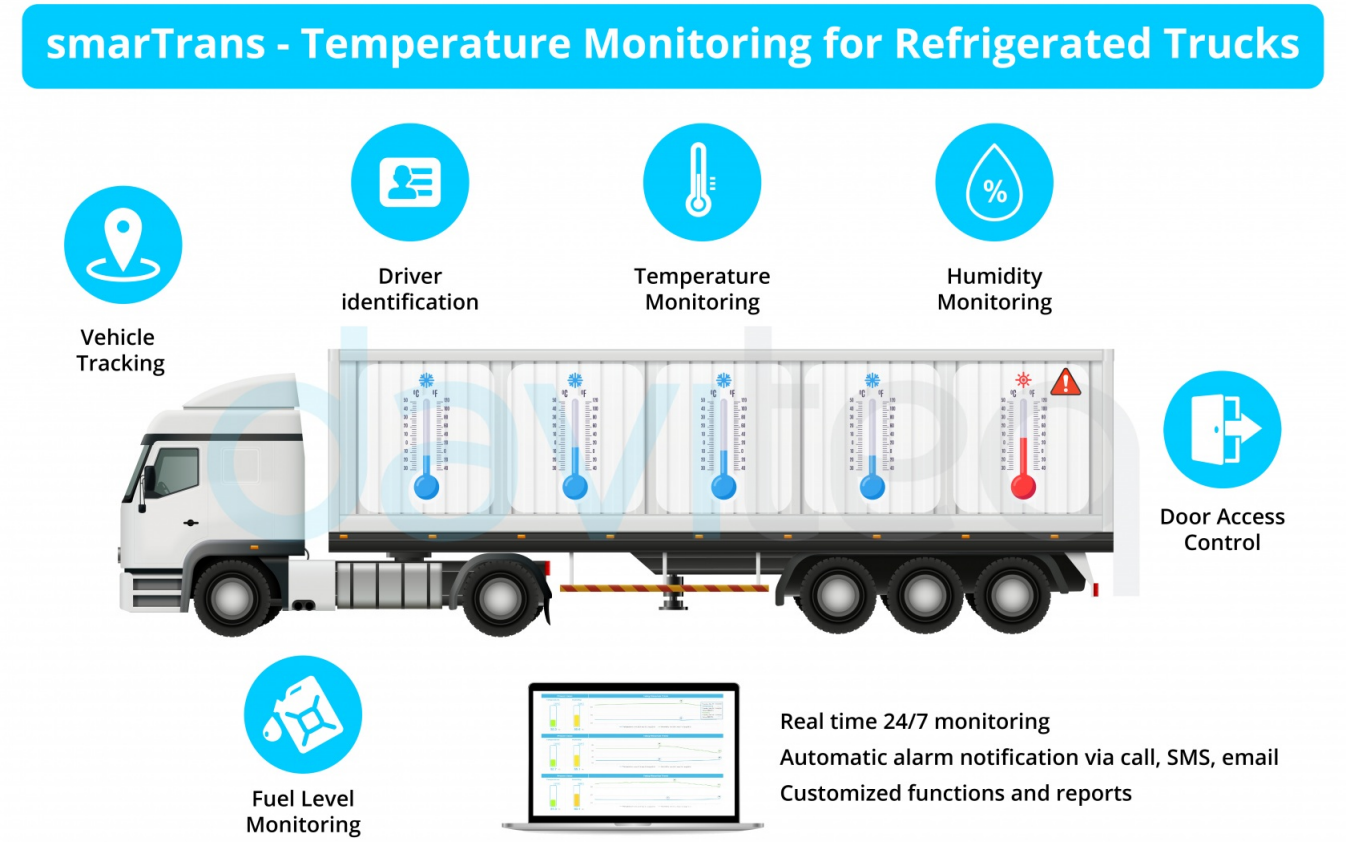
IoT Solutions for Smart Transportation

- smarTrans - Temperature Monitoring for Refrigerated Trucks

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Customer Challenges

Transporting special goods such as pharmaceuticals, vaccines or certain types of food requires strict temperature control during transportation. Solutions available on the market include:

A- GPS Black box with Cheap wired temperature sensor

This solution is economical, convenient and enables realtime monitoring. However encountered the following problems:

1. Using inexpensive sensor with low accuracy, poor reliability;
2. It is difficult to calibrate and certify by authority;
3. Only one temperature point measured, so the temperature of other areas in the compartment is not known;
4. Only measure 1 point of temperature, so when the sensor fails, there will be no other data to replace.

B- Battery operated Temperature Logger

This solution has the advantage of being able to monitor the temperature of multiple points in the storage compartment, by installing multiple temperature loggers into the cargo compartment. However, it also has the following weaknesses:

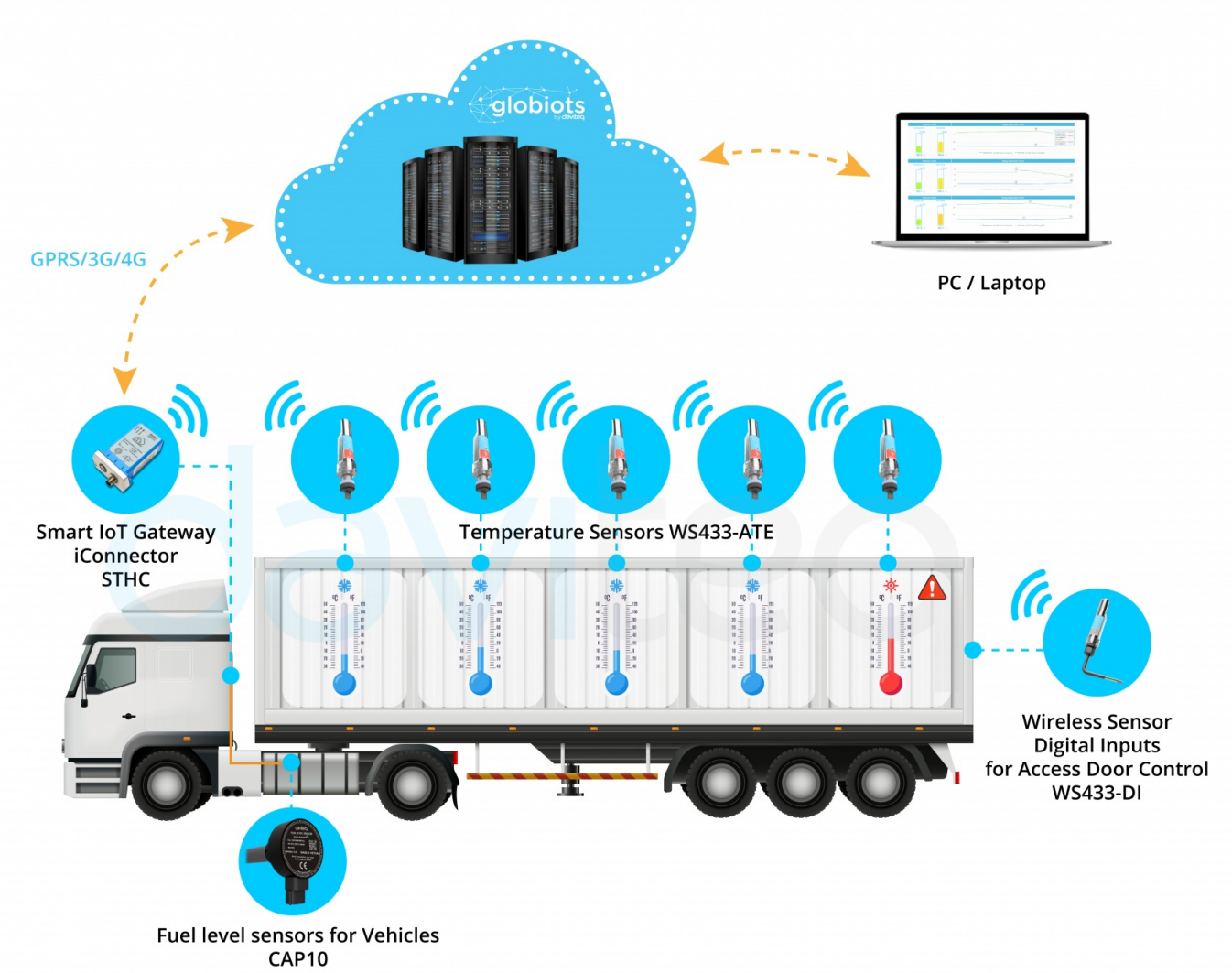
1. Only see the temperature data when the vehicle arrives;
2. Cannot see the current temperature value when the vehicle is in motion;
3. Failure to detect in time when the temperature is outside the permissible area while the vehicle is in motion;

4. Operation is complicated, because the device must be plugged into the computer with specialized software

smarTrans solution from Daviteq

Daviteq offers an optimal and economical solution to solve all the shortcomings of the two solutions above. That is, on the vehicle will be equipped with the following equipment:

- Wireless temperature sensors, fully battery operated (10-20 years), installed in all parts of the cargo compartment;
- A wireless sensor receiver that receives data from those temperature sensors. This receiver has a 3G / 4G connection directly to the server



Advantages of **smarTrans** solution

1. Monitor multiple temperature points in cargo compartment;
2. Temperature sensor is high accuracy and certified by 3rd-party;
3. Realtime monitoring during transportation;
4. Immediate notification received when Temperature is out of range;
5. Easy of use software on Web or Mobile;

Benefits of smarTrans

smarTrans Solution helps Trucking companies quickly deploy a reliable & efficient solution to provide the best services and meet the freight transportation needs of customers.

In addition, this solution allows the upgrade to monitor additional vehicle metrics such as:

1. Door open detection wireless sensor;
2. Fuel consumption monitoring;
3. Idling monitoring;
4. Automatic Driver identification;
5. Driver behavior report: risky driving, high acceleration...

Related products used in **smarTrans** solution

- Temperature Wireless Sensor: https://www.daviteq.com/en/?prd=wireless-sensors-actuators_WS433-M12F-ATE_wireless-ambient-temperature-sensor
- Wireless Sensor Reveiver with 3G/4G: https://www.daviteq.com/en/?prd=iot-products-2_STHC_smart-iot-gateway---iconnector
- Fuel Level Sensor: https://www.daviteq.com/en/?prd=measurement-controls_CAP10_fuel-level-sensors-for-vehicles
- Door open detection Sensor: https://www.daviteq.com/en/?prd=wireless-sensors-actuators_WS433-DI_wireless-sensor-digital-inputs

Contact us for Consultant and Pricing