



# TRONOX

A Brighter Future - From the Ground Up

## MAXIMIZING VALUE THROUGH VERTICAL INTEGRATION TiO<sub>2</sub> 2013

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**Section I:  
The New Tronox**



# The New Tronox

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## Transformation Over Past Year

- Vertically integrated producer of mineral sands and titanium dioxide
- Only enterprise that produces and consumes both slag and synthetic rutile
  - Ability to adjust pigment plant feedstock consumption to optimize financial performance, enhancing low-cost position
- Cross function technical teams focusing on margin optimization

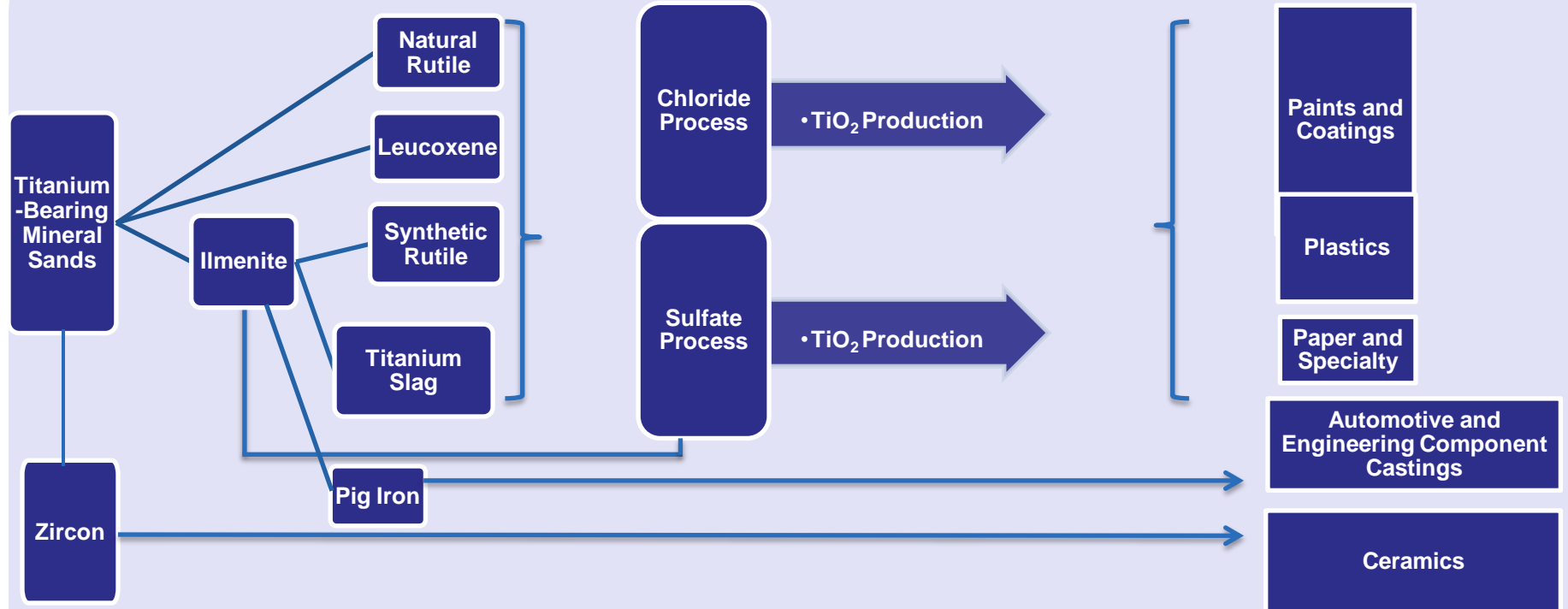


# Mineral Sands and Pigments Value Chain

Mineral Sands

TiO<sub>2</sub> Pigments

Markets



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## Tronox is Differentiated in the Pigments and Mineral Sands Value Chain

3<sup>rd</sup> largest global producer of Chloride process  $TiO_2$  with sales primarily to coatings, plastics and paper laminate markets

