



ILUKA

# Iluka Resources Limited

Macquarie Western Australian Forum

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# Disclaimer – Forward Looking Statements



## Forward Looking Statements

This presentation contains certain statements which constitute “forward-looking statements”. These statements include, without limitation, estimates of future production and production potential; estimates of future capital expenditure and cash costs; estimates of future product supply, demand and consumption; statements regarding future product prices; and statements regarding the expectation of future Mineral Resources and Ore Reserves.

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- changes in product pricing assumptions;
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This presentation uses non-IFRS financial information including mineral sands EBITDA, mineral sands EBIT, Group EBITDA and Group EBIT which are used to measure both group and operational performance. A reconciliation of non-IFRS financial information to profit before tax is included in the supplementary slides. Non-IFRS measures have not been subject to audit or review.

## Mineral Resources Estimates

The information in this presentation that relates to Mineral Resources estimates on the Tapira and Puttalam Projects has been previously announced to ASX (see relevant slides for details). Iluka confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the estimates in those announcements continue to apply and have not materially changed. Iluka confirms that the form and context in which the Competent Person’s findings are presented have not been materially modified from the original market announcements.

# Company Overview



- Large producer of zircon - around one third of the global market
- Significant high grade titanium dioxide producer:
  - Rutile
  - Synthetic rutile (ilmenite upgrading capacity currently idled)
- Producing operations in 5 locations globally (predominantly Australia)
- Extensive global marketing presence
- Ongoing commitment to exploration:
  - Currently ~10 years reserve life; resources<sup>1</sup> ~ 5 times reserves
- Multiple internal production options at advanced stages of evaluation
- Focused on investment in innovation and technology
- Royalty from BHP Billiton's Mining Area C in WA

**Notes:**

<sup>1</sup> Net of reserves

# Iluka Activities



# Iluka Approach

- Focus on shareholder returns through the cycle
- Flex asset operation in line with market demand
- Continue market development through the cycle
- Maintain strong balance sheet
- Preserve/advance mineral sands growth opportunities
- Continue to evaluate/pursue corporate growth opportunities
- Act counter-cyclically where appropriate

# 2014 Half Year – Key Features

- Flexibility, unit costs, capex, FCF, balance sheet, sustainability
- Earnings reflect low product pricing
- Free cash flow \$63.9 million
- 6 cents dividend per share fully franked
- Net debt / net debt + equity (gearing ratio) reduced to 9.2%
- Cash costs of production \$200.7 million
  - trending below FY guidance (~\$430 million)
  - unit cash costs / tonne Z/R/SR produced \$796
  - Z/R/SR revenue / tonne \$1,015
- SA Premier's Award for Environmental Excellence

# Mining Area C Royalty

1H 2014 versus 1H 2013

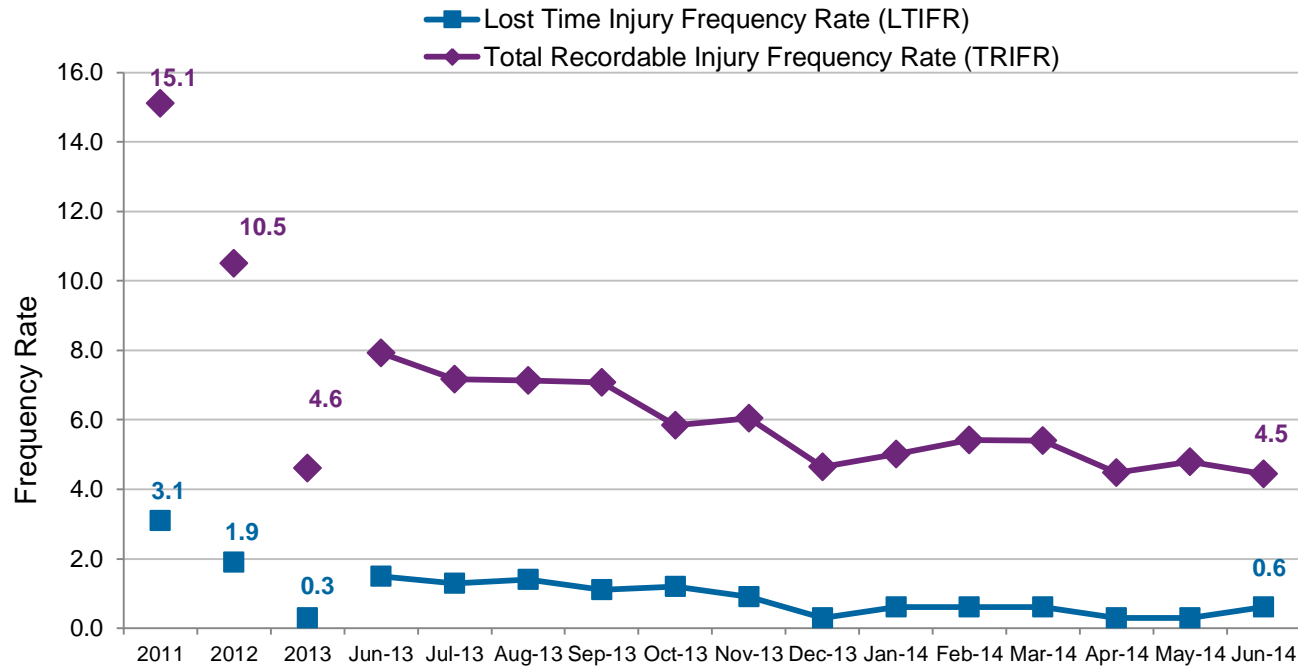


		<b>1H 2014</b>	<b>1H 2013</b>	<b>1H 2014 vs 1H 2013 % change</b>
Sales volumes	mdmt	25.9	26.6	(2.6)
Implied price	A\$/t	114.3	125.1	(8.6)
Net Royalty income	\$m	37.0	41.4	(11.1)
Annual capacity payments	\$m	1.0	4.0	(75)
Iluka EBIT	\$m	38.0	45.4	(16.3)

