Digital Control Systems

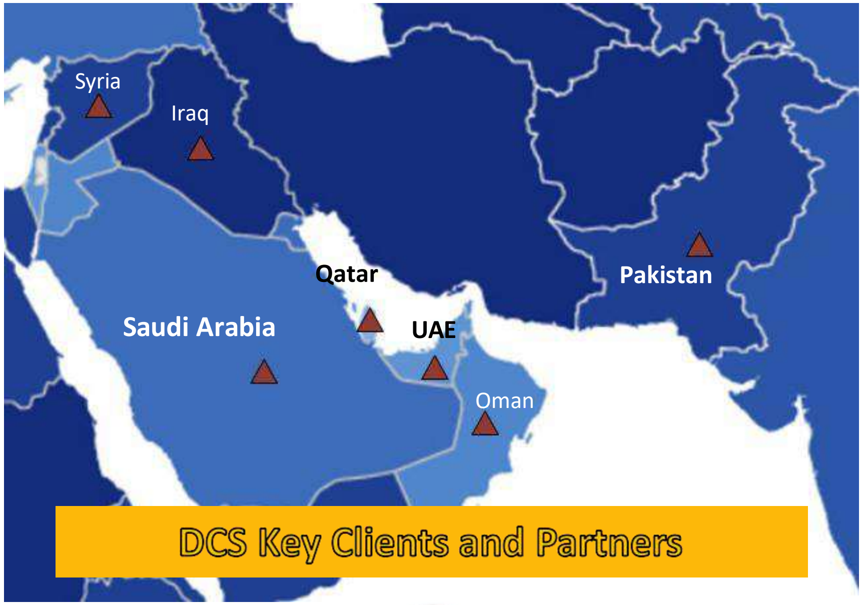
YOUR STRATEGIC PARTNER

ASSET MANAGEMENT SOLUTION

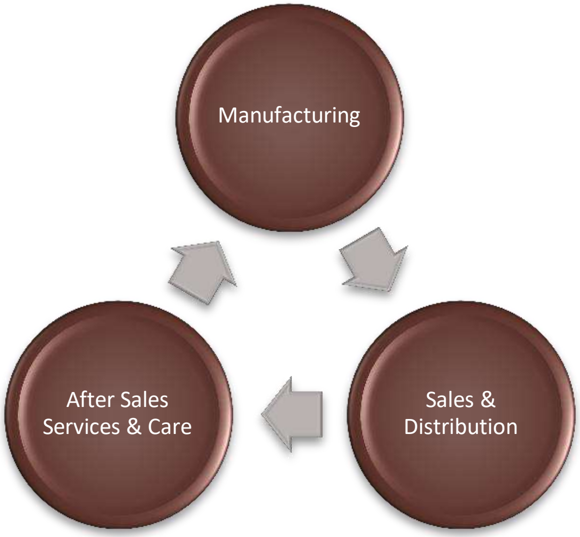
HISTORY

Due to the rapid demand on safety and security of vehicles in transportation operations and asset management Digital Control Systems (DCS) as manufacturer was established in year 2009 in UAE, specialized in designing and developing asset management solutions bringing the most advanced technology into the emergent market of MEA adopting German technology with an international standardized model accommodating local need's and highly customizable features (DCS) was able to successfully introduce one of the cutting edge technological product to assist its clients exploiting resources and enhance safety and security as primary objective within (Asset management Solutions)

(DCS) has been approved to be one of the top leading (Asset management Solutions)
providers within the largest organization operations of Oil and Gas field on global level complying with the high standard rules and regulations of its clients through their day to day needs and requirements (DCS) continually strives to have become a strategic partner to its clients.



DCS Key Clients and Partners



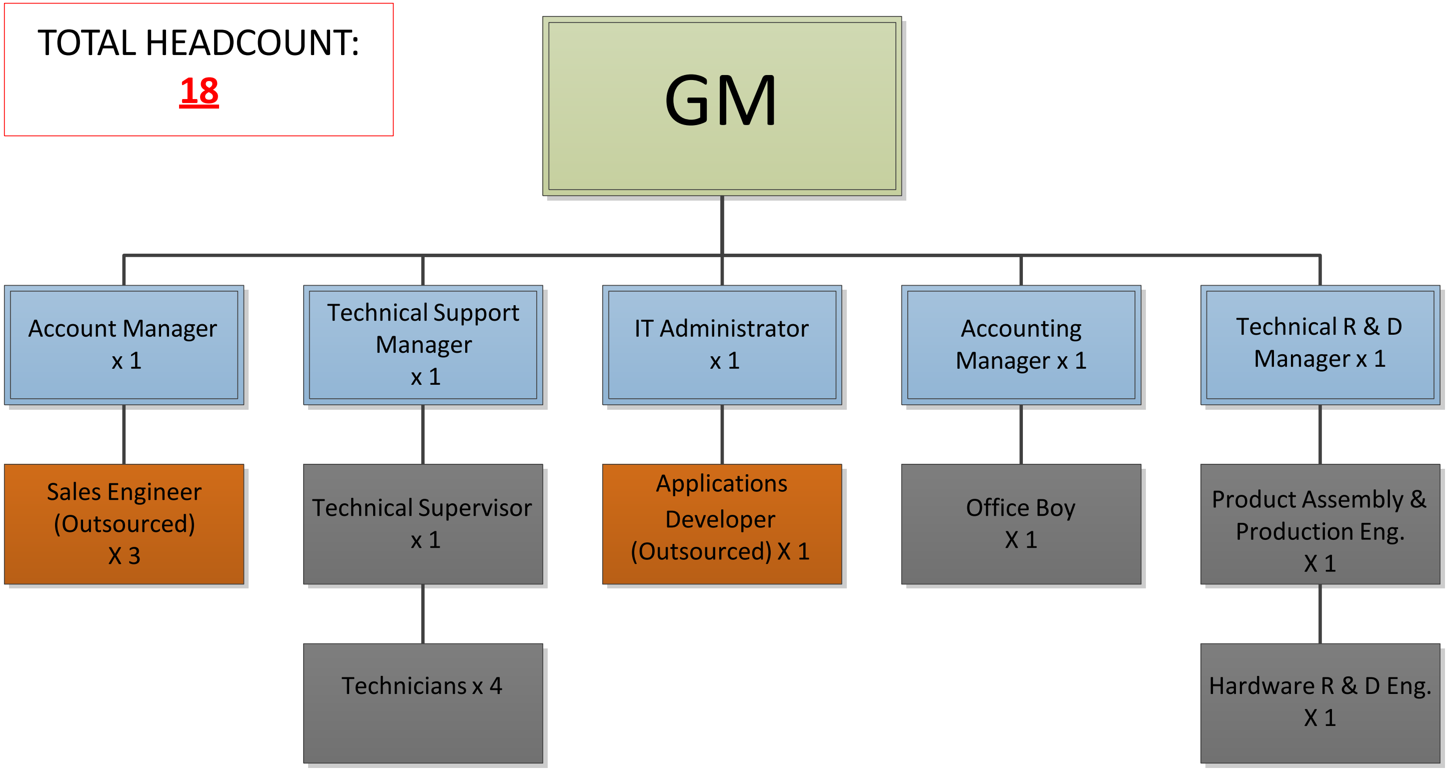
Manufacturing

Sales & Distribution

After Sales Services & Care

ORGANIZATIONAL CHART

TOTAL HEADCOUNT: **18**



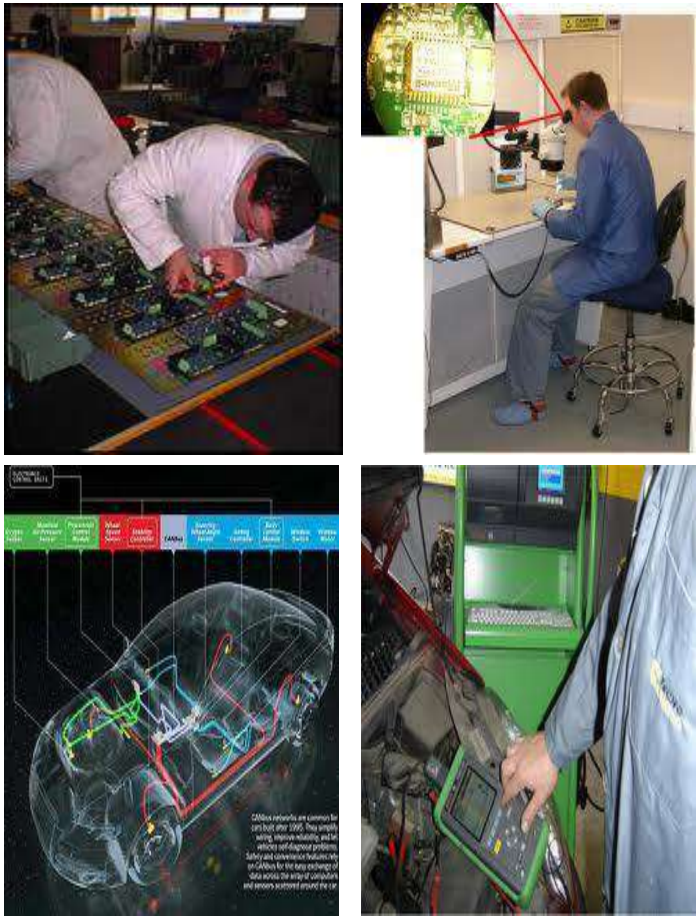
GM

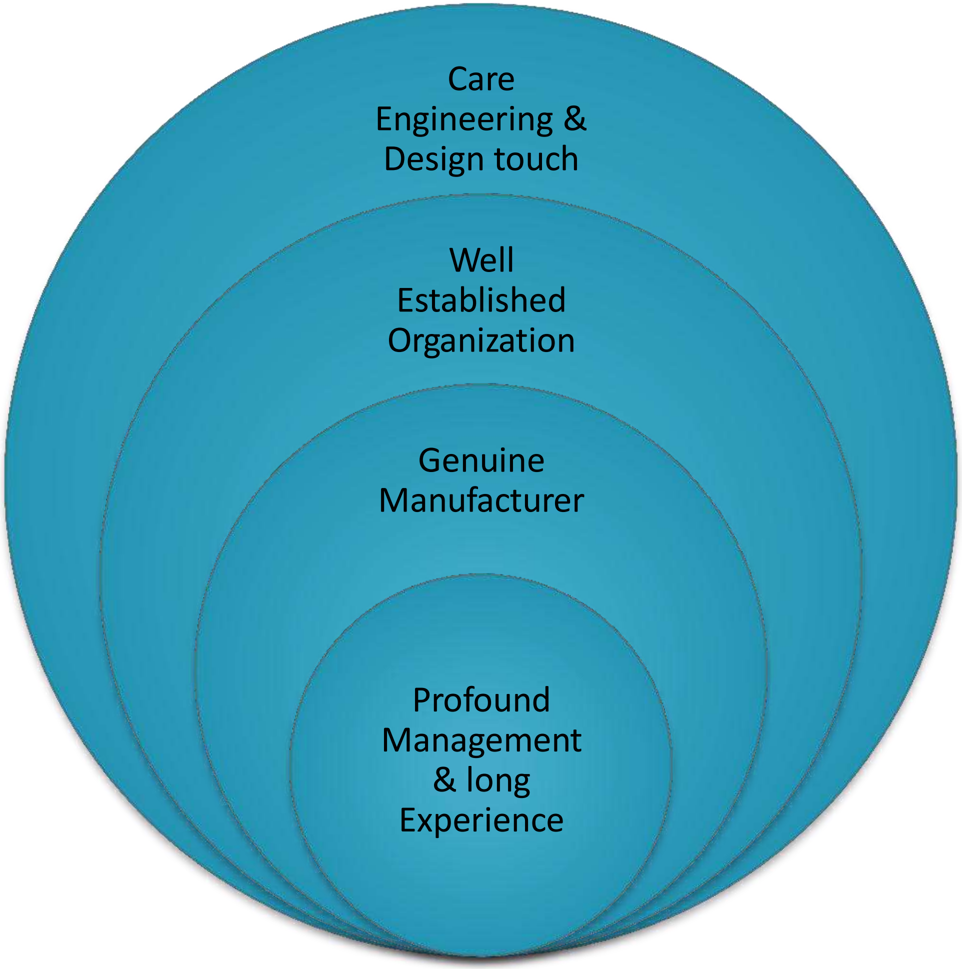
- Account Manager x 1
  - Sales Engineer (Outsourced) X 3
- Technical Support Manager x 1
  - Technical Supervisor x 1
    - Technicians x 4
- IT Administrator x 1
  - Applications Developer (Outsourced) X 1
- Accounting Manager x 1
  - Office Boy X 1
- Technical R & D Manager x 1
  - Product Assembly & Production Eng. X 1
    - Hardware R & D Eng. X 1

