

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**  
Washington, D.C. 20549

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**FORM 6-K**

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**Report of Foreign Private Issuer  
Pursuant to Rule 13a-16 or 15d-16  
under the Securities Exchange Act of 1934**

**For the Month of September 2016**

**1-15240  
(Commission File Number)**

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**JAMES HARDIE INDUSTRIES plc**  
(Translation of registrant's name into English)

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**Europa House, Second Floor  
Harcourt Centre  
Harcourt Street, Dublin 2, Ireland  
(Address of principal executive offices)**

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Indicate by check mark whether the registrant files or will file annual reports under cover Form 20-F or Form 40-F.

Form 20-F       Form 40-F

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1): Not Applicable

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7): Not Applicable

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### *Forward-Looking Statements*

This Form 6-K contains forward-looking statements. James Hardie Industries plc (the “company”) may from time to time make forward-looking statements in its periodic reports filed with or furnished to the Securities and Exchange Commission, on Forms 20-F and 6-K, in its annual reports to shareholders, in offering circulars, invitation memoranda and prospectuses, in media releases and other written materials and in oral statements made by the company’s officers, directors or employees to analysts, institutional investors, existing and potential lenders, representatives of the media and others. Statements that are not historical facts are forward-looking statements and such forward-looking statements are statements made pursuant to the Safe Harbor Provisions of the Private Securities Litigation Reform Act of 1995.

Examples of forward-looking statements include:

- statements about the company’s future performance;
- projections of the company’s results of operations or financial condition;
- statements regarding the company’s plans, objectives or goals, including those relating to strategies, initiatives, competition, acquisitions, dispositions and/or its products;
- expectations concerning the costs associated with the suspension or closure of operations at any of the company’s plants and future plans with respect to any such plants;
- expectations concerning the costs associated with the significant capital expenditure projects at any of the company’s plants and future plans with respect to any such projects;
- expectations regarding the extension or renewal of the company’s credit facilities including changes to terms, covenants or ratios;
- expectations concerning dividend payments and share buy-backs;
- statements concerning the company’s corporate and tax domiciles and structures and potential changes to them, including potential tax charges;
- statements regarding tax liabilities and related audits, reviews and proceedings;
- expectations about the timing and amount of contributions to Asbestos Injuries Compensation Fund (AICF), a special purpose fund for the compensation of proven Australian asbestos-related personal injury and death claims;
- expectations concerning the adequacy of the company’s warranty provisions and estimates for future warranty-related costs;
- statements regarding the company’s ability to manage legal and regulatory matters (including but not limited to product liability, environmental, intellectual property and competition law matters) and to resolve any such pending legal and regulatory matters within current estimates and in anticipation of certain third-party recoveries; and
- statements about economic conditions, such as changes in the US economic or housing recovery or changes in the market conditions in the Asia Pacific region, the levels of new home construction and home renovations, unemployment levels, changes in consumer income, changes or stability in housing values, the availability of mortgages and other financing, mortgage and other interest rates, housing affordability and supply, the levels of foreclosures and home resales, currency exchange rates, and builder and consumer confidence

Words such as “believe,” “anticipate,” “plan,” “expect,” “intend,” “target,” “estimate,” “project,” “predict,” “forecast,” “guideline,” “aim,” “will,” “should,” “likely,” “continue,” “may,” “objective,” “outlook” and similar expressions are intended to identify forward-looking statements but are not the exclusive means of identifying such statements. Readers are cautioned not to place undue reliance on these forward-looking statements and all such forward-looking statements are qualified in their entirety by reference to the following cautionary statements.

Forward-looking statements are based on the company’s current expectations, estimates and assumptions and because forward-looking statements address future results, events and conditions, they, by their very nature, involve inherent risks and uncertainties, many of which are unforeseeable and beyond the company’s control. Such known and unknown risks, uncertainties and other factors may cause actual results, performance or other achievements to differ materially from the anticipated results, performance or achievements expressed, projected or implied by these forward-looking statements. These factors, some of which are discussed under “Risk Factors” in Section 3 of the Form 20-F filed with the Securities and Exchange Commission on 19 May 2016, include, but are not limited to: all matters relating to or arising out of the prior manufacture of products that contained asbestos by current and former company subsidiaries; required contributions to AICF, any shortfall in AICF and the effect of currency exchange rate movements on the amount recorded in the company’s financial statements as an asbestos liability; governmental loan facility to AICF; compliance with and changes in tax laws and treatments; competition and product pricing in the markets in which the company operates; the consequences of product failures or defects; exposure to environmental, asbestos, putative consumer class action or other legal proceedings; general economic and market conditions; the supply and cost of raw materials; possible increases in competition and the potential that competitors could copy the company’s products; reliance on a small number of customers; a customer’s inability to pay; compliance with and changes in environmental and health and safety laws; risks of conducting business internationally; compliance with and changes in laws and regulations; currency exchange risks; dependence on customer preference and the concentration of the company’s customer base on large format retail customers, distributors and dealers; dependence on residential and commercial construction markets; the effect of adverse changes in climate or weather patterns; possible inability to renew credit facilities on terms favorable to the company, or at all; acquisition or sale of businesses and business segments; changes in the company’s key management personnel; inherent limitations on internal controls; use of accounting estimates; and all other risks identified in the company’s reports filed with Australian, Irish and US securities regulatory agencies and exchanges (as appropriate). The company cautions you that the foregoing list of factors is not exhaustive and that other risks and uncertainties may cause actual results to differ

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materially from those referenced in the company's forward-looking statements. Forward-looking statements speak only as of the date they are made and are statements of the company's current expectations concerning future results, events and conditions. The company assumes no obligation to update any forward-looking statements or information except as required by law.

**EXHIBIT INDEX**

<b><u>Exhibit No.</u></b>	<b><u>Description</u></b>
99.1	2016 USA Investor Tour – Cover
99.2	2016 USA Tour – North America
99.3	2016 USA Tour- Market and Capacity
99.4	2016 USA Tour – Manufacturing and Operations
99.5	2016 USA Tour – Market Position
99.6	2016 USA Tour – Interiors
99.7	2016 USA Tour - Technology

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**SIGNATURES**

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Date: 15 September 2016

**James Hardie Industries plc**

By: /s/ Natasha Mercer  
Natasha Mercer  
Company Secretary

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**James Hardie - USA  
Investor/Analyst Tour  
15-17 September 2016**



# CAUTIONARY NOTE ON FORWARD-LOOKING STATEMENTS

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## CAUTIONARY NOTE ON FORWARD-LOOKING STATEMENTS (continued)

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## NOTE TO THE READER

As of 30 June 2016, the Company changed its reportable operating segments. Previously, the Company reported on three operating segments: (i) North America and Europe Fiber Cement, (ii) Asia Pacific Fiber Cement, and (iii) Research and Development. As of 30 June 2016, the Company will report on four operating segments: (i) North America Fiber Cement, (ii) International Fiber Cement, (iii) Other Businesses, and (iv) Research and Development. The significant changes to how certain businesses are reported in the new segment structure are as follows: (i) our European business is now reported in the International Fiber Cement segment, along with the other businesses that were historically reported in the Asia Pacific Fiber Cement segment, and (ii) business development, including some non-fiber cement operations, such as our Windows business in North America, are now reported in the Other Businesses segment as opposed to previously being reported in the old North America and Europe Fiber Cement segment. The Company has provided its historical segment information at 31 March 2016 and for the three months ended 30 June 2015 to be consistent with the new reportable segment structure. The change in reportable segments had no effect on the Company's financial position, results of operations or cash flows for the periods presented. Readers are referred to Note 14 of our condensed consolidated financial statements for further information on our segments.

## USE OF NON-GAAP FINANCIAL INFORMATION; AUSTRALIAN EQUIVALENT TERMINOLOGY

This Management Presentation includes financial measures that are not considered a measure of financial performance under generally accepted accounting principles in the United States (US GAAP). These financial measures are designed to provide investors with an alternative method for assessing our performance from on-going operations, capital efficiency and profit generation. Management uses these financial measure for the same purposes. These financial measures include:

- Adjusted EBIT;
- Adjusted EBIT margin;
- Adjusted net operating profit;
- Adjusted diluted earnings per share;
- Adjusted operating profit before income taxes
- Adjusted income tax expense;
- Adjusted effective tax rate
- Adjusted EBITDA; and
- Adjusted selling, general and administrative expenses ("Adjusted SG&A")

These financial measures are or may be non-US GAAP financial measures as defined in the rules of the U.S. Securities and Exchange Commission and may exclude or include amounts that are included or excluded, as applicable, in the calculation of the most directly comparable financial measures calculated in accordance with US GAAP. These non-GAAP financial measures should not be considered to be more meaningful than the equivalent US GAAP measure. Management has included such measures to provide investors with an alternative method for assessing its operating results in a manner that is focused on the performance of its ongoing operations and excludes the impact of certain legacy items, such as asbestos adjustments. Additionally, management uses such non-GAAP financial measures for the same purposes. However, these non-GAAP financial measures are not prepared in accordance with US GAAP, may not be reported by all of the Company's competitors and may not be directly comparable to similarly titled measures of the Company's competitors due to potential differences in the exact method of calculation. For additional information regarding the non-GAAP financial measures presented in this Management Presentation, including a reconciliation of each non-GAAP financial measure to the equivalent US GAAP measure, see the slide titled "Non-US GAAP Financial Measures" included in the Appendix to this Management Presentation.

In addition, this Management Presentation includes financial measures and descriptions that are considered to not be in accordance with US GAAP, but which are consistent with financial measures reported by Australian companies, such as operating profit, EBIT and EBIT margin. Since the Company prepares its Consolidated Financial Statements in accordance with US GAAP, the Company provides investors with a table and definitions presenting cross-references between each US GAAP financial measure used in the Company's Condensed Consolidated Financial Statements to the equivalent non-US GAAP financial measure used in this Management Presentation. See the section titled "Non-US GAAP Financial Measures" included in the Appendix to this Management Presentation.



# NORTH AMERICA OVERVIEW STRATEGIC PILLARS

LOUIS GRIES  
SEPTEMBER 2016

# AGENDA

- **STRATEGIC PILLARS**
- **PEOPLE**
- **BRAND PROMISE**
- **MARKET POSITION**
- **NON-FIBER CEMENT**

# STRATEGIC PILLARS



## PEOPLE

Continue to invest in the safety, development and promotion of our people



## BRAND PROMISE

Build on industry leadership through unrivalled commitment to manufacturing, R&D, technology and capacity planning

**DRIVING  
PROFITABLE  
GROWTH  
DELIVERING  
SUPERIOR  
RETURNS**



## MARKET POSITION

Grow fiber cement market share in all geographies we operate in



## NON-FIBER CEMENT

Develop other streams of growth beyond fiber cement

## PEOPLE – INCREASING ORGANIZATIONAL CAPABILITY



### PEOPLE

Continue to invest in the development and promotion of our people

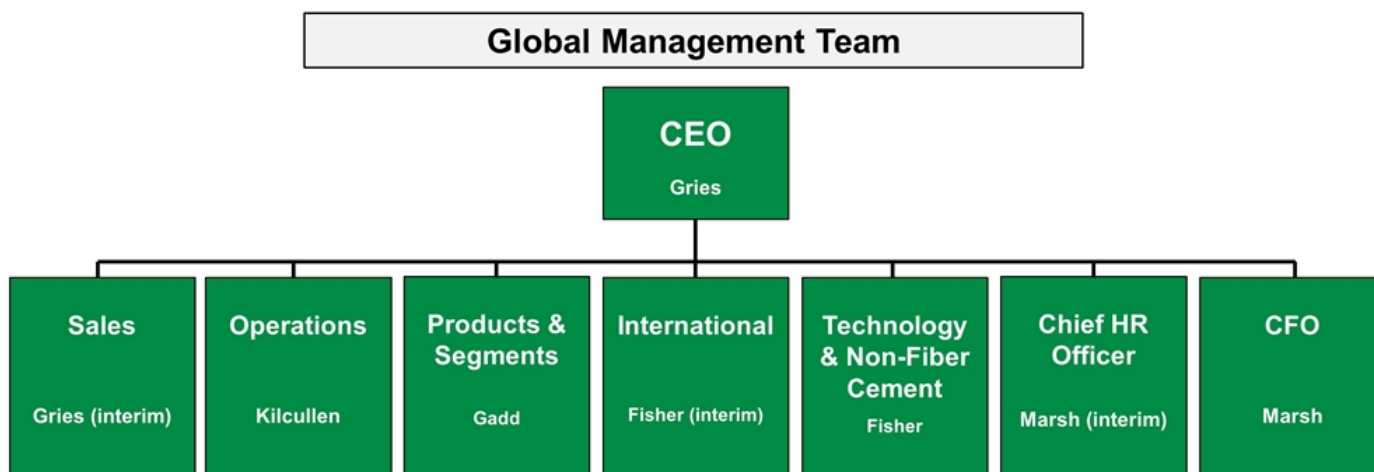
**We will refocus on optimizing our organizational capability by:**

- Ensuring a safe work environment
- Developing and promoting our employees
- Attracting top external talent
- Creating a culture of engagement with our employees
- Delivering a better employee retention outcome

**Smart, Driven, Respectful and Real**



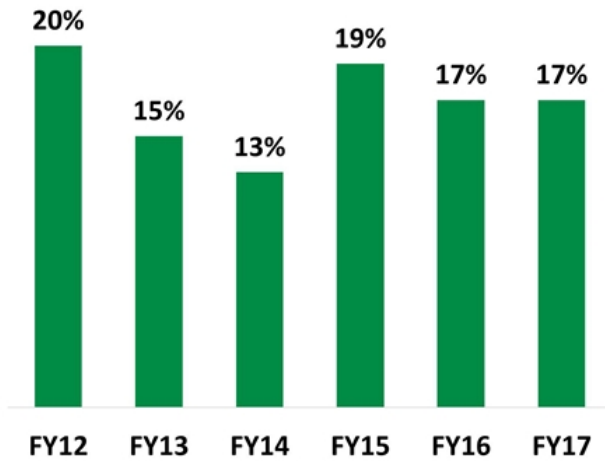
# PEOPLE – GLOBAL MANAGEMENT TEAM



- Focus on expanding the breadth and depth of managerial talent
- External talent to be recruited to fill interim positions
- CEO tenure to be determined by the readiness of the business to transition

# PEOPLE – FY17 ORGANIZATIONAL PRIORITIES AND METRICS

## Attrition Rate



- Seamless transition to global organization structure
- Move to longer time in role for critical jobs to build talent depth
- Target reduction in overall turnover with emphasis on voluntary turnover
- Key areas of focus – Sales and Manufacturing

# PEOPLE – “BLUE LINE” DEVELOPMENT PROGRAM

**Formal  
Training**

**Mentoring**

**Individual  
Development**

**Peer  
Networking**

OBJECTIVES	METRIC
Build pipeline of talent for critical roles by increasing awareness of talent across the organization	Promotions/Transfers at above average rate
Accelerate the development of high potential employees	Expanded development plans and incremental development opportunities
Ensure engagement and retention meets or exceeds peers	Engagement scores and turnover metrics

## PEOPLE – FY17 SAFETY PRIORITIES AND METRICS

**JH US Manufacturing  
Historical Safety Performance**



- Step change approach regarding Company's approach to safety
- HardieSafe vision initiated with goal of achieving sustainable world-class safety performance globally across every area of the business
- Primary focus on 5 key areas:
  - Organizational Culture
  - Work Environment
  - Engineering and Process Capability
  - Training and Development
  - Optimized Feedback Loop
- Safety incorporated into all aspects of business planning

# BRAND PROMISE – DIFFERENTIATED BY DESIGN



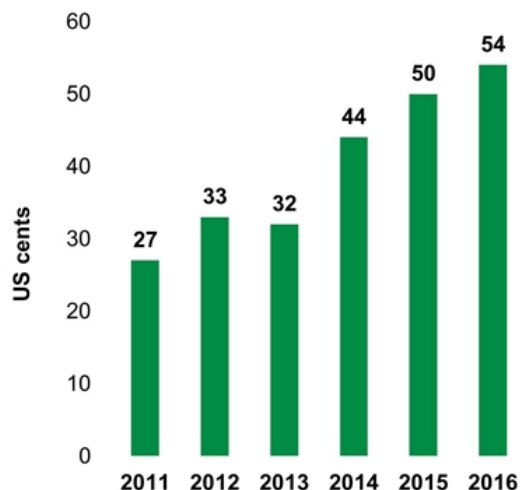
**We aim to deliver differentiated products and services by:**

- An unrivalled commitment to research and development
- Maintaining our manufacturing cost advantage
- Delivering industry leading quality and service levels
- Investing in future manufacturing capability and capacity
- Utilizing technology to better improve our customers experiences with us
- Ensuring we meet our financial returns objectives

**Operational Excellence and Continuous Innovation**

## BRAND PROMISE – FY17 PRIORITIES AND METRICS

### Adjusted Diluted Earnings Per Share



- FY17 guidance for full year for Adjusted Net Operating Profit to be between US\$260 million and US\$290 million
- FY17 EBIT margins to be at the higher end of 20% to 25% targeted range<sup>1</sup>
- Lifting service levels to targeted standard
- Successful commissioning of capacity projects:
  - Plant City #4 2Q FY17
  - Cleburne #3 3Q FY17
  - Plant City #3 4Q FY17
  - Summerville 1Q FY18

