



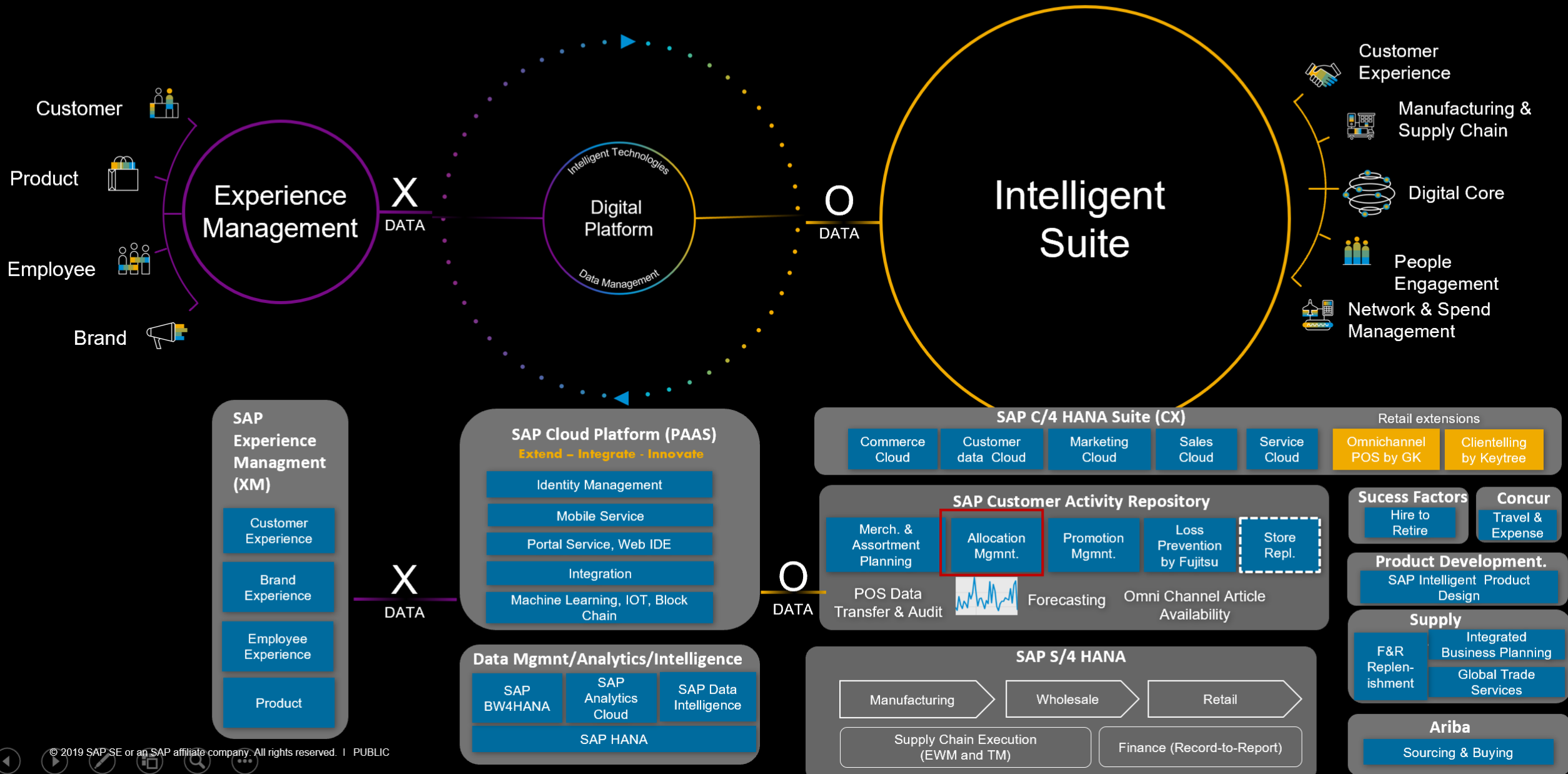
SAP Allocation Management

Promotional Push to stores

Tor Haabrekke, Sr. Solution Advisor Retail, Nordic Market Unit
October, 2019

CONFIDENTIAL

The experience company powered by the intelligent enterprise



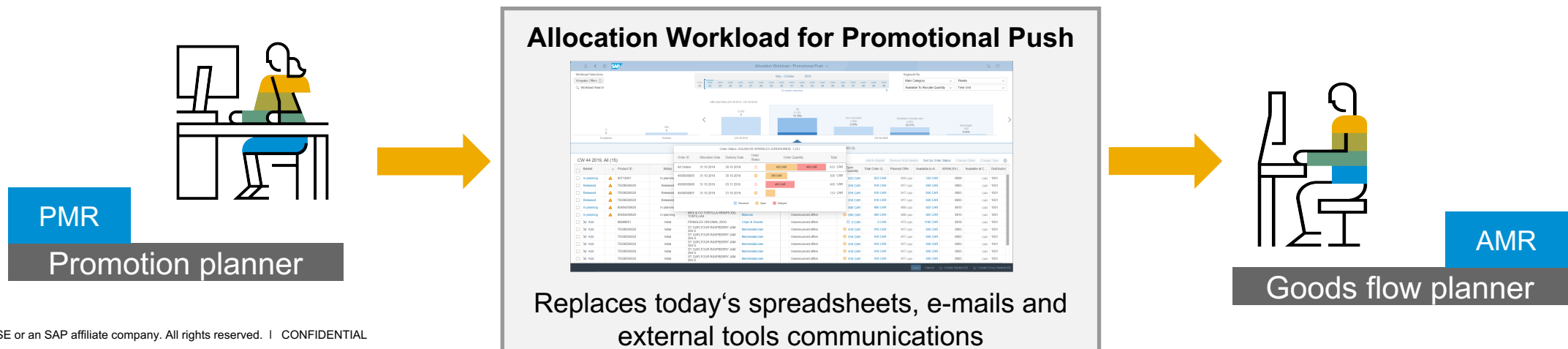
Salling Group's expectations using SAP Allocation Management (AMR)



