A New Era of Growth and Value Creation
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<thead>
<tr>
<th>Time</th>
<th>Session</th>
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</thead>
<tbody>
<tr>
<td>0930-1000</td>
<td>IVL journey: past, present, future</td>
</tr>
<tr>
<td>1000-1015</td>
<td>Olympus Program - Cost and efficiency transformation</td>
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<td>1015-1035</td>
<td>Combined PET</td>
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<td>1035-1045</td>
<td>Recycling and sustainability</td>
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<td>1045-1055</td>
<td>Coffee break</td>
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<td>1055-1115</td>
<td>Integrated Oxides and Derivatives</td>
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<td>1115-1130</td>
<td>Fibers</td>
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<td>1130-1140</td>
<td>Leadership development</td>
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<td>1140-1150</td>
<td>Balance sheet strength</td>
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<td>1150-1200</td>
<td>Key takeaways</td>
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<td>1200-1230</td>
<td>Q&amp;A</td>
</tr>
</tbody>
</table>
IVL’S JOURNEY: PAST, PRESENT, FUTURE

Mr. Aloke Lohia
Group Chief Executive Officer
IVL is the world’s leading PET supplier with a diversified asset base and business portfolio serving attractive customer segments.

One of the world’s leading PET producers with:

- Presence in 33 countries
- 119 Manufacturing facilities
- Consolidated revenues of $13.3B (LTM 3Q19)
- 24,000+ employees

Key achievements:

- 1 in 5 PET bottles made from our PET resin
- 1 in 4 airbags made from our Yarns
- 1 in 2 premium baby diaper made from our Fibers
- 2nd Largest Ethylene Oxide producer in the US (post-Spindletop)

Note: All figures are as of LTM 3Q2019, include the Spindletop business (Huntsman Integrated EO/PO acquisition) 
Source: IVL Business Plan
Over the past decade, IVL has successfully diversified and delivered growth

Core EBITDA ($B)

- 2006: $0.05
- 2010: $0.4
- 2014: $0.6
- 2018: $1.2B
- LTM 3Q19: $2.6B
- LTM 3Q19 incl. Spindletop: $2.8B
- LTM 3Q19 incl. Spindletop: $3.5B

Note: *Combined PET includes PET, PET HVA, PTA, PX, recycling, packaging, and specialty chemical; COMA stands for contribution margin (revenues less raw materials less variable costs)

Source: IVL Financials
We built a vertically integrated and diverse business, centered around PET

**Commodity**

Leveraging the scale of commodity business and expand into HVA products

**HVA**

+Spindletop

**IOD***

26% COMA contribution***

- Ethane (from Shale Gas)
  - Cracker
  - Ethylene
  - EO/EG
  - LAB/Surfactants/Ethanolamines
  - PO/Oxyfuel

**Combined PET**

50% COMA contribution***

- PX, PTA, IPA
  - PET
  - Packaging
  - Recycling

**Fibers**

24% COMA contribution***

- Polyester Fiber
  - Rayon
  - Nylon
  - PP/PE

**Note:** *IOD = Integrated Oxides and Derivatives; **Combined PET includes PET, PET HVA, PTA, PX, recycling, packaging, and specialty chemical; ***COMA (contribution margin) contribution is calculated using IVL pro forma including Spindletop financials as of LTM 3Q19 Source: IVL Analysis*
PET is the preferred beverage packaging product given its superior economics and lower carbon footprint.

PET is the main non-alcoholic beverage packaging material, growing at 5% per annum.

Non-alcoholic beverage packaging by material type (T units)

<table>
<thead>
<tr>
<th>Material Type</th>
<th>2005</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>PET bottles and jars</td>
<td>40%</td>
<td>50%</td>
</tr>
<tr>
<td>Other rigid plastic</td>
<td>1.2</td>
<td>1.2</td>
</tr>
<tr>
<td>Flexible packaging</td>
<td>1.2</td>
<td>1.2</td>
</tr>
<tr>
<td>Glass</td>
<td>1.2</td>
<td>1.2</td>
</tr>
<tr>
<td>Metal</td>
<td>1.2</td>
<td>1.2</td>
</tr>
<tr>
<td>Liquid cartons</td>
<td>1.2</td>
<td>1.2</td>
</tr>
</tbody>
</table>

PET is more cost-effective, with a lower carbon footprint and is safe for transportation*

Price ratio (cents per bottle, PET = 1X):

- PET bottle: 1X
- Aluminum can: 1.6X
- Glass bottle: 1.7X

GHG ratio (GHG per 100 Koz liquid, PET = 1X):

- PET bottle: 1X
- Aluminum can: 1.5X
- Glass bottle: 2.2X

Note: *Price and GHG ratio based on Lifecycle Inventory Analysis, which includes total energy, raw material, air and water emissions and total solid waste produced from cradle-to-disposal/recycling of product. Source: Euromonitor; Franklin Associates; Cleanmetrics Corp; Goldman Sachs Global Investment Research.
### PET is 100% recyclable and fully circular, unlike other plastics

<table>
<thead>
<tr>
<th>Common Uses</th>
<th>Symbol</th>
<th>Recyclable (based on mechanical recycling)</th>
<th>Circular recycling</th>
</tr>
</thead>
<tbody>
<tr>
<td>PET</td>
<td><img src="image" alt="PET Symbol" /></td>
<td>Commonly</td>
<td>Fully circular</td>
</tr>
<tr>
<td>HDPE</td>
<td><img src="image" alt="HDPE Symbol" /></td>
<td>Commonly</td>
<td>Circular (for non-dyed)</td>
</tr>
<tr>
<td>PVC</td>
<td><img src="image" alt="PVC Symbol" /></td>
<td>Almost never</td>
<td>Downcycled* (for colored)</td>
</tr>
<tr>
<td>LDPE</td>
<td><img src="image" alt="LDPE Symbol" /></td>
<td>Sometimes</td>
<td>Circular (emerging)</td>
</tr>
<tr>
<td>PP</td>
<td><img src="image" alt="PP Symbol" /></td>
<td>Sometimes</td>
<td>Circular (emerging)</td>
</tr>
<tr>
<td>PS</td>
<td><img src="image" alt="PS Symbol" /></td>
<td>Almost never</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

*Note: *Colored HDPE usually downcycled due to complexities in coloring and appearance of rHDPE flakes; downcycled means of lower quality and functionality than the original material.

Source: Our World in Data (2018); Plastics recycling: challenges and opportunities - Philosophical Transactions of the Royal Society B: Biological Sciences
The **Fibers** market has grown strongly; IVL is a leader in many high-value, attractive spaces

Polyester fibers have grown at 6% per annum & substituted cotton

Global staple & filament fiber consumption* (mt)

- **Polyester**: 65% in 2005, 55% in 2018
- **Wool**: 40% in 2005
- **Acrylic**: 60% in 2005
- **PP**: 50% in 2005
- **Nylon**: 80% in 2005
- **Cellulosic**: 100% in 2005
- **Cotton**: 20% in 2005

IVL has built a HVA business on the scale commodity platform...

IVL’s fiber capacity (kt)

- **Polyester**: 1,520 kt in 2018
- **HVA**: 1,020 kt in 2018
- **Necessities**: 500 kt in 2018

Note: *Consumption data excludes inorganic fibers (e.g. carbon fibers, glass fibers and other composite fibers)
Source: Wood Mackenzie, IVL Financials

...and has created leadership positions in several attractive spaces

- **#1** global supplier premium baby diapers market
- **#1** global supplier of premium safety fibers
- **#1** global integrated supplier of airbag fabrics
- **#2** total solution provider to global tire industry
IOD is a cost-advantaged business due to the advantage of US shale and is emerging as a second core for IVL

US MEG producers have a cost advantage

Global integrated MEG cash cost
$/t, North America Ethane = 1X

Further opportunity beyond EG and EO to capture higher margins downstream

IVL contribution margin (2015-19 average)*
%, EG = 1X

Note: *Average contribution margin 2015-19, with 100% ethylene integration and 20% propylene integration; EG = Ethylene Glycol; EO = Ethylene Oxide; EOA = Ethanolamines; PO = Propylene Oxide
IOD= Integrated oxides and derivatives and include Ethylene, Propylene, EO, EG (MEG and others), Surfactants (including EOA and LAB) and PO, MTBE
Source: IHS Markit, Wood Mackenzie, IVL Analysis
IVL’s success is predicated on a time-tested recipe to drive efficiency in our acquisitions (SK and Tuntex case studies)

1. **SK acquisition (Poland & Indonesia) in 2011**
   - Acquired in 2011; 1st entry into Poland and Indonesia
   - Produced PET and Fibers
   - Conducted cost benchmarking and debottlenecking
   - Consolidated fibers sites in Indonesia
   - +15% Capacity
   - -24% Lower conversion cost per ton
   - $380M Accumulated EBITDA with invested capital of $250M
   - 16% ROCE ~2% of IVL’s capital employed

2. **Tuntex Thailand acquisition (IPI Rayong) in 2008**
   - Acquired a distressed company in bankruptcy
   - Restarted fibers production in 2009
   - Diversified the business by adding PET and packaging capacity
   - Transformed portfolio and expanded high value-add fibers capacity by 60%
   - +26% Capacity
   - $280M* Accumulated EBITDA with invested capital of $170M
   - 13% ROCE ~2% of IVL’s capital employed

Note: *Invested capital = total capex made till Sep2019 plus net working capital as of Sep2019;
Financial results and operational metrics are calculated over the period from 2011 to LTM 3Q19 for SK Poland & Indonesia’s and from 2009 to LTM 3Q19 for IPI Rayong
Source: IVL Financials
This recipe enables IVL to sustain returns through the peaks and troughs of the chemicals cycle

