



**2021 Investor Presentation**  
29 June 2020 EDE:ASX

# Disclaimer

## FORWARD LOOKING STATEMENTS

This presentation includes certain forward-looking statements of Eden's management. Forward-looking statements are statements that contemplate the happening of possible future events and are not based on historical fact. Forward-looking statements may be identified by the use of forward-looking terminology, such as "may", "shall", "could", "expect", "estimate", "anticipate", "predict", "probable", "possible", "should", "continue", "budgeted", "forecast", "targeted" or similar terms, variations of those terms or the negative of those terms. Forward-looking statements should not be read as a guarantee of future performance or results and may not be accurate indications of when or whether such performance or results will be achieved. Forward-looking statements are based on information known to Eden when those statements are made or management's good faith belief as of that time with respect to future events and are subject to risks and uncertainties that could cause actual performance or results to differ materially from those expressed in or suggested by the forward-looking statements. The forward-looking statements specified in this presentation have been compiled by Eden's management on the basis of assumptions (which may or may not turn out to be accurate) made by management and considered by management to be reasonable. Eden's future operating results, however, are impossible to predict because of risks and uncertainties, and no representation, guarantee, or warranty is to be inferred from those forward-looking statements. You are cautioned not to place undue reliance on these forward-looking statements.

Forward-looking statements include, but are not limited to, the following:

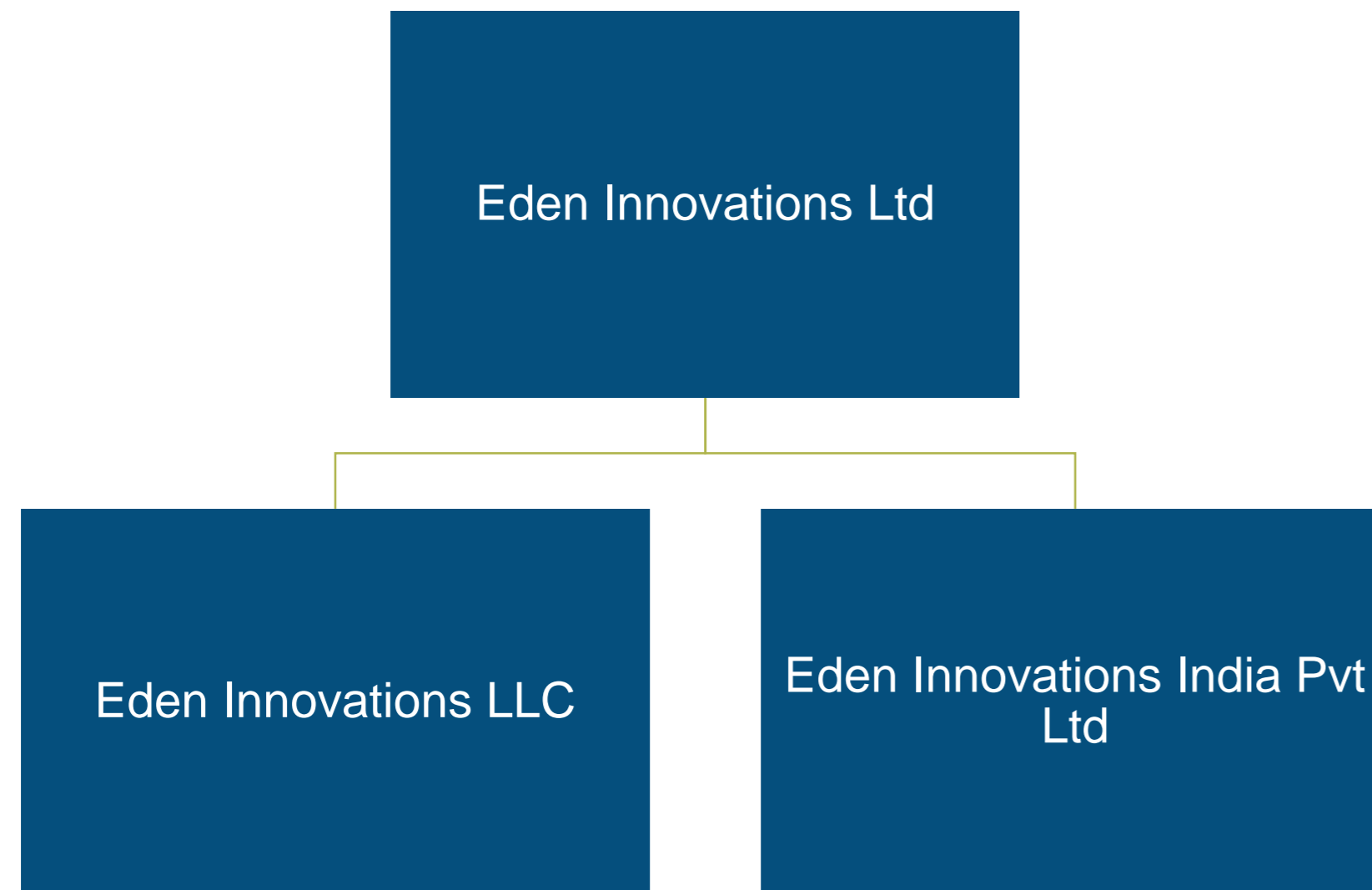
Statements relating to Eden's budgeted, forecast and targeted revenue, future production capacity and sales levels, and business and financial performance; Statements relating to future research and development results and regulatory approvals of Eden's products; Statements relating to Eden's competitive position; and Other statements relating to future developments that you may take into consideration.

Actual results of Eden's operations may differ materially from information contained in the forward-looking statements as a result of risk factors some of which include, among other things: global economic stability, continued compliance with government regulations regarding production and use of carbon nanotubes in the U.S. or any other jurisdiction in which Eden conducts its operations; changing legislation or regulatory environments in the U.S. and any other jurisdiction in which Eden conducts its operations; credit risks and product sales affecting Eden's revenue and profitability; exposure to product liability claims; changes and new competitive products in the specialty concrete admixture industry; the level of market acceptance and demand for EdenCrete™; Eden's ability to effectively market all the product it can produce; Eden's ability to manage its growth, including implementing effective controls and procedures and attracting and retaining key management and personnel; changing interpretations of generally accepted accounting principles; the availability of capital resources, including in the form of capital markets financing opportunities; and general economic conditions.

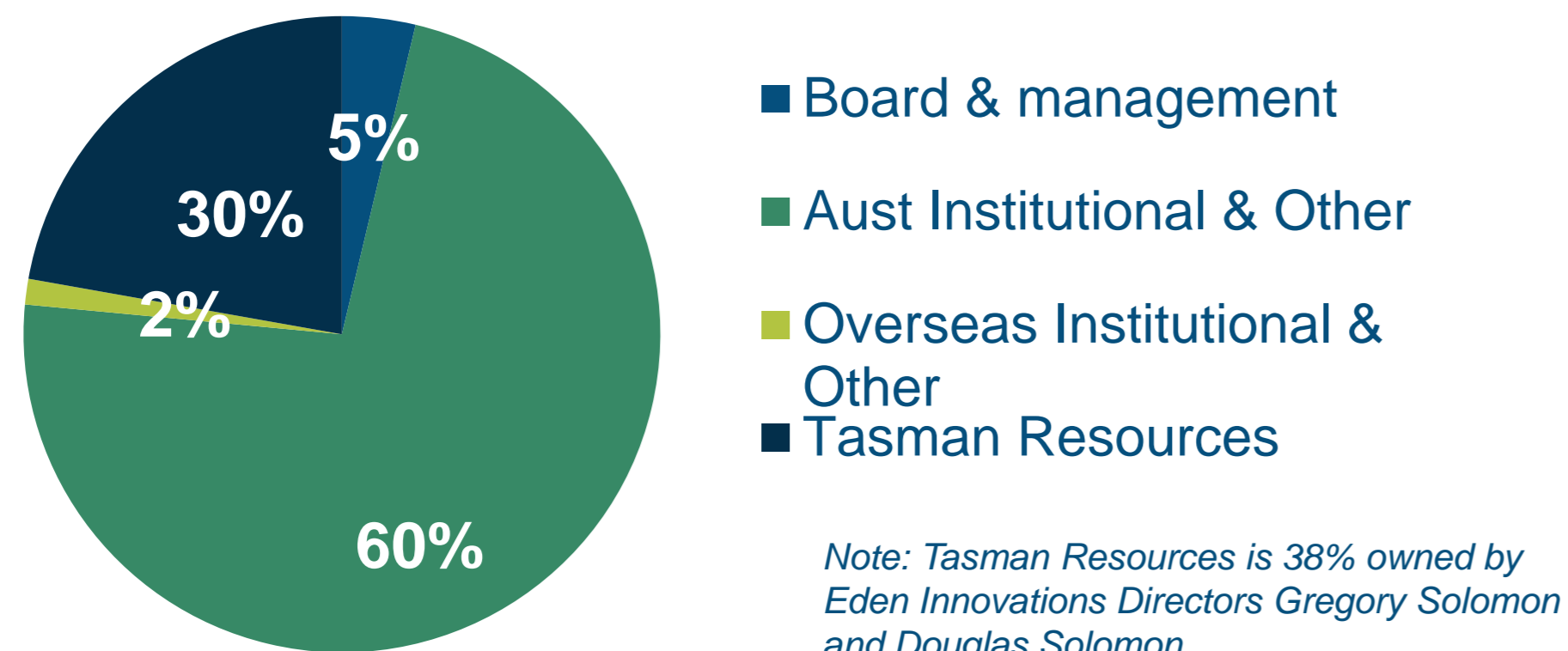
This presentation has been prepared as a summary only and does not contain all information relating to Eden's assets and liabilities, financial position and performance, profits and losses and prospects: it should be read in conjunction with all of the publicly available information in relation to Eden which has been released to the Australian Securities Exchange (ASX Code: EDE).

