

# Vision 2020



 **FERRO.**  
Where innovation  
delivers performance™

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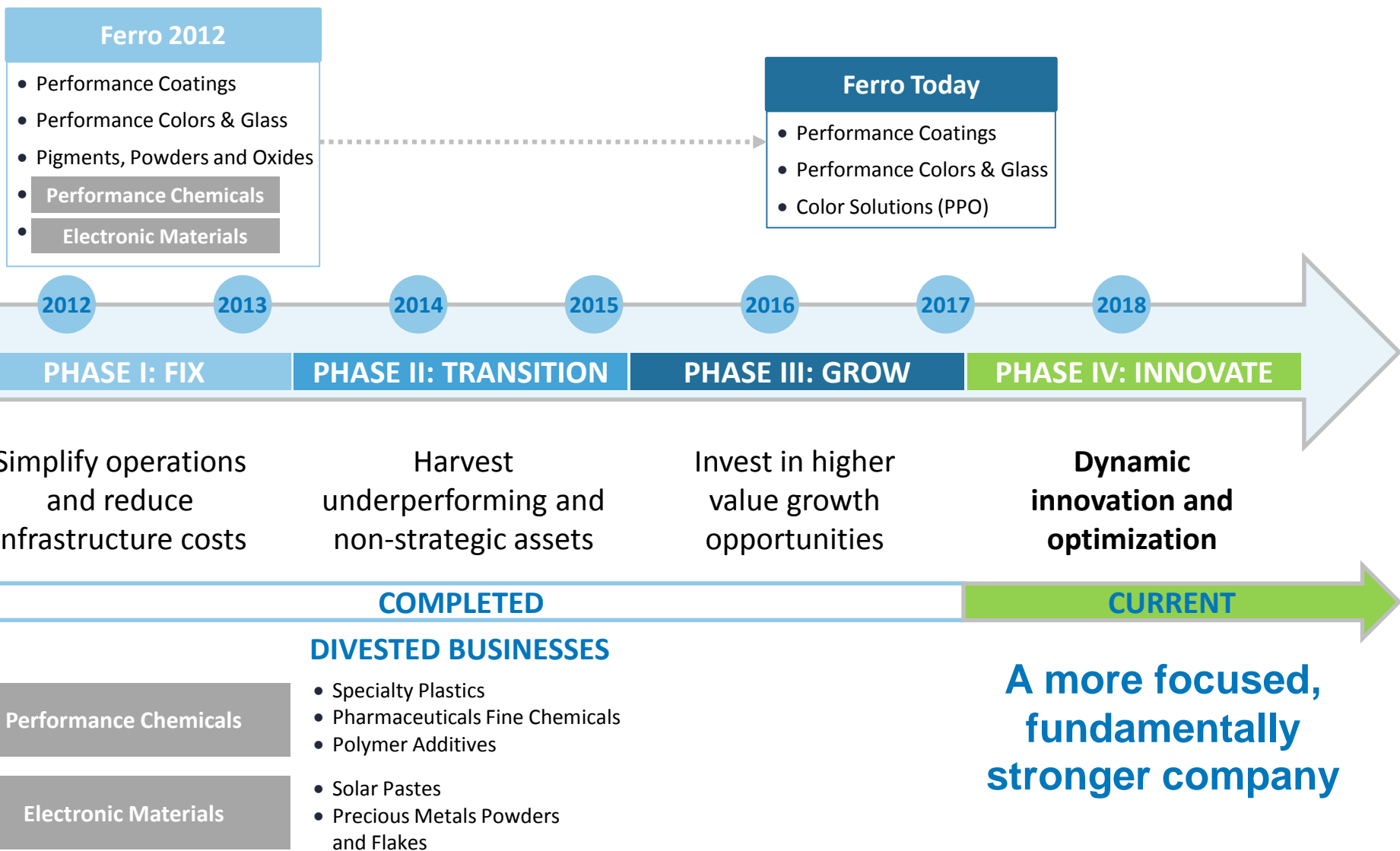
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*Also, this presentation includes certain financial measures that were not prepared in accordance with generally accepted accounting principles. Reconciliations of the historical non-GAAP financial measures to the most directly comparable GAAP financial measures can be found in the Appendices included in this presentation. This presentation includes adjusted gross profit and adjusted EBITDA guidance. It is not possible, without unreasonable effort, for the Company to identify the amount or significance of future charges that would be excluded from adjusted gross profit and adjusted EBITDA guidance or the potential for other transactions that may impact such guidance. Accordingly, the Company is unable to reconcile, without unreasonable effort, the adjusted gross profit and adjusted EBITDA guidance. Also, this presentation provides future financial projections with Sales, adjusted Gross Profit and adjusted EBITDA.*

