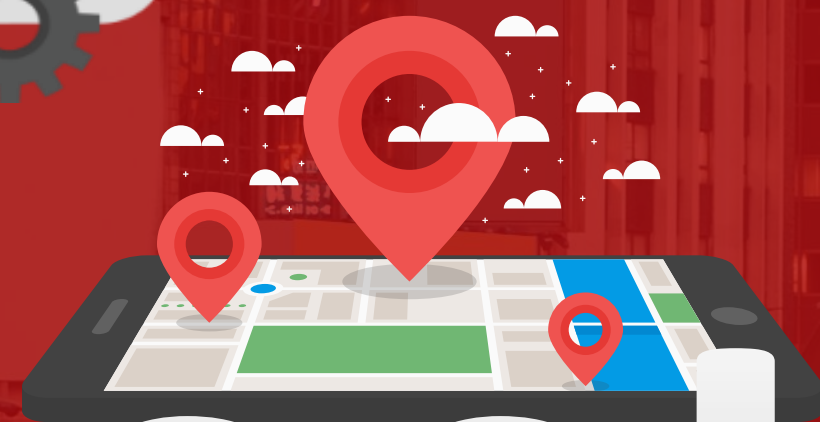
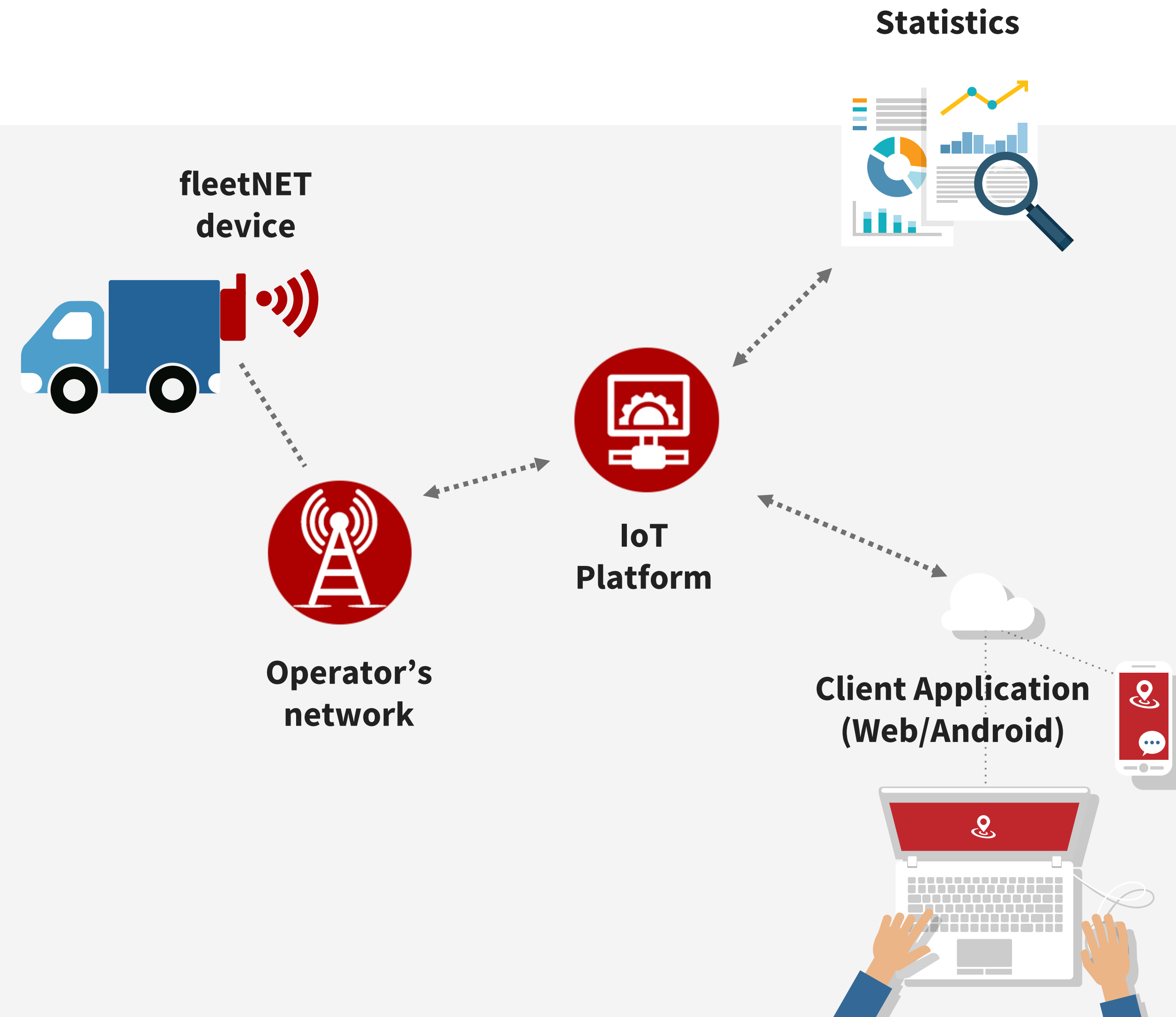


