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# Integrated Solution for Oil & Gas Companies

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# Oil & Gas Automation credentials

End 2 End

Management of Oil & Gas upstream & Secondary Distribution supply chain

7
Control Towers

ISO: 9001
ISO: 18001
ISO: 14001

**$1b**
Spend on services from **local contractors**

**2,600**
Contractor personnel managed

20,000+
Retail Automation Devices
Managed

4,500+
Rig Moves
Managed

**1,000+**
Logistics Assets
Managed

20,000 vehicles tracked through BCT IVMS

Centralized Journey management

**$54m**
Saving through
Rig move optimization

**$130m**
Supply Chain
Saving through
Cost modeling

Technology

MTL | TMS | SJMS | IVMS | FX

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# BCT's customers in Oil & Gas

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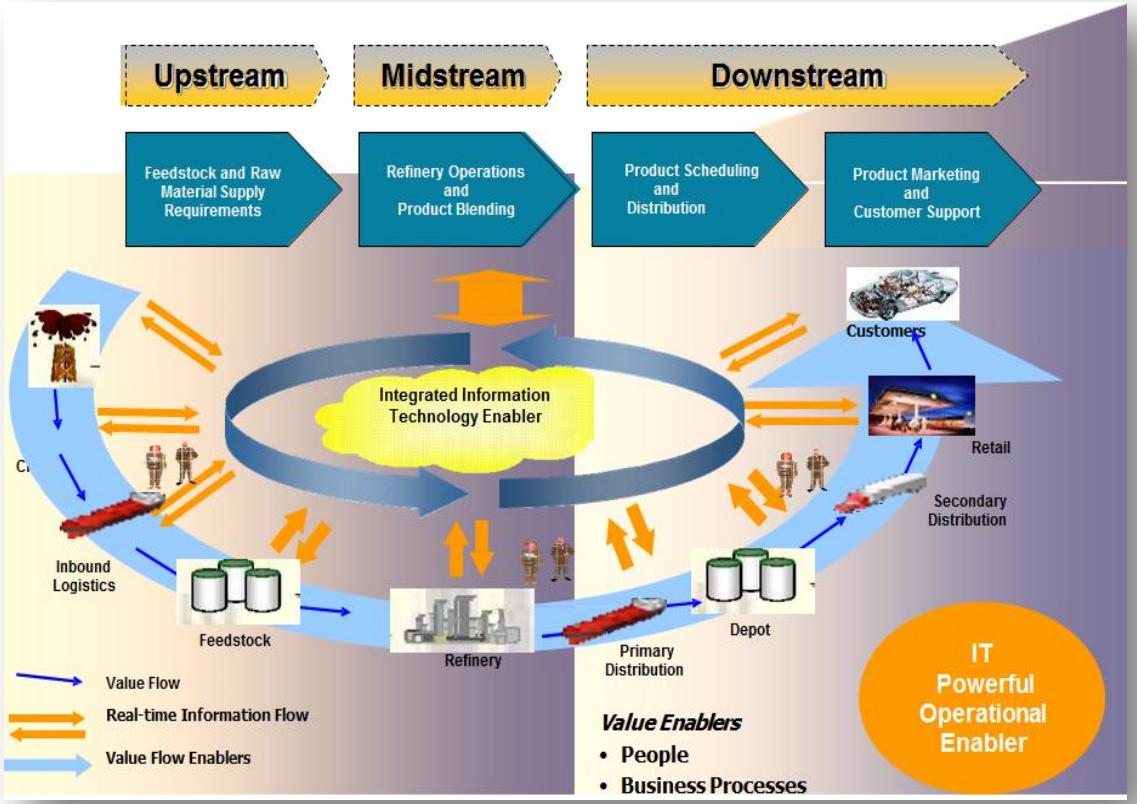
# Business Context - *Petroleum Value Chain*




***"right product, right place, right time, every time" should dominate scheduling and distribution activities.***

**Differentiating Practices**

- Continuous **Replenishment** techniques
- Scheduling targets to **reduce distribution** cost, maximize resource utilization
- Scheduling information is maintained in **real time** and can be accessed by internal and external customers
- Collaborative practices **reduces demand** variability and hence the strain on logistics.

