

The logo for Huntsman, featuring the word "HUNTSMAN" in a bold, dark blue, sans-serif font. The text is centered between two horizontal red bars of equal length.

Enriching lives through innovation

# Jefferies Industrials Conference

August 7, 2018

# General Disclosure

This presentation includes “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. These forward-looking statements include statements concerning our plans, objectives, goals, strategies, future events, future revenue or performance, capital expenditures, financing needs, plans or intentions relating to acquisitions, business trends and other information that is not historical information. When used in this presentation, the words “estimates,” “expects,” “anticipates,” “projects,” “plans,” “intends,” “believes,” “forecasts,” or future or conditional verbs, such as “will,” “should,” “could” or “may,” and variations of such words or similar expressions are intended to identify forward-looking statements. All forward-looking statements, including, without limitation, management’s examination of historical operating trends and data, are based upon our current expectations and various assumptions. Our expectations, beliefs and projections are expressed in good faith, and we believe there is a reasonable basis for them. However, there can be no assurance that management’s expectations, beliefs and projections will be achieved.

The forward-looking statements in this release are subject to uncertainty and changes in circumstances and involve risks and uncertainties that may affect the company's operations, markets, products, services, prices and other factors as discussed in the Huntsman companies' filings with the U.S. Securities and Exchange Commission. Significant risks and uncertainties may relate to, but are not limited to, volatile global economic conditions, cyclical and volatile product markets, disruptions in production at manufacturing facilities, reorganization or restructuring of Huntsman’s operations, including any delay of, or other negative developments affecting the ability to implement cost reductions and manufacturing optimization improvements in Huntsman businesses and realize anticipated cost savings, and other financial, economic, competitive, environmental, political, legal, regulatory and technological factors. Any forward-looking statement should be considered in light of the risks set forth under the caption “Risk Factors” in our Annual Report on Form 10-K for the year ended December 31, 2017.

All forward-looking statements attributable to us or persons acting on our behalf apply only as of the date made. We undertake no obligation to update or revise forward-looking statements which may be made to reflect events or circumstances that arise after the date made or to reflect the occurrence of unanticipated events.

This presentation contains financial measures that are not in accordance with generally accepted accounting principles in the U.S. (“GAAP”), including EBITDA, adjusted EBITDA, adjusted EBITDA from discontinued operations, adjusted net income (loss), adjusted diluted income (loss) per share, free cash flow and net debt. Reconciliations of non-GAAP measures to GAAP are provided in the financial schedules attached to the earnings news release for the relevant period and available on the Company's website at <http://ir.huntsman.com/>

The Company does not provide reconciliations of forward-looking non-GAAP financial measures to the most comparable GAAP financial measures on a forward-looking basis because the Company is unable to provide a meaningful or accurate calculation or estimation of reconciling items and the information is not available without unreasonable effort. This is due to the inherent difficulty of forecasting the timing and amount of certain items, such as, but not limited to, (a) business acquisition and integration expenses, (b) merger costs, and (c) certain legal and other settlements and related costs. Each of such adjustments has not yet occurred, are out of the Company's control and/or cannot be reasonably predicted. For the same reasons, the Company is unable to address the probable significance of the unavailable information.

# Simple Strategy for Significant Value Creation Through 2020

## Downstream EBITDA Growth

- Existing core business will grow at well above GDP
- EBITDA expected to grow at high single digits
- EBITDA margin expected to expand to high teens through downstream strategy



## Investment Grade Balance Sheet

- Maintain Investment Grade profile and secure Investment Grade rating
- Monetize remaining Venator shares
- Generate >\$1.7 billion of free cash flow



## Capital Allocation

- Maintain competitive dividend
- Invest up to \$2.2 billion in downstream growth through bolt-on acquisitions and additional growth capital
- Up to \$1.0 billion of share repurchases supported by Venator monetization and free cash flow

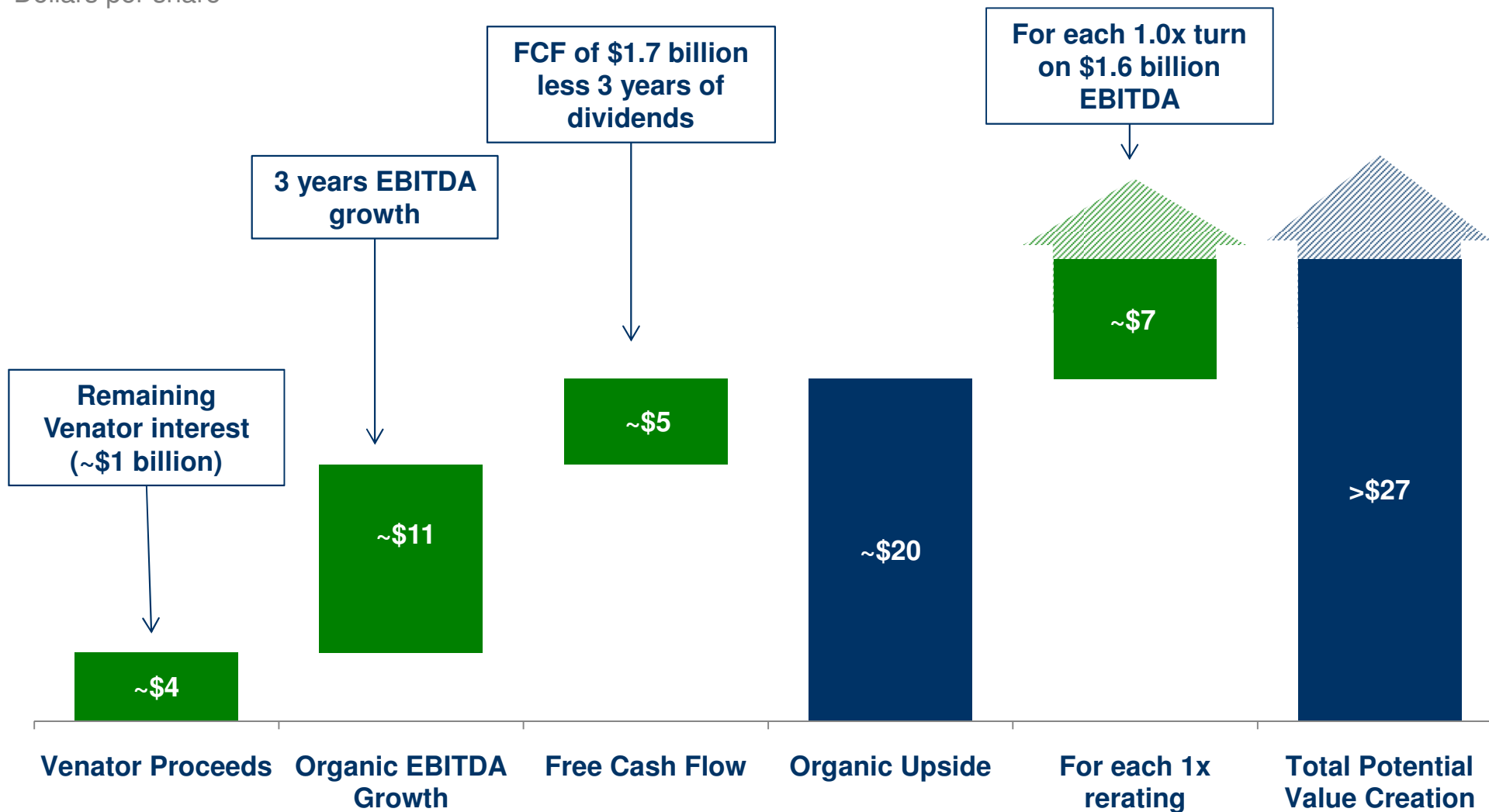


## Value Creation

- Potential value creation of >\$27/share

# Significant Value Creation Upside

Dollars per share



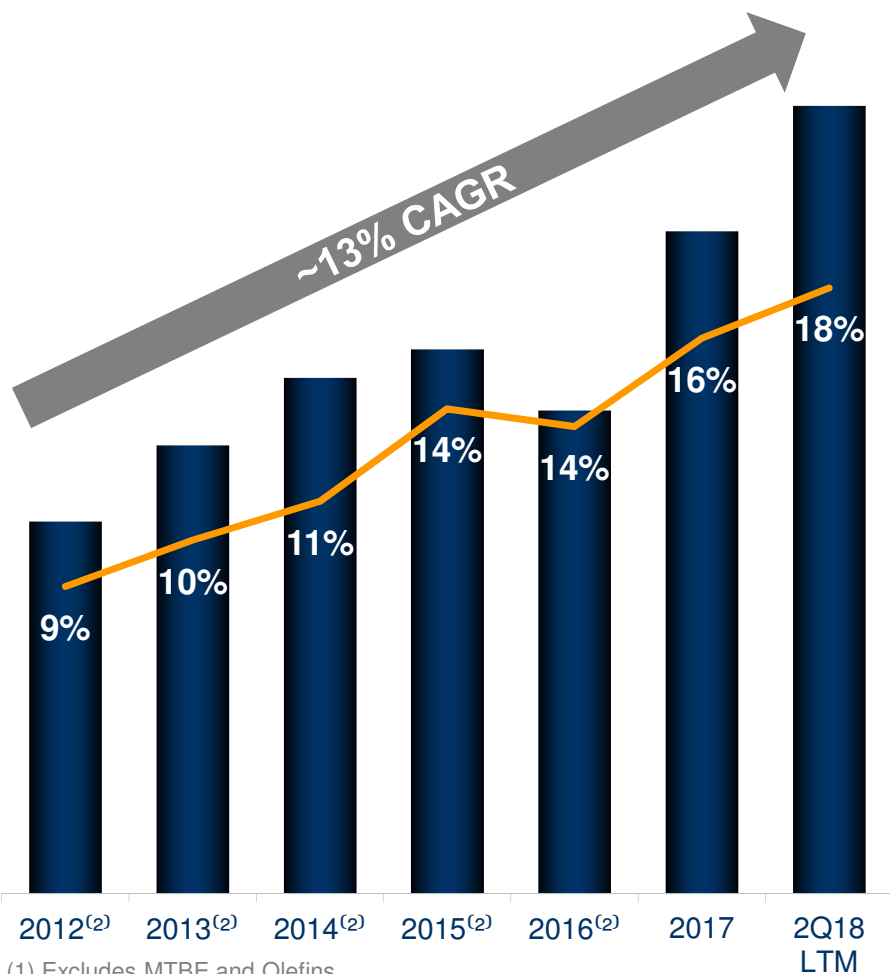
**>\$27 per Share in Potential Value Creation**