<sup>1</sup> This expectation is based upon the Company continuing to achieve strong operating performance in its plants, consistent with recent quarters, and stable exchange rates and input costs

# MARKET POSITION – POSITIONED FOR GROWTH



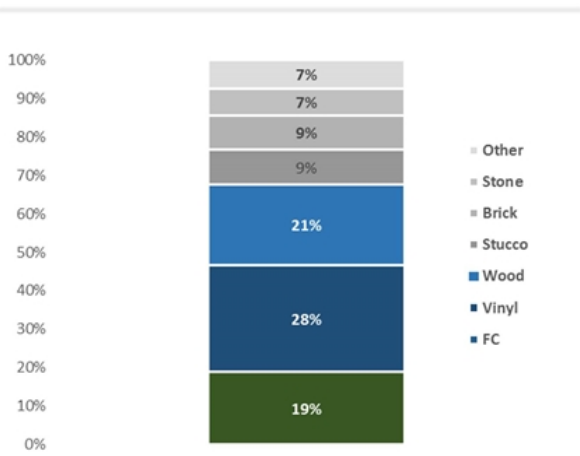
## We aim to grow our businesses by:

- Growing fiber cement by substituting for wood and vinyl siding and trim in the new construction, repair and remodel and multifamily segments (35%)
- Maintaining our fiber cement category position by delivering differentiated value from the supply chain through to the home owner (90%)
- Driving our share of the rigid backer board market to 50%, while extending our presence in the underlayment market to non-fiber cement categories and adjacent accessories
- Utilizing a segmented approach to brand positioning and strategic pricing

**Growing Market Share in all our Businesses and Geographies**

# MARKET POSITION – FY17 PRIORITIES AND METRICS

## North America Siding Market Share

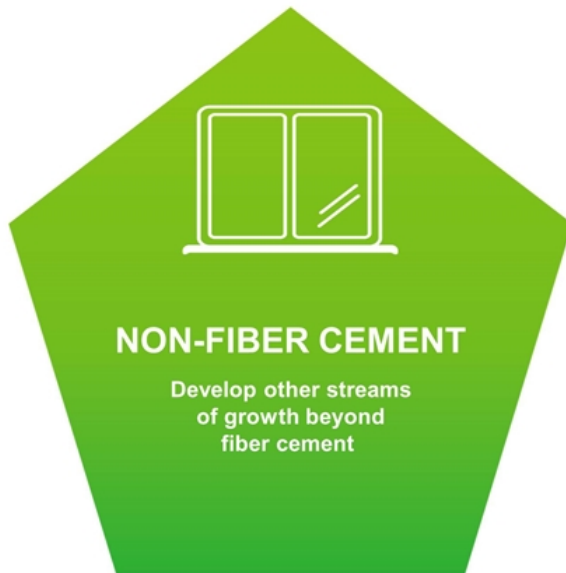


- Lift rolling four-quarter primary demand growth (“PDG”) to 8%
- Continue to invest in sales programs that drive increased market demand
- Recruit new Executive Vice President of Sales
- Realize return on incremental FY15-17 SG&A spend
- Fine-tune tactical pricing practices

Source: Internal estimates based on NAHB product usage data adjusted for regional market intelligence



## NON-FIBER CEMENT – DEVELOPING NEW STREAMS OF GROWTH



**We will continue to explore opportunities for growth beyond our existing fiber cement business by:**

- Continuing to invest in fiberglass protrusion technology and our existing fiberglass window frame business
- Identifying other non-fiber cement businesses within the North American building materials sector
- Prioritising early stage technology where our existing core competencies around product innovation, process improvement and market development can add value
- Giving consideration to fiber cement opportunities beyond existing geographies

**Building the Foundations for Future Growth**

# QUESTIONS



# MARKET AND CAPACITY UPDATE

Matthew Marsh  
September 2016

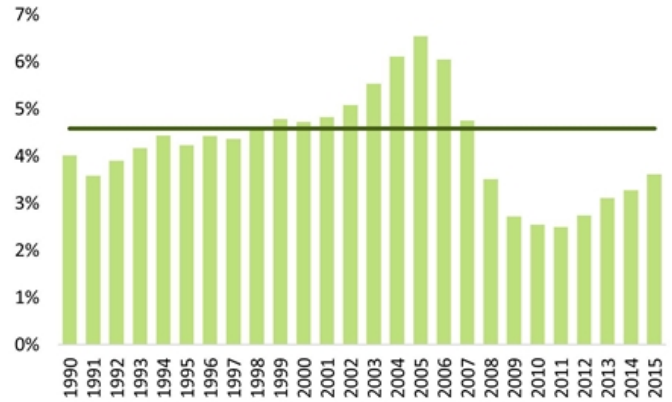
# ECONOMY AND HOUSING SECTOR STABILIZING

### GDP Growth



Source: Bureau of Economic Analysis

### Residential Fixed Investment as a % of GDP

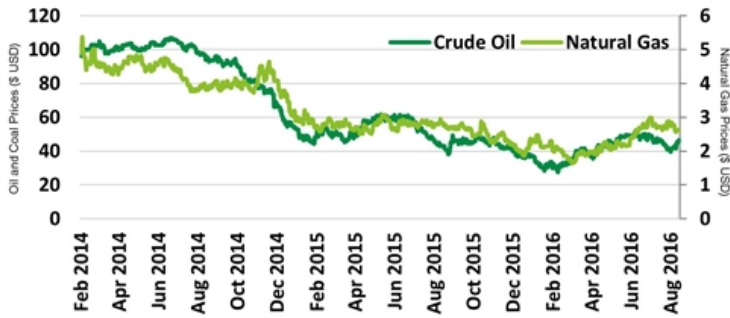


Source: JCHS tabulations of BEA, National Income and Product Accounts

**Overall economy remains stable and housing is in slow but steady recovery**

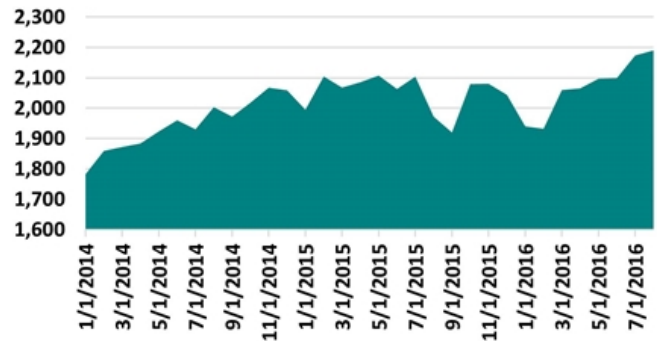
# THOUGH SOME VOLATILITY REMAINS

### Energy Commodity Pricing (\$USD)



Source: World Bank

### S&P 500



Source: Yahoo Finance

**Commodity prices and equity markets have displayed volatility**

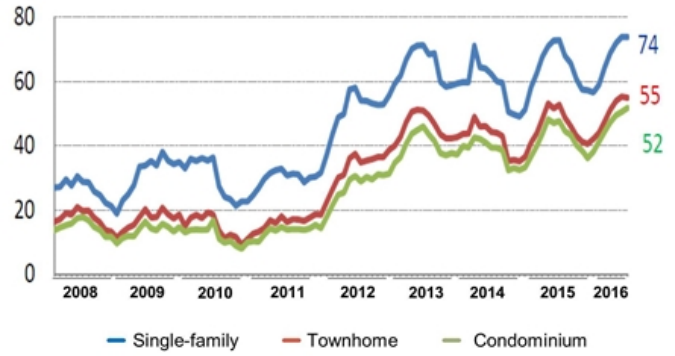
# HOUSING CONFIDENCE REMAINS STRONG

Overall Consumer Confidence



Source: OECD August 2016, Confidence Index

Real Estate Confidence Index  
Current Conditions as of June 2016  
(50="Moderate" Conditions)

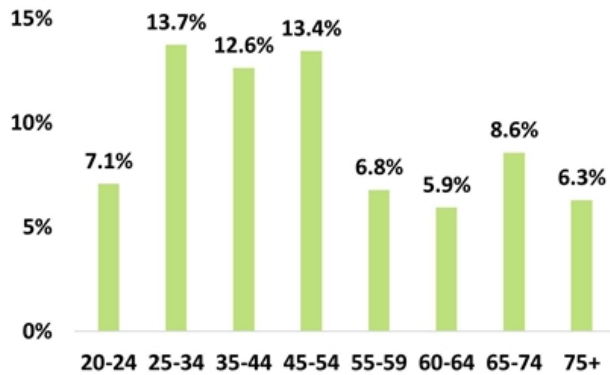


Source: Report on the June 2016 Survey, National Association of Realtors

**Consumer and real estate confidence remain strong**

# THE ELIGIBLE HOMEBUYER EXISTS

% of U.S. Population by Age, 2015



Source: U.S. Census Bureau

Percentage of 18-34 Year-Olds Living with Their Parents

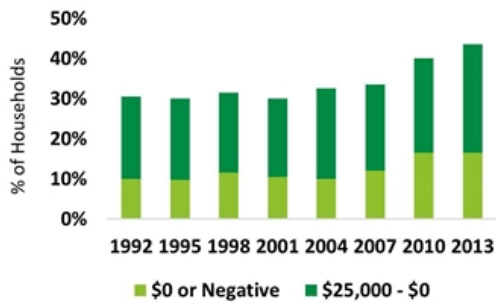


Source: U.S. Census Bureau

**Millennial pent-up demand continues...**  
**~20% of U.S. population between 20-34. ~30% living at home is historic high.**

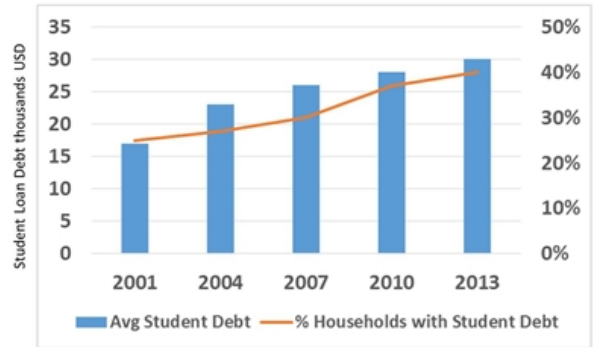
# HOMEBUYER CHALLENGES

## Households with Little or No Wealth



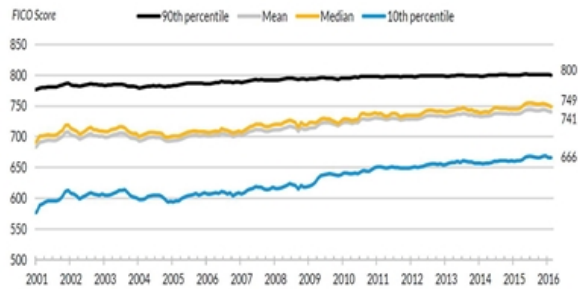
Source: JCHS Tabulation of US Federal Reserve Board of Governors, Survey of Consumer Finances

## Student Loan Debt



Source: JCHS Tabulation of Federal Reserve Board

## Borrower FICO Score at Origination



Sources: CoreLogic Servicing and Urban Institute, May 2016. Note: Purchase-only loans.

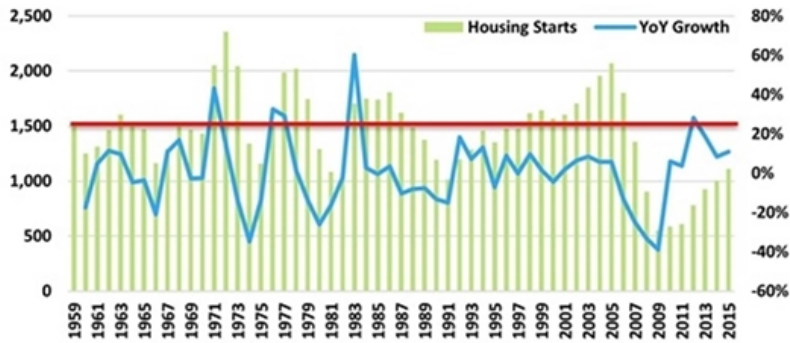
### Challenges to home ownership remain:

- student loan debt
- lack of household wealth
- stricter financing standards



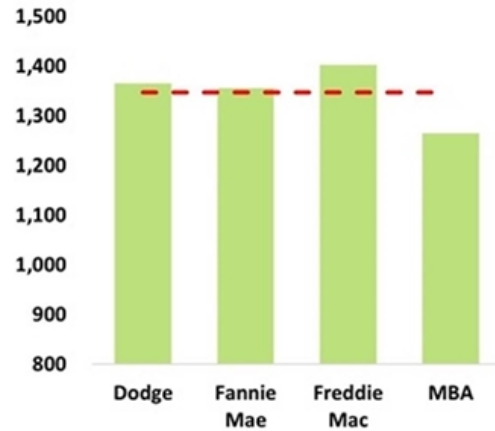
# HOUSING RECOVERY SLOW BUT STEADY

Housing Starts



Source: U.S. Census Bureau

2017 Forecasted Housing Starts

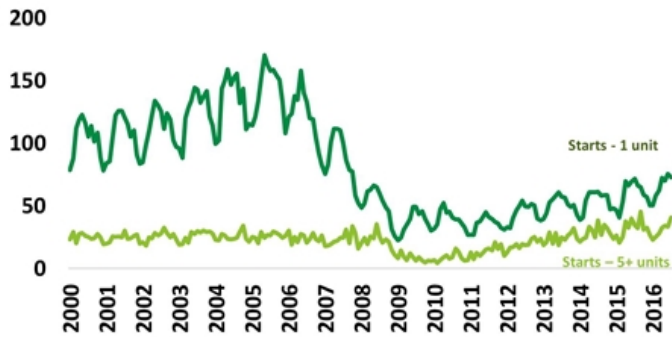


Source: Dodge, Fannie Mae, Freddie Mac and MBA

**Starts continue to trend below historic average of 1.5M per year.  
Starts forecasted to be 1.2M in 2016 and 1.3M in 2017.**

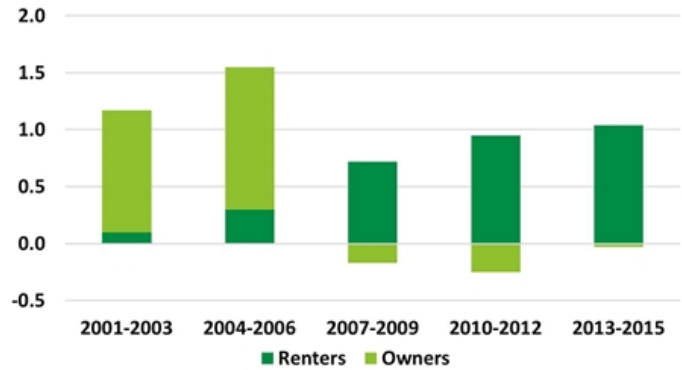
# NEW CONSTRUCTION DYNAMICS

**Housing Starts**  
000s Homes



Source: U.S. Census Bureau

**Average Annual Growth – Rent vs. Own**  
(Millions of Households)



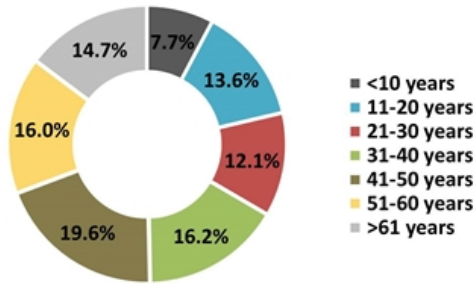
Source: JCHS tabulations of US Census Housing Vacancy Surveys

**Multi-Family has outpaced Single-Family during the previous 5+ years, consistent with the shift towards rentals vs. home ownership.**

