

2019 Investor Day

Quaker Houghton

December 11, 2019

Michael Barry

Chairman of the Board, Chief Executive Officer and President



Risks and Uncertainties Statement

Regulation G

The attached charts include Company information that does not conform to generally accepted accounting principles (“GAAP”). In addition, the Company has provided certain unaudited pro forma financial information in the attached charts. The unaudited pro forma financial information is based on the historical consolidated financial statements and results of both Quaker, as reported, and Houghton, and has been prepared to illustrate the effects of their combination, as previously reported (the “Combination”). The unaudited pro forma financial information has been presented for informational purposes only and is not necessarily indicative of Quaker Houghton’s past results of operations, nor is it indicative of the future operating results of Quaker Houghton and should not be considered a substitute for the financial information presented in accordance with GAAP. Management believes that an analysis of this data is meaningful to investors because it provides insight with respect to ongoing operating results of the Company and allows investors to better evaluate the financial results of the Company. These measures should not be viewed as an alternative to GAAP measures of performance. Furthermore, these measures may not be consistent with similar measures provided by other companies. This data should be read in conjunction with the Company’s most recent annual report filed on form 10-K, as amended by Form 10-K/A, as well as the third quarter earnings news release dated November 12, 2019, which has been furnished to the Securities and Exchange Commission (“SEC”) on Form 8-K and the Company’s Form 10-Q for the period ended September 30, 2019, which has been filed with the SEC.

Forward-Looking Statements

This presentation contains “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. These statements can be identified by the fact that they do not relate strictly to historical or current facts. We have based these forward-looking statements on our current expectations about future events. These forward-looking statements include statements with respect to our beliefs, plans, objectives, goals, expectations, anticipations, intentions, financial condition, results of operations, future performance, and business, including but not limited to statements relating to the potential benefits of the Combination described above, our current and future results and plans, and statements that include the words “may,” “could,” “should,” “would,” “believe,” “expect,” “anticipate,” “estimate,” “intend,” “plan” or similar expressions. These forward-looking statements are subject to certain risks and uncertainties that could cause actual results to differ materially from those projected in such statements. A major risk is that demand for the Company’s products and services is largely derived from the demand for its customers’ products, which subjects the Company to uncertainties related to downturns in a customer’s business and unanticipated customer production shutdowns. Other major risks and uncertainties include, but are not limited to, significant increases in raw material costs, customer financial stability, worldwide economic and political conditions, foreign currency fluctuations, significant changes in applicable tax rates and regulations, future terrorist attacks and other acts of violence. Furthermore, the Company is subject to the same business cycles as those experienced by steel, automobile, aircraft, appliance, and durable goods manufacturers. Our forward-looking statements are subject to risks, uncertainties and assumptions about the Company and its operations that are subject to change based on various important factors, some of which are beyond our control. These risks, uncertainties, and possible inaccurate assumptions relevant to the Company’s business could cause its results to differ materially from expected and historical results. Other factors beyond those discussed in this presentation could also adversely affect us, including, but not limited to the following related to the Combination:

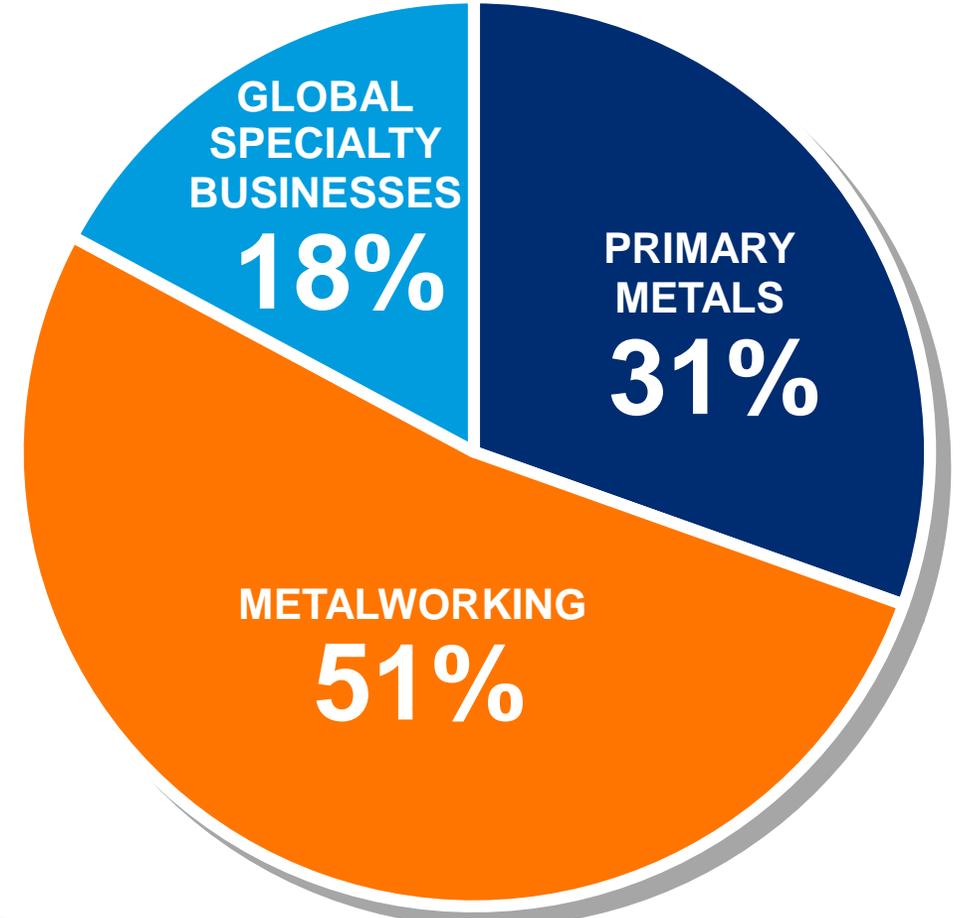
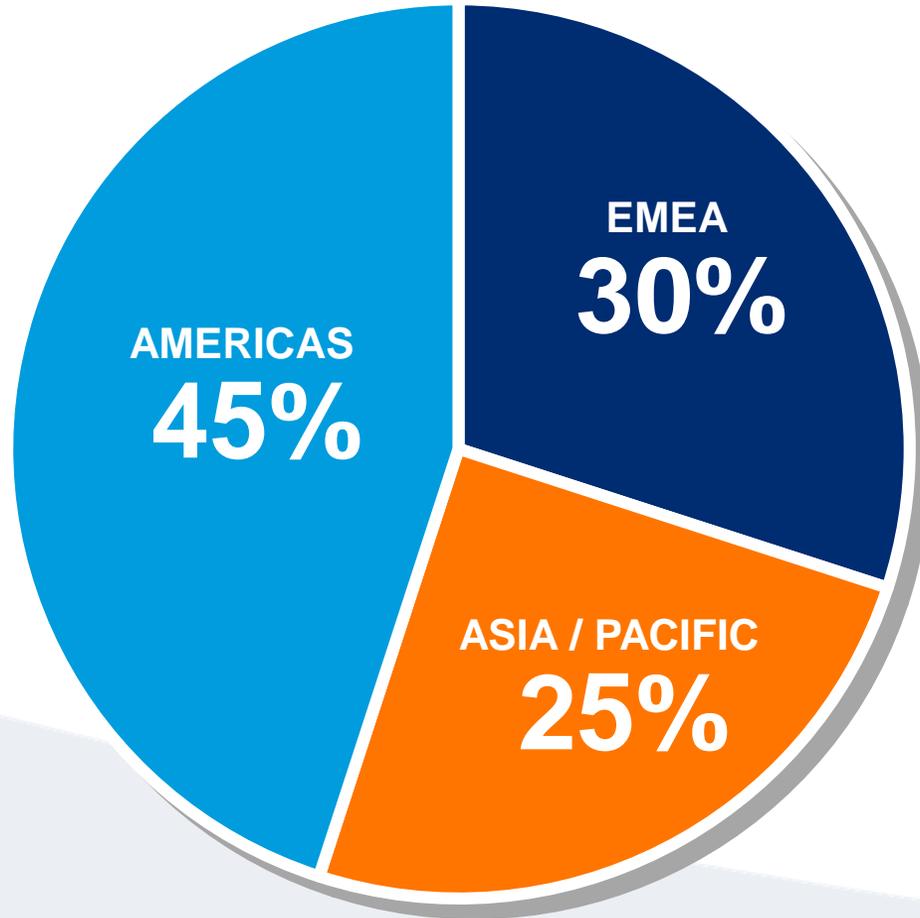
- potential adverse effects on the Company’s business, properties or operations caused by the implementation of the Combination;
- the Company’s ability to promptly, efficiently and effectively integrate the operations of Houghton and Quaker Chemical;
- the ability to develop or modify financial reporting, information systems and other related financial tools to ensure overall financial integrity and adequacy of internal control procedures;
- the ability to identify and take advantage of potential synergies, including cost reduction opportunities, while maintaining legacy business and other related attributes, as well as the risk that the costs to achieve synergies may be more than anticipated;
- difficulties in managing a larger, combined company, addressing differences in business culture and retaining key personnel;
- risks related to each company’s distraction from ongoing business operations due to the Combination; and,
- the outcome of any legal proceedings that may be instituted against the companies related to the Combination.

Therefore, we caution you not to place undue reliance on our forward-looking statements. For more information regarding these risks and uncertainties as well as certain additional risks that we face, you should refer to the Risk Factors detailed in Item 1A of our Form 10-K for the year ended December 31, 2018 as well as the proxy statement the company filed on July 31, 2017 and in our quarterly and other reports filed from time to time with the SEC. We do not intend to, and we disclaim any duty or obligation to, update or revise any forward-looking statements to reflect new information or future events or for any other reason. This discussion is provided as permitted by the Private Securities Litigation Reform Act of 1995.



Net Sales

Geographic and Product Snapshot



Outperformance Powered by Distinctive Customer Intimacy Model



Quaker Houghton.

Combination of **Two** Iconic Companies
Specializing in
Industrial Process Fluids.



Quaker Chemical 1918
Houghton International 1865
Headquartered in PA



Strategic Rationale for Combination – Exceeding My Expectations!

Observations		Strategic Rationale
<ul style="list-style-type: none">• Best in the business talent• Hard to tell legacy Q from legacy H		✓ Strong Talent and Cultural Fit
<ul style="list-style-type: none">• Market leader solely focused on our space• More resources to deploy for customer service, innovation/R&D, customer solutions		✓ Increases Size and Scale
<ul style="list-style-type: none">• Cross-selling “playbook” activated with early wins• Norman Hay leverages new customer solutions capabilities		✓ Accelerates Growth Opportunities
<ul style="list-style-type: none">• Broader and deeper product portfolio yields more opportunities for innovation• Ability to leverage different approaches, equipment and customer connections to drive solutions		✓ Enhances R&D Capabilities
<ul style="list-style-type: none">• Increased confidence in achieving ≥ \$60MM in synergies		✓ Achieves Significant Cost Synergies

Increases Addressable Markets



The Combination Makes Us Stronger. Together.

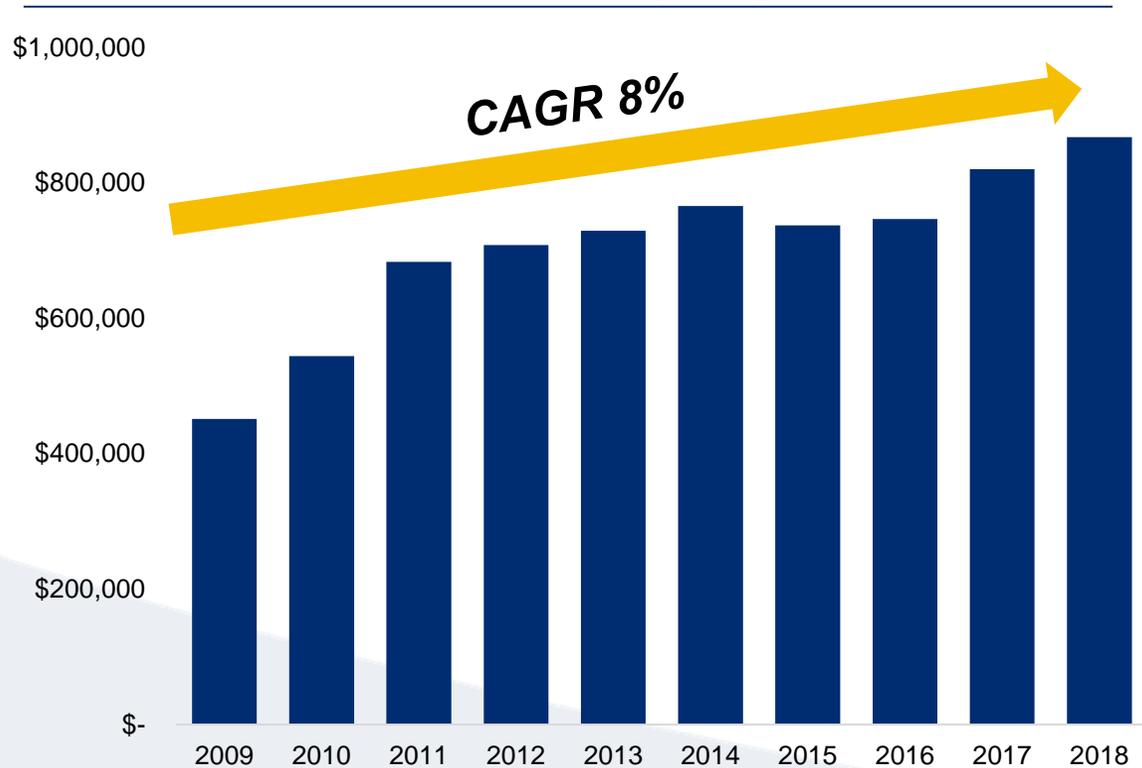
Company with Stronger Market Presence

● Quaker ● Houghton ● Both Strong

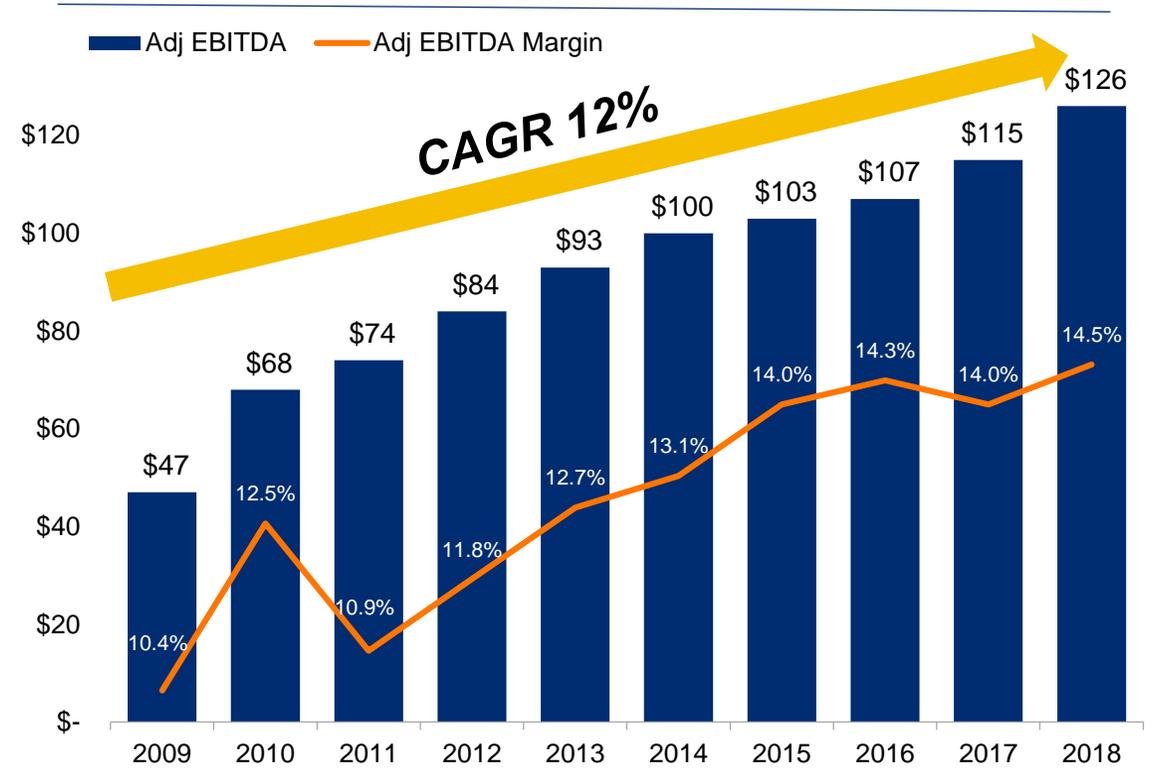
Quaker Financial Performance History

Track Record of Steady Growth

Net Sales (\$MM)



Adjusted EBITDA (\$MM)



Note: Net sales and Adjusted EBITDA in millions of \$.

