

## Revolutionizing Downstream Logistics & Transportation System with Visibility, Transparency & Efficiency



The fuel retail industry is at the threshold of a paradigm shift. With growing consumer demands, Oil & Gas enterprises have the challenge of monitoring multiple fuel stations, and their fueling & billing operations. The companies need to manage fleet, customers, and contracts, and generate comprehensive reports on every aspect of the supply chain and fuel stations activities. Though the industry is ripe for digital transformation, legacy on-site, monolithic systems are proving to be difficult and expensive to maintain, support and sustain.

To extract maximum net present value from core business and adjacent value pools, oil marketing companies need 360-degree view of operations. Leveraging IoT, Cloud and AI/ML technologies, Oil & Gas enterprises can achieve maximum business value, significant incremental value and optimise sustainability in operations and distribution.

An intelligent and integrated logistics and transport management can digitally transform fuel supply chains and build a distinctive value proposition for fuel businesses.

# Revolutionizing Your Fuel Trade and Logistics Processes

Transportation of fuel products in the downstream sector is a complex, high-cost operation. Though oil companies and their haulers seek the most effective strategies for transport between supply depots and customer locations, challenges such as imprecise planning and forecasting, unforeseen customer demands, complex scheduling problems, low fleet utilization and invoice inaccuracies prevent full realization of this goal. One of the most significant challenges is incorporation of technology-based strategies to get synchronous real-time data to make critical decisions and streamline operations and save costs.

Successful companies are constantly working towards the following goals to secure their long-term future



**Process automation**  
Reducing manual work, concentrating on core competencies



**Efficiency**  
Increasing operational and cost efficiency



**Visibility**  
Seamlessly managing supply chain distribution with real-time data visibility



**Automation**  
Eliminating time-consuming manual process leading to errors in billing & accounting



**Inventory**  
Achieving zero inefficiency in Wet stock Inventory Management



**Resource Cost**  
Managing highly specialized and dedicated workforce with cost efficiency

## Multiplex Terminal ManagerI Powering Digital Transformation

Secondary Distribution Information Hub to manage and optimize your logistics assets and resources

360-degree view of oil distribution, logistics, and operations

Improved integration that delivers transparency, traceability and eliminates silos

Get full visibility and automation of your transportation process, from request to planning and fulfillment

Gain increased visibility across Invent, inventory and logistics through a centralized integratedsystem

Reduced cost of operational planning

Minimal risk exposure and safe movement of resources

Improved operational assurance

Efficient supply-demand matching for optimal logistics

# Multiplex Terminal Manager | All-In-One Integrated Logistics, Planning, Scheduling and Transportation System

Multiplex Terminal Manager is an IoT-enabled and analytics-driven solution that automates entire order-to-cash cycle and offers a comprehensive view of secondary fuel supply chain distribution for retail and commercial business segments.

Multiplex Terminal Manager automates the entire Secondary Supply Chain distribution with almost no-manual intervention and enables oil marketing companies to effectively manage and optimize on their logistics assets and resources bringing in full visibility and automation of the transportation process, from Request to Planning and Fulfilment. This facilitates retail operations to increase monthly volume delivery, reduce transportation costs and improve on service-level assurance, sales potential fulfilment, risk reduction and customer participation.



# Secondary Distribution Information Hub

**Multiplex Terminal Manager** provides a Secondary Distribution Information Hub that gives a 360° view of oil distribution, logistics, and operations

**Integrated Supply Chain Planning** - Optimizing across the supply chain from terminal / depot to bulk storage and handling, secondary distribution and transportation for wholesale and fuel retail stations

**Intelligent Terminal Services** - Predictive and collaborative ways of working across terminals with integration to terminal process benchmarking, remote monitoring of terminals, shared best practices and visibility of the supply chain

**Secondary Distribution Optimization** - Dynamic scheduling and routing, HSE compliance monitoring, inspection and risk management, stock planning and scheduling optimization and asset network optimization

**Integration** to customer ERP system, order management, ATG system, TAS system, IVMS, SMS gateway



## Demand Forecasting and Replenishment

Effective demand planning delivers both profit and customer satisfaction and helps businesses strike the right balance between sufficient inventory levels and customer demand. Poor planning can result in avoidable supply chain disruptions or excess inventory lock-up of working capital, adding inventory carrying costs and increasing the potential to be stuck with low-value or obsolete inventory.

