

**SUMMARY SLIDE DECK**

# MINERAL RECYCLING **FORUM** 2021

Tuesday 9 February 2021

**ONLINE**



**The networking and knowledge hub for the industrial mineral recycling business**

Supporting Partners



# PROGRAMME\*

GMT	CET+1	EDT-5	SGT+8	PRESENTATIONS
12:00	13:00	07:00	20:00	<b>Welcome &amp; Introduction</b> Ismene Clarke & Mike O'Driscoll, Directors, IMFORMED
12:15	13:15	07:15	20:15	<b>Critical raw materials resilience: charting a path towards greater security and sustainability –increased circularity and efficient use of resources</b> Maria Nyberg, Policy Officer, EC, Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs, Belgium
12:30	13:30	07:30	20:30	<b>EcoGraf: Closing the Carbon Loop in Li-ion batteries</b> Andrew Spinks, Managing Director, EcoGraf Ltd, Australia
12:45	13:45	7.45	20.45	<b>DISCUSSION</b>
13:00	14:00	08:00	21:00	<b>BREAK</b>
13:15	14:15	08:15	21:15	<b>South Korea's refractory recycling status &amp; key challenges to address</b> Joo Yongdon, CEO, Korea Material Co. Ltd, South Korea & Sangpil Raul Hwang, Industrial Minerals Trader, Sojitz Corp., Japan
13:30	14:30	08:30	21:30	<b>Requirements for implementing Circular Economy in the refractory waste management of a steel plant</b> Aintzane Soto, R&D Process Engineer, Sidenor, Spain
13:45	14:45	08:45	21:45	<b>Refractory recycling developments</b> Wilker Felipe Silva, Refractory Purchasing Manager, ArcelorMittal Brazil, Brazil
14:00	15:00	09:00	22:00	<b>DISCUSSION</b>
14:15	15:15	09:15	22:15	<b>BREAK</b>

14:30	15:30	09:30	22:30	<b>ENSUREAL – Pedersen Process Revisited: Changing the colour of alumina production</b> Dr David Konlechner, Owner, KON Chemical Solutions e.U, Austria
14:45	15:45	09:45	22:45	<b>Mineral waste streams in ceramic construction products: Potential &amp; limitation</b> Carl Sorrell, Vice President, IntoCeramics, OPF Enterprises LLC, USA
15:00	16:00	10:00	23:00	<b>Reclamation &amp; repurposing tailings as a source of low-risk MgO supply for construction market</b> J. Michael Sullivan President & CEO, BAIE Minerals Inc., Canada
15:15	16:15	10:15	23:15	<b>Use of LIBS in recycling and in steel, refractory and mining industry</b> Amit Ahsan, Sales Engineer, SECOPTA analytics GmbH, Germany
15:30	16:30	10:30	23:30	<b>DISCUSSION</b>
15:45	16:45	10:45	23:45	<b>ROUNDTABLE BREAKOUT:</b> <b>1. Refractory Recycling</b> <b>2. Sorting &amp; Other Challenges in Mineral Recycling</b>
16:30	17:30	11:30	00:30	<b>Close of Forum</b>





ALFRAN  
Almatis GmbH  
ArcelorMittal Brasil  
Baie Minerals Inc  
Calderys Italia S.r.l  
Deref Spa  
EcoGraf Ltd  
Eggerding  
European Commission  
FUSP  
HarbisonWalker International  
Horn & Co Group  
Hydro Aluminium AS  
Imerys  
IntoCeramics  
JSW Steel Ltd  
Kon Chemical Solutions  
Korea Material Co.  
Maharashtra Minerals Ltd  
MEI Online

Mineralen Kollee  
PF&U Mineral Development ApS  
Possehl Erzkontor GmbH & Co KG.  
PRCO America  
Quarzwerke GmbH  
REF Minerals  
Refractories WorldForum  
Refratechnik Holding GmbH  
RHI Magnesita  
Roskill Information Services  
Saint-Gobain  
SCR-Sibelco  
SECOPTA Analytics GmbH  
Sidenor  
Sojitz Corp.  
SSAB  
TAK Industrial Minerals Consultancy  
University of Koblenz-Landau  
Vesuvius  
Wuhan University of Science & Technology

***This would be difficult to improve on. You had steel producers, refractory producers, new technology developers, academics, government officials and experts presenting and sharing current info on very relevant real time topics. Well done!***

Bill Porter, National Manager USA & Canada, PRCO America, USA

***Really enjoyed the session and was very well hosted.***

Andrew Spinks, Managing Director, EcoGraf Ltd, Australia

***Congratulations, it was a very well organised and good Forum. The roundtable session was a very good idea.***

Werner Odreitz, Managing Director, REF Minerals GmbH, Germany

***The forum is an excellent tool to promote recycling/circular economy***

Karin Scharrer, Editor, Refractories WorldForum, Germany

***It was an eye-opening experience and I got to “meet” a lot of interesting people who bring their unique value to the industrial mineral industry.***