- 465,000 metric tons (MT) of global  $TiO_2$  capacity
  - Hamilton, MS, USA: 225,000 MT
  - Botlek, Netherlands: 90,000 MT
  - Kwinana, WA, Australia: 150,000 MT



# Tronox Mineral Sands: One of the Largest Global Producers

Geographically well positioned to serve markets in APAC, EMEA, Americas

- 3<sup>rd</sup> largest titanium feedstock producer globally in 2011 (approximately 10% market share) with 3 producing assets
- 2<sup>nd</sup> largest global producer of high-grade slag
- 3<sup>rd</sup> largest zircon producer globally in 2011 (approximately 18% market share)
- Produce high-purity pig iron as a co-product and sells rutile into non-pigment welding and titanium metal market



# Tronox Mineral Sands: One of the Largest Global Producers

Operations Consist of Two Key Product Streams – Titanium Feedstock and Zircon

- Presently have 3.5 million MT of mined ilmenite ready for processing
- Existing inventory will supply slag furnaces until the Fairbreeze mine is online

## Production Facilities

Capacity (MT)	Namakwa Sands	Northern ops	KZN Sands <sup>1</sup>	Total
Natural Rutile	31,000	36,000	30,000	97,000
Synthetic Rutile		220,000		220,000
Slag	190,000		220,000	410,000
Zircon	135,000	70,000	60,000	265,000
Pig Iron	100,000		121,000	221,000
Leucoxene		26,000		26,000
Reserve Life of Mine	20+ Years	15+ Years	12+ Years	

1. KZN Sands data includes Fairbreeze mine development project expected to open in early 2015 with 190kt of TiO<sub>2</sub> ore capacity and 60kt of zircon capacity.

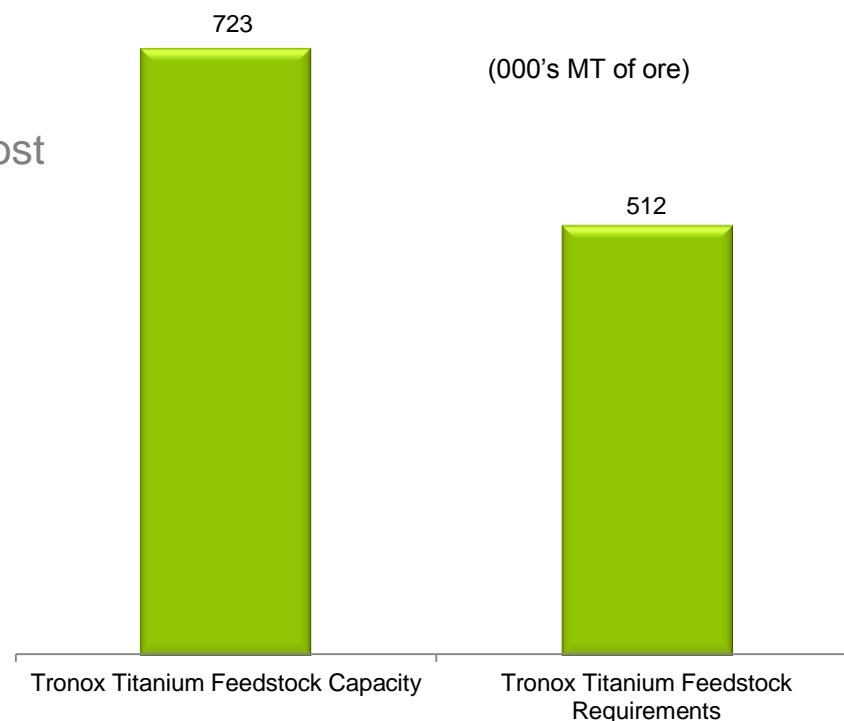


# Vertically Integrated Platform Yields Enduring Structural Advantage

Tronox is Long—211,000 MT of Feedstock

## Optimization of Feedstock in-Use Results in Higher Margins and Cash Flows

- Assure adequate ore supply and low position on cost curve
- Captive customers for mineral sands operations allowing the full realization of production scale efficiencies
  - Ore at cost of extraction and beneficiation