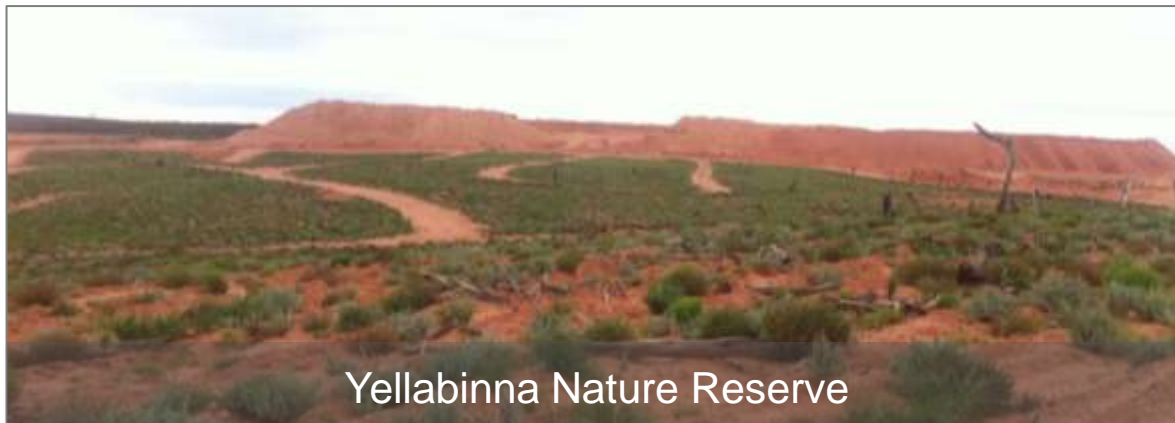
(mdmt = million dry metric tonnes)

- Iron ore sales volumes down 2.6%
- \$1.0m of annual capacity payments to 30 June (1H 2013: \$4.0m)
- Average A\$/tonne iron ore realised price decreased by 8.6%

# Sustainability

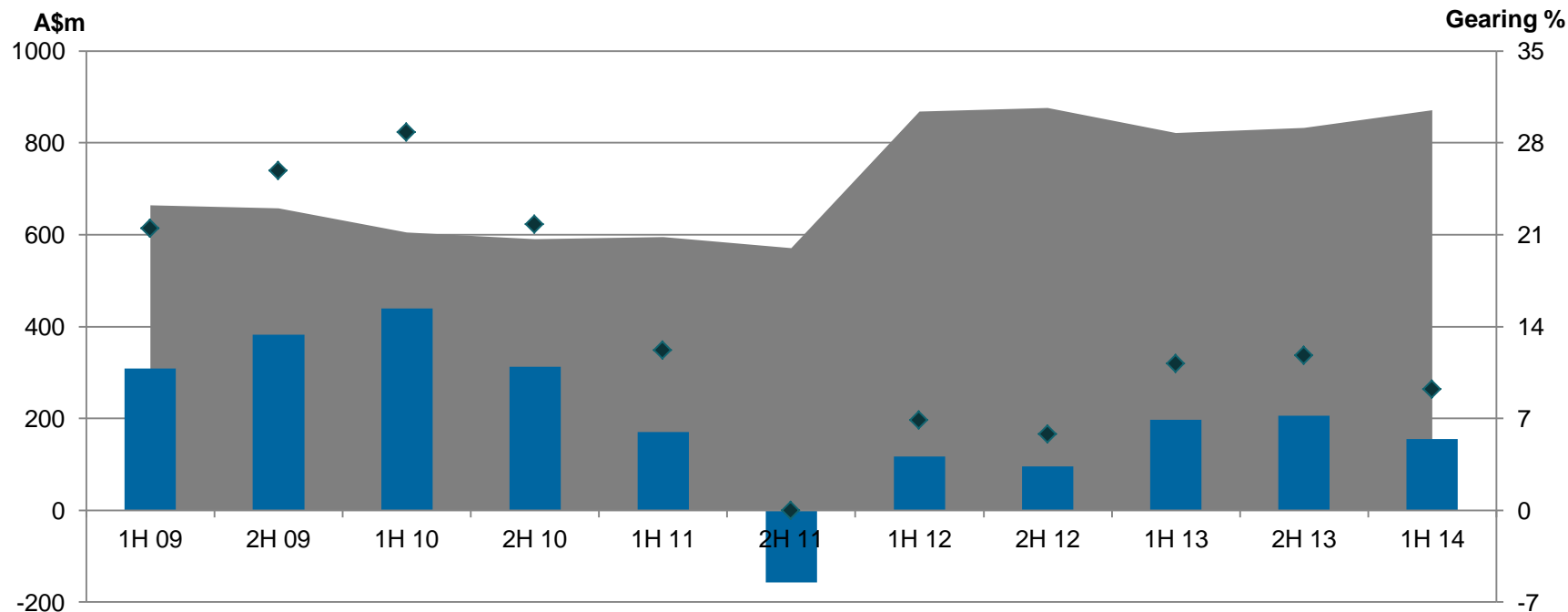


- Safety performance improvement maintained
- Strong safety culture, despite business reconfiguration
- First native revegetation in Yellabinna Nature Reserve
- 2014 SA Premier's Award for Environmental Excellence