Note: *IVL Combined PET Spread exclude the volumes of PTA and PX; Industry Integrated PET = PET spread + 0.86*PTA spread; PET spread = PET FOB China - (0.86*PTA Spot CFR China + 0.34*MEG ASP); PTA spread = PTA ICIS Spot, CFR China - 0.67 PX ASP:ACP 50:50; Combined PET include PET, PET HVA, PTA, PX, recycling, packaging, and specialty chemical; Operating cash flow return on investment = OCF / Net operating capital employed (excluding Spindletop); For assets acquired within the year or LTM, the EBIT is annualized to capture the full year impact

Source: IHS Markit, PCI, Platts, ICIS
IVL remains well positioned to benefit from key trends affecting the chemical industry

<table>
<thead>
<tr>
<th>Industry outlook</th>
<th>IVL position</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strong demand in North America</strong></td>
<td>Strong product portfolio in America with ~60% net capital employed serving the packaging, lifestyle hygiene and safety need of consumers</td>
</tr>
<tr>
<td>Overall GDP growth and a <em>growing</em> demand for chemicals</td>
<td></td>
</tr>
<tr>
<td><strong>Chemical cycle downturn</strong></td>
<td>Low-cost asset base and diversification allows IVL to outperform peers and remain resilient amid the slowdown</td>
</tr>
<tr>
<td>Petrochemicals industry facing a <em>period of overcapacity</em>, resulting in <em>lower margins</em></td>
<td></td>
</tr>
<tr>
<td><strong>China self-sufficiency</strong></td>
<td>Global asset-base outside China provides strategic hedge against overcapacity in China</td>
</tr>
<tr>
<td>China heavily investing in domestic capacity of key petrochemicals across the value chain</td>
<td></td>
</tr>
<tr>
<td><strong>Plastics Circularity</strong></td>
<td>Target to build a leading PET recycling business, leveraging our #1 position in PET</td>
</tr>
<tr>
<td>Growing <em>pressure on plastics use</em> and disposal from consumer; Mandates on <em>recycling targets</em></td>
<td></td>
</tr>
</tbody>
</table>

Note: IVL America net capital employed % is calculated based on IVL Sep2019 including Spindletop
Source: IVL Financials
What is clear is that we are currently at a low point in the chemical cycle

Integrated PET industry spread ($/t)

- Avg. = 252

- Avg. = 185

MEG industry spread ($/t)

- Avg. = 375

- Avg. = 115

PX industry spread ($/t)

- Avg. = 431

- Avg. = 259

PE industry spread ($/t)

- Avg. = 550

- Avg. = 307

Note: Integrated PET Spread = PET Spread + 0.86 PTA Spread; PET spread = PET ICIS Spot, FOB China – 0.86 PTA ICIS Spot, CFR China; PTA spread = PTA ICIS Spot, CFR China - 0.67 PX ASP:ACP 50:50; PX spread = PX ASP:ACP 50:50 – Naphtha; MEG spread = MEG ASP - 0.58 Ethylene Cash Cost (Naphtha); PE spread = Asia PE - Naphtha

Source: IHS Markit, PCI, Platts, ICIS
We have 5 strategic priorities to steer the business through the cycle and beyond

<table>
<thead>
<tr>
<th>Vision</th>
<th>Financial Aspiration</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>To be a world-class chemical company making great products for society</td>
<td>Double-digit ROCE in each core business</td>
<td>“We see change as an opportunity”</td>
</tr>
<tr>
<td></td>
<td>Top decile TSR relative to peers</td>
<td>“The customer is why we exist”</td>
</tr>
<tr>
<td></td>
<td>Strong cashflow across the cycle</td>
<td>“We are responsible”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Diversity is our strength”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Our people make the difference”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Differentiators</th>
<th>Metrics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scale Global PET leader</td>
<td>Lowest cost producer in core products</td>
</tr>
<tr>
<td>Global-local Close to customers in global core markets</td>
<td>Industry-leading margins</td>
</tr>
<tr>
<td>Integrated Value chain margin capture</td>
<td>Share of EBITDA from adjacency businesses</td>
</tr>
<tr>
<td>Diversified Through cycle resilient portfolio</td>
<td>Leading rPET player in core markets</td>
</tr>
<tr>
<td>Serial M&amp;A Programmatic, buy low, capture synergies</td>
<td>% of high-potential talent</td>
</tr>
</tbody>
</table>

Thrusts – Diversification and Circular Economy

<table>
<thead>
<tr>
<th>Must do</th>
<th>Thrusts</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Cost Transformation Accelerate performance through cost optimization</td>
<td>2 Asset Full Potential Focus on commercial excellence to grow revenues and margin</td>
</tr>
<tr>
<td>3 Adjacency Growth Pursue organic and bolt-on growth in attractive adjacencies</td>
<td>4 Recycling Leadership Build leading rPET business; set new bar for sustainability</td>
</tr>
</tbody>
</table>

Enabler

| Leadership Development Invest in and develop the best management team in the industry |

Source: IVL Business Plan
# Cost & Cash Optimization

IVL launched *Olympus*, a ~$350M cost transformation program.

## Corporate-Led Initiatives

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Impact $M</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERP</td>
<td>$35-40M</td>
</tr>
<tr>
<td>Global Business Solutions*</td>
<td>$25M</td>
</tr>
<tr>
<td>Digital</td>
<td>$30-35M</td>
</tr>
</tbody>
</table>

## Business Segment-Led Initiatives

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Impact $M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined PET**</td>
<td>$70-80M</td>
</tr>
<tr>
<td>IOD (incl. Spindletop)</td>
<td>$40-50M***</td>
</tr>
<tr>
<td>Fibers</td>
<td>$130-140M</td>
</tr>
</tbody>
</table>

*Note: *Includes deployment of global business solution across finance, IT and HR, as well as a broader transformation initiative of the finance function; **Combined PET includes PET, PET HVA, PTA, PX, recycling, packaging, and specialty chemical; ***Does not include savings from raw materials discounts (direct procurement) captured by 2023; Excludes Project Prosperity (specialty surfactants) |

Source: IVL Business Plan
2 Asset Full Potential - We are maximizing the growth and margin potential in each business

- **Enhance PET product portfolio** including the single-pellet solution
- **Expand packaging business** into new geographies and segments
- **Build a leading recycling business** with partnerships across the value chain (collectors to customers)

- **Backward integration into the cracker** to capture integrated margins
- **Expansion into new high value-added segments** e.g. surfactants
- **Increase capacity of EO, PO and MTBE** to underpin volume growth

- **Grow capacity and market share** in high growth/high margin segments
- **Strengthen collaborations** and long-term agreements with key customers
- **Invest in R&D and innovation** to maintain competitive advantage

Source: IVL Business Plan
### Adjacency Growth - We continue to monitor adjacent growth opportunities

<table>
<thead>
<tr>
<th>Integrated PET</th>
<th>PET packaging</th>
<th>Integrated Oxides and Derivatives</th>
<th>Fibers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong> Expand PET resin applications in food and homecare packaging</td>
<td><strong>2</strong> Enter PET beverage packaging segment (beyond preforms)</td>
<td><strong>4</strong> Build capacity and capabilities in high margin specialty surfactants</td>
<td><strong>6</strong> Enter industrial and medical markets for polyester/nylon fibers</td>
</tr>
<tr>
<td><strong>3</strong> Create integrated PET packaging business with attractive food, homecare, pharma verticals</td>
<td></td>
<td><strong>5</strong> Expand footprint in emerging markets with high growth potential</td>
<td><strong>7</strong> Develop new composite materials to capture attractive profit pool of carbon fiber</td>
</tr>
</tbody>
</table>

Source: IVL Analysis
Recycling Leadership – Recycling is a priority growth engine, with strong projected financial returns

rPET drives long-term industry growth in PET

Global PET demand (mt)

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2018</th>
<th>2030F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>17</td>
<td>26</td>
<td>42</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2018</th>
<th>2030F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>8</td>
<td>9</td>
<td>12</td>
</tr>
</tbody>
</table>

North America & Europe* PET demand (mt)

IVL has put in place a recycling strategy

Vision

“To reinvent PET as a trusted and safe material”

2025 Targets for IVL

750kt of recycling capacity committed to Ellen MacArthur Foundation

~25% of IVL’s beverage PET portfolio in the West

12-14% ROCE

Note: *Europe market only considers EU28 countries which are member states of the European Union
Source: IVL Scenario Analysis, IVL Business Plan
Sustainability – IVL is also setting the standard for sustainability

**KEY SUSTAINABILITY AWARDS & RECOGNITIONS**

- #1 of global chemical companies
  - Overall ESG score: 4.6
- MSCI
  - ESG Rating: BB
- FTSE4Good
  - A constituent of the 2019 FTSE4Good Index
- Bloomberg
  - Leading company in 2019 SET Index
  - ESG Disclosure Scores

- 2019 Climate Change Rating: B
- 2018 Supply Chain Rating: B-
- 2019 DJSI World and DJSI Emerging Markets Indices
- #2 of global chemical companies

**ecovadis**
- Gold Recognition:
  - Top 3% of suppliers in all categories

**SET**
- SET Sustainability Awards 2018 Outstanding
- Thailand Sustainability Investment 2019

**KEY SUSTAINABILITY AWARDS & RECOGNITIONS**

- Leading company in 2019 SET Index
- ESG Disclosure Scores

**IVL**
- To be a World-class Chemical Company Making Great Products for Society
- Low Carbon Products
- Resource Reduction
- Climate Protection
- Circular Economy
- Operational Eco-efficiency
- Renewable Resources
- Carbon Footprint
- Recycling