fleetNET



WHAT IS GPS vehicle tracking?

- Tracking your vehicles using GPS data and mobile network connection
- Data access in real-time, anytime, using any internet-connected device
- Reduce fuel consumption, tear&wear of vehicles
- Improve driving styles of drivers
- Optimize utilization of vehicles
- Reduce paperwork, increase efficiency and customer satisfaction
- Prevent thefts and inappropriate usage



fleetNET solution

Data collection

- Vehicle location, activity, speed, start/stop, harsh acceleration and braking, sensor data
- CAN bus information (if available)
- Driver ID

Real time control

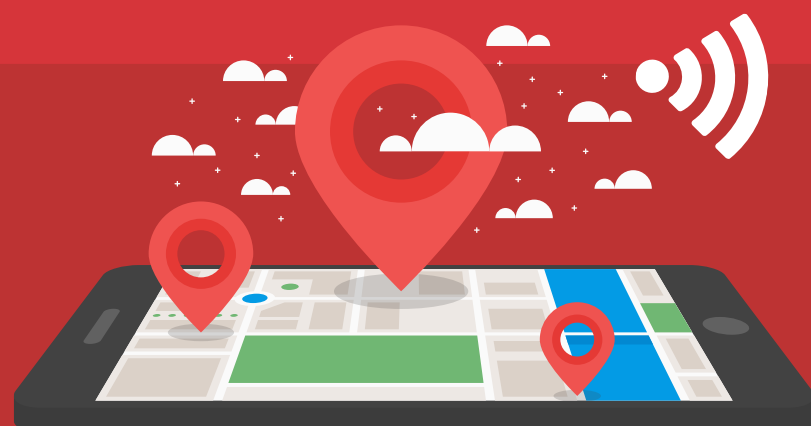
- Map view of all vehicles' locations and activities
- Current status of engine (on/off) - moving, idling
- Geo-fencing
- Configurable alarms (e.g. SMS sent for harsh breaking)

Reporting

- Reports for chosen period – travel history, driver profile
- Rules of the road - monitor driving and resting periods
- Incidents overview – harsh breaking/accelerating, route violations...

Visualization

- Route compliance monitoring – map view
- Geo-fencing – map view
- Real time fuel level and consumption – graph view



Device - data collected

GPS data

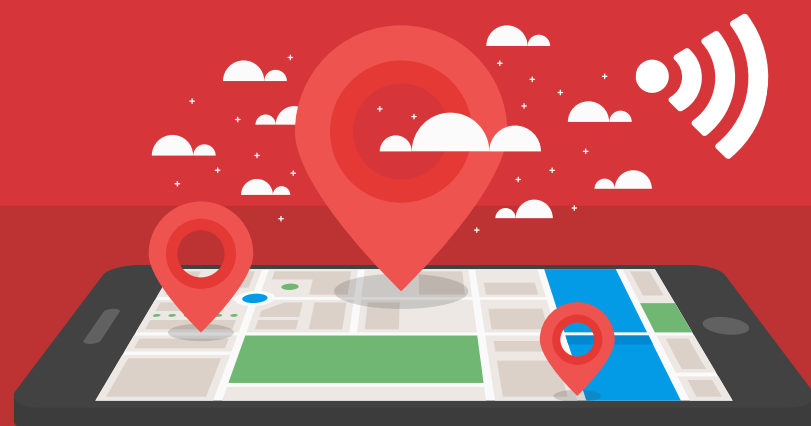
- Position
- Altitude
- Eco driving
- Green driving
- Crash detection
- Towing detection