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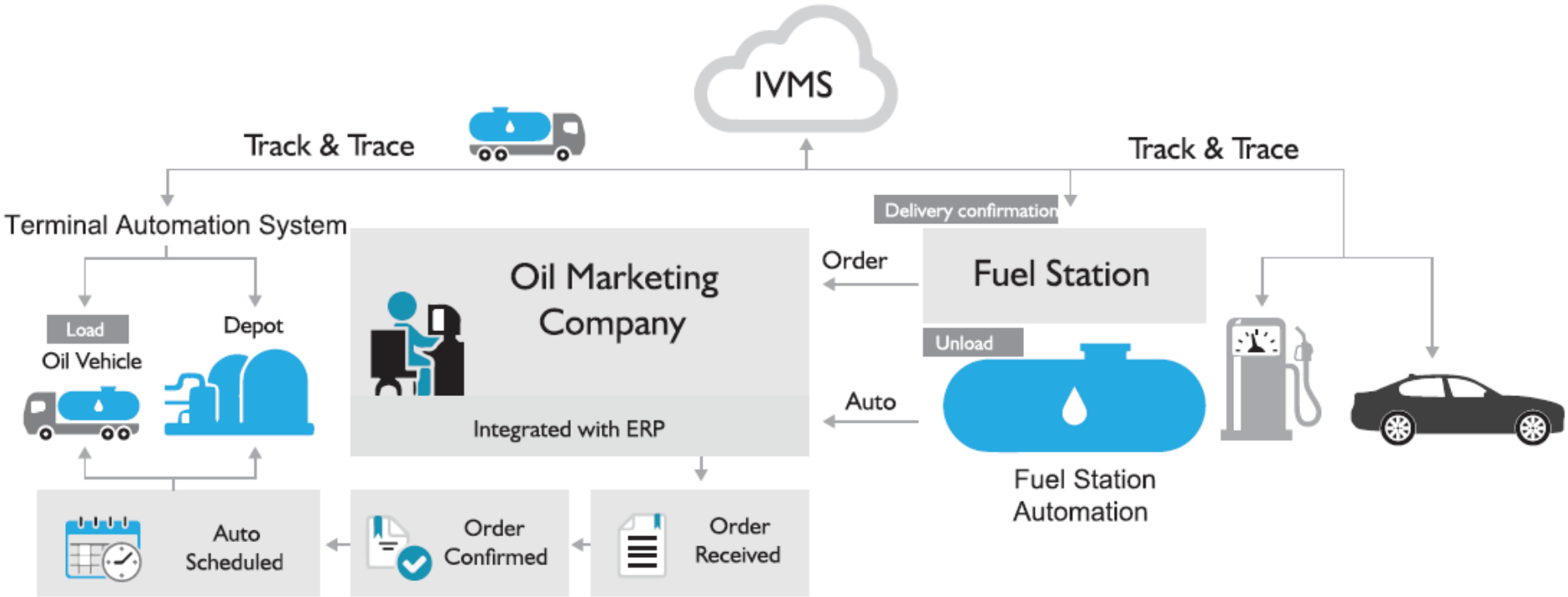
# FuelTrans Process Flow

