Leveraging Transportation Management Platform

Santosh Kumar
Practice Lead – Logistics
Mahindra Satyam

June 27, 2012
Agenda

- Logistics Environment
- Transportation Platform Overview
- Shipper Transportation Platforms
- LSP Transportation Platforms
- Case Study: Overland Transportation Platform
- LSP’s journey with TMS
- Q & A
Logistics & SC Imperatives

Dynamic nature of supply chain networks | Global sourcing | Out-sourced manufacturing | Multiple distribution channels across the globe

The 3 high growth triangles of trade today represent nearly 50% of total trade and are expected to grow fast in the coming years:

- Europe - Asia: 6% of total
- Asia - North America: 5% of total
- North America - Europe: 4% of total
- Europe - MEA: 11% of total
- Intra Americas: 15% of total
- Middle East/Africa-Asia: 18% of total
- Intra-Asia: 25% of total
- Latin America-Asia: 5% of total

Source: DHL Report 2011

...there is a constant need to align global logistics strategy, policies, processes, technology and people....

TMS, Mobility and BI top the list of Planned Investments for LSPs.

Challenges in Logistics Service Provider (LSP) IT Systems

- Complex Applications
- Legacy Platforms
- Lack of internationalization
- Hard-coding of customer info
- Lack Agility
- No Documentation
- Point to point integration
- What is used by which customer?

Source:
State of Logistics outsourcing; 2012 3PL Study

Even more challenges in supporting increasingly complex & global supply chains
## Growth in Services Portfolio

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Services</th>
<th>Traditional</th>
<th>3PL</th>
<th>Lead Logistics/4PL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply Chain Planning</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business Strategy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Value Added Services
- International Logistics / GTM
- Transportation Companies
- Warehousing Companies

### Basic Execution Services
- Freight Forward Companies
- Transportation Companies
- Warehousing Companies

### Integrated Services + Supply Chain Services
- Shipper
- Supply Chain Manager
- Integrated Services: Service Logistics, Inbound Logistics, FF + GTM + Domestic, Global Distribution
- Verticalized Services: Retail, Automotive, Hi-tech, oil, Gas and Projects etc.

### Landscape
- Transportation Companies
- Warehousing Companies
Transportation Platform Overview
Drivers for Transportation Platform …

1. Leverage Transportation Platform as growth driver with new / integrated services & help create differentiators in the market (LSP)
2. Optimize / Reduce logistics cost while meeting the service levels
3. Automate manual logistics processes and define exception management processes
4. Provide visibility to all stakeholders and downstream processes
5. Manage own, dedicated fleet as well as common carriers in one application
6. Collaboration with Suppliers / Carriers to manage inbound logistics
7. Ability to support complex programs like cross-dock, pools etc
8. Prevent spend leakages – carrier selection & freight audit
9. Analytics to measure, monitor and make improvements
10. Rationalize the number of logistics applications impacting the cost of maintenance and others…
Imperatives of Transportation Platform

Shippers
Integrate Transportation components across
• Multiple Geo
• Multiple business units
• Inbound / Outbound / After-market
• Own Fleet / Hired fleet
• In-house Operations & Visibility of Outsourced operations

Logistics Service Providers
• Service Portfolio & geography expansion
  • Asset business
  • Non-Asset business
  • New / Integrated services
  • Support regional business practices and regulations
• Own assets / Hired

Common Elements
• Process orchestration
  • Automate processes
  • Customize customer solutions without customizing core processes
  • Collaborate… with customers, partners, employees

• Measure to drive improvement: **Have one version of the truth**
Shipper Transportation Platforms
Shipper Transportation Platforms
Case Study – Leading Retailer in UK

TMS for Inbound and Outbound Logistics which includes PO & Shipment Visibility

Pre-TMS Implementation Scenario

Post TMS Implementation Scenario

Key Business Challenges

- Inbound PO & Shipment Visibility for International Sourcing
- Utilize factory gate pricing to reduce costs
- Gain complete control of inventory
- Support the flexibility and scalability required by their expanding business
- Complex transportation scenarios.
- Complexity in reporting structure and data security hierarchy.

Business Benefits

- Complete Inbound PO & Shipment Visibility for International Sourcing
- Complete visibility of the real time Orders / Shipments from one single TMS
- One TMS Replaced 5 Source Systems
- Automated process, Exception reports, Event management, Configurable reports
- TMS is highly configurable and is integrated with other systems and data flows seamlessly
- Increase in on-time delivery.
Creating Transportation Platforms with Packaged Applications

Case Study – Leading Energy Company

Key Business Challenges
- Design footprint to handle Integrated TMS capability with seamless integration with multiple Legacy ERP’s viz EBS, BAAN, SAP etc. and financial systems
- Design footprint to handle Unique & Complex methodologies to be implemented for 32 business and their processes in single instance / Domain