# Corporate Snapshot

## CORPORATE STRUCTURE



## SHAREHOLDERS



## CAPITAL STRUCTURE

### Eden Innovations Ltd

Symbol	EDE
Issued shares	2,082,852,348
Stock Price <sup>(1)</sup>	A\$0.021
Market Cap <sup>(1)</sup>	~ A\$44 million
Cash <sup>(1)</sup>	~ A\$2.3 million
Debt <sup>(1)</sup>	~ A\$5.2 million

1) As at 28 June 2021

# Summary – Progress- 2020-21

**EdenCrete® - US Market** - re-opening after Covid-19 and sales growing

- **Substantial growth** anticipated over next 12 - 24 months, including for infrastructure

**Recent progress**

- **Shotcrete** - rapid growth for various applications including swimming pools , earth stabilisation
  - **I-70 Denver-** significant reduction in CO<sub>2</sub> footprint from reduced cement
- **First Airport Project- Denver International Airport** - United Airlines apron slab replacement
- **Waste Transfer Stations - First project in Georgia** very successful, large market potential.
- **Sales in 12 states** – California, Colorado, Georgia, Indiana, Kansas, New York, Ohio, Pennsylvania, South Carolina, Tennessee, Texas, Utah.
- **Trials in 15 states** – many for significant applications including shotcrete, pumpability (including 3-D concrete printing) precast
- **First major contract (for EMP protection)** worth up to US\$48 million over 8 years.

**EdenCrete® - International Markets**

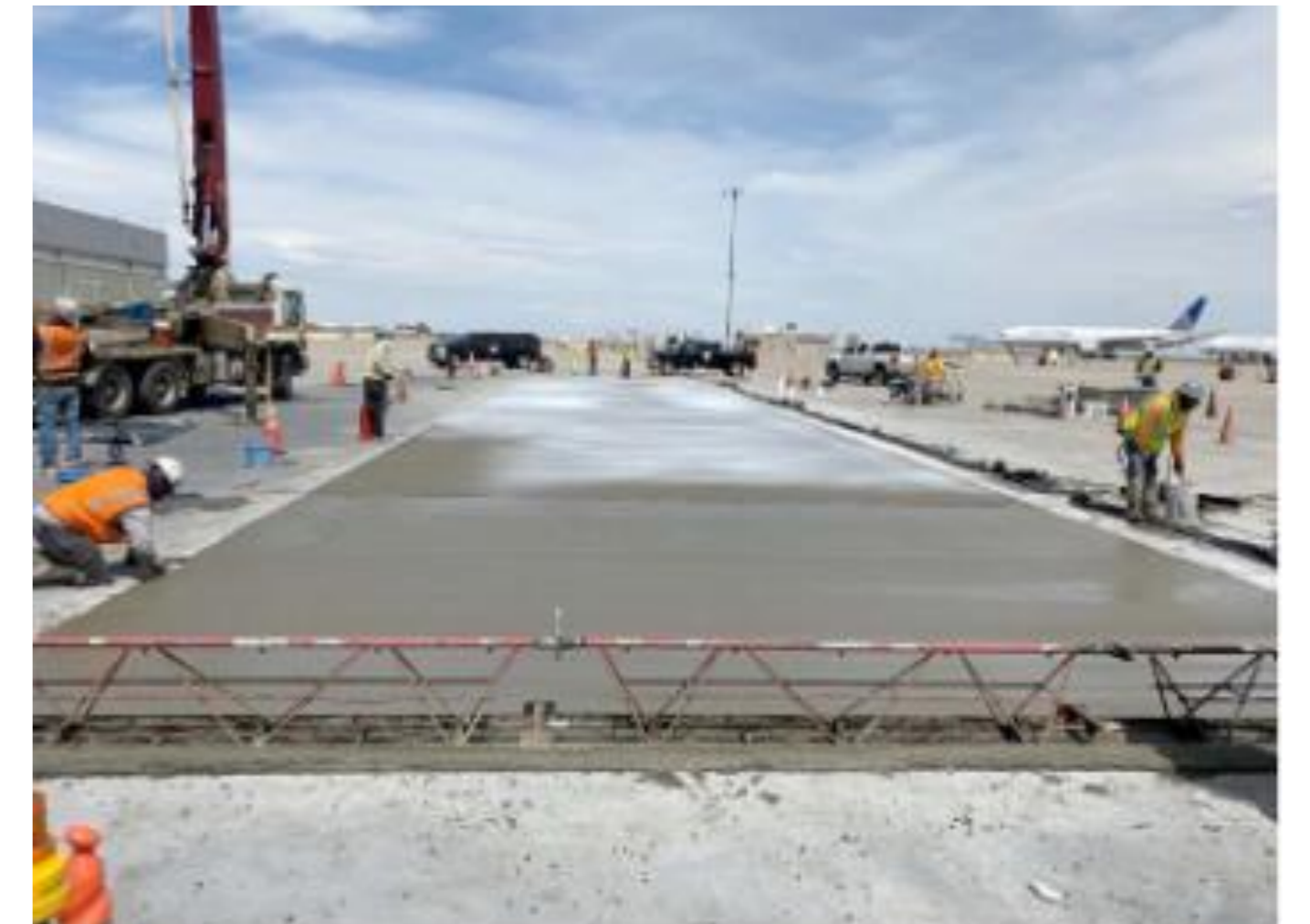
- **Sales in 3 new countries** - Australia, India and Israel. Huge Indian market potential - Godrej Construction has EdenCrete® in 2 of its standard concrete mixes
- **Trials in 6 countries** - Australia, France, Greece, India, Israel, Korea.

**OptiBlend®**

- **Sales (over past 10 years) - US, India, Nigeria, Bangladesh, Dubai.**
- **India - Significant market growth emerging** - driven by proposed government ban on diesel-only powered generators in greater Delhi area during winter due to air pollution.

**EdenPlast®**

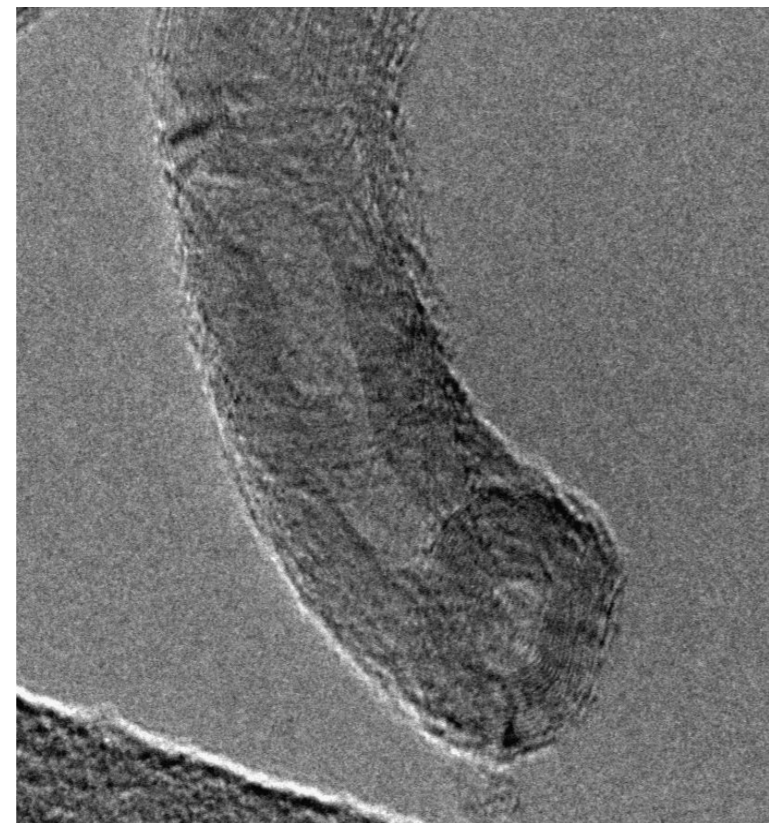
- **Commercialisation - Japan-** First trial of CNT enriched EdenPlast® masterbatch in progress.



