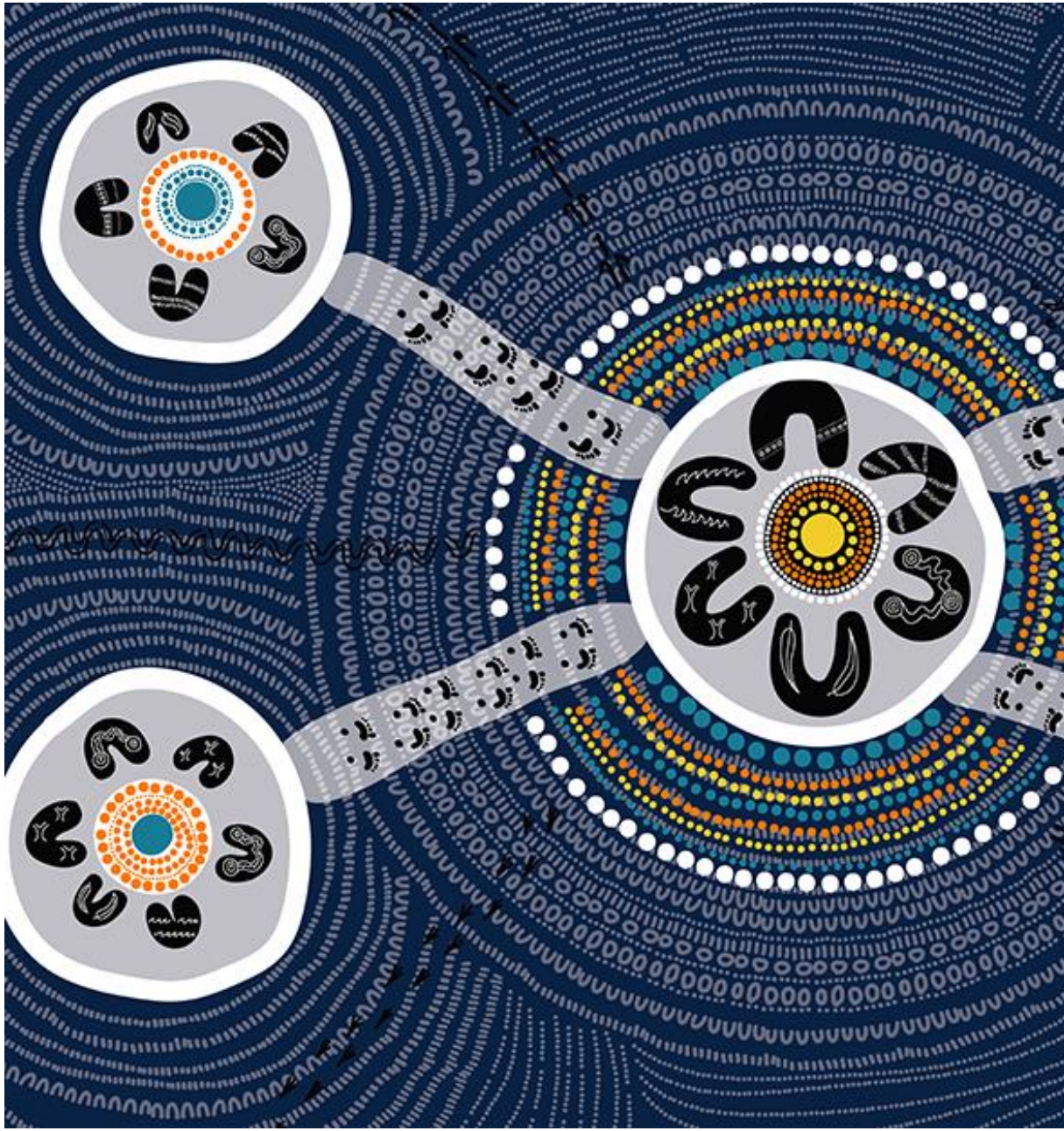
Infrastructure Sustainability Council

Suppliers in the Spotlight

30 January 2025

Acknowledgement of Country

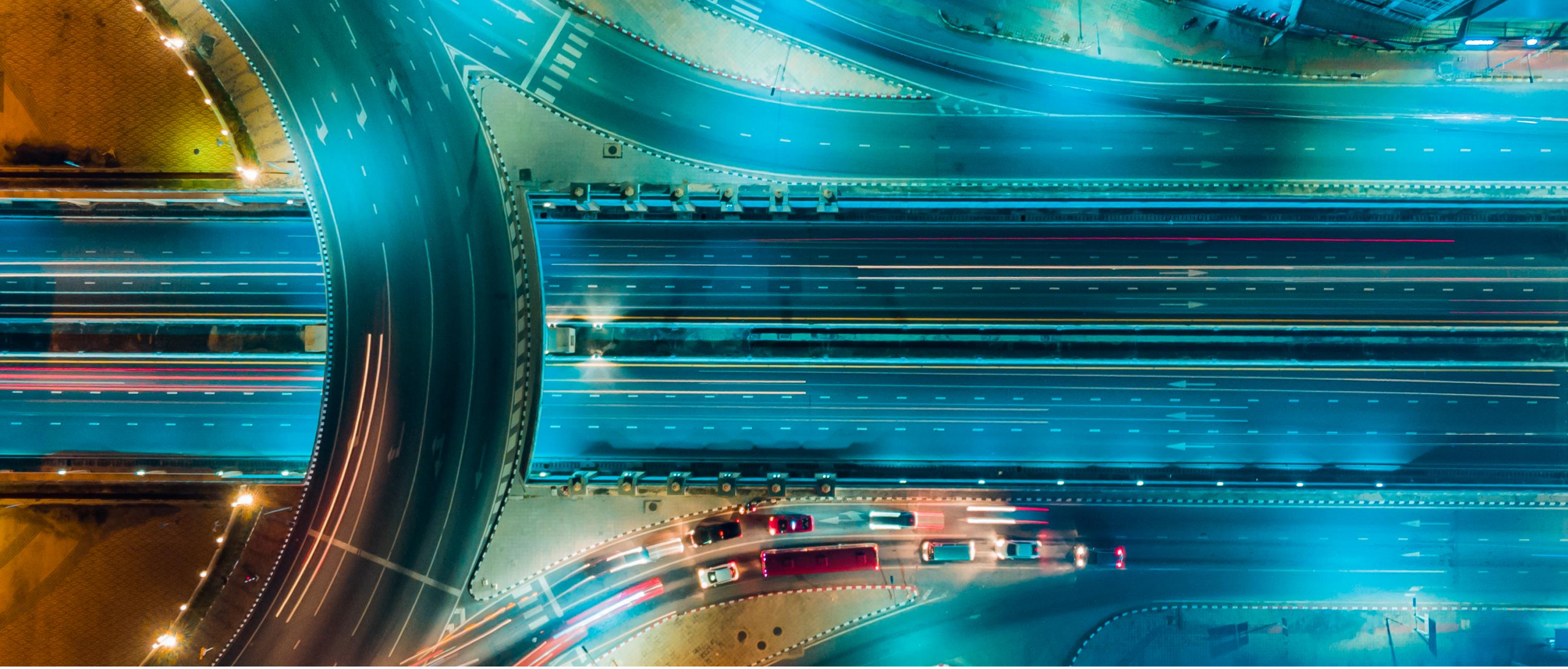
The Infrastructure Sustainability Council would like to begin by acknowledging the Traditional Custodians of the land on which we meet today. I acknowledge their deep connection to land, water and culture, and pay my respects to their Elders past and present.



Agenda

1	Nishant Gujarati	Global Sustainability Solutions — Innovative • Economical • Practical
2	Rob James	XYPEX® AUSTRALIA
3	Hari Nair	ZUNO CARBON
4	Manfred Fussi and Matt Hunter	aggreko
5	Geoff Sedgman	BarChip Inc. — The Synthetic Fibre Experts
6	Dan Rowley	CG Construction Solutions

Infrastructure Sustainability Council



Global Sustainability Solutions

Nishant Gujarati, Managing Director

Global Sustainability Solutions

Innovative • Economical • Practical

Global Sustainability Solutions

Innovative • Economical • Practical

GSS is founded with a commitment to innovation, economics, and practicality in environmentally sustainable construction solutions.

