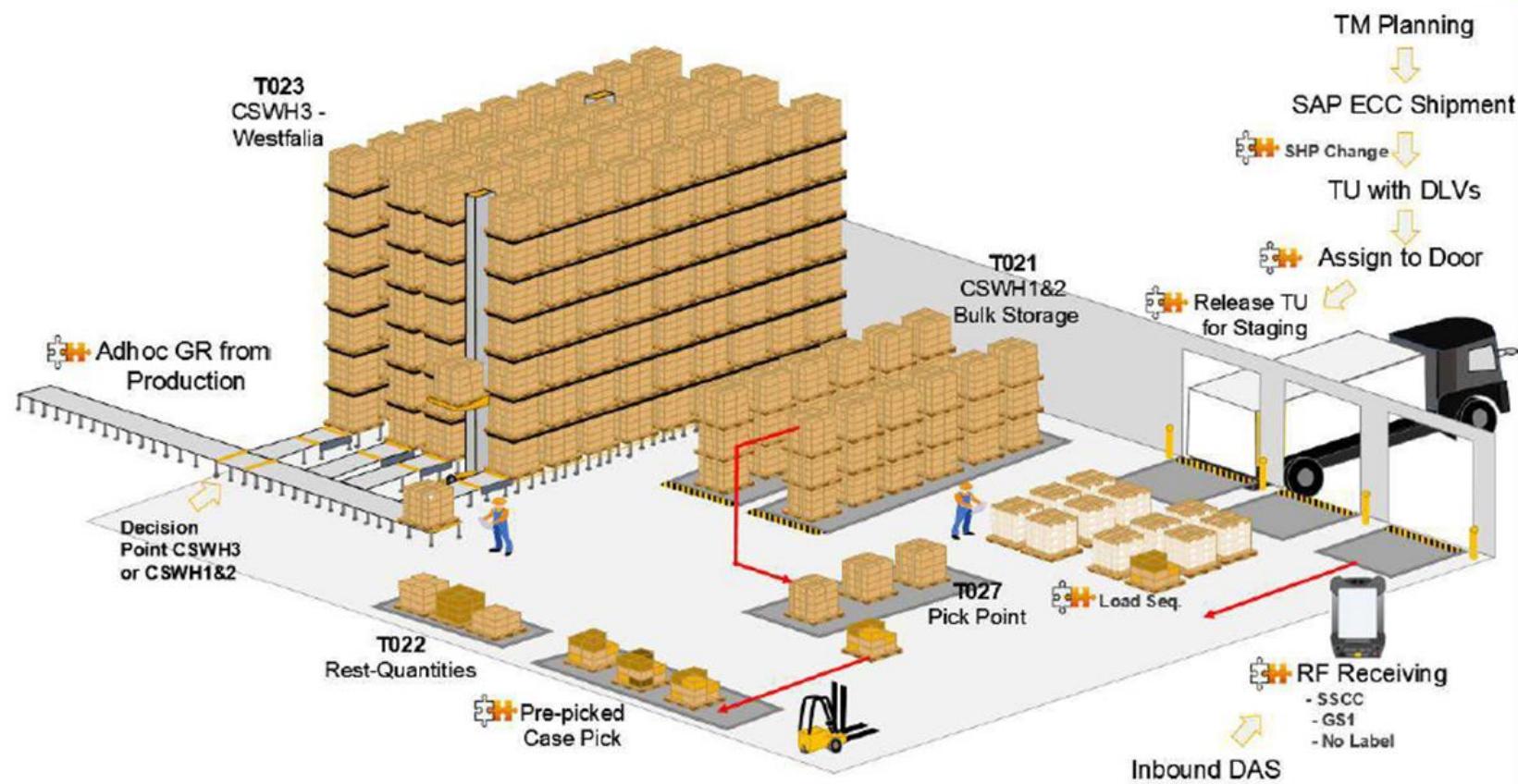


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Vrieshuis 1, 2 en 3

