



CREATECH

SOFTWARE · AUTOMATION · ARTIFICIAL INTELLIGENCE

ENVIRONMENTAL MONITORING · SENSORS AND ALARMS ·
SEPTEMBER 2026

Every environment, every critical value, live control

From factory machines to field vehicles —
one platform, built on smart boards
supporting digital I/O, temperature sensors,
CAN, RS232, RS485 and TTL.

An integrated solution that monitors temperature, voltage, current and digital signal values in every environment — from the cold store to the concrete mixer — and raises an alarm within seconds of a threshold being crossed. Board and firmware are developed in our own R&D center.

100%

ENVIRONMENTAL
VISIBILITY

60%

ALARM RESPONSE TIME
↓

95%

PROTOCOL
COMPATIBILITY

Figures are target values; see page 8 for detail.

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ONE BOARD · SIX INTERFACES · EVERY ENVIRONMENT

01 · CRITICAL CHALLENGES

The values are measured — but nobody sees them

Temperature, voltage, current and digital signals are already being produced on site. Measuring is not the problem; the problem is that those values stay in different protocols, on different devices and on screens that never meet. A threshold breach is usually noticed only once the damage shows.

The Createch solution ties the machine in the plant, the cold store and the vehicle in the field into **one data flow**. The same record produces the live value, the alarm and the historical analysis.

IN ONE SENTENCE

Instead of **learning about a threshold breach after the loss**, see it and record it the moment it happens.

WHAT HAPPENS TODAY

01 · VISIBILITY

Scattered, untrackable values

When data from different machines, sensors and vehicles cannot be gathered in one place, operational visibility is severely limited. Every device has its own screen; there is no common picture.

02 · PROTOCOL

Protocol sprawl

Finding a single platform that supports different communication standards such as RS232, RS485, CAN and TTL is getting harder. Each new device brings its own converter and its own software.

03 · ALARM

Missed threshold breaches

Temperature excursions in cold stores and anomalies in machine current draw are not caught in time. Spoiled product and repair costs surface days after the event.

04 · INTEGRATION

No vehicle-to-factory integration

Not being able to monitor working field vehicles and in-plant machines together on one platform breaks data integrity; the cold chain starts in the store and is lost in the vehicle.

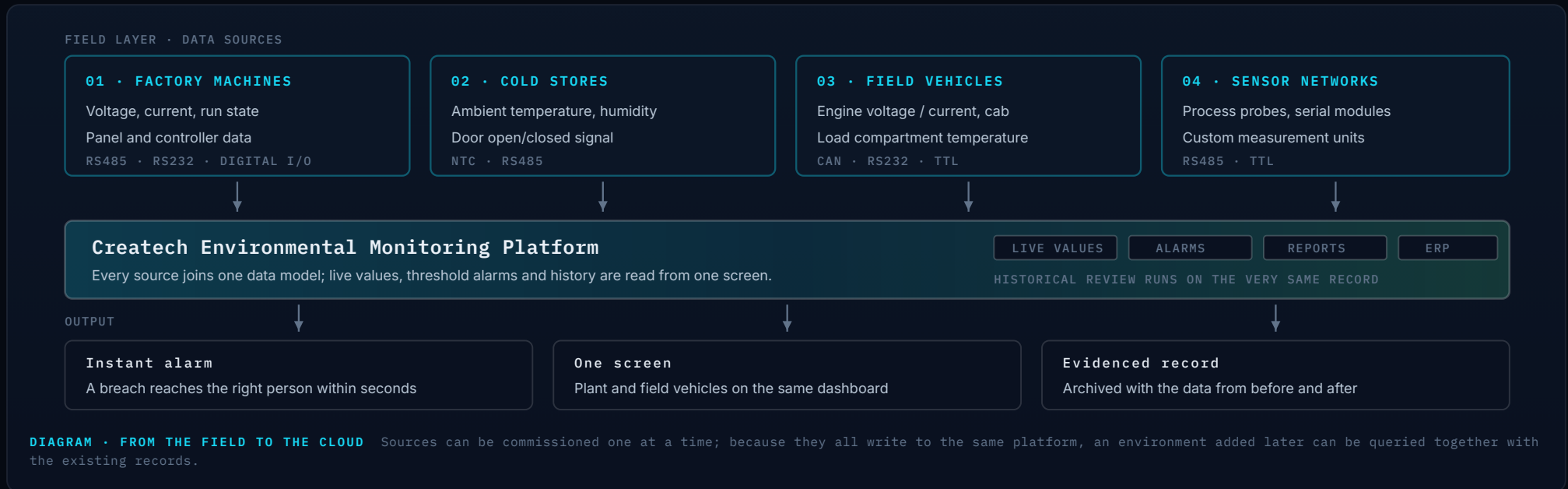
THE SOLUTION IN SHORT

A **multi-protocol board** in the field; **live value monitoring, threshold alarms and historical analysis** at the center. Digital I/O, NTC, RS485, RS232, CAN and TTL interfaces come together on one piece of hardware; whatever the environment, the data is written to the same platform and every threshold breach is recorded with its value, its source and its timestamp.

