



CREATECH

SOFTWARE · AUTOMATION · ARTIFICIAL INTELLIGENCE

CONCRETE / CEMENT · MIXER AND PUMP · SEPTEMBER 2026

Every drum, every pour, under control

Drum direction automation, automatic discharge detection, dispatch optimization, camera recording and blind spot radar for mixer and pump equipment — on one platform.

An integrated field solution that prevents incorrect pours, safeguards mix quality and makes every trip measurable. Developed in our own R&D center, from the hardware to the software.

85%

FEWER INCORRECT
POURS

95%

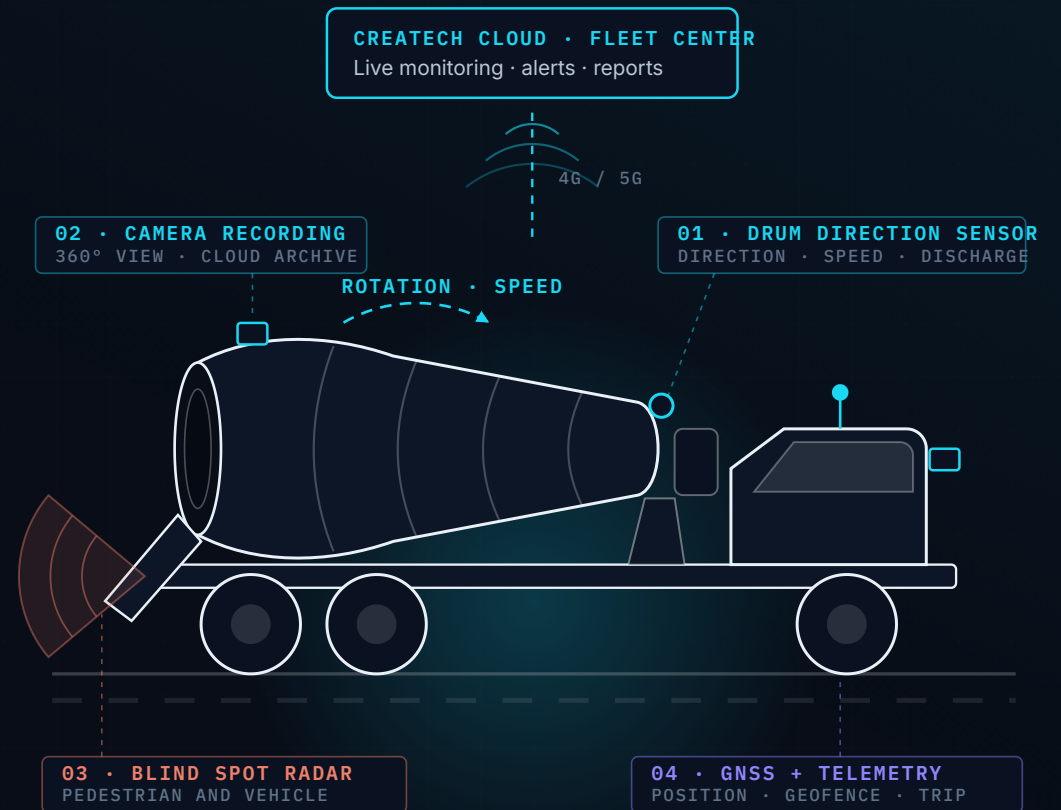
MIX CONSISTENCY

60%

LOWER ACCIDENT RISK

These are target figures; see page 10 for detail.

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01 · CRITICAL CHALLENGES

Quality, pour and safety managed all at once

Concrete has a **limited workable life** from the moment it is batched. When the drum does not turn at the right speed the mix suffers; when dispatch does not match the pour rate the load waits on site. Both are discussed only after the fact.

Today each of these is tracked from a different source: quality from the sample, the pour from the delivery note, safety only after an incident. With no link between them, field management starts to **run on guesswork**.

The Createch solution ties these together into **one data flow**. The same trip record produces the evidence of mix quality, the location of the pour and the cost report.

IN ONE SENTENCE

Instead of **learning after the event** how the drum turned and where the concrete went, seeing it as it happens and putting it on record.