Proven Executive Leadership Team

Business Leaders



Michael Barry –
Chairman,
Chief Executive
Officer
& President



Jeewat Bijlani –
SVP, Managing
Director – Americas



Dieter Laininger –
SVP, Managing
Director – APAC



Adrian Steeples –
SVP, Managing
Director – EMEA



Joseph Berquist –
SVP, Global Specialty
Businesses & Chief
Strategy Officer

Global Functional Leaders



Mary Dean Hall –
SVP, CFO & Treasurer



Kym Johnson –
SVP, CHRO



Robert T. Traub –
SVP, General Counsel
& Corporate Secretary



Wilbert Platzer –
SVP, Global Operations,
EHS & Procurement



Dr. Dave Slinkman –
SVP, Chief Technology
Officer

2019 Investor Day Agenda

Time	Speaker	Topics
8:30 AM	Michael Barry	Welcome
8:45 AM	Joseph Berquist	Strategy and Specialty Businesses
9:10 AM	Jeewat Bijlani	Metals and Metalworking: Customer Solutions
9:35 AM	Panel <ul style="list-style-type: none">• Jeewat Bijlani• Adrian Steeples• Dieter Laininger	Regional Perspective
10:15 AM	Break	Break
10:30 AM	Dave Slinkman	R&D
10:45 AM	Wilbert Platzer and Kym Johnson	Integration Update
11:10 AM	Mary Dean Hall	Financial Review
11:30 AM	Michael Barry	Summary
11:40 AM	Q&A	Q&A

Strategy and Specialty Businesses

Joseph Berquist

Senior Vice President, Global Specialty Businesses & Chief Strategy Officer



The image shows two men in a factory or industrial setting. They are wearing safety glasses and are focused on a large, complex piece of machinery. One man is pointing at a component of the machine while the other looks on. The machine has a control panel with a screen and various buttons. The overall scene is dimly lit with a blue tint, suggesting a professional and technical environment.

Global Specialty Businesses

Global Specialties Operate as “Stand-alone”

Discrete Global Businesses Aligned with Unique Industry Segments

~\$300M annual sales businesses with attractive margin and growth characteristics

- Targeted and niche business segments (organized by application or industry)
- Served by dedicated global teams
- Unique and highly specific customer, technical, and service requirements
- Narrow end markets with consolidated, large global or multi-regional customers

Closely linked or adjacent to core portfolio of products and services

- Focused on metal-related industrial processing fluids and specialty hydraulics
- Customer-intimate business model with higher level of specialization
- Operations utilize existing Quaker Houghton infrastructure

Globally dedicated teams increase our ability to win in these high value markets

Leadership Positions in High Value Markets with Significant Opportunities to Grow

Specialty Products with Diverse Applications

Target only a small high value portion of a much broader product market

 <p>Specialty Coatings</p>	 <p>Specialty Greases</p>	 <p>Metal Finishing</p>	<p>Porosity Sealants & Selective Plating¹</p>
<p>Global Leader in Aerospace Maskants</p>	<p>Emerging Growth</p>	<p>Leading Position in Americas</p>	<p>Global Leader in Porosity Sealants</p>
<p>Aerospace fleet will more than double over next 20 years²</p> <p>Marine Coatings: cross-sell with Offshore segment</p> <p>Expand marine coatings from defense to Cruise fleet</p>	<p>Grow share organically and through acquisition</p> <p>Enhance local supply chain in APAC and EMEA</p> <p>Gain approvals with Global OEMS</p>	<p>Expand position in APAC and EMEA</p> <p>Trend of more aluminum content in building and auto due to light-weighting and recyclability</p> <p>Bolt-on acquisition opportunities</p>	<p>Significant cross-sell opportunity</p> <p>Grow share organically and through acquisition</p> <p>New alloys/ applications</p> <p>Educate the customer about selective plating</p>

Specialty Applications in Specific Customer End Market

Currently target only specific applications with large global customers

 <p>Can</p>	 <p>Mining</p>	 <p>Offshore</p>
<p>#2 Global Supplier</p>	<p>#2 Global Supplier</p>	<p>#1 or #2 Global Supplier</p>
<p>Steady growth outlook in beverage containers due to recyclability of aluminum and environmental impact of plastics</p> <p>Front-to-Back portfolio</p>	<p>Leverage short / medium term market recovery in mining and offshore</p> <p>Expansion of portfolio beyond specialty hydraulics</p> <p>Leverage portfolio into other types of mining and tunneling</p>	

Targeting ~\$2.1B addressable market within multi-billion \$ sectors



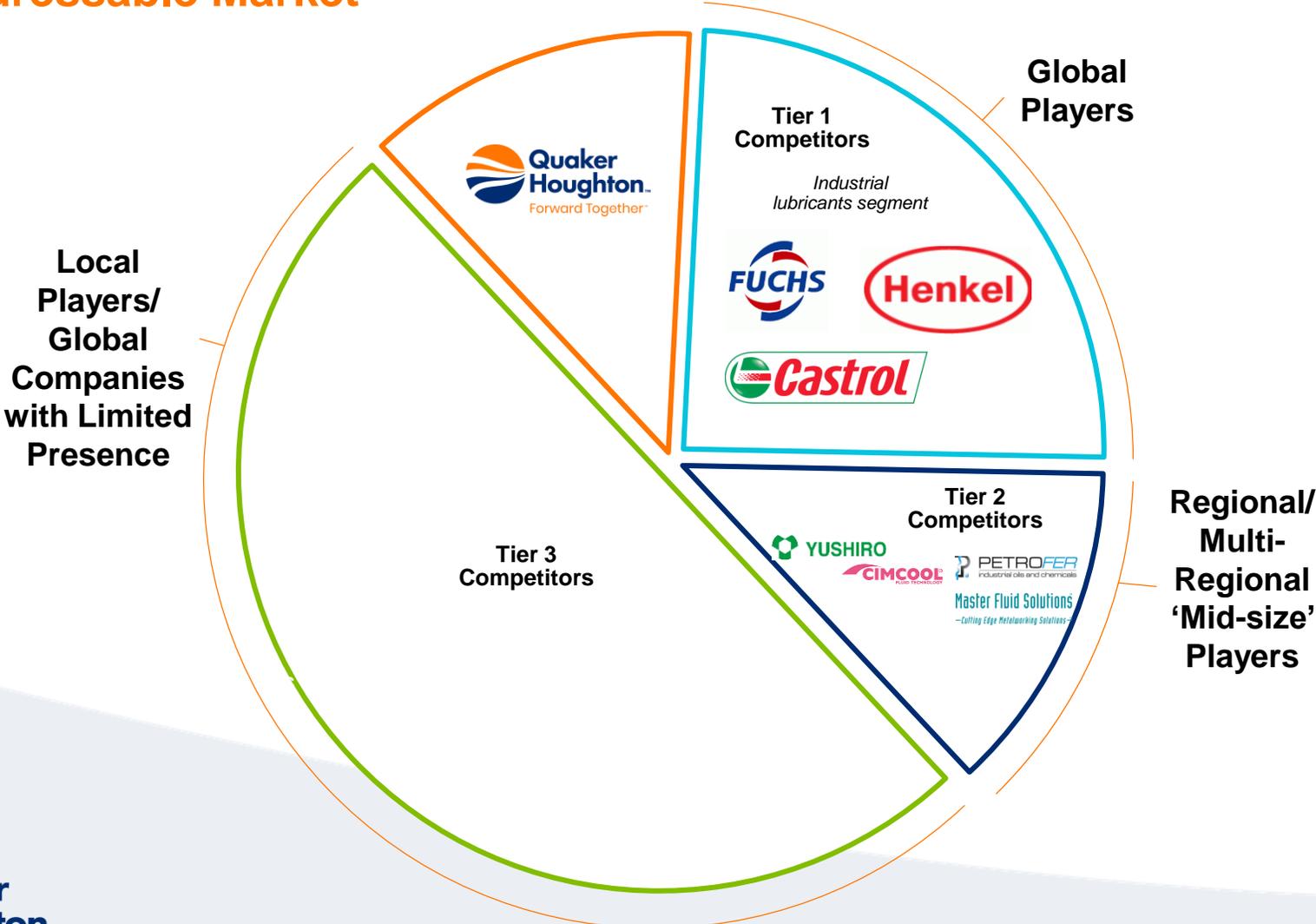
Note: 1. Norman Hay group of companies: Ultraseal, Sifco ASC, Surface Technology, Norman Hay Engineering.
 Note: 2. Source Airbus GMF 2018.

The background image shows two men in an industrial setting, likely a factory or refinery. They are wearing blue hard hats and safety glasses. The man on the left is wearing a dark jacket, and the man on the right is wearing a light-colored shirt and a yellow safety vest. They are both looking at a tablet computer held by the man on the left. The scene is overlaid with a semi-transparent blue filter. The text 'Market Overview & Growth Strategy' is centered in white, bold font.

Market Overview & Growth Strategy

Only Global Pure Play in Our Addressable Markets

~\$12.6B Addressable Market



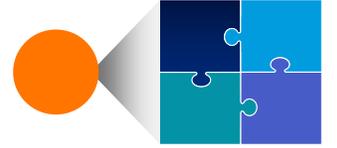
Source: Quaker Houghton management and Charles River Associates estimates, Kline, Grandview, LEK.

Differentiated from Competitors by Scale, Focus and Solution Offering

	 Quaker Houghton™ Forward Together™	Tier 1 Competitors	Tier 2 Competitors	Tier 3 Competitors	
		  	   	Small, Local Player	Diversified Chemical Companies
Scale and Global Reach	●	●	●	●	●
Tight Strategic Focus	●	●	●	●	●
Portfolio Breadth and Depth	●	●	●	●	●
Industry Talent and Expertise	●	●	●	●	●
Service Capabilities: Fluidcare® & Solutions	●	●	●	●	●

● Advantage
 ● Neutral / Average
 ● Potential Disadvantage
Industrial Processing Fluid Market Perspective

Customer-Intimate Model Delivering Results



Customer Challenge

- **Problem:** Need to increase efficiency and reduce emissions levels in large truck, bus and agricultural engines
- **Solution:** Compacted Graphite Iron (CGI) alloys deliver lower weight and higher-pressure operating combustion chambers
- **Customer Challenge:** CGI is difficult to machine, leading to lower throughput and higher costs (broken tools, scrap, labor)



Quaker Houghton Solution

- QH colleagues embedded within customer identity need to develop a solution for CGI
- Global and regional labs work together to develop a new metalworking fluid
- Proof of concept delivered in short turnaround time



Customer Benefit

- Cost savings through extended tool life and decreased fluid consumption
- Reduced scrap rate
- Improved efficiency by reducing downtime
- Improved biostability
- Higher levels of productivity than conventional coolant
- **Lower total cost**

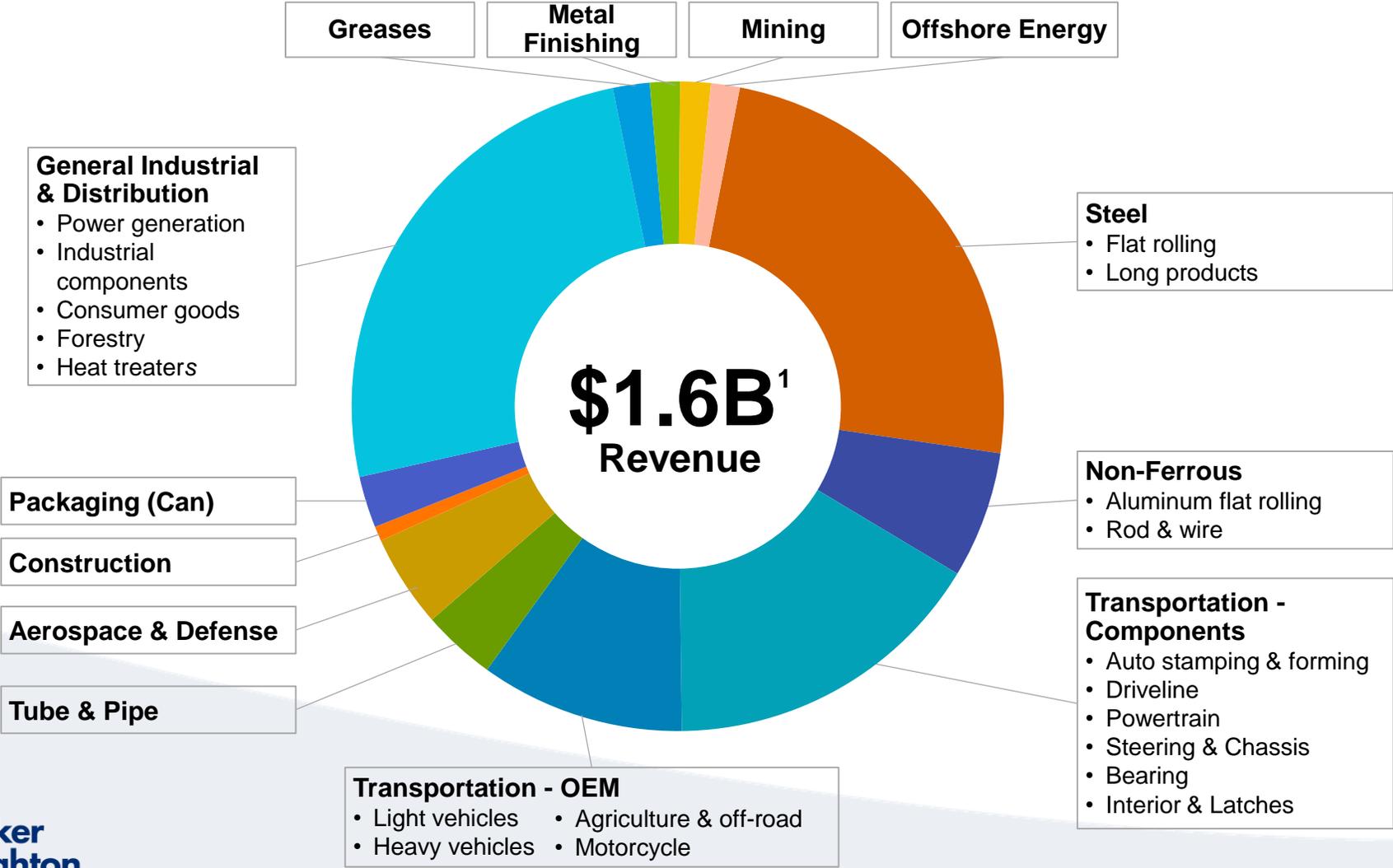


New Opportunities

- Strengthened the relationship with customer and established trust
- Customer now evaluating cross-selling opportunities with QH

Diversified End Markets

QH Continues to Expand Addressable Markets



Note: 1. Based on TTM Q3 2019 Pro Forma Net Sales as of September 30, 2019 plus an additional ~\$78 million in Net Sales due to the acquisition of Norman Hay.

~13% Market Share in \$12.6B Addressable Market

Significant Opportunities to Grow

~\$12.6B Addressable Market		QH Market Share ²	Strategic Segments
PRIMARY METALS	\$1.4B	~38%	<ul style="list-style-type: none"> • Steel • Non-Ferrous
METALWORKING Mid-large size customers	\$3.7B	~13%	<ul style="list-style-type: none"> • Transportation – OEM • Transportation – Components • Aerospace & Defense • Tube & Pipe
METALWORKING Small-mid size customers	\$5.4B	~7%	<ul style="list-style-type: none"> • General Industrial • Indirect Channel
GLOBAL SPECIALTY BUSINESSES	\$2.1B ¹	~13%	<ul style="list-style-type: none"> • Global Specialty Segment



Source: 1. Quaker Houghton management and Charles River Associates estimates, Kline, Grandview, LEK.
 Source: 2. Assessment based on management estimates of current target addressable markets within larger segments (coatings, plating, grease, mining).

A blue-tinted photograph of two men in a factory or laboratory. The man on the left is wearing safety glasses and a dark long-sleeved shirt, holding a small mechanical component. The man on the right is wearing glasses and a dark jacket, looking at the component. In the background, there is a computer monitor displaying a data dashboard with several green bars. To the right, a large industrial machine with a glass window is visible, showing internal mechanical parts. A metal table with various tools is in the foreground on the right.

Market Trends

Well-Positioned to Address Market Trends

**TECHNOLOGY
ADVANCEMENT**

**ELECTRIC
VEHICLES**

**AUTONOMOUS /
SELF-DRIVING
VEHICLES**

**NEW MATERIALS /
ADDITIVE MFG**

**CLIMATE CHANGE /
SUSTAINABILITY**

LIGHT-WEIGHTING

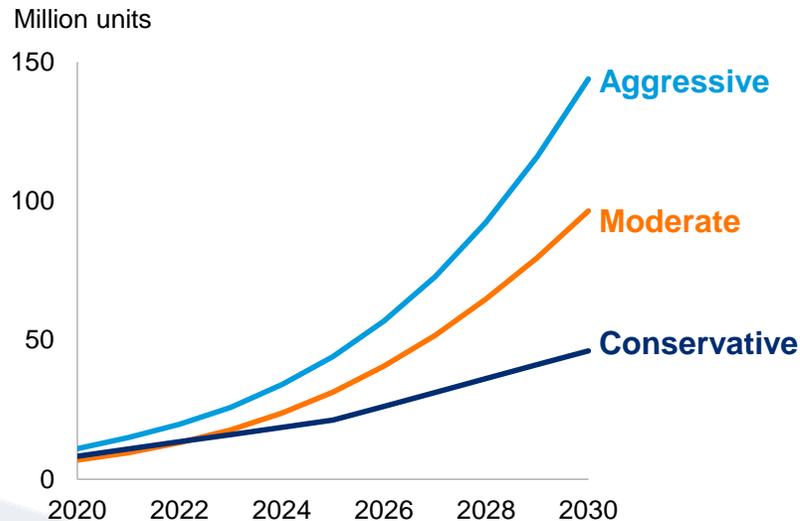
**TIGHTENING
REGULATORY
ENVIRONMENT**

**GREEN CHEMISTRY
INITIATIVES**

EV is Expected to Drive High Growth in Automotive Sector, but ICE Still Dominates in the Next 5-10 Years

A wide range of projections on EV penetration...

