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ARKEMA

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# Magellan

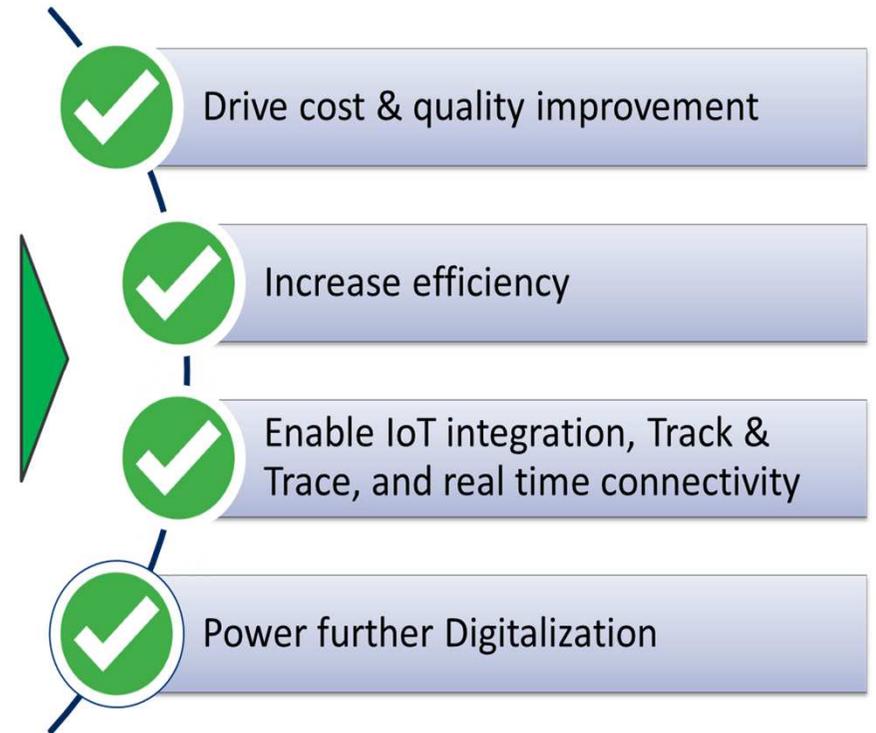
Global OTM  
Implementation

4/13/2022



# About Arkema & Project Magellan

- Arkema S.A. is a specialty chemicals and advanced materials company headquartered in Colombes, near Paris, France.
- Arkema was created when French oil major Total restructured its chemicals business in 2004