**2016 outlook indicates single-family to surpass multi-family growth.**

# REPAIR AND REMODEL DYNAMICS

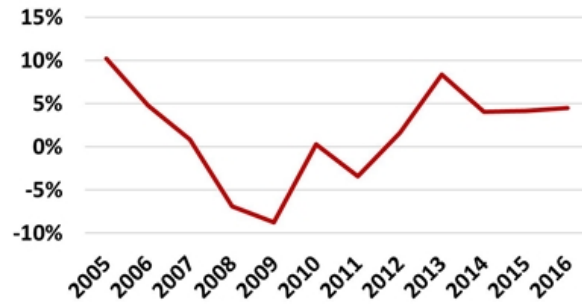
### Age of Housing Stock



Average Age = 41 Years

Source: U.S. Census Bureau

### Hanley Wood R&R Siding Project Growth

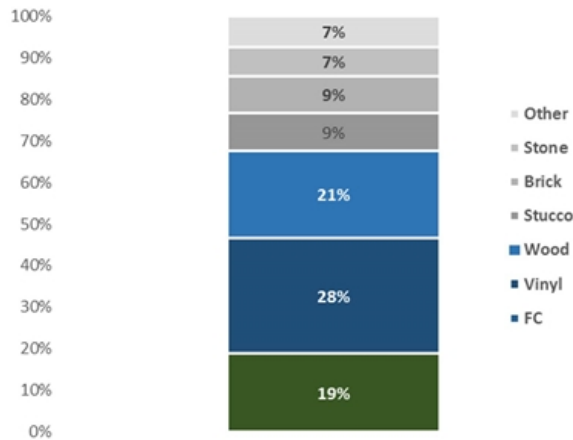


Source: Hanley Wood

The repair and remodel market continues to be a stable segment of growth

# MARKET SHARE LANDSCAPE

## North America Siding Market Share

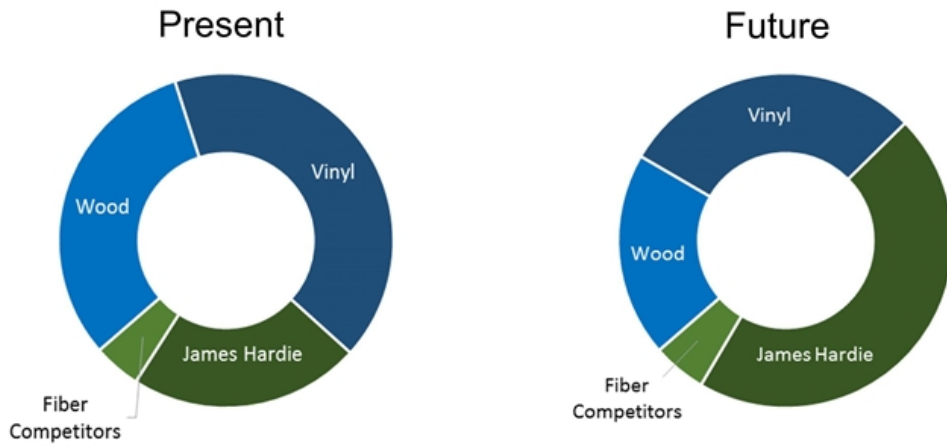


Source: Internal estimates based on NAHB product usage data adjusted for regional market intelligence

National Association of Homebuilders (NAHB) serves as our main source for market share measurement as it provides the following:

- Siding used in residential dwelling applications
- Square feet as unit of measurement
- Geographic detail allowing alignment to organizational structure
- Segmentation between single-family, multi-family and repair & remodel

# WOOD-LOOK SHARE OUTLOOK



**Focus remains on gaining share in the wood-look market**

# WOOD-LOOK SHARE

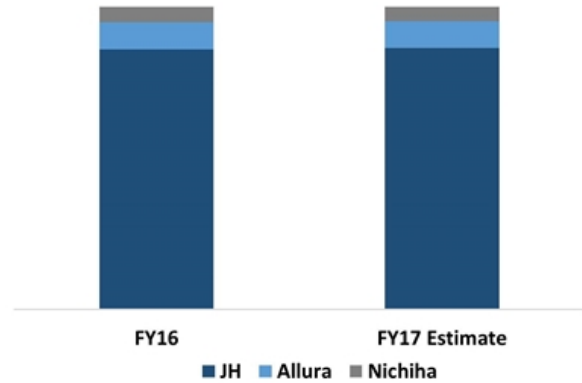
## US Vinyl Market Share Estimate



Source: Internal estimates based on NAHB product usage data adjusted for regional market intelligence

- While vinyl continues to be the volume-leader in siding, market share continues to steadily decline.
- With the wood-look market maintaining 65-70% market share, vinyl's decline is the result of gains by fiber cement and wood.

## Fiber Cement Category Market Share



- Competitive fiber cement plants ran at an estimated ~40% of capacity in 2015.
- Though competitors have available capacity, James Hardie remains the category leader.

# CAPACITY

# CAPACITY – ANNUAL DESIGN

Plant Location	Owned/Leased	Design Capacity (mmsf)
Cleburne, Texas	Owned	466
Incremental Capacity		200
Peru, Illinois	Owned	560
Plant City, Florida	Owned	300
Incremental Capacity		400
Pulaski, Virginia	Owned	600
Reno, Nevada	Owned	300
Tacoma, Washington	Owned	200
Waxahachie, Texas	Leased	360
Fontana, California	Owned	250
Summerville, SC	Owned	190
<b>Total U.S. Network</b>		<b>~3,800</b>

Historically, our disclosed capacity is based on running a standard 5/16<sup>th</sup> inch medium standard product:

- No accepted industry standard exists for the calculation of our fiber cement manufacturing facility design and utilization capacities
- Based on management's historical experience with our production process
- Good at standardizing capacity additions for comparative purposes
- Not reflective of actual capacity based on product mix, which is impacted by product size, thickness, and density

To evaluate capacity, utilization levels, and when incremental capacity will be needed, capacity utilization is determined by using machine hours



# CAPACITY – GROSS HOURS

Capacity Utilization Determined by Machine Hours of Active Capacity



Active Capacity	% Utilization
Cleburne, Texas	} 91%
Peru, Illinois	
Plant City, Florida	
Pulaski, Virginia	
Reno, Nevada	
Tacoma, Washington	
Waxahachie, Texas	
Fontana, California	
Idle Capacity	
Cleburne, Texas	New
Plant City, Florida	New
Summerville, SC	Idle

**74% utilization based on total active available hours as of 1Q17**

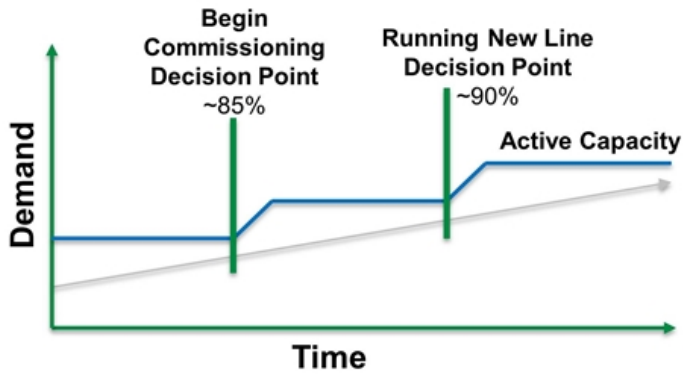
# CAPACITY CORE CONCEPTS

## CORE CONCEPTS OF MANUFACTURING CAPACITY

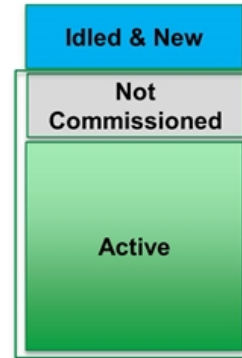
- ➔ Enable 35/90 by ensuring market supply ahead of demand
- ➔ Commission new capacity to optimize network costs
- ➔ Invest in capacity that maximizes value creation
- ➔ Use triggers to serve as leading indicators for capacity expansion

# SHORT-TERM CAPACITY MANAGEMENT

## Utilization Trigger Concept



## Capacity Category



Complexity of capacity add will influence actual trigger point timing

# CURRENT CAPACITY PROJECTS

	Anticipated Commission	Design Capacity in mmsf
Plant City #4	2Q FY17	300
Cleburne #3	3Q FY17	200
Plant City #3	4Q FY17	100
Summerville	1Q FY18	190

**Additional “active” capacity of ~790 mmsf**

## Plant City Sheet Machine #4

- Performance ramp up on target
- Excellent material yield result to date
- Minimal impact to existing plant operations

## Cleburne Sheet Machine #3

- Project started in FY14; put on hold in FY16
- Construction in progress; on track to commission in 3Q FY17

## Plant City Sheet Machine #3

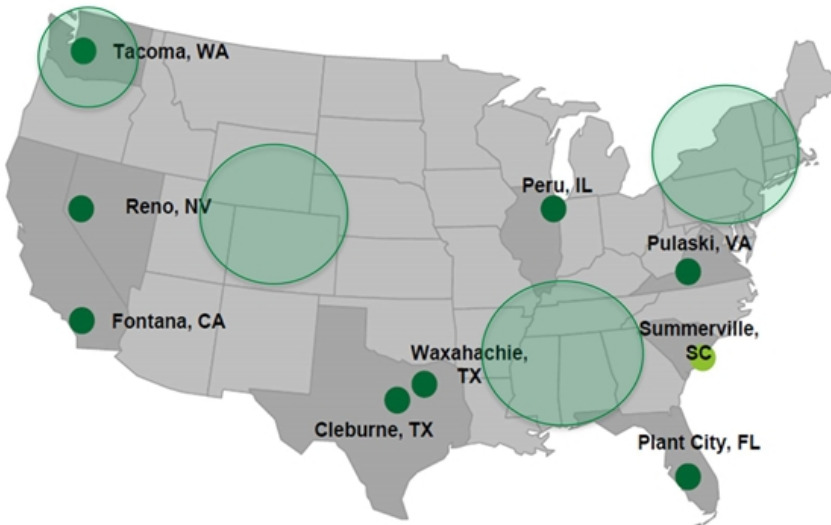
- Capacity idled in 2Q FY15
- Line will serve as flex capacity based on demand

## Summerville

- Capacity idled in FY10
- Construction to begin 3Q FY17

*\*Capacity on this slide is already included in the Annual Design*

# GREENFIELD CAPACITY CONCEPTS



- **Greenfield construction anticipated in 2-3 years**
- **Potential locations**
  - Pacific Northwest
  - Midsouth
  - Northeast
  - West
- **Decision drivers**
  - Demand
  - Proximity to raw materials
  - Total cost to operate

# GREENFIELD CAPACITY CONCEPTS

**Design new capacity that optimizes returns of the entire network**

- **Line location and size determination**
- **Product & process capability selection**
- **Value engineering and line optimization**

**Current cost estimates for next greenfield site range between \$70MM-\$120MM**

**Cost to build increasing faster than margin growth, dampening returns**

**Assessing opportunities to reduce construction costs through value engineering**

## SUMMARY

- US housing market continues down path of recovery, though at a slower than historical rate.
- James Hardie remains focused on market position, including share growth in the wood-look category.
- Capacity core concepts remain guiding principles of investment decision-making.



# MANUFACTURING AND OPERATIONS

Ryan Kilcullen  
September 2016



# AGENDA

- **MANUFACTURING AND OPERATIONS OVERVIEW**
- **JAMES HARDIE MANUFACTURING ADVANTAGE**
- **JAMES HARDIE MANUFACTURING APPROACH**
- **APPROACH TO NEW LINE COMMISSIONING**

# OPERATIONS STRATEGY

- Provides a safe environment and good workplace for all employees, and complies with environmental regulations
- Enables JH's Product Leadership of making highest quality fiber cement
- Ensures capacity is available during periods of peak demand
- Allows delivered unit cash costs to remain relatively flat during periods of lower utilization

# MANUFACTURING PROCESSES

Process technology segments manufacturing approach

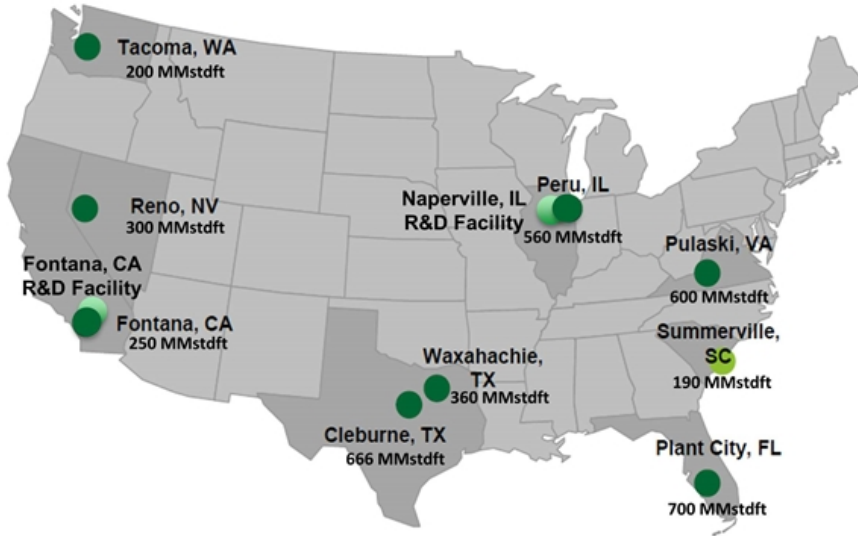
	<u>Pre-Autoclave</u>	<u>Post-Autoclave</u>
<b>Manufacturing Process</b>	Continuous Process Raw Material Conversion	Material handling Coatings application
<b>Key Process Objectives</b>	Long Continuous runs Raw material yield	Optimize coating yield
<b>Inventory Model</b>	Make-to-Inventory	Mix of Make-to-Inventory and Make-to-Order

## James Hardie's Management System

Operators operate, managers manage and engineers support / enable

# NORTH AMERICA FOOTPRINT & PERFORMANCE

## USA Plant Locations



- Largest fiber cement producer in North America
- 1,505 manufacturing employees
- 9 manufacturing locations\*
- 2 research and development facilities

\*Production was suspended at the Summerville plant in November 2008

# WHAT IS OPERATIONS ORGANIZATION ?

## Manufacturing

Safety in every part of our process. Delivering on our brand promise while optimizing returns

## Supply Chain

Total value chain (raw materials to customer) optimization while creating non-product value add

## Engineering

Maximizing capacity, innovating new products and processes, and ensuring sustainability.

## Finance & Human Resources

Helping to maximize resources and provide meaningful analytics and guidance to the business.

Safety

Quality

Plant Leadership

Reliability & Plant Performance

Manufacturing Cost Optimization

Customer Integration

Network Planning

Transportation

Procurement

Capacity Management

New Capacity Design

35/90 Network Design

Platform Development

Step-Change Processes

Reliability & Pci/PdI

ROCE Optimization

Cost Performance

Step-Change IT Capabilities

Hourly Workforce Development

Operations Leadership Development



# JAMES HARDIE'S MANUFACTURING ADVANTAGE

# MANUFACTURING ADVANTAGE

## JH manufacturing: Major lever in our competitive advantage

Proprietary technology delivers unit cost & ROCE advantage

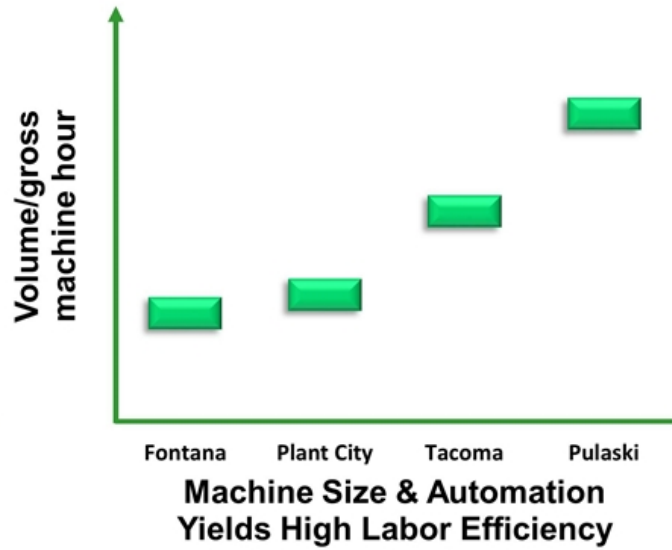
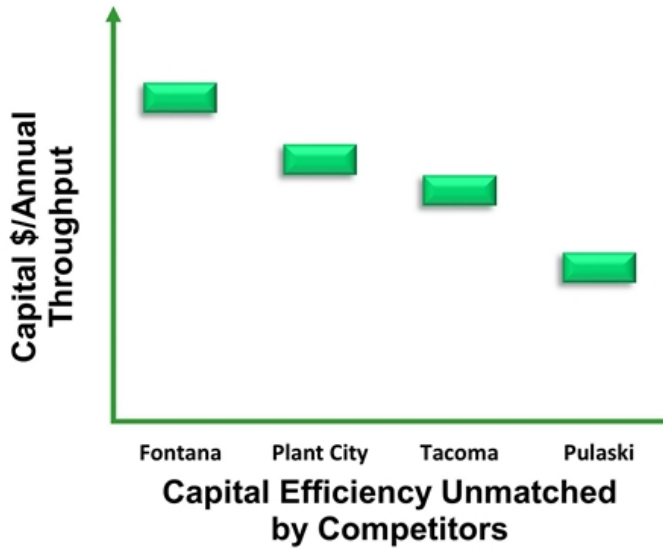
- ➔ Unique throughput advantage in our Hatscheck manufacturing
- ➔ Engineered scale creates labor and capital advantage
- ➔ Flexible manufacturing achieves low unit cost through market cycles

Innovation in process capability enables product leadership

- ➔ Process capability to deliver innovative product differentiation
- ➔ Innovation approach delivers speed to market advantage
- ➔ Network flexibility creates delivered cost advantage