02 · ONE PLATFORM

One board, six interfaces, one data flow

The machine in the plant, the cold store and the vehicle in the field all write to the same center. A threshold breach becomes a **single record**, with its value, its time and its source.



INTERFACES ON THE BOARD

01 · DIGITAL I/O

Digital input / output

High-speed digital input/output ports for door, hatch and trigger signals and relay outputs.

02 · NTC

Temperature sensor

Cold chain and process temperature monitoring through NTC sensor inputs.

03 · CAN / RS485 / RS232

Industrial protocols

Data reading with broad protocol compatibility across vehicle ECUs and industrial devices.

04 · TTL

TTL communication

TTL-level serial communication with microcontrollers and low-power sensor modules.

03 · IN THE PLANT

Full visibility from machine to store

We monitor the voltage, current and temperature values of factory machines, along with ambient temperature in cold stores and critical process parameters, **in real time**.



01 · TEMPERATURE

Temperature and humidity

Temperature in cold stores and process areas is measured live with RS485 sensors and logged. The cold chain record is kept unbroken; a historical report for an audit is produced in one click.

02 · ENERGY

Voltage / current tracking

Voltage and current on machine and panel electrics are monitored continuously over digital I/O and RS485. An anomaly in current draw is caught before the fault grows.

03 · ALARM

Threshold alarm system

When the defined value limits are exceeded, the system raises an alarm immediately and notifies the people concerned automatically.

