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## Utilize SAP EWM to Conquer your Freight Shipping Challenges

Neil Patel, Managing Partner Supply Chain Execution, MSCG  
Wesley Marion Sr., Director Presales Solution Engineering, MSCG  
Session ID # 82537

# About the Speakers

## Neil Patel



- Managing Partner  
My Supply Chain Group
- 13+ years of SAP Supply Chain, Warehousing, Distribution and Fulfillment experience with WM & EWM
- 1<sup>st</sup> Certified EWM Consultant in North America

## Wesley Marion Sr.



- Director, Solution Engineering  
My Supply Chain Group
- 6+ years of SAP Supply Chain, Warehousing, Distribution and Fulfillment experience with EWM
- Prior PGA Golf Professional

## Key Outcomes/Objectives

1. Gain a better understanding of the challenges faced by today's warehousing and distribution operations related to freight shipment and scheduling of dock appointments.
2. Understand how to properly utilize the Shipping Cockpit in SAP Extended Warehouse Management to accurately plan Outbound Delivery Orders with correct transportation units, monitor warehouse progress for transportation units and execute work.
3. Learn how to efficiently schedule loading appointments at your warehouse or distribution center with SAP Extended Warehouse Management's Dock Appointment Scheduling tool.

# Agenda

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- My Supply Chain Group Introduction
- Common Struggles and Challenges
- SAP EWM Outbound Processes for Freight
- SAP EWM Shipping Cockpit
- SAP EWM Dock Appointment Scheduling
- EWM Integration: Shipping Cockpit & DAS



# MSCG // My Supply Chain Group

## Company Background, Core Competencies & SAP Practice



### MSCG SAP Practice

- Founded in 2008
- Head-office in USA
- Subsidiaries in Canada & Mexico
- 50+ Clients
- 100+ SCE/SCM Consultants

### Key SAP Solution Areas

- Supply Chain Execution
  - S/4 embedded EWM & CORE EWM
  - S/4 embedded TM & CORE TM
- Supply Chain Planning
  - SAP SCM - IBP & APO

### Services Offered

- Supply Chain Strategy & Roadmap
- Process Re-engineering & Optimization
- Organizational Change Management
- Assessments & Diagnostics
- Implementation Rollouts
- Application Maintenance (AMS)

### Industry Expertise

- Wholesale, CPG, Retail & ecommerce
- Aerospace & Defense
- Oil & Gas, Chemicals
- Life Sciences, Pharma, Bio Med
- Manufacturing, Hi Tech
- Omni-Channel

***“MSCG’s combined strength with SAPEWM, YL, TM, IBP and APO allow us to compete completely in the SAP Supply Chain space without any compromise” Neil Patel***

## Freight Shipping Struggles and Challenges

- Time consuming processes to manually create system vehicles and/or trailers for freight shipments with accurate dates, times, route and other relevant shipping information to plan and execute work.
- Poor visibility of orders or work that have freight shipping requirements against the physical restraints of the dock in your warehouse or distribution center.
- No central location to obtain an overview and status for trucks/trailers of the work associated in the warehouse or distribution center.



# SAP EWM Outbound Processes for Freight

**Challenge:** *Time consuming processes to manually create system vehicles and/or trailers for freight shipments with accurate dates, times, route and other relevant shipping information to plan and execute work.*

## EWM Solution: Transportation Units

### Configuration

- Control Parameters for TU Creation
- TU Profiles w/ Access Sequence

### System Settings

- Staging Area and Door Determination w/ Access Sequence
- TU Profile Determination

### System Program

- Auto Planning of TU-DLV Assignments

# SAP EWM Shipping Cockpit: Planning

## Search Criteria

- Time Period
- Transportation Info
- EWM Delivery info
- Additional Info

## Saving Searches

- Save Search Criteria
- Default Saved Searched
- Auto Run Default
- Auto Collapse Criteria

The screenshot displays the SAP EWM Shipping Cockpit Planning interface for Warehouse BP10. The search criteria are organized into several sections, with callouts highlighting specific areas:

- Dates & Times:** Includes fields for Route Departure Date (04/03/2019), Delivery Date, and Goods Issue Date.
- Carrier & Vehicle:** Includes fields for Carrier, Partner: SCAC, Means of Transport, Transportation Unit, Vehicle, Appointment Number, and Loading Point.
- Routes & Customers:** Includes fields for Route (TR0001), Dep. Cal. / Schedule, Destination Country, Ship-To, and Shipping Condition.
- Misc & Cust Info:** Includes fields for Restricted Selection, Filter TUs by Delivery Criteria, Documents w/o Warehouse Activity, EWM-Based Plan, and Filter Empty Transp. Units.