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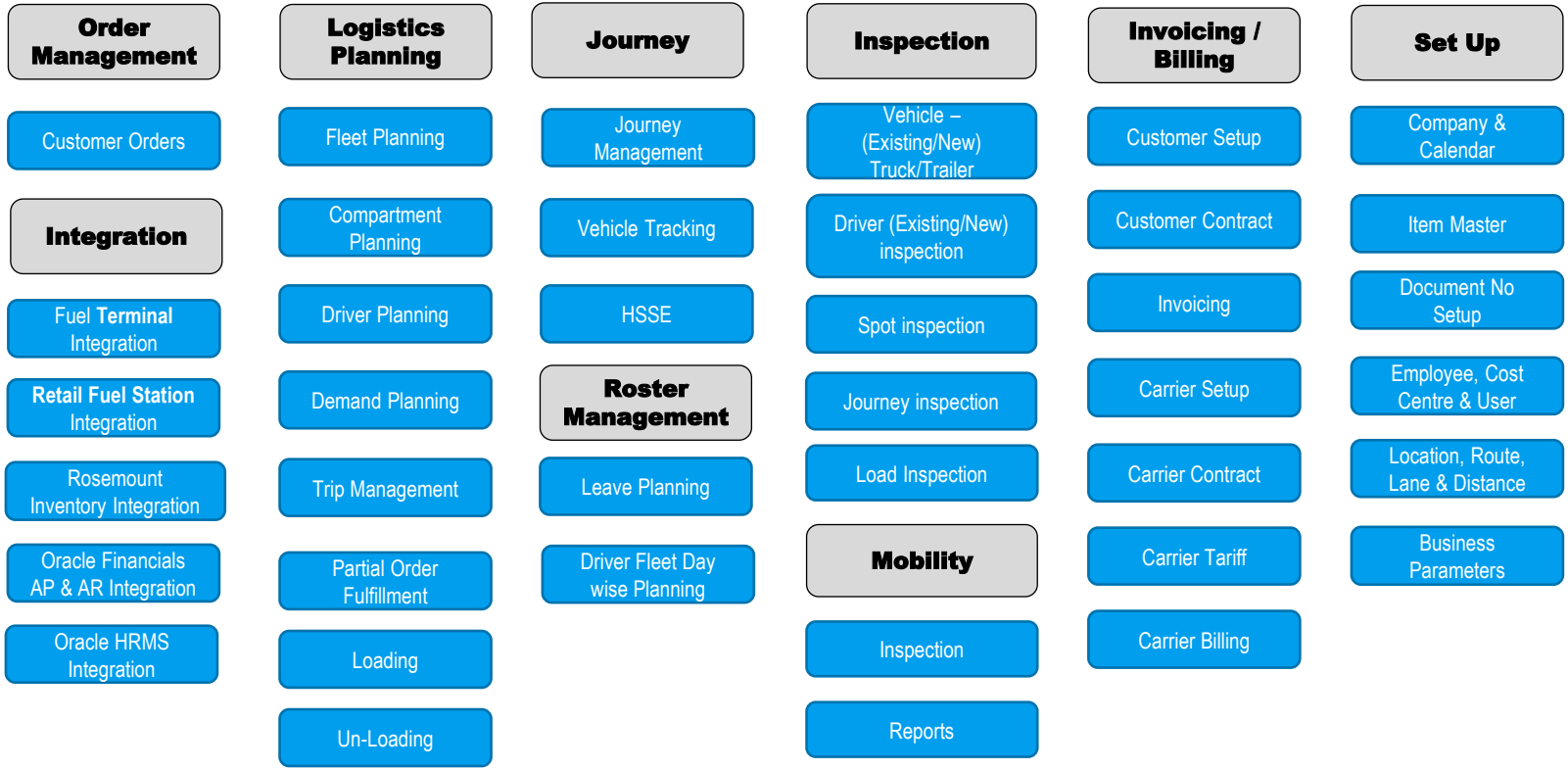
# Solution Map for Fuel Transportation

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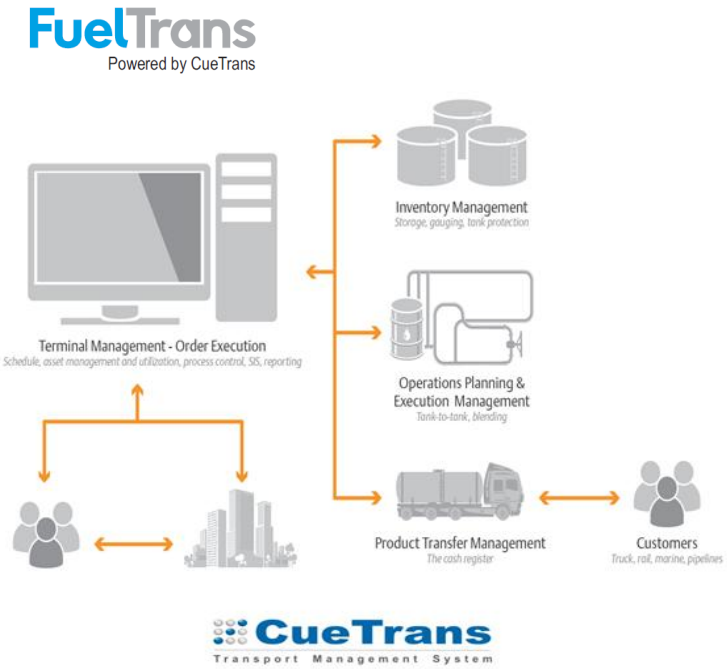
# Secondary Distribution – Control Tower Solution