# Core Expertise – Carbon Nanotubes and Hydrogen



Harnessing the benefits of carbon nanotube technology for commercial application in concrete and plastics.



TEM image of Eden's MWCNT

## ***Key properties:***

- Tensile Strength: 100-300x steel
- Weight: ~17% of steel
- Highly conductive: thermally and electrically

# How carbon nanotubes work



Act as nucleation points for dense cement hydration - builds on all surfaces of CNT



Create quintillions ( $10^{18}$ ) of flexible, super-strong carbon nano-structures throughout the concrete



Produces denser, stronger, tougher and more durable concrete

# EdenCrete® Range



**EdenCrete®** is a cost effective, carbon nanotube enriched liquid admixture that is mixed into wet Portland concrete:

- Increases flexural, tensile & compressive strength, and abrasion resistance;
- Reduces shrinkage, permeability and damage from salt and chemicals and increases freeze / thaw resistance.

**EdenCrete® Pz** is a cost effective, carbon nanotube enriched liquid admixture that is mixed into any wet concrete:

- Often increases compressive strength and abrasion resistance and may also improve flexural strength and other characteristics.

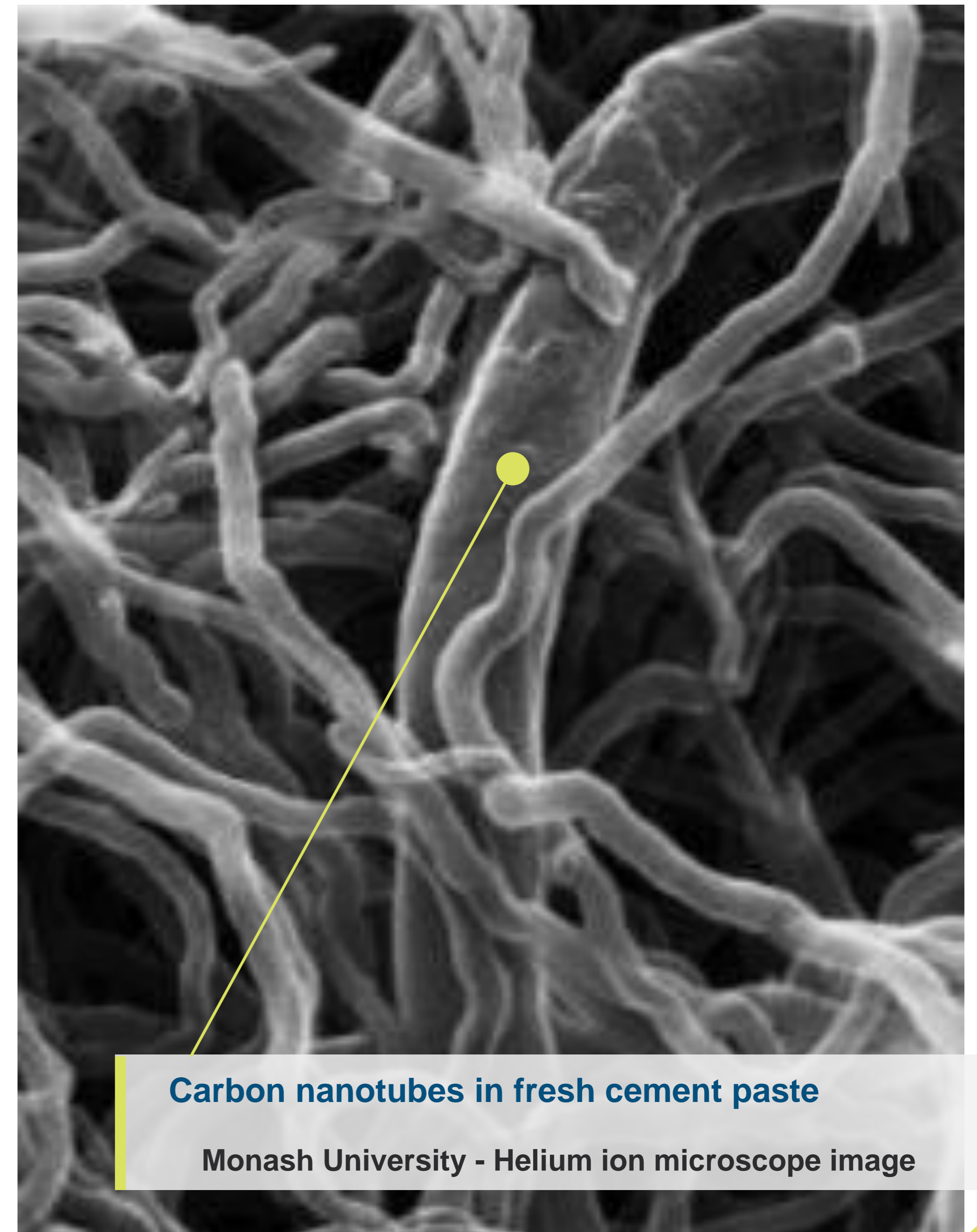
## *All key qualities for infrastructure*

### **EdenCrete®**

Suitable for Portland cement

### **EdenCrete® Pz**

Suitable for both Pozzolanic and Portland cements



**Carbon nanotubes in fresh cement paste**

Monash University - Helium ion microscope image

## Growth of EdenCrete® Market Footprint

### USA- Sales in 12 states; Trials in 15 states

- **COVID 19** - despite the impact , EdenCrete® continues expanding in existing markets and new markets
- **Shotcrete** - has been the largest expansion, building on the success of the mix design for the Central 70 project. Since February of 2021, we have had 5 different customer trials of shotcrete with EdenCrete® and 4 have immediately become customers, with the final one under review. More trials are currently scheduled with additional customers.
- **Colorado DOT** - has embarked upon a concrete trial at Vail Pass on I70, where a 2 gallon per cubic yard EdenCrete® mix design is competing against a silica fume mix design and a baseline CDOT mix design
- **Georgia DOT** - bridge trial continues and is now in its 18th month. Full review will be completed in Q1 of CY22 and we expect EdenCrete® to be added to the QPL for bridge work
- **Marine Mix** - designs for both cast-in-place and precast work completed in Q2 of CY21. Analysis by GA Ports contracted engineering team underway to determine impact to design requirements for projects in Fall of CY21.
- **Precast** - trials are underway to assist in shrinkage crack mitigation and strength enhancements

### International – Sales in 3 countries and trials in 6 countries

- **Sales: 3 current international customers** in Australia, India and Israel.
- **Trials: 6 trials** in Australia, India, Israel, France, Korea and Greece. Trials in further countries under discussion.
- **Indian market** - significant potential: large population; an abundant supply of low cost fly-ash from its many coal fired power stations, that, with EdenCrete® Pz, can be substituted for cement to produce a high quality, low cost concrete.
- **Parchem Construction Supplies**, the Australian EdenCrete® distributor, has underway or requested.

## Growth of Cheaper, Low CO<sub>2</sub>, EdenCrete® Concrete Market USA

### Central-70 Project – Denver shotcrete project between 2018-2021 has delivered:

- 21% reduction in Greenhouse Gas (GHG) footprint in strong concrete by replacement of 21% of cement with low cost, fly ash
- Estimated total of 6,000 -10,000 cubic yards of the new shotcrete mix needed for project, that would result in:
- An estimated reduction in the total cement for shotcrete of between 413 metric tonnes and 689 tonnes;
- Estimated total additional fly ash required will be between 93 tonnes) and 154 tonnes.
- Fly ash has a zero Greenhouse Gas Footprint and sells at 50% of the cost of cement in Colorado;
- Cement production generates an estimated 927kgs of CO<sub>2</sub> for every 1tonne of cement produced <sup>1</sup>;
- Approximately reduction of GHG emissions of 382 tonnes and 630 tonnes, of CO<sub>2</sub> equivalents
- The new shotcrete mix achieved 6,390psi, or 27% more than the minimum strength required by CDOT of 5,000psi at 28 days.

