



# INVESTOR PRESENTATION

MARCH 2018

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", 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 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).

# Company Overview

Eden Innovations Ltd, an Australian listed company, has a patented and proprietary method of producing carbon nanotubes that it has commercialised in Denver, Colorado, US

EdenCrete®, its primary commercial product, is a high performance, world leading carbon nanotube enriched, liquid concrete additive, that produces stronger, tougher, more durable concrete



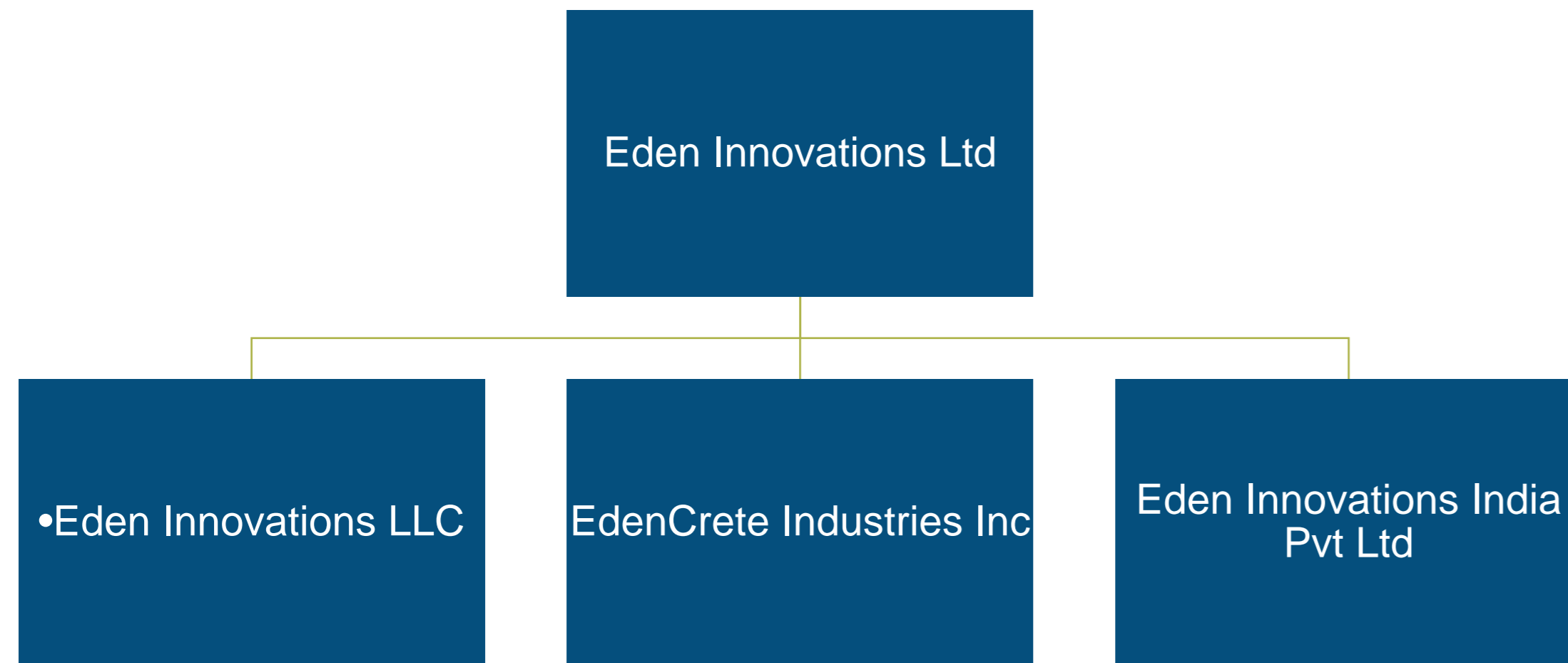
a revolutionary high performance concrete admixture

A key market focus is US infrastructure, and EdenCrete® is already approved for use by the Departments of Transport in 11 States and also by the Federal Highway administration

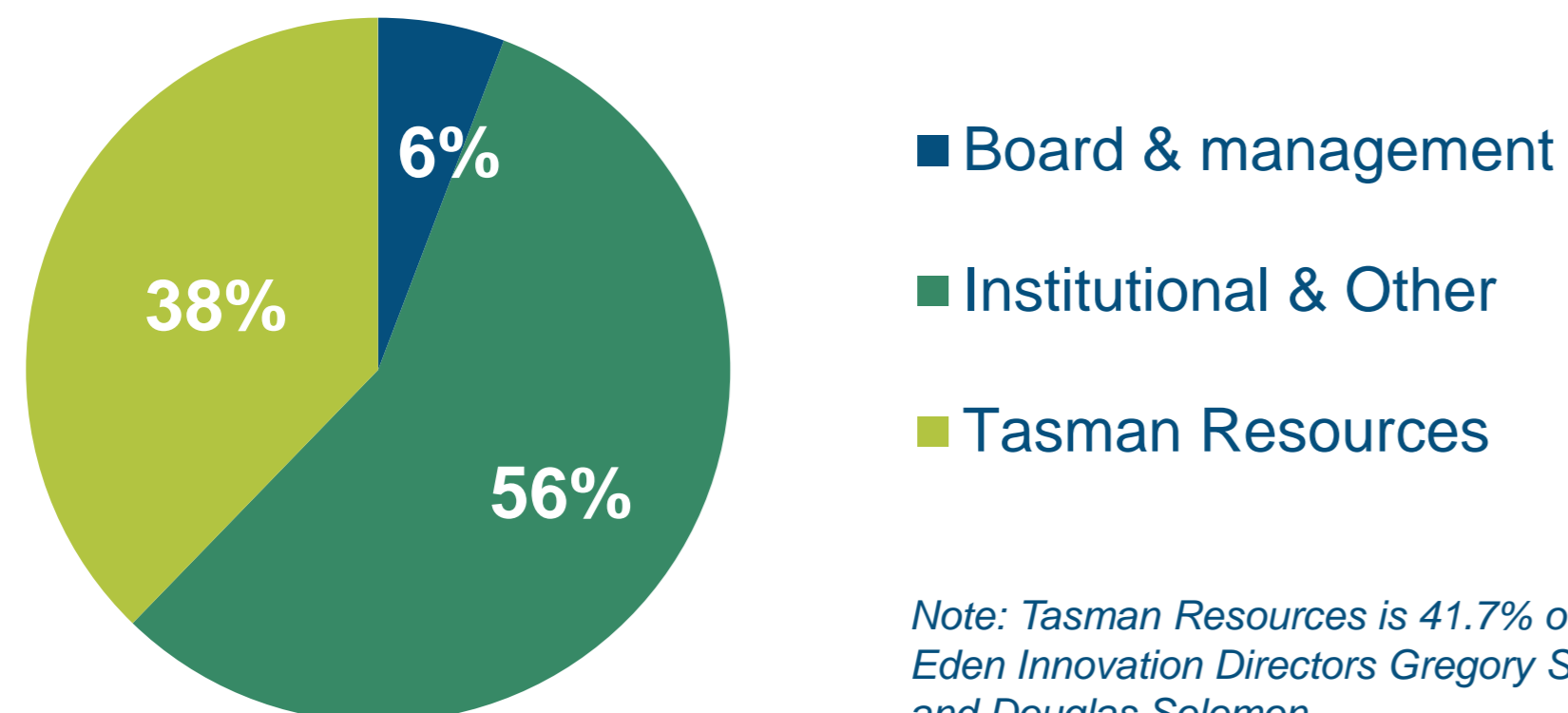
An important second product, EdenPlast™, carbon nanotube enriched plastic, is currently being developed for future commercialisation

