



We are
on our way
to a brighter
tomorrow



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Tijdlijn

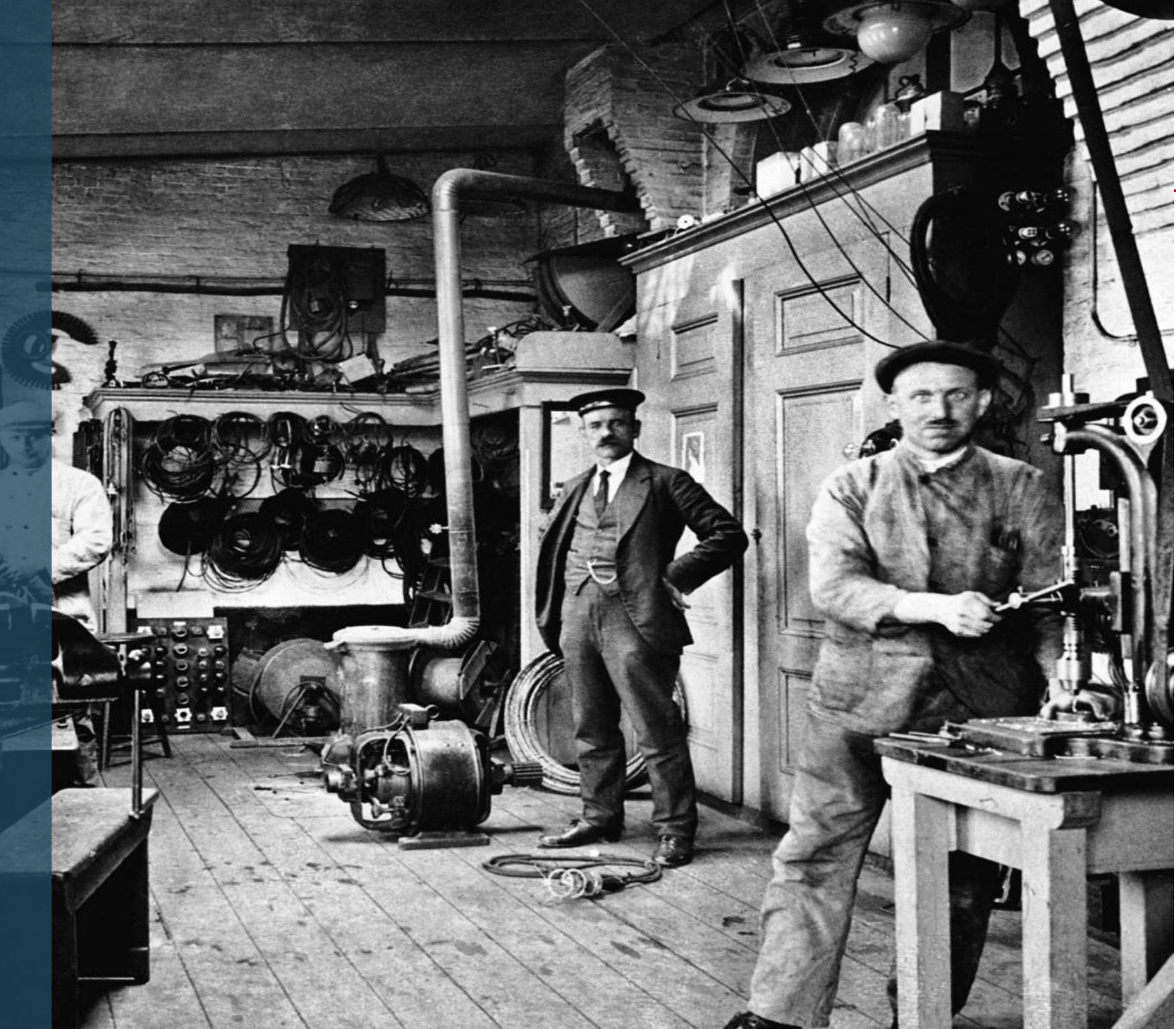


Over Batenburg Techniek





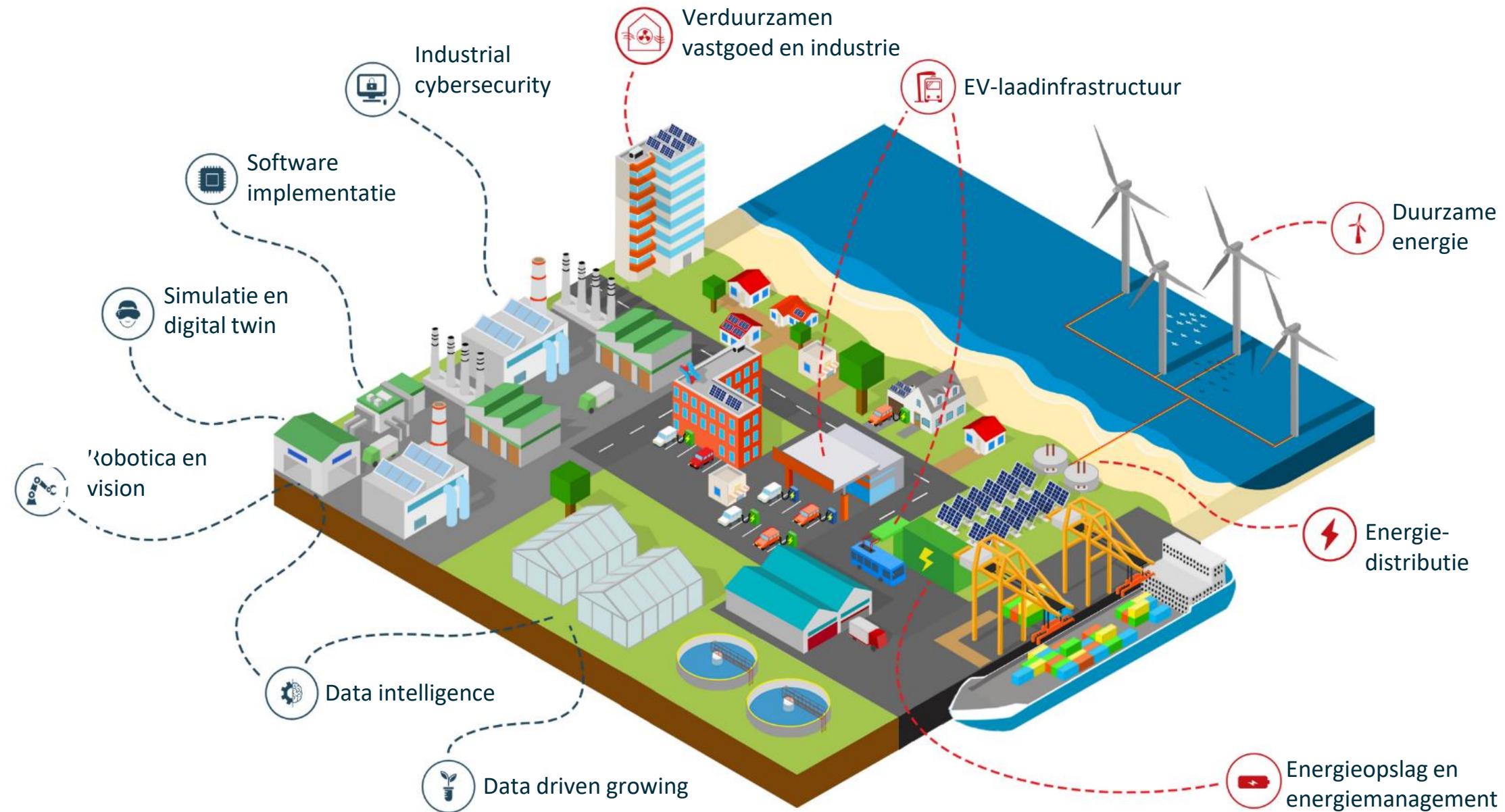
Van elektrisch licht voor ondernemers



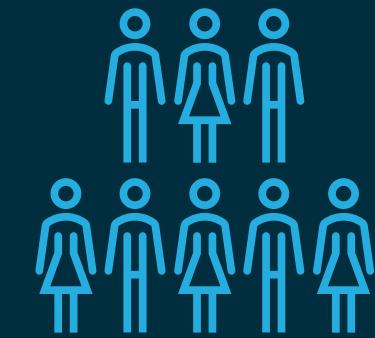
Tot slimme industriële automatisering



Smarter focus, brighter tomorrow



Dit doen we samen



1.300 medewerkers



19 bedrijven

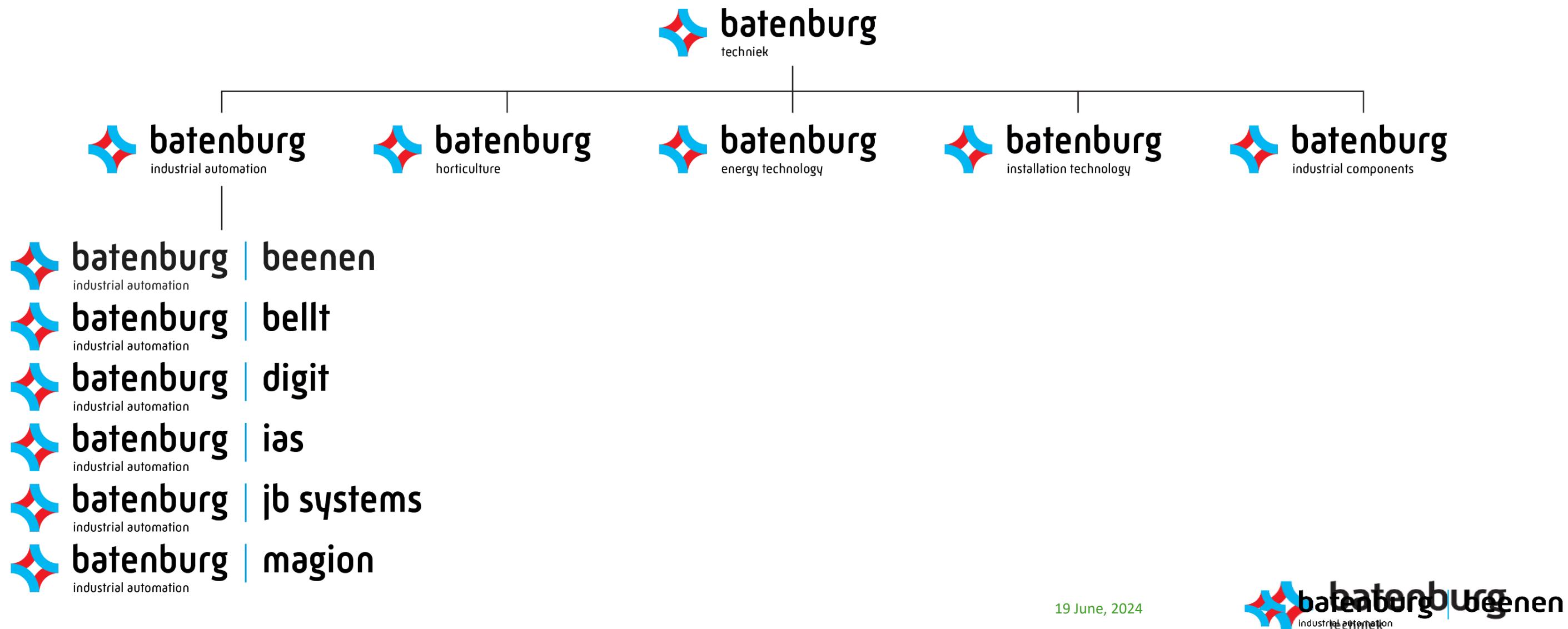


5 divisies

5 Divisies



Stamboom



Klanten

Food & Beverage Horticulture	Chemical industry	Oil & Gas	Pharma	Machine building	Water & Infrastructure	Marine & Offshore
         	        	     	     	        	        	        

Klant & Proces



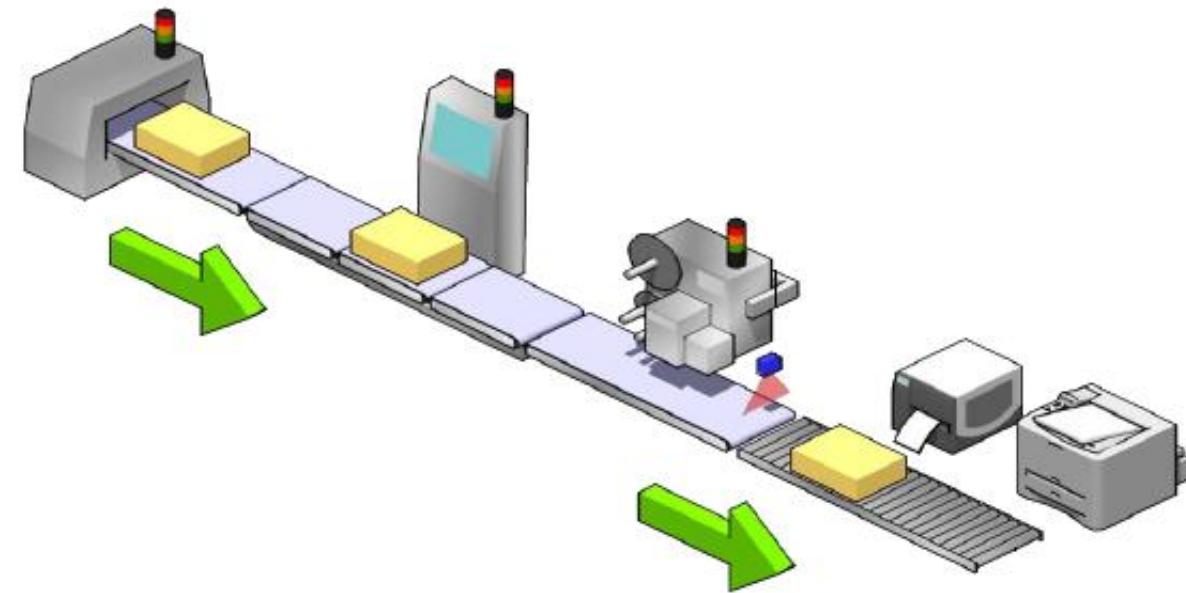
Friesland Campina



Doelen

- Standaardisatie
- Uniformiteit
- Onderhoudbaarheid
- Meer configureren dan programmeren