WHAT HAPPENS TODAY

01 · LOSS

Incorrect pours and material loss

Pours made in unauthorized or incorrect zones cause material loss and hurt customer satisfaction. The loss is often noticed only at end-of-day reconciliation.

02 · QUALITY

Mix quality control

Inconsistencies in the rotation speed and duration of the mixer drum cause fluctuations in concrete quality. The deviation surfaces only in the sample result.

03 · TRANSPARENCY

Operator and trip tracking

A lack of transparency in field operations makes processes harder to manage and costs efficiency. Reports rest on declarations and reviews on memory.

04 · SAFETY

Safety risks

Blind spots and limited visibility increase accident risk in heavy vehicle operations. Manoeuvring on site is where that risk is highest.

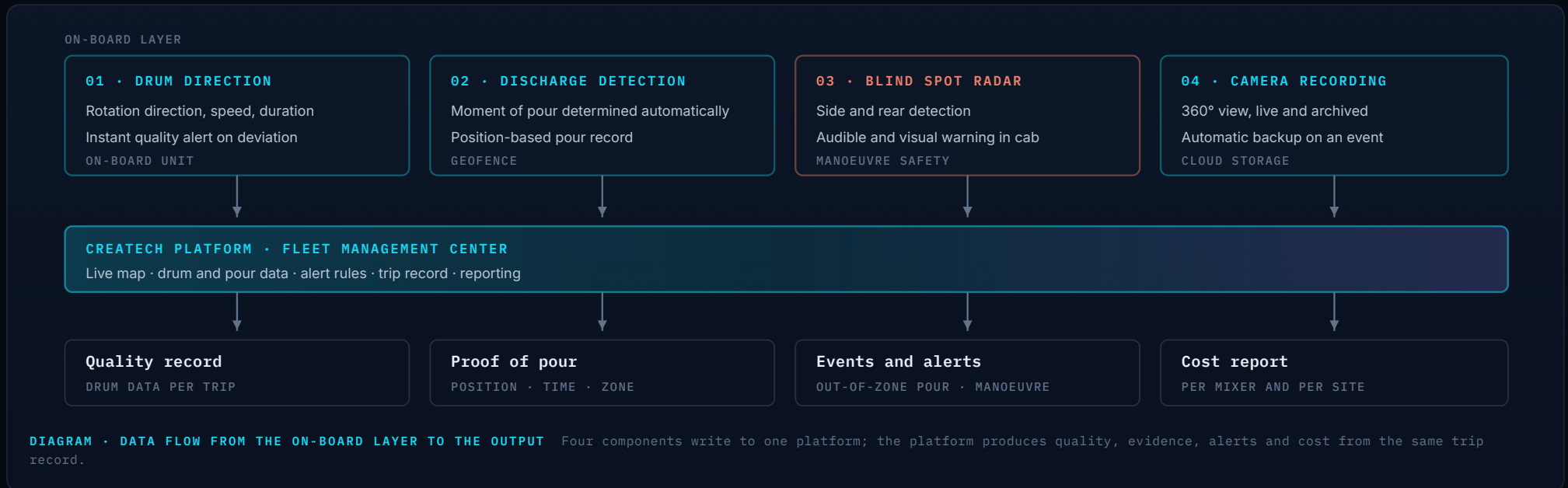
THE SOLUTION IN SHORT

On the vehicle: **drum direction automation, discharge detection, camera recording and blind spot radar**; at the center: **fleet management and dispatch optimization**. All four write to the same platform, so a pour is recorded with its location, its drum data and its timestamp.

02 · ONE PLATFORM

Four systems, one data flow, one screen

Every component on the vehicle writes to the same center. A trip becomes a **single record**, complete with drum rotation data, pour location, footage and timestamp.



DEPLOYED ONE AT A TIME

The systems work independently. You can start with drum direction automation alone and add cameras, radar and dispatch optimization later; they all come together on the same platform.

INTEGRATES WITH YOUR FLEET SOFTWARE

The real-time data flow can connect directly to the fleet management center you already use, so there is no new screen to learn.