# Corporate Snapshot

## CORPORATE STRUCTURE



## SHAREHOLDERS



Note: Tasman Resources is 41.7% owned by Eden Innovation Directors Gregory Solomon and Douglas Solomon

## CAPITAL STRUCTURE

### Eden Innovations Ltd

<b>Symbol</b>	EDE
<b>Issued shares</b>	1,378,892,424
<b>Stock Price <sup>(1)</sup></b>	A\$0.092
<b>Market Cap <sup>(1)</sup></b>	~ A\$137 million <sup>(2)</sup>
<b>Cash</b>	~ A\$6.1 million <sup>(1)</sup>
<b>Debt</b>	~ US\$0.89 million <sup>(4)</sup>

1) As at 16 March 2018

2) Incl. EDEO 155m Ex @ 3c 30.9.18

3) Completed in February 2018

4) Balance of vendor finance of purchase price on first Colorado property, 2% interest rate



# Investment Highlights



Core product EdenCrete<sup>®</sup>, is a liquid concrete admixture that delivers significant cost and product advantages, facilitating denser, tougher, stronger cement and longer lasting, more durable concrete



Operating in the global concrete market expected to reach US \$921 billion and growing at almost 8% GAGR



Proprietary technology and core expertise in manufacturing and production of carbon nanotube products



Two commercialised products, EdenCrete<sup>®</sup> and OptiBlend<sup>®</sup>, with strong year on year revenue growth for EdenCrete<sup>®</sup> expected for FY18 and accelerating in FY19 and FY20



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



Strong US Government traction with product approval from 11 Departments of Transport across the country and 11 further applications, plus Federal Highway Authority approval in one State



Opportunity to expand into the automotive and packaging sub sectors of the multi-billion dollar plastics industry, with EdenPlast<sup>™</sup> - development already underway



Strong news flow pipeline including customer trials with revenue conversion potential

# Corporate Journey

## 2005

- Eden & University of Queensland awarded ARC Grant for Carbon Nanotube research

## 2006

- **June** – Eden admitted to official list of ASX
- **June** – Eden wins major US Technology award for Hythane
- **September** – Eden in US Energy Department Breakthrough – Historic Hydrogen Fuel Test

## 2007

- **May** – Eden enters agreement with Larsen & Toubro Engineering group in India – Manufacturing and marketing hydrogen and Hythane™ technology

## 2008

- **January** – Eden wins international tender to supply India's first public hydrogen fuel station

## 2009

- **March** – Ashok Leyland launches new Indian Hythane™ Engine
- **September** – Eden Secures maiden Indian sales of OptiBlend® system. First 3 sales of OptiBlend® dual fuel system in Assam India

## 2010

- **February** – Eden signs agreement with Gail India Ltd and Mahangar Gas Ltd for commercial sized Hythane Demonstration project
- **August** – Pyrolysis (CNT) Project acquisition from the University of Queensland completed. Eden now owns 100% of the intellectual property

## 2011

- **January** – First US Production – super strength carbon nanotubes (CNT)
- **April** – Testing commenced on carbon nanofibres in rubber, coating, plastic and concrete
- **September** – Eden released next generation OptiBlend®
- **December** – Initial order for 12 OptiBlend® Dual fuel kits in US

## 2013

- **July** – Eden & University of Queensland awarded second ARC Grant for Carbon Nanotube research

## 2014

- **October** – Eden's carbon concrete additive wins Australian Civil Contractors Federation's Environment award

## 2015

- **February** – First US trial of EdenCrete®
- **July** – Eden and Monash University receive ARC research grant (transferred to Deakin)
- **September** – ONGC (India) tender won for OptiBlend®
- **August** – 1st Georgia DOT I-20 field trial
- **November** – EdenCrete® receives approval from Georgia Department of Transport (DOT)

## 2016

- **April** – US \$24.76m incentive package received to establish EdenCrete® plant in Augusta, Georgia
- **May** – First commercial order for EdenCrete®
- **June** – Study shows encouraging results of CNT in plastics
- **August** – Georgia DOT highway repair projects

## 2017

- **January** – EdenCrete® mandated for use by Georgia DOT
- **April** – First EdenCrete® bulk supply agreement in Texas
- **August** – Korean Government agency trials of EdenCrete®
- **September** - EdenCrete® approved by US Federal Highways Administration for use in Georgia

## 2018

- **January** – Conditional approval of EdenCrete® by Oregon DOT, bringing State government DOT approvals to 11
- **January** - New EdenCrete® products launched at World of Concrete - EdenCrete® HC and EdenCrete® Pz

The background of the slide is a photograph of a city skyline, likely New York City, with several prominent skyscrapers. The buildings are reflected in a body of water in the foreground, which is surrounded by lush green trees. The overall color palette is dark and moody, with deep blues and greens.

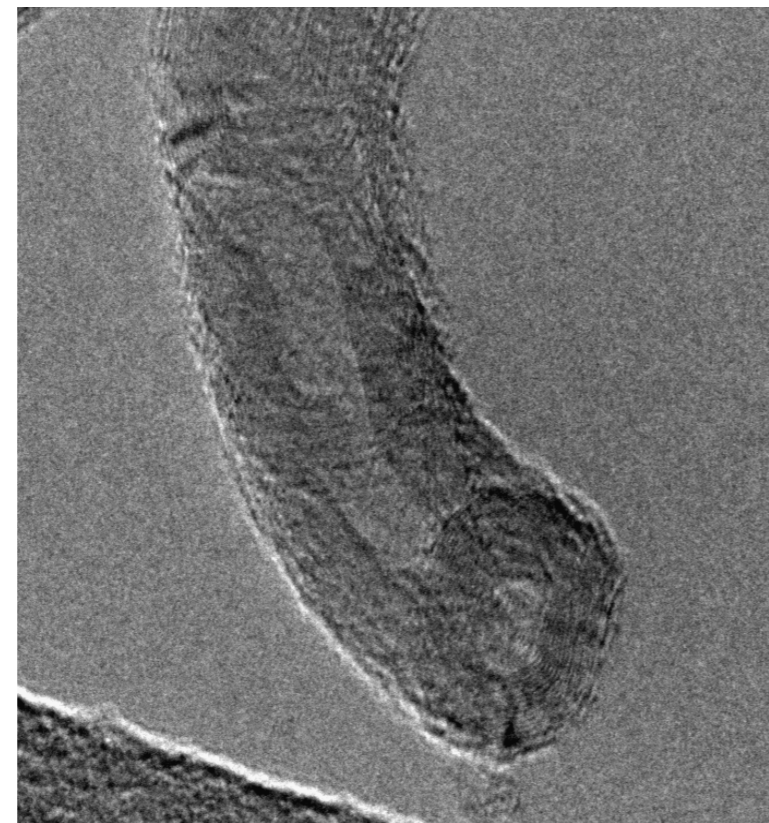
# 2.

