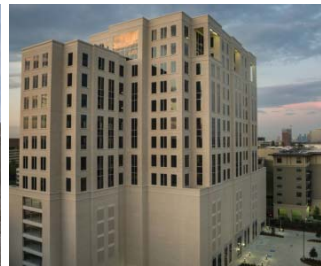


# INVESTOR SITE TOUR & PRESENTATIONS

Boral North America

*Dallas, Texas and  
Detroit, Michigan  
12–13 September 2017*



## Day 1 and Day 2 schedule Tuesday and Wednesday, 12-13 September 2017



Sep 12 – Time	Agenda
8:00 a.m. – 12:30 p.m.	<b>Management Presentations and Q&amp;A</b>
12:30 p.m. – 1:00p.m.	Lunch
1:00 p.m. – 1:40 p.m.	<i>Travel to Windows Legacy plant</i>
1:40 p.m. – 2:25 p.m.	<b>Safety Briefing, Tour of Windows Dallas facility</b>
2:25 p.m. – 3:05 p.m.	<i>Travel to airport for flights to Detroit – Day 2 and tour of Metamora plant</i>
Sep 13 – Time	Agenda
7:00 a.m. – 9:00 a.m.	<i>Travel to Metamora plant</i>
9:00 a.m. – 10:00 a.m.	<b>Management Presentations and Q&amp;A</b>
10:00 a.m. – 12:00 p.m.	<b>Safety Briefing and Tour of Light Building Products Detroit facility</b>
12:00 p.m. – 1:30 p.m.	Lunch
1:30 p.m. – 3:20 p.m.	<i>Travel to airport</i>
3:20 p.m.	<i>Arrive at airport for flights</i>

# Agenda



## Introduction, Strategy and Outlook

Mike Kane

### Boral North America Overview

David Mariner

### Construction Materials

Keith Depew

### Building Products

Chris Fenwick, Joel Charlton

### Innovation

Joel Charlton



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## FY2017 marks the fifth year of transforming Boral

*We are building a transformative culture to grow, innovate and be responsive*



Across Boral's **three strong divisions**, we are building a transformative culture to deliver performance excellence, capture growth and to respond to a changing world

 <b>Boral Australia</b>	 <b>USG Boral</b>	 <b>Boral North America</b>
<ul style="list-style-type: none"> <li>• Strengthening our leading position in Australia through pivotal quarry reinvestments</li> <li>• Leveraging diverse markets with multi-year growth in major roads &amp; infrastructure</li> <li>• Margin growth through commercial &amp; operational excellence</li> <li>• Developing innovation platform</li> </ul>	<ul style="list-style-type: none"> <li>• Delivering long-term organic growth through:                             <ul style="list-style-type: none"> <li>○ Innovation</li> <li>○ Asian economic growth</li> <li>○ Product penetration for interior linings and related products</li> </ul> </li> <li>• Defend &amp; improve leading regional capabilities through next gen Sheetrock®</li> </ul>	<ul style="list-style-type: none"> <li>• Transformational growth and improved performance through:                             <ul style="list-style-type: none"> <li>○ Headwaters acquisition</li> <li>○ Meridian Brick JV</li> <li>○ New product development and innovation</li> <li>○ Market recovery / growth</li> </ul> </li> <li>• Shift from high fixed cost capital intensive to variable cost model to better respond to cycles</li> </ul>

4



# Headwaters acquisition delivers on our objectives

Highly complementary businesses, generating substantial value



## STRENGTHENING The Portfolio

- Establishes Boral North America (BNA) as a leader in our product areas
- Grows scale of Fly Ash, Stone, Roofing and Light Building Products (LBP)
- Improves position, offering and earnings

## TRANSFORMING Our Business Position

- Balances end market exposures, reducing dependence on new residential building
- Diversifies channel, geography and customer
- Creates a more variable based, low fixed asset platform

## SCALING Light Building Products

- Establishes a significant LBP platform
- Focuses on large repair and remodel segment
- Complements Innovation Factory

## DELIVERS

- ✓ Strong business
- ✓ Platform for innovation and growth
- ✓ Significant value and synergies
- ✓ Improved quality of earnings
- ✓ Better positioned to exceed cost of capital through cycle

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## OUTLOOK and FY2018 FINANCIAL CONSIDERATIONS

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## Outlook for FY2018 – as reported on 30 August 2017



### Earnings growth across all divisions, with significant lift in Boral North America as we deliver on Headwaters acquisition objectives

Boral Australia	<ul style="list-style-type: none"> <li>Expect <b>higher EBIT</b> in FY2018 compared with FY2017 <b>excluding property</b> in both years; 1H and 2H EBIT expected to be broadly balanced</li> <li><b>Property</b> earnings in FY2018 currently expected at lower end of historical range (\$8m-\$46m)</li> <li>EBIT in FY2018 including Property expected to be broadly similar to FY2017</li> </ul>
USG Boral	<ul style="list-style-type: none"> <li><b>Profit expected to grow</b> at a high single digit growth rate in FY2018</li> <li>Sheetrock® to deliver price, volume and cost benefits across all markets</li> <li>Improvements expected from Indonesia and Thailand businesses, while softer activity is forecast in Australian and Korean residential construction markets</li> </ul>
Boral North America	<ul style="list-style-type: none"> <li>Expect <b>significant growth in EBIT</b> in FY2018 from the full year contribution of Headwaters coupled with US\$30-35m of year 1 synergies</li> <li>Expect <b>Meridian Brick JV</b> to contribute an <b>earnings uplift</b> from market growth and synergies</li> <li>Business should benefit from forecasted <b>market growth</b><sup>1</sup> of ~8% in housing starts (to ~1.29 million), ~5% increase in US infrastructure activity, ~12% growth in Non-residential and ~6% growth in Repair &amp; Remodel</li> </ul>

1. Housing starts based on average of analysts' forecasts (Dodge, Wells Fargo, NAR, NAHB, Fannie Mae, Freddie Mac, MBA) from July/August 2017 forecast; Non-residential from McGraw Hill Dodge; Repair & Remodel from Moody's Retail Sales of Building Products; and Infrastructure Ready Mix Demand from McGraw Hill Dodge.



## FY2018 financial considerations



Area	FY2018 implications
Synergies	<ul style="list-style-type: none"> <li>Headwaters acquisition expected year 1 synergies of US\$30m-\$35m and run rate of US\$50-55m at end of year 1</li> <li>Meridian Brick JV synergies of US\$25m p.a. within 4 years (by Nov 2020) with US\$8m run rate at end of FY17</li> </ul>
Corporate costs	<ul style="list-style-type: none"> <li>FY18 to be slightly higher than FY17 due to additional Innovation spend of ~A\$3-\$5m</li> </ul>
Depreciation & Amortisation	<ul style="list-style-type: none"> <li>Headwaters post acquisition PPA adjustments underway, additional D&amp;A likely to be ~US\$30-35m p.a.</li> <li>Group D&amp;A ~A\$390-410m in FY18 (including amortisation of ~A\$70-\$80 million in FY18, subject to PPA finalisation)</li> </ul>
Capex	<ul style="list-style-type: none"> <li>Total Boral capex expected to be ~A\$425-\$475m p.a. (including incremental Headwaters capex)</li> </ul>
Debt & gearing	<ul style="list-style-type: none"> <li>Cost of debt ~ 4.75% to 5.00% p.a.</li> <li>Gearing of 30% within comfort range – expect to reduce to ~25% in coming years</li> </ul>
HW significant items	<ul style="list-style-type: none"> <li>Implementation costs – expect US\$90-100m over two years, FY18 &amp; FY19</li> </ul>
Taxation	<ul style="list-style-type: none"> <li>Effective tax rate ~ 29-31%</li> <li>Cash flow benefits of US tax loss carried forward</li> </ul>
Dividends & franking	<ul style="list-style-type: none"> <li>Franking to align with earnings mix from Australia; expect FY18 dividends to be partially franked in range of 50-70%</li> <li>Dividend Policy: payout ratio ~50-70% of earnings before significant items, subject to Company's financial position</li> </ul>



# FY2018 financial considerations

## Building blocks for EBITDA, EBITA, EBIT and Group NPATA



Boral North America, US\$m	
Headwaters FY17 pro forma Adjusted EBITDA <sup>1</sup>	221
Boral legacy business FY17 EBITDA	57
Year 1 targeted synergies (US\$30-\$35m)	~33
EBITDA	311
Less D&A <sup>2</sup> : HW (\$74m), Boral (\$24m), PPA (\$30-\$35m)	(130)
Base EBIT plus synergies	181
Add in growth assumptions	XX
Total North America EBIT	>>181
Add back Amortisation <sup>3</sup> ~A\$70-80m (~US\$56m)	~56
EBITA	XXX

Boral Group EBITA and NPATA, A\$m	
Group EBIT assumption	XXX
Add back Amortisation <sup>3</sup> ~A\$70-80m (~US\$56m)	~75
EBITA	XXX
Group NPAT assumption	XXX
Add back tax-effected Amortisation (~A\$70-80m at US rate of 38%) <sup>4</sup>	~47
NPATA	XXX

Adjusted EBITDA of US\$221m for year ended 30 June 2017 is provided as a comparable basis to previously reported results from Headwaters. With expected growth of earnings<sup>5</sup> in the September 2017 quarter, the June year end pro forma result is in line with guidance provided by Headwaters of an Adjusted EBITDA of US\$235-\$250m for the 12 months ending September 2017.

1. Provided in Boral's full year results presentation on 30 August 2017 (slide 15)
2. \$74m is underlying pro forma FY2017 D&A for Headwaters; \$24m is FY2017 D&A for Boral's legacy business excluding Bricks; \$30-\$35m is guided purchase price accounting (PPA) adjustment
3. Amortisation from the Headwaters businesses plus additional amortisation from PPA uplift
4. For accounting purposes
5. Expected growth includes a full September quarter of earnings from the Windows business acquired in August 2016



## BORAL NORTH AMERICA

David Mariner  
President & CEO,  
Boral North America



# Agenda



## Introduction, Strategy and Outlook

Mike Kane

## Boral North America Overview

David Mariner

## Construction Materials

Keith Depew

## Building Products

Chris Fenwick, Joel Charlton

## Innovation

Joel Charlton



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# Agenda



- **Business overview**
- **Market outlook**
- **Strategic priorities**
- **Meridian Brick Joint Venture**



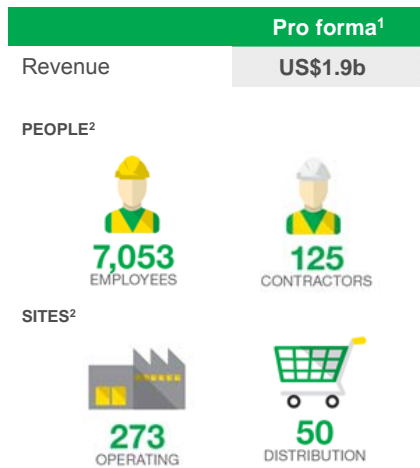
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# Boral North America – Overview

A leader in key construction materials and building products markets



## Overview



## Well positioned to deliver synergies and growth

- 1 Industry leading player with national footprint
- 2 Significant synergies identified in Fly Ash, Stone, Roofing, Light Building Products and Corporate
- 3 Fundamentals signal healthy market growth over next 5+ years
- 4 Growth from innovation by capitalising on network scale and investing in early stage products
- 5 Strong management team with extensive industry experience and track record of integrating operations and realising synergies

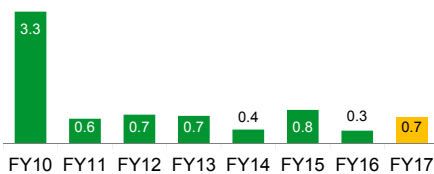
1. Pro forma based on 12 months ended 30 June 2017, except for Windows which is based on revenue post-acquisition from August 2016, and includes Boral's 50% share of revenue from the Meridian Bricks JV for 12 months ended 30 June 2017  
 2. As at 30 June 2017, people on a full time equivalent basis, includes Headwaters and Meridian Brick employees and sites

# Safety: Key performance indicators

Safety a focus within integration work

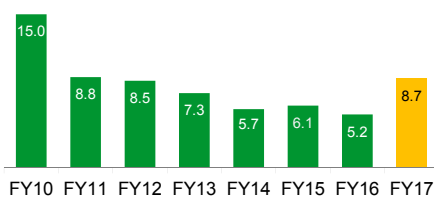


## Employee and Contractor LTIFR<sup>1</sup>



- Safety integration work streams underway
  - Focus on risk identification and employee engagement
  - Headwaters historical performance was improving, focusing on accelerating improvement
  - Safety integration continues with Meridian Brick JV

## Employee and Contractor RIFR<sup>2</sup>

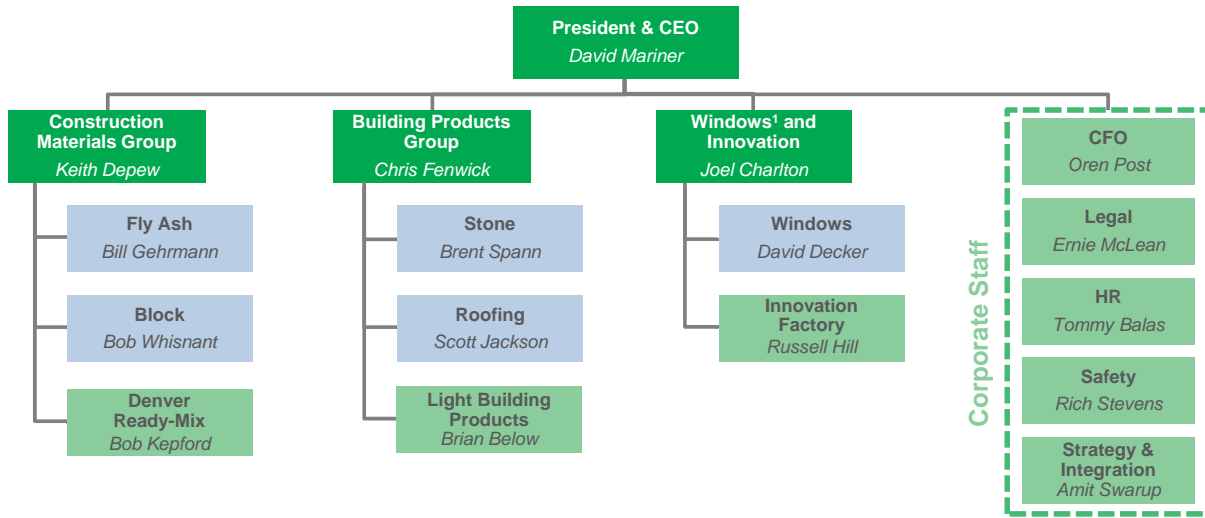


**ZEROHARM TODAY**

1. Lost Time Injury Frequency Rates (per million hours worked) in 100%-owned businesses (2 months of Headwaters), 50%-owned Meridian Bricks joint venture operations (8 months)  
 2. Reportable Injury Frequency Rates (per million hours worked) in 100%-owned businesses (2 months of Headwaters), 50%-owned Meridian Bricks joint venture operations (8 months)

# Boral North America organisational structure

Experienced executives from Boral and Headwaters coming together

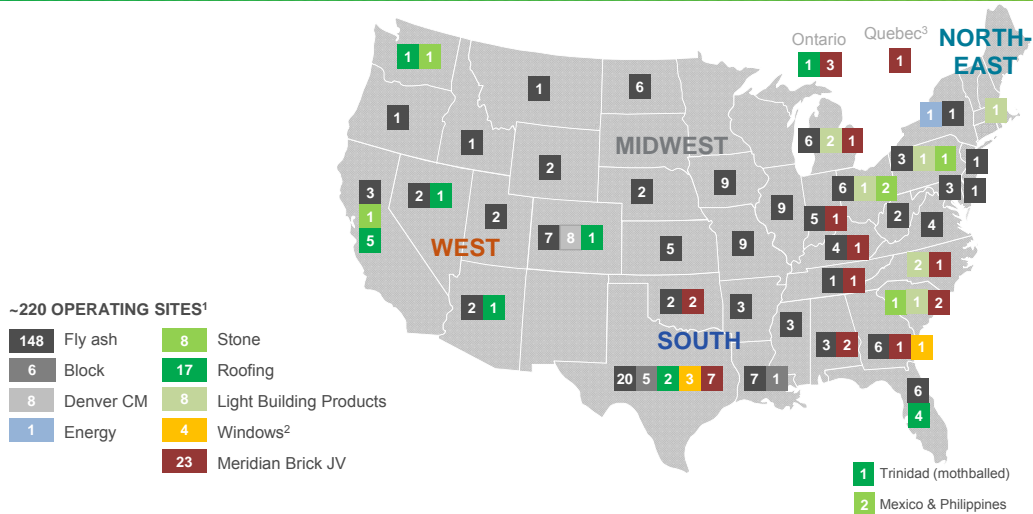


1. Note that for external reporting Windows results will be reported with Building Products Group businesses

Legacy Boral Legacy Headwaters

# Extensive national footprint

Synergies resulting from scale and complementary geographic coverage



1. As of September 2017. Building Products distribution centres not shown. Fly ash sites include fly ash sources, terminals, services only sites and synthetic gypsum sources  
 2. Includes three Windows plants and one components facility  
 3. Closure announced of Brick plant in Quebec