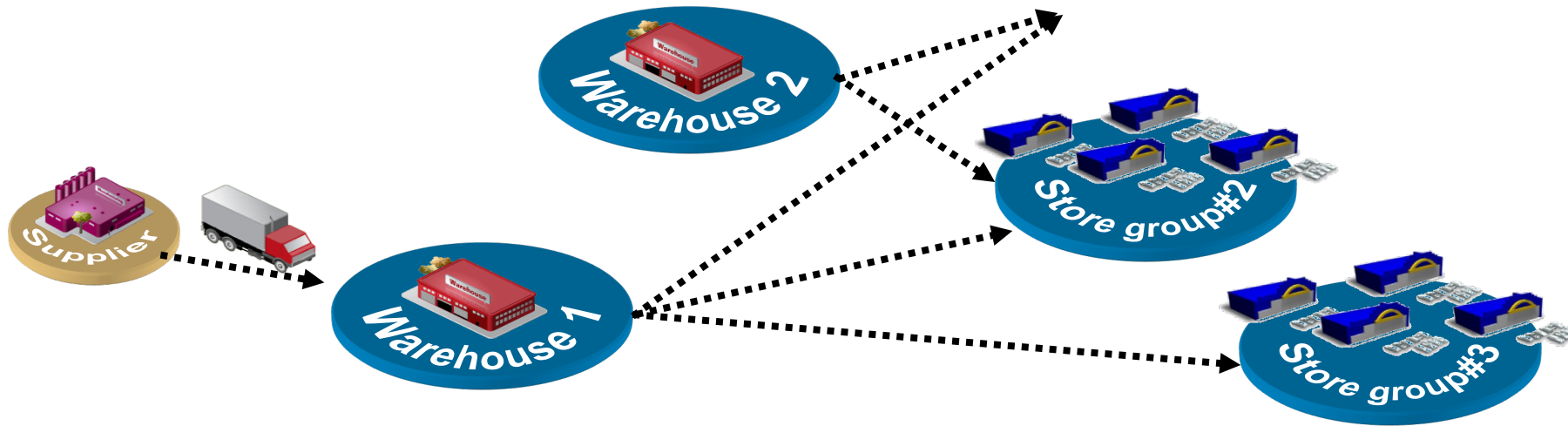
For Salling Group, AMR is:

“Promotion driven allocation to support efficient workflow, handle store capacity and use the general forecast engine to optimize allocations.”

Kim Rovsing Kraglund, Group Director – Business Process Management



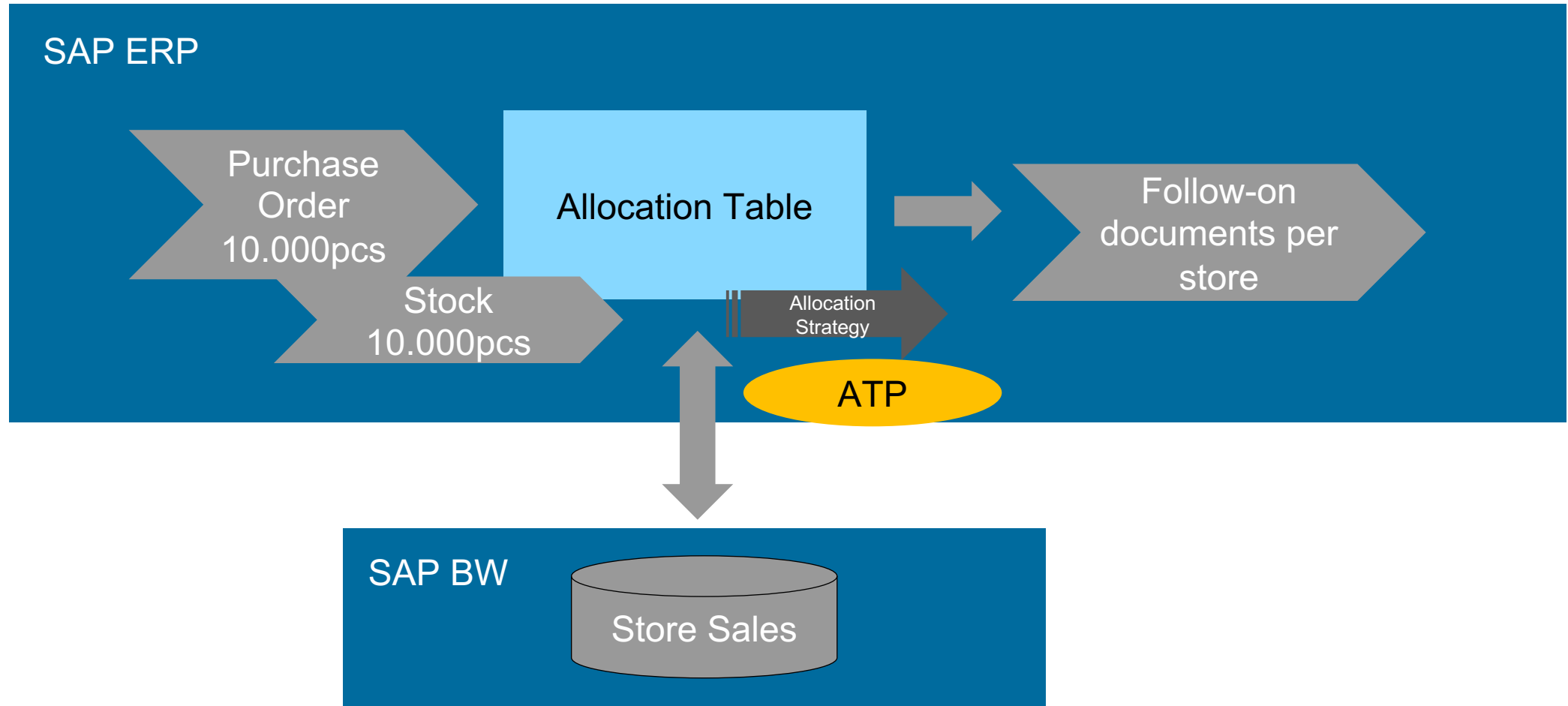
Does my company allocate (push) goods to stores?