Sangpil Raul Hwang, Industrial Minerals Trader, Sojitz Corp., Japan

# New era of mineral exploration, sourcing, & development

- Inevitable development spotlighted  
& advanced by the pandemic
  - = Mineral sourcing strategy rethink
  - = Accelerated mineral recycling





# New era of mineral recycling

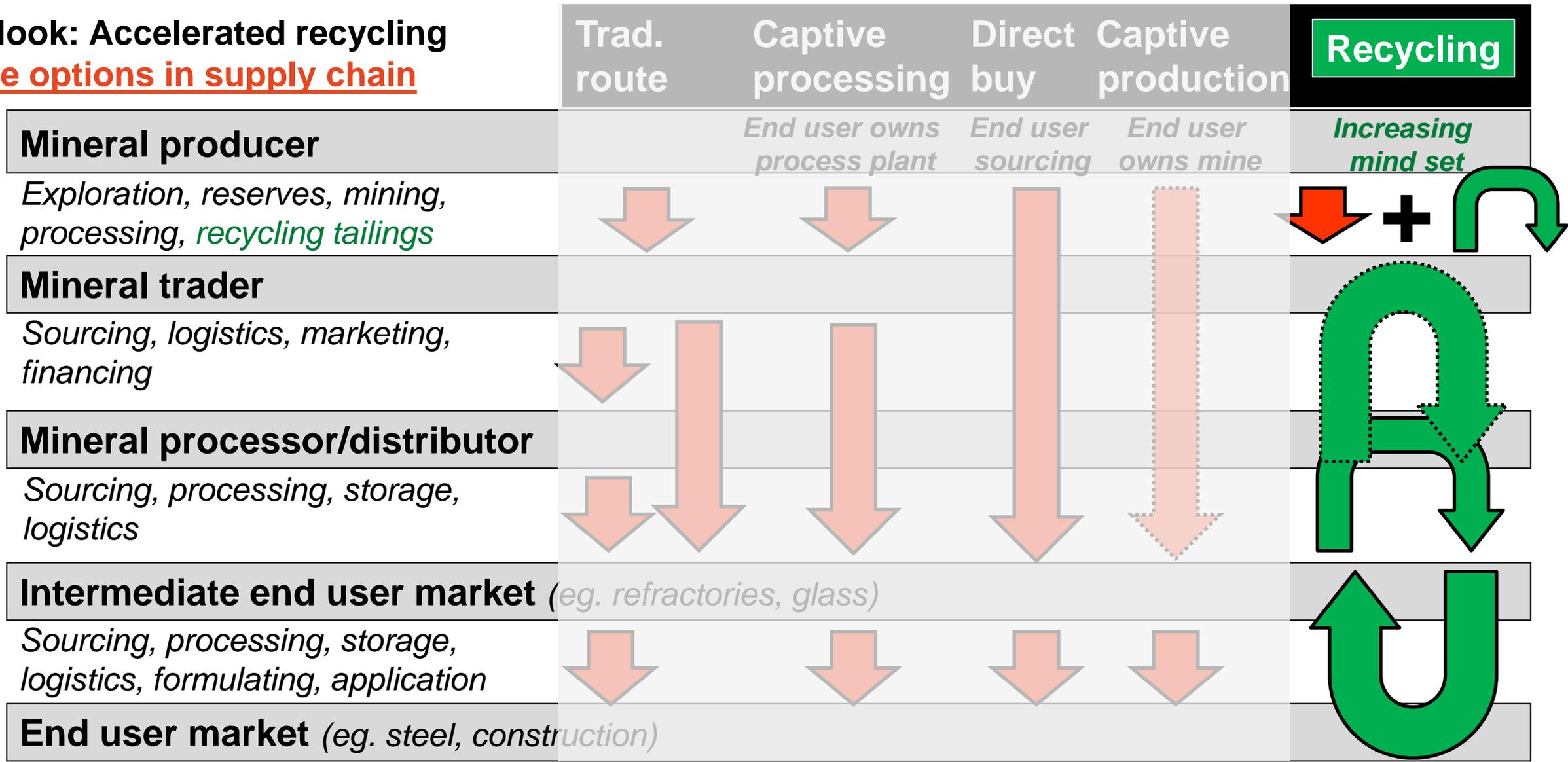
## Primary drivers: “Rule of Six”

1. **Limited primary sources:** shortage of commercially developed “critical” mineral resources and processing plants
2. **Source overreliance:** risky overreliance on supply/trade from limited overseas source
3. **China in change:** supply issues, range of factors.
4. **Emergence of hi-tech growth markets:** to become mainstream, particularly in the energy sector (eg. Li-ion batteries, EVs, solar, wind), and thus demand for respective critical minerals (eg. lithium, graphite, rare earths).
5. **Recycling technology more economic/established:** from esoteric, expensive sideshow, to mainstream processing line; opportunities sensed and sought after
6. **Environment:** saving the environment, drive for the “Circular Economy” gathering momentum