# Industry leading competitor in key segments

Strong strategic fit between Headwaters and Boral's existing US businesses



## Complementary businesses with strong capabilities in key market segments and national scale

FY2017 external revenue (US\$m)<sup>1</sup>



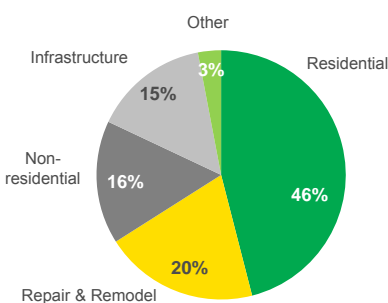
1. Pro forma based on 12 months ended 30 June 2017, except for Windows which is based on revenue post-acquisition from August 2016  
 2. Light Building Products includes siding, trim and panelized stone  
 3. Represents Boral's 50% share of revenue from the Meridian Bricks JV for 12 months ended 30 June 2017

# A more diverse revenue profile (%)

More exposure to scaled, higher margin businesses and diverse end markets



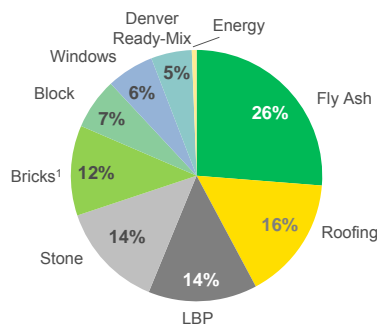
### End-market<sup>1</sup>



**Diversified market exposures beyond single family housing**



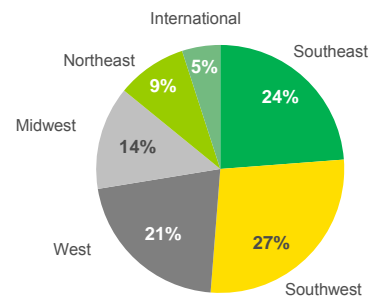
### Business



**Less capital intensive, more variable cost businesses. Focus on emerging trends and products early in life cycle**



### Geographic<sup>2</sup>



**Positioned across high population growth markets, with strong exposure in the South**

1. Includes Boral's 50% share of revenue from the Meridian Bricks JV for 12 months ended 30 June 2017  
 2. Southeast – AL, FL, GA, KY, MS, NC, SC, TN, VA, WV; Southwest – AR, LA, OK, TX; West – AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, WY; Midwest – IA, IL, IN, KS, MI, MN, MO, ND, NE, OH, SD, WI; Northeast – CT, DC, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VT. Revenue split is based on a combination of FY2017 external revenues for legacy Boral (50% of Meridian JV) and the regional level percent split for Oct '15 – Sep '16 applied to FY17 pro forma revenue for legacy Headwaters

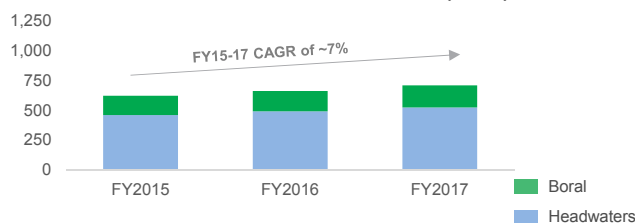
# Overview of pro forma financial history

## Sustainable growth both organically and from acquisitions

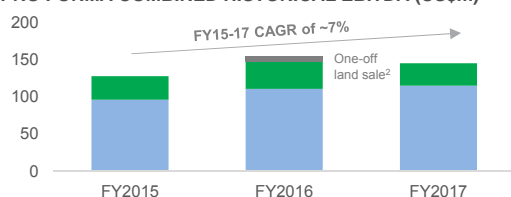


### Construction Materials<sup>1</sup>

PRO FORMA COMBINED HISTORICAL REVENUE (US\$m)

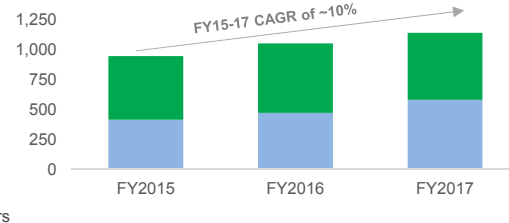


PRO FORMA COMBINED HISTORICAL EBITDA (US\$m)

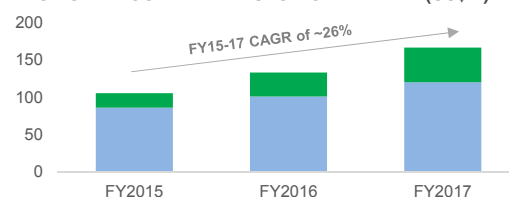


### Building Products (incl. Bricks)<sup>1</sup>

PRO FORMA COMBINED HISTORICAL REVENUE (US\$m)



PRO FORMA COMBINED HISTORICAL EBITDA (US\$m)



- Based on Headwaters results for 12 months ended 30 September for FY2015 and FY2016, and 12 months ended 30 June for FY2017 before PPA adjustments, except for Windows which is based on post-acquisition results from August 2016. Block results shown under Construction Materials. Boral results for 12 months ended 30 June for all years. Includes 50% share of Meridian Bricks JV underlying result for 12 months ended 30 June 2017. Excludes head office costs and Energy business
- FY2016 Construction Materials result includes Boral's US\$7m one-off land sale benefit

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# Capital expenditure

In FY2018, we have allocated ~US\$120m to SIB<sup>1</sup> and growth in North America



- **Total capex of ~US\$120m** expected in FY2018, including ~US\$5-\$10m for safety & environmental
- **Fly Ash:** new or upgraded storage capacities at ~3-4 facilities; reclamation capital at Montour
- **Stone:** mould replacements; cost reduction / automation; Greencastle completion; and environmental projects
- **Light Building Products:** additional production capacity; small equipment projects
- **Roofing:** curing chambers & racking (Lathrop); new racks (Stockton); scrubber (Corona); oven, line & press upgrade (Oceanside); various infrastructure projects; Florida network optimization
- **Denver:** small projects at quarry, truck lease buy-out
- **Windows:** additional fleet
- **Block:** small SIB projects
- **Corporate:** ERP upgrade

1. Stay in business capital expenditure

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# Agenda



- Business overview
- Market outlook
- Strategic priorities
- Meridian Brick Joint Venture



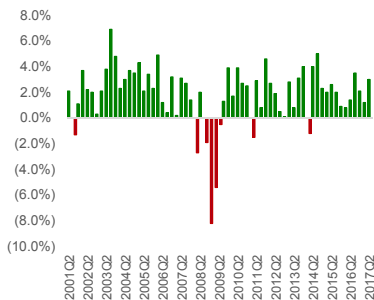
# Economic outlook

Fundamentals sound, driving growth across all market segments



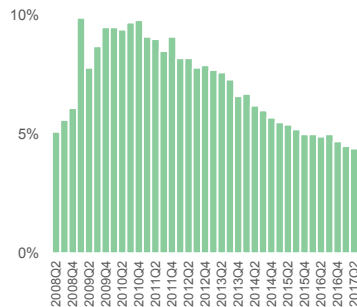
Q2 CY 2017 GDP Growth

**3.0%** 2.1% average quarterly growth since 3Q 2009<sup>1</sup>



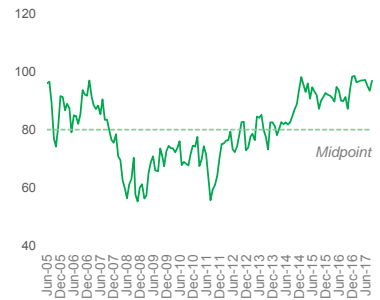
August 2017 Unemployment

**4.4%** vs. Oct-09 peak of 10.0%<sup>2</sup>



Consumer Confidence

**96.8** up from Nov-08 trough of 55.3<sup>3</sup>



1. US Bureau of Economic Analysis  
 2. US Bureau of Labor Statistics  
 3. University of Michigan Surveys of Consumers, 80+ considered positive

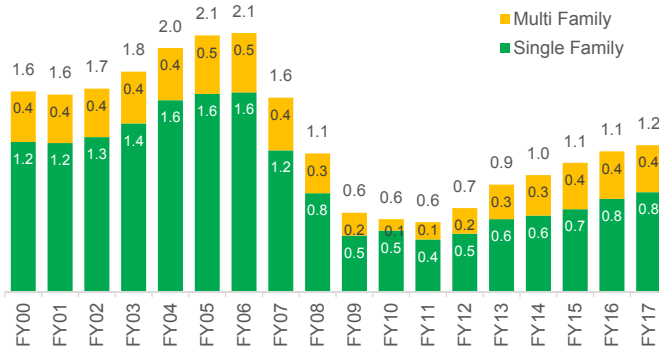
# New residential housing

Single family growing, affordability high, supply remains challenged



## Single and Multi Family Housing Starts<sup>1</sup>

Housing units millions



1. Source: US Census seasonally adjusted annualized housing starts  
 2. Source: National Association of Realtors (NAR)  
 3. Source: National Association of Home Builders (NAHB)

## Single Family Growth<sup>1</sup> (FY17 % of Total)

**68%**

~2.0 percentage points above FY16; Below 71% long term average

## Affordability Index<sup>2</sup>

**153**

5.4% down year over year but significantly above historic average of 100

## New Housing Stock<sup>3</sup> (millions)

**0.3**

11.2% up year over year; coming in line with 0.4 million long term average

## Existing Housing Stock<sup>2</sup> (millions)

**2.0**

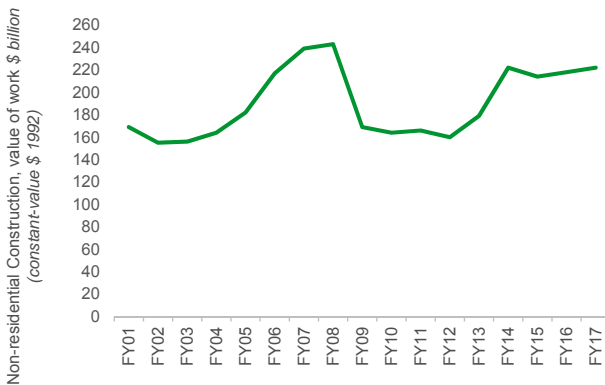
8.4% down year over year; below long term average of 2.2 million

# Non-residential

Warehousing and Education continued to drive construction in FY2017

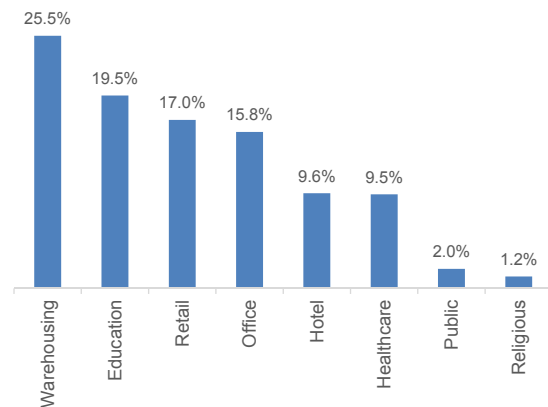


## Non-residential Activity<sup>1</sup>



Non-residential grew ~2% in FY2017; Warehousing, Education and Retail driving construction

## 2017 Breakdown by Non-residential Segment<sup>1</sup>



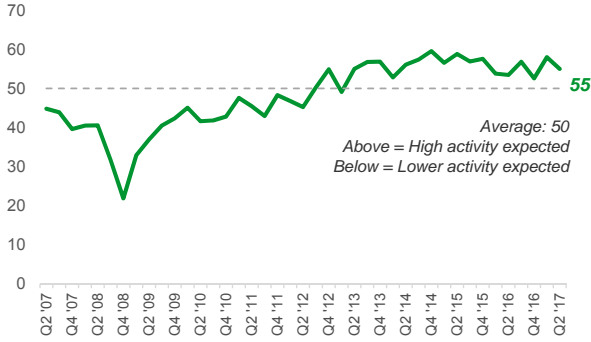
1. Sources: Dodge Data & Analytics. Non-residential value of work

# Repair and Remodel (R&R)

Builder optimism coupled with higher retail sales in home improvement

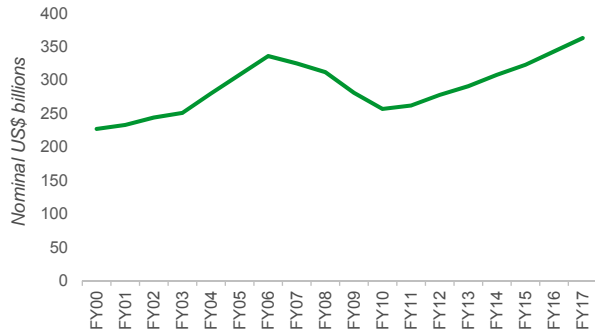


Remodelling Market Index (RMI)<sup>1</sup>



RMI above 50 for 17 consecutive quarters, indicating robust remodeling demand across the US

Building Products Retail Sales<sup>2</sup>



Home Improvement sales continue to rise as homeowners take advantage of rising equity values

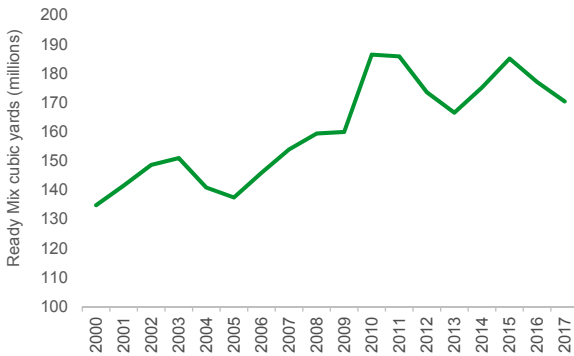
1. Source: National Association of Home Builders (NAHB)  
2. Source: Moody's

# Infrastructure

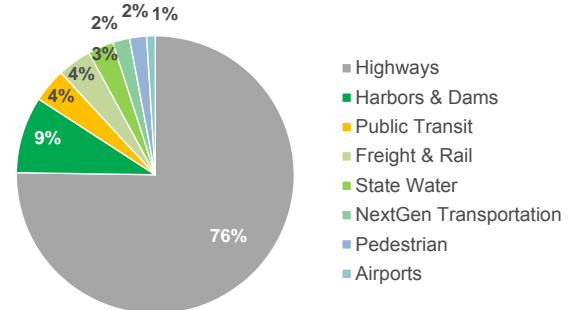
Highways continue to be the main driver in the infrastructure segment



Infrastructure Activity<sup>1</sup>



Infrastructure Cement Consumption<sup>2</sup>



Infrastructure slowed in FY2017 by ~4%, driven by lower spend in election year; trend is expected to return to growth over the next 18 months

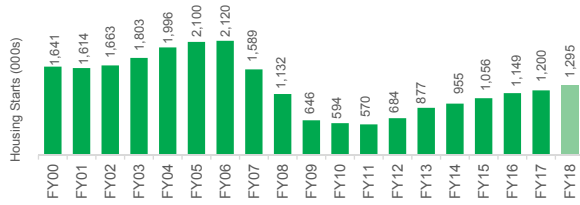
1. Source: Dodge Data & Analytics, US Ready Mix Outlook for Non-Building / Maintenance & Repair segments  
2. Source: Portland Cement Association

# Positive outlook across all markets

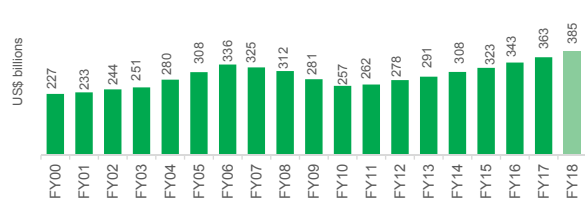
## Growth expected in all segments



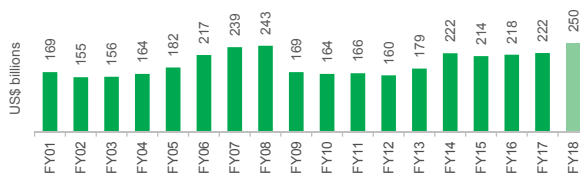
**USA New Residential: 46%<sup>5</sup> of combined NA revenue<sup>1</sup>**



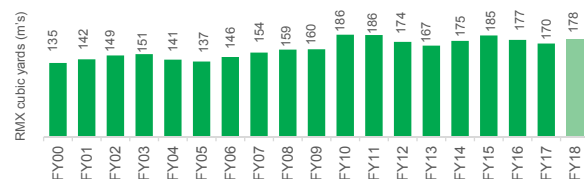
**USA Residential Repair & Remodel: 20%<sup>5</sup> of combined NA revenue<sup>2</sup>**



**USA Non-residential: 16%<sup>5</sup> of combined NA revenue<sup>3</sup>**



**USA Infrastructure: 15%<sup>5</sup> of combined NA revenue<sup>4</sup>**



1. Source: US Census SAA. Forecasts based on an average of analysts' forecasts (July 17 and Aug 17) sourced from NAHB, MBA, Wells Fargo, NAR, Fannie Mae and Freddie Mac
2. Source: Moody's Retail Sales of Building Products
3. Source: Dodge Data & Analytics, Non-Residential Value of Work in constant 1992 dollars
4. Source: Dodge Data & Analytics, US Ready Mix Outlook for Non-Building / Maintenance & Repair segments
5. Source: Other accounts for 3% of Combined NA revenue

# Agenda



- Business overview
- Market outlook
- Strategic priorities
- Meridian Brick Joint Venture