# Differentiated Adjusted EBITDA<sup>(1)</sup>

## Annual<sup>(1)</sup>

\$ in millions

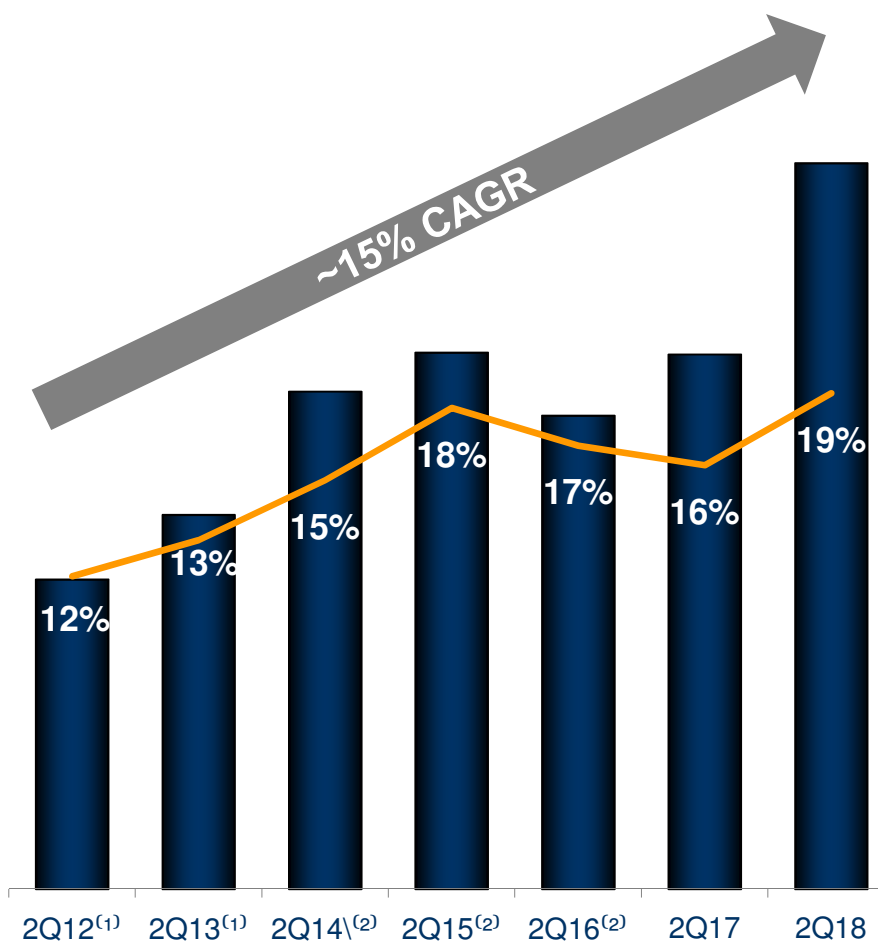
Adjusted EBITDA Margin



## Second Quarter<sup>(1)</sup>

\$ in millions

Adjusted EBITDA Margin



(1) Excludes MTBE and Olefins

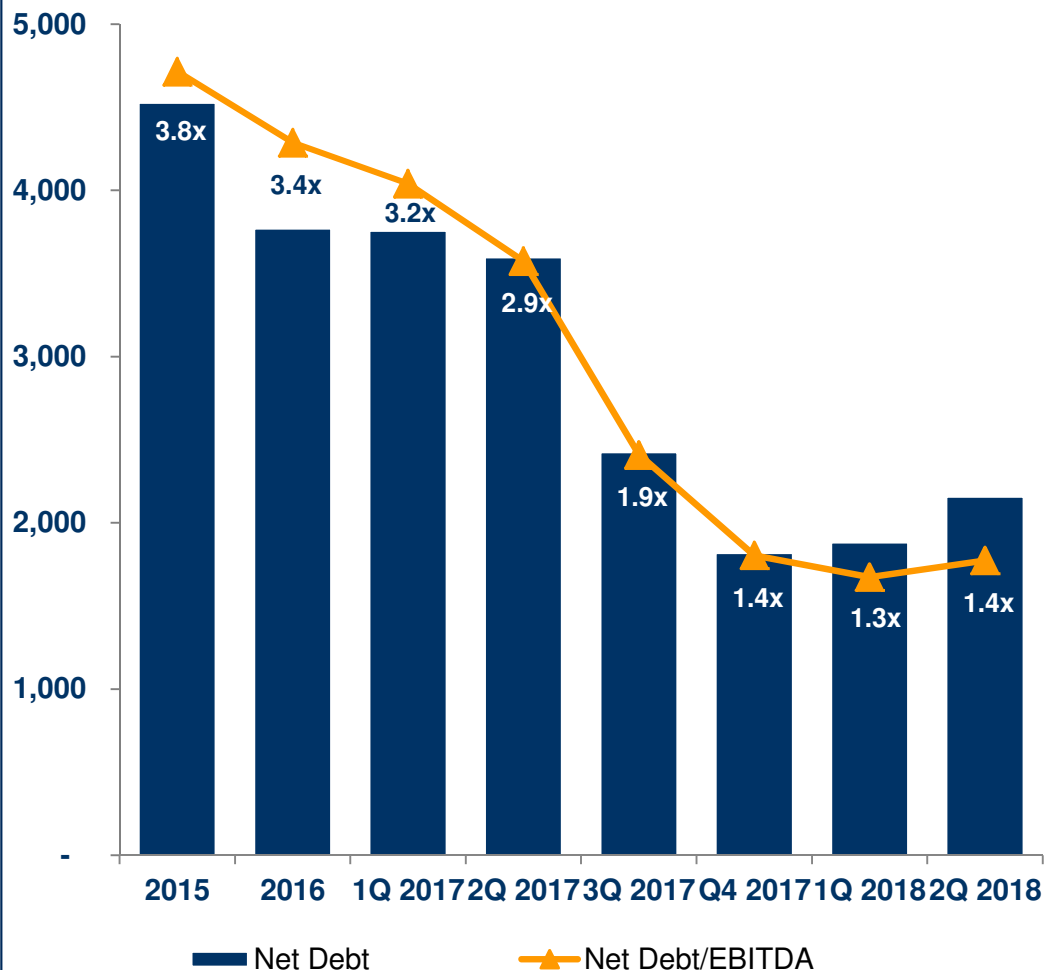
(2) Excludes European surfactants business, which was sold to Innospec on December 30, 2016

# Transformation of Huntsman Balance Sheet

Investment Grade Profile Achieved and Sustainable

## Net Debt

\$ in millions



## New \$1.2B Investment Grade Revolver

- Unsecured
- 5 year commitment
- Completed May 21<sup>st</sup>, 2018

## Rating Agency Status – One Notch Below

MOODY'S

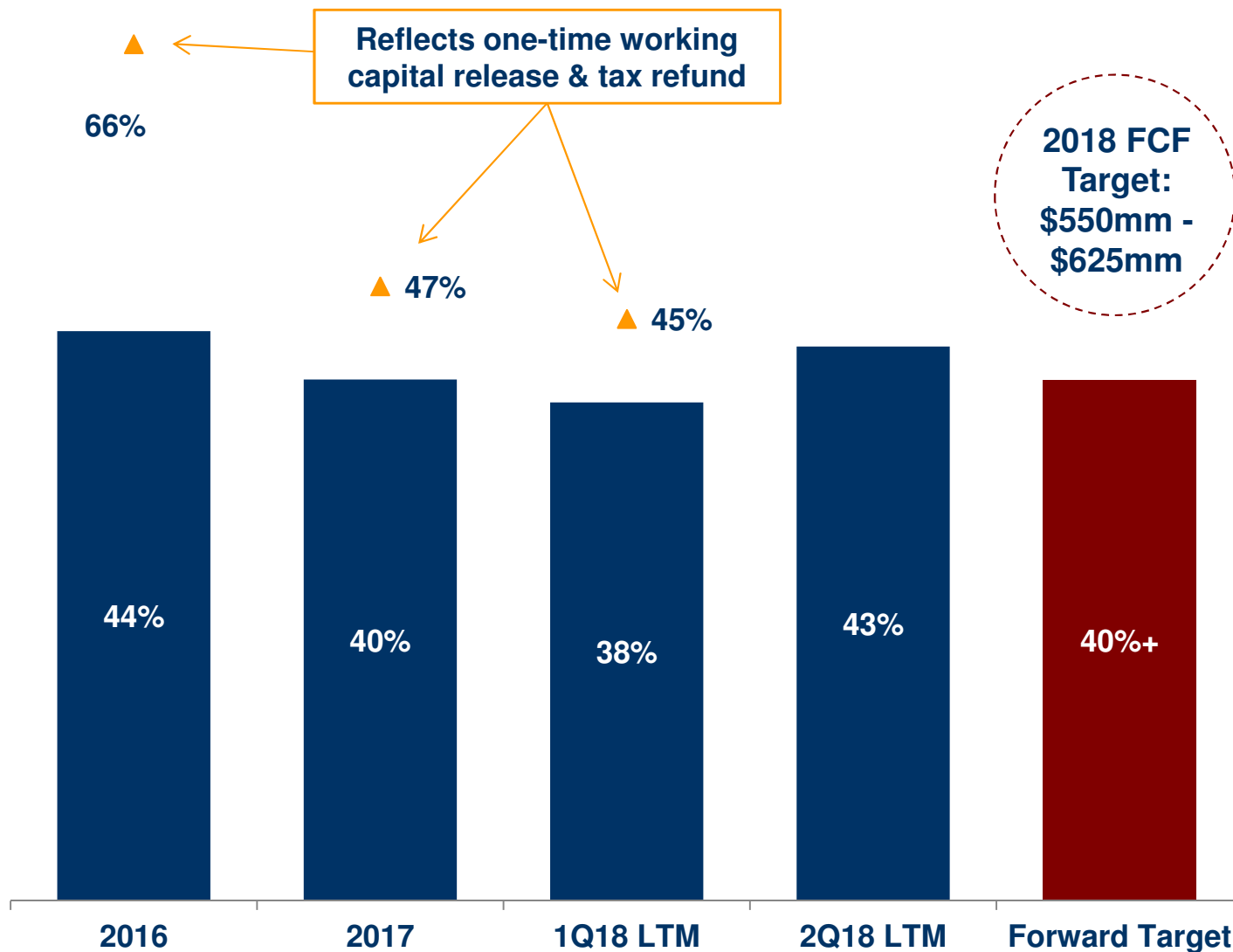
Corporate Rating Ba1  
Outlook Positive



Corporate Rating BB+  
Outlook Positive

# Consistent Strong Free Cash Flow Generation

Over \$1.2 Billion in Free Cash Flow Generated in 2016 & 2017



## Divisional 2020 FCF Conversion

**PU**  
>70%

**PP**  
>60%

**AM**  
>75%

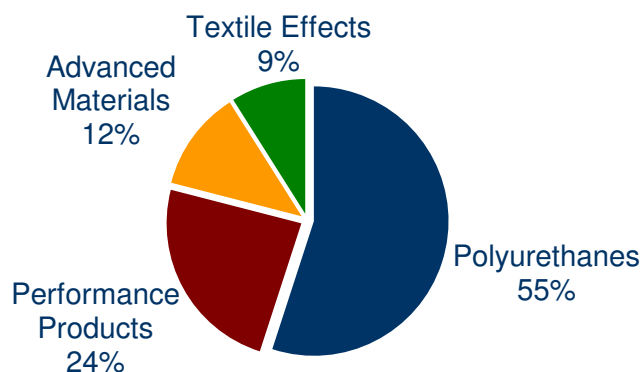
**TE**  
>50%

**Total**  
~40%

~40% Normalized FCF Conversion

# Portfolio Composition<sup>(1)</sup>

## Revenue<sup>(2)</sup>

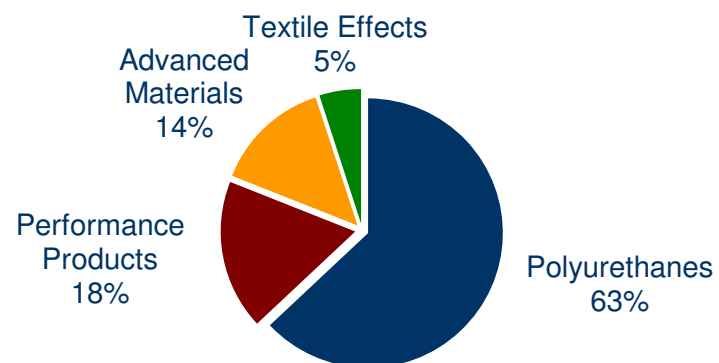


## 2Q18 LTM

Revenues  
**\$9.1**  
billion

Adjusted EBITDA  
**\$1.5**  
billion

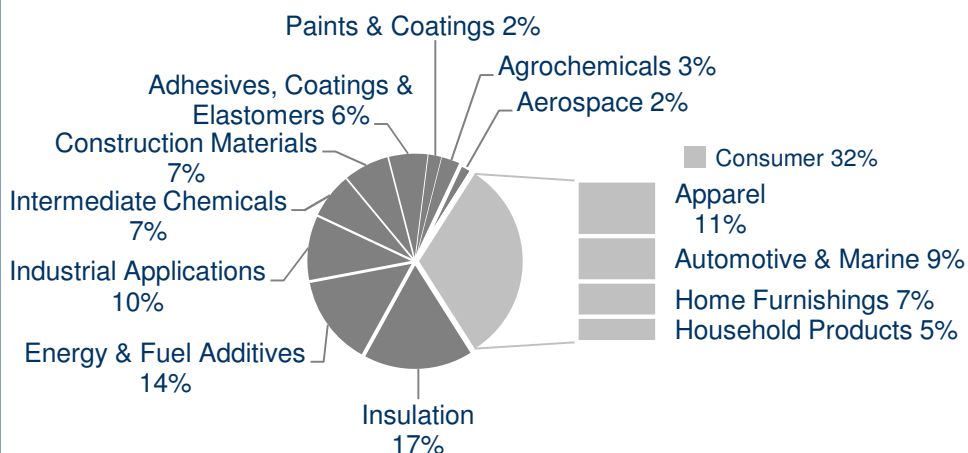
## Adjusted EBITDA<sup>(2)(3)</sup>



## End Markets

2017 Revenues

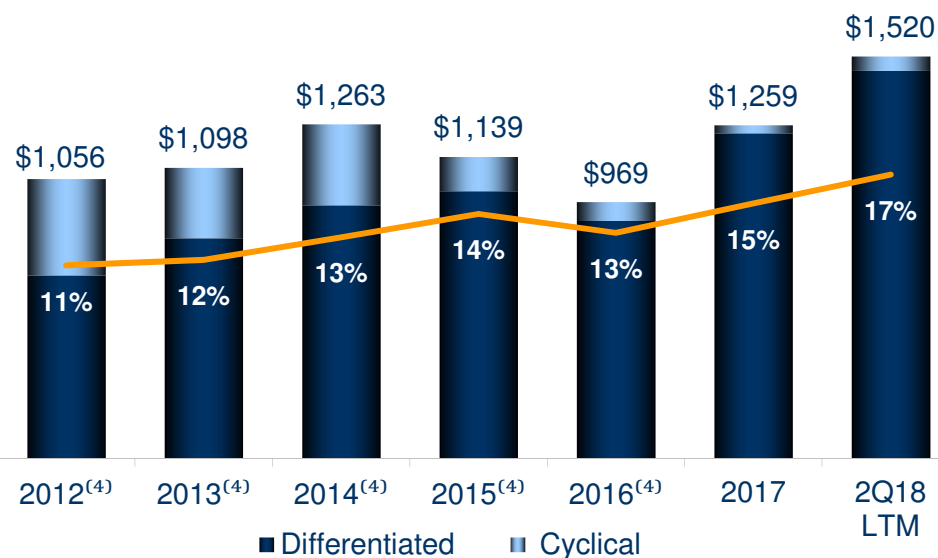
Source: Management estimates



## Adjusted EBITDA<sup>(3)</sup>

\$ in millions

Adj. EBITDA Margin



(1) Pro forma to exclude the Pigments & Additives business, which is treated as discontinued operations after the Venator IPO on August 8, 2017

