



## **Business Unit Inorganic Pigments**

### **World market leader in iron oxide pigments**

Joerg Hellwig, Head of BU IPG

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Energizing Chemistry

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# Agenda

- **Business Unit Inorganic Pigments (BU IPG) – a true world market leader**
- Proven business model with strong and continuous cash generation and further growth opportunities



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## BU IPG focuses on attractive colorful inorganic pigments

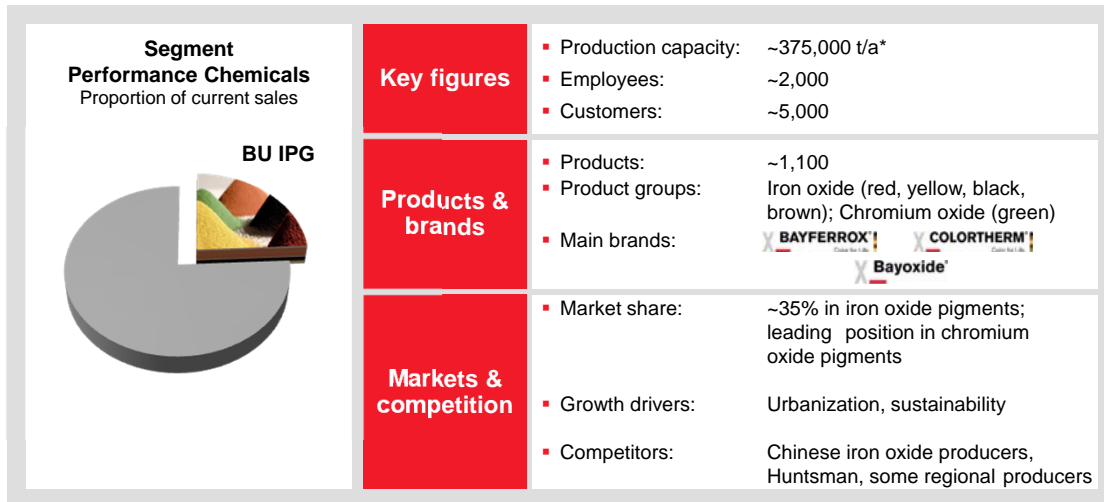
	Organic pigments	Inorganic pigments
<b>Color</b>	<p>~5%</p> <p><b>BASF</b> The Chemical Company</p> <p><b>CLARIANT</b></p>	<p>~20% Iron oxides</p> <p><b>HUNTSMAN</b> Enriching lives through innovation</p> <p><b>LANXESS</b> Empowering Chemistry</p> <p><b>BU IPG</b></p>
<b>Carbon black / white</b>		<p>~65%</p> <p>~10%</p> <p><b>TRONOX</b></p> <p><b>HUNTSMAN</b> Enriching lives through innovation</p> <p><b>CABOT</b></p> <p><b>ORION</b> ENGINEERED CARBONS</p> <p><b>KRONOS</b></p>
<b>Structure Characteristics Market</b>	<ul style="list-style-type: none"> <li>▪ Complex chemical structure</li> <li>▪ Bright colors, low stability</li> <li>▪ Few big western players, many Chinese</li> </ul>	<ul style="list-style-type: none"> <li>▪ Mineralogical structure</li> <li>▪ Warm earth tones, high stability</li> <li>▪ Ongoing consolidation globally</li> </ul>

● Iron oxide                      ● Titandioxide  
● Organic and special pigments      ● Carbon black



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## BU IPG – world’s leading iron oxide pigment business