<sup>1</sup>. [https://www.greenconcrete.info/downloads/11\\_ConcreteCO2.pdf](https://www.greenconcrete.info/downloads/11_ConcreteCO2.pdf)

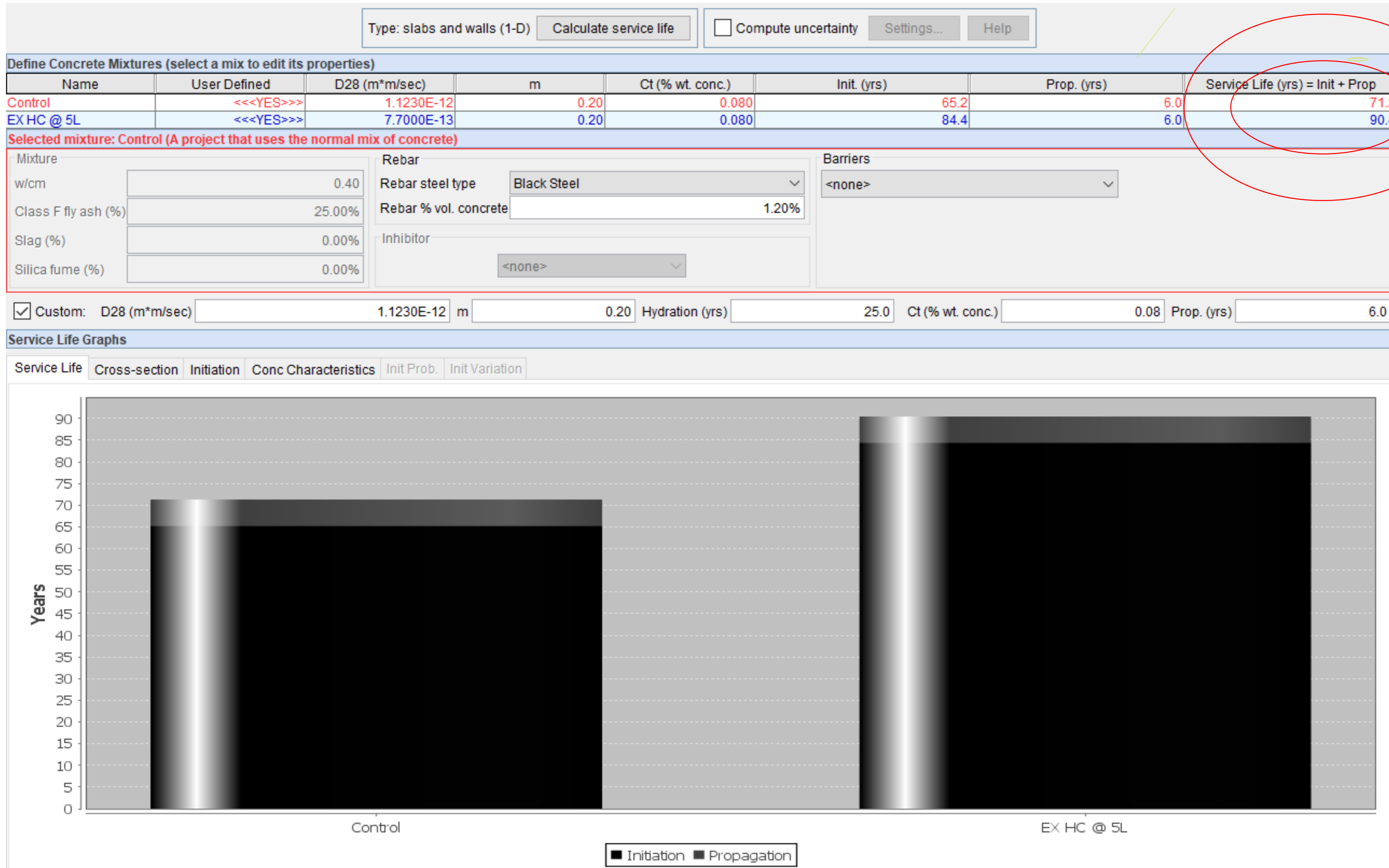
## INDIA

### Huge Indian market - 1.2 billion population; over 100 million tonnes p.a. of unused, very low cost fly-ash:

- EdenCrete® Pz proven in Indian market – successfully trialled with three different types of Indian fly ash - Enabled substitution of high percentage of cement with fly ash producing, low cost, high performance concrete with far lower GHG footprint; and
- Godrej Construction - has incorporated EdenCrete® Pz into two concrete mixes with significantly increased percentage of fly ash.



## Service Life Prediction –Modelling in Life-365EdenCrete at 5 L/m<sup>3</sup>vs Reference: “Parking garage”-conditions



### Laboratory Trial

Brisbane, Australia

May 2020

### Mix Details

Ternary Precast Mix:

55% OPC, 25% FA, 20% slag

Total Cementitious: 840 lb/cy =

526kg/m<sup>3</sup>

w/c: 0.37

10% increase in compressive strength with EdenCrete vs Reference.

27% longer life

27% Reduced repair cost

Software at: <http://www.life-365.org/>

## Marine/ Port Applications

### Service Life Prediction – Modelling in Life-365 EdenCrete at 5 L/m<sup>3</sup> vs Reference

#### PORT OF SAVANNAH - Marine Spray Zone and Tidal Zone Simulations

#### “Parking garage”-conditions Australia:

53.3 years to maximum surface concentration of 1.24% chloride  
**Life increase from 71.2 to 90.4 years, equals 27% longer life, 27% reduced repair cost**

#### Georgia - Savannah weather, Marine spray zone, same D-value:

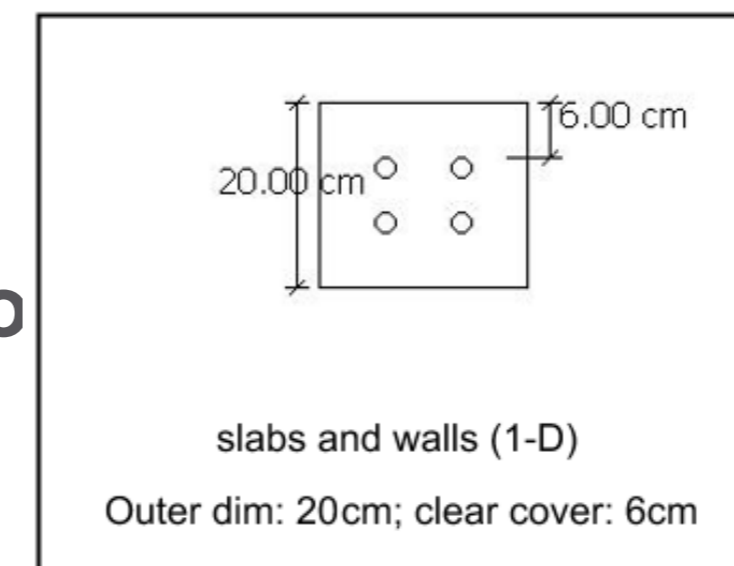
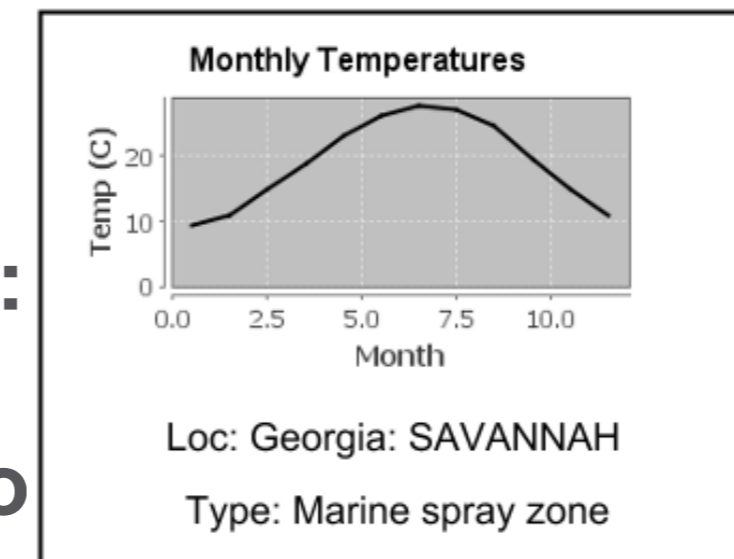
10.0 years to maximum surface concentration of 1.0% chloride  
**60.6 to 84.6 years of life, 40% longer life, 24% reduced repair cost**

#### Georgia - Savannah weather, Tidal zone, same D-value:

1.0 years to maximum surface concentration of 0.8% chloride  
**60.6 to 87.8 years of life, 45% longer life, 25% reduced repair cost**

Diffusion Properties and Service Lives

Alt name	D28	m	Ct	Init.	Prop.	Service life
Control	-> 1.12E-12 m <sup>2</sup> /sec	-> 0.2	-> 0.08 % wt. conc.	54.6 yrs	-> 6 yrs	<b>60.6 yrs</b>
EX HC @ 5L	-> 7.70E-13 m <sup>2</sup> /sec	-> 0.2	-> 0.08 % wt. conc.	81.8 yrs	-> 6 yrs	<b>87.8 yrs</b>



#### Laboratory Trial

Brisbane, Australia, May 2020

#### Mix Details

- Ternary Precast Mix:
- 55% OPC, 25% FA, 20% slag
- Total Cementitious:  
840 lb/cy = 526kg/m<sup>3</sup>
- w/c: 0.37