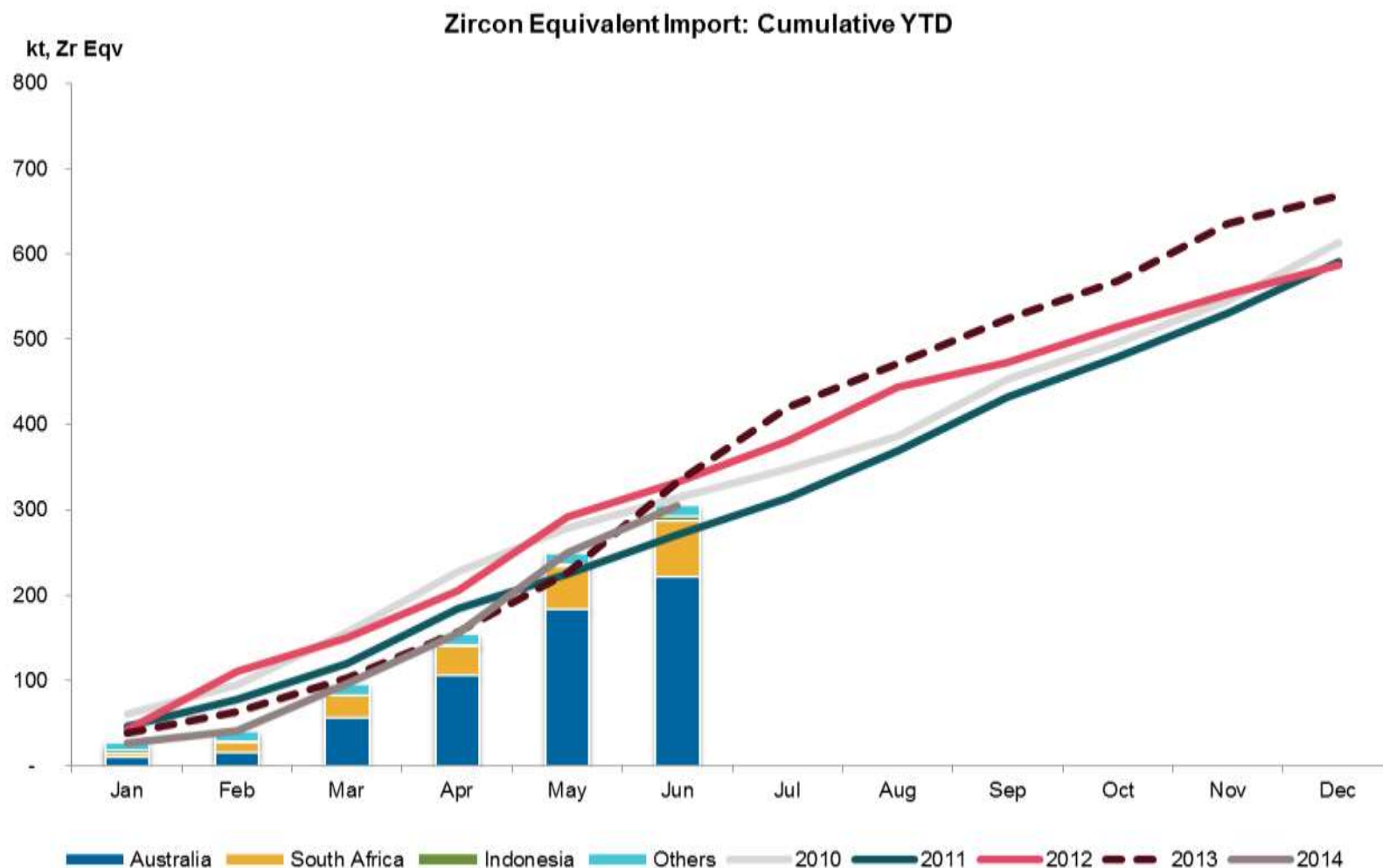
# Balance Sheet



- Gearing of 9.2% (30 June 2014)
- Available debt facilities increased by \$50 million in the half
- Total facilities A\$850 million + US\$20 million US Private Placement
  - A\$175 million due April 2017
  - A\$675 million due April 2019
  - US\$20 million USPP due June 2015
- A\$174 million drawn as at 30 June 2014
- Undrawn facilities of A\$676 million and cash at bank of A\$34 million as at 30 June 2014

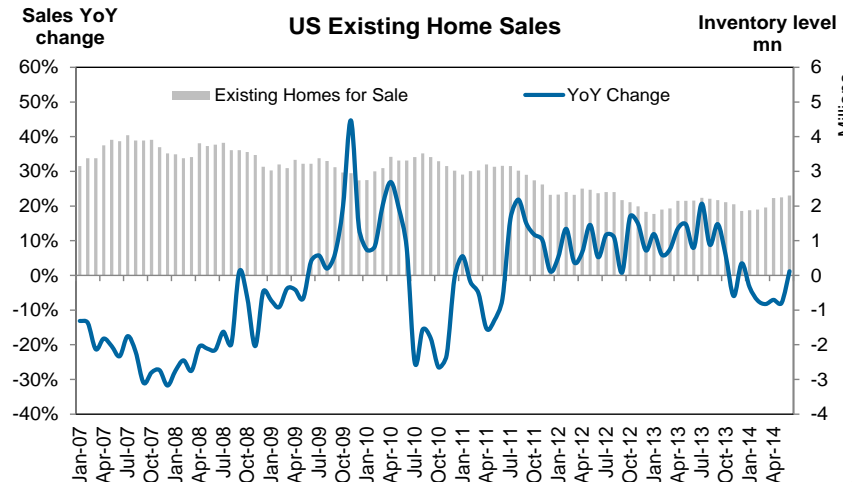
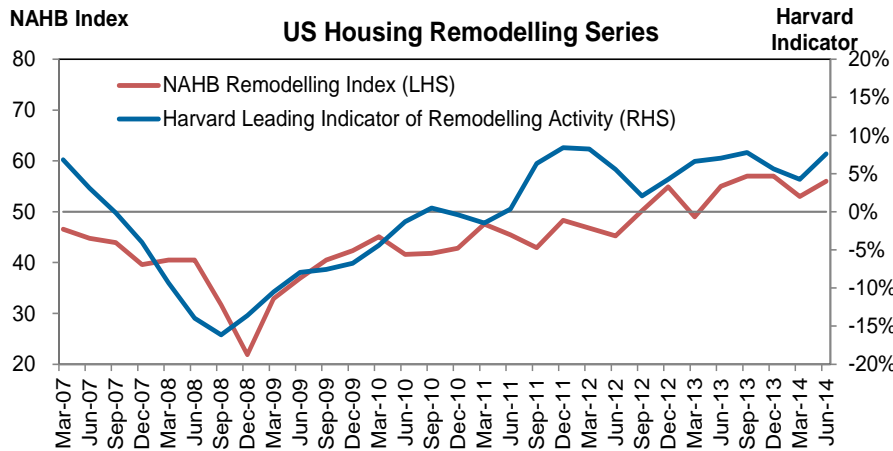
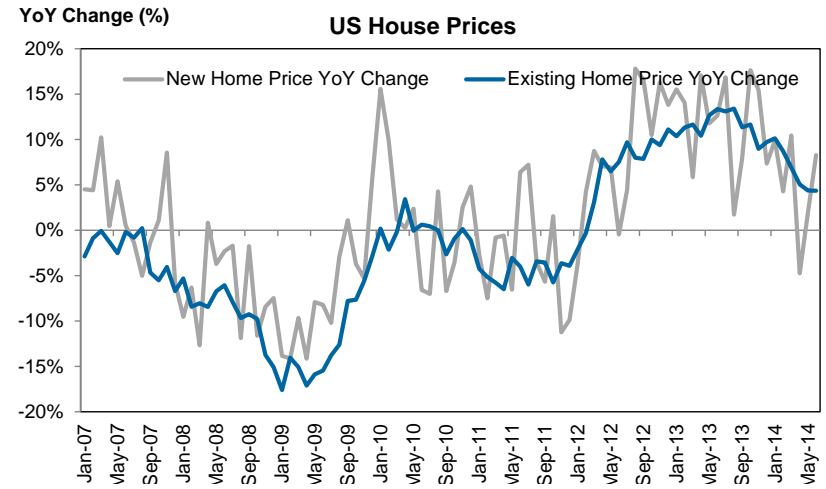
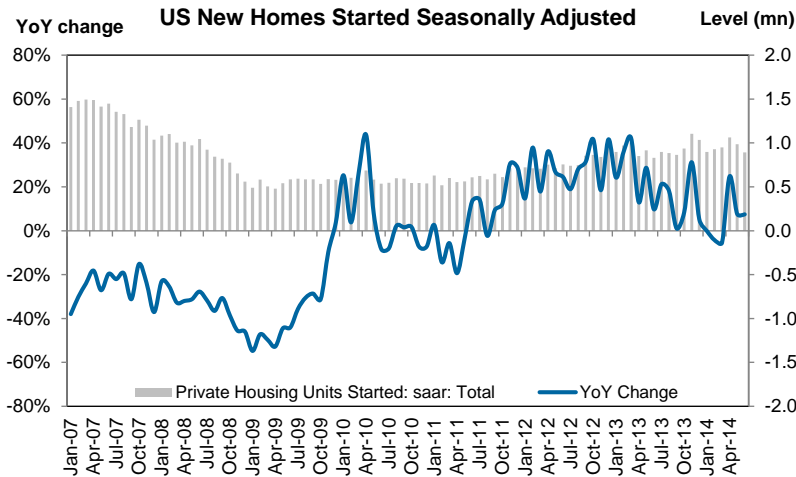
# China Zircon Imports