## PRODUCT OVERVIEW



# Core Expertise – Carbon Nanotubes

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 for concrete that is mixed into wet concrete

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

***All key qualities for infrastructure***

## **EdenCrete®**

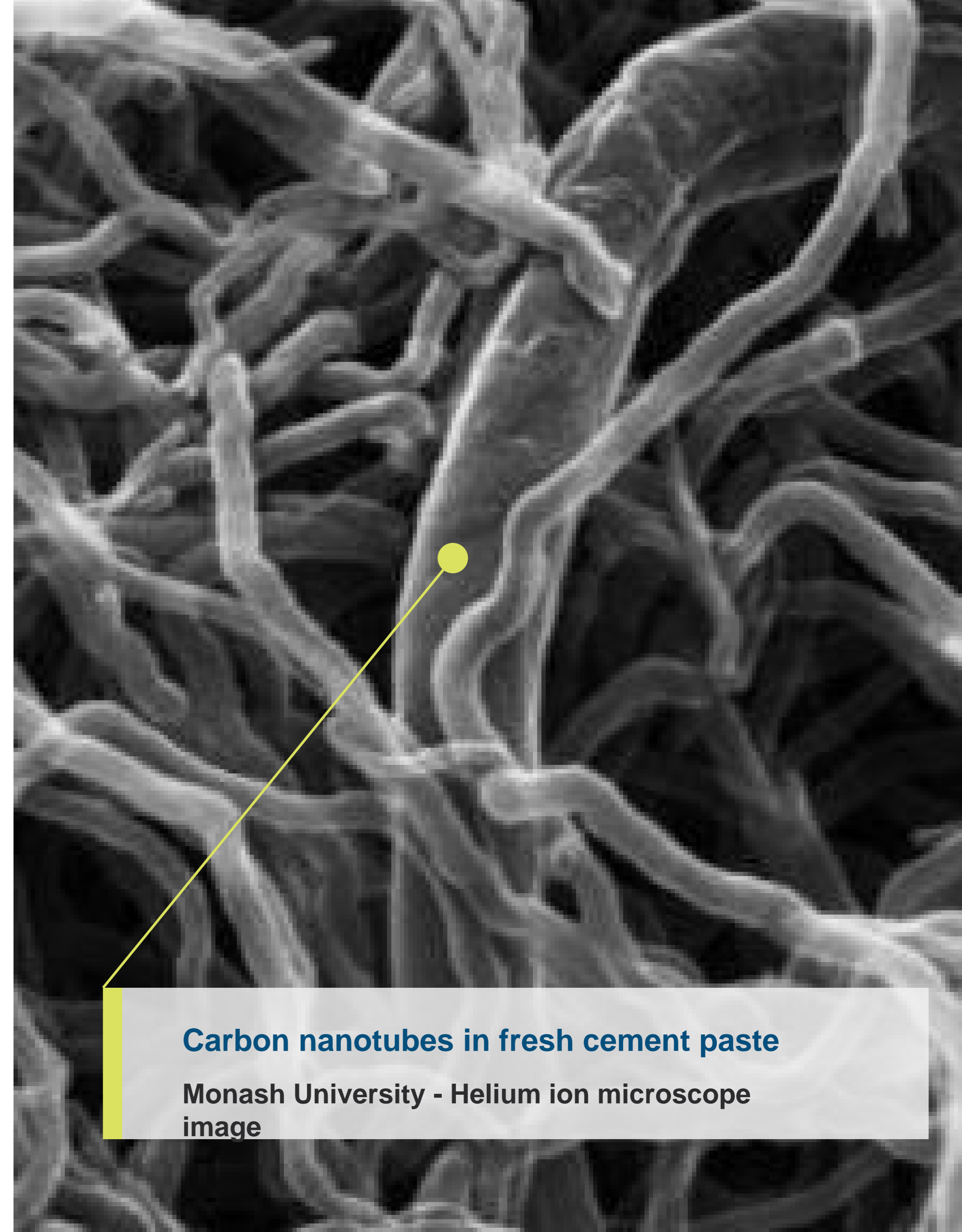
Suitable for  
Portland cement

## **EdenCrete® Pz**

Suitable for both  
Pozzolanic and  
Portland cements

## **EdenCrete® HC**

High concentration  
lower cost



**Carbon nanotubes in fresh cement paste**

Monash University - Helium ion microscope  
image

# Value Proposition

- Cost advantages resulting from price and reduced concrete volumes, plus faster setting times
- Combines multiple product advantages
- Liquid suspension, easy controlled mixing
- Environmental impact from reduced concrete consumption

Products	Increases Compressive Strength	Increases Split-Tensile Strength	Increases Flexural Strength	Reduces Shrinkage	Reduces Permeability	Increases Abrasion Resistance	Drawback
<b>EdenCrete™</b>	✓	✓	✓	✓	✓	✓	
Fibers (PP,PVA,ACRY,LOK)		●	●	●			Reduced workability, difficult to handle
Shrinkage Reducers			●				Strength reduction, expensive, reduces workability, impacts entrained air
Steel Reinforcement			●	●			Expensive, corrosion potential, weight factor, job-site safety
Surface Hardener					●	●	Potential alkali-silica reaction
Silica Fume, Fly Ash	●				●	●	Expensive, increased water, hard to handle, worker/workplace safety
Steel Fibres	●						Reduced workability, difficult to handle, job-site safety



# Applications & Customers

## ADVANTAGE

## SUITABLE FOR

**Permeability / salt resistance / shrinkage**

- Roads, airfields, coastal, marine, dams, sewers, bridges, runways, coastal/marine environments, dams, sewer/water pipelines



**Abrasion resistance**

- Hard-stand areas, warehouse floors, roads, bridges, pavements



**Flexural, tensile & compressive strength / early strength**

- Beams and slabs, roads and bridges, precast & pre-fabricated products, high rise buildings, retaining walls