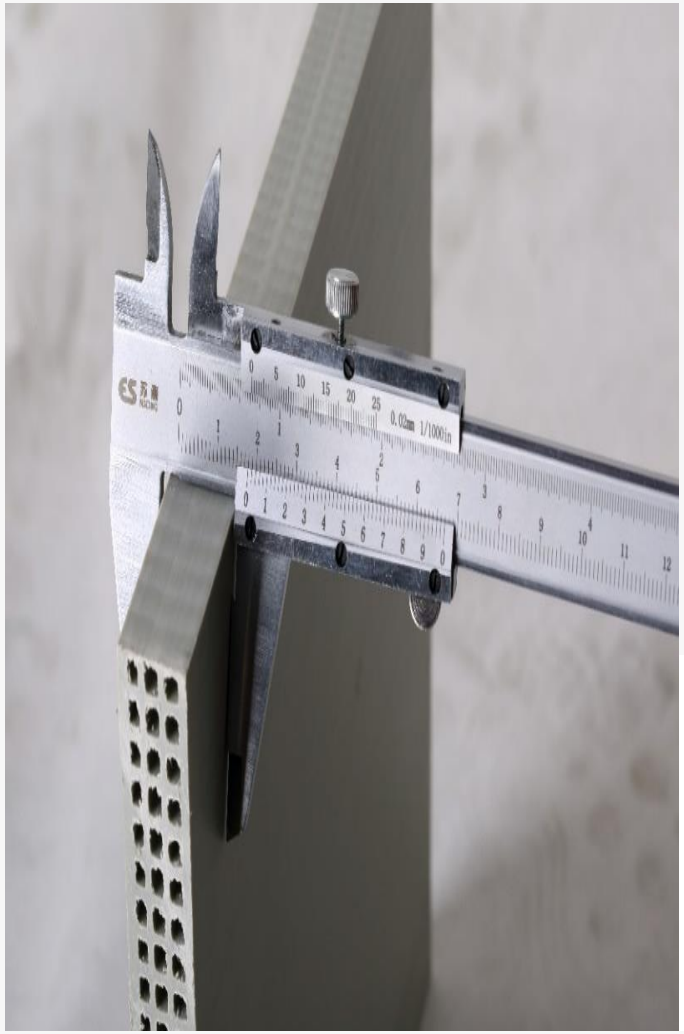
Global Approach | Local Focus

Align business to add value to Western Australia's Waste Avoidance and Resource Recovery Strategy 2030 to become a sustainable, low-waste, circular economy in which human health and the environment are protected from the impacts of waste

Sustainable Formwork, a Disruptive Alternative to Plywood

We aim to divert a substantial part of treated wooden concrete formwork from landfills. **SForm disrupts the industry by offering 100% recyclable Polypropylene sheets** made from recycled material, paving the way for a greener and more responsible approach to formwork solutions.