# SCALE AS A COMPETITIVE ADVANTAGE

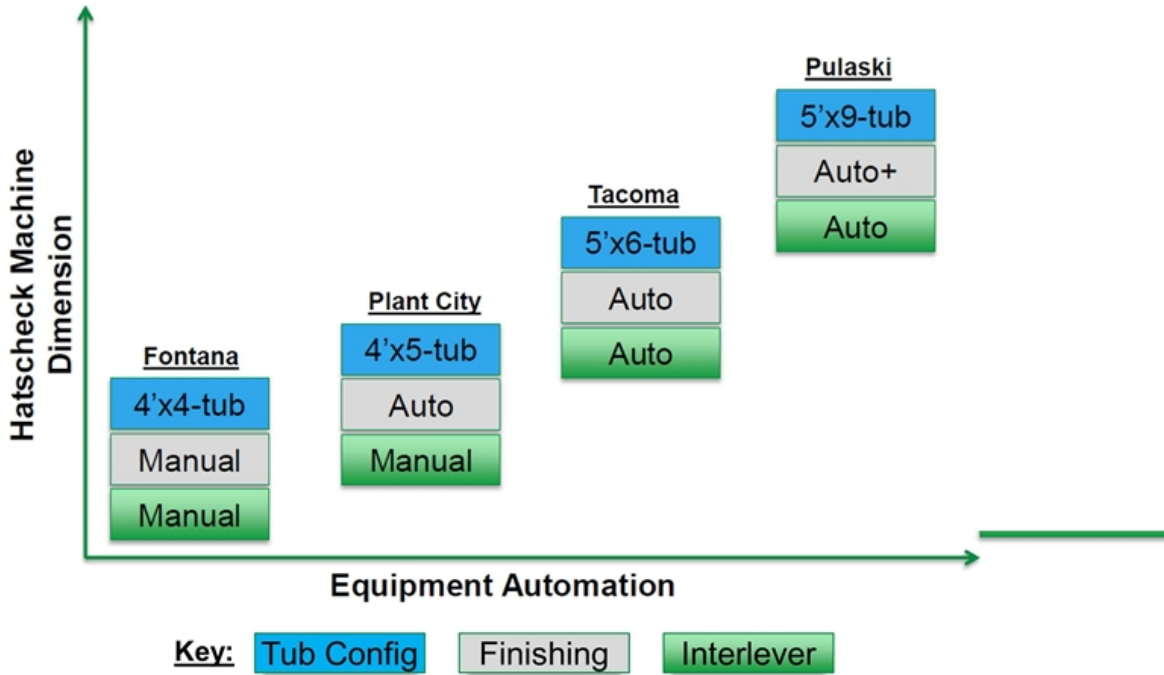
Manufacturing scale creates a significant competitive advantage





# MANUFACTURING SCALE EVOLUTION

A culture of engineering step-change has yielded a tremendous increase in manufacturing scale



# PROCESS & PRODUCT CAPABILITY ADVANTAGE

*Internally developed process capability enables product differentiation*

Product thickness & density control



HardieTrim® & Artisan product lines

Fit-to-purpose manufacturing processing



HardieZone® Engineered for Climate

Post-processing engineering



HardieShingle®

Coatings application expertise



ColorPlus® Technology

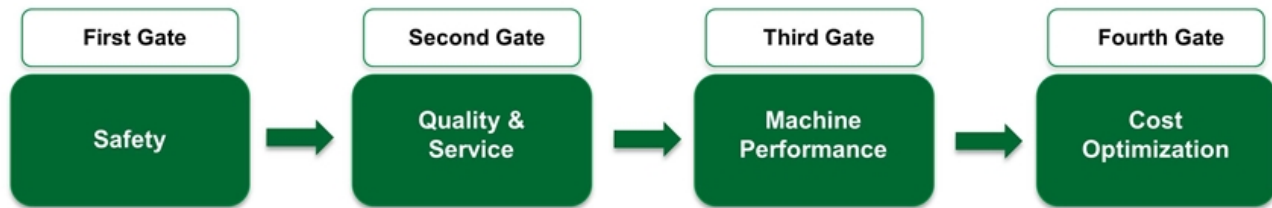
## MANUFACTURING ADVANTAGE SUMMARY

- Step change engineering focus has delivered a substantial manufacturing scale advantage
- Constant investment in manufacturing process capabilities enable our product differentiation
- Flexibility in manufacturing and capacity model allow for cost advantage through market cycles



# JAMES HARDIE'S MANUFACTURING MANAGEMENT SYSTEM

# MANUFACTURING GATES 2017



- Gate requirements still in place from FY16
- Path to achieve a journey ... tasking sites to learn to run as holistic business
- Goal achievement requires understanding of the interrelated nature of metrics

# FIRST GATE: SAFETY

First Gate

Safety



**Goal: Zero Harm**

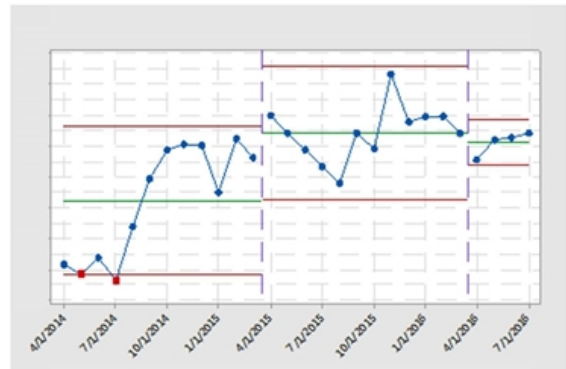
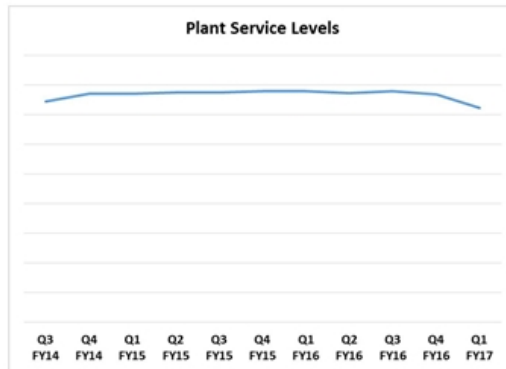
*Safety remains the #1 priority*

- Organization Culture
- Work Environment
- Engineering Capability
- Training and Development
- Feedback Loop Optimization

# SECOND GATE: QUALITY & SERVICE

Second Gate

Quality & Service

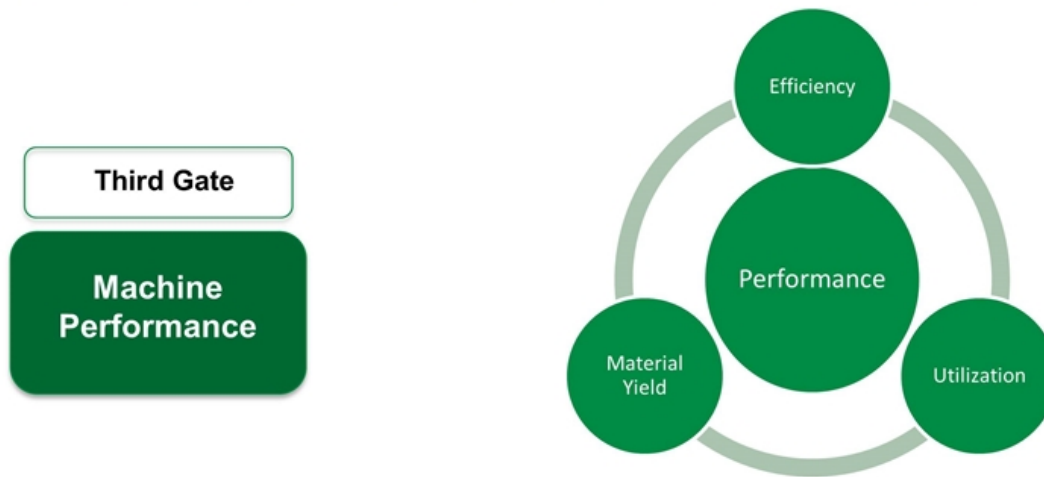


## Goal: Deliver on the Brand Promise

*Quality in execution*

- 100% 1st Pass & 97% Service
- Improve schedule adherence
- Reduce process variation
- Increase process sustainability

# THIRD GATE: MACHINE PERFORMANCE



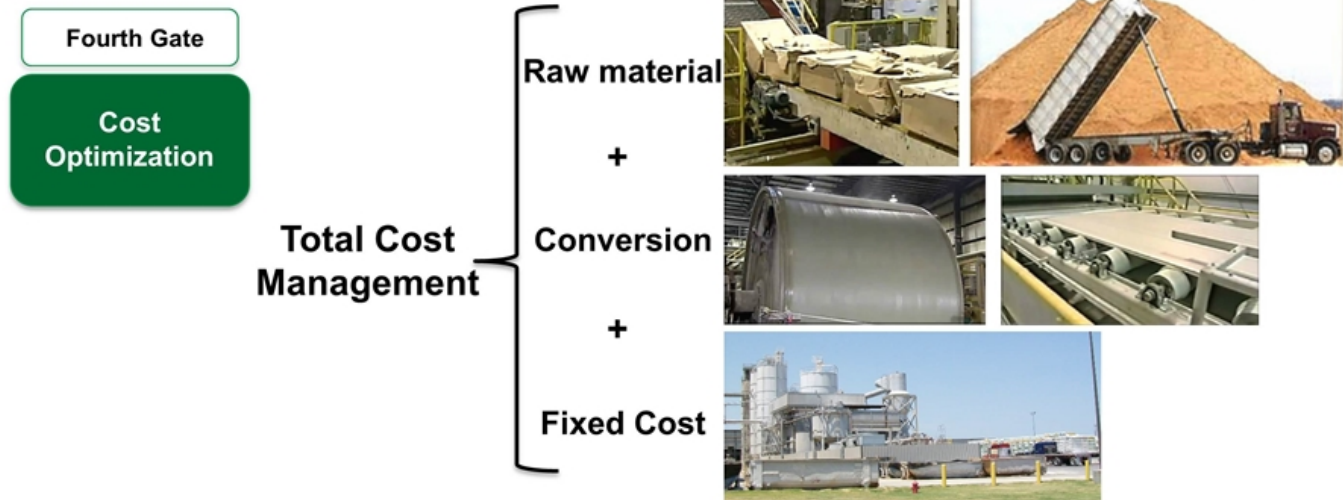
**Goal: 100% Pci-Pdl Design with 10% Total Delay**

*Optimize utilization ... avoid unnecessary machine start-up*

- Focus on total delay to increase net hours, machine throughput and plant utilization
- Eliminate tradeoffs between waste, speed or delay



# FOURTH GATE: COST OPTIMIZATION



**Goal: Tight cost control as we add capacity to deliver within Guidance of 20-25% EBIT**

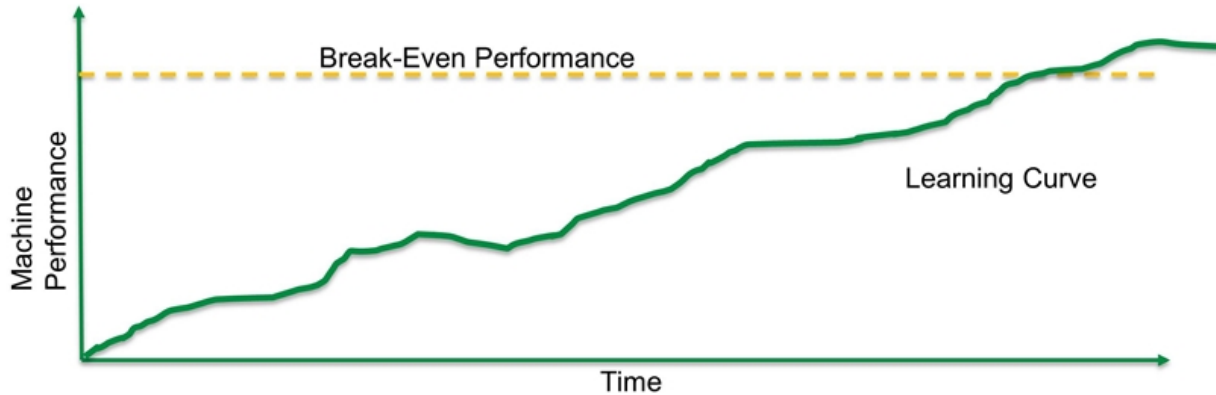
*Drive total cost efficiencies ... understand financial tradeoffs*

- Improve machine throughput
- Reduce finishing hours
- Optimize fixed cost structure
- Increase total yield
- Reformulate mix
- Plan network to optimize total landed cost



# START-UP PERFORMANCE

# KEY CONCEPTS FOR OUR START-UPS



## Historical Start-Up Approach

- ➔ Focus on time to break-even performance
- ➔ Machine speed used as primary measure of progress

## Historical Start-Up Approach

- ➔ Low material yield results in high cost learning curve
- ➔ Start-up line focus results in total site performance decline

# PLANT CITY START-UP APPROACH

## Operational Concepts

- Maximize learning per dollar spent on the start-up
- Minimize volume produced at a premium to the next alternative volume

## Organizational Concepts

- Firewall the start-up organization
- Separate the “start-up” team into a planning team and an execution team
- Minimize “new-in-position” employees

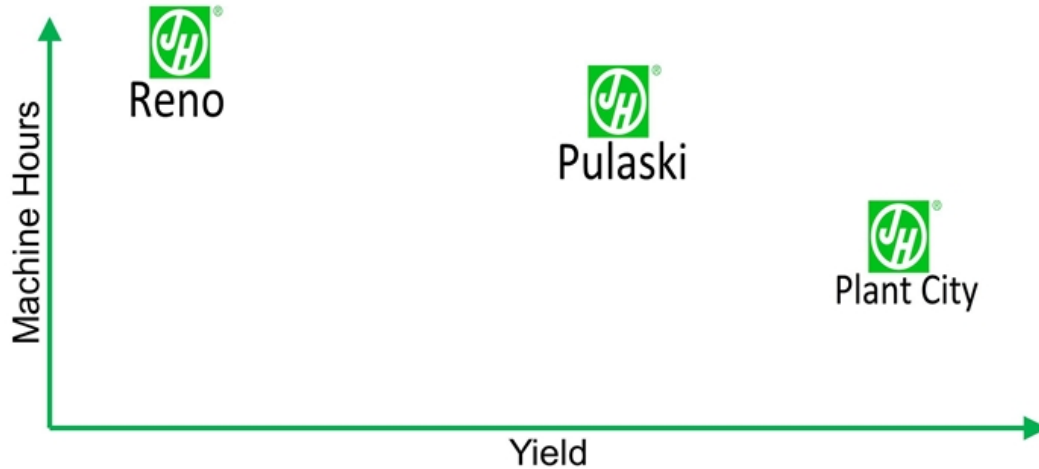
## Game Plan Design

*Approach designed to minimize the cost of learning with a focus on material yield*



# PLANT CITY VS. RECENT NA START-UPS

Lowering Cost per Learning to Achieve Similar Efficiency



*Plant City 4 is delivering significantly higher yield and similar machine performance with half the gross hours run – significantly lowering our “cost of learning”*

## SUMMARY

- ➔ **JH manufacturing capabilities continue to provide a significant source of competitive advantage**
- ➔ **Our gate philosophy in our approach to plant operations provides clarity for organization to deliver continuous improvement**
- ➔ **Significant progress has been made in our approach to capacity ramp-ups with Plant City 4 – learnings will be applied to Cleburne**



# MARKET POSITION

Sean Gadd

September 2016

# AGENDA

- **35/90 AND WHERE IT COMES FROM**
- **SINGLE FAMILY NEW CONSTRUCTION AGAINST VINYL**
- **SINGLE FAMILY REPAIR AND REMODEL AGAINST VINYL**
- **WINNING AGAINST OSB SIDING**
- **TOP OF MARKET STRATEGY**

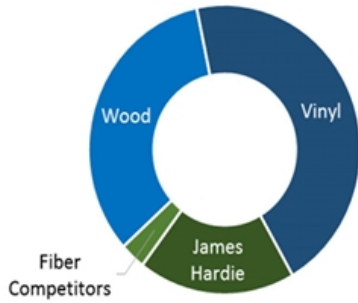


# JAMES HARDIE US STRATEGY

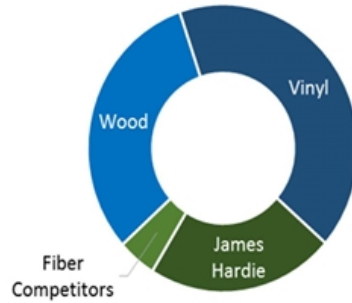
- To grow organically through a differentiated position in the building products industry.
- Grow Fiber Cement by substituting for both wood and vinyl based sidings and trim in the new construction, repair & remodel market and multifamily segments (35)
- Maintain our Fiber Cement category position by delivering differentiated value to supply chain participants, right through to the home owner (90)

# JAMES HARDIE VS COMPETITIVE WOOD-LOOK CLADDING

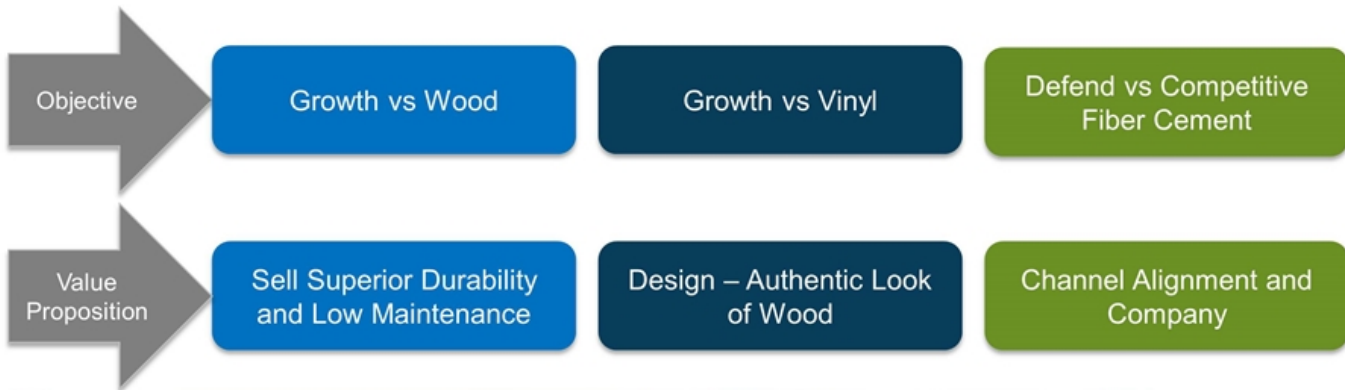
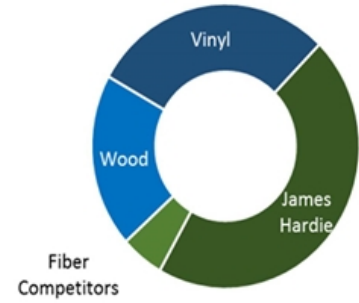
Past