The interface also shows a table for Deliveries and Transportation Units at the bottom, with columns for Ship-To / Route / Delivery, Weight, Weight Unit, Volume, and Volume Unit. The table currently shows "No data available".

**Challenge:** *Poor visibility of orders or work that have freight shipping requirements against the physical restraints of the dock in your warehouse or distribution center.*



# SAP EWM Shipping Cockpit: Planning

## Deliveries

- Unplanned Deliveries
- Display Info from Settings
- Assign Delivery to TU

## Create TU & Assignment

- External TU ID
- Available Carrier Info
- Default Information
- Set Dates & Times

The screenshot displays the SAP EWM Shipping Cockpit Planning interface for Warehouse BP10. The main window is divided into two panes: Deliveries and Transportation Units. The Deliveries pane shows a list of deliveries with columns for Ship-To / Route / Delivery, Weight, and Weight Unit. The Transportation Units pane shows a list of transportation units with columns for Transportation Unit / Ship-To / Route / Delivery, Update Info, and Number of Items. A 'Create Transportation Unit' dialog box is open in the foreground, allowing users to create a new transportation unit. The dialog box has two sections: General Data and Dates and Times. The General Data section includes fields for Transportation Unit, Carrier, Partner, Means of Transport (set to YN04), and Packaging Material (set to EWMS4-TRUCK00). The Dates and Times section includes fields for Planned Arrival Time (set to 11/26/2018 at 11:00:00 AM) and Planned Departure Time (set to 11/26/2018 at 03:00:00 PM). There is also a checkbox for 'Planned Times Fixed' and a 'Set Planned Arrival Time' button.

**Challenge:** *Poor visibility of orders or work that have freight shipping requirements against the physical restraints of the dock in your warehouse or distribution center.*

# SAP EWM Shipping Cockpit: Planning

## Capacity Overview

- Integration with DAS
- Planned arrival times
- Loading Point Usage
- Slot Overbooked
- Slot In Requested Range

The screenshot displays the SAP EWM Shipping Cockpit Planning interface for Warehouse BP10. The main window is titled "Shipping Cockpit Planning - Warehouse BP10" and includes a search bar for "Deliveries and Transportation Units". The interface is divided into two main sections: "Deliveries" and "Transportation Units".

The "Deliveries" section is currently active, showing a "Capacity Overview" table. The table has columns for "Planned Arriva...", "Planned Depa...", "Start Time", "Planned Durat...", "Start Time Valid", "Capacity Usage", "Slot Overbo...", and "In Requested...". The data rows show a sequence of planned arrivals and departures from 04:00 AM to 03:00 PM. Capacity usage is indicated by progress bars and numerical values (e.g., 0/2, 1/2, 2/2). Some slots are marked as "Overbooked" (e.g., 1/2, 2/2).

