

# Investor Presentation

November 2019

**INDORAMA**  
VENTURES



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# AGENDA

## Performance Update

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Industry Update

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Projects Update

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Outlook

## *LTM 3Q19 key Takeaways*

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- **LTM volumes grew 24%** (11% on an organic basis)
- **Operating cash flows remained strong** (LTM \$1.30b vs. \$0.95b YoY) as a result of focused working capital management
- **LTM core EBITDA declined by 8%** (LTM \$1.26b vs. \$1.38b YoY), driven by a **sharp decline in industry-wide spreads especially** in integrated PET, MEG, IPA and Lifestyle fibers
- **Huntsman (Spindletop) asset acquisition is on-track** and expected to close in 1Q 2020; Adjusted EBITDA in IVL definition for these assets for 3Q19 is US\$122M and LTM3Q19 is US\$360M
- **IVL expanded and announced new investments in recycling** as we **spearhead the industry's transition to a circular use of PET**

**Despite the challenging industry environment,  
IVL continues to register strong volume and operating cash flow growth**

# LTM 3Q19 Reflections

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## What went well

- **IVL and industry volumes** grew
- Volume growth reflected in **strong operating cash flow**
- **Huntsman** (Spindletop) asset **acquisition on-track**
- **AA- rating reaffirmed** by TRIS **after the announcement** of the Spindletop asset acquisition
- **Recycling commitment reaffirmed** with strategy in place and Indorama Ventures Recycling Group set up
- Perpetual debenture of THB 15b **refinanced at 200bps lower coupon**



## What could have gone better

- **Industry spreads** lower for integrated PET, MEG, IPA & Lifestyle fibers
- **Inventory loss** of \$276M due to declining prices
- **IVOG TAR, unplanned shutdowns** including Force Majeure and line conversions led to an exceptional EBITDA loss of \$155M
- **Lake Charles cracker start-up delayed** to 1Q20
- The **Mobility fibers verticals** performed below plan on the back of a continued soft global automotive sector
- The **Thai baht strengthened**, especially in 3Q19 (7% vs 3Q18 vs. the USD), affecting earnings translation

# LTM 3Q19 Financial Highlights

Operating Cash flow grew 36%

<b>Total Production</b> 12.3 MMt	<b>+24%</b>	<b>Total Revenue</b> \$11.6B (THB 367B)	<b>+15%</b>	<b>Core EBITDA</b> \$1.26B (THB 40.1B)	<b>-8%</b>
<b>OCF</b> \$ 1.3B (THB 41.1B)	<b>+36%</b>	<b>Core EPS in USD</b> (THB 2.63)	<b>-40%</b>	<b>Net Op. Debt to Equity</b> 0.61x	<b>+8 bps</b>

% change YoY

Note: Total production – Integrated PET at 9.4MMt, fibers at 1.5MMt, packaging at 0.2MMt, IO at 0.4MMt, specialty chemical at 0.7MMt;

Core EPS growth is calculated based on core EPS in USD

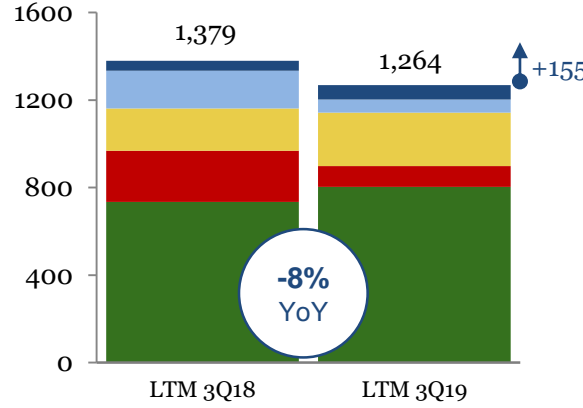
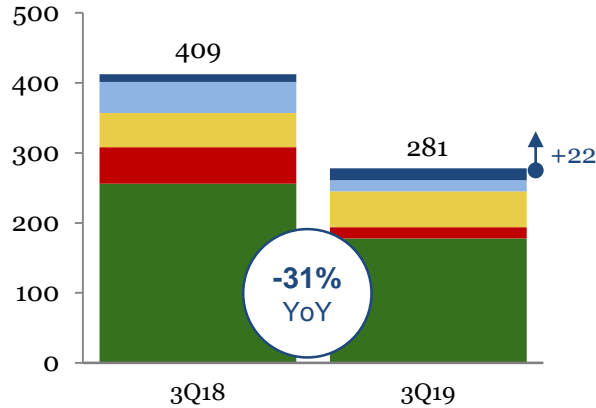
Source: IVL Analysis

# 3Q 2019 Results – IVL

■ Integrated PET 
 ■ Integrated Oxides & Derivatives 
 ■ Fibers 
 ■ Specialty Chemicals 
 ■ Packaging

↑ IVOG catalyst change, unplanned shutdowns incl. FM, PTA conversion to IPA

## Core EBITDA (\$M)



- Robust underlying volume growth, including organic volumes
- Sharp decline in industry spreads coming off the high in 3Q18

	3Q18	3Q19	LTM 3Q18	LTM 3Q19
Core EBITDA (\$/MT)	150	<b>84</b>	139	<b>103</b>
Core EBITDA Margin	14%	<b>10%</b>	14%	<b>11%</b>
Core ROCE	17%	<b>7%</b>	14%	<b>10%</b>
OCF (\$/MT)	101	<b>121</b>	96	<b>106</b>

**Better working capital management has enabled OCF growth**

Note: 1. After subordinated capital debentures interest. IO&D vertical is previously termed as Integrated Olefins. ROCE is calculated based on operating capital employed; EBITDA loss come from IVOG change of catalyst turnaround of \$23M in LTM 3Q19, FM/unplanned shutdown of \$10M in 3Q19 and \$99M in LTM 3Q19, PTA conversion to IPA in USA of \$12M in 3Q19 and \$33M in LTM 3Q19