(2) Segment allocation is before Corporate and other unallocated items

(3) See Appendix for a reconciliation

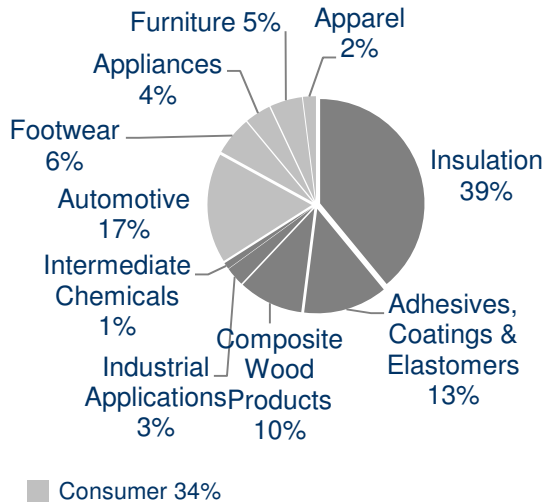
(4) Excludes European surfactants business, which was sold to Innospec on December 30, 2016



# Polyurethanes

## MDI Urethanes End Markets

2017 Revenues Source: Management Estimates



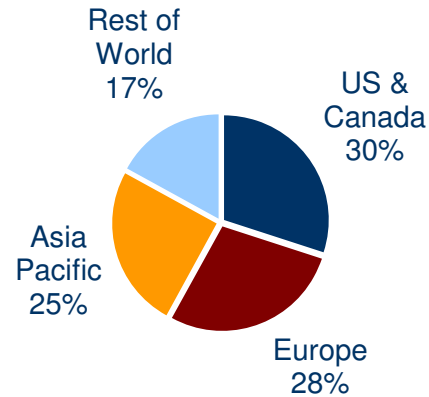
## 2Q18 LTM

Revenues  
**\$5.0**  
billion

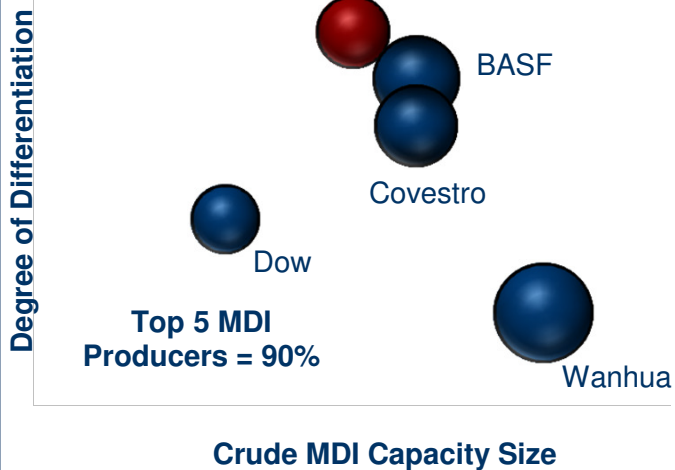
Adjusted EBITDA  
**\$1.1**  
billion

## Revenues

2017 Revenues



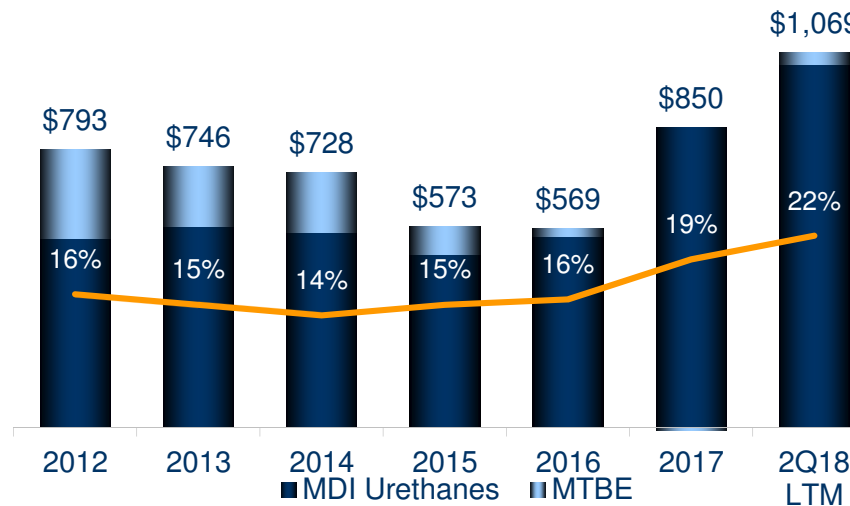
## MDI Competitive Intensity



## Adjusted EBITDA History

\$ in millions

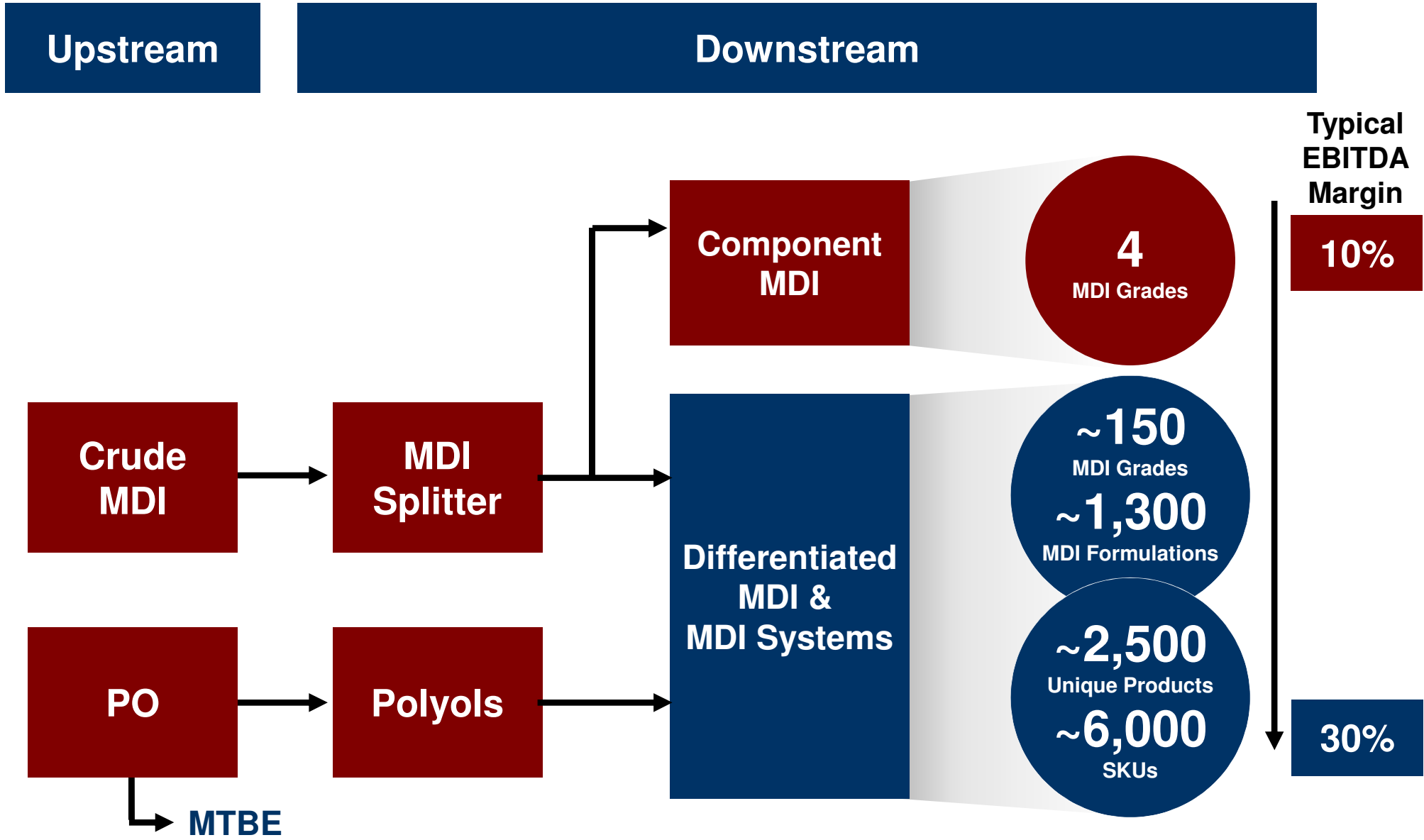
Adj. EBITDA Margin



Source: Management Estimates

# MDI Urethanes Products

Significant Opportunity to Differentiate

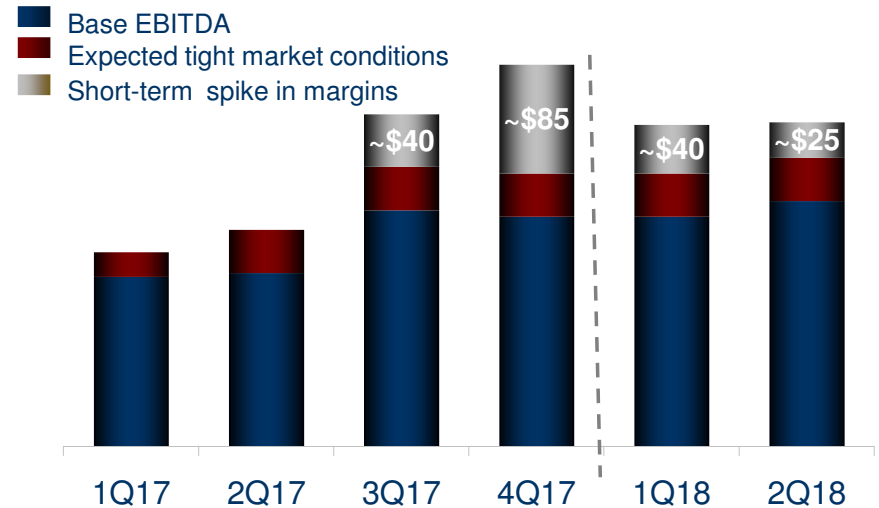


# MDI Market Outlook

## Industry status

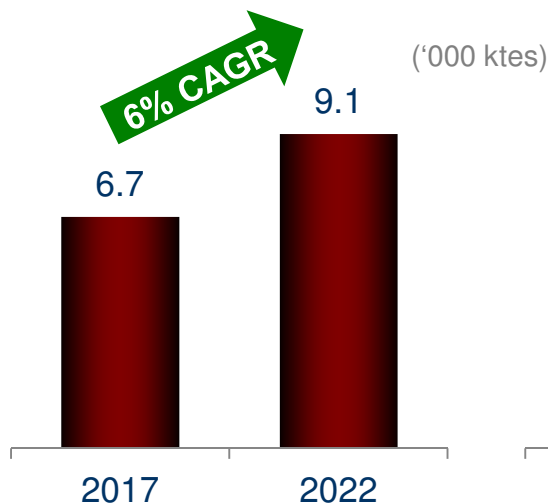
- Current global effective operating rates are ~90%
- Differentiated margins and demand remain strong and stable globally
- Component MDI pricing:
  - China component MDI pricing stabilized in Q2 following decline in Q1
  - European component MDI pricing dropped ~10% in Q2
  - US spot prices came under some pressure in Q2 although region remains tight

## Continued focus on growth in core business

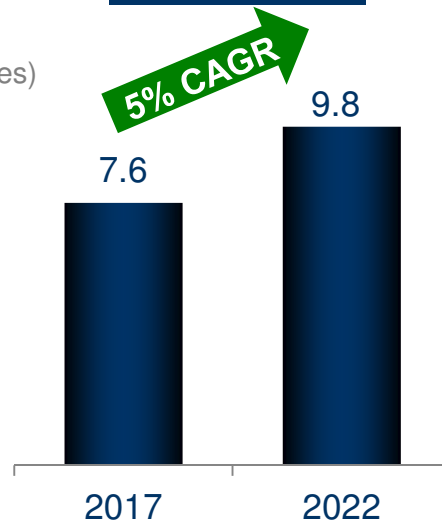


## Longer-term market outlook remains tight

### MDI Demand

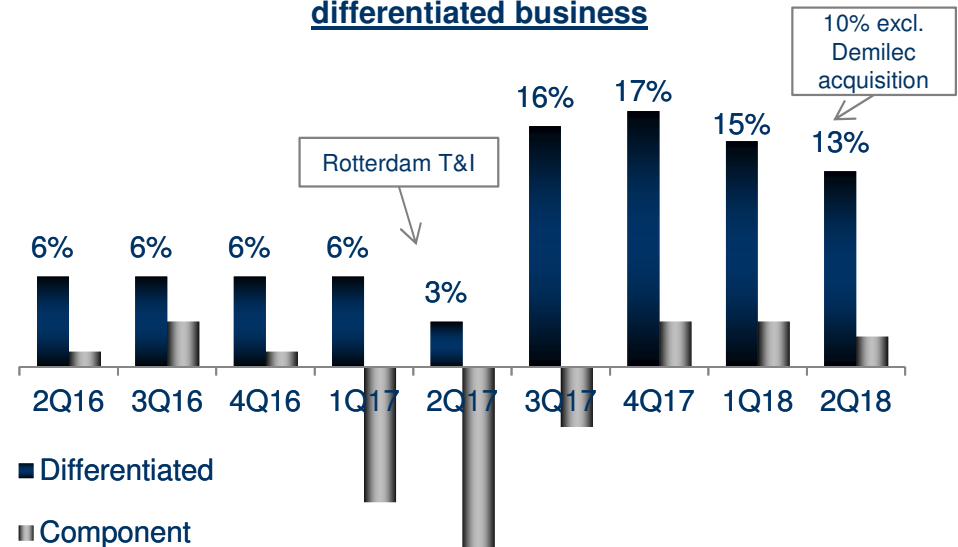


### MDI Capacity



## Focus on differentiated volume growth

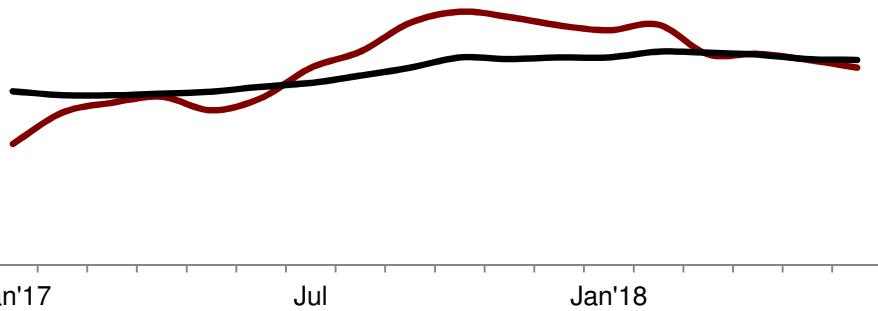
### Continued volume growth in more stable, high value differentiated business



