

A light gray world map is centered in the background of the slide, showing the continents of North America, South America, Europe, and Africa.

Best Practices

in Tank Logistics Management

Who is TCMS?

- ***Tank and Container Management Systems was created in November 2016 – two years ago***
- ***First client was Honeywell International***
- ***Distribution and fleet management of 10,000+ global assets including ISOs, cylinders, and chassis***
- ***Staff in The Woodlands, Singapore, Romainia***
- ***Navigator software system leverages:***
 - ***Broad ISO experience of staff who managed the Honeywell ISO fleet and distribution for 12 years***
 - ***Bourque Logistics' rail logistics software systems for 100+ North American shippers***

Disciplines

Key areas to address in ISO management:

- ***Shipment Tracking***
- ***Tank Maintenance and Compliance***
- ***Certificates***
- ***Load and Return Management***
- ***ERP (SAP) Integration***
- ***BI and Dashboards***

Shipment Tracking

Issues

- ***Complex Trips - International, Multi-Mode Segments, Interchanges***
- ***Transit Data – Different reporting by carrier, freight forwarder, mode***
- ***Interchange Activities – mainly email and spreadsheet for tank status, dispo, repair, test***

Shipment Tracking

Suggestions

- ***Complex Trips –***
 - ***Critical to integrate Trip, Mode Segment, and Interchange components***
 - ***Must handle round trips but mainly orphaned and one-way movements, diversions, etc.***
 - ***Trip processing varies by container type – ISO vs Cylinder***
- ***Transit Data –***
 - ***Standards based on 200/300 series EDI***
 - ***Must handle spreadsheet and other reporting***
 - ***“Estimated Landings” show un-confirmed arrivals if data is non-existent or late***
 - ***Ease of arrival confirmation critical – multiple containers, fleet, product, O-D assignments, etc***
- ***Interchange Activities -***
 - ***Tank status standard codes - STORAGE, RECOVERY, REPAIR, AVAILABLE***
 - ***Tank condition standard codes – LOADED, EMPTY, CLEAN, PARTIAL***
 - ***Standards easier with evolving 3P depot software systems***

Tank Maintenance and Compliance

Issues

- ***Depots – communication vital, tank dispo and status. Email, spreadsheet, phone***
- ***Tank Owners/Lessors – tank profiles for physical specs, critical dates, lease details***
- ***Paying Bills – pricing and coding for storage, movements, repairs, lease, etc.***

Tank Maintenance and Compliance

Suggestions

- ***Depots –***
 - ***Standard codes for tank status***
 - ***Instruction coding for activity request/response***
 - ***Final info instead of in-process activities used by depots (To-CLEAN vs CLEANed)***
- ***Tank Owners/Lessors –***
 - ***Standard files for on-hire tank profiles – physical specs, test dates,***
 - ***Lease details – rider, start date, end date, cost, etc.***
- ***Paying Bills –***
 - ***Standard line item coding based vendor and activity type***
 - ***UM standards for pricing***
 - ***Date types***
 - ***Repair estimates, approvals (BRC example)***
 - ***Payment coding and processing to ERP (SAP)***

Certificates

Issues

- ***Certificate Types - birth, inspection, clean***
- ***Timely Delivery – before tank arrivals***
- ***Certificate Designs – paper-based, different layouts, languages, date types***
- ***Filing and Sharing – fax, email, and manual filing***

Certificates

Suggestions

- **Certificate Designs –**
 - *Go electronic and standardize layouts*
 - *Coded dates, English but translated as required*
 - *Use tablets to record data*
 - *DocuSign or other providers for required signatures*
- **Filing and Sharing**
 - *“Metadata” standards for docs – tank ID, certificate type, dates, creator*
 - *Allows automated filing*
 - *Automate exchange/access documents between party systems – depots, lessors – via web calls*
- **Timely Delivery**
 - *Tie the documents to the transactions*
 - *Emails, URLs provided to trading partners linked to shipments*

Load and Return Management

Issues

- ***Orders vs. Deliveries***
- ***Tank Assignment and Dispatch***
- ***Customer inventory, release, return***

Load and Return Management

Suggestions

- ***Orders vs. Deliveries***
 - ***Orders combined for production estimates – a longer horizon***
 - ***Deliveries (pending shipments) – a shorter horizon***
- ***Tank Assignment and Dispatch***
 - ***60/90-day lead times***
 - ***Selection criteria – non-automatic but “data informed and selected”***
 - ***Provide analyst - tank location, product assignment, ETA, test/maintenance status, user-defined***
- ***Customer inventory, release, return***
 - ***Monitor hold times, allowances, demurrage***
 - ***Interact with customers – email, but Portal is best***
 - ***Allow them interactively release assets for return, produce shipping docs for pickup carrier***

ERP (SAP) Integration

Issues

- ***Its critical (for shippers) to integrate tank transactions with ERP (SAP)***
- ***Order and Deliveries***
- ***Delivery to Tank Assignments***
- ***Shipment Generation for PGI and PGR (tanks)***
- ***Freight Costing and Payment***
- ***Fleet Costs and Payment***

ERP (SAP) Integration

Suggestions

- ***Standardize the file interfaces***
 - ***Same file structure among all clients***
 - ***Flat files vs. XML***
 - ***User-defined fields***
- ***Data transfer should be simple technology***
 - ***Use of ftp or sftp***
 - ***Avoid web-services or rigid "conditional interfaces" hard wired to ERP platforms***
 - ***Why? Application platforms are constantly evolving – on-premise, off-premise, Windows, Web, SQL, HANA, "cloud"***
 - ***A low-level data exchange is versatile and rarely requires modification***
- ***Modes/Other***
 - ***Design interfaces should be mode and container agnostic***
 - ***Leave EDI translation and interaction apart from ERP/SAP – a higher cost to maintain***
 - ***Only register production moves in ERP/SAP***
 - ***On-hire/Off-hire, Repair, Inspection, Re-positions should be handled in the TMS***

BI and Dashboards

- ***Business Intelligence – new trends in associating business (logistics) data***
- ***For humans, visuals are better than reams of data***
- ***Trends and gaps can be easily spotted***
- ***Collaborative in nature – within company as well as with your trading partners***

Performance and Reach

- ***Data structures pre-designed for staging***
- ***Cloud-based for international consumption and performance***
- ***Versatile tools for quick response to evolving client needs***



Thank you