Sensor data

- RFID 1-Wire
- iButton 1-Wire
- Temp. 1-Wire
- 3 digital inputs
- 2 analog inputs
- 2 digital outputs
- Built-in accelerometer

Board computer data for light vehicles

- Vehicle Driven Distance
- Total fuel consumption
- Fuel level (Dashboard)
- Engine speed (RPM)
- Vehicle speed (wheel)
- Acceleration position



Solution - Current vehicles' location

The screenshot displays the fleetNET web application interface. At the top, there is a navigation bar with the fleetNET logo and several menu items: View vehicles, Vehicle tracking, Geo fencing, Safety, Reporting, Service book, and Settings. Below the navigation bar, the interface is split into two main sections. On the left, there is a 'Choose parameters' panel with various filters and a table of vehicle data. On the right, there is a map showing the current location of vehicles, with an information popup for a selected vehicle.

Choose parameters

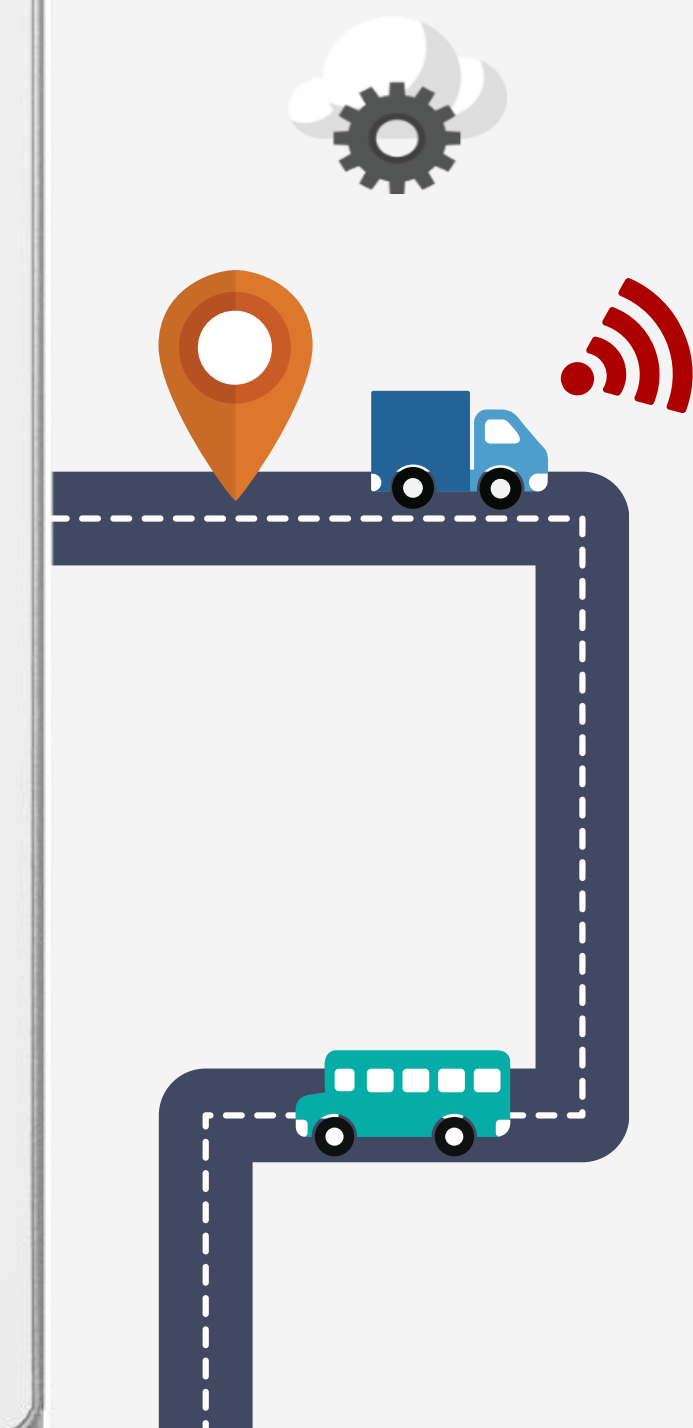
- Vehicle: [input field]
- Search: [input field]
- Deselect all: [button]
- Select vehicle groups: [dropdown]
- Additional options:
 - Select POI: [dropdown]
 - Select zones: [dropdown]
 - Select route: [dropdown]
- Track vehicles
- Show label
- Vehicles selection