**PEOPLE**
- Thought Leaders
- Robust Health, Safety and Well-being
- High Happiness Index
- Admired Employer
- Human Rights Protection
- Health & Safety
- Human Capital Development

**PLANET**
- Operational Eco-efficiency
- Renewable Resources
- Carbon Footprint
- Recycling

**PROSPERITY**
- Corporate Governance, Ethics & Transparency
- Sustainable Operations
- Innovation
- Digitalization

**OUTCOMES**
- Sustainable Products / Vitality Index
- EBITDA Growth / Top & Bottom Line Growth

**SUSTAINABILITY AWARDS & RECOGNITIONS**

- 2019 DJSI World and DJSI Emerging Markets Indices
- #2 of global chemical companies
Leadership Development – Continued investment in our leadership team

Indorama Management Council (IMC)

Aloke Lohia
GCEO

D K Agarwal
CEO – PET & IOD

Suchitra Lohia
Director

Indorama Business Council (IBC) – next generation of leaders

Uday Gill
CEO - Fibers

Sanjay Ahuja
CFO

Deepak Parikh
CSO

Roberto Bettini
CHRO
This focused strategy underpins our ambition to grow and sustain double-digit ROCE through the peaks and troughs of the chemical cycle.

IVL Core EBITDA ($B)

- Industry spread drop*
- IVL premium and mix effect
- Cost transformation
- Organic growth
- Projects

Note: *Include Integrated PET, MEG, EO and IPA spreads; **Only include new recycling projects – growth of existing recycling assets is recorded under organic growth; ***Based on current committed capex plans 2023 and projected new recycling investments; projection includes EBITDA from holding company of $-12M.

Source: IVL Business Plan, Industry Expert Interviews, IVL Analysis
IVL will continue to grow and register healthy cash flow in the next 4 years

### Overall financial performance

<table>
<thead>
<tr>
<th></th>
<th>LTM 3Q2019</th>
<th>2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume</td>
<td>12 mt</td>
<td>~17 mt*</td>
</tr>
<tr>
<td>EBITDA</td>
<td>$1.3B</td>
<td>$2.4-2.6B</td>
</tr>
<tr>
<td>Total cost initiatives</td>
<td>Ongoing</td>
<td>~$350M</td>
</tr>
<tr>
<td>Net operating capital employed</td>
<td>$7.6B</td>
<td>$10-11B</td>
</tr>
<tr>
<td>ROCE</td>
<td>9.8%</td>
<td>13-15%</td>
</tr>
</tbody>
</table>

*Note: *2023 volume excludes Spindletop’s captive production of EO, PO and cracker; **Debt service coverage ratio is ratio of EBITDA to debt servicing for Interest and principal payments

Source: IVL Business Plan
IVL expects to sustain strong cash flow and improve returns up to 2023

- Global PET producer with PTA integration in Asia & Europe
- + PTA integration in NA & IPA integration
- + Gas cracker in the US, Integrated EO and PO derivatives (surfactants, PO/MTBE)

**IVL Combined PET* Spread ($/t)**

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</tr>
</thead>
<tbody>
<tr>
<td>Spread</td>
<td>278</td>
<td>270</td>
<td>338</td>
<td>415</td>
<td>471</td>
<td>393</td>
<td>345</td>
<td>361</td>
<td>364</td>
<td>375</td>
</tr>
<tr>
<td>% of combined PET EBITDA</td>
<td>57%</td>
<td>54%</td>
<td>67%</td>
<td>68%</td>
<td>69%</td>
<td>74%</td>
<td>53%</td>
<td>52%</td>
<td>52%</td>
<td>50%</td>
</tr>
</tbody>
</table>

**Operating Cash Flow Return on Investment**

- 8% 10% 11% 12% 14% 10% 18% 9% 16% 11% 18% 13% 19% 15% 21%

**ROCE**

- 17% 18% 15% 15% 14% 14% 18% 15% 16% 18% 18% 15% 14% 21%

**Note:**
- IVL Combined PET Spread excludes the volume of captive raw materials (PTA, PX); Integrated PET = PET spread + 0.86*PTA spread; PET spread = PET FOB China - (0.86*PTA Spot CFR China + 0.34*MEG ASP);
- PTA spread = PTA ICIS Spot, CFR China - 0.67 PX ASP:ACP 50:50; Combined PET includes PET, PET HVA, PTA, PX, recycling, packaging, and specialty chemical;
- Operating cash flow return on investment = OCF / Net operating capital employed (excluding Spindletop); For assets acquired within the year or LTM, the EBIT is annualized to capture the full year impact.

Source: IVL Financials; IHS Markit; PCI; Platts; ICIS;
Our strategy also enables IVL to deleverage our balance sheet over the next 3 years.

**CAPEX Plan (in $B)**

- Combined PET Growth CAPEX
- Fibers Growth CAPEX
- Corporate Initiatives
- IOD Growth CAPEX
- Maintenance CAPEX
- Net Debt/Equity(x)

- Net D/E ratio to remain below the financial covenants of 2.0x and internal threshold of 1.5X.
- IVL will deleverage the balance sheet down with D/E projected to be below 1.0X from 2022.

Note: *Jan 2020F CAPEX only includes Spindletop acquisition
Source: IVL Business Plan
Key messages: IVL Journey

1. IVL’s strong growth is predicated on a strategy of integration along the value chain while building a scalable, attractive and resilient portfolio.

2. Our financial performance has been strong through the peaks and troughs of the chemicals cycle, supported by an advantaged cost position and diversified portfolio.

3. Going forward, IVL will pursue 5 strategic themes: optimize costs, achieve asset full potential, capture adjacency growth, seek recycling leadership and strengthen our leadership bench.

4. We expect to deliver savings of ~$350M by 2023 through Olympus, a cost transformation program that we launched this year.

5. This strategy supports our ambition to produce double-digit ROCE, generate strong cash flow across the cycle while delivering top decile returns to stakeholders.
COST & EFFICIENCY TRANSFORMATION

Dr. Deepak Parikh
Chief Strategy Officer
Over last 20 years, IVL has acquired and integrated >50 businesses

IVL has successfully integrated each business through several key actions:

- **Improving operating rates** of the asset
- **Consolidating procurement** (raw materials)
- **Eliminating duplicate fixed costs**
- **Sharing best-in-class practices** across sites

Source: IVL Financials
IVL has launched the Olympus program to drive deeper integration and cost efficiency across the portfolio.

**Objectives of Olympus***

1. Streamline the portfolio of sites
2. Eliminate duplication of all resources and spend
3. Standardize systems and processes
4. Deepen best-in-class practice sharing across sites

**Corporate-led initiatives**

Corporate-led ‘future-ready’ initiatives with savings of $90-100M** by 2023 identified:
- Shared Services
- Digital Transformation
- Enterprise Resource Planning (ERP)

**Business segment-led initiatives**

Business-led excellence initiatives with savings of $240-270M** by 2023 built in to business plans
- Manufacturing Excellence
- Procurement
- Supply Chain
- SG&A/ Functional Excellence

Note: *Olympus program do not include savings from raw materials discounts (direct procurement) captured by 2023, amounting to $42M; **All savings figures are on a 2023 run-rate basis and exclude CAPEX*

Source: IVL Business Plan
3 corporate-led business transformation programs will unlock ~$90-100M

1. **ERP (SAP S/4HANA)**
   - Support core operational business processes such as procurement, supply chain and manufacturing
   - Create single-source of truth for all information to enable decision-making
   - Estimated savings: $35-40M 2023 run-rate EBITDA impact

2. **Global business solution (GBS)**
   - Improve business efficiency by centralizing finance and procurement
   - Relocate repetitive or standard activities in low cost locations
   - Estimated savings: ~$25M* 2023 run-rate EBITDA impact

3. **Digital**
   - Drive data-driven decision making across operations in all sites
   - Scale-up 9 pilots across manufacturing, production planning, inventory and sales
   - Estimated savings: $30-35M 2023 run-rate EBITDA impact

Note: *Includes deployment of global business solution across finance, IT and HR, as well as a broader transformation initiative of the finance function; All savings figures are on a 2023 run-rate basis and exclude CAPEX

Source: IVL Business Plan
~$35-40M in savings identified by 2023 from ERP implementation

<table>
<thead>
<tr>
<th>Area</th>
<th>Savings Identification</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procurement</td>
<td>Reduce indirect procurement spend by consolidating purchases across IVL, enabled by standardization of materials and vendors</td>
<td>$25-30M</td>
</tr>
<tr>
<td>Operations</td>
<td>Optimize MRO supplies and reduce unplanned maintenance cost by standardizing maintenance strategies and processes</td>
<td>~$20M</td>
</tr>
<tr>
<td>IT</td>
<td>Application cost avoidance by replacing current ERP systems and legacy IVL applications (potentially replaced by S/4)</td>
<td></td>
</tr>
<tr>
<td>Finance</td>
<td>Improved finance reporting productivity by deploying integrated reporting capabilities and speeding up closing cycles</td>
<td>$5-7M</td>
</tr>
<tr>
<td>HR</td>
<td>Improved HR Function Productivity by enabling global talent visibility and analytics through a single source of truth</td>
<td></td>
</tr>
<tr>
<td>OPEX</td>
<td>Recurring OPEX from year 4 onwards incl. infrastructure connectivity &amp; support, application licensing and reduction in IT People Cost</td>
<td>($15M)</td>
</tr>
</tbody>
</table>

Total savings: $35-40M*

Note: * All savings figures are on a 2023 run-rate basis and exclude CAPEX
Source: IVL Business Plan
Global business solutions will save ~$25M* across several functions

IVL is setting up the GBS

**Global hub**
- India

**Regional spoke (options)**
- China
- Czech Republic
- Poland
- Malaysia
- Philippines
- Thailand

Will optimize several functions...

