COE TRANSPORTATION MANAGEMENT

END TO END PROCES

Transportation Planning and Management and Track & Trace
(TPTM – T&T project)

December 2018
<table>
<thead>
<tr>
<th>LOAD LIST</th>
<th>PLAN</th>
<th>PROCURE FREIGHT</th>
<th>EXECUTE &amp; MONITOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>COE</td>
<td>TCC Stage</td>
<td>Freight Forwarder</td>
<td>TCC Stage</td>
</tr>
<tr>
<td>Update Excel</td>
<td>LOA</td>
<td>Stage</td>
<td>LOA</td>
</tr>
<tr>
<td>Load List</td>
<td>Freight</td>
<td>NON-LOA</td>
<td>Freight Forwarder</td>
</tr>
<tr>
<td>OFFLINE</td>
<td>Forwarder</td>
<td>Stage</td>
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</tr>
<tr>
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<td>NON-LOA</td>
<td>NON-LOA</td>
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</table>
The following output from the “Memorandum of Understanding” (MOU) between the Contingency and the United Nations will be used to initiate the Transportation processes:

a) Cargo Load List

It is important to point out that TM is not a “Travel Management system”, therefore only the information relevant for transportation purposes will be uploaded to TM.

The contents of the Cargo Load List are summarized in the Excel Load List. Some data should be cross-referenced in TM.

Main differences between UNOE & COE:

✓ ECC Integration: There is no integration with ECC
✓ Prepare Load List: Load List (Break Bulk, Containers, Rolling Stocks, Trailers, Vehicles, as well as Dangerous Goods), Item Details (Weight, Volume, Quantity, etc) Delivery Locations (Source, Destination, Time, Date), Incoterms (DAP for LOA, EXW for NON-LOA), Forwarding Group (1,2,3,4… one digit for each different delivery date)
✓ Upload Load list: Upload Load List in TM to generate FWO (Forwarding Order), No DTR
✓ FOW: TM generates as many FOWs as Forwarding Groups added to the Load List
Manually update fields in the Excel Load List (summary of Cargo Load List):

- **FWO Type:** ZFW1 (for COE)
- **Service Level:** Priority of transportation requirements

<table>
<thead>
<tr>
<th>Service Level Code</th>
<th>Service Level Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Standard</td>
</tr>
<tr>
<td>02</td>
<td>Express</td>
</tr>
<tr>
<td>03</td>
<td>High Value</td>
</tr>
</tbody>
</table>
Manually update fields in the Excel Load List (summary of Cargo Load List):

- **Source & Destination Location**: Location codes of the source & destination airports. (Cross reference data in TM)
- **Pick-Up Date & Time**: Use time zone at source location
- **Delivery Data & Time**: Use time zone at destination airport

<table>
<thead>
<tr>
<th>FWO Type</th>
<th>Service Level</th>
<th>Source Loc</th>
<th>Dest Loc</th>
<th>Pick-Up (From) Date</th>
<th>Pick-Up (From) Time</th>
<th>Delivery (To) Date</th>
<th>Delivery (To) Time</th>
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<tbody>
<tr>
<td>ZFW1</td>
<td>01</td>
<td>SUJO-00001</td>
<td>SUCF-00001</td>
<td>09/30/2018</td>
<td>09:45:00</td>
<td>11/11/2018</td>
<td>04:30:00</td>
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<tr>
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<td>SUCF-00001</td>
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<td>ZFW1</td>
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<td>SUCF-00001</td>
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<td>11/11/2018</td>
<td>04:30:00</td>
</tr>
</tbody>
</table>
Manually update fields in the Excel Load List (summary of Cargo Load List):

The **Product, Item Type, and Item Category** fields are defaulted, however can be edited as necessary

- **Load List**: This line remains as is and should be added before Product categories that belong to a new FWO(s)
- **Product**: Main categories from Cargo Load List. Add DG to define Dangerous Goods
- **Item Type**: It is a technical description of the Product. (e.g. CONTAINER = ZCON)
- **Item Category**: PRD for product