# Ferro's Transformation



# Dynamic Innovation and Optimization

## Innovation

### Innovation aligned to trends and customer needs

- R&D and product development
- New technology platforms
- Shift from product-centered to a more solution-driven model

## Optimization

### On-going optimization to drive efficiency and increase return on capital employed

- Cost reduction / productivity
- Asset footprint optimization / utilization
- Manufacturing and operating processes optimization



## Growth

### Balanced organic and inorganic growth:

- Product renewal
- New applications
- Scope expansion – larger addressable market
- Geographic expansion
- Actively managed M&A pipeline

# Principal Characteristics of Phase IV



## Optimized Business Model

- Continuation of customer-tailored, asset-light, specialty model
- A larger addressable market
- Strategically extended down the value chain
- Continuous optimization of cost structure and asset footprint
- Scale to support reinvestment in core businesses and in growth areas
- A self-renewing, higher growth model



## Growth Through Innovation

- A technology leader in its target spaces - innovating, not following
- Complementary organic and inorganic growth
- A wider lens of growth options
- Better positioned behind major macro and sector growth drivers
- Development of new platforms that leverage existing market positions

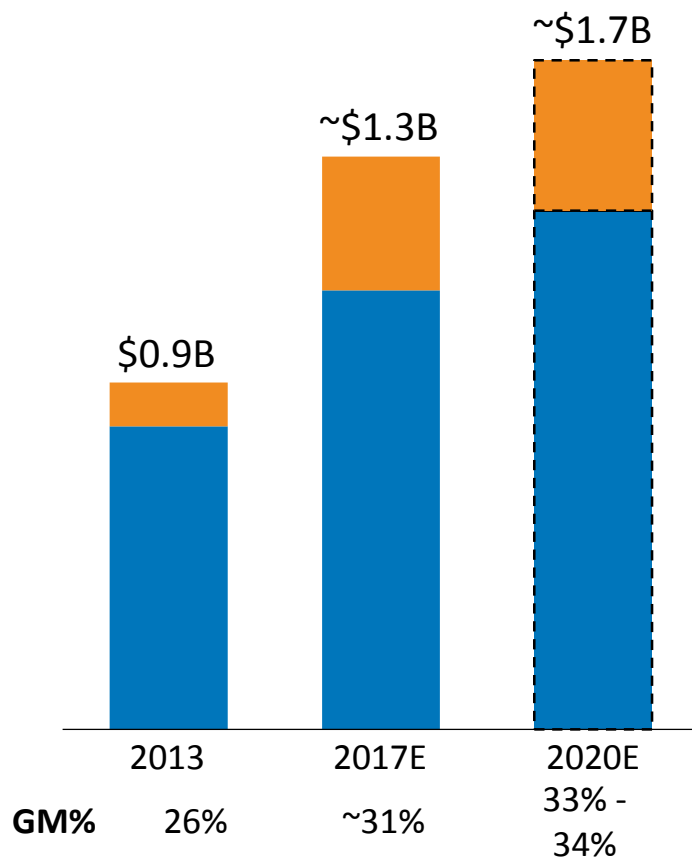
**VISION: A LEADING FUNCTIONAL COATINGS AND COLOR SOLUTIONS COMPANY**



# Vision 2020

## Net Sales and Margins

(Net Sales in \$B)