- Year-to-date China zircon imports in line with previous years.



# Lead Indicators – USA Housing

- US property indicators remain positive y-o-y, supporting the sector's cyclical upturn
- July data: housing starts increased by 15.7% in July while permits issued rose ~8% (indicating strong starts in coming months)



# Industry Context - Robust Demand Long Term

## Urbanisation



## Consumption based growth



## Array of applications



ZIRCON

TITANIUM DIOXIDE

MINERAL SANDS

➔ ceramics, range of chemical and consumer applications

➔ pigment ➔ paint, plastics ➔ coatings

➔ Mid-to-late cycle demand characteristics; consumption/GDP related

# Increasing Array of Applications

## Zircon Applications

- Catalytic converters
- Nuclear fuel rods
- Oxygen and pressure sensors
- Fibre optics
- Electrical motherboards and capacitors

## Titanium Dioxide Applications

- 3D printing applications
- Desalination plants
- Offshore oil and gas components
- Power plant cooling systems
- Aerospace / defence
- Nanotechnologies



# Industry Context and Dynamics

## VHM Grade / Assemblage decline

- Global decline in VHM/ assemblage characteristics
- Increasing trash – adverse to VHM component
- TiO<sub>2</sub> abundant but higher sulphate ilmenite assemblage
- Zircon and rutile credits critical to project economics
- Technical challenges of new supply

## Medium to longer term supply challenge

- Limited known high quality deposits
- Poorer resources, often in higher risk jurisdictions
- Supply issue in context of:
  - increased intensity of demand (e.g. pigment in China)
  - urbanisation
  - consumerism
  - new applications

## Maturing ore bodies / fresh capital required

- Major players operating within mature ore bodies
- Significant capital required to sustain production levels and bring on supply to meet market demand over medium term
- Shareholder return consideration

## Higher prices required to incentivise supply?

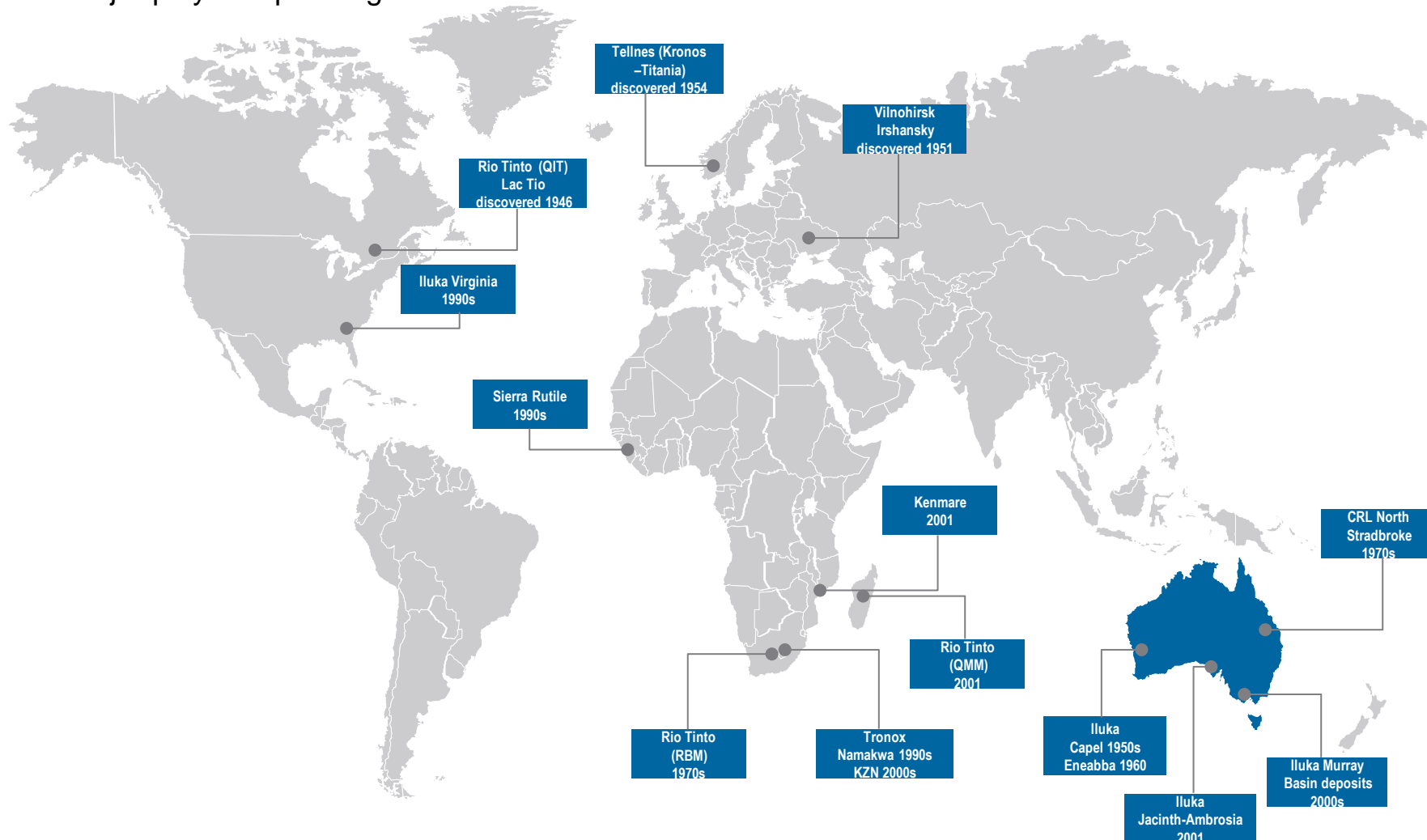
- Nature of declining grades and assemblages - challenging economics
- Costs increasing and jurisdictional challenges more pronounced