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**Section II:  
Moving Beyond A  
Challenging 2012**



# Coatings Volumes vs TiO<sub>2</sub> Volumes (In Coatings)

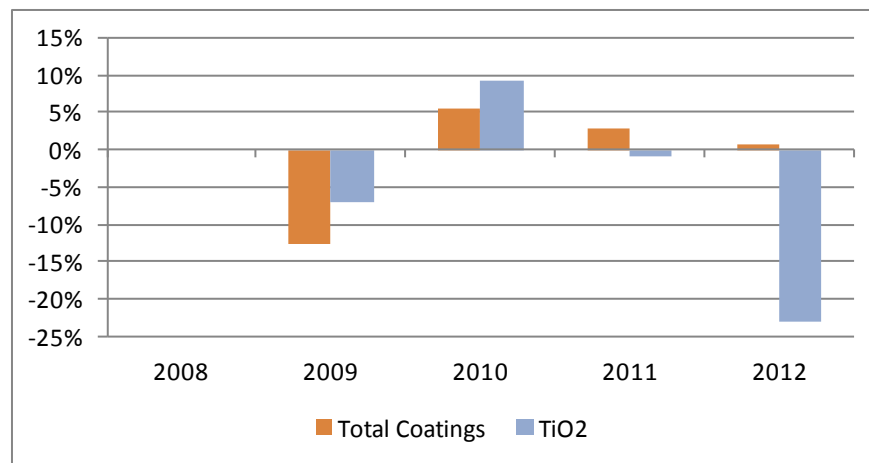
Coatings volume is using growth numbers public coatings sources

- TiO<sub>2</sub> volumes were stronger than coatings volumes in 2009 and 2010

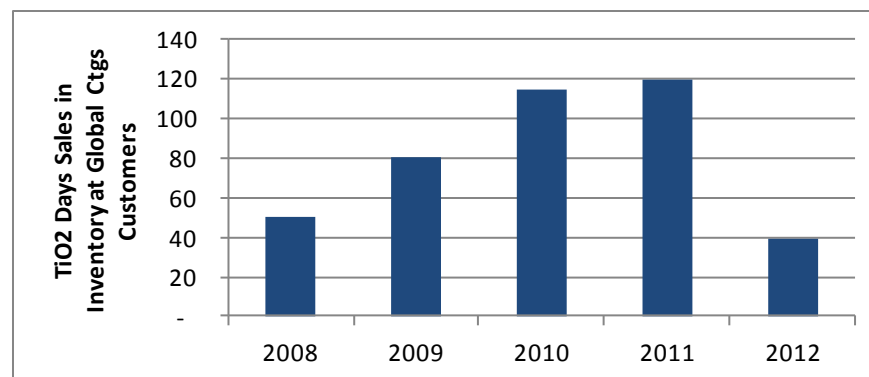
Destocking by paint producers has concluded

- Inventory build in 2009/2010
  - Finished goods and raw materials
  - Coatings producers were balanced in 2008
  - Significant destocking event in 2012
  - Destocking complete in late 2012

Growth in Coatings Volumes vs. Growth in TiO<sub>2</sub> Volumes in Coatings



TiO<sub>2</sub> Inventory Changes in Global Coatings \*



\*Coatings data source: Freedonia, World Ctg, Public Filings

# 2012: What Happened?

## Downstream destocking:

- Regression studies confirm that demand destocking is close to 13% down vs. 2011
- Accounts for ~70% of drop in pigment purchases in 2012