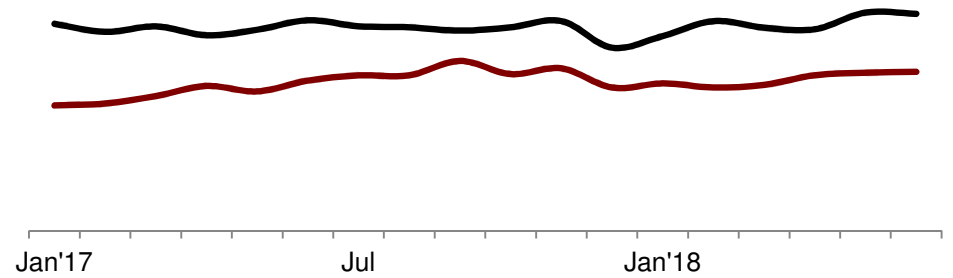
# Strategic Core Differentiated Business Remains Stable

## Polyurethanes

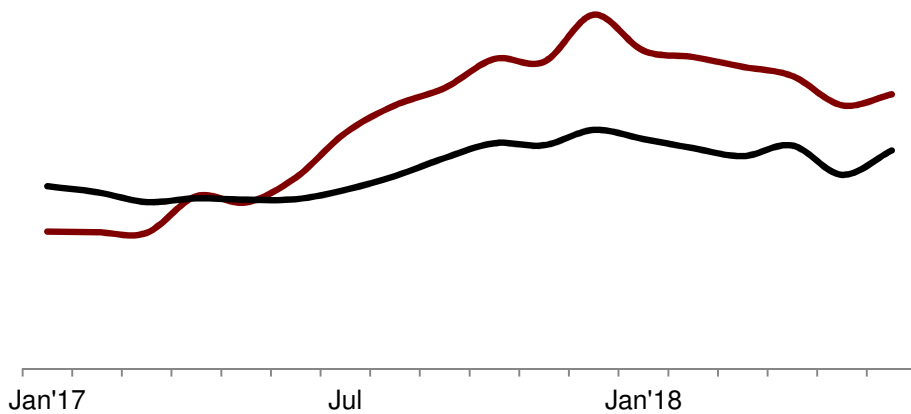
Global



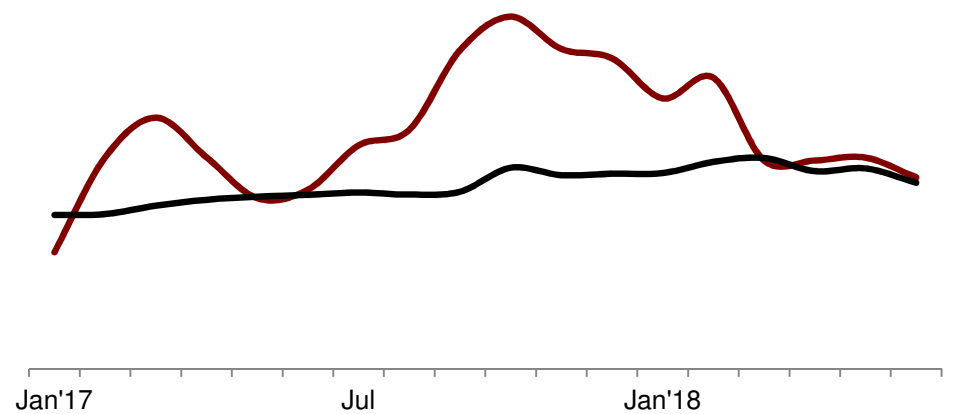
Americas



Europe



Asia




— Short-term spiked margins — All other margins

# Huntsman Portfolio Composition

Differentiation is a Continuum

**~75% Differentiated**



**Continuum of Differentiation**

Automotive Furniture Adhesives & Coatings Systems Elastomers (TPU, Footwear, Specialty Elastomers)	Insulation Systems	Appliance Systems
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**Typical EBITDA Margin Range**

**15% to 30%**

**~25% Component**



**Continuum of Differentiation**

Adhesive Components Composite Wood Products	Synthetic Leather	Insulation Components Appliance Components
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**EBITDA Margin Range 10% to 20%**

# Downstream Footprint

## Significant Expansion Program



- New investments under construction**
- New System House in Dubai
  - New System House in North China
  - System House Expansion in Taiwan

**3x**  
GDP Growth

**>20%**  
EBITDA  
Margins

**39%**  
MDI  
Revenues

# Growth in Insulation with Energy Saving Formulated Systems

## MDI Insulation

- MDI systems provide highest insulation value, air tightness and moisture barriers
- Largest MDI sector growing at 6%-7% per annum
- Sector requires equivalent of two new world scale MDI plants to meet demand in the next five years
- 40%-50% of all energy used to heat & cool buildings – insulation is the most cost effective way of saving energy
- Huntsman focus on formulated insulation systems, back integrated into both MDI and TEROL polyester technology

## Huntsman Insulation Innovation


**Americas**  
SPF - Home Insulation




A full portfolio of environmentally friendly, energy-efficient insulation products, that reduce expenses for builders and building owners

**TEROL**  **DEMILEC**

**Europe**  
Composite Panels



Rapid development of DaltoPUR and DaltoPIR fire retardant product portfolio in response to customer and regulatory demand for fire retardant products



**Asia**  
SPF - Pipe Insulation



Developed new spray foam technology delivering 30% improvement efficiency on a 38 km pipeline providing heating to 2 million residents in Taiyuan, China



**12%**  
MDI  
Revenues

# Global Elastomers Business

Versatile High performance MDI / TPU systems

## Global Elastomers ~2000 Ktes MDI Systems Market

Huntsman is a ~\$500 million global business  
Highly fragmented customer base seeking custom solutions  
Value pricing reflects need for formulation and innovation support

### Footwear



- Accelerate growth to become the number 1 footwear PU company
- ~700 Huntsman SKUs
- >10% Growth (2017-2020)
- >20% EBITDA / revenue

### Specialty Elastomers



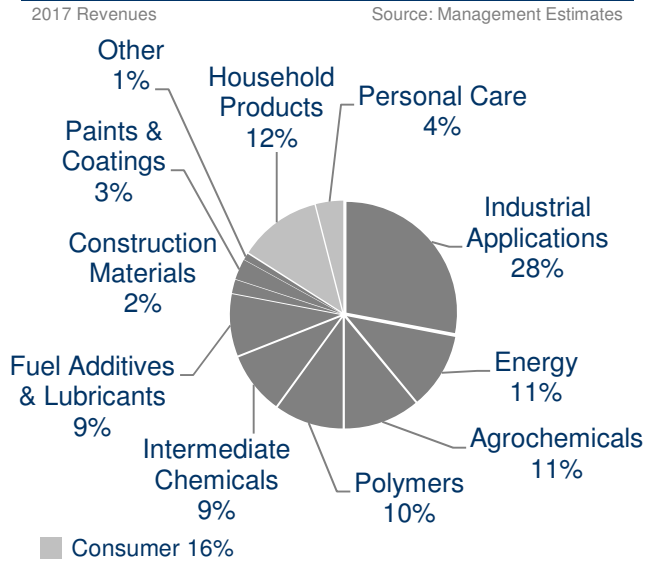
- With our customers deliver high quality sustainable solutions
- ~2,400 Huntsman SKUs
- 10% Growth (2017-2020)
- ~20% EBITDA / revenue

Leverage decades of global elastomer technology and innovation experience



# Performance Products

## End Markets



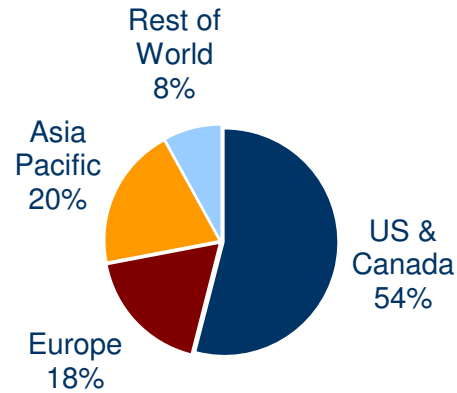
## 2Q18 LTM

Revenues  
**\$2.2**  
billion

Adjusted EBITDA  
**\$306**  
million

## Revenues

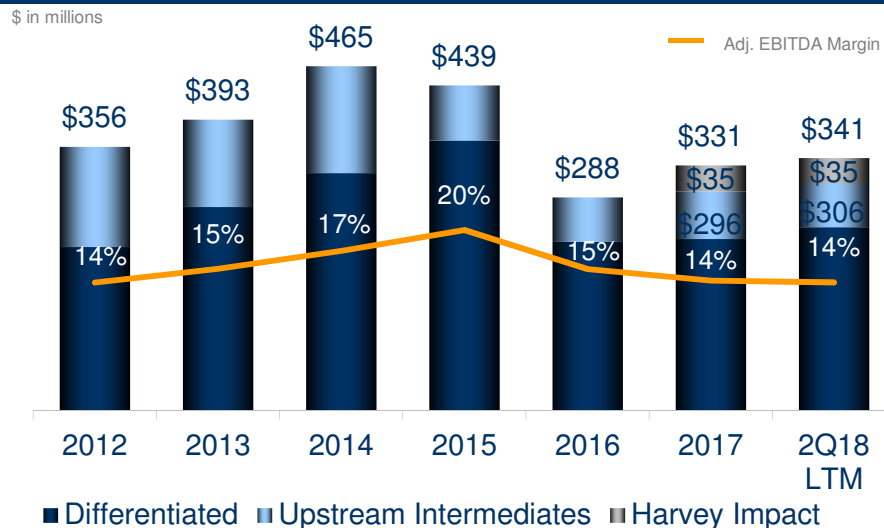
2017 Revenues



## Huntsman Market Share

Product	Market Share	Peers
<b>Amines</b>		
Polyetheramines (Global)	>60%	BASF
Ethyleneamines (Global)	45%	Dow, Tosoh, Delamine
Ethanolamines (Americas)	20%	Dow, Ineos, Oxiteno
Morpholine/DGA (Americas & EMEA)	50%	BASF
Specialty PU Catalysts (Global)	40%	BASF, Evonik, Momentive
<b>Maleic Anhydride</b> (Americas & EMEA)	40%	Lanxess, Flint Hills, Polynt, Bartek