## Rise of China – sulphate and chloride pigment

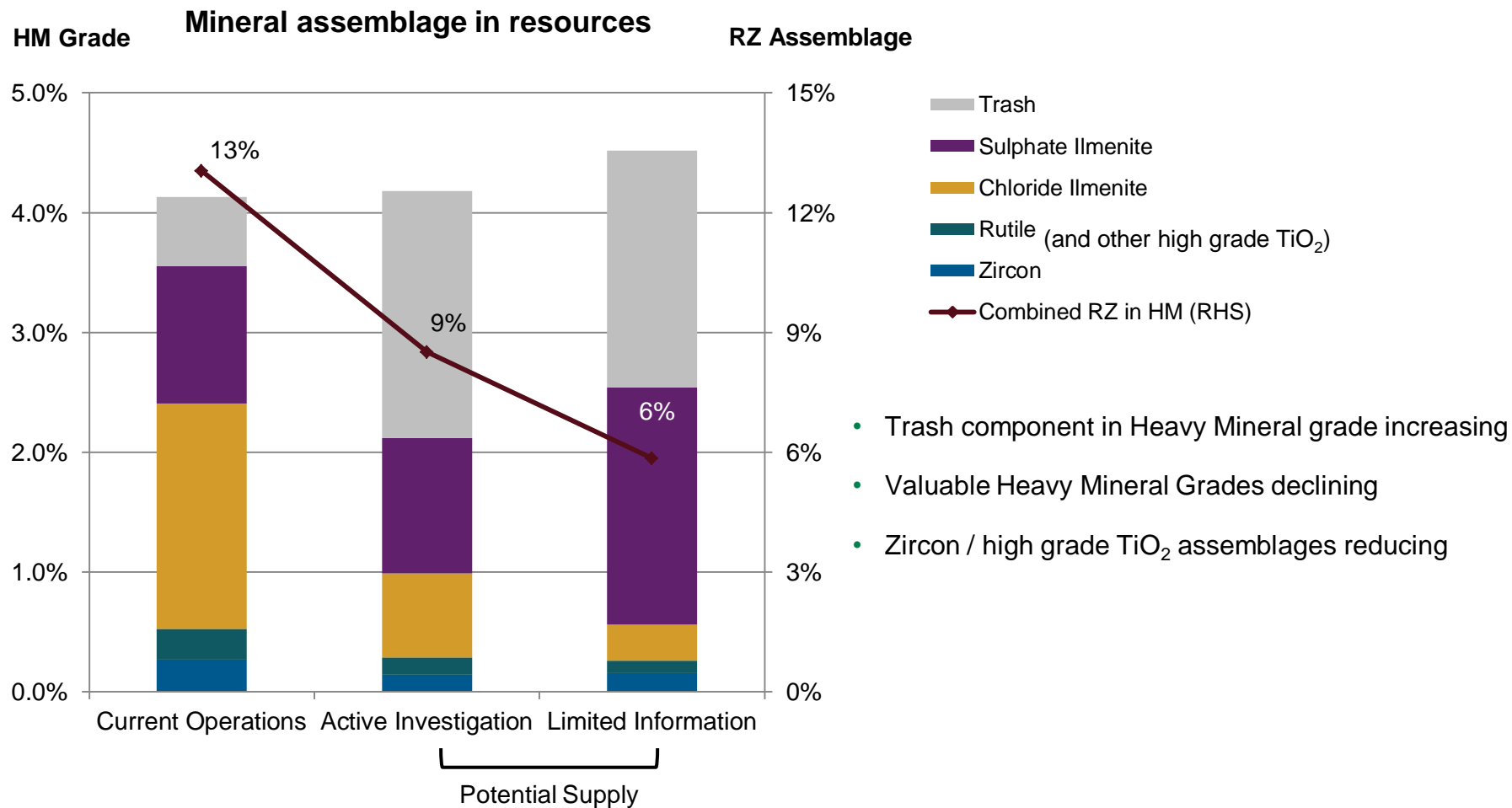
- China's consumption of TiO<sub>2</sub> is expected to continue growing
- Production to date predominately sulphate
- China chloride pigment industry encouraged
- Requirement for imported feedstocks
- Higher grade feedstock imports/ilmenite for domestic upgrading

# Mineral Sands - Major Deposit Discoveries

- Major players operating within mature ore bodies.