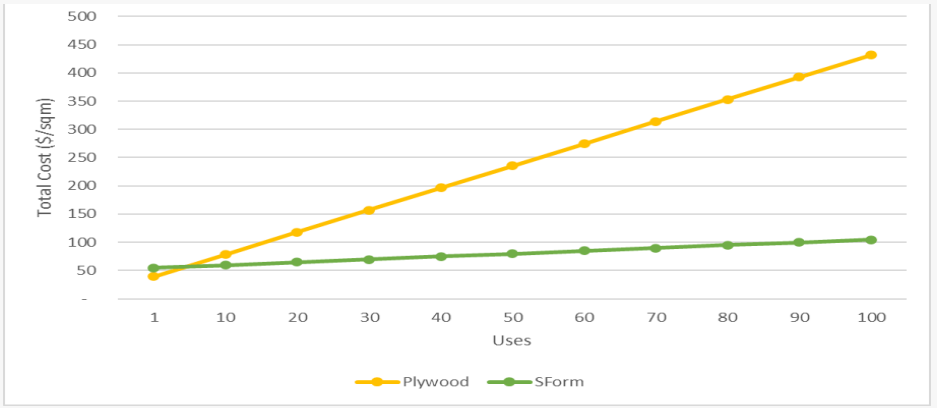
SForm



disrupting the conventional use of

plywood formwork at **AUD 9.5/use** v/s

SForm at **AUD 2.6/use**, achieving **savings of 73%**



Reusable

Conservation

Smooth Surface

Less cost

Tough

No Demould

Versatile

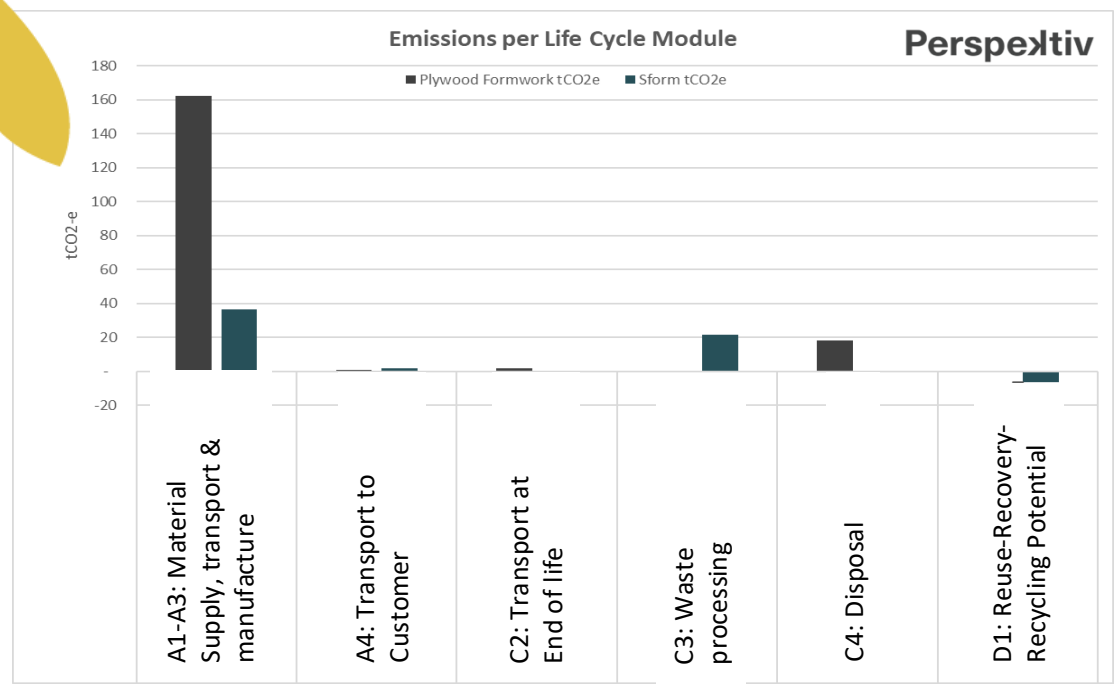
Eco Friendly

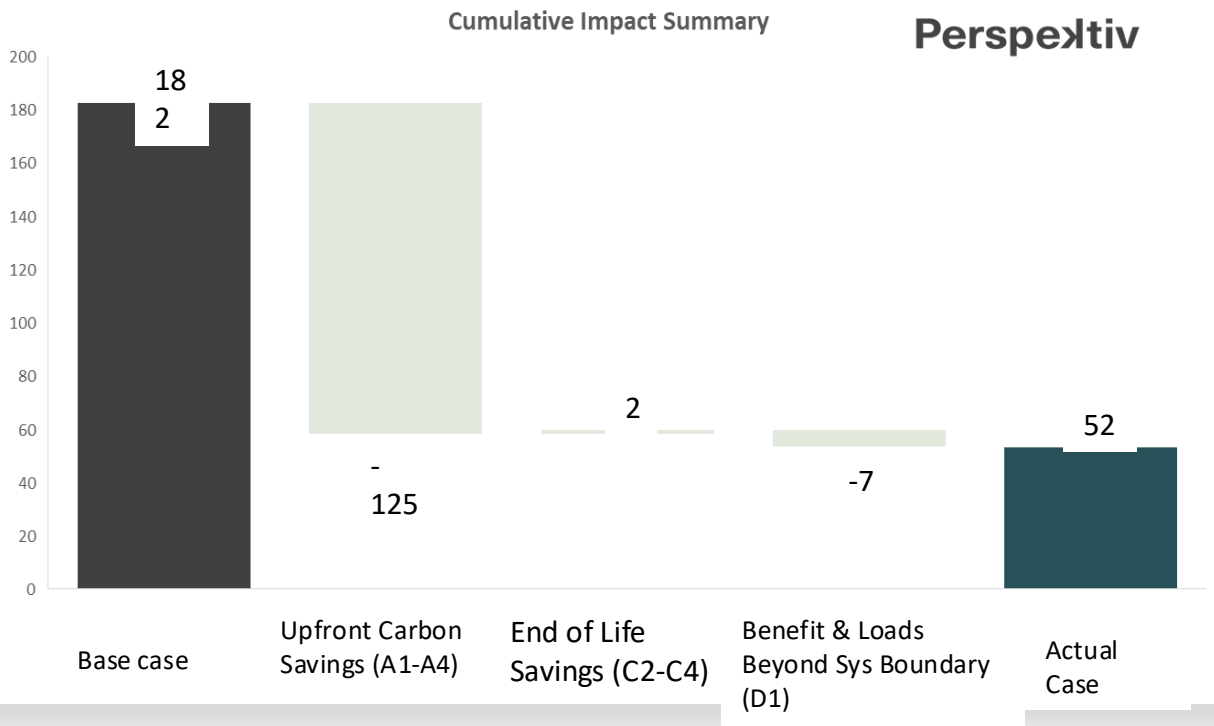
Recyclable

Workability

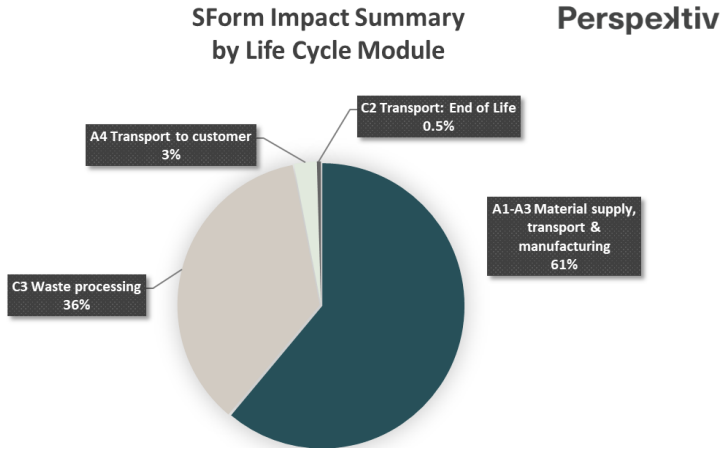
Integrity

Maintainability





Sustainability Outcomes



- Case Study: **10 x ten-storey buildings - comparing SForm to Plywood formwork of horizontal 100,000 sqm and vertical 81,200 sqm**.
- Perspektiv's preliminary assessment suggests **emissions could be reduced by 67% when substituting SForm for plywood formwork** (excludes module D1).
- Overall (exc. D1) **SForm emission intensity suggested to be 0.33 kgCO2-e/m²** of formwork area compared to 1.01 kgCO2-e/m^2 of formwork area for Plywood.
- Key driver of **MCI 0.99** & emissions reduction for **SForm is re-used 100 times, compared to Plywood which is assumed to be re-used 10 times**.

USAGE

Bridges & Viaducts

Industrial & Buildings

Stations & Airport

Transport & Mine Tunnell

Integration with Proprietary formwor systems

can be installed in formwork system Doka, MEVA, PASCHAL, PERI

Climbing, Walls & Columns

Smoother surface provides lesser friction

Slabs

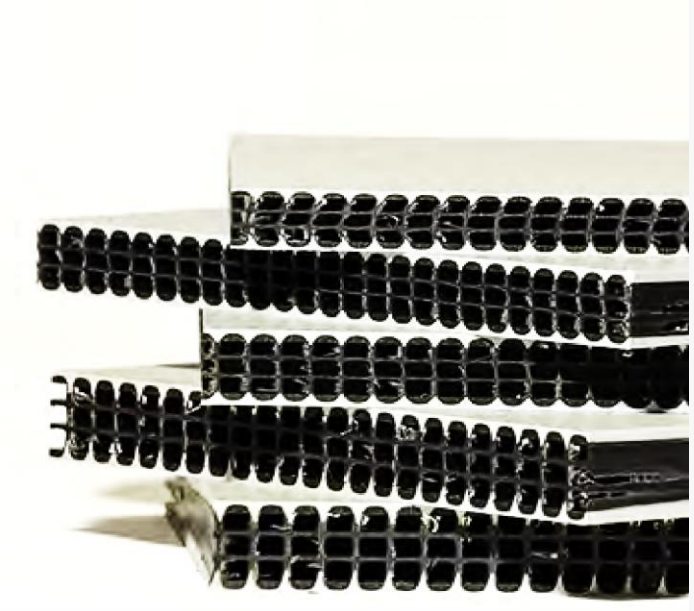
Quicker installation and demolding

Precasts

Multiple usage without changing the skin

Global Sustainability Solutions

Innovative • Economical • Practical



- ✓ Sustainable solution
- ✓ Circular economy
- ✓ Cost effective
- ✓ Practical applications
- ✓ Local Business

NISHANT GUJARATI

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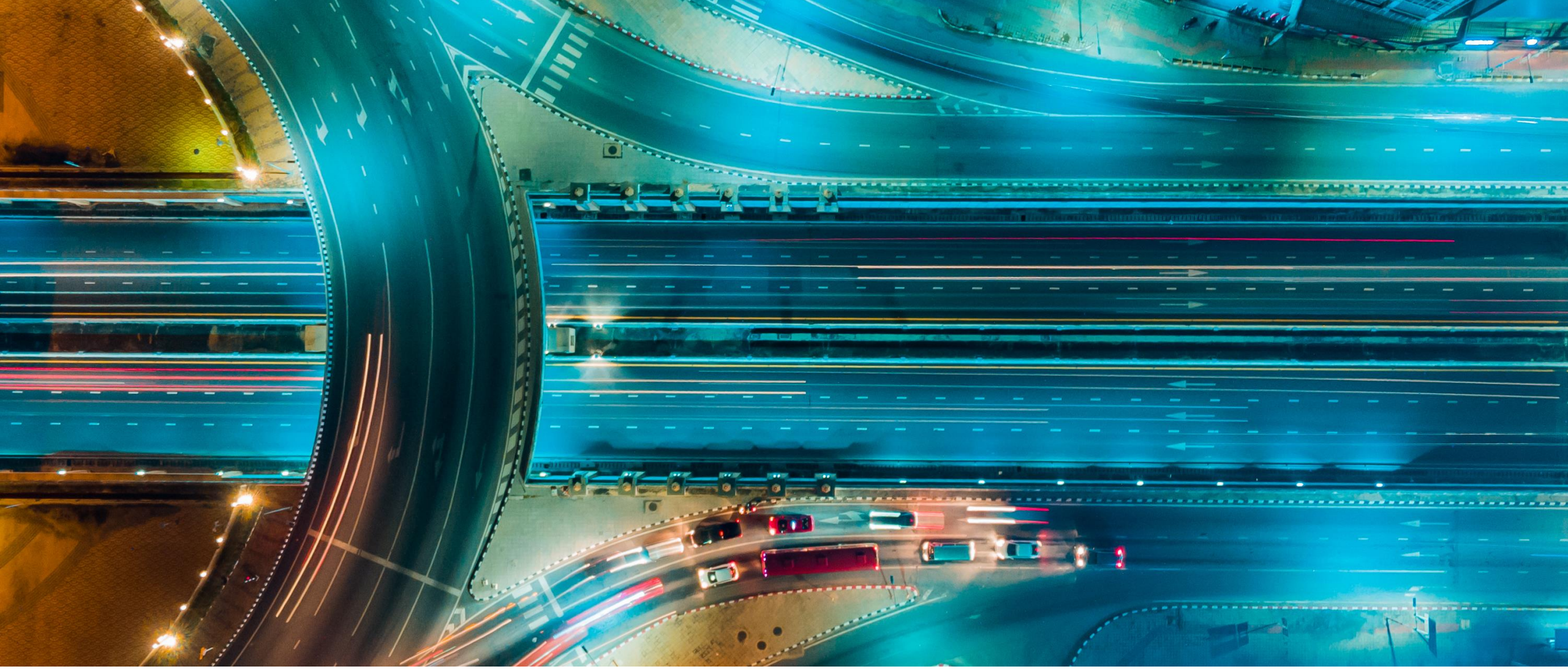
www.sustainables.au

info@sustainables.au

Our website

Contact Form



Xypex Australia

Rob James, Strategic National Business Development Manager

ISC - Suppliers In The Spotlight

Rob James

30 January 2025

30 years of success in a wide range of applications

XYPEX®

XYPEX®

XYPEX®

XYPEX®

XYPEX®

XYPEX®

Xypex – Worldwide Leader in Crystalline Waterproofing Technology (CWT)

Xypex Advantages:

- Creates waterproof and highly durable concrete that resists all corrosion mechanisms
- Extends the service life of concrete structures & reduces whole of life cost & carbon impacts
- Seals fine static cracks - up to 0.4mm
- Integral, permanent and has no negative effect on the concrete
- Easy to apply and does not need re-application
- Xypex is hydrophilic so bonding to treated concrete is achievable
- Saves construction time and reduces trades on site
- Does not need dry conditions and dropping temperatures required for applications such as coatings
- Is not deteriorated by ultra-violet rays like coatings
- Is potable water compatible
- Very low to no VOC contents, unlike coatings, and is carbon neutral certified
- Has a post-application visual detection system (VDS)
- Any placement issues can be fixed with Xypex repair materials
- Well established and proven technology and methodologies