Kaas verpakken / Etiketteren

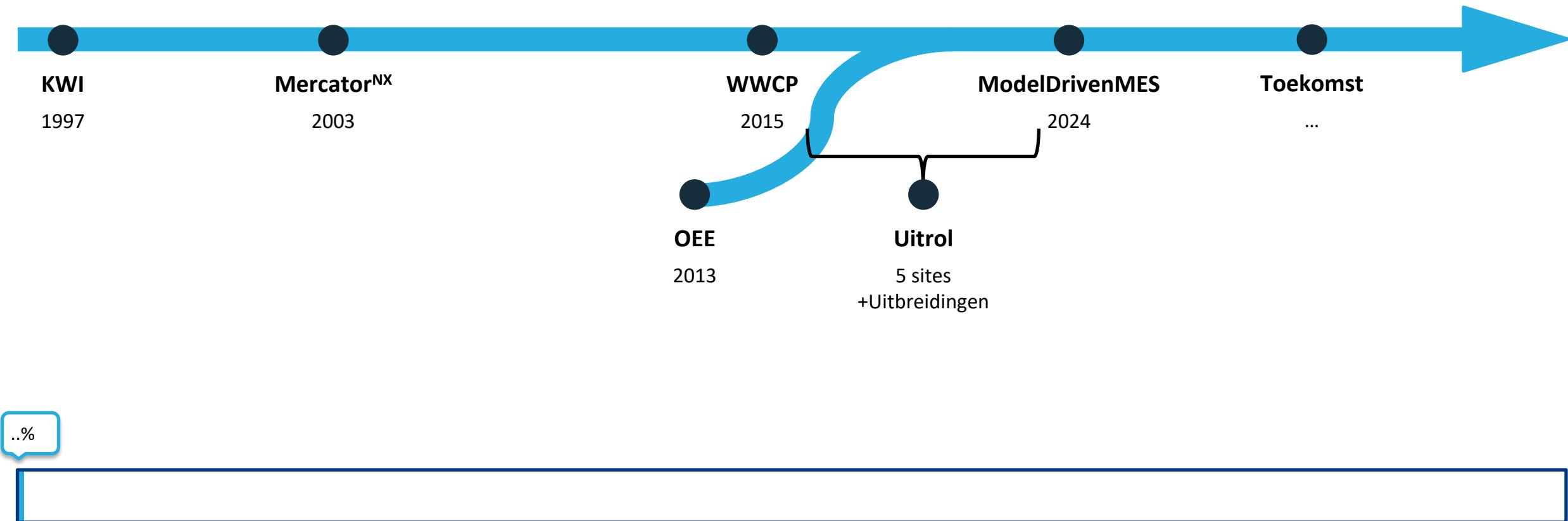


Reis door de tijd



Timeline

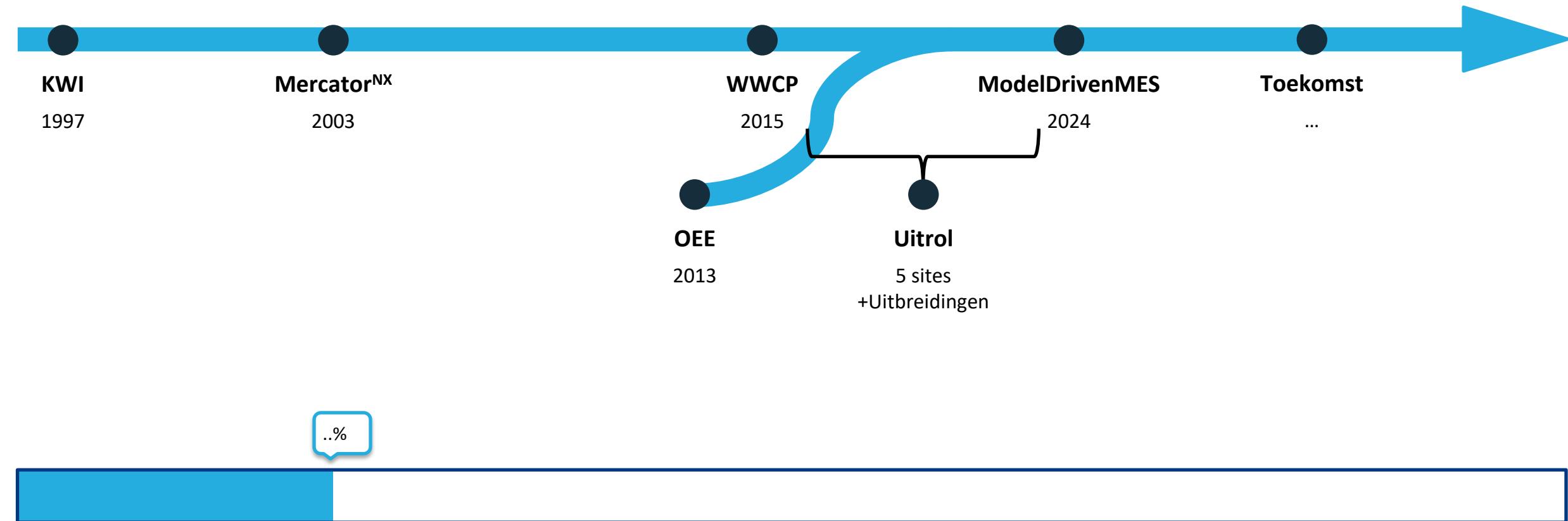
Evolutie van maatwerk



Mercator^{NX}



Timeline



KWI / Mercator^{NX}

MercatorNX - Lijn 1

Bestand Gebruiker Extra Help

Verkenner CS Rekenmachine

Lijnstatus

> LijnStatus

Bestemd voor: Voorraad
Land: Nederland
Klantorder: 5645 - 55
Artikel: testartikel

Verpakningsorder: 54654
Productie datum: 24-4-2015
THT Datum: 12-5-2016
Verpakningsdatum: 24-4-2015

Charge uit: 654
Hoeveelheid: 100002 stuk(s)
Rest: 24491 stuk(s)

Kaas Totaal Pallet Totaal Hulpstoffen

Volgnummer: 75551	40	75511	1349	1207756,23
Netto:	1208129,57			1207756,23
Tara:				
Bruto:	1208129,57			
Merken:				
gemiddeld	15.999 kg			
ondergrens	14.000 kg			
bovengrens	18.000 kg			

Opmmerking: duurtest

Orders Meldingen Randapparatuur

KlantOrder	Verpakking Order	Charge uit	Klant	Artikel
5645 - 55	54654	654	1 Voorraad	123123 testartikel
888 - 888	888	123456	11111 Demo Klant	
123 - 123	123	123	11111 Demo Klant	
7863246 - 04	7863246-04	44556677	00000 MTS	
45 - 45	65456	789132	VOORRAAD voorraad	
710507 - 01	710507-01	71050701	00000 MTS	

datell industriële informativering

MercatorNX - Lijn 1

Bestand Gebruiker Extra Help

Verkenner CS Rekenmachine

Lijnstatus

> Layout preview

Layout preview window showing a template for a cheese label.

Content of the layout preview:

48% fat in dry matter
48% vet in droge stof

Keep refrigerated: 4-7°C Gekoeld bewaren: 4-7°C
Friesland Foods Cheese, P.O. Box 4, 8470 AA Wolvega, Holland

boxnumber: 1
kistnummer: 1

production date: productie datum: 24-04-2015

article: 12312 net weight: artikel: 12312 netto gewicht: 12,69 kg

Bestemd voor de kaasverwerkende industrie
K201959

Barcode

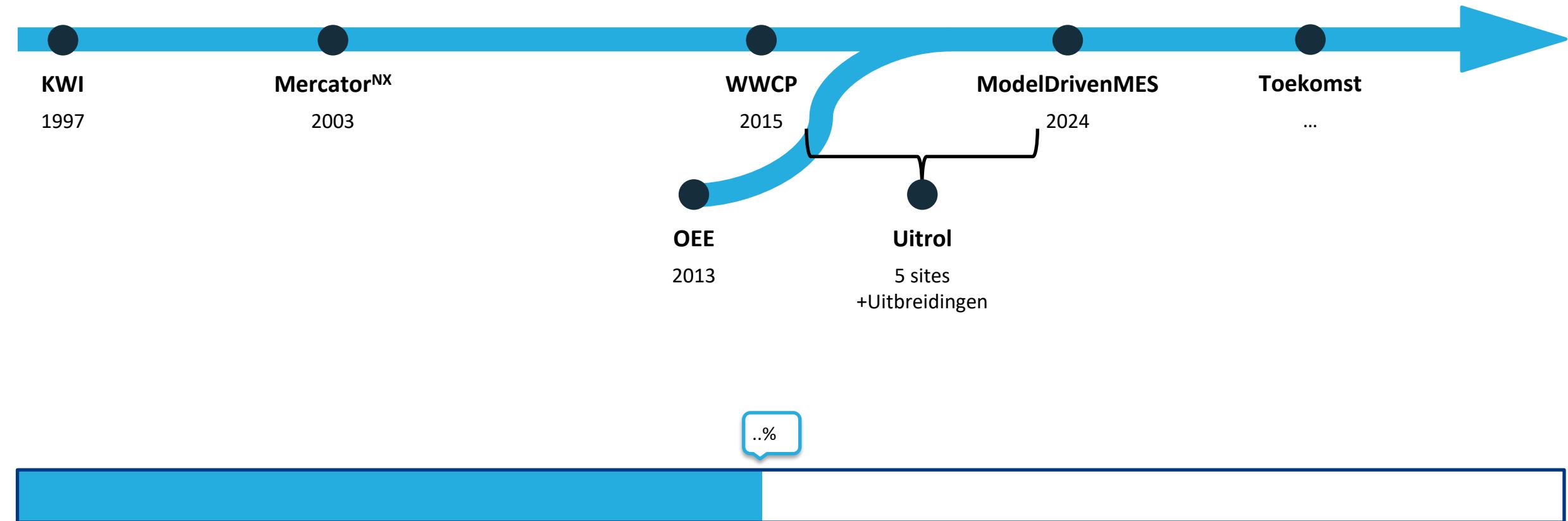
(01)12345678901234(15)130726(3102)001234