Vehicle	Current speed	Driver	Km/day	POI	POI - time
Demo vehicle 1	0.00		13.17	POI test 1-2	20/03/2018 10:32:08
Demo vehicle 2	46.00	Nikola Nkolic	54.96		
CAN 2	52.00	Dejan Popovic 345	88.13		
Demo vehicle 3	0.00		1.32		
Demo				Novi	20/03/2018

Map

Info

- Vehicle: Demo vehicle 8
- IMEI: 3561730607412669
- Vehicle type: Car
- Vehicle brand:
- Driver:
- Current speed: 0.00 km/h
- Today Km: 6.76
- All Km: 10933.42
- Current location: Dr Sime Miloševića 8, Novi Sad, Serbia
- Last measurement date: 20/03/2018 09:52:28
- Last data update: 20/03/2018 10:52:10
- Standing start time: 20/03/2018 07:51:28



Solution - Travel history



The screenshot displays the fleetNET interface with several key components:

- Navigation Bar:** Includes 'View vehicles', 'Vehicle tracking' (active), 'Geo fencing', 'Safety', 'Reporting', 'Service book', and 'Settings'.
- Left Panel (Choose parameters):** Contains filters for 'Select vehicle groups', 'Demo vehicle 6', 'Stop time greater than' (3 min), 'Time interval' (Previous week selected), 'Additional options' (Select POI, Select zones, Select route), and 'Export: History travel report' (.XLS, .PDF).
- Map:** Shows a geographical view of Europe with a red trajectory line. A callout box states: 'Tabs with graphical presentation of data coming from CAN'. Another callout points to the trajectory: 'Map presentation of the trajectory'.
- Travel history Table:** A table with columns: Map, Driver name, Start location, Departure time, End location, Arrival time. It lists several stops in 'Unnamed Road, Preljina, Serbia' with specific timestamps.
- Export Callout:** A red box points to the export options: 'Exporting into Excel or PDF file'.
- Periods Callout:** A red box points to the 'Departure time' and 'Arrival time' columns: 'Periods of travel and stop time'.