## Demand

- Demand for coatings, plastics, and paper products only down marginally

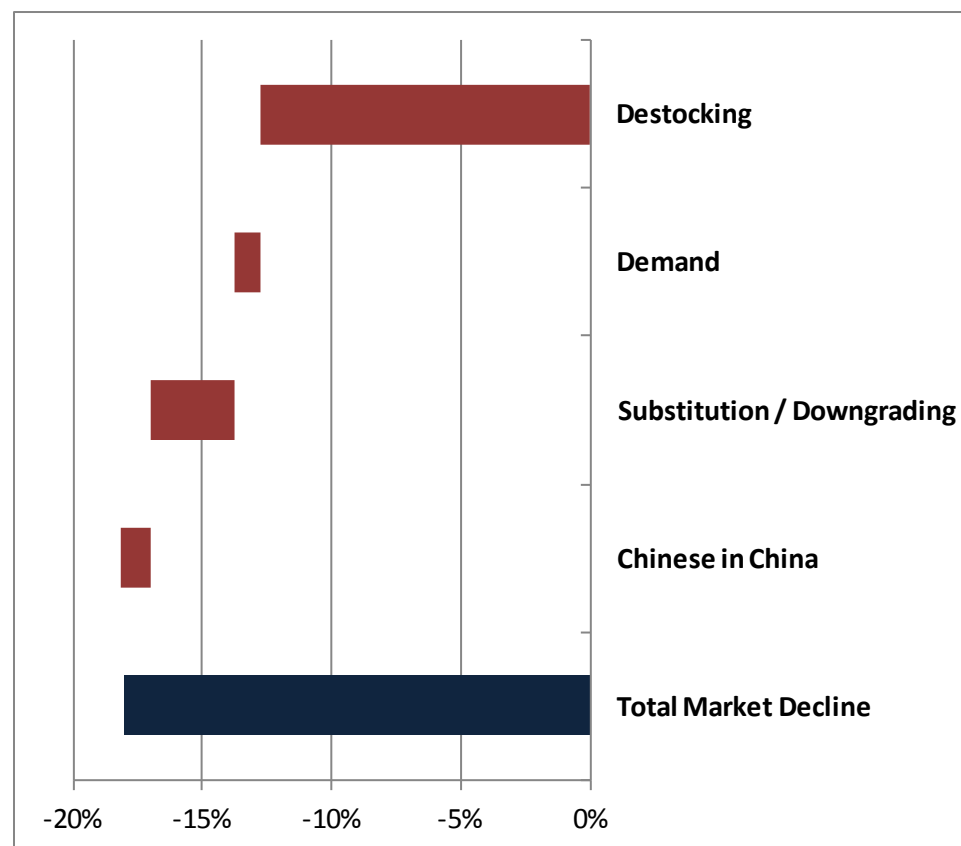
## Substitution

- Weighted average is 3-5% based on current regional estimates
- Downgrading by reducing TiO<sub>2</sub> levels

## Chinese

- 2012 vs. 2011 capture by Chinese producers only marginal
  - Strong in H1 but fell off in H2

## Breakdown of 2012 TiO<sub>2</sub> Market Decline



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**Section III:  
Industry Fundamentals  
and Tronox's View of the  
Market**