# Industry Grade and Assemblage Challenges

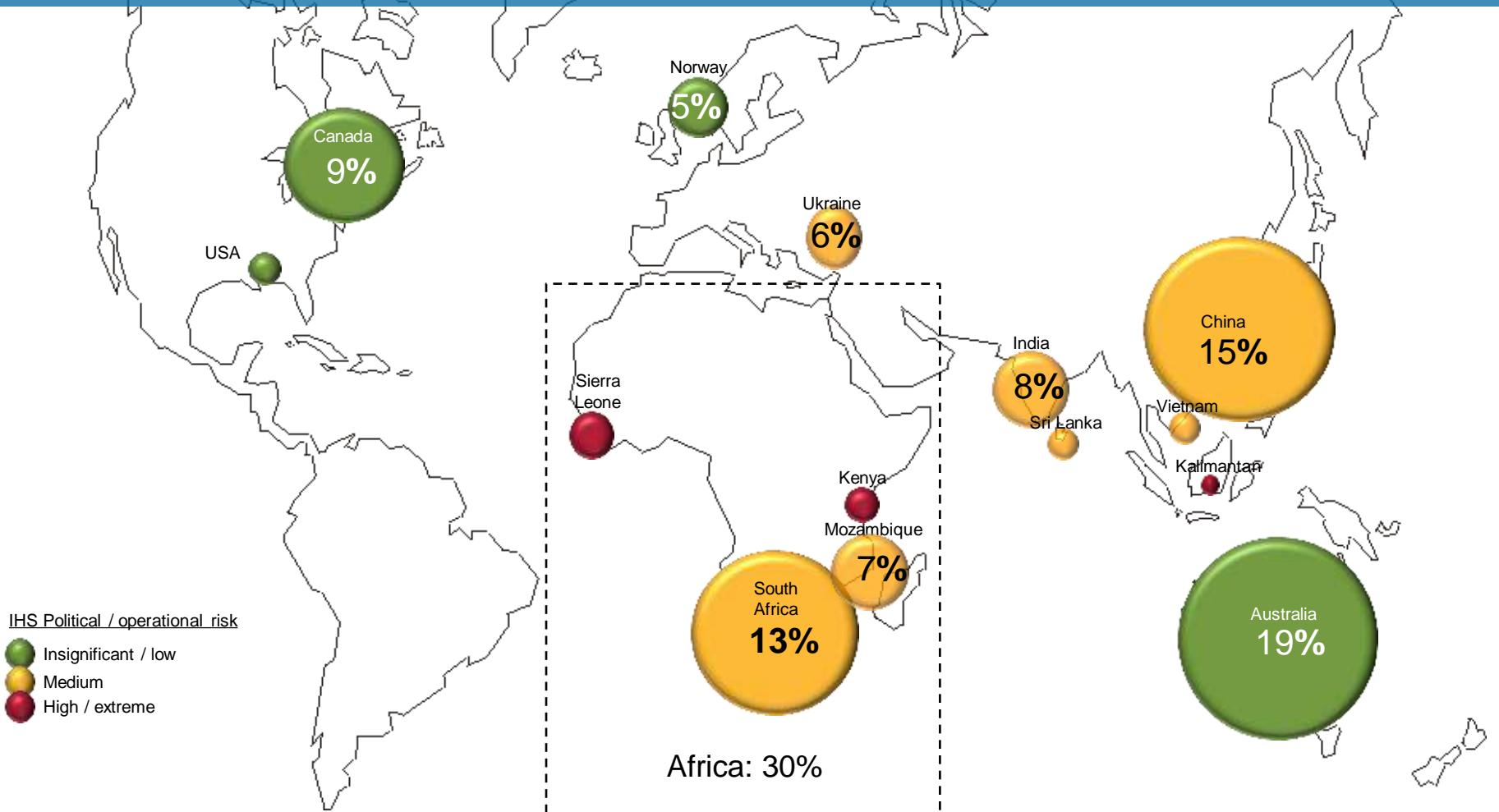


Source: Iluka analysis






# Increasing Supply Chain Risk and Cost

TiO<sub>2</sub> units produced (2020 Forecast)

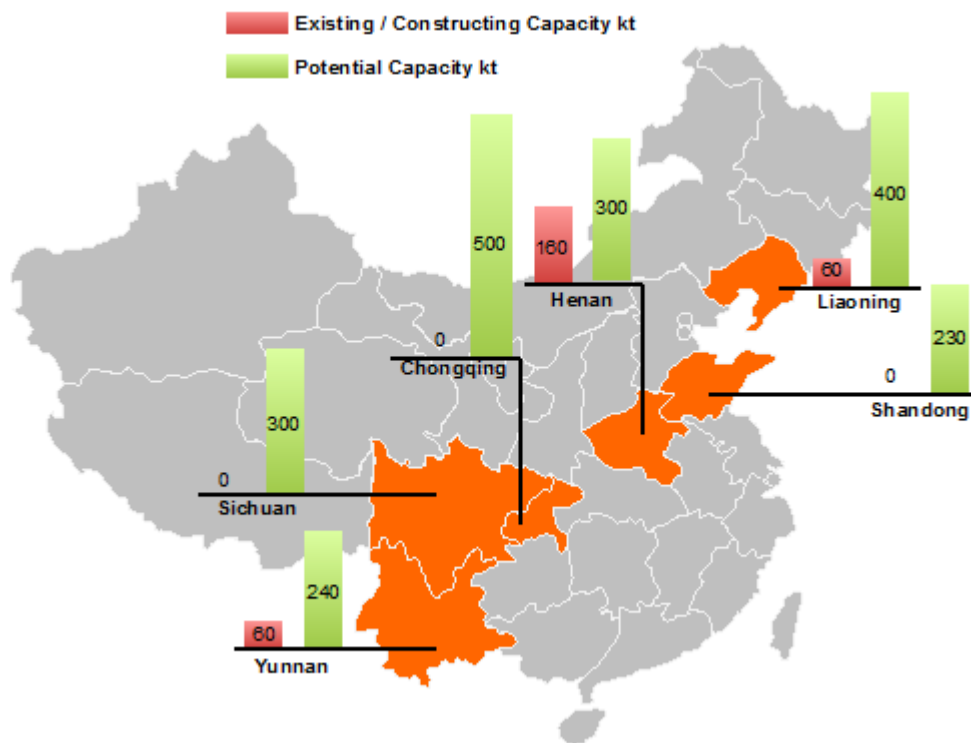


IHS Political / operational risk

-  Insignificant / low
-  Medium
-  High / extreme

# Industry Dynamics – China Influence

## Chloride Process Projects in China



Source: CM

- Jan 2011, MIIT\* published “Cleaner Production Technology Implementation Scheme for Five Industries Including Titanium Dioxide”, stating:  
*by 2014, it is anticipated that TiO<sub>2</sub> production capacity using the chloride process will reach 300 kt/year...*
- March 2011, NDRC published the “Directory Catalogue on Readjustment of Industrial Structure, (2011 version No. 9)”, stating:  
*Encouraging the production line of TiO<sub>2</sub> with the chloride process, having over 30 kt/year capacity for each production line and using Ti-rich materials with minimum 90% TiO<sub>2</sub> content, such as synthetic rutile rutile, natural rutile and titanium-rich slag. Restricting newly constructed facilities for production of sulphate Ti pigment.*

\*MIIT: Ministry of Industry and Information Technology

## NEW RESOURCES AND RESOURCE TO RESERVE CONVERSION

### Exploration

- Internal expertise
- Consistent expenditure ~ \$20m p.a.
- Predominantly greenfield
- Wider international search spaces
- Focused non mineral sands team

### Innovation and Technology

- Production efficiencies / recoveries / product quality
- Non conventional resource conversion
  - e.g. fine grained
- Resource development pathways
  - e.g. Tapira

### Market Development

- Market representation
- Facilitate potential demand drivers
  - Zircon Industry Association
  - Metalysis
- Position in China pigment market
  - both sulphate and chloride
  - detailed country analysis

# Areas of Focus

- Maintain multiple options
- Five internal mineral sands projects at advanced evaluation
- Two at earlier stage evaluation (Tapira, Sri Lanka)
- Focus on capital efficiency / returns e.g. kiln reactivation
- Timeframe for all options dependent on:
  - timely and satisfactory completion of feasibility studies
  - prevailing and forecast market demand conditions
  - commercial arrangements and/or project economics