Present



Future



# GROWTH – TERMINAL SEGMENT COMPOSITION



**Multifamily**

35%++



**Repair and Remodel**

>35%



**Single Family**

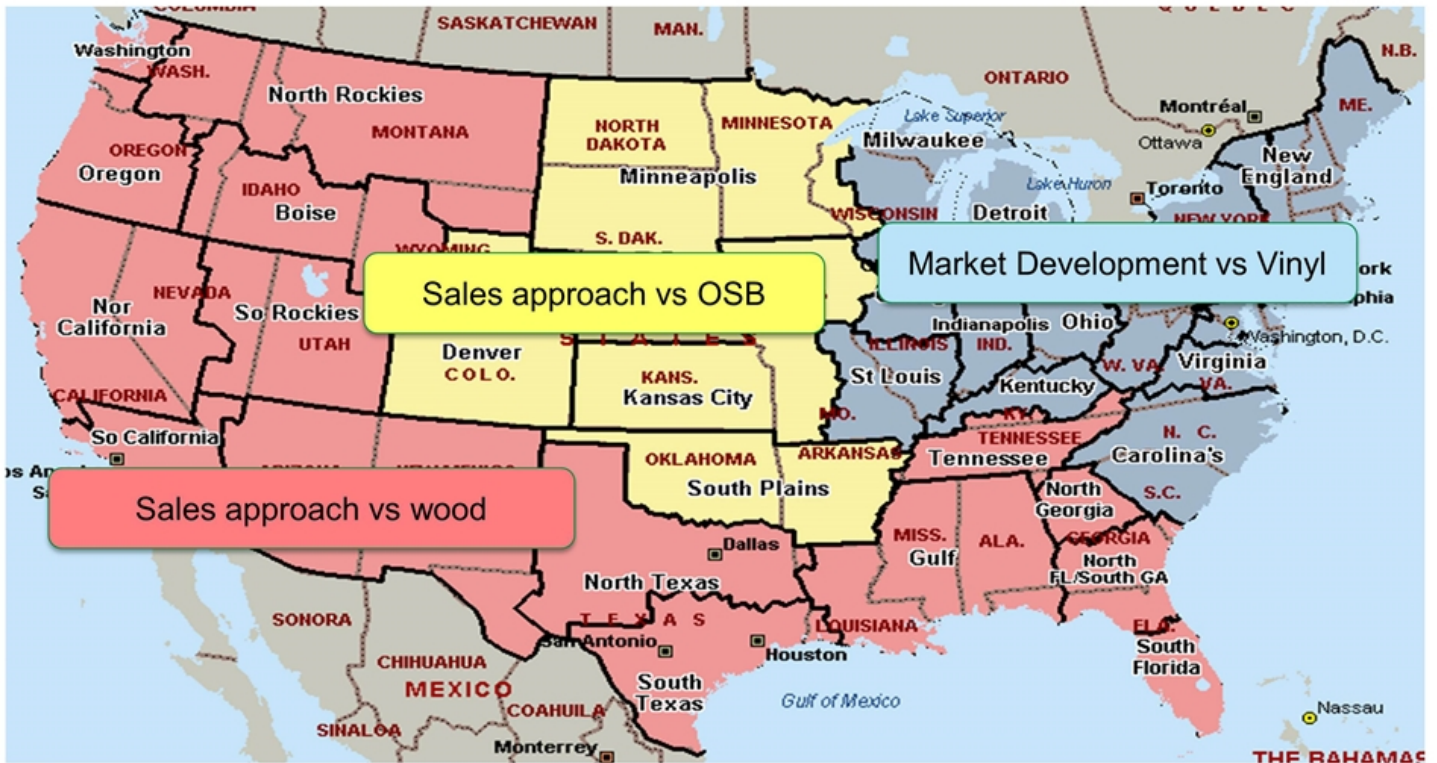
<35%

Market opportunity & growth will come from both metro and non-metro markets



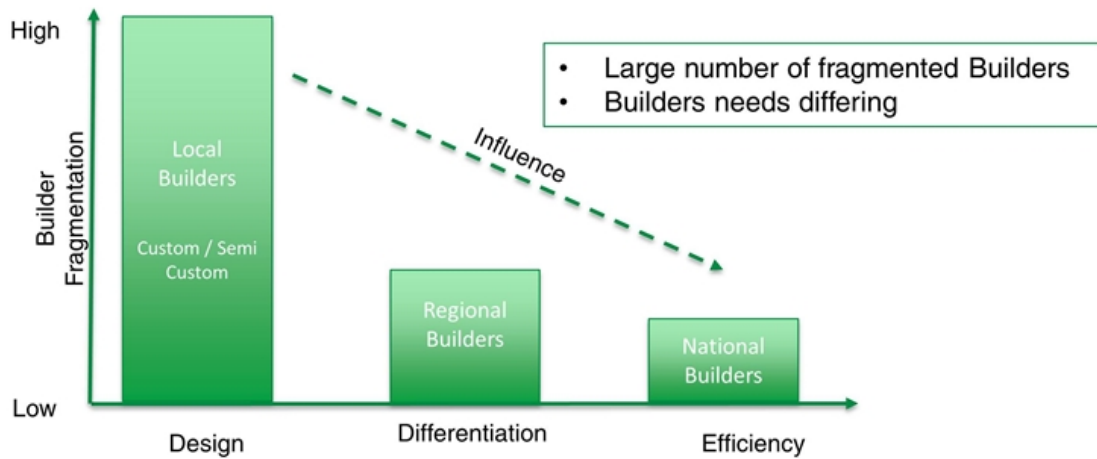
# SINGLE FAMILY NEW CONSTRUCTION - VINYL

# PRIMARY COMPETITOR BY REGION



# MARKET DEVELOPMENT AGAINST VINYL

1. Significant price increase
  2. Requires articulation of the value
  3. Switching costs or barriers
- Market Development Approach



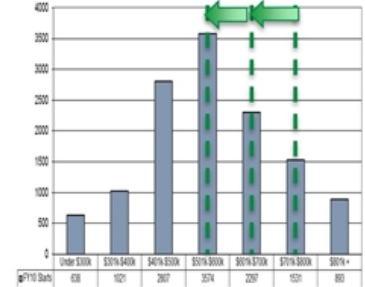
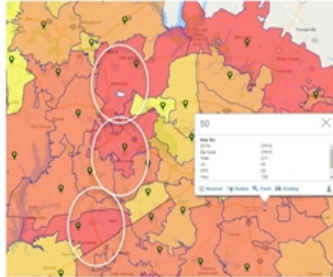
# MARKET DEVELOPMENT – TARGETED APPROACH

## Market Development Approach

Targeting the quality builder, in the right geography at the right price point that is looking to build a quality home with authentic design and the look of real wood



# ACCELERATING THE APPROACH



Increasing James Hardie resources and developing their capability

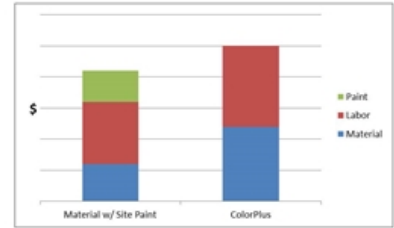
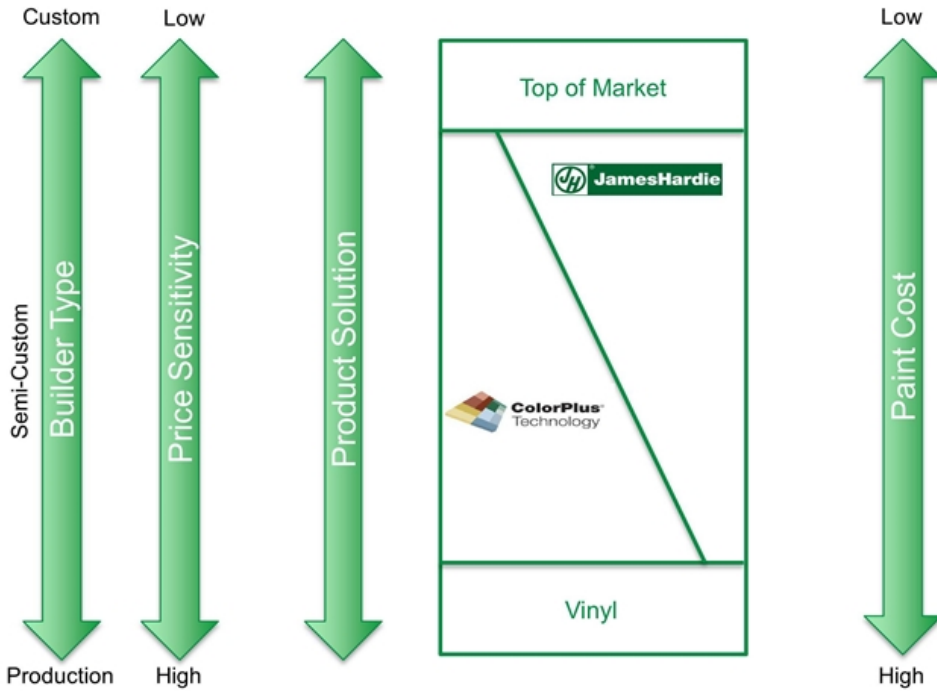
Operating in multiple geographies and price points

Leveraging the wins and making it "loud" by marketing with key builders

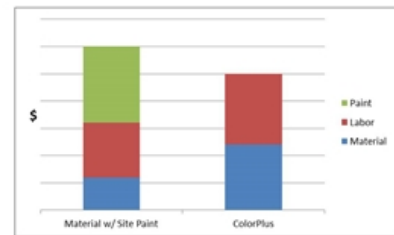
Shift price point Left – creating competitive pressure for builders on the lower price points



# VINYL STANDARD MARKET – PRODUCT MIX



A ColorPlus® Technology finish can also be the lowest cost depending on market paint costs





# SINGLE FAMILY REPAIR AND REMODEL

# SINGLE FAMILY REPAIR AND REMODEL

Key Decision Maker

Homeowner

Decision Maker Key Considerations

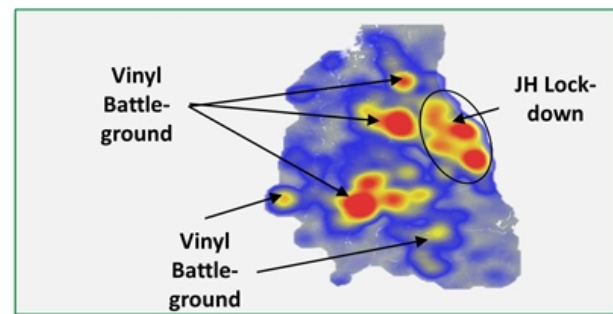
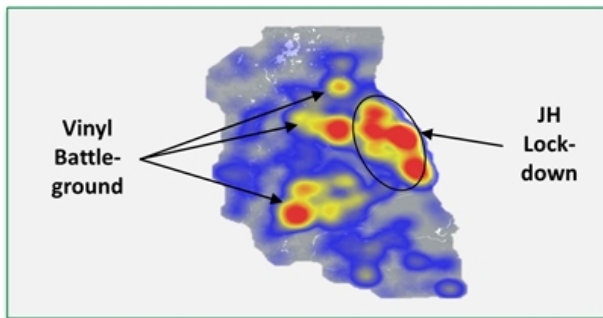
- Return On Investment
- A Trusting Contractor
- Renewing Homeowner's Dream Home
- Durability, Low Maintenance, Design and Time Proven Product

Go to Market Strategy

- Raise Awareness with The Homeowner
- Develop an Aligned Group of Contractors
- Help the Contractor Sell in the Home
- Brand ONLY

# VINYL STANDARD, METRO MARKETS

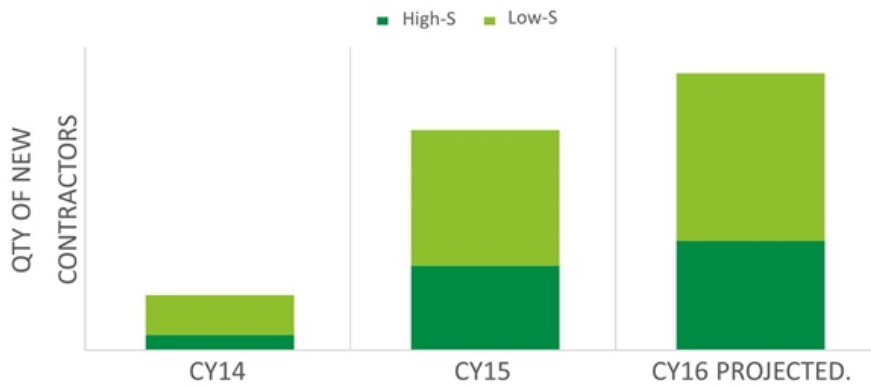
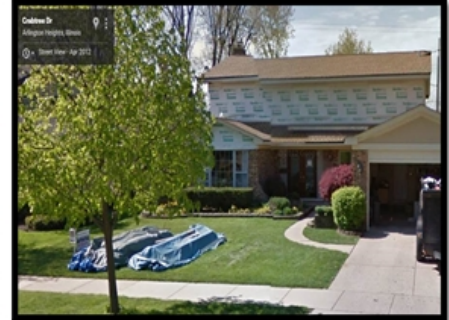
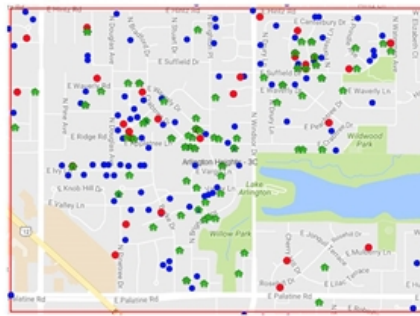
- Drive awareness and preference for James Hardie products in vinyl battleground neighborhoods via the Contractor
- Convert battlegrounds into lockdowns
- Reach Homeowners through multiple touch points
- Enabling Contractor growth in these key neighborhoods



# "2 TO 10" ACTIVITY AND LEAD NURTURING



- Sold Job
- Request for quote
- Request for quote

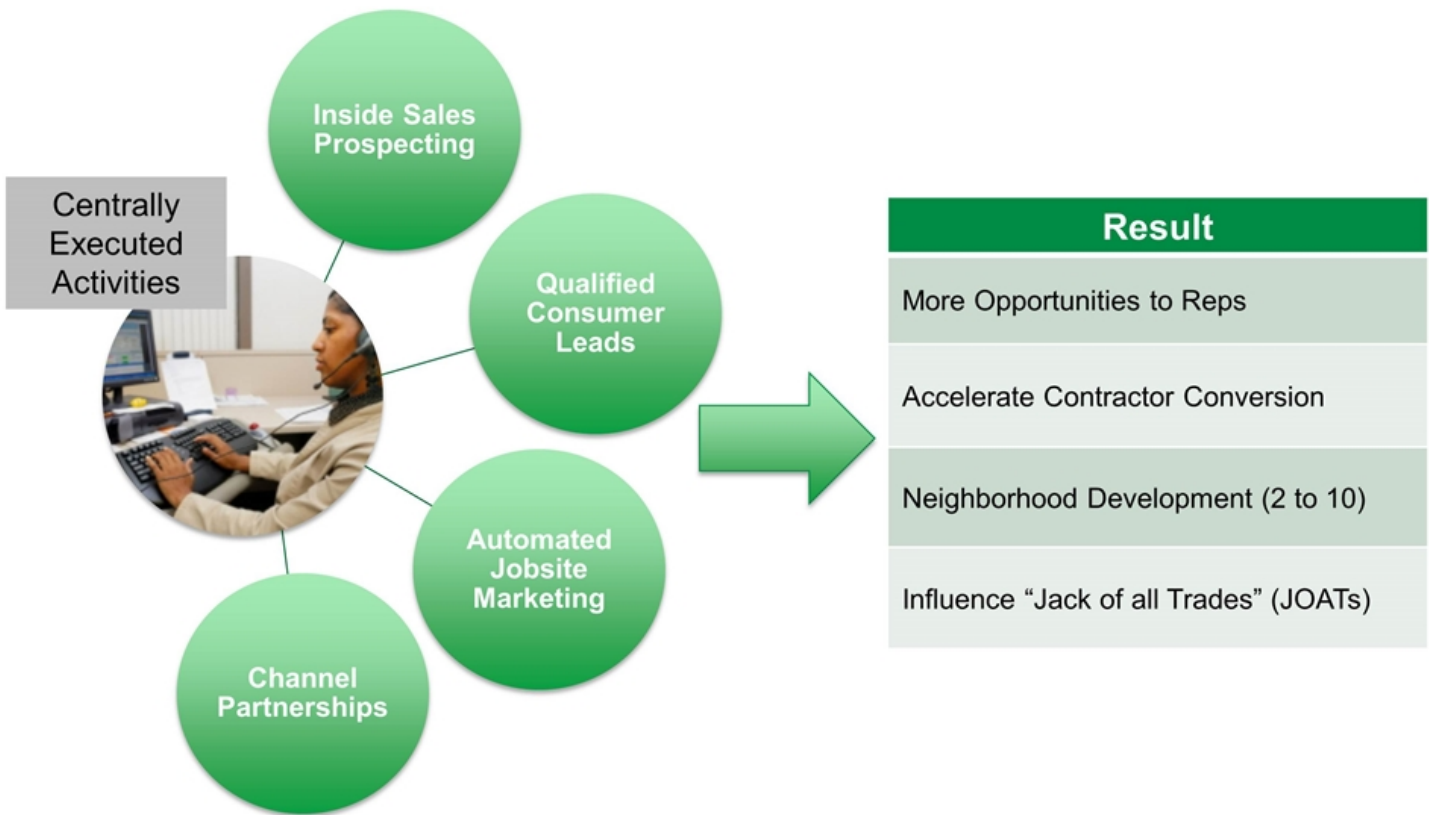


# NON-METRO MARKETS

- Invest in non-metro markets – 50%+ of the opportunity
- Invest in the “boat” to help create the “wake”
- Generalist sales model
- Optimize rep selling time in field by doing more work centrally