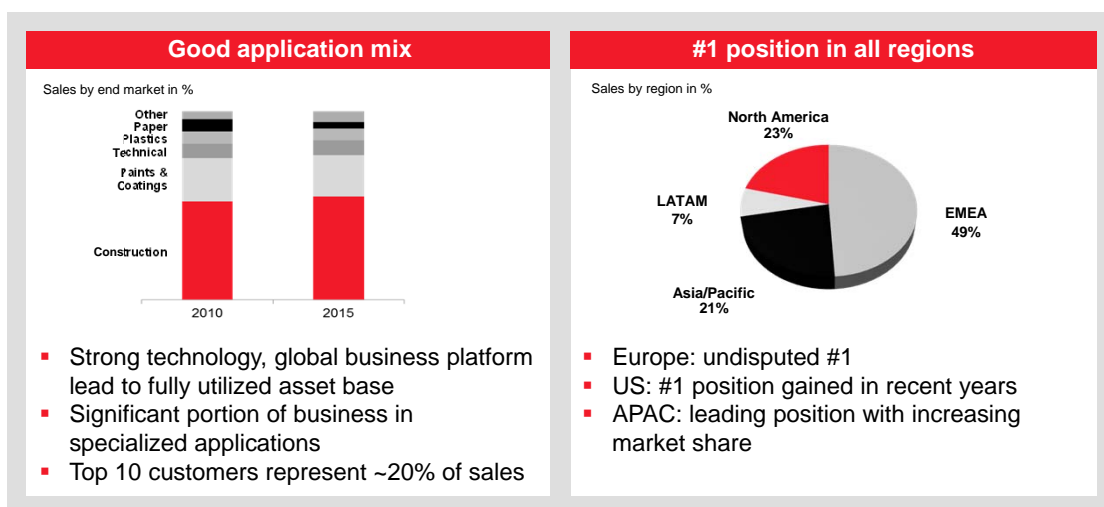


\* incl. new site in Ningbo

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## Excellent strategic position in key end markets worldwide



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## Strong global production network

**BU IPG – a true global player with assets in all continents**

- Krefeld-Uerdingen/Germany as backbone of pigment business with 90 years experience and production excellence
- New site in Ningbo/China increases already strong production footprint in China
- Globally leading environmental standards as competitive edge
- Sophisticated logistics network allows full utilization of all assets

● Integrated sites: Chemical production of pigments  
● Blending sites: Value adding by mixing and/or milling, local/regional service hubs

\* Production start Q1 2016

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## BU IPG uses full value chain of iron oxide pigment production

	Synthesis	Sieving & washing	Drying/ calcination	Milling & color adjustment	Packaging
Laux process					
Precipitation process					
Penniman/ Ningbo process					
	Integrated sites (synthesis and blending)			Blending sites (mixing and milling)	

- Global network of sites allowing full benefit of entire value chain of iron oxide pigment production
- Krefeld-Uerdingen with unique Laux process by far largest (~factor 4) production facility globally
- Highest sustainability standards in iron oxide industry globally; new site in Ningbo setting new standards for China

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## Agenda

- Business Unit Inorganic Pigments (BU IPG) – a true world market leader
- **Proven business model with strong and continuous cash generation and further growth opportunities**

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## BU IPG contributes to a more balanced and resilient LANXESS portfolio

Resilience  
Cash Generation  
Growth



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# Proven business model with strong and continuous cash generation and further growth opportunities

Resilience  
Cash Generation  
Growth

### Stable EBITDA pre margin

**EBITDA pre margin**

2010 2011 2012 2013 2014 Q3 2015 LTM

- Very stable EBITDA pre margin (+/- 2%pts) with low volatility even in crisis years
- Recent realignment improves cost structure
- Further EBITDA growth through investments

### Broad portfolio

- High quality products for many applications in diverse industry setup
  - Wide diversification in color applications (construction, paint & coatings, plastics, paper, cosmetics, etc.)
  - Growing portfolio for technical applications (toners, biogas desulfurization, li-ion batteries for e-cars, arsenic adsorbers, catalysts etc.)
- Diversification and innovation fosters long-term resilience

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# Excellent global sales and distribution network resulting in #1 position in all key markets and regions

Resilience  
Cash Generation  
Growth

### Undisputed global leader in iron oxide business

	EMEA	Americas	Asia/Pacific	World
<b>IPG</b>	●	●	●	●
Deqing	●	●	●	●
Huntsman	●	●	●	●
Yipin	●	●	●	●
Yixing	●	●	●	●
Cathay	●	●	●	●
other Chinese	●	●	●	●

- 35% market share globally
- Europe remains global stronghold for IPG
- Good positioning in APAC's key countries and segments
- #1 position in US with ongoing growth opportunities