## Characteristics

### Color Solutions

- Pigments
- Colorants

- Specialty inorganic and organic pigments
- Colorants, dispersions and other color services / solutions
- Wider addressable market

### Functional Coatings

- PCG
- PC

- Market leader
- Broad range of substrates
- Technology leader - digital inks & printing
- Favorable macro trends

**SCALABLE MODEL ALLOWS FOR CONTINUOUS GROWTH & VALUE CREATION**

Note: Assumptions do not include future acquisitions

# Vision 2020 – Growth Elements

		Ferro Today	Ferro 2020
Business Model	Annual Sales and Gross Margin	~\$1.3B ~31%	~\$1.7B ~33% - 34%
	Sources of 2020 Growth	<ul style="list-style-type: none"> <li>~20% Organic</li> <li>~80% Inorganic</li> </ul>	<ul style="list-style-type: none"> <li>~40% Organic</li> <li>~60% Inorganic</li> </ul>
	Business Segments	<ul style="list-style-type: none"> <li>Performance Coatings (PC)</li> <li>Performance Colors &amp; Glass (PCG)</li> <li>Pigments, Powder and Oxides (CS)</li> </ul>	<ul style="list-style-type: none"> <li>Functional Coatings (Glass, Metal, Ceramic...)</li> <li>Color Solutions (Pigments + Colorants)</li> <li>Surface Technology Solutions (new platform)</li> </ul>
Growth Elements	Addressable Market	~\$10B	~\$12B
	Underlying Market Growth	~2 - 3%	~4% - 5%
	New product pipeline value	~\$210M 15 - 20% of revenue	~\$240M 15 - 20% of revenue

## ENHANCED DYNAMICS OF GROWTH MODEL

Note: Inorganic growth includes deals completed in 2017. Vision 2020 excludes any uncompleted transactions.

# Vision 2020 - Performance Metrics

Three key levers, aligned with strategy



## Organic Growth

~3% - 4% annual org. growth

- New product pipeline (15-20% vitality)
- CTO Office
- Expand our “market”