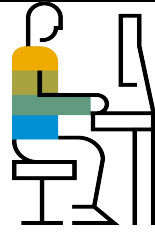
Does my company allocate seasonal goods to stores? (fashion, sports, etc.)

Does my company allocate promotional products (one timers, multi timers) into spot zones?

Allocation process in SAP ECC or SAP S/4 HANA



Allocation in ERP



Not intuitive user experience. The more advanced, the harder for the end user to understand and act upon the rules.

SAP Change allocation table : Plants in Item 00010

Details Plant groups Sort in Ascending Order Sort in Descending Order Delete Sources of Supply Strategy More Exit

Item: 10
Material: MR311301
Crackers

Quantities in item Plant total

Planned Quantity: 1.000 EA
Confirmed Quantity: 1.000
Minimum Quantity: 0
Maximum Quantity: 0

Plants in Item

Plant	Planne...	Reques...	Confirm...	Un...	Stock/Unrestricted
☐ R365	200	0	200	EA	66
☐ R367	126	0	126	EA	99
☐ R370	348	0	348	EA	138

Plants in Item

- ☐ Plant
- ☐ R365
- ☐ R367
- ☐ R370

Top Down Allocation Strategy (SAP BW)

Item Data

Material: MR311301 Material Group: RS11310

Access to SAP BW

Sales

Method: Z_ACTUAL_SALES
Selection Date: to: Selection Date: to:

Alternative Selection

Hierarchy Material Group: to: Material Group: to: Material: to:

Trend Using

Need to access BW

Limited allocation logic and optimization

No automation of allocation

For Fashion, no size curve logic to break down on sizes.