# Strategic priorities

Strong focus on delivering synergies



# 1 Integration well underway

Dedicated, internally-led team delivering on detailed integration plan



## Progress on key integration activities

Safety	<ul style="list-style-type: none"> <li>Zero Harm message rolled out in HW sites</li> <li>Incidences trending down</li> </ul>
Customers	<ul style="list-style-type: none"> <li>Customer outreach successful</li> <li>Customers welcome enhanced value proposition of combined entity</li> </ul>
Employees	<ul style="list-style-type: none"> <li>60 sites visited by key leaders in 3 weeks</li> <li>Working through harmonizing benefits &amp; policies</li> </ul>
Communications	<ul style="list-style-type: none"> <li>Strong focus during first 90 days</li> <li>Highlighted organization changes, integration quick wins</li> </ul>
Finance, IT and support services	<ul style="list-style-type: none"> <li>IT Roadmap underway</li> <li>Support service streamlined</li> </ul>
Business Units	<ul style="list-style-type: none"> <li>All BUs have developed detailed plans with approximately 80 synergy initiatives</li> <li>Fast tracking execution</li> </ul>

## Dedicated integration office

- Dedicated team driving communication & synergy capture
- Team led by VP of Integration with support from external consultants
- Working hand-in-hand with business unit integration teams

## Early findings

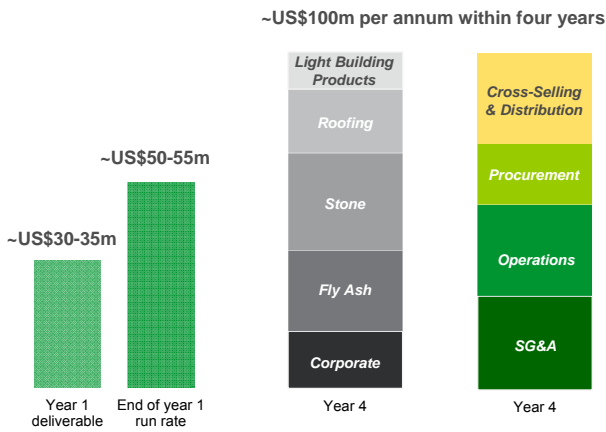
- Some work needed to close the gap between Boral and HW safety performance
- Post-close review confirms initial diligence assumptions
- Employees engaged and excited to be part of the integration journey

# ① On track to deliver substantial synergies

From complementary businesses and SG&A overhead savings



## Targeted synergies<sup>1</sup>



## Synergy sources and implementation costs

REVENUE SYNERGIES	<b>Cross-Selling &amp; Distribution</b>	<ul style="list-style-type: none"> <li>Leverage existing relationships across sales channels for greater cross-selling opportunities</li> </ul>
	<b>Procurement</b>	<ul style="list-style-type: none"> <li>Utilise scale and best practices from each business across procurement functions</li> </ul>
COST SYNERGIES	<b>Operations</b>	<ul style="list-style-type: none"> <li>Utilise scale, optimise logistics and supply chain; network optimisation and production efficiency</li> </ul>
	<b>SG&amp;A</b>	<ul style="list-style-type: none"> <li>Support function efficiencies and sharing capabilities, public company cost savings</li> </ul>
	<b>Implementation costs</b>	<ul style="list-style-type: none"> <li>Primarily incurred within the first 24 months post transaction completion</li> </ul>

1. Synergies include cost synergies and estimated cross-selling and distribution revenue synergies, and exclude one-off implementation costs estimated at approximately US\$100 million

# ② Investing in innovation

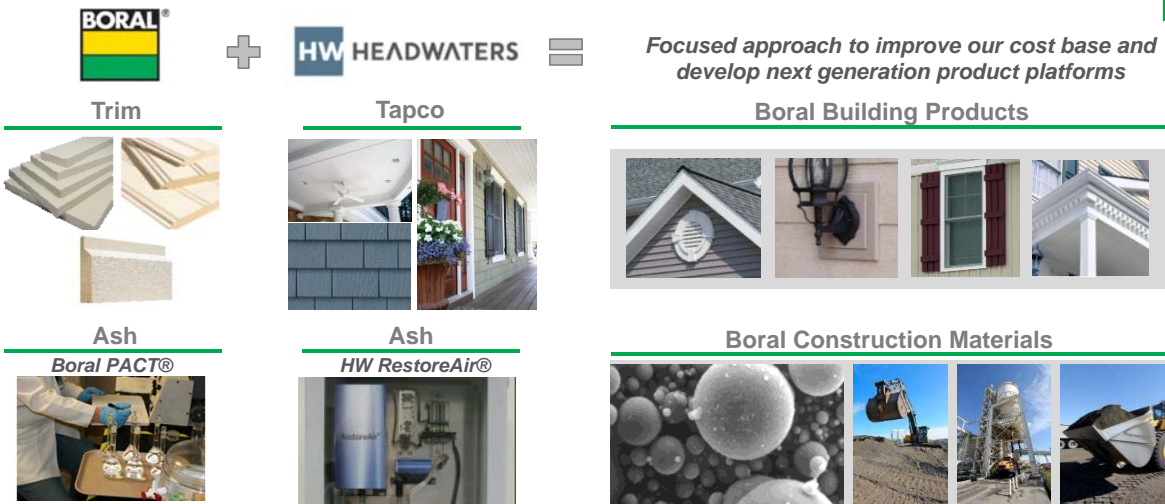
Headwaters acquisition opens a number of innovation opportunities



## Pre close

## Deal closing

## Post close





# Agenda



- Business overview
- Market outlook
- Strategic priorities
- Meridian Brick Joint Venture



## Update on the Meridian Brick joint venture

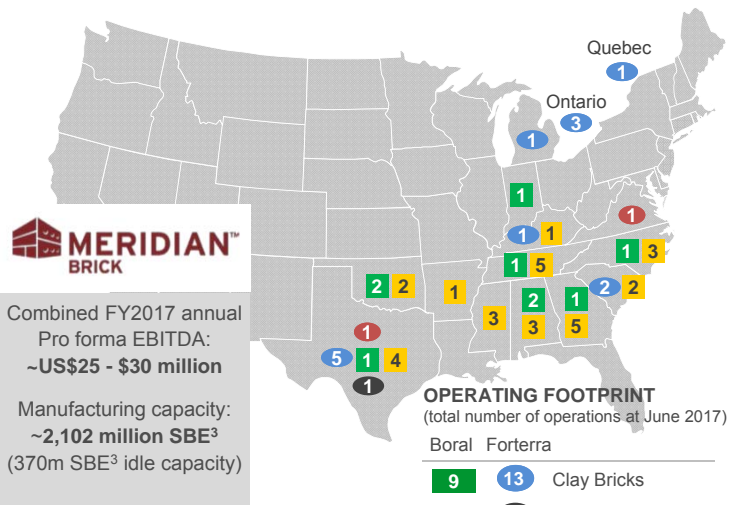
Forterra and Boral Bricks joint venture formed on 1 November 2016



### Underlying result (for first 8 months of JV)

US\$m	FY2017
Revenue	282 <sup>1</sup>
EBIT	(13) <sup>2</sup>

- Expecting cost synergies of ~US\$25m p.a. by year 4 through:
  - Plant network optimisation
  - Improved freight & distribution
  - Streamlined selling, marketing and administration costs
  - Procurement cost savings
- Delivering run rate of ~US\$8m p.a. at 30 June 2017
- 12 distribution centres and 6 plants permanently closed
- Quebec plant closure announced



1. Represents 50% of the JV's revenue for a Pro forma 12 months ending 30 June 2017  
 2. Includes \$13m in non-recurring cash costs related to the integration of the Joint Venture  
 3. Standard brick equivalent

# Hurricane Harvey Update

Houston market demand / activity likely to be affected for several weeks



- Employees: Safe (homes impacted)
- Texas market: ~25% of Boral North America's revenue
- Impacted Boral Facilities:
  - Katy Roof Tile
  - Alleyton Block, East Houston Block and Western Brick facilities
  - Houston Distribution Yard – Meridian Brick
- Sales:
  - Lost sales for Block, Windows, Flyash, LBP and Roofing as customers and facilities impacted
- Raw material supply impacted
- Financial impact under review
- Boral is well positioned to support rebuilding efforts going forward

Houston



Katy Roof Tile



## BORAL NORTH AMERICA

Construction Materials

Keith Depew,  
Group President,  
Construction Materials



# Agenda



## Introduction, Strategy and Outlook

Mike Kane

## Boral North America Overview

David Mariner

## Construction Materials

Keith Depew

## Building Products

Chris Fenwick, Joel Charlton

## Innovation

Joel Charlton






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# Construction Materials

Portfolio of industry leading businesses with significant synergies



Fly Ash 	Block 	Denver Ready-mix 
<p><b>Leading fly ash marketer</b></p> <ul style="list-style-type: none"> <li>148 operational sites</li> <li>Only fly ash marketer operating nationally in markets across the US</li> <li>Cement demand growth of ~3% in FY2017<sup>1</sup></li> <li>Strong combined R&amp;D capabilities</li> </ul>	<p><b>Leading Texas producer</b></p> <ul style="list-style-type: none"> <li>6 plants in Texas and Louisiana</li> <li>Largest block producer in Texas</li> <li>Block growth of ~2% in FY2017<sup>2</sup></li> <li>3 owned distribution storefronts</li> </ul>	<p><b>Among top materials producers in Denver</b></p> <ul style="list-style-type: none"> <li>6 plants and 2 aggregate sites<sup>3</sup></li> <li>Completion of Franklin St. ready mix concrete plant</li> <li>Opened new sand and gravel aggregate operation in Ft. Lupton, CO</li> </ul>



1. Source: Portland Cement Association  
 2. Source: Freedonia, Mgt. Estimates  
 3. One greenfield, permitted aggregate site included

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# Construction Materials

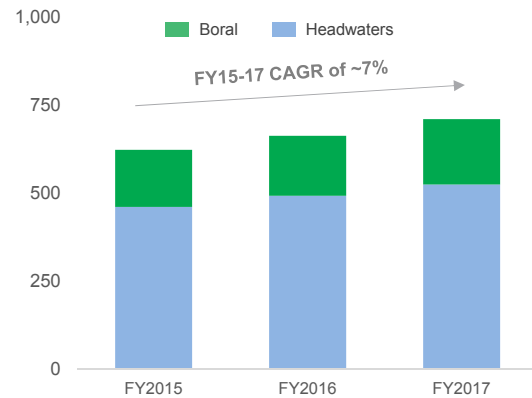
Pro forma revenue CAGR of ~7% from FY2015 – FY2017



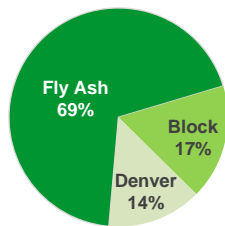
- Boral and Headwaters have enjoyed top line growth in FY17 as the economy continues to recover
  - Boral CAGR ~7% (FY15-17)
  - HW CAGR ~7% (FY15-17)
- Cement pricing trajectory provides opportunity in Fly Ash industry

## Construction Materials<sup>1</sup>

PRO FORMA COMBINED HISTORICAL REVENUE (US\$m)



FY2017 Pro forma business exposure



1. Based on Headwaters results for 12 months ended 30 September for FY2015 and FY2016, and 12 months ended 30 June for FY2017. Includes Block. Boral results for 12 months ended 30 June for all years

# Construction Materials

Key initiatives to grow supply, expand applications and improve margins



## Opportunities

- New fly ash contracts, expand supply / storage
- Expand fly ash site service footprint
- Expansion into new products/industries
- Expanded hardscape offering in Block business
- Margin improvement initiatives across all BUs

## Immediate priorities

- ✓ Organization design and implementation
- ✓ Network optimization
- ✓ Price competitively
- ✓ New ash storage facilities
- ✓ Explore opportunities between Block and Meridian JV

### Optimisation<sup>1</sup>



### Expand Ash Supply



### Hardscapes



1. Conceptual only, refer to slide 53 for site map

# Construction Materials



- **Fly Ash**  
Bill Gehrmann

- **Block**  
Bob Whisnant



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## Fly Ash background

Utilities' coal combustion for electric generation produces fly ash



### Utilities



- Coal makes up ~33%<sup>1</sup> of total fuel for energy generation in the USA

### Coal Basins



- Key coal supply regions include Central Appalachia and Wyoming's Powder River Basin

### Coal Fired Power Plants



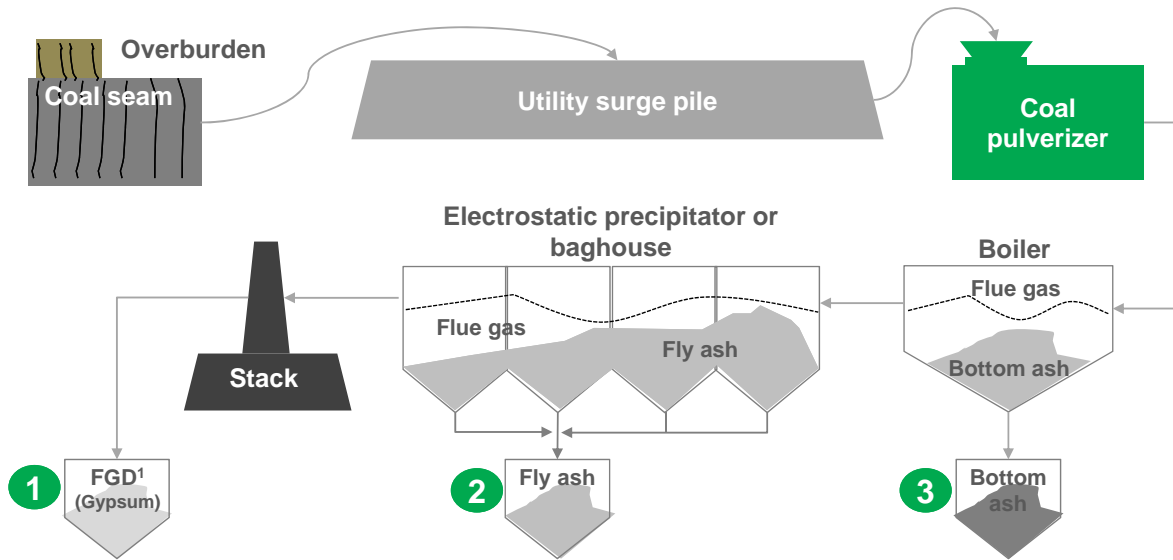
- ~500 power plants using coal as primary fuel source<sup>1</sup>
- ~600m tons of coal were used in 2016<sup>1</sup>

1. Source: 2016 Energy Information Administration (EIA)

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# Coal Combustion Products (CCP)

Fly ash is one of 3 by-products generated from coal burning power plants



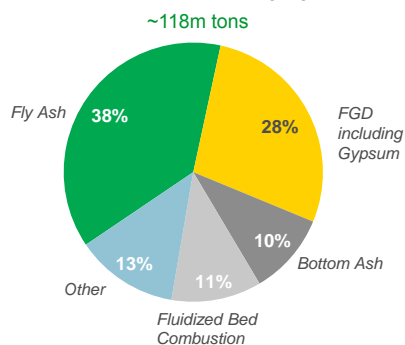
1. Flue gas desulfurization includes Gypsum and other materials

# CCP breakdown in 2015

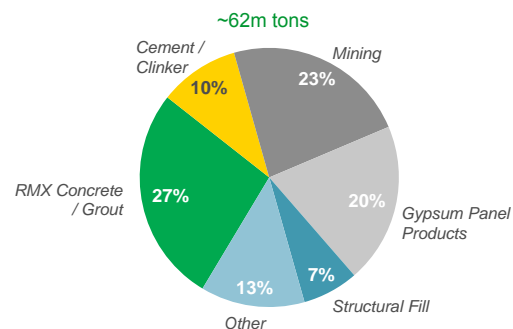
~118 million tons produced, ~62 million tons utilized



## CCP production by type<sup>1</sup>



## CCP usage by application<sup>1</sup>



- ~118 million tons of CCP's produced in 2015
  - ~56 million tons were landfilled
  - ~62 million tons were beneficially used

- Primary application by value is a mineral admixture to partially replace cement in ready mix concrete
- Other key applications include use in mining and in the production of cement

1. ACAA 2015 Product Use Survey and management estimates

# Why Fly Ash?

Fly ash is beneficial in multiple areas



- Improves concrete products' performance
  - Increases life span
  - Greater long-term strength and durability
  - More workable and pumpable
  - Mitigates problems caused by salts, chemicals, and some aggregates
- Cost savings
  - Generally less expensive than Portland cement
  - Ready mix producers motivated to maximize fly ash replacement levels
- Positive environmental impacts
  - Reduces landfill utilization
  - Displaces cement production, i.e. every ton of cement emits ~1 ton of CO<sub>2</sub>



Fly ash used in Roman Colosseum



# Outlook for Fly Ash supply remains strong

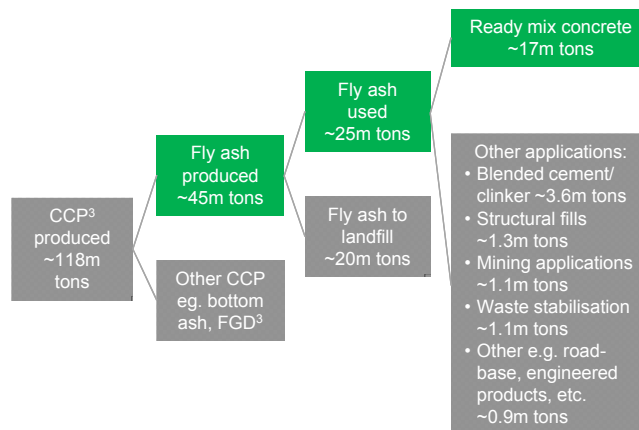
Initiatives to expand supply underway to meet growing demand