Integration to Key Application




- Order Management
- Auto Order Consolidation & Load Planning
- Auto Vehicle Scheduling & Allocation
- Journey Management & Tracking
- Inventory - TAS
- Connection to TAS (Terminal Automation System)
- Connection to ATG (Automation Tank Gauging)

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# Fuel Station Automation Solution

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# Solution Components

HOS

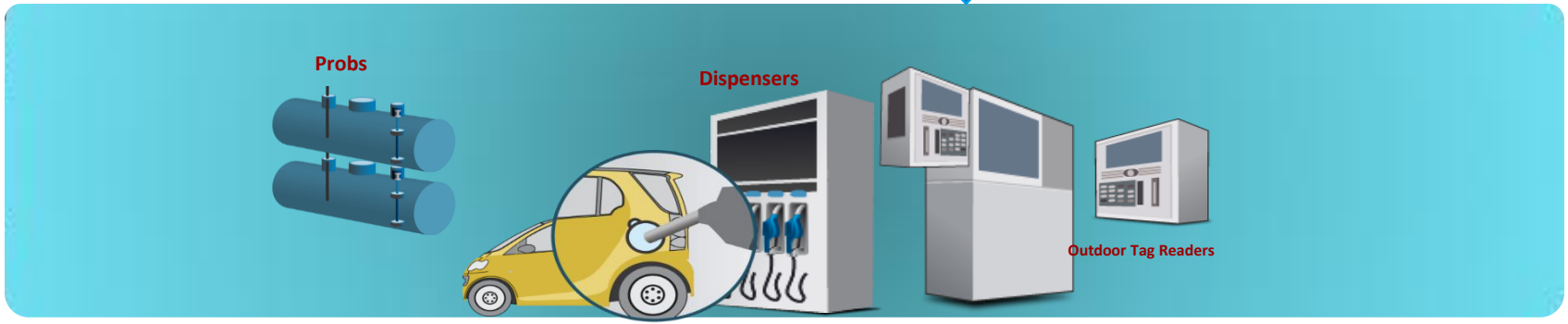
- Retail Head Office System
- Loyalty & Promotions
- Fleet Management System

POS BOS

- Point of Sale
- Back Office System

FCC

- Management

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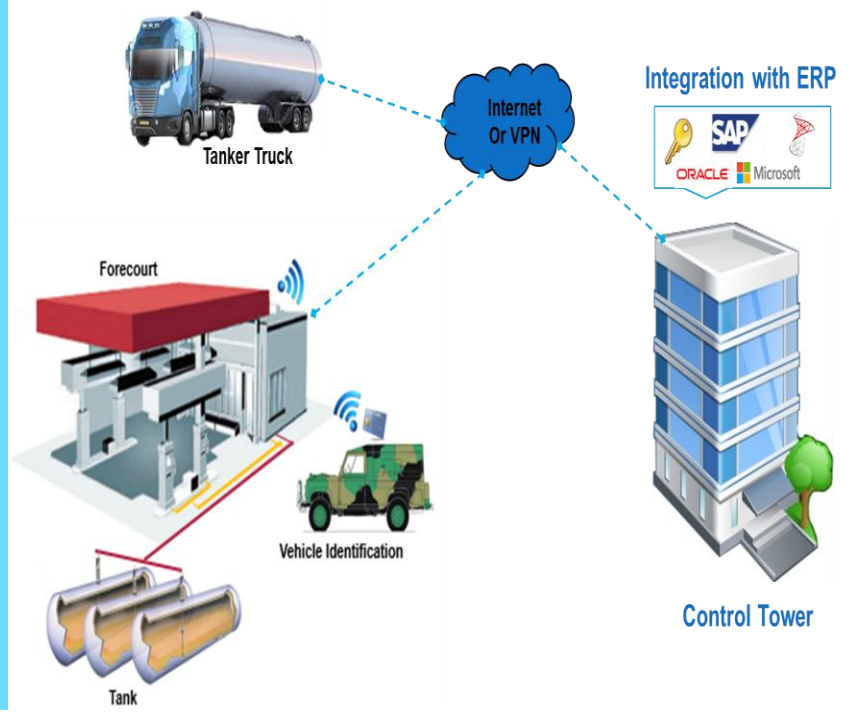
# Fuel Station Automation Solution