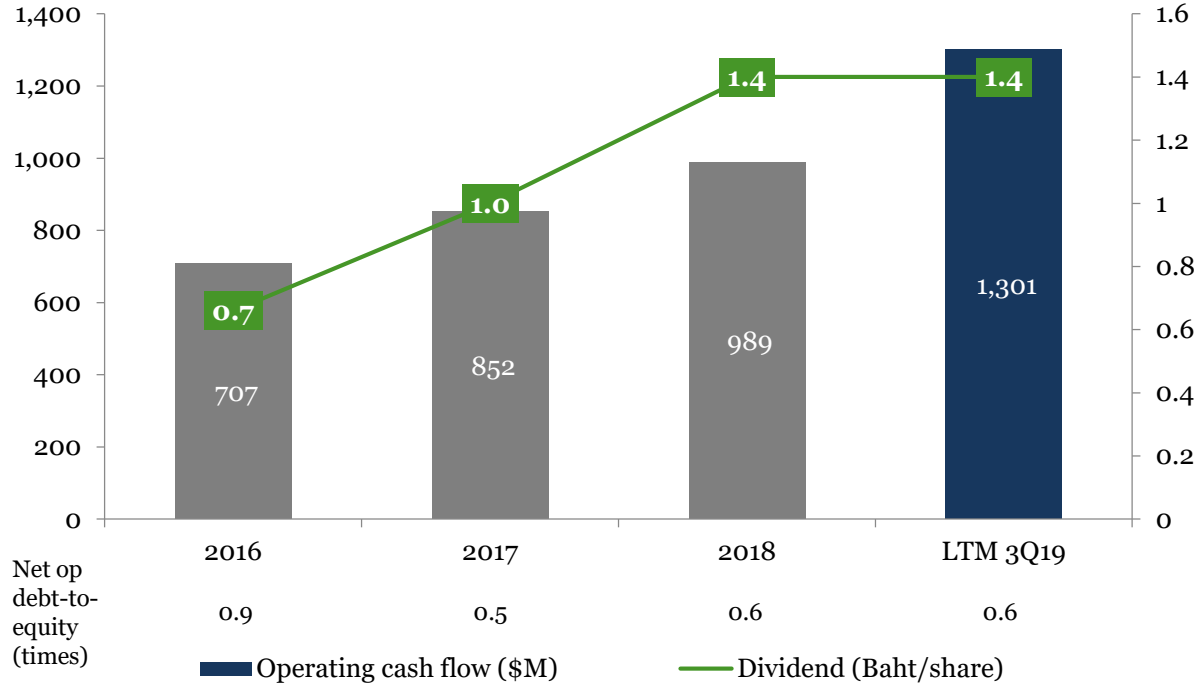
Source: IVL Analysis

# Operating Cash Flow

## Growing despite industry headwinds

Operating cash flow (in \$M)

Dividend (in Baht/share)



- Robust and **growing operating cash flow (OCF) generation**
- OCF enhanced through better **working capital management**
- Strong OCF generation **enables high dividend payout**

**Focus on working capital management initiatives to sustain OCF on like-for-like basis going forward**



## AGENDA

Performance Update

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**Industry Update**

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Projects Update

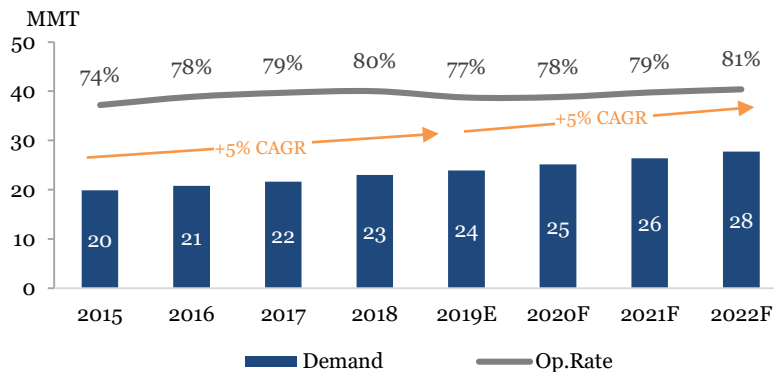
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Outlook

# PET Industry Outlook

## IVL is the largest seller of PET globally

### Global Supply/Demand

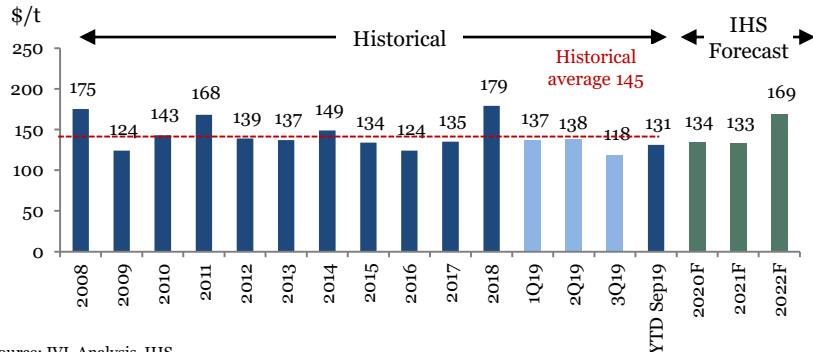


### Capacity Addition (MMT)

	19E	20F	21F	22F
China	1.3	1.0	0.7	-
Rest of World	0.9	0.5	0.1	1.1
<b>Total Capacity Addition</b>	<b>2.2</b>	<b>1.5</b>	<b>0.8</b>	<b>1.1</b>
<b>Total Demand Addition</b>	<b>0.9</b>	<b>1.2</b>	<b>1.3</b>	<b>1.3</b>

Include Corpus Christi in USA

### Industry Spread<sup>(1)</sup>



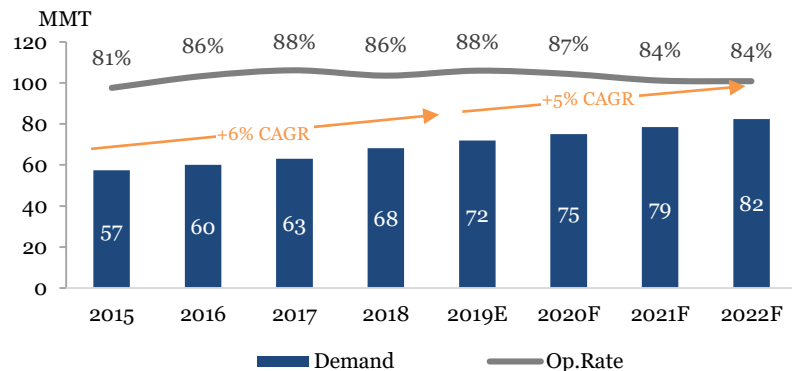
Source: IVL Analysis, IHS

Note: (1) PET Historical = PET ICIS Spot, FOB China - 0.86 PTA ICIS Spot, CFR China - 0.34 MEG ICIS Spot, CFR China ; PET Forecast = PET IHS NE Asia spot FOB - 0.86 PTA NE Asia spot C&F - 0.34 MEG NE Asia spot CFR

# PTA Industry Outlook

IVL sell almost all of its PTA captive to its PET and Fiber businesses

## Global Supply/Demand

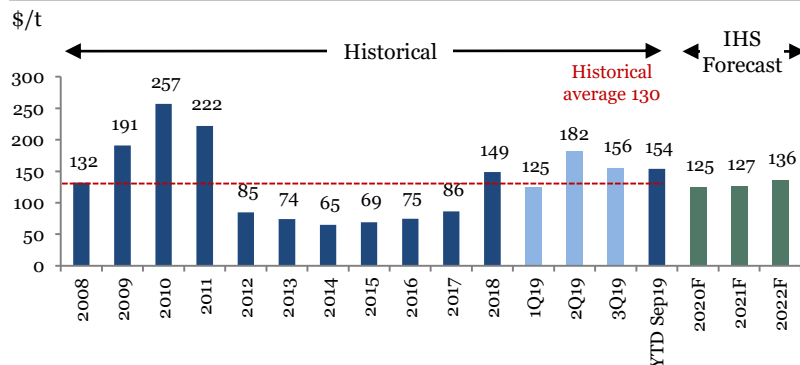


## Capacity Addition (MMT)

	19E	20F	21F	22F
China	2.8	2.6	6.6	3.9
Rest of World	(0.4)	0.6	0.1	0.9
<b>Total Capacity Addition</b>	<b>2.4</b>	<b>3.2</b>	<b>6.7</b>	<b>4.8</b>
<b>Total Demand Addition</b>	<b>3.7</b>	<b>3.1</b>	<b>3.5</b>	<b>3.8</b>