## Supply considerations

- Fly ash supply dependent on coal-sourced electricity generation<sup>1</sup>
- Regulations may change in the future, but coal expected to remain ~30% of the energy mix in USA<sup>2</sup>
- Currently ~45% of fly ash produced is land-filled
- Initiatives in place to increase sources of supply over medium to long-term:
  - Increase storage capabilities
  - Develop new fly ash beneficiation technologies
  - Assess long-term ability to reclaim ash
  - Explore opportunities to import

## 2015 American Coal Ash Association Volumes



1. Other fly ash source of supply includes ~1 billion tons currently landfilled (source: American Coal Ash Association)  
 2. US Energy Information Administration (EIA) projects coal to account for 29% of total energy generation in US in the next ten years  
 3. CCP is Coal Combustion Products; FGD is flue gas desulfurization which includes gypsum and sludge

# Diverse market segments tied to concrete usage

All end markets expected to trend up over next 12 months<sup>1</sup>



## Infrastructure



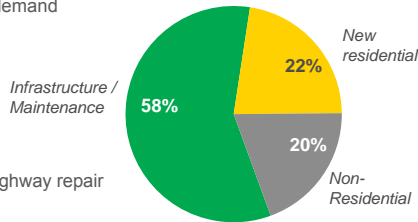
- Roads / Highways / Bridges
- Oil Field / Drilling
- Soil Stabilization
- ~42% of US demand

## New Residential



- New home foundations and sidewalks
- ~22% of US demand

## Fly ash segmentation<sup>2</sup>



## Repair & Maintenance



- Roadway / Highway repair
- Bridge repair
- ~16% of US demand

## Non-residential



- Commercial foundations, parking lots / decks
- ~20% of US demand

1. Source: McGraw Hill / Dodge, management estimates  
2. 20 Year weighted history; Source: Dodge and management estimates

# Fly Ash is a growth business

Demand continues to expand in Ready Mix and next generation applications



## Demand growth opportunities

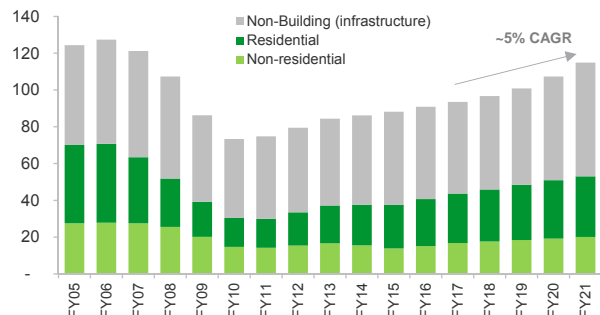
- Potential to expand substitution rates in concrete, currently ~16% (~50% in European markets<sup>1</sup>)
- Cement growth forecast<sup>2</sup> at ~5% CAGR FY2017 – 21
- Exposure to increasing US infrastructure spend

## US Infrastructure Report Card<sup>3</sup>

Type	Grade
Dams	D
Aviation	D
Bridges	C+
Rail	C+
Roads	D
Levees	D
Transit	D-
<b>Overall Grade</b>	<b>D+</b>

Estimated infrastructure investment needed by 2025 is US\$4.6 trillion

## Cement demand (millions of tons)<sup>2</sup>



- CAGR of ~5% from FY2017 – FY2021, growth fairly even across 3 segments

1. Management estimates  
2. Portland Cement Association: May 2017 Market Intelligence Report  
3. 2017 American Society of Civil Engineers, Infrastructure Report Card

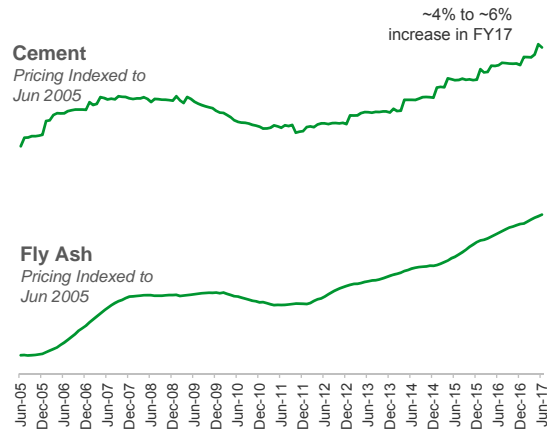


# Product pricing

## Fly ash remains competitively priced against cement



### CEMENT AND FLY ASH PRICING<sup>1</sup>



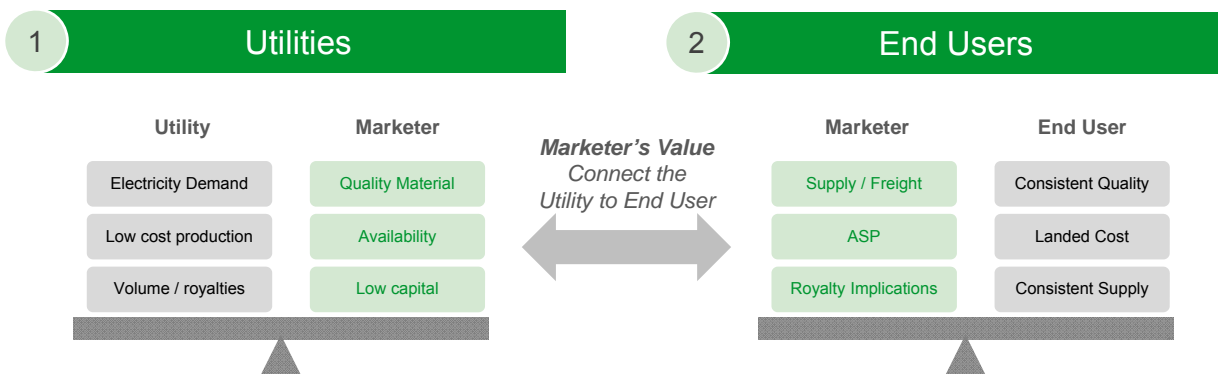
1. Estimated industry fly ash ASP, cement ASP: Bureau of Labor Statistics (PPI Indexed to June 2005)  
2. Approximate range represents cement replacement quality fly ash

### PRICING DYNAMICS

- Primary Fly Ash pricing (~\$25 - \$75/ton)<sup>2</sup> tends to follow cement pricing (~\$90 - \$150/ton) for the Ready Mix market
- Fly Ash pricing gap to cement represents opportunity
  - Regional supply constraints impact gap
- Pricing dependent on right place, right time, right product
- Non Traditional applications present unique opportunities to increase value / pricing of Fly Ash
  - High strength applications
  - Filler applications
  - Technical engineering applications

# Fly Ash: Marketer's value chain

Manage two relationships: 1) utilities, focus on cost; 2) end user, focuses on quality and availability



- Utilities motivated by production costs & demand
- Marketers motivated by:
  - Manageable royalties and minimum volumes
  - Supply availability (seasonality)
  - Consistent quality

- End users seek:
  - Low landed cost, consistent supply and quality
- Marketers motivated by:
  - Consistent supply, competitive freight

# Business position

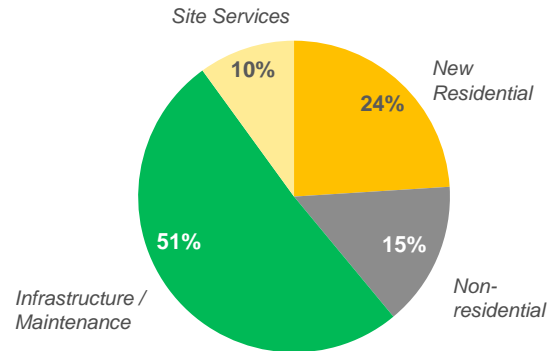
Boral is the only fly ash marketer operating nationally across the US



## Snapshot of Boral's position

- Pro forma FY2017 revenue of ~US\$490m p.a.
- Supplies >7.5m tons p.a.<sup>1</sup> of fly ash to US construction industry – predominantly ready mix concrete industry
- National and assorted supply / distribution footprint with ~148 operational sites
  - 84 fly ash supply, 8 Gypsum supply, 27 service only sites, and 29 distribution terminals
- Leading fly ash **beneficiation technologies**
- Strong reputation** with utilities & fly ash customers, with excellent quality, safety, environmental track record
- National coverage, ash sales in **48** states

## Sales by market segment<sup>2</sup>



1. Supply reflects pro forma FY2017  
2. Source: Management estimates on pro forma FY2017 numbers

# Our value proposition

Four main ways value is created



### Fly ash sources:

- a coal fired utility where fly ash is produced
- product transported by Boral to customers or a terminal
- these sites can also include site services



Deely / Spruce

### Fly ash terminals:

- material is trucked or railed from a source to terminal
- may accept ash from one or multiple sources
- customers may pick up material directly from a terminal or Boral may transport to customers
- Also serves as storage

### Services only sites:

- managing landfills for utilities (construction, placing material, closing)
- other activities include equipment maintenance, construction and other services for utilities

### Synthetic Gypsum sources:

- another by-product from the utilities, used in gypsum products
- Boral manages operations, site services, quality control, dewatering and material handling, with small marketing component
- Larger, fewer customers – often have direct contracts with utilities

# Fly Ash: Our footprint

## An attractive, sustainable business



### Contracts and services<sup>1</sup>

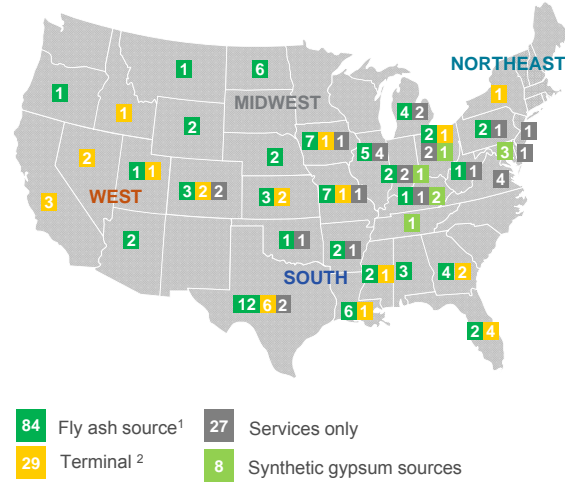
- Products make up ~90% of revenue
- Site services make up ~10% of revenue
- Fly Ash supply and site service contracts with utilities, terms range from ~5 to 15 years
- Industry practice is to pay utilities royalty based on revenues

### Competitors



1. Management estimates as at 30 June 2017  
 2. Excludes 23 throughput / toll locations, across 15 states

### Boral's position across the US



# Opportunities

## High synergy expectations, currently being executed



### Fly Ash synergy drivers

Ash Supply / network optimisation / logistics

Procurement

Sales coverage expansion & high value product growth – *Boral faces local supply constraints in some locations, HW has ability to supply*

Organizational efficiencies – *e.g. consolidating finance systems and overlapping sales coverage, engineer support and operations*

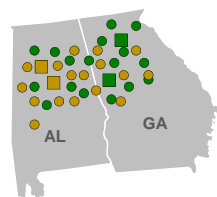
Other including technology / R&D

	Targeted year 1 run rate US\$ per annum	Within 4 years US\$ per annum
<b>Total</b>	<b>~\$12m</b>	<b>&gt;\$24m</b>

### Synergy spotlight: Optimization<sup>1</sup>

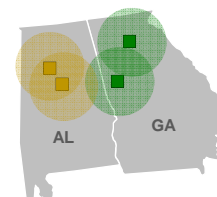
#### Customer layout

Sub-optimum sourcing after combination of supply network



#### Optimization

- BMT Source
- HWCM Source
- BMT Customer
- HWCM Customer



#### Post optimization

Right source, right time, right product.

1. Maps including sourcing and customers conceptual only to illustrate synergy opportunity

# Fly ash strategic priorities

Maintain, Leverage, GROW



1. **Maintain** current position in market
2. **Leverage** synergies and combined capabilities/offerings
3. **GROW** business through technology, expertise, innovation



## 1. Strategic priority - Maintain

Managing relationships through the chain is crucial for sustainable success



### Managing utility relationships

- Some contracts date back to 1970's
- Long-term relationships with most utilities:
  - Most contracts have original terms of 5 to 10 years, we strive to extend contracts before they expire
- Site service contracts typically shorter, 3 to 5 years
- Deep industry knowledge and strong footprint a key value in contract extensions

### Managing end user relationships

- Managing two key functions is critical to maintaining customers
  - Consistent quality: managing changing coal sources that impact ash quality
  - Consistent supply: managing through seasonality and utility outages



## 2. Strategic priority - Leverage

Improve efficiencies and optimize network



### Leverage consistent supply

1. Utilize recently installed storage
  - Capture off-season production
  - Minimize impact of seasonality and utility disruptions
2. Capital to increase loading efficiency
  - Faster turns equate to more throughput
3. Beneficiation technology
  - RestoreAir®, PACT®, new technology

### Storage



### Optimize



### Leverage margin maximization

1. Optimize combined network
  - Right place, right time, right product
  - Utilize blending

Boral PACT®



HW RestoreAir®



Next Application



## 3. Strategic priority - GROW

Invest in storage and technology to increase supply and grow demand



### Grow supply

1. New supply
  - Secure new contracts
2. Wet to dry collection
  - New regulations are phasing out wet collection
3. Reclaim ash
  - Mined, classified, dried, sold into concrete market

### Secure supply contracts



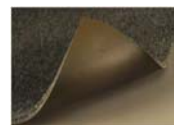
### Reclaimed ash



### Grow demand

1. Increase cement replacement rates into Ready Mix industry
  - Customer education, grow ~16% rate
2. Composite / Engineered products
  - TruExterior® Siding & Trim
3. High value / classified ash applications

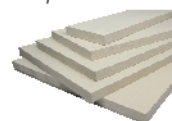
Celceram®



Highly reactive pozzolans



Engineered products



# Construction Materials



- **Fly Ash**  
Bill Gehrmann

- **Block**  
Bob Whisnant



Oversized Masonry Block on St. James Place in Houston, TX

## Block and Boral's portfolio

Block business has key attributes which align with Boral's priorities



1. Strong capabilities in Texas, area of **high growth**
  - Largest block producer in Texas
2. Balances historical Boral US end **market exposures**
  - Demand driven by non-residential and retail segments
3. **Variable** cost based manufacturing
  - Ability to perform through the business cycle

### 2015 Analyst Visit, Portfolio Aspirations

Current Portfolio	Aspiration
<ul style="list-style-type: none"><li>• High cost assets, high energy</li></ul>	<ul style="list-style-type: none"><li>• Low asset base, low energy, sustainable</li></ul>
<ul style="list-style-type: none"><li>• High fixed cost platform</li></ul>	<ul style="list-style-type: none"><li>• Variable cost based manufacturing</li></ul>
<ul style="list-style-type: none"><li>• Residential focus</li></ul>	<ul style="list-style-type: none"><li>• Balanced market segments<sup>1</sup></li></ul>
<ul style="list-style-type: none"><li>• Mature markets</li></ul>	<ul style="list-style-type: none"><li>• Innovative technology platform</li></ul>
<ul style="list-style-type: none"><li>• High skilled labor</li></ul>	<ul style="list-style-type: none"><li>• Low skilled labor</li></ul>

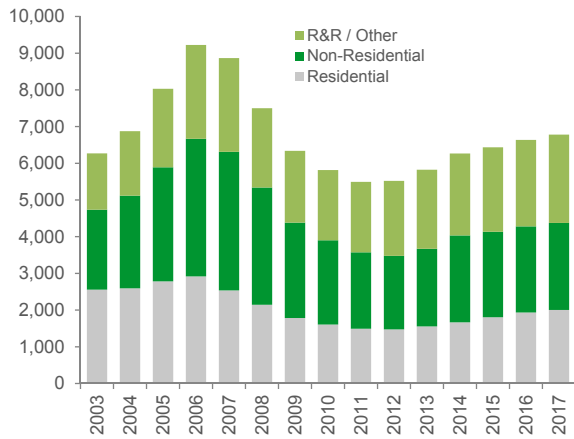
*Headwaters Block strengthens our Texas product offering and diversifies our market segmentation*

# Brick, *Block* & Paver industry: Market size and segments

The Brick, Block and Paver industry is ~\$7 billion<sup>1</sup>



**Brick, Block, Paver demand<sup>1,2</sup>**  
in \$ millions



1. Based on Freedonia and management estimates, represents market at underlying demand  
2. Freedonia 2014, Bricks, Block, Pavers Report, plus management estimates

## Market overview<sup>1</sup>

- Overall market includes brick, block, and pavers; broadly weighted towards all three end markets (residential, non-residential, repair and remodel)
- Brick demand predominantly driven by residential segment
- Block demand more heavily tied to the non-residential segment
- Paver demand predominantly driven by repair & remodel segment
- Texas estimated to be ~8% to 10% of overall market

# Brick, *Block* & Paver industry: Market segments

Well balanced market segments



Non-residential ~38% <sup>1</sup>	Repair & Remodel / Other ~31% <sup>1</sup>	New Residential ~31% <sup>1</sup>
<ul style="list-style-type: none"> <li>Specification driven</li> <li>Longer sale's cycle</li> <li>Higher price and margin</li> <li>State sponsored projects, e.g. schools, critical to success</li> </ul>	<ul style="list-style-type: none"> <li>Hardscape a growing market</li> <li>Strong margins</li> <li>Retail channel, Big Box critical</li> <li>Foundation products, strong margins</li> </ul>	<ul style="list-style-type: none"> <li>Cyclically driven</li> <li>Production builder</li> <li>Lower price / margin (block)</li> <li>Primarily multi-family (block)</li> </ul>