- Finance & Accounting
- IT
- Procurement
- HR

...yielding benefits of ~$25M

**Savings of $17M by 2023**
from GBS deployment (run-rate)

**Savings of $9M by 2023**
from other finance transformation initiatives

**Quality time for analytics**
vs. routine tasks

- Leveraging labor arbitrage in low cost market
- Right-sizing the organization
- Standardizing and improving quality of service

Note: *Includes deployment of global business solution across finance, IT and HR, as well as a broader transformation initiative of the finance function; All savings figures are on a 2023 run-rate basis and exclude CAPEX.

Source: IVL Business Plan
We have piloted several digital initiatives with tangible results

Selected pilot examples...

1. **Auriga Fibers**
   - **Production planning optimization**
     - 30% less transition cost
     - $300-600K EBITDA impact from transitions and polymer flow*

2. **IVXP**
   - **Reduction of PX losses across isomerization reactor**
     - Up to $400K annual impact on IVXP bottom line

...cumulatively leading to a $6-6.5M run rate impact

- Expected run rate impact: $6-6.5M
- Of which can already be validated: $1.9-2M
- Of which has been realized: $800K+
- 100+ IVL employees with hands-on digital experience

Note: *Subject to Auriga’s return to normal production & demand context
Source: IVL Business Plan
We will scale up our digital initiatives with $30-35M EBITDA upside by 2023

**Within manufacturing**

- Replicate current initiatives across sites
- Raise reliability through predictive maintenance

**Beyond manufacturing**

- Optimize indirect procurement spend
- Optimize global supply chain efficiency

**Ambition**

- Scale from 5 to 100+ production sites
- Reduction of unplanned down-time by 10-30%

**How?**

- Replicate analytics tools from pilot across global sites
- Implement predictive maintenance via digital twins

**EBITDA Impact by 2023**

- $12M run-rate
- $9M run-rate
- $11M run-rate

Note: All savings figures are on a 2023 run-rate basis and exclude CAPEX
Source: IVL Business Plan
3 business segment-led excellence programs will unlock $240-270M in savings by 2023

1. Manufacturing Excellence
   - Yield improvement via process improvements
   - Operational efficiency and reliability enhancements
   - Waste reduction in energy and raw material usage

   Estimated savings
   $130-140M
   2023 savings

2. Procurement* & Supply Chain Optimization
   - Consolidation of suppliers and contracts across assets
   - Renegotiation of discounts for indirect spend
   - Logistics optimization
   - Freight contracts consolidation and centralization

   Estimated savings
   $20-30M
   2023 savings

3. SG&A/Functional Excellence
   - Manpower optimization via improved productivity
   - Maintenance and factory overhead cost reduction

   Estimated savings
   $90-100M
   2023 savings

Note: All savings figures are on a 2023 run-rate basis and exclude CAPEX. *Does not include savings from raw materials discounts (direct procurement) captured by 2023, amounting to $42M.
Source: IVL Business Plan
In summary, Olympus is expected to yield $350M run-rate savings by 2023.

<table>
<thead>
<tr>
<th>Corporate-Wide Initiatives</th>
<th>Business Segment-Specific Initiatives</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ERP</strong> Enabling IVL to manage core operational processes Systems</td>
<td><strong>Combined PET</strong> Optimizing supply chain management, sourcing and manpower</td>
</tr>
<tr>
<td>$35-40M</td>
<td>$70-80M</td>
</tr>
<tr>
<td><strong>Global Business Solutions</strong>* Improving business efficiency and decision support</td>
<td><strong>IOD (incl. Spindletop)</strong> Integration synergies from Spindletop Improving yield via process improvement Backward integration of assets</td>
</tr>
<tr>
<td>$25M</td>
<td>$40-50M***</td>
</tr>
<tr>
<td><strong>Digital</strong> Building and enabling digital organization Transformation</td>
<td><strong>Fibers</strong> Improving yield via process improvement Consolidation and integration of assets</td>
</tr>
<tr>
<td>$30-35M</td>
<td>$130-140M</td>
</tr>
</tbody>
</table>

2023 run-rate EBITDA Impact $M

Note: *Includes deployment of global business solution across finance, IT and HR, as well as a broader transformation initiative of the finance function; **Combined PET includes PET, PET HVA, PTA, PX, recycling, packaging, and specialty chemical; ***Does not include savings from raw materials discounts (direct procurement) captured by 2023; Excludes Project Prosperity (specialty surfactants)

Source: IVL Business Plan
~$350M in savings will be unlocked via the IVL cost transformation

Run-rate savings from IVL cost transformation in $M, % of total savings

Note: *Procurement does not include savings from raw materials discounts (direct procurement) captured by 2023, amounting to $42M
Source: IVL Financials; IVL Business Plan
We have a governance framework to track and realize Olympus

Indorama Management Council (IMC)

Indorama Business Council (IBC)

Americas IBC (AmIBC)

Asia Pac. IBC (APIBC)

Europe IBC (EuIBC)

We have a governance framework to track and realize Olympus.

We have a governance framework to track and realize Olympus.

Portfolio / site optimization | People | Procurement & supply chain | Manufacturing excellence | Functional excellence (SG&A)

~$350M* Savings (run-rate) by 2023

Site 1  Site 2  Site 3  Site 4  Site 5  Site 6  Site 7  Site 8  ...  Site 119

Note: All savings figures are on a 2023 run-rate basis and exclude CAPEX. *Cost savings from Olympus program do not include savings from raw materials discounts (direct procurement) captured by 2023, amounting to $42M; Source: IVL Business Plan
The Olympus program is a first-of-its-kind program for IVL

- **Shared expertise** across organization
- **Supported** by the full leadership team
- **Responsible** for specific outcomes
- **Employee engagement**
- **Focused** on what’s important
- **Involved** every layer
- **Defining** company culture
- **Committed** to delivering savings

Source: IVL Business Plan
Key Messages: Cost & Efficiency Transformation

1. Over the last 20 years, IVL has successfully acquired and integrated >50 assets; however, we can continue to drive deeper integration and cost efficiency.

2. We have launched Olympus, a company-wide cost transformation program, whose objective is the delivery of ~$350M savings run-rate in 2023.

3. We are currently undertaking a number of Olympus corporate initiatives in ERP, shared services and digital transformation, with projected savings of $90-100M.

4. Each business segment has also developed Olympus cost excellence programs, amounting to a further $240-270M savings by 2023.

5. We have established a governance structure, led by the Indorama Management Council, to monitor and ensure the delivery of Olympus.
COMBINED PET
Integrated PET, Packaging, Specialty Chemical

Mr. DK Agarwal
Chief Executive Officer – Combined PET and IOD Business
IVL is the world leader in PET

Largest global PET resin producer

2019 PET production by producer:

- IVL: 20%

Strong financial performance and contribution*
(LTM 3Q2019)

- 58% IVL EBITDA**
- ~$940M EBITDA
- 11% EBITDA Margin
- 14% ROCE

Integrated and resilient business

- 80%+ PTA Integration
- Top quartile cost position
- 59 manufacturing sites in 22 countries

Note: *Financial performance figures are for Combined PET (PET, PTA, PX, Packaging, Specialty Chemical); **EBITDA contribution value is based on IVL pro-forma including Spindletop
Source: IVL Financials
PET expected to continue be the material of choice for beverage packaging

**PET share of beverage packaging has and expected to continue to grow**

Non-alcoholic beverage packaging by material type (T units)

<table>
<thead>
<tr>
<th>Material Type</th>
<th>2006</th>
<th>2018</th>
<th>2030F</th>
</tr>
</thead>
<tbody>
<tr>
<td>PET bottles and jars</td>
<td>0.8</td>
<td>1.2</td>
<td>1.6</td>
</tr>
<tr>
<td>Other rigid plastic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flexible packaging</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glass</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liquid cartons</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PET share of beverage packaging has and expected to continue to grow and expected to continue to be the material of choice for beverage packaging (in T units)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**PET growth drivers**

**Past**
- Economical
- Lightweight
- Ergonomics (e.g. gas seal, resealable)

**Future**
- Low carbon footprint (i.e. GHG emissions)
- Recyclable
- Economical

Source: Euromonitor, IVL Analysis
Spreads to remain normalized in the near term given low utilization

Integrated PET Spreads

Note: Spreads = PET FOB China - (PTA Spot CFR x 0.86 + MEG ICIS Spot NEA x 0.34)
Source: Wood Mackenzie, IVL Analysis
IVL PET has an advantaged cost position to weather the currently low spread environment.