Include Corpus Christi in USA

## Industry Spread<sup>(1)</sup>



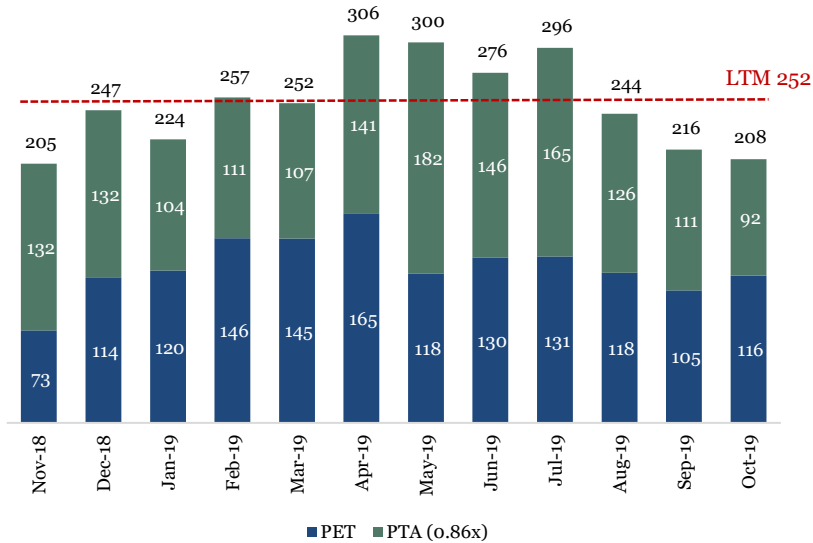
Source: IVL Analysis, IHS

Note: (1) PTA Historical = PTA ICIS Spot, CFR China - 0.67 PX 50:50/ ACP: Spot ; PTA Forecast = PTA IHS Spot, C&F NEA - 0.67 PX 50:50/ ACP: Spot