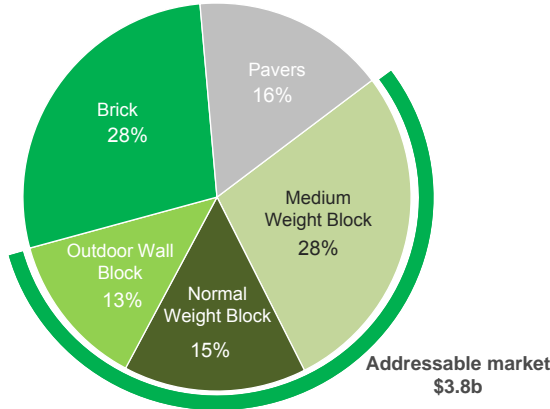
1. Freedonia 2014, Bricks, Block, Pavers Report, Management Estimates; represents market at underlying demand

# Brick, **Block** & Paver industry: Product categories

Block represents ~56% of the total industry



**Brick, Block, and Pavers<sup>1</sup>**  
underlying demand<sup>2</sup>



1. Freedonia 2014, Bricks, Block, Pavers Report, management estimates  
2. Underlying demand assumed to be average of prior 15 years, 2003 - 2017

## Product positioning

- Block competes in the cladding and hardscape industry
- Cladding position:
  - Block considered a premium cladding option
  - Predominantly used in non-residential segment
- Hardscape position:
  - Staple in expanding hardscape industry
  - Mainly tied to repair and remodel segment

# Brick, **Block** & Paver industry: Product categories

Multiple offerings from basic masonry units to high-end non-residential block



	Concrete Brick	Split-Faced Block	Oversized Block	Clay Brick
Cladding				
	Stepping Stone	Concrete Wall Block	Concrete Paver	Clay Pavers
Hardscape				





# Boral Block: A regional leader in Block

## Leading position in the Southwest



### Key product offerings

Oversized



Split Face



Keystone®<sup>1</sup>



Versa-Lok®<sup>2</sup>



Paver

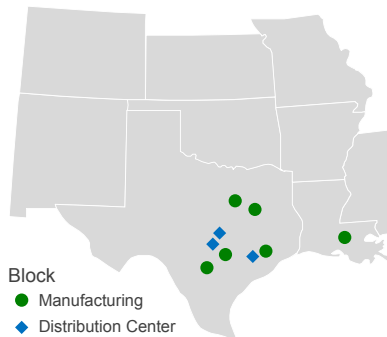


Foundation Repair



1. Registered Trademark of Keystone Retaining Wall Systems LLC  
2. Registered Trademark of Kiltie Corp.

### Business footprint



- 6 manufacturing sites, 5 operational
- Largest block producer in Texas
- New plant commissioned in 2016

### Key competitors



by Oldcastle®



# Boral's position is unique

## A regional leader in Block in the southwest

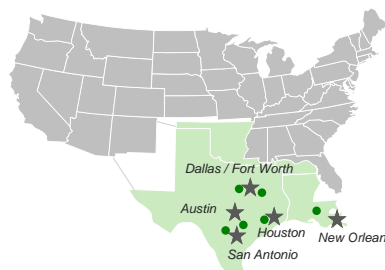


The business can perform through the cycle and generate higher margins than industry peers

Competitive advantage	Unique footprint	Channel diversity
<ul style="list-style-type: none"> <li>▪ Continually expanding product offerings</li> <li>▪ Big Block machine created new markets and customers</li> <li>▪ Investment in machine creates competitive advantage</li> </ul>	<ul style="list-style-type: none"> <li>▪ Located in high growth Texas market</li> <li>▪ Largest manufacturer in Texas</li> <li>▪ Plant locations strategically located near key MSAs<sup>1</sup></li> <li>▪ Lowest landed cost to majority of large MSAs' non-res work</li> </ul>	<ul style="list-style-type: none"> <li>▪ Contractors prefer Boral through custom product lines</li> <li>▪ Retail presence in key markets drive vertical integration</li> <li>▪ Strong relationship with Big Box channel</li> </ul>



Big Block in Alleyton, TX



1. Metropolitan Statistical Area



Go Build Something®

# Boral Block: End markets & products

Larger end-market exposure to non-residential and retail (Big Box)



Concrete Masonry Units



Retaining Walls



Pavers



Foundation Products



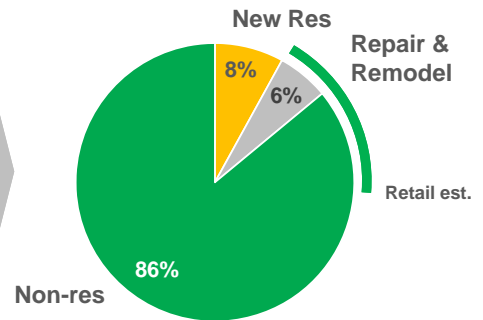
Stepping Stones



Brick / Stone



End market exposure<sup>1</sup>



Retail (Big Box) customers serve both the R&R and non-residential market segments

1. Source: Management estimates on pro forma FY17 numbers

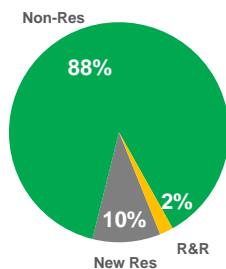
# Diversify and Grow

Aspiring to grow in attractive Repair & Remodel segment



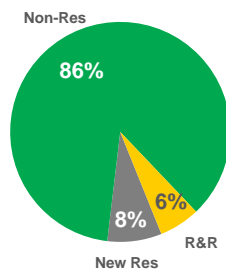
Expanding Big Box & hardscape exposure can transform business and provide future growth in Texas

FY2014

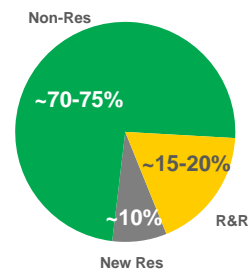


Go Build Something®

Today



Aspiration<sup>1</sup>



1. Conceptual to illustrate management aspirations

# Vertical integration

We are focused on maximising margins through resale



## Owned storefronts allow Boral to sell ancillary products with strong margins



### Materials Product International, Inc.

- Headwaters purchased in 2015
- Strong supplier relationships
- 2 Store-fronts in Austin, TX
- 3rd largest block distributor in central Texas, Home Depot / Lowes leaders
- Strong Custom project portfolio, including Toyota Center in Houston



### Western Brick Company

- Headwaters purchased in 2010
- 1 Store-front in Houston, TX
- Design center: one stop shop for masonry products



CMU, Block



Stucco



Brick



Stone



Concrete Stain



Flooring Stain



Outdoor Living



Tools



Pavers

# Boral Block: Strategic opportunity

Exploring opportunities to work with Meridian JV



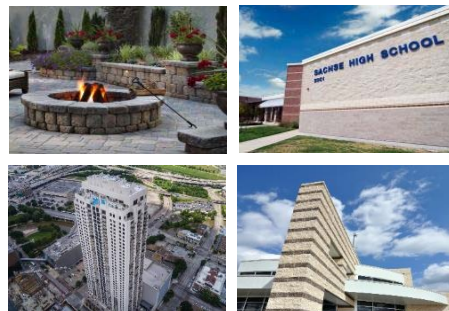
## Meridian Brick JV

- Strong position in new residential construction
- One stop-shop for residential cladding
- Distribution in key metro areas in Texas and Oklahoma
- Product lines tangential



## Block position

- Strong position in non-residential with remodel outlets
- Broad product portfolio for total market
- Manufacturing diversified in architectural, commercial, residential, outdoor living
- Retail (Big Box) relationships



# Block, a growth opportunity

Maintain leading regional position and grow



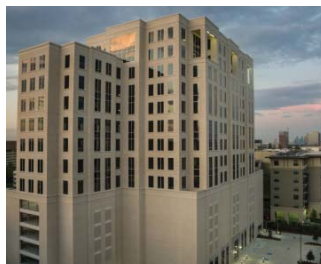
## Strategic fit

- ✓ Strong capabilities in Texas, area of **high growth**
- ✓ Balances historical Boral US end **market exposure**
- ✓ **Variable** cost based manufacturing

## Key focus areas

1. Implement Zero Harm Today
2. Expansion of hardscape position
3. Explore growth opportunity; footprint and product offering
4. Maintain leading competitive capabilities in non-residential and retail segments
5. Vertical integration through resale
6. Meridian JV opportunity
7. Applying Lean principles and best practice manufacturing processes from other businesses

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## BORAL NORTH AMERICA

### Building Products

Chris Fenwick,  
Group President,  
Building Products

Joel Charlton,  
Group President,  
Windows & Innovation



# Agenda



## Introduction, Strategy and Outlook

Mike Kane

## Boral North America Overview

David Mariner

## Construction Materials

Keith Depew

## Building Products

Chris Fenwick, Joel Charlton

## Innovation

Joel Charlton



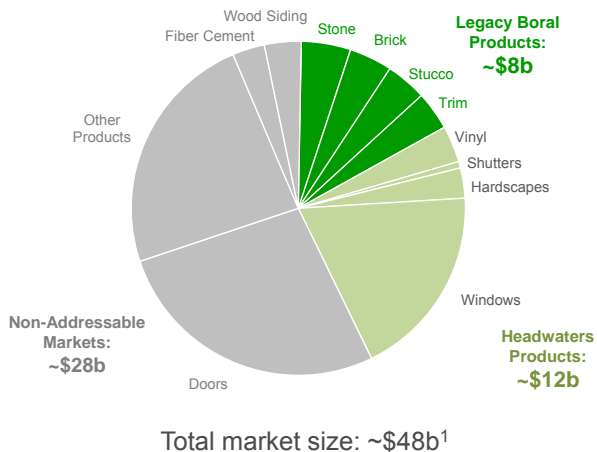
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# Building Products: Transformational step

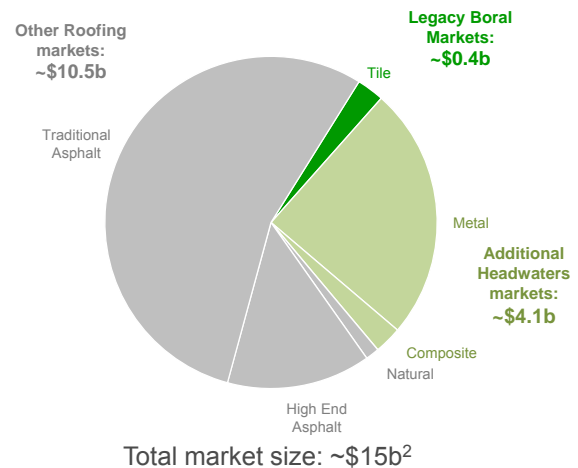
Headwaters acquisition unlocks opportunity in ~US\$16b of new product markets



USA cladding and exterior market<sup>1</sup>



USA pitched roof market<sup>2</sup>











1. Source: Market analysis, McGraw Hill housing starts, NAHB, management estimates  
 2. Source: Management estimates, Freedonia, BCC Research

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# Building Products

Portfolio of industry leading businesses with significant synergies



Stone 	Roofing 	Light Building Products 	Windows 
<p><b>Leading provider of stone veneer</b></p> <ul style="list-style-type: none"> <li>8 manufacturing plants</li> <li>3 mold facilities</li> <li>Brands: Eldorado®, Cultured Stone®, Dutch Quality®, StoneCraft™, ProStone®, Versetta®</li> </ul>	<p><b>Top provider of concrete &amp; clay tile in key regions</b></p> <ul style="list-style-type: none"> <li>15 manufacturing plants</li> <li>10 distribution sites</li> <li>Brands: Boral®, US Tile®, Entegra®, Gerard®, Metro®, Allmet®, Inspire®</li> </ul>	<p><b>Siding &amp; trim, shutters &amp; accessories, tools</b></p> <ul style="list-style-type: none"> <li>8 manufacturing plants</li> <li>Brands: Mid-America®, TruExterior®, Kleer®, Versetta®, Foundry™, Grayne®, Atlantic Premium®</li> </ul>	<p><b>Regional vinyl and aluminium window manufacturer</b></p> <ul style="list-style-type: none"> <li>3 manufacturing plants</li> <li>Brands: Krestmark®, Legacy™, Magnolia™</li> </ul>
 <p><i>Eldorado®, Stone</i></p>	 <p><i>Inspire®, Roofing</i></p>	 <p><i>Mid-America®, LBP</i></p>	 <p><i>Krestmark®, Windows</i></p>

# Building Products

Portfolio of products targeting the building envelope



## Building product envelope

- Shutters
- Windows
- Outdoor Living
- Speciality Siding
- Architectural Stone
- Gable Vents
- Trim
- Siding Accessories
- Clay Roof Tile
- Concrete Roof Tile
- Composite Roofing
- Metal Roofing
- Bead Board
- Moulding
- Roof Components
- Stone Accessories

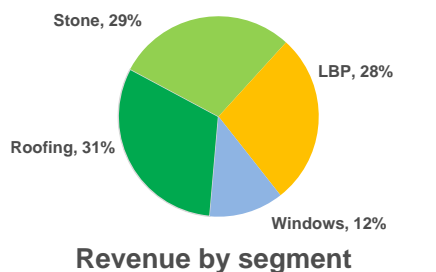


# Building Products revenue

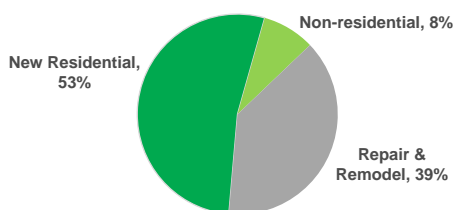
Pro forma revenue CAGR of 15% from FY2015 – FY2017 (excluding Bricks)



## Building Products revenue<sup>1</sup>

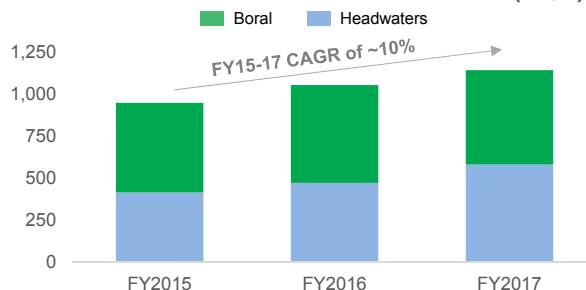


## Revenue by segment



## Building Products (Incl. Bricks)<sup>2</sup>

PRO FORMA COMBINED HISTORICAL REVENUE (US\$m)



- Boral 10% CAGR (FY2015-17) excluding Bricks
- HW 18% CAGR (FY2015-17) supported by several acquisitions
  - Metro®, SteelRock® Roofing in FY2016
  - Krestmark® Windows in FY2017

1. Pro forma for the 12 months ended 30 June for FY2017, includes Windows post-acquisition results from August 2016. Excludes Bricks.  
 2. Based on Headwaters revenue for 12 months ended 30 September for FY2015 and FY2016, and 12 months ended 30 June for FY2017, includes Windows post-acquisition results from August 2016. Boral results for 12 months ended 30 June for all years. Includes 50% share of Meridian Bricks JV underlying result for 12 months ended 30 June 2017

# Building Products

Focus on cost improvements and portfolio and manufacturing synergies



## Opportunities

- Product portfolio, brand strategy and go to market strategy
- Margin improvement initiatives
- Manufacturing network optimization
- Back office conversion and consolidation

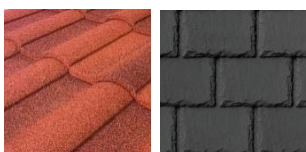
## Immediate priorities

- ✓ Organizational design and implementation
- ✓ Procurement and cost savings initiatives
- ✓ Portfolio review and optimization
- ✓ Manufacturing assessment and optimization

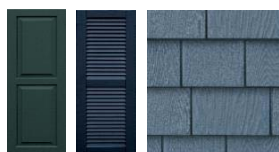
### Stone



### Roofing



### Light Building Products



### Windows



# Building Products



- **Roofing**  
Scott Jackson

- **Stone**  
Brent Spann

- **Windows**  
Joel Charlton

- **Light Building Products**  
Brian Below



Metal Product Line: Gerard Barcelona Tile

# Roofing expansion

The new portfolio delivers on **key** strategic objectives



1. **Expand geographic reach** beyond the tile markets:
  - Now a true national roofing player, with some international markets
2. **Expand product offerings** beyond clay and concrete tile:
  - Moved into the growing Metal and Composite categories
3. **Diversify end-market exposure** into non-residential and re-roof segments:
  - Combined position has a strong presence in the re-roof end segment

## 2016 Analyst Visit, Roofing Strategy

**Roofing: Strategic Intent**  
Provide full offering of high-end pitched roof solutions that will enable Boral to grow and diversify into new geographies and market segments.