**US Cost Curves (2019)**

<table>
<thead>
<tr>
<th>Capacity (mt)</th>
<th>Total cash cost ($/t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>0.5</td>
<td>500</td>
</tr>
<tr>
<td>1</td>
<td>1,000</td>
</tr>
<tr>
<td>1.5</td>
<td>1,500</td>
</tr>
<tr>
<td>2</td>
<td>2,000</td>
</tr>
<tr>
<td>2.5</td>
<td>2,500</td>
</tr>
<tr>
<td>3</td>
<td>3,000</td>
</tr>
</tbody>
</table>

- **PET Import parity to US – 2019 (YTD)**

**EU28 Cost Curves (2019)**

<table>
<thead>
<tr>
<th>Capacity (mt)</th>
<th>Total cash cost ($/t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>0.5</td>
<td>500</td>
</tr>
<tr>
<td>1</td>
<td>1,000</td>
</tr>
<tr>
<td>1.5</td>
<td>1,500</td>
</tr>
<tr>
<td>2</td>
<td>2,000</td>
</tr>
<tr>
<td>2.5</td>
<td>2,500</td>
</tr>
<tr>
<td>3</td>
<td>3,000</td>
</tr>
</tbody>
</table>

- **PET Import parity to Europe**

Note: Cost Curve for 9-month 2019; *PET Import parity price = ICIS PET China FOB + Duty + Ocean freight + Interest + Local freight from China to the respective region; Europe PET cash costs are lower than the US due to lower PTA feedstock costs in Europe.

Source: Industry Data, IVL Analysis
We are implementing a strategy to strengthen our leadership position across the PET value chain

**Vision**
To add value to our customers and the environment by delivering superior packaging solutions

**Aspiration**

<table>
<thead>
<tr>
<th>Maintain double-digit ROCE</th>
<th>Deepen cost advantage vs. peers</th>
<th>Become the leader in circular PET</th>
</tr>
</thead>
</table>

**Strategic priorities**

1. **Operational efficiency and cost reduction**
   - Deliver Olympus cost transformation targets
   - Turnaround IPA business

2. **Core business growth**
   - Deliver Corpus Christi
   - Expand high-value-added portfolio
   - Explore investments in developing market outside China

3. **Recycling**
   - Expand mechanical recycling footprint
   - Develop chemical recycling solutions
   - Build PET circular value chain

4. **Adjacency growth**
   - Enter new applications and market segments
   - Diversify into attractive packaging segments

**Metrics**

<table>
<thead>
<tr>
<th>Cost savings and yield improvement</th>
<th>IVL market share in key geographies</th>
<th>Recycling capacity and returns</th>
<th>EBITDA contribution beyond beverage resins</th>
</tr>
</thead>
</table>

Source: IVL Business Plan
Olympus will unlock ~$80M cost savings by 2023

<table>
<thead>
<tr>
<th>Program</th>
<th>Initiatives</th>
<th>Savings* (2023 run-rate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing Excellence</td>
<td>• Factory workforce productivity improvement</td>
<td>$60-70M</td>
</tr>
<tr>
<td></td>
<td>• Plant automation and installation of predictive maintenance</td>
<td></td>
</tr>
<tr>
<td>Indirect Procurement &amp; Supply Chain Optimization</td>
<td>• Change in Chemicals &amp; Additives to optimize costs &amp; consumption</td>
<td>$5M</td>
</tr>
<tr>
<td></td>
<td>• Logistics optimization</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Change of cargo transportation provider, e.g., in Turkey</td>
<td></td>
</tr>
<tr>
<td>SG&amp;A/ Functional Excellence</td>
<td>• Manpower headcount optimization initiatives across all regions</td>
<td>$15M</td>
</tr>
</tbody>
</table>

Note: *All savings figures exclude CAPEX
Source: IVL Business Plan
Beyond 2020, adjacent packaging growth opportunities will be explored

### PET packaging opportunities

<table>
<thead>
<tr>
<th></th>
<th>Beverage</th>
<th>Food</th>
<th>Homecare</th>
<th>Pharma</th>
<th>Beauty &amp; Personal Care</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Market size</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>Attractive</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-alcoholic</td>
<td>Neutral</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alcoholic</td>
<td>Less attractive</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Growth rate</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>Attractive</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-alcoholic</td>
<td>Neutral</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Alcoholic</td>
<td>Less attractive</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Profitability</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>Attractive</td>
<td></td>
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<tr>
<td>Non-alcoholic</td>
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</tr>
<tr>
<td>Alcoholic</td>
<td>Less attractive</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Beverage**
  - Water: Large market for packaging, one-step adjacency for IVL from current preforms business
  - Non-alcoholic: Large market with similar customer profile (major FMCGs)
  - Alcoholic: Growing market for PET given substitution trends

- **Food**
  - Large market with similar customer profile (major FMCGs)

- **Homecare**
  - Growing market for PET given substitution trends

- **Pharma**
  - Fast growing and profitable; requires approvals and R&D

- **Beauty & Personal Care**

**Source:** Smithers Pira; Euromonitor; Interviews with industry participants
Specialty chemicals: IPA business turnaround is underway

IPA business is underperforming...

Core EBITDA ($M)

<table>
<thead>
<tr>
<th></th>
<th>LTM 3Q18</th>
<th>LTM 3Q19</th>
<th>2023F</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPA</td>
<td>115</td>
<td>61</td>
<td>~190</td>
</tr>
<tr>
<td>NDC and PET HVA</td>
<td>57</td>
<td>83</td>
<td>-22</td>
</tr>
</tbody>
</table>

...and IVL is taking action to push for a recovery

1. Drive an increase in demand commercial excellence initiatives
to increase use of IPA vs other competing feedstocks

2. Convert IPA line to flexible PTA/IPA line
to allow capacity adjustment based on market conditions

3. Optimize feedstock through tolling agreements

IPA Asia Spreads ($/t)

Note: "LMF – Low Melt Fibers; UPR – Unsaturated Polyester Resin"
Source: IVL Business Plan, IVL Financials
Combined PET segment will grow and register healthy cash flow

### Overall financial performance

<table>
<thead>
<tr>
<th></th>
<th>LTM 3Q2019</th>
<th>2023</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Volume</strong></td>
<td>10 mt</td>
<td>~13 mt</td>
</tr>
<tr>
<td><strong>EBITDA</strong></td>
<td>$0.9B</td>
<td>$1.2-1.3B</td>
</tr>
<tr>
<td><strong>Net operating capital employed</strong></td>
<td>$4.4B</td>
<td>~$5B</td>
</tr>
<tr>
<td><strong>ROCE</strong></td>
<td>14%</td>
<td>&gt;15%</td>
</tr>
</tbody>
</table>

Note: *EBITDA bridge excludes any potential adjacency growth opportunities (e.g. building a fully-fledged packaging business)*

Source: IVL Business Plan
Key Messages: Combined PET

1. PET demand projected to grow as it remains the material of choice for many packaging applications given its superior functional and environmental properties.

2. PET spreads likely to remain thin due to low industry utilization; IVL is best-positioned to weather this given our scale, leading cost position and presence outside China.

3. IVL is pursuing a strategy to maintain double-digit ROCE, strengthen our cost advantage and lead the circular economy for PET through a leading rPET business.

4. We are implementing Olympus to improve operational efficiencies and reduce costs across our sites.

5. IVL will explore attractive adjacency growth opportunities, especially in other packaging sectors where we can leverage our existing capabilities and therefore have a “right to win.”
COMBINED PET

Recycling & Sustainability

Mr. Yash Lohia
Chief Recycling Officer
rPET is a new growth engine for PET

**Targets**
- Plastic bottles from at least 50% recycled material by 2030 (in Europe)
- 25% recycled content in plastics packaging by 2025
- 35% rPET in all PET bottles by 2025
- Bottles made from 100% rPET by 2021 (in major water markets)

**Quotes**
- “What we really need is a war on waste, not a war on plastics… we need to focus on materials that have economic value to be re-used again. Plastic PET bottle is one of them.”
  James Quincey, Coca cola CEO
- “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, Danone Argentina Director of Research and Innovation
- “PET is chosen due to the significantly lower carbon footprint than alternatives. …Plastic is also much cheaper.”
  Marina Bay Sands SG

**Products launched**

*Source: FMCG company websites; One Young World 2019 James Quincey Speech*
IVL has a clear strategy to be the leader in rPET

**Vision**

To reinvent PET as a trusted and safe material

**Mission**

To serve the needs of IVL’s customers by building a leading, differentiated and economically attractive recycling business

**Strategic priorities**

1. **Global one-stop solution**
   - Build global scale leveraging IVL’s extensive global footprint

2. **Cost leadership**
   - Create best-in-class assets, leveraging 30 years of IVL’s recycling experience

3. **Integration**
   - Integrate across multiple technologies to make high quality products

4. **Ecosystem**: Develop and integrate the circular ecosystem for PET

**2025 Targets**

- 750kt of rPET production
- ~25% of IVL’s beverage PET portfolio in the West
- 12-14% ROCE

Source: IVL Business Plan
We have 5 key areas of differentiation that underpin our ambition

1. **IVL’s extensive global footprint**
   - Ability to **leverage existing PET production and distribution network** to serve customers
   - **One-stop solution for virgin PET & rPET**

2. **Customer intimacy and trust in IVL brand**
   - Ability to **leverage relationship and trust with global brands** that IVL has developed
   - **High quality products that serve customers’ needs**

3. **Leveraging the recycling know-how from Wellman**
   - 30+ years of recycling experience
   - **know how on bottle washing, customizable by geography**

4. **Partnership with leading innovators to develop of the next-gen technology**
   - **ioniq**
   - Collaborated to create the first ever PET bottle made from marine plastic waste

5. **Partnerships with leaders in PET circular economy to drive the ecosystem**
   - **loop Industries**
   - JV to retrofit chemical recycling technology to existing PET facilities
We plan to scale recycling capacity to 750,000 tons, while achieving a double-digit ROCE.