STRATEGIC CLIENTS

- Being one of the top ADCO's authorized vendors, our endeavor to serve our clients is something that we are proud of, on constant growth and expansion our key clients have greatly added into our success.
- Beside our internal achievement, our company goals for achieving best plans on regional level had been remarkable, our company operates in UAE, Syria, IRAQ, & Pakistan

COMPETIVITY





Care
Engineering &
Design touch

Well
Established
Organization

Genuine
Manufacturer

Profound
Management
& long
Experience

SOLUTION’S KEY UTILIZATIONS

SECURITY

SAFETY

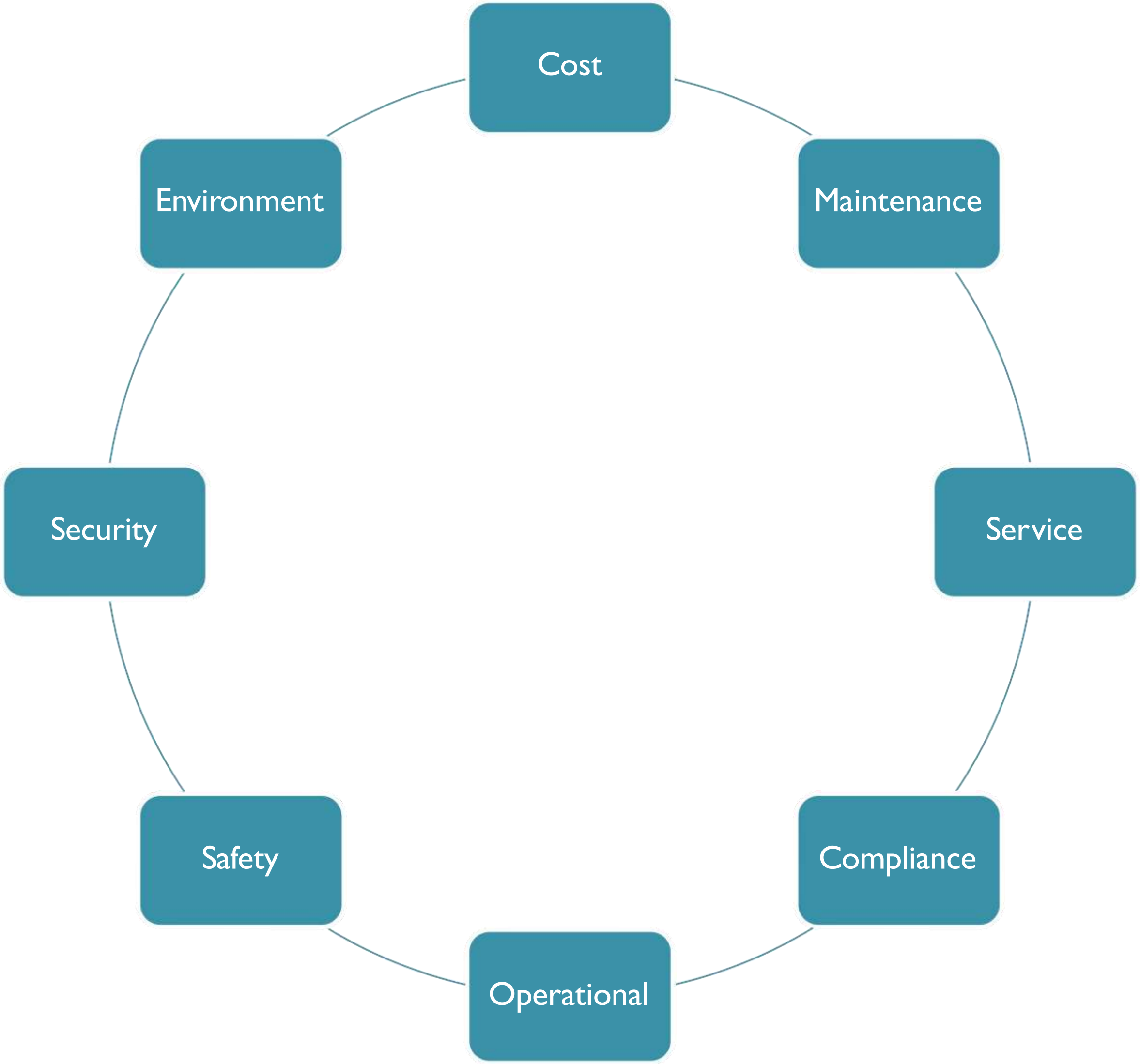
TRACKING

MANAGEMENT

CONTROL

MONITORING

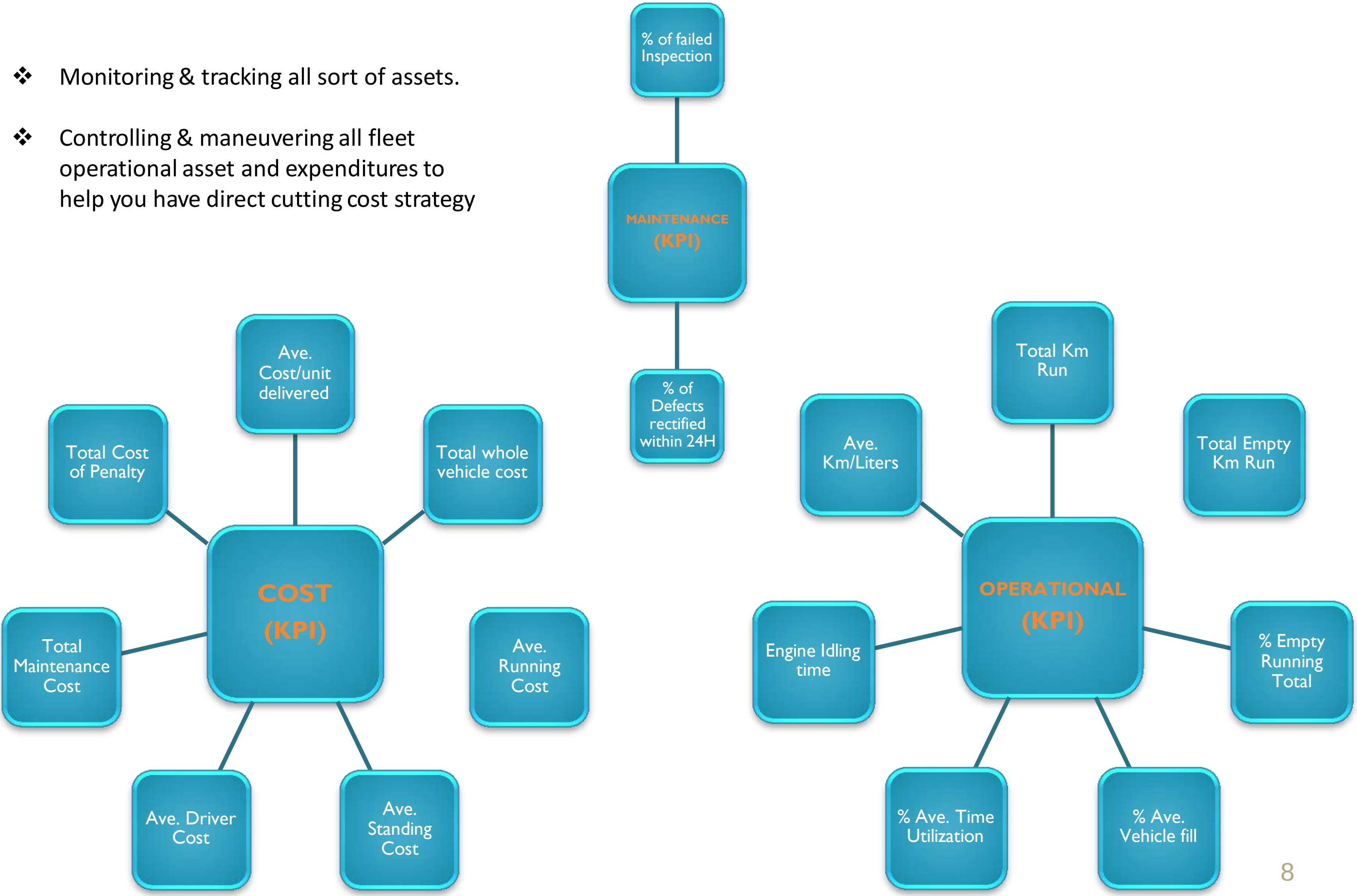
KEY BENEFITS



Cost
Maintenance
Service
Compliance
Operational
Safety
Security
Environment

OPERATIONAL AND ASSET COST CONTROL

- Monitoring & tracking all sort of assets.
- Controlling & maneuvering all fleet operational asset and expenditures to help you have direct cutting cost strategy



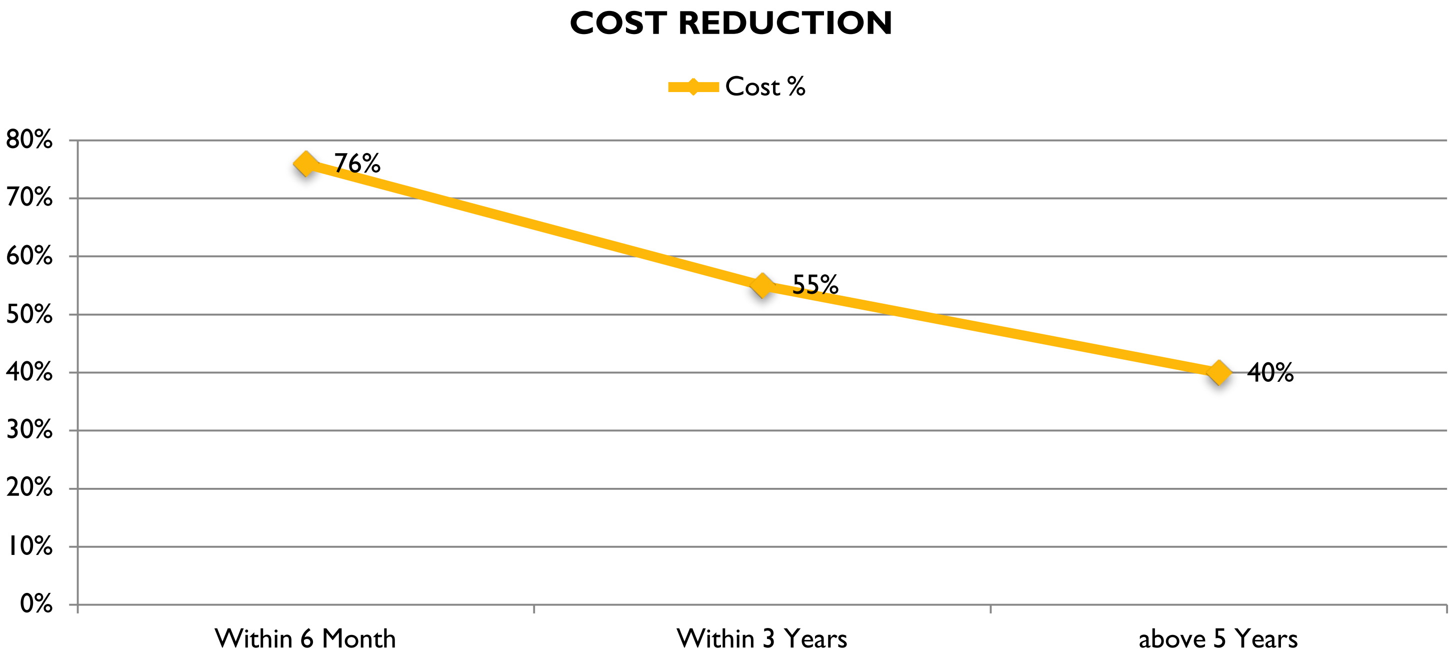
MAINTENANCE (KPI)
- % of failed Inspection
- % of Defects rectified within 24H