Total Global EV Fleet - Scenarios



EV's Share of Total

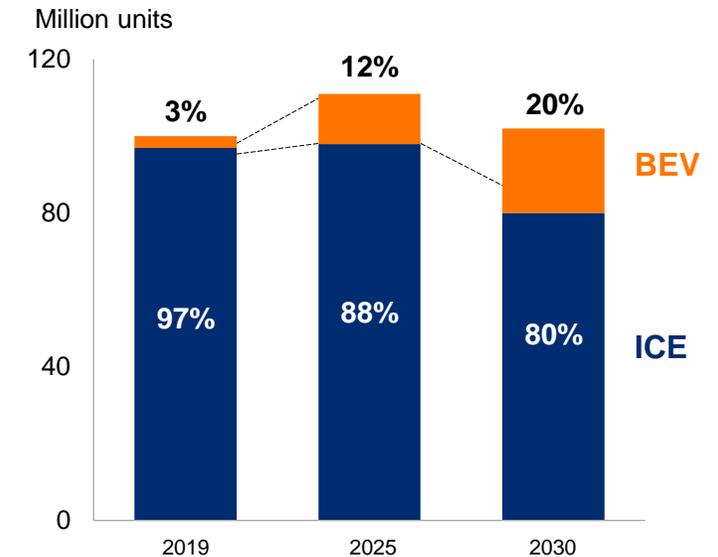
Annual Auto Production	2025	2030
Aggressive Case	~12%	~30%
Moderate Case	~10%	~15%

Principal Growth Drivers

- Battery prices fall to point of price parity between EVs and ICE by mid-2020s
- Regional CO₂ regulation
- City Regulations (prohibit ICE)
- Government incentives (e.g., VAT exemptions)
- Energy grid upgrades
- Consumer demand in proportion to cost gap between ICE and BEV
- Fuel economy and emissions standards
- Energy independence for importing countries
- Infrastructure limitations

A Moderate Scenario...

Global Automotive Production



Annual growth	'19-25	'19-30
BEV units	~30%	~20%
ICE units	0.5%	(0.9%)
Total Production	2%	1%

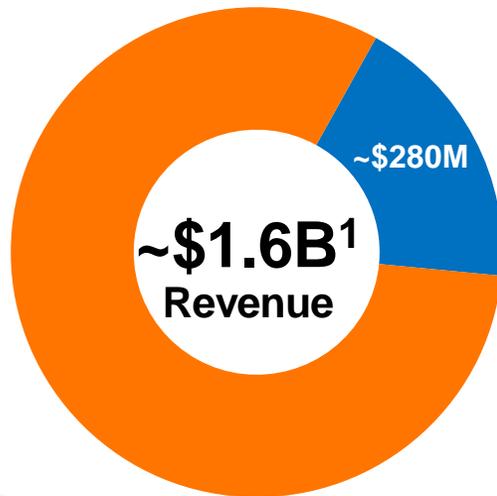


Sources for slide: 'Electric Vehicle Outlook 2019' report from [BloombergNEF](#). Conservative case based on estimates from Exxon; Moderate case based estimates from OPEC; Aggressive case based on 2019 estimates from BloombergNEF; 'New market. New entrants. New challenges - Battery Electric Vehicles' 2019 report from [Deloitte](#); BEV (Battery Electric Vehicles) include Plug-in Hybrid Electric Vehicle (PHEV); McKinsey 'Trends in the Automotive Industry and Discussion of Implications for Material Compositions' July 2019.

Moderate Sales Impact from Growing EV Penetration Over Next Ten Years

Potential Opportunities in EV can Help Offset Impact

~17% of current sales directly related to auto engines, transmissions and drivetrains



Sales related to Automotive Engine & Transmission and Drivetrain

Limited impact from higher EV penetration

Estimated impact on QH sales growth given EV's market penetration

Impact of EV on Total QH sales growth²

	'19-25	'25-30
Moderate Case	+0.3%	-0.3%
Aggressive Case	0%	-0.5%

Quaker Houghton has no exposure to engine oils and transmission fluids

Potential gains to offset impact from EV in scenario

- New process fluid applications required for BEV will bolster growth in other product segments:
 - Die casting
 - Aluminum rod and wire
 - Hot aluminum forming
 - Specialty grease
 - Advanced High Strength Steels
- Infrastructure spending to fully realize EV expansion (charging stations, power grid)
- Fleet replacement could accelerate auto production rates through 2030

Technology Advancements Create Revenue and Profit Opportunities



AUTONOMOUS / SELF-DRIVING VEHICLES



Limited short-term impact on automotive production and fluid demand



Higher metal demand for infrastructure build-up, 5G networks, connectivity and upgrade to fleet required in long-term



NEW MATERIALS / ADDITIVE MANUFACTURING



3D printing unlikely to penetrate large volume industrial applications



Opportunities for Ultraseal™ used for porosity challenges seen in 3D printed materials



Powdered metals may still require metal machining



INDUSTRY 4.0



QH has acquired and developed equipment and energy solutions to fully participate in Industry 4.0



Fewer people in plants means greater reliance on suppliers and equipment to support operations

Quaker Houghton Advantages

Strong position with global auto OEMs and component manufacturers, and clear leadership in flat rolled metals

Recent Norman Hay acquisition of Ultraseal™ division positions Quaker Houghton as leader in porosity solutions

Service & Equipment Solutions to augment our field technical support: QH Fluid Trend™, QH Fluid Worker™, QH Fluid Mix™, QH Fluidcare™

Technology Advancements Create Revenue and Profit Opportunities



LIGHT-WEIGHTING

- ↑ Potential shift from steel, offset by new Advanced High Strength Steel applications (AHSS)
- ↑ Significant growth opportunities in flat-rolled aluminum and structural diecasting applications



TIGHTENING REGULATORY ENVIRONMENT

- ↑ Tighter regulations toward lower emissions, energy efficiency and compliant “worker safe” raw materials
- ↑ Our global scale and enhanced R&D capabilities increase Quaker Houghton’s competitive advantage



GREEN CHEMISTRY INITIATIVES

- ↑ Demand for heavy-metal/toxic free chemicals (driven by regulations **and** consumer demand)
- ↑ Shift away from plastics, move towards recyclable aluminum and steel

Quaker Houghton Advantages

Clear leadership position in ferrous and non-ferrous metal rolling

Products and services help customers reduce energy, waste and water usage, while complying with local regulations

Renewable raw material feedstocks, scale and capability of R&D, leadership positions in non-ferrous and beverage containers

Our Plan to Grow

Our Plan to Grow

▶ Mid-teens **market share** allows plenty of **room to grow**

▶ Combination provides unique opportunities to **cross-sell** products to **expanded customer base** and **end markets**

▶ Well positioned to take advantage of macro trends like **electrification, digitization**, and an expected **increased regulatory environment**

▶ We are in **markets** that are expected to **grow at a steady rate of 1-3%**

▶ Differentiated **customer intimate** business model will enable **share gains above market at 2-4%**

▶ Continue to pursue strategic **acquisitions**

Metals and Metalworking: Customer Solutions

Jeewat Bijlani

Senior Vice President, Managing Director - Americas

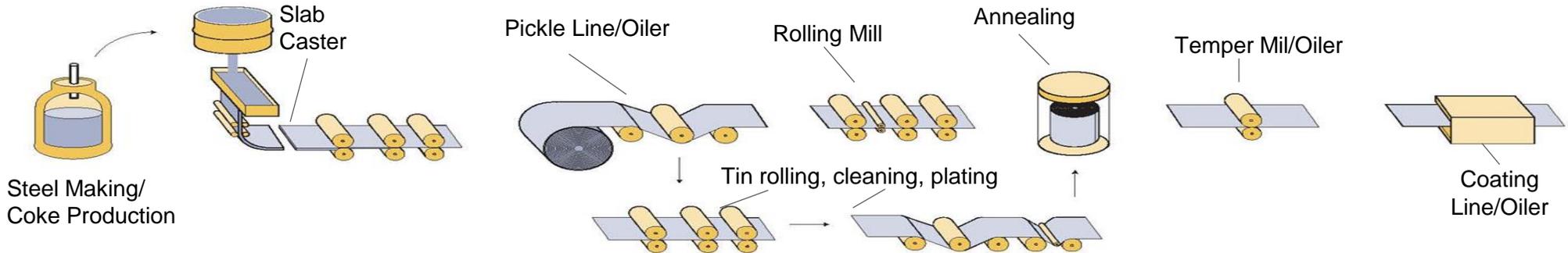


Outperformance Powered by Distinctive Customer Intimacy Model

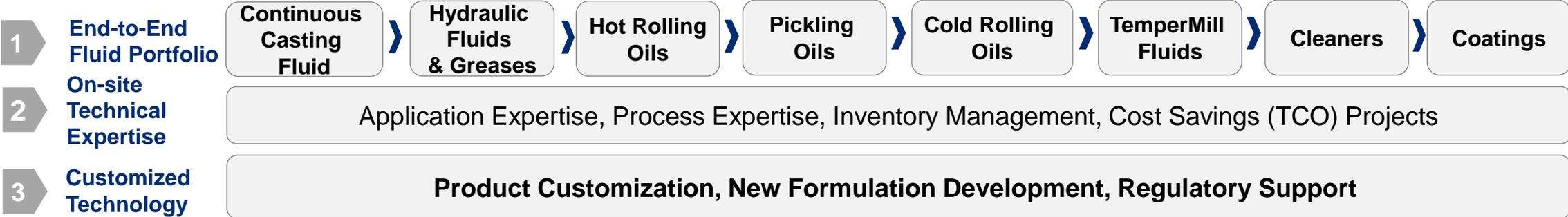


Quaker Houghton: Value Proposition for Metals

Sheet Metal Production Process



QH Value Proposition



Customer Benefits \$\$\$



Quaker Houghton: Value Proposition for Metalworking

Business Segments



QH Value Proposition

- 1 **Expanded Product Portfolio:** Offering for entire metalworking fluid lifecycle
- 2 **FluidCare (On-Site Support):** Application, Inventory and Chemical Management, Training, Cost Savings (TCO) Projects
- 3 **Innovation and Application Expertise:** New Product Development, Product and Formulation Customization
- 4 **Fluid Intelligent Solutions:** Data, Equipment and Engineering

Customer Benefits \$\$\$

Sustainable Cost Reductions



Product Surface Improvements



Equipment & Tool-life Improvement



Increased Throughput & Utilization

Continued Commitment to Customer Performance

What have been historical customer needs?

Additional customer needs...



Optimized fluid usage



Extend equipment and tool life



Lower energy costs



Minimize rework and rejects



Increase productivity, throughput and utilization



Minimize environmental impact



Usage monitoring and reporting



Lower operating costs

Enhanced Quaker Houghton Capability

Innovation



Sustainability



Global



Solutions



Expanding Capability and Offering to Strengthen Customer Intimacy and Differentiation

TODAY

PRODUCTS

Rolling Oils
Metalworking Fluids
Surface Treatment and Cleaners
Metal Forming Oils
Hydraulic and Industrial Fluids

SERVICE AND EXPERTISE

Lab Chemists
Product Application Engineers
Research Scientists
Process and Technical Service Specialists
Managed and On-Site Teams
Industry Experts

TOMORROW

QH EQUIPMENT AND DATA SOLUTIONS



QH Equipment Solutions



QH Data Monitoring



QH Engineering Services

QH recognized as Leading Process Fluids Supplier

QH Positioned as a Value-Added Partner

Data and Equipment Solutions: Complement Existing Product Portfolio

Growing Pipeline of Customer
Opportunities and Interest



Building the Future: Turning Data into Insights through Fluid Reporting and Monitoring

FluidCare Service Observations

ph and Concentration Health

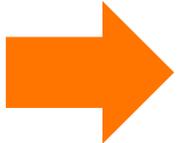
Historical Data and Audits

Bacteria Monitoring

Connected Machines & Sumps



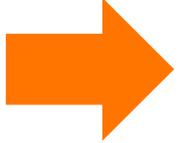
 www.fluidtrend.solutions



Risk Identification



Machine Specific Prioritization



Lead Operators to Targeted Actions



A Win-Win Partnership: Quaker Houghton and Customer



CUSTOMER BENEFIT



- ➔ Sustainable OPEX and Process Improvements

CUSTOMER BENEFIT



- ➔ Training and Onsite Support
- ➔ Fluid Intelligence Academy

CUSTOMER BENEFIT



- ➔ Innovative Solutions

QUAKER HOUGHTON BENEFIT

- ➔ Customer For Life
- ➔ Profitable Growth and Margins
- ➔ Competitive Differentiation
- ➔ Increasing Barriers to Entry

Regional Perspective

Jeewat Bijlani

Senior Vice President, Managing Director – Americas

Adrian Steeples

Senior Vice President, Managing Director – EMEA

Dieter Laininger

Senior Vice President, Managing Director – Asia Pacific



Break



Research and Development

Dave Slinkman

Senior Vice President, Chief Technology Officer



Quaker Houghton is the Industry's R&D Leader

Combined \$200 million spent in past 5 years on R&D

320+ R&D staff in 16 countries

Centers of Innovation and Regional Labs in Asia, Europe and the U.S.

- R&D Technology Center
- ★ Center of Innovation (COI)
 - ★ COI Primary Metals
 - ★ COI Global Metalworking
 - ★ COI Surface Chemistry



Combined R&D Organizations Create Unique Capabilities

QUAKER

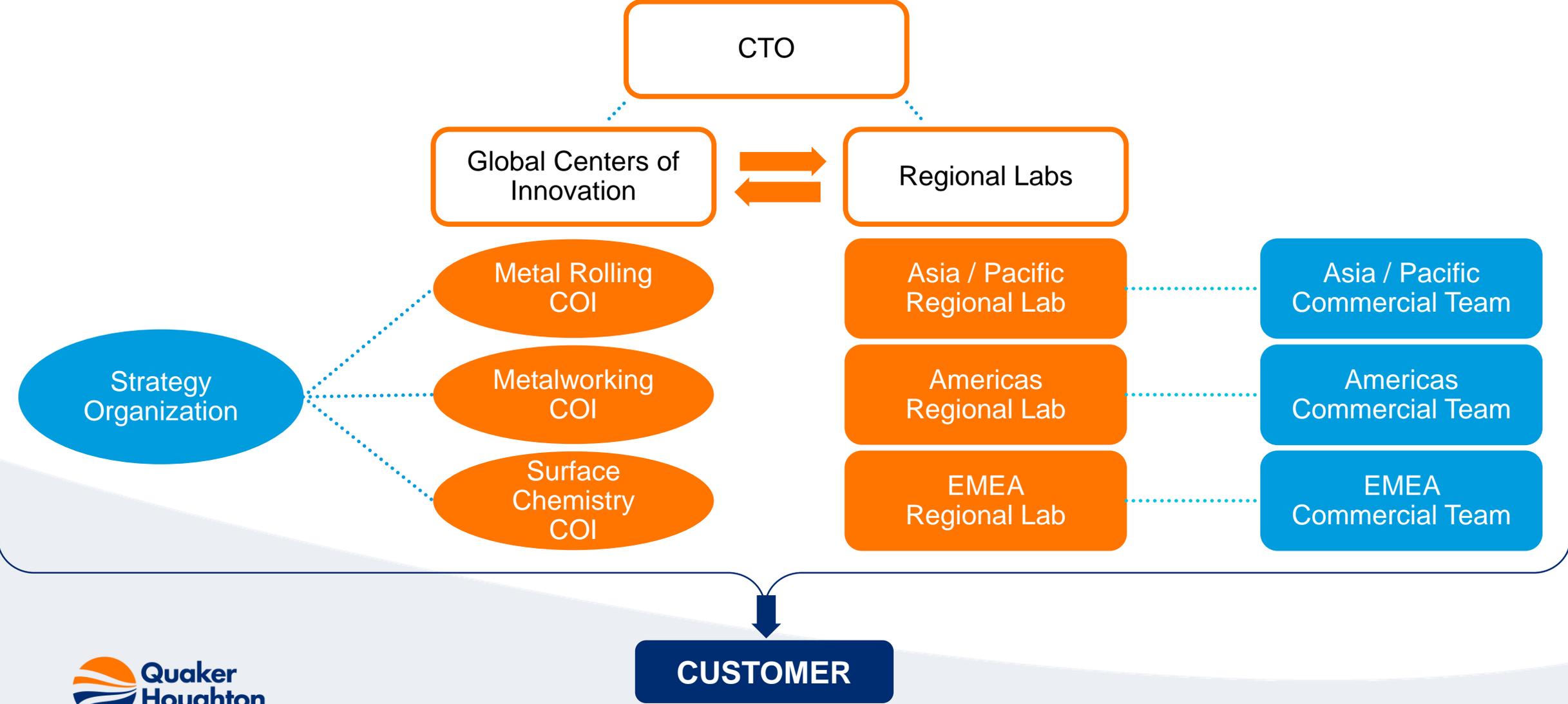
- Strong analytical capabilities in U.S. and China
- Deep research in Global Metalworking and Steel Rolling Groups
- Investment in application of customer simulation
- Active Safety Program

HOUGHTON

- Strong analytical capabilities in Europe
- Investment in lab bench tribology and emulsion equipment
- Vitality focus
- Focus on Industry 4.0