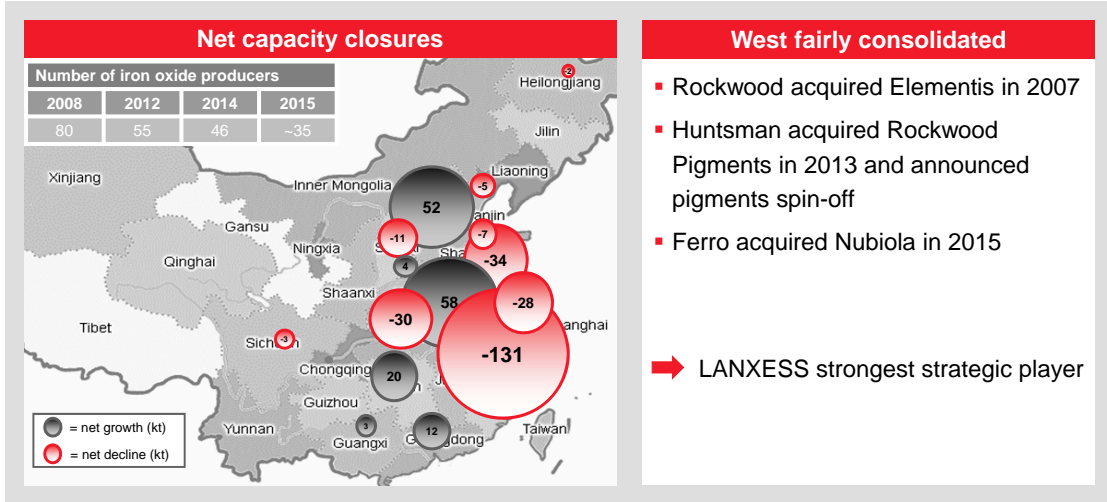
Bubble size indicates sales volume by producer and region

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# Strong global consolidation in iron oxide industry led by China

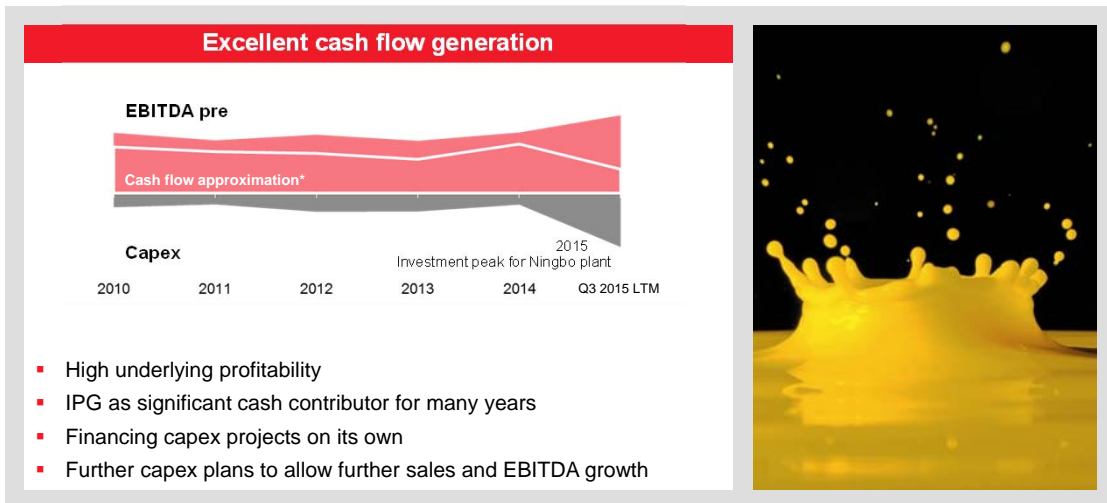
Resilience  
Cash Generation  
Growth



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# Proven business model with strong and continuous cash generation and further growth opportunities

Resilience  
Cash Generation  
Growth



\* Before changes in working capital and M&A




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## BU IPG with excellent position based on full understanding of market needs and developments

Resilience  
Cash Generation  
Growth

**Enablers for continues success at IPG**

<b>Quality</b>	<ul style="list-style-type: none"> <li>▪ Bayferrox positioned as the industry “gold standard”</li> <li>▪ Broadest product portfolio in terms of color space and applications</li> </ul>
<b>Cost competitiveness</b>	<ul style="list-style-type: none"> <li>▪ World class production sites</li> <li>▪ High economy of scale</li> </ul>
<b>Sustainability</b>	<ul style="list-style-type: none"> <li>▪ Best in class HSE standards in the industry</li> <li>▪ Strong distribution network with long-term partners</li> </ul>

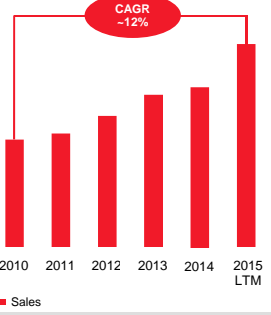


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## Sustainability is key competitive advantage for IPG – Production landscape in China drastically changing