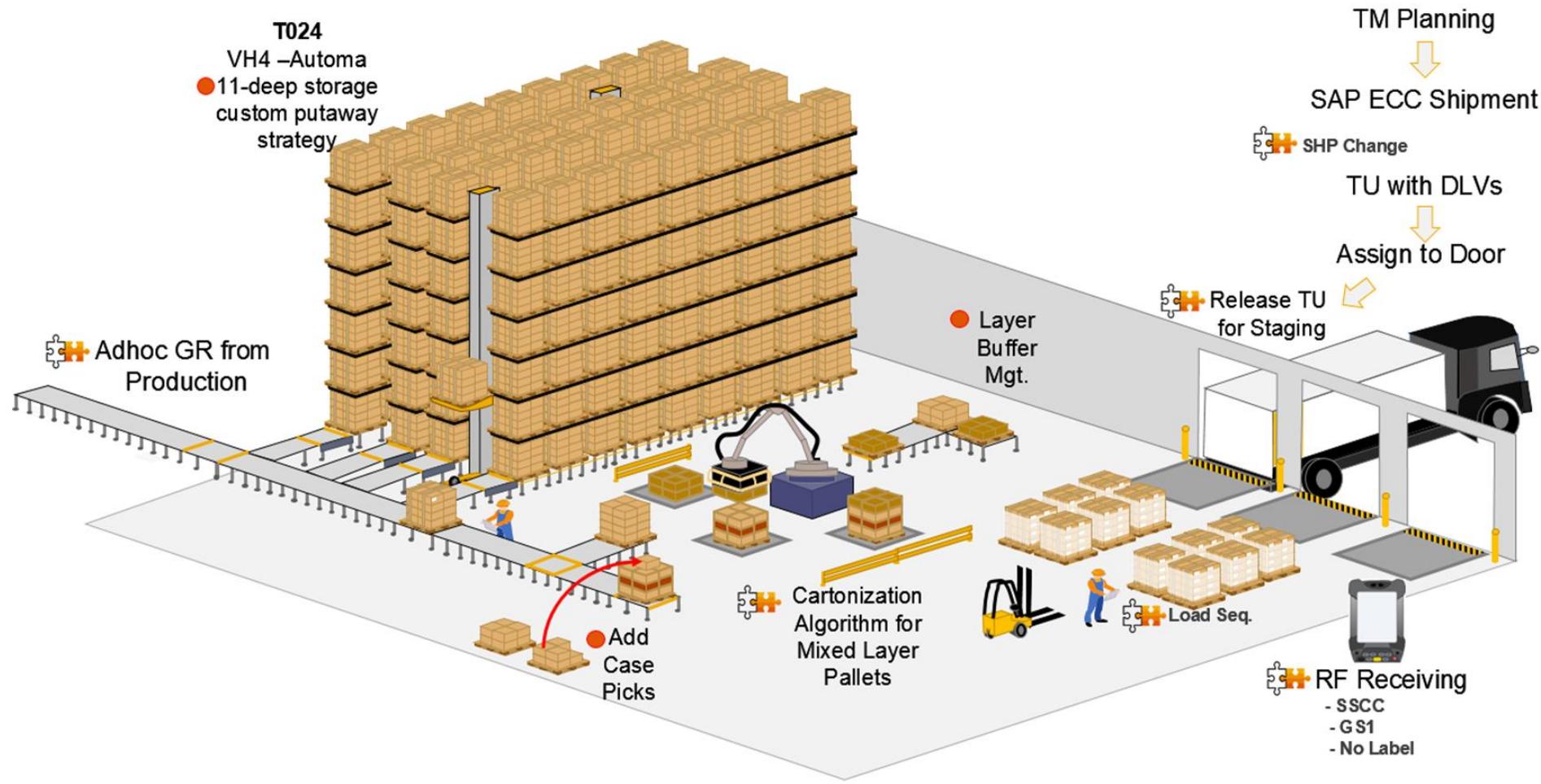


Summary Scope Discussion CSWH 1, 2 and 3