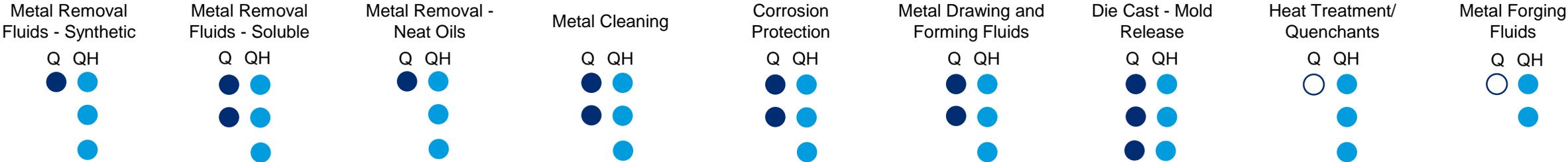
- **Accelerated** innovation speed
 - **Faster** speed to market
- **Complete** customer solutions
- **Enhanced** customer intimacy
- **Deeper** analytical capabilities
- **Experience** to address regulatory compliance

R&D Structure Designed to Leverage Unique Strengths

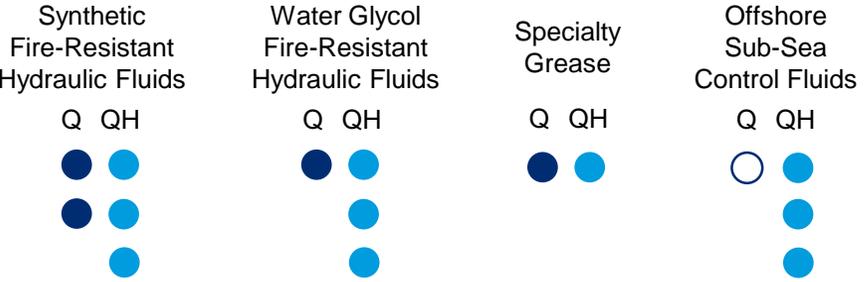


Stronger Product Portfolio: Broader and Deeper

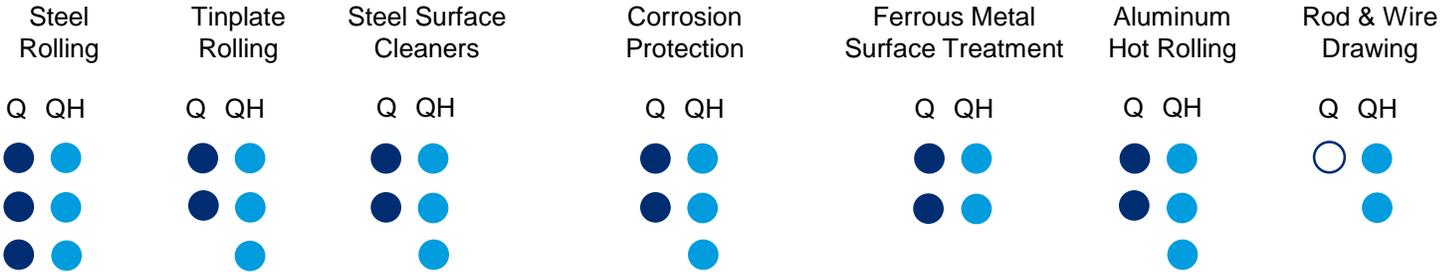
Metalworking



Industrial



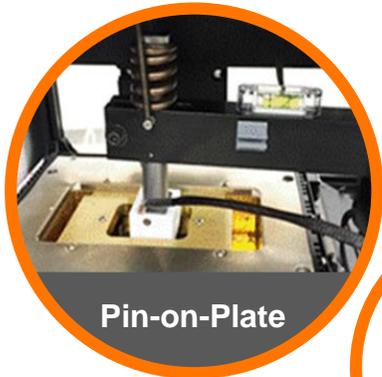
Metals



Product Portfolio Strength and Breadth
 ●●● High ●● Medium ● Low ○ No Presence

Enhanced Lab Capabilities

Front End Development



Pin-on-Plate

R-Tec
Tribology
Tester



Turbiscan
Emulsion
Tester



Mini Traction
Machine

Back End Development



Emulsion
Pump Test



Product
Application
Simulator



Pilot
Rolling Mill



CNC

Enhanced Field Support Capabilities

Field Support



Water Treatment Installation



On-line Concentration Monitoring



Fluidcontrol



Fluidmix



Fluidworker



Midas

Our Innovation Empowers Customers in a Changing World

Customer Driven, Solutions Focused

Industry Dynamics

- Light-weighting
- Industry 4.0
- 3D Printing, MQL, Dry Machining
- Electrical / hybrid vehicles
- ESG principles
- Increasing globalization of customer base

QH R&D Strengths

- Innovation
- Application expertise in the field
- Strong customer partnerships
- Understanding of customers' processes
- Fast and flexible customer service
- Focus on health and safety

Quaker Houghton. People Are The Difference.



Better Together



Integration Update

Wilbert Platzer

Senior Vice President, Global Operations, Environmental Health & Safety & Procurement

Kym Johnson

Senior Vice President, Chief Human Resources Officer



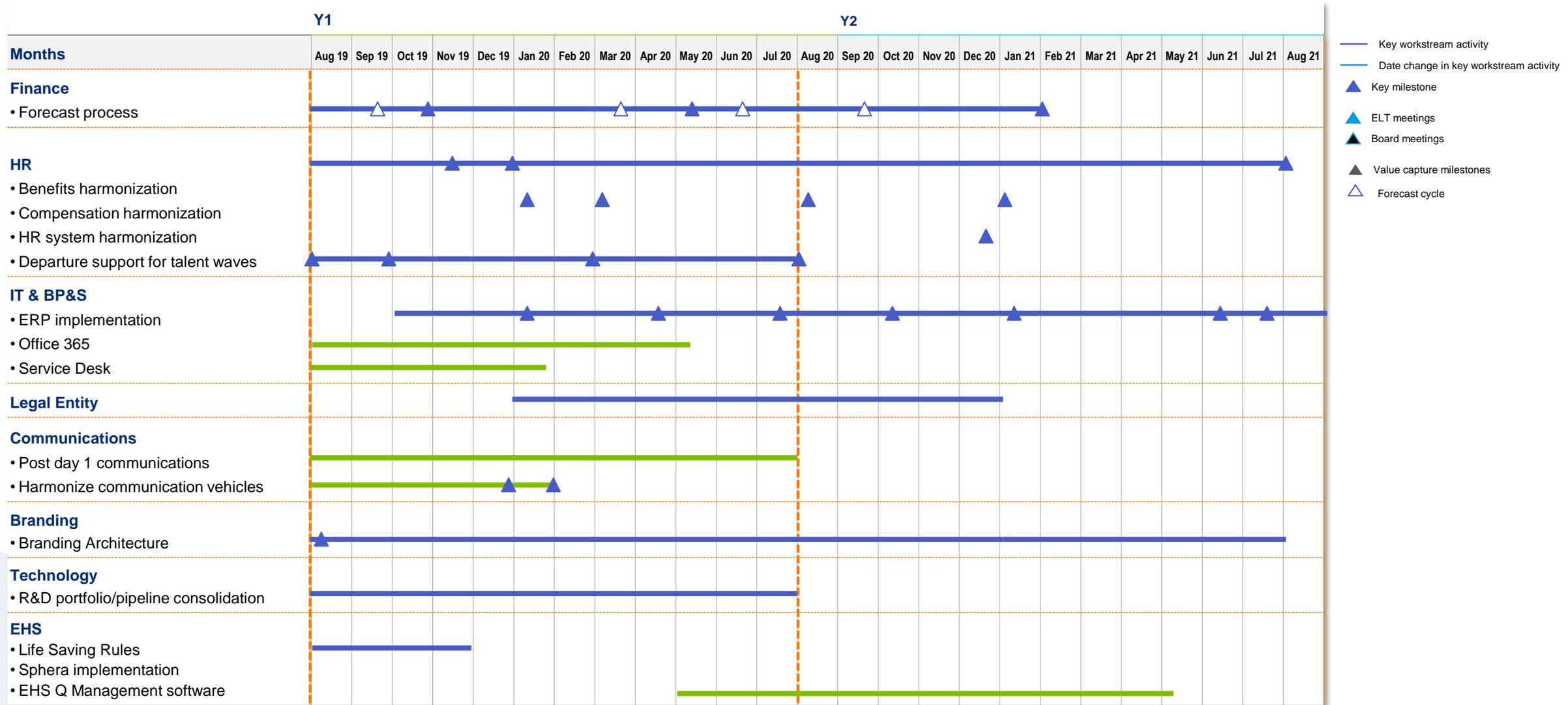
We Hit the Ground Running Day 1

✓ **Used our time wisely** over 2+ years

✓ Worked with outside experts using best practices to develop **detailed execution plans and integration management structure, tools and processes**

✓ **Seamless Day 1 Launch of Company and Brand**
– No customer disruption
– Early quick wins

Integration Plan and Timeline



Our Progress to Date



Held face-to-face discussions & celebrations in first 10 days

Connected networks and aligned communication systems



Global Listening Surveys



Launch of Core Values



Safety Initiatives – Roll out of Global EHS management software, Dupont training system, 10 Lifesaving rules and Live Safe campaign



Launched new product packaging



U.S. benefits consolidated



Relocated to new global HQ & regional HQ in China

3 R&D technical exchanges



Designing a Culture that Performs



Executive alignment on culture as a business process



Both legacy organizations were healthy with remarkable similarities in cultures



Create a vision of the desired culture, linking to business strategies and aspirations



Culture as a workstream in integration



Identify our new core values

Measuring Cultural Success of Combination

	Perceptions 	Actions 	Measure Impact 		Measure Desired Outcomes 	
Measures	Listening Surveys	Culture Initiatives	Employee Retention	Safety	Customer Service	Customer Retention
Descriptions	Are employees positive about the combination and new identity?	Are people identifying with the desired culture attributes?	Are employees engaged and committed?	Are Safety KPIs being met?	Is the company performing and growing? Is it functioning effectively as a more complex business?	Are business continuity and customer satisfaction measures stable?

Culture at the Center of our Integration Success



Leadership – Balanced and Focused

- Management is balanced between Quaker and Houghton
- Global leadership team meeting within 45 days



Values – Activated and Articulated

- Development and launch of Core Values for QH
- Community - HQ relocations completed immediately
- Safety - Focus on Live Safe
- Customers - Exceed Customer Expectations

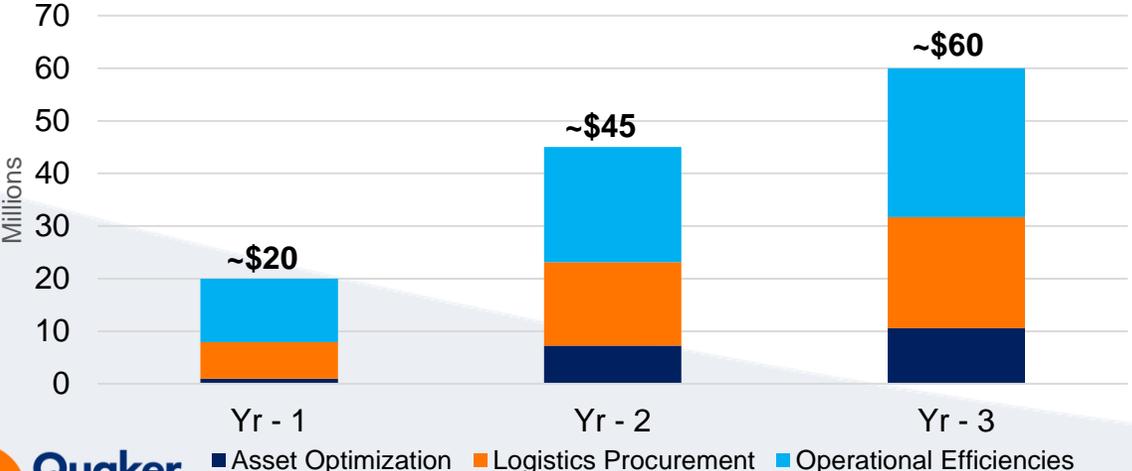
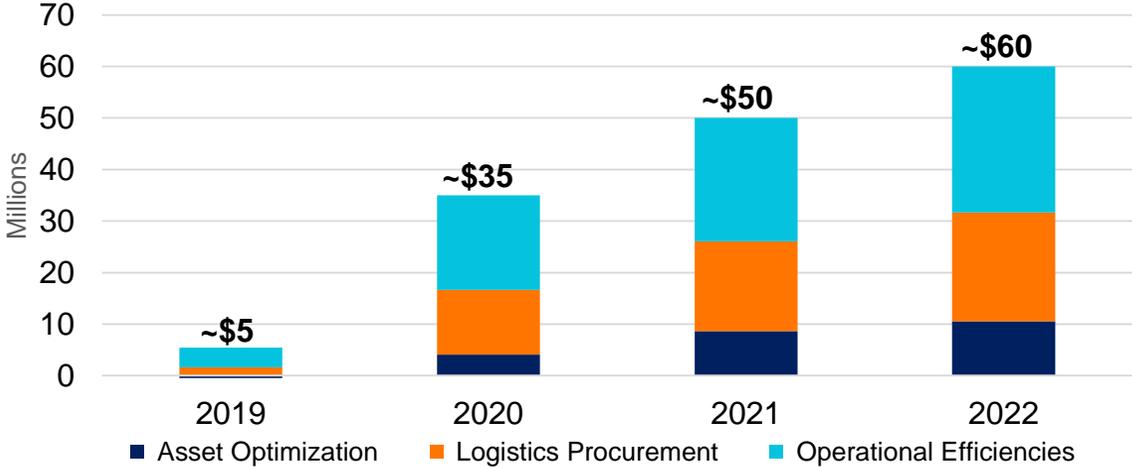


Employees – Positive and Engaged

- 4/5 of employees highly favorable on combination
- Less than 3% voluntary turnover during first 100 days

Strong Focus on Realizing Significant Cost Synergies

Estimated Synergy Realization Timing



Sources of Synergy

Asset Optimization (17%)

- Manufacturing footprint optimization
- Optimize IT platforms

Logistics & Procurement (35%)

- Raw material purchasing
- Freight / warehousing
- Ester production

Operational Efficiencies (48%)

- Organizational redundancies
- Non-labor cost savings



■ Asset Optimization ■ Logistics Procurement ■ Operational Efficiencies

Significant Opportunities for Asset Optimization

- Q manufacturing location - 17
- H manufacturing location - 13

Global Footprint Infrastructure
30 wholly owned plants
~90 contract manufacturers
52 facilities (excl. HQ/plants)



Significant Opportunities for Procurement Optimization

Global Procurement Infrastructure	
\$750M	Direct material spend
\$250M	Indirect spend
	External ester manufacturing
~1200	Suppliers
200	Shared suppliers (60% of combined spend)



Future
Reduce direct spend by \$16 million
Reduce indirect spend by \$2 million
In-house ester manufacturing +\$3 million
Reduce supplier numbers by 15-30%
Increase shared suppliers by 75-100%

Quick Procurement Wins: YTD \$6M+ Run Rate Benefits



Completed the
“A-match” raw
material supply



New base oil
supplier in Brazil



Completed the
insourcing for
legacy Houghton
esters in China and
Brazil



Indirect Procurement

- Freight tender China
- Office supplies / utilities
- Insourcing
- IT activities

Key Takeaways

STRATEGIC IMPERATIVES



STRONG PROGRESS

Integration



On track with company-wide integration execution

Culture



High focus on culture (condition for success)

Cost Synergies



On track / may exceed goal

Financial Review

Mary Dean Hall

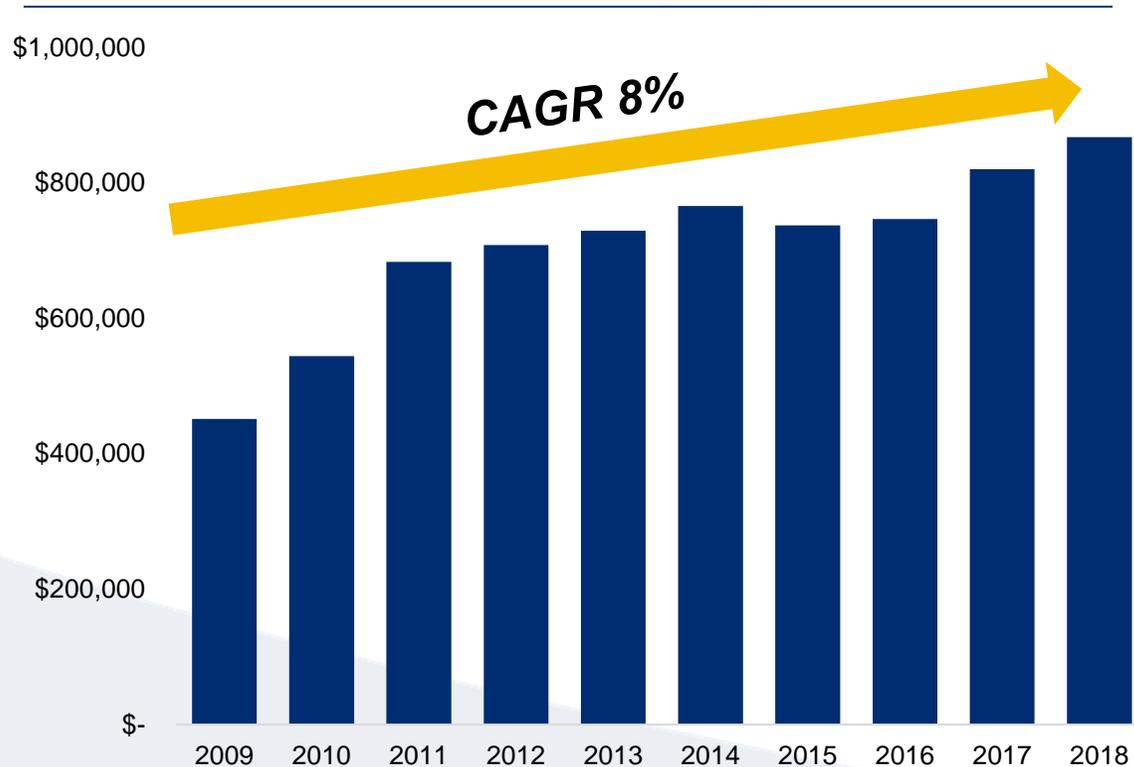
Senior Vice President, Chief Financial Officer & Treasurer