Choose vehicles or drivers and period

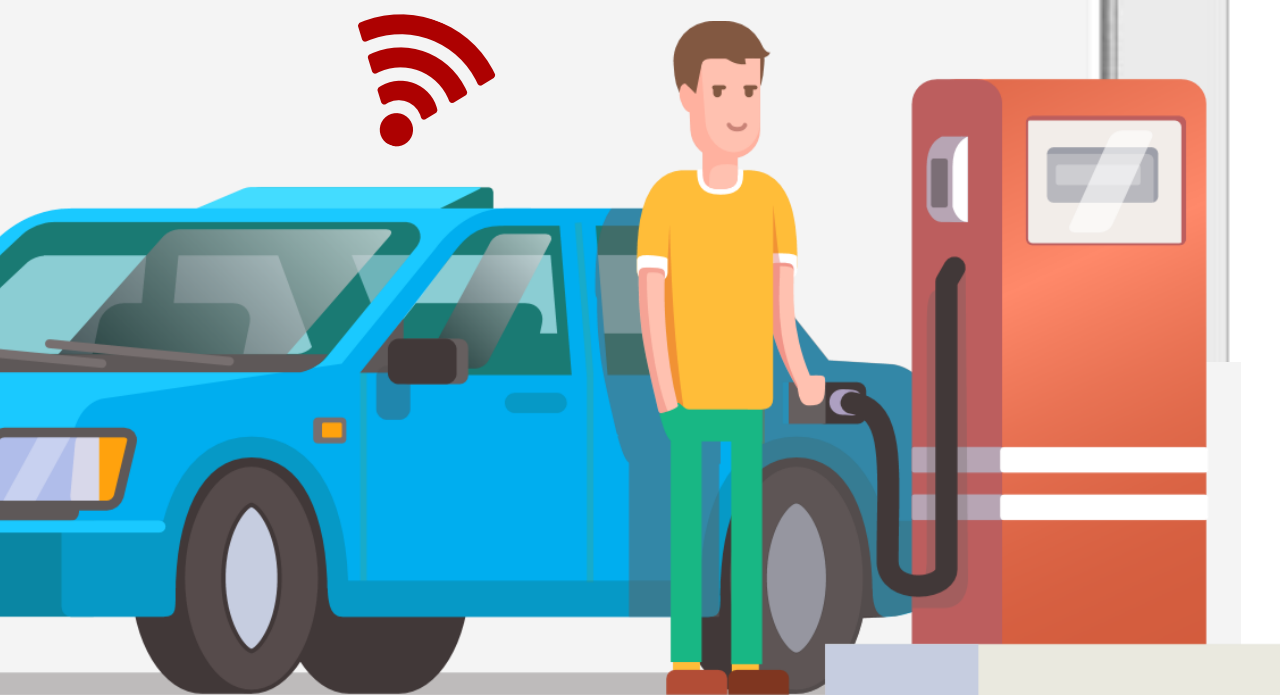
Tabs with graphical presentation of data coming from CAN

Map presentation of the trajectory

Exporting into Excel or PDF file

Periods of travel and stop time

Solution - CAN data on graphs



Solution - Concrete transport monitoring



Choose vehicles or drivers and period

Places where concrete unloading happened shown on the map

Concrete transport - blue
Concrete unload - yellow

Exporting into Excel or PDF file

The screenshot displays the fleet NET software interface. At the top, there is a navigation menu with options like 'View vehicles', 'Vehicle tracking', 'Geo fencing', 'Safety', 'Reporting', 'Service book', 'Settings', and 'Super admin'. Below this, there are filters for 'Select vehicle groups', 'Stop time greater than', and 'The Time interval'. A 'Show tracking history' button is visible. The main area features a map with a route highlighted in blue and yellow. A 'Travel history' table is shown at the bottom, with columns for 'Map', 'Driver name', 'Start location', 'Departure time', 'End location', 'Arrival time', 'Distance traveled (km)', 'Stop time (min)', and 'Driving time (min)'. The table contains three rows of data.

Map	Driver name	Start location	Departure time	End location	Arrival time	Distance traveled (km)	Stop time (min)	Driving time (min)
			12/03/2018 09:45:07	44.6702716, 20.2522383	12/03/2018 09:45:07	0.00	0	0
			14/03/2018 08:54:46	44.6623633, 20.1751283	14/03/2018 09:23:38	21.23	0	28.87
			14/03/2018 09:27:08	44.6621083, 20.1752083	14/03/2018 09:30:02	0.02	0	2.9

Solution - Incidents



The screenshot displays the fleetNET dashboard with several key features highlighted by red callout boxes:

- Choice of one or more vehicles or drivers:** A sidebar menu on the left allows users to select specific vehicles or drivers from a list of 12.
- Specific incidents shown on the map:** A central map view shows incident locations marked with orange dots and timestamps, such as 13/02/2016 13:02:48.
- Incidents that can be tracked:** A list of incident types is provided, including Harsh braking, Harsh breaking, Harsh accelerating, Harsh cornering, Route violation, Geo-fence violation, Speeding, Panic button, Towing, Unauthorised fuel dumping, Too long retention, and Remove all markers.
- Incidents grouped by drivers, vehicles and dates:** A table at the bottom summarizes incidents, grouped by driver, vehicle, and date.

