

# LEADING THE WAY



H.B. Fuller Investor Overview  
July, 2019



**H.B. Fuller**

Connecting what matters.™

## Safe Harbor Statement

Certain matters discussed today may include 'forward looking statements' as that term is defined under the Private Securities Litigation Reform Act of 1995. Since such statements reflect our current expectations, actual results may differ as they are subject to the kinds of risks that are enumerated in the Company's Securities and Exchange Commission (SEC) filings. The Company disclaims any obligation to subsequently revise any forward-looking statements to reflect actual events or circumstances after the date of such statements.

## Regulation G

The information presented during today's meeting regarding adjusted gross profit, adjusted selling, general and administrative expense, adjusted diluted earnings per share, earnings before interest, taxes, depreciation, and amortization (EBITDA) and constant currency revenue does not conform to generally accepted accounting principles (GAAP) and should not be construed as an alternative to the reported results determined in accordance with GAAP. Management has included this non-GAAP information to assist in understanding the operating performance of the Company and its operating segments as well as the comparability of results. The non-GAAP information provided may not be consistent with the methodologies used by other companies. All non-GAAP information is reconciled with reported GAAP results in the company's press releases available on the company's website, with the exception of our forward looking non-GAAP measures contained in our fiscal 2019 outlook, which are unknown or have not yet occurred.

## Additional Information

Please refer to our recent press release and annual report for the year ended December 1, 2018, on Form 10-K, filed with the Securities and Exchange Commission, and available on our website at [www.hbfuller.com](http://www.hbfuller.com) in the Investors section.



# Company Overview



**H.B. Fuller**

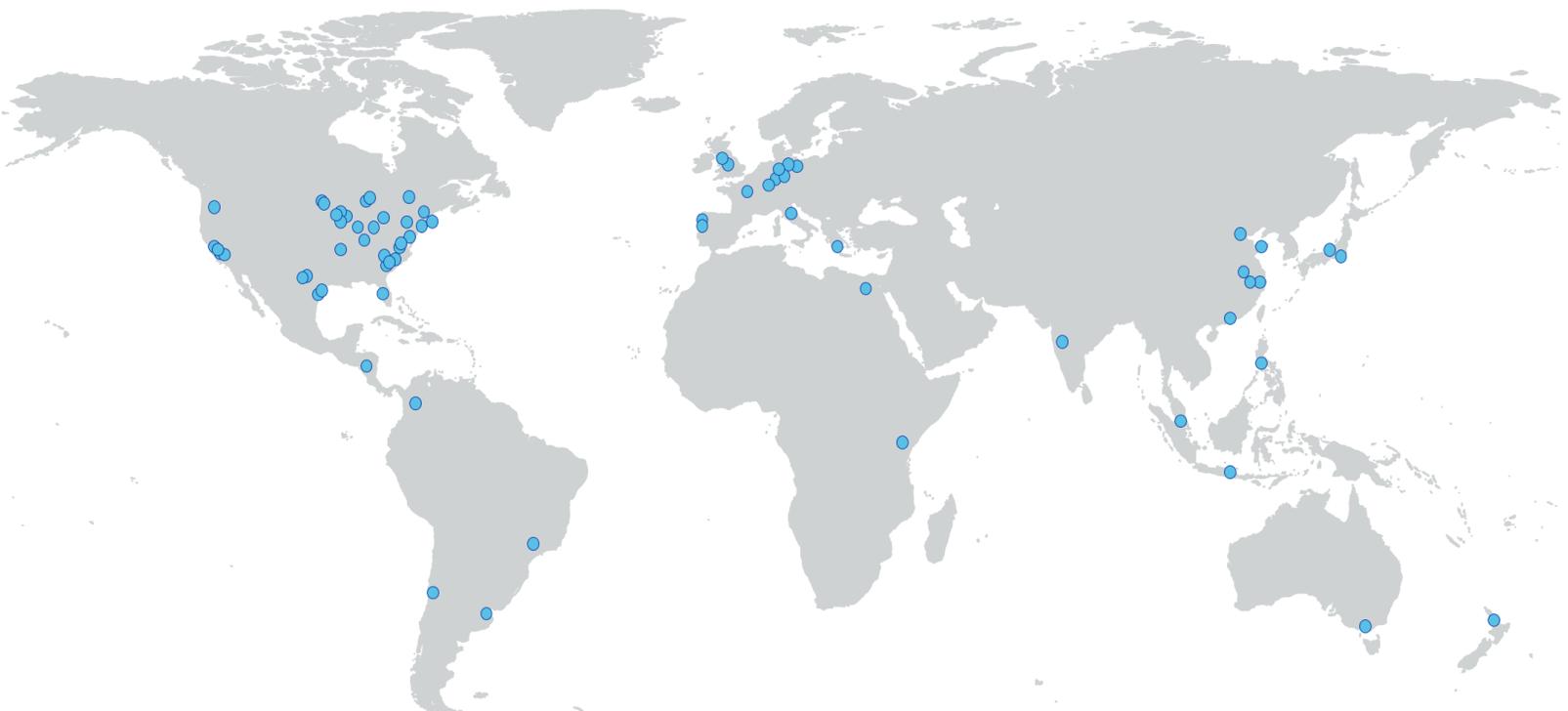
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# H.B. Fuller is a global market leader in adhesives

**Global Headquarters:  
St. Paul, MN**

**\$3.04 Billion  
Revenue  
2018**

**\$449 Million\*  
Adjusted EBITDA  
2018**

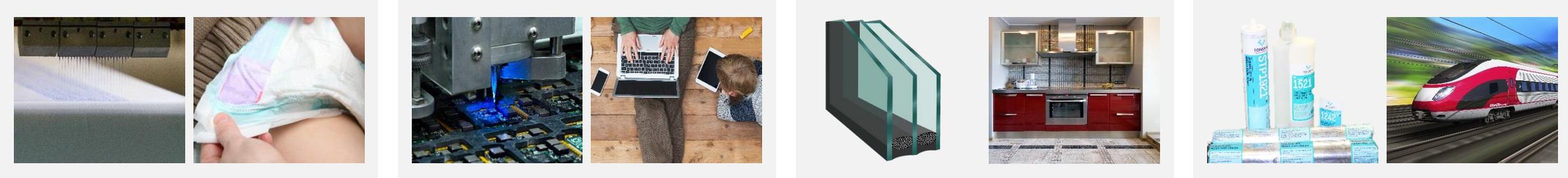


**74 Manufacturing  
Facilities**  
**30 Technology  
Centers**  
**Direct Presence in  
37 Countries**

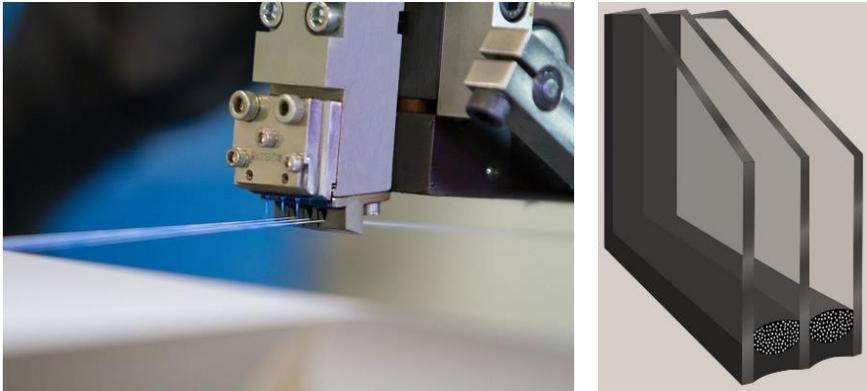
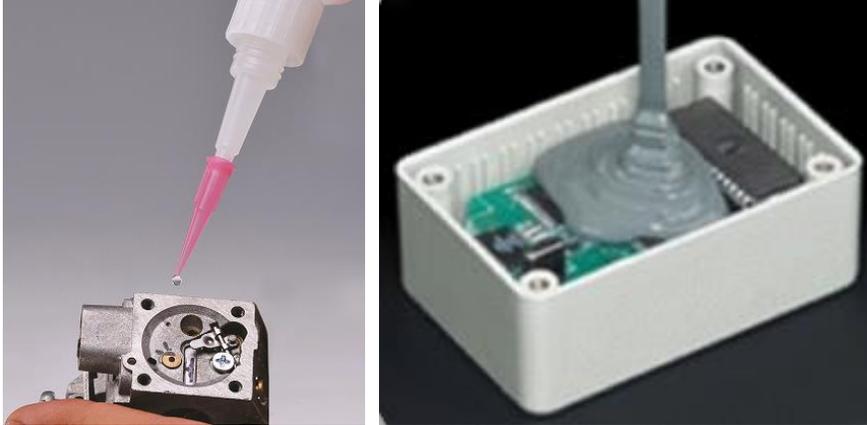
**Serve Customers  
in 125 Countries**