# Mineral Sands Project Development



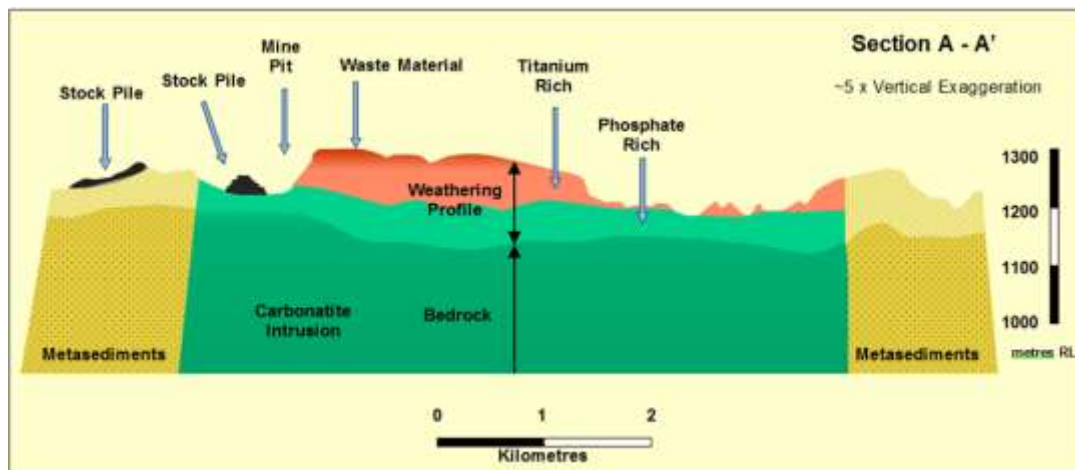
Project	Location	Characteristics
<b>Pre-execute</b>		
Hickory	Virginia, USA	<ul style="list-style-type: none"> <li>• Chloride ilmenite with associated zircon</li> <li>• Utilisation of existing mineral separation plant (MSP)</li> </ul>
<b>Definitive Feasibility Study</b>		
Balranald	Murray Basin, NSW	<ul style="list-style-type: none"> <li>• High grade rutile, zircon and ilmenite</li> <li>• Next planned mine development in Murray Basin</li> </ul>
Cataby	Perth Basin, WA	<ul style="list-style-type: none"> <li>• Chloride ilmenite with associated zircon</li> <li>• Next planned mine development in WA</li> </ul>
Eucla Basin Satellite Deposits	Eucla Basin, SA	<ul style="list-style-type: none"> <li>• 3 chloride ilmenite deposits with associated zircon</li> <li>• Close proximity to Jacinth-Ambrosia infrastructure</li> </ul>
Aurelian Springs	North Carolina, USA	<ul style="list-style-type: none"> <li>• Chloride and sulphate ilmenite with associated zircon</li> <li>• Utilisation of Virginia MSP</li> </ul>
<b>Scoping / Pre PFS</b>		
Puttalam	Sri Lanka	<ul style="list-style-type: none"> <li>• Large, long life mainly sulphate resource, re- acquired by Iluka in 2013</li> </ul>

Projects may be a significant component of the carrying value of the associated assets.

# Tapira, Brazil

- Tapira complex
  - host to large volumes of titanium bearing minerals
  - ~ 6 x 8 kms; area of ~ 35 square kms
  - In-situ and stockpiled materials<sup>1</sup>
- Vale and Iluka teams formed under Phase 1

- Phase 1 evaluation involves
  - geological, technical evaluation
  - market assessment
  - pilot plant design
  - review of existing data



<sup>1</sup> Refer Iluka ASX Release, 4 June 2014, Agreement with Vale for information on exploration target mineralisation sizes.

## Puttalam Project

- Large scaleable sulphate ilmenite deposits
- 56 million tonnes of in situ HM Mineral Resource<sup>1</sup>
  - HM grade 8.2%
  - ilmenite 67%, zircon 3%, rutile 4% of HM assemblage
- Discussions with Government to determine legislative framework:
  - mineral policy
  - legal and investment terms
- Extension granted on key Exploration Licence
- Further resource drilling conducted

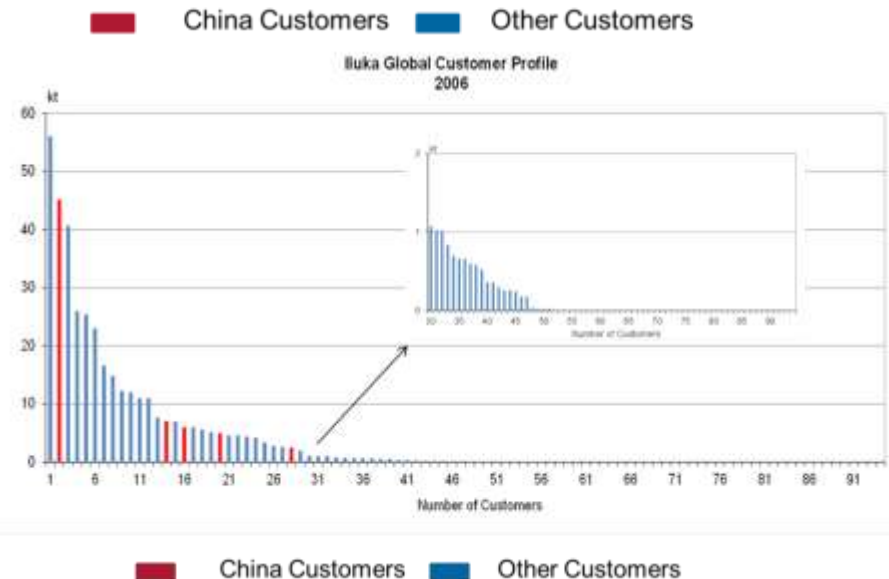
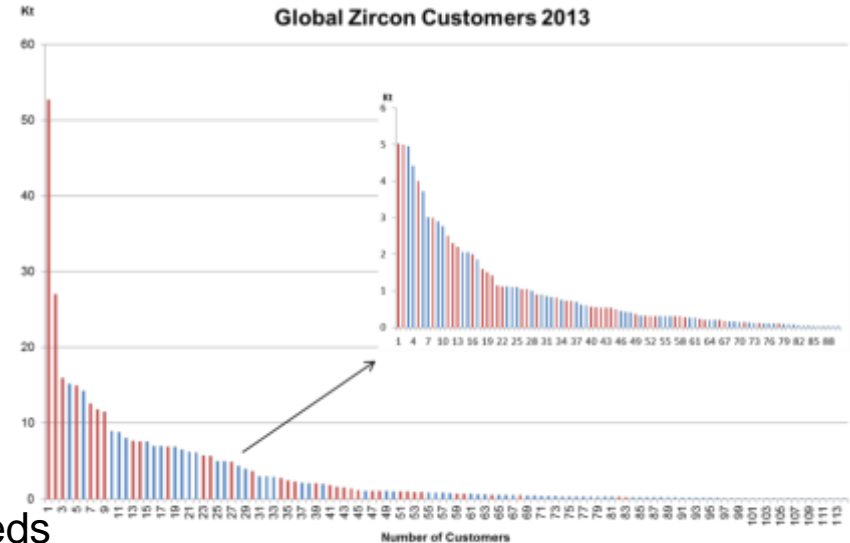
<sup>1</sup>Refer Iluka ASX Release, 5 August 2013, Acquisition of Sri Lanka Tenements and Heavy Mineral Base and Iluka 2013 Annual Report, Iluka Mineral Resources Breakdown by Country, Region and JORC Category page 135.