# Integrated Asia PET/PTA Spreads

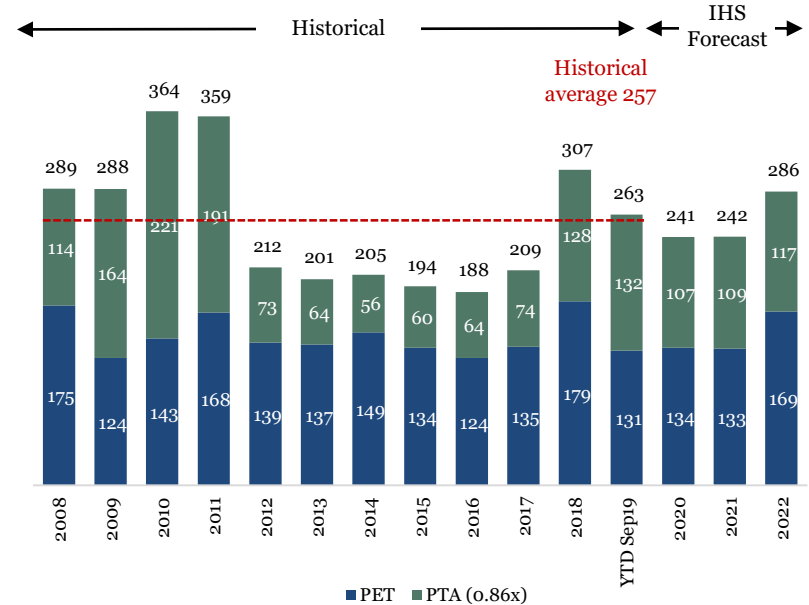
## Integrated PET Spread - LTM

\$/t



## Integrated PET Spread - Forecast

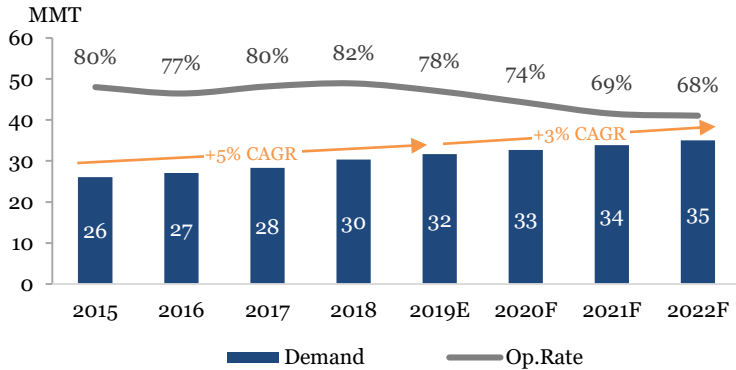
\$/t



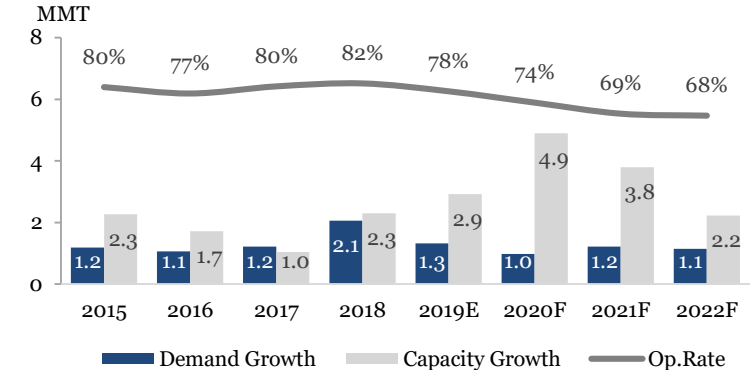
# MEG Industry Outlook

## IVL is a net buyer of around 2MMT

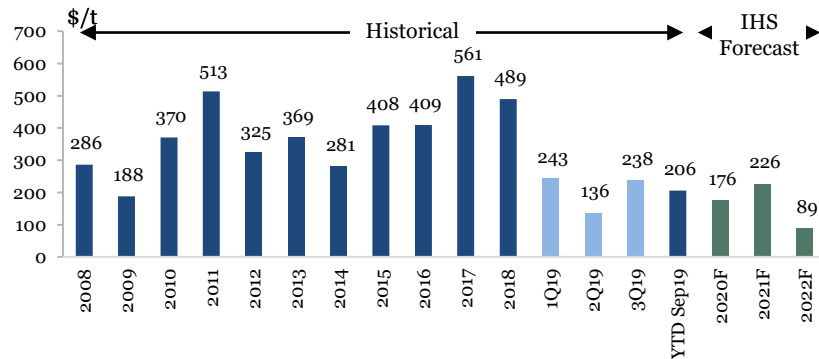
### Global Supply/Demand



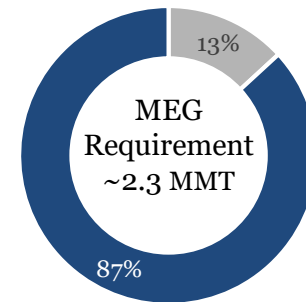
### Demand vs. Capacity Growth



### Industry Spread<sup>(1)</sup>



### IVL MEG Integration



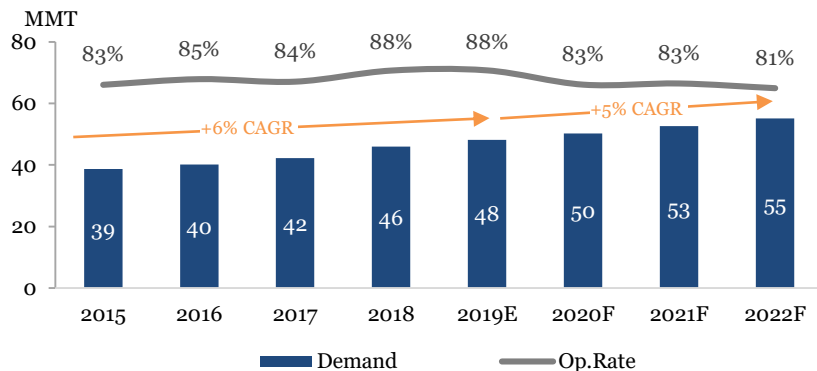
Source: ICIS, IHS IVL Analysis

Note: (1) Industry Spread =MEG ICIS Spot, CFR China-0.58 IHS Ethylene Spot Production Cash Cost Naphtha Feed

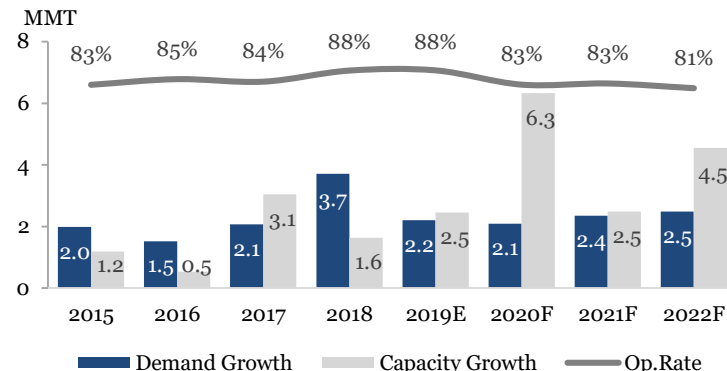
# PX Industry Outlook

## IVL is a net buyer of around 2.3MMT

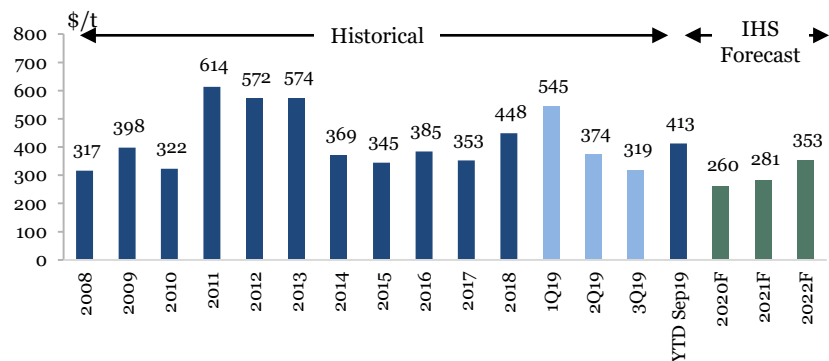
### Global Supply/Demand



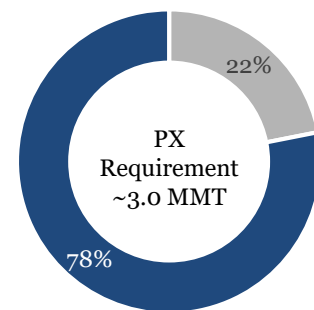
### Demand vs. Capacity Growth



### Industry Spread<sup>(1)</sup>



### IVL PX Integration



Source: IVL Analysis

Note: (1) Industry Spread = PX 50:50/ ACP:ASP – Naptha IHS, Full-Range C&F Japan

*IVL with Coca-Cola & other partners helped convert marine waste into recycled PET for the first time*

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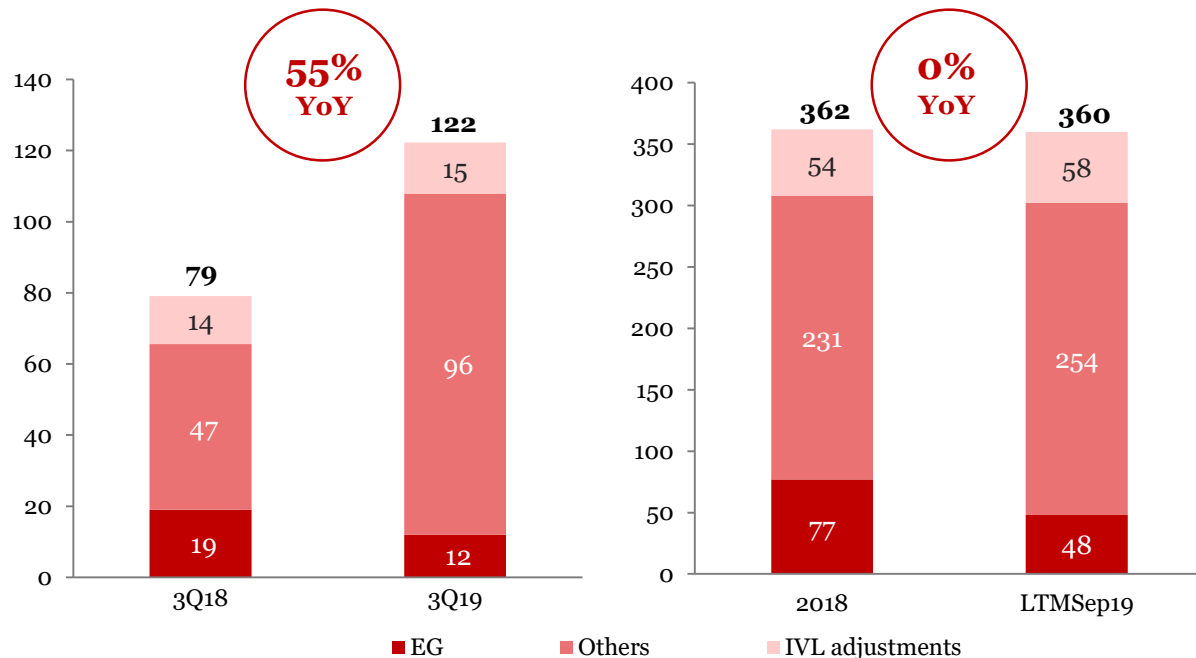
# R&D Bottle Marine Plastic\*

Note: Final recycled marine plastic content in the bottle will vary post production, between 20-25%  
Source: Coca-Cola

# 3Q 2019 Results – Spindletop (Huntsman EO/PO Assets)

## Expect completion of deal by 1Q20

### Spindletop EBITDA (\$M)



- Huntsman EBITDA from Spindletop operations was **\$360M in LTM 3Q19** after IVL adjustments
- **Synergies of \$100M within 3 years:**
  - \$40M from procurement and efficiencies
  - \$60M from specialty surfactants project

- **Geo-advantaged USGC feedstock**
- **Increase in less cyclical HVA products (e.g. surfactants)**
- **Captive outlet for LC cracker; further value chain integration**