### Capacity (kt)
- **Asia**
- **EMEA**
- **Americas**

<table>
<thead>
<tr>
<th>Year</th>
<th>Capacity (kt)</th>
<th>ROCE (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>160</td>
<td>10%</td>
</tr>
<tr>
<td>2023F</td>
<td>440</td>
<td>12-14%</td>
</tr>
<tr>
<td>2024F/2025F</td>
<td>750</td>
<td>12-14%</td>
</tr>
</tbody>
</table>

**ROCE (%)**
- **10%**
- **12-14%**
- **12-14%**

**Note:** ROCE shown here is only for Flake and rPET. SPS and rFiber ROCE not included.

Source: IVL Business Plan
Key messages: Recycling & Sustainability

1. rPET is a new growth engine for PET given its 100% recyclability; suppliers and users are setting high aspirations for rPET use.

2. IVL has a clear recycling strategy and will build upon our #1 PET position to remain the leader in rPET.

3. We have a competitive advantage in rPET, driven by our global footprint, recycling expertise and strong partnerships across the circular value chain.

4. We are investing in expanding our recycling capacity with a target to hit 750kt by 2025 while leading the development of the circular PET ecosystem.
INTEGRATED OXIDES & DERIVATIVES (IOD)

Mr. DK Agarwal
Chief Executive Officer – Combined PET and IOD Business
IVL has built a large and diversified IOD business

IOD represents an increasingly large and profitable portion of IVL
(LTM 3Q2019 incl. Spindletop pro-forma)

- **28%** of IVL EBITDA*
- **$455M** EBITDA
- **22%** EBITDA margin
- **11%** ROCE

**Spindletop brings further scale and business diversification**

US EO capacity in 2019 (kt)

<table>
<thead>
<tr>
<th></th>
<th>IVL+ Spin. pro-forma</th>
<th>Spin.</th>
<th>IVL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1010</td>
<td>590</td>
<td>420</td>
<td></td>
</tr>
</tbody>
</table>

IVL becomes the second largest Ethylene Oxide producer in the US

Breakdown of IVL IOD portfolio, EBITDA ($M)

- **455**
- **57** MTBE
- **90** EG
- **307** HVA & Derivatives**
- **95**
- **27**
- **67**

**Additional $60-70M in 2020 from IVOL**

Note: *EBITDA contribution value is based on IVL pro-forma including Spindletop; **Include EOA, LAB, Surf, PO, PG and EO; EG – Ethylene Glycol; EO – Ethylene Oxide; PO – Propylene Oxide; PG – Propylene Glycol; EOA – Ethanolamines; LAB – Linear Alkyl Benzene
Source: Wood Mackenzie; IVL Financials; IVL Analysis
We are structurally advantaged from US shale and superior PO technology.

**Global Ethylene Cash Cost***

- $t
- Cumulative capacity (%)
- Marginal producer $/t
- North America Ethane
- ME Ethane
- ME LPG
- WE Naphtha
- Mixed Feed RoW
- NEA LPG
- NEA Naphtha
- SEA Naphtha
- ME Naphtha
- North America Ethane
- WE Naphtha
- Mixed Feed RoW
- NEA LPG
- NEA Naphtha
- SEA Naphtha
- ME Naphtha
- Gas

**Global Integrated MEG Cash Cost***

- $t
- Cumulative capacity (%)
- Marginal producer $/t
- North America Ethane
- ME Ethane
- ME LPG
- WE Naphtha
- Mixed Feed RoW
- NEA LPG
- NEA Naphtha
- SEA Naphtha
- ME Naphtha
- Gas

**Global PO Cash Cost**

- $t
- PO-TBA & PO-SM
- HPPO, CHPO, Cumene PO
- Spindletop Technology (PO-TBA) & Shale Gas Advantage

Notes:
- All cash costs don’t include freight (factory gate).
- *2019 cash cost for Ethylene and MEG.
- **Avg. 2014-18 cash cost for PO.
- Spindletop uses PO-TBA (propylene oxide / tertiary butyl alcohol) technology, which yields both PO and MTBE from Propylene and Isobutane.
- ME – Middle East; WE – Western Europe; NEA – North East Asia; SEA – South East Asia

Source: IHS Markit, Nexant, IVL Analysis
IOD has a focused strategy to grow and further increase margins

**Vision**
To be a leading downstream producer in a high growth market leveraging low cost feedstock

**Aspiration**
- Build an integrated IOD value chain
- Maintain double digit ROCE
- Expand HVA share in portfolio

**Strategic priorities**

1. **IVOL cracker operations**
   - Stabilize IVOL (Lake Charles) cracker operations
   - Ensure best-in-class operating rates for Lake Charles cracker

2. **Spindletop integration**
   - Consolidate SG&A and restructure organization in Spindletop
   - Improve yields, reduce waste and leverage benefits from ethylene integration via IVOL
   - Improve reliability of IVOL and IVOG by exploiting technical capabilities acquired with Spindletop

3. **Portfolio enhancement to HVA**
   - Expand into high margin specialty surfactants via Project Prosperity
   - Explore attractive adjacencies in the propylene (oxide) value chain
   - Leverage Spindletop R&D and innovation capabilities to explore new specialty chemicals

**Metrics**

<table>
<thead>
<tr>
<th>IVOL cracker operating rates</th>
<th>% of Spindletop synergies captured</th>
<th>Asset reliability / downtime %</th>
<th>EBITDA share from HVA products</th>
</tr>
</thead>
</table>

Source: IVL Business Plan
Spindletop has expanded our global manufacturing and R&D footprint

### Assets before 2020
- IVOG, Clear Lake, TX
- IVOL, Lake Charles, LA

### New Assets 2020 - Spindletop
- Port Neches, TX
- Chocolate Bayou, TX
- Dayton, TX
- Ankleshwar, India
- Botany, Australia

### R&D and Technical Services
- Brussels, Belgium
- Shanghai, China
- The Woodlands, TX
- Mumbai, India
- Sao Paulo, Brazil
- Melbourne, Australia
Spindletop integration will yield ~$45M in cost synergies, and bring new capabilities to IVL

**~$45M savings/synergy** to be captured by 2023*

**Organizational consolidation**
- Organizational consolidation at Spindletop and IVOL

**Operational Excellence**
- Ethylene *yield improvement* at Spindletop
- Ethylene *backward integration* at IVOL
- Improved *reliability* and reduced *downtime* from technology transfer / sharing among assets

**R&D capabilities**
- 6 R&D centers with ~50 researchers
- 200+ active *patents* and ~200 pending
- Portfolio of *specialty chemicals* for surfactants and niche applications in agrochemical, O&G
- Facilities dedicated to *customized formulations* (e.g. Dayton site)

**Commercial capabilities**
- Wide and longstanding *customer base*

*Note: *Run-rate basis
Source: IVL Business Plan
Spindletop increases IVL’s margins and provides a platform for further expansion into high value-added products

We are exploring further downstream options e.g. specialty surfactants

**Specialty Surfactants**
Project Prosperity launched with target of ~$60M EBITDA by 2022 onwards

**Adjacent Opportunities**
Other downstream opportunities e.g. in the PO value chain will be explored in the medium term

---

Spindletop acquisition enables IVL to move into higher value-add products

**IVL contribution margin (2015-19 average)**
Per ton, EG = 1X

- **Opportunity from 100% Propylene Integration**
- **20% Propylene Integration (current business)**

**Avg contrib. margin = 1.5X**

- 1X
- 1.4X EG
- 1.5X EO
- 2.0X EOA
- 3.1X Surfactants

**IVL Production Volume (%)**
- 20%
- 40%
- 60%
- 80%
- 100%

**IVOG + IVOL**

**Spindletop**

Note: *Average contribution margin 2014-19, with 100% ethylene integration and 20% propylene integration; Contribution margin is revenue minus all variable costs. Volumes include Spindletop pro-forma. EG – Ethylene Glycol; EO – Ethylene Oxide; EOA – Ethanolamines; PO – Propylene Oxide; MTBE - Methyl Tertiary Butyl Ether
Source: IHS Markit, Wood Mackenzie, IVL Business Plan; IVL Analysis
Integrated Oxides segment projected to grow to ~$700M EBITDA

Overall financial performance

<table>
<thead>
<tr>
<th></th>
<th>LTM 3Q2019*</th>
<th>2023**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume</td>
<td>2.2 mt</td>
<td>~2.5 mt</td>
</tr>
<tr>
<td>EBITDA</td>
<td>$455M</td>
<td>~$700M</td>
</tr>
<tr>
<td>Net operating capital employed</td>
<td>$2.6B</td>
<td>~$3B</td>
</tr>
<tr>
<td>ROCE</td>
<td>11%</td>
<td>~13%</td>
</tr>
</tbody>
</table>

Note: *Figure as of LTM 3Q2019 including IVOG, pro-forma Spindletop, excluding IVOL; **Figures include IVOG, Spindletop, IVOL; ***Includes Project Prosperity but excludes integration cost synergies, that is captured under Cost synergies; Production volume excludes Spindletop’s captive production of EO and cracker.

Source: IVL Financials; IVL Business Plan.
Key Messages: Integrated Oxides

1. With the acquisition of Spindletop, IVL has built a large and diversified IOD business from Huntsman that complements our existing Integrated PET and Fibers segments.

2. A critical element is that across our portfolio, IVL has a structural cost advantage from low cost shale gas feedstock in the US, allowing for higher margins through the cycle.

3. IVL IOD has set out clear growth plans to fully integrate and capture the EBITDA upside from IVOL and Spindletop by 2023 while maintaining double-digit ROCE.