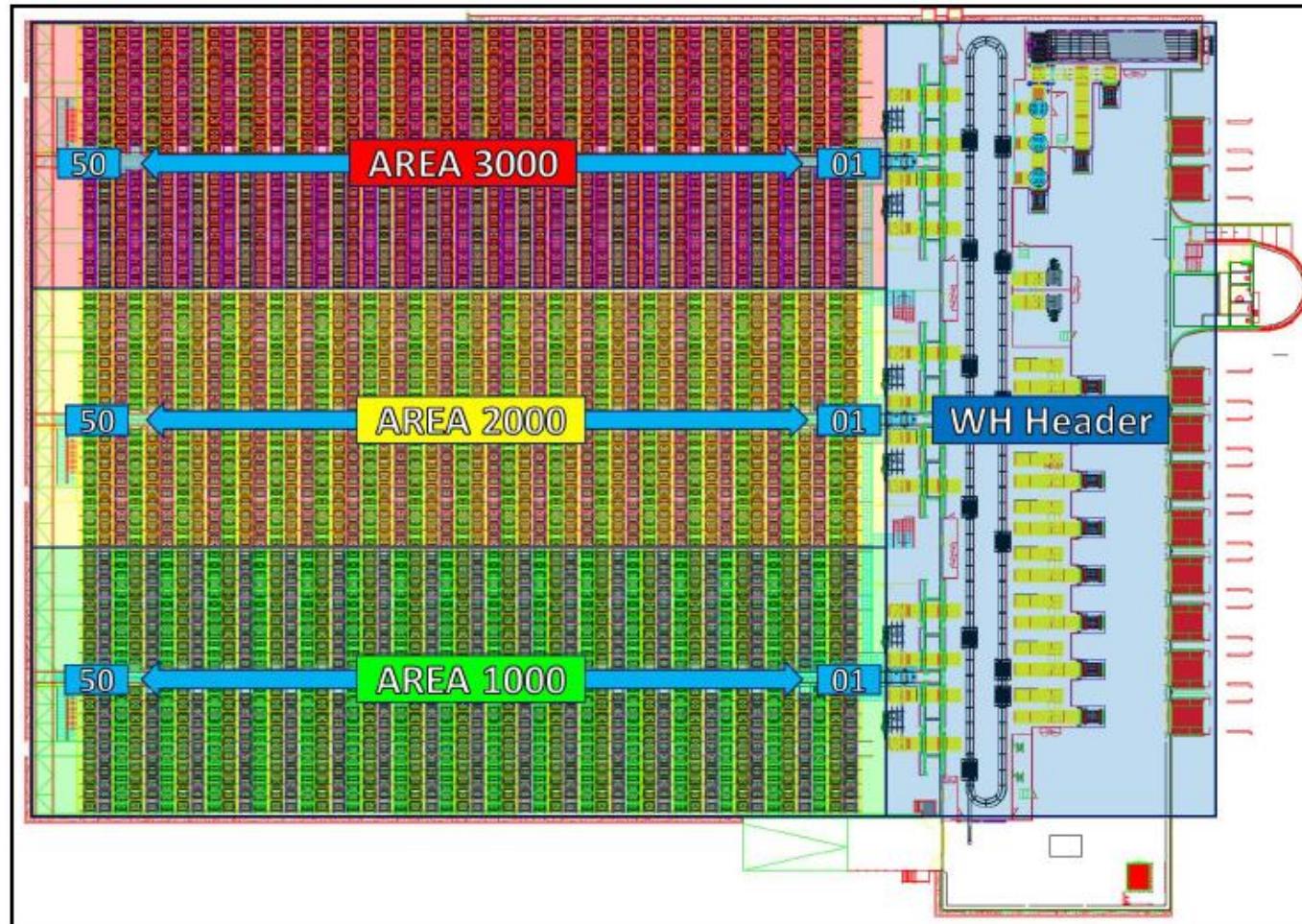
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Vrieshuis 4