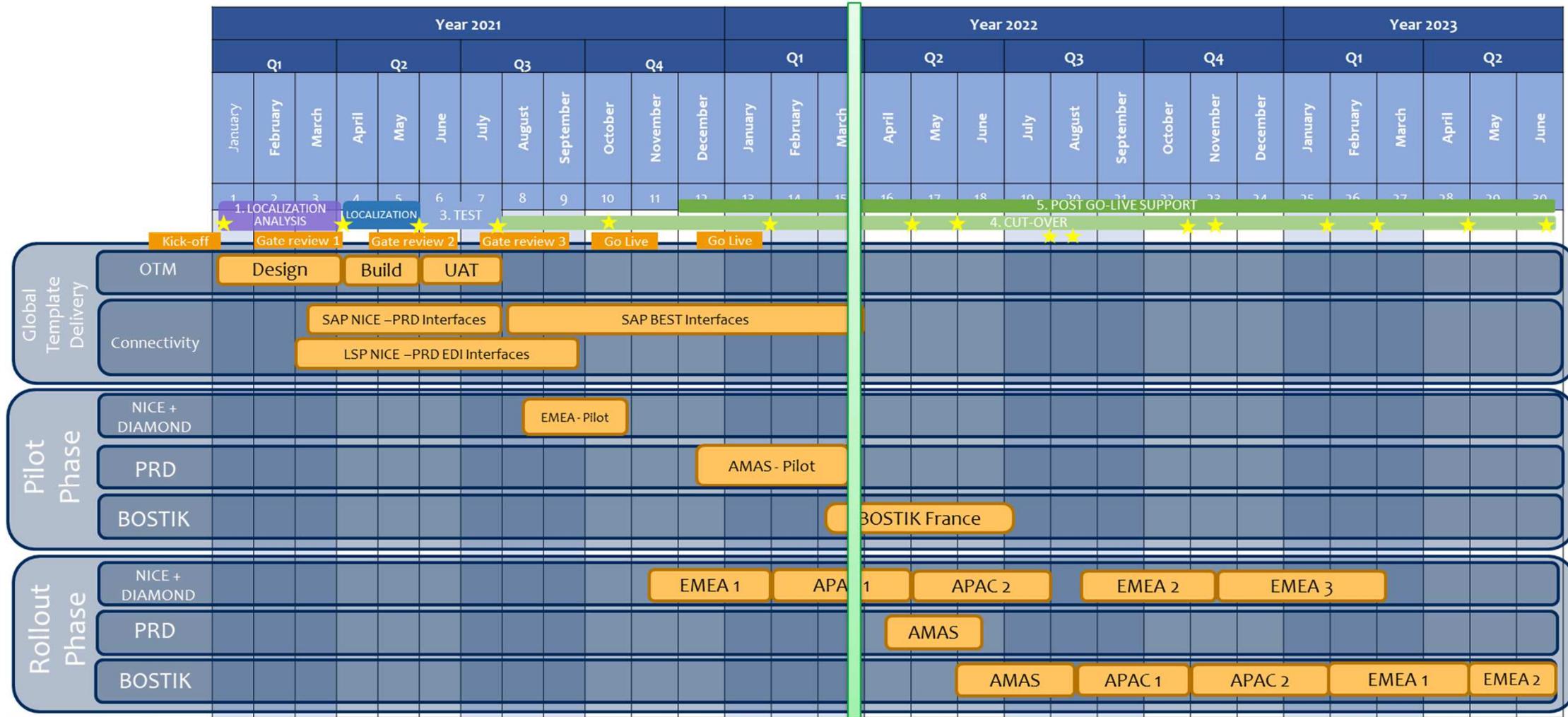


## MAGELLAN KEY PROJECT FACTS

- 3 main Zones : AMAS – EMEA – APAC
- All Transportation modes: FTL - LTL – FCL – LCL –Rail- Air – Parcel
- All types of products: Bulk – Packaged – Haz and not Haz
- Strong asset management ( Tanks, spheres...)
- Industry or retail based Businesses
- 3 ERP to be connected with.
- 130 Sites to be deployed
- 1 000 End users expected.