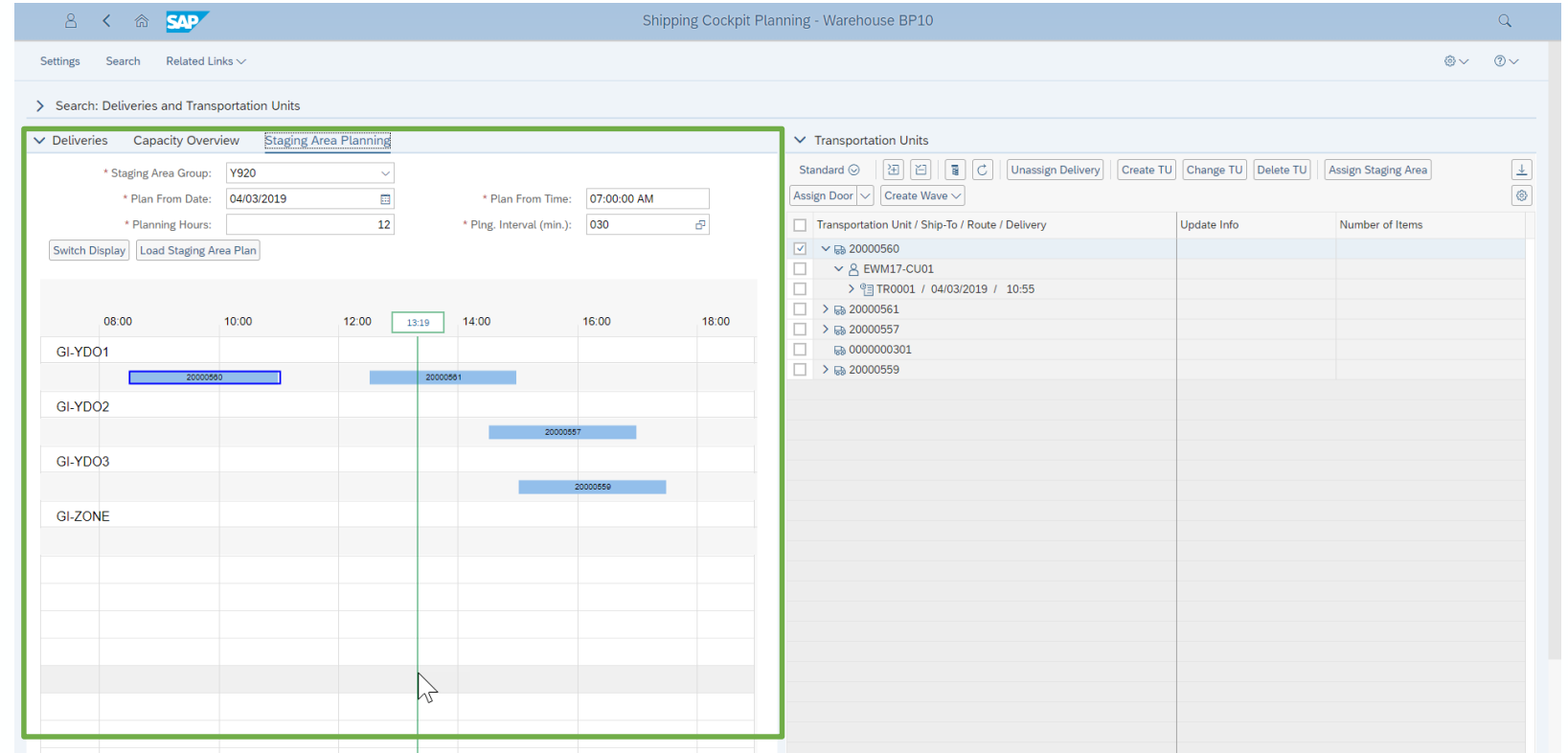
The "Transportation Units" section is visible on the right, showing a list of units with columns for "Transportation Unit / Ship-To / Route / Delivery", "Update Info", and "Number of Items". The units listed include 20000560, EWM17-CU01, TR0001 / 04/03/2019 / 10:55, 20000561, 20000557, 0000000301, and 20000559.

**Challenge:** *Poor visibility of orders or work that have freight shipping requirements against the physical restraints of the dock in your warehouse or distribution center.*

# SAP EWM Shipping Cockpit: Planning

## Staging Area Planning

- Two different displays
  - Table
  - Graphical
- Configuration to Display
- Blocked Slot from TU Time



**Challenge:** *Poor visibility of orders or work that have freight shipping requirements against the physical restraints of the dock in your warehouse or distribution center.*

# SAP EWM Shipping Cockpit: Planning

## Transportation Units

- Unassign Deliveries
- Create TU
- Change TU
- Delete TU
- Assign Staging Area
- Assign Door
- Create Wave

The screenshot displays the SAP EWM Shipping Cockpit Planning interface for Warehouse BP10. The main view is 'Staging Area Planning', which shows a Gantt chart for the date 04/04/2019 from 07:00:00 AM to 18:00. The chart is organized by staging areas: GI-YDO1, GI-YDO2, GI-YDO3, and GI-ZONE. A vertical green line indicates the current time at 09:59. Blue bars represent transportation units (TUs) assigned to these staging areas. For example, TU 20000560 is assigned to GI-YDO1, and TU 20000557 is assigned to GI-YDO2.