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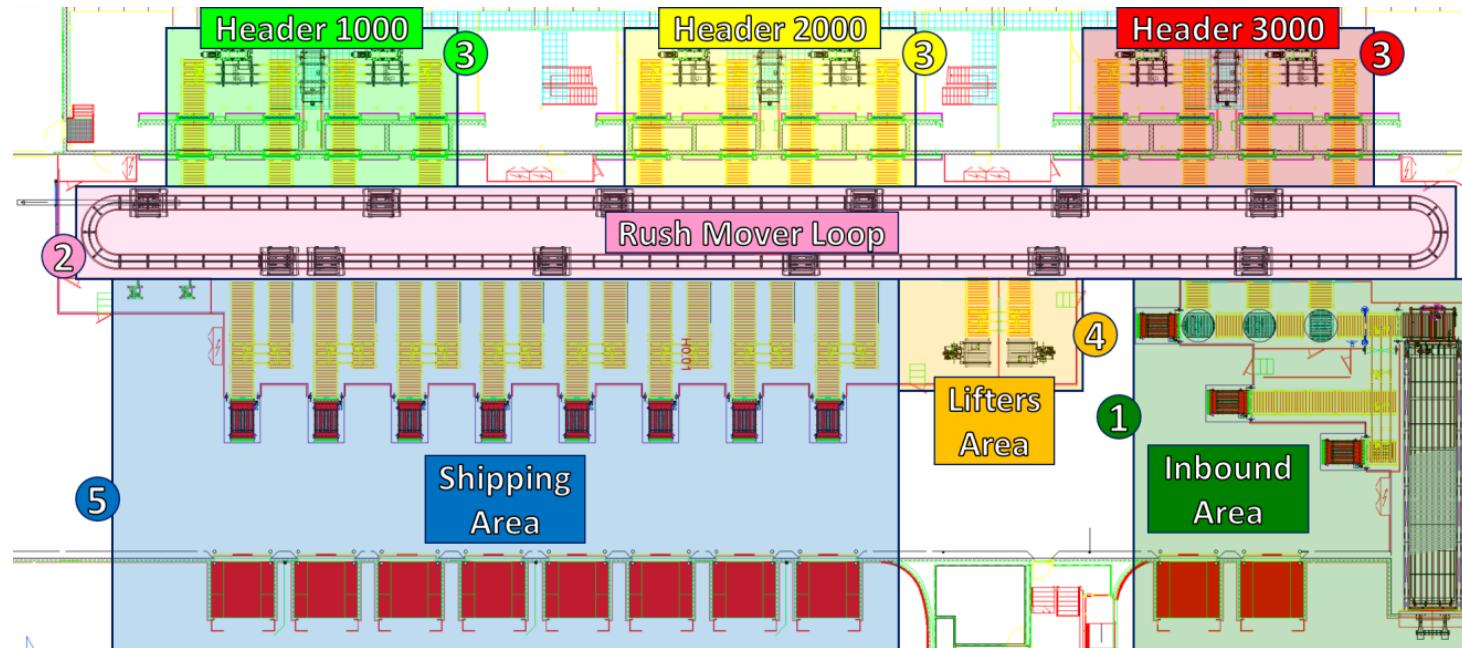
Vrieshuis 4: High bay



- 40.000 palletplaatsen
- 11 levels
- 3 gangen
- 6 liften
- 33 shuttles

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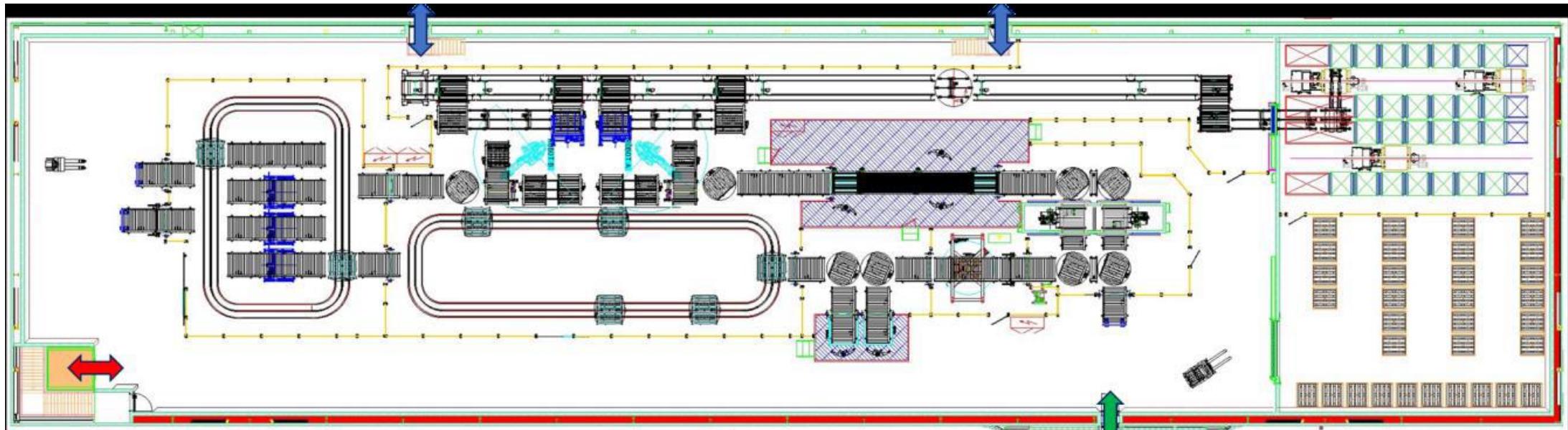
Vrieshuis 4: Expeditie