**Business Overview:**

- Market leader in roof tile, but only 1% to 2% of total North America roofing
- Heavily tied to four states and new construction (production builders)
- Opportunity in new geographies, products, and market segments

**Industry Structure and Business Road Map**

**Market Structure and Outlook:**

- Category Size (2015): \$1.8B US
- Market Structure: New residential
- Growth tied to national builders
- US, FL, AZ, MI significant upside in housing starts
- Further expansion of market

**Organic Strategy:**

- Optimize manufacturing with automation
- Geographic expansion and new roof systems
- Consolidated administrative growth

**Innovation Strategy:**

- Manufacture Development - Process Improvement

**Geographic Focus:**

- 25% in New Construction
- 25% in 4 States

**Product Focus:**

- Hard Standing Tile
- Prefabricated Solutions

Headwaters Roofing offerings strengthen and transform Boral's position

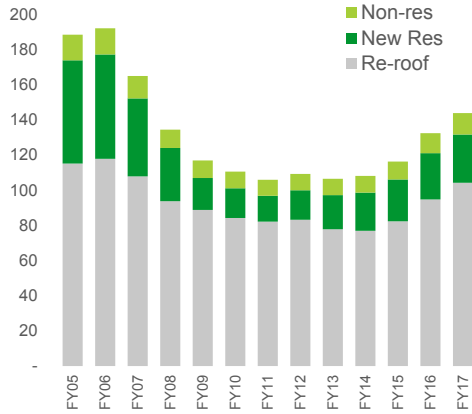


# Roofing industry: Market size and segments

The pitched roof market is currently ~140 million squares



**Market size<sup>1</sup>**  
(millions of squares)



## North America market overview

- Large segment, ~140m squares
- Three primary pitched roof markets – Re-roof, New Residential, and Non-residential
- Market supported (~70%) by large re-roof demand from +80 million aging single family detached homes in the USA
- Estimated at \$14.8 billion<sup>2</sup> annual spend
- All three segments expected to grow over the next 5 years<sup>1</sup>

1. Source: ARMA, NAHB, Moody's, Dodge, Management Estimates  
2. Source: ARMA, BCC, Management Estimates; represents size of market at underlying demand

# Roofing industry: Market segments

Re-roof construction, the most stable segment, drives demand



New Residential ~22% <sup>1</sup>	Re-roof ~70% <sup>1</sup>	Non-residential ~8% <sup>1</sup>
<ul style="list-style-type: none"> <li>▪ ~1.2 million starts in FY17<sup>1</sup></li> <li>▪ Cyclically driven</li> <li>▪ Production builder</li> <li>▪ Lower price / margin</li> <li>▪ Less fragmented sale</li> </ul>	<ul style="list-style-type: none"> <li>▪ ~4.0 million roofs / year<sup>1</sup></li> <li>▪ Stable and growing due to aging homes and storms</li> <li>▪ Re-roofer</li> <li>▪ Higher price / margin</li> <li>▪ Fragmented sale</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lower sloped applications</li> <li>▪ Specification driven</li> <li>▪ Longer sale's cycle</li> <li>▪ Higher price and margin</li> <li>▪ Less fragmented sale because of limited contractor options due to insurance requirements</li> </ul>

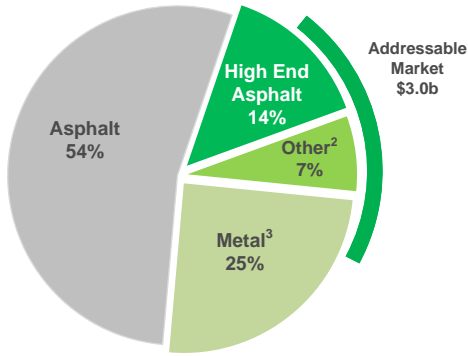
1. Source: ARMA, NAHB, Moody's, Dodge, Management Estimates; represents market at underlying demand

# Roofing industry: Product categories

The pitched roof market is US\$14.8b<sup>1</sup>, Boral's addressable market is ~US\$3.0b



North America  
Pitched Roof Market<sup>1</sup>



Total Market Size: \$14.8b<sup>1</sup>

1. Source: ARMA, BCC, Management Estimates; represents size of market at underlying demand  
 2. Other: Concrete Tile, Clay Tile, Composite, Natural Wood Shake, Natural Slate  
 3. Metal: includes Stone Coated Metal, Standing Seam Metal









## North America product overview

- Asphalt roofing accounts for ~68% of the market size in North America
- Over last several decades, market has been converting to higher end asphalt from low end asphalt
- Other high end products include Tile, Metal, Composite, and Natural Materials (Slate / Wood Shake)
- Other high end products have been gaining share from standard and high end asphalt as market acceptance increases

# Roofing industry: Product categories

Perceived value of new products increasing versus traditional asphalt



<p>Asphalt</p> 	<p>Stone Coated Metal</p> 	<p>Concrete Tile</p> 	<p>Wood</p> 
<p>High End Asphalt</p> 	<p>Advantages</p> <ul style="list-style-type: none"> <li>• Long life</li> <li>• Durable</li> <li>• Sustainable</li> <li>• Textures</li> <li>• Colors</li> <li>• Delivery                             <ul style="list-style-type: none"> <li>- Metal</li> <li>- Composite</li> </ul> </li> </ul>		<p>Slate</p> 
	<p>Composite</p> 	<p>Clay Tile</p> 	



# Boral Roofing: Strategic intent

Leverage new products to grow and diversify into new geographies and segments



## Combined position

### New geographies

- National player in the high-end roofing market
- Opportunity to leverage coverage for cross selling

### New end markets & products

- Diversified portfolio allows for participation in broader roofing market
- Stepping into re-roof market in a more significant way
- Ability to leverage broad product offering to better serve customers

### New customers

- Channel diversification reaching new customer base
- Strengthening access to remodeling customers across the US and in international markets

## Portfolio brands

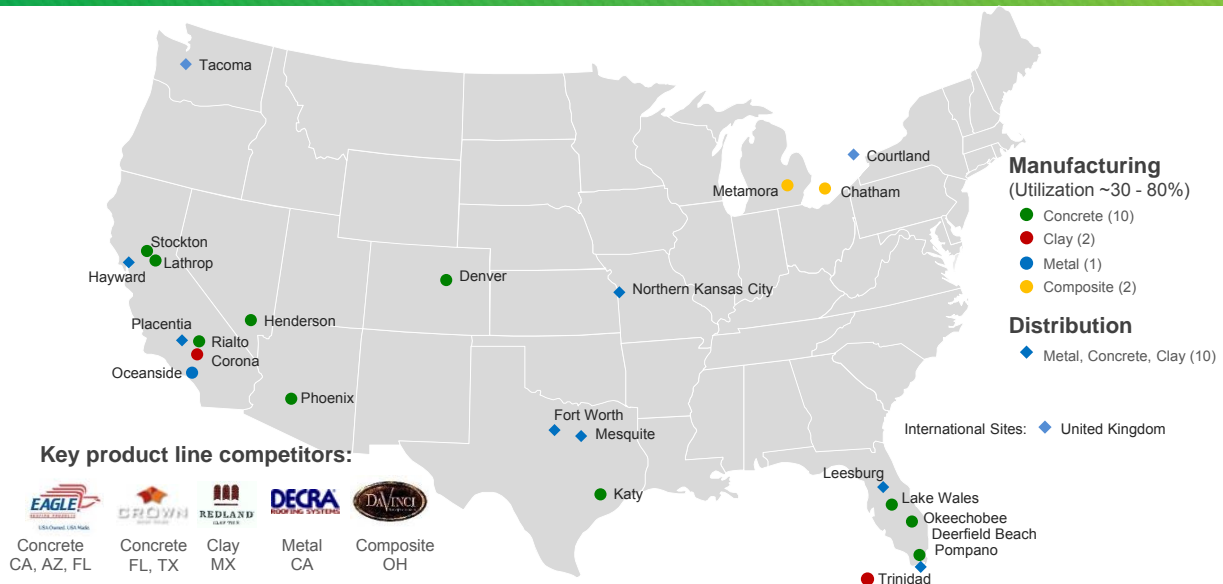


US TILE® BY BORAL®



# Boral Roofing: New geographies

Expanding beyond 4 tile states with national manufacturing and distribution



# Boral Roofing: New end markets & products

Strong repair and remodel focus, balancing out our new residential exposure

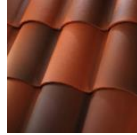


## Stone Coated Metal



- Primarily re-roof
- Some non-res

## Clay



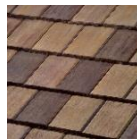
- Primarily new res
- Some re-roof

## Composite



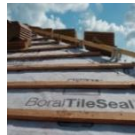
- Primarily re-roof
- Some new res

## Concrete



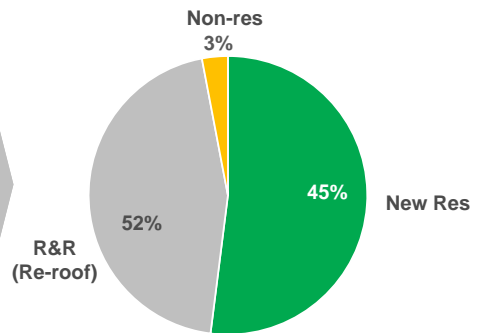
- New residential
- Some re-roof

## Components



- All end markets

## Boral end market exposure<sup>1</sup>



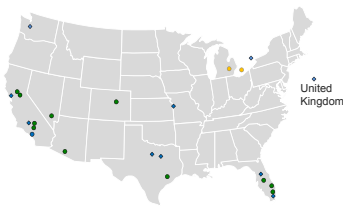
1. Source: Management estimates on pro forma FY17 numbers

# Boral Roofing: New customers

Strong ties to custom and regional builders, production builders and re-roof installers



## Manufacturing



## Resale



## Distributors



## Custom Builders



## Production Builders



## Re-roofers, Installers



# Boral Roofing: Synergy opportunities

Roofing business expected to generate >\$19m in synergies by year 4



## Roofing synergy drivers

Targeted year 1 run rate  
US\$ per annum

Within 4 years  
US\$ per annum

Procurement

Cross selling portfolio – e.g. re-sale products account for 20% of Boral Roofing sales, while Headwaters has minimal exposure

Manufacturing and network optimization

Manufacturing efficiencies

Other including organizational efficiencies

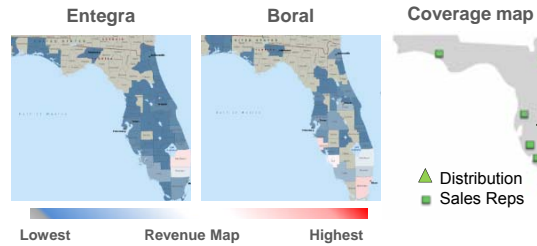
**Total**

~\$10m

>\$19m

### Synergy spotlight: Florida consolidation

- Acquired minority partner in JV (post close); now in full control
- Rationalizing network ~1 plant to close, ~1 dist. to close
- Increasing utilization of network
- Leverage combined salesforce, sales center & network



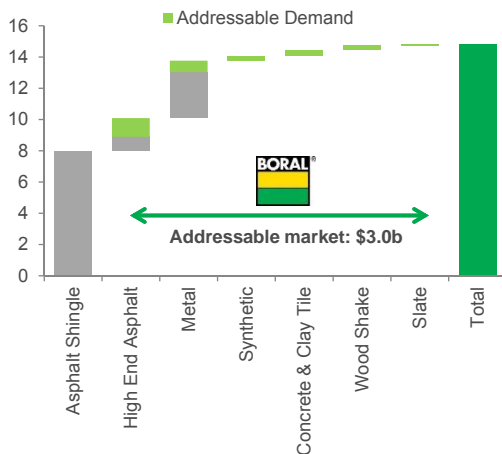
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# Boral Roofing: Strategic fit in industry

New portfolio of highly complementary businesses, creating a stronger, balanced market position



## Roofing product breakdown<sup>1</sup> (US\$b)

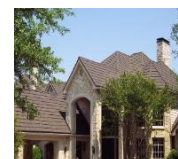


## Complementary platforms

	BORAL®	HW
<b>Product Offering</b>		
High end market	✓	✓
Geography	NV, AZ, CA, FL	N. America / Europe
Market segments	New Res	Re-roof, Non-res
Roof components	✓	—



Metal



Composite



Clay Tile

1. Sources: Freedonia, ARMA, Management Estimates

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# Roofing, a transformational step

Combined position deliver on **key** strategic objectives



## Strategic objectives

- ✓ **Expand geographic reach** beyond the tile markets
- ✓ **Expand product offerings** beyond the clay and concrete offerings
- ✓ **Diversify end-market exposure** into non-residential and re-roof segments

## Key focus areas

1. Implement Zero Harm Today
2. Organizational design
3. Complete metal roofing plant consolidation, unlock future cross-selling
4. Expand selling opportunities of full offering
5. Focus on Florida consolidation and manufacturing network optimization
6. Enhance value to our customers; broader portfolio, better service, strengthened network

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# Building Products



- **Roofing**  
Scott Jackson

- **Stone**  
Brent Spann

- **Windows**  
Joel Charlton

- **Light Building Products**  
Brian Below



Eldorado® Product Line: Dry Creek Stacked Stone

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# Stone: A strong combination positioned to grow

Combined positions deliver on **key** strategic objectives



- 1. Leading** manufactured stone provider:
  - Strategically positioned manufacturing sites and largest distribution network
- 2. Stronger** brand portfolio with expanded opportunities for growth across broader distribution network
  - “Good, Better, Best” product offering
- 3. Increased** category awareness through marketing and new product development
  - Grow overall wall share and applications of stone
- 4. Expanded** sales through Architectural specifications
  - Commercial and Builder account relationships

## 2016 Analyst Visit, Stone Strategic Intent

**Stone: Strategic Intent**  
Manufactured stone veneer leader across residential new construction, light commercial, and repair and remodel segments

**Business Overview:**

- Leading brand manufactured stone veneer
- Diversified segment including new construction, interior/exterior, and repair and remodel
- Geographic exposure – US and Canada
- Opportunity in optimizing network, expanding sales offering (good, better, best), product development, innovation

**Industry Structure and Business Road Map**

Category Size (est. capex): US\$2.3B  
Market Position: New residential, non-residential and R&R

Market Focus:

- US and Canada
- Regional competition
- Regional product preferences
- Expanding market

**Organic Strategy:**

- Brand-led - Better/Best
- Reach and accessory growth
- Continue new brand penetration
- Increase product development

**Strategic Strategy:**

- Sustainable development process improvement

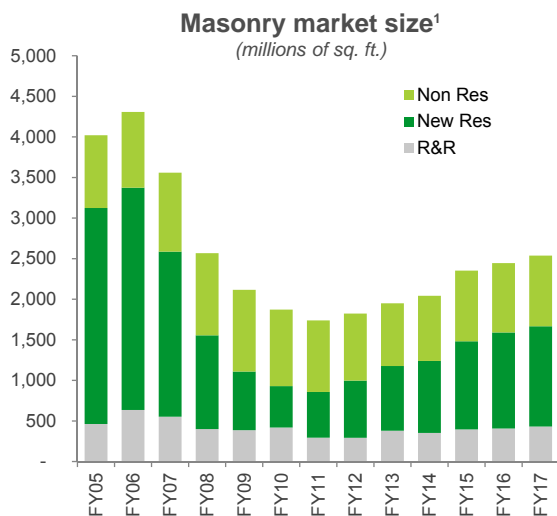
Non-residential, multi-family, repair and remodel

2015 Designer Cultural Stone Collection

*Headwaters Stone business helps transform Boral's Stone position*

# Masonry industry: Market size and segments

The current market is +2,500 million square feet



## North America market overview

- Large segment, +2,500m square feet
- Mainly driven by new construction but emerging outdoor living driving R&R growth
- R&R and Non Res more stable through the market cycle driven by home remodel projects and retail / commercial accents
- Stone estimated at ~\$2.3 billion<sup>2</sup> annual spend which includes manufactured and real stone

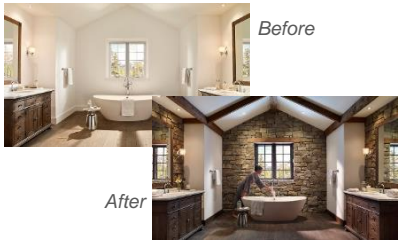
1. Market analysis, NAHB for square foot, management estimates  
2. Source: NAHB, Principia, and management estimates; market size at Underlying Demand

# Masonry industry: Market segments

Higher exposure to new construction



New Residential ~49% <sup>1</sup>	Repair & Remodel ~16% <sup>1</sup>	Non-residential ~35% <sup>1</sup>
<ul style="list-style-type: none"> <li>~1.2 million starts in FY17</li> <li>Cyclically driven</li> <li>Custom builder</li> <li>Regional pricing</li> <li>Less fragmented sale</li> </ul>	<ul style="list-style-type: none"> <li>Limited exposure</li> <li>Expanding presence through hardscapes and interior remodel</li> <li>Fragmented sale</li> </ul>	<ul style="list-style-type: none"> <li>Specification driven</li> <li>Longer sale's cycle</li> <li>Stronger price and margin</li> <li>Strong focus on schools, office and retail applications</li> </ul>



1. Market analysis, NAHB for square foot, management estimates; represents market at underlying demand

# Masonry industry: Product categories

Stone competes at different value points in industry



Stucco Economical



Stucco Premium



Block



Brick



Thin Brick



### Advantages

- Aesthetics
- Durable
- Low maintenance
- Sustainable
- Ease of installation
- Availability

Manufactured Stone Economical



Manufactured Stone Premium



Real Stone



Cost and perceived value

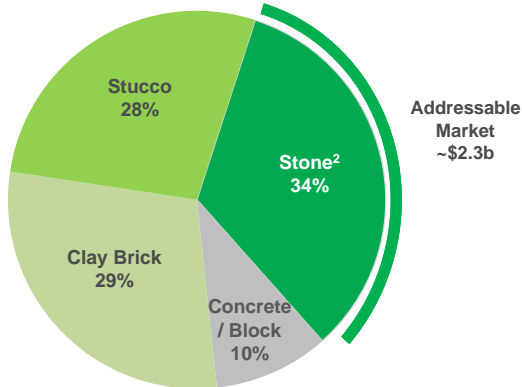


# Masonry industry: Product categories

The masonry cladding market is ~US\$6.9b<sup>1</sup>, Boral's opportunity is ~US\$2.3b