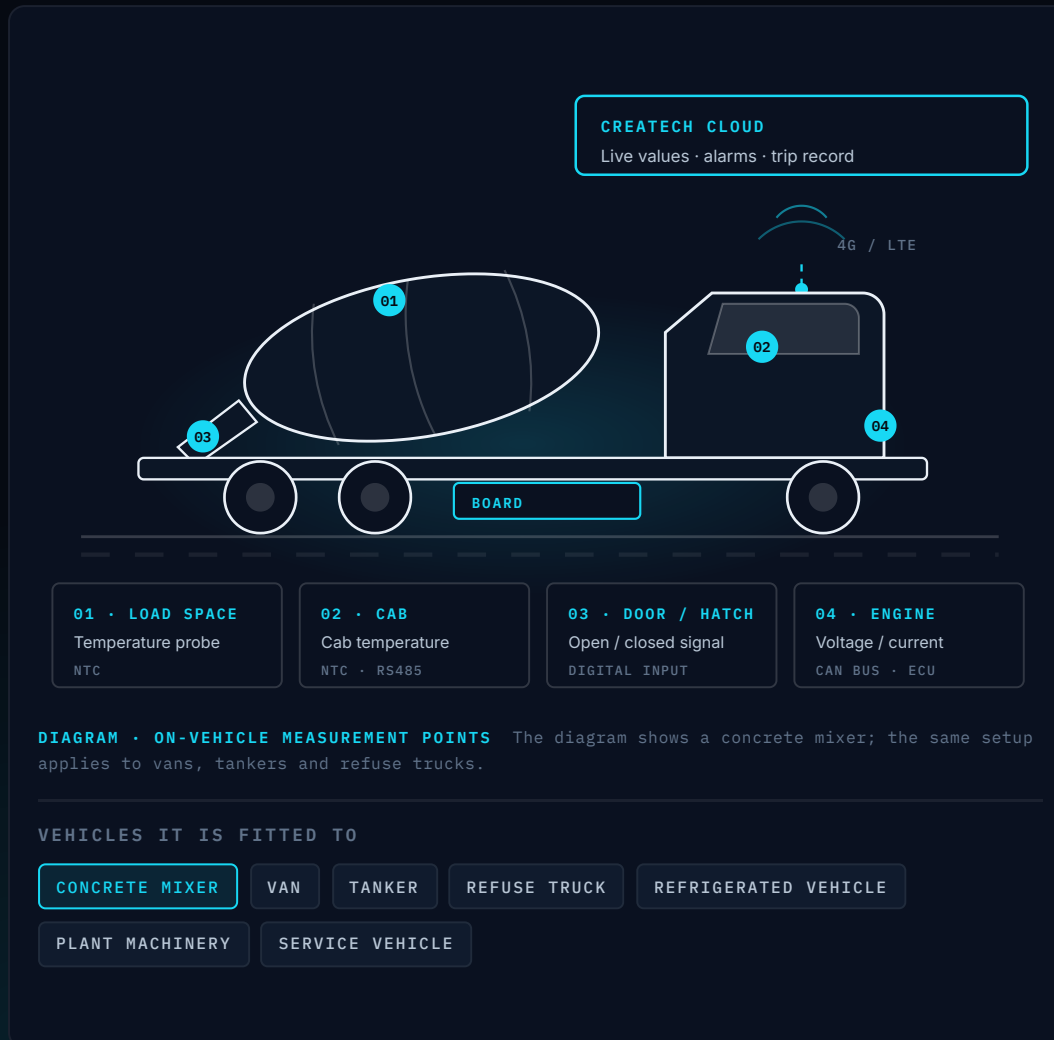
LOSSES PREVENTED BEFORE THEY OCCUR

In a cold store, temperature crossing the limit is caught before the product spoils. The same logic works on the production machine: **a deviation in current draw becomes a warning before it becomes downtime.**

04 · VEHICLE MONITORING

Environmental monitoring on mixers, vans and tankers

We read critical values in real time from every field vehicle — including the concrete mixers, vans and tankers standing outside the plant — over the **CAN bus**, **RS232** and **RS485** protocols.



01 · TEMPERATURE

In-vehicle temperature

Temperature in the cab and the load compartment is measured continuously by sensors and logged.

02 · CAN BUS

Engine voltage / current values

Voltage and current data from the engine and electrical system is read over the CAN bus.

03 · DIGITAL INPUT

Digital input signals

Digital input signals such as door open/closed, and custom sensor data, all become visible on one platform.

04 · FLEXIBLE INTERFACE

Protocol selected per vehicle

Depending on the board model fitted to the vehicle, a TTL, RS232, RS485 or CAN interface is selected to build a data collection setup specific to that vehicle.

THE MOMENT A LIMIT IS CROSSED

If any value crosses the operating limits defined in advance, the system steps in immediately: it **raises an audible and visual alarm** and notifies the control center automatically. The driver in the field and the manager in the office see the same event at the same moment.

IT ALL MEETS ON ONE PLATFORM

Records from the vehicle are gathered on the same screen as in-plant measurements. The cold chain starts in the store and continues unbroken in the vehicle; one single temperature history is built all the way to the delivery point.

05 · ALARM SYSTEM

Real-time value monitoring and alarms

Recording starts the moment a threshold is crossed; **data from before and after the event is merged** and sent straight to the people concerned.