**10% increase - compressive strength** with EdenCrete vs Reference.

**27% - 45% longer life depending on conditions**

Software at:  
<http://www.life-365.org>

# Infrastructure Target Markets

- Roads, Bridges, Tunnels, Shotcrete Ports and marine applications
- Airports
- Railways
- Dams and water systems
- Bus transit stations / light rail
- Toll Roads
- Public / Private Partnerships



# Commercial Target Markets

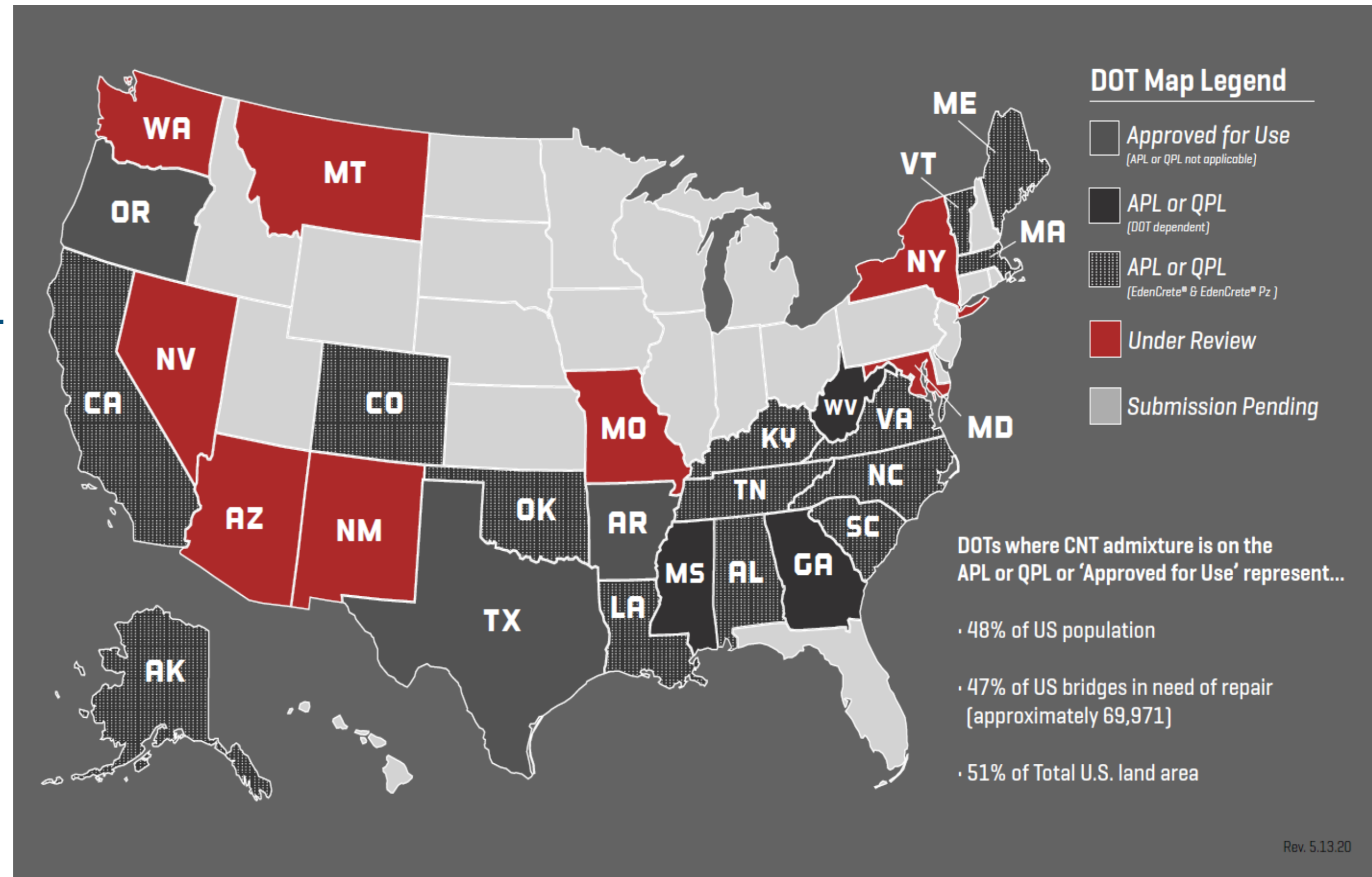
- Reduced CO<sub>2</sub> concrete
- Hardstand areas
- Factories
- Showrooms
- Warehouses/ logistics hubs
- Waste transfer stations
- Driveways / car parks
- Retaining walls/ swimming pools/ earth stabilisation
- Precast
- Building/ construction
- Stadiums
- 3-D Concrete Printing
- EMP Protection



# EdenCrete®

## Current Major/ Emerging US markets

- Infrastructure
  - 2015 FHWA report - 146,418 US bridges (24%) structurally deficient or functionally obsolete.
  - EdenCrete® approved by 20 State DOTs/ FHWA in Georgia.
  - Roads/ bridges – In use in Georgia, Colorado, Texas, Ohio.
  - Water treatment plant - South Carolina.
- Shotcrete, Pumping, Mining - Colorado, Illinois, Kansas.
- Ready mix - Colorado, Georgia, New York.
- Warehouses/ Industrial flooring - Georgia, Colorado, South Carolina, Texas.
- Mid - High Rise Construction - New York, Chicago, Kansas.
- Ports and Marine - Georgia, South Carolina.
- Industrial Flooring - Georgia, South Carolina, Colorado.
- EMP Protection - West Virginia.
- Stadiums / Sporting facilities – Colorado.



## EdenCrete® - Major Achievements in Sales and Marketing

**US Roads and Bridges** - Approved in 21 States, in use in 4 States (2017 - specified by GDOT in repair specifications)  
- 2 GDOT/ FHWA major highway repair contracts completed (total sales value over US\$1.1m)  
- I-70 in Denver- continually used in shotcrete for stablisation/ retaining walls since 2018

**US Ports** - Port of Savannah- first Georgia PA contract awarded after trials; Discussions with South Carolina PA

**US Airports** - first contract awarded for apron slab repair

**US Waste Water Treatment** - included in first project in South Carolina.

**US Electro-Magnetic Pulse (EMP) Protection** - major contract awarded worth up to US\$48 million over 8 years.

**US Waste Transfer Stations** – First successful commercial project in Georgia completed

**US Ready Mix**- marketing targets have been more focused on organizations above the ready mix company – ‘pulling’ EdenCrete® into their admixture offering

**US Shotcrete** - used by 10 ready mix companies across 4 States. Shotcrete contractors are now upselling EdenCrete®

**US Warehouses/ Industrial Flooring** –construction slow down due to COVID. Trial underway with international fast food franchise for drive through lanes for long term durability

**US Contractors/ Engineers** – new emphasis on educating engineering firms in order to specify EdenCrete® (e.g., ports).