<table>
<thead>
<tr>
<th>Product</th>
<th>Item Type</th>
<th>Item Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Load List</td>
<td>ZLOL</td>
<td>PKG (package)</td>
</tr>
<tr>
<td>BREAKBULK</td>
<td>ZBRB</td>
<td></td>
</tr>
<tr>
<td>CONTAINER</td>
<td>ZCON</td>
<td></td>
</tr>
<tr>
<td>ROLLINGSTOCK</td>
<td>ZROS</td>
<td></td>
</tr>
<tr>
<td>TRAILER</td>
<td>ZTRL</td>
<td>PRD (product)</td>
</tr>
<tr>
<td>VEHICLE</td>
<td>ZVEH</td>
<td></td>
</tr>
<tr>
<td>DBGBREAKBULK</td>
<td>ZBRB</td>
<td></td>
</tr>
<tr>
<td>DGCONTAINER</td>
<td>ZCON</td>
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</table>

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<tr>
<td>VEHICLE</td>
<td>ZVEH</td>
<td>PRD</td>
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</table>
Manually update fields in the Excel Load List (summary of Cargo Load List):

- Weight & Weight UoM / Volume & Volume UoM / Quantity & Quantity UoM
  
  \textit{This example refers to a requirement for 102 Vehicles to be transported.}

<table>
<thead>
<tr>
<th>Product</th>
<th>Item Type</th>
<th>Item Category</th>
<th>Weight</th>
<th>Weight UoM</th>
<th>Volume</th>
<th>Volume UoM</th>
<th>Quantity</th>
<th>Quantity UoM</th>
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<td>PKG</td>
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<td>KG</td>
<td>1000</td>
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<td>EA</td>
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<td></td>
<td>6700</td>
<td>KG</td>
<td>4000</td>
<td>M3</td>
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<td>M3</td>
<td>10</td>
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<td>KG</td>
<td>9000</td>
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<td>KG</td>
<td>9000</td>
<td>M3</td>
<td>2</td>
<td>EA</td>
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</tbody>
</table>
Manually update fields in the Excel Load List (summary of Cargo Load List):

- **FWO Group**: Important when creating multiple Forwarding Orders (FWO) with the same Excel upload sheet

- **Def.Route**: Only if Default Route information is provided. System will use Def.Route for the planning

- **Base BTD Ref**: MOU number (*future link with the RAPS system that is being developed*). It is a common reference number between UN and the TCC.
Manually update fields in the Excel Load List (summary of Cargo Load List):

- **Goods Value & Goods Value Currency**: Goods Value for each item.
- **Sales Group**: Use “SG_S02” for the COE process.
- **Incoterm**: The system uses standard incoterms. Please indicate:
  - DAP for a LOA scenario
  - EXW for a Non-LOA scenario
- **Member Country [Shipper]**: Business Partner related to the Contingency. (Cross reference data in TM)
- **Receiving Plant [Consignee]**: Plant of the mission receiving the equipment. (Cross reference data in TM)
Upload Excel Load List to Umoja

A Forwarding Order (FWO) will be created in Umoja TM by uploading the Excel Load List completed in the previous step.

The upload can be done in Umoja TM backend (similar to ECC) by the TM Planner role using the ZTMFWOUPLOAD T-Code.
Create FWO(s) & FU(s) Umoja System

The system automatically creates a Freight Unit (FU) for each Forwarding Order (FWO) in TM.

Both the FWO and FU can be displayed in the TM Portal (SAP Netweaver Business Client).
LOAD LIST

COE

Update Excel
Load List

OFFLINE

TM Planner

Upload Load List

Umoja System

Create FWO(s)

Umoja System

Create Freight Unit(s)

PLAN

TCC Stage
LOA

Freight Forwarder
Stage
NON-LOA

Umoja System

Create FO(s)
Vendor/TCC Stage

Assign Carrier to FO(s)

Umoja System

Manage FO(s)

PROCURE FREIGHT

NON-LOA

EXECUTE & MONITOR

TCC Stage
LOA

Freight Forwarder
Stage
NON-LOA
In a COE scenario, the TCC stage applies to DAP Incoterms. The system automatically creates the Freight Order used to report all the events related to the transportation that is completely managed by the TCC.