**~6,500 Employees**

*\* Non-GAAP Reconciliation provided in press release dated Jan. 16, 2019, available on our investor website*



# The adhesives market is attractive



**Critical material that comprises a small amount of spend for customers**

- For most customers, adhesives make up less than 1% of COGS

**Annuitized business with high switching costs**

- Requires resource intensive qualification and testing

**Each adhesive has unique chemistry**

- Product formulations use from three to more than 10 specialty chemicals

**Significant diversity of customers, products, and raw materials**

- Top 10 customers make up less than 15% of revenue
- Top 25 raw materials make up less than 20% of all purchases

# Our competitive dynamics are favorable

## Leader in a growing industry

- 38-year industry CAGR: 3.6%\*
- FUL has consistently been the #2 player, typically #1 or #2 in markets we're committed to competing in
- Able to choose the most attractive markets in which to operate

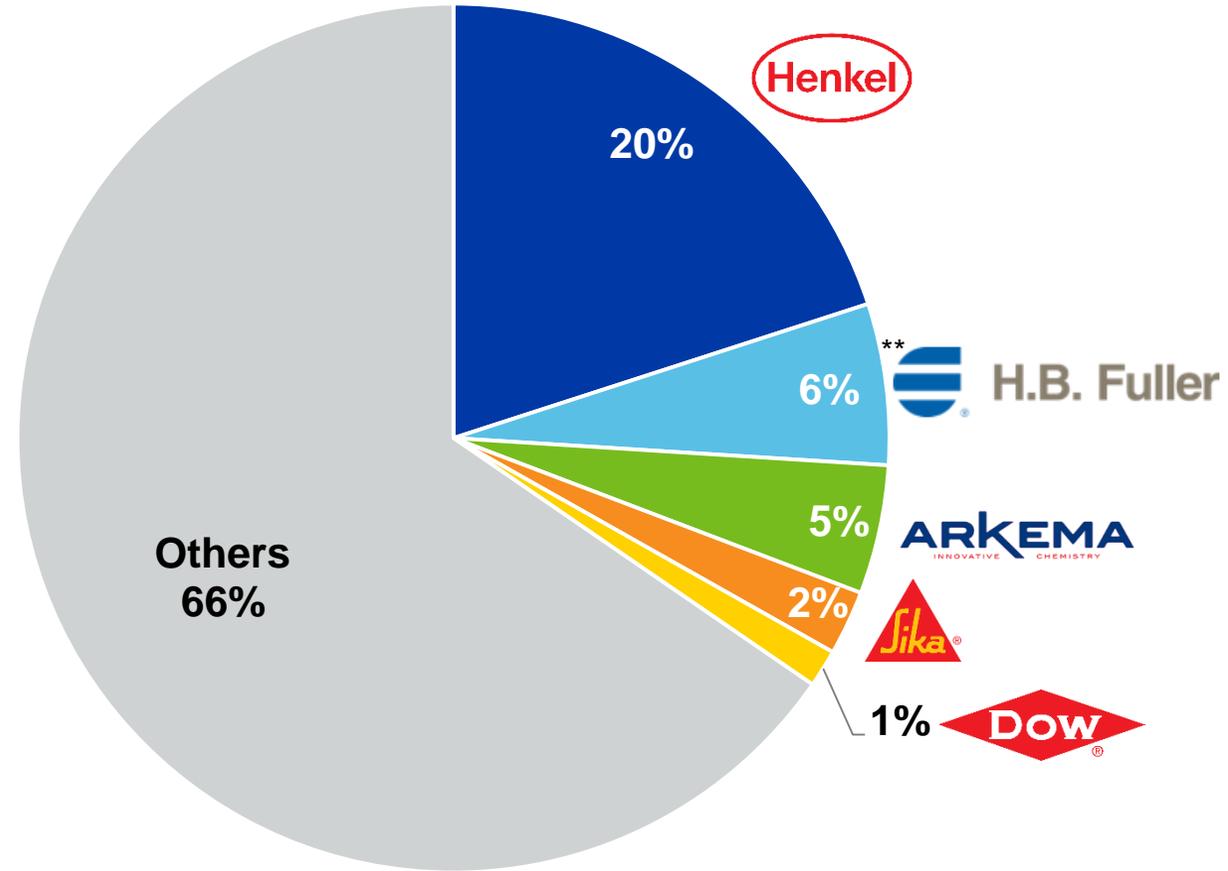
## Competitive dynamics

- Competitors include the following types of companies: global adhesives; global chemical; mid-sized specialized; regional adhesives
- FUL has competitive advantage versus global competitors that are not as well coordinated, and smaller competitors that do not have the global reach

## Highly fragmented market

- Top five players hold < 35% of market
- Long-term consolidation opportunities

**Adhesives Market: \$50 Billion**



\*Source: ChemQuest, based on 2017 data

\*\*H.B. Fuller 2017 Pro Forma

# A number of global trends across a diverse range of markets are allowing FUL to help its customers adapt to a changing world

- Overall, FUL is well-positioned to benefit from industry trends

Industry Trend	H.B. Fuller-Enabled Customer Innovation
<b>Shift from fasteners to adhesives</b>	<ul style="list-style-type: none"> <li>Waterproof and lighter weight next-generation smartphones</li> </ul>
<b>Increased use of composites</b>	<ul style="list-style-type: none"> <li>Resilient veneer-laminated wood flooring</li> </ul>
<b>Demand for alternative, sustainable energy sources</b>	<ul style="list-style-type: none"> <li>Long-term, durable solar panels</li> </ul>
<b>Globally aging population</b>	<ul style="list-style-type: none"> <li>Comfortable adult incontinence products</li> </ul>
<b>Electric vehicles and vehicle light-weighting</b>	<ul style="list-style-type: none"> <li>Thermally-conductive encapsulants; lightweight adhesives</li> </ul>
<b>Demand for energy efficient buildings</b>	<ul style="list-style-type: none"> <li>Highly durable, easy-to-apply insulating adhesives and tapes</li> </ul>
<b>Micro-electronics and electronic light-weighting</b>	<ul style="list-style-type: none"> <li>Shock-resistant component assembly</li> </ul>
<b>E-commerce and demand for sustainable packaging</b>	<ul style="list-style-type: none"> <li>Automated, lower-cost, more sustainable packaging solution for online retailers</li> </ul>

# We help our customers solve their adhesion challenges every day

- FUL helps its customers develop solutions by (i) helping them improve their processes; (ii) introducing new processes; (iii) introducing new products



## Applications Expert

- Leveraging convergence of technology between market segments, such as electronics and automotive



## Global Innovator

- Creating specified adhesives to meet demanding requirements and then delivering what key customers need, when they need it, where they need it



## Strong R&D Partner

- Longstanding collaborative relationships
- Global supply assurance for world's largest brand owners
- Local production supports regional product differentiation

# Why H.B. Fuller? We are a global market leader in adhesives with a significant competitive advantage



**Resilient, diversified, innovation-focused business model**

- Diversified end-market portfolio
- Shifting to highly specified businesses
- Comprise 54% of \$3B annual revenues

**Leader in high margin adhesives industry with attractive growth prospects**

- FUL is the #1 or #2 player in most of the markets we choose to compete in
- Industry is expected to grow 3-4% per year over the next 10 years, driven by market trends

**Strategic plan driving long-term, profitable growth**

- Strategic plan will drive significant value for shareholders
- Drivers include growth in Engineering Adhesives, realization of Royal synergies, and manufacturing excellence

**Deep, multi-decade customer relationships**

- Expertise in innovation and our globally connected team of experts are instrumental in maintaining and building new long-term relationships with customers