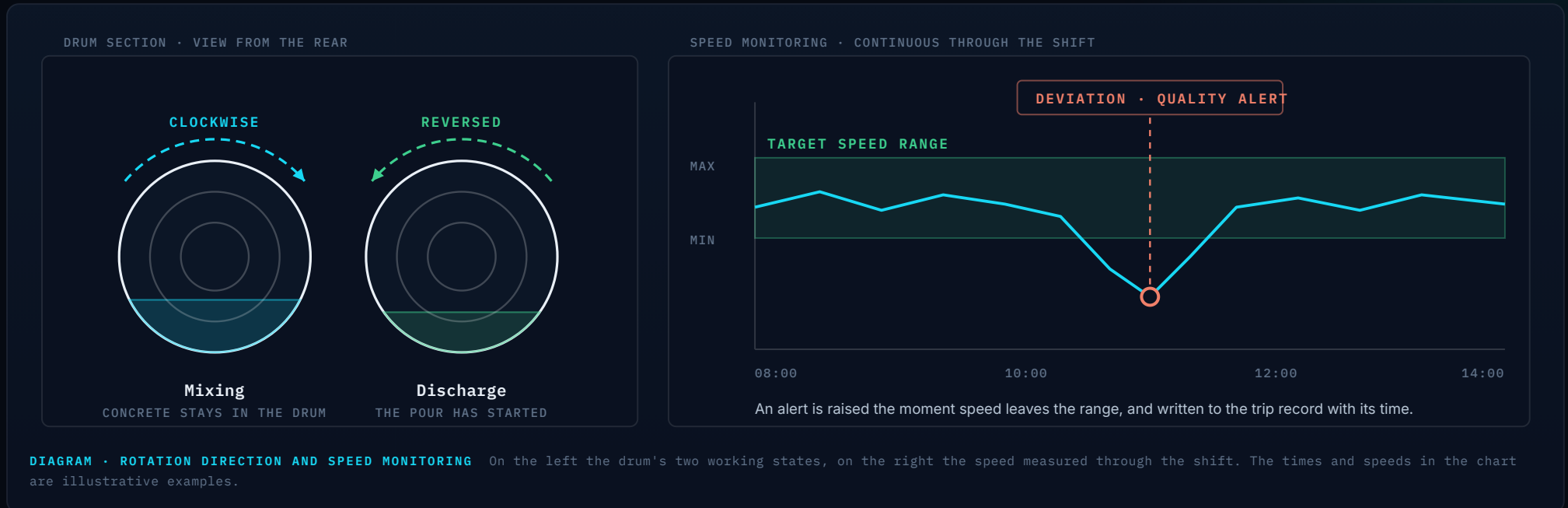
PLANT AND FIELD TOGETHER

The plant production schedule and the pour rate on site meet in the same data set; the dispatch plan is built on measurement rather than estimate.

03 · SMART DRUM MONITORING

Full control of mix quality: direction, speed and duration

Our automation solution, developed specifically for the cement and concrete sector, monitors the **rotation direction and speed of the mixer drum in real time**. Even the smallest deviation in rotation speed is detected and reported to the relevant teams immediately.



01

Live monitoring

Sensor technology tracks drum movement continuously and in real time; rotation direction and speed are logged without a break.

02

Automatic analysis

Rotation speed and direction are analyzed in real time to provide process control; mixing and discharge are separated automatically.

03

Quality alerts

When a deviation is detected the system steps in immediately and alerts the relevant teams, before the concrete reaches the site.