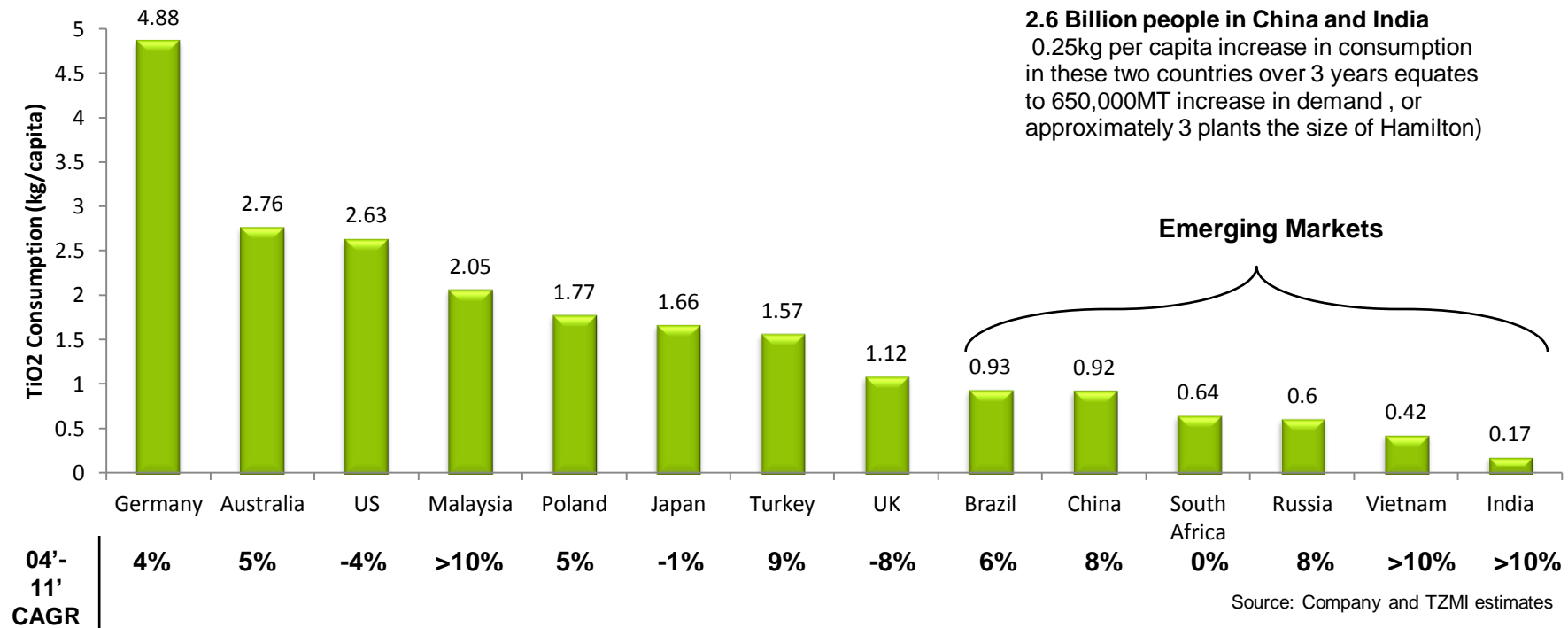
# Favorable Long Term Supply / Demand Dynamic: TiO<sub>2</sub> Pigment Market

## Significant Long-term TiO<sub>2</sub> Consumption Growth Expected from Emerging Markets

- TiO<sub>2</sub> usage per capita in the major emerging markets, particularly in China and India, is significantly below that seen in most Western countries

### TiO<sub>2</sub> Consumption per Capita and Growth Rates

**2.6 Billion people in China and India**  
0.25kg per capita increase in consumption in these two countries over 3 years equates to 650,000MT increase in demand, or approximately 3 plants the size of Hamilton)



# Tronox View of the Near-Term Market



- TiO<sub>2</sub> demand stabilizing in first half of 2013
  - Demand retuning to normal rates in Q1 after destocking in 2012
- Reduced levels of finished goods pigment inventory being held by TiO<sub>2</sub> producers
  - Global inventories reduced by more than 20 days since end of 2012
- Anticipate improvement in supply-demand fundamentals in the second half of 2013.
  - Vertically integrated producers should recover quicker
- Feedstock supply will require significant investment to meet pigment demand growth forecasted for 2014-2020
- High risk and long lead time (5-10 years) in starting new projects due to volatility in the cycle
  - Vertical integration will benefit Tronox



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**Section V:  
Key Investment Highlights**

# Key Investment Highlights

- Optimizing Margin Across the Value Chain
  - Vertically Integrated Platform reduces costs, increases margins and assures optimized feedstock supply
- Leading Global Market Positions
- Low Cost and Efficient Production Network
- Favorable long term supply/demand conditions across value chain
- Strong Free Cash Flow and Conservative Financial Profile
- Management Team Focused on Building Shareholder Value







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TiO<sub>2</sub> 2013

Thank you