WWCP

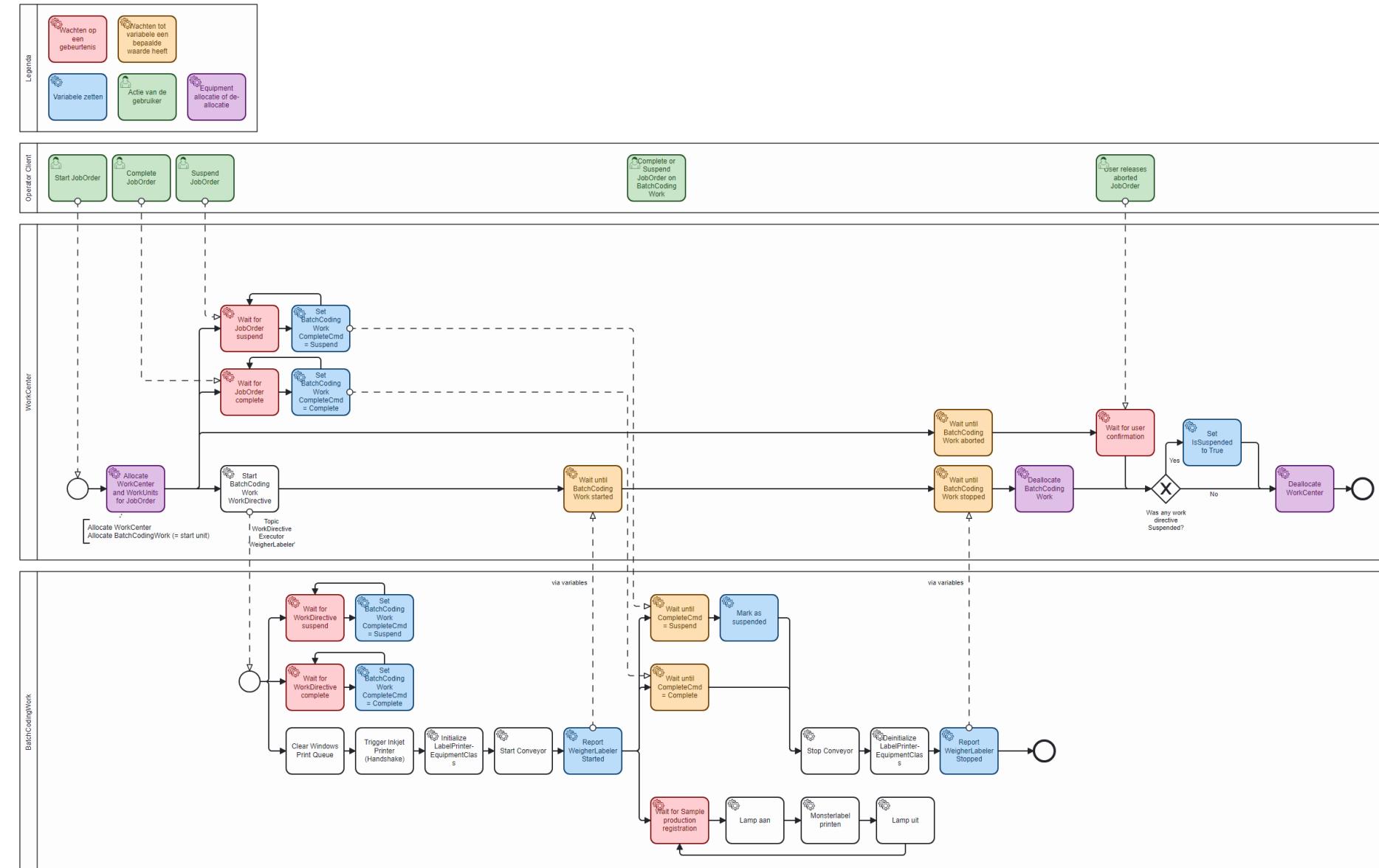
Wonderware Coding Packaging



Timeline



Software design



User interface design

Lijn status

K order
Actief

Batch 83004543
Aflever moment 18-05-2016 04:00
Artikel

Hoeveelheid 3900
Resterend 1950
Voortgang 
Resterende tijd 03:15

Ingeplande aflever werkorders

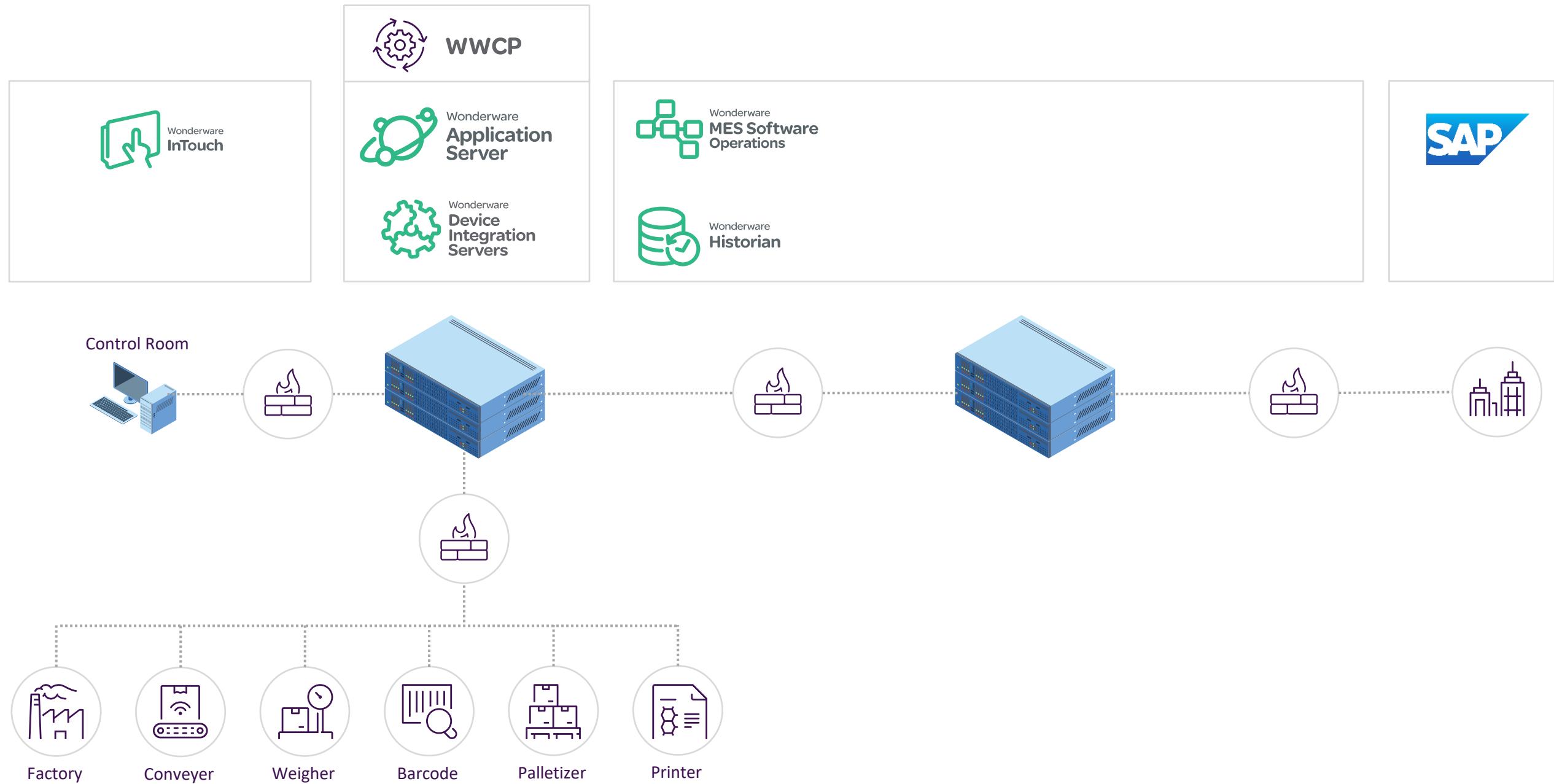
Aflever moment SAP order Order Type Prio Aantal Batch Product Lege racks Exp cel 1 Exp cel 2 Exp cel 3 Status

2017-01-01 12:00	K order	MTS	0	3900	2850374	1153	33		5,6		Actief
2017-01-01 12:00	82984220	MTO	0	2000	2850375	1140	25	5,6			Vrijgegeven
2017-01-01 12:00	82984220	MTO	1	-	2850375	1140	-	-			Vrijgegeven

Aflever orders

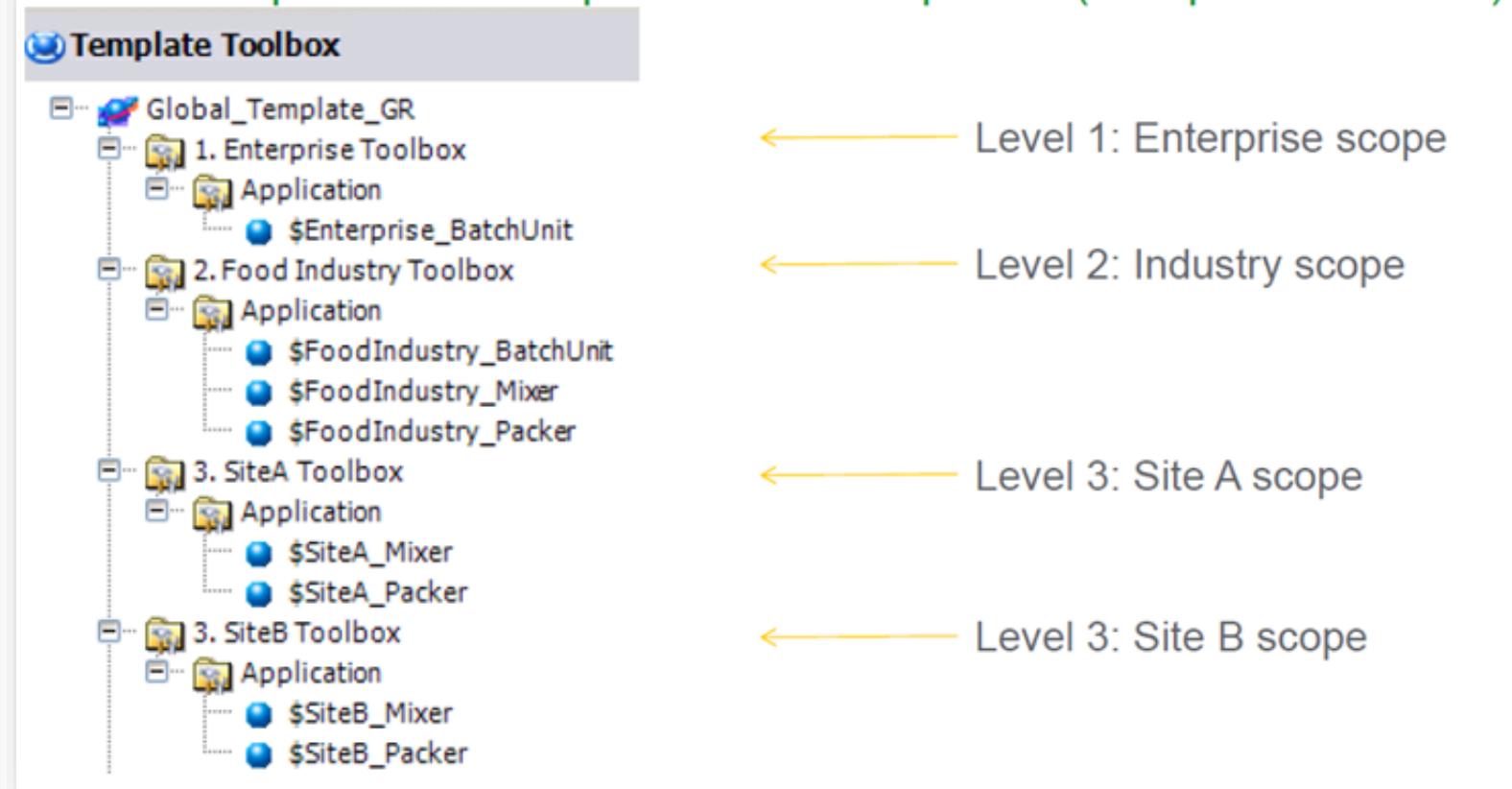
+_S +_O +_C    

Aflever moment	SAP order	Order Type	Prio	Aantal	Rack Type	Batch	Product	Product naam
2017-01-02 12:00	82984005	MTS	0	3000	KK	2854018		
2017-01-03 12:00	82984110	MTO	0	2000	KVPC	2854200		
2017-01-03 12:00	82984110	MTO	1	-	-	2854201		
2017-01-03 12:00	82984110	MTO	2	-	-	2854202		



Wonderware

Global template with scope derived templates (Template Toolbox):

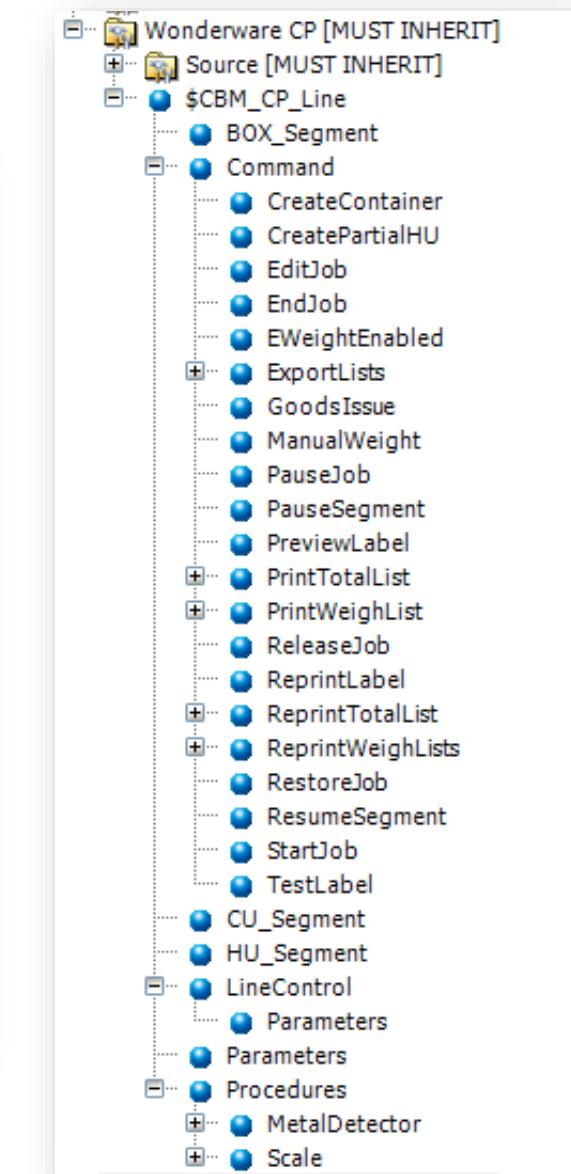


← Level 1: Enterprise scope

← Level 2: Industry scope

← Level 3: Site A scope

← Level 3: Site B scope



WWCP – Order scherm

Lijnstatus Orders Hist. orders Nieuw Preview Wouter Dijkstra Log in Log uit Codes Help

Folie lijn status
888 - 888 Bestemd voor: Demo Klant Verpakkingsorder: 888 Charge uit: 123456
Land: Nederland Productie datum: 03-02-2016 Hoeveelheid: 120
Klantorder: 888 - 888 THT datum: 31-05-2016 Resterend: 32
Artikel: Test Artikel Demo Verpakkingsdatum: 03-02-2016 Voortgang:

Verpakken

Herafdruk etiketten X

CU **Doos** **HU**

Aantal	Stuks	Afgekeurd	Totaal
40	5	35	524.71
Netto:	0.0000		524.71
Tara:	0.0000		0.0000
Bruto:	0.0000		524.71
Gemiddeld:	14.99		
Ondergrens:	13.00		
Bovengrens:	17.00		

Volgnummer	Stuks	Totaal
0	0.0000	0.0000
Netto:	0.0000	0.0000
Tara:	0.0000	0.0000
Bruto:	0.0000	0.0000
Merken:		

Aantal	Stuks	Totaal
2	0.0000	80.16
Netto:	0.0000	80.16
Tara:	0.0000	0.0000
Bruto:	0.0000	80.16

Orders

Klantorder Verpakkingsorder Batch Klant Artikel code Hoeveelheid Enh. Verwerkt. Rest aantal. Netto Gereed. Status

Bevestig Reset Claxon

Printer CU_Printer_1
Label K208078
Volgnummer
Labelcode K208078
P204948
Afdrukken

WWCP – Wegingen beheer

Lijnstatus Orders Hist. orders Nieuw Preview Wouter Dijkstra Log in Log uit Codes Help