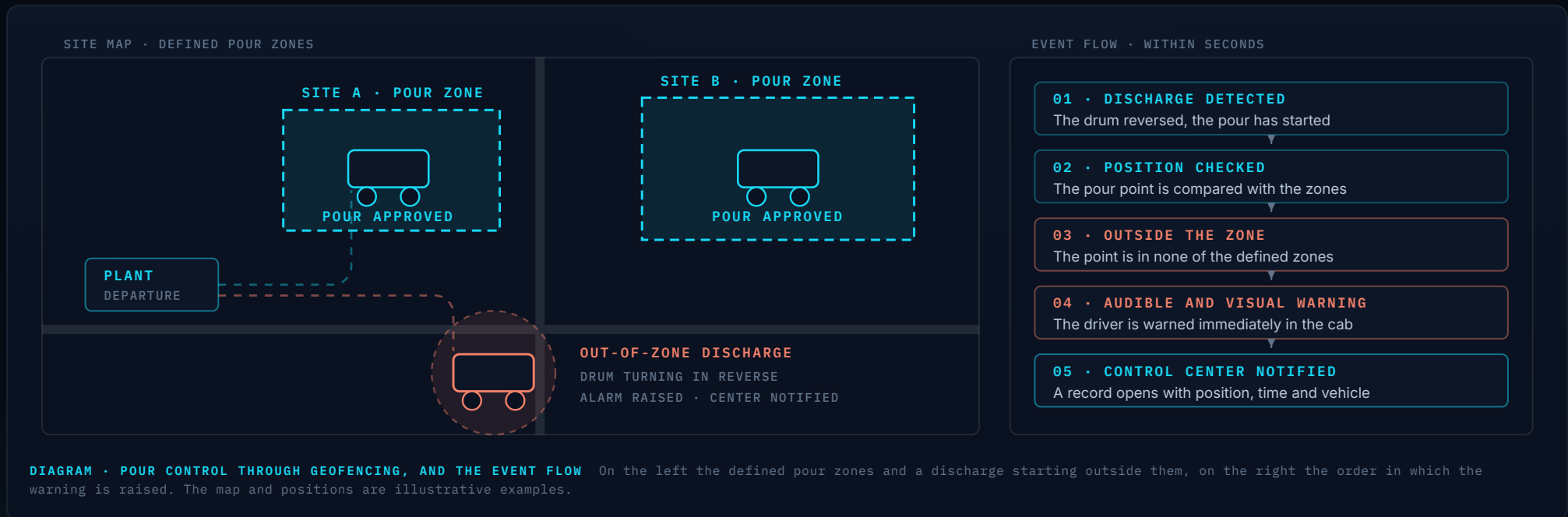
WHY IT MATTERS

Mix quality no longer rests on **the sample result** but on the drum data logged for every trip. That same record serves as evidence if a delivery is later disputed.

04 · AUTOMATIC DISCHARGE DETECTION AND GEOFENCE

Where the concrete went is a record, not a guess

An advanced algorithm monitors drum movement in real time, **determines the moment of discharge automatically** and identifies where the concrete was poured on a geographic basis. If a pour starts outside a defined zone the system raises an audible and visual warning at once and notifies the control center.



01

Rotation direction analysis

The drum's rotation direction is analyzed continuously to determine the moment of discharge automatically, with no driver declaration needed.

02

Position-based pour detection

The geographic zone in which the concrete was poured is identified from position data and logged with a timestamp.

03

Out-of-zone alarm

If a pour starts outside the defined operating zone, an audible and visual alarm is raised and the control center is notified automatically.

THE DIRECT GAIN

Material loss from incorrect and unauthorized pours is **prevented before it occurs**, and every delivery gains a proof of pour with its position and time.

05 · DISPATCH AND ROUTE OPTIMIZATION

One production schedule, fewer mixers, an unbroken pour

Concrete has a **limited workable life** from the moment it is batched, so a dispatch plan has to solve more than the shortest route: it has to match plant departures to the pour rate on site. The system weighs the production schedule, the pour rate, mixer positions and live traffic data together, and assigns each mixer a trip order and a departure time.



IN THE CURRENT PLAN

The queue forms outside the site

Because plant departures do not match the pour rate, the mixer queues and the pour stops waiting for a mixer. Every waiting mixer burns workable life and cannot turn another trip that day.

IN THE OPTIMIZED PLAN

The interval is set by the pour rate

The site's hourly pour rate is measured and plant departures are spaced to match it. Waiting shortens, the pour completes without a break, and the same schedule is met with **fewer mixers**.

06 · THE THREE THINGS OPTIMIZATION MANAGES

Cost, time and equipment are linked

The departure, arrival, pour and return times logged for every trip become the input for the next plan, so the **real cycle time** between plant and site is established by measurement rather than estimate.

01 · COST

Distance, fuel and returned concrete

Part of the cost of concrete is lost on the road: duplicate distance, a drum turning empty, and loads that come back from site because the workable life ran out.

- Total trip distance and fuel consumption fall
- Fewer returns caused by exceeding workable life
- Trip cost is reported per mixer and per site

02 · TIME

Waiting time and pour continuity

When plant departures are spaced to the site's pour rate, the mixer does not queue and the pour does not stop waiting for a mixer.