On the right, a 'Transportation Units' panel is visible, listing various TUs with their status and assigned staging areas. The panel includes a search bar and several action buttons: Unassign Delivery, Create TU, Change TU, Delete TU, and Assign Staging Area. The table below shows the details of the TUs:

Transportation Unit / Ship-To / Route / Delivery	Staging Ar...	Wave	Planned Times Fixed	Wareh...	Stagi...
20000560					Y920
EW17-CU01				YD01	Y920
TR0001 / 04/03/2019 / 10:55				YD01	Y920
20000561					Y920
20000557					Y920
20000559					Y920
20000568					Y920

**Challenge:** *Poor visibility of orders or work that have freight shipping requirements against the physical restraints of the dock in your warehouse or distribution center.*

# SAP EWM Dock Appointment Scheduling

The screenshot shows the SAP EWM 'Maintain Appointment - Graphical' interface. At the top, there are search filters for Docking Location (BP10), Loading Point (LP-OUT1), Appointment Date (MM/DD/YYYY or description), Appointment Time (12:00:00 AM), Appointment Number, Carrier, and Means of Transport ID. Below the filters, a table lists 11 items. The table has columns for Docking Location, Loading Point, Start, Start, Finis, Finis, Appointment Number, Status, and Carrier. The 9th item is selected.

	Docking Location	Loading Point	Start ...	Start ...	Finis...	Finis...	Appointment...	Status	Carrier
<input type="radio"/>	BP10	LP-OUT1		12:00 ...		12:00 ...	20000568	Provisional	
<input type="radio"/>	BP10	LP-OUT1	02/27/...	11:00 ...	02/27/...	12:00 ...	201	Canceled	1000014
<input type="radio"/>	BP10	LP-OUT1	03/28/...	10:00 ...	03/28/...	12:00 ...	20000558	Departed from Checkpoint	
<input type="radio"/>	BP10	LP-OUT1	04/03/...	04:00 ...	04/03/...	05:00 ...	301	Planned	1000015
<input type="radio"/>	BP10	LP-OUT1	04/04/...	08:00 ...	04/04/...	10:00 ...	20000560	Planned	1000015
<input type="radio"/>	BP10	LP-OUT1	04/04/...	12:00 ...	04/04/...	02:00 ...	20000561	Planned	1000015
<input type="radio"/>	BP10	LP-OUT1	04/04/...	02:00 ...	04/04/...	04:00 ...	20000557	Planned	
<input checked="" type="radio"/>	BP10	LP-OUT1	04/04/...	03:00 ...	04/04/...	05:00 ...	20000559	Planned	
<input type="radio"/>	BP10	LP-OUT1	04/05/...	10:00 ...	04/05/...	11:00 ...	302	Arrived at Checkpoint	1000015
<input type="radio"/>	BP10	LP-OUT1	04/23/...	10:00 ...	04/23/...	12:00 ...	20000567	Arrived at Dock	
<input type="radio"/>	BP10	LP-OUT1	04/23/...	01:00 ...	04/23/...	03:00 ...	20000565	Departed from Checkpoint	

## Search Appointments

- Save Search Criteria
- Run Searches
  - At Opening
  - At Selection
  - Manually
- Set Filters
- Appointment Selection

**Challenge:** *Poor visibility of orders or work that have freight shipping requirements against the physical restraints of the dock in your warehouse or distribution center.*

# SAP EWM Dock Appointment Scheduling

The screenshot displays the SAP EWM 'Maintain Appointment - Graphical' interface for appointment 0020000559. The top section contains appointment details:

- Planning Data:** Loading Point: LP-OUT1, Requested Duration: 02:00, Reference Document Number, Number of Packages, Property, Docking Location: BP10, Appointment Direction: Outbound.
- General Data:** Status: Planned, Start Date: 04/04/2019 03:00 PM, Finish Date: 04/04/2019 05:00 PM, Planned Arrival at Checkpoint Date: 04/04/2019 01:00 PM.
- Administrative Data:** Carrier, Means of Transport: YN04, Means of Transport ID: 20000559, Driver.

The bottom section, 'Capacity Overview', shows a Gantt chart for Thursday, April 4, 2019, from 00:00 to 22:00. A red box highlights a capacity constraint period from approximately 06:00 to 18:00. Blue bars represent appointment durations, with one bar overlapping the red constraint area. A mouse cursor is positioned over the chart at 11:02.

## Maintain Appointment

- Update Provisional Appoint.
- Capacity Overview
  - Integrated
- Carrier Information

## Other DAS Capabilities

- Planning vehicle arrival for workload balancing
- Planning for Carrier
  - Carrier Portal
- Standalone
- Integrated with EWM

**Challenge:** *Poor visibility of orders or work that have freight shipping requirements against the physical restraints of the dock in your warehouse or distribution center.*

# SAP EWM Shipping Cockpit: Execution

## Settings

- Warehouse Number
- Shipping Office
- Weight Unit
- Volume Unit
- Document Hierarchy

## Search Criteria

- Time Period
- Transportation Info
- EWM Delivery info
- Additional Info

The screenshot displays the SAP EWM Shipping Cockpit Execution interface for Warehouse BP10. A 'Maintain User-Specific Settings' dialog box is open, showing the following settings:

- Warehouse Nu...: BP10
- Shipping Office:
- Weight Unit: LB
- Volume Unit: 3

The main interface is divided into several sections:

- Search: Transportation Units**: Includes a search bar and a 'Search Criteria' section with various filters like 'Route Departure Date', 'Planned Arrival Date', 'Planned Departure Date', 'Delivery Date', 'Goods Issue Date', 'Carrier', 'Partner: SCAC', 'Means of Transport', 'Transportation Unit', 'Vehicle', 'Appointment Number', and 'Loading Point'.
- General Settings**: Fields for Warehouse Number, Shipping Office, Weight Unit, and Volume Unit.
- Hierarchy**: A tree view showing the document hierarchy with levels for Transportation Unit, Route, Ship-To Party, and Delivery.
- Delivery**: A section with various delivery-related settings like 'Route', 'Dep. Cal. / Schedule', 'Destination Country', 'Ship-To', and 'Warehouse Door'.
- Other**: Additional settings like 'Incl. Selec. of Completed Transp. Un', 'Include Selection of Empty Transp. L', and 'Determine Distribution Status'.
- Execution Overview**: A table showing the execution status of various transportation units. The table has columns for 'Transportation Unit / Route / Ship-To / Delivery', 'Outb. Delivery Order', 'Update Info', 'Partial Assignment to TU', 'Arrival', 'At Door', and 'Loading S'. A row is visible for 'S4/TRUCK0014'.

**Challenge:** No central location to obtain an overview and status for trucks/trailers of the work associated in the warehouse or distribution center.

# SAP EWM Shipping Cockpit: Execution

## Actions

- Change TU
- Assign/Unassign Door
- Assign Staging Area
- Create Wave
- Unassign Delivery
- Arrival at Checkpoint
- Arrival at Door
- Start Loading
- Change Seals
- Request Invoice
- Close TU
- Departure from Door
- Post GI
- Departure from Checkpoint

The screenshot displays the SAP EWM Shipping Cockpit Execution interface for Warehouse BP10. The interface includes a search bar for Transportation Units and a table with columns for various actions and status indicators. The table contains the following data:

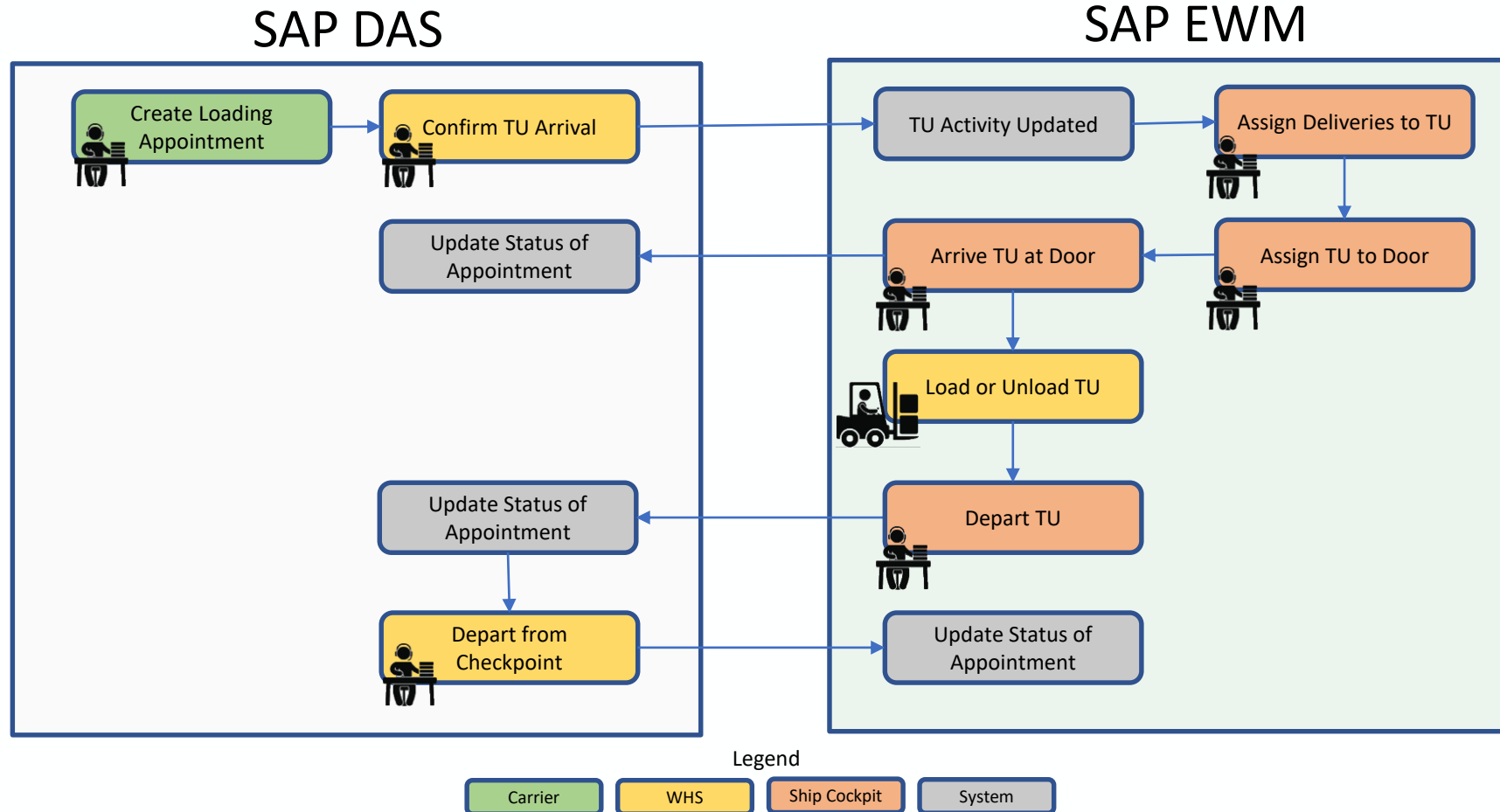
Post GI	Departure from Checkpoint	date Info	Assign Door	Unassign Door	Loading Sta...	LO	Automatically - Determination	Wave	Staging	Reverse Arrival at Checkpoint	Reverse Arrival at Door	Reverse Start Loading	Goods issue	Wareno...	Staging Bay	Request Invoice	Cancel Invoice	Print Invoice	Open PIC...	Reverse Loading Completed	Confirmed PI...	Pick WTs	No. of Itms w/o
<input type="checkbox"/>	> TU_CBI_0001	***	■	◇	■	◇	◇	■	■	▲	■	■	■	◇	YDO1	***	1	0	0	19	19		2
<input type="checkbox"/>	> 20000560	80000190	◇	◇	◇	◇	◇	■	■	■	◇	◇	◇	◇		0	5	0	5	0	5		
<input type="checkbox"/>	> 20000561	80000191	◇	◇	◇	◇	◇	■	■	■	◇	◇	◇	◇		0	13	0	13	0	13		
<input type="checkbox"/>	> 20000557	80000187	◇	◇	◇	◇	◇	■	■	■	◇	◇	◇	◇		0	0	0	0	0	0		
<input type="checkbox"/>	> 20000559	80000188	◇	◇	◇	◇	◇	■	■	■	◇	◇	◇	◇		0	0	0	0	0	0		

**Challenge:** No central location to obtain an overview and status for trucks/trailers of the work associated in the warehouse or distribution center.