# CENTRALIZED APPROACH TO DELIVER RESULTS



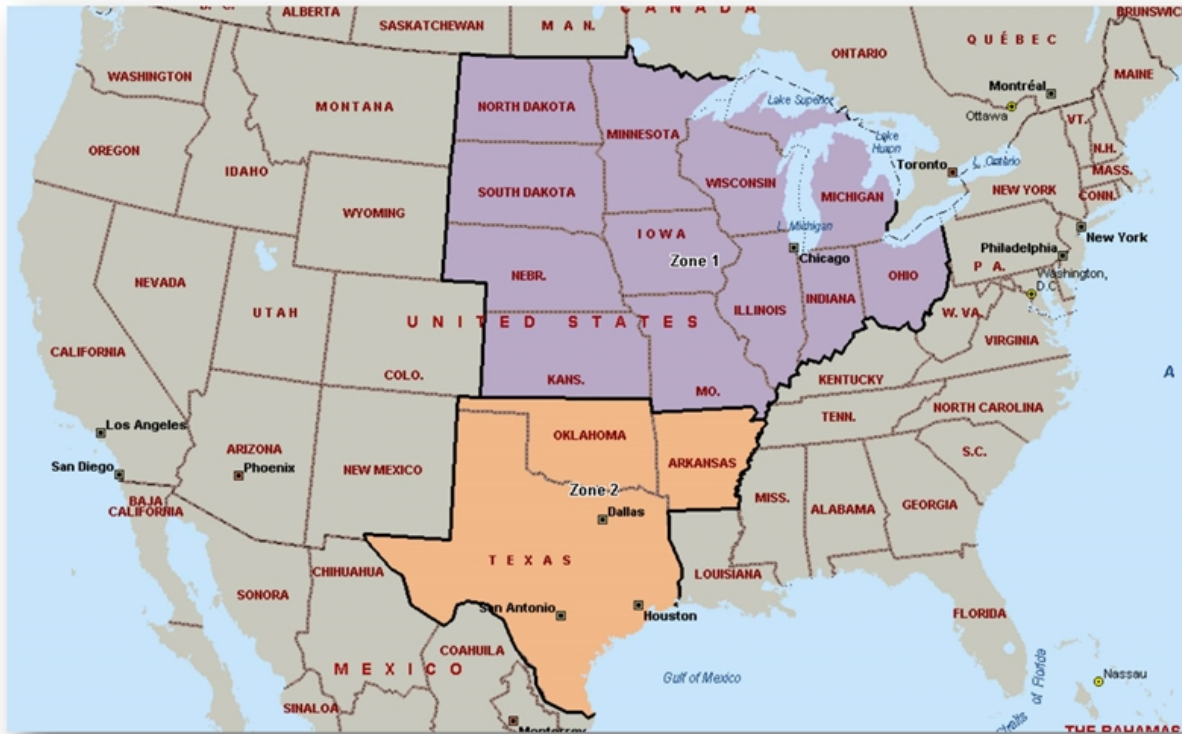


# WINNING AGAINST OSB SIDING



# WINNING AGAINST OSB SIDING

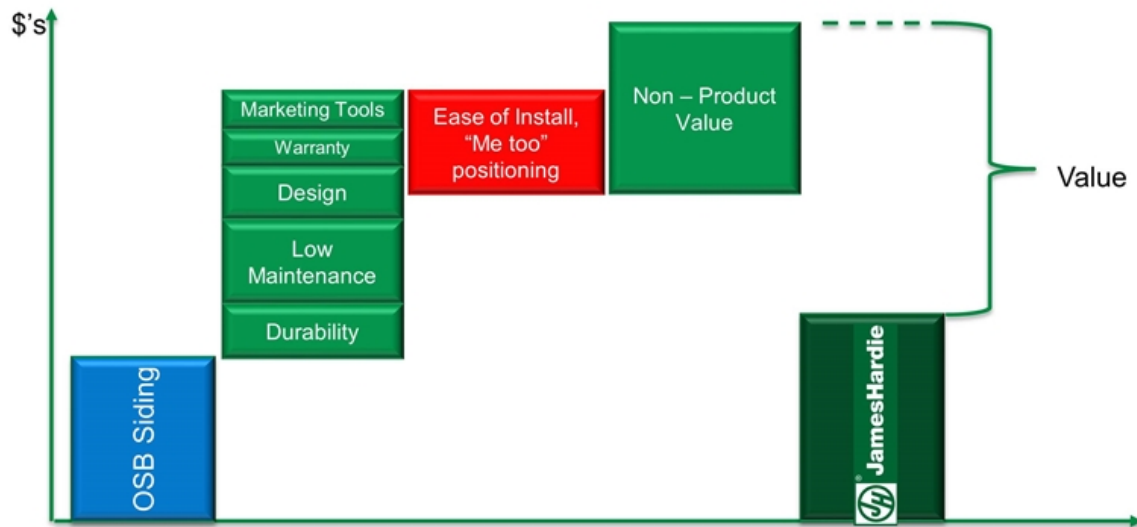
## WIN IN KEY REGIONS



# WINNING AGAINST OSB SIDING

## Company versus company (non-product value)

### *Economic Value Analysis*



# WINNING AGAINST OSB SIDING IN ZONE 1

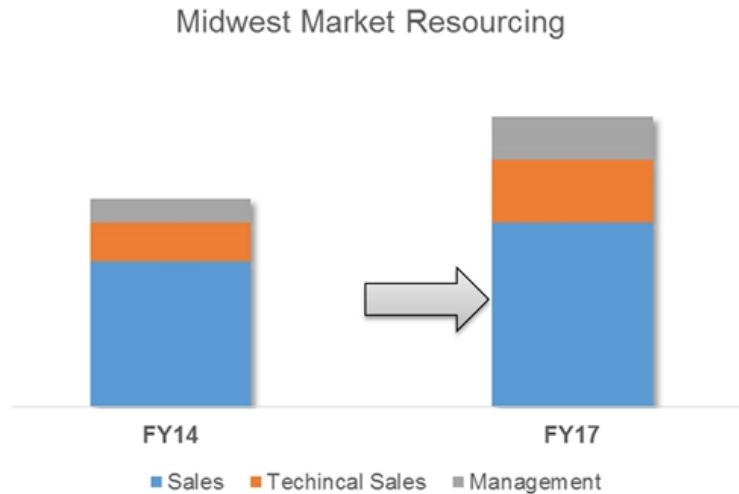
To win against OSB siding products, James Hardie game plan was developed around key pillars:

- Resourcing
- Product portfolio changes
- Non-Product value programs
- Value chain engagement



# RESOURCING INVESTMENTS

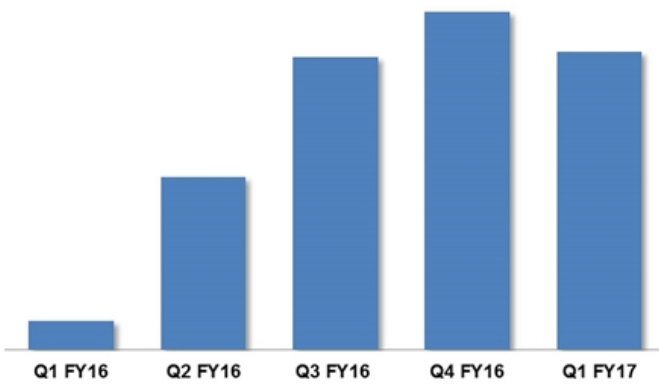
- Increased market presence in additional metros and non-metros
- Resourced market programs for success
- Increased management effectiveness



# PRODUCT PORTFOLIO – CUSTOM COLOR

Since the launch of Custom Color sales volume has grown consistently as James Hardie capabilities continue to improve

Custom Color Volume



## INTRODUCING: JAMES HARDIE CUSTOM COLORS WITH COLORPLUS® TECHNOLOGY

Custom colors are now available on James Hardie® siding products. Our proprietary ColorPlus® Technology finishes, along with the versatility of custom colors, offer the unmatched durability of James Hardie siding, now with limitless design options.



REQUEST A SAMPLE ONLINE  
[JHCUSTOMCOLOR.COM](http://JHCUSTOMCOLOR.COM)



REQUEST A SAMPLE BY PHONE  
877-491-6663

The process of getting custom color samples is easy and quick!  
See details listed on the opposite side on how to get started.

James Hardie Building Products smelt/mixes a specified color only and makes representations or warranties that its custom color products match other appearance characteristics of other products, components or finishes on the same or other projects. We will not be responsible for any differences in appearance or performance between architectural or productized finishes and/or components used in weathering or other environmental factors (e.g., differences in look-etc).

# PRODUCT PORTFOLIO – ROUGHSAWN TRIM

HardieTrim is now attached to more Hardie homes following the launch of Roughsawn trim



## 5/4 NT3® SMOOTH

Arctic White

Thickness	1 in.					
Width	3.5 in.	4.5 in.	5.5 in.	7.25 in.	9.25 in.	11.25 in.
ColorPlus	✓	✓	✓	✓	✓	✓
Primed	✓	✓	✓	✓	✓	✓



## 5/4 NT3® ROUGHSAWN\*

Arctic White

Thickness	1 in.				
Width	3.5 in.	5.5 in.	7.25 in.	9.25 in.	11.25 in.
ColorPlus*	✓	✓	✓	✓	✓
Primed	✓	✓	✓	✓	✓

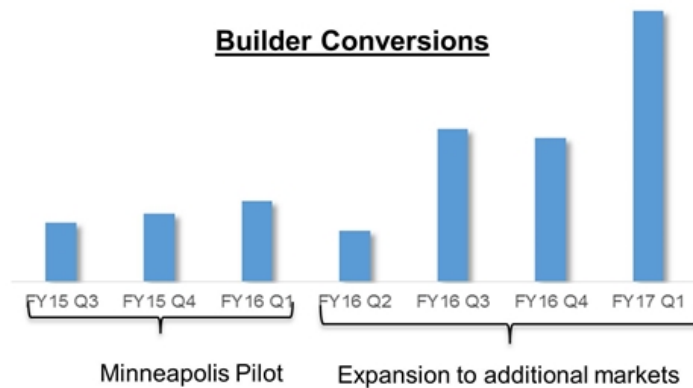


# NON PRODUCT VALUE – 100% HARDIE

- Single family new construction program
- 100% Hardie program continues to enhance the James Hardie value proposition
- Designed to inspire confidence that is marketable at the builder level



**A program that:**  
...inspires confidence  
...stands above the rest  
...delivers results

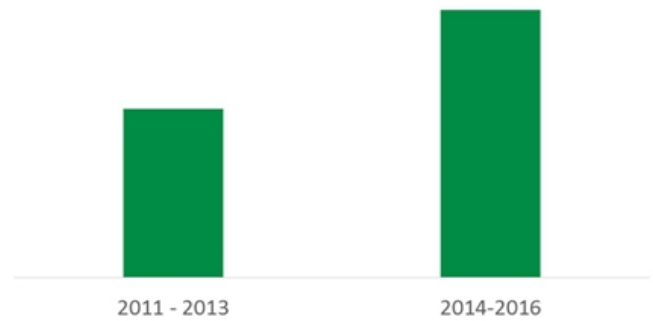


# NON-PRODUCT VALUE - AMBASSADOR PROGRAM

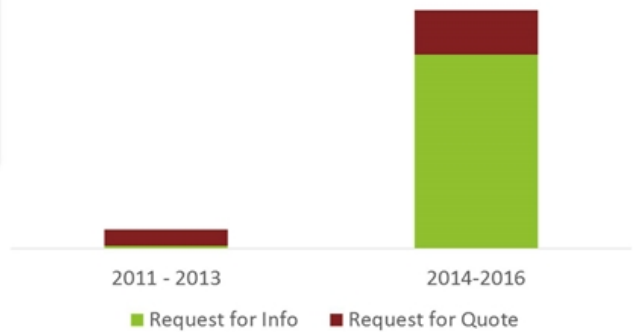
- Repair and Remodel program
- Expanded the Ambassador Program to additional markets



Contractor Reported Jobs



Consumer Lead Generation





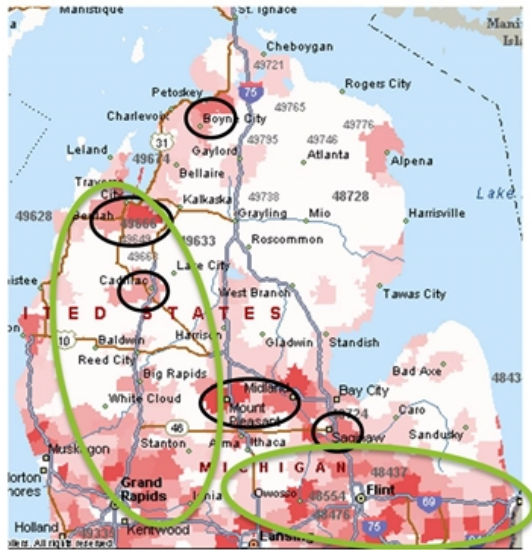
# VALUE CHAIN ENGAGEMENT – SIDEMASTER

- SIDE Master is an Installer affiliation program
- Enhances James Hardie partnership with installers through education, tools and services.
- Continue to work on creating value for the installer



# VALUE CHAIN ENGAGEMENT – ASKHARDIE™

Additional resources for dealers in select non-metro markets providing expedited response times through dedicated single source experts



JH Rep Coverage  
askHardie™ Coverage



## Comprehensive Trade Support



### Products

Get immediate answers to your product-related questions, including the availability of profiles and sizes for your market and specific questions about accessories, colors and warranties.



### Installation

Get customized support for your James Hardie® product and accessory installation questions. You can also arrange installation training events.



### Marketing Materials

Get quick, easy access to a wide range of marketing materials such as brochures, samples and displays.



### Ordering

Get expedited access to your product inquiries and order status.



### One-on-one Support

Address any needs or questions you may have with one-on-one support from your representative.

# WINNING AGAINST OSB SIDING IN ZONE 2

To win against OSB siding in Zone 2, James Hardie game plan was developed around key pillars:

- Winning large builders
- Building stronger relationships with our channel partners
- Winning trim

LP conversions - Zone 2





# TOP OF MARKET

# TOP OF MARKET

- The goal in Top of Market is to establish a design leadership position for James Hardie on luxury and custom homes.
- Product development investments will deliver a suite of products designed to appeal to traditional, contemporary, or modern design preferences.