- Average waiting time on site falls
- Fewer pour interruptions and less cold-joint risk
- Cycle time is measured and fed back into the next plan

03 · EQUIPMENT

Mixer and pump utilization

As waiting time falls, the same mixer turns more trips in a day, and the number of vehicles needed for the same production schedule drops.

- Trips per mixer per day increase
- Filled drum volume is measured per trip
- Mixer and pump numbers are planned to real demand

THE FIVE DECISIONS THE PLAN MAKES

01

Dispatch to the pour rate

The site's hourly pour rate is measured; plant departures are spaced to match it.



02

Cycle time measurement

The plant-site-plant cycle is measured for every trip; the plan is built on actual times.



03

Constrained route

Loaded vehicle weight, road and bridge restrictions and live traffic are weighed together.



04

Multi-site balancing

Mixer allocation across sites fed by the same plant is balanced to each pour schedule.



05

Same-day resequencing

If the pour stops or a mixer goes out of service, the remaining trips are resequenced.

THE CONSTRAINTS THE OPTIMIZER TAKES INTO ACCOUNT

Workable life — any sequence exceeding the maximum time between leaving the plant and pouring never enters the plan.

Vehicle weight and road restrictions — roads, bridges and gradients a loaded mixer cannot pass are excluded from the route.

Site pour rate — how many cubic meters the site pours per hour is measured, and the dispatch interval is set from it.

Geofence — because defined pour zones enter the plan, a point outside them is never added to the sequence by mistake.

Plant production schedule — sites fed by the same plant are assessed together, so capacity is never exceeded.

Driver hours — trip duration, breaks and maximum driving time are taken into account, keeping the plan compliant.

Every operation from one platform, live

Vehicle position, load status and operational data are updated continuously, so your fleet can be followed live on a digital map. From verifying mix quality to tracking pour performance, and from operator analysis to delivery transparency, **every process stays on one screen.**

CREATECH · FLEET MANAGEMENT CENTER

LIVE · 24 VEHICLES

SITE A

34 AK 1180

POURING

34 AK 2204

EN ROUTE · LOADED

34 AK 4417

OUT-OF-ZONE POUR

34 AK 3391

POURING

PLANT

LIVE EVENT FEED

09:42 · OUT-OF-ZONE POUR

34 AK 4417 · control center notified

09:31 · SPEED DEVIATION

34 AK 2204 · quality alert closed

09:18 · MANOEUVRE WARNING

34 AK 1180 · blind spot radar

09:05 · POUR COMPLETED

34 AK 3391 · site B · 9 m³

MOCK-UP · FLEET MANAGEMENT CENTER SCREEN

On the left the live map, geofences and vehicle states; on the right the event feed. The plates, times, volumes and alert values are for illustration. The interface shown is the Turkish build.

01 · LOCATION

Live position tracking

The position of every vehicle is followed live on the map, keeping the fleet's status continuously under control.

02 · QUALITY

Mix quality verification

Drum rotation data is logged and analyzed automatically on every delivery, giving continuity in concrete quality.

03 · ALARM

Automatic alerts

Managers are alerted immediately to unauthorized pours or deviations, allowing a fast response.

04 · REPORTS

Performance reporting

Detailed per-operator and per-vehicle reports support efficiency analysis and make areas for improvement easy to spot.

08 · PRODUCT FAMILY

Camera, radar and drum automation — on one platform

Three core components for mixer and pump operations, working together. The cameras record what happens around the vehicle, the radar tells the driver about risk in the blind spot, and the drum automation safeguards the accuracy of the mix.