- Based on the TM Transportation Network (Master Data), the system selects the default route between the vendor location and the delivery location and creates as many Freight Orders as legs in the route.
- The system automatically assigns the Business Partner details of the TCC as Carrier to these newly created Freight Orders in the carrier field of the Freight Order.
- These automatically created Freight Orders are in “Ready for Execution” status. The TM Planner connects to TM to submit the events related to each FO (i.e. leg).
- Should the automatically created Freight Orders differ from the Business Partner’s actual route, the TM Planner can delete and re-create them to reflect the real route and to facilitate the insertion of events at a later stage.
**LOAD LIST**
- Update Excel Load List
- **OFFLINE**
  - TM Planner
    - Upload Load List
  - Umoja System
    - Create FWO(s)

**PLAN**
- TCC Stage
  - LOA
  - Freight Forwarder Stage
    - NON-LOA
    - TM Planner
      - Select FU(s) in TM Cockpit
    - Umoja System
      - Generate TM Proposals
    - TM Planner
      - Select Best TM Proposal
    - Umoja System
      - Calculate Charge Estimate
    - Umoja System
      - Create Freight Unit(s)
      - Generate SOW

**PROCURE FREIGHT**
- NON-LOA

**EXECUTE & MONITOR**
- TCC Stage
  - LOA
  - Freight Forwarder Stage
    - NON-LOA
In a COE scenario, the Freight Forwarder stage applies to EXW Incoterms. In this stage the Freight Forwarder is responsible for delivering the items to the final destination.

Freight Units appear in the Transportation Cockpit filtered by Profile (EXW vs DAP):

Several Freight Units (FUs) with the same pick-up and destination locations can be consolidated to be transported together. There is a time window (currently 7 days) that allows multiple FUs to be consolidated.
The system displays a list of transportation proposals for the set of FUs selected based on the existing Transportation Network Master Data.

Transportation Proposals are organized in the following way:

- **Transportation Proposal Number**
- **Freight Unit Number**
  - Legs of Goods Vendor Stage *(pre, main, on)*
  - Legs of Freight Forwarder Stage *(pre, main, on)*

*TM Planner will select the best proposal based on distance, duration, etc.*
The system creates the new **Freight Orders** for the FFW stage based on the proposal selected *(one for each leg)*.

- The Carrier is defaulted to ZDUMMY_CAR until the freight is awarded and the real carrier is assigned.
- The system automatically calculates the estimated Charges based on the “Charges Master Data”.

**TM Planner**

- Select FU(s) in TM Cockpit

**Umoja System**

- Generate TM Proposals
- Select Best TM Proposal
- Calculate Charge Estimate
- Create FO(s) FFW Stage
A “Statement Of Work” document (SOW) can be downloaded from each Freight Order. The SOW can be edited and printed. The SOW serves as an input for the Freight Procurement phase.

The SOW includes all the Freight Orders related to the same Shipment.

* Specific templates are available for UNOE, COE & Troops.
The Freight Procurement steps in the system remain very similar as they currently are.

Below some items to be considered with the TM implementation:

- Freight Services are requested in a separate Shopping Cart (no more $1 line for freight in the goods shopping cart).
- The SOW to be attached in the Freight Shopping Cart can be downloaded directly from Umoja TM.
- TM is now the single source of information for all the transportation requirements.
Once the freight services have been awarded, the Freight Order in TM has to be updated with the selected carrier and the related purchase order number.

Once the carrier is assigned in the FO, the FO execution status changes to “Ready for Execution” allowing the freight forwarders to submit the related events.

Moreover the Freight Order needs to be updated with:

- **Actual Route**: If the route selected by the carrier is different to the planned route, the FO has to be updated with the new route as it is used to report events.

- **Actual Dates**: The planned dates need to be updated in the Freight Order based on the information provided by the Freight Forwarder.