COST (KPI)
- Ave. Cost/unit delivered
- Total Cost of Penalty
- Total whole vehicle cost
- Total Maintenance Cost
- Ave. Running Cost
- Ave. Driver Cost
- Ave. Standing Cost

OPERATIONAL (KPI)
- Total Km Run
- Ave. Km/Liters
- Total Empty Km Run
- Engine Idling time
- % Empty Running Total
- % Ave. Time Utilization
- % Ave. Vehicle fill

FINANCIAL IMPACT

- the cost reduction is observed upon utilization of asset management solutions which had reduced cost of operations, and increased the asset appreciation value including safety of asset that is invaluable.
- The cost reduction is quite significant and yet supported by many researchers and big well-know international organizations

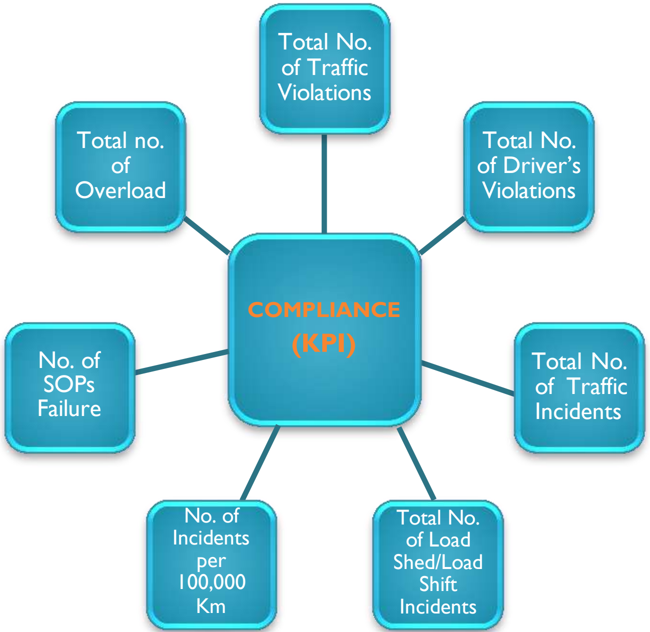


SERVICE OPERATIONS

- Exceptionally our dedicated on-site team are always on reach, our services and customer service qualities are premium and within reach.
- Any issues within all business days are on-site and immediately ready to support you with best services according to your needs
- Standard escalation procedure helps you tackle any issue within less than 24Hours
- Our Product & Solution are covered within warranty standard
- All products are upgradable according to the most convenient technological advancement of GSM
- Our servers are utilizing the highest security & hardware protocol for your convenience, all data is stored and archived over a very long time span
- Our solution is highly configurable and customizable according to client’s needs this includes user interface application and reports

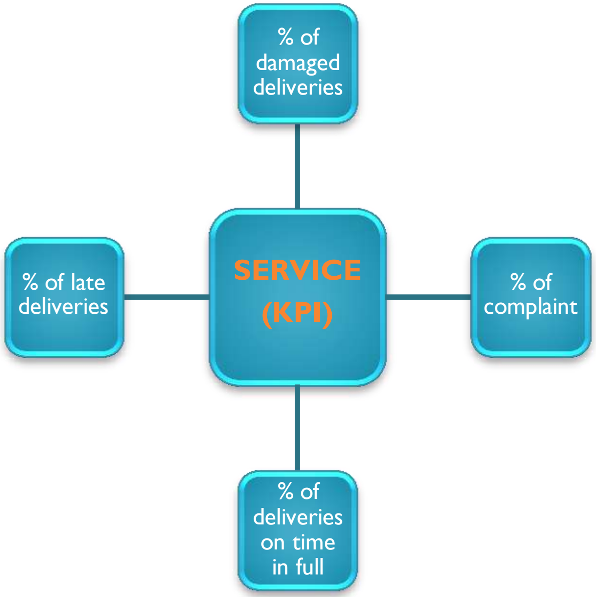
MANAGEMENT EFFICIENCY & EFFECTIVENESS

- Managing your asset has become extraordinarily efficient
- Customer satisfaction significantly improved
- Offering more services and qualitative deliveries is easy
- Incentive scheme and compensation for employees is simple
- Safety and security of inventories and goods deliverables to customers is quite handy



COMPLIANCE (KPI)

- Total No. of Traffic Violations
- Total No. of Driver's Violations
- Total No. of Traffic Incidents
- Total No. of Load Shed/Load Shift Incidents
- No. of Incidents per 100,000 Km
- No. of SOPs Failure
- Total no. of Overload

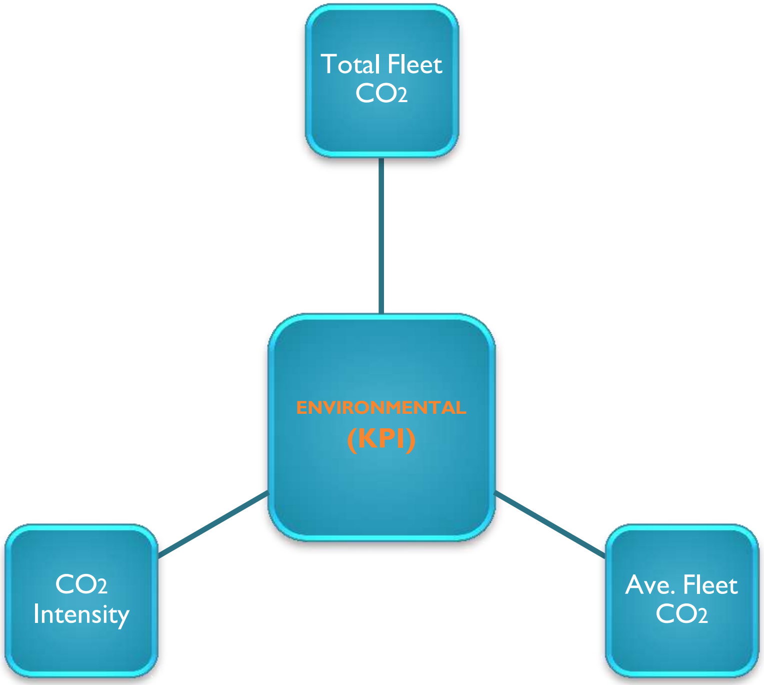


SERVICE (KPI)

- % of damaged deliveries
- % of complaint
- % of deliveries on time in full
- % of late deliveries

ENVIRONMENTAL IMPACT

- Now you can start implement a total quality management system which is highly compatible with all QMS and EMS ISO standards which help you save the planet and keep it environmentally clean.



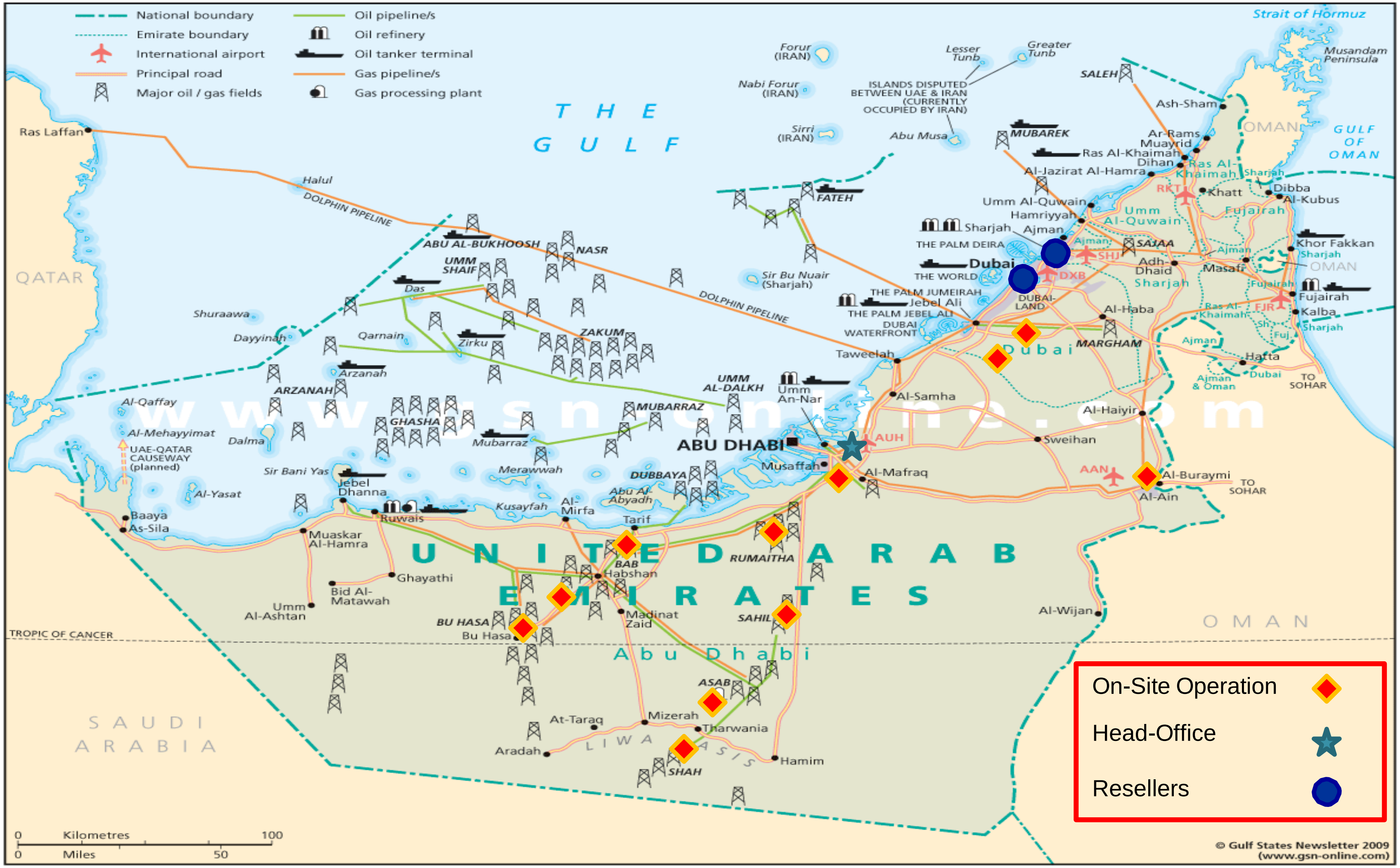
ENVIRONMENTAL (KPI)