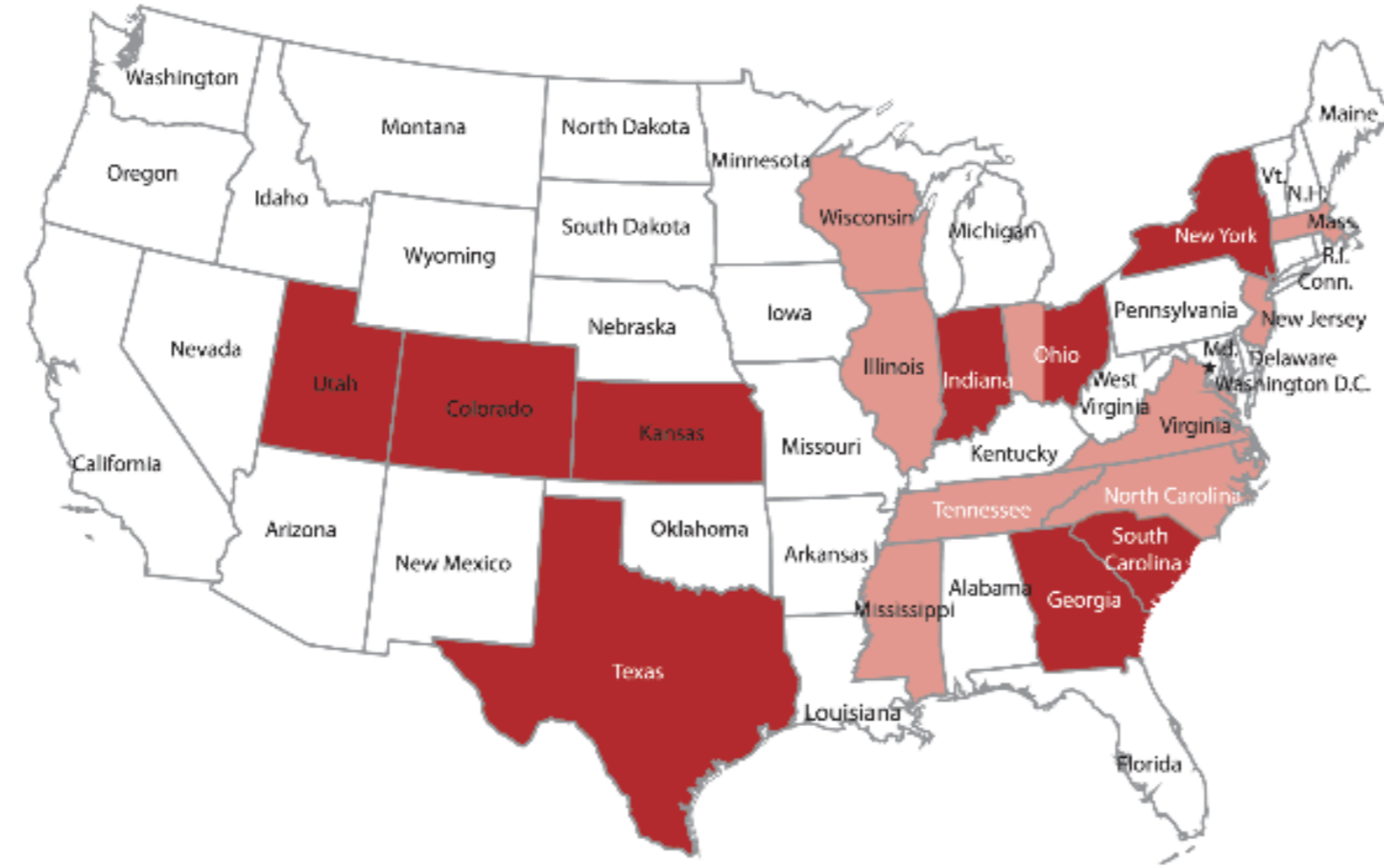
**US Sporting Stadiums and Arenas** - used on 9 different repairs projects at a professional Denver sporting facility.

**International Sales** - in 2020 the first international sales to Australia, India and Israel took place.

YEAR 2020



EdenCrete<sup>®</sup>



TRIALS	NEW LOCATION	YEAR
USA	Indiana	2015
USA	Georgia	2016
USA	South Carolina	2016
USA	Tennessee	2017
USA	Texas	2017
USA	Ohio	2017
USA	New Jersey	2017
USA	North Carolina	2017
USA	New York	2017
USA	Mississippi	2018
USA	Virginia	2018
USA	Utah	2019
USA	Wisconsin	2019
USA	Illinois	2019
International	Australia	2019
International	France	2019
International	Greece	2019
International	India	2019
International	South Korea	2019
<b>USA</b>	<b>Massachusetts</b>	<b>2020</b>
<b>International</b>	<b>Israel</b>	<b>2020</b>

SALES	NEW LOCATION	YEAR
USA	Indiana	2015
USA	Georgia	2016
USA	South Carolina	2016
USA	Colorado	2017
USA	Texas	2017
USA	Ohio	2019
USA	New York	2019
International	Australia	2019
<b>USA</b>	<b>Utah</b>	<b>2020</b>
<b>USA</b>	<b>Kansas</b>	<b>2020</b>
<b>International</b>	<b>India</b>	<b>2020</b>
<b>International</b>	<b>Israel</b>	<b>2020</b>

# OptiBlend®

## 100% owned, world leading dual fuel system

OptiBlend® is a custom fitted hardware technology designed and produced by Eden that allows conventional diesel engines to run on natural gas as its primary fuel without modifying the engine or the diesel fuel system.

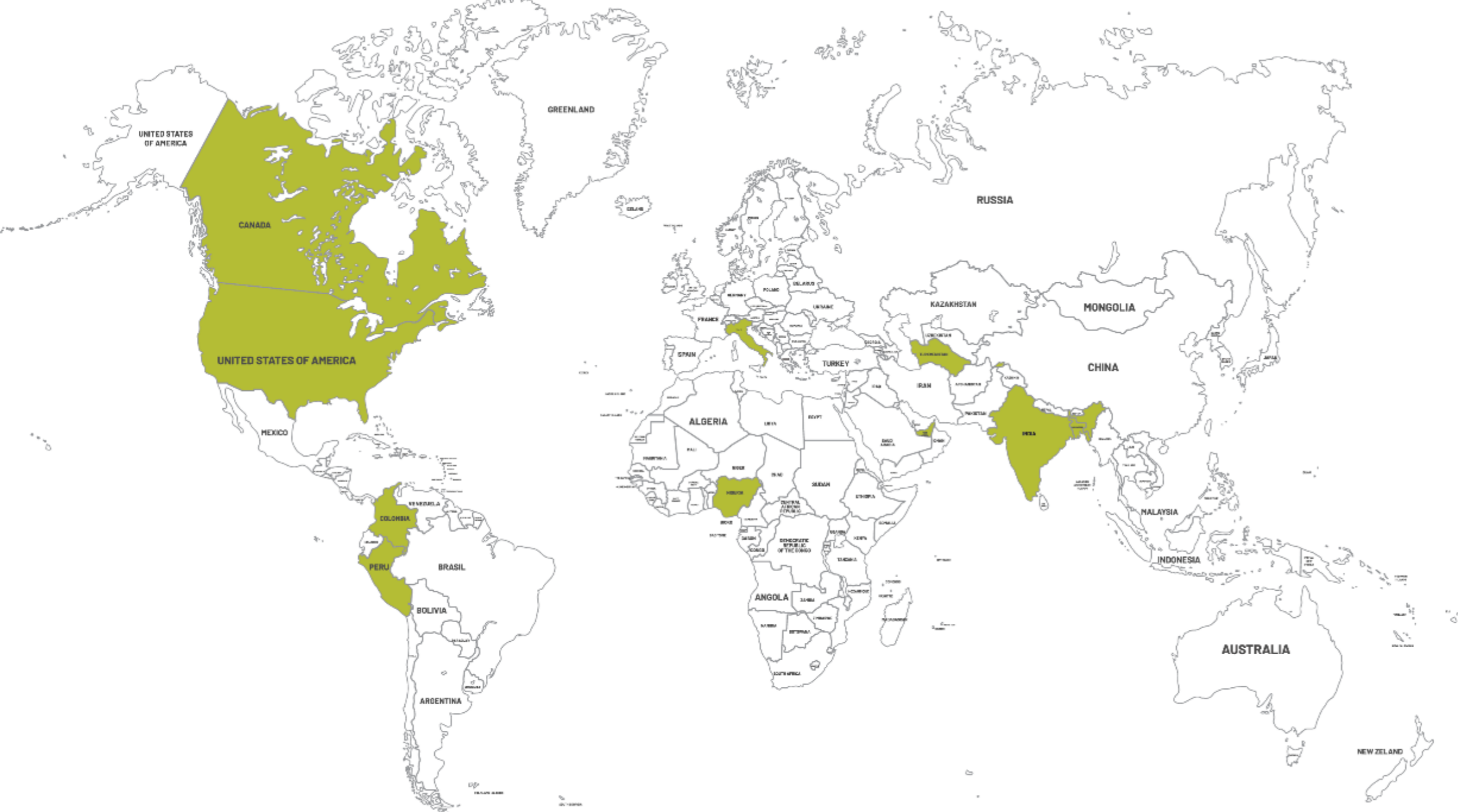
- Works by displacing up to 70% of diesel fuel with natural gas;
- Lower fuel costs, lower emissions and increased runtime;
- Highly efficient, cost effective system that reduces fuel cost and emissions;
- Used by Cummins on its oil/gas drilling power module using 3 Tier II gensets;
- Suitable for most makes of diesel engines; installed on most major global brands;
- Marketed in US and India for over 10 years – highly reliable and durable, long proven in the market place;
- Over 200 systems sold and installed over the past 10 years across USA and India and in a number of Middle East and East Asian countries; and
- Significant potential market emerging in India and in particular in Delhi where extreme air pollution has resulted in a proposed government ban on use of gensets during winter running solely on diesel fuel.
- In both India and USA Eden has expanded its OptiBlend® sales force.



OptiBlend® Fuel Control Valve (left) and Air-Gas Mixer (right)

 **OptiBlend™**





SALES	NEW LOCATION	YEAR
International	India	2009
USA	Kentucky	2009
USA	Tennessee	2011
USA	Montana	2011
International	Italy	2011
USA	Texas	2012
International	Peru	2012
USA	Colorado	2012
USA	Kansas	2012
International	Canada	2013
International	Bangladesh	2013
USA	Arizona	2013
USA	Oklahoma	2013
USA	Louisiana	2013
USA	Wyoming	2013
International	Colombia	2013
USA	Alabama	2014
USA	New Mexico	2014
USA	Virginia	2014
USA	Florida	2014
International	Tajikistan	2015
USA	Indiana	2015
USA	Washington	2015
USA	New Jersey	2016
USA	Delaware	2016
International	Turkmenistan	2016
USA	Georgia	2017
USA	Maryland	2017
International	United Arab Emirates	2018
<b>International</b>	<b>Nigeria</b>	<b>2020</b>

# EdenPlast<sup>®</sup>

## Eden Commercialising EdenPlast<sup>®</sup>

### CNT enriched plastics

- Patented, cost effective process.
- Uses CNT produced by Eden.