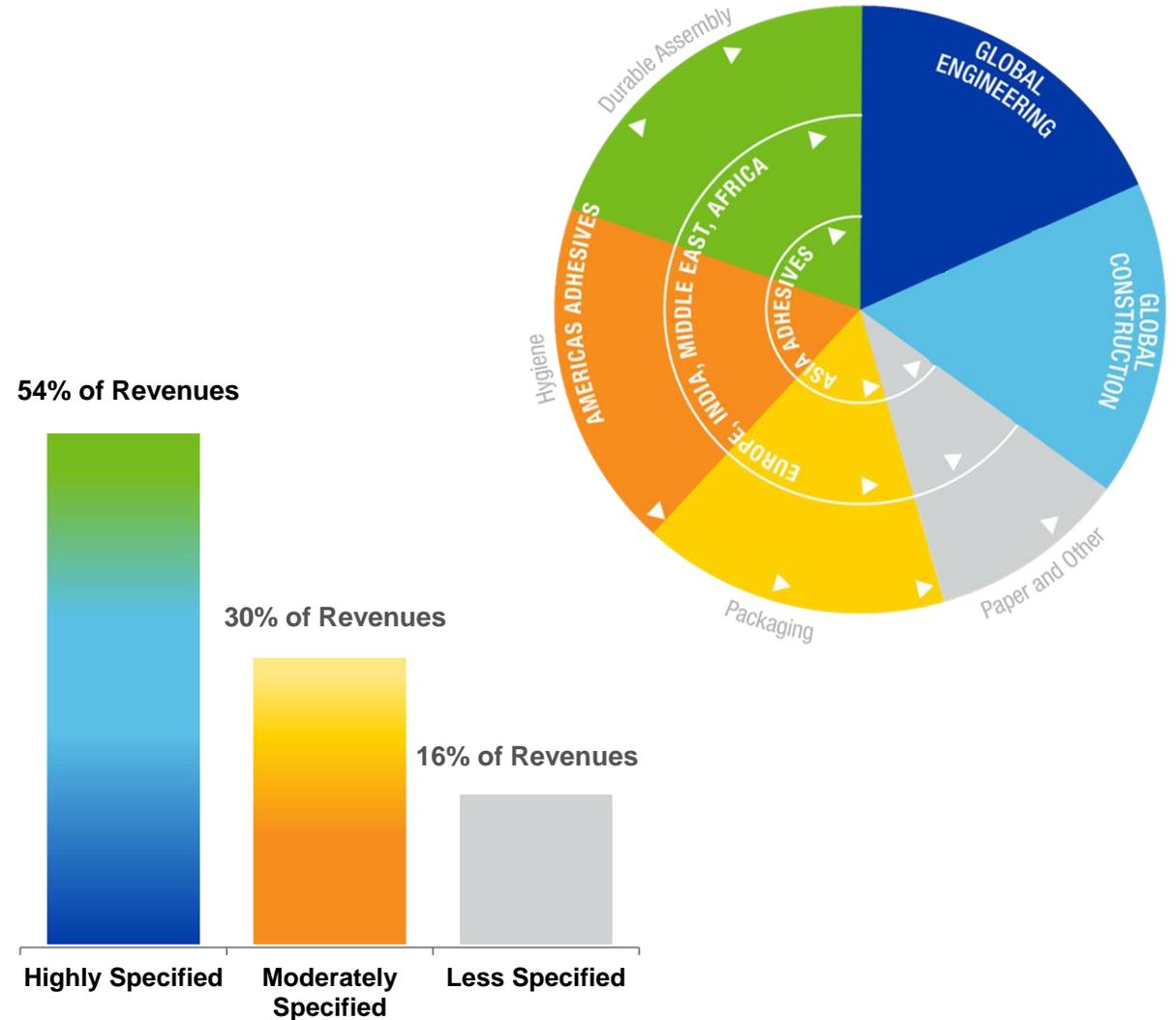
**Long-tenured, highly experienced management team**

- We have the right team to execute the strategy
- More than 200 years of combined experience
- Management incentives are aligned with investors' interests



# H.B. Fuller is organized to maximize focus on profitable growth

- Engineering and Construction Adhesives businesses operate globally
- Remaining segment organization balanced between global strategy and regional execution
- Executives develop global strategy and execute regional operating plans
- Executive leadership takes on two roles to ensure management is engaged across both globally- and regionally-operated segments



# FUL competes in high-growth, high-margin markets

Market and Product Examples	Top Competitors	H.B. Fuller Market Share Estimate	Level of Cyclicity	Pricing Power	Unique Attributes
 <b>ENGINEERING</b> Electronics, Auto, Solar, Aerospace, MRO, etc.	<ul style="list-style-type: none"> <li>▪ Henkel</li> <li>▪ Sika</li> <li>▪ Huitian</li> </ul>	<ul style="list-style-type: none"> <li>▪ 2010: &lt;1%</li> <li>▪ 2017: 2.5%</li> <li>▪ 2020E: 5%</li> </ul>	Moderate	High	<ul style="list-style-type: none"> <li>▪ Often sell small quantities of high-value adhesives</li> <li>▪ Products engineered and designed centrally but produced worldwide</li> </ul>
 <b>CONSTRUCTION</b> Flooring, Roofing, Utilities and Infrastructure	<ul style="list-style-type: none"> <li>▪ F: Mapei, Custom</li> <li>▪ R: Specialty Competitors</li> <li>▪ U&amp;I: Sika, 3M</li> </ul>	<ul style="list-style-type: none"> <li>▪ 2010: &gt;10%</li> <li>▪ 2017: 12%</li> <li>▪ 2020E: 13%</li> </ul>	Moderate	Moderate-High	<ul style="list-style-type: none"> <li>▪ Sell through distributors &amp; DIY retailers, but bought by installers</li> <li>▪ Products applied by tradesman/ DIY-ers on site</li> </ul>
 <b>DURABLE ASSEMBLY</b> Insulating Glass, Filtration, Bus/ Truck/RV, Product Assembly	<ul style="list-style-type: none"> <li>▪ Henkel</li> <li>▪ Dow Corning</li> <li>▪ Sika</li> </ul>	<ul style="list-style-type: none"> <li>▪ 2010: 5%</li> <li>▪ 2017: 8%</li> <li>▪ 2020E: 10%</li> </ul>	Moderate	Moderate-High	<ul style="list-style-type: none"> <li>▪ Sister to EA market, but usually requires more bulk production and use of adhesives</li> <li>▪ High volume, highly durable adhesives required</li> </ul>
 <b>HYGIENE</b> Baby Diapers, Feminine Products, Adult Incontinence	<ul style="list-style-type: none"> <li>▪ Henkel</li> <li>▪ Arkema (Bostik)</li> </ul>	<ul style="list-style-type: none"> <li>▪ 2010: 24%</li> <li>▪ 2017: 30%</li> <li>▪ 2020E: 34%</li> </ul>	Low	Moderate	<ul style="list-style-type: none"> <li>▪ Strong innovation partner to large, multinational customers</li> <li>▪ Requires FUL's global supply chain and support</li> </ul>
 <b>PACKAGING</b> End of Line, Labeling, Flexible Packaging, etc.	<ul style="list-style-type: none"> <li>▪ Henkel</li> <li>▪ Dow</li> <li>▪ Regional Players</li> </ul>	<ul style="list-style-type: none"> <li>▪ 2010: 15%</li> <li>▪ 2017: 14%</li> <li>▪ 2020E: 17%</li> </ul>	Low	Moderate	<ul style="list-style-type: none"> <li>▪ Long-time packaging adhesives innovation leader</li> <li>▪ Focus on production efficiency of customers' packaging operations</li> </ul>
 <b>PAPER &amp; OTHER</b> Bookbinding, Envelopes, Box Making, Tissue and Towel, etc.	<ul style="list-style-type: none"> <li>▪ Henkel</li> <li>▪ Regional Players</li> </ul>	<ul style="list-style-type: none"> <li>▪ 2010: 9%</li> <li>▪ 2017: 12%</li> <li>▪ 2020E: 12%</li> </ul>	Low	Low-Moderate	<ul style="list-style-type: none"> <li>▪ Mature market where FUL has historic know-how and capabilities</li> <li>▪ Broad range of existing technologies address market needs</li> </ul>