# New era of mineral recycling

**Outlook: Accelerated recycling**  
More options in supply chain





# New era of mineral recycling

## Outlook: Accelerated mineral recycling

- **Drivers:**

- alternative mineral source
- cutting costs (from waste disposal)
- move to develop Circular Economy to protect environment
- **provides mineral suppliers and mineral consumers with “green” portfolio**

- **“New normal”:** Recycled raw materials will become a “normal” supply chain option for mineral buyers

- **Challenges remain:**

*eg. competitive pricing; grade quality; advanced sorting techniques; development & investment processing tech.; harmonisation of waste handling/permitting; “education” of industry and ridding of stigma of recycled material as “contaminated”*

- **Opportunities** to process minerals from waste, develop & supply sorting technology & equipment
- **Economic alliances** increasing between waste sources (end users) + recyclers, new logistic chains
- **Supply chain co-operation** in modifying end product formulations to ease end-of-life recyclability



Red mud from bauxite processing subject to much R&D in recycling



# REFRACTORY MINERALS FORUM 2021

16-17 March 2021

ONLINE



## Global trends & outlook in supply & demand for refractory raw materials & markets

<b>Global Outlook</b>	Carol Jackson, <i>President, WRA &amp; CEO, HarbisonWalker</i>
<b>Refractory futures</b>	Dr Richard Flook, <i>Managing Director, Mosman Resources</i>
<b>India</b>	Sameer Nagpal, <i>CEO, Dalmia-OCL</i>
<b>China</b>	Vincent Wong, <i>Market Analyst, Refractories Window</i>
<b>Dolomite</b>	Thomas Frömmer, <i>Senior VP Mining, RHI Magnesita</i>
<b>Andalusite</b>	Dirk Auge, <i>Sales Manager, Cofermin Rohstoffe</i>
<b>Bauxite</b>	Ted Dickson, <i>TAK Industrial Mineral Consultancy</i>
<b>Guyana bauxite</b>	John Karson, <i>VP Sales and Marketing, First Bauxite</i>
<b>Graphite</b>	George Miller, <i>Analyst, Benchmark Mineral Intelligence</i>
<b>Chromite</b>	Dr Nils Backeberg, <i>Manager Steel Alloys, Roskill</i>
<b>Magnesia</b>	Mike O'Driscoll, <i>Director, IMFORMED</i>

# IMFORMED ONLINE

# Rendezvous

Wed 14 April 2021

SUPPLY  PROCESSING  LOGISTICS  MARKETS

*For established players seeking new horizons & newcomers evaluating industrial minerals*

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## Future trends & developments in port logistics

Pim Steenhuis, Commercial Manager Dry Bulk, Port of Amsterdam

## CO<sub>2</sub> reduction challenges & opportunities

Aurela Shtiza, Director Industrial Affairs & Raw Materials, IMA-Europe

## How will strategic minerals ride the next economic cycle?

Neal Brewster, Chief Economist, Roskill

## The security of critical mineral supply chains

Dr Steven Fortier, Director, National Minerals Information Center USGS

## Understanding the geopolitics of critical minerals

Jack Lifton, Director, Critical Minerals Policy Institute & Ken Santini, Managing Director, Santini & Associates

## Creating reference & benchmark pricing for lithium

Simon Moores, Managing Director, Benchmark Mineral Intelligence

## Transforming strategy into cash in the industrial mineral sector

Miguel Galindo, Managing Director, Strateg-On

## Improved performance of grinding systems

Andreas Henssen, Product Manager Classifiers, Neuman & Esser

## Energy conservation in ultrafine industrial mineral processing

Dietmar Alber, Business Development Director, Hosokawa Alpine AG

## Wrap-Up + BREAKOUT ROUNDTABLE SESSION

**EARLY BIRD RATE ENDS FRIDAY 5 MARCH – BOOK NOW!**

# REFRACTORY MINERALS **FORUM 2021**

16-17 March 2021

**ONLINE**



# OILFIELD MINERALS & MARKETS **FORUM 2021**

Wed 26-Thu 27 May 2021

**ONLINE**



# FLUORINE **FORUM 2021**

Pan Pacific Hanoi  
18-20 October 2021



# **IMFORMED** **ONLINE** *Rendezvous*

13-14 April 2021

SUPPLY  PROCESSING  LOGISTICS  MARKETS

# **MAGFORUM 2021**



Magnesium Minerals & Markets Conference  
Grand Hotel Huis ter Duin (Noordwijk),  
Amsterdam — 28-30 June 2