Total Fleet CO_2

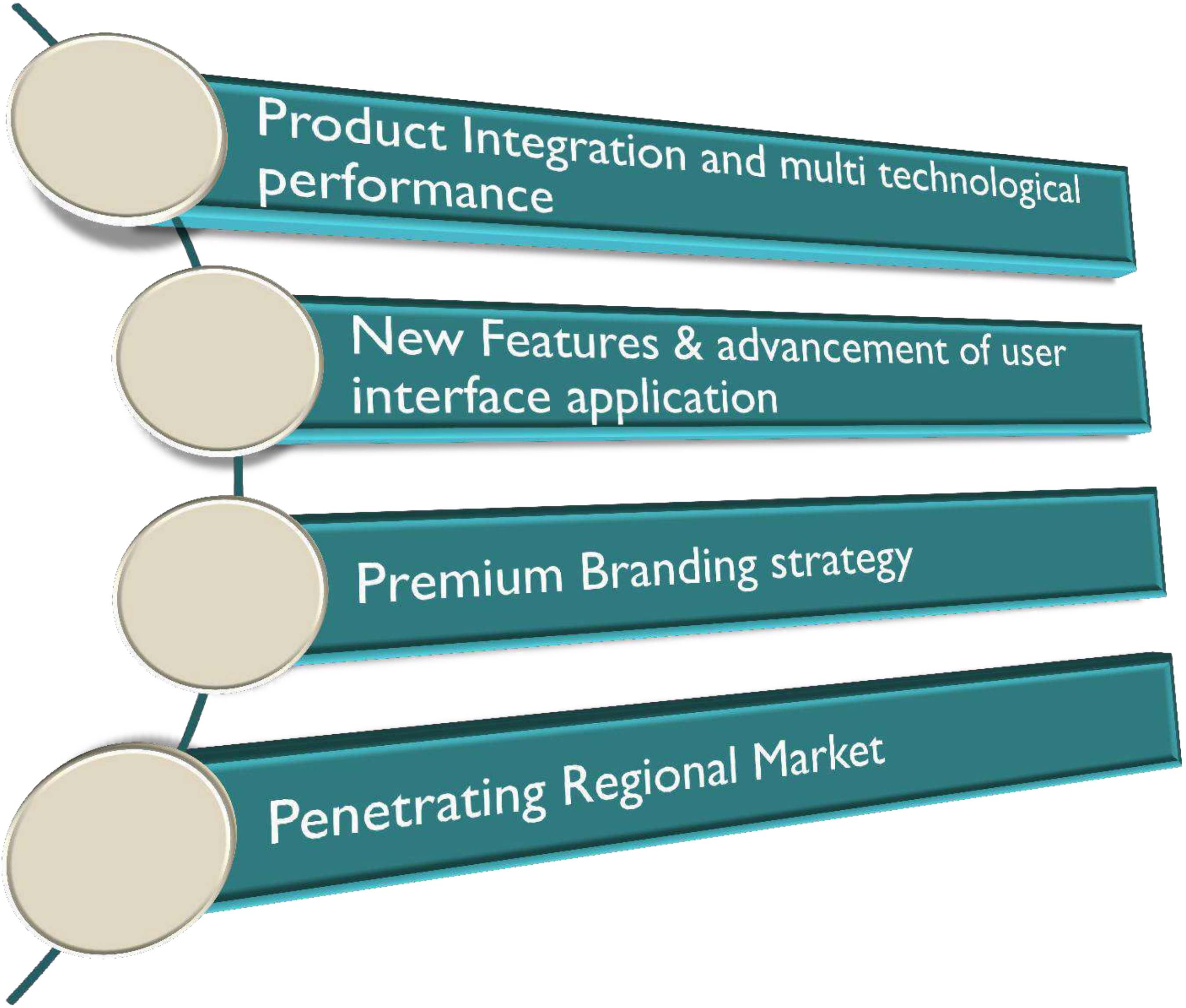
CO_2 Intensity

Ave. Fleet CO_2

BRANCHES & OPERATIONS

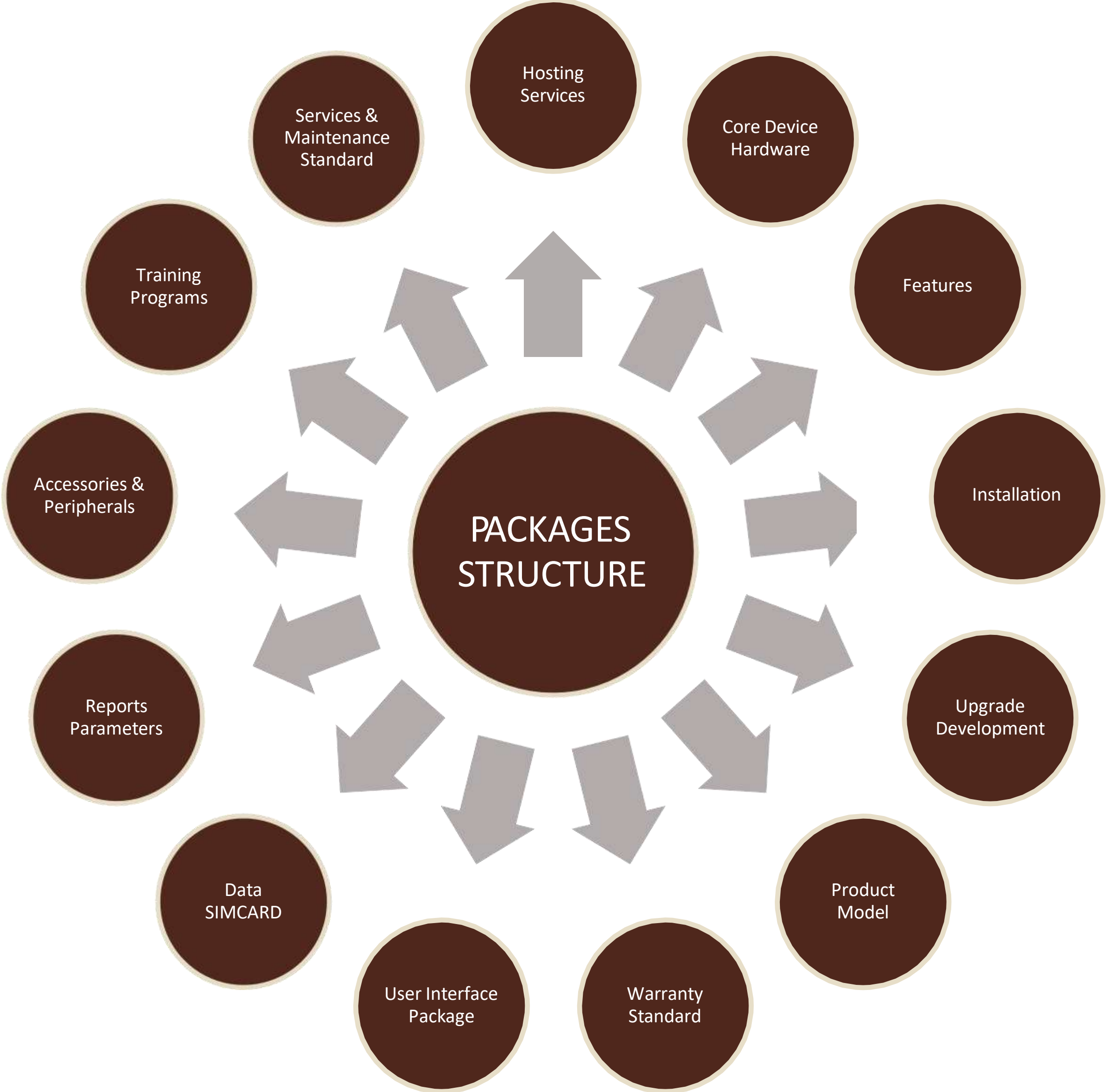

National boundary
Emirate boundary
International airport
Principal road
Major oil / gas fields
Oil pipeline/s
Oil refinery
Oil tanker terminal
Gas pipeline/s
Gas processing plant
THE GULF
Strait of Hormuz
GULF OF OMAN
Musandam Peninsula
QATAR
Ras Laffan
SAUDI ARABIA
OMAN
UNITED ARAB EMIRATES
Abu Dhabi
Dubai
ABU DHABI
Sharjah
Ajman
Umm Al-Quwain
Ras Al-Khaimah
Fujairah
Khor Fakkan
Kalba
Al-Ain
Al-Buraymi
Ruwais
Jebel Dhanna
Mirfa
Madinat Zaid
Liwa Oasis
Jebel Ali
Musaffah
Al-Mafraq
Taweelah
Das
Zirku
Halul
DOLPHIN PIPELINE
TROPIC OF CANCER
Kilometres 0 100
Miles 0 50
© Gulf States Newsletter 2009 (www.gsn-online.com)
www.usnmlnc.com
On-Site Operation ◆
Head-Office ★
Resellers ●

STRATEGY

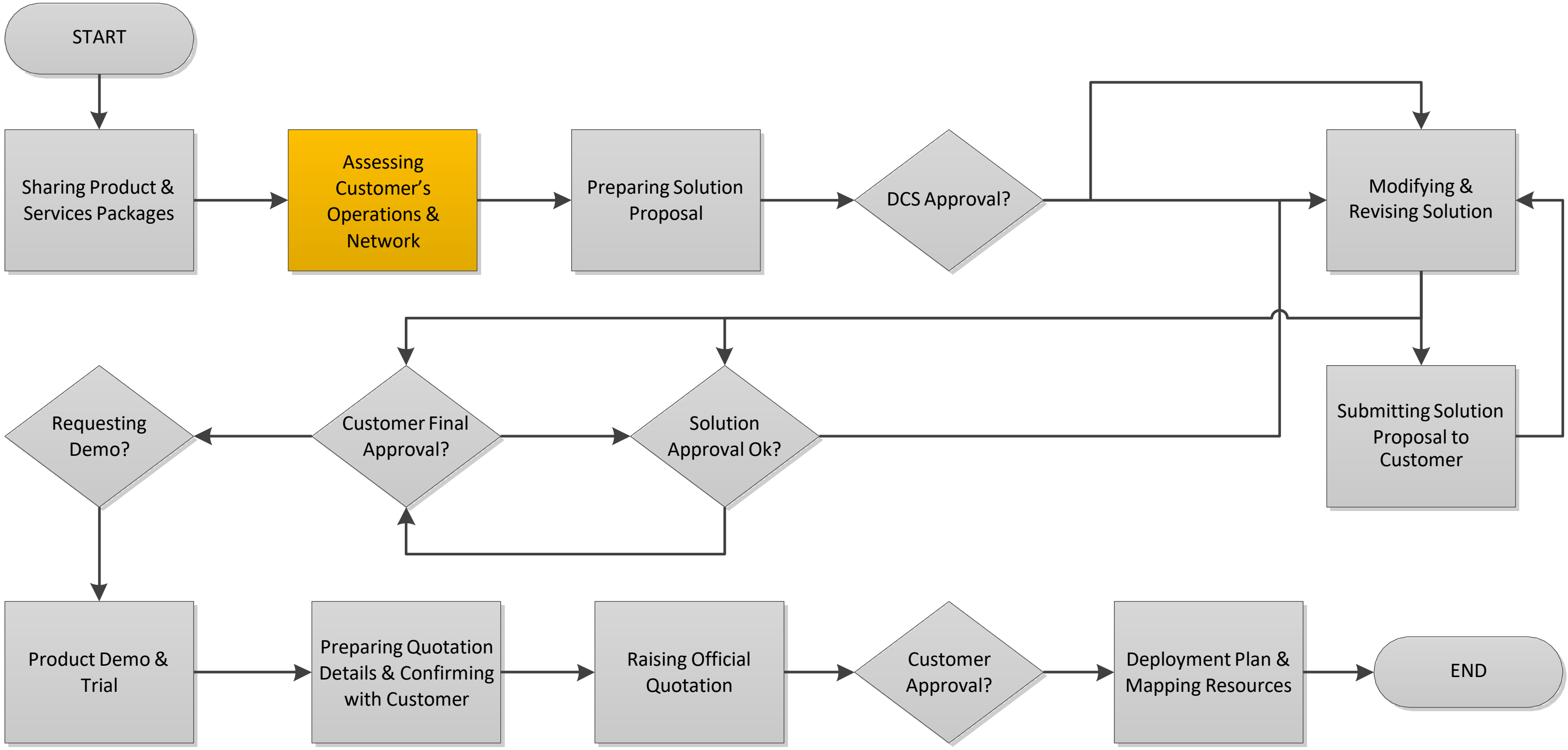


- Product Integration and multi technological performance
- New Features & advancement of user interface application
- Premium Branding strategy
- Penetrating Regional Market