- Automatisch trailer losplaats
- 2 inbound docks
- 8 outbound docks
- Monorail: 12 shuttles
- Kantoor

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Vrieshuis 4: Layerpick area



- Lagenmagazijn
- 2 layerpick robots
- 2 single box stapel plaatsen
- Folie verwijder station
- 3 Palletmagazijnen
- Palletwikkelaar

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Gefaseerde implementatie EWM en MFS

- Inrichting van basis processen EWM
 - Standaard voor alle vrieshuizen
 - Diverse workshops met SAP consultants, key-users en proces eigenaren
- 1^e fase EWM implementatie – VH 1, 2 en 3
 - Testen voor VH 1 en 2 uitgevoerd in ons test- en opleidingscentrum
 - Handmatige processen, ook in de praktijk
 - Voor VH3 zijn we uitgegaan van een as-is interface (black box)
 - De bestaande berichten tussen SAP WM en Westfalia zijn 1-op-1 nagebouwd zodat er geen wijziging in Westfalia noodzakelijk was.
 - Training van medewerkers in het opleidingscentrum
 - Hierdoor gewenning aan het nieuwe systeem voor implementatie
- 2^e fase EWM en MFS implementatie – VH 4
 - Zelfde basisprocessen Warehouse Management niveau
 - Additioneel WCS/MFS
 - Greenfield testen - onafhankelijk van productie en verlading
- 3^e fase – VH4 Layerpick
 - Testen in productief systeem
- Op een later moment zullen we VH 3 via WCS/MFS direct koppelen aan EWM.

Video: Vrieshuis Steenderen



EWM en MFS inrichting bij Aviko



Inbound from vendor / STO

Inbound from Vendor or other Aviko Locations with an inbound delivery:

- Forklift/truck driver gets the task to bring the pallets from the docked truck to the infeed conveyor without scanning the pallet
- Conveyer infeed is assigned to one of the inbound doors. Therefore, the system will select which inbound delivery/TU is docked to the assigned door and pack the quantity from the correct inbound
- Scanner will scan SSCC and GS1 Label to identify the stock of the pallet
- Packed HUs will be posted on the scanner communication point immediately
- In case, an inbound delivery is not packed and not labeled, an operator has the task to pack them outside the automated equipment. The operator will use a RF-terminal to pack and print all needed labels. After this is done, the operator can set up the pallet on the conveyor.



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Inbound – MFS Flow example

- HU: Exists in EWM, or is in an inbound delivery, or product on HU (label scan) is in inbound delivery.
- Process starts with placing a pallet on the inbound conveyer
- PLC sends a SCAN telegram
 - If the HU is known to the system, the pallet will move on to the contour check
 - In case of a no-read, the pallet is rejected and moves back to the infeed lade
- EWM sends a WTSK for every step, the PLC confirms this by sending a WTCO