## Adjusted EBITDA History<sup>(1)</sup>

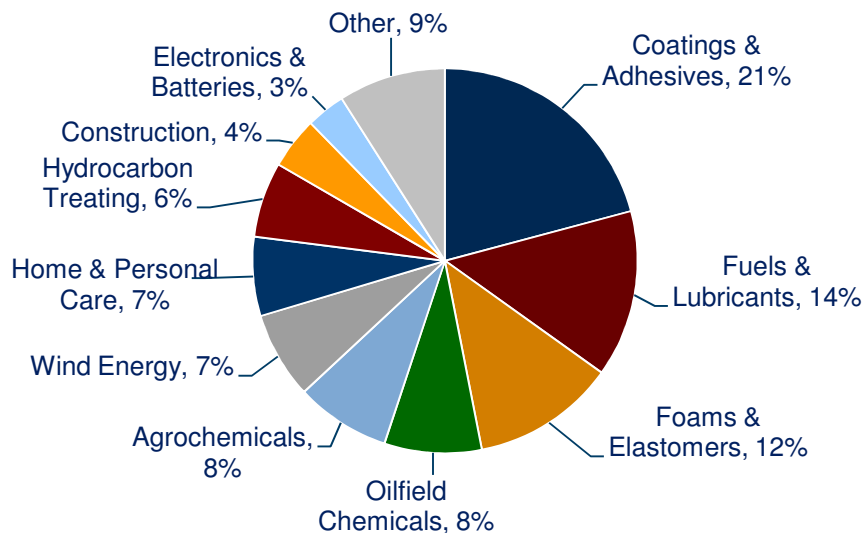


(1) Excludes European surfactants business, which was sold to Innospec in 2016

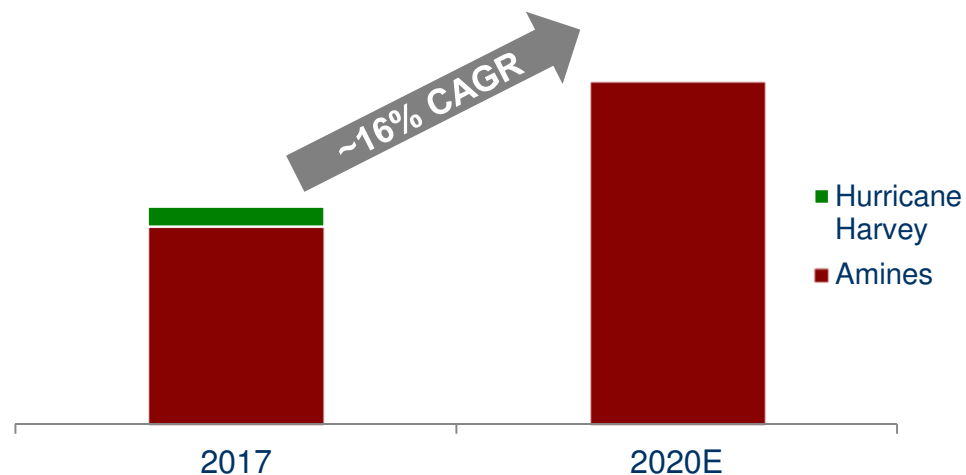


# Amines & Surfactants Poised for Growth

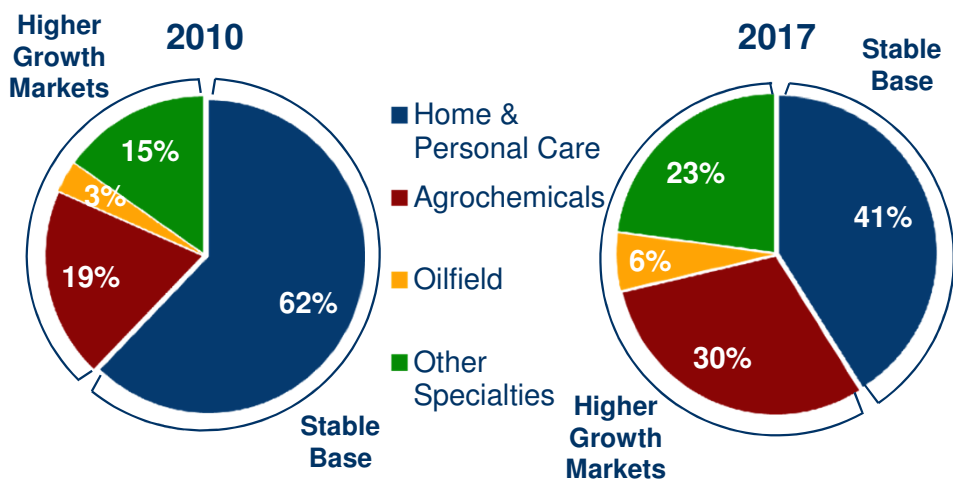
## Amines Markets



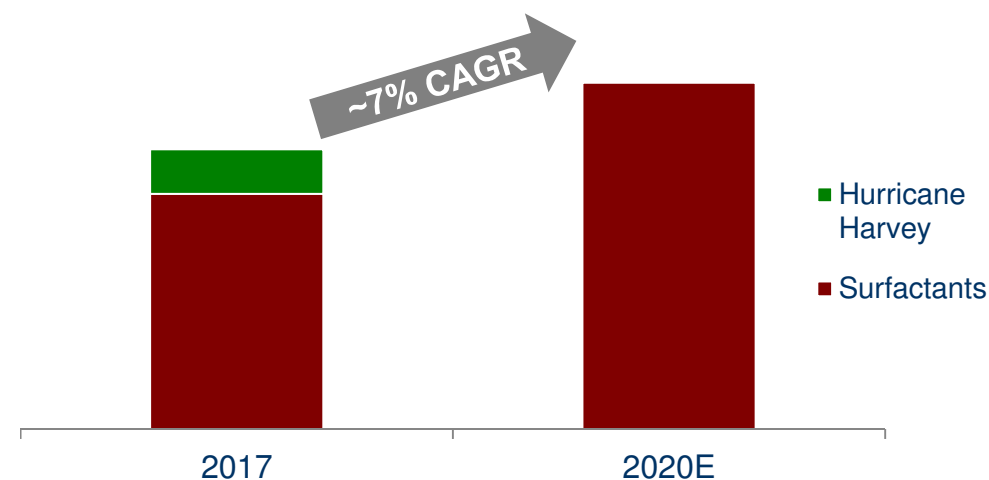
## Amines EBITDA



## Surfactants Markets



## Surfactants EBITDA



2010 includes European surfactants businesses sold to Innospec and Wilmar

# Performance Products Innovation

## Delivering Functionality to Meet Market Needs

- Marketing-led R&D with extensive customer collaboration
- 160 R&D professionals at seven centers across the globe
- 175 new uses across 20 markets launched annually

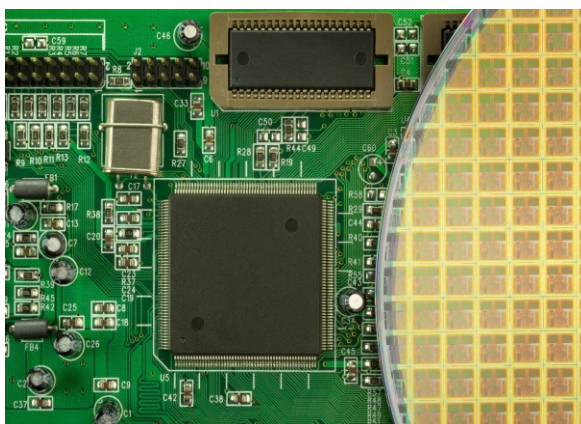
## Market-Specific Examples

### Improving flow of crude oil



JEFF-FLOW™ oilfield flow assurance products help maintain flow of crude oil by preventing solids formation and plugging.

### Faster computing power



e-Grade® high-purity amines for use in semi-conductor manufacturing processes enable production of higher resolution chips.

### Reducing emissions from fuels and industrial operations

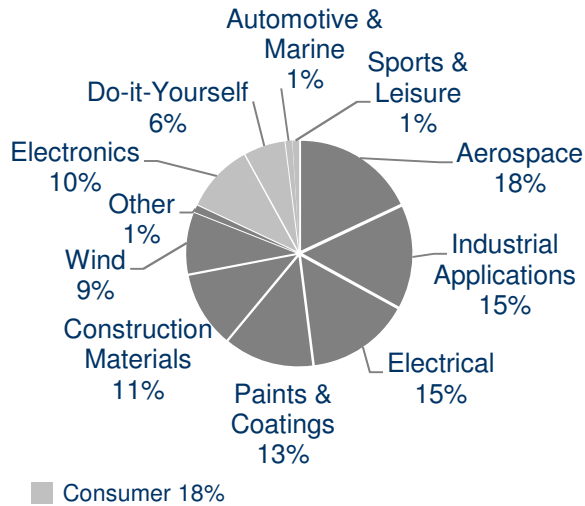


JEFFTREAT® and DGA Agent® gas treating amines help refineries to more effectively capture sulfur from off gases to reduce atmospheric emissions.

# Advanced Materials

## End Markets

2017 Revenues Source: Management Estimates



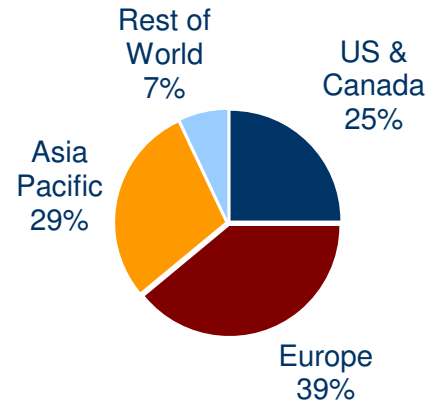
## 2Q18 LTM

Revenues  
**\$1.1**  
billion

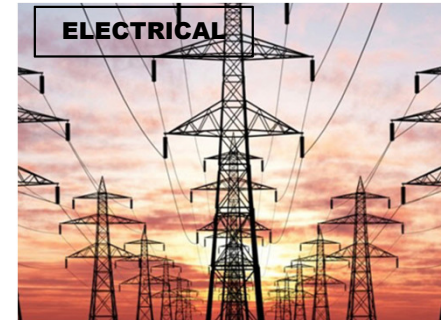
Adjusted EBITDA  
**\$230**  
million

## Revenues

2017 Revenues



AEROSPACE



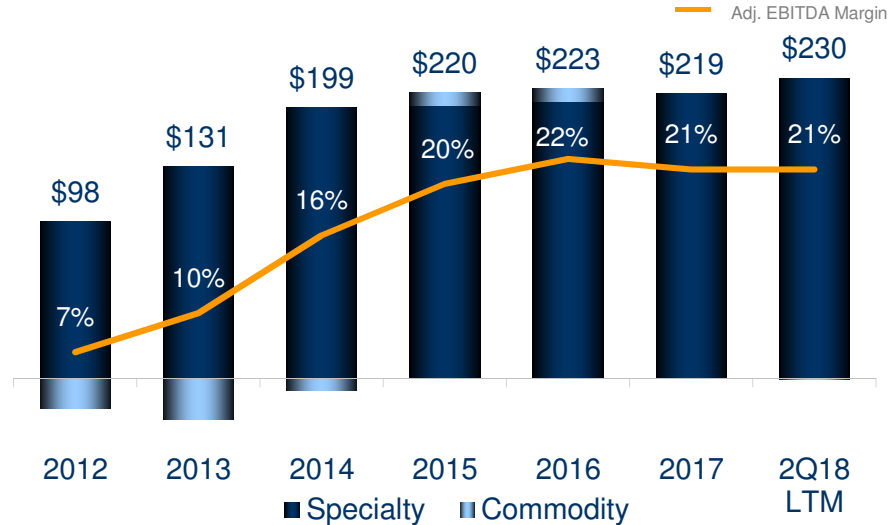
ELECTRICAL

## Competitive Landscape

Primary Market	Select Competitors
Transportation & Industrial	Henkel, Sumitomo
Electrical & Electronic	Elantas, Xiongrun
Coatings & Construction Additives	Evonik, Allnex, BASF

## Adjusted EBITDA History

\$ in millions



ADHESIVES



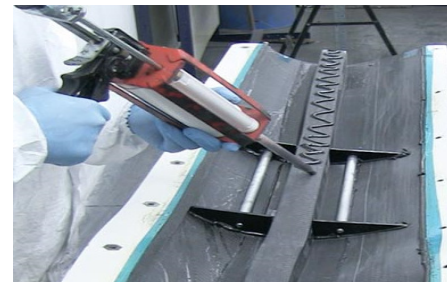
AUTOMOTIVE

# Platform for Specialty Growth

## Benefit by Leveraging Innovation and Acquisitions

2017 EBITDA

Effect Market	Light Weighting	Adhesion & Joining	Electrical Insulation	Protection	New Effects
Transportation & Industrial	EBITDA \$129mm				
Electrical & Electronic	EBITDA \$66mm				
Coatings & Construction	EBITDA \$24mm				
Adjacent Markets	Innovation and bolt-on acquisitions				