GLOBAL GREENTAG
CARBON RATE

100%

CARBON ZERO

trust brands™

kg CO_2e/kg 0

XYPEX®

Infrastructure Sustainability Council

Global GreenTag CertTM
Certified

LEVEL A

GreenRate™

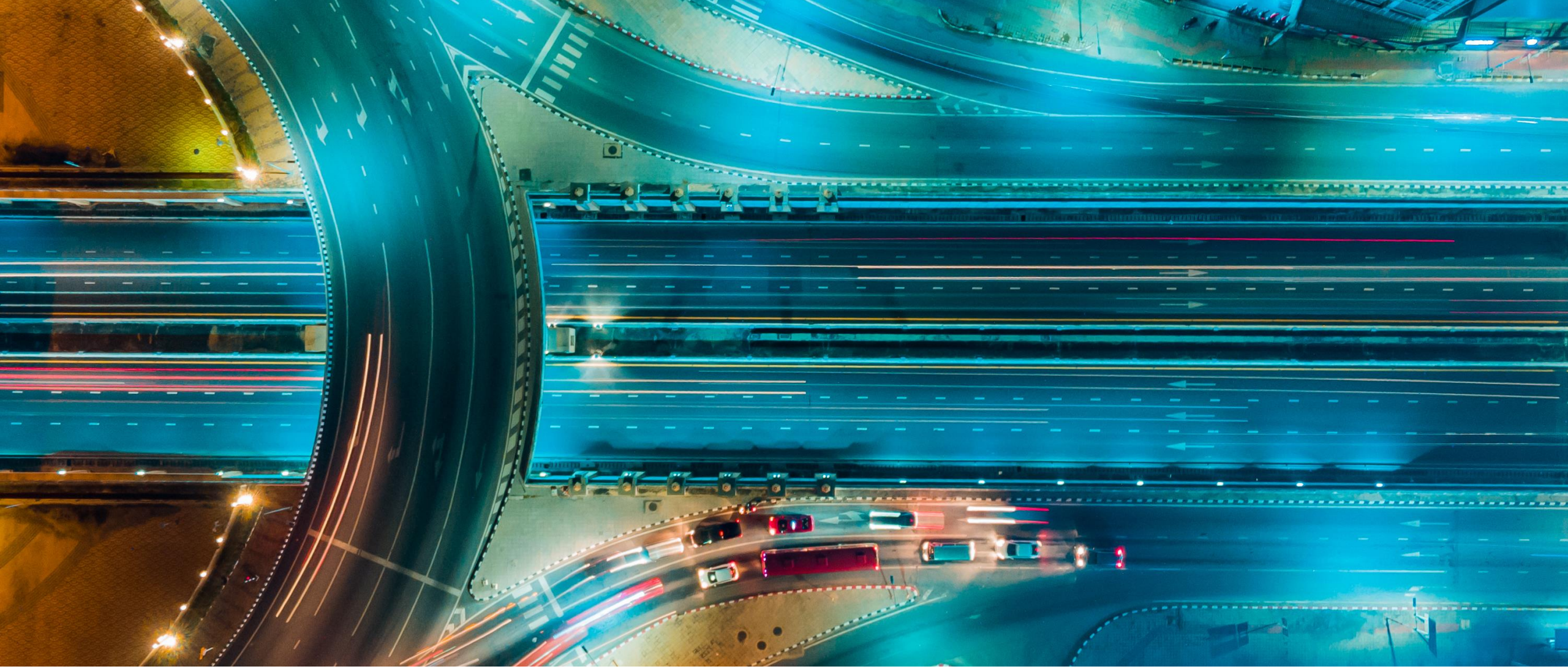
Climate Active

Carbon Neutral PRODUCT

XYPEX® Concrete Waterproofing by Crystallization™

Beingthere™

Rob James
Strategic National Business Development Manager
0455 557050
robj@xypex.com.au



Zuno Carbon

Hari Nair, CEO

ZUNO
CARBON

Utilizing technology and AI to empower climate and sustainability reporting

Hari Nair

CEO & Co-founder of Zuno Carbon

ZUNO CARBON

About Zuno Carbon

Founded in 2020, Zuno Carbon is an award-winning climate tech startup based in Singapore that helps businesses navigate the messy sustainability landscape.

Zuno Carbon provides an end-to-end ESG solution that enables businesses to measure their carbon emissions, report on their ESG performance, and act on their decarbonization insights.

FOUNDERS

Hari Nair
Chief Executive Officer

Jason Wong
Managing Director – Customer Success

Jon Adams
Chief Technological Officer

INVESTORS

wavemaker
SEEDS Capital
BLUE INCUBE
FEBE VENTURES

CUSTOMERS AND PARTNERS

SMRT TRAINS
MOTUL
traveloka
INFOCOMM MEDIA DEVELOPMENT AUTHORITY
Microsoft
COMFORTDELGRO
Giti
Cyan renewables
HBA Future Energy
Enterprise Singapore

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END-TO-END ESG PLATFORM

Transforming how you manage carbon and ESG data

- Activity data
- Financial data
- Employee activity
- Utility data
- Operational expenses

SINGLE SOURCE OF TRUTH

AI-assisted workflows
Integration for real-time data update
Multi-user collaboration

- Carbon footprint
- Emissions insights
- ESG reporting
- Target setting and modeling

ZUNO CARBON

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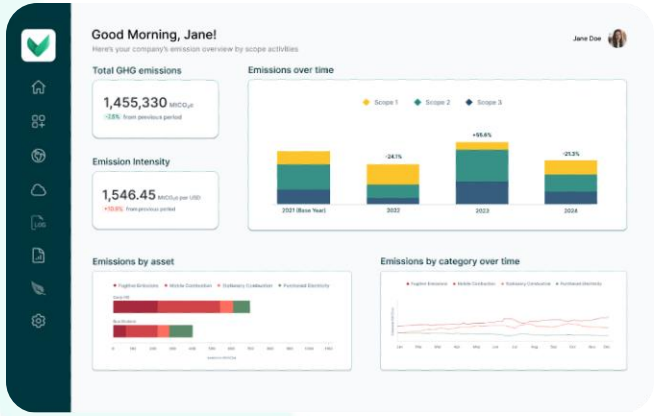
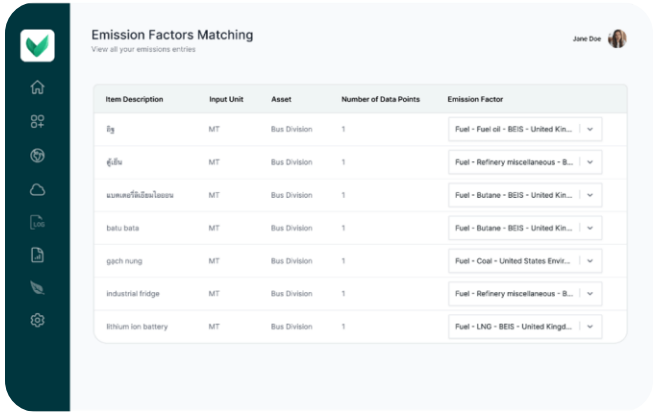
How technology can help your sustainability efforts



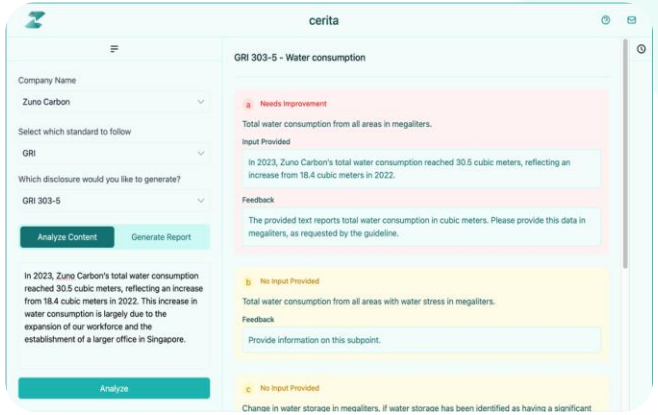
1 Simplify data collection

Reduce manual data collection, analyze emission data trends over time and establish a single source of truth for GHG emissions data



2 Speed up processes

Save countless hours with AI powered emission factors matching. Improve accuracy and mitigate risk from human error



3 AI assisted reporting

Instantly check for content alignment with global frameworks and receive recommendations for improvement

© 2024 Zuno Carbon

SUCCESS STORY – BUILT ENVIRONMENT

How we help

- Streamlined their GHG emissions data from manual calculation using spreadsheets to a centralized system on Zuno Carbon's platform
- Emissions data categorization to capture carbon footprint based on product type
- Improved transparency & efficiency in GHG calculation for their operations
- Setting up data integration with SAP and Navision for Scope 3 data, greatly reducing manual data input time and effort

3

Weeks

To conduct gap analysis, map out GHG inventory, and plan for data collection

6

Weeks

For configuration of platform and integration with existing data management system

70%

Reduction

In manual data collection efforts by streamlining processes and integrations

ZUNO CARBON

Navigate the ESG mess with Zuno Carbon

REACH OUT TO US:

h.nair@zunocarbon.com

www.zunocarbon.com

ZUNO CARBON

Q&A

Aggreko

Manfred Fussi, Renewable Sector Manager and Matt Hunter, Head of ESG & QHSE


aggreko
Creating better energy solutions together
aggreko
ARM
aggreko

Company Facts

- Founded in **1962** in the Netherlands
- **Over 60 countrie**s where we operate
- **6,000+** permanent **employees**
- **Over 8 GW power** in our fleet
- **World - leading provider** of **mobile modular energy services**

Local expertise to help our customers to make their difference

Battery and Energy Storage: BESS

Our BESS solutions provide dependable, consistent power while reducing your operational costs and shrinking your carbon footprint.