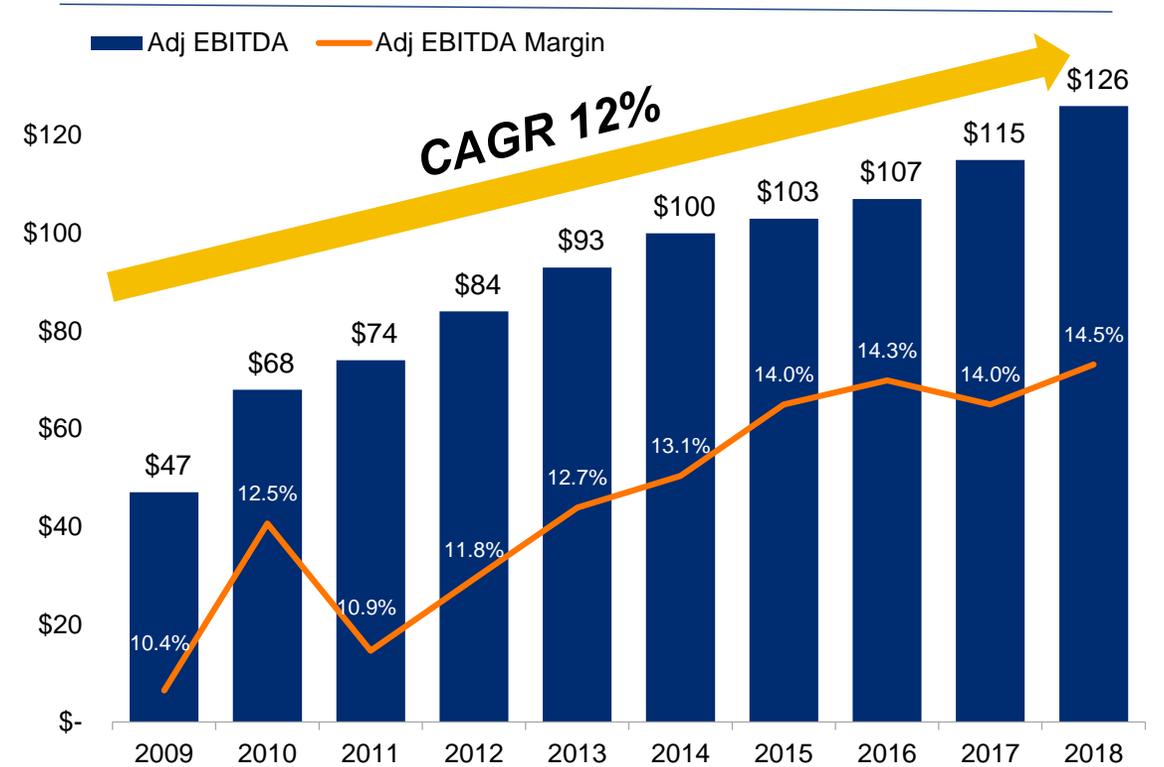
Quaker Financial Performance History

Track Record of Steady Growth

Net Sales (\$MM)

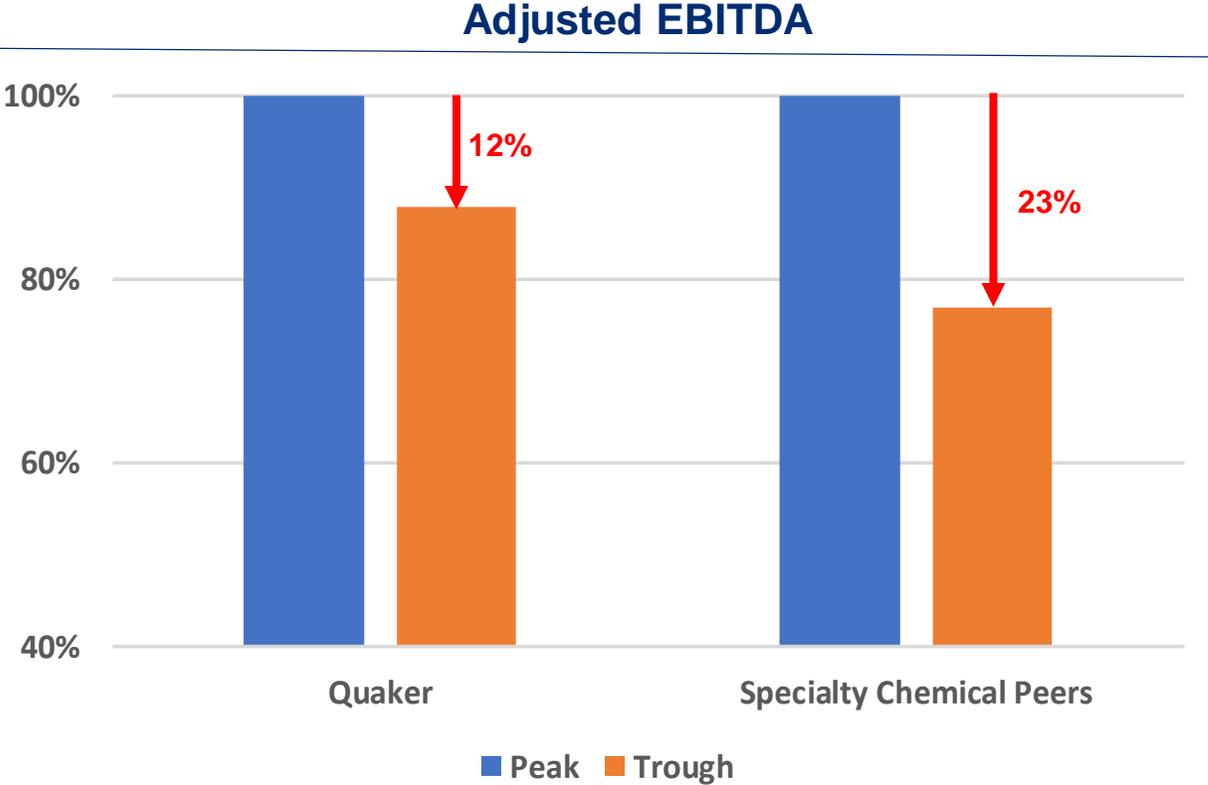


Adjusted EBITDA (\$MM)



Note: Net sales and Adjusted EBITDA in millions of \$.

Resilience Through Financial Crisis



Proven resilience through 2008 / 2009 downturn

- Adjusted EBITDA decline of 12% from peak vs peers 23% decline (average)
- End market and regional diversification dampens impact of recession
- Track record of responding quickly to changing market conditions

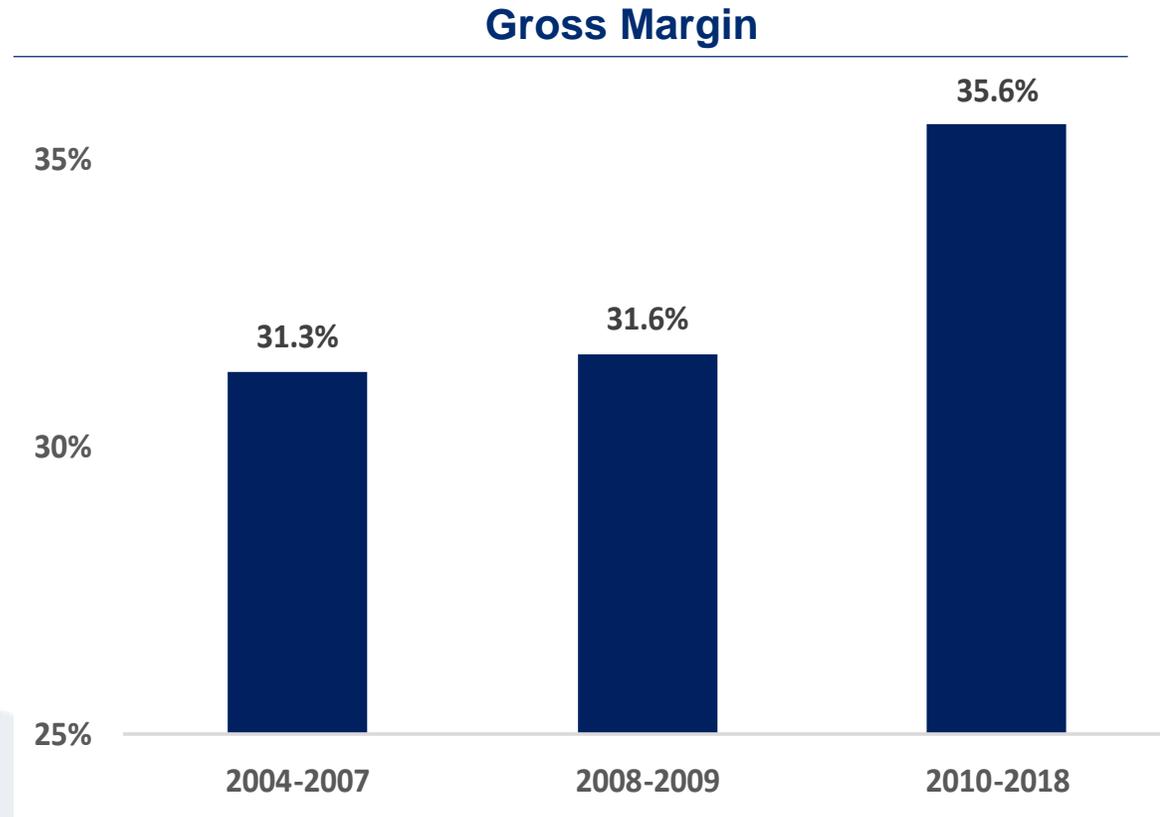
Peak and trough represent maximum and minimum Adjusted EBITDA for years 2007-2009



Note: Specialty chemical peers include ASH-US, SHW-US, ALB-US, CLN-CH, POL-US, GRA-US, IOSP-US, PPG-US, FUL-US, JMAT-GB, KOP-US, SYNT-GB.
Source: Bloomberg, Eikon and FactSet.

Gross Margin: Steady in Crisis; Step Change Post Crisis

EVA Focused Management Post Crisis

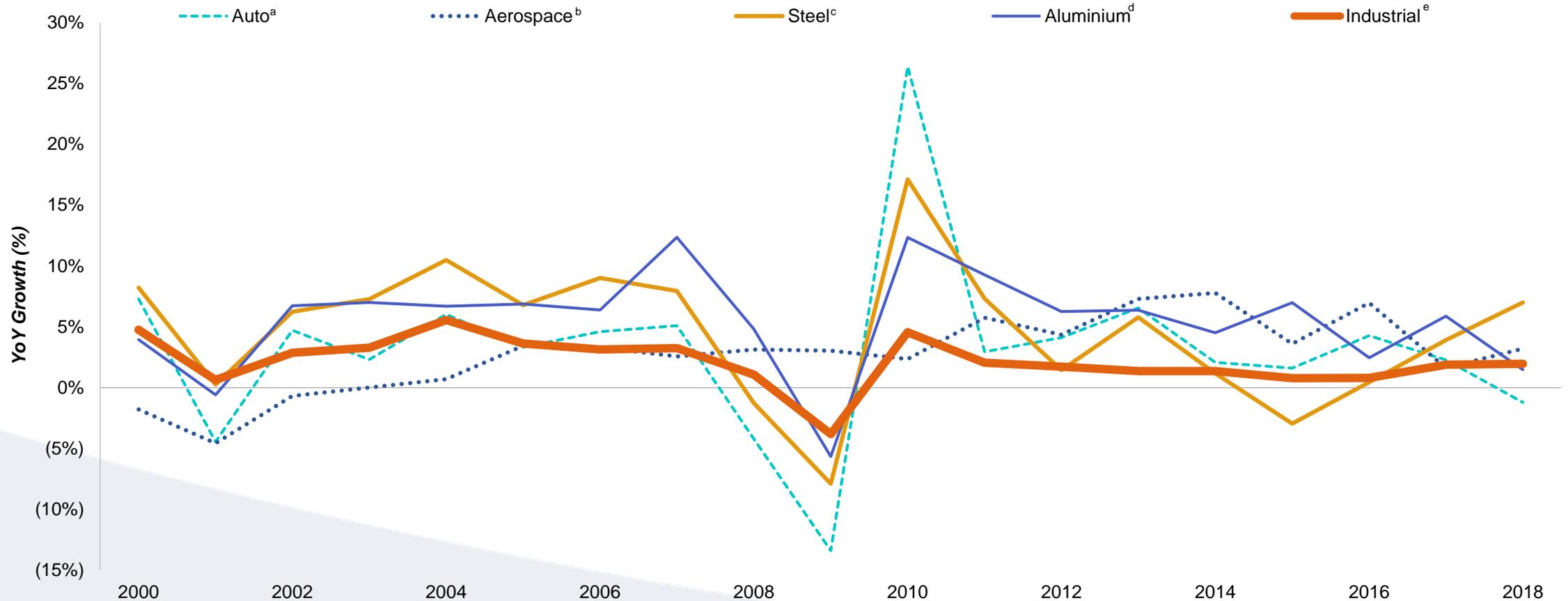


Gross Margin Stability

- Pricing structure allows pass through of raw material costs
- Asset lite business model means less drag from maintenance and depreciation
- Cost synergies from combination will further improve gross margin 200 bps

Increased Diversification Mitigates Cyclicality

Key Product End Markets



(a) World Vehicle Production (millions of vehicles), includes passenger and commercial vehicles; (b) Represents in service fleet of passenger planes; (c) Represents thousand metric tons of crude steel production; (d) Represents thousand metric tons of aluminum production; (e) World Industrial Production Growth (% change from prior year).
 Source: Company information, IHS Markit, World Steel Association, Cirium's Fleets Analyzer, World Aluminum, Bureau of Transportation, Bloomberg and FactSet.

Enhanced Financial Profile – Illustrative



	Quaker	Houghton	Divestiture	Synergies	Norman Hay	Combination
	Quaker	Houghton		Norman Hay ^b	Quaker Houghton ^a	Δ vs. Quaker standalone
(\$ in millions)						
Net Sales	\$851	\$786		\$78	\$1,663	~2x
Adjusted EBITDA	\$124	\$118		\$14	\$305	~2.5x
Adjusted EBITDA Margin	14.5%	15.0%		17.8%	18.3%	~4% pts

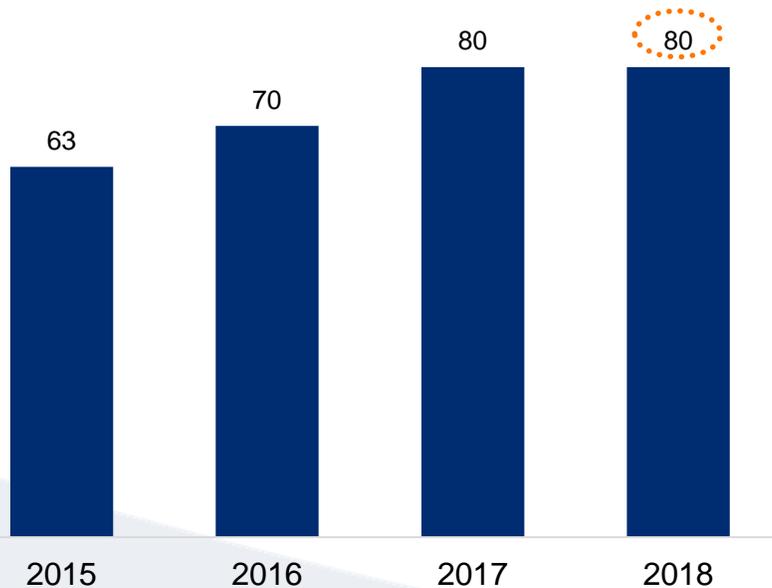


a) Column includes Quaker and Houghton's TTM 6/30/2019 financials as presented, adjusted for synergies, divestiture estimates, and the Norman Hay acquisition.
 b) Norman Hay figures represent estimated full year 2019 Norman Hay performance.