Multiplex Terminal Manager's Demand Planning Module analyses sales as well as consumer trends, historical sales and seasonality data to optimize your business' ability to meet customer demand in the most efficient way possible. The module combines sales forecasting, supply chain management and inventory management. It uses data from internal and external sources to predict future demand which helps in sales nominations across regions with Plan Vs Actual analysis and benefits businesses in identifying the key focus areas to meet that demand.



### Benefits of Demand Planning

- Automatic order creation
- Range of calculation methods
- Forecasts for end consumer business
- Shift from a reactive commercial model to a proactive one
- Reduction in order-taking workload
- Increase in customer retention

## Order Management & Logistics Automation

Traditionally, the order management process involved error-prone, manual tasks, especially in order entry and inventory management. Multiple handoffs among departments increase overhead costs and the potential for errors or fraud.

Multiplex Terminal Manager's Order Management Module automates the entire order management process for sourcing and supplying products from terminals to the end consumer. It enables your employees and customers to view and track each order from start to finish and helps you analyse the overall efficiency of the process.

The module facilitates multichannel order booking through various form factors such as online customer portal, manual booking, SMS, mobile app, re-order level-based auto ordering and provision for bulk upload.

The **Logistics Planning & Trip Management Module** allows auto allocation of orders to resources using configurable parameters, reducing planning time and eliminating manual errors. The module also facilitates bulk trip generation and provision to manually update trips, simplifying the dynamic changes as per business demands and enabling businesses to monitor, measure and optimise the entire last-mile delivery logistics and fulfilment process.



### Benefits of Order Management & Logistics

- Reduction in order creation time
- Mitigation of risks with on-time credit control
- Improved usability
- Elimination of wrong data entries
- View of all relevant data on single-window
- Increased customer satisfaction
- Auto order allocation to resources reducing planning time
- Bulk Trip generation

## Truck Scheduling and Dispatch, Resource and Delivery Optimization



Multiplex Terminal Manager helps improve the usage of truck fleet with easy-to-use graphical dispatch and route optimization. Truck Scheduling and Dispatch Module involves providing interactive work places for truck dispatchers that include geographical maps and route optimization and truck compartment planning to improve performance and help ensure maximum use of your fleet. It includes truck geo tracking (IVMS) which facilitates intelligent calculation of all available trucks nearby the terminal, optimising truck scheduling in the best possible way and instant calculation of driving time to expedite delivery of bulk fuel products.

**Resource Management Module** enables the dispatcher to manage a depot's resources by building trips, assigning resources and tracking resources. In order to manage resources, you must keep accurate and complete resource records. To facilitate this process, the system records and allows changes to a variety of resource information such as vehicles and compartments, own fleet availability by fleet owners, carrier fleet and driver availability through online carrier portal and own driver availability using shift, OT and roster management.

**Loading & Delivery Management Module** allows a high level of flexibility in planning. You choose the level of system support and automation you need. It doesn't matter whether you use manual, semi-automated or fully automated dispatching or integration with loading terminal system, it supports in achieving the best possible solution for your transportation with delivery compliance through Digital Proof of Delivery using electronic signature and OTP.

## HSSE Compliance & Safe Journey Management (JMS)



Achieving HSE compliance is essential for any industry, but vital for the Oil & Gas industry, especially when it involves long-distance fuel transportation.

The **JMS module** provides a simple, methodical and auditable compliance tool to monitor a mobile workforce. The module automates the process with pre-set checkpoints, journey schedule and risk assessments with approval work flow that drivers must adhere to ensure safe journey practices during the journey. If drivers do not reach these checkpoints in a designated period of time or adhere to fatigue management stops, then alerts are sent to the management via SMS, push notifications and email.

### Benefits of HSSE Compliance & Safe Journey Management

- Improved organisation efficiency and productivity
- Highest compliance standards
- Improved employee safety and welfare
- Minimal errors and assured consistency
- Effortless reporting and tracking
- Reduced downtime

## Contracts & Billing Management

Configurable customer and carrier contracts with flexible tariff model and Integration capabilities of Carrier Billing & Customer Invoicing ensure seamless visibility between the finance and business operations.



## In-Vehicle Monitoring System (IVMS)



IVMS facilitates map interface with real-time location with aggregated control tower view of own and other carriers. IVMS enables advanced location services and ensures effective visibility across the fleets, resources and operations helping fleet owners to unify cost, efficiency, productivity and safety.