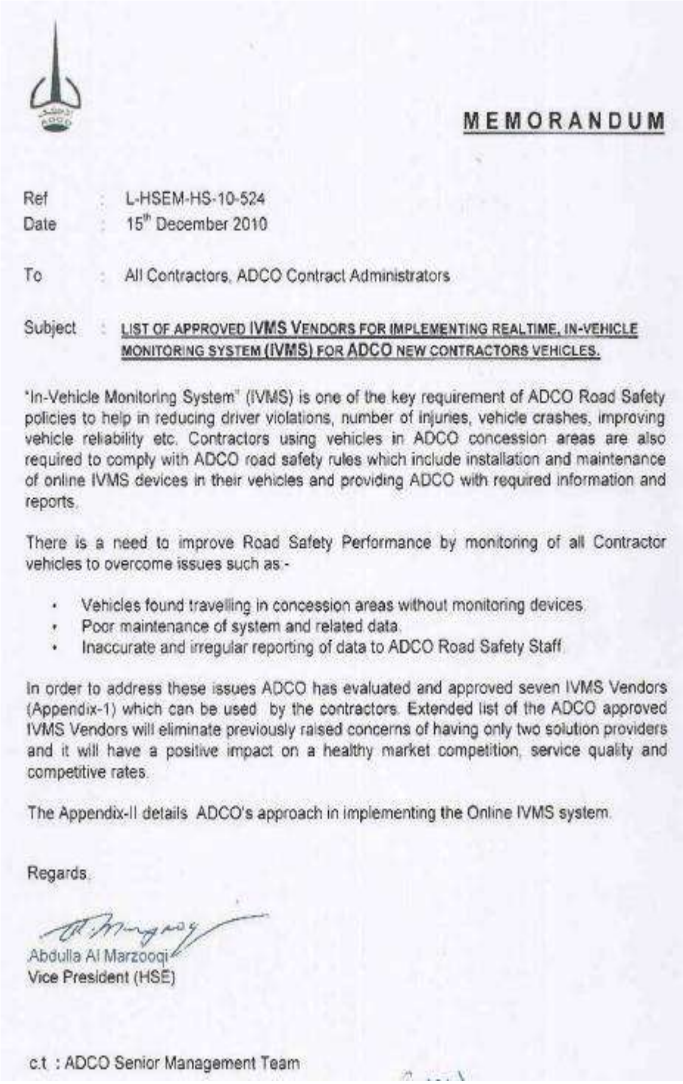
PACKAGES STRUCTURE


PACKAGES STRUCTURE
Hosting Services
Core Device Hardware
Features
Installation
Upgrade Development
Product Model
Warranty Standard
User Interface Package
Data SIMCARD
Reports Parameters
Accessories & Peripherals
Training Programs
Services & Maintenance Standard

SALES OPERATION


START
Sharing Product & Services Packages
Assessing Customer’s Operations & Network
Preparing Solution Proposal
DCS Approval?
Modifying & Revising Solution
Submitting Solution Proposal to Customer
Solution Approval Ok?
Customer Final Approval?
Requesting Demo?
Product Demo & Trial
Preparing Quotation Details & Confirming with Customer
Raising Official Quotation
Customer Approval?
Deployment Plan & Mapping Resources
END

ADCO's APPROVAL



MEMORANDUM

Ref : L-HSEM-HS-10-524
Date : 15th December 2010

To : All Contractors, ADCO Contract Administrators

Subject : LIST OF APPROVED IVMS VENDORS FOR IMPLEMENTING REALTIME, IN-VEHICLE MONITORING SYSTEM (IVMS) FOR ADCO NEW CONTRACTORS VEHICLES.

"In-Vehicle Monitoring System" (IVMS) is one of the key requirement of ADCO Road Safety policies to help in reducing driver violations, number of injuries, vehicle crashes, improving vehicle reliability etc. Contractors using vehicles in ADCO concession areas are also required to comply with ADCO road safety rules which include installation and maintenance of online IVMS devices in their vehicles and providing ADCO with required information and reports.

There is a need to improve Road Safety Performance by monitoring of all Contractor vehicles to overcome issues such as:-

- Vehicles found travelling in concession areas without monitoring devices
- Poor maintenance of system and related data.
- Inaccurate and irregular reporting of data to ADCO Road Safety Staff

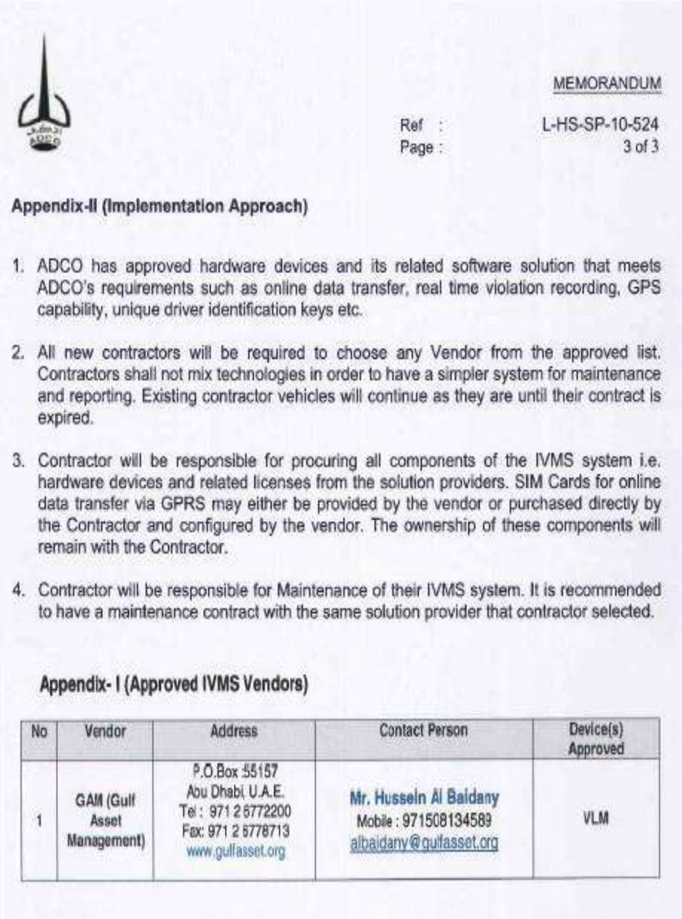
In order to address these issues ADCO has evaluated and approved seven IVMS Vendors (Appendix-1) which can be used by the contractors. Extended list of the ADCO approved IVMS Vendors will eliminate previously raised concerns of having only two solution providers and it will have a positive impact on a healthy market competition, service quality and competitive rates.

The Appendix-II details ADCO's approach in implementing the Online IVMS system.

Regards.

Abdulla Al Marzooqi
Vice President (HSE)

c.t : ADCO Senior Management Team



MEMORANDUM

Ref : L-HS-SP-10-524
Page : 3 of 3

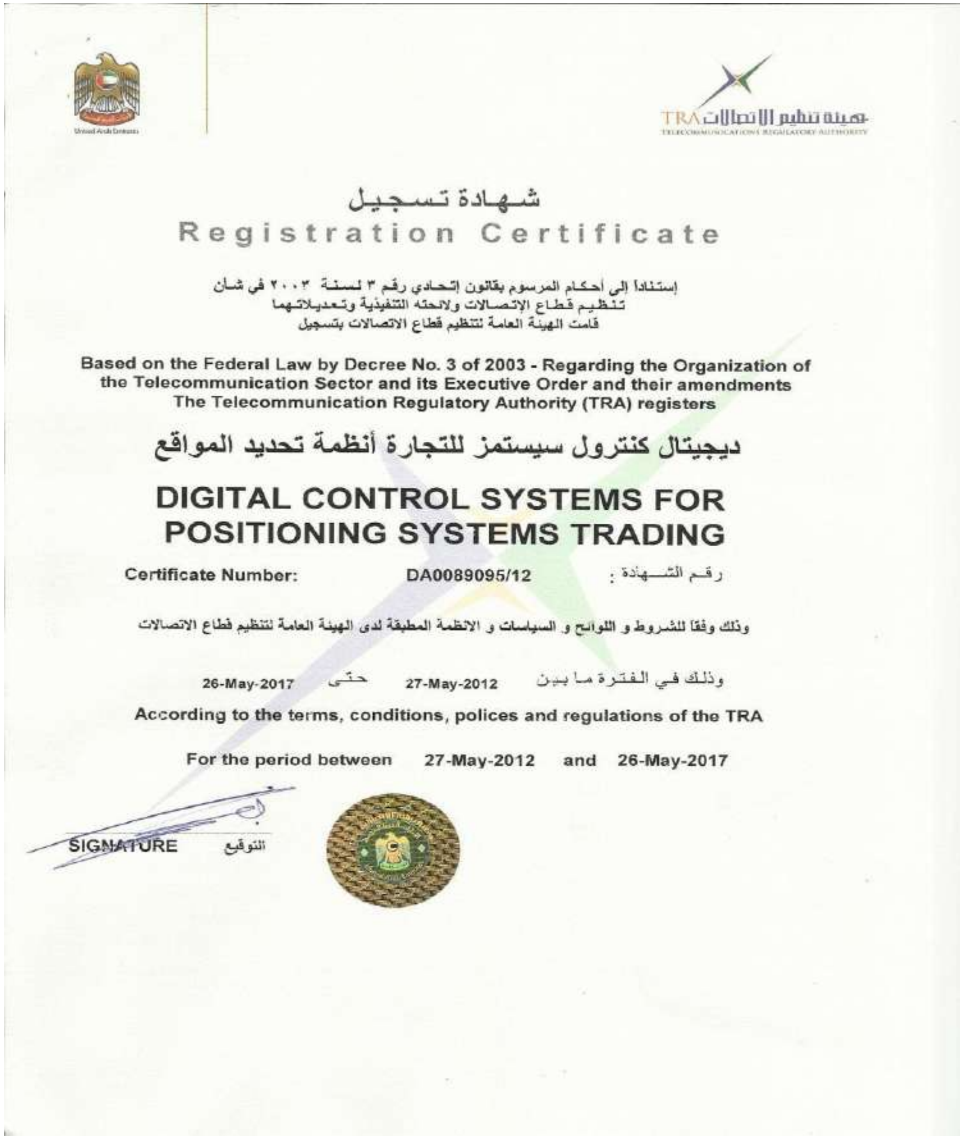
Appendix-II (Implementation Approach)

1. ADCO has approved hardware devices and its related software solution that meets ADCO's requirements such as online data transfer, real time violation recording, GPS capability, unique driver identification keys etc.
2. All new contractors will be required to choose any Vendor from the approved list. Contractors shall not mix technologies in order to have a simpler system for maintenance and reporting. Existing contractor vehicles will continue as they are until their contract is expired.
3. Contractor will be responsible for procuring all components of the IVMS system i.e. hardware devices and related licenses from the solution providers. SIM Cards for online data transfer via GPRS may either be provided by the vendor or purchased directly by the Contractor and configured by the vendor. The ownership of these components will remain with the Contractor.
4. Contractor will be responsible for Maintenance of their IVMS system. It is recommended to have a maintenance contract with the same solution provider that contractor selected.