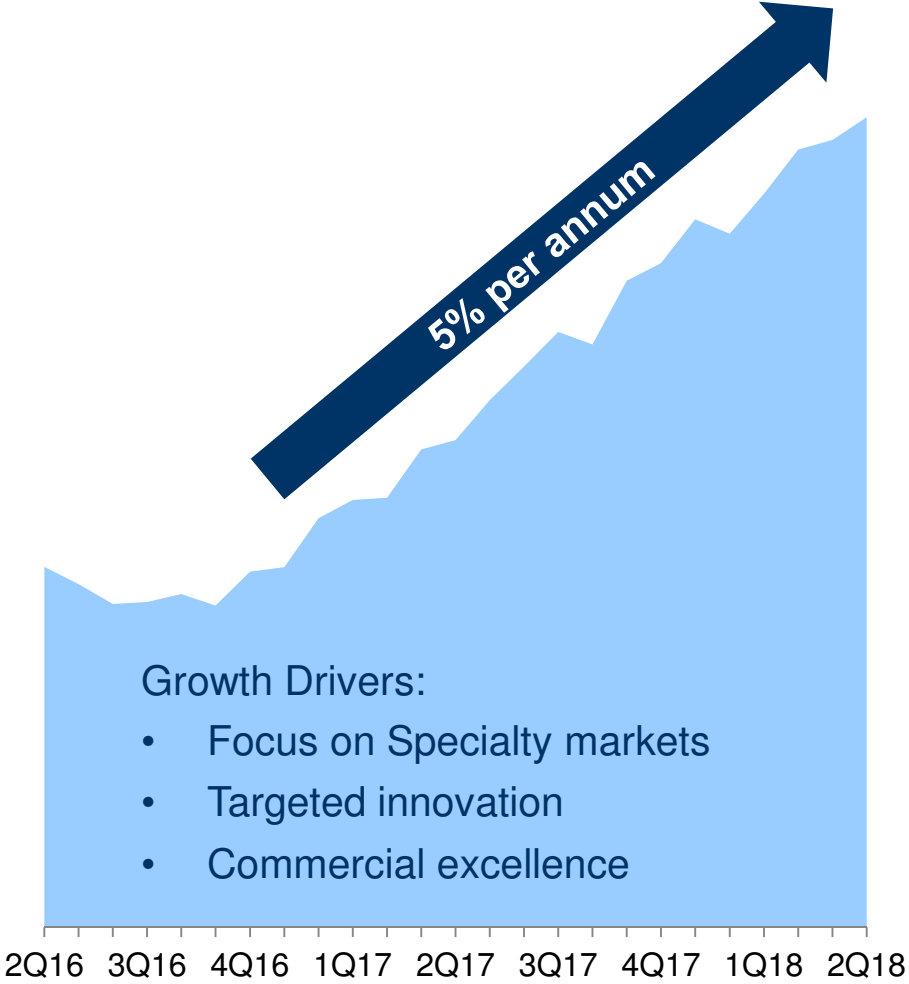
# Specialty Business Growth

Specialty Growth Drives EBITDA



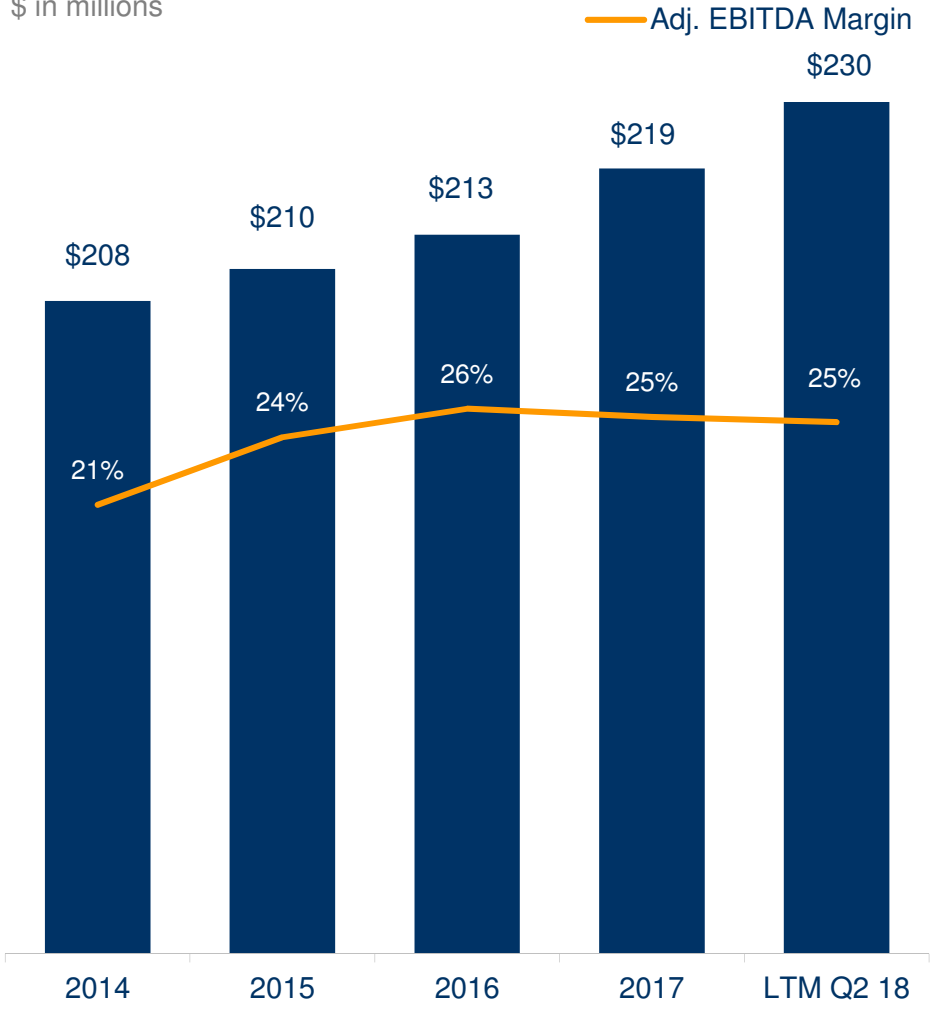
## Specialty Volume inflection late 2016

LTM Sales volume in ktes



## Specialty EBITDA

\$ in millions

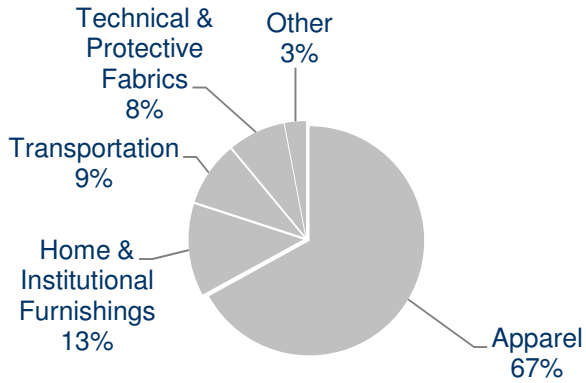


# Textile Effects

## End Markets

2017 Revenues

Source: Management Estimates



Consumer 100%

## 2Q18 LTM

Revenues

**\$0.8**

billion

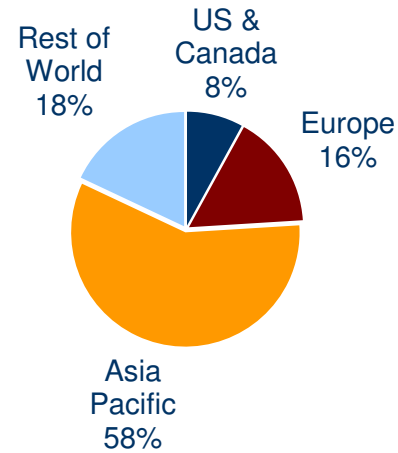
Adjusted EBITDA

**\$93**

million

## Revenues

2017 Revenues



ACTIVE WEAR



FOOTWEAR

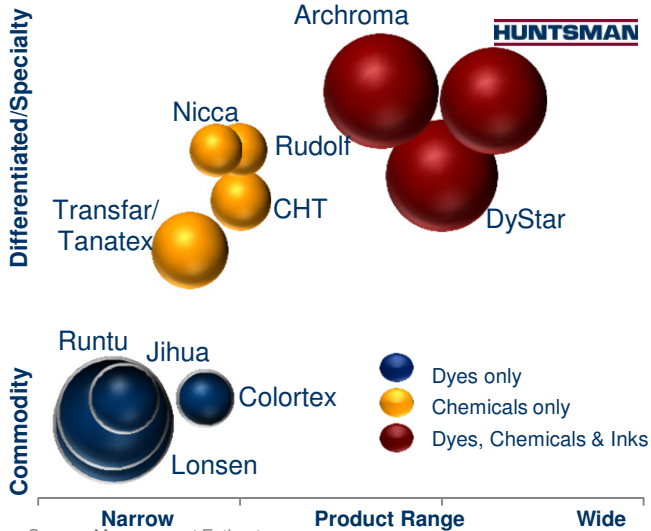


HOME & FURNISHINGS



FORMAL WEAR

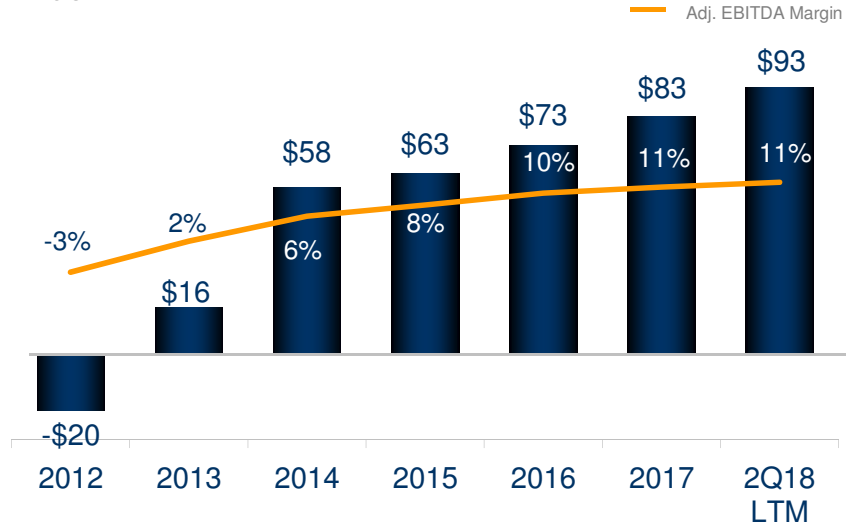
## Competitive Landscape



Source: Management Estimates

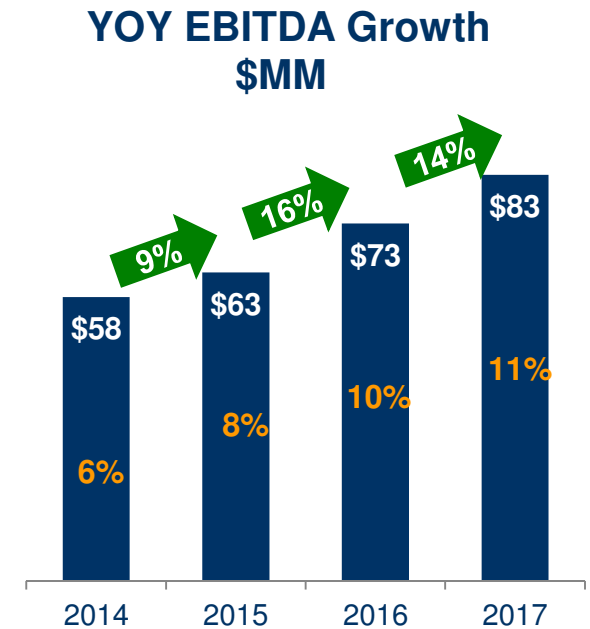
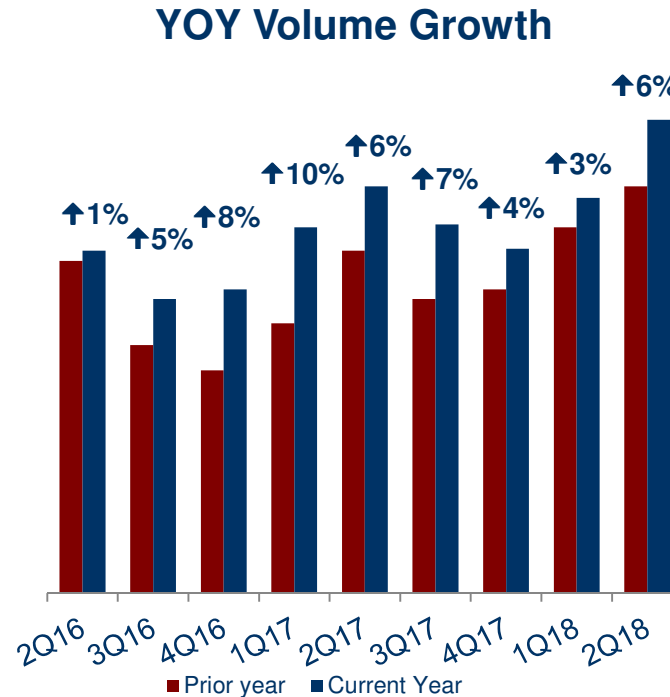
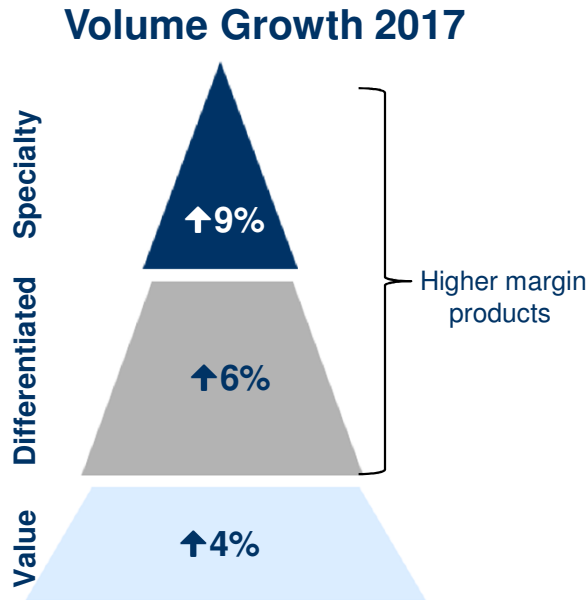
## Adjusted EBITDA History

\$ in millions



# Delivering Sustainable Performance

9 Straight Quarters of Volume Growth



**Restructuring completed**

**Positioned for consistent profitable growth and cash generation**







The logo for Huntsman, featuring the word "HUNTSMAN" in a bold, dark blue, sans-serif font. The text is centered and flanked by two horizontal red lines, one above and one below the letters.