# TOP OF MARKET – JAMES HARDIE

## **James Hardie is uniquely advantaged to win in the Top of Market...**

- Trusted and respected brand with proven durability
- Product Leadership: Technologies to deliver improved product development capabilities
- Leverage process advantages
- Work through current aligned channel partners for quick entry
- Wood–replacement strategy against cedar

## **Top of Market is aligned to the James Hardie strategy**

- Delivers against the 35 and better defends the 90
- Provides value that this customer group is looking for

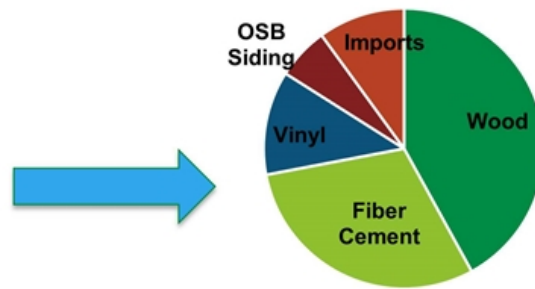
# TOP OF MARKET - COMPETITOR

- The wood and panel look portion of the Top of Market has traditionally been split between cedar, wood and some high-end imports
- Several exterior cladding manufacturers have recently introduced products

Total Top of Market



Wood-look Market Share, Top of Market



# TOM OF MARKET - CUSTOMER

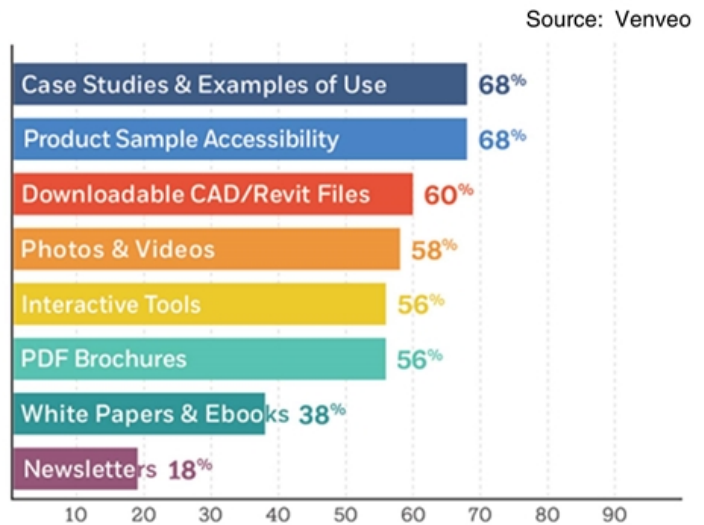
The Top of Market is influenced heavily by the small, custom home builder and the architect they partner with

## Custom Builder Segmentation

Segmentation	Profile
Small Independent and Custom Builders	<ul style="list-style-type: none"> <li>Primarily local builders</li> <li>High fragmented universe</li> <li>5 to 7 employees</li> <li>Spec and semi custom</li> <li>Buy through independent lumber yard, use as trusted advisor</li> <li>Limited influence from architect</li> </ul>
High-end Luxury Custom Builders	<ul style="list-style-type: none"> <li>Fully Custom</li> <li>Average 4-6 employees</li> <li>3 to 5 homes per year</li> <li>Buy's through lumber yard but make final brand decision</li> <li>Strong influence from architects</li> <li>Client financed</li> </ul>

Source: Hanley Wood

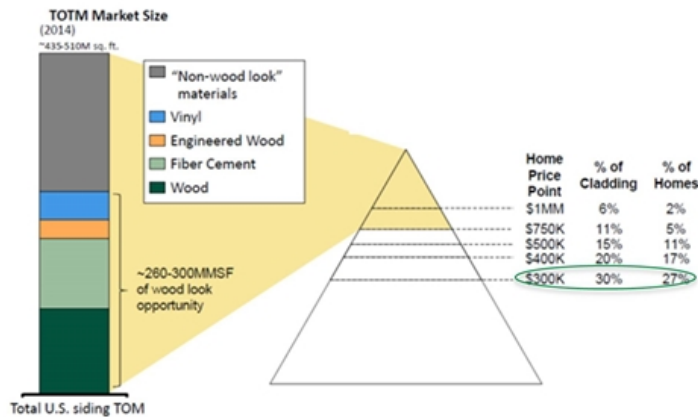
## Architect Needs from Manufacturer





# TOP OF MARKET - OPPORTUNITY

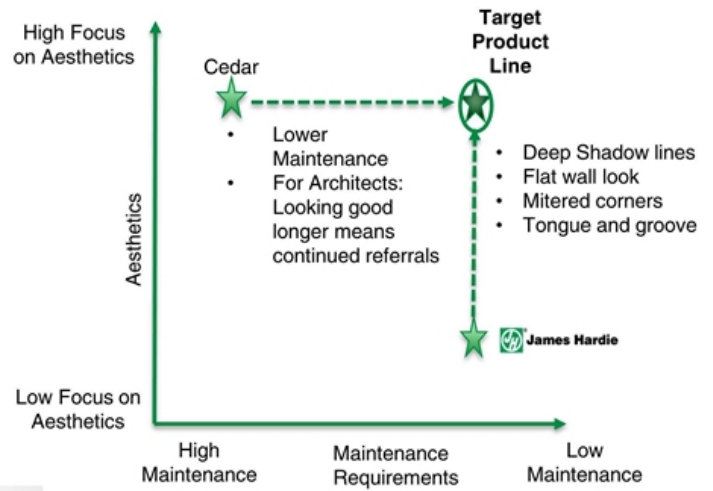
- Approx. 35% of wood look material has already been displaced by HardiePlank
- Over time Top of Market products should extend downward and address homes in lower tiers
- Including all homes above \$300K would add another 19% of US cladding



Source: LEK

# TOP OF MARKET – VALUE PROPOSITION

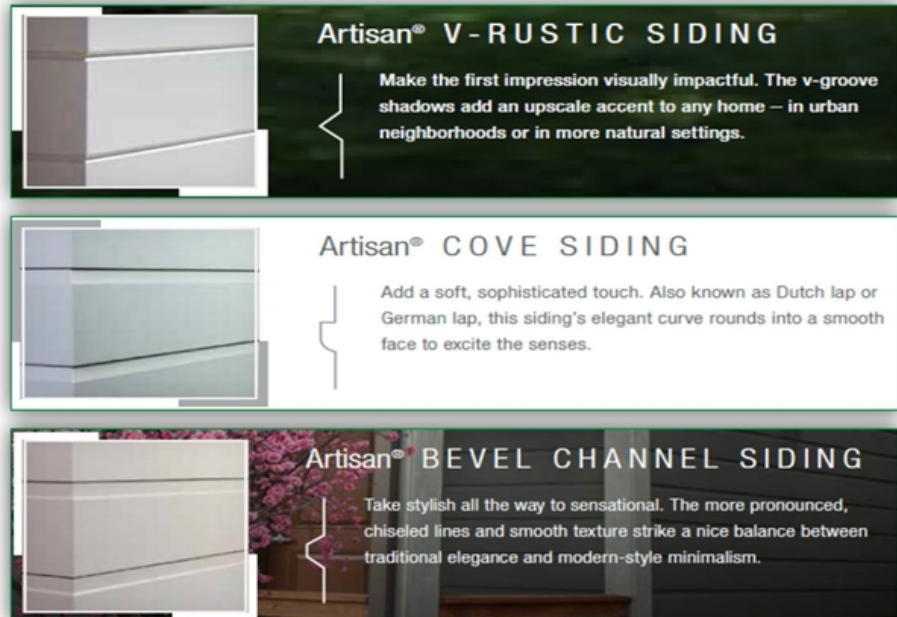
- Brand you can trust
- Low maintenance
- Design, specifically hidden nails
- Affordable



# TOP OF MARKET - PRODUCT DEVELOPMENT

Our product development programs leverage advances and investments in:

- Thick Products
- Low Density
- Machining
- Pressing
- Sanding
- Embossing



The image displays three distinct siding profiles. The top panel shows a V-groove profile with a dark background. The middle panel shows a cove profile with a light background. The bottom panel shows a bevel channel profile with a dark background and a small inset image of a house exterior.

**Artisan® V-RUSTIC SIDING**

Make the first impression visually impactful. The v-groove shadows add an upscale accent to any home – in urban neighborhoods or in more natural settings.

**Artisan® COVE SIDING**

Add a soft, sophisticated touch. Also known as Dutch lap or German lap, this siding's elegant curve rounds into a smooth face to excite the senses.

**Artisan® BEVEL CHANNEL SIDING**

Take stylish all the way to sensational. The more pronounced, chiseled lines and smooth texture strike a nice balance between traditional elegance and modern-style minimalism.

## TOP OF MARKET – SALES AND MARKETING

- High fragmentation of Top of Market customers drives the marketing mix to win the segment more heavily weighted to centralized investments vs field resources.
- Will supplement with field resources to partner with key builders, architects and independent lumber yards

Architect  
Outreach  
Programs

BIM &  
Technical  
Resources

Content  
Marketing

Central Lead  
Generation  
and  
Management

Website &  
Digital

# QUESTIONS



# INTERIORS OVERVIEW

Bill Hogan

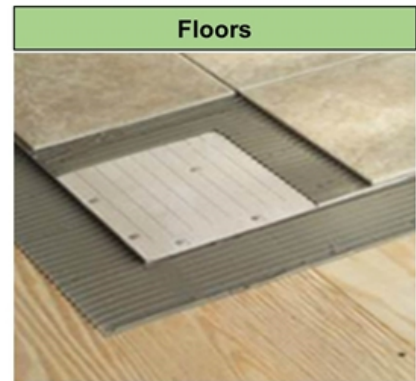
September 2016

# AGENDA

- **INTERIORS OVERVIEW**
- **PATH TO 50% SHARE**
- **ACHIEVING “++” STRATEGY**
- **QUESTIONS**

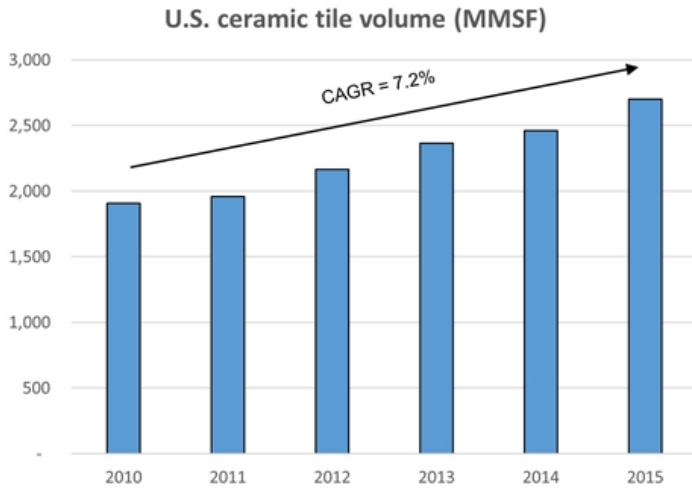
# TILE UNDERLAYMENT OVERVIEW

- Tile underlayment, most commonly referred to as backerboard, is installed under tile in wet areas
- Backerboard provides a solid foundation to install the tile and protects the subfloor from moisture and mold
- Backerboard is most commonly installed on floors and walls (also on countertops in some cases)
  - 1/4" thickness used for floors
  - 1/2" thickness used for walls
- The most common sizes are 3'x5' and 4'x8'





# TILE MARKET GROWTH



- U.S. ceramic tile volume has increased by ~7.2% p.a. to reach ~2.7 billion square feet in 2015
- Ceramic tile has increased its share of the total floor coverings market from ~11% in 2010 to ~13% in 2015
- Dollar sales of ceramic tile have increased at a faster rate than volume, largely due to a shift toward higher value large format tile

% of total floor coverings	2010	2011	2012	2013	2014	2015
	11.3%	11.4%	12.1%	12.4%	12.6%	13.4%

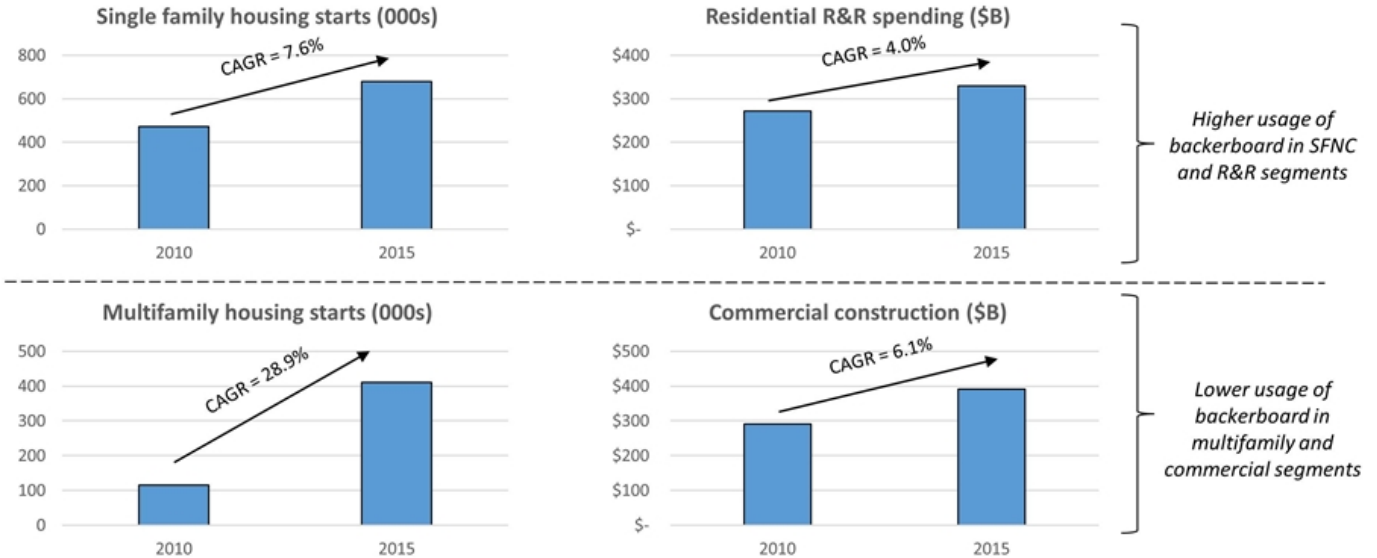
Tile is forecast to continue gaining share of the overall flooring market and reach ~15% by 2020

\*Ceramic tile as a percent of overall floor coverings was 10.6% in 2002

Source: Catalina Research

# CONSTRUCTION DRIVERS

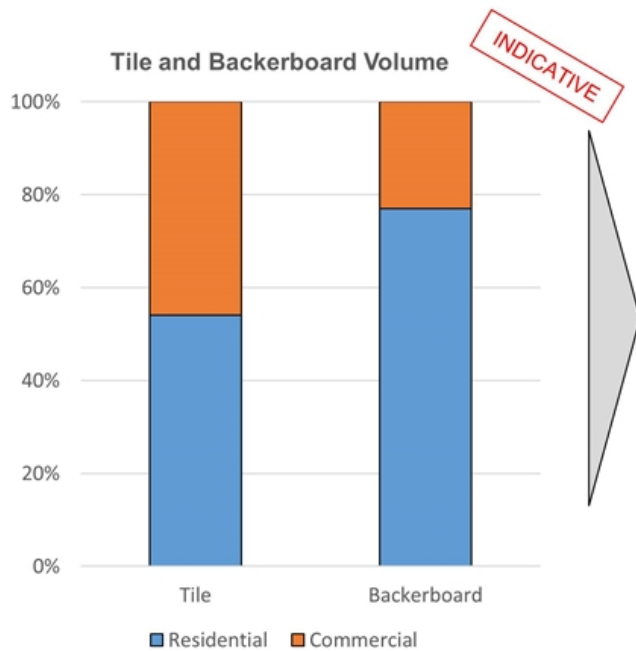
Increased construction activity has driven higher demand for ceramic tile ...



... but backerboard usage varies significantly by construction segment

Source: U.S. Census Bureau, Home Improvement Research Institute, Catalina Research

# TILE VS. BACKERBOARD USAGE



## SFNC and R&R



- Backerboard is prominent solution over wood subfloors
- Not used over slab on grade

## Commercial and multifamily












- Lower usage as backerboard is not used over concrete floors
- Backerboard used on wet area walls

**While the tile market is split roughly 50/50 for residential vs. commercial applications, the backerboard market is weighted more heavily toward residential**

Source: Catalina Research, Freedonia

# TYPES OF TILE UNDERLAYMENT

	Description	JH value proposition	Example brands
Fiber cement	<ul style="list-style-type: none"> <li>Cement board with 90% Portland cement and sand</li> </ul>	<ul style="list-style-type: none"> <li>HardieBacker® has a differentiated fiber cement formulation and has been voted the most preferred backerboard by NTCA professional contractors</li> </ul>	
Glass mesh cement	<ul style="list-style-type: none"> <li>Cement board wrapped in fiberglass mesh</li> </ul>	<ul style="list-style-type: none"> <li>Uniform composition, which leads to cleaner cuts and less mess on the job</li> </ul>	 (Durock)  (PermaBase)
Gypsum	<ul style="list-style-type: none"> <li>Gypsum core, typically with paper or glass mat facer</li> </ul>	<ul style="list-style-type: none"> <li>The HardieBacker® MoldBlock® technology provides superior mold and moisture resistance relative to gypsum</li> </ul>	 
Foam	<ul style="list-style-type: none"> <li>Extruded polystyrene or poly-iso foam core with facer</li> </ul>	<ul style="list-style-type: none"> <li>HardieBacker® is less expensive than most foam boards and has higher compression strength</li> </ul>	 (Kerdi) 
Mats	<ul style="list-style-type: none"> <li>Polyethylene sheet that is rolled on floor</li> </ul>	<ul style="list-style-type: none"> <li>HardieBacker® is less expensive than mats and installation methods are more well known with contractors</li> </ul>	 (Ditra) 

# HARDIEBACKER POSITIONING

**HardieBacker®**  
Cement Board

FOR USE ON  
WALLS, FLOORS  
AND COUNTERTOPS

**MOST PREFERRED BRAND OF BACKER BOARD**

**MADE BETTER**

- 90% Portland cement and sand
- No loose filler
- Solid foundation for your tile job

**INSTALLS BETTER**

- Simple score and snap
- Clean cuts
- Less dust and debris











**PERFORMS BETTER**

- Outstanding moisture and mold resistance
- Excellent tile adhesion



- HardieBacker® is the market leader in rigid backerboard
- Voted most preferred backerboard by NTCA professional contractors in study conducted by Clear Seas Research
- Only backerboard stocked nationally at both Home Depot and Lowe's
- Customers see value in HardieBacker® due to its uniform composition, which allows for cleaner cuts and less mess