Appendix- I (Approved IVMS Vendors)

No	Vendor	Address	Contact Person	Device(s) Approved
1	GAM (Gulf Asset Management)	P.O.Box :55157 Abu Dhabi, U.A.E. Tel : 971 2 6772200 Fax: 971 2 6778713 www.gulfasset.org	**Mr. Hussein Al Baidany** Mobile : 971508134589 albaidany@gulfasset.org	VLM

TRA APPROVAL & REGISTRATION



United Arab Emirates

هيئة تنظيم الاتصالات TRA
TELECOMMUNICATIONS REGULATORY AUTHORITY

شهادة تسجيل
Registration Certificate

إستناداً إلى أحكام المرسوم بقانون إتحادي رقم ٣ لسنة ٢٠٠٣ في شأن
تنظيم قطاع الإتصالات ولائحته التنفيذية وتعديلاتهما
قامت الهيئة العامة لتنظيم قطاع الاتصالات بتسجيل

Based on the Federal Law by Decree No. 3 of 2003 - Regarding the Organization of the Telecommunication Sector and its Executive Order and their amendments
The Telecommunication Regulatory Authority (TRA) registers

ديجيتال كنترول سيستمز للتجارة أنظمة تحديد المواقع

DIGITAL CONTROL SYSTEMS FOR POSITIONING SYSTEMS TRADING

Certificate Number: DA0089095/12 : رقم الشهادة

وذلك وفقا للشروط و اللوائح و السياسات و الانظمة المطبقة لدى الهيئة العامة لتنظيم قطاع الاتصالات

وذلك في الفترة ما بين 27-May-2012 حتى 26-May-2017

According to the terms, conditions, polices and regulations of the TRA

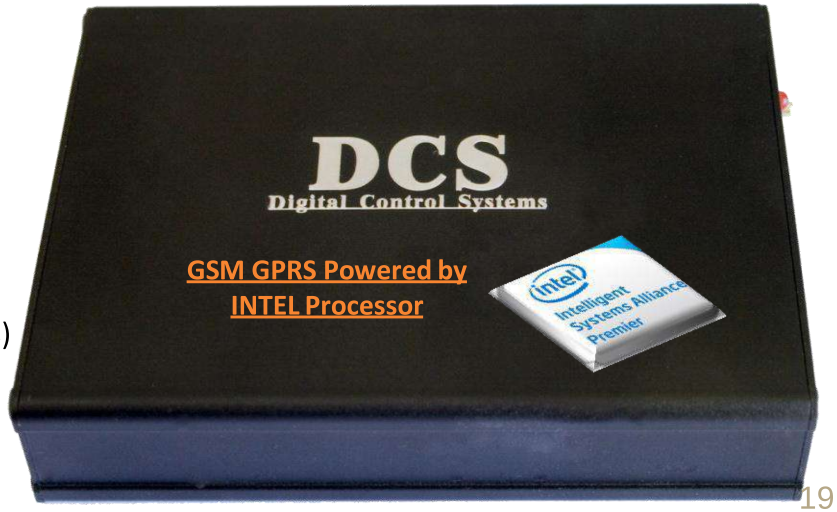
For the period between 27-May-2012 and 26-May-2017

SIGNATURE التوقيع

AMCD – Asset Management Solution

- AMCD lets you manage your Assets in real-time, offline regardless of where your assets are.
- You can track and manage your assets and have exceptions reported to you any time.
- This helps you actively & pro-actively manage your assets, Keeping you in control all the time.
- Up to 20 Inputs and 20 Outputs.
- Used smartly for mobile and Stationary assets.
- Multiple communications methods (GSM, WiFi, RC, Ethernet, USB).
- Large internal memory for offline modes.
- Ability to operate based on predefined formulas (Offline).
- Suitable for harsh environment operation (Remote Sites)

OUT1
GND
OUT2
GND
OUT3
GND
OUT4


DCS
Digital Control Systems
intel
Intelligent Systems Alliance
Premier

GSM GPRS Powered by INTEL Processor

AMCD – Asset Management Solution – Technical Specifications

- Power :
  - Input voltage 9V - 48V DC.
  - (110 DCV For Heavy Equipment.
  - Internal Backup Battery (6 Hours).
- Physical characteristics:
  - Dimensions 4.5” x 3” x 0.8”
  - Weight 200g
- I/O:
  - 2 Rs232.
  - 20 Analog - Digital - Frequency Inputs (User Selection).
  - 20 Relay Contact output.
  - 1 Buzzer.
  - 1 Internal 50DCV Relay.
  - Built-in G Sensor.
- RFID
  - 1 RFID Reader (Hi Frequency OR Low Frequency).
  - 2 Led Indicators.
  - 1 Buzzer Indicator.
  - Up To 10,000 IDs.
- Wireless Communication:
  - Built-in 3G Module.
  - Ability to operate in Quad-Band GSM 850/900/1800/1900.
  - Wi-Fi.
  - Frequency 433.1 Mhz
  - Max Power +10 dbm.
  - Internal & External GSM antenna / External GPS antenna
  - Remote Firmware & Settings Update
- RTC:
  - Built-in RTC.
  - Battery life >6 Years.
- Storage:
  - Events Messages 8MB up to 16MB.
  - Tacho (secondly) 8MB up to 16MB.
- GPS & Geo-fence:
  - Built-in GPS Module
  - Up to 3000 point multi-polygon shape.
- Environmental specification:
  - Operation Temperature range -40C to +70C.
  - Operation humidity range up to 95%.
- Accessories:
  - Asset Peripheral ID.
  - CAN Bus.
  - Finger Print.
  - MP3 Speaker.
  - HUB Mode.

AMCD – Examples of Use

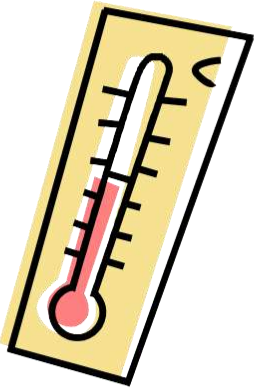
AMCD has the ability to connect to almost all kinds of sensors and controllers, with this unique feature the device capabilities is limited only by the imagination of the operator.

- **Water Desalination Plant :** Ability to set reminders for maintenance and report failure of systems.
- **Electricity Plants :** Ability to monitor operation, shutdown while generator is overloaded and switching between generators.
- **Access Control :** ability to identify operators and run a role-based operation system.
- **Fire Fight & Detection System :** Ability to sense fire by Smoke, heat, Flame etc.… and notify authorities, setting off the alarm and start the foam and/or water sprinklers.
- **Factories and production lines :** Ability to monitor the production line and factory and have custom action based on all kinds of exceptions for example (system overload, performance drop, etc.…

FEATURES

Site Power Generators

Fuel Consumption Monitoring



Engine & Container Temperature Monitoring

Surveillance

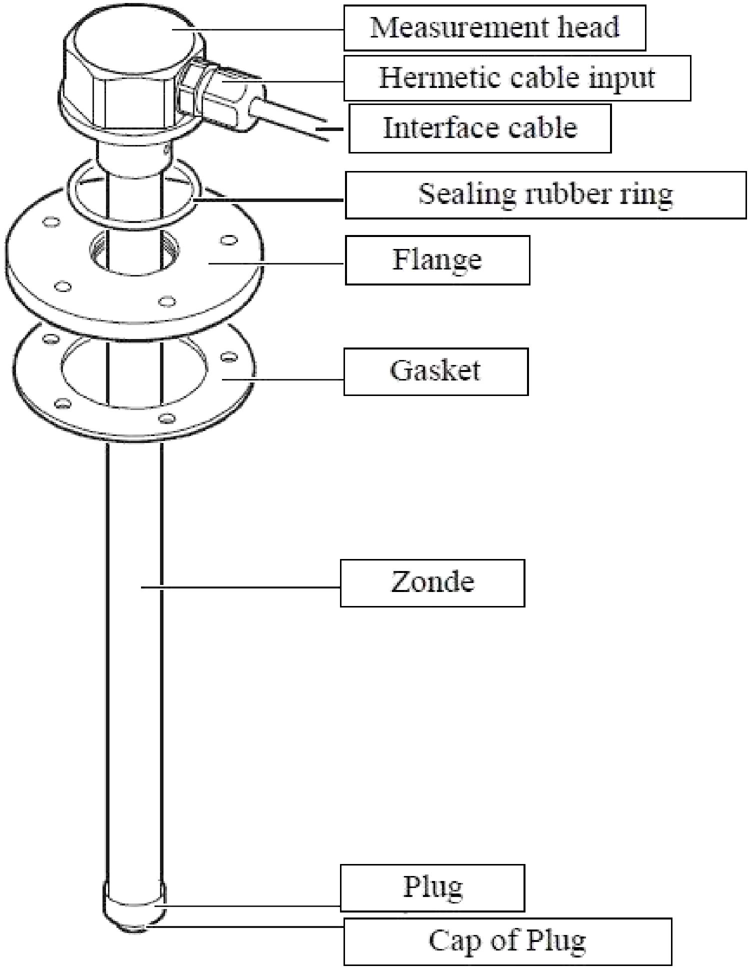
Forbidden Zone Entering

& Immobilization

160 / 260 Series

Control Locks

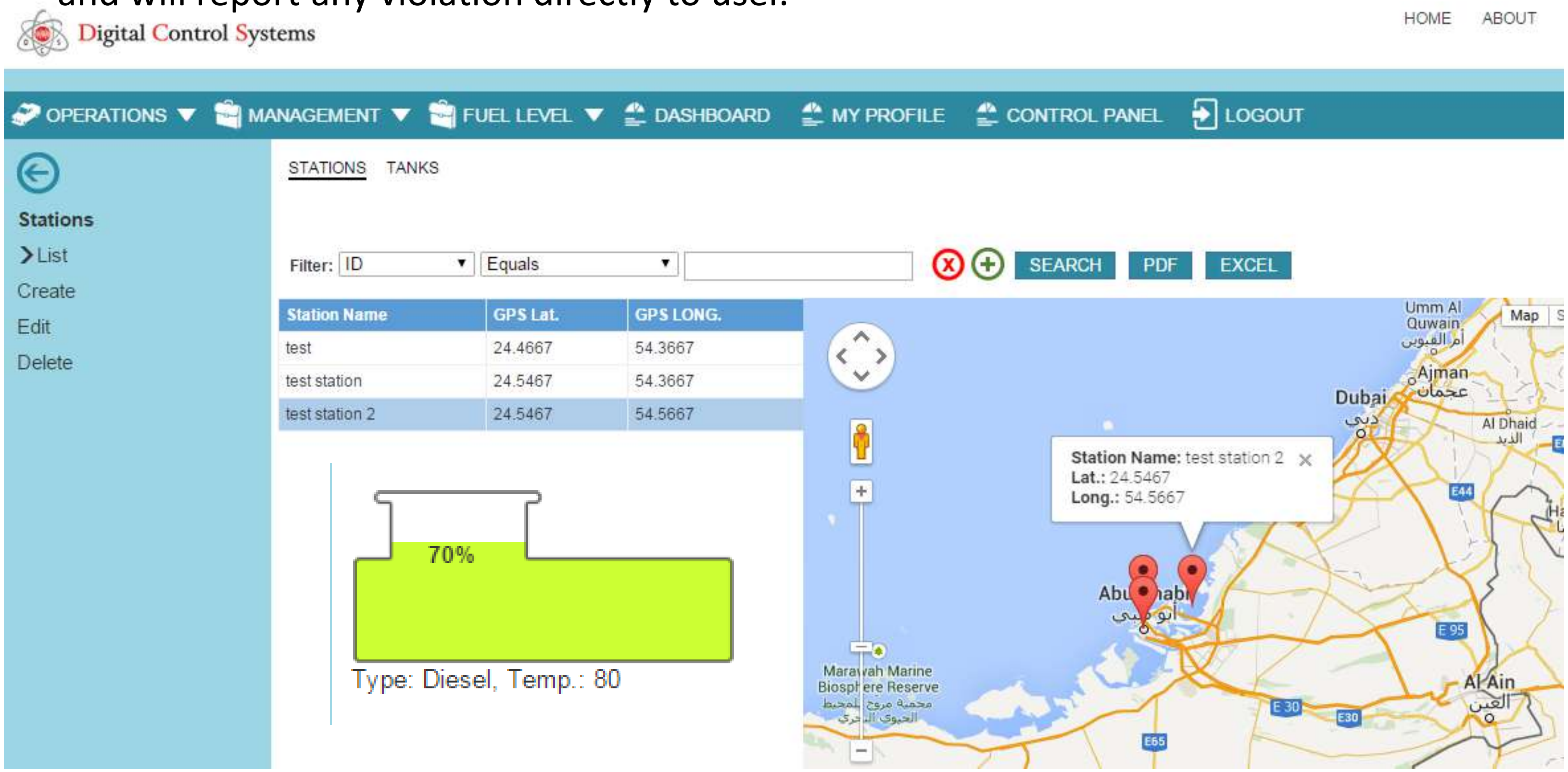
Fuel management


Measurement head
Hermetic cable input
Interface cable
Sealing rubber ring
Flange
Gasket
Zonde
Plug
Cap of Plug