Enriching lives through innovation

# Appendix

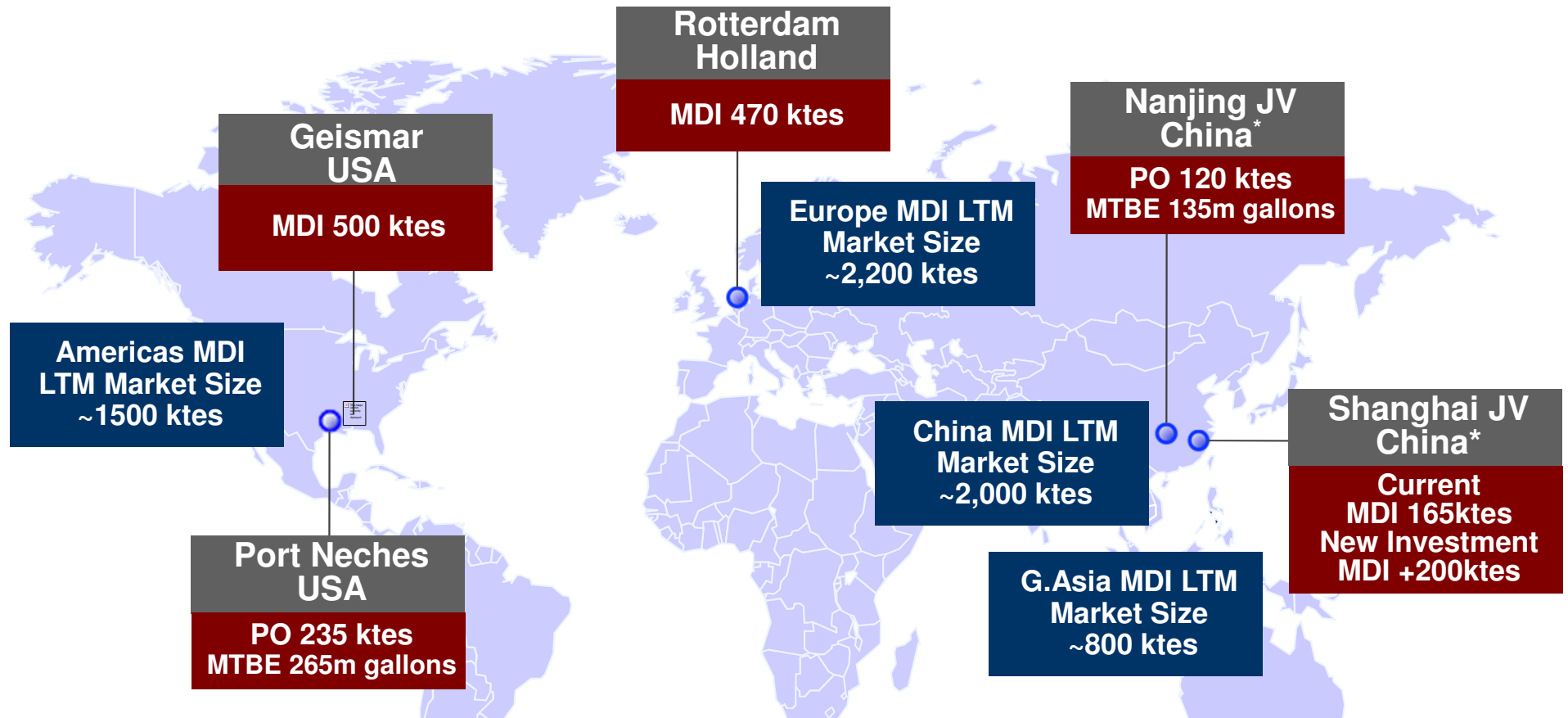
# Attractive Downstream Portfolio with Strong Growth Metrics

## 2020 Target Summary

			GDP Volume Growth	FCF conversion	EBITDA	EBITDA Margin	
	<b>Polyurethanes</b>	<b>High growth through downstream substitution</b>	<b>2x MDI</b>	<b>&gt;70%</b>	<b>&gt;\$1 billion</b>	<b>~20%</b>	
	<b>Performance Products</b>	<b>Margin expansion and growth through downstream derivatization</b>	<b>1.5x Derivatives</b>	<b>~60%</b>	<b>&gt;\$420 million</b>	<b>High Teens</b>	
	<b>Advanced Materials</b>	<b>Growth and consistent margins in specialty effects</b>	<b>2.0x Specialty</b>	<b>&gt;75%</b>	<b>&gt;\$270 million</b>	<b>&gt;22%</b>	
	<b>Textile Effects</b>	<b>Consistent growth through sustainable solutions</b>	<b>2x</b>	<b>&gt;50%</b>	<b>&gt;\$110 million</b>	<b>Mid Teens</b>	
				<b>Total HUN</b>	<b>~40%</b>	<b>&gt;\$1.6 billion</b>	<b>High Teens</b>

# Upstream Footprint

## Partner Upstream And Stretch Existing Assets



Capacity Additions	Type	Amount	Comments
Rotterdam	MDI Debottleneck	+60ktes	Complete
Nanjing	PO Joint Venture	+120ktes	Complete/Ramp up
Caojing	MDI Expansion	+200ktes	Ramp up 2018-2020

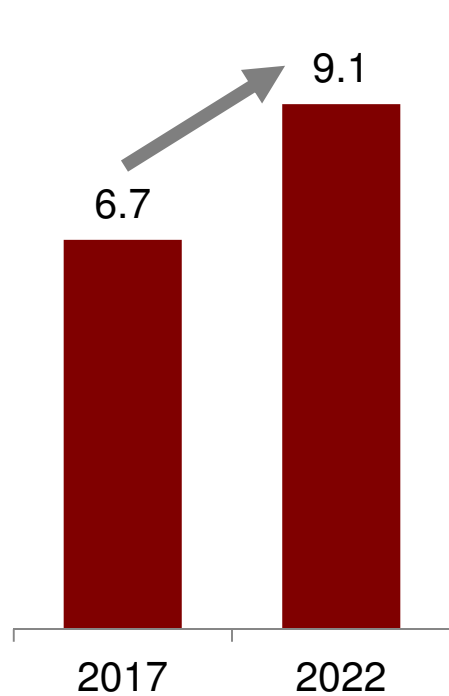
\*Huntsman share of JV plant output  
Market Size, Source Nexant, Management

# MDI Industry Capacity Utilization

Over the Next 5 Years Demand Will Continue to Outstrip Supply Additions

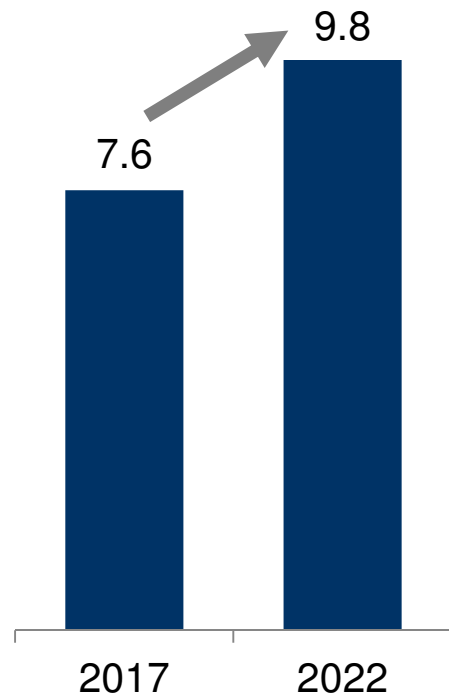
## MDI Demand (‘000s ktes)

**CAGR**  
**6%**



## MDI Capacity (‘000s ktes)

**CAGR**  
**5%**



## New Investments 2018 - 2022

Company	Country	ktes
Wanhua	China	+800
BASF	US	+300
SLIC/HUN	China	+240 (HUN =200/240)
Covestro	Germany	+200
Covestro	China	+140
K.Mitsui	Korea	+100
Wanhua	Hungary	+60
Covestro	Europe	+50

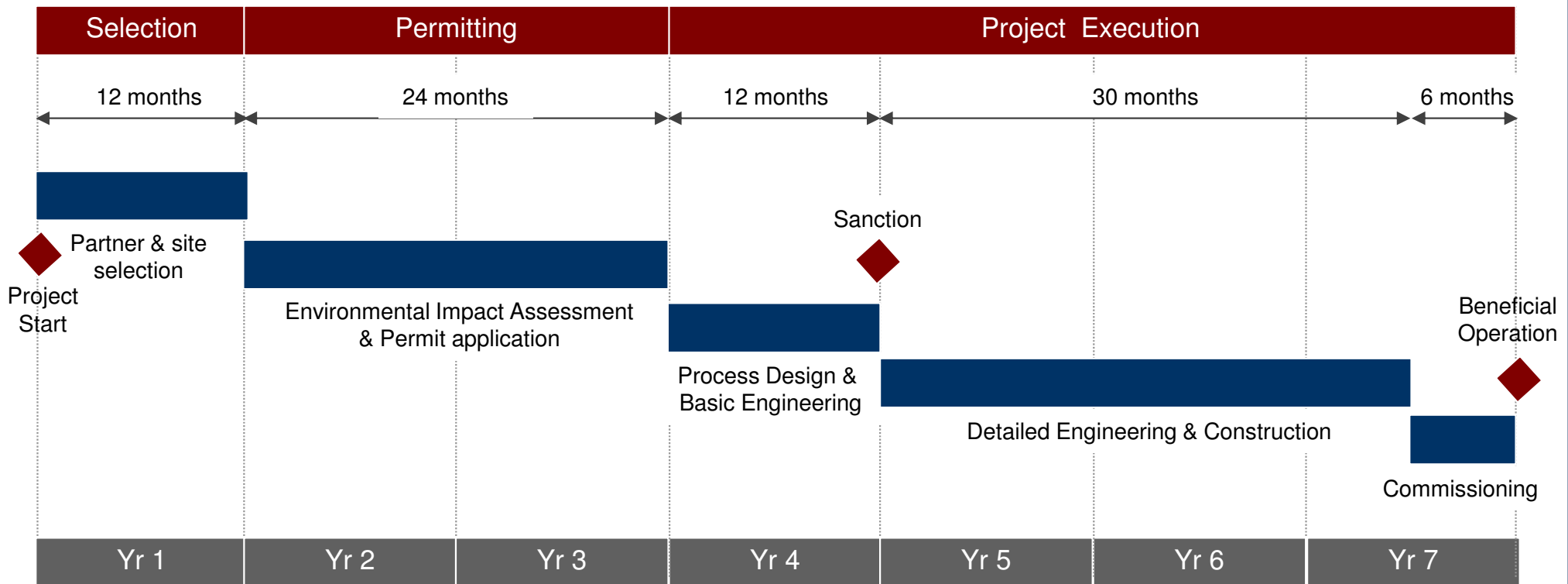
Note: 2022 capacity bar charts to the left include BASF Chongqing and Sadara realization of full capacity.

Note: \* Operating capacity  
Source: Management Estimates

# World Scale MDI Plant Timeline

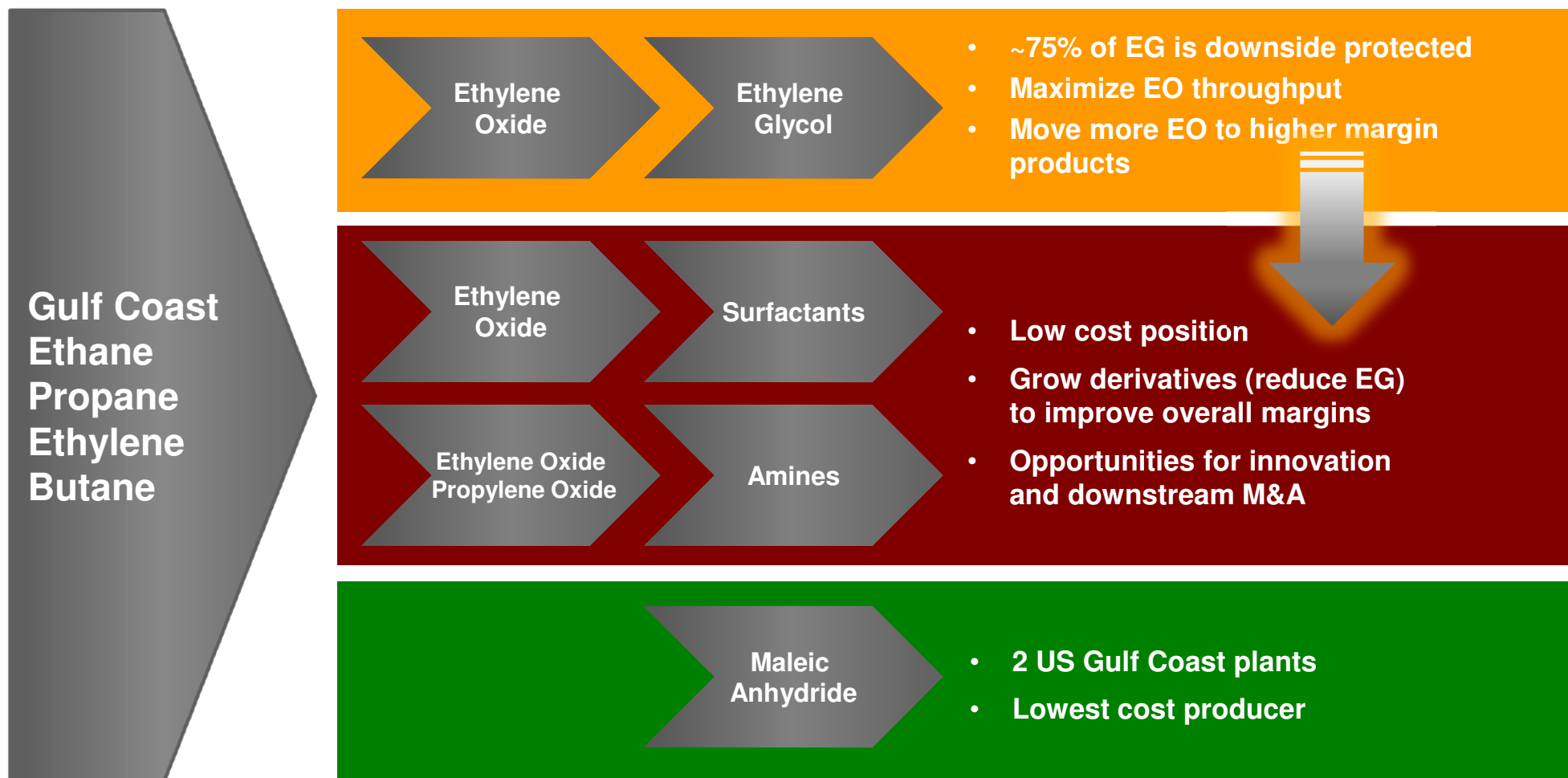
Approximately 7 Years from Project Start to Beneficial Operations