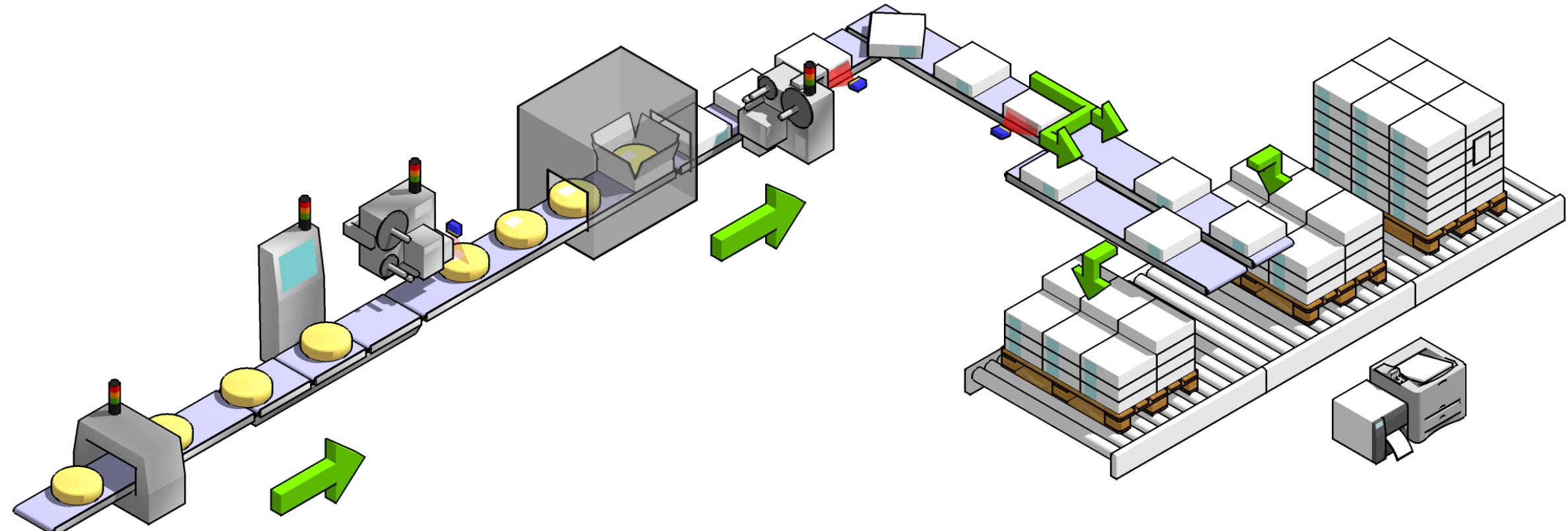
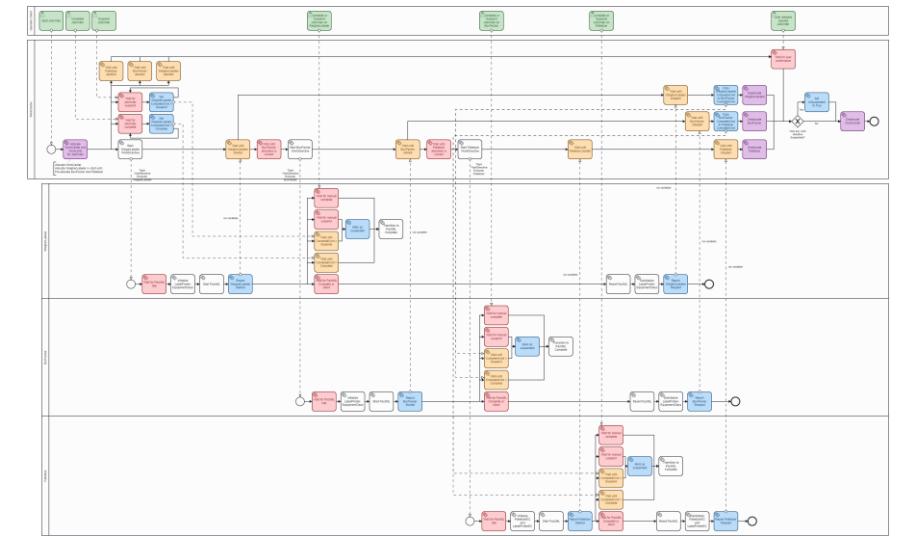
Wegingen
① CU
② HU

Verpakken

Time Stamp	Volgnummer	Netto Gewicht	Bruto Gewicht	Status	HU
2016-11-16 04:10	216	0.000	0.000	Verwijderd	
2016-11-16 04:10	215	0.000	0.000	Verwijderd	
2016-11-16 04:09	214	0.000	0.000	Verwijderd	
2016-11-16 04:09	213	14.810	14.810	Goedgekeurd	
2016-11-16 04:08	212	14.850	14.850	Goedgekeurd	
2016-11-16 04:08	211	14.700	14.700	Goedgekeurd	
2016-11-16 04:08	210	14.770	14.770	Goedgekeurd	
2016-11-16 04:08	209	14.730	14.730	Goedgekeurd	
2016-11-16 04:08	208	14.700	14.700	Goedgekeurd	
2016-11-16 04:08	207	14.740	14.740	Goedgekeurd	
2016-11-16 04:08	206	14.710	14.710	Goedgekeurd	
2016-11-16 04:08	205	14.850	14.850	Goedgekeurd	
2016-11-16 04:08	204	14.800	14.800	Goedgekeurd	
2016-11-16 04:08	203	14.730	14.730	Goedgekeurd	
2016-11-16 04:08	202	14.740	14.740	Goedgekeurd	
2016-11-16 04:08	201	14.760	14.760	Goedgekeurd	
2016-11-16 04:07	200	14.680	14.680	Goedgekeurd	
2016-11-16 04:07	199	14.720	14.720	Goedgekeurd	
2016-11-16 04:07	198	14.760	14.760	Goedgekeurd	
2016-11-16 04:07	197	14.800	14.800	Goedgekeurd	
2016-11-16 04:07	196	14.820	14.820	Goedgekeurd	
2016-11-16 04:07	195	14.780	14.780	Goedgekeurd	
2016-11-16 04:05	194	0.000	0.000	Verwijderd	
2016-11-16 04:05	193	14.770	14.770	Goedgekeurd	
2016-11-16 04:05	192	14.840	14.840	Goedgekeurd	
2016-11-16 04:05	191	14.790	14.790	Goedgekeurd	
2016-11-16 04:05	190	14.820	14.820	Goedgekeurd	
2016-11-16 04:05	189	14.820	14.820	Goedgekeurd	
2016-11-16 04:05	188	14.760	14.760	Goedgekeurd	
2016-11-16 04:05	187	14.910	14.910	Goedgekeurd	
2016-11-16 04:05	186	14.780	14.780	Goedgekeurd	
2016-11-16 04:04	185	14.850	14.850	Goedgekeurd	
2016-11-16 04:04	184	14.690	14.690	Goedgekeurd	
2016-11-16 04:04	183	14.840	14.840	Goedgekeurd	
2016-11-16 04:04	182	14.790	14.790	Goedgekeurd	
2016-11-16 04:04	181	14.820	14.820	Goedgekeurd	
2016-11-16 04:04	180	14.830	14.830	Goedgekeurd	
2016-11-16 04:04	179	14.800	14.800	Goedgekeurd	
2016-11-16 04:04	178	14.780	14.780	Goedgekeurd	
2016-11-16 04:04	177	14.670	14.670	Goedgekeurd	
2016-11-16 04:04	176	14.800	14.800	Goedgekeurd	
2016-11-16 04:03	175	14.820	14.820	Goedgekeurd	
2016-11-16 04:03	174	14.650	14.650	Goedgekeurd	
2016-11-16 04:03	173	14.750	14.750	Goedgekeurd	