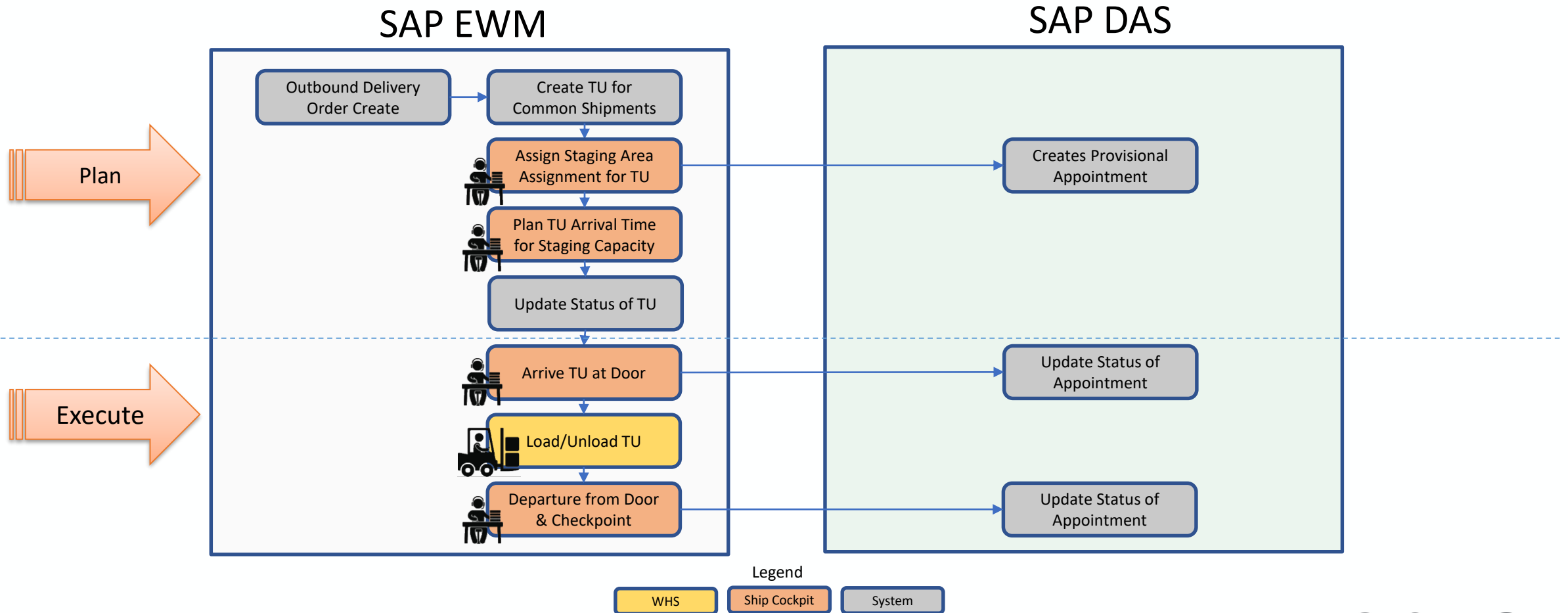
# EWM Integration: Shipping Cockpit & DAS

## Appointments Originating in SAP Dock Appointment Scheduling



# EWM Integration: Shipping Cockpit & DAS

## Appointments Originating in SAP Extended Warehouse Management



# SAP EWM Shipping Cockpit: Jumpstart!

Shipping Cockpit Execution - Warehouse BP10

Settings Search Related Links

No Messages - Display Message Log

Search: Transportation Units

Execution Overview

Standard \* Change TU Assign Door Assign Staging Area Create Wave Unassign Delivery Arrival at Checkpoint Arrival at Door Start Loading Change Seals Request Invoice Close TU Departure from Door

Post GI Departure from Checkpoint

Transportation Unit / R...	Outb. Deli...	Update Info	Arrival	At Door	Loading Sta...	Loading Com...	Depa...	Wave	Staging Area PL...	Pick	Pack	Stage	Load	Goods Issue	Wareho...	Staging Bay	Number of HUs	Open Pic...	Confirmed Pi...	Pick WTs	No. of Itms w/c
> S4/TRUCK0014	***		■	◇	■	■	◇	■	■	■	■	■	■	■		GI-YDO1	0	0	19	19	
> TU_CBI_0001	***	⚠	■	■	■	◇	◇	■	▲	■	■	■	▲	◇	YDO1	***	1	0	2	2	
> 20000560	80000190		◇	◇	◇	◇	◇	■	■	◇	◇	◇	◇	◇		GI-YDO1	0	5	0	5	
> 20000561	80000191		◇	◇	◇	◇	◇	■	■	◇	◇	◇	◇	◇		GI-YDO1	0	13	0	13	
> 20000557	80000187		◇	◇	◇	◇	◇	■	■	◇	◇	◇	◇	◇		GI-YDO2	0	0	0	0	
> 20000559	80000188		◇	◇	◇	◇	◇	■	■	◇	◇	◇	◇	◇		GI-YDO3	0	0	0	0	

## Added Functionality

- BAdI Utilization
  - Customer API
- Wave Release
  - Release by Wave Temp

# SAP EWM Shipping Cockpit: Jumpstart!

Shipping Cockpit Execution - Warehouse BP10

Settings Search Related Links

No Messages - Display Message Log

Search: Transportation Units

Execution Overview

Standard \* Change TU Assign Door Assign Staging Area Create Wave Unassign Delivery Arrival at Checkpoint Arrival at Door Start Loading Change Seals Request Invoice Close TU Departure from Door