- **Head Office Automation :**
  All pumps, Automation System and loyalty applications are centrally managed with online data storage.
- **Pump Automation System : *(eFuel Station)***
  Pump and cash register integration, Loyalty program management & BOS / POS integration.
- **Tank Automation System :**
  Inventory Data, Delivery detection, Alarm detection and Automatic Dynamic calibration.
- **Vehicle RFID Customer Identification System:**
  Automatic refuelling, Prevents Fuel Fraud, Fuel Usage Control, Efficient Use Of Time & Manpower, Accurate Automatic Reporting, One point payment.
- **Integration with ERP :**
  Fully integrated solution that Capture station sales and inventory, Wet Stock Monitoring, Periodical payment and billing information for retailers and customers. Integration with management and accounting system link ORACLE/SAP/MICROSOFT ERP

**End-to-End Automation Solution: Supply , Implementation , Support and On field Managed Services & Central Call Centre Operation**

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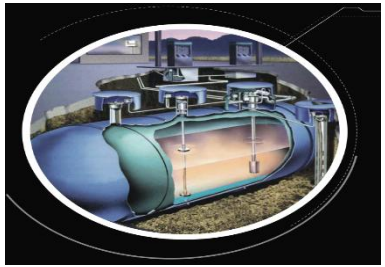
# Automation Solution Value Proposition



- Fully integrated with ATG
- Automatic Dynamic Calibration
- User friendly Software
- Detailed Report Management

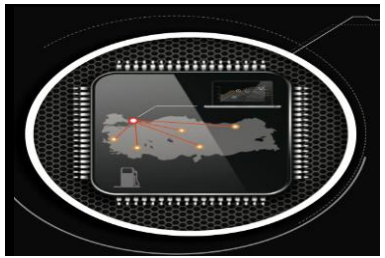
Complete Visibility on wet stock inventory

Control Fuel pilferage

- Pump and cash register integration
- Tank automation system integration
- Vehicle and customer identification system integration
- Loyalty program management
- BOS / POS integration

Manage Issues on reconciliation

Control Misuse of fuel subsidy



- All pumps, Automation Systems and loyalty applications are centrally managed with online data storage
- Dry & Wet Stock Pricing Management

Transparency and control of Retail operations

Monitor Fuel Consumption with RFID based VIS solution

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# Pump & Tank Automation

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# Pump - Automation System

- Pump Sales Management
- Customer Identification
- Vehicle Identification
- Pump Attandent Id
- Local Account Management
- Loyalty Management
- Fleet Card Management
- Shift Management & Reports
- Price Management

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# Components

## controller

controller is a standalone pedestal that offers complete automation and flexible fueling authorization capabilities.

- Pump authorization.
- Shift Management.
- Driver and vehicle identification
- Report generation.