Telegram												
	Warehouse Task	AppLog Time	AppLog HU	AppLog WO	APC TCP Log							
PLC	Comm.chan.	Date	Time	MS	Sender	Recip.	Comm. Pnt	Handshake	SeqN	Comm.Error	TeleTyp	A... Handling Unit
AMHPLC02	B	27.02.2020	14:37:15	727	AMHPLC02	EWMMFS		AY	17		WTCO	387104499137514561 1BM100010001 1BW200010009 I
AMHPLC02	B		14:35:34	252	EWMMFS	AMHPLC02		AY	7060		WTSK	387104499137514561 1BM100010001 1BW200010009 O
AMHPLC02	B		14:35:33	696	AMHPLC02	EWMMFS		AY	16		WTCO	387104499137514561 1B0200010001 1BM100010001 I
AMHPLC02	B		14:35:19	921	EWMMFS	AMHPLC02		AY	7059		WTSK	387104499137514561 1B0200010001 1BM100010001 O
AMHPLC02	3		14:34:40	780	AMHPLC02	EWMMFS		AY	35		WTCO	387104499137514561 1AL200010001 1B0200010001 I
AMHPLC02	3		14:34:21	620	EWMMFS	AMHPLC02		AY	7088		WTSK	387104499137514561 1AL200010001 1B0200010001 O
AMHPLC02	3			45	AMHPLC02	EWMMFS		AY	34		WTCO	387104499137514561 1A1600010001 1AL200010001 I
AMHPLC02	3		14:33:56	860	EWMMFS	AMHPLC02		AY	7087		WTSK	387104499137514561 1A1600010001 1AL200010001 O
AMHPLC02	1		14:33:47	441	AMHPLC02	EWMMFS	1A1600010001	AY	20		WTCO	387104499137514561 4K0200010001 1A1600010001 I
AMHPLC01	1		14:29:37	845	EWMMFS	AMHPLC01	4K0200010001	AY	5958		WTSK	387104499137514561 4K0200010001 1A1600010001 O
AMHPLC01	1		14:29:36	198	AMHPLC01	EWMMFS	4K0200010001	AY	28		SCAN	387104499137514561 I
AMHPLC01	1			123	AMHPLC01	EWMMFS	4K0200010001	AY	27		WTCO	387104499137514561 4M0200010001 4K0200010001 I
AMHPLC01	1		14:28:23	541	EWMMFS	AMHPLC01	4M0200010001	AY	5955		WTSK	387104499137514561 4M0200010001 4K0200010001 O
AMHPLC01	1		14:28:20	499	AMHPLC01	EWMMFS	4M0200010001	AY	26		SCAN	387104499137514561 I

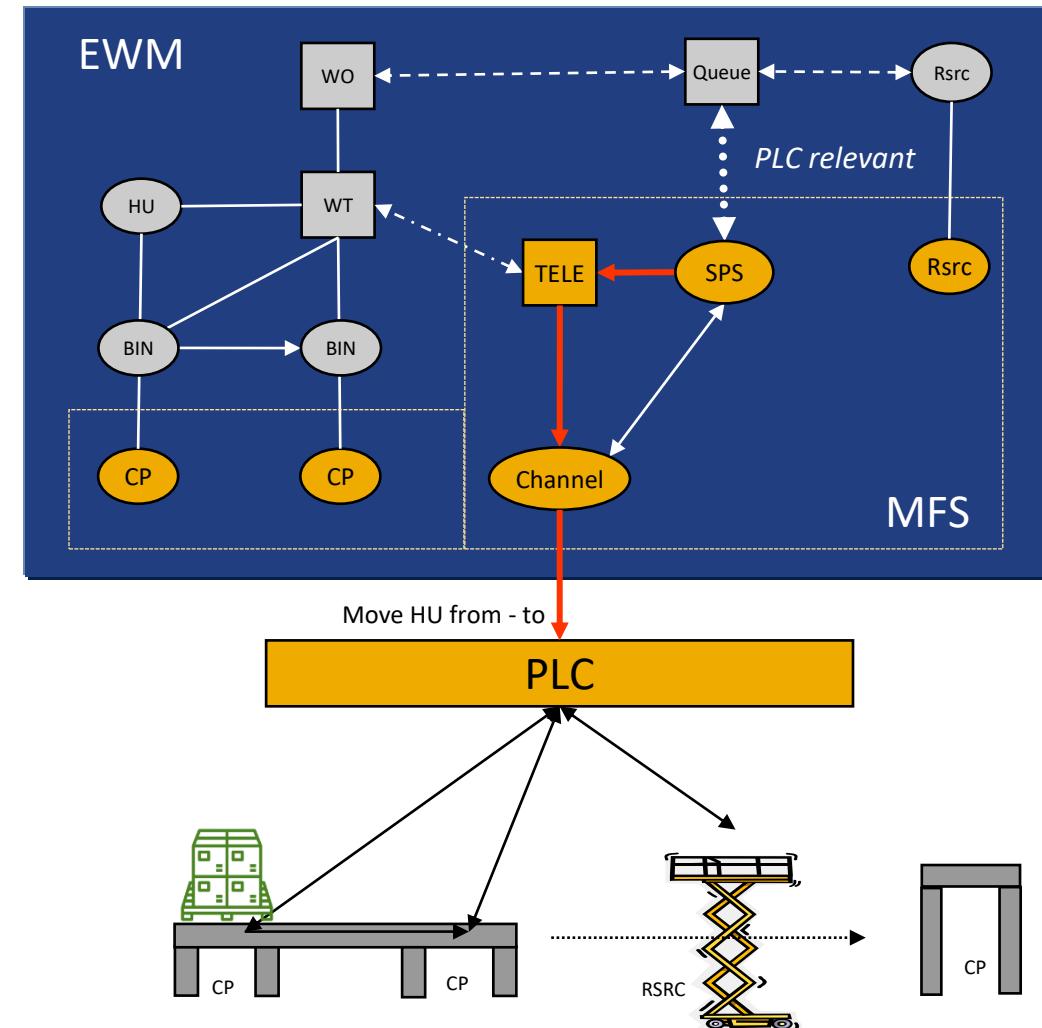
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Outbound