# Royal Integration



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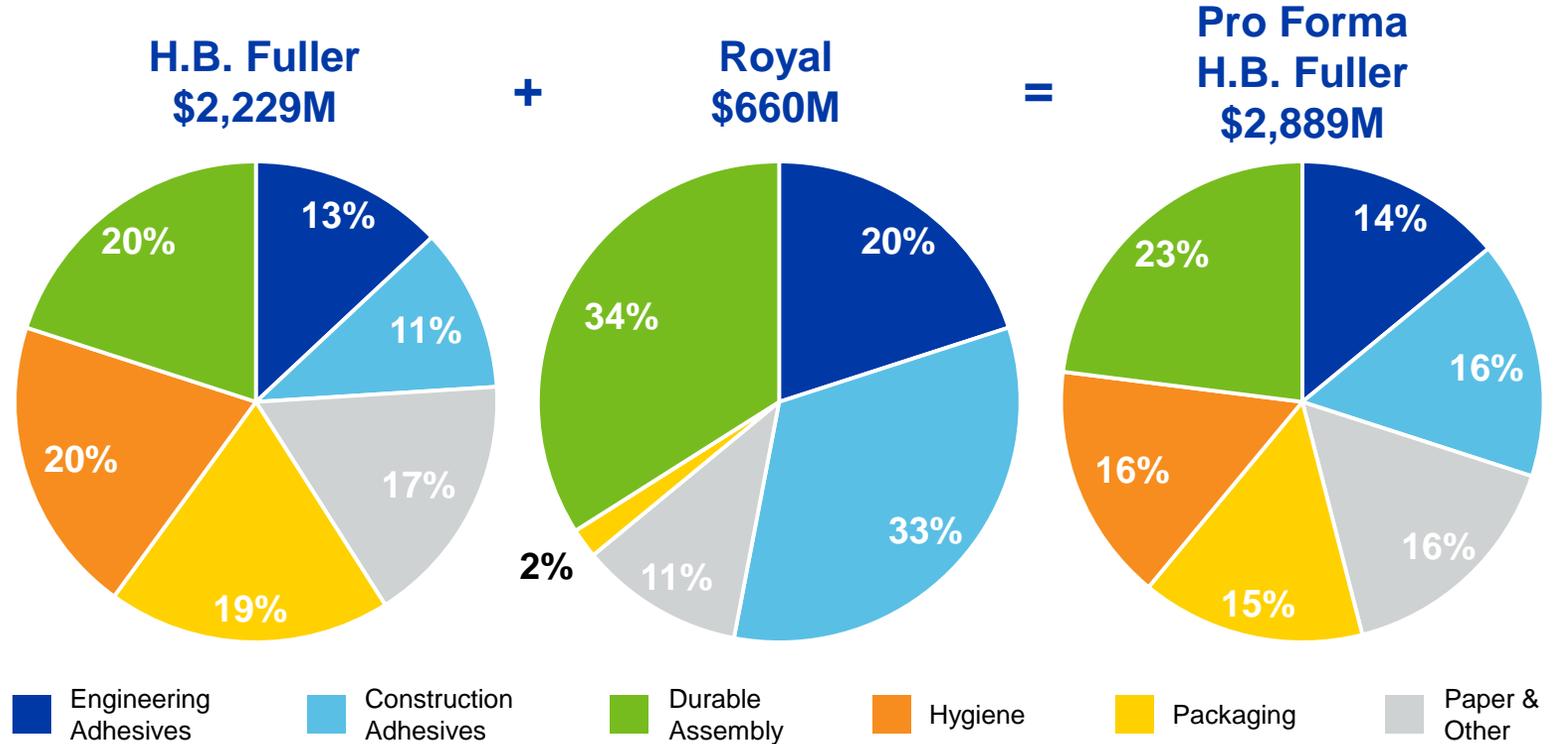
# Overview of the transformational Royal acquisition in 2017

- Royal Adhesives & Sealants: pure-play adhesives and sealants company ranked in the top 10 with 19 manufacturing facilities across five countries on three continents

**2017 Royal Financials\***

- \$660M Revenue
- \$133M Adjusted EBITDA
- \$120M Free Cash Flow\*\*

\* Based on H.B. Fuller fiscal calendar  
 \*\* Defined as adjusted EBITDA minus capital expenditures



*The addition of Royal increased highly specified business composition from 44% of a \$2.2 billion portfolio to 53% of a \$2.9 billion portfolio*

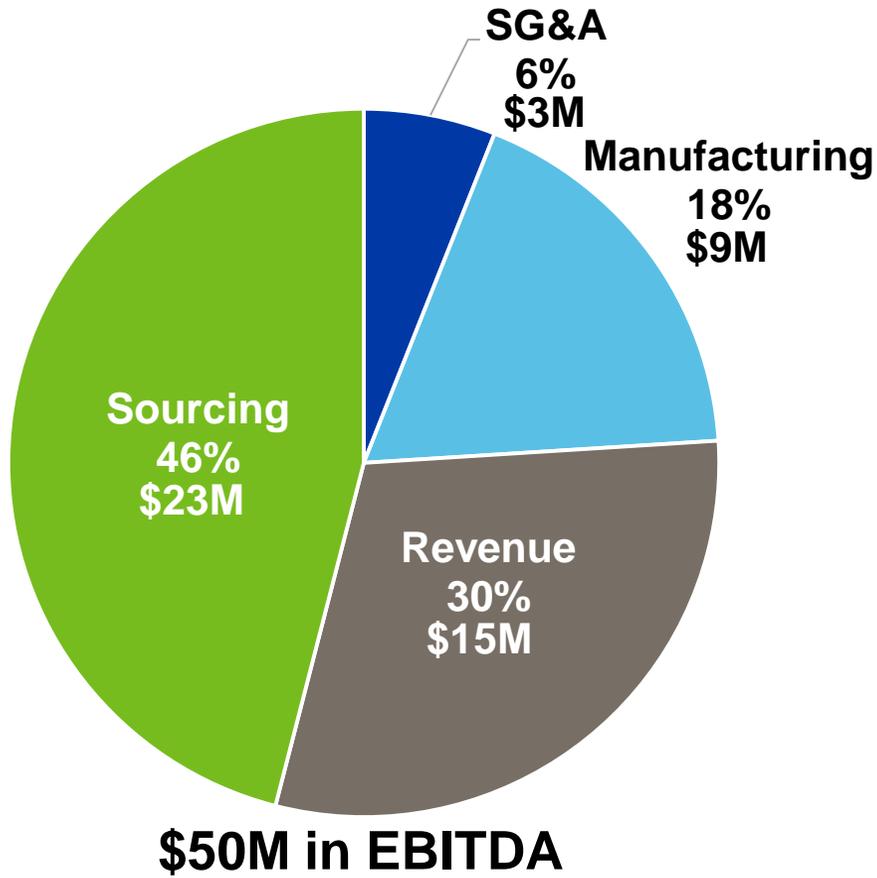
# Guiding principles to manage risk and maximize value creation

- |   |                               |   |
|---|-------------------------------|---|
| 1 | <b>Profitable Growth</b>      | ▶ <b>Protecting and growing</b> the base business is more important than cost synergies.  |
| 2 | <b>Cash Flow Delivery</b>     | ▶ <b>Create a cash-driven mentality</b> in order to optimize balance sheet, maximize returns, and drive efficiency.                             |
| 3 | <b>3-Year Plan</b>            | ▶ <b>Use a staggered integration approach</b> and create a three-year planning horizon to deliver synergies.                                    |
| 4 | <b>5 Integration Projects</b> | ▶ <b>Align integration projects</b> with existing H.B. Fuller segment structure in order to align accountability, project plans, and resources. |
| 5 | <b>Independence</b>           | ▶ <b>Balance integration with independent operation</b> of existing businesses in order to leverage Royal effectively.                          |
| 6 | <b>Talent Retention</b>       | ▶ <b>Retain talent and build a unified culture</b> to bring our best thinking together in robust plans.   |

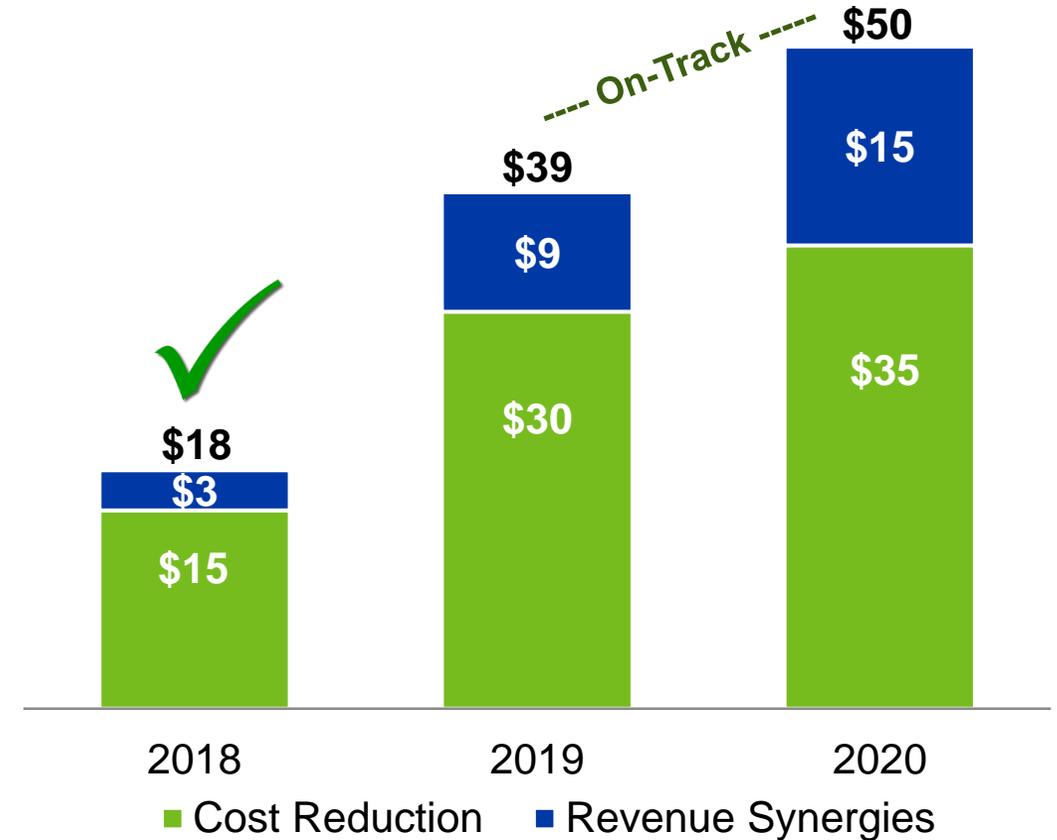


# The Royal integration is on track and progressing well

## Source of Synergies



## Timing of Realization\* (\$M)



\*Reflects cumulative or aggregate synergies generated over this time period.

