



CONCRETE MONITORING FOR EVERY JOBSITE

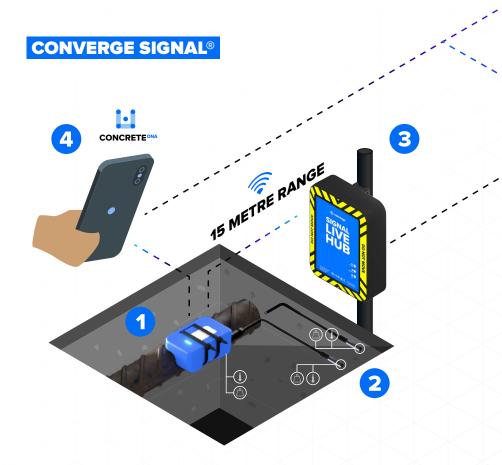
GO FULLY WIRELESS OR GO REUSABLE LONG RANGE



HOW THE HARDWARE WORKS

SOLUTIONS FOR EVERY JOBSITE

No two construction sites are the same, so your solutions shouldn't be a one-size-fits-all either. With the Signal & Helix systems you can choose a combination of solutions that fit your specific needs for functionality and budget. And the best part, they both work seamlessly on the ConcreteDNA® platform.





CONVERGE SIGNAL®

WIRELESS, EMBEDDED CONCRETE SENSING FOR REAL-TIME AND TEMPERATURE MONITORING

- Embedded solution
- 15m coverage
- Collect data from multiple points
- · Real-time temperature and maturity data on the go

- 1 Signal Sensor +™
- Multi-Probe Thermal Tail™
- 3 Signal Live Hub™ (real-time data collection)
- 4 ConcreteDNA® Mobile App (manual data collection)



CONVERGE HELIX®

ENDURING REUSABILITY AND LONG RANGE THAT MAXIMISES VALUE

- Non-embedded solution
- 1.5 mile range
- Reusable Helix Node
- View real-time data using the ConcreteDNA® app
- 5 Helix Node
- 6 Single-Probe Thermal Tail™
- 7 Helix Hub

HOW THE SOFTWARE WORKS

NEXT LEVEL CONCRETE INTELLIGENCE, DATA MANAGEMENT AND MIX SELECTION



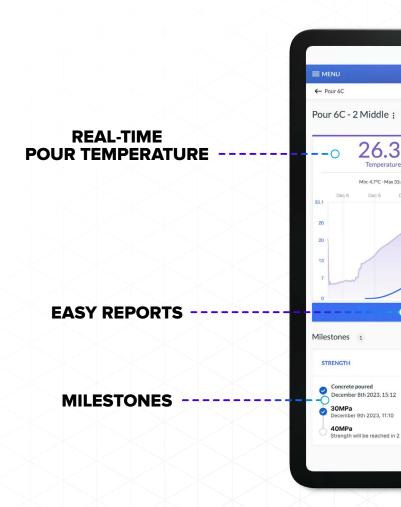
PROJECTS FINISH FASTER

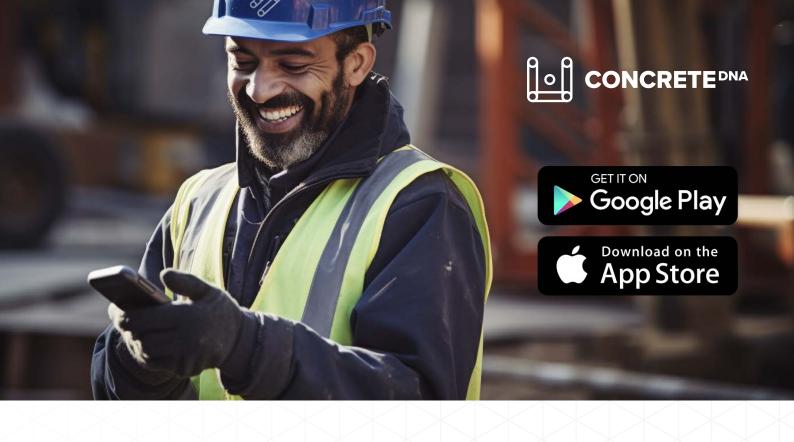
When concrete is on the critical path of your construction schedule, can you really afford to wait for lab results?

Get continuous, accurate, and real-time strength and temperature data, ensuring you always have the most up-to-date information at your fingertips.

Use real-time monitoring and AI predictions on concrete strength and temperature to strike formwork up to 40% faster.

- Make faster, safer decisions on posttensioning, formwork removal, road openings, and more.
- Ensure project milestones are met by reducing wait times associated with traditional third-party lab testing.
- Monitor temperature differential limits to avoid cracking.
- Minimize safety risks associated with premature formwork removal or posttensioning.
- Provide an audit trail for quality assurance and safeguard against potential disputes with irrefutable data on in-situ maturity testing.













EVERTON FC

LIVERPOOL, UK (FEBRUARY 2022 - PRESENT)



At Everton we're using low-carbon mixes that have longer strike times. We can claw back efficiency thanks to Converge's embedded sensors, which provide us with real-time curing data, rather than wait for cubes to return from the lab."

Gregory DeaneSenior Engineer, Laing O'Rourke

SUPPORTING THE REDUCTION OF EMBODIED CARBON AT EVERTON STADIUM

Laing O'Rourke was pouring a number of different concrete mixes at the new Everton FC stadium which consist of a higher volume of GGBS (ground granulated blast-furnace slag). GGBS is a low-carbon cement alternative that can be up to double its 28-day design strength after 10 years of curing. The drawback, however, is that the cycle times are longer.

By using embedded Converge sensors in the slabs, and analysing realtime maturity data, Laing O'Rourke are able to claw back this time by striking falsework at the earliest opportunity, without delay.

KEY STATS



November 7th 2023

Saved 3 days per pour



Number of sensors registered to date:

297







KEY BENEFITS

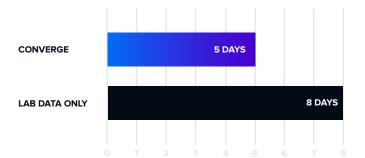
1. Decreased Pour-Cycle Length

a. After performing a calibration for each mix to be used, they were able to see real-time strength data on the ConcreteDNA platform. This allowed them to remove formwork once each pour had reached strength (47 MPa).

b. Temperature/Strength graphs available in the platform were used by their Engineers to document strike orders to remove formwork after strength had been reached.

c. On average, pour cycles were shortened by 3 days per pour. This translated to labour savings of 360 hours.

Pour Cycle Length (in days):



2. Reliable, wireless, and embedded solution

a. On previous projects, the client has used an un-embedded solution which had a tendency to be damaged and lose data. "While Signal is more expensive, it works a lot better and we don't ever worry about losing data since we can collect it from our phones as a failsafe".

Although you get value from the traditional test cube processes, being able to supplement these with more accurate real time data from these innovative sensors, has been beneficial in enabling us to determine actual insitu strength gain within the poured slabs."

Gregory DeaneSenior Engineer, Laing O'Rourke