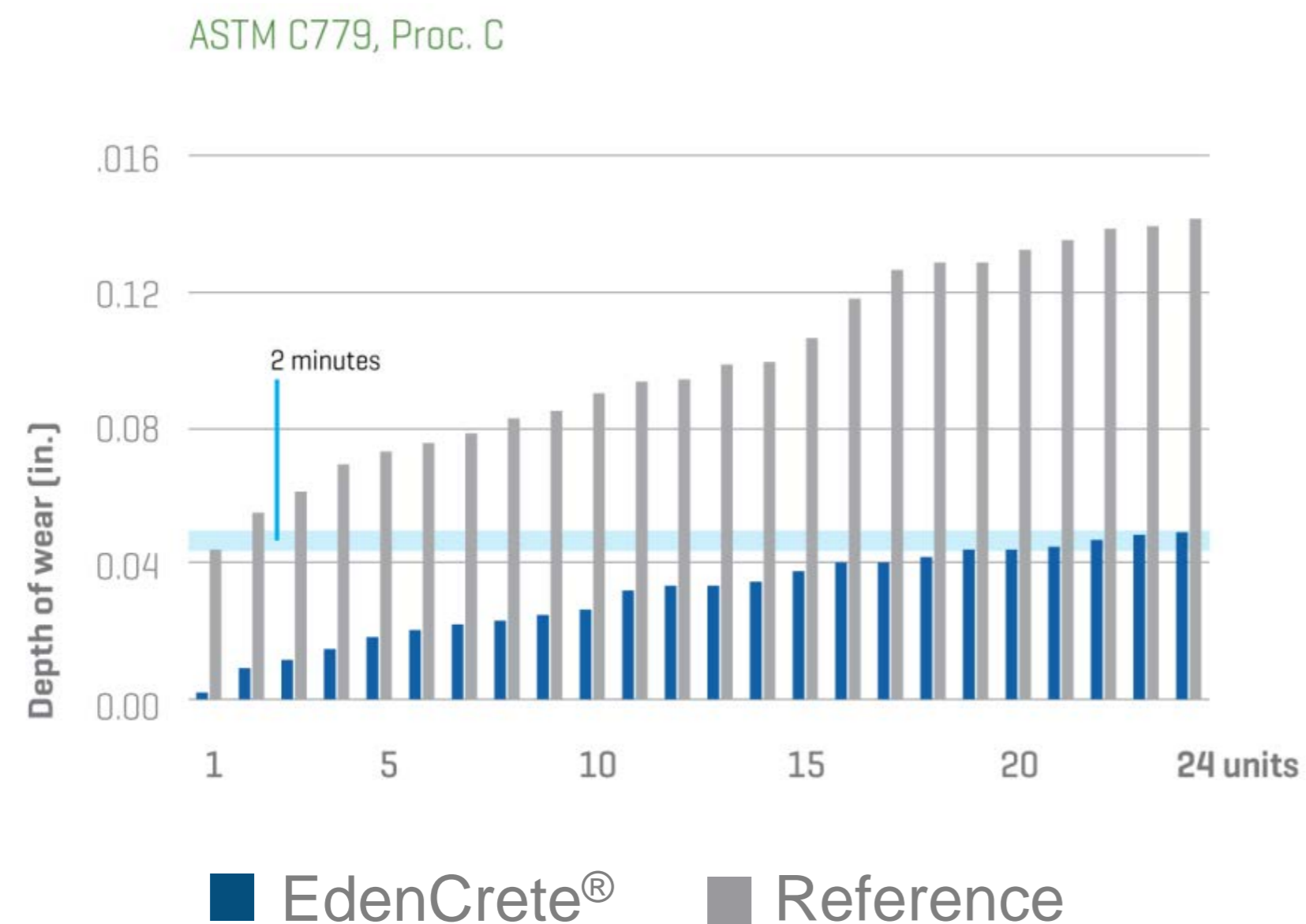


## CUSTOMERS

- Government Department of Transport authorities - ~40% of US concrete market
- Pre-cast concrete manufacturers - ~30% of US concrete market
- Ready-mix suppliers - ~30% of US concrete market

# Outstanding Product Benefits

## ABRASION RESISTANCE



**Dramatic increase in abrasion resistance**

## REDUCED PERMEABILITY

Chloride Content (Wt.%)			
Depth (mm)	Control Mix – Not Poned	Control Mix – Poned	Penetrated Chloride Values
10-20	0.004	0.059	0.055
25-35	0.006	0.045	0.039
40-50	0.004	0.005	0.001
55-65	0.003	0.004	0.001

Depth (mm)	Test Mix – Not Poned	Test Mix – Poned	Penetrated Chloride Values
10-20	0.006	0.012	0.006
25-35	0.004	0.005	0.001
40-50	0.004	0.004	0.000
55-65	0.003	0.003	0.000