- If the truck driver arrives the warehouse area, the operator has to use the function “Release TU for Staging”(RTS). Through this function, the picking warehouse task will be created. Based on the picking task, the HU warehouse task to the respective door will be created by the EWM.
 - The HU will receive a sequence and the destination in an enhancement field of the HU header.
 - The sequence will represent the loading sequence in a TU. If the first delivery in the sequence has more HUs, there will be more HU warehouse tasks with sequence 1 for the same TU.
 - The destination will represent the outfeed lane, which the HU is going to be moved.
 - The MFS will consider the sequence and the destination to check, if the movement can be done. If the movement is possible, the MFS will select the HU and move it to the defined outfeed lane. The HU has to be moved to the respective outfeed lane, where the TU is docked on the door.
- Because of the depth, it might happen, that a HU, which can be moved, is blocked by other HUs. To avoid transfer movements, the system will at selection of the next movement switch the source of the HUs, if they have the same product and batch combination.

MFS Tasks

- Communicates with PLC via telegrams
- Controls material flow (routing)
- Determine which HU to move next (interleaving)
- Determine destination for HU and transfer it to the PLC
- React on exceptional situations
- Keep track of HUs on system
- Implement material flow strategies like respecting state of equipment, respecting state and capacity of source and destination, priority, sequencing, exception handling and throughput optimization,..
- Take use of EWM putaway and retrieval strategies
- Determines block, aisle and bin for storage



PLC-MFS responsibilities

PLC responsibilities:

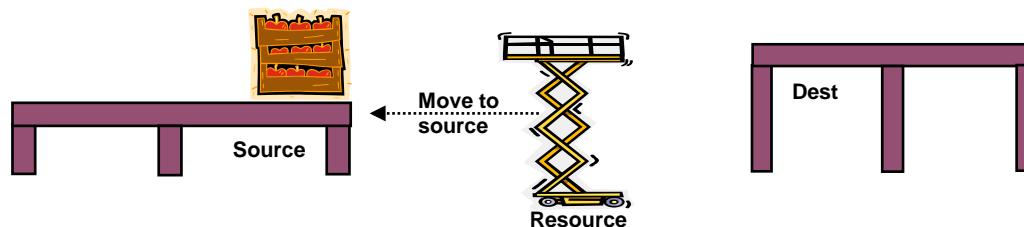
- Moving HUs (receive movement orders, execute them and confirm them)
- Processing sensor signals, setting actors (e. g. drives)
- Keep track of HUs on conveyor element level
- Integrate peripherals like scanners, contour checks, label applicators, wrappers, ...
- Implement “right of way” rules, loop control, ...
- Detect and communicate exception situations (Source empty, destination occupied)