Strong Cash Flow More Than Doubles with Combination

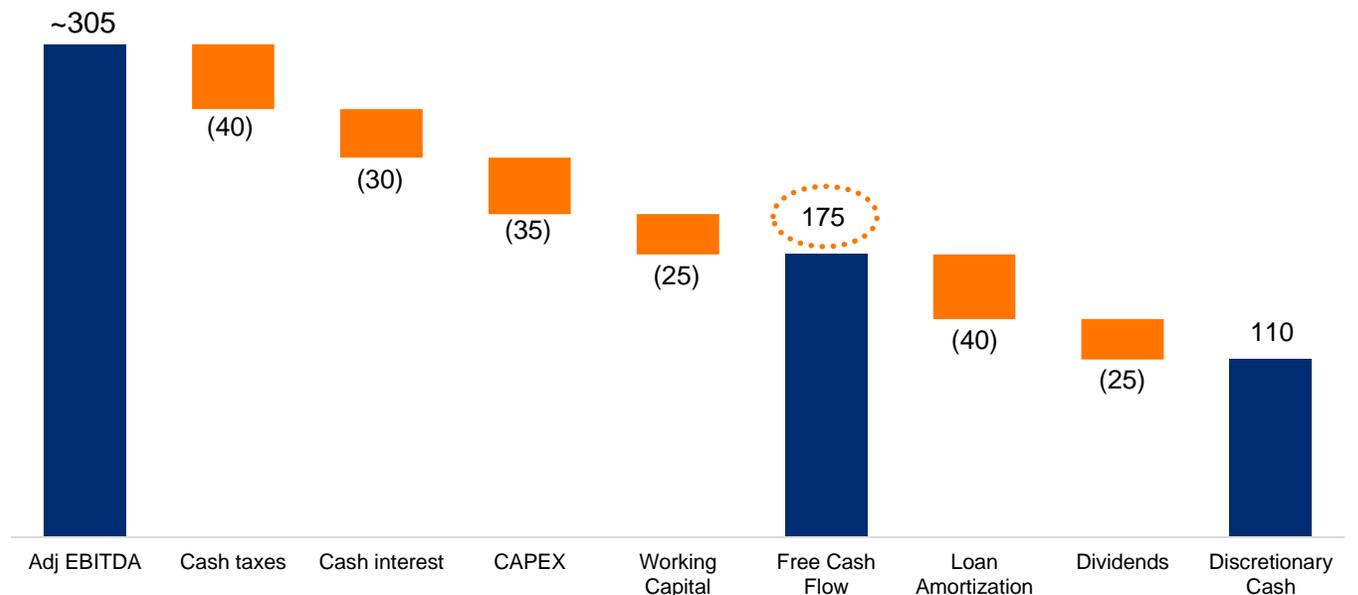
Quaker history of consistent and growing cash flow

Adjusted Free Cash Flow (\$MM)



Pro forma snapshot of cash flow with \$60MM of synergies

Discretionary Cash Flow (\$MM)



Note: Adjusted Free Cash Flow and Discretionary Free Cash Flow in millions.

Raises baseline for future growth



Note: See appendix for reconciliations of adjusted free cash flow. With regard to the pro forma snapshot of cash flow, Cash Taxes were estimated at the U.S. statutory tax rate of 21% multiplied by estimated profit before taxes, Cash Interest was estimated using the Company's estimated cost of capital of 3.3% multiplied by estimated debt outstanding, Capex was estimated at 2-3% multiplied by net sales, Working Capital was estimated at 25-30% multiplied by estimated sales growth, Loan Amortization is based on the Company's specified scheduled payments per its outstanding revolving credit facility agreement and Dividends were estimated based on most recent dividends paid per share multiplied by an estimated 17.6 million shares outstanding.

Balanced Capital Allocation Strategy

Supported by Strong Free Cash Flow

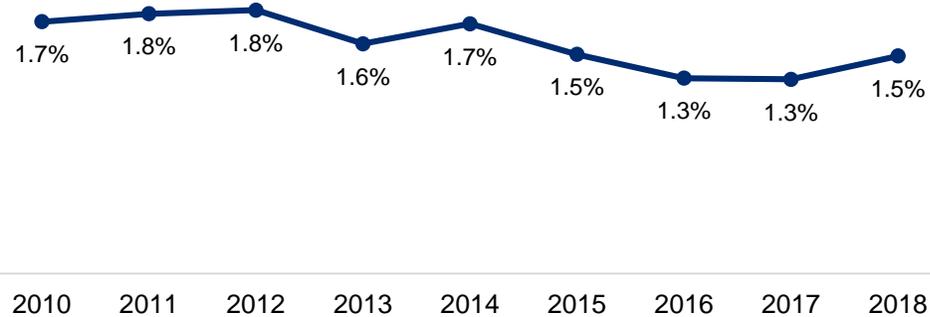
Capex	Houghton Integration	~2.0% of sales first two years
	Long-term	~1.5% of sales afterwards
Acquisitions	Support Growth Strategy	Bolt-ons will support core growth near term; larger opportunities considered post leverage reduction in ~ two years
Return to Shareholders	Dividends	Pay dividends consistent with Quaker's practice over 48 years
	Share Repurchase	Return excess cash to shareholders through opportunistic buybacks
Capital Structure	Net Leverage Target $\leq 2.5x$	Repay debt to reach target range within two years after closing



Capital Allocation will Remain Disciplined and Balanced

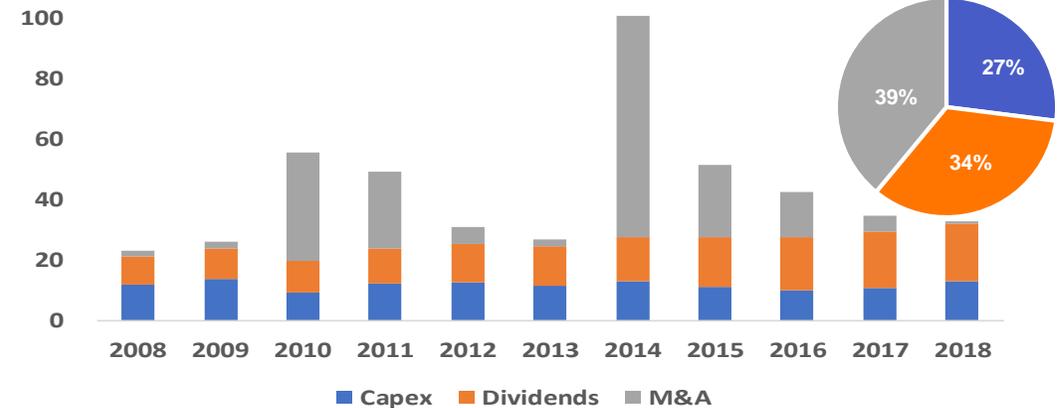
Asset-lite footprint enhances cash flow

Capex as % of Sales

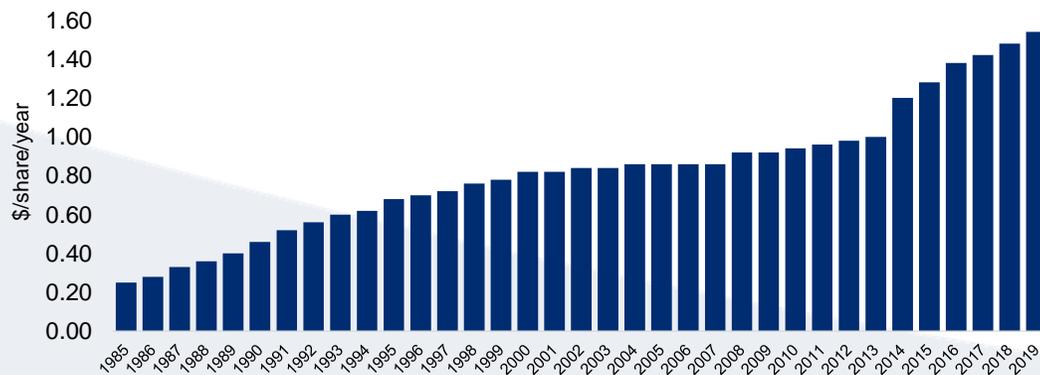


Balanced across categories

Capital Allocation History (\$MM)

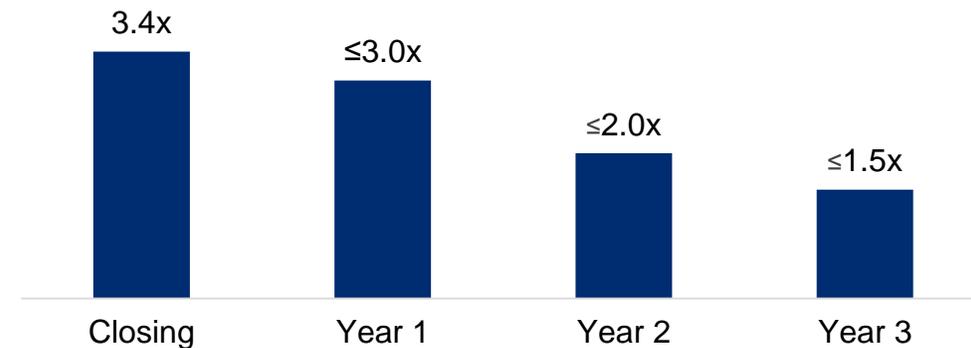


Long-standing commitment to dividends



Committed to improving leverage

Net Debt / Adjusted EBITDA



Note: Chart assumes all excess cash applied to reduce debt.

Financial Key Takeaways

- 1** Houghton and Norman Hay transactions have **reset the baseline financial performance** of the company and **strengthened the overall financial profile**
- 2** **Strong cash flow** supports key capital allocation priorities
- 3** **Track record of managing** through difficult economic conditions is enhanced by **added size, scale and diversification**
- 4** Future remains **opportunity rich**

***Quaker Houghton Positioned
for Continuing Growth***

Summary

Michael Barry

Chairman of the Board, Chief Executive Officer and President

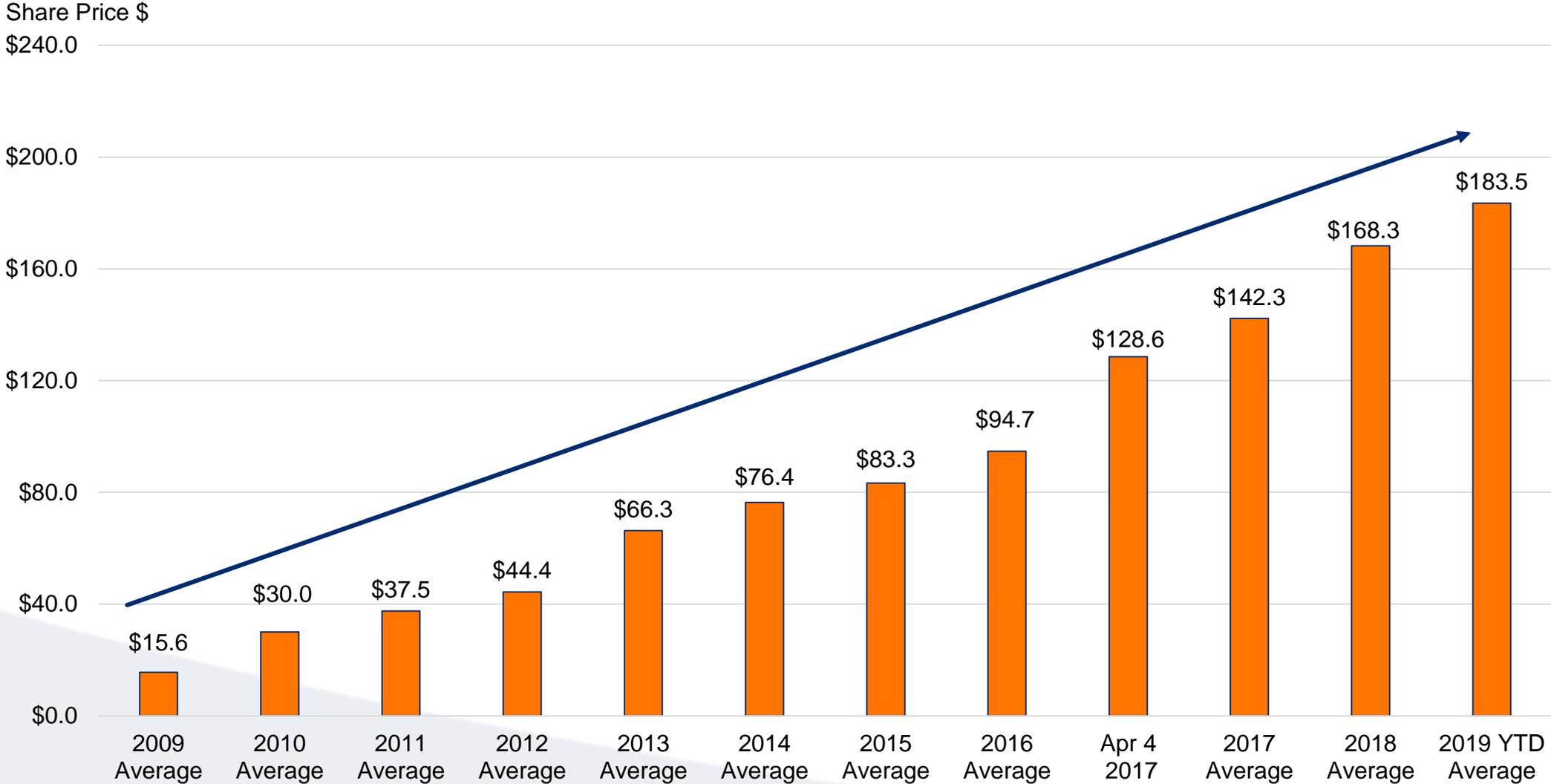


Success: What Does it Look Like After 2 Years?

We are highly confident in our ability to deliver our Integration Plan

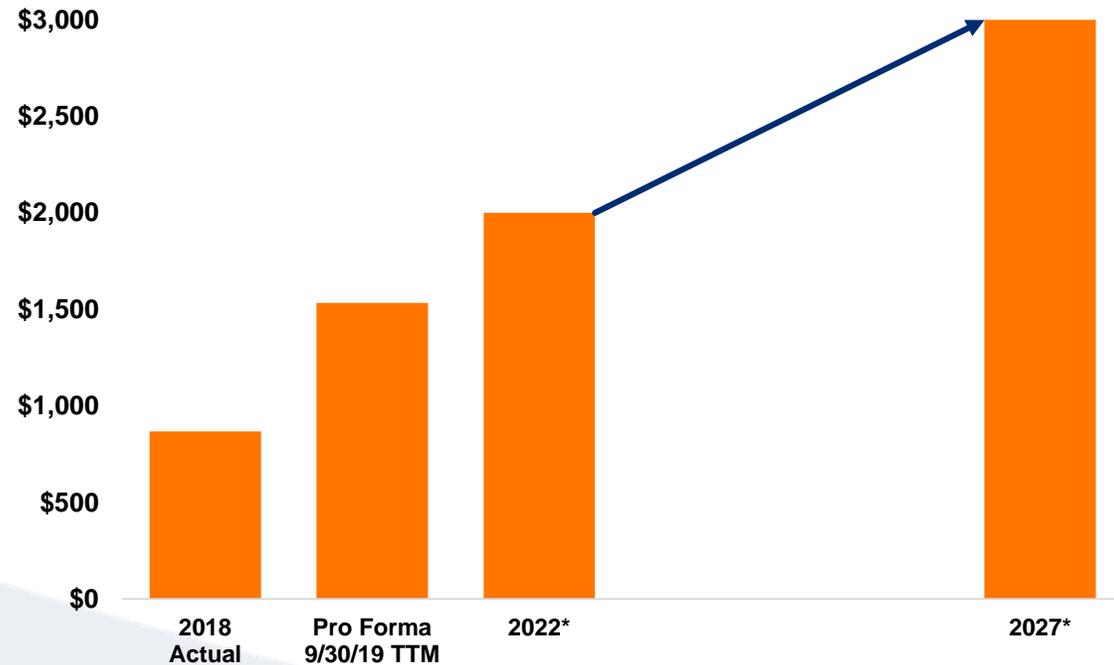
- 1 We will have industry leading safety performance
- 2 We will have retained our customers
- 3 We will have achieved our targets and be a \$300+ million Adjusted EBITDA company
- 4 We will be growing above the market by 2 to 4%
- 5 We will have reduced our debt to targeted level of $\leq 2.5x$ net debt to Adjusted EBITDA
- 6 We will have made at least one acquisition and be positioned for more
- 7 We will have an engaged and happy workforce

Creating Shareholder Value is a Priority

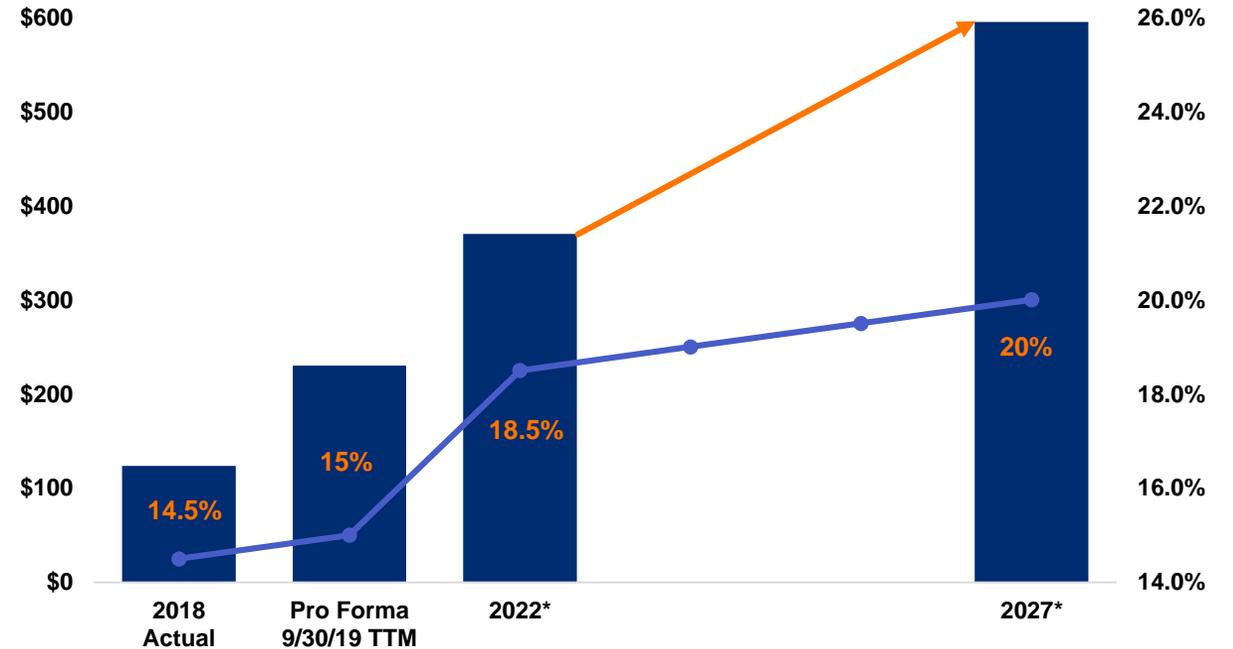


Quaker Houghton: Positioned for Growth

Revenue (\$MM)



Adjusted EBITDA (\$MM)



*Key Assumptions: Management's View of What Future Could Look Like

- **Sales growth:** Assumed ~3.5% next year and ~5% thereafter, reflecting above market growth consistent with historical 2-4% achieved
- **Houghton integration:** Successful integration with full \$60 million cost synergies achieved during 2021
- **Additional acquisitions:** Assumes bolt-on acquisitions of \$50 million of sales in 2020 and 2021, and \$100 million thereafter; acquired sales and EBITDA assumed at a half year convention; assumed cost synergies, but at a lower level than Houghton



Data Footnote: 2018 Actual data for Quaker legacy only, Pro Forma 9/30/19 TTM includes estimated performance of Quaker Houghton for the trailing twelve months September 30, 2019 in millions of dollars (see appendix for reconciliation) and 2022 and 2027 estimates adhere to the forward-looking statements disclosures made at the onset of this presentation.