Energy Storage – Small

45 kVA and 90 kVA units

Energy Storage – Medium

500kW units

Energy Storage – Large

1 MW+ units

Renewable Power

Mobile PV – Small

5 kW and 25 kW PV &
Inverter packages

Mobile PV – Medium

70 kW units

Fixed PV– Large

Bespoke designs

Our greener solutions

Right sizing

our equipment to its application to ensure greater efficiency and further reduction in carbon emissions.

Load on demand (LOD)

power solutions replace a large constantly operating generator with a group of smaller generators – minimising emissions and fuel usage.

Alternative fuels

providing HVO as an alternative:

- Drop-in fuel in all our generators
- Distributed, handled and stored in the same way as traditional fuel
- Full HVO fuel management service means we deliver your fuel when you need it
- No compromise on reliability
- Eliminates up to 90% of net CO_2 greenhouse gas
- Significantly reduces nitrogen oxide (NOx), particulate matter (PM) and carbon monoxide (CO) emissions

Aggreko Connect

- 24/7 remote monitoring and support
- Assess and resolve alerts
- Proactive equipment checks
- **Reporting function** (e.g. carbon emissions)

Avoid any downtime

Contact us for more information

Matt Hunter (Head of ESG & QHSE, APAC):
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0499 300 605

Manfred Fussi (Renewables Sector Manager):
Manfred.Fussi@Aggreko.com
0477 003 555

Aggreko AusPac
Head Office
Melbourne

Visit **aggreko.com**

Call **1800 808 109**

Follow us!

Temporary construction power goes hybrid to save fuel, emissions

Customer: **Ausco**

Location: **Melbourne, Australia**

Sector: **Construction**

KEY FACTS

4 batteries
30 kVA to 90 kVA

4 generators
30 kVA to 125 kVA

190,912 kg
Of CO_2 saved

71,236 litres
Of fuel saved

OUR DIFFERENCE

Reliable hybrid power that reduces fuel use, emissions, and noise at construction sites.

CHALLENGE

Efficient and eco-friendly power to support freeway construction

During the construction of a freeway, Ausco needed temporary power for facilities such as traffic lights and modular site buildings that were not connected to the grid.

As they were carrying out the construction work in a residential area they also needed to minimise noise as much as possible.

Having worked with Aggreko for a number of years, Ausco asked us to provide a solution that would deliver all the power they needed in the most efficient and environmentally friendly way while ensuring that the construction project could be completed on time.

SOLUTION

Right-sized hybrid power for four construction sites

We designed a hybrid power system that involved the installation of both diesel generators and battery storage units at four separate locations across the freeway construction area.

These units were sized according to the power needs of each site, with generators ranging from 30 kVA to 125 kVA in capacity and batteries ranging from 30 kVA to 90 kVA. This allowed Ausco to rely on battery power as much as possible, only using the generators when there was a high power demand or when the batteries needed recharging.

IMPACT

Notable fuel savings and reduced CO2 emissions

By quickly installing the generators and batteries at each site we ensured that Ausco had all the power needed to keep the construction of the freeway on track.

Thanks to the batteries, generator use was dramatically reduced, keeping noise to a minimum as well as delivering significant savings in terms of both fuel costs and carbon dioxide emissions. Across the four sites, Ausco saved a total of 71,236 litres of fuel and produced 190,912 kg fewer CO2 emissions than if the generators had been providing all the power.

BarChip

Geoff Sedgman, Marketing Manager

BarChip Inc.

The Synthetic Fibre Experts

BarChip Inc.
The Synthetic Fibre Experts

BarChip Fibre
ISC Supplier Spotlight

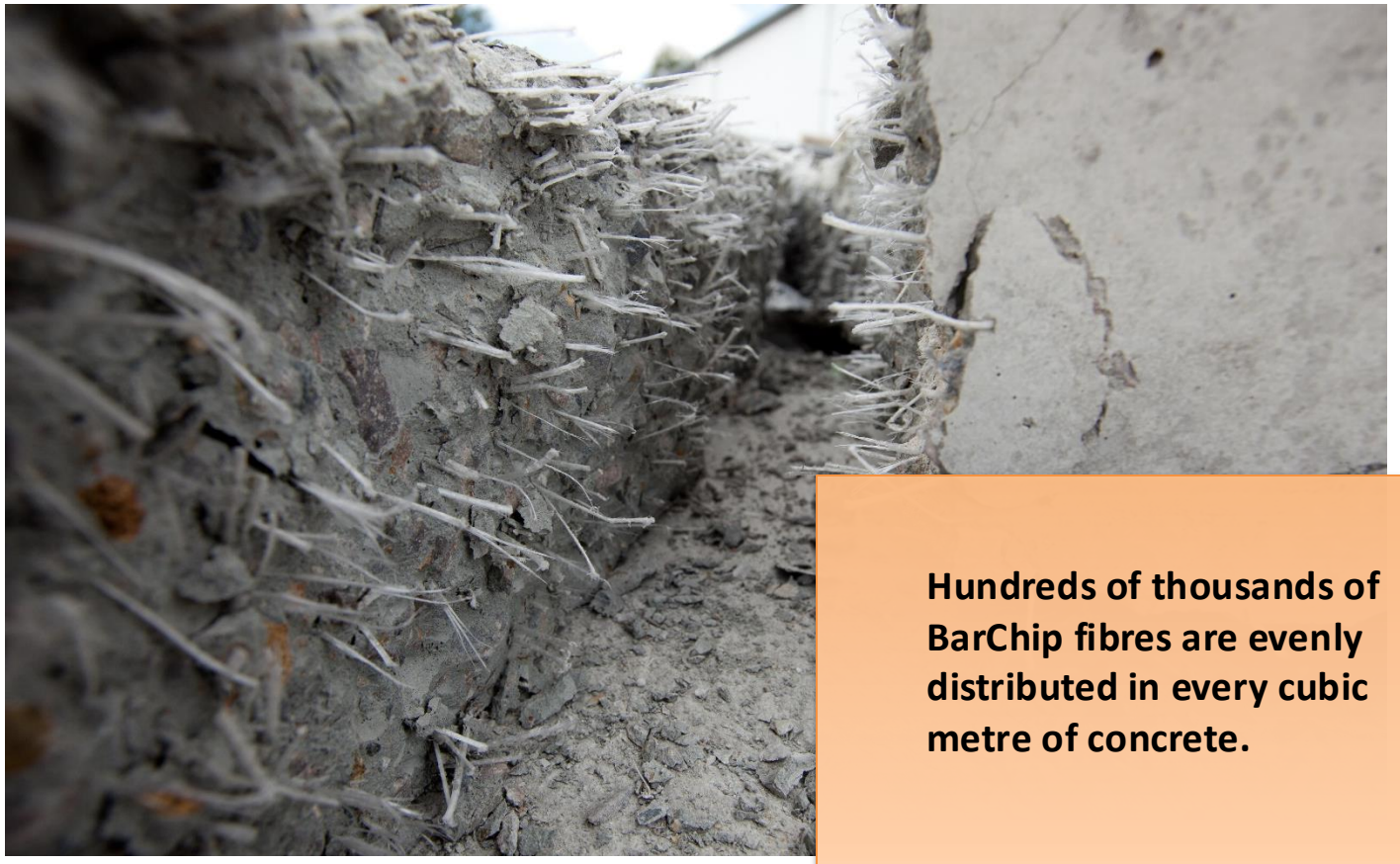
Geoff Sedgman
Marketing Manager

BarChip Inc.
The Synthetic Fibre Experts

What is BarChip Fibre?