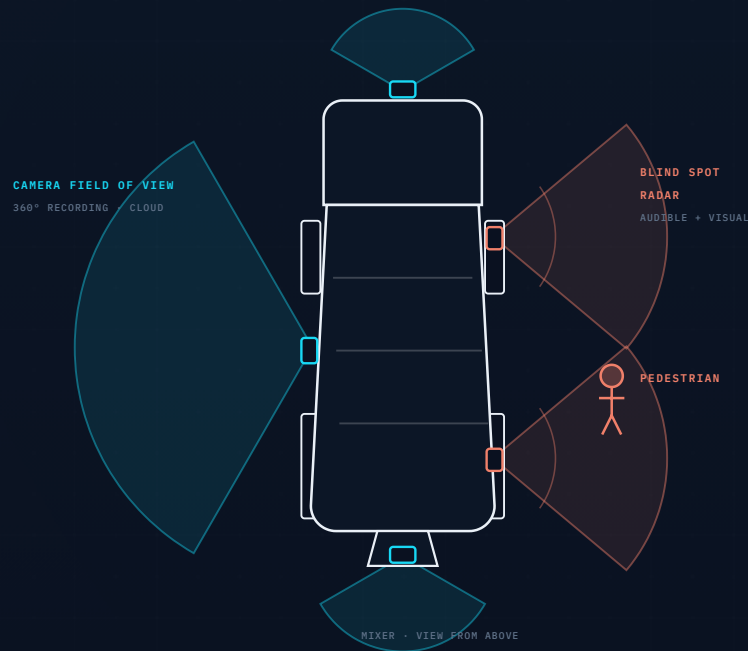


DIAGRAM · COVERAGE AROUND THE VEHICLE Camera view cones and radar detection lobes shown together. The angles and ranges are representative; the actual layout is set by vehicle type during installation.

01

Camera recording systems

High-resolution camera systems watch and record a 360-degree view around the vehicle. Footage is archived in the cloud, so after an incident it can be reviewed with its timestamp.

- Live monitoring and automatic backup on an event
- Visual evidence of pours and manoeuvres
- One-click access from the fleet management center

02

Blind spot radar systems

Advanced radar technology detects risks in the blind spots and sends the driver real-time warnings. Manoeuvring on site is where risk is highest in heavy vehicle operations.

- Pedestrian and vehicle detection to the side and rear
- Audible and visual warning in the cab
- Works in dust, mud and poor visibility

03

Drum direction automation system

Monitoring the rotation direction and speed of the mixer drum in real time safeguards the consistency and accuracy of mix quality. The same data also underpins discharge detection.

- Rotation direction, speed and duration logged
- Instant quality alert on deviation
- The moment of discharge determined automatically

09 · RESULTS

Measurable operational benefits

The concrete gains delivered by the systems deployed in plant and field operations.

85%

FEWER INCORRECT POURS
Position-based discharge detection significantly reduces unauthorized and incorrect pours.

40%

LESS TIME SPENT CHECKING
Automatic quality monitoring significantly reduces the need for manual checking and follow-up.

95%

MIX CONSISTENCY
Real-time drum monitoring delivers concrete of consistent quality.

60%

LOWER ACCIDENT RISK
Blind spot radars and camera systems reduce safety risks and bring accident rates down.

ABOUT THESE FIGURES

The percentages above are **target figures**, not the measured result of a particular installation. Project-specific targets are set together with a measurement of the current position and the results of a pilot. The times, durations, trips, plates and volumes in the diagrams are likewise illustrative examples.

WHY CREATECH

HOME-GROWN R&D

Through our in-house R&D center we develop innovative, sustainable solutions built specifically for the concrete and cement sector.

SECTOR EXPERTISE

With many years of experience in the concrete and cement sector, we analyze the operational needs of sector leaders at first hand.

CONTINUOUS SUPPORT

Our expert technical team provides fast, effective support 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 fleet into the future

From drum direction automation and discharge detection to cameras, blind spot radar and dispatch optimization, we put together solution packages for your needs. The systems can be deployed one at a time and all come together on the same platform.

Get in touch for more information, project consultancy or a demo. Our technical team is ready to help you identify the system that suits you best.

01

Fleet and plant analysis

Your mixers, trips and pour structure are reviewed together; the priority gains are identified.

02

Pilot installation

Real measurement on a limited number of mixers; the gains are seen in your own data.

03

Demo

A live walkthrough of the fleet management center, event feed and reporting screens.

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OUR OTHER SECTOR SOLUTIONS

ENERGY · FUEL DISTRIBUTION

FOOD · COLD CHAIN

PUBLIC TRANSPORT

ENVIRONMENTAL MONITORING

INDUSTRIAL AUTOMATION

BLE RTLS & AOA

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