## Nozzle Reader

- Reliable and robust
- Easy to install and service
- Tamper-proof and secure
- Advanced power management capabilities
- Self-contained with replaceable batteries

## Tag Reader

- Handle a variety of authorization options
- Robust & reliable
- Cost-effective
- Field-proven
- Suitable for manned and un-manned stations

## Wireless Gateway

- Enables RFID based Vehicle identification system
- Communicates with RFID nozzle reader
- Collects data from RFID equipped vehicles
- Works on Zigbee protoclo

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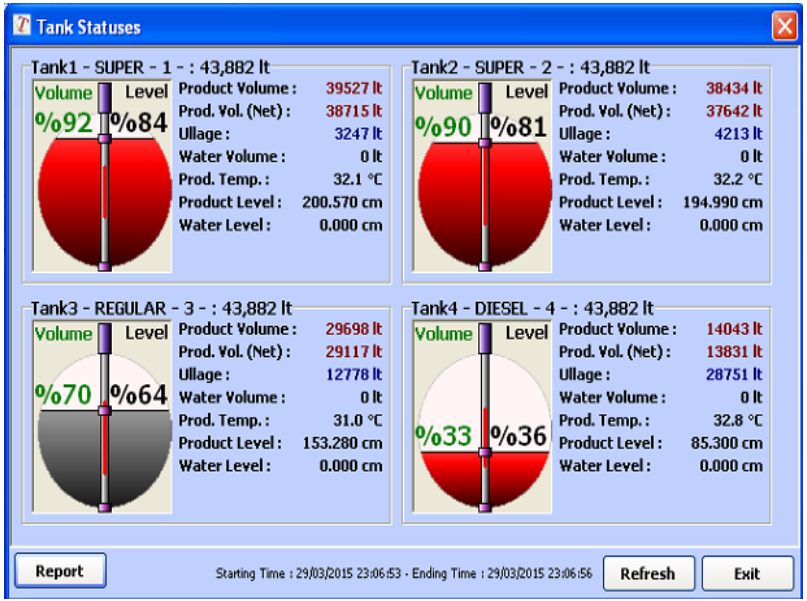
# Tank Automation System

Tank Automation

- Fully integrated *(OPW , Veeder Root, FAFNIR, INCON, START ITALY, HECTRONIC)*
- Compatible with major Tank Gauging units
- Delivery and inventory alarms
- Automatic Calibration
- User friendly SW
- Detailed Report Management
- Integration with Center HOS – Wet Stock