Macro Synthetic Fibre that's used as structural and crack control reinforcement in concrete.

Used as a replacement for steel reinforcement in concrete.

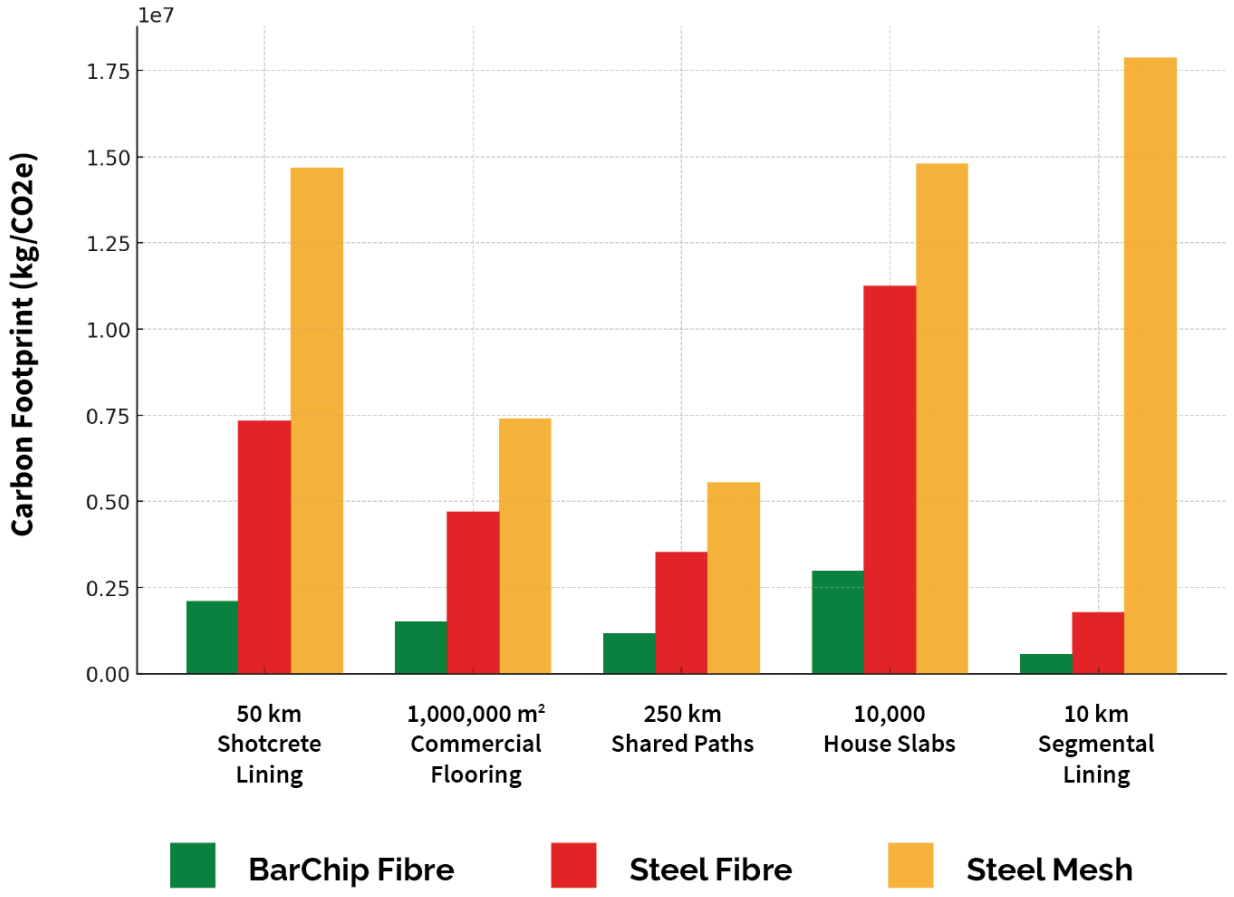


Hundreds of thousands of BarChip fibres are evenly distributed in every cubic metre of concrete.

BarChip Inc.
The Synthetic Fibre Experts

Low Carbon Reinforcement

Carbon modeling shows that BarChip fibre delivers a significantly lower carbon footprint compared to steel alternatives.



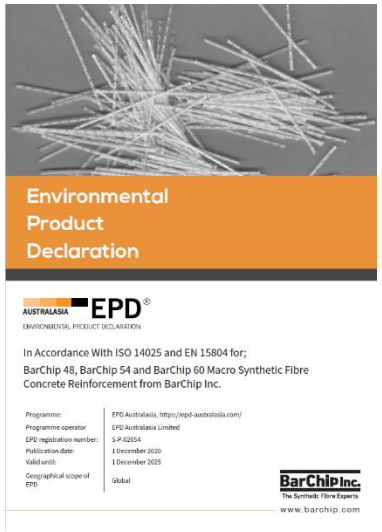
BarChip Inc.
The Synthetic Fibre Experts

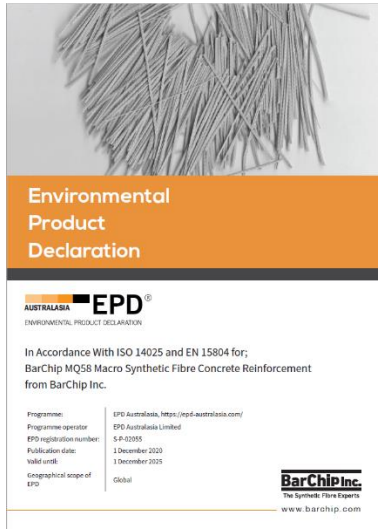
EPD Certified

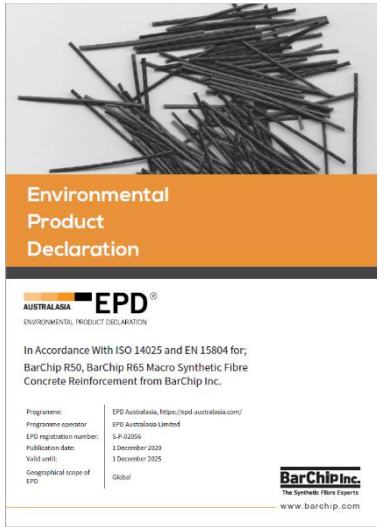
BarChip fibres are EPD certified through EPD Australasia in the International EPD System.

BarChip is a member of the Infrastructure Sustainability Council

BarChip is a registered product in the ISC Materials Calculator.







[Download BarChip EPD's]

AUSTRALASIA EPD®
ENVIRONMENTAL PRODUCT DECLARATION

BarChip Inc.
The Synthetic Fibre Experts

Case Study: Parramatta Light Rail

- 101 tonnes of BarChip replaced 2,426 tonnes of steel.
- Delivered a GHG emissions reduction of 4,815 tonnes of CO2e.
- Contributed 1 ISC innovation point to the project.
- Eliminated material transport saving additional 4 tonnes of CO2e.

Download Parramatta Light Rail Case Study

BarChip Inc.
The Synthetic Fibre Experts

Case Study: Melbourne Metro

- Eliminated the need for a 50mm sprayed shotcrete smoothing layer.
- Enabled a 15% reduction in the total amount of shotcrete used on the project.

BarChip Inc.
The Synthetic Fibre Experts

Beyond Carbon – Sustainability Outcomes

BarChip delivers positive sustainability outcomes at nearly every stage of the construction process.

[Download BarChip Sustainability Guide]