### Highly encouraging results

- < 50% increase in stiffness.
- Increase in electrical conductivity.

### Current target markets

- Automotive, aerospace, packaging.
- Batteries - cathodes.
- Non-corroding reinforcing material.
- Global plastics market ~US\$600 billion p.a.

### Commercialisation

- First trial with CNT enriched masterbatch in progress in Japan.

### Research

- Eden/UQ awarded new \$376,518 ARC grant.



# Targeted Revenue – 1 July 2021 to 30 June 2022

EdenCrete®	USD (millions)	AUD (millions)
• EMP Protection	\$2.0	\$2.7
• Infrastructure	\$1.0 - 1.5	\$1.4 - 2.1
• Shotcrete	\$0.5 - 1	\$0.7 - 1.4
• Ports	\$0.5 - 1	\$0.7 - 1.4
• Industrial Flooring	\$0.5 - 1	\$0.7 - 1.4
• International Sales	<u>\$0.2 - 0.4</u>	<u>\$0.3 - 0.5</u>
	<b>US\$4.7 – 6.9m</b>	<b>A\$6.3 – 9.5m</b>
<b>OptiBlend®</b>		
• US	\$0.9 - 1.2	\$1.2 - 1.5
• India	<u>\$0.9 - 1.2</u>	<u>\$1.2 - 1.5</u>
	<b>US\$1.8- 2.4m</b>	<b>A\$2.4- 3m</b>



\*These Targeted Revenue estimates are subject to the risks and qualifications detailed in Slides 2 and 21.

# Commercialisation Progress\*

## EdenCrete®

- Expanding market penetration into shotcrete for all users – residential, commercial, and infrastructure.
- Increasing repeat business customers in US - government and private.
- Significant emerging potential in international markets - Europe, India, Australia, Israel, Korea.

\* EdenCrete® sales in FY2020 and 2021 were greatly impacted by COVID-19, not only in the US which was significantly affected, but also in the other countries where EdenCrete® products are marketed. India and France, in particular, have been effectively shut down for more than a year.

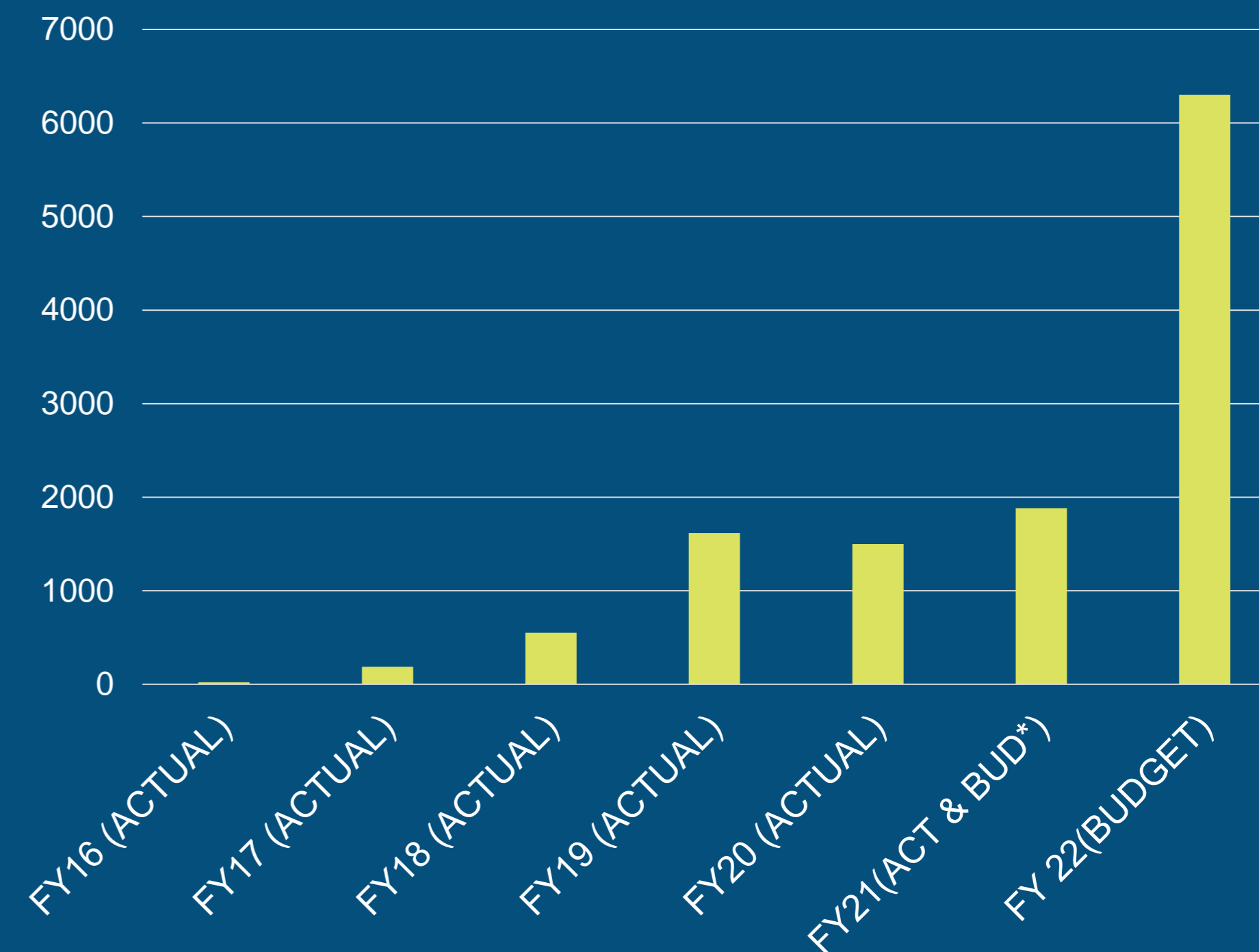
## OptiBlend®

- One-off contracts customised to customer’s requirements
- Typically installation plus unit purchase – US \$23k-40k (AU \$30k-50k).
- Significant growth in OptiBlend sales, particularly in India (shown in darker shade on the chart), due to the government ban on diesel-only power generation in greater Delhi area during winter.

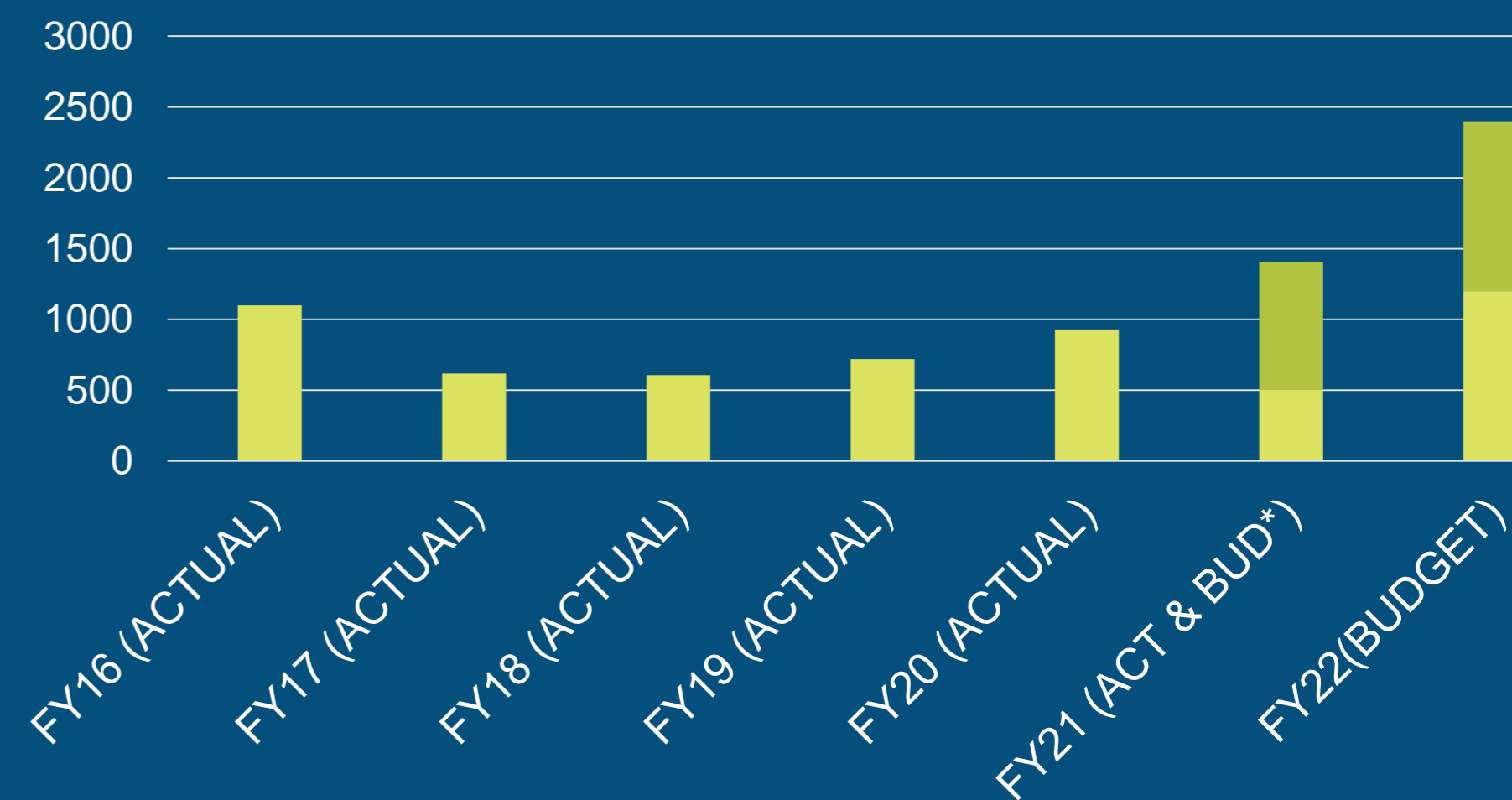
\* These budgeted revenue projections for FY22 and are subject to the risk factors and qualifications detailed in Slides 2 and 21.