Thank You



Appendix



Note to Forward Looking Statements and Non-GAAP Reconciliations

As it relates to certain non-GAAP and forward looking statements including, but not limited to, the full year expected results for the Company's acquisition of the operating divisions of Norman Hay plc, as well as the Company's forward looking calculations for potential 2022 and 2027 results, and the forward looking calculations of Adjusted EBITDA compared to net debt, the Company has not provided guidance for GAAP measures or a quantitative reconciliation of forward-looking non-GAAP financial measures to the most directly comparable U.S. GAAP measure because it is unable to predict with reasonable certainty the ultimate outcome of certain significant items necessary to calculate such measures without unreasonable effort.

These items include, but are not limited to, certain non-recurring or non-core items the Company may record that could materially impact net income, such as Combination and other acquisition-related expenses and restructuring expenses, as well as income taxes. These items are uncertain, depend on various factors, and could have a material impact on the U.S. GAAP reported results for the guidance period.

Adjusted EBITDA Reconciliation

(dollars in thousands unless otherwise noted)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Net income attributable to Quaker Chemical Corporation	\$ 15,471	\$ 9,833	\$ 16,058	\$ 32,120	\$ 45,892	\$ 47,405	\$ 56,339	\$ 56,492	\$ 51,180	\$ 61,403	\$ 20,278	\$ 59,473
Depreciation and amortization	12,883	12,056	10,603	10,855	13,793	15,358	15,784	16,631	19,206	19,566	19,966	19,714
Interest expense, net	5,050	4,409	4,805	4,024	3,585	3,691	1,936	(170)	961	852	1,358	4,041
Taxes on income before equity in net income of associated companies	6,668	4,977	7,065	12,616	14,256	15,575	20,489	23,539	17,785	23,226	41,653	25,050
EBITDA	40,072	31,275	38,531	59,615	77,526	82,029	94,548	96,492	89,132	105,047	83,255	108,278
Equity loss (income) in a captive insurance company	-	1,299	162	(313)	(2,323)	(1,812)	(5,451)	(2,412)	(2,078)	(1,688)	(2,547)	(966)
Non-cash gain from the purchase of an equity affiliate	-	-	-	-	(2,718)	-	-	-	-	-	-	-
Equity affiliate out of period charge	-	-	-	564	-	-	-	-	-	-	-	-
Houghton combination and other acquisition-related expenses	-	-	-	-	-	-	-	-	2,813	1,531	29,938	16,051
Restructuring expense (credit)	-	2,916	2,289	-	-	-	-	-	6,790	(439)	-	-
Executive transition costs	-	3,505	-	-	-	609	-	-	-	-	-	-
Customer bankruptcy costs	487	-	-	-	-	1,254	-	825	328	-	-	-
Pension and postretirement benefit costs, non-service components	2,425	2,051	5,944	3,880	2,548	3,504	4,040	3,833	3,308	2,302	4,235	2,285
Gain on liquidation of an inactive legal entity	-	-	-	-	-	-	-	-	-	-	-	(446)
Cost streamlining initiatives	-	-	-	-	-	-	1,419	1,166	173	-	286	-
Loss on disposal of held-for-sale asset	701	-	-	-	-	-	-	-	-	-	125	-
Insurance insolvency recovery	-	-	-	-	-	-	-	-	-	-	(600)	(90)
Non-income tax contingency charge	-	-	-	4,132	-	-	796	-	-	-	-	-
Change in acquisition-related earnout liability	-	-	-	-	(595)	(1,737)	(497)	-	-	-	-	-
Mineral oil excise tax refund	-	-	-	-	-	-	(2,540)	-	-	-	-	-
Environmental remediation activities	3,300	-	-	-	-	-	-	-	-	-	-	-
Currency conversion impacts of hyper-inflationary economies	-	-	-	322	-	-	357	321	2,806	88	388	664
Adjusted EBITDA	\$46,985	\$41,046	\$46,926	\$68,200	\$74,438	\$83,847	\$92,672	\$100,225	\$103,272	\$106,841	\$115,080	\$125,776
Adjusted EBITDA Margin (%)	8.6%	7.1%	10.4%	12.5%	10.9%	11.8%	12.7%	13.1%	14.0%	14.3%	14.0%	14.5%



Note: 2007 Adjusted EBITDA decreased \$5.9 million or ~12% compared to 2008 Adjusted EBITDA, which is the value presented in the slide entitled "Resilience through financial crisis" related to a peak and trough analysis for legacy Quaker.

Adjusted Free Cash Flow Reconciliation

(dollars in thousands unless otherwise noted)

	2015	2016	2017	2018
Operating cash flow	\$73,432	\$73,753	\$64,762	\$78,779
Less: Capital expenditures	(11,033)	(9,954)	(10,872)	(12,886)
Plus: Houghton and other combination-related expenses	-	1,531	30,832	19,452
Less: Combination-related expenses, net of payments	-	(503)	(5,846)	(5,518)
Plus: Restructuring costs	490	5,252	675	-
Adjusted free cash flow	\$62,889	\$70,079	\$79,551	\$79,827

TTM Q2 '19 Pro Forma Reconciliation

(dollars in millions)

	TTM Q2 2019				
	As Reported	Houghton	Divestitures	Other (a)	Pro Forma*
Net Sales	\$ 851	\$ 793	\$ (51)	\$ (7)	\$1,585
Net Income Attributable to Quaker Houghton	\$ 57	\$ 1	\$ (9)	\$ 12	\$ 61
Depreciation and Amortization	19	53	-	10	83
Interest Expense, Net	3	57	-	(26)	35
Taxes on Income (b)	26	(2)	(2)	3	24
EBITDA*	105	109	(11)	(0)	203
Equity Income in a Captive Insurance Company	(1)	-	-	-	(1)
Combination and Other Acquisition-Related Expenses	16	8	-	-	24
Pension and Postretirement Benefit Costs, Non-Service Components	3	(1)	-	-	2
Currency Conversion Impacts of Hyper-Inflationary Economies	1	1	-	-	1
Affiliate Management Fees	-	1	-	-	1
Other Addbacks (c)	-	0	-	-	0
Adjusted EBITDA*	\$ 124	\$ 118	\$ (11)	\$ (0)	\$ 230
Adjusted EBITDA Margin* (%)	14.6%	14.8%	22.0%	0.0%	14.6%
Estimated Norman Hay Full Year Adjusted EBITDA					\$ 14
Estimated Full Synergy Run Rate Achieved					\$ 60
Estimated Quaker Houghton Adjusted EBITDA including Norman Hay and Synergies					\$ 305

*Certain amounts may not calculate due to round, including EBITDA, Adjusted EBITDA, Adjusted EBITDA margin (%) as well as the total pro forma financial results presented for combined Quaker Houghton.

(a) Other includes estimated increases to depreciation and amortization due to purchase accounting fair value adjustments and a reduction of interest expense based on the average borrowings of the period plus the purchase consideration under the Quaker Houghton facility estimated interest rates.

(b) Taxes on income related to the Divestiture and Other reflect each tax effected at the U.S. tax rate of 21%.

(c) Other addbacks include insurance insolvencies, charges related to the settlement of a non-core equipment charge and cost reduction activities, and a gain on the liquidation of an inactive legal entity.



TTM Q3 '19 Pro Forma Reconciliation

(dollars in millions)

	TTM Q3 2019				
	As Reported	Houghton	Divestitures	Other (a)	Pro Forma*
Net Sales	\$ 994	\$ 683	\$ (46)	\$ (22)	\$1,568
Net Income Attributable to Quaker Houghton	\$ 24	\$ (7)	\$ (9)	\$ 13	\$ 21
Depreciation and Amortization	29	44	-	5	78
Interest Expense, Net	8	48	-	(21)	35
Taxes on Income (b)	16	4	(2)	4	21
EBITDA*	77	89	(11)	0	154
Equity Income in a Captive Insurance Company	(1)	-	-	-	(1)
Fair Value Step Up of Houghton Inventory Sold	10	-	-	-	10
Combination and Other Acquisition-Related Expenses	28	46	-	-	74
Restructuring Expenses	24	(0)	-	-	24
Gain on Sale of Divested Assets	-	(35)	-	-	(35)
Pension and Postretirement Benefit Costs, Non-Service Components	3	(0)	-	-	2
Affiliate Management Fees	-	1	-	-	1
Other Addbacks (c)	1	(0)	-	-	1
Adjusted EBITDA*	\$ 142	\$ 99	\$ (11)	\$ 0	\$ 230
Adjusted EBITDA Margin* (%)	15%	15%	25%	0%	15%

*Certain amounts may not calculate due to round, including EBITDA, Adjusted EBITDA, Adjusted EBITDA margin (%) as well as the total pro forma financial results presented for combined Quaker Houghton.

(a) Other includes estimated increases to depreciation and amortization due to purchase accounting fair value adjustments and a reduction of interest expense based on the average borrowings of the period plus the purchase consideration under the Quaker Houghton facility estimated interest rates.

(b) Taxes on income related to the Divestiture and Other reflect each tax effected at the U.S. tax rate of 21%.

(c) Other addbacks include insurance insolvencies, currency conversion impacts on hyper-inflationary economies, and a gain on the liquidation of an inactive legal entity.



Region Overview – Americas

Jeewat Bijlani

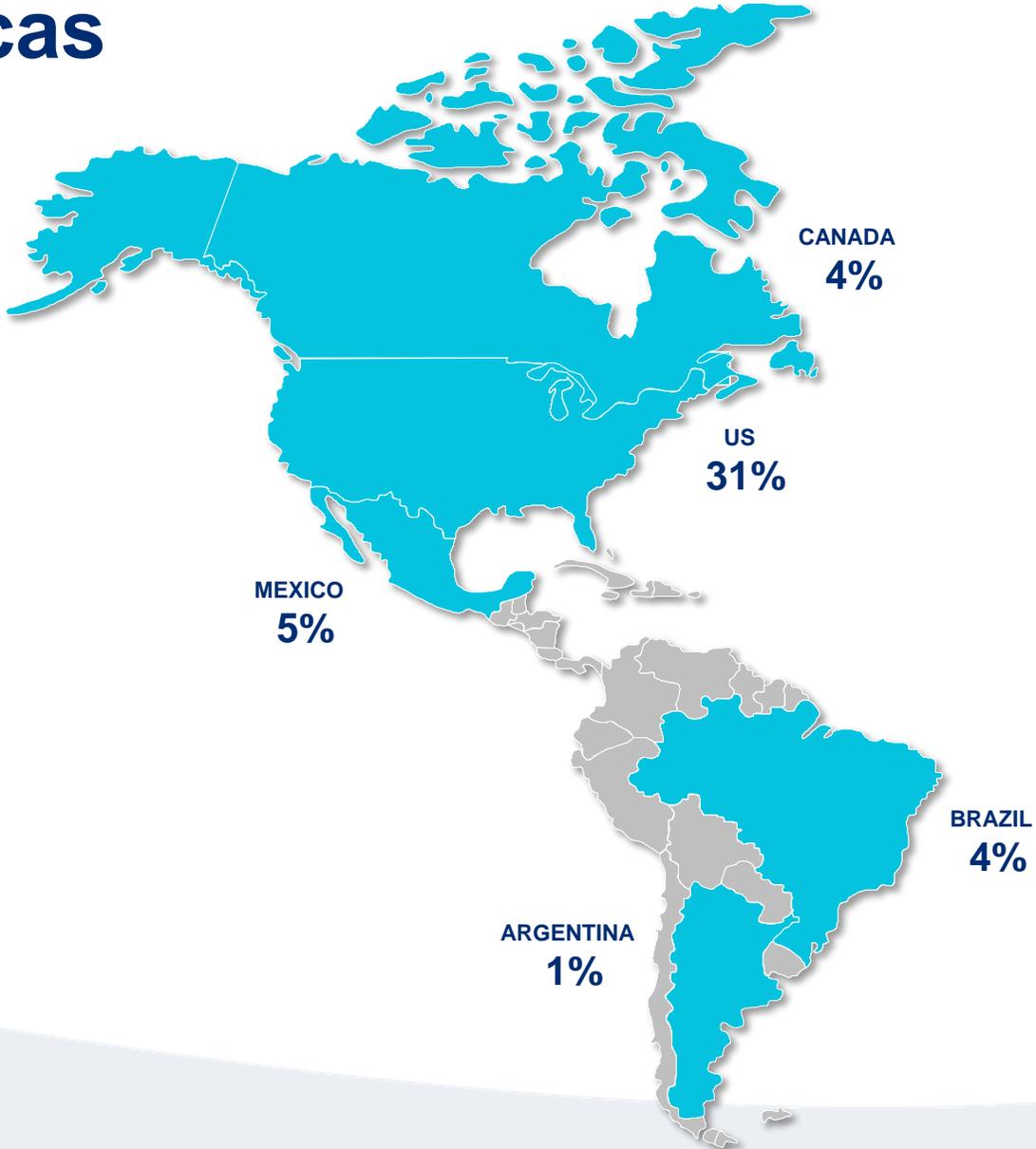
Senior Vice President, Managing Director - Americas



Quaker Houghton in Americas

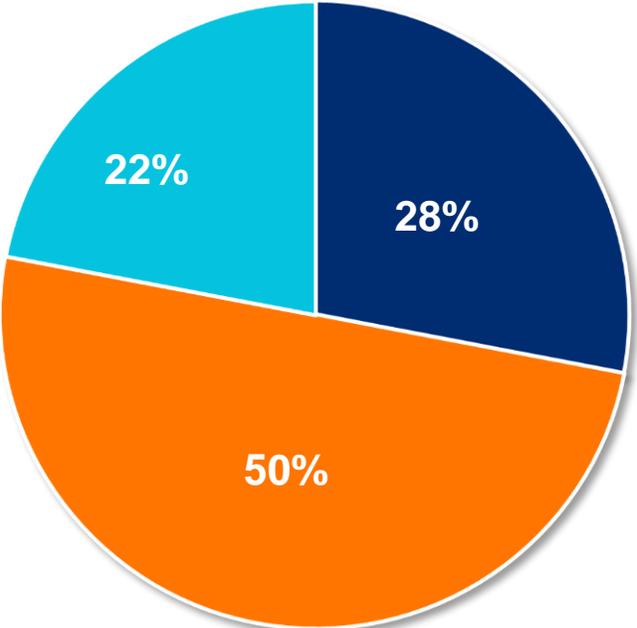
1,568M⁽¹⁾
in consolidated sales

45%
from Americas



Note: 1. TTM total as of third quarter of 2019, which ended September 30, 2019.

Business and Region Snapshot



- Primary Metals - % of regional revenue
- Metalworking - % of regional revenue
- Global Specialty Businesses - % of regional revenue



Note: Data derived from Pro Forma Net Sales for TTM September 30, 2019.