No understanding of store capacity to avoid over/under allocation

Weak rules framework to set allocation parameters

Save Cancel

Allocation process in on SAP CAR

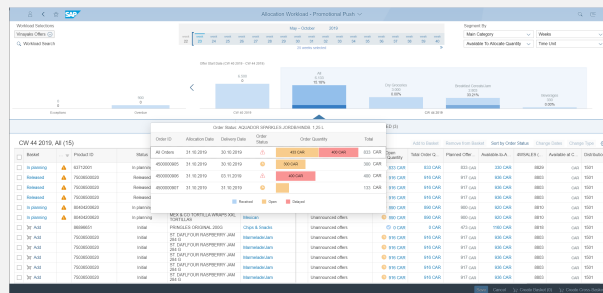


PMR

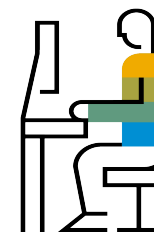
Promotion planner



Allocation Workload for Promotional Push



Replaces today's spreadsheets, e-mails and external tools communications



AMR

Goods flow planner

Promotion Management

Allocation Management

SAP CAR

SAP ERP

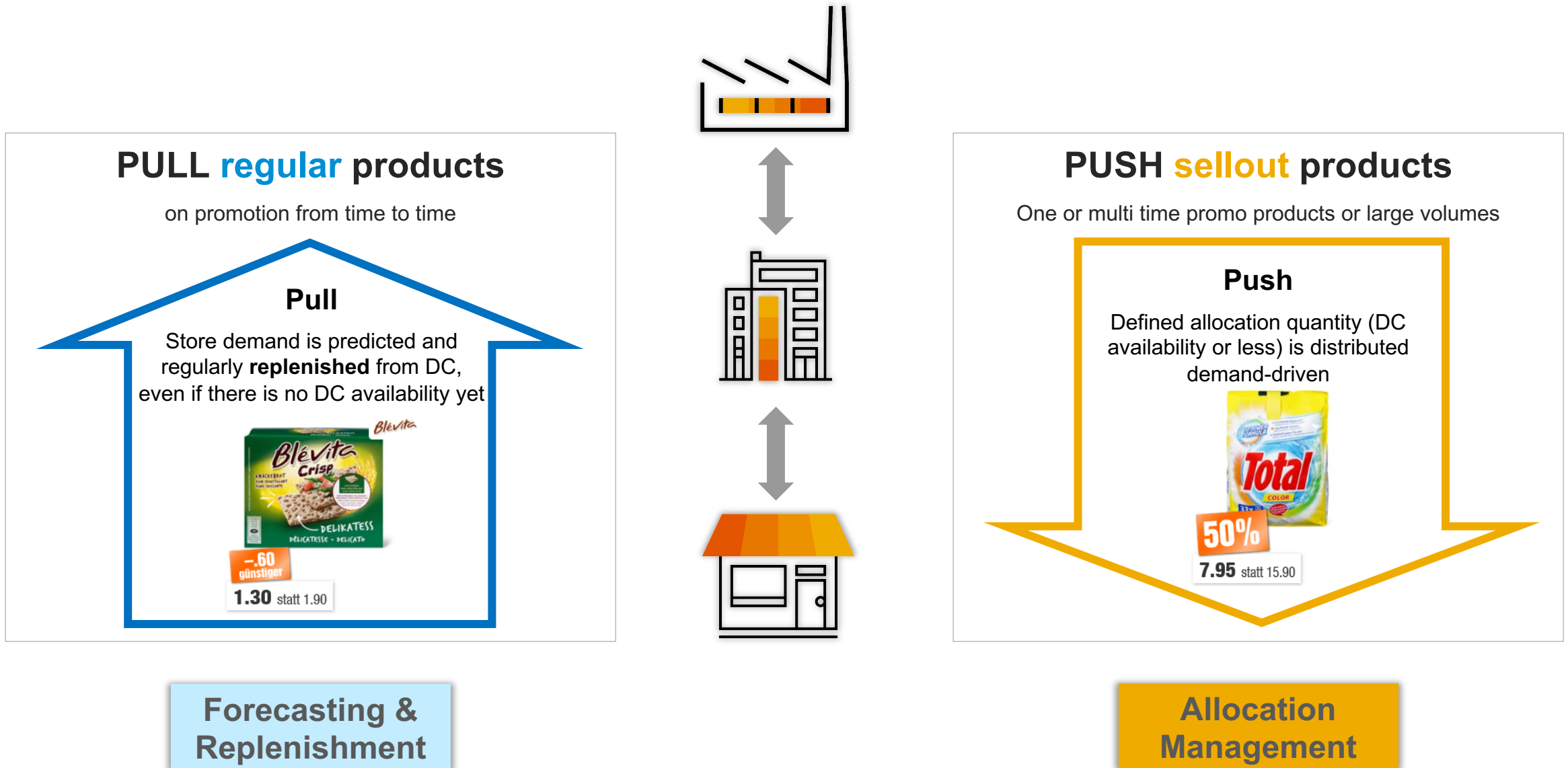
Unified Demand Forecast

HANA

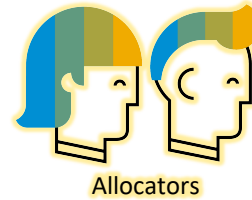
Allocation Table

Follow-on documents per store

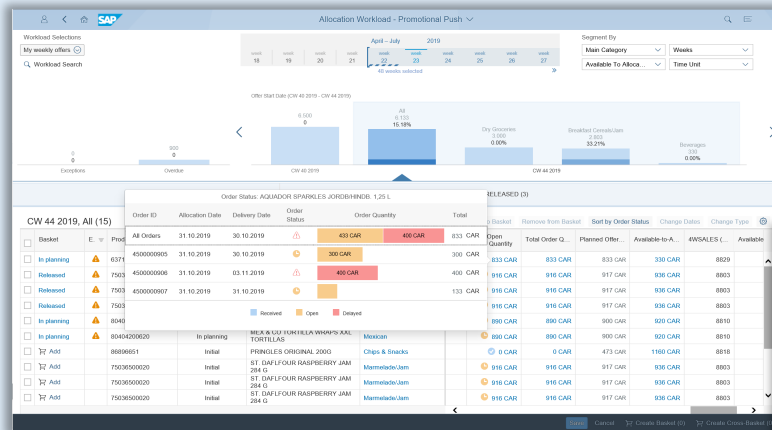
Push and Pull in the context of promotions with SAP in Retail



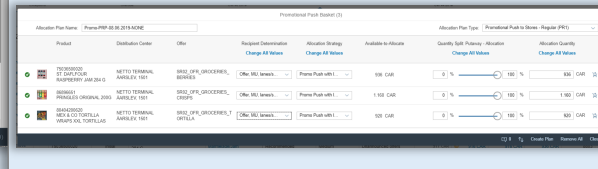
Allocation Management: User experience, intelligence & automation are key



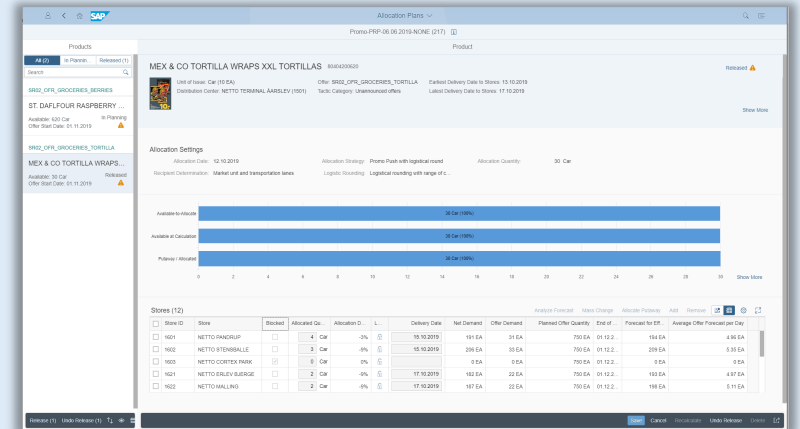
Allocation Workload



Allocation Basket



Allocation Plan



Workload by market unit within the user's responsibility; structures the work by time and hierarchies, allows triggering allocation calculation; information mainly at product and DC level, overview about allocation results across stores

Detailed results of the allocation calculation for selected products down to stores and variants; provides a view by store and across products



Allocation plan calculation



Availability

ATP, DC stock, Purchase Order, or Inbound delivery

Recipients

For example: supply network, with or wo listing, dep. on previous allocations...