BarChip Inc.
The Synthetic Fibre Experts

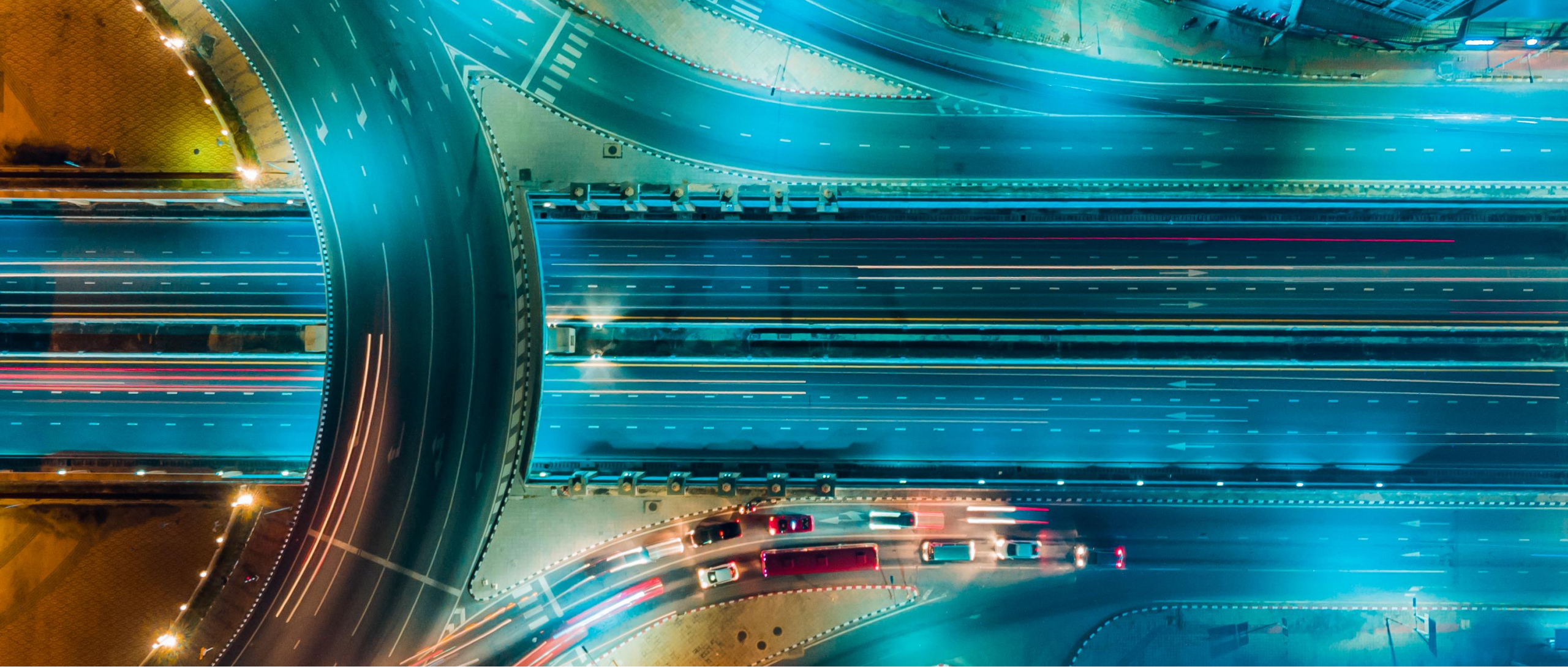
Thank You

Contact our team for more information.

Craig Wright – cwright@barchip.com (WA, QLD, NT, SA, TAS)

Todd Clarke – tclarke@barchip.com (NSW, ACT, VIC)

Des Vlietstra – desv@barchip.com (WA)



CE Construction Solutions

Dan Rowley, General Manager

CE Construction Solutions

CE Construction Solutions

Suppliers in the Spotlight

SUNSTAINABLE CONCRETE WITH CARBONCURE AND SMARTROCK CONCRETE SENSORS

Dan Rowley | General Manager
CE Construction Solutions

Construction Solutions

Established in 1973
CE Construction Solutions continues to be a leading provider of specialist construction products and technical solutions.

Over the past five decades, CE has grown from a Canberra based distributor of specialist concrete products, to a national leader. We are revolutionising the way Australia builds with concrete through innovative technology, IoT and sustainability solutions.

INDUSTRY PARTNERS

CONCRETE INSTITUTE of AUSTRALIA

Supply Nation REGISTERED

MASTER BUILDERS

Infrastructure Sustainability Council MEMBER

acra

NAWIC THE NATIONAL ASSOCIATION OF WOMEN IN CONSTRUCTION

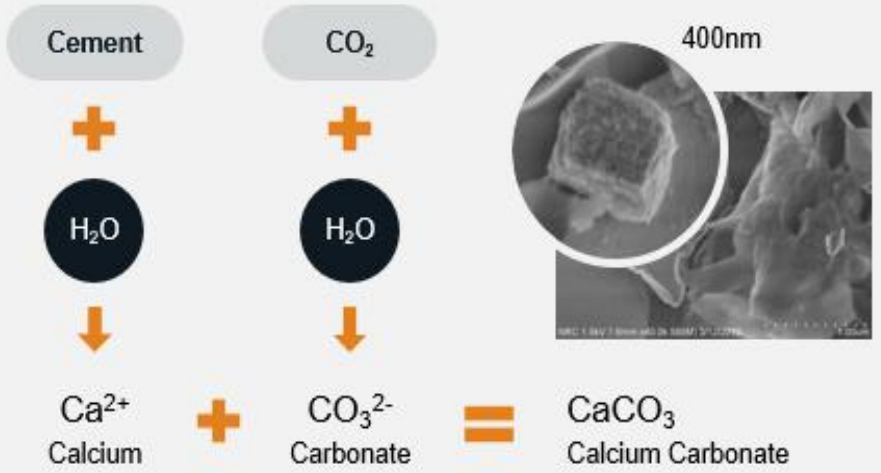
WE ADVOCATE FOR CHANGE.
WE EDUCATE AND EMPOWER.
WE CONNECT. WE ARE NAWIC.
www.nawic.com.au

CARBONCURE


CARBON CURE.
WHO KNEW THAT POURING CONCRETE COULD BE LIKE PLANTING TREES?
CARBON CURE.
Innovative CO_2 Technology

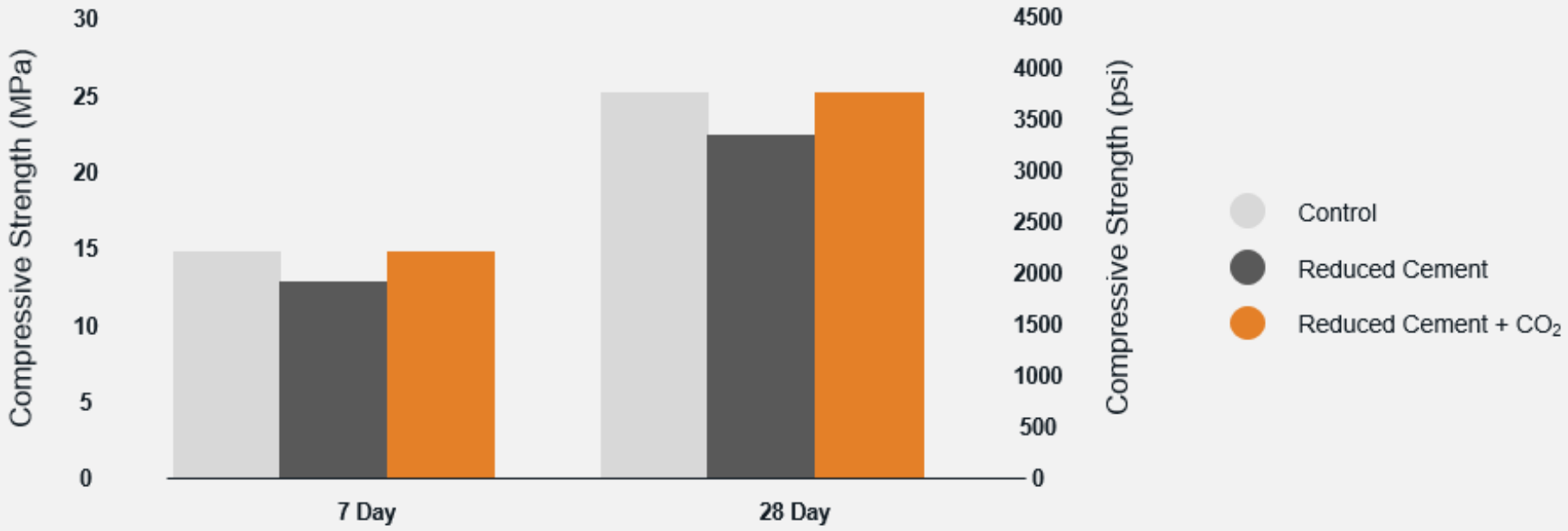
WHAT HAPPENS WHEN CO_2 IS INJECTED?

What Happens When CO_2 is Injected?



- **CO_2 Converts** to **Nano-Limestone** $CaCO_3$
- Creates 1 000's of **Seeding** sites for **Hydration**

Compressive Strength & Mix Adjustment



CarbonCure provides a saving of approx. **15Kg – 20Kg of CO2 per m3** of concrete from both mineralised CO2 and the facilitated cement reductions.