- Fuel level sensor is designed for precise measuring of the fuel level in reservoirs and vehicle fuel tanks.
- There are two types of fuel sensor, stationary and mobile
- **Higher precision measurement of fuel due to :** high-resolution of the sensor, linearity, temperature stability;
- Explosion proof**.** Sensor has all required explosion proof certificates;
- Modular construction**.** Measuring head is mounted and dismantled independently of the fuel probe, which allows easily and quickly to change, if necessary, the measuring head without re-calibration of the tank.
- Wide range of possible probe length**.** The sensor with the length 75cm can be cut down up to 3cm. Non-standard length up to 3m;
- Ease of installation**.** Only a small tube cutter needed to cut the probe. No need to sink the probe into the tank before the calibration;
- Light weight (300g).

Fuel management

- The online web application lets you monitor and track your generator/tanker/station online and live 24/7 and it gives you the ability to get notified by email and/or SMS with exceptions and violations.
- The application can be programmed to allow a certain amount of consumption per hour and will report any violation directly to user.


Digital Control Systems
HOME
ABOUT
OPERATIONS ▼
MANAGEMENT ▼
FUEL LEVEL ▼
DASHBOARD
MY PROFILE
CONTROL PANEL
LOGOUT
Stations
List
Create
Edit
Delete
STATIONS
TANKS
SEARCH
PDF
EXCEL
70%
Map
Umm Al Quwain
Ajman
Dubai
Al Dhaid
Abu Dhabi
Marawah Marine Biosphere Reserve
Al Ain
E44
E 95
E 30
E30
E65

Filter: ID ▼ Equals ▼

Station Name	GPS Lat.	GPS LONG.
test	24.4667	54.3667
test station	24.5467	54.3667
test station 2	24.5467	54.5667

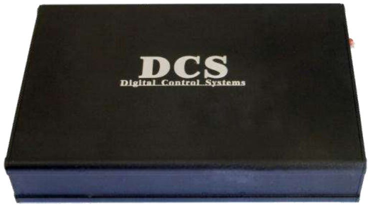
Type: Diesel, Temp.: 80

Station Name: test station 2
Lat.: 24.5467
Long.: 54.5667

FEATURES

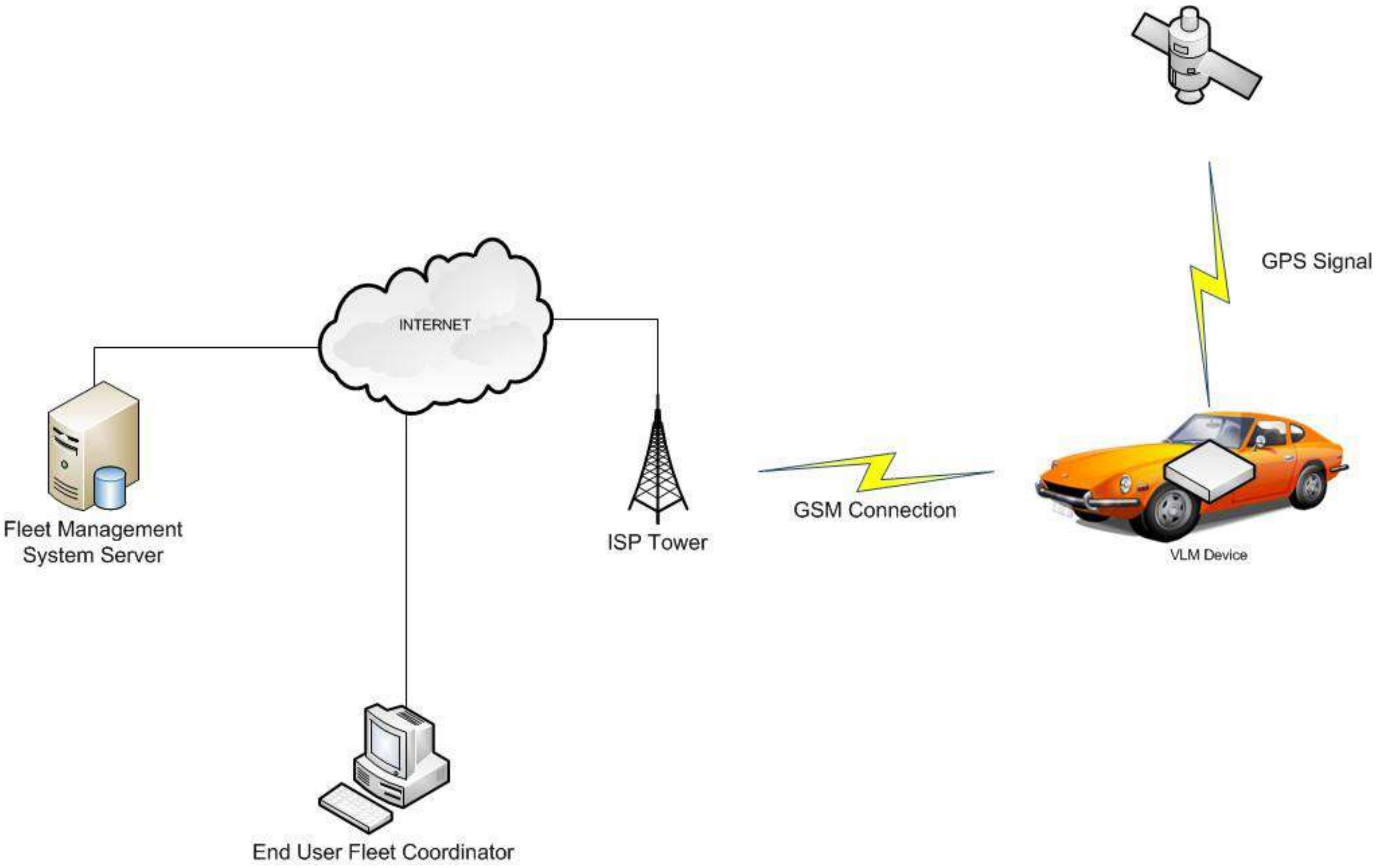
- Ability to analyze accidents second by second
- Increased driver performance through accountability and productivity
- Increased driver safety through the monitoring of their driving habits
- Increased customer satisfaction by providing accurate service arrival times
- Increased ability to manage productivity through the use of management graphs
- Increased ability to efficiently dispatch your fleet through the use of landmarks and real-time positioning
- Increased fleet utilization by getting to more service stops per day
- Provides accurate data for customer billing
- Faster response time to customer service requests by knowing exactly where your vehicles are
- Reduced fuel, maintenance and overtime costs
- Reduced liability and insurance costs
- Reduced non-revenue driver time
- Reduced unauthorized use of vehicles
- Reduced theft of vehicles and inventory

DCS
Digital Control Systems

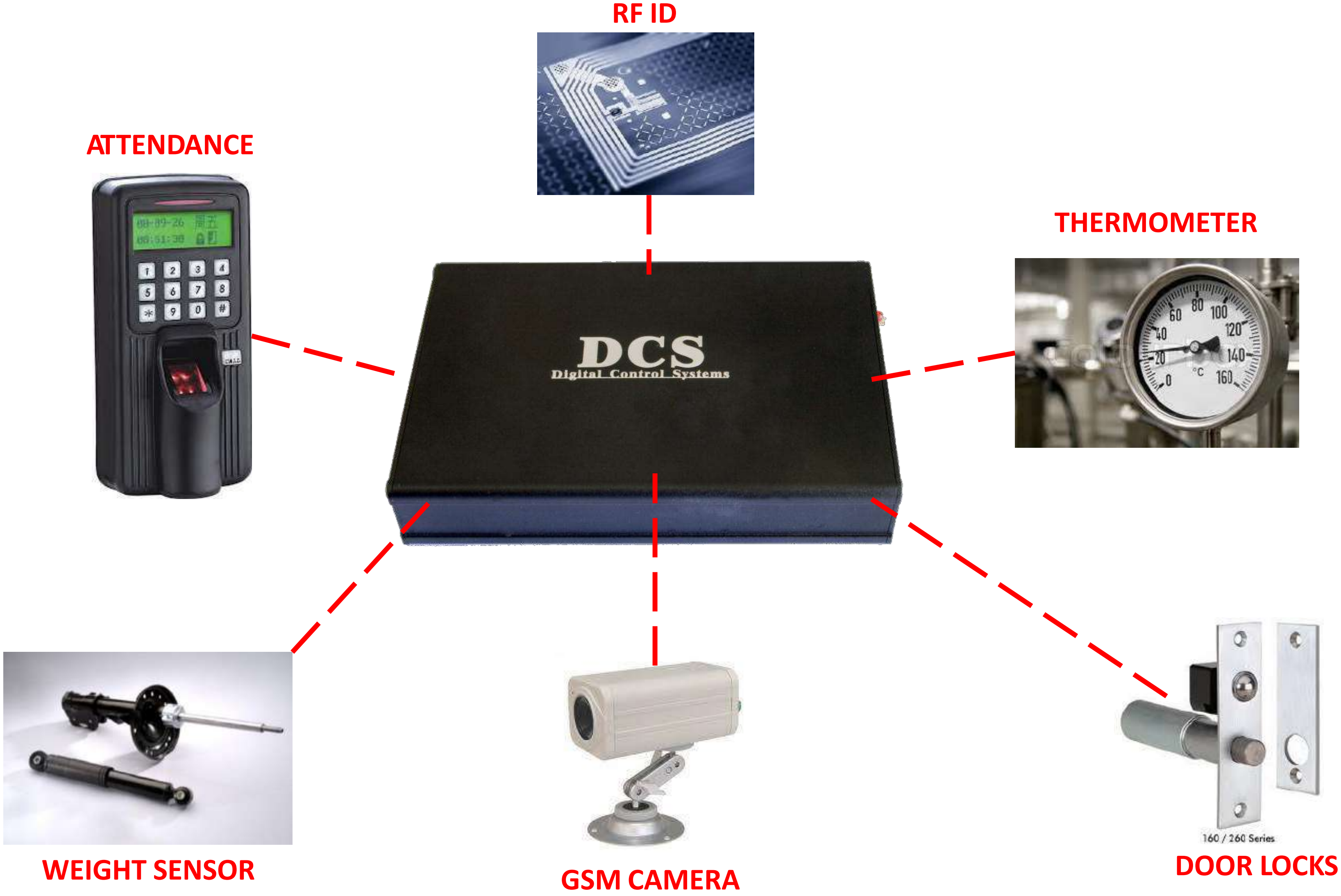


DCS
Digital Control Systems

SOLUTION COMMUNICATION & TECHNOLOGY


GPS Signal
INTERNET
Fleet Management
System Server
ISP Tower
GSM Connection
VLM Device
End User Fleet Coordinator