Order/delivery schedules

Order / Delivery Schedule or planned delivery time

Store demands

For ex.: bottom-up (forecast, target stock, assortment plan) or top-down (KPI)

Optimized quantities

For example rounding and rationing with store ranking by sales performance KPI

User experience

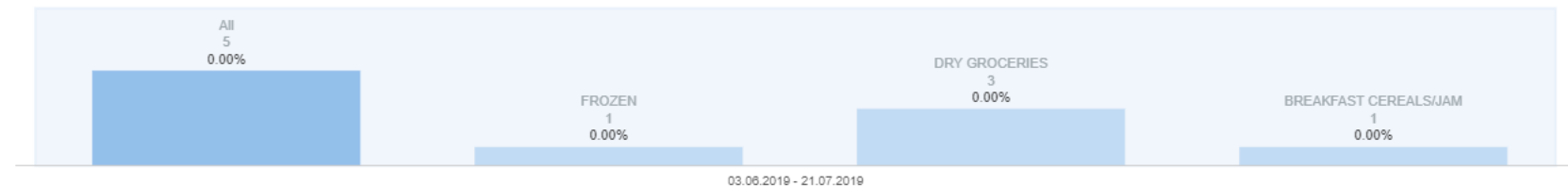


 Workload Search

week week week week week week week week week week week week week week week week week week week
 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42

7 weeks selected

Sub-Category	Weeks
No. Product	Aggregated



ALL (5) INITIAL (5) » EXCEPTIONS (0) IN PLANNING (0) » RELEASED (0)

Offer Details

03.06.2019 - 21.07.2019, All (5)

	Basket	Exc.	Product ID	Status	Product Name	Product Group	Sales Price	Event Name	Offer ID	Offer	Tactic Category
☐	Add		80404200620	Initial	MEX & CO TORTILLA WRAPS XXL TORTILLAS	MEXICAN	9,99 USD	Weekly Leaflet CW 27	7253	Snacks	Announced
☐	Add		84301701	Initial	FROZEN SALMON PORTIONS 4X100G SKINLESS	FROZEN SALOMON	44,99 USD	Weekly Leaflet CW 27	7254	Frozen	Announced
☐	Add		75036500020	Initial	ST. DAFLFOUR RASPBERRY JAM 284 G	MARMELADE/JAM	19,99 USD	Weekly Leaflet CW 28	7540	JAM / g	Announced
☐	Add		86896651	Initial	PRINGLES ORIGINAL 200G	CHIPS & SNACKS	0,00	Weekly Leaflet CW 28	7538	Snacks	Announced
☐	Add		80404200620	Initial	MEX & CO TORTILLA WRAPS XXL TORTILLAS	MEXICAN	9,99 USD	Weekly Leaflet CW 28	7538	Snacks	Announced

Workload Selections

Promo push

Workload Search



Segment By

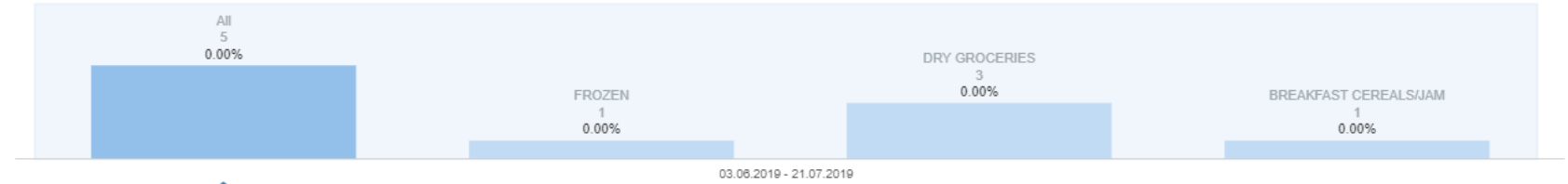
Sub-Category

Weeks

No. Product

Aggregated

Allocation Date (03.06.2019 - 21.07.2019)



03.06.2019 - 21.07.2019, All (5)

☐	Basket	Exc.	Product ID	Status	Product Name
☐	Add		80404200620	Initial	MEX & CO TORTILLA WRAPS XXL TORTILLAS
☐	Add		84301701	Initial	FROZEN SALMON PORTIONS 4X100G SKINLESS
☐	Add		75036500020	Initial	ST. DAFLFOUR RASPBERRY JAM 284 G
☐	Add		86896651	Initial	PRINGLES ORIGINAL 200G
☐	Add		80404200620	Initial	MEX & CO TORTILLA WRAPS XXL TORTILLAS

Order Status: FROZEN SALMON PORTIONS 4X100G SKINLESS

Order ID	Allocation Date	Delivery Date	Order Status	Order Quantity	Total
All Orders	21.06.2019	26.05.2019		700 CAR	1,000 CAR
4500001215	21.06.2019	01.06.2019		300 CAR	300 CAR
4500001215	21.06.2019	24.06.2019		300 CAR	300 CAR
4500001223	21.06.2019	26.05.2019		200 CAR	200 CAR
4500001231	21.06.2019	11.06.2019		200 CAR	200 CAR