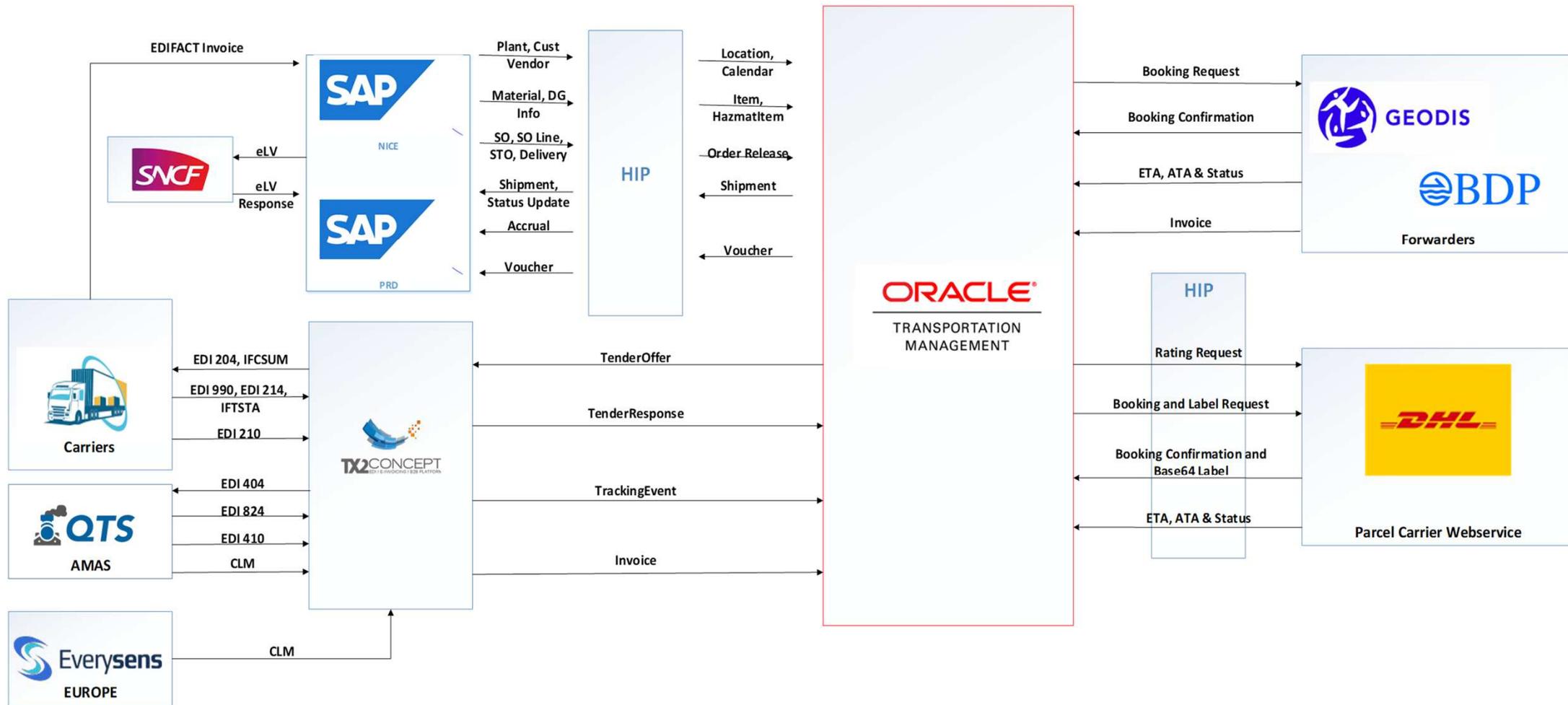


# High Level Roadmap



# Solution Footprint

# Solution Footprint – Currently Live



# Managing Exports

## Managing Exports - Challenge

- Arkema is directly contracted with steamship lines. Bookings are managed via Forwarders
- Need to be able to book with sufficient lead time to ensure space on vessel/container availability
- Cannot plan Pre and Post leg shipments until booking confirmation is received
- No inclination to manage vessel schedules in OTM, currently
- Sales Orders are owned by Sales Assistants. Delivery notes in SAP are owned by Shipment planners at plants. Sales Assistants may be situated in a different country than the plants
- Delivery notes are created closer to ship date, hence the need to book with Sales Order
- A sales order may ship in one or more containers

# Managing Exports - Solution

## → Booking Request

- Sales orders are sent to OTM as Order Releases with request for container
- Order Releases are planned as single leg shipment to the forwarder
- Shipment is tendered to send Booking Request to Forwarder
- The booking request consists of Ship From, Ship to, Container details, Product details, Preferred steamship line and Ranking for all steamship lines on the lane

## → Booking confirmation

- Forwarder books with steamship line and

send booking confirmation to OTM

- Booking confirmation consists of confirmation of Steamship line, container type and count, POL/CFS/TSA, POD, Sail Date, Sail/CFS/TSA Cutoff Date, ETA at POD, Pickup date at plant, Estimated delivery date at Consignee
- Consol and consol shipment(s) is created using Automation agents.
- Booking confirmation is sent from OTM to SAP when all mandatory information are available
- Plant can create delivery now

# Managing Exports - Solution

## → Delivery Creation

- Shipment planner at plant can create delivery in SAP only after receiving booking confirmation
- Planner create **as many deliveries as the number of containers** booked
- Each delivery is sent to OTM with BOL number to create as many Order Releases

## → Planning Pre and Post leg shipments

- On Order release creation, an automation agent automatically **creates Order Movements**
- Update **Operational pickup and delivery**