Note: IVL adjustments to Huntsman reported EBITDA to take into account of Turnaround and Inspection costs inline with IVL reporting policies and other adjustments; the numbers include certain IVL analysis by segment which might be different from Huntsman numbers

Source: Adjusted EBITDA from discontinued operations as reported by Huntsman and IVL Analysis

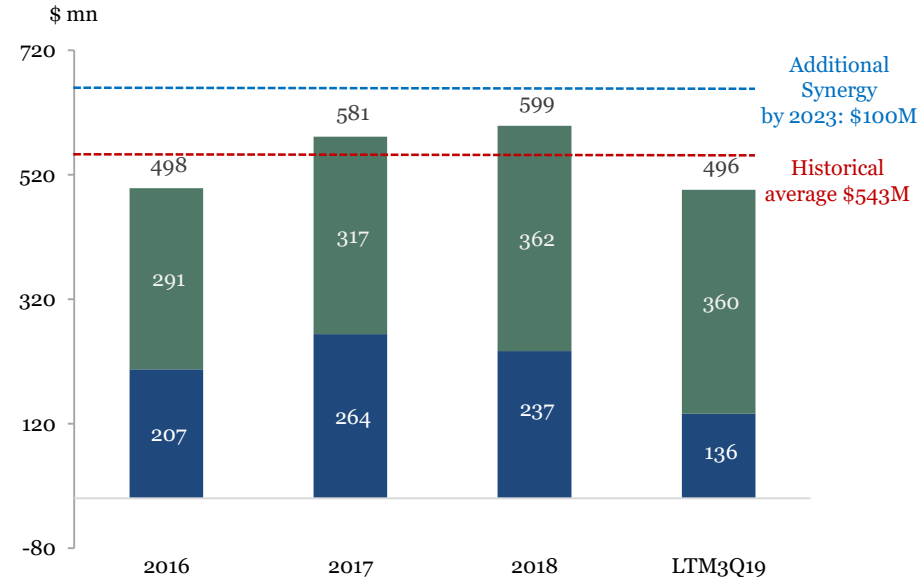


# IVOL/IVOG and Spindletop Pro-forma EBITDA

## Quarterly EBITDA



## Annual EBITDA

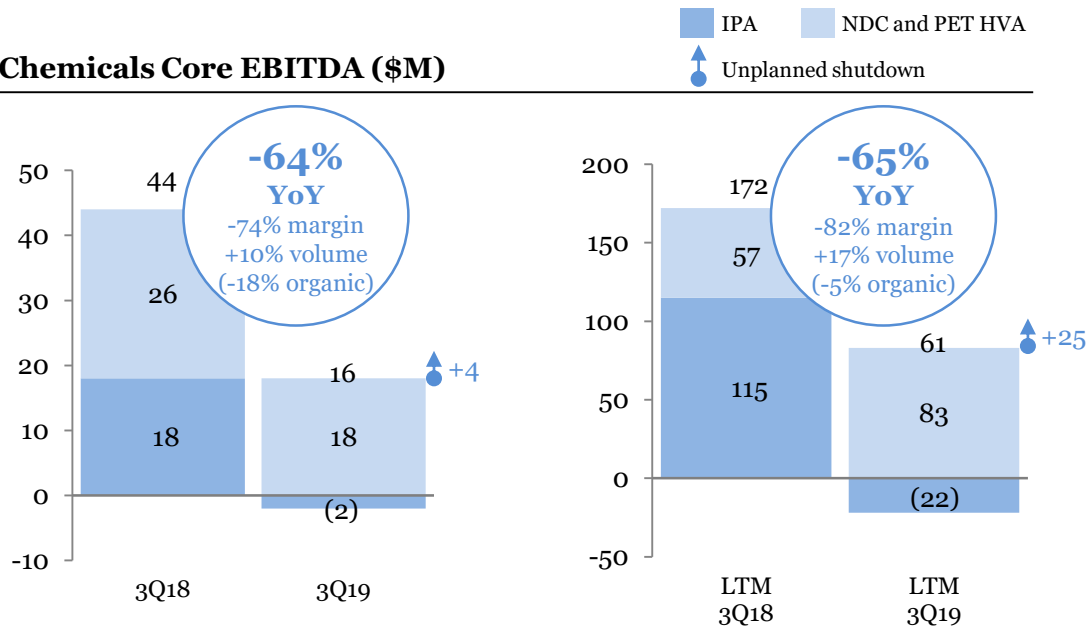


**+ Synergies of \$100M To Be Realized Within 3 Years**

# 3Q 2019 Results – Specialty Chemicals

## Underpinned by lower IPA spreads and unplanned shutdown

### Specialty Chemicals Core EBITDA (\$M)



- **Margin decline** driven by lower industry-wide Isophthalic Acid (IPA) spreads
- **Organic volumes decline** affected by one-time unplanned shutdown in the Auriga asset

	3Q18	3Q19	LTM 3Q18	LTM 3Q19
Core EBITDA (\$/MT)	251	83	286	86
Core EBITDA Margin	15%	7%	17%	6%
Core ROCE	27%	2%	27%	3%

**Segment strategy undergoing review and will be shared during IVL's Capital Market day in February 2020**

Note: Specialty Chemicals include NDC, IPA and Specialty PET; changes in margin are driven by spread, cost, and mix; NDC EBITDA dependent on NDC production, which is undertaken periodically to get the best cost efficiencies; unplanned shutdown refers to Auriga plant; EBITDA loss from unplanned shutdown of Auriga plant in 3Q19 and LTM 3Q19 of \$4M and \$25M respectively

Source: IVL Analysis

## AGENDA

Performance Update

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Industry Update






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**Projects Update**

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Outlook

# Major Projects Update & Recycling Growth Plan

	Integrated PET		Integrated Oxides and Derivatives		Fibers
					
	Corpus Christi	Recycling	IVOL	Spindletop	Sinterama
<b>Business</b>	Integrated PET	Recycling	Ethylene Cracker	Propylene Oxides, Ethylene Oxides and Derivatives	Mobility and Lifestyle Fibers
<b>Capacity</b>	PET: 367 kta PTA: 433 kta	~700 kta	Ethylene: 430 kta	3,147 kta	30 kta
<b>Region</b>	North America	North Americas, Europe and Asia	North America	North America, Asia and Australia	Americas, Europe and Asia
<b>Commencement of Commercial Op.</b>	4Q21/1Q22	2020-2023	1Q20	1Q20	4Q19
<b>CAPEX (\$M)</b>	600-700	~1,000	~1,000	2,076*	65
<b>CAPEX spent as of 30 Sept 2019 (\$M)</b>	386	Nil	897	Nil	Nil

Note: \*Acquisition cost of Spindletop (Huntsman asset) including pension liabilities. For Corpus Christi, capacity and CAPEX are adjusted for IVL share of business.  
Source: IVL Analysis