# Strategy



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# Strategy – Building the best adhesives company in the world



## OUR COMPETITIVE ADVANTAGE

### Globally-connected:

- Sharing ideas
- Executing plans
- Solving customers' adhesion challenges

### Agile:

- Market-focused
- Faster to innovate
- Flexible to change



## HOW WE WIN IN THE MARKET

### Innovators with:

- Application expertise
- Customer partners
- Technology experts
- Emerging markets focus

### Excellence in:

- Manufacturing
- Supply chain
- Sourcing
- Quality and service

Execute with a **winning, global team**



## FINANCIAL TARGETS

**3 - 5%** annual organic growth

**~10%** annual growth in EBITDA @CC

Over the next three years, achieve:

- **\$260 million** in capital investments
- **\$600 million** in debt paydown



## OPERATING PRINCIPLES

High **ethical** standards

**Safe** working environment

Commitment to **sustainability** and **community**

Global **collaboration**



## ACTIONS TO DRIVE SUCCESS

Grow aggressively in **high value segments**

Manage and **grow the core**

- Create teams of experts
- Develop differentiated applications
- Leverage efficient processes and tools
- Make informed resource allocations

# Our action plan is designed to deliver results

**Profitable Growth  
in Engineering  
Adhesives**



**Realization of  
Royal-Related  
Synergy Targets**



**Efficiency Through  
Manufacturing  
Excellence**



**Expertise in Technology and Innovation**

**Dedicated and Globally-Connected Team of Experts**

# Capital Allocation Philosophy to Support Strategy

## FUL Long-Term Capital Allocation Philosophy

Debt-to-EBITDA leverage between 2x to 3x

Dividend = 25% of average prior three years earnings

CAPEX investment of 2.5% of revenue

Balance strategic M&A & share repurchase

## Our Focus Over the Next Three Years

### Ongoing

- CAPEX at 2.5% of revenue
- Annual dividend of 25% of prior 3 years average net income

### Near-term Focus

- Reduce debt-to-EBITDA leverage to ~3.0x by paying down \$600 million of debt (from 5.8X FY'17)
- Reduce working capital by 1% of annualized revenue per year

### Post-2020 Focus

- Share repurchase to offset dilution from equity comp
- Re-engage in strategic M&A

# Financial Results Recap



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# FYE 2018 Organic Growth and Margin Improvement

(\$ Millions)

	H.B. Fuller 2017	Royal 2017	ProForma 2017		Actual 2018		YoY vs. ProForma 2017
Revenue	\$2,229	\$660	\$2,889		\$3,041		+5%
EBITDA	\$287	\$133	\$420		\$449		+7%
EBITDA %	12.9%	20.2%	14.5%		14.8%		+30 bps
EBITDA less CapEx	\$232	\$120	\$352		\$381		+8%

# Q2'19 Financial Results Recap

(\$ Millions)

## Q2 2019

	2019	2018	% YoY
Revenue	\$760	\$789	-3.8%
Organic			+1% @ cc
Adj GP %	28.9%	28.0%	+90 bps
Adj EBITDA	121	123	-1.3%
Adj EBITDA %	16.0%	15.5%	+50 bps
Adj EPS	\$0.88	\$0.89	-\$0.01

## Q2'19 HIGHLIGHTS

- Earnings in-line with guidance range
- EBITDA margin up 50 bps on pricing, improved business mix, efficiency gains and expense controls
- Pricing, strength in targeted growth markets and synergies offset FX and slower China, Europe and construction-related business for 1% organic growth
- Gross profit margin improvement on strong pricing, synergies and manufacturing efficiencies
- Paid down \$42M of debt ahead of 2018 pace
- Increased FY2019 paydown target to \$250M from \$200M, utilizing net proceeds from divestiture

Q2'19 YoY	Americas	Asia Pacific	EIMEA	Construction	Engineering	Total
Revenue Growth @cc	+ 1 %	+ 1 %	- 1 %	- 9 %	+ 10.5 %	+ 1 %
Adj. EBITDA Margin	15.4 % +20 bps YoY	12.3 % +160 bps YoY	10.8 % -110 bps YoY	17 % +200 bps YoY	22.4 % +400 bps YoY	16 % +50 bps YoY

# FUL has solid upside potential and the strategic plan is strong

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## Clear, achievable financial commitments



- ~3 - 5% organic revenue growth through 2020
- \$35M in cost synergies
- \$15M of procurement synergies achieved in 2018
- ~10% annual growth in EBITDA through 2020 @CC
- \$600M of free cash flow 2018-2020 to pay down debt

## Creates significant shareholder value and positions us to be a much stronger company post-2020



- Larger, more profitable
- Increased portfolio in higher-specified adhesives
- Outstanding cash flow

# Topics of interest



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# Topics of recent investor interest

Topic	Considerations and Developments
<b>Raw Materials Inflation</b> 	<ul style="list-style-type: none"> <li>▪ Typically increase/decrease in aggregate by 1-2% per year</li> <li>▪ Largest raw material makes up less than 5% of purchases</li> </ul>
<b>Pricing</b> 	<ul style="list-style-type: none"> <li>▪ Developed advanced pricing tools to continuously monitor raw materials</li> <li>▪ Carry-over benefit from ~ \$100 million of annualized pricing realized in 2018</li> </ul>
<b>Organic Growth</b> 	<ul style="list-style-type: none"> <li>▪ Achieved 3.8% organic growth in FYE 2018</li> <li>▪ Led by Engineering Adhesives organic growth of 14.7% in FYE 2018</li> </ul>
<b>Royal Integration</b> 	<ul style="list-style-type: none"> <li>▪ \$15 million of cost synergies achieved in FYE 2018</li> <li>▪ Identified &gt;\$50 million in revenue synergies that will be realized by 2020</li> </ul>
<b>Leverage</b> 	<ul style="list-style-type: none"> <li>▪ Reduced debt by \$204M in FY 2018; targeting \$250M pay down in FY 2019</li> <li>▪ Targeting \$600 million paydown and reduce debt-to-EBITDA to ~3x by 2020</li> </ul>