- Indicative timeline for planning, construction and commissioning of a greenfield world scale MDI plant
- Approximately 7 years from project start to plant beneficial operation
- World scale facility typically runs at <80% capacity in first year, takes 2-3 years to optimize production to 100% nameplate



# Performance Products Competitively Integrated Value Chain

## Gulf Coast Advantage



**Two-thirds of global revenue from products produced in Gulf Coast Region**

# Adjusted EBITDA Reconciliation

(\$ in millions)

	2Q16	3Q16	4Q16	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18
<b>Net Income</b>	\$ 94	\$ 64	\$ 137	\$ 92	\$ 183	\$ 179	\$ 287	\$ 350	\$ 623
Net income attributable to noncontrolling interests	(7)	(9)	(9)	(16)	(16)	(32)	(41)	(76)	(209)
<b>Net income (loss) attributable to Huntsman Corporation</b>	\$ 87	\$ 55	\$ 128	\$ 76	\$ 167	\$ 147	\$ 246	\$ 274	\$ 414
Interest expense, net	52	52	50	48	47	39	31	27	29
Income tax expense (benefit)	26	6	44	19	24	35	(14)	53	4
Depreciation and amortization	78	83	80	76	79	80	84	82	83
Interest, income taxes, depreciation and amortization in discontinued operations	35	23	14	33	50	34	37	29	95
Acquisition and integration expenses, purchase accounting adjustments	2	6	1	3	4	10	2	1	7
EBITDA from discontinued operations	(22)	(47)	(18)	(26)	(95)	(97)	(94)	(143)	(429)
Noncontrolling interest of discontinued operations	3	3	3	3	3	12	31	55	188
U.S. tax reform impact on noncontrolling interest	-	-	-	-	-	-	(6)	-	-
(Gain) loss on disposition of businesses/assets	-	-	(97)	-	(8)	-	(1)	-	-
Loss on early extinguishment of debt	2	1	-	-	1	35	18	-	3
Certain legal and other settlements and related expenses (income)	-	-	1	-	1	-	(12)	7	1
Plant incident remediation costs	-	-	-	-	-	13	3	-	-
Expenses associated with merger	-	-	-	-	6	12	10	-	1
Amortization of pension and postretirement actuarial losses	14	14	13	19	17	19	18	17	18
Restructuring, impairment, plant closing and transition costs (credits)	17	38	(9)	9	3	1	7	3	1
<b>Adjusted EBITDA</b>	<u>294</u>	<u>234</u>	<u>210</u>	<u>260</u>	<u>299</u>	<u>340</u>	<u>360</u>	<u>405</u>	<u>415</u>
Sale of European differentiated surfactants business <sup>(2)</sup>	(8)	(7)	(6)	-	-	-	-	-	-
<b>Proforma adjusted EBITDA</b>	<u>\$ 286</u>	<u>\$ 227</u>	<u>\$ 204</u>	<u>\$ 260</u>	<u>\$ 299</u>	<u>\$ 340</u>	<u>\$ 360</u>	<u>\$ 405</u>	<u>\$ 415</u>

	2012	2013	2014	2015	2016	2017	2Q18 LTM
<b>Net Income</b>	\$ 373	\$ 149	\$ 345	\$ 126	\$ 357	\$ 741	\$ 1,439
Net income attributable to noncontrolling interests	(10)	(21)	(22)	(33)	(31)	(105)	(358)
<b>Net income attributable to Huntsman Corporation</b>	\$ 363	\$ 128	\$ 323	\$ 93	\$ 326	\$ 636	\$ 1,081
Interest expense, net	226	190	205	205	203	165	126
Income tax (benefit) expense	104	109	59	60	109	64	78
Depreciation and amortization	350	364	358	298	318	319	329
Interest, income taxes, depreciation and amortization in discontinued operations	144	98	77	85	89	154	195
(Gain) loss on initial consolidation of subsidiaries	4	-	-	-	-	-	-
Acquisition and integration expenses, purchase accounting adjustments	5	11	7	9	12	19	20
EBITDA from discontinued operations	(350)	(78)	63	217	(81)	(312)	(763)
Noncontrolling interest of discontinued operations	-	-	1	7	11	49	286
U.S. tax reform impact on noncontrolling interest	-	-	-	-	-	(6)	(6)
(Gain) loss on disposition of businesses/assets	-	-	(2)	1	(97)	(9)	(1)
Loss on early extinguishment of debt	80	51	28	31	3	54	56
Extraordinary (gain) loss on the acquisition of a business	(2)	-	-	-	-	-	-
Certain legal and other settlements and related (income) expenses	2	4	-	1	1	(11)	(4)
Plant incident remediation costs	-	-	-	-	-	16	16
Purchase accounting inventory adjustments	-	1	2	-	-	-	-
Expenses associated with merger	-	-	-	-	-	28	23
Amortization of pension and postretirement actuarial losses	33	64	41	66	55	73	72
Restructuring, impairment, plant closing and transition costs	105	160	102	87	48	20	12
<b>Adjusted EBITDA</b>	<u>1,064</u>	<u>1,102</u>	<u>1,264</u>	<u>1,160</u>	<u>997</u>	<u>1,259</u>	<u>1,520</u>
Acquisition of PU Systems house from Rockwood <sup>(1)</sup>	5	6	7	-	-	-	-
Sale of European differentiated surfactants business <sup>(2)</sup>	(13)	(10)	(8)	(21)	(28)	-	-
<b>Proforma adjusted EBITDA</b>	<u>\$ 1,056</u>	<u>\$ 1,098</u>	<u>\$ 1,263</u>	<u>\$ 1,139</u>	<u>\$ 969</u>	<u>\$ 1,259</u>	<u>\$ 1,520</u>

(1) Pro forma adjusted to include the Polyurethanes system house acquired from Rockwood in October 2014.  
(2) Pro forma adjusted for the sale of the European Surfactants business on December 30, 2016.

# Revenue, Adjusted EBITDA & Margin by Segment

(\$ in millions)

Revenue	Pro Forma(2)(3) 2Q16	Pro Forma(2)(3) 3Q16	Pro Forma(2)(3) 4Q16	Pro Forma(2) 1Q17	Pro Forma(2) 2Q17	3Q17	4Q17	1Q18	2Q18
Polyurethanes	\$ 976	\$ 891	\$ 964	\$ 953	\$ 1,022	\$ 1,197	\$ 1,227	\$ 1,222	\$ 1,313
Performance Products	507	451	452	533	561	501	514	603	593
Advanced Materials	261	247	246	259	260	263	258	279	292
Textile Effects	198	184	184	188	205	193	190	200	227
Corporate, LIFO and other	(33)	-	(5)	(1)	6	15	14	(9)	(21)
<b>Total</b>	<b>\$ 1,909</b>	<b>\$ 1,773</b>	<b>\$ 1,841</b>	<b>\$ 1,932</b>	<b>\$ 2,054</b>	<b>\$ 2,169</b>	<b>\$ 2,203</b>	<b>\$ 2,295</b>	<b>\$ 2,404</b>

Revenue	Pro Forma(2)(3) 2012	Pro Forma(2)(3) 2013	Pro Forma(2)(3) 2014	Pro Forma(2)(3) 2015	Pro Forma(2)(3) 2016	Pro Forma(2) 2017	Pro Forma(2) 2Q18 LTM
Polyurethanes	\$ 4,915	\$ 4,991	\$ 5,053	\$ 3,811	\$ 3,667	\$ 4,399	\$ 4,959
Performance Products	2,574	2,566	2,695	2,251	1,885	2,109	2,211
Advanced Materials	1,325	1,267	1,248	1,103	1,020	1,040	1,092
Textile Effects	752	811	896	804	751	776	810
Corporate, LIFO and other	(285)	(251)	(219)	(80)	(46)	34	(1)
<b>Total</b>	<b>\$ 9,281</b>	<b>\$ 9,384</b>	<b>\$ 9,673</b>	<b>\$ 7,889</b>	<b>\$ 7,277</b>	<b>\$ 8,358</b>	<b>\$ 9,071</b>

(\$ in millions)

Adjusted EBITDA <sup>(1)</sup>	Pro Forma(2)(3) 2Q16	Pro Forma(2)(3) 3Q16	Pro Forma(2)(3) 4Q16	Pro Forma(2) 1Q17	Pro Forma(2) 2Q17	3Q17	4Q17	1Q18	2Q18
Polyurethanes	\$ 171	\$ 137	\$ 130	\$ 144	\$ 167	\$ 245	\$ 294	\$ 261	\$ 269
Performance Products	78	63	62	84	102	63	47	102	94
Advanced Materials	58	55	50	54	56	56	53	59	62
Textile Effects	24	17	14	21	24	19	19	26	29
Corporate, LIFO and other	(45)	(45)	(52)	(43)	(50)	(43)	(53)	(43)	(39)
<b>Total</b>	<b>\$ 286</b>	<b>\$ 227</b>	<b>\$ 204</b>	<b>\$ 260</b>	<b>\$ 299</b>	<b>\$ 340</b>	<b>\$ 360</b>	<b>\$ 405</b>	<b>\$ 415</b>

Adjusted EBITDA <sup>(1)</sup>	Pro Forma(2)(3) 2012	Pro Forma(2)(3) 2013	Pro Forma(2)(3) 2014	Pro Forma(2)(3) 2015	Pro Forma(2)(3) 2016	Pro Forma(2) 2017	Pro Forma(2) 2Q18 LTM
Polyurethanes	\$ 793	\$ 746	\$ 728	\$ 573	\$ 569	\$ 850	\$ 1,069
Performance Products	356	393	465	439	288	296	306
Advanced Materials	98	131	199	220	223	219	230
Textile Effects	(20)	16	58	63	73	83	93
Corporate, LIFO and other	(171)	(188)	(187)	(156)	(184)	(189)	(178)
<b>Total</b>	<b>\$ 1,056</b>	<b>\$ 1,098</b>	<b>\$ 1,263</b>	<b>\$ 1,139</b>	<b>\$ 969</b>	<b>\$ 1,259</b>	<b>\$ 1,520</b>

Adj. EBITDA Margin	Pro Forma(2)(3) 2Q16	Pro Forma(2)(3) 3Q16	Pro Forma(2)(3) 4Q16	Pro Forma(2) 1Q17	Pro Forma(2) 2Q17	3Q17	4Q17	1Q18	2Q18
Polyurethanes	18%	15%	13%	15%	16%	20%	24%	21%	20%
Performance Products	15%	14%	14%	16%	18%	13%	9%	17%	16%
Advanced Materials	22%	22%	20%	21%	22%	21%	21%	21%	21%
Textile Effects	12%	9%	8%	11%	12%	10%	10%	13%	13%
<b>Total</b>	<b>15%</b>	<b>13%</b>	<b>11%</b>	<b>13%</b>	<b>15%</b>	<b>16%</b>	<b>16%</b>	<b>18%</b>	<b>17%</b>

Adj. EBITDA Margin	Pro Forma(2)(3) 2012	Pro Forma(2)(3) 2013	Pro Forma(2)(3) 2014	Pro Forma(2)(3) 2015	Pro Forma(2)(3) 2016	Pro Forma(2) 2017	Pro Forma(2) 2Q18 LTM
Polyurethanes	16%	15%	14%	15%	16%	19%	22%
Performance Products	14%	15%	17%	20%	15%	14%	14%
Advanced Materials	7%	10%	16%	20%	22%	21%	21%
Textile Effects	-3%	2%	6%	8%	10%	11%	11%
<b>Total</b>	<b>11%</b>	<b>12%</b>	<b>13%</b>	<b>14%</b>	<b>13%</b>	<b>15%</b>	<b>17%</b>

(1) For a reconciliation see previous page.  
(2) Pro forma adjusted to exclude the Pigments & Additives business (Venator), which is treated as discontinued operations.  
(3) Pro forma adjusted for the sale of the European Surfactants business on December 30, 2016.