Key Competitors	Product and Geographic Focus
	<ul style="list-style-type: none"> Motor, motorcycle and commercial vehicle oil and fluids; Metalworking and several industrial lubricants Primarily present in US and Canada, marketing products through distribution
	<ul style="list-style-type: none"> Automotive and industrial lubricants; Lubricating greases; Metal processing lubricants; Special application lubricants Strong presence with German customers
	<ul style="list-style-type: none"> Adhesive technologies; Machining fluids and cleaners Strong presence in automotive and beverage containers
	<ul style="list-style-type: none"> Energy player; Fuels, rolling oils, industrial lubricants Presence in steel and aluminum mills

Business Conditions and Economic Environment Trends

- ▶ Experiencing slowdown and subdued industrial activity in US since August 2019
- ▶ Trade uncertainty impacting capital expansion and investment decisions in North America
- ▶ Weaker than expected economic activity and growth in Mexico
- ▶ Brazil recovery is slow but showing positive growth in select end markets
- ▶ In summary, continued short-term market headwinds for next 6 months driven by weaker customer demand and external complications

Segments Financial Comparison

Reported net sales and segment performance include two months of Houghton performance

~\$325M

Total Company Q3 '19
Reported Net Sales

~\$73M

Total Company
Q3 '19 Reported Segment
Operating Earnings

	Americas	EMEA	Asia / Pacific	Global Specialty Businesses
Net sales	\$117M	\$82M	\$74M	\$52M
<i>Percent of total company</i>	36%	25%	23%	16%
Segment operating earnings	\$24M	\$13M	\$21M	\$15M
<i>Percent of total company</i>	33%	18%	28%	21%
<i>Segment operating margin</i>	20%	16%	27%	29%

Segment Growth Opportunities

- ▶ **Cross-selling and share of wallet expansion at existing customers**
 - Metal forming, industrial greases and fluids surface treatment; at key accounts, FluidCare and customer sites
- ▶ **Accelerate non-automotive growth in metalworking**
 - Leverage early wins in aerospace, tube & pipe, agriculture and beverage containers for faster than market growth
- ▶ **Leverage partnerships for indirect channel expansion**
 - Expand strategic distribution partnerships in US and increase penetration in Chile, Colombia and Peru
- ▶ **Increase market penetration and sales presence in non-sheet metal applications**
 - Growth in rod & wire, long products and rebar across the Americas region
- ▶ **Expansion of Quaker Houghton capabilities to include equipment and solutions offering**
 - Value-added capability to retain and grow customer relationships through services, data and equipment offering

Region Overview – EMEA

Adrian Steeples

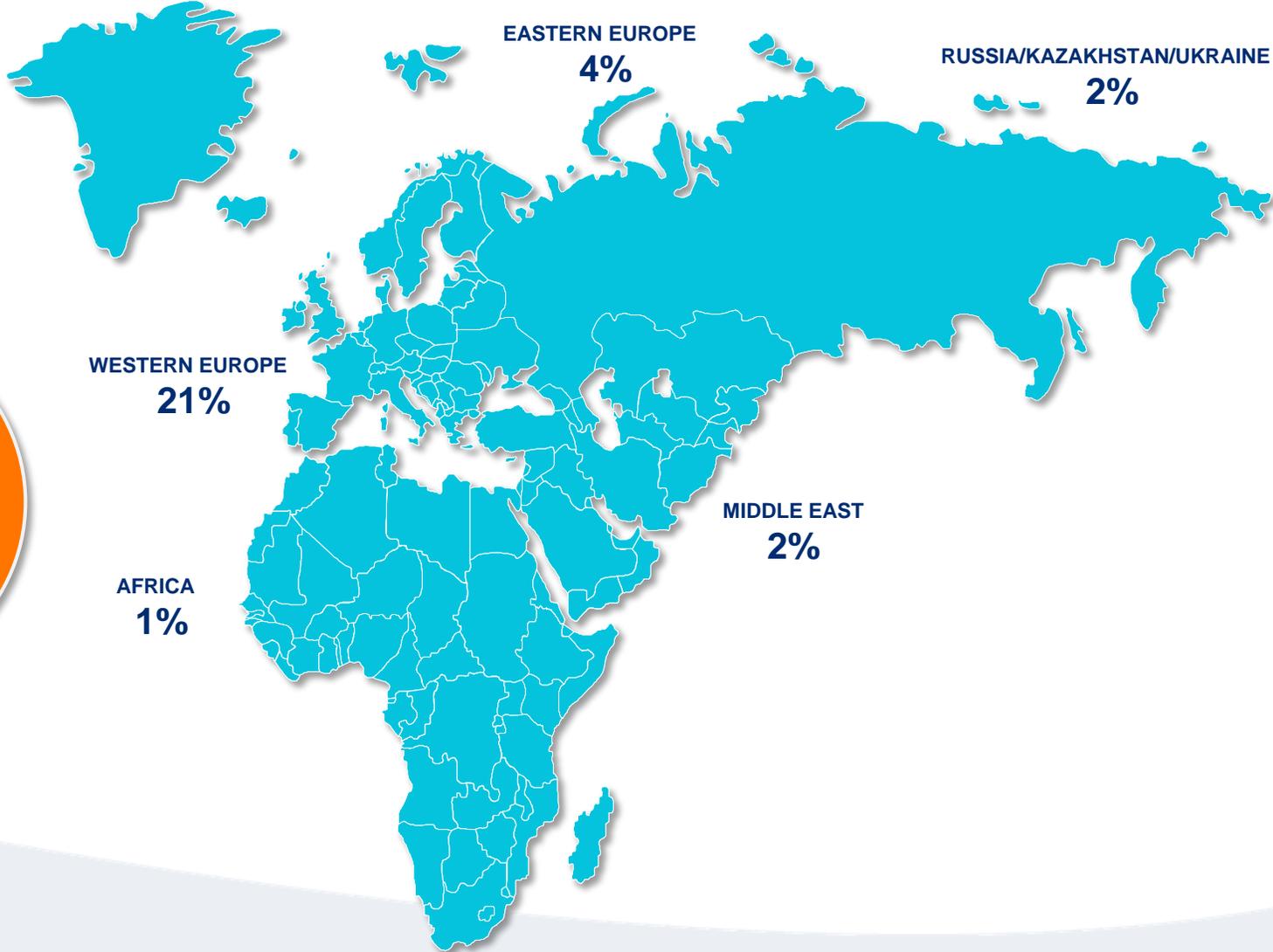
Senior Vice President, Managing Director - EMEA



Quaker Houghton in EMEA

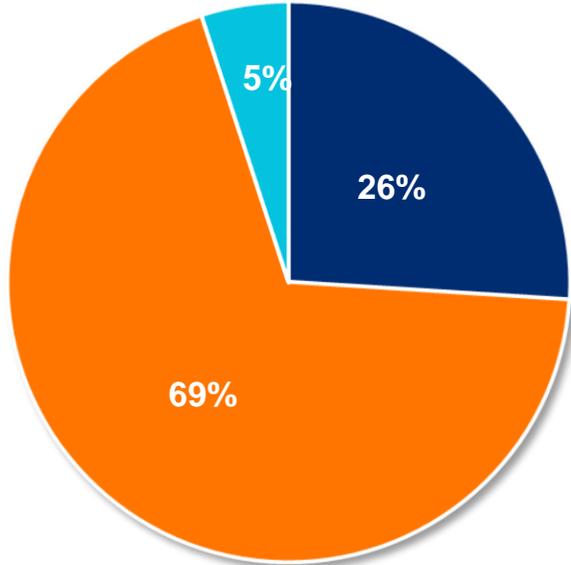
1,568M⁽¹⁾
in consolidated sales

30%
from EMEA



Note: 1. TTM total as of third quarter of 2019, which ended September 30, 2019.

Business and Region Snapshot



- Primary Metals - % of regional revenue
- Metalworking - % of regional revenue
- Global Specialty Businesses - % of regional revenue

Key Competitors	Product and Geographic Focus
	<ul style="list-style-type: none"> Motor, motorcycle and commercial vehicle oil and fluids; Metalworking & general industrial lubricants Direct presence in major EU countries but use a national distributor model in smaller geographies
	<ul style="list-style-type: none"> Automotive and industrial lubricants; Lubricating greases; Metal processing lubricants; Special application lubricants Strong presence with German customers
	<ul style="list-style-type: none"> Metalworking specialties; Strong insolubles and heat treatment products Strong presence in German automotive and very competitive on price
	<ul style="list-style-type: none"> Energy player; Fuels, rolling oils, industrial lubricants Presence in steel and aluminum mills

Business Conditions and Economic Environment Trends

- ▶ Eurozone and German Manufacturing PMI have been declining throughout 2019 and in September, German PMI was the lowest since the financial crisis (auto and components being the weakest product segment)
- ▶ Increasing number of German insolvencies: Bielomatik, Eisenmann, JD Norman
- ▶ No improvement in economic conditions predicted in Q4 2019 or early next year

Segments Financial Comparison

Reported net sales and segment performance include two months of Houghton performance

~\$325M

Total Company Q3 '19
Reported Net Sales

~\$73M

Total Company
Q3 '19 Reported Segment
Operating Earnings

	Americas	EMEA	Asia / Pacific	Global Specialty Businesses
Net sales	\$117M	\$82M	\$74M	\$52M
<i>Percent of total company</i>	36%	25%	23%	16%
Segment operating earnings	\$24M	\$13M	\$21M	\$15M
<i>Percent of total company</i>	33%	18%	28%	21%
<i>Segment operating margin</i>	20%	16%	27%	29%

Segment Growth Opportunities

- ▶ **Largest opportunity in Germany (1/3 of EU) where we are currently third in terms of market share**
 - We have increased focus in strategic account management
 - “Made in Germany” is still extremely important in the mind of the German customers
- ▶ **Movement towards digitalization and industry 4.0**
 - Quaker Houghton has the leading solutions offering and Fluidcare expertise due to largest number of managed programs in Europe
 - Strong growth in ancillary equipment sales
- ▶ **Cross-selling is a bigger opportunity than originally envisaged; the broader portfolio has created significant opportunities**
- ▶ **Distributors want to be associated with the “market leader”; there has been a balance of power shift**
- ▶ **Increased focus on die casting and non-ferrous wire and rod rolling as a consequence of increased electrification and hybridization of vehicle powertrains**
- ▶ **Strong growth forecast in Middle East and North Africa as customers look to align with market leaders**

Region Overview – Asia / Pacific

Dieter Laininger

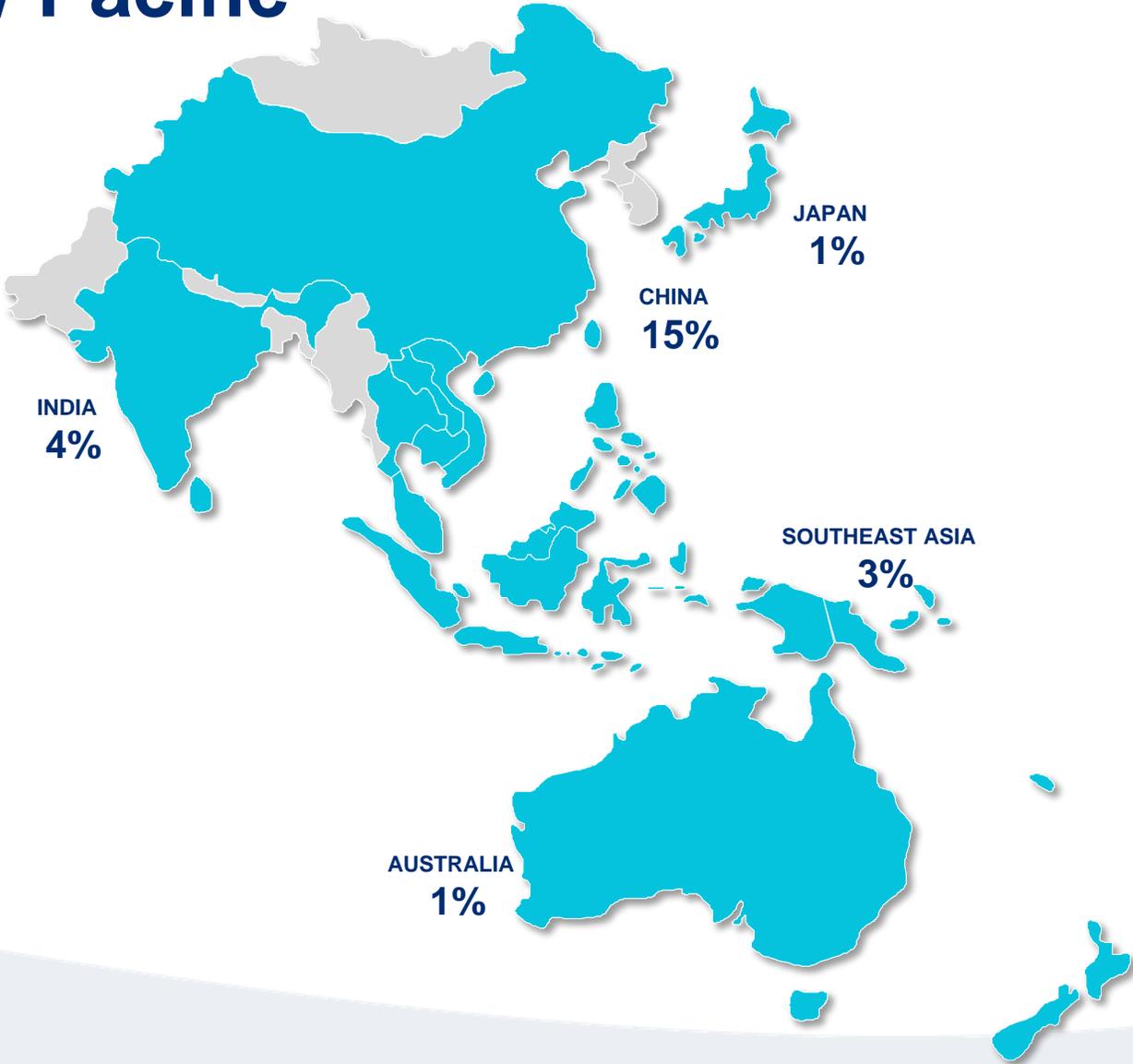
Senior Vice President, Managing Director – Asia / Pacific



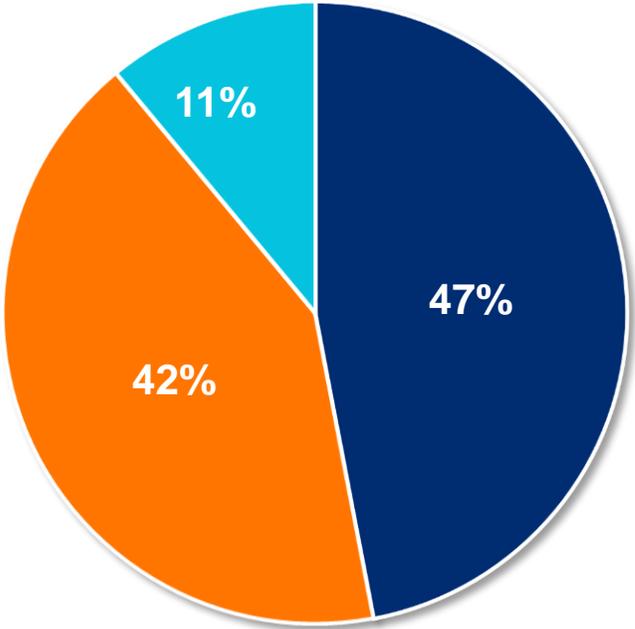
Quaker Houghton in Asia / Pacific

1,568M⁽¹⁾
in consolidated sales

25%
from Asia / Pacific



Business and Region Snapshot



- Primary Metals - % of regional revenue
- Metalworking - % of regional revenue
- Global Specialty Businesses - % of regional revenue

Key Competitors	Products
	<ul style="list-style-type: none"> Metalworking specialties; Strong insolubles and heat treatment products Strong presence in German automotive and very competitive on price
	<ul style="list-style-type: none"> Motor, motorcycle and commercial vehicle oil and fluids; Metalworking and several industrial lubricants Primarily present in US and Canada, marketing products through distribution
	<ul style="list-style-type: none"> Ferrous Cold Rolling and Surface Treatment
	<ul style="list-style-type: none"> Automotive and industrial lubricants; Lubricating greases; Metal processing lubricants; Special application lubricants Strong presence with German customers

Business Conditions and Economic Environment Trends

China

- ▶ Policymakers are focused on domestic dynamics, not the trade war
- ▶ Domestic policy choices from 2017 - 2018 are driving a slowdown (more fiscal stimulus vs. flood-like stimulus)
- ▶ Despite growth challenges, addressing financial risks is still one of the three top policy priorities for 2019 - 2021
- ▶ Focus is on improving the business environment

Australia and Southeast Asia (“SEA”)

- ▶ Vietnam will remain one of Asia’s fastest growing economies
- ▶ Thailand, Indonesia, Australia and Malaysia are beginning to show slower GDP growth
- ▶ We see increasing production movements from China towards SEA

India

- ▶ Weak local demand drives 2019 slowdown, rather than global trade impacts
- ▶ Reviving growth is main policy challenge for 2020
- ▶ The government has announced corporate tax cuts and the India Central Bank has decreased interest rates to spike demand

Segments Financial Comparison

Reported net sales and segment performance include two months of Houghton performance

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Segment Growth Opportunities

China

- ▶ **Metalworking** (OEM, Tier 1 and 2)
 - Engine and transmission (Metal Forging, Cleaners, Heat Treatment, Neat Oils, Die Casting)
 - Tier 1 and Tier 2 (Neat Oils, RP)
 - Industry Segment (Metal Forging, Cleaners, Fire Resistant Hydraulics, Neat Oils)
 - Industrial Lubrication
 - Fluid Care
- ▶ **Primary Metals** (Share of wallet sales)
 - Steel (Surface Treatment, Grease, Host Rolling)
 - Aluminum (Grease, Cold Rolling, Coil Rolling)

ASEAN

- ▶ We do expect that some car manufacturers will move from China, South Korea and Japan to Malaysia and Indonesia

India

- ▶ Accelerate automotive and two wheelers growth in metalworking
- ▶ Share of wallet approach in primary metals