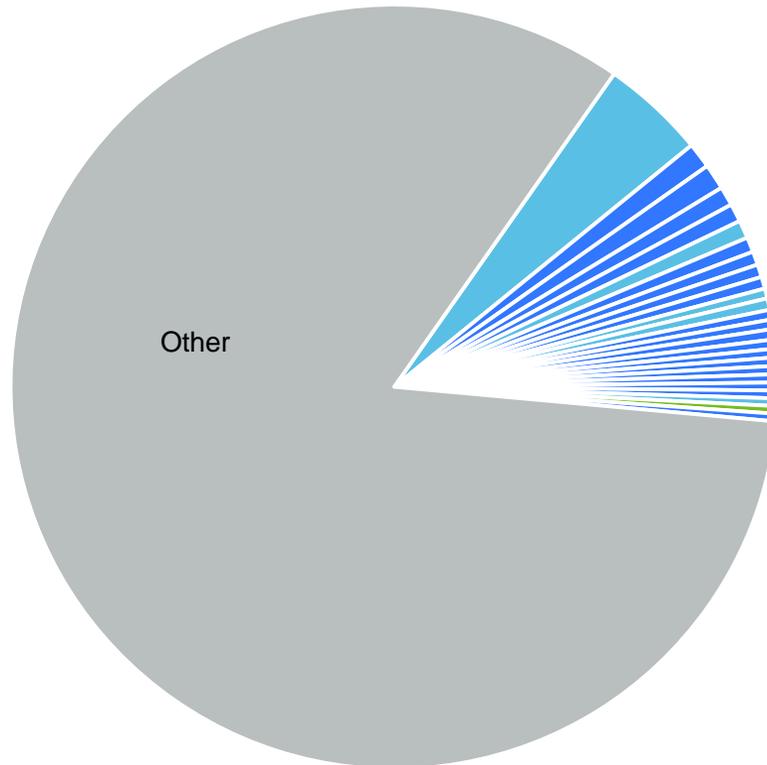


# Raw material inflation is manageable

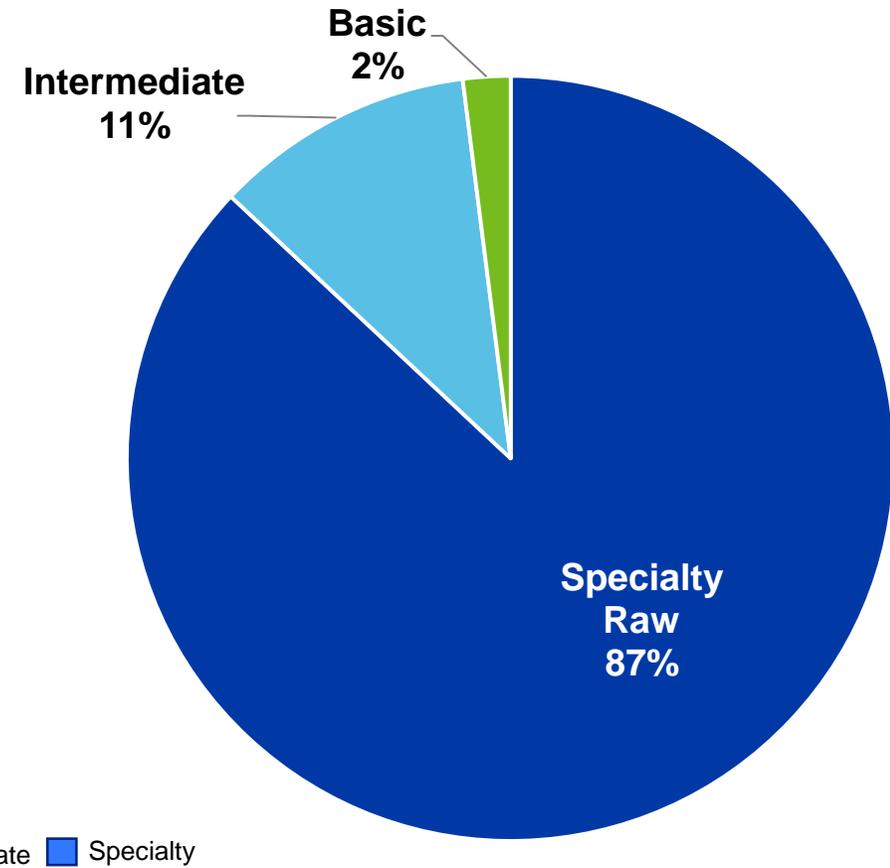
- Top 25 individually sourced materials make up less than 20% of annual spend

## Raw Material Basket Composition Spend

- Vinyl Acetate
- Olefin Polymer
- Polymeric Tackifier A
- Urethane Polymer
- Specialty Wax A
- MDI
- Polymeric Tackifier B
- Rosin Tackifier
- Polymeric Tackifier C
- Specialty oil A
- Polymeric Tackifier D
- Acrylic monomer A
- Polymeric Tackifier E
- Polymeric Tackifier F
- Specialty MDI
- Polymeric Tackifier G
- Specialty Wax B
- Specialty oil B
- Polymeric Tackifier H
- Specialty Rubber
- Styrene
- Polyester Polymer
- Acrylic monomer B
- Ethylene
- Tackifier



## Categories of Raw Material Spend



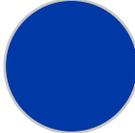
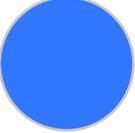
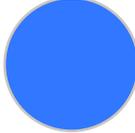
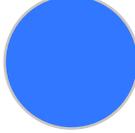
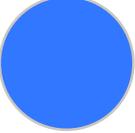
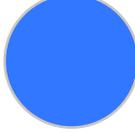
# The value we deliver drives our pricing strategy

● Very High 
 ● High 
 ● Moderate 
 ● Low

Market	Specification Level	Adhesion Performance	Global Supply Chain Requirements	Switching Costs	Unique Chemistry	Competitive Differentiation	Market Attractiveness
 Engineering Adhesives	<span style="color: #004a99;">●</span>	<span style="color: #004a99;">●</span>	<span style="color: #004a99;">●</span>	<span style="color: #004a99;">●</span>	YES	<span style="color: #004a99;">●</span>	10
 Construction Adhesives	<span style="color: #007bff;">●</span>	<span style="color: #007bff;">●</span>	<span style="color: #a9a9a9;">●</span>	<span style="color: #007bff;">●</span>	YES	<span style="color: #007bff;">●</span>	9
 Durable Assembly	<span style="color: #007bff;">●</span>	<span style="color: #004a99;">●</span>	<span style="color: #add8e6;">●</span>	<span style="color: #004a99;">●</span>	YES	<span style="color: #007bff;">●</span>	9
 Hygiene	<span style="color: #add8e6;">●</span>	<span style="color: #add8e6;">●</span>	<span style="color: #004a99;">●</span>	<span style="color: #007bff;">●</span>	YES	<span style="color: #007bff;">●</span>	7
 Packaging	<span style="color: #add8e6;">●</span>	<span style="color: #a9a9a9;">●</span>	<span style="color: #add8e6;">●</span>	<span style="color: #add8e6;">●</span>	YES	<span style="color: #add8e6;">●</span>	6
 Paper & Other	<span style="color: #a9a9a9;">●</span>	<span style="color: #a9a9a9;">●</span>	<span style="color: #add8e6;">●</span>	<span style="color: #add8e6;">●</span>	YES	<span style="color: #a9a9a9;">●</span>	4

# 3 – 5% organic growth driven by innovation, customer partnerships, and targeted selection of opportunities

● High ● Moderate ● Low

Market	Market Growth	Drivers	Share Gain	Share Gain Drivers	Organic Growth
 <b>Engineering Adhesives</b>		Increased product complexity, fastener replacement, light-weighting,		Speed of innovation, global leverage of acquired businesses, targeted investment in growth segments, application equipment partnerships	
 <b>Construction Adhesives</b>		US commercial and residential building and refurbishment, labor availability, energy-efficient buildings		Innovative products that allow faster application of adhesives and job completion of adhesives in roofing and flooring	
 <b>Durable Assembly</b>		Multilayer composite materials, engineered plastics, energy-efficient windows		Innovation in reactive adhesives to bond composites and plastics, application engineers to driver equipment innovation and productivity	
 <b>Hygiene</b>		Increased usage of disposable hygiene products in emerging markets, new features, and aging population in mature economies		Leading partnership position with global multinational companies, differentiated global field-based technical support, innovative specialty products, leader in polyolefin technology	
 <b>Packaging</b>		Sustainable and lighter packaging in mature economies, e-commerce; growing consumerism in developing economies		Partnership with equipment and OEM companies, global strategic account management processes	
 <b>Paper &amp; Other</b>		Replacement of paper products with electronics, synthetic alternatives to paper		Maintain share in market with secular decline through service, experience and reputation	

# Market Segment Profiles



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# Strategic approach to Engineering markets leverages global R&D to deliver next-generation adhesive technology

Engineering Sub-segments	Markets Served	Top Competitors	Unique Attributes
 <p><b>CLEAN ENERGY</b> #1 market position</p>	Battery, PV/Solar, Wind	<ul style="list-style-type: none"> <li>▪ Huitian</li> <li>▪ Dow</li> </ul>	<ul style="list-style-type: none"> <li>▪ Process-driven technology focused on lowering installation labor hours required</li> </ul>
 <p><b>ELECTRONICS</b> #2 market position</p>	Circuit Board Protection, Display, Camera Modules, PCB Assembly, Portable Device Assembly, Soft Goods	<ul style="list-style-type: none"> <li>▪ Henkel</li> <li>▪ 3M</li> <li>▪ Local Competitors</li> </ul>	<ul style="list-style-type: none"> <li>▪ High-performing adhesives and sealants to improve performance, durability, and aesthetics of a wide range of applications</li> </ul>
 <p><b>GENERAL INDUSTRIES</b></p>	Facility Maintenance, Marine, Mining, Repair: Heavy Equipment, Vehicle and HVAC, Medical, Sporting Goods	<ul style="list-style-type: none"> <li>▪ Henkel</li> <li>▪ Specialized Competitors</li> <li>▪ Local Competitors</li> </ul>	<ul style="list-style-type: none"> <li>▪ High-tech flange sealants, structural adhesives, functional coatings, and rebuilding products</li> </ul>
 <p><b>TRANSPORTATION</b></p>	Aerospace, Automotive, Defense, Farm/Construction Machinery	<ul style="list-style-type: none"> <li>▪ Henkel</li> <li>▪ Sika</li> <li>▪ Dow</li> </ul>	<ul style="list-style-type: none"> <li>▪ High-performing adhesives and sealants for interior, exterior, electronics, and engine applications</li> </ul>