## U.S. Masonry Cladding<sup>1</sup>



Total Market Size: ~\$6.9b<sup>1</sup>

1. Source: NAHB, Principia, and management estimates; market size at Underlying Demand  
 2. Includes real and manufactured stone

## North America product overview

- Brick and Stucco product categories account for ~57% of masonry cladding segment
- Stone, manufactured and real, account for ~34% of the segment, valued at ~\$2.3billion<sup>1</sup>
- Residential recovery has led to a strong national builder market presence
- Manufactured stone veneer products continue to be highly desirable due to ease of installation, low maintenance and affordability

# Boral Stone: Strategic intent

Highly complementary businesses create a stronger position



## Combined position

### Manufacturing network

- Opportunity to optimize and leverage best practices
- Regionally positioned in key geographies

### Products and distribution

- Diversified portfolio allows for participation at all value levels
- Leadership position in innovation
- Ability to leverage brand awareness on broader scale
- Broadest North American distribution

### End market exposure and customers

- Sales across residential, remodel and non-residential
- Diversified distribution and customer base

## Portfolio brands

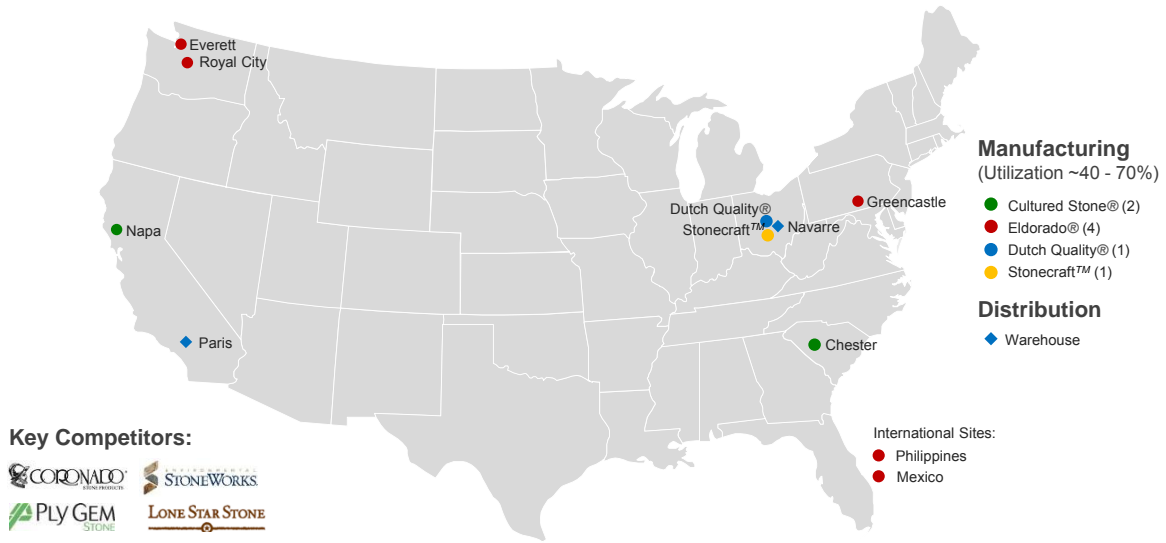
### Cultured Stone®



### Boral ProStone®

# Boral Stone: Manufacturing positioned in key markets

Leading position across the nation servicing all stone markets



# Boral Stone: Diversified portfolio

A stronger "good, better, best" product portfolio to maximize sales



## Low end Tier (Good)

**Brands: Stonecraft™, ProStone®**

- Streamlined product offering
- Value line, limited colors
- Priced competitively
- Strong regional players

Stonecraft™



ProStone®

## Middle Tier (Better)

**Brand: Dutch Quality®**

- Streamlined product offering
- Consistent quality
- Competitively priced
- Strong regional player

Dutch Quality®



## Upper Tier (Best)

**Brands: Cultured Stone®, Eldorado®**

- High authenticity and design
- Large selection of colors and textures
- Architecturally focused
- Available nationwide

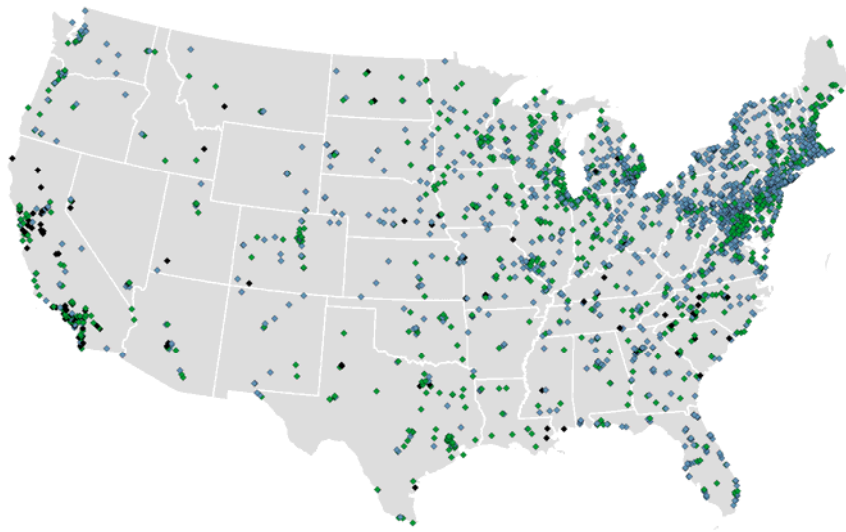
Cultured Stone®



Eldorado® Stone

# Boral Stone: Broad distribution reach

National distribution network services all markets



North American distribution points:  
+2,600 Distribution Points

- ◆ Boral Stone Brands
- ◆ HW Stone Brands
- ◆ Shared Distribution

# Boral Stone: End markets & products

Diverse exposure to end markets



**Cultured Stone®**  
Pro-Fit LedgeStone®



**Cultured Stone®**  
Del Mare LedgeStone®



**Dutch Quality®**  
Sienna Stacked Ledge™



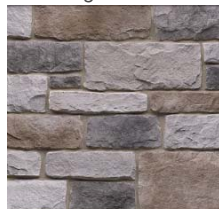
**Eldorado®**  
LedgeCut33®



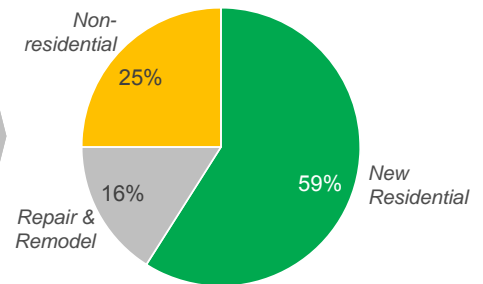
**Eldorado®**  
Outdoor Living



**Stonecraft™**  
Heritage Collection



Boral end market exposure<sup>1</sup>



1. Source: Management estimates on pro forma FY17 numbers

# Boral Stone: Diversified customer base

Strong relationships with builders, architects and the mason

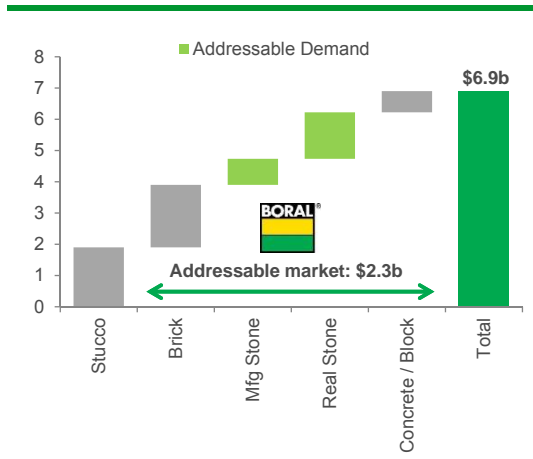


# Boral Stone: Strategic fit in industry

Complementary businesses reaching all levels of the market



Stone product breakdown<sup>1</sup> (US\$b)



Complementary platforms

<b>Product Offering</b>		
Manufactured Stone	✓	✓
Geography	N. America	N. America
Brands	2	3
Premium Brands	1	1
Good / Better Brands	1	2
Outdoor Living	-	✓



1. Market analysis at Underlying Demand, NAHB, Principia, and management estimates

# Boral Stone: Synergy opportunities

Stone business expected to generate >\$29m in synergies by year 4

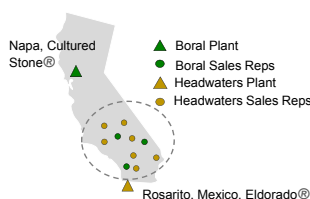


Stone synergy drivers	Targeted year 1 run rate US\$ per annum	Within 4 years US\$ per annum
Plant network optimization		
Sales coverage		
Procurement		
Manufacturing equipment		
Other including organizational efficiencies		
<b>Total</b>	<b>~\$6m</b>	<b>&gt;\$29m</b>

## Opportunities

- Leverage best practices across manufacturing network
- Leverage product portfolio to increase customer solutions and profitability
- Maximize combined salesforce to improve customer experience and brand awareness

## Synergy spotlight: Leverage combined sales coverage<sup>1</sup>



- Optimize territory size, more efficient geographic coverage
- High customer focus, less time travelling

1. Maps including sales rep locations conceptual only to illustrate synergy opportunity

# Stone, Delivering on portfolio strategy

Combined positions deliver on **key** strategic objectives



## Strategic objectives

- ✓ **Leading** manufactured stone provider
- ✓ **Stronger** brand portfolio with expanded opportunities for growth across broader distribution network
- ✓ **Increased** category awareness through marketing and new product development
- ✓ **Expanded** sales through Architectural specifications

## Key focus areas

1. Implement Zero Harm Today
2. Organizational design
3. Enhanced go to market strategy, leverage portfolio to increase customer solutions
4. Operational optimization, best manufacturing practices
5. Enhanced customer value, broader product "Good, Better, Best" offering

## Building Products



- **Roofing**  
Scott Jackson

- **Stone**  
Brent Spann

- **Windows**  
Joel Charlton/David Decker

- **Light Building Products**  
Brian Below



Krestmark® Windows

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## Windows fit with Boral

New addition is a good fit and win for Boral



1. Production costs are **highly variable**
  - Ability to scale business to perform through the cycle
2. **Low fixed cost** asset base
  - Attributes to strong margins
3. **Customer base** well known across Boral
  - Strengthens relationships with key customers



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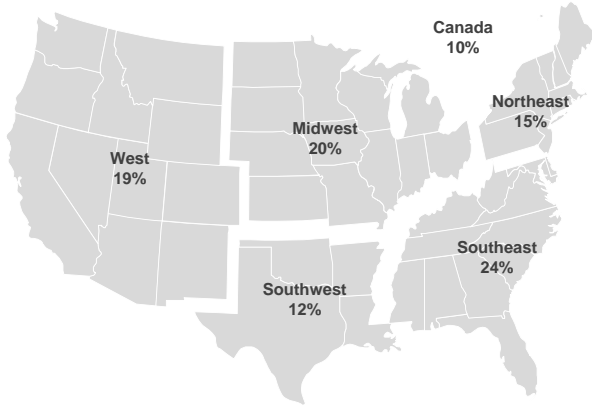
# North American windows & patio door industry

A large national industry which has changed over time



## Windows and patio doors geography<sup>1</sup>

percentages based on market size by \$ value



1. Principia and management estimates, range represents market size at underlying demand

## Market overview

- North American market estimated at ~\$8-10 billion<sup>1</sup>
- 85% to 90% windows; 10% to 15% doors
- Large national players compete with regional and local businesses
- Industry consolidation has and continues to occur

## Large competitors

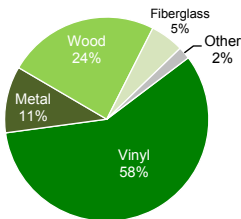


# Windows & patio door industry product segments

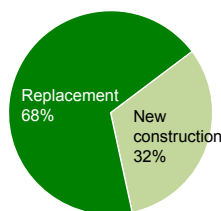
Vinyl and replacement windows are largest segments of the market



## Demand by product segment<sup>1</sup>



## Demand by end use<sup>1</sup>



## Product segmentation

- Industry has shifted over time from wood to Vinyl
- As housing stock ages (+80m aging single family homes), replacement window demand to remain strong
- Single family homes (new and R&R) drives demand



Repair & Remodel



New Construction

1. North American totals; source: Principia and management estimates; represents market at underlying demand

# Windows & patio door industry market segments

Market driven by new residential, single family construction



Single Family	~71% <sup>1</sup>	Multi Family	~23% <sup>1</sup>	Light Commercial	~6% <sup>1</sup>
<ul style="list-style-type: none"> <li>1.2 million starts in FY17</li> <li>New construction with various quality preferences</li> <li>Repair and Replacement drives majority of volume</li> <li>Specialty products</li> </ul>		<ul style="list-style-type: none"> <li>Longer sell cycle</li> <li>Standard products</li> <li>Low cost / competitive</li> </ul>		<ul style="list-style-type: none"> <li>Specification driven</li> <li>Longer sale's cycle</li> <li>Custom orders</li> </ul>	



1. Principia and management estimates; represents market at underlying demand

# Boral Windows: Strategic fit

Headwaters acquired windows in 2016

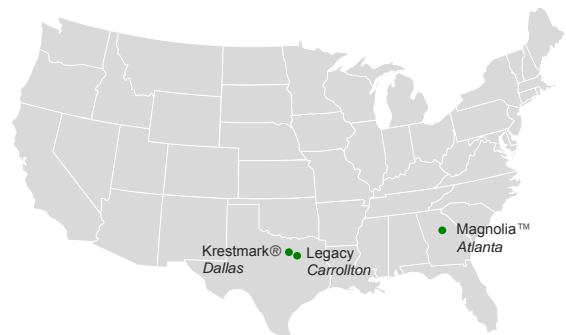


## History

- 2004: Krestmark® founded, manufactured aluminum windows in Texas
- 2006: Developed new vinyl window product line
- 2014: Established Legacy Brand
- 2016: Acquired by Headwaters
- 2017: Pre-close acquisition of Magnolia™ Windows in Georgia



## Geographic footprint



- Regional focus mainly in Texas and Georgia
- Roughly 700 mile distribution footprint connects plant network
- Sales in 14 states across the southwest and southeast regions

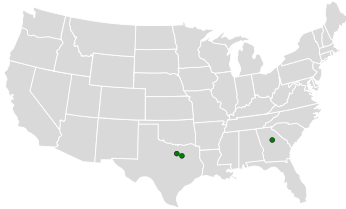


# Boral Windows: Value chain

Sells through multiple channels with a focus on builders



## Manufacturing network



## Distributors



## Installers



## Production Builder



## Remodelers



Focus since 2004 founding has been on serving new home construction, building long relationships with reliable, on time service

# Boral Windows: End Markets & Products

Full product portfolio to service the market



## Standard Vinyl



## Impact Vinyl



IMPACT 4000

## Specialty



## Patio Doors



## Aluminum

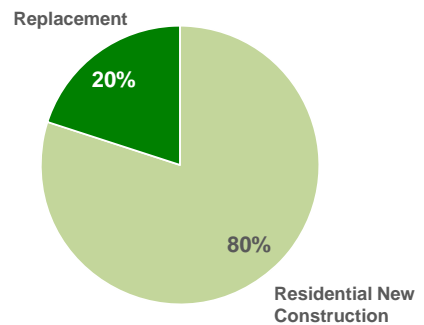


ALUMINUM 175

## Custom



## Boral Windows end market exposure<sup>1</sup>



End market exposure reflects go to market strategy since founding

1. Source: Management estimates on pro forma FY17 numbers

# Boral Windows: Strategic priorities

Vision: "Raising the bar in the windows industry with quality and service"



## Strategic objectives

- ✓ Production costs are **highly variable**, ability to scale the business
- ✓ **Low fixed cost** asset base, margins above industry average
- ✓ **Customer base** well known, allows increased share of wallet from large builders in growth areas

## Key focus areas

1. Implement Zero Harm Today
2. Leverage value to customer, "local" service model is successful
3. Relocate Magnolia™ Facility, preparation for growth in Southeast
4. Growth Opportunities
  - Geographic reach around current assets
  - Repair and remodel / replacement window segment

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...Continuing into DAY 2



## BORAL NORTH AMERICA

### Building Products

Chris Fenwick,  
Group President,  
Building Products

Joel Charlton,  
Group President,  
Windows & Innovation



# Building Products



- **Roofing**  
Scott Jackson
- **Stone**  
Brent Spann
- **Windows**  
Joel Charlton



*Kleer®, Atlantic Premium®, Mid America®*

- **Light Building Products**  
Brian Below

# Why Light Building Products (LBP)?

LBP delivers on **all** strategic portfolio priorities



1. Transform from **high cost / fixed asset** based portfolio:
  - LBP has lower cost / asset base and is in emerging sustainable industries
2. Diversify Boral's heavy reliance on **new residential**:
  - LBP has high correlation to stable repair and remodel segment
3. Evolve Boral's reliance on **maturing markets / categories**:
  - Emerging LBP products are still penetrating market and taking share from traditional products
4. Leverage **distribution footprint** to accelerate penetration of newer products (eg. TruExterior® Trim & Siding)

## 2015 Analyst Visit, Portfolio Aspirations

BORAL USA INVESTOR DAY 2015	
Priority 3. Acquisition Strategy	
Positioning businesses to transform the portfolio and achieve ROFE targets	
Current Portfolio	Aspiration
• High cost assets, high energy	• Low asset base, low energy, sustainable
• High fixed cost platform	• Variable cost based manufacturing
• Residential focus	• Balanced market segments <sup>1</sup>
• Mature markets	• Innovative technology platform
• High skilled labor	• Low skilled labor