# New Opportunities for PET from Recycling



## Substitution to PET examples

Thermoform PP  
& PS



PET



HDPE &  
Paper-Based Packaging



PET



HDPE



PET



## Case Study: Danone La Serenísima Yoghurt

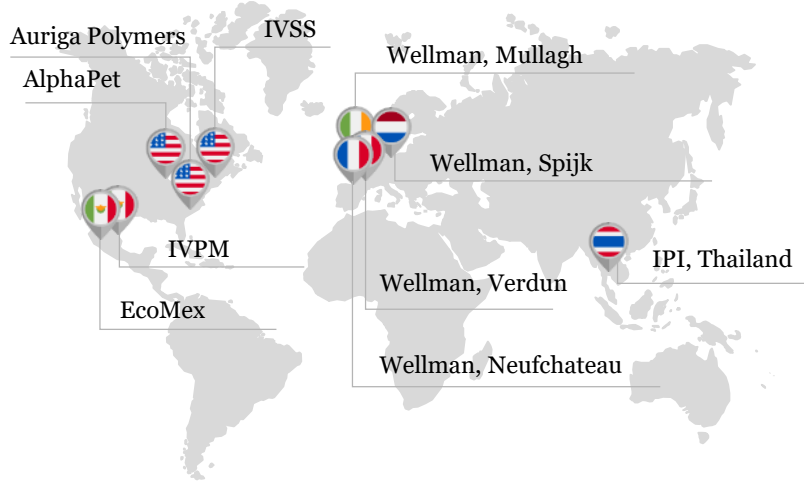
- **Packaging revamp in Argentina** from thermoformed PP & polystyrene to **PET for yoghurt jars**
- **Benefits of PET packaging** are:
  - Transparent, allowing consumers to see the content
  - Recyclable material, in-line with transition to circular economy

*"We decided to choose PET because it already has a developed recycling market in Argentina, and by doing this, we feed an inclusive recycling chain"*

Maximiliano Sassone  
Director of Research and Innovation  
Danone Argentina

# IVL Recycling Progress

## Recycling Footprint



## Achievements to date

**46 billion** PET bottles recycled

**840K tons** of plastic waste saved from going to landfills \*

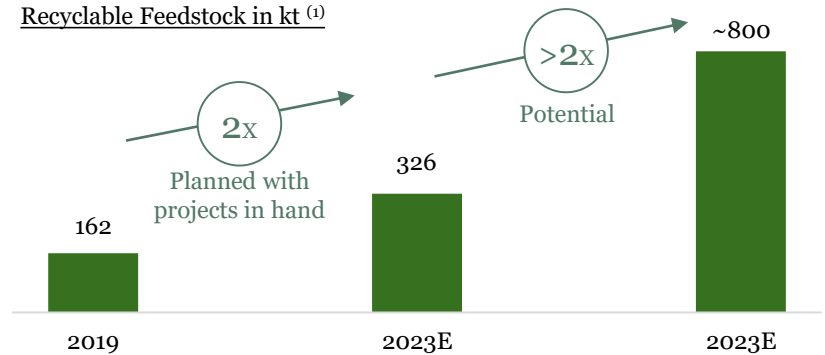
**1.25 million tons** of carbon footprint reduced \*

## Industry recognition



## Strategy Towards 2023

### Growing our Volumes



### Creating Returns

ROCE (%)



11%  
2019E



12-14%  
2023E

Note: (1) Recycling capacity on Flakes, Returns and investment on Flakes plus end products i.e. rPET, rFibers, single pallet solution (SPS) and chemical recycling  
Source: IVL data; Lit search

## AGENDA

Performance Update

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Industry Update

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Projects Update

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**Outlook**

# IVL's strategic priorities going forward

## Financial Objective: Double EBITDA by 2023

### Corporate

Implement **cost management programs**

Drive **operational excellence** and **reliability**

Improve **working capital management** to drive further growth in operating cash flows

Reinforce **customer-centric culture** to meet the evolving needs of key customers



### Integrated PET



### Integrated Oxides & Derivatives



### Fibers

**Expand recycling footprint** (both mechanical and chemical) to spearhead **industry-wide change**

Close, consolidate and **realize synergies on Huntsman acquisition**

**Extract synergies** in mobility, lifestyle and hygiene segments

**Complete Corpus Christi** project on revised timeline & budget

**Start Lake Charles gas cracker** in 1Q 2020

**Focus on organic growth** via innovation

In the 2020-23 plan, there is ~\$3bn headroom of unallocated investment budget



# *PET as the future of circular packaging*

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Reuters, 7 November 2019

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SUSTAINABLE BUSINESS NOVEMBER 7, 2019 / 1:21 AM / 3 DAYS AGO

## Coca-Cola chooses plastic bottle collection over aluminum cans to cut carbon footprint

Alexis Akwagyiram

4 MIN READ



LAGOS (Reuters) - Coca-Cola (KO.N) is committed to collecting and recycling plastic bottles rather than switching to aluminum cans as the world's largest soft drinks maker seeks to reduce its carbon footprint, its chief executive officer told Reuters.

*“A recycled PET (polyethylene terephthalate) bottle has a much lower carbon footprint than an aluminum can or a returned glass bottle,”*

James Quincey, CEO Coca-Cola  
7 November 2019

One Young World Summit, October 2019

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**Link:**

<https://player.vimeo.com/video/368776117#t=252s>

*Thank you*



# 3Q 2019 Financial Highlights

**Total  
Production**  
3.3 MMt

**+23%**

**Total  
Revenue**  
**\$2.8B**  
(THB 86.8B)

**-3%**

**Core  
EBITDA**  
**\$281M**  
(THB 8.6B)

**-31%**

**OCF**  
**\$ 405M**  
(THB 12.5B)

**+47%**

**Core EPS  
in USD**  
(THB 0.45)

**-67%**

**Net Op. Debt  
to Equity**  
**0.61x**

**+8  
bps**

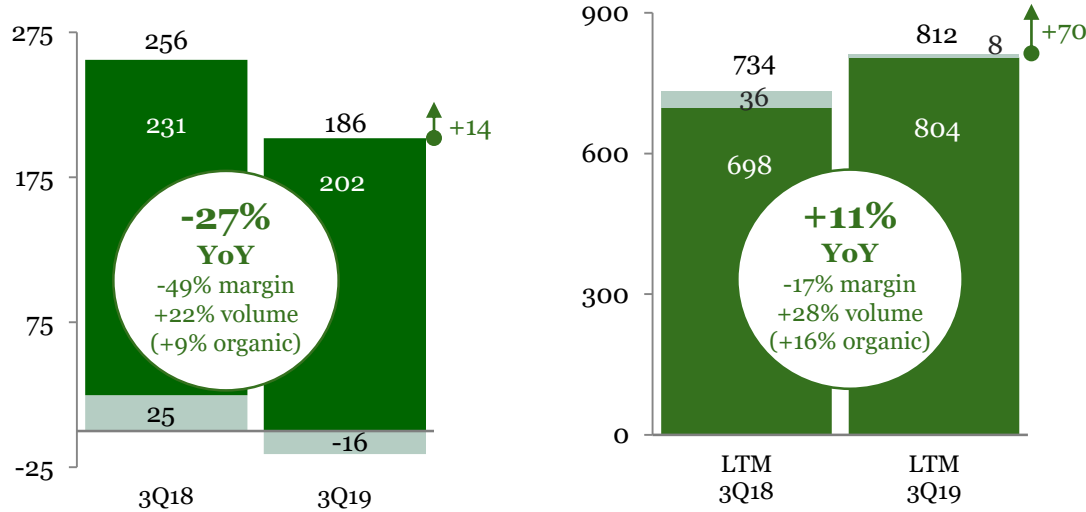
**%** change YoY

Note: Total production – Integrated PET at 2.5MMt, fibers at 0.5MMt, packaging at 0.1 MMt, IO at 0.1 MMt, specialty chemical at 0.2 MMt;  
Core EPS growth is calculated based on core EPS in USD  
Source: IVL Analysis