# A number of global trends are allowing FUL to help its EA customers adapt to a changing world

- Overall, FUL is well-positioned to benefit from industry trends

Industry Trend	H.B. Fuller Solution or Technology
<b>Shift from fasteners to adhesives</b> 	<ul style="list-style-type: none"> <li>Polyurethane structural adhesive eliminate the need for fasteners and enable use of lighter weight composite materials or thinner devices</li> </ul>
<b>Demand for alternative, sustainable energy sources</b> 	<ul style="list-style-type: none"> <li>Adhesives/sealants for solar to simplify panel assembly</li> <li>Disassembly-friendly adhesives to support recycling/re-use</li> </ul>
<b>Electric vehicles and vehicle light-weighting</b> 	<ul style="list-style-type: none"> <li>Thermally-conductive encapsulants</li> <li>Multi-material bonding</li> </ul>
<b>Micro-electronics and electronic light-weighting</b> 	<ul style="list-style-type: none"> <li>Reactive hot melt seals the enclosure for wearables and consumer devices, providing waterproofing and superior chemical resistance</li> </ul>
<b>Demand for process efficiency by manufacturers</b> 	<ul style="list-style-type: none"> <li>Faster UV cure adhesives accelerate assembly in smaller footprint</li> <li>High performance pressure sensitive adhesives deliver faster setting to automate processes</li> </ul>

# Convergence is driving design and manufacturing trends across Engineering Adhesives segment

## GROWTH RATES:



### CLEAN ENERGY



- Global consumer demand growing
- Pricing compression
- Government regulations
- Shift manufacturing back to China

**Market** 10%  
**FUL plan** 10-15%



### ELECTRONICS



- Dynamic/fast-moving change
- Chinese manufacturers compete with global players
- Waterproofing
- Growing in Automotive

**Market** 5%  
**FUL plan** +20%



### GENERAL INDUSTRIES



- Globalization
- Shift: fasteners to adhesives
- Increasing dependence on certifications
- Consolidating purchase points

**Market** 5%  
**FUL plan** ~20%



### TRANSPORTATION



- Light-weighting
- Rapid development of electric vehicles
- Emerging acoustic soft trim (AST) market
- Global vehicle platforms
- Engineering cost reduction

**Market** 2%  
**FUL plan** 7-9%



# Engineering is an attractive segment with great potential



## ATTRACTIVE MARKET

- \$12+ billion market
- Growing at high single digits
- High profitability driven by demanding specifications
- Convergence presents multitude of opportunities



## COMPETITIVE ADVANTAGE

- Innovative reputation
- Diverse technology solutions and expertise
- Committed to knowledge sharing
- World-class service
- Alternative to dominant global leader





# From the floor to the roof and beyond, FUL's adhesives experts are enabling innovations in construction

## Construction Subsegments

## Markets Served

## Top Competitors

## Unique Attributes



### ROOFING

#1 market position

- Membrane Lamination
- Structural Tapes
- Insulation Attachment Adhesives, foamed for low rise/slope roofs

- Specialty Competitors

- TPO (Thermoplastic Polyolefin) is the highest growth segment for commercial roofing; our adhesive is the preferred solution



### FLOORING

- Mortars and Grouts
- Flooring Adhesives
- Surface Preparation

- Mapei
- Custom

- Faster-setting, faster-curing solutions that reduce installers time on the job
- FUL offers solutions for all flooring types, which is unique in this market



### UTILITIES AND INFRASTRUCTURE

- Industrial insulation coating
- HVAC sealants
- Telecom
- Road sealants and potting

- Sika
- 3M

- FUL takes existing technologies and adds value in identified niche markets

# Construction Adhesives is a more balanced, more global segment



Demand for **energy efficient, high-performing commercial roofing** is growing



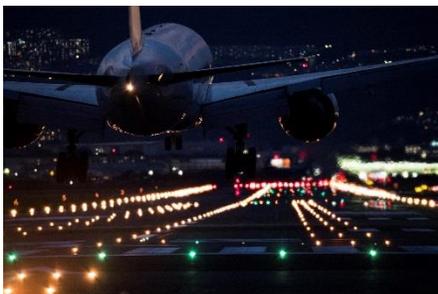
- New building insulation techniques and roofing systems create need for advanced adhesive and sealant opportunities
- Focus on retrofit, repair, and reuse, which accounts for ~75% of demand in commercial roofing



**Full line of flooring adhesives** addresses range of design requirements



- Demand for hard surfaces driving use of new installation applications
- Focus on versatility and durability
- We offer unique range of solutions that lower installation time



U&I serves **high-value niche markets** that require unique adhesives and sealants and knowledgeable service



- Highly diversified innovations in niche markets
- We offer range of solutions derived from unique technologies and packaging

# A number of global trends are allowing FUL to help its Construction customers adapt to a changing world

- Overall, FUL is well-positioned to benefit from industry trends

Industry Trend	H.B. Fuller Solution or Technology
<b>Shift from fasteners to adhesives</b>	<ul style="list-style-type: none"> <li>Adhesive bonded membrane roofs replacing mechanically secured roofing systems</li> <li>Epoxy and urethane adhesives that replace bolts in construction projects</li> </ul>
<b>Easy to apply low cost labor flooring systems</b>	<ul style="list-style-type: none"> <li>Power Grout enables faster and better grouting for professional installers</li> <li>Roll-on adhesive solutions for resilient luxury vinyl flooring</li> </ul>
<b>Demand for energy efficient buildings</b>	<ul style="list-style-type: none"> <li>Urethane foam insulation adhesives</li> <li>Structural and butyl tapes that ensure roofs are properly insulated</li> </ul>
<b>Demand for more sustainable products</b>	<ul style="list-style-type: none"> <li>Low VOC single ply roofing adhesives replace asphalt</li> <li>Pole- and post-setting foam solution replace concrete and cement; lowers carbon usage in transit</li> </ul>



# FUL makes installation solutions that save time and money while delivering high-quality performance over time



## ATTRACTIVE MARKET

- Preferred material shift in flooring and roofing driving our growth
- Rapidly growing end markets
- Labor shortages driving need for more innovation



## COMPETITIVE ADVANTAGE

- Recognized innovation leader
- Understand end consumers' changing requirements and innovate quickly to address
- Variety of high-quality technology offerings to meet changing market trends





# Comprehensive product range, dedicated team of experts and global footprint present myriad opportunities for growth

Durable Assembly Submarkets	Markets Served	Top Competitors	Unique Attributes
 <p><b>INSULATING GLASS</b> #1 market position</p>	Residential and commercial insulating glass sealants and desiccants, reactive thermoplastic spacers, glazing	<ul style="list-style-type: none"> <li>▪ Dow Corning</li> </ul>	<ul style="list-style-type: none"> <li>▪ World leader in partnering with equipment manufacturers and spacer designs to drive energy efficiency</li> </ul>
 <p><b>INDUSTRIAL FILTRATION</b> #2 market position</p>	Desalination, beverages, dairy	<ul style="list-style-type: none"> <li>▪ Henkel</li> <li>▪ Specialized Players</li> </ul>	<ul style="list-style-type: none"> <li>▪ Field-proven longevity and safety performance record in reverse osmosis and hollow fiber filters that remove contamination and provide clean liquids</li> </ul>
 <p><b>RECREATIONAL VEHICLES</b> #1 market position</p>	Wall and floor, floor lamination, repairing, roof, assembly, and furniture	<ul style="list-style-type: none"> <li>▪ Henkel</li> <li>▪ Regional Players</li> </ul>	<ul style="list-style-type: none"> <li>▪ Most diverse adhesive product range, addressing all aspects of RV body and cab construction</li> </ul>
 <p><b>PRODUCT ASSEMBLY</b> #2 market position</p>	Doors, floors, wood furniture and flooring, millwork, kitchen cabinets/counters, appliance, technical textiles	<ul style="list-style-type: none"> <li>▪ Henkel</li> <li>▪ Sika</li> </ul>	<ul style="list-style-type: none"> <li>▪ Preferred solutions to bond and seal highly diverse materials that perform under extreme conditions</li> </ul>

# A number of global trends are allowing FUL to help its Durable Assembly customers adapt to a changing world

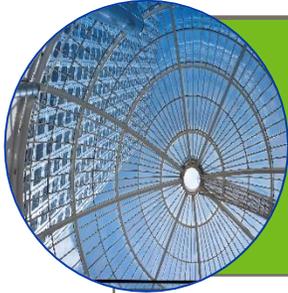
- Overall, FUL is well-positioned to benefit from industry trends