Post GI Departure from Checkpoint Release Wave

Transportation Unit / R...	Comb. Deli...	Release Case Wave	At Do...	Loading Sta...	Loading Com...	Depa...	Wave	Staging Area PL...	Pick	Pack	Stage	Load	Goods Issue	Wareho...	Staging Bay	Number of HUs	Open Pic...	Confirmed Pi...	Pick WTs	No. of Itms w/c
> S4/TRUCK0014	***	Release Case Wave	◇	■	◇	◇	■	■	■	■	■	■	■		GI-YDO1	0	0	19	19	
> TU_CBI_0001		Release Pal Wave	◇	■	◇	◇	■	■	■	■	■	■	■	YDO1	***	1	0	2	2	
> 20000560	80000190	Release All Waves	◇	■	◇	◇	■	■	■	■	■	■	■		GI-YDO1	0	5	0	5	
> 20000561	80000191		◇	■	◇	◇	■	■	■	■	■	■	■		GI-YDO1	0	13	0	13	
> 20000557	8000018		◇	■	◇	◇	■	■	■	■	■	■	■		GI-YDO2	0	0	0	0	
> 20000559	80000188		◇	■	◇	◇	■	■	■	■	■	■	■		GI-YDO3	0	0	0	0	

## Added Functionality

- BAdI Utilization
- Wave Release
  - Release by Wave Temp
- SAP API Management

# EWM Jumpstarts – Best Practice Differentiators

MSCG Jumpstart is a proprietary set of custom SAP EWM objects, developed by MSCG, that provide enhanced functionality to Standard EWM processes. The Jumpstart offerings are tried, tested and deployed in live warehouse locations running SAP EWM today.

Every business is unique. Our Jumpstarts help reduce the time & cost required to implement as 60-80% of the development is already done ahead of localization.

## Available Jumpstarts

- Cubiscan – GUI transaction and Fiori App  
*Direct EWM integration to Cubiscan*
- IBGI and pack-slips  
*Comprehensive document printing solution for the warehouse*
- Cartonization and Cart Picking  
*Calculate exact shipping box sizes at Warehouse Order Creation*
- Wave Simulation  
*Check for product shortages and trigger replenishments needs*
- Automatic Pack-spec Creation  
*Pack-spec creation can be triggered from a new product CIF*
- HU Audit  
*Custom transaction (RF and GUI) for verify quantities after picking*
- Consolidation Monitor & RF  
*Monitor and consolidate multiple boxes for shipments*

- Product Master: Default values (CIF)  
*Automatically create Warehouse Data from Product Attributes*
- Fiori environment Enablement steps  
*Documented list of steps that a new customer can follow*
- Receiving – Fiori App  
*Simplified transaction to reduce receiving time*
- Shuttle transfer between Warehouses using DODOs  
*Simplified process to transfer stock between 2 warehouse in a plant*
- Pallet Move  
*Simplified HU move transaction to reduce complexity with open WTs*
- Simplified Task – Interleaving  
*Enable interleaving with decreased data requirements and complexity*
- Voice Pick Utilities  
*Enhanced loading for PBV verification and QR Code password creation*



## Upcoming Jumpstarts

- EGF Warehouse Reports: *Monitor warehouse productivity with graphical reports*
- Auto Resource to Resource Transfer: *Allow users to complete unfinished work without interference*
- High Volume Outbound Picking: *Streamlined repetitive picking process*
- Fiori App for HU Audit: *Custom Fiori application for MSCG HU Audit process*
- Small Parcel Shipping: *Simple small parcel carrier integration through EWM packing*
- Standalone Warehouse & 3PL: *Pre-built EWM warehouse for standalone or 3PL use*



## Key Outcomes/Objectives

1. Gain a better understanding of the challenges faced by today's warehousing and distribution operations related to freight shipment and scheduling of dock appointments.
2. Understand how to properly utilize the Shipping Cockpit in SAP Extended Warehouse Management to accurately plan Outbound Delivery Orders with correct transportation units, monitor warehouse progress for transportation units and execute work.
3. Learn how to efficiently schedule loading appointments at your warehouse or distribution center with SAP Extended Warehouse Management's Dock Appointment Scheduling tool.

# Take the Session Survey.

We want to hear from you! Be sure to complete the session evaluation on the SAPPHIRE NOW and ASUG Annual Conference mobile app.



# Presentation Materials

Access the slides from 2019 ASUG Annual Conference here:

<http://info.asug.com/2019-ac-slides>



# Q&A

For questions after this session, contact us at

[wmarion@mysupplychaingroup.com](mailto:wmarion@mysupplychaingroup.com) and [npatel@mysupplychaingroup.com](mailto:npatel@mysupplychaingroup.com)

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