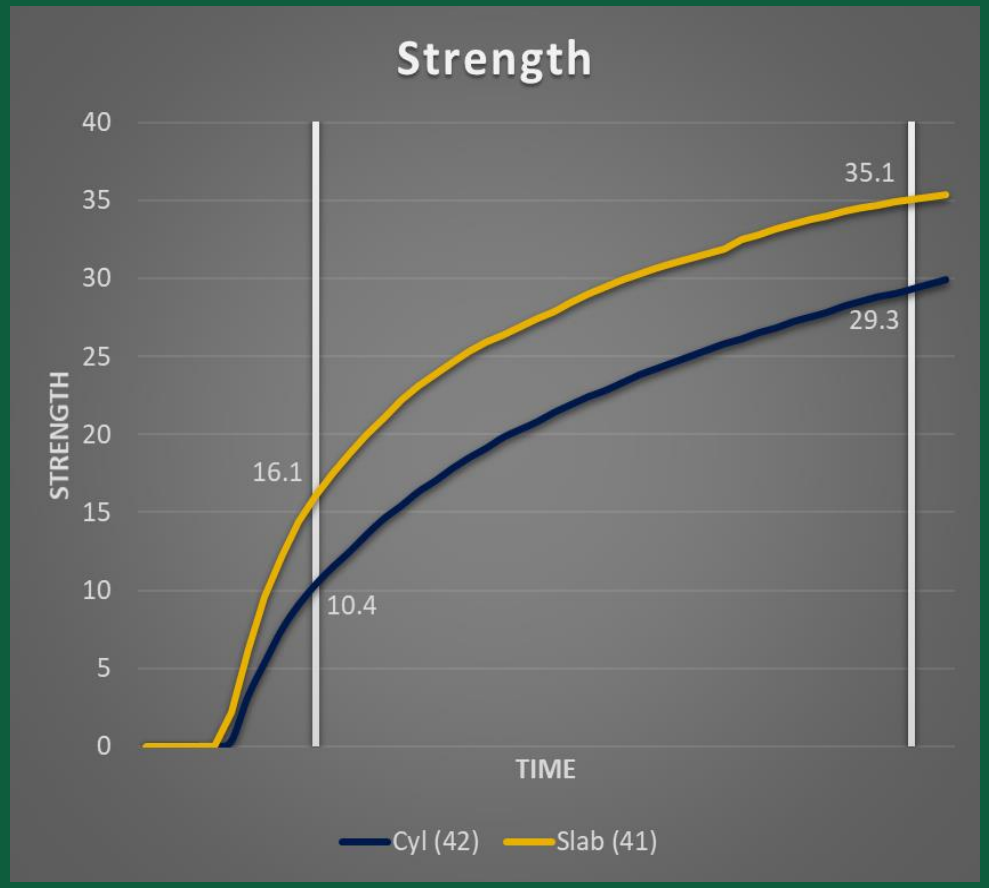
SmartRock Maturity Sensor

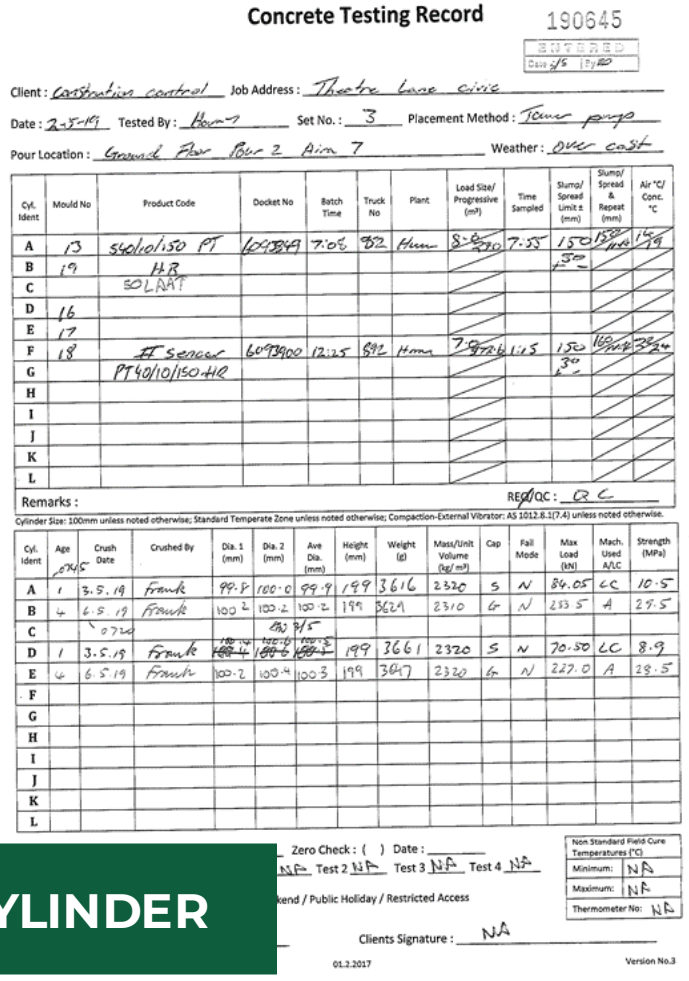
Maturity Sensor

- Early age concrete strength
- Mix optimisation
- Bluetooth connectivity
- Location-specific monitoring
- Real time – true strength

Cylinders Less Than 7 Days

ELEMENT VS CYLINDER





Concrete Testing Record

190645

Client : construction control Job Address : Theatre Lane civic

Date : 2-5-19 Tested By : Hamza Set No. : 3 Placement Method : Concrete pump

Pour Location : Ground Floor Pour 2 Aim 7 Weather : Over cast

Cyl. Ident	Mould No	Product Code	Docket No	Batch Time	Truck No	Plant	Load Size/ Progressive (m³)	Time Sampled	Slump/ Spread Limit ± (mm)	Slump/ Spread & Repeat (mm)	Air °C/ Conc. °C
A	13	40/10/150 PT	609849	7:05	852	Hamm	8.5/330	7.55	150 ± 30	150 mm	19
B	19	HR SOLAAT									
C											
D	16										
E	17										
F	18	II Sensor	609900	12:25	892	Hamm	7/330	1:15	150 ± 30	150 mm	24
G		PT40/10/150 HR									
H											
I											
J											
K											
L											

Remarks : REQ QC : QC

Cylinder Size: 100mm unless noted otherwise; Standard Temperate Zone unless noted otherwise; Compaction-External Vibrator: AS 1012.8.1(7.4) unless noted otherwise.

Cyl. Ident	Age	Crush Date	Crushed By	Dia. 1 (mm)	Dia. 2 (mm)	Ave Dia. (mm)	Height (mm)	Weight (g)	Mass/Unit Volume (kg/m³)	Cap	Fail Mode	Max Load (kN)	Mach. Used A/C	Strength (MPa)
A	1	3.5.19	Frank	99.5	100.0	99.9	199	3616	2320	S	N	84.05	LC	10.5
B	4	6.5.19	Frank	100.2	100.2	100.2	199	3629	2310	G	N	233.5	A	29.5
C		07/20				100.3	9/5							
D	1	3.5.19	Frank	~~100.4~~	~~100.6~~	~~100.5~~	199	3661	2320	S	N	70.50	LC	8.9
E	4	6.5.19	Frank	100.2	100.4	100.3	199	3647	2320	G	N	227.0	A	28.5
F														
G														
H														
I														
J														
K														
L														

Zero Check : ( ) Date :

Test 1 NA Test 2 NA Test 3 NA Test 4 NA

Weekend / Public Holiday / Restricted Access

Non Standard Field Cure Temperatures (°C)	
Minimum:	NA
Maximum:	NA
Thermometer No:	NA

Clients Signature : NA

01.2.2017 Version No.3

ELEMENT

CYLINDER

Multiplex
216,244 followers
11mo •

On time On budget On carbon

We have achieved our highest ever carbon saving in the concrete used at Brookfield Properties One The Esplanade in Perth, a brilliant example of how collaboration and innovation around everyday building materials can have a significant impact on our industry's carbon footprint.

When we talk about making our buildings 'on carbon', we're challenging ourselves and our value chain to make early design and delivery decisions that have a material impact on carbon.

When we began planning for One The Esplanade, we worked with Boral, SRG Global and BG&E to determine how we could evolve the use of concrete to reduce carbon outputs, without compromising quality and performance. Through off-site testing and monitoring via thermocouples and compressive strength testing, we developed a unique concrete mix and construction methodology that enabled Boral's lower embodied carbon concrete product to be used for every element of the build – including the high performance concrete and post tension slabs.

This achieved a 46% reduction in Portland (general purpose) cement, creating a CO2-e saving of 7,560 tonnes, the equivalent of planting 125,000 new trees.

We are serious about having a material impact on our industry's carbon footprint. We're proud of what we achieved together at One The Esplanade and are already applying what we learnt to current and future jobs. #ontimeonbudgetoncarbon

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Concrete and cement contribute to approximately 5-8% of the worlds global emissions each year. CarbonCure's innovative technology is a direct way to reduce embodied carbon in concrete. Our technology is retrofitted into existing concrete plants and...

Credits: Inn-1 , Inn-1 , Mat-1 , Rso-6

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QUESTIONS

CE Construction Solutions

If you have any questions or enquiries, please feel free to ask now or send through to the contact details below.

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Q&A

Thank You