Bevestig Reset Claxon

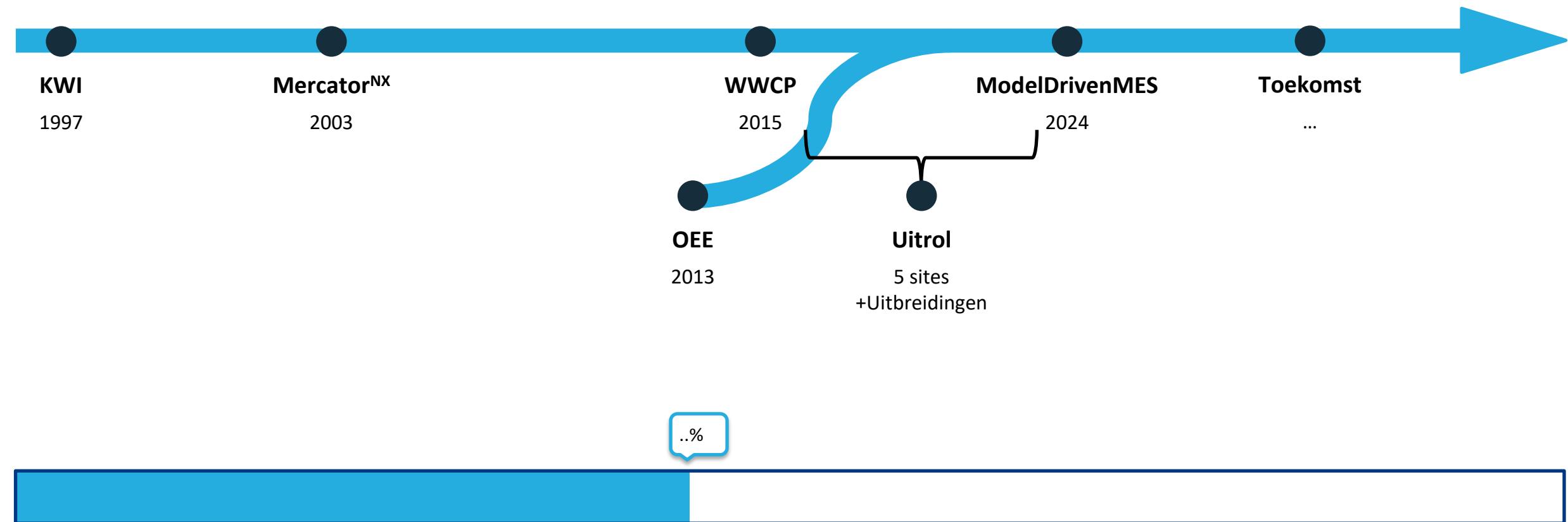
Complexere lijnen



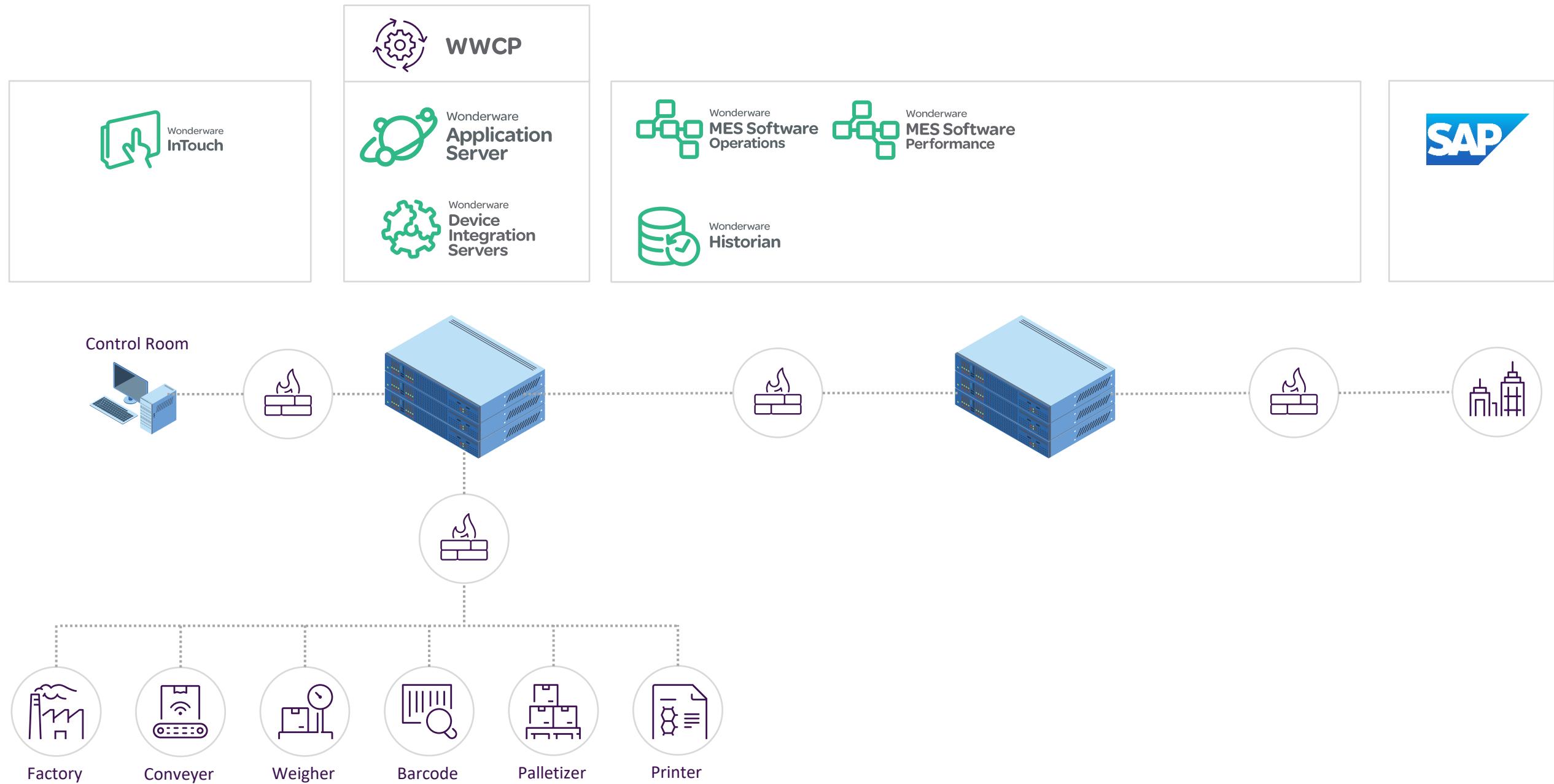
Uitbreidingen



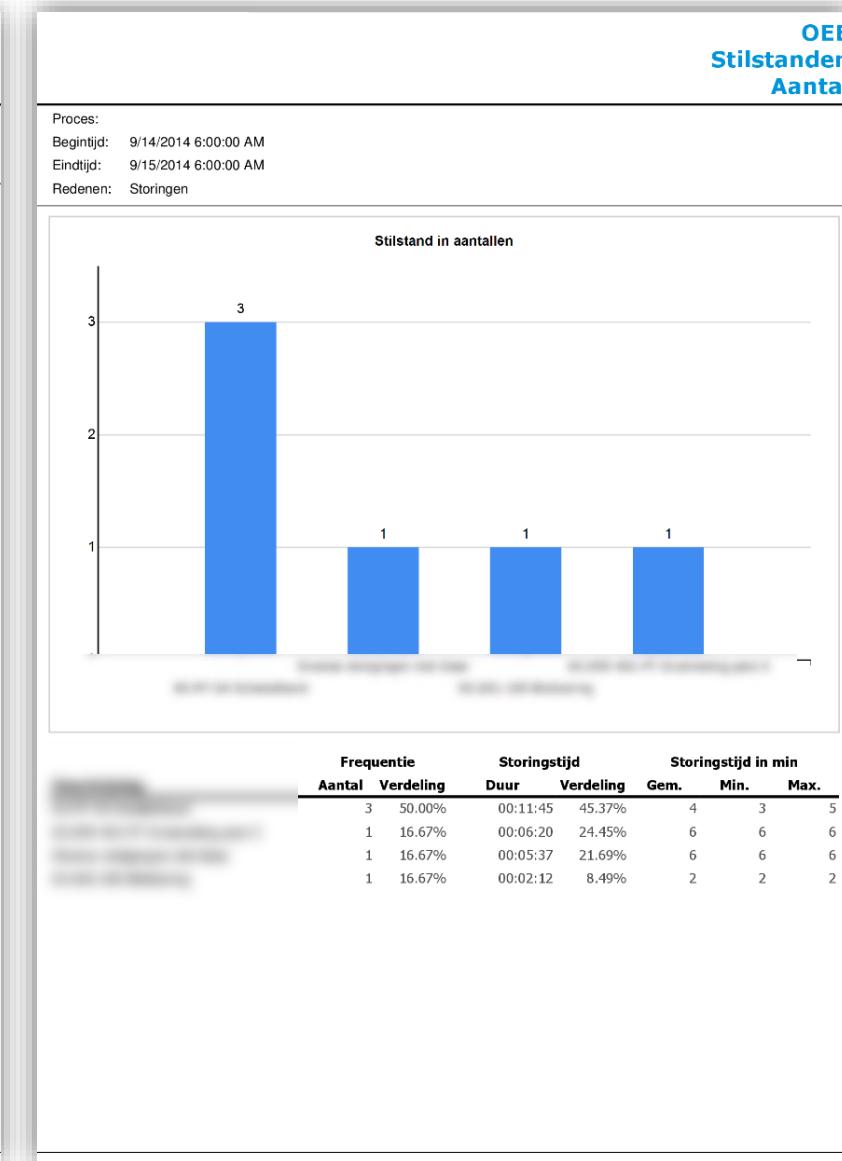
Timeline



OEE



Overall Equipment Effectiveness

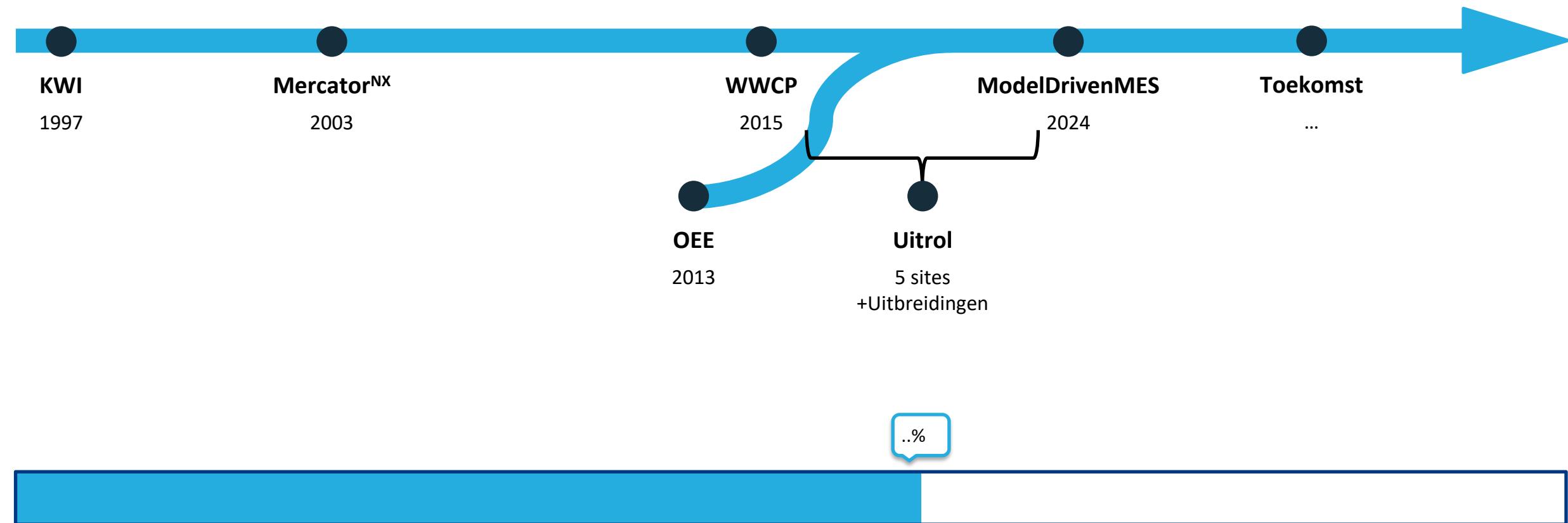


OEE Stilstanden Detail

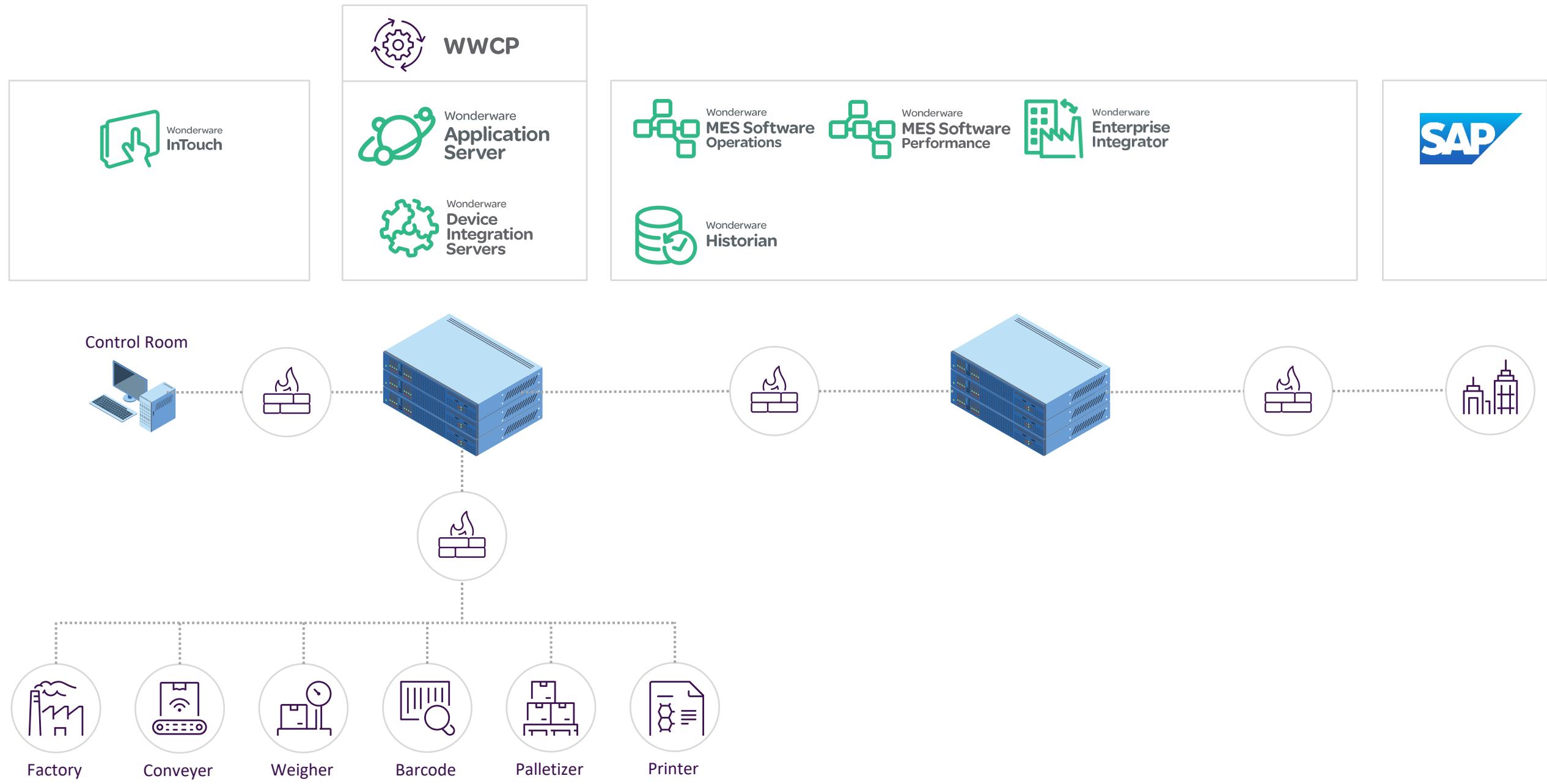
Proces:
Begin: 9/14/2014 6:00:00 AM
End: 9/15/2014 6:00:00 AM
Redenen: Storingen

Orzaak	Van	Tot	Duur	Commentaar
2 vaten te dicht op elkaar T-04			00:05:19	2 vaten te dicht op elkaar
Vaten te dicht op elkaar			00:03:00	vaten te dicht op elkaar
vaten te dicht op elkaar			00:03:26	
D 05 persdruk te hoog			00:06:20	D 05 persdruk te hoog
T06 niet klaar			00:05:37	T06 niet klaar
			00:02:12	

Timeline



ERP koppeling



Global Solution Set - SAP

Enterprise Integrator

Message Location Details

Location

★ Location Id	Direction	★ Message Service
B2MMLMsgArchiveLoc	OUT	WW Message Service

Context

URI	C:\BEENEN\DEV\WEI\ARCHIVE-SERVER\application
Label Format	*.XML
PreSend Assembly	PreSend Assembly
File Options	<input checked="" type="radio"/> Create Unique File <input type="radio"/> Overwrite <input type="radio"/> Append

2020-01-06 10:27:34

Configuration

Enterprise Integrator

Message Log

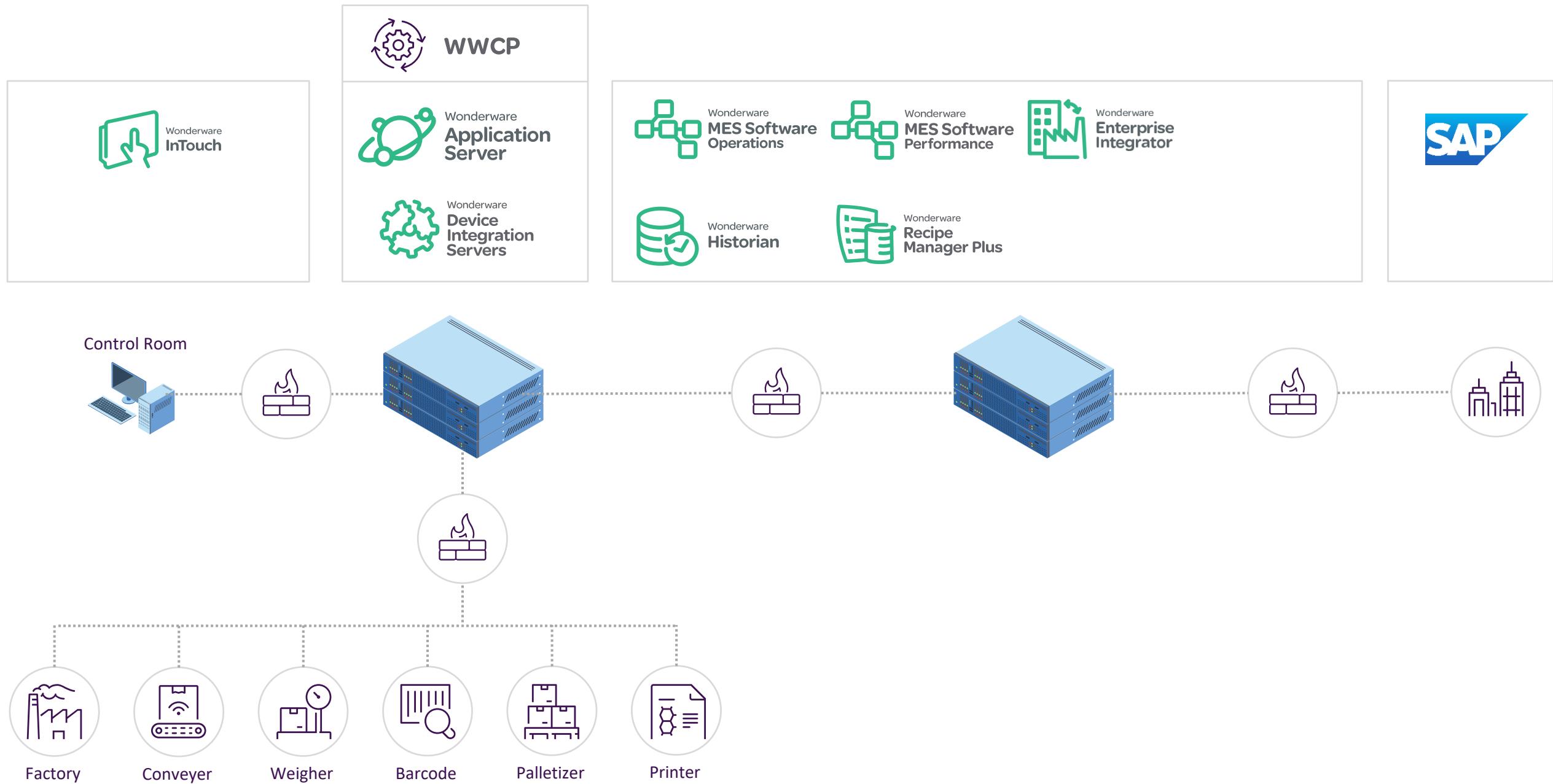
Insert Date/Time:	To	Summary	Category:	Content	Group:
5/16/2024 2:03 PM	5/30/2024 2:03 PM	1D	All		
Message #	To				
Status:	Summary				
Message Type:	Category:				
Location	Content				
Direction:	Group:				