With IVMS, fleet operators have first-hand information of assets / resources / sensors through intelligent and customizable alerts via SMS / email / mobile notifications to proactively act during any critical situations such as route deviation alerts, geo or territory fencing, over-speeding, excess idling and unauthorised access.

### Benefits of In-Vehicle Monitoring System

- Real-time tracking and visibility
- Location history for compliance monitoring
- Intelligent workspace for efficient dispatch
- Trip automation with ETA
- Route-specific performance visibility

## TransSmart | Mobile App

TransSmart app directly links with the Terminal Manager eco system and provides features for Oil Marketing Companies and their dealers to create indents and track order status on the go. Mobile app has role-based access and provides process flow of indent approvals/rejections, credit approvals, product transfer process flow, indent cancellations and monitor real time order status along with summary of past indents. The result: The order to delivery process become more efficient, transparent, and safe for all parties involved.

The mobile app features also support connected trucks and drivers on trip execution which helps in eliminating information gaps and provides process visibility for involved supply chain participants. With Driver mobile app, drivers can view list of pending orders, trips assigned to them, map view of trip. Drivers can also leverage the mobile app for the purpose of providing ePOD (electronic Proof of Delivery) with provision to receive digital signature / take photo and capture delivery feedback from the receiver.

### Benefits of TransSmart

- Deliver an optimal order fulfilment experience by providing your customers with omnichannel order capture, orchestration, and fulfilment
- No Paper Dependencies - ePOD reduces the cost to capture customer delivery data by eliminating manual documentation and also reduces billing cycle as delivery data can be used immediately to invoice the customer as opposed to days later.
- Improve Workforce Productivity
- Real-Time Information Flow
- Strengthened Communication across Supply Chain



# Multiplex Terminal Manager-Value through Digital Technologies



## Priority1: Simplified and Optimized Automation

Get full visibility and automation of your logistics, scheduling, and transportation process, from Request to Planning and Fulfilment

**38%** Reduction in order fulfilment time by automating entire logistics process



## Priority2: Enhanced Customer Satisfaction and Loyalty

Gain 360 view of oil distribution, logistics, and operations providing a seamless and personalized experience that increases satisfaction and loyalty

**63%** Improvement in visibility empowered customers to manage their working capital effectively relieving two days of blocked funds per retail outlet



## Priority3: Increase Operational Excellence

Enables fuel retail enterprises to improve on service-level assurance, optimize resource utilization, maximize sales potential fulfilment, and achieve end-to-end operations visibility.

**78%** Increase in accurate and real-time information on order management, indent generation, inventory, and logistics planning through centralized integrated system.



## Priority4: Efficient supply-demand matching for optimal logistics

Improves efficiency, increases delivery capacity, enhances customer experience, and boosts your overall revenue.

**46%** Reduction in order creation time - facilitated multichannel order booking through various form factors such as online customer portal, SMS, mobile app, re-order level-based auto ordering and provision for bulk upload.



## Priority5: Minimal risk exposure and safe movement of resources

Provides a simple, methodical, and auditable compliance tool to monitor a mobile workforce

**26%** Reduction in downtime and increase in adherence to the highest compliance standards leading to improved organisation HSE compliance and productivity



## Priority6: Reduced cost of operational planning

Truck geo tracking (IVMS) facilitates intelligent calculation of all available trucks nearby the terminal, optimising truck scheduling in best possible way.

**35%** Improvement on fleet planning through instant calculations of truck availability and driving time to expedite delivery of bulk fuel products.

## About Us

Bahwan CyberTek (BCT) is a digital transformation company founded in 1999 and has delivered solutions in over 20 countries. The company today has 3000+ associates, 1000+ Enterprise Customers and 3500+ SME Customers globally, including Fortune 500 Companies.

BCT is a thought leader and innovative solutions partner and has delivered transformational solutions across Logistics, Predictive Analytics, Payments & Citizen Services & Education through IP-led products and cognitive solutions, growth accelerators and outcome-based business models. For more on Bahwan CyberTek, please visit [www.bahwancybertek.com](http://www.bahwancybertek.com)

For a demo of Multiplex, please write to [SALES-DSCM@bahwancybertek.com](mailto:SALES-DSCM@bahwancybertek.com)

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