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Cash Generation  
Growth

<p><b>Rapid changes in iron oxide industry</b></p> <ul style="list-style-type: none"> <li>▪ Stronger environmental regulation accelerates market consolidation in China</li> <li>▪ Significant shutdowns of competitors in China in the last 18 months and ongoing</li> <li>▪ Environmental problems in China cause tight supply of red iron oxides globally</li> <li>▪ Lower output of remaining yellow and black capacities due to general labor shortages and further environmental restrictions</li> <li>▪ Steadily improving IPG's strategic market positioning and business performance</li> </ul>	<p><b>IPG growth in China</b></p>  <p>■ Sales</p>
<p><b>Tightening environmental regulations in China are a major driver for rapid changes in the global iron oxide industry</b></p>	

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# All IPG production sites with highest environmental standards and ongoing improvements

Resilience  
Cash Generation  
Growth

## Sustainability principles

- IPG is focusing on continuous improvements in Health, Safety and Environmental aspects at all sites
- IPG is continuously setting standards for the iron oxide industry globally
- Sustainability principles drive cost improvements by focusing on resource efficiency

### Krefeld-Uerdingen, Germany

- Innovative waste recycling process
- High efficiency in resource handling
- Massive plant automation allows high quality output and cost efficiency



### Porto Feliz, Brazil

- IPG owned co-generation plant using renewable feedstock
- CO<sub>2</sub> neutral production of energy
- Independence from external energy resources



### Jinshan, China

- State-of-the-art waste water treatment
- Reduced emissions due to improved energy utilization
- Investments in automation ongoing



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# New IPG plant in Ningbo/China sets new standards for sustainable production globally

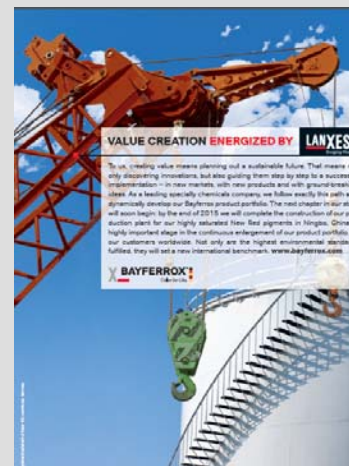
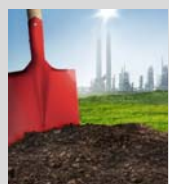
Resilience  
Cash Generation  
Growth

## IPG in China – high quality red iron oxides

- Benchmark for sustainable iron oxide production
- Completely new technology developed by IPG (“Ningbo Process”)
- Unique new process using innovative energy conservation, waste water and off-gas treatment processes to minimize emissions
- Extending the broad BAYFERROX product portfolio with unique bright, yellow-shade reds for specialized end markets

### Key data

- Start-up on schedule: Q1 2016
- Capex: ~€60 m
- Production capacity red pigments: 25kt
- Mixing & Milling capacity: 70kt
- Employees: 200



VALUE CREATION ENERGIZED BY LANXESS

To us, creating value means planning out a sustainable future. That means not only discovering innovations, but also guiding them step by step to a successful implementation – in new markets, with new products and with groundbreaking ideas. As a leading specialty chemicals company, we follow exactly the path and dynamically develop our Bayerferrox product portfolio. The next chapter in our story will soon begin: by the end of 2015 we will complete the construction of our production plant for our highly saturated New Red pigments in Ningbo, China, a highly important step in the continuous enlargement of our product portfolio for our customers worldwide. Not only are the highest environmental standards fulfilled, they will set a new international benchmark. [www.bayerferrox.com](http://www.bayerferrox.com)

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## Understanding of market conditions drives growth plans and investments for IPG

Resilience  
Cash Generation  
Growth

### Growth opportunities

- Ongoing investments into all sites for cost and resource efficiency
- Investment opportunities to further expand the Krefeld-Uerdingen/Germany site
- Further upgrades of sites in Porto Feliz/Brazil and Jinshan/China
- New site in Ningbo/China will allow growth in high-end paints & coatings applications worldwide
- Further projects as work in progress by ongoing monitoring of market conditions and global supply/demand balance
- Ongoing investments to develop more specialized and new products and applications



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## BU IPG – flagship business in LANXESS’ portfolio set up for further profitable growth

Resilience  
Cash Generation  
Growth

### Resilience



- Leading market positions in key industries
- High quality product range with well-known brands
- Technological leadership and sustainability as key competitive advantages
- Innovation supports business diversification

### Cash generation



- Proven business model as world market leader
- Strong and consistent cash delivery

### Growth



- Undisputed #1 position with increased market penetration and ongoing market share gains
- Investment plans for an even stronger global asset network allowing sustainable business growth



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**End of presentation**