Refresh **Reset** **Archive** **ReProcess**

#	Location Id	Insert Date/Time	Group	Dir..	Src #	Source Location Id	Message Type	Summary	Status	Status Message
6456121	B2MMLMsgInMatProcess	2024-05-23T14:00:40.33	B2MML-IN	OUT	6456119	B2MMLMsgInMatLoc	B2MMLMsgType		Processed	
6456120	B2MMLMsgArchiveLoc	2024-05-23T14:00:40.297	Archive-IN	OUT	6456119	B2MMLMsgInMatLoc	B2MMLMsgType		Processed	
6456119	B2MMLMsgInMatLoc	2024-05-23T14:00:40.203	B2MML-IN	IN			B2MMLMsgType		Processed	
6456118	B2MMLMsgOutLoc	2024-05-23T14:00:32.187	B2MML-OUT	OUT	6456117	B2MMLMsgOutProcess	B2MMLMsgType		Processed	
6456117	B2MMLMsgOutProcess	2024-05-23T14:00:32.17	B2MML-OUT	IN			B2MMLMsgType		Processed	

1 2 3 4 5 ... 25 items per page

Recipe Manager



Recipe manager

AVEVA™ Recipe Management

Formulas

Add

BLUE Slurry Approved Slurry 17 Parameters	Light GREEN Slurry Approved Slurry 17 Parameters	Standard Bags Low La... Approved BearBags 6 Parameters
Christmas Bags Top C... Approved BearBags 6 Parameters	Light YELLOW Slurry Approved Slurry 17 Parameters	TINY Bags default label Approved BearBags 6 Parameters
GREEN Slurry Approved Slurry 17 Parameters	ORANGE Slurry Approved Slurry 17 Parameters	YELLOW Slurry Approved Slurry 17 Parameters
Light BLUE Slurry Approved Slurry 17 Parameters	RED Slurry Approved Slurry 17 Parameters	

11 formulas shown

AVEVA™ Recipe Management

Formula Templates

Version 3

BearBags

Formula Template for the Packers

Parameters

Export

Ingredients General Temperatures Input Output

Parameter	Description	Data Type	Default Value	Min Value	Max Value	Frequently Used	UOM
epHLabelPos	Horizontal Label Position	Horizontal La...	Left			Yes	
epMaintenance		Boolean	False			Yes	
epPackSize		Double	100.0	100.0	5000.0	Yes	
epPackSpeed		Integer	0 %	0 %	100 %	Yes	%
epPackType		Integer	1	1	5	Yes	

6 General parameters shown

Recipe manager

AVEVA™ Recipe Management

Audit Trail

Date/Time	Entity Name	Entity Type	Version	Action	Current State	Previous State	User	Notes/Comment
9/1/2021 12:05:59 AM	MicroMix#03	Equipment	4	Undo Check Out	Approved	Draft	AVEVALAB\LabUser	
9/1/2021 12:05:41 AM	MicroMix#03	Equipment	5	Check Out	Draft	Approved	AVEVALAB\LabUser	
9/1/2021 12:05:24 AM	Agitate	Capability	1	Undo Check Out				
9/1/2021 12:05:20 AM	Agitate	Capability	2	Check Out				
9/1/2021 12:03:57 AM	GREENBears	Recipe	5	State Change				
9/1/2021 12:03:35 AM	GREENBears	Recipe	5	Check In				
9/1/2021 12:03:29 AM	GREENBears	Recipe	5	Check Out				
9/1/2021 12:01:31 AM	GREEN Slurry	Formula	3	State Change				
9/1/2021 12:01:03 AM	GREEN Slurry	Formula	3	Check In				
9/1/2021 12:00:40 AM	GREEN Slurry	Formula	3	Check Out				
8/17/2021 12:46:57 AM	GREENBears	Recipe	4	Undo Check Out				
8/17/2021 12:46:49 AM	GREENBears	Recipe	5	Check Out				
8/17/2021 12:46:48 AM	GREENBears	Recipe	4	Check In				
8/17/2021 12:46:44 AM	GREENBears	Recipe	5	Check Out				

AVEVA Recipe Management

Formula Template Version Difference Report - Slurry #2 Version Difference Report

Element	Original Value	New Value
▲ Formula Template	Slurry #2 v2	Slurry #2 v3
Author	AVEVALAB\LabUser	AVEVALAB\LabUser
▲ Formula Parameter Changes		
Formula Parameter (Deleted)	Agitate.cpAgitateSpeed	
Formula Parameter (Deleted)	Discharge.cpEmptyLevel	

Version Difference

Compare

To

i21 AVEVA Group plc and its subsidiaries. All rights reserved. Legal | Version 4.5

Procedure borging

Procedure borging

1

Metaal detector controle

- Instelbare interval
- Artikel gestuurd (Recipe Manager)
- Directe integratie met PLC