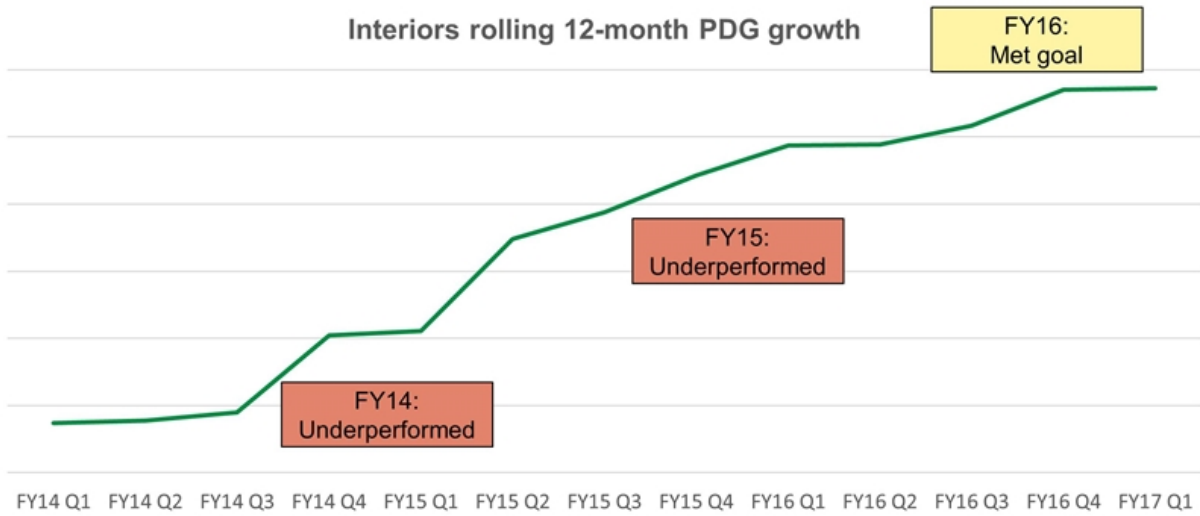
# CHANNEL PRESENCE

	Example companies	JH presence	Primary customer	Segment advantage
Big Box	  	JH over-indexes	DIY, remodeling contractors, "jack of all trades"	<ul style="list-style-type: none"> <li>Convenience (locations / hours)</li> <li>One-stop-shop for a broad range of items that remodelers buy (fixtures, mirrors, cabinets, etc.)</li> </ul>
Pro-Tile	  	JH under-indexes	Tile contractors	<ul style="list-style-type: none"> <li>Contractors already purchasing tile through the channel</li> <li>Purchase all related installation accessories</li> </ul>
Gypsum	 	JH under-indexes	Drywall contractors	<ul style="list-style-type: none"> <li>High volume drywall purchases</li> <li>Service / delivery</li> </ul>
Lumber	 	JH on par	General contractors, custom builders	<ul style="list-style-type: none"> <li>Lumber channel carries a range of other products that GCs / builders purchase (siding, roofing, etc.)</li> <li>Service / delivery</li> </ul>

Largest backerboard segment

Smallest backerboard segment

# HISTORICAL INTERIORS PERFORMANCE



The Interiors team has consistently accelerated PDG growth since FY14 and must continue to grow PDG to achieve our goal of 50% market share in backerboard

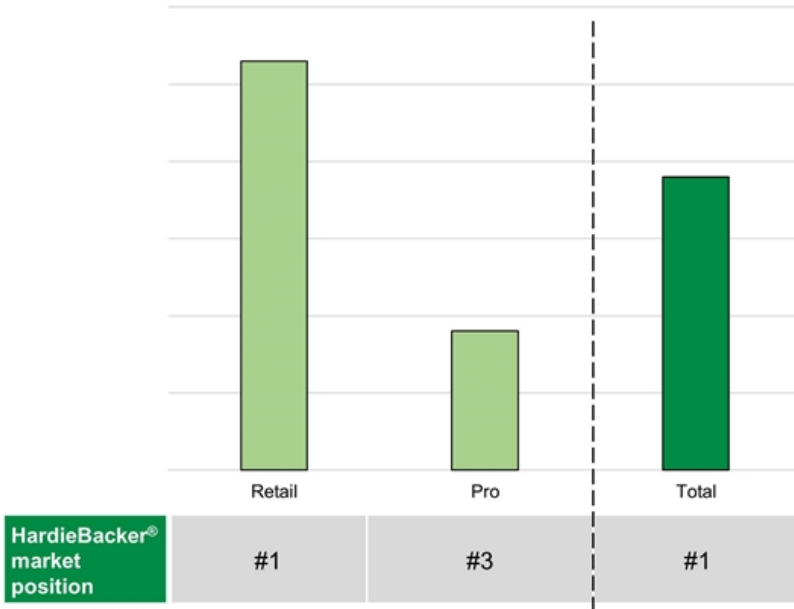
# AGENDA

- INTERIORS OVERVIEW
- PATH TO 50% SHARE
- ACHIEVING “++” STRATEGY
- QUESTIONS



# 50% SHARE AMBITION

HardieBacker® current market share



- Our goal is to drive HardieBacker® share to 50% of the backerboard market
- Current share is estimated to be ~35-40%, with a stronger position in retail than in the pro channel
- Achieving 50% market share will require growth in both the retail and pro channels

Source: Management estimates

# KEY INITIATIVES

## 1 Driving Brand Preference



- Educating contractors on the value proposition and points of differentiation
- Driving end user conversion to HardieBacker® from other technologies

## 2 Channel Alignment



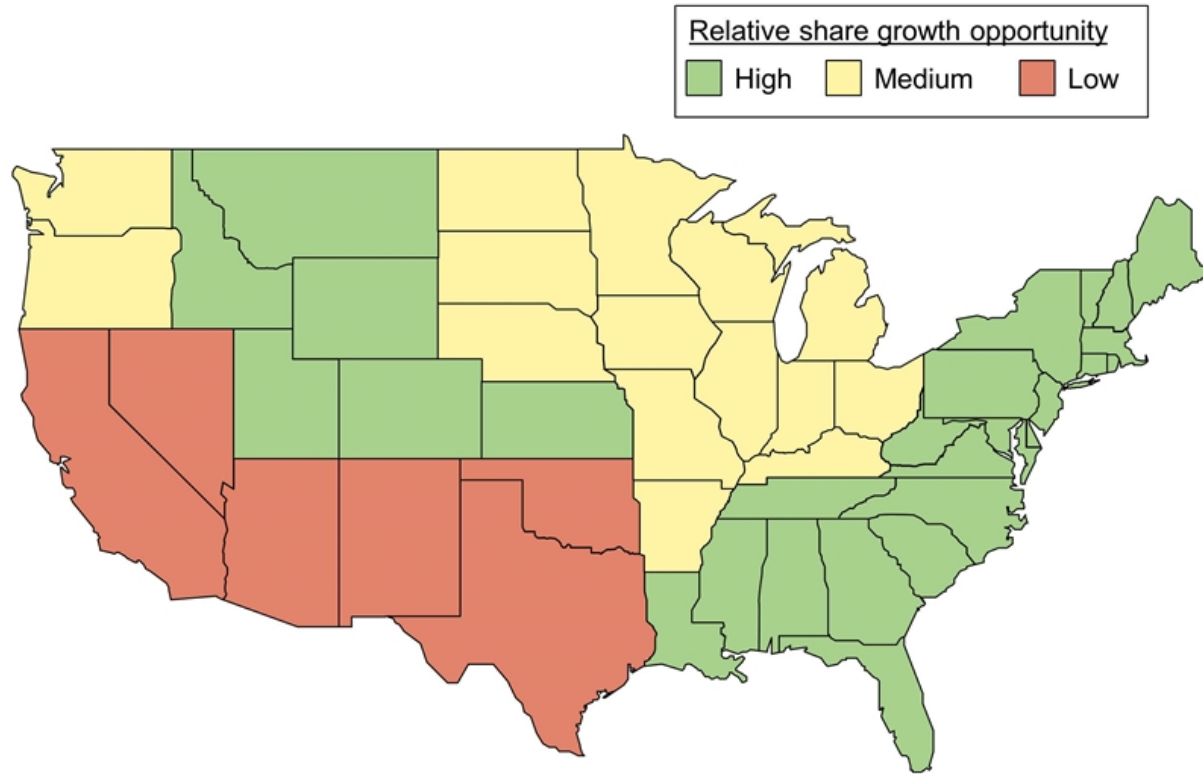
- Maintain high level of engagement in retail channel
- Expand points of distribution and increase customer intimacy in pro channel

## 3 Organizational Execution



- Management focus
- Attract, develop and retain talent

# PATH TO 50% SHARE



# AGENDA

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# VISION FOR INTERIORS

**50**

**% share of rigid  
backer**



- Drive share of backerboard to 50%
  - Growth required across channels, with most coming from pro

**+**

**Win  
underlayments**



- Enter non-FC underlayment categories to achieve 50% share of total underlayments

**+**

**Add  
adjacencies**



- Develop JH into one of the top 3 companies in tile installation products with portfolio revenue > \$500M

# EXAMPLE CATEGORIES AND PRODUCTS

## Prep / underlayment

Backerboard



Mats



Membranes



Self-leveling



## Setting / grout

Mortar



Grout



## Accessories

Tapes



Fasteners



Sealants

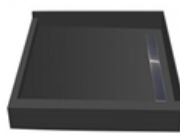


## Shower systems

Kits



Pans / bases



Benches



Shelves



# AGENDA

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# TECHNOLOGY UPDATE

Mark Fisher

September 2016



# FIBER CEMENT TECHNOLOGY STRATEGY

## **Enable James Hardie Product Leadership Strategy**

Provide a continuous pipeline of innovative new products and technologies that deliver sustainable advantages to achieve our category and market share goals

# R&D LOCATIONS

Three research centers – US and Australia

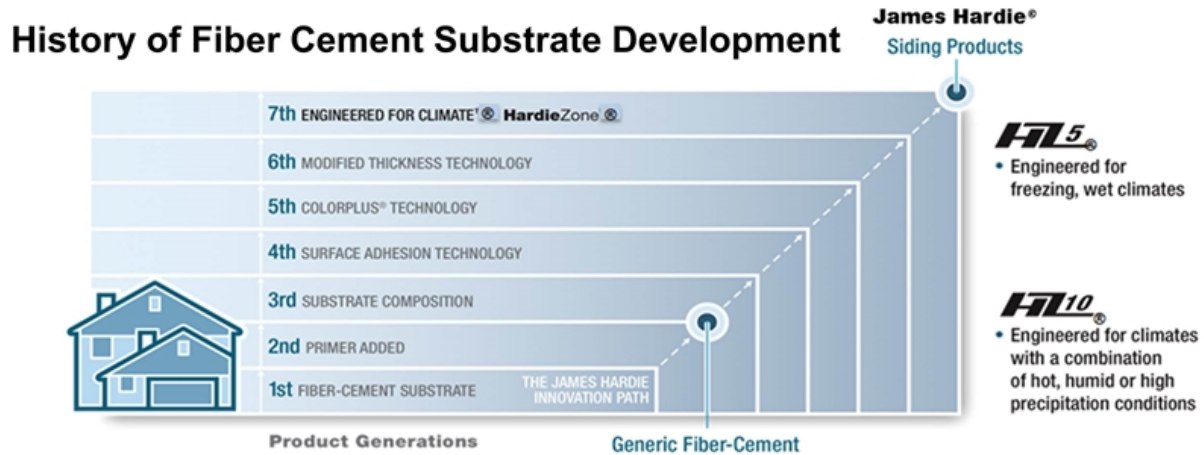
- Fontana, CA
- Naperville, IL
- Sydney, AUS



# CREATING A SUSTAINABLE AND DIFFERENTIATED ADVANTAGE

**Research and Development:** Significant and consistent investment

- US\$29.5m spent on Research & Development in FY16

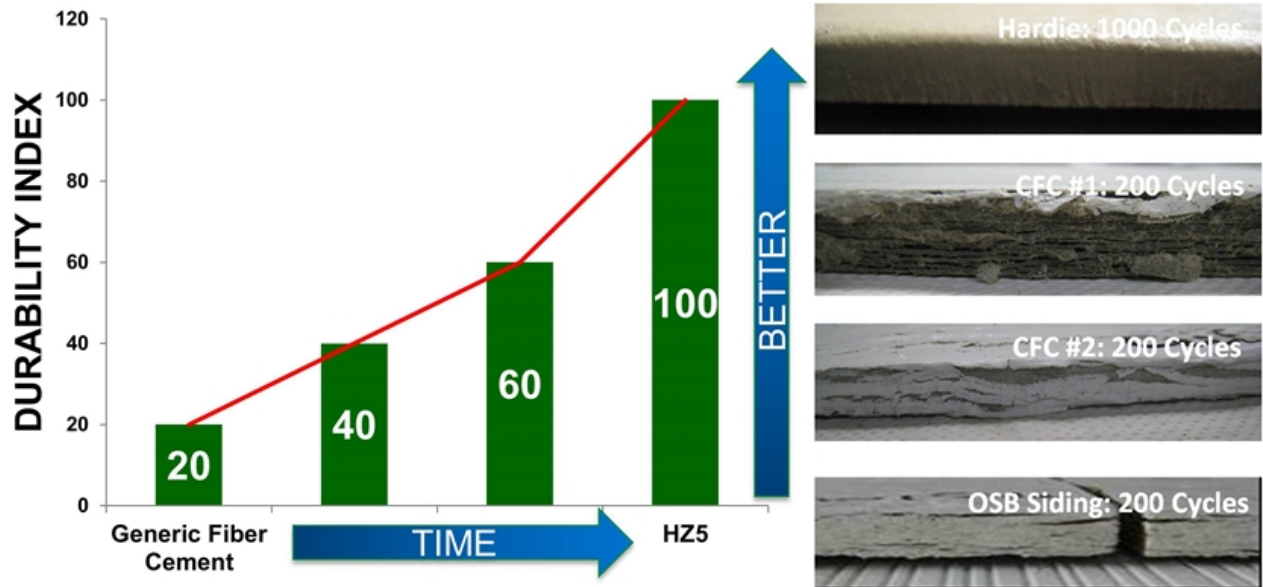


# RESEARCH CAPABILITIES



# PRODUCT PERFORMANCE

HZ5® siding performs 5X better than generic FC in system testing

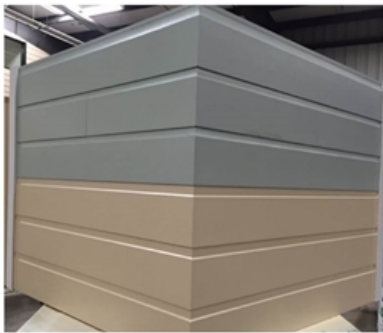


Source: James Hardie Internal Research and Testing

# PRODUCT DEVELOPMENT



**Artisan® V-Rustic Siding**



**Artisan® Cove and Beveled Channel Siding**



**HardieReveal2.0™ Panel System**



**HardieTrim™ Mouldings**

Thickness	1 in.				
Width	3.5 in.	5.5 in.	7.25 in.	9.25 in.	11.25 in.
ColorPlus*	✓	✓	✓	✓	✓
Primed	✓	✓	✓	✓	✓
<b>NEW</b>					

**HardieTrim™ NT3® Roughsawn**

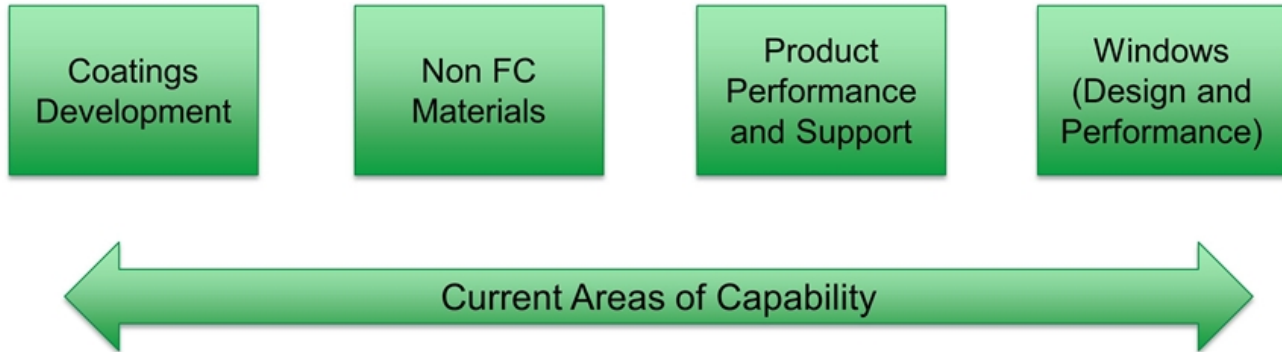
# NON – FC TECHNOLOGY STRATEGY

Evaluate and develop alternate material technologies and Non – FC product opportunities for fit with current and future JH Business

- New technology exploration – materials, process and applications
- Utilize existing markets or new opportunities to springboard viable technology
- Development and support for invested technology

# NON – FC TECHNOLOGY CAPABILITY

Established Non – FC research and development capabilities in Naperville center over the last 2-3 years





# QUESTIONS