Received
 Open
 Delayed

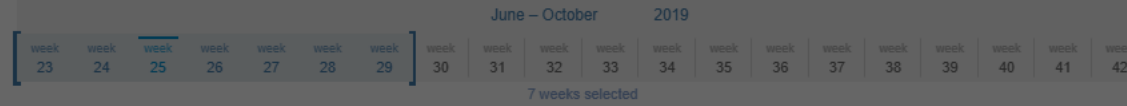
Order Q...	Total Open Order Quantity	Available-to-Allocate	Allocation Date
0 CAR		0 CAR	20 CAR
1000 CAR		1000 CAR	1460 CAR
0 CAR		0 CAR	60 CAR
20 PAL		20 PAL	100 CAR
0 CAR		0 CAR	20 CAR

Save Cancel Create Basket (3) Create Cross-Basket (3)

Workload Selections

Promo push

Workload Search



Segment By

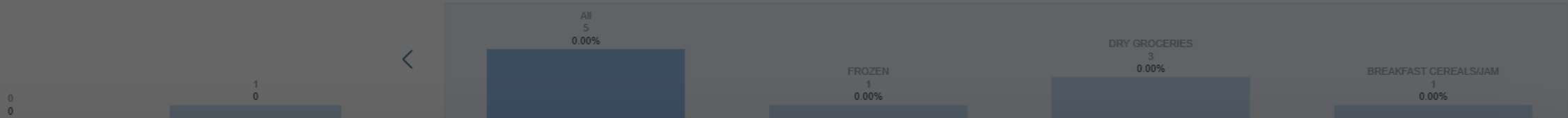
Sub-Category

Weeks

No. Product

Aggregated

Allocation Date (03.06.2019 - 21.07.2019)



Promotional Push Basket (3)

Allocation Plan Name: Promo-BWPP-18.06.2019-NONE

Allocation Plan Type: AP Type for Promo Push (BWPP)

Product	Distribution Center	Offer	Recipient Determination Change All Values	Allocation Strategy Change All Values	Available-to-Allocate	Quantity Split: Putaway - Allocation Change All Values	Allocation Quantity Change All Values
80404200620 MEX & CO TORTILLA WRAPS XXL TORTILLAS	DC Fashion RF10, 1501	Snacks	Market unit, transp...	Promo push with i...	20 CAR	0 % 100 %	20 CAR
84301701 FROZEN SALMON PORTIONS 4X100G SKINLESS	DC Fashion RF10, 1501	Frozen	Market unit, transp...	Promo push with i...	1.460 CAR	0 % 100 %	1.460 CAR
75036500020 ST. DAFLFOUR RASPBERRY JAM 284 G	DC Fashion RF10, 1501	JAM / grocery CW 28	Market unit, transp...	Promo push with i...	60 CAR	0 % 100 %	60 CAR

0 Create Plan Remove All Close

Products/Colors

AllIn PlanningReleased

Search

ALL PRINGLES TASTES

Pringles Original, 200G

Available: 66 PC
Offer Start: 04.05.2018

In Planning

MEX TORTILLA VARIATIONS

Mex & Co. Tortilla Wraps XXL Tortillas

Available: 25 PC
Offer Start: 04.05.2018
Allocation Deviation: +28,5%

In Planning

CHEASY MOZZARELLA

Cheasy Revet Mozzarella 13% 12x150G

Available: 25 PC
Offer Start: 04.05.2018

In Planning

Product



Pringles Original, 200G 86896651

Unit of Issue: CA1 (12 PC)
Distribution Center: Koge

Offer: <Offer Name>
Tactic Category: Announced

Earliest Delivery Date: 04.05.2018
Latest Delivery Date: 11.05.2018

Status: In Planning 

Show More

Allocation Settings

Allocation Date: 4.5.2018

Recipient Determination: Outlet - MU & Lanes

Allocation Strategy: Target Stock driven IA

Logistic Rounding: Log. Rounding by ROC

Available-to-Allocate: 66 CA (100%)

Available to Calculation: 66 CA (100%)

Putaway / Allocated: 11 CA (17%) 55 CA (83%)

Show More

Stores (512)

Analyse ForecastMass ChangeAllocate PutawayAddRemoveShow Sizes

☐	Store ID	Store	Lock	Allocation Quantity	Minimum Quantity	Allocation Deviation	Range of Coverage	Delivery Date
☐	1234	Netto Store Name		45 CA1	1 CA1	+40%	8 Days	12.5.2019
☐	1234	Netto Store Name		45 CA1	1 CA1	+38%	8 Days	12.5.2019
☐	1234	Netto Store Name		45 CA1	1 CA1	+35%	8 Days	12.5.2019
☐	1234	Netto Store Name		45 CA1	1 CA1	+33%	8 Days	12.5.2019
☐	1234	Netto Store Name		45 CA1	1 CA1	+33%	8 Days	12.5.2019
☐	1234	Netto Store Name		45 CA1	1 CA1	+32%	8 Days	12.5.2019
☐	1234	Netto Store Name		45 CA1	1 CA1	+10%	8 Days	12.5.2019
☐	1234	Netto Store Name		45 CA1	1 CA1	-11%	8 Days	12.5.2019

Release (3)

SaveCancelRecalculateRelease

Allocation Plan

Plan Name (0021150)

Store Summary

Products/Colors

All

In Planning

Released

Search

ALL PRINGLES TASTES

Pringles Original, 200G

Available: 66 PC
Offer Start: 04.05.2018

MEX TORTILLA VARIANTIC

Mex & Co. Tortilla Wrap

Available: 25 PC
Offer Start: 04.05.2018
Allocation Deviation: +28,5

CHEASY MOZZARELLA

Cheasy Revet Mozzarella

Available: 25 PC
Offer Start: 04.05.2018

514

All Stores

!