2

Weegschaal procedure

- Instelbare interval
- Directe integratie met PLC
- Controle met ijk gewicht

3

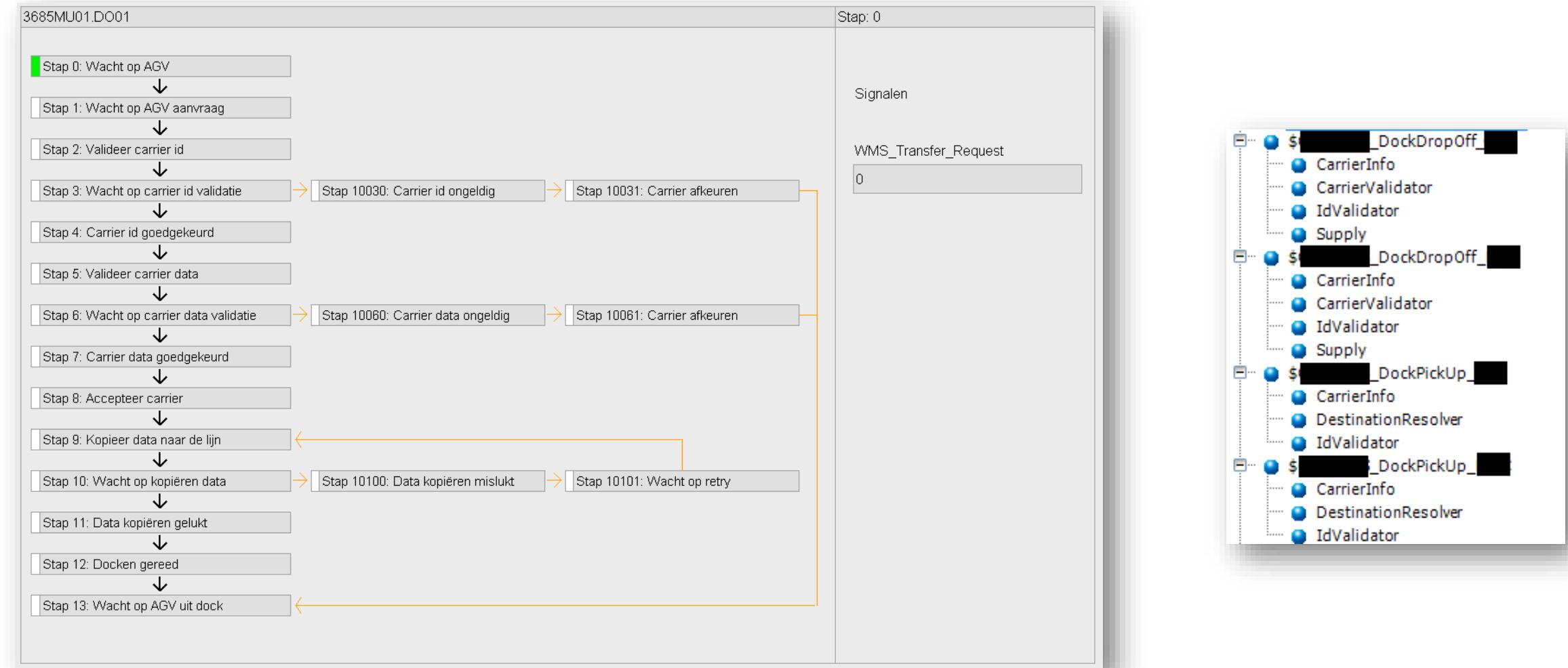
Label controle

- Voor starten van een order
- Controleren van layout
- Controleren van data

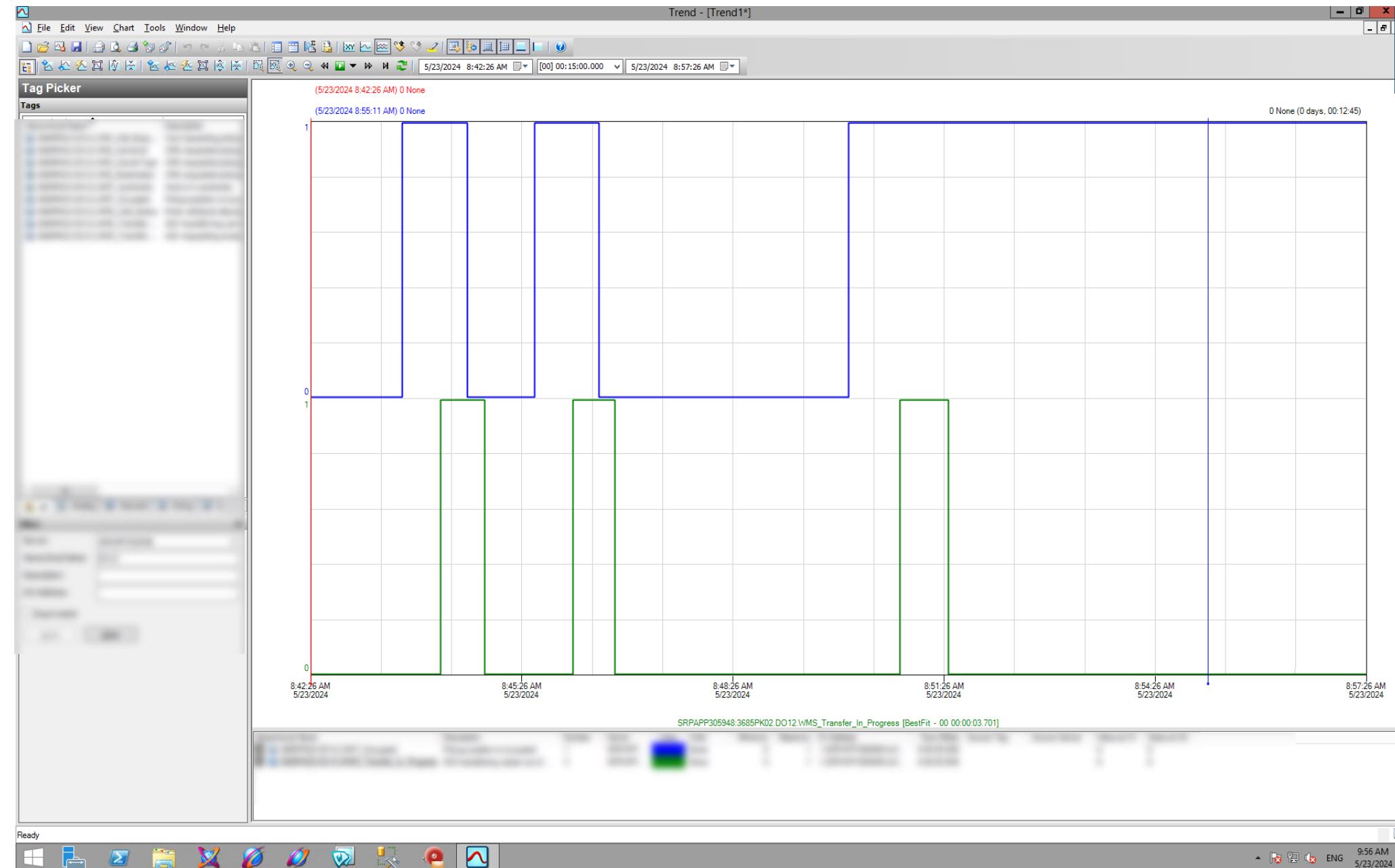


Koppeling AGV's

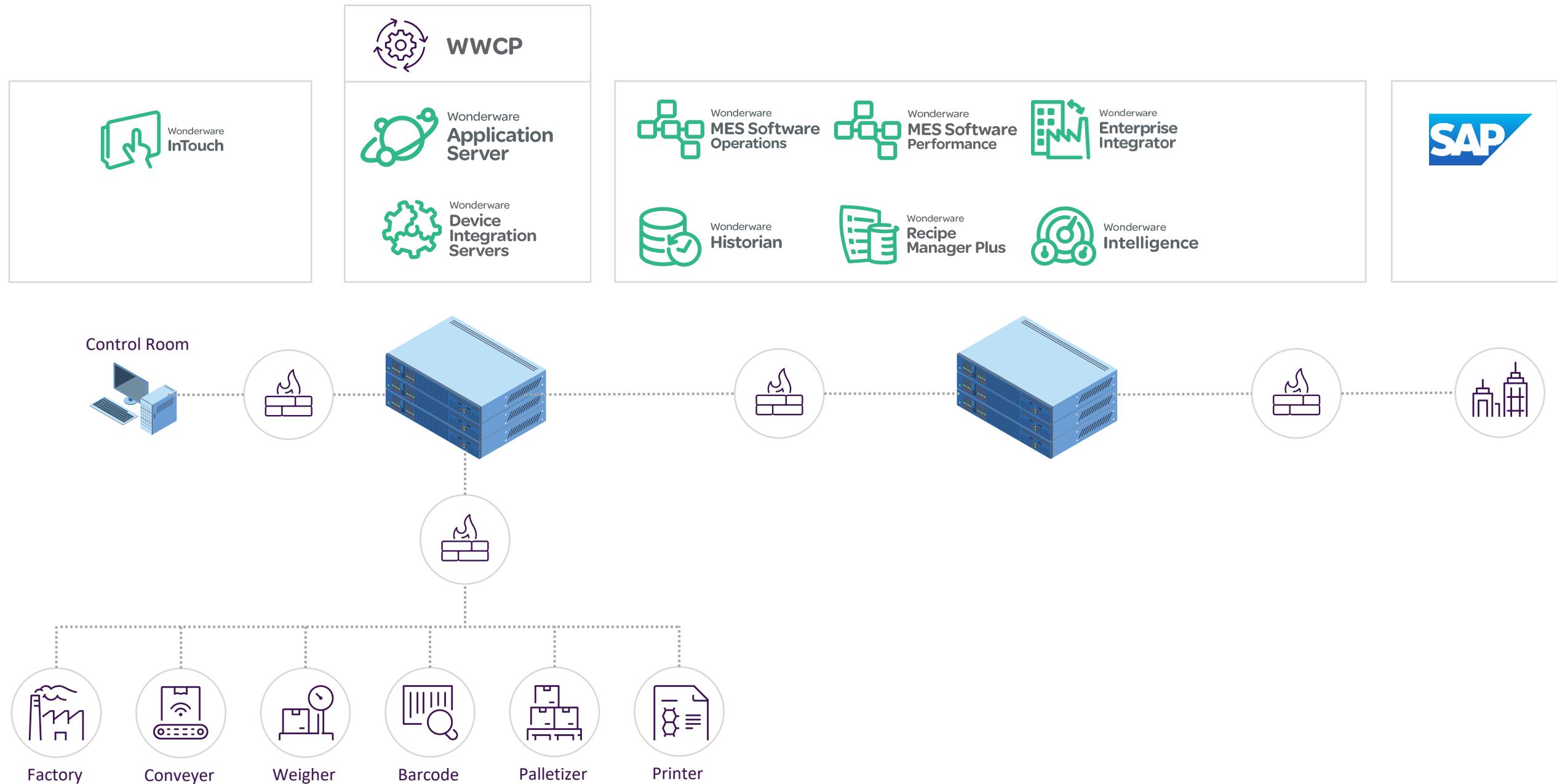




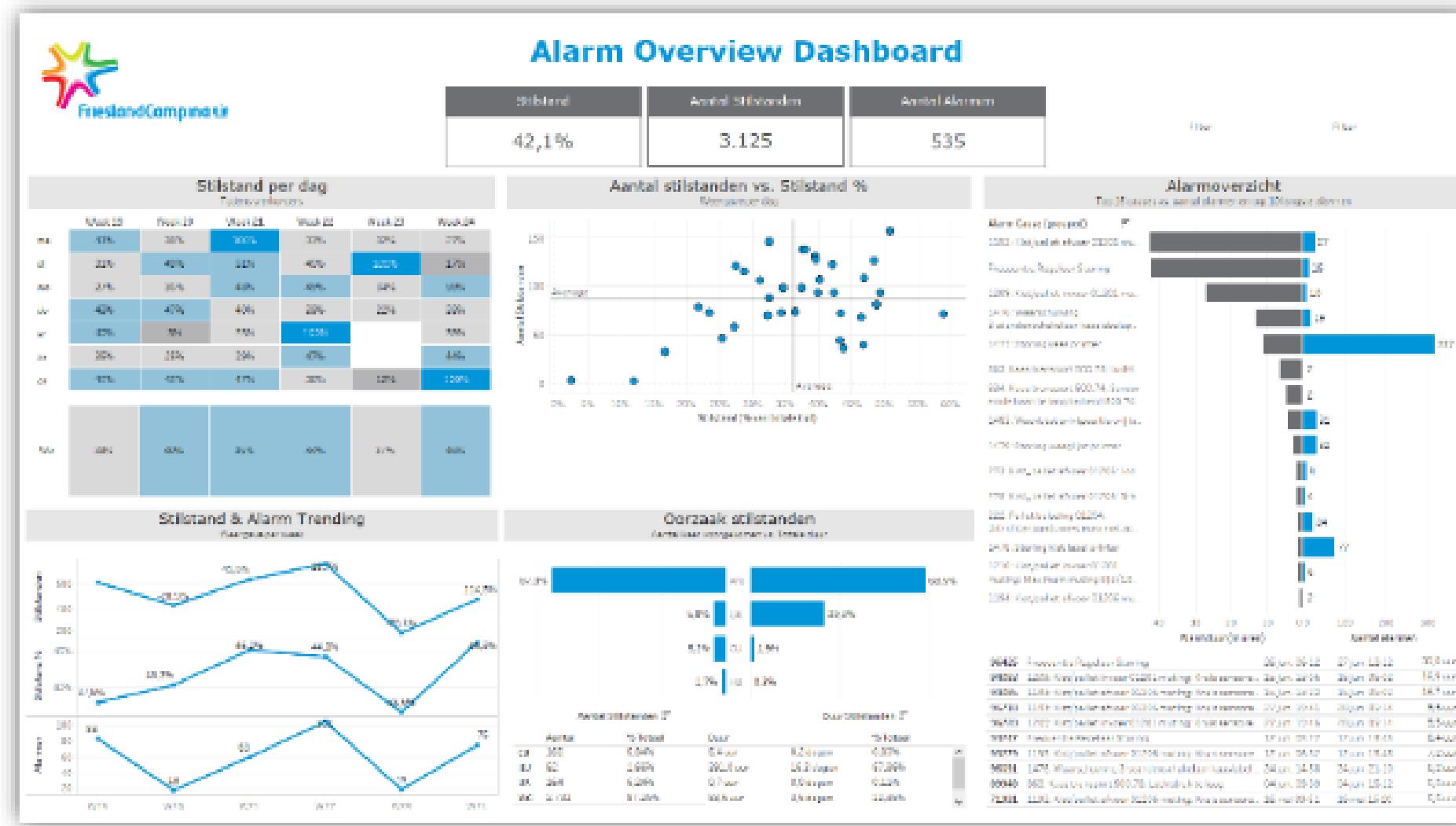




Data Intelligence



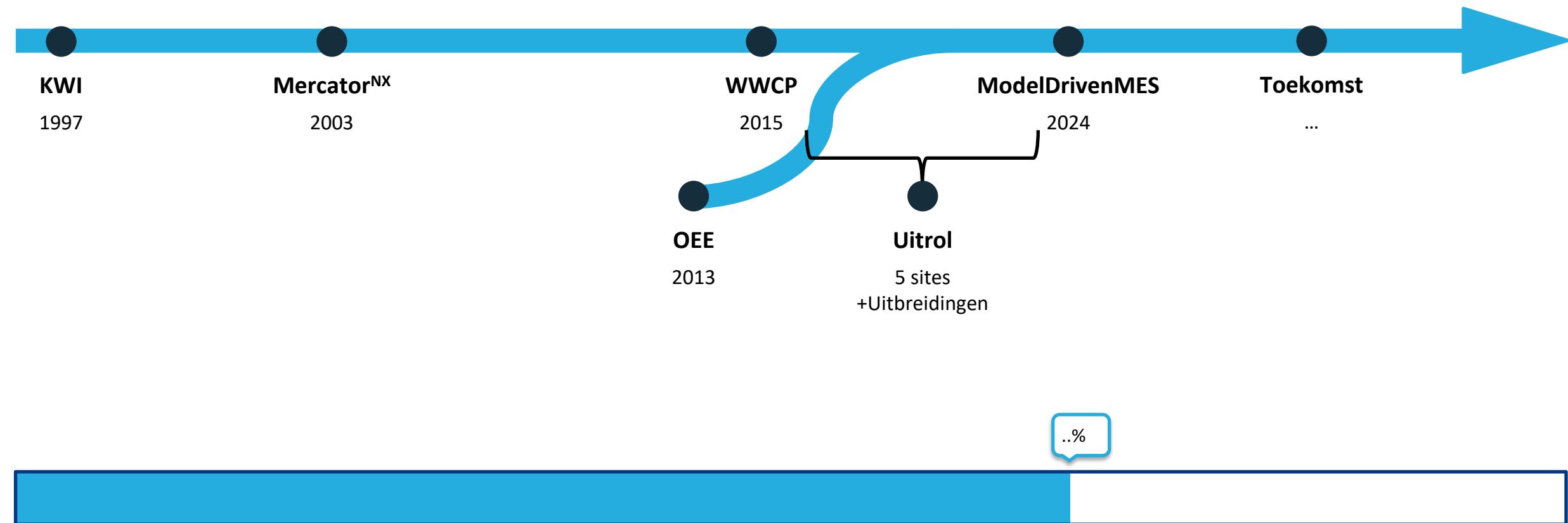
Data intelligence

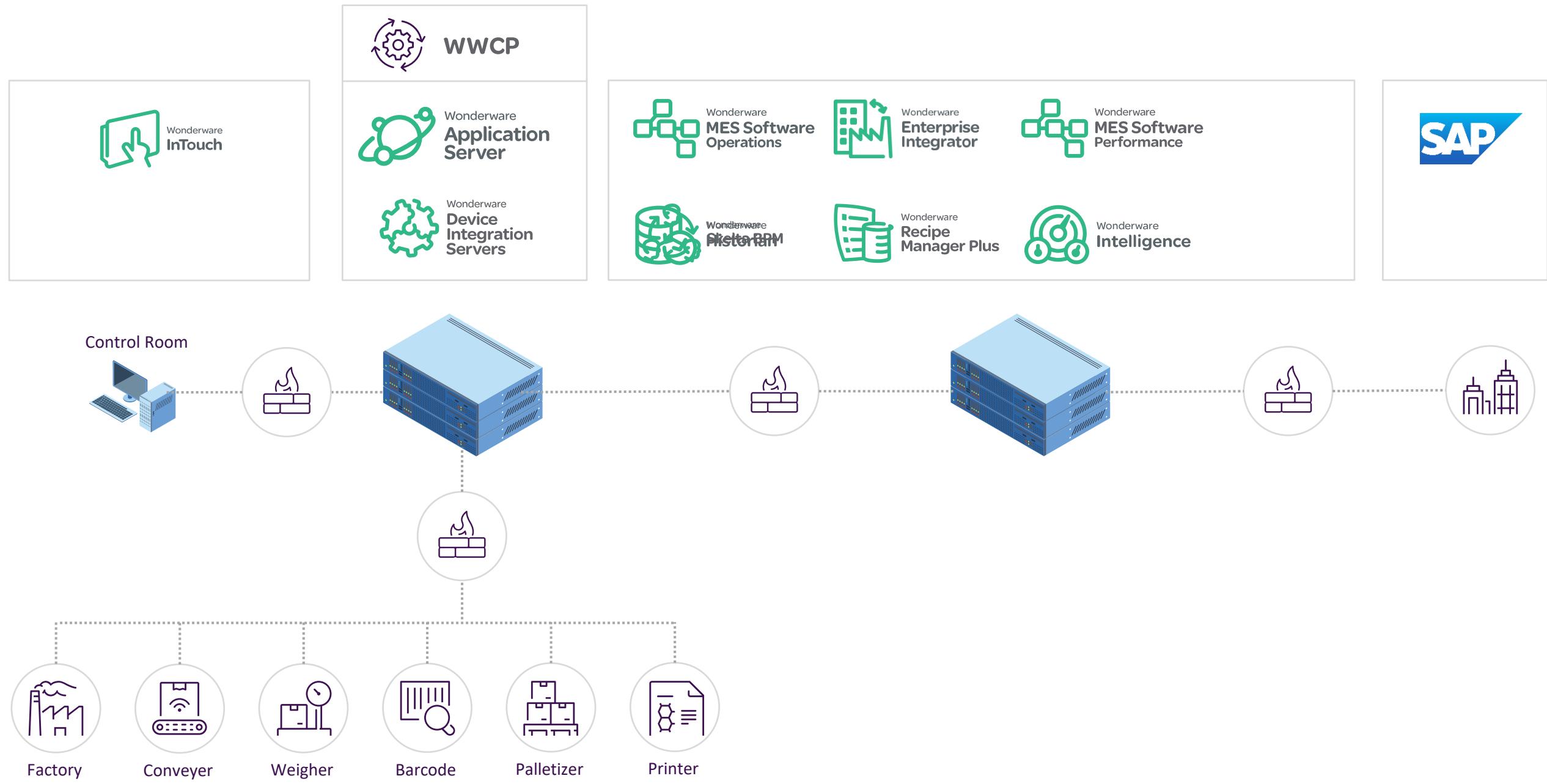


Model Driven MES



Timeline





Implementatie – Huidige project

The screenshot displays three overlapping windows from the AVEVA™ Work Tasks Enterprise Console:

- Top Window (Job Monitoring):** Shows a summary for Job ID LOTNO_12345. Status: RUNNING. Item: TempTestFinishedItem(Tijdelijk finished item). Sequence Number: 388. Req. Qty.: 510. Qty. Prod.: 388. Source: Test 6.
- Middle Window (Job Details):** Shows the Job Details for WorkOrder TestWorkorder_2. Status: RUNNING. Operation: 0. Sequence Number: 388.
- Bottom Window (Production Grid):** Shows a grid of scheduled work orders. The grid includes columns for Sched. Start Date, WorkOrder ID, Item Desc., Lot No., Status, Req. Qty., and Qty. Prod. The grid shows several entries, including:
 - 5-3-2024 11:00:00 TestWorkorder_1 TempTestFinishedItem Tijdelijk finished item LOTNO_ABC123 SUSPENDED 110 17
 - 5-3-2024 11:00:00 TestWorkorder_2 TempTestFinishedItem Tijdelijk finished item LOTNO_12345 RUNNING 510 388
 - 5-3-2024 13:00:00 TestWorkorder_3 TempTestFinishedItem Tijdelijk finished item LOTNO_456789 CANCELLED 200 0
 - 5-3-2024 16:00:00 TestWorkorder_4 TempTestFinishedItem Tijdelijk finished item Z3B05 READY 177 211
 - 22-2-2024 14:30:00 TestWorkorder_5 TempTestFinishedItem Tijdelijk finished item 76AAP7 SUSPENDED 250 0
- Bottom Left Window (Job Details):** Shows the Job Details for WorkOrder TestWorkorder_1. Status: SUSPENDED. Operation: 0. Sequence Number: 17.
- Bottom Right Window (Coding):** Shows the Coding details for Job Production. Item ID: TempTestFinishedItem. Item Desc: Tijdelijk finished item. Batch: LOTNO_12345. Qty. to Produce: 510. Qty. Remaining: 122. The window lists 73 items with various creation dates and descriptions.
- Bottom Center Window (Item Detail):** Shows detailed information for Item ID TempTestFinishedItem. REF.ID: TempTestFinishedItem. ADDITIONAL DATA: ORDER NUMBER: Tijdelijk finished item. Content: 18992753722614. Count: 00000 Zakken. BATCH/LOT: LOTNO_ABC123. EXPIRY DATE(DD.MM.YY): 02-02-2025. NET WEIGHT: 1250 KG. SSCC CODE: 487131070000999992. GROSS WEIGHT: KG.