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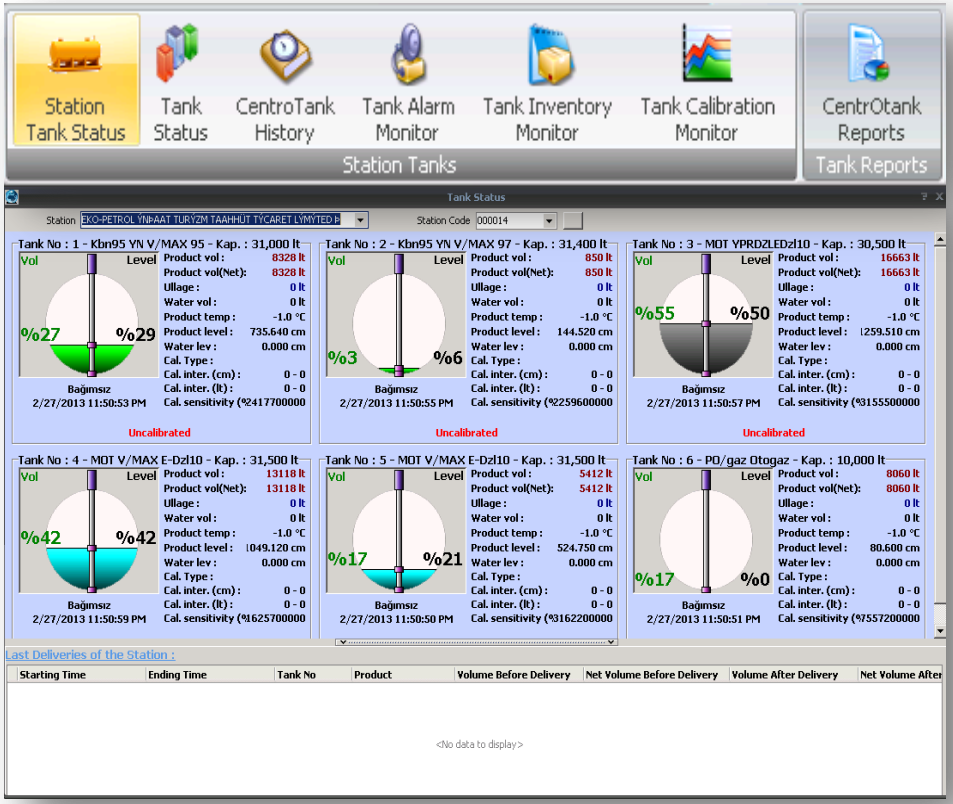
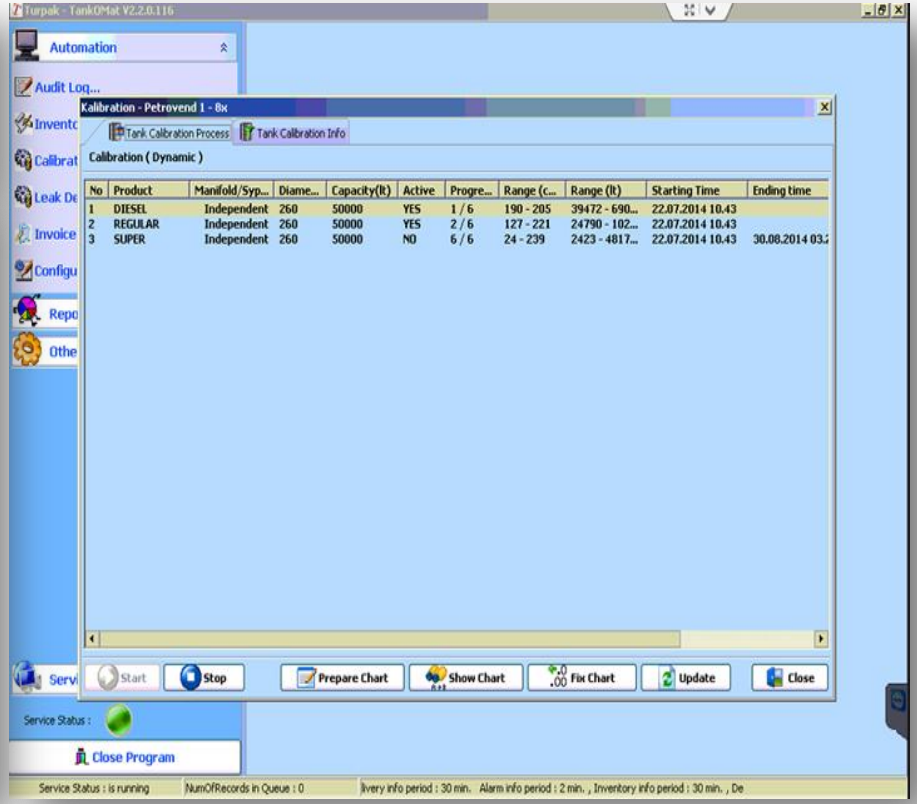
# Tank – Inventory & Dynamic Calibration



# Vehicle Identification – RFID Solution

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# Vehicle Identification – RFID Solution

- Automated refueling
- Prevents deviation
- Fuel Usage Control
- Efficient use Of Time & manpower
- Accurate Reporting
- Available for all type of fleet vehicles
- Smart-card technology
- Encryption - Triple DES
- Protected against removal
- Advanced power saving