# 3Q 2019 Results – Integrated PET

## Integrated PET Core EBITDA (\$M)

■ Integrated PET, excl. PX
 ■ PX  
↑ Unplanned shutdown + PTA to IPA conversion



- **Sharp decline in margins** driven by **lower industry-wide integrated PET spreads**
- **PX underperformed yoy**
- **Integrated PET volumes up**, organically and inorganically

**Management focus on cost saving initiatives, operational excellence and reliability, working capital optimization and rPET growth strategy**

	3Q18	3Q19	LTM 3Q18	LTM 3Q19
Core EBITDA (\$/MT)	125	74	100	86
Core EBITDA Margin	13%	10%	11%	10%
Core ROCE	23%	13%	16%	15%

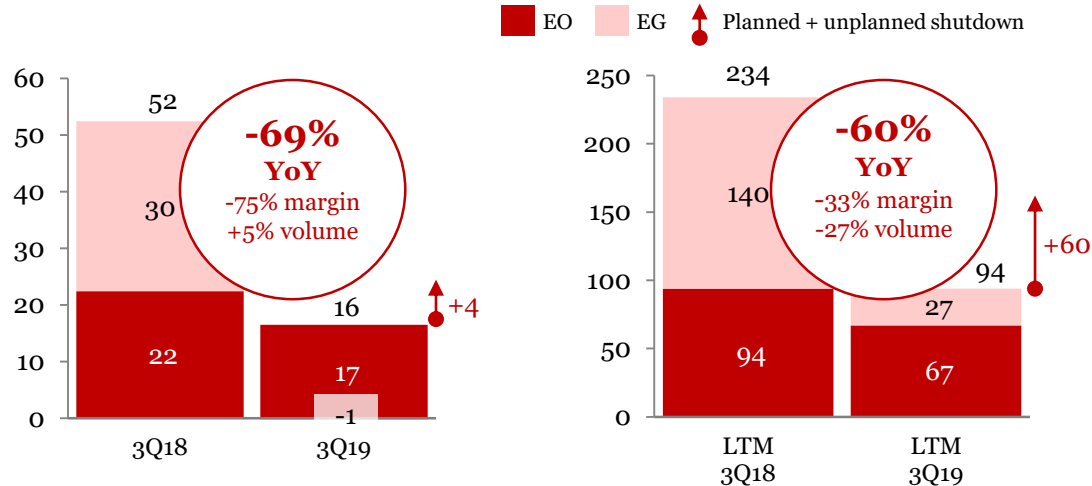
Note: Integrated PET include PET, PTA, Px and recycling; changes in margin are driven by spread, cost, and mix; EBITDA loss from unplanned shutdowns in India and Rotterdam plants in 3Q19 and LTM 3Q19 worth \$2M and \$37M respectively, and PTA conversion to IPA in USA in 3Q19 and LTM 3Q19 worth \$12M and \$33M respectively

Source: IVL Analysis

# 3Q 2019 Results – Integrated Oxides and Derivatives

## Lower MEG spreads

### Integrated Oxide & Derivatives EBITDA (\$M)



- EBITDA decline **mainly in MEG**, as margins declined due to **lower industry-wide MEG spreads**
- **Force Majeure/ unplanned shut-downs** contributed to EBITDA loss of \$37M and IVOG catalyst change led to an EBITDA loss of \$23M in LTM

### Management focus

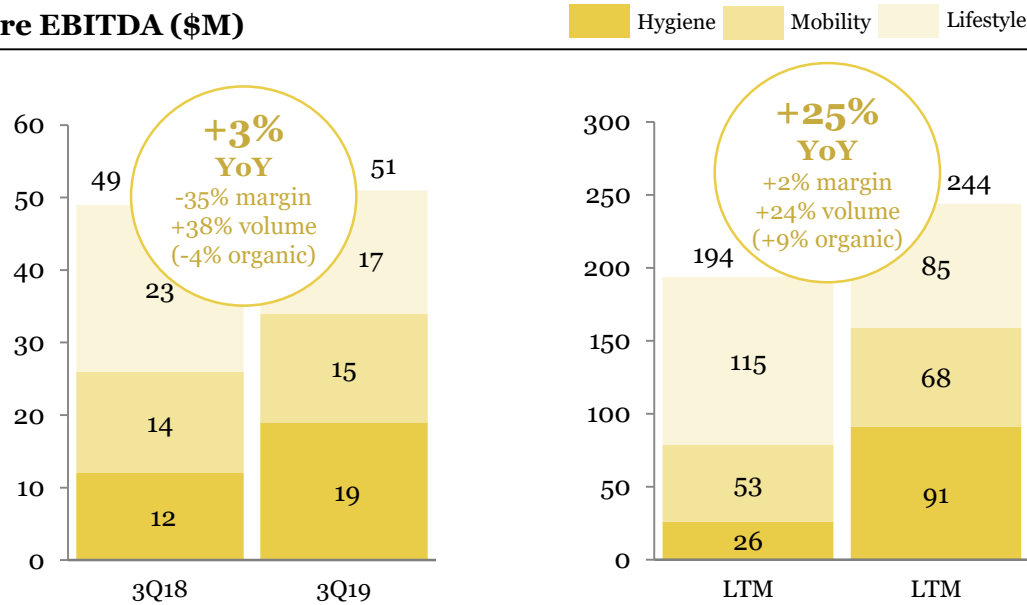
**Management focus on Spindletop integration and synergy realization, IVOL cracker start up and operations excellence and reliability**

	3Q18	3Q19	LTM 3Q18	LTM 3Q19
Core Overall EBITDA (\$/MT)	433	<b>126</b>	437	<b>241</b>
Core EO EBITDA (\$/MT)	443	<b>297</b>	396	<b>400</b>
Core EBITDA Margin	48%	<b>20%</b>	50%	<b>31%</b>
Core ROCE	28%	<b>2%</b>	32%	<b>8%</b>

Note: Integrated Olefins is renamed as Integrated Oxides and Derivatives which include IVOL and IVOG (Indorama Ventures Oxide & Glycols, LLC); changes in margin are driven by spread, cost, and mix; EBITDA loss from IVOG catalyst change turnaround of \$23M in LTM 3Q19, FM/unplanned shutdown of \$4M in 3Q19 and \$37M in LTM 3Q19  
Source: IVL Analysis