Implementatie – Huidige project

Attributes **Scripts** **Graphics** **Object Information**

Script name: SC_Step_000

Configure execution order

Aliases:

Declarations:

Scripts:

Execution type: Execute

Expression: Me.Step_Nr == 0

Trigger type: WhileTrue

Trigger period: 00:00:00.000000

Deadband: 0.0

Historize script state

Priority:

```

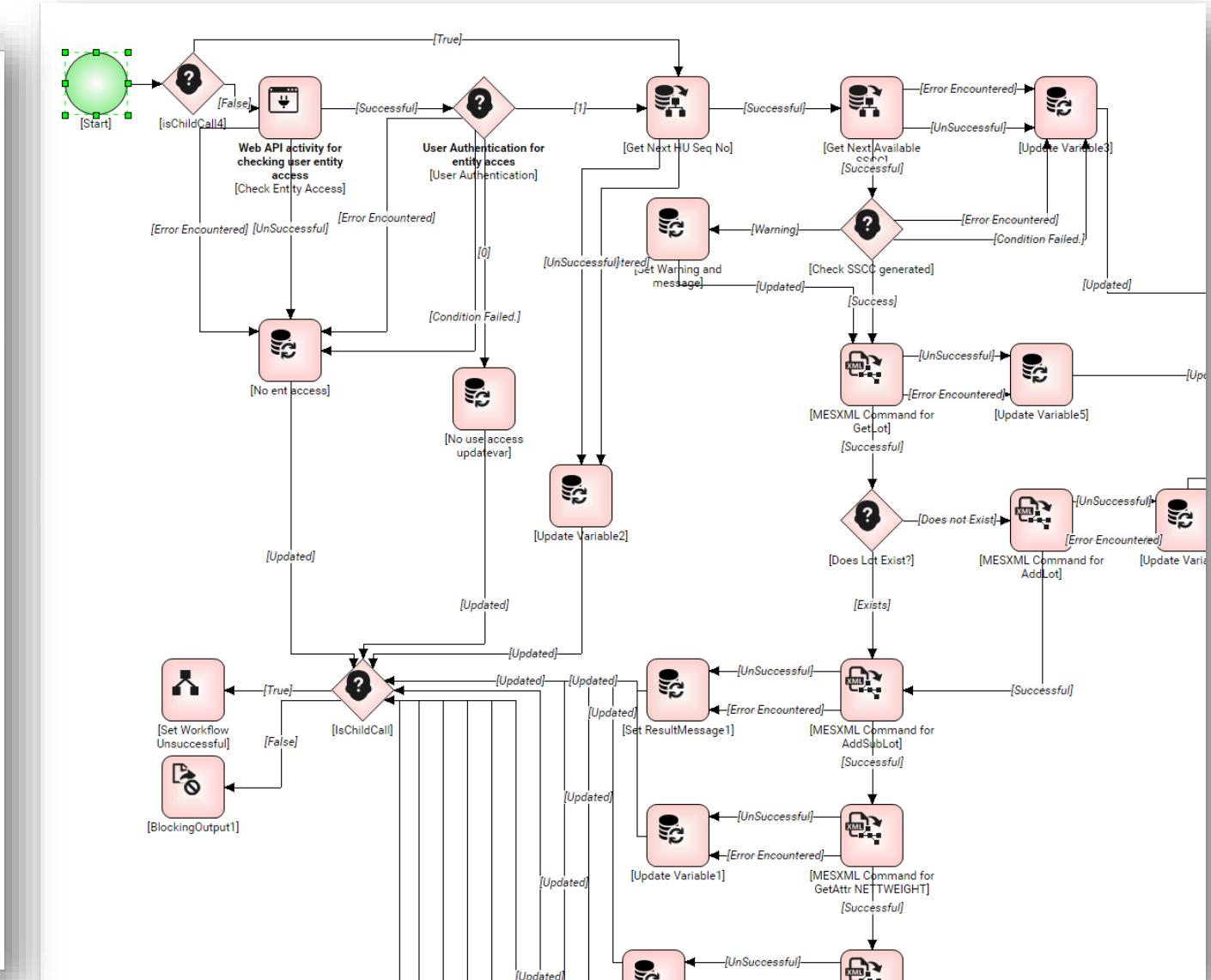
1 -- ****
2 -- Author: WoDij
3 -- Create date: 2017-06-22
4 -- Description: Step 0: Ready for CMD_DataReady
5 --
6 -- Date_Modified Modified_By Ver Changes
7 --
8 -- 2017-06-22 WoDij 001 Original
9 --
10 -- ****
11 Me.CurrentStatusText = "";
12
13 if(Me.CMD_DataReady) then
14     Me.Status = 2;
15     'tell external process we have seen the cmd
16     Me.DataRead = true;
17
18     'Make sure valid is false
19     if(Me.Scheduler.CONF_Enabled) then
20         if(Me.Valid) then
21             Me.Valid = false;
22         endif;
23     endif;
24
25     'Reset signals
26     Me.Current_Session = "";
27     Me.Current_Sequence = 0;
28     Me.Alarm = false;
29
30     if(Me.DebugMode) then
31         LogMessage("Step 0 - Done");
32     endif;
33
34     Me.Step_Nr = 1;
35 endif;

```

Inherited scripts:

- SC_MetalDetectionTest [RFC_CP_Line.Procedures.M]
- SC_Status [RFC_CP_Line.Procedures.M]
- SC_Step_001 [RFC_CP_Line.Procedures.M]
- SC_Step_002 [RFC_CP_Line.Procedures.M]
- SC_Step_003 [RFC_CP_Line.Procedures.M]
- SC_Step_004 [RFC_CP_Line.Procedures.M]
- SC_Step_005 [RFC_CP_Line.Procedures.M]
- SC_Step_006 [RFC_CP_Line.Procedures.M]
- SC_Step_007 [RFC_CP_Line.Procedures.M]
- SC_Step_008 [RFC_CP_Line.Procedures.M]
- SC_Step_009 [RFC_CP_Line.Procedures.M]

Line: 1 Col: 1



Kwaliteitsanalyses

Kwaliteitsanalyses

Enterprise Console - FCLochem_Repo2 - Google Chrome
srpmes307225.fcloch.local:8001/EnterpriseConsole/BPMUITemplates/Default/Repository/Site/InstanceFormAsDashboard.aspx?Icsuri=X83-TEh9_FTslcSKlwsTSYj0Uer_AXVWRdMr10XB0KonCjZ8kQ4QTepOBWCqxy5C8w213OOLUBHGM34z1s7zyOCiauOkfVD0FlpssidqAf wzE7h7p2QgwIW7qalmvmTy...

AVEVA™ Work Tasks Enterprise Console

Administrator

Avalon RUNNING TestWorkorder_2 TempOperation Operation 0 Sequence Number

Batch: LOTNO_12345 Item: TempTestFinishedItem(Tijdelijk finished item)

Req. Qty: 510 Qty. Prod: 406 Source: Test 6

406

Manual Refresh

Wachtrij | Produceren | BOM Consumeren | Monstername | Codering | @@printers@@

@@Samples@@ @@RegisterLa... @@AddNewS... @@RegisterSa...

Refresh Help

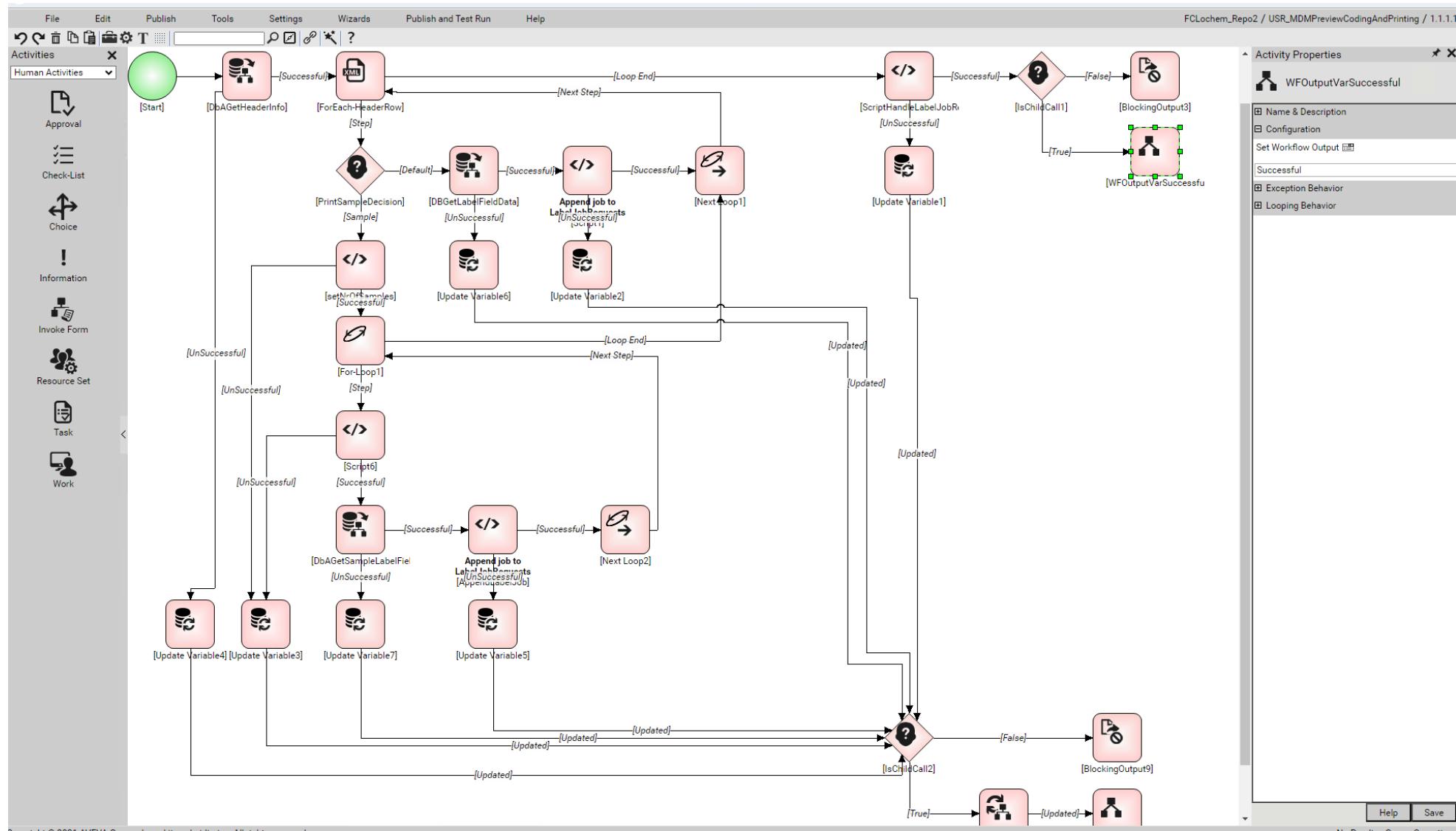
Filter

@@sp_attr...	@@sp_seq...	@@sp_cod...	@@sp_cod...	@@sp_cou...	@@sp_print...	@@sp_test...	@@sc_coun...	@@extra_c...
HU	0	10	Microbiological	2	1		2	1
HU	0	20	First chemical	1	0		1	0
HU	0	30	Visco	1	1	L	1	0
HU	2	30	Visco	1	1	L	0	0
HU	4	30	Visco	1	1	L	0	0
HU	6	30	Visco	1	1	L	0	0
HU	6	40	Shelf life	2	1	L	0	12
HU	8	10	Microbiological	2	1		0	0
HU	10	30	Visco	1	1	L	0	0
MAN		30	Visco	2	1	L	0	0
CU	4	30	Visco	1	1	L	0	0

@@SamplingPlanDetails@@
@@sp_code@@ 10
@@sp_code_desc@@ Microbiological
@@sp_count@@ 2
@@sp_test_code@@

Close

Kwaliteitsanalyses



Friesland Campina Doelen



- Standaardisatie
- Uniformiteit
- Onderhoudbaarheid
- Meer configureren dan programmeren

..%



batenburg
techniek

smarter focus.
brighter tomorrow.