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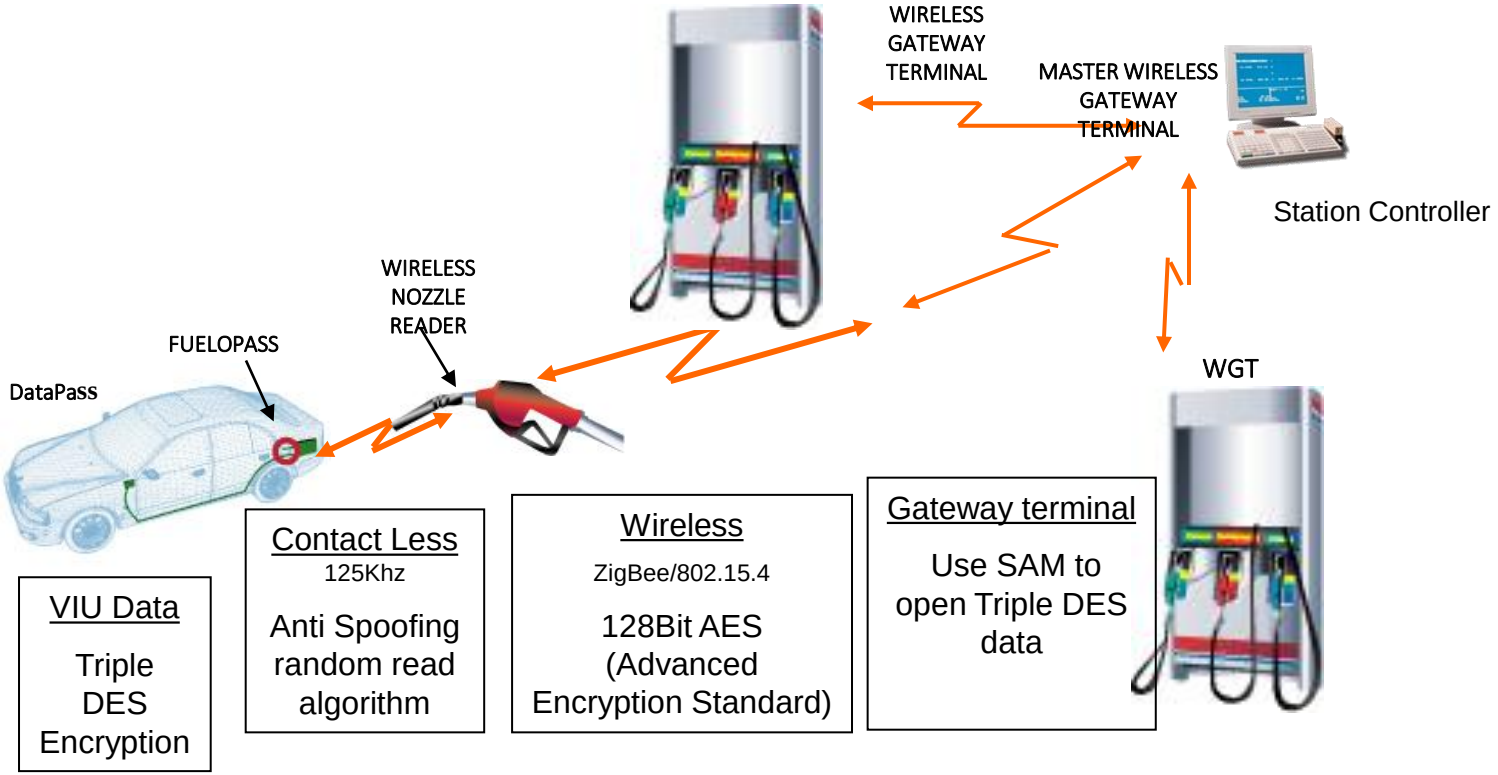
# Vehicle RFID Automation System

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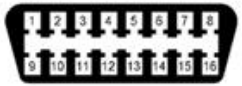
# RFID Components

RFID vehicle identification tag

- Automatic refueling
- No card, ticket and ledgers
- Prevents Fuel Fraud
- Fuel Usage Control
- Efficient Use Of Time & Manpower
- Accurate Automatic Reporting
- Available for all type of fleet vehicles

Data Pass Units – ODO meter or Running hours




OBD 2 ports

OBD 2 Datapass

- Fetches ODO meter information
- Merges it with RFID transaction
- Availability of reports.

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# Mobile Unit Automation

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# Tanker Truck

Tanker controller

Driver Identification unit

RFID vehicle identification tag

Electronic Flow Meter

RFID Nozzle Reader

- Automatic refueling
- Transactions can be monitored at HO
- Accuracy of the sales
- HO can authorize the transactions

## Modification required

- Modification of compartment
- Install Solenoid valve
- Installation electronic meter
- Modification to compartment

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