Driver	Vehicle	Date	Incident number	Route name
		13/02/2016 00:00:00	37	NoLine
		10/02/2016 00:00:00	36	Beočin-Ljig
		01/02/2016 00:00:00	36	NoLine
		08/02/2016 00:00:00	34	NoLine
		03/02/2016 00:00:00	33	NoLine

Solution - Reports



Choice of report type

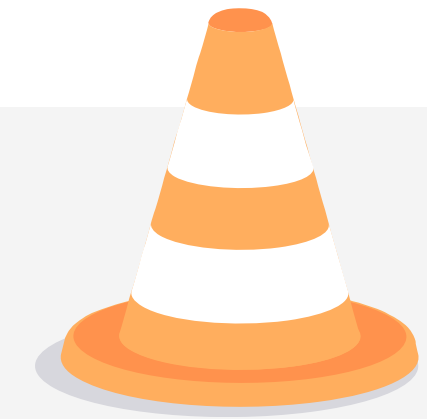
The screenshot displays the fleetNET Reporting interface. The top navigation bar includes 'View vehicles', 'Vehicle tracking', 'Geo fencing', 'Safety', 'Reporting' (highlighted), and 'Settings'. The user is logged in as 'AdminTest' in 'English'. The 'Choose parameters' sidebar on the left allows selecting the report type (History travel report), the number of vehicles (3), and the time interval (Previous month). A 'Show report' button is visible. Below the sidebar, there are options to export the report to Excel (.XLS) or PDF (.PDF) files.

Profile	Vehicle number	Driver name	Start location	Departure time	End location	Arrival time	Distance trav
2	45.0992128, 19.7637504	28/01/2016 14:02:43	45.0992128, 19.7637504	28/01/2016 14:03:17	-
3	45.0991968, 19.7638080	28/01/2016 13:38:14	45.0992160, 19.7637488	28/01/2016 14:02:43	76
2	45.0992384, 19.7638880	26/01/2016 15:31:04	45.0991616, 19.7638624	28/01/2016 13:38:14	-
3	45.0991776, 19.7637536	26/01/2016 15:14:50	45.0992544, 19.7638048	26/01/2016 15:31:04	58
2	45.0991904, 19.7637600	26/01/2016 15:00:02	45.0991872, 19.7637616	26/01/2016 15:14:50	-
3	45.0992096, 19.7638528	26/01/2016 14:52:01	45.0991744, 19.7638128	26/01/2016 15:00:02	42
2	45.0991808, 19.7637680	25/01/2016 14:35:06	45.0992352, 19.7638400	26/01/2016 14:52:01	-
3	45.0992480, 19.7637424	25/01/2016 14:12:42	45.0992096, 19.7637808	25/01/2016 14:35:06	69
2	45.0991872, 19.7637328	21/01/2016 14:39:34	45.0992064, 19.7637920	25/01/2016 14:12:42	-
3	45.0992288, 19.7637744	21/01/2016 14:27:46	45.0991616, 19.7636944	21/01/2016 14:39:34	43
2	45.0992096, 19.7637904	17/01/2016 17:10:24	45.0992288, 19.7637760	21/01/2016 14:27:46	-
3	45.0992128, 19.7638624	17/01/2016 16:58:53	45.0992192, 19.7637392	17/01/2016 17:10:24	70

Vehicle, driver and period choice

Report exported to Excel or PDF file

Solution - Rules of the Road



Choice of one or more drivers and period

The screenshot shows the 'Rules of the Road' report configuration page. The top navigation bar includes 'New vehicles', 'Vehicle tracking', 'Geo fencing', 'Safety' (highlighted), 'Reporting', and 'Settings'. The right side shows 'English' and 'AdminTest'.