### MARTA Test Results

**Dramatic reduction in permeability**

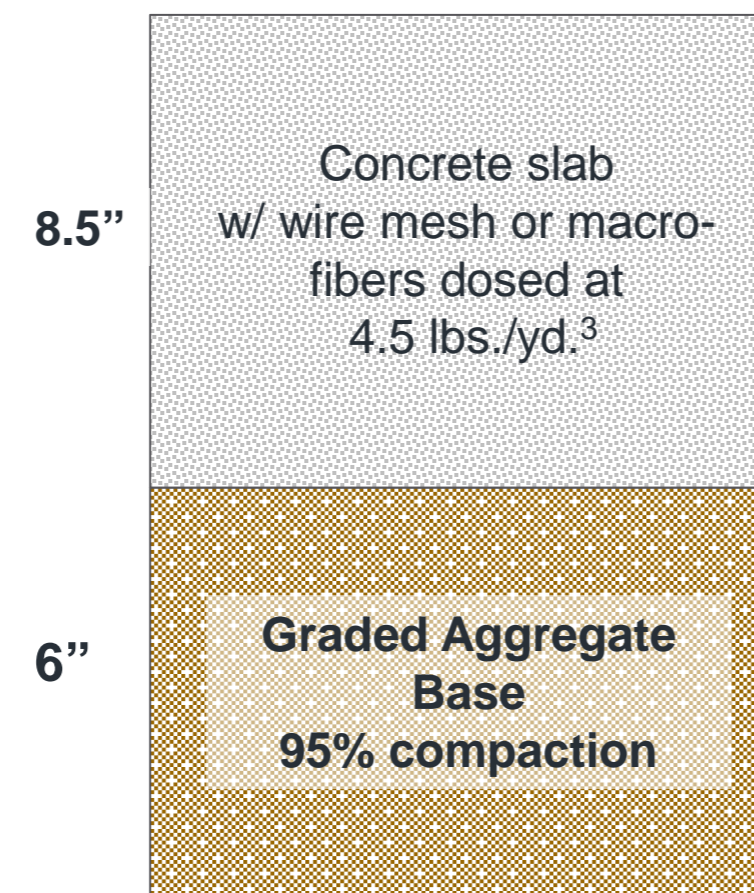


# Cost Comparison

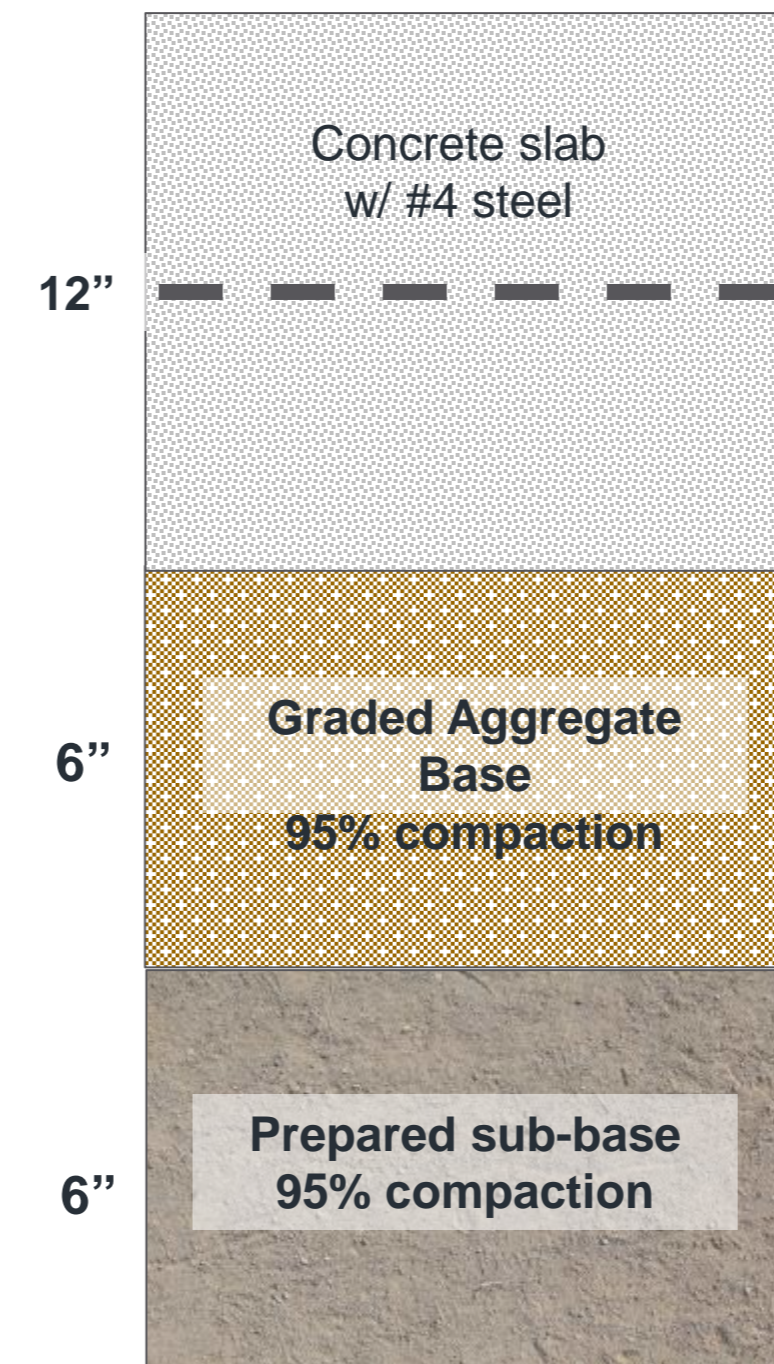
Ultra High Wear /Abrasion Resistance Application

Higher wearing concrete requires less depth, without base and preparation layers. This delivers significant cost advantages to the customer.

Concrete slab with wire mesh or macro-fibers  
~ \$15/ ft.<sup>2</sup>



Concrete slab with steel  
~ \$22/ ft.<sup>2</sup>



Concrete slab with EdenCrete<sup>®</sup>  
~ \$12/ ft.<sup>2</sup>



# Government Validation and Commercialisation



Government approval for use by Departments of Transport (DOTs) in 11 US States, 26% of total US bridges in need of repair, with 11 further DOT applications pending



Georgia Department of Transport (GDOT) mandated use of EdenCrete® in all State funded full depth slab repair projects in Jan 2017



Federal Highway Administration (FHWA) approval for use of EdenCrete® in federally funded, repair projects in Georgia in September 2017

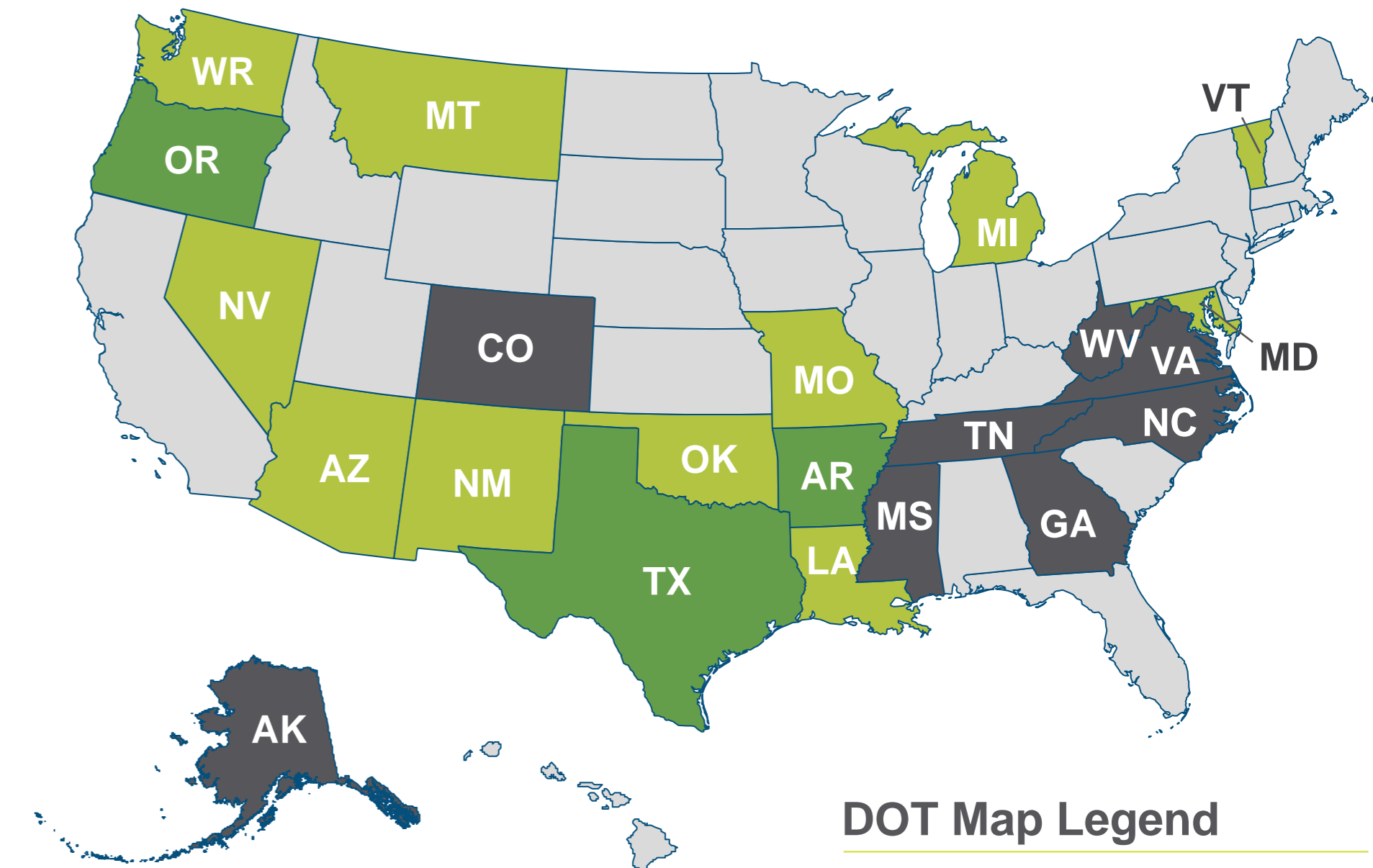
- First order anticipated H1 2018



Customer sales to Texas Department of Transport-approved pre-stressed bridge beam manufacturer