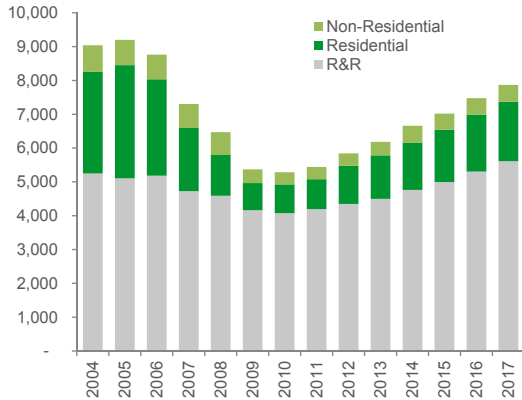
*Headwaters LBP business is major step in transforming portfolio*

# LBP Industry: Market segments

The siding and trim market is currently ~8 billion square feet



**Market size<sup>1,2</sup>**  
(millions of square feet)



1. Market analysis, NAHB for square foot, Principia for value, and management estimates
2. Excludes shutters, accessories, and tools
3. Market analysis, NAHB, Principia, and management estimates; represents market at underlying demand
4. Based on key external market forecasters

## Market overview

- Large market, ~8 billion square feet
- Three primary trim and siding segments – repair and remodel, new residential, and non-residential
- Market supported (~68% in FY17) by large repair and remodel demand from +80 million aging, single family detached homes in the USA
- Estimated at ~US\$7.9 billion<sup>3</sup> annual spend
- All three segments expected to continue growth trends over next 12 to 24 months<sup>4</sup>

# LBP Industry: Market segments

Repair & remodel drives construction, creating stable demand through the cycle



New Residential ~24% <sup>1</sup>	Repair & Remodel ~68% <sup>1</sup>	Non-residential ~8% <sup>1</sup>
<ul style="list-style-type: none"> <li>▪ ~1.2 million starts in FY2017</li> <li>▪ Cyclically driven</li> <li>▪ Custom, production &amp; regional builder</li> <li>▪ 2-step, 1-step</li> </ul>	<ul style="list-style-type: none"> <li>▪ Stable and growing due to aging homes and harsh weather</li> <li>▪ Siding installer, contractor</li> <li>▪ 2-step, 1-step, retail</li> <li>▪ Fragmented end user</li> </ul>	<ul style="list-style-type: none"> <li>▪ Specification driven</li> <li>▪ Longer sale's cycle</li> <li>▪ 2-step, 1-step</li> </ul>



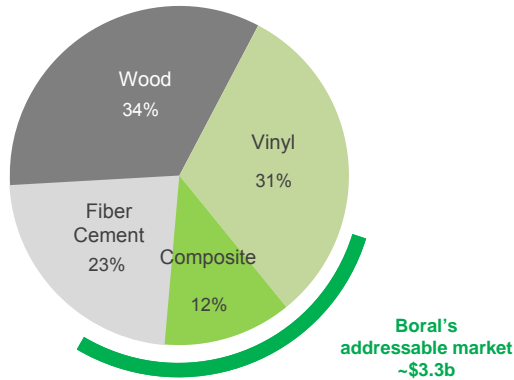
1. Market analysis, NAHB for square foot, Principia for value, and management estimates; represents market at underlying demand

# LBP Industry: Product categories

The total market is ~US\$7.9b<sup>1</sup>, Boral's addressable market is ~US\$3.3b



## Wood and wood like replacement<sup>1,2</sup> (US\$ million)



Total market size: \$7.9b<sup>1</sup>

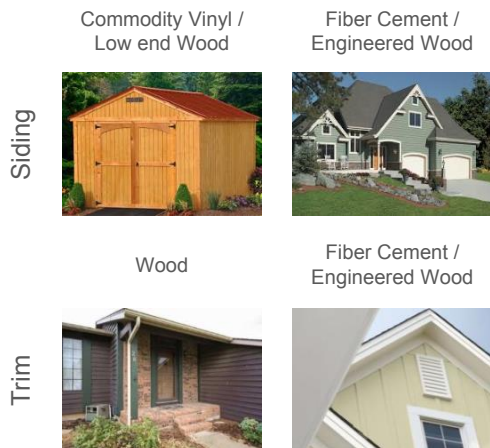
1. Market analysis, NAHB, Principia, and management estimates; represents market at underlying demand  
2. Excludes shutters, accessories, and tools market





## Product overview

- Wood is market leader but comparative growth less than emerging composite and higher grade vinyl and fiber cement products
- Vinyl continues to gain against wood due to low cost installation and low maintenance
- Fiber Cement continues to maintain share among cladding and trim markets
- Composite materials show the highest potential with low cost / low risk solutions

# LBP Industry: Siding and trim categories

Categories range from low end wood to high-performance composite materials



	Specialty Vinyl	Poly Ash
		
	Poly Ash	PVC
		

**Advantages**

- Durable
- Low maintenance
- Ease of install
- Aesthetics
- Profiles
- Sustainable

# LBP Industry: Shutters and accessories categories

Accessories are essential housing accents supplied into all Cladding markets



	Decorative - Economic	Decorative - Premium	Functional - Economic	Functional - Premium
Shutters				
Accessories & Other	Vents 	Tools 	Blocks 	Window Wells 

# What is Boral's LBP?

Our business consists of Siding, Trim, Shutters, Accessories and Tools



- **Siding & Trim:** Includes specialty vinyl, PVC, poly-ash and panelised stone offerings
- **Shutters and Accessories:** Includes decorative and functional shutters, and siding accessories (blocks, vents, etc.)
- **Other:** Siding tools and window wells

Siding	Trim	Shutters	Accessories	Tools	Window Wells

# Boral LBP: Product categories

Supported by strong base of brands and multiple technologies

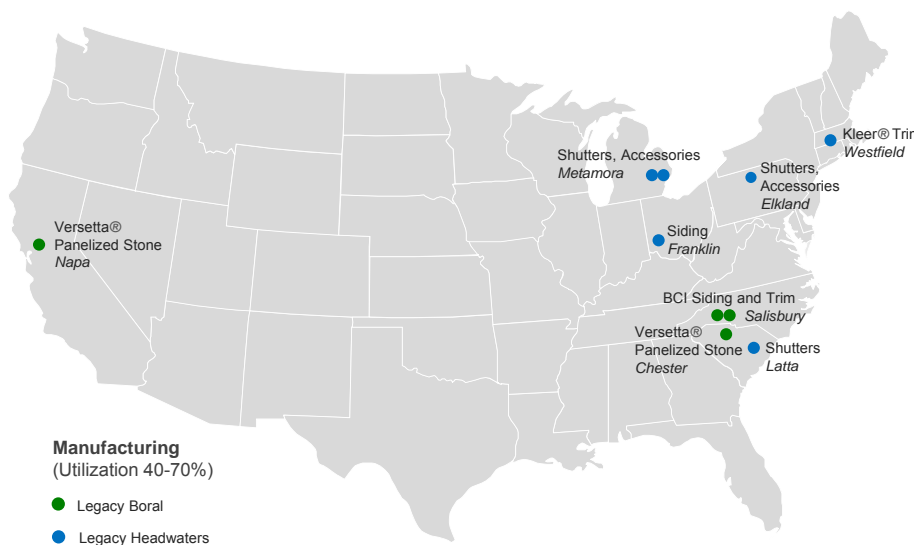


Category	Description	Primary material	Brands
Siding and Trim	Vinyl Siding	Vinyl	Foundry™ / Grayne®
	PVC Trim	Polyvinyl chloride (PVC)	Kleer®
	Poly Ash Siding / Trim	Polyurethane	TruExterior®
	Panelized Stone Siding	Concrete	Versetta®
Shutters and Accessories	Decorative shutters, vents, blocks	Polyvinyl chloride (PVC)	Mid-America® / Builders Edge® / Vantage®
	Blocks and Mounts	Polyvinyl chloride (PVC)	Sturdimount®
	Functional Shutters	Composite	Atlantic Premium®
Other	Metal siding tools	Aluminum	Tapco® Tools
	Egress wells	Polyethylene	Wellcraft®



# Boral LBP: Manufacturing footprint

Industry leading competitor in key geographic markets



### Key Product Line Competitors:

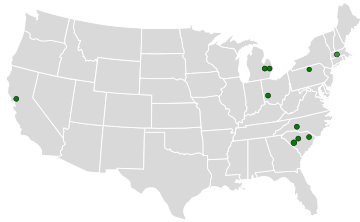


# Boral LBP: Value chain

## National distribution across three channel categories



### Manufacturing



### Channel Partners (2-Step, 1-Step, Retail)



### Builders, Installers, Contractors and DIY



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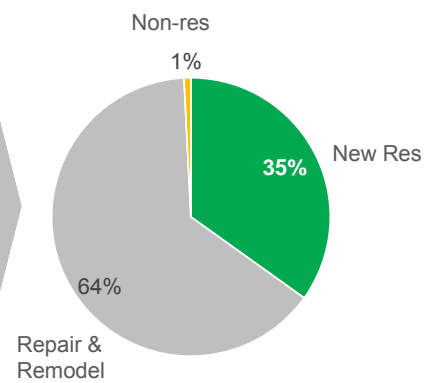
# Boral LBP: End market exposure

## Diversified end markets led by stable repair and remodel segment



Siding, Trim <sup>1</sup>	Vinyl Siding, Trim	Panelized Stone	Composite Siding, Trim
			
	Grayne®, Lakeside Blue	Versetta®, Plum Creek	TruExterior®, Siding / Trim
Shutters, Accessories <sup>2</sup>	Functional Shutters	Decorative Shutters	Tools / Other
			
	Atlantic Premium®, Bahama	Mid-America®, Standard	Tapco®, SturdiMount®

### Boral end market exposure<sup>3</sup>



1. Siding & Trim materials include poly-vinyl, stone, poly-ash  
 2. Accessories include specialty metal tools, window sills, mounts, vents, blocks  
 3. Pro forma FY2017 sales split per management estimates

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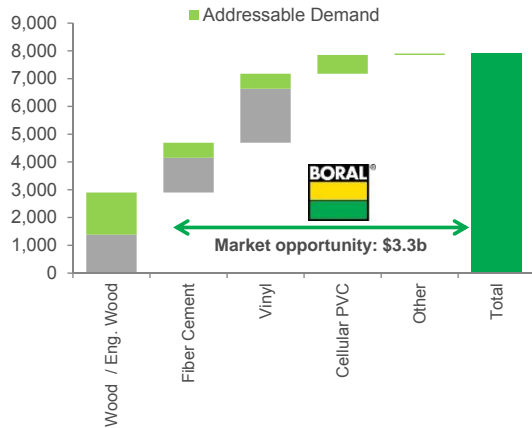


# Boral LBP: Strategic fit in the industry

Products well positioned to play in multiple categories



## LBP product breakdown<sup>1</sup> (US\$m)



## Complementary platforms

<b>Product Offering</b>		
LBP offering	✓ emergent	✓ scaled & mature
Geography	national	national
Market segments	R&R, new res, non-res	R&R, new res, non-res
Emerging technology	✓	—

1. Market analysis, NAHB for square foot, Principia for value, and management estimates, represents market at underlying demand

# Boral LBP: Synergy opportunities

LBP business expected to generate >\$11m in synergies by year 4



## LBP synergy drivers

- Procurement
- Sales coverage, cross selling
- Retail presence
- Organisational efficiencies
- Other

Targeted year 1 run rate  
US\$ per annum

Within 4 years  
US\$ per annum

<b>Total</b>	<b>~\$5m</b>	<b>&gt;\$11m</b>
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### Synergy spotlight: Leverage combined sales teams to capture incremental sales

- Cross sell products via larger channel network
- Expansion in Big Box retail presence
- Leverage National Account relationships

### Home Depot Exteriors Product Launch



# LBP Delivering on portfolio strategy

Segment delivers on **all** strategic portfolio priorities

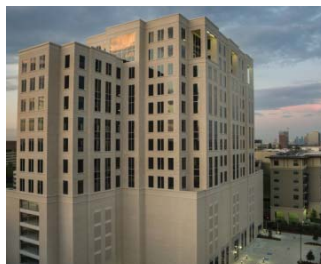


## Strategic objectives

- ✓ Transform from **high cost / fixed asset** based portfolio
- ✓ Diversify Boral's heavy reliance on **new residential**
- ✓ Evolve Boral's reliance on **maturing markets / categories**
- ✓ Leverage **distribution footprint** to accelerate penetration of newer products (eg. TruExterior® Trim & Siding)

## Key focus areas

1. Implement Zero Harm Today
2. Organizational design
3. Align lean culture with best practices across network
4. Streamline brands, channel and products
5. Leverage operations and R&D resources
6. Grow emerging products specialty vinyl, PVC trim, and Poly-Ash products to supplement mature products in portfolio



# BORAL NORTH AMERICA

Innovation

Joel Charlton,  
Group President,  
Windows & Innovation



# Agenda



## Introduction, Strategy and Outlook

Mike Kane

## Boral North America Overview

David Mariner

## Construction Materials

Keith Depew

## Building Products

Chris Fenwick, Joel Charlton

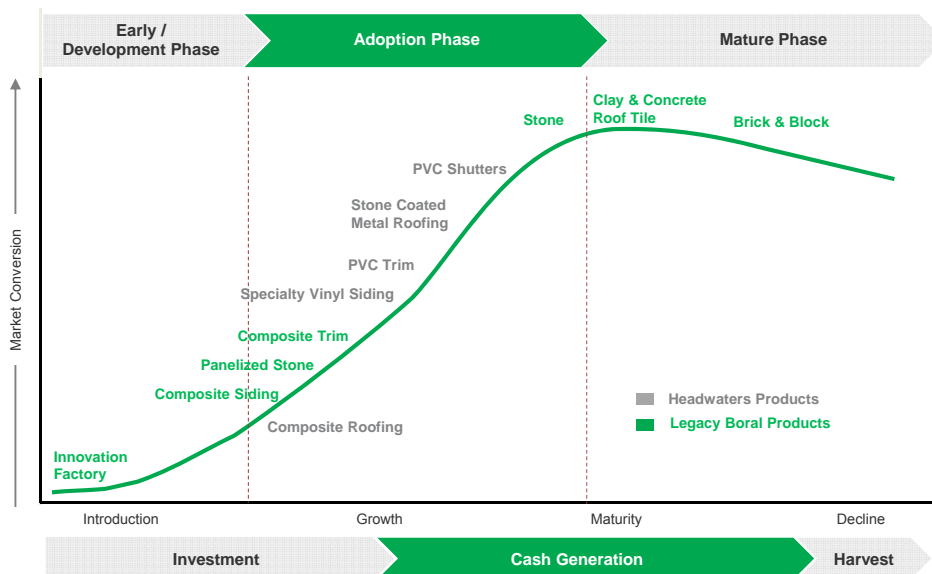
## Innovation

Joel Charlton



# Innovation: Fix

Headwaters complements Boral's product portfolio



# Innovation: Growth platforms

New Poly-Ash category continues to provide strong organic growth



	Product	Application	Channel	End Markets	Strategy
TRIM		Exterior	1-step and 2-step	New Res / R&R	<ul style="list-style-type: none"> <li>New to world poly ash product</li> <li>Increased R&amp;R exposure</li> </ul>
SIDING		Exterior	1-step and 2-step	New Res / R&R	<ul style="list-style-type: none"> <li>Product portfolio expansion</li> <li>New category</li> </ul>
<b>In-market pilot</b>					
NEW		Interior	2-step, Pro-dealer, Retail	Primarily R&R	<ul style="list-style-type: none"> <li>Entry point into interior building applications</li> <li>Reach new customers and new channels</li> </ul>

# Innovation: New growth opportunities

Headwaters acquisition opens a number of innovation opportunities



Pre close Deal closing Post close



*Focused approach to improve our cost base and develop next generation product platforms*

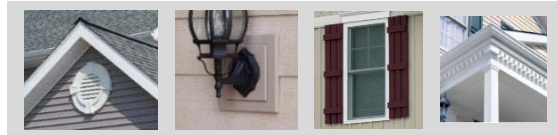
Trim



Tapco®



Boral Building Products



Ash

Boral PACT®



Ash

HW RestoreAir®



Boral Construction Materials



## Strategic priorities & opportunities

Vision: "Delivering tomorrow's innovation today"



### Strategic objectives

- ✓ *Align with Boral's transformation strategy by **accelerating growth** through innovation*
- ✓ *Develop **proprietary technology** for competitive advantage, including cost advantage*
- ✓ ***Respond to market trends** with high performance, lighter weight, more durable, lower maintenance and more sustainable (eg. recycled content, low energy) products*
- ✓ ***Maintain momentum** - launch a new product every year from the Innovation Factory*

### Key focus areas

1. Implement Zero Harm Today
2. Continue to expand Poly-Ash platform
3. Accelerate new product extensions
4. Continuous improvement – including to reduce material costs

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## Boral North America well positioned to deliver synergies & growth



- 1 Industry leading competitor with national footprint
- 2 Significant synergies identified in Fly Ash, Stone, Roofing, Light Building Products and Corporate
- 3 Fundamentals signal healthy market growth over next 5+ years
- 4 Grow from innovation by capitalising on network scale and investing in early stage products
- 5 Strong management team with extensive industry experience and track record of integrating operations and realising synergies

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www.boral.com.au



## Disclaimer



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To the extent that this document may contain forward-looking statements, such statements are not guarantees or predictions of future performance, and involve known and unknown risks, uncertainties and other factors, many of which are beyond our control, and which may cause actual results to differ materially from those expressed in the statements contained in this release.

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