## **dates** on the order movements

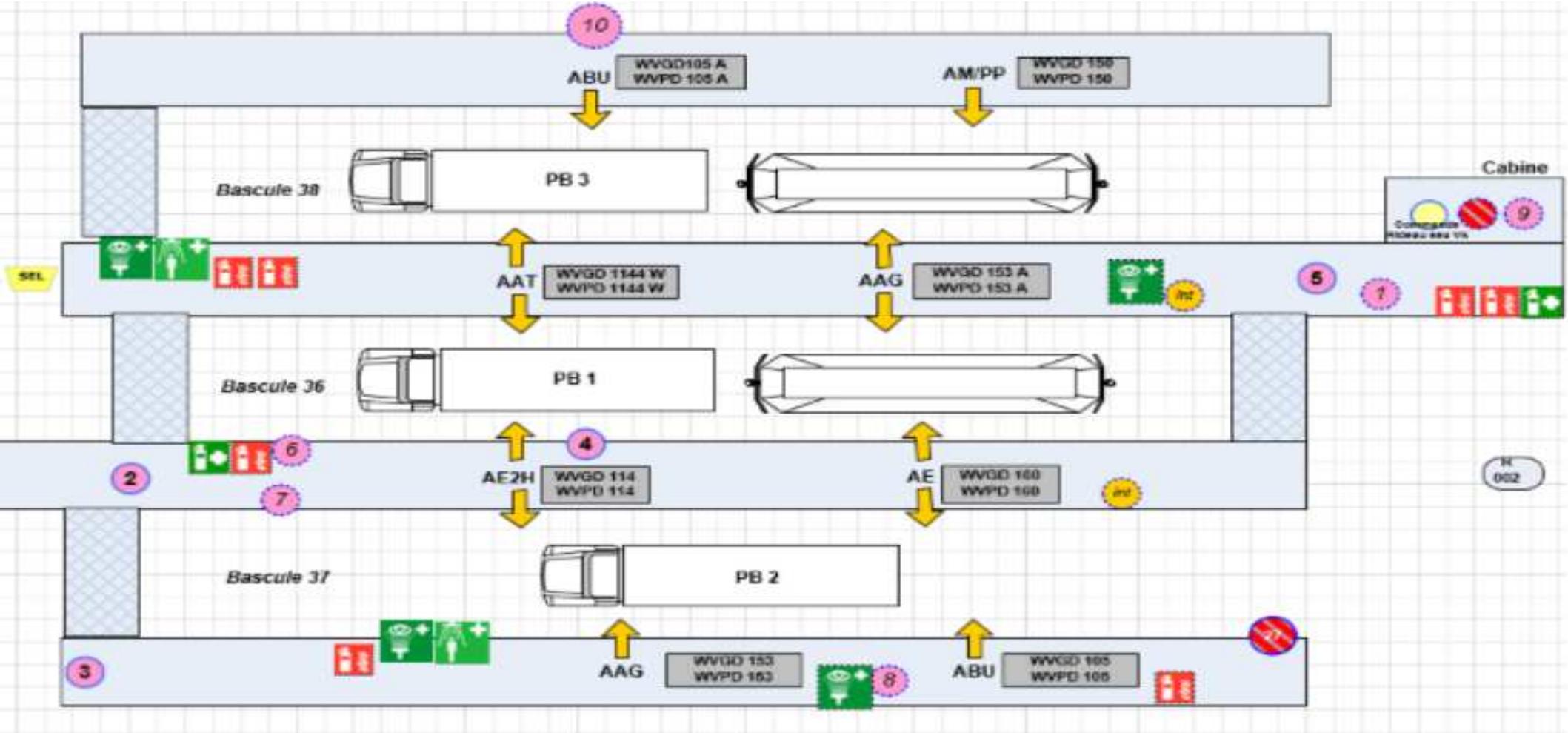
- The main leg order movement is assigned to the Consol shipment
- Pre and Post leg order movements are planned
- If forwarder is managing only the P2P movement the pre leg and post leg shipments **are tendered to the drayage carriers.**
- When booking for all legs are confirmed, shipment is sent to SAP.