\* FY21- Actual revenue to 31 May 2021 and budget for June 2021

EDENCRETE REVENUE AUD\$000s \*



OPTIBLEND REVENUE AUD\$000s



# TOTAL FORECAST REVENUE FY22

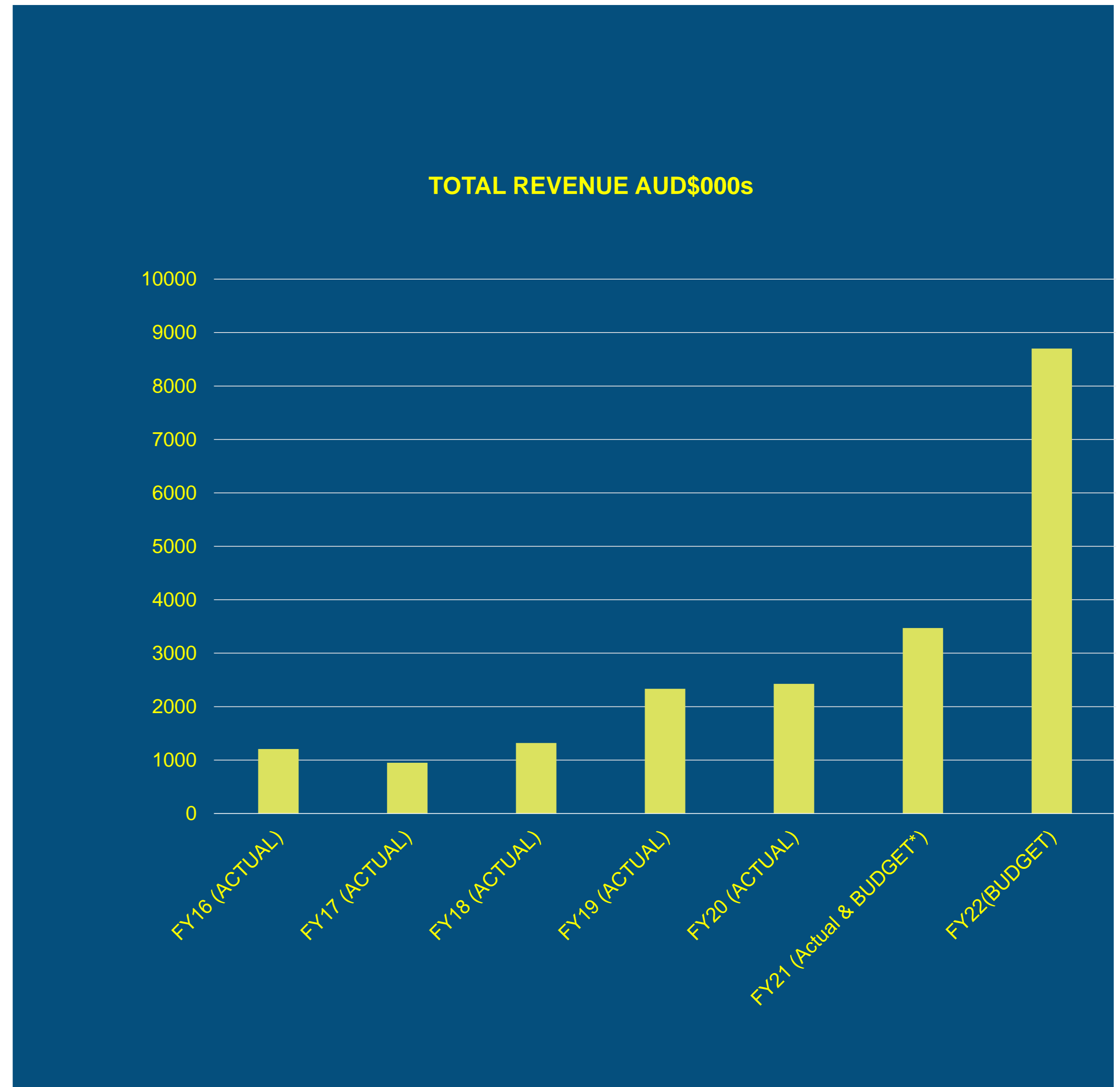
Based on total budgeted revenue from EdenCrete® and OptiBlend® in FY22

## Risk factors and Qualifications

The targeted revenue and budgeted revenue numbers in slides 14-16 are subject to change that could arise from any external risks and other factors outside of Eden's control including, but not limited to the risks detailed in Slide 2 and:

- The ongoing market difficulties, not only in the USA but also in all the other countries where Eden's products are being marketed, and in particular India and France where COVID-19 continues to cause great disruption, resulting from COVID-19 not easing across all relevant markets where operating restrictions are in place to allow industry to re-open without further lockdowns or operating restrictions being imposed;
- The number of new customers, the number of repeat customers, and volume of repeat business, not continuing to grow at the rates that have occurred over the past 18 months; and
- a major upheaval, including any civil, military, or economic disruption, in or to any of Eden's markets or product supply lines occurring.

\* FY21- Actual revenue to 31 May 2021 and budget for June 2021



# A Compelling Story



**Five products: EdenCrete<sup>®</sup>, EdenCrete Pz<sup>®</sup>, OptiBlend<sup>®</sup>, EdenPlast<sup>®</sup>, Hydrogen** - strong year on year revenue growth anticipated for FY22 and beyond.



**Proprietary technology** and core expertise in manufacturing and production of carbon nanotubes, hydrogen and carbon nanotube enriched products.



**Core product EdenCrete<sup>®</sup>** operates in global concrete market expected to reach US \$921 billion and growing at approx. 8% p.a.



**High barriers to market entry**, with over 10 years in product development, established direct working relationships with Government departments, plus strong patent protection and proprietary technology.



**Significant US Government traction** with product approval from 21 Departments of Transportation, repeat GDOT/ FHWA funded contracts in Georgia, road projects Colorado and Ohio DOTs, GPA contract at Port of Savannah; MARTA endorsement.



- **Strong EdenCrete<sup>®</sup> sales growth emerging:** Sales in 12 US states, trials in 15 US states, first major contract (for EMP protection in US) worth up to US\$48 million over 8 years, Emerging sales in India, Australia, Israel.



**OptiBlend<sup>®</sup>** - Sales growing in US, India and Africa; Many markets applications; Major expansion of Indian sales anticipated in greater Delhi where due to extreme air pollution, proposed government banned use of diesel-only gensets during winter.



**EdenPlast<sup>®</sup>** - First trial with CNT enriched masterbatch underway in Japan ; Global plastics market approaching US \$600 billion and growing at  $\approx$  3% p.a.



**Significantly growing momentum** - anticipated to result in strong news flow pipeline.

GREG SOLOMON  
EXECUTIVE CHAIRMAN

Level 15, 197 St. Georges Terrace, Perth,  
Western Australia

Telephone (Work): +61 8 9282 5889

Cell / mobile: +61 4 0206 0000

Email: [gsolomon@edeninnovations.com](mailto:gsolomon@edeninnovations.com)