4. We have completed the start up of our Lake Charles cracker at IVOL to fully realize the benefits from backward integration of ethylene.

5. The integration of IVOL and Spindletop will lead to cost synergies of ~$45M and ~$60M EBITDA upside from specialty surfactants by 2023, in addition to significant R&D and innovation capabilities.
Mr. Uday Gill
Chief Executive Officer – Fibers business
Fibers has been organized into 3 application-focused verticals

- Mobility: Revenue: ~$1B
  - Airbags
  - Seatbelts
  - Tire reinforcements

- Hygiene: ~$1B
  - Baby diapers
  - Adult incontinence
  - Feminine care

- Lifestyle: ~$1.5B
  - Clothing & active wear
  - Fire retardant apparel
  - Fabrics & home textile

**50 manufacturing sites in 19 countries**

**Fibers performance**
(LTM 3Q2019)

- **15%** of IVL EBITDA*
- **$244M** EBITDA
- **8%** EBITDA margin
- **3%** ROCE

**Clear objectives driving business transformation**

1. Reduce complexity and fragmentation
2. Create lean and empowered verticals led by champions
3. Enhance customer centricity and intimacy to improve value

**Note:** EBITDA contribution value is based on IVL pro-forma including Spindletop
Source: IVL Business Plan; IVL Analysis
Each vertical has very strong underlying growth drivers

**Mobility**
- Higher number of airbags/car driving demand above automotive sales
- Replacement demand for tires outpacing automotive demand
- Lowering emission with lighter, more sustainable fibers and composites

**Hygiene**
- Population, modern retailing and higher per capita income in EMs
- Aging population creating demand for adult incontinence in affluent markets
- New functionalities for medical and skin care leading to new growth area

**Lifestyle**
- Affluence and urbanization creating new class of consumers
- New materials leading to high demand in athleisure segment
- Increasing focus on sustainability creating new opportunities

**Addressable Market & Volume CAGR ’18-’23**

- Mobility: $25-30B, ~5%
- Hygiene: $10-15B, ~5%
- Lifestyle: $70-80B, ~3%

Source: Wood Mackenzie; IVL Analysis
We continue to identify and enter in attractive segments, to complement the commodity business.
Fibers is exploring expansion into adjacent sub-segments

<table>
<thead>
<tr>
<th>Material</th>
<th>Segment</th>
<th>Apparel</th>
<th>Home</th>
<th>Hygiene</th>
<th>Mobility</th>
<th>Industrial</th>
<th>Medical</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>clothing, sportswear</td>
<td></td>
<td></td>
<td>Fem care, diapers</td>
<td>airbag, tires, belts</td>
<td>protective, filter, insulation</td>
<td>gowns, disposables</td>
</tr>
<tr>
<td>Polyester</td>
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<td>Nylon</td>
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<tr>
<td>Composites</td>
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</tbody>
</table>

Note: Heat map scoring by multiplying the market size of each sub-segment with its growth rate and gross profit margin (e.g. insulation)
Source: Smithers Pira; Grand View Research; Interviews with industry participants; IVL Analysis
Fibers has developed a strategy to double EBITDA by 2023

**Mission**

*Continuously transform to maintain leadership by providing sustainable solutions for our customers*

**Aspirations**

<table>
<thead>
<tr>
<th>Double digit ROCE</th>
<th>Double EBITDA</th>
<th>65% EBITDA share</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>in each vertical</em></td>
<td><em>every 5 years</em></td>
<td><em>from innovative products</em></td>
</tr>
</tbody>
</table>

**Strategic priorities**

1. **Mobility**
   - Expand capacity by 100 kt and increase utilization by ~9ppt
   - Strengthen collaboration with tire, airbag, auto suppliers to increase Share of Wallet
   - Accelerate new product development and commercialization in composites

2. **Hygiene**
   - Expand capacity by 140 kt and increase utilization by ~7ppt
   - Accelerate development and commercialization of new products with improved functional and environmental properties
   - Diversify into medical offerings

3. **Lifestyle**
   - Expand capacity by 550 kt and increase market share by 2%
   - Expand sustainable fibers offerings through Deja (100% rPET) and iCare
   - Diversify into sensitive skin-friendly intimate apparel

**Metrics**

- **Operational Excellence:** Olympus savings realized
- **Capital efficiency:** NWC reduction
- **Innovation:** % of revenue from new products (ongoing)
- **Commercial:** # of partnerships with key customers

Source: IVL Business Plan

Deliver the *Olympus cost transformation*, asset turnaround and integration in each vertical (~$130M)
We are embarking on a ~130M cost transformation program under Olympus

<table>
<thead>
<tr>
<th>Cost efficiency within each asset</th>
<th>Consolidation and integration of assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>• <strong>Manpower</strong> rationalization and AI / automation $35M</td>
<td>• <strong>Consolidation and integration</strong> within business verticals, e.g. corporate function centralization, footprint optimization $20M</td>
</tr>
<tr>
<td>• <strong>Cost innovations in operations</strong> e.g. utilities, chemical, additives and packing $30M</td>
<td>• <strong>Modernization</strong> of PF Mexico asset and GLLV winder and fiber automation $10M</td>
</tr>
<tr>
<td>• <strong>Yield improvement</strong> via manufacturing excellence initiatives $25M</td>
<td>• <strong>Integration</strong> of Trevira with Sinterama and capture of combination synergies $10M</td>
</tr>
</tbody>
</table>

$90M savings at run rate in 2023

$40M savings at run rate in 2023

Source: IVL Business Plan
IVL is consistently innovating to extend our market lead

Over 21% of our revenues is from products developed in the last 5 years, supported by a pipeline of products

- Light weight car seat with IVL TecTape Hybrid Roving
- Flame retardant, UV-resistant yarn for outdoor applications
- Heavy metal free fibers commercialized at multiple sites

AVK Innovation Award @ Composites Europe Fair 2019

Brandenburg Innovation Award for Plastics and Chemistry 2019

For sensitive skin, targeting intimate wear and baby diapers

Source: IVL Press Release
### Overall financial performance

<table>
<thead>
<tr>
<th></th>
<th>LTM 3Q2019</th>
<th>2023</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Volume</strong></td>
<td>1.6 mt</td>
<td>~2 mt</td>
</tr>
<tr>
<td><strong>EBITDA</strong></td>
<td>$245M</td>
<td>~$500M</td>
</tr>
<tr>
<td><strong>Net operating capital employed</strong></td>
<td>$2.4B</td>
<td>~$2B</td>
</tr>
<tr>
<td><strong>ROCE</strong></td>
<td>3%</td>
<td>~15%</td>
</tr>
</tbody>
</table>

**EBITDA ($M)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>211</td>
</tr>
<tr>
<td>Cost transformation</td>
<td>130</td>
</tr>
<tr>
<td>Organic growth</td>
<td>500</td>
</tr>
<tr>
<td>Projects</td>
<td>2023F</td>
</tr>
</tbody>
</table>

**Source:** IVL Business Plan
Key Messages: Fibers

1. IVL remains focused on delivering the full potential of our strategically acquired assets via integration and consolidation in 3 verticals (mobility, hygiene, lifestyle).

2. Each vertical is projected to have sustainable growth driven by structural increases in per capita income and evolving customer needs in safety, hygiene and performance.

3. The Fibers segment is focused on doubling EBITDA in the next 5 years and achieving a double-digit ROCE via an integrated strategy and turnaround plan.

4. Olympus has been launched to enhance our value with improved operational efficiency in each site and a consolidation/integration across multiple sites.

5. IVL aims to further cement our leadership position by deepening customer intimacy through partnerships and driving innovation to create proprietary offerings.
LEADERSHIP DEVELOPMENT

Mr. Roberto Bettini
Chief Human Resources Officer
IVL’s HR strategy contains 3 pillars

**Structure & Succession**
- Establishment of 2 management councils to provide structure and clarity to our decision-making
- Groom IVL’s next generation of leaders who sit on the Indorama Business Council (IBC)

**Performance Management**
- Complete the design and implementation of IVL’s performance management system for all the levels below N-2*
- Progressively extend the methodology to all levels in the organization

**Leadership Development**
- Communicate IVL’s leadership model and competencies across the organization
- Undertake training for 1000 senior/middle managers and 2500+ junior managers in the next 4 years

*Note: *Performance management system for N-2 level is already in place

Source: IVL HR Plan
Structure and Succession - we have established two councils as part of our leadership structure

**Indorama Management Council (IMC)**

- Aloe Lohia
  - GCEO
- D K Agarwal
  - CEO – PET & IOD
- Uday Gill
  - CEO - Fibers
- Suchitra Lohia
  - Director
- Sanjay Ahuja
  - CFO
- Deepak Parikh
  - CSO
- Roberto Bettini
  - CHRO

**Indorama Business Council (IBC) – next generation of leaders**

Succession plan in place for the IBC with 63 successors identified; succession for next level in-progress

Source: IVL HR Plan
Performance management – an integrated and standardized system rolled out across IVL

Objective setting

- Identify appropriate quantitative and qualitative KPIs to assess individual performance

Ongoing coaching and feedback

- Ensure feedback loops mechanisms
- "Train the trainer": train supervisors to provide feedback

Evaluation

- Implementation of a structured performance review process
- Clear setting of targets and expectations by tenure

Compensation

- Deployment of an incentive compensation model for manager levels

Source: IVL HR Plan
Leadership Development - we have defined the key elements of a successful IVL leader

**IVL LEADERS**
Collectively create a dynamic, experiential and innovative environment for growth and learning

- **Drive results**
  - Business acumen
  - Create new possibilities
  - Perform

- **Energize others**
  - Stretch self and team
  - Get results as a team
  - Empower and motivate

- **Champion change**
  - Influencer
  - Organizational agility
  - Navigate through uncertainties

---

Business growth | Customer satisfaction | Employee engagement

Source: IVL Leadership Curriculum
Key Messages: Leadership Development

1. IVL embarking on a journey to transform our HR management, bringing increased structure, governance and oversight from the corporate center.