# 3Q 2019 Results – Fibers

## Fibers Core EBITDA (\$M)



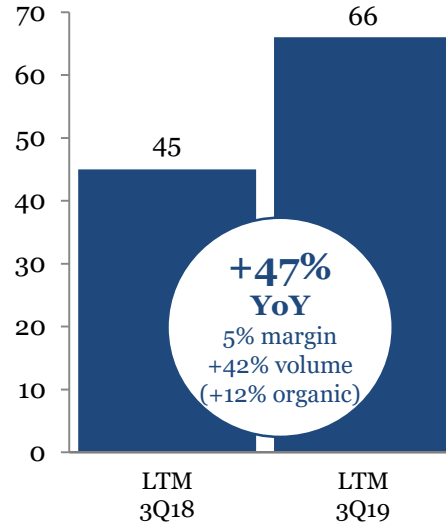
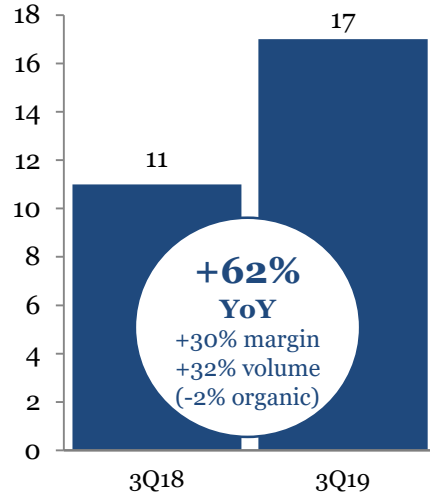
	3Q18	3Q19	LTM 3Q18	LTM 3Q19
Core EBITDA (\$/MT)	143	<b>106</b>	155	<b>157</b>
Core EBITDA Margin	7%	<b>6%</b>	8%	<b>8%</b>
Core ROCE	4%	<b>1%</b>	5%	<b>3%</b>

- **Hygiene** vertical volumes higher from strong nonwoven fabrics and fibers demand in North America
- **Mobility** vertical growing despite global slow-down in demand and weak performance of automotive sector
- **Lifestyle** vertical adversely affected from stock overhang due to US-China trade disputes

**Segment transformation plan being developed, including review of costs & productivity, portfolio and operating model optimization**

# 3Q 2019 Results – Packaging

## Packaging Core EBITDA (\$M)



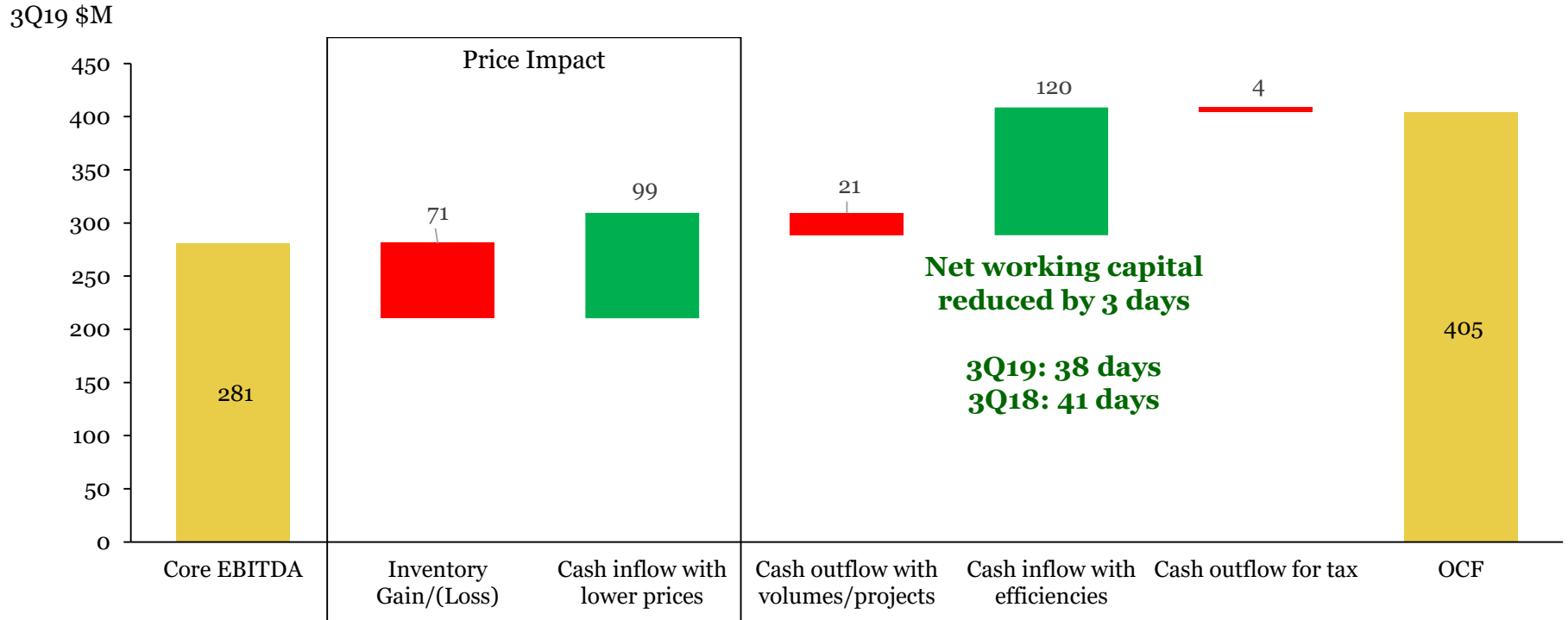
	3Q18	<b>3Q19</b>	LTM 3Q18	<b>LTM 3Q19</b>
Core EBITDA (\$/MT)	277	<b>340</b>	308	<b>319</b>
Core EBITDA Margin	18%	<b>22%</b>	20%	<b>20%</b>
Core ROCE	20%	<b>20%</b>	21%	<b>19%</b>

- **Volumes increased** from acquisition and organic growth
- **Packaging segment strength** in-line with growing PET demand

**Strong performance is evidence of continued PET demand growth**

# Core EBITDA to Operating cash flow

## Operational excellence





# Key Definitions

	Term	Definition
Metrics and acronyms	<b>Core</b>	When used in relation to a financial metric (e.g. EBITDA, earnings, etc.), refers to that metric excluding any inventory gains/(losses) and one-time extraordinary items
	<b>NOCE</b>	Net Operating Capital Employed refers to <b>Net Debt</b> minus <b>Non-Operating CAPEX</b> plus <b>Total Equity</b>
	<b>Net Op. Debt</b>	Net Operating Debt refers to <b>Net Debt</b> minus <b>Non-Operating CAPEX</b>
	<b>Spindletop</b>	Huntsman EO/PO & Derivatives business
Metrics and acronyms	<b>Integrated PET</b>	<b>Includes full PET value chain:</b> PX (Paraxylene), PTA (Purified terephthalic acid), PET (Polyethylene terephthalate), and Recycling
	<b>Integrated Oxides and Derivatives</b>	<b>Include olefin intermediates and EO:</b> MEG (Monoethylene glycol), DEG (Diethylene Glycol) and TEG (Triethylene Glycol) and EO (Purified Ethylene oxide)
	<b>Fibers</b>	<b>Polyester, Rayon, Nylon, PP (poly propylene), composites and worsted wool fibers for three end uses:</b> Mobility (automotive), Lifestyle (active wear, apparel), and Hygiene (baby diapers, feminine care)
	<b>Specialty Chemicals</b>	Includes Specialty PET (for medical, premium bottles, films and sheet), IPA (Isophthalic acid, for PET production, unsaturated polyester resins, and coatings), NDC (Naphthalene dicarboxylate, for optical displays and industrial/ mobility uses)
	<b>Packaging</b>	PET preforms and bottle packaging for beverage and food end uses