## Managing Exports – Solution Benefits

- By delaying Delivery creation in SAP, the sales assistant have added flexibility to modify the Sales order in SAP at will
- As each delivery represents a container, we are able to create as many pre leg shipments as the number of containers being shipped. This helps in setting up pickup appointments for each container
- Ability to calculate booking fees for the entire booking on the shipment created from sales order
- Ability to calculate freight on a per container basis on the shipments created from deliveries
- Forwarders are able to send consolidated invoice to OTM with costs broken down by Leg and container number

# Dock Scheduling

# Representative Dock Layout



## Dock Scheduling- Challenge

- Loading of bulk chemicals into tank trucks come with a unique set of operational requirements that is not so common with packaged products
- Bulk Chemicals are pumped through loading arms. Each **loading arm is dedicated for a particular chemical** or its dilution
- A **loading arm may be turned around** to load at multiple loading bays, however at a time a loading arm can be used at only 1 loading bay
- Two or more different bulk chemicals may be shipped in a **multi-compartment tanker**. A **separate appointment is required** to load each compartment.
- LTL carriers pickup multiple shipments in the same truck. Need to be able to setup **one pickup appointment for multiple LTL shipments**
- LTL carriers communicate **loading sequence**

# Dock Scheduling- Solution

→ Constraints – Dock door, Loading arm, Product compatibility

- Setup custom resource type of Loading Arm in addition to the standard resource type of Dock Door
- Define each physical loading arm as a resource on the Location
- Define each loading bay as a Dock Door on the location
- Constraint both the dock doors and the loading arm to specific chemicals by specifying a Flex Commodity Profile

Resource Type	Calendar ID	Constrain Appointment
DOCK DOOR	CARLING_PB_MON_FRI_0615_1915	<input checked="" type="checkbox"/>
LOADING_ARM	CARLING_PB_MON_FRI_0615_1915	<input checked="" type="checkbox"/>

Location Resource ID	Location Resource Name
NORTH-LA1	NORTH-LA1-ACOH
NORTH-LA2	NORTH-LA2-ADAME
SOUTH-LA1	SOUTH-LA1-ABU
SOUTH-LA2	SOUTH-LA2-AAT
SOUTH-LA3	SOUTH-LA3-AAG
SOUTH-LA4	SOUTH-LA4-AE2H
SOUTH-LA5	SOUTH-LA5-AE

LOCATION_RESOURCE_GID	LOCATION_RESOURCE_XID	LOCATION_GID	RESOURCE_TYPE_GID	LOCATION_RESOURCE_NAME	DESCRIPTION	CALENDAR_GID	FLEX_COMMODITY_PROFILE_GID
ARK/NICE.SOUTH-PB1	SOUTH-PB1	ARK/NICE.0134	DOCK DOOR	SOUTH PONT 1	null	null	ARK/NICE.SOUTH-PB1

# Dock Scheduling- Solution

## → Multi compartment

- When shipping multiple bulk chemicals shipments are planned to a **multi compartment tank truck**
- When shipment tender is accepted OTM workflow automation is used to automatically create as many **'Appointment Shipments'** as the number of compartments
- The Shipment ID for the appointment shipments start with the **original shipment ID followed by the compartment number** e.g.: AR100029487\_1, AR100029487\_2
- Appropriate status set on **original shipment so that it doesn't show up in the dock scheduling** screen

## → Multiple LTL shipments in one truck

- LTL carriers have been provided an efficient option to **update truck number on multiple shipments** efficiently via the OTM carrier portal
- LTL carriers are also able to specify the **loading sequence for each shipment**. This information is made available to the dispatch teams at the plant/warehouse who then stage and load the shipments accordingly
- OTM workflow **automatically creates shipment groups** for shipments with the same Truck license plate number
- LTL carriers **set pickup appointment for the shipment group**

# Asset Tracking

# Asset Tracking



# Asset Tracking - Challenge

- Ability to track all reusable assets with UpToDate information on last sighting location
- Easier to track assets that are 'Equipment' e.g.: Rail Car and Reefer
- Difficulty in tracking assets that may be a handling unit e.g.: SBC, IBC, ISO tanks, Cages, Pallets, Spheres