0

No Allocation

i

0

Shortened Allocation

✓

514

Complete Allocation

⚠

2

Critical Fill Rate

Stores (514)

Store	Block	Allocated PAL	Allocated QPAL	Allocated CA	Allocation Deviation	Number of Products	Average Range of Coverage	Expected Store Area Fill Rate	
Netto Pandrup 7101		1 PAL	0 QPAL	3 CA	+52%	3	6 days	110% of 140%	>
Netto Stensballe 7102		1 PAL	0 QPAL	16 CA	+63%	3	6 days	90% of 140%	>
Netto Cortex Park 7103		5 PAL	0 QPAL	0 CA	+58%	3	7 days	130% of 140%	>
Netto Erlen Bjerger 7105		0 PAL	3 QPAL	4 CA	+53%	3	9 days	150% of 140%	⚠ >
Netto Erlen Bjerger 7105		0 PAL	3 QPAL	4 CA	+53%	3	6 days	110% of 140%	>

Close

1234

Netto Store Name

45 CA1

1 CA1

+33%

8 Days

12.5.2019

1234

Netto Store Name

45 CA1

1 CA1

+32%

8 Days

12.5.2019

1234

Netto Store Name

45 CA1

1 CA1

+10%

8 Days

12.5.2019

1234

Netto Store Name

45 CA1

1 CA1

-11%

8 Days

12.5.2019

Release (3)

Save

Cancel

Recalculate

Release



er

Assortment Planner - Wholesale

Assortment Planner - All Channel Reports

Analytics

Promotion Management

Forecast

Merchandise Planner (1.0)

Allocator

Planning Administr



My Allocation
Workload
Initial Allocation



My Allocation
Workload
In-Season Fill-In



My Allocation Plans



Manage Market
Units



Manage Allocation
Parameters



Configure
Distribution Curves



Configure Allocation
KPIs



My Allocation
Workload
In-Season Manual P...



My Allocation
Results



Copy Market Unit

Automatic
Allocation

Preselection

Cancel

Market Unit: MU_DE_InbDelivery

STORES DISTRIBUTION CENTERS

Segment
Men

Product (Optional)

Missing Defaults: 0

Stores

Add
Remove
☐ Group by Store Cluster

☐	Store Cluster or Store	Address	City	Target Stock	Target Rang...	Presentation Stock	Minimum ...	Maximum ...	Unit o...	Size Run Rule	Block Initial Allocation From - To	Block In-S...	T
☐	Berlin Store - R163	St. Wolfgang-Str 13,10178	Berlin	5	1	0	0	9999	PC	Size Run Rule for City Stores	18.10.2019 - 27.10.2019		
☐	Berlin Mitte Store - R164	Brachfelder Str 28,12683	Berlin	0	1	0	0	9999	PC	Size Run Rule for City Stores	18.10.2019 - 27.10.2019		
☐	Hannover Store - R165	Fössestraße 83,30451	Hannover	5	1	0	0	9999	PC	Size Run Rule for City Stores	18.10.2019 - 27.10.2019		
☐	Düsseldorf Store - R166	Inselstr 2,40479	Duesseldorf	5	1	0	0	9999	PC	Size Run Rule for City Stores	18.10.2019 - 27.10.2019		
☐	Köln Store - R167	51368	Köln	0	1	0	0	9999	PC	Size Run Rule for City Stores	18.10.2019 - 27.10.2019		
☐	Frankfurt Store - R168	60311	Frankfurt	0	1	0	0	9999	PC	Size Run Rule for City Stores	18.10.2019 - 27.10.2019		
☐	Stuttgart Store - R169	70174	Stuttgart	0	1	0	0	9999	PC	Size Run Rule for City Stores	18.10.2019 - 27.10.2019		
☐	München Store - R170	Muenchner Str 123,81379	Muenchen	0	1	0	0	9999	PC	Size Run Rule for City Stores	18.10.2019 - 27.10.2019		
☐	Nürnberg Store - R171	90427	Nürnberg	0	1	0	0	9999	PC	Size Run Rule for City Stores	18.10.2019 - 27.10.2019		
☐	Saarbrücken Store - R172	66111	Saarbrücken	0	1	0	0	9999	PC	Size Run Rule for City Stores	18.10.2019 - 27.10.2019		
☐	Mainz Store - R173	55129	Mainz	0	1	0	0	9999	PC	Size Run Rule for City Stores	18.10.2019 - 27.10.2019		
☐	Store Dresden - R174	Stadtweg 2,01169	Dresden	0	1	0	0	9999	PC	Size Run Rule for City Stores	18.10.2019 - 27.10.2019		
☐	Store Wiesbaden - R175	Biebricher Allee 168,65...	Wiesbaden	0	1	0	0	9999	PC	Size Run Rule for City Stores	18.10.2019 - 27.10.2019		
☐	Store Bremen - R176	Neuenweg 105,28207	Bremen	0	1	0	0	9999	PC	Size Run Rule for City Stores	18.10.2019 - 27.10.2019		
☐	Store Leipzig - R177	Gutsweg 142,04356	Leipzig	0	1	0	0	9999	PC	Size Run Rule for City Stores	18.10.2019 - 27.10.2019		

Rules and parameters are decided by business user at desired level in the article hierarchy per store. Some parameters are time dependent.