- Sales expanding to include additional two plants for Valley Prestress

\* DOT Fact Sheets Highlight Grim State of US Roads and Bridges – 9 July 2015



## DOT Map Legend

- Approved for Use (APL or QPL not applicable)
- APL or QPL (DOT dependent)
- Under Review
- Submission Pending

*DOTs where CNT admixture is on the APL or QPL or 'Approved for Use' represent...*

- 25% of US population
- 26% of US bridges in need of repair (approximately 37,800)
- 39% of US total land area



# Barriers to Entry

- 10 years of product development
- Product field testing by Government departments after initial approval typically requires 12 months, including lab tests
- Typical sales cycle for EdenCrete® is 6 -9 months, after successful field testing by the relevant DOT
- 100% ownership of the Pyrolysis Project (CNT production) – acquired from University of Queensland
  - Carbon nanotube production process
- Patents granted for Pyrolysis Project  
Patent applications pending for EdenCrete®, EdenCrete® Pz and EdenPlast™

# Case Study

## ABRASION RESISTANCE / ULTRA HIGH WEAR APPLICATION



**CONTROL TRIAL SLAB**

Significant cracks and wear after 6 months



**TYPICAL ULTRA HIGH LOAD**

High loading/ abrasive application at site – repeat contracts



**EdenCrete® TRIAL SLAB**

No cracks or evidence of wear



# OptiBlend®

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

- Comprised of a proprietary Air-Gas Mixer *and* a Fuel Control Valve
- Works by displacing up to 70% of diesel fuel with natural gas
- Lower fuel costs, lower emissions and increased runtime
- Current customers in the US and India
- Greatest current potential in the Indian diesel powered generator set market



 **OptiBlend™**

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



3.

**GLOBAL MARKET  
OPPORTUNITY**



# Growing Market Opportunity

## US \$921 billion

The **GLOBAL CONCRETE AND CEMENT MARKET** is expected to exceed US \$921 billion by 2020<sup>1</sup>

## US \$18.1 billion

The **CONCRETE ADMIXTURES MARKET** was estimated to be US \$11.68 billion in 2015 and is projected to reach USD 18.10 billion by 2020<sup>2</sup>

## CAGR of almost 8%<sup>1</sup>

## CAGR of 9.15%<sup>2</sup>

## Key drivers of US growth:

- **Need to upgrade infrastructure**  
In 2015, the US government announced plans to spend **US \$305 billion** on the development of highways and other connecting roads in the country
- **Increased demand for prefabricated construction and ready mix applications**  
US demand for higher strength, lower cost concrete products

Sources: <sup>1</sup>Global Concrete and Cement Market 2016-2020 report by technavio, March 2016  
<sup>2</sup>Concrete Admixtures Market by Type by marketsandmarkets.com, November 2015

4.

**GROWTH STRATEGY**





# Current sales pipeline

## GEORGIA

### GDOT State funded projects using EdenCrete®

- 6 currently underway or open for tender
- 9 further projects expected by July 2018

### FHWA Federally funded project using EdenCrete®

- 1 large pavement replacement project (potentially 11 lanes miles) expected for tender in late April 2018

### Corporate, privately funded project

- Follow up orders received for national company's heavy duty hardstand area

### Metropolitan Atlanta Rapid Transit Authority (MARTA)

- Potential projects under discussion

## TEXAS

### Texas Department of Transport (TxDOT)

- Additional precast contractors, manufacturers

## COLORADO

### Denver Public Works / Colorado Department of Transport (CDOT)

- Successful trials - extreme use of salt/road chemicals, abrasion resistance
- Follow-up trials and production scale up to meet future demand