MFS responsibilities

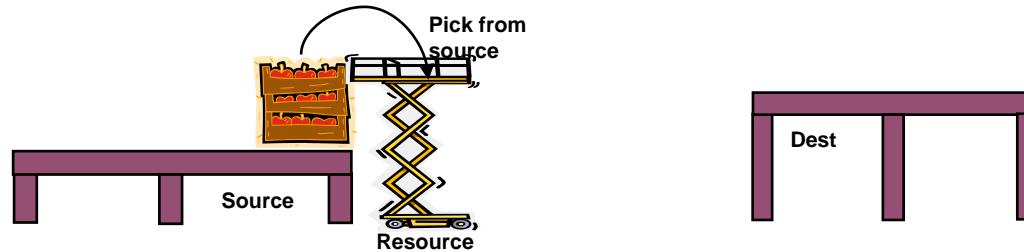
- Determine destination for HU movement (push or pull principle) and transfer it to the PLC
- Keep track of HUs on communication point level and resources
- Set commands for peripherals and receive and process information from peripherals
- Implement material flow strategies like respecting state of equipment, respecting capacity, sequencing, exception handling and throughput optimization, ...
- Take use of EWM putaway and retrieval strategies

Aviko choice: 2-step commissioning

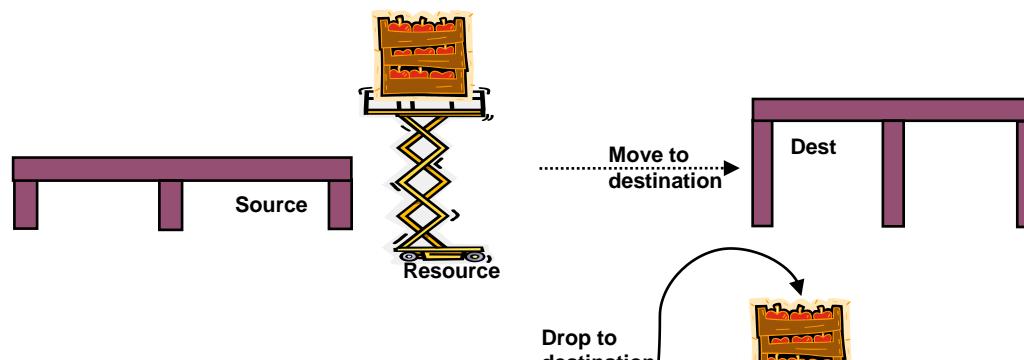
1. EWM sends movement order:
HU from source to resource



3. EWM posts HU to resource



4. EWM sends movement order:
HU from resource to destination



6. EWM posts HU to destination



2. PLC sends pick confirmation:
HU from source to resource

5. PLC sends drop confirmation:
HU from resource to destination



Wat ging goed?

- Keuze voor SAP model company.
- Samenwerking met SAP.
- Samenwerking met het Cosun shared service center.
- Gefaseerde aanpak.
- Greenfield test mogelijkheid.
- Opleiding eigen Business Proces Consultants.
- Uitrol naar ons tweede project in Poperinge is tot nu toe zeer succesvol verlopen.

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Advies

- Werk wanneer mogelijk met een emulator van het systeem om de software te testen.
- Werk bij voorkeur met een hardware leverancier die ervaring heeft met interfacing met EWM.
- Besteed voldoende aandacht aan opleiding en de verandering
- Denk goed na over de communicatiepunten en manier van communiceren met de PLC
- De happy flow gaat snel goed maar besteed voldoende aandacht aan trainen van medewerkers bij het oplossen van problemen, met name op de analyse waar dit probleem zich bevind (PLC/EWM)



Ambitie

Onze ambitie is om de komende jaren stap voor stap al onze eigen DC's te gaan aansturen vanuit EWM/MFS. Daarmee werken we aan standaardisatie en optimalisatie en zijn we in de toekomst hardware onafhankelijk.

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Vragen?



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Bedankt voor je deelname

Bekijk op www.VNSGFocusOnline.nl welke sessies er nog meer zijn!