CUSTOMIZABLE SOLUTIONS



DCS
Digital Control Systems
160 / 260 Series

RF ID

ATTENDANCE

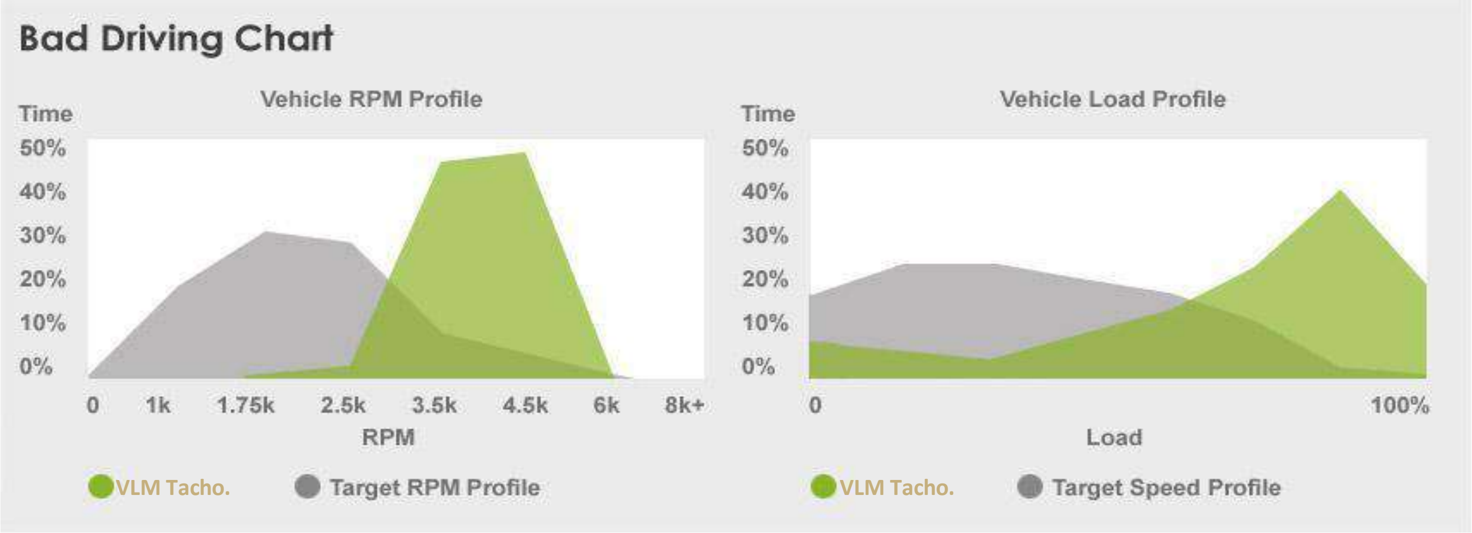
THERMOMETER

WEIGHT SENSOR

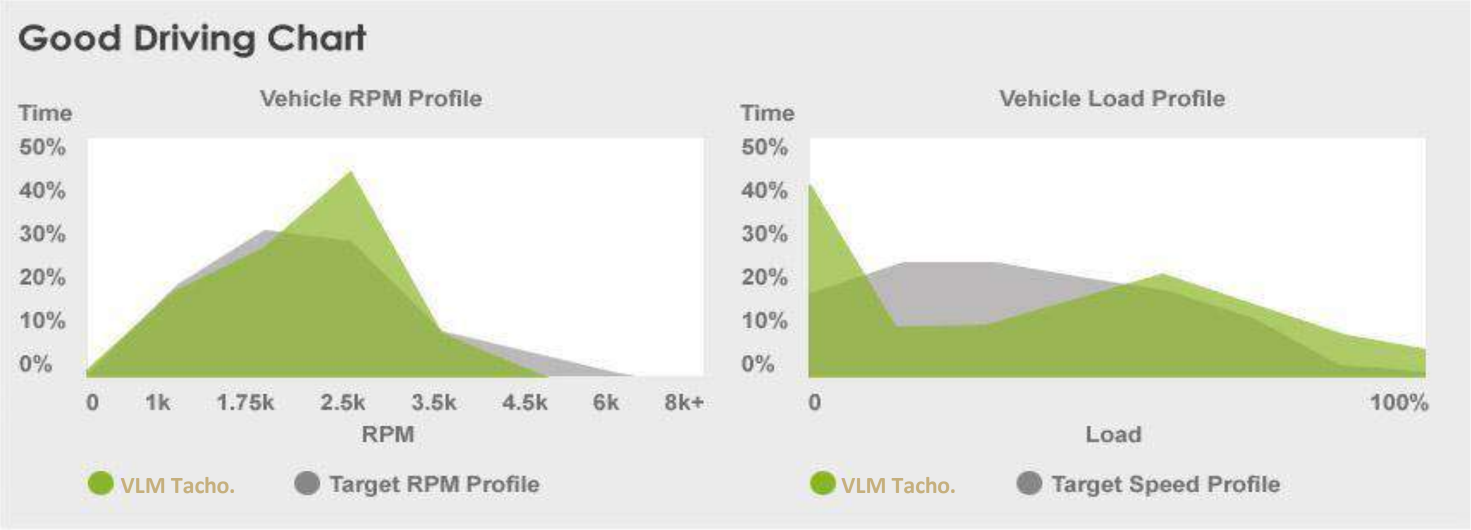
GSM CAMERA

DOOR LOCKS

SAMPLE REPORT



Bad Driving Chart



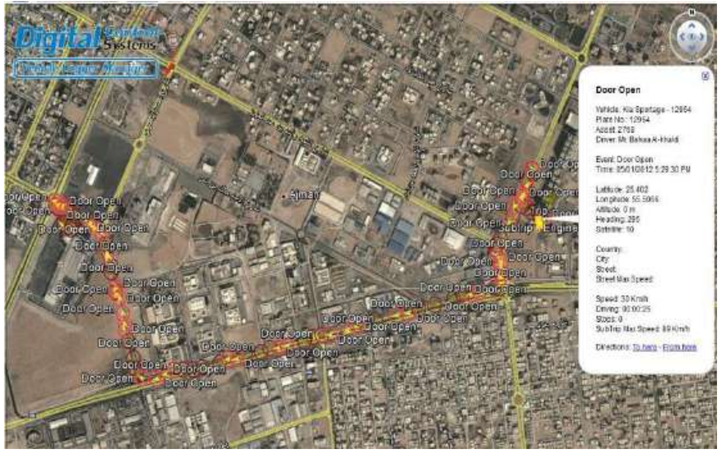
Good Driving Chart

SAMPLE REPORT

Company

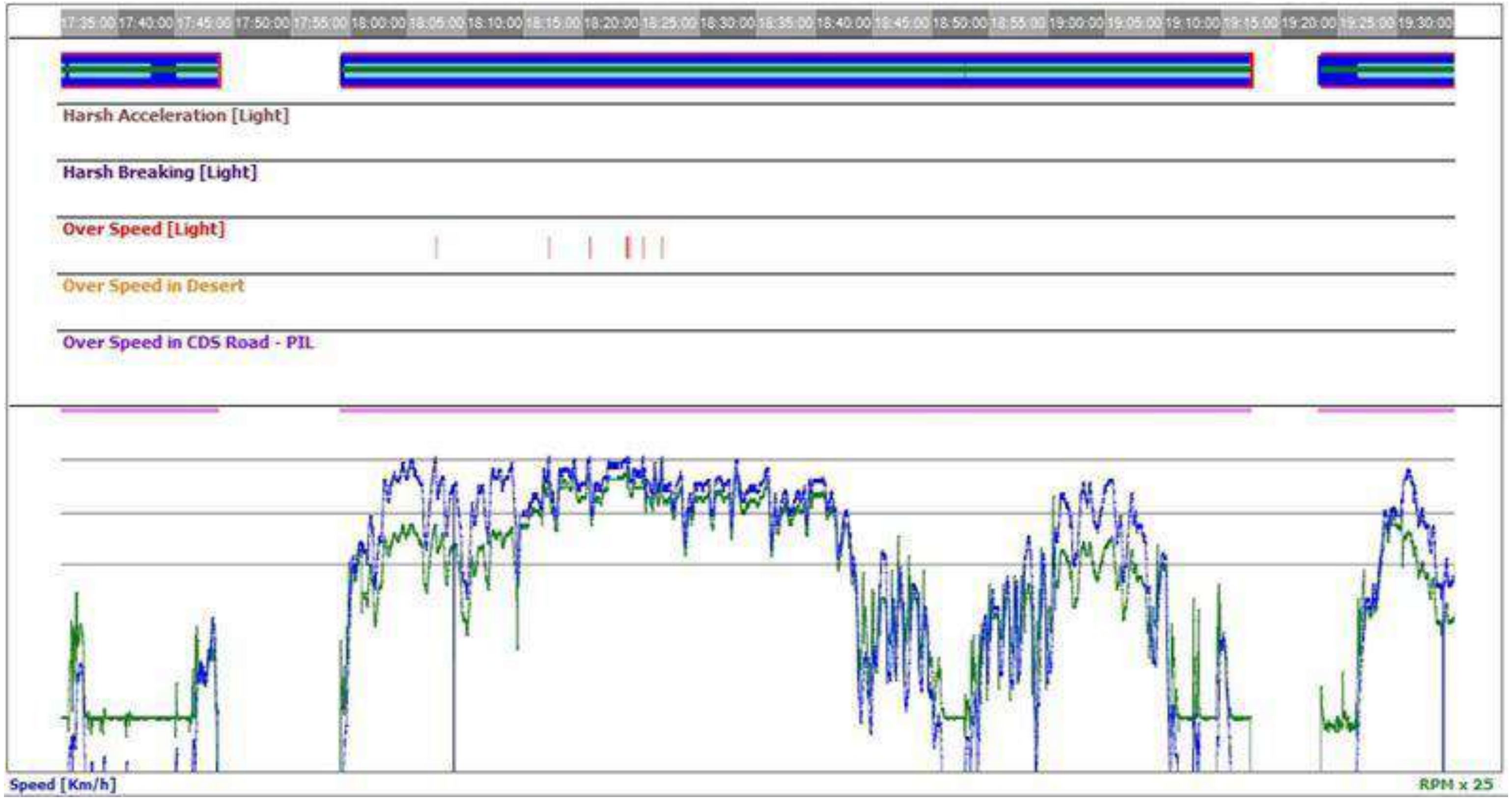
Report Start:	17-Mar-08
Report End:	23-Mar-08

Site	Vehicle	Event	Start Time	End Time	Max Speed	Max RPM	Max Accel	Max Decel
	Toyota LC-SW-4WD - 0001	Ignition	17/03/08 09:41:39	17/03/08 09:47:53	0	275		
	Toyota LC-SW-4WD - 0001	RPM	17/03/08 09:41:47	17/03/08 09:47:54	0	950		
	Toyota LC-SW-4WD - 0001	Speed	17/03/08 09:41:52	17/03/08 09:47:54	2	700		
	Toyota LC-SW-4WD - 0001	Seatbelt	17/03/08 09:42:26	17/03/08 09:42:27	21	1125		
	Toyota LC-SW-4WD - 0001	Seatbelt	17/03/08 09:42:28	17/03/08 09:42:30	21	1175		
	Toyota LC-SW-4WD - 0001	Harsh Acc.	17/03/08 09:43:28	17/03/08 09:43:30	20	2225		
	Toyota LC-SW-4WD - 0001	Harsh Acc.	17/03/08 09:43:43	17/03/08 09:43:44	30	2975		



USER INTERFACE APPLICATION

TACHO METER GRAPH



Very high quality of vehicle monitoring and resolution for accidents and events' analysis