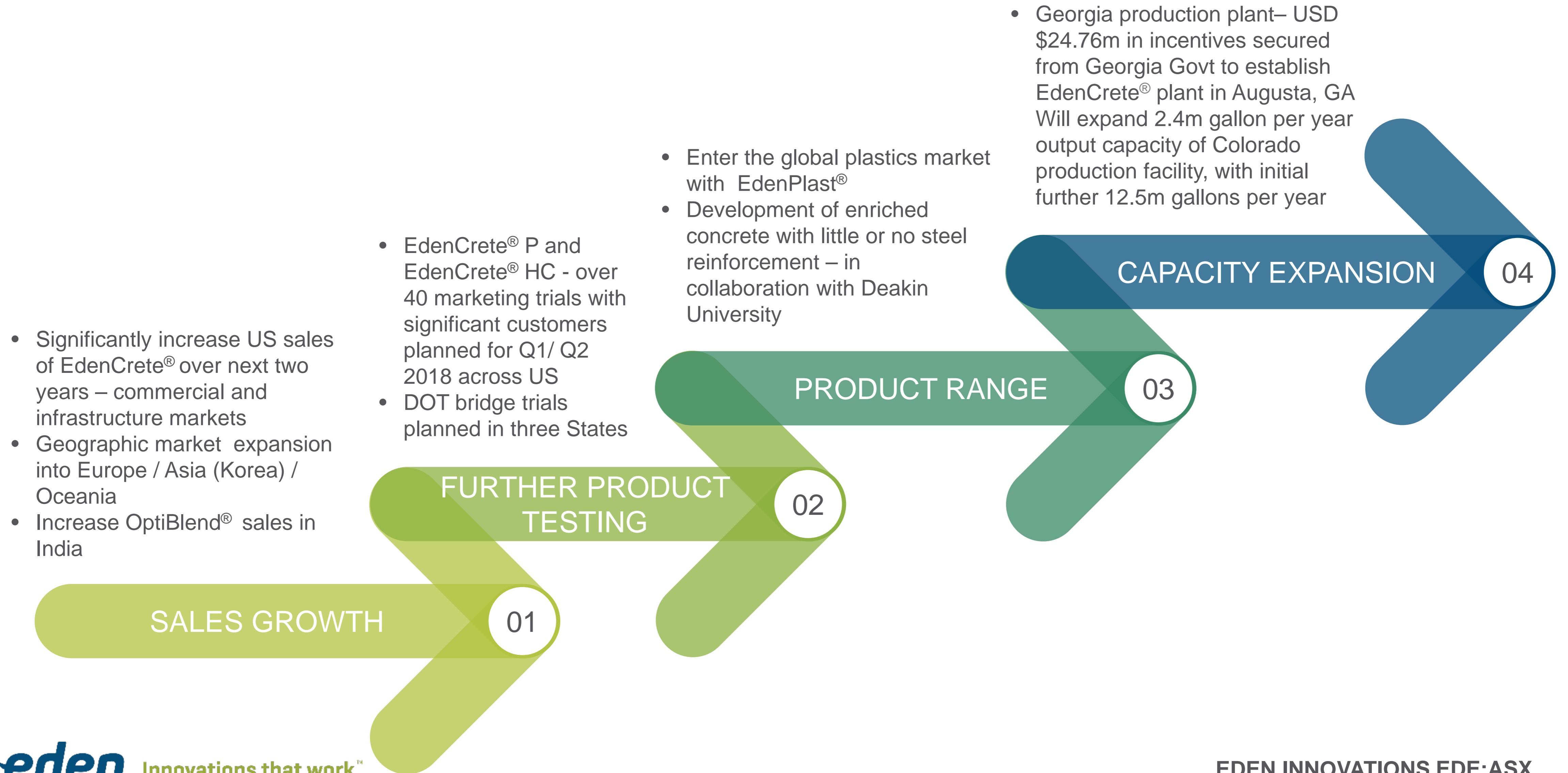
### Vail and Gypsum towns

- Contracts EdenCrete® in bridges and road repairs

### Corporate, privately funded project

- Follow up order received for factory flooring projects

# Growth Strategy





# New product development: EdenPlast™

## Eden aims to enter the plastics market with its new product, EdenPlast™

- Aims to develop CNT in Nylon 6 plastic and other polymers
- Jointly funded project with University of Queensland
- Awarded Australian Research Council funding
- Relatively low-cost processing method

### Suitable plastics markets:

- Automotive and packaging

### Highly encouraging preliminary results:

- 50% increase in stiffness
- Increase in electrical conductivity

### Next steps:

- ARC R&D project into possible commercial scale-up underway

## Proven in-house capability

Development, testing and commercialisation

- EdenCrete®
- EdenCrete® HC
- EdenCrete® Pz
- OptiBlend®
- Hythane®

HC and Pz products launched at World of Concrete in January 2018

# 5.

## FINANCIALS



# Commercialisation Progress

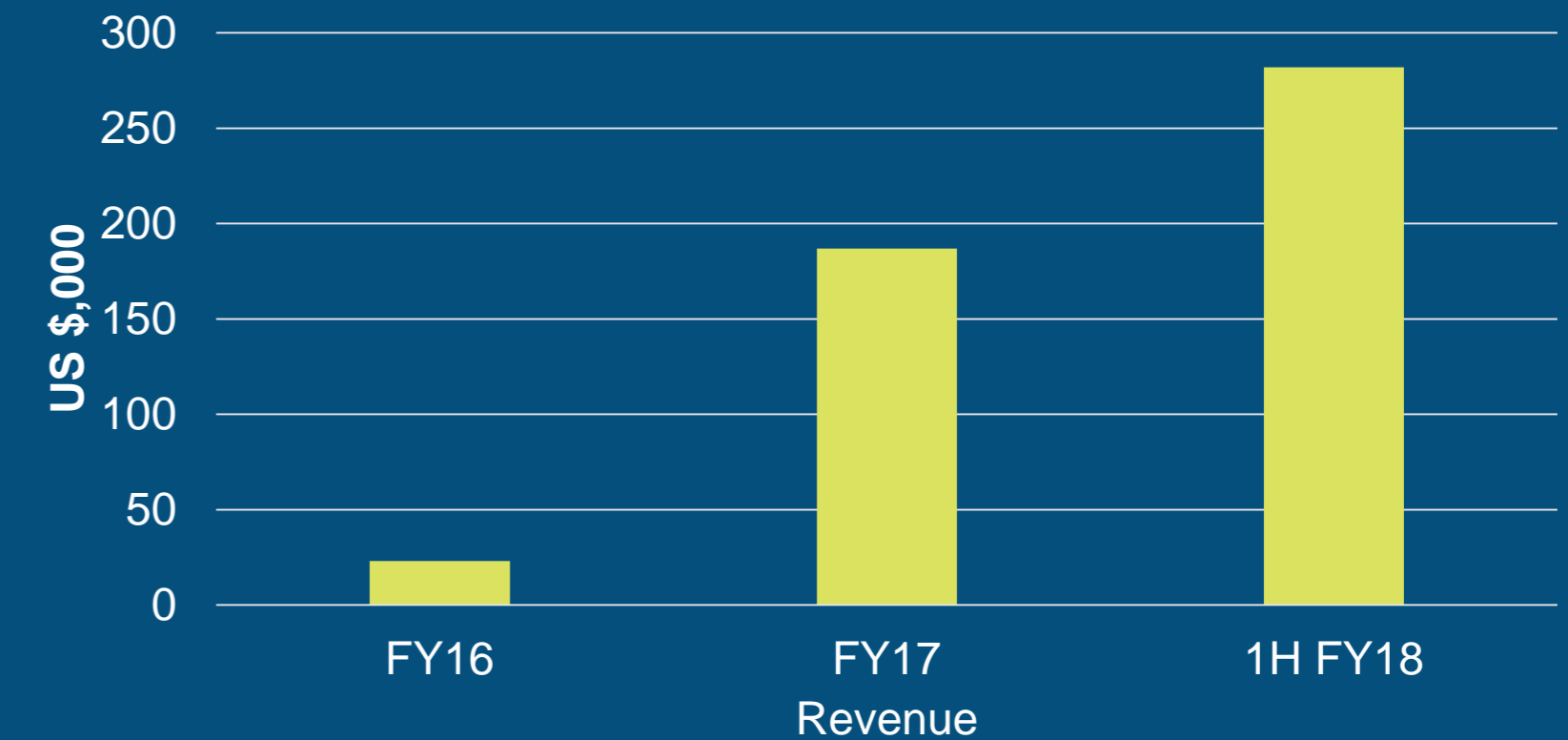
## EdenCrete®

- Bulk distribution contracts
- Repeat business customers - government and private
- Supply contracts vary by volume for each project
- Significant revenue growth projected FY 2019 and FY 2020
- Targeted to be cash flow positive FY 2019