- **Actual Charges**: The Freight Order charges have to be updated with the actual ones appearing in the Freight Purchase Order. The system allows comparing the estimated charges and the actual charges for reporting purposes.
In a LOA scenario, the transportation is completely managed by the TCC. However, as TCC will not have access to the Carrier Collaboration Portal (CPP), all the transportation events will be submitted by the TM Planners on their behalf.

- The Umoja role “TS.01 TM Planner” will update the related events/attachments directly in the TM module. These Events/Attachments are also displayed in CCP.

- Once the first event is submitted, the FO execution status changes to “In Execution”. No changes in the route are further allowed.

**Report Event** – Expected Events

**Insert Event** – Unexpected Events
Freight Forwarders will be provided with login credentials for the Umoja Carrier Collaboration Portal (CCP).

In CCP, Freight Forwarders will see the Freight Orders they are responsible for the transportation. They will be able to submit events and upload attachments.

All Events/Attachments submitted via CCP are displayed in TM.

In case the vendor cannot connect to CCP, Umoja role “TS.01 TM Planner” can update the related events/attachments directly in the TM module. These Events/Attachments are also displayed in CCP.

Once the first event is submitted, the FO execution status changes to “In Execution”. No changes in the route are further allowed.

Other Umoja related documents:
- Predecessor documents (EXW): Virtual Goods Receipt & Stock Transport Order
- Follow-on documents (EXW): Physical Goods Receipt
Email notifications are sent automatically when some specific events are reported or overdue:

- **Unexpected Events:**
  - An email notification to the TM Planner, Requisitioner and R&I is sent when any of this type of events is reported (*delay, damage, loss, etc.*).
  - Procurement Division will also be notified in case the unexpected event is either “Cost Change” or “Route Change”

- **Planned Events:**
  - “Handover document” event:
    - When the event is reported an email is sent to the R&I contact in the destination Plant
    - If the event is overdue more than 48 hours (*from the planned date*) an email is sent to MovCon.
  - “Documentation Sent” event (*only for “main carriage” leg)*:
    - When the event is reported an email is sent to the R&I contact in the destination Plant
    - If the event is overdue more than 10 days (*from the planned date*) an email is sent to MovCon.
  - “Documentation Complete” & “Custom Clearance” events (*only for “main carriage” leg)*:
    - If the event is overdue more than 10 days (*from the planned date*) an email is sent to MovCon.
TRANSPORTATION MANAGEMENT ENTERPRISE ROLES

• **TS.01 TRANSPORTATION PLANNER & EXECUTION**
  
  Main function is to create Freight Orders to execute a transportation plan. They can also submit events.
  
  This enterprise role has three flavors: UNOE, COE & Troops.

• **TS.02 FREIGHT ORDER MANAGEMENT**
  
  Main function is to update Freight Order stages, dates, actual charges, carrier and Freight PO. They can also submit events.

• **TS.03 TM DISPLAY ALL**
  
  Display access is granted to all TM documents: DTR, FWO, FU, and FO.

• **TS.04 TM MASTER DATA MAINTAINER**
  
  Main function is to maintain the Transportation Network (Locations, Zones, Lanes, etc.) and Transportation Rates.

• **TS.05 COLLABORATION PORTAL**
  
  Access the Carrier Collaboration Portal to submit related Events & Attachments.

• **TS.07 TM & EM Reporting Display and Analysis**
  
  It provides access to the reporting and analysis TM workspace in Umoja BI.
### TM RELATED ACRONYMS

<table>
<thead>
<tr>
<th>ACRONYM</th>
<th>FULL FORM</th>
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</tr>
</thead>
<tbody>
<tr>
<td>SRM</td>
<td>Supplier Relationship Management</td>
<td>T/PCC</td>
<td>Troops/Police Contributing Country</td>
</tr>
<tr>
<td>ECC</td>
<td>ERP Central Component</td>
<td>FWO</td>
<td>Forwarding Order</td>
</tr>
<tr>
<td>TM</td>
<td>Transportation Management</td>
<td>LOA</td>
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<td>PO</td>
<td>Purchase Order</td>
</tr>
<tr>
<td>SC</td>
<td>Shopping Cart</td>
<td>SOW</td>
<td>Statement of Work</td>
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