Business Benefits
- Better information - inventory visibility, shipment status, estimated cost, less time lost to get information from LCOE.
- Lower cost from LCOE from better management of premium freight charges
- Optimum selection of delivery mode to minimize cost and meet customer CTQs
- Compliance excellence – business process and regulatory

Oracle Transportation Management – ’10 & ’11

<table>
<thead>
<tr>
<th>4Q09</th>
<th>1Q10</th>
<th>4Q10</th>
<th>1Q11</th>
<th>2Q11</th>
<th>3Q11</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OTM Functionality</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>✓ AS IS &amp; TO BE workshop for 13 Business Processes</td>
<td>✓ Action Workout To Onboard 32 businesses on One Instance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>✓ TMS Evaluation and Selection</td>
<td>✓ 8 CRP’s Conducted</td>
<td>✓ Oracle On-Demand</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>✓ Automated SMF compliance</td>
<td>✓ Automated PO compliance (Foxtrot- Aero Business)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>✓ Automated PO contract rates</td>
<td>✓ Automated Rail/Air contract rates</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>✓ Integrated reporting</td>
<td>✓ Integrated EDI messaging</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>✓ Automated OB demand management</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>✓ Automated Billing Code allocation Business wise</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>✓ Automated LTL contract rates (SMC &amp; Carrier Connect)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

© Mahindra Satyam 2012
LSP Transportation Platforms
Customer workflow is configurable based on pre-defined services and based on specific needs.

Extend Transportation Platform to LSP Platform
Components of Transportation Platform

Characteristics of Transportation Platform

- Chain of Services across applications
- SOA based Business Process Platform that drives key processes like Quote to Cash
- Configurable, Flexible and scalable
- Best of breed functionalities
- Strong workflow and event management
- Platform that supports collaboration with customers, partners, suppliers and regulatory authorities

Common TMS ‘Services’ – across customers and lines of business.

Examples:
- Tender the shipment
- Track and Trace
- Carrier Payment

Build Flexibility and Scalability

- Core process across customers and even across LoBs
- “Configure” personalization for customers and LoBs with workflow, data on objects
- Consistent Architecture and standards
Case Study: Overland Transportation Platform
Case Study: Overland Transportation Platform

Lines of Business Supported
- Air & Sea (First and Last Mile)
- Contract Logistics
  - US
  - Mexico
- Transborder – US – Mexico – Canada
- Load Brokerage Model
- Lead Logistics Business (customer specific)
  - US
  - Europe

Company Overview
- Leading LSP
- 830 locations in 100 countries
- 47000 employees
- Comprehensive Logistics Solutions

Solution
- Live on Oracle G-Log Transportation Management
- Integrated to legacy applications, WMS, financial applications and to carriers (EDI)

Challenges / Opportunities
- Create a backbone for delivering multiple services
- Consolidate overland transportation requirements across lines of business
- Automate and Integrate the processes for efficiency

Benefits
- Ability to jump-start Trans-Border product
- Contract logistics line of business can process multiple customers through the standard model while catering to individual customer needs
- Successful integration of different lines of business in one funnel
- Planning capabilities include direct shipment, multi-stop shipment and multi-leg shipment
- Ability to rate for the most appropriate carrier reducing the overall transportation cost
- Automated processes on freight audit and payment including VAT calculation for Canada
- Mexican users see Spanish screens, reports and notifications
Case Study: Overland Transportation Platform

Contract Logistics Solution across warehouses & customers

- Customer Orders – WMS, Manual
- Order Assignments & Validations
- Create Customer specific -Traffic File number
- Carrier Buy Shipment Planning
  - Multi-stop
  - Special Services
  - Customer negotiated carrier rates
- Shipment Execution
- Customer Sell Shipment Rating
  - Tariffs based on weight, mileage, SMC
  - Cost Plus shipment rating

Contract Logistics in non-US Geography despite challenges

- Collect and Standardize; Base data not accurate / available (zips, lat-longs, regions, non-standard equipment, carriers codes)
- No defined tariff’s for carriers
- Wide variety of rating logic (based on weight / dim wt / distance / pallets / combination)
- Mexican VAT (IVA) / Retention
Case Study: Overland Transportation Platform Contd..
Intermodal business – consolidation across modes

Order details
- Steam ship line
- Import / Export
- Cut-off date
- Pick-up / drop off location
- Last Free Date

Shipment Planning

Buy Shipment

Port

Consignee
(Live-Load / Drop)

Manage Demurrage at port / container

Import Move

Order Manager

Container Yard

Manage Cut-off date

Export Move

Shipper
(Live-Load / Drop)

Manage Demurrage at port / container

Port
Case Study: Overland Transportation Platform Contd..

Trans-Border processes that include multi-language & currencies

**Inter-country Processes**
- Which country owns the customer
- Managing Carriers
  - Choice of currency
  - Country paying the Carrier
- Through Shipment / Multi-leg Shipment
- Handover between planners
- Customs
- Settlement
  - Billing currency for the customer
  - Credit Notes
  - Print from TMS to pre-printed govt. issued stationery (MX)

**Key Business Enabler:**
- Plan and Execute Trans-border shipments
- Leveraging joint purchase power
- Visibility across the system
Case Study: Overland Transportation Platform  Contd..