Choose parameters

Driver: No of selected drivers: 111

From date: 02/02/2016

Check period: Last 24h

Show result

Export: Rules of the road report

Time

Total driving time (hh:mm:ss)

Total break time (hh:mm:ss)

Drivers Results Violations

Driver	Has violations
	No
	No
	No
	No data
	No
	No data
	No
	No
	No data
	No data

Period a report is looked for

Table with indication if drivers have violated Rules of the road

Solution – Mobile application



Current location



Travel history



Technologies used



GPS devices

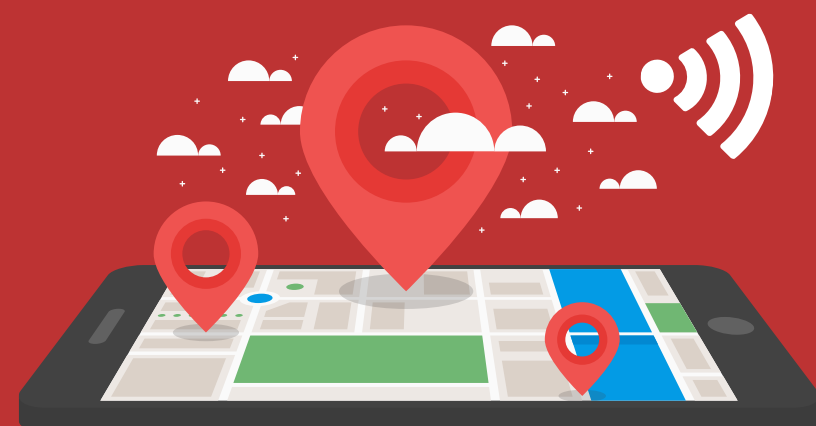
- GPS device from different vendors are used (Teltonika, Ruptela)
- Communication over GPRS

Cloud

- Cloud based infrastructure enables efficient data processing and storage

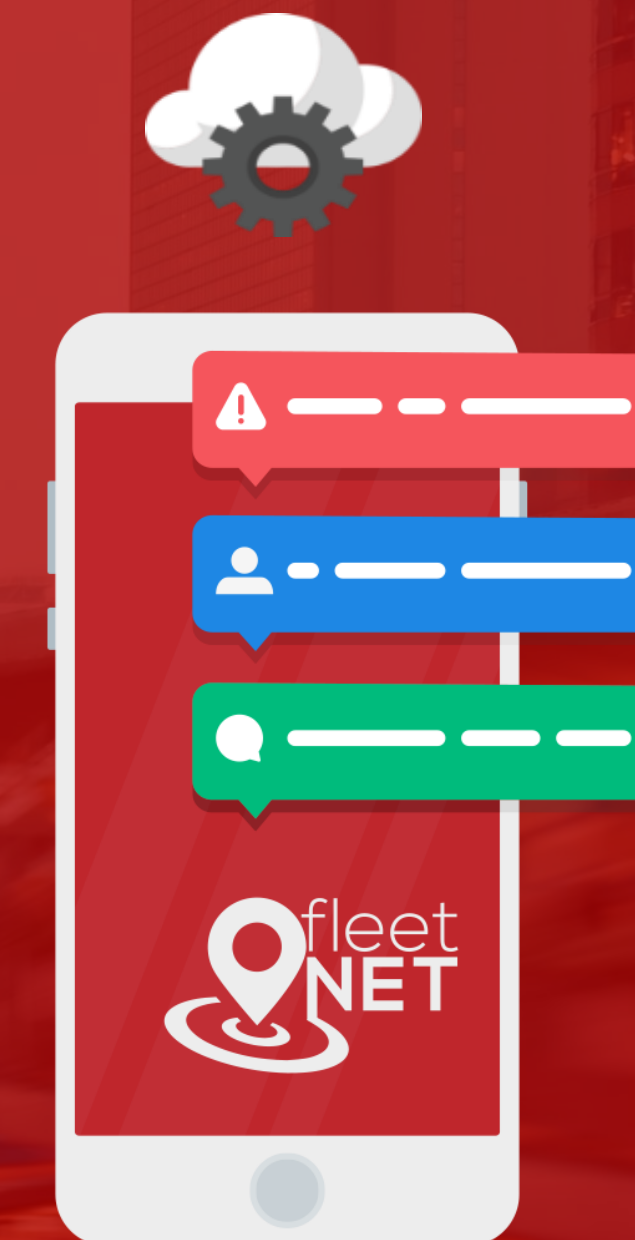
Web and mobile applications

- Providing data to end users in real-time





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