Rail Tank Car - Handling unit & Equipment



IBC - Handling Unit Equipment - Flatbed



Reefer- Equipment

# Asset Tracking - Solution

## → Equipment Tracking

- At PGI, Equipment number is interfaced to OTM to update the shipment
- Partners send tracking information at shipment (road, ocean) or equipment (rail) level
- Standard OTM functionality matches tracking events to Equipment

## → Tracking Handling Units

- All assets are defined as equipment in OTM
- At PGI, asset number is interfaced to OTM as an attribute on the ship unit
- A customised workflow updates the shipment events on equipment referenced in the ship unit attribute

**Equipment** Total Found: 1000

Actions	+	🔍	✂	🔄	🖨			
<input checked="" type="checkbox"/>	★	ID	Equipment Number	Equipment Type ID	Sighting Location ID	Sighting Location N...	Sighting Date	
<input type="checkbox"/>	☆	<a href="#">ARK.3387792932...</a>	338779293293	<a href="#">Z065</a>	<a href="#">0000110966</a>	ADISSEO FRANCE SAS	2022-03-12 07:15 Euro...	
<input type="checkbox"/>	☆	<a href="#">ARK.930328J</a>	930328J	<a href="#">TON_TANK</a>	<a href="#">0000104176</a>	ALL'CHEM	2022-03-11 09:14 Euro...	

Actions	+	🔍	✂			
<input checked="" type="checkbox"/>	★	ID	Status Code	Status Code Descri...	Event Date ▲	
<input type="checkbox"/>	☆	<a href="#">145204</a>	<a href="#">AF</a>	Actual Pickup	2021-11-12 12:15 GMT	
<input type="checkbox"/>	☆	<a href="#">145799</a>	<a href="#">P1</a>	Departed Terminal Loc...	2021-11-12 15:15 GMT	
<input type="checkbox"/>	☆	<a href="#">145208</a>	<a href="#">X4</a>	Arrived at Terminal Loc...	2021-11-12 15:15 GMT	
<input type="checkbox"/>	☆	<a href="#">145797</a>	<a href="#">X4</a>	Arrived at Terminal Loc...	2021-11-12 18:25 GMT	
<input type="checkbox"/>	☆	<a href="#">145967</a>	<a href="#">P1</a>	Departed Terminal Loc...	2021-11-12 18:25 GMT	
<input type="checkbox"/>	☆	<a href="#">146077</a>	<a href="#">P1</a>	Departed Terminal Loc...	2021-11-12 21:17 GMT	
<input type="checkbox"/>	☆	<a href="#">145971</a>	<a href="#">X4</a>	Arrived at Terminal Loc...	2021-11-12 21:17 GMT	
<input type="checkbox"/>	☆	<a href="#">146081</a>	<a href="#">X4</a>	Arrived at Terminal Loc...	2021-11-13 00:15 GMT	
<input type="checkbox"/>	☆	<a href="#">146598</a>	<a href="#">P1</a>	Departed Terminal Loc...	2021-11-15 03:15 GMT	
<input type="checkbox"/>	☆	<a href="#">146602</a>	<a href="#">X1</a>	Arrived at Delivery Loc...	2021-11-15 06:15 GMT	
<input type="checkbox"/>	☆	<a href="#">366767</a>	<a href="#">AF</a>	Actual Pickup	2022-01-20 12:15 GMT	
<input type="checkbox"/>	☆	<a href="#">368574</a>	<a href="#">P1</a>	Departed Terminal Loc...	2022-01-20 15:32 GMT	
<input type="checkbox"/>	☆	<a href="#">375413</a>	<a href="#">P1</a>	Departed Terminal Loc...	2022-01-21 15:25 GMT	
<input type="checkbox"/>	☆	<a href="#">376423</a>	<a href="#">P1</a>	Departed Terminal Loc...	2022-01-21 18:15 GMT	

Thank You

[arkema.com](https://arkema.com)

**ARKEMA**



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