1A Store areas - Salling Group

19 Stores

Market Unit:
Beautiful Salling promo chain (BW_PRP_001)

Parameters on store to define capacity for spot zones

Missing Store Assignments:
19 Stores

Store Areas (6) Store Area Templates Store Assignments Capacity Analysis

Stores (19)

Show All Stores Assign Template

☒	Store ID	Store Name	WINE	GROCERY	CHILLED	FROZEN	BEVERAGES	NON-FOOD	Status
☒	1601	Philadelphia		Small	Small	Small	Small	Small	
☒	1602	Wilmington		Modified	Modified	Small	Modified	Small	
☒	1603	Trenton		X-Small	Small	Small	Small	Small	
☒	1621	Brooklyn		Small	Small	Small	Small	Small	
☒	1622	Long Island		Small	Small	Small	Small	Small	
☒	1623	Manhattan		Small	Small	Small	Small	Small	
☒	1641	Boston		Small	Small	Small	Small	Small	
☒	1642	Providence		Large	Large	Large	Large	Medium	
☒	1643	Hartford		Large	Large	Large	Large	Medium	
☒	1644	Baltimore		Large	Large	Large	Large	Medium	
☒	1651	Atlanta		Large	Large	Large	Large	Medium	
☒	1671	Orlando		Large	Large	Large	Large	Medium	
☒	1691	Miami		Large	Large	Large	Large	Medium	
☒	1701	Tacoma		Large	Large	Large	Large	Medium	
☒	1721	Portland		Large	Disabled	Large	Large	Medium	
☒	1741	San Francisco		Large	Disabled	Large	Large	Medium	
☒	1751	Los Angeles		Large	Disabled	Large	Large	Medium	
☒	1771	San Diego		Large	Disabled	Large	Large	Medium	
☒	1791	Phoenix		Large	Disabled	Large	Large	Medium	

Capacity Configurations

Configurations (8) Create

Capacity Configuration	Number of Stores
1A Store areas - Salling Group	19
AR_COPY_VK	30
AR_PRP_001	30
EG_STORE_ASSIGNMENT_BLANK	19
SV_CM_RTI_01	19
Second new config	13
VK_PRP_001	30
Z_JB_BeeLine_CAPA	14

1A Store areas - Salling Group

19 Stores

Market Unit:
Beautiful Salling promo chain (BW_PRP_001)

Missing Store Assignments:
19 Stores

Store Areas (6) Store Area Templates Store Assignments Capacity Analysis

Store Area Templates

Store Area Name	Store Area Templates	Stores Assigned
WINE	0 Templates	0 Stores
NON-FOOD	3 Templates	19 Stores
BEVERAGES	2 Templates	19 Stores
FROZEN	2 Templates	19 Stores
CHILLED	2 Templates	19 Stores
GROCERY	3 Templates	19 Stores

More capacity space data per spot zone

Add Store Area Template

GROCERY

Store Area Templates

Large

Large Change Name Delete

Capacity: m³ Fill Limit: %

Logistical Settings

Tactic Category	Excluded Unit of Issue Groups	Minimum Order Quantity
Announced (BWAN)	None	2
Unannounced (BW...)	None	2

Medium Change Name Delete

Capacity: m³ Fill Limit: %

Logistical Settings

Tactic Category	Excluded Unit of Issue Groups	Minimum Order Quantity
No data		

Small Change Name Delete

Capacity: m³ Fill Limit: %

Logistical Settings

Tactic Category	Excluded Unit of Issue Groups	Minimum Order Quantity
Announced (BWAN)	None	1

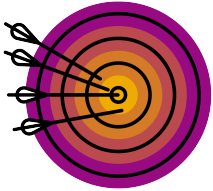
Capacity used in a process and visualization of % of space used

In store summary: Expected fill levels per store area based on space capacity calculation.

Stores (18)							
Store	Block	Allocated Cartons	Allocated Pallets	Allocation Deviation	Average Range of Coverage	Number of Products	Expected Fill Level for Store Area
Philadelphia 1601	☒	0 CAR	0 PAL	0%	Unavailable	0	0% (max. 120%)
Wilmington 1602	☐	316 CAR	15 PAL	-38%	109 Days	4	116% (max. 105%)
Brooklyn 1621	☐	295 CAR	18 PAL	-13%	165 Days	3	119% (max. 120%)
Long Island 1622	☐	269 CAR	19 PAL	-14%	125 Days	4	119% (max. 120%)
Manhattan 1623	☐	281 CAR	18 PAL	-10%	127 Days	4	119% (max. 120%)
Boston 1641	☐	319 CAR	15 PAL	-36%	110 Days	4	119% (max. 120%)
Providence 1642	☐	297 CAR	58 PAL	15%	149 Days	4	98% (max. 120%)
Hartford 1643	☐	299 CAR	57 PAL	15%	149 Days	4	97% (max. 120%)
Baltimore 1644	☐	318 CAR	57 PAL	15%	148 Days	4	98% (max. 120%)
Atlanta 1651	☐	287 CAR	37 PAL	21%	157 Days	4	69% (max. 120%)
Orlando 1671	☐	281 CAR	39 PAL	21%	156 Days	4	71% (max. 120%)
Miami 1681	☐	279 CAR	24 PAL	20%	215 Days	3	51% (max. 120%)

Capacity Optimization with Linear Programming in HANA OFL

Use of Linear programming with HANA Optimization Function Libraries to



Optimization goal for the store delivery dates and per store area across products:

- Rule#1: The demands of all stores for all products **shall be met** – in unit of issue
- Rule#2 - All stores shall have the **same fill-rate** (% of normal capacity) for a store area
- Rule#3 - The **range of coverage** for each allocated product shall be about the same for all stores
- Rule#4 - The total allocation quantity (= DC availability or desired quantity) is **completely allocated**

The importance of each goal can be weighted



P