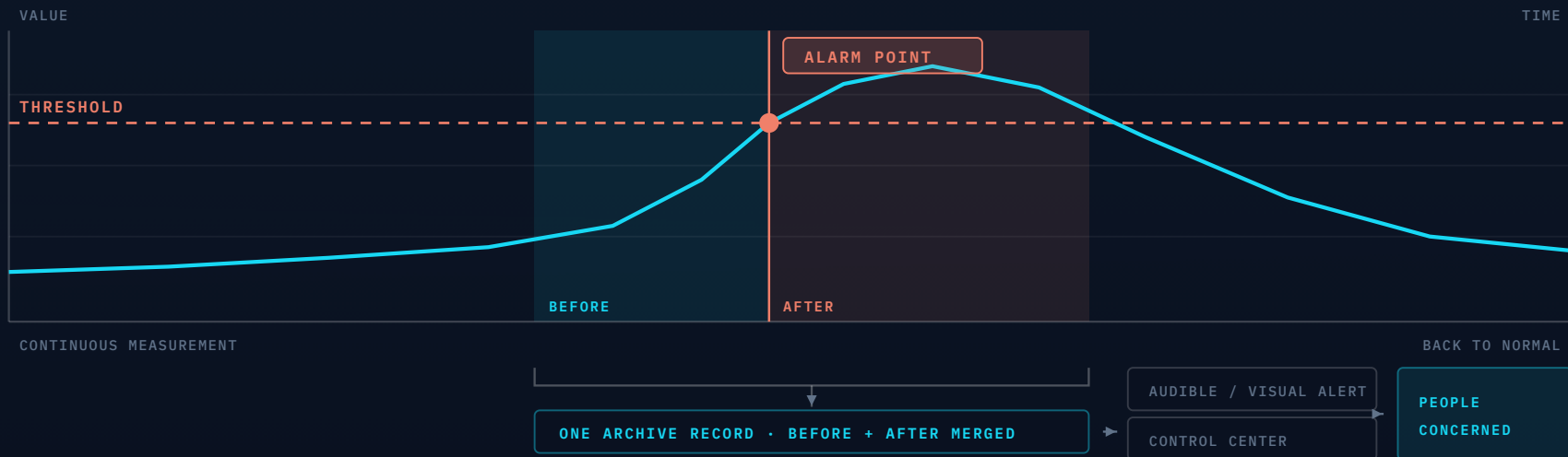


DIAGRAM · THRESHOLD BREACH AND CAPTURE WINDOW The curve and time scale are illustrative; threshold values and buffer durations are defined separately for each installation.

01 · DETECTION

Threshold detection

When temperature, voltage, current or digital signal values cross the defined limits, the system raises an alarm immediately and starts recording.

02 · CAPTURE

Before-and-after data capture

Sensor data from before and after the moment of the alarm is merged automatically and stored as a single archive record.

03 · NOTIFICATION

Instant notification

Alarm and event reports reach the people concerned immediately, allowing fast remote analysis and response.

Every source on one screen

We pull all sensor and controller data from factory machines, cold stores and working field vehicles and bring it together on **one central platform**.



01 · COLLECTION

Data from many sources

Machine controllers, sensor networks and vehicle units are brought into one structure over different protocols. Adding a new source needs no separate installation.

02 · MONITORING

Live status dashboard

Every sensor value in the plant and on field vehicles is monitored live from one platform; which source sits within its limits is clear at a glance.

03 · ANALYSIS

Alarm history and analysis

Historical data supports analysis, and predictive monitoring reveals faults before they happen.

WORKS WITH YOUR EXISTING SYSTEMS

The platform integrates with the organization's existing ERP and reporting systems over an API. Measurement and alarm records can be exported; **the data in the field and the report in the office come from the same source.**

07 · RESULTS

Measurable operational benefits

The concrete gains a central data collection infrastructure delivers in factory and field operations.

100%

FULL ENVIRONMENTAL VISIBILITY
Every sensor value in the plant and on field vehicles is monitored live from one platform.

60%

FASTER ALARM RESPONSE
A central data flow means critical excursions are detected and acted on far more quickly.

40%

LESS UNPLANNED DOWNTIME
Predictive monitoring data reveals machine faults early, keeping unplanned downtime to a minimum.

95%

PROTOCOL COMPATIBILITY
Boards supporting RS232, RS485, CAN, TTL and digital I/O allow data integration from almost any device.

ABOUT THESE FIGURES

The percentages above are **target values**, not measurements from a particular installation. Project-specific targets are set together with a baseline measurement and the results of a pilot. The temperature, voltage, current, plate and time values in the diagrams are illustrative examples as well.

WHY CREATECH

HOME-GROWN R&D

Through our in-house R&D center we develop innovative, sustainable solutions built specifically for the sector's environmental monitoring needs.

SECTOR EXPERTISE

Many years of experience in environmental monitoring mean we know the operational needs of sector leaders at first hand.

CONTINUOUS SUPPORT

Our expert technical team provides fast, effective service to keep your operations running.

MEASURABLE RESULTS

The solutions are designed to deliver concrete efficiency gains and cost savings in operational processes.

NEXT STEP

Take your operations into the future

From cold storage temperature monitoring to machine voltage/current tracking, and from in-vehicle CAN bus data reading to field sensor network management, we put together solution packages for your needs. Systems can be commissioned one at a time; they all meet on the same platform.

Get in touch for detailed information, project consultancy and demo requests. Our technical team is ready to build a solution around your requirements.

01

Environment review

We look at your machines, stores and vehicles together and identify the critical values to monitor.

02

Pilot installation

Real measurement on a limited number of points and vehicles; you see the gains in your own data.

03

Demo

A live walkthrough of the monitoring dashboard, alarm flow and reporting screens.

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OUR OTHER SECTOR SOLUTIONS

ENERGY · FUEL DISTRIBUTION

FOOD · COLD CHAIN

CONCRETE / CEMENT

PUBLIC TRANSPORT

INDUSTRIAL AUTOMATION

BLE RTLS & AOA

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