- Iluka payment of \$18.6 million for 18.3% equity
- Completion of Commercial Framework Agreement
- Metalysis hired new process engineers and metallurgists
  - drive scale-up of proposed UK based reference plant
- Joint collaboration on feedstock development research
  - focusing on synthetic and natural rutile
- Metalysis won “European Automotive 3D Printing Customer Leadership Award”
- Re-commissioning of Industrial Plant
  - focus on tantalum powder production for electronic and metallurgical applications



# Market Development

- Expansion of global offices / logistics
  - 13 warehouses
  - 8 marketing offices
- Dedicated zircon and TiO<sub>2</sub> sales teams
- Improving market analysis:
  - deepening understanding of customer needs
  - advancing technical development work
- Expanded customer base
- ‘Long tail’ capability



## Sulphate Pigment Large Installed Base

### SITUATION

- Largest pigment producer globally - sulphate
- Reliant on imported feed stocks ~1/3<sup>rd</sup> of requirements

### INFLUENCES

- Installed sulphate base will be retained in the main
- Less efficient component rationalised
- Need for high quality ilmenite / upgraded feed stocks

### ELEMENTS OF ILUKA'S APPROACH

- Sulphate ilmenite sales
- Acid Soluble Synthetic Rutile (ASSR)
- Sri Lanka – sulphate resource

## Emergent Chloride Pigment Industry

### SITUATION

- Minimal existing in-country chloride production
- China dependent almost exclusively on imports
- World's largest car manufacturers use chloride

### INFLUENCES

- Acquisition of best technology
- China Government imperative
- Need for high grade imported feedstocks

### ELEMENTS OF ILUKA'S APPROACH

- Detailed analysis
- Develop relationships
- Focus on current and potential new producers
- Rutile and synthetic rutile trial supply

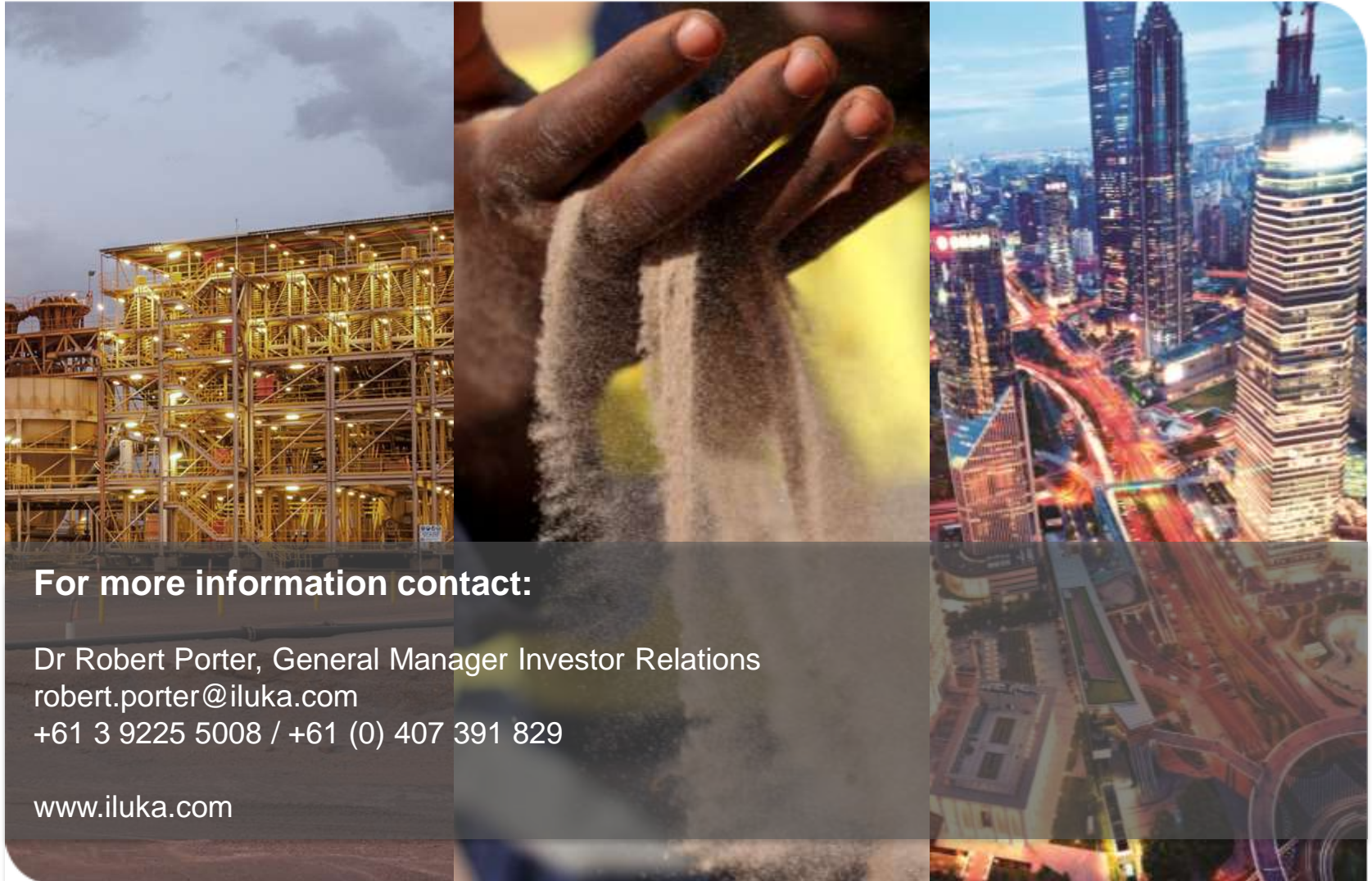
# Industry is Changing

- Pigment – ownership, geography, technology shifts
  - China factor
- Feedstock – quality diminishing, pipeline emptying, risk increasing
  - supply cost and availability challenge
- Zircon – assemblage decline, tile manufacturing transformations
  - intensity of use additive to demand, leaner resources to supply
- Technology to play a bigger role

# Iluka Approach

- Focus on shareholder returns through the cycle
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- Act counter-cyclically where appropriate

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