Industry Trend	H.B. Fuller Solution or Technology
Shift from mechanical fasteners to adhesives	<ul style="list-style-type: none"> <li>Eliminate rivets in trucks, trailers, and RVs</li> </ul>
Increased use of composites	<ul style="list-style-type: none"> <li>Veneer-laminated wood flooring</li> </ul>
Scarcity of potable water	<ul style="list-style-type: none"> <li>Polyurethane bonded industrial filters (desalination etc)</li> </ul>
Vehicle light-weighting	<ul style="list-style-type: none"> <li>Adhesive-bonded wall panels are lighter and thinner, lowering carbon emissions in buses, trucks, and RVs</li> </ul>
Demand for energy efficient buildings	<ul style="list-style-type: none"> <li>Insulating glass adhesives and sealants</li> </ul>





# FUL is well positioned in the highly fragmented, highly specified, and growing Durable Assembly market



## ATTRACTIVE MARKET

- ~\$8 billion opportunity
- Growing at >4% per year
- Profitability driven by specifications
- Diversified segment comprising numerous high-margin markets



## COMPETITIVE ADVANTAGE

- Trusted brand with outstanding reputation
- Dedicated applications expertise, creating added value in product quality and process efficiency
- Cohesive global reach



# One of only a few global players addressing growing demand for disposable hygiene products

Hygiene Submarkets	Markets Served	Top Competitors	Unique Attributes
 <p><b>BABY DIAPERS</b> <i>#1 market position</i></p>	<p>Disposable product construction, core, elastic attachment, positioning, odor control</p>	<ul style="list-style-type: none"> <li>▪ Henkel</li> <li>▪ Arkema (Bostik)</li> <li>▪ Regional Players</li> </ul>	<ul style="list-style-type: none"> <li>▪ Improved absorption and thinner cores</li> <li>▪ Support waste reduction</li> <li>▪ Higher performance at greater comfort</li> </ul>
 <p><b>FEMININE CARE</b> <i>#2 market position</i></p>	<p>Disposable product construction, core, elastic attachment, positioning, odor control</p>	<ul style="list-style-type: none"> <li>▪ Arkema (Bostik)</li> <li>▪ Henkel</li> <li>▪ Regional Players</li> </ul>	<ul style="list-style-type: none"> <li>▪ Excellent anchorage to a wide variety of backsheet materials without transfer</li> <li>▪ Enable production of thinner, smarter, drier, more absorbent products</li> </ul>
 <p><b>ADULT INCONTINENCE</b> <i>#2 market position</i></p>	<p>Disposable product construction, core, elastic attachment, positioning, odor control</p>	<ul style="list-style-type: none"> <li>▪ Henkel</li> <li>▪ Arkema (Bostik)</li> <li>▪ Regional Players</li> </ul>	<ul style="list-style-type: none"> <li>▪ Addressing demands of a fast-growing aging population with thinner, more discreet, smarter, drier, more absorbent products</li> </ul>
 <p><b>SPECIALTY NONWOVENS</b> <i>#1 market position</i></p>	<p>Wetness indication, humidity resistance, conformable stretch materials, odor control</p>	<ul style="list-style-type: none"> <li>▪ Arkema (Bostik)</li> <li>▪ Specialized Players</li> </ul>	<ul style="list-style-type: none"> <li>▪ High humidity resistance eliminates premature indicator color change</li> <li>▪ Disposable undergarments that adapt comfortably to different shapes and sizes</li> <li>▪ Eliminate odor molecules</li> </ul>

# FUL continually innovates in response to a number of global trends; comfort, fit and performance are paramount in the hygiene market

- Overall, FUL is well-positioned to benefit from industry trends

Industry Trend	H.B. Fuller Solution or Technology
<b>Globally aging population</b>	<ul style="list-style-type: none"><li>Full line of core, positioning, elastic and specialty adhesives that enable thinner, more discreet, smarter, drier, more comfortable adult incontinence products</li></ul>
<b>Growing consumerism</b>	<ul style="list-style-type: none"><li>Global innovation partner to world's most respected disposable hygiene product manufacturers, working together to develop improvements, like wetness indicators and odor reduction</li></ul>
<b>Demand for process efficiency by manufacturers</b>	<ul style="list-style-type: none"><li>Proven solutions that improve production processes by enabling faster line speeds and lower total cost of ownership for hygiene product manufacturers</li></ul>
<b>Demand for more sustainable products</b>	<ul style="list-style-type: none"><li>Continued innovations in low VOC adhesive solutions</li><li>Full line of adhesives that enable thinner designs that require less packaging; lowers carbon usage in transit; less space required on shelf</li></ul>



# FUL's Hygiene team of experts is driving innovation to respond to the needs of a growing, global population



## ATTRACTIVE MARKET

- Growing global market
- Multinationals growing significantly in emerging markets
- Consumers driving new product development opportunities



## COMPETITIVE ADVANTAGE

- #1 or #2 position due to longstanding, proven innovation leadership
- Local industry experts supported by world-class, global R&D centers
- Global supply assurance by strategic raw material sourcing and manufacturing footprint





# FUL has targeted four sub-segments within the highly diverse packaging adhesive market

Packaging Submarkets	Markets Served	Top Competitors	Unique Attributes
 <p><b>END OF LINE / CASE &amp; CARTON SEALING</b> #2 market position</p>	<p>Cartons, cases, trays Food &amp; Beverage Healthcare</p>	<ul style="list-style-type: none"> <li>▪ Henkel</li> <li>▪ Regional Players</li> </ul>	<ul style="list-style-type: none"> <li>▪ Superior bonding across varied substrates and service temperatures, thermal stability, clean machining, and lower total cost in use</li> </ul>
 <p><b>LABELING</b> #2 market position</p>	<p>Paper, PP, PET Food &amp; Beverage Other</p>	<ul style="list-style-type: none"> <li>▪ Henkel</li> <li>▪ Specialized Players</li> </ul>	<ul style="list-style-type: none"> <li>▪ Full range of adhesives that enable new bottle and container designs, accelerate production and enhance differentiation for brand owners</li> </ul>
 <p><b>FLEXIBLE PACKAGING</b></p>	<p>Solventless and solvent-based lamination Food &amp; Beverage Other</p>	<ul style="list-style-type: none"> <li>▪ Henkel</li> <li>▪ Dow</li> </ul>	<ul style="list-style-type: none"> <li>▪ Comprehensive line of flexible packaging adhesives and materials for film, paper and foil laminating, heat seal applications, in-mold-labeling, and laminating and coating waxes</li> </ul>
 <p><b>ADHESIVE COATED SOLUTIONS</b> #1 market position</p>	<p>Corrugators Folding cartons</p>	<ul style="list-style-type: none"> <li>▪ Alternate Technology</li> </ul>	<ul style="list-style-type: none"> <li>▪ Engineered to strengthen bulk bins and heavy-duty boxes</li> <li>▪ Fully-integrated reinforcement technology and dispensing systems that increase stacking strength and weight-carrying capacity of corrugated and folding carton packaging</li> </ul>



# A number of global trends are allowing FUL to help its customers create innovative, highly functional packaging designs

- Overall, FUL is well-positioned to benefit from industry trends

Industry Trend	H.B. Fuller Solution or Technology
<b>Growing consumerism and e-commerce</b> 	<ul style="list-style-type: none"> <li>Better consumer-ready packaging for home delivery of consumer goods</li> <li>H.B. Fuller solutions enable easy-open, flexible, individually-sized package designs that keep food fresher for longer</li> </ul>
<b>Increased focus on sustainability</b> 	<ul style="list-style-type: none"> <li>Superior H.B. Fuller technology allows packaging makers to produce lighter, thinner, more sustainably produced packaging that breaks down more easily</li> <li>Open-Sesame™ and Close-Sesame™ tape – less packaging required for delivery and returns; lowers carbon usage, lower freight cost and materials required</li> </ul>
<b>Demand for process efficiency by manufacturers</b> 	<ul style="list-style-type: none"> <li>H.B. Fuller leading hot melt technology supports less production line downtime, maintenance, and clean up</li> <li>Low density adhesives seal more packages more efficiently</li> </ul>



# FUL is answering consumer demand for more attractive, functional, and sustainable packaging



## ATTRACTIVE MARKET

- Consolidation of multinational food companies resulting in growth of strategic accounts and emergence of specialty food packagers in niche markets
- Consumers driving new product development opportunities



## COMPETITIVE ADVANTAGE

- Proven innovation leadership
- Partnership with brand owners and OEMs; ability to develop unique global solutions that solve packaging-makers' adhesion challenges that are then implemented through local service teams

# Thank you

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**H.B. Fuller**

Connecting what matters.™