2. We have a succession planning system that takes into account our talent pool and succession risks to inform individual development and recruitment plans.

3. Establishment of a new performance management system that drives management promotions and compensation based on a set of agreed and defined KPIs.

4. IVL is actively investing in training and mentoring programs for all employees at manager level or above.

5. We have clearly defined what leadership means to us and are deploying the initiatives needed to disseminate our leadership model throughout the organization.
Key Messages: Balance Sheet Strength

1. Olympus will yield cost savings of ~$350M by 2023 – a direct impact to IVL’s bottom line

2. Further working capital optimization, including through supply chain financing initiatives, will continue to drive strong cash flows and enable dividend payouts

3. IVL’s gearing ratio remains well-below debt-covenant thresholds; our balance sheet projected to deleverage and create positive free cash flow post Spindletop acquisition

4. Diversified sources of debt, including green loans, result in a healthy debt profile and a declining cost of financing
Olympus will lead to ~$350M upside to IVL’s bottom line

Corporate-Led Initiatives

- **ERP**
  Enabling IVL to manage core operational processes Systems
  - 2023 EBITDA impact $M
  - $35-40M

- **Global Business Solutions***
  Improving business efficiency and decision support
  - $25M

- **Digital**
  Building and enabling digital organization Transformation
  - $30-35M

Business Segment-Led Initiatives

- **Manufacturing Excellence**
  - $130-140M

- **Procurement** & Supply Chain Excellence
  - $20-30M

- **SG&A / Functional Excellence**
  - $90-100M

---

Note: *Includes deployment of global business solution across finance, IT and HR, as well as a broader transformation initiative of the finance function; **Cost savings from Olympus program do not include savings from raw materials discounts (direct procurement) captured by 2023, amounting to $42M; Source: IVL Business Plan
OCF has been strong and we will further optimize our working capital management.

Sharp focus on working capital management will continue going forward

**LTM 3Q19:** Reduced net working capital by 3 days in 3Q19 resulted in $120M inflow

**2020p – 2023p:** Implement supply chain financing solutions and optimize inventory levels

Source: IVL Financials; IVL Business Plan
IVL consistently adheres to our dividend payout policy

Dividend payout ratio (%)

Source: IVL Financials
Gearing is well-below covenants and we continue to deleverage

CAPEX Plan (in $B)

- Net D/E ratio to remain below the financial covenants of 2.0x and internal threshold of 1.5x
- Balance sheet will gradually deleverage with a net D/E below 1.0x from 2022 onwards
- Free cash flow generation post Spindletop acquisition

Note: *Jan 2020F CAPEX only includes Spindletop acquisition
Source: IVL Financials; IVL Business Plan
Strong cash flow will support the deleveraging efforts

2020F-2023F sources and uses of cash

Strong cash flow has been the main source of funding for various expenditures, including maintenance CAPEX and dividends. Cash flow generated across the 4 years will cover all strategic CAPEX, including Spindletop.

Core EBITDA | Net Working Capital | Maint. Capex | Finance Cost & Cash Tax | Dividends | FCF* before Strategic Investment | Cash Available for Debt Repayment | Strategic Investment**
---|---|---|---|---|---|---|---
8-9

Note: *FCF stands for Free Cash Flow, which is calculated by subtracting reported EBITDA with net working capital, maintenance capex, finance cost, cash tax and dividend; **Strategic Investment = growth CAPEX + any net working capital on acquisitions.
IVL has a healthy debt profile and a declining financing cost

First company in Thailand to be provided green loans, which lowers the cost of financing

$200M USD loan + €200M EUR loan

Note: Information as of 30 September 2019; green loans are given to companies that meet ESG performance (sustainability metric);
*The total green loan credit line are $200M loan and €200M loan, where only 50% had been disbursed as of 30 September 2019
Source: IVL Financials; IVL Business Plan
KEY TAKEAWAYS

Mr. Alok Lohia
Group Chief Executive Officer
The outlook is challenging but IVL remains well-positioned for growth

<table>
<thead>
<tr>
<th>Challenges</th>
<th>Mitigations</th>
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<tbody>
<tr>
<td>Low point of the chemical cycle, where spreads are expected to remain thin in the near-term</td>
<td>IVL with a top-tier cost position vs. competitors; reinforcing this position via the Olympus program</td>
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<td>Downside risks to the global economy, from geopolitical tensions, trade dislocation and the recent n-CoV coronavirus</td>
<td>IVL's portfolio of businesses that addresses the packaging, lifestyle, hygiene and safety needs of consumers provides resiliency and diversity</td>
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<td>Growing concerns on plastic waste and environmental sustainability</td>
<td>IVL in the process of building a leading rPET business, leveraging our #1 position in PET</td>
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<tr>
<td>Recent large acquisition of Spindletop; sizeable effort needed to integrate and realize synergies</td>
<td>IVL has successfully integrated 50+ acquisitions and we have set up an integrated leadership team across all assets in the IOD segment</td>
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</table>

Source: IVL Business Plan
Our 2023 strategy will guide all our actions in the next few years

<table>
<thead>
<tr>
<th>Vision</th>
<th>Values</th>
<th>Financial Aspiration</th>
<th>Differentiators</th>
<th>Strategic priorities</th>
<th>Metrics</th>
</tr>
</thead>
<tbody>
<tr>
<td>To be a world-class chemical company making great products for society</td>
<td>“We see change as an opportunity”</td>
<td>Double-digit ROCE in each core business</td>
<td>Scale Global PET leader</td>
<td><strong>Must do</strong>&lt;br&gt;1. Cost Transformation Accelerate performance through cost optimization</td>
<td>Lowest cost producer in core products</td>
</tr>
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<td></td>
<td>“The customer is why we exist”</td>
<td>Top decile TSR relative to peers</td>
<td>Global-local Close to customers in global core markets</td>
<td><strong>Thrusts – Diversification and Circular Economy</strong>&lt;br&gt;2. Asset Full Potential Focus on commercial excellence to grow revenues and margin</td>
<td>Industry-leading margins</td>
</tr>
<tr>
<td></td>
<td>“We are responsible”</td>
<td>Strong cashflow across the cycle</td>
<td>Integrated Value chain margin capture</td>
<td><strong>Enabler</strong>&lt;br&gt;3. Adjacency Growth Pursue organic and bolt-on growth in attractive adjacencies</td>
<td>Share of EBITDA from adjacency businesses</td>
</tr>
<tr>
<td></td>
<td>“Diversity is our strength”</td>
<td></td>
<td>Diversified Through cycle resilient portfolio</td>
<td><strong>Leadership Development</strong>&lt;br&gt;4. Recycling Leadership Build leading rPET business; set new bar for sustainability</td>
<td>Leading rPET player in core markets</td>
</tr>
<tr>
<td></td>
<td>“Our people make the difference”</td>
<td></td>
<td>Serial M&amp;A Programmatic, buy low, capture synergies</td>
<td><strong>% of high-potential talent</strong></td>
<td></td>
</tr>
</tbody>
</table>
Summary

1. IVL’s time-tested approach has generated strong returns for stakeholders through both the peaks and valleys of the chemical cycle.

2. We have a well articulated 2023 strategy focusing on 5 pillars: Cost Transformation via Olympus, Asset Full Potential, Adjacency Growth, Recycling Leadership, and our People.

3. In combined PET, we aim to strengthen our cost advantage while also driving the circular economy for PET by building a leading recycling business.

4. In IOD, the priority we will fully integrate and capture synergies from IVOL and Spindletop to further strengthen this large, diversified and growing business.

5. In Fibers, we are focused on operational efficiency, asset integration, and innovation to meet customer’s evolving needs, resulting in a business that delivers double-digit ROCE.

6. Our aggregated businesses continue to generate healthy operating cash flow, we continue to focus on working capital while simultaneously deleveraging the balance sheet.

7. We continue to invest in our people, put in place organization and governance structures and HR processes to ensure we have a healthy IVL for the future.
Appendix
Series of key events in the new few years

**2018**
- Strong industry spreads

**2019**
- Very weak industry spreads in 4Q19
- Inorganic growth: India Fibers, UTT Fibers, Sinterama Fibers, Brazil Fibers, Recycling
- $140M impact due to unplanned shutdowns
- Major global macro volatilities and lower prices resulted in low pipeline inventories

**2020**
- Some recovery of industry spreads from lows of 4Q19
- Potential global macro improvement leading to pipeline inventory buildups
- Full year impact of 2019 inorganic growth
- Recovery of volumes lost in 2019 due to unplanned shutdowns
- Full Spindletop contribution from mid-march 2020
- IVL Gas cracker startup in 1Q20
- Recycling growth
- Conversion of a US IPA line to a flexible IPA-PTA line
- Cost saving programs across segments

**2021**
- Full year impact of Spindletop and US gas cracker
- Recycling growth
- Cost saving programs across segments
- Free cash flow generation

**2022/23**
- Corpus Christi startup
- Spindletop expansion – Project Prosperity
- Recycling growth
- Cost saving programs across segments
- Free cash flow generation

Source: IVL Financials; IVL Business Plan