Market  
+ 1-2%



## Optimization

Gross Margin ~33% – ~34%

EBITDA ~20%+

FCF Conversion ~50%-60%

- Lean & optimization initiatives

2%  
Annually



## Inorganic Growth\*

~\$100MM sales annually

- Existing M&A Pipeline
- Enhanced process

Strategic Acquisitions  
\$150MM / Year

\* Uncompleted transactions not included in base model

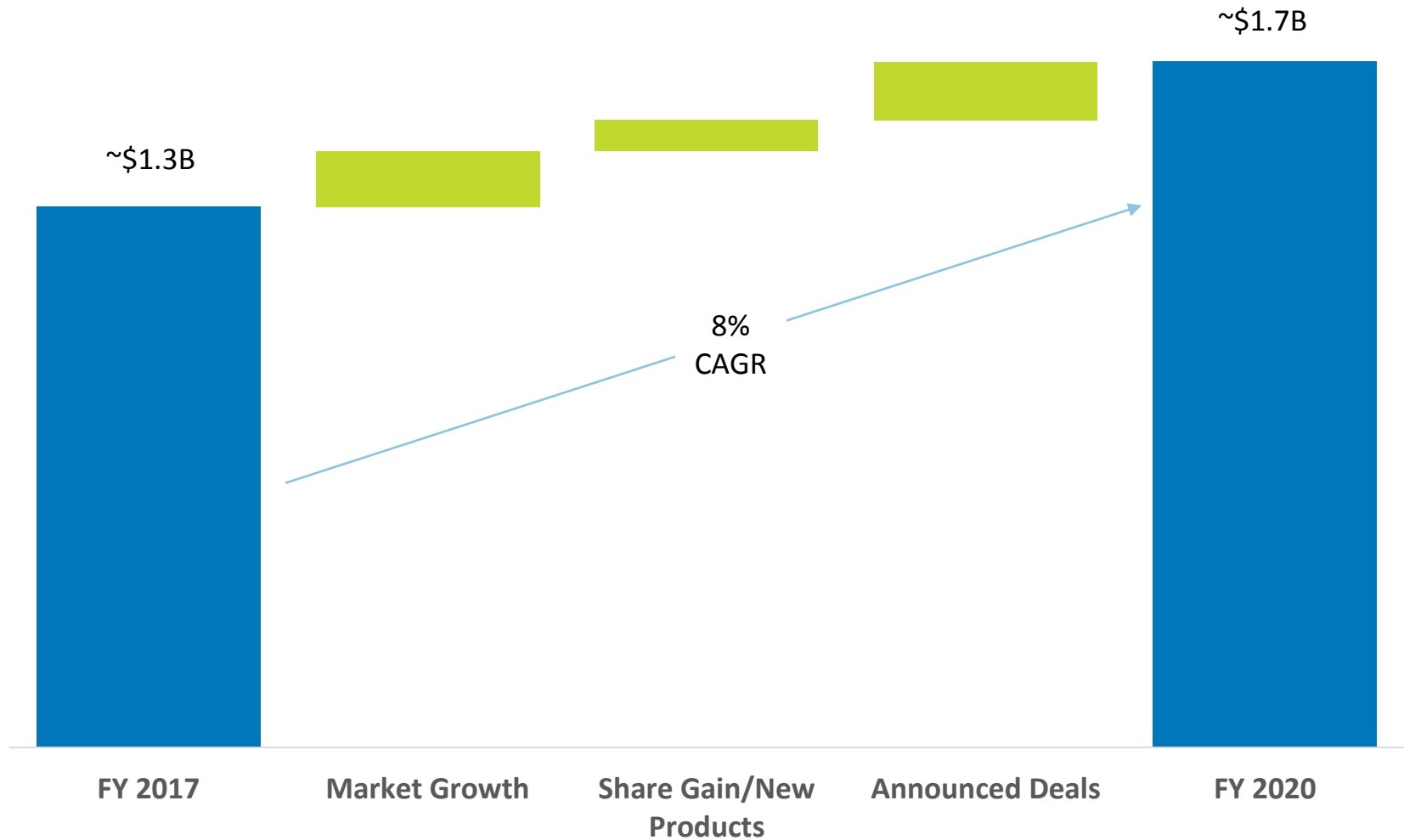
**SIGNIFICANT VALUE AND PERFORMANCE ENHANCEMENT**



# Vision 2020 – Organic Growth Elements: Market + 1-2%

## Revenue Growth

(\$ in billions)



**INNOVATION & NEW PRODUCT PIPELINE PROVIDES CLEAR PATH TO 2020 GOALS**

# Vision 2020 – Optimization: 2% Annually



**ENABLING GROWTH THROUGH EFFICIENCY DRIVES VALUE**

# Vision 2020 – Inorganic Growth



## M&A Considerations and Process

- Successful business with strong fundamentals that can be easily integrated, offering synergies and attractive value creation
- Tuck-in/bolt-on or platform
- Disciplined approach and process
- Strive to generate value, not just scale



## Strategic Fit

- Driven by strategy
- Industry leader
- High-margin
- Scalable
- Asset-light, heavy customer touch
- Increased geographic reach and penetration
- Technology/product extension



## Rigorous Financial Criteria

- Cash flow accretive in the short-term
- Maintain leverage targets within ~12-18 months post deal
- Return Expectations
  - 30%+ > Cost of Capital / IRR ~25%
- Achievable synergy potential (cost and growth)

**MAINTAIN DISCIPLINED APPROACH & ENHANCE PROCESS TO DRIVE VALUE**