Multiple Businesses in NAFTA on One TMS Instance

- **Air & Ocean First and last Mile**
- **Load Brokerage**
- **Contract Logistics**
- **Transborder**
- **Intermodal**

---

**Motor Brokerage**

- **Host Systems**
  - Air
  - Ocean
  - WMS 1
  - WMS 2
  - Legacy

- **Orders**
  - Customer Specific rules
  - Order Constraints, Weight / Volume / Delivery Window / equipment
  - Carrier Constraints

- **Buy Shipments**

- **Tender to Carrier**
  - XML
  - EDI
  - Email
  - Fax

- **Sell Shipments**
  - Internal Sell
  - External Customer Sell
  - Inter-Country

- **Invoices**
  - EDI - Auto Match & Auto Approve
  - TMS Invoices

- **Bills**
  - Standalone Bill
  - Consolidated Bill

---

**Financial System**

© Mahindra Satyam 2012
Benefits

- Time to market on New Services. Ex: Transborder product

- Flexibility and Scalability.
  - Contract logistics line of business to process multiple customers through the standard model while catering to individual customer needs
  - Accommodate Growth in volumes

- Operational Excellence, Standard Process & Automation
  - Standardize common processes across different lines of business in one funnel
  - Automate the standardized processes. Ex: ‘No click freight audit and payment’

- Cost Optimization by
  - Leveraging planning capabilities
  - Rate to most appropriate carrier reducing transportation cost

- Localization on a global instance
  - Spanish Implementation – language and taxes
  - Canadian Implementation
LSP’s Journey with TMS
Here are the opportunities to leverage more from TMS

• **Expansion to**
  - Scope: Inbound, Outbound, Return, Spares, Cross-docks & others
  - Other business units / LoBs
  - New geographies
  - New / integrated services (LSP)

• **Process Automation**: No-touch processes + exception management

• **Integrate process & application to**
  - WMS / Cross – dock
  - Order management, ERPs, SCM Planning
  - Mobile devices / Telematics
  - Partners: carriers, suppliers, customers

• **Cost Reduction**: Planning scenarios, infrastructure, maintenance

• **Additional modules**
  - FTI
  - Fleet / Driver / Asset Inventory
  - Global Trade Management
  - Inventory visibility
  - Cooperative routing
  - Transportation sourcing

**Benefits**

- Drive Growth
- Cost Optimization
- Time to market
- Flexibility and Scalability
- Standard Process & Automation
- Operational Excellence
TMS Extensions that bridge the gap… if any

Extensions

- Addresses IP / Unique process that adds to overall competitive advantage
- Allows benefit from TMS’s out-of-the-box functionality while leveraging own IP/unique process capabilities
- Extensions are created with the philosophy that extension can scale with the core TMS application

Minor Customizations for productivity improvement.

- Custom screens with small changes / tweaks to TMS screens
- Custom process
Analytics to Drive Improvements

On Time Pick Up

<table>
<thead>
<tr>
<th>Month</th>
<th>Total Stops</th>
<th>Total On Time Count</th>
<th>Percentage On Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>01 JANUARY</td>
<td>97.00</td>
<td>95.00</td>
<td>97.9%</td>
</tr>
<tr>
<td>02 FEBRUARY</td>
<td>105.00</td>
<td>102.00</td>
<td>97.1%</td>
</tr>
<tr>
<td>03 MARCH</td>
<td>95.00</td>
<td>93.00</td>
<td>97.9%</td>
</tr>
<tr>
<td>04 APRIL</td>
<td>100.00</td>
<td>104.00</td>
<td>95.4%</td>
</tr>
<tr>
<td>05 MAY</td>
<td>99.00</td>
<td>98.00</td>
<td>98.1%</td>
</tr>
<tr>
<td>06 JUNE</td>
<td>100.00</td>
<td>101.00</td>
<td>93.5%</td>
</tr>
<tr>
<td>07 JULY</td>
<td>92.00</td>
<td>83.00</td>
<td>92.2%</td>
</tr>
<tr>
<td>08 AUGUST</td>
<td>112.00</td>
<td>104.00</td>
<td>92.6%</td>
</tr>
<tr>
<td>09 SEPTEMBER</td>
<td>112.00</td>
<td>108.00</td>
<td>94.6%</td>
</tr>
</tbody>
</table>

Source: Oracle
Thank You!

Contact:
[Email]
Tel: +91-9704622261

[Website]

Safe Harbor
This document contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. The forward-looking statements contained herein are subject to certain risks and uncertainties that could cause actual results to differ materially from those reflected in the forward-looking statements. Mahindra Satyam undertakes no duty to update any forward-looking statements.