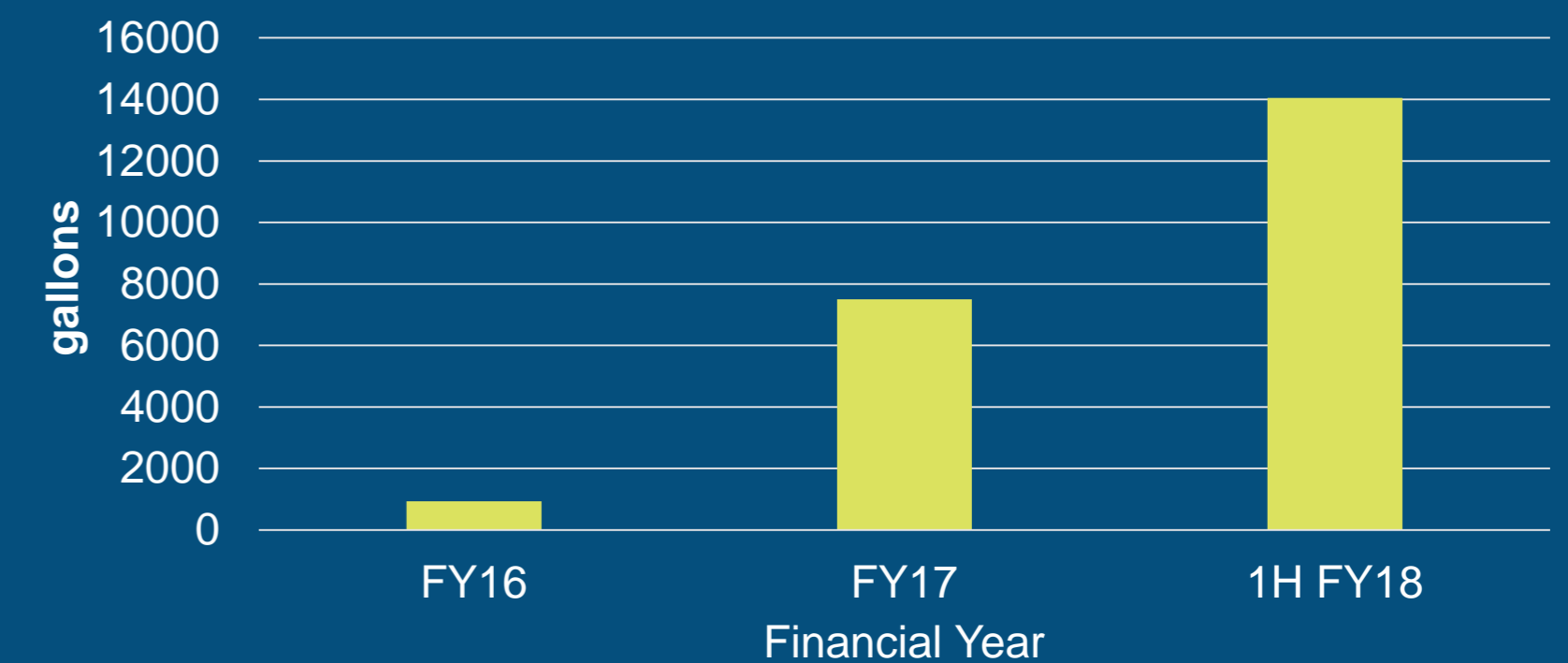
## OptiBlend®

- Customised one-off contracts
- Typically installation plus unit purchase - US\$ 23k-40k (AU \$30k–50k)

EDENCRETE REVENUE



EDENCRETE SALES BY VOLUME







6.

**OUTLOOK &  
SUMMARY**

# Outlook & News Flow Pipeline

## OUTLOOK



Strong year on year revenue growth expected for FY18 and FY 19, driven by EdenCrete® sales:

- Existing projects already underway
- Anticipated pipeline projects, including potential for an estimated 10 further Georgia DOT full slab replacement projects
- Increasing sales for both infrastructure and commercial projects in Colorado and other States
- Contribution from Texas (which has been hampered by severe weather for 7 months)

## NEWS FLOW



Further significant contract wins for EdenCrete®



State DOT approval process by the US National Transportation Product Evaluation Program (NTPEP) reporting in early Q2 2019



ASTM (international standards organisation) trials of EdenCrete® Pz reporting in early 2019



Initial sales expected for new products EdenCrete® HC and EdenCrete® Pz



# Investment Summary

- 1 | EdenCrete® admixture product delivers significant cost and product advantages in concrete
- 2 | Large global concrete market expected to reach US \$921 billion by 2020, with significant barriers to entry for competitors
- 3 | Proprietary technology and core expertise in carbon nanotube products
- 4 | Revenue generating, with strong year on year revenue growth expected in FY18 and accelerating in FY19 and FY20
- 5 | Strong US Government traction with product approval from 11 State DOTs and FHWA approval in Georgia
- 6 | EdenPlast™ product development underway leading to future plastics market entry





# Management Team



**Gregory Howard Solomon**

Executive Chairman

Chairman of Eden since incorporation in 2004. More than 30 years of public company experience. Currently executive chairman of Tasman Resources Ltd and a non-executive chairman of Conico Ltd.

A lawyer by background with more than 30 years Australian and international experience in a wide range of areas including mining and energy law, commercial and corporate law.



**Aaron P. Gates**

CFO, Company Secretary

A qualified accountant with more than 14 years of accounting, audit and corporate finance experience.

Chartered Accountant and Chartered Secretary.

Bachelor of Commerce (Curtin University) with majors in accounting and business law and completed a Diploma of Corporate Governance.

BCom CA AGIA



**Roger Marmaro**

President / CEO - Eden Innovations U.S

Responsible for corporate planning and implementation, management development and commercial business expansion.

Co-inventor of Hythane®.

Formerly at ADA Technologies and BOC Edwards.

BFA in Design, BSME



**Robert Reid III**

Executive Business Director-EdenCrete Industries Inc. US

Responsible for assisting in the strategic planning, development of the sales and marketing strategy, policies and operating procedures.

Mr Reid has over 40 years of experience in Risk Management and Private Equity dealing with a wide array of operating companies.

Mr Reid has a degree in economics.



# Financials

Half Year Ended Dec 2017

## SUMMARY

	\$,000 FY17	\$,000 1H FY18	% change
Revenue	468	856	82.9% up
Other comprehensive income / (loss)*	304	114	62% down
Total comprehensive income / (loss) attributable to members of the parent	(3,019)	(5,411)	79% up

## BALANCE SHEET

	\$,000 30 June 2017	\$,000 31 Dec 2017
Cash and cash equivalents	7,985	1,040
Total Assets	22,981	16,930
Total Liabilities	3,416	2,451
Net Assets	19,565	14,479
Total equity	19,565	14,479

## CASH FLOW

	\$,000 31 Dec 2016	\$,000 31 Dec 2017
Receipts from customers	299	584
Net cash used in operating activities	3,636	4,833
Cash at end of period	20,134	1,040

**Note:** Revenues for FY15 and FY16 reflected sales for OptiBlend product which decrease in line with the decline in the US fracking market.

\* Exchange differences on translating foreign operations

GREG SOLOMON  
EXECUTIVE CHAIRMAN

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

Telephone: +61 8 9282 5889

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

**eden** Innovations that work.™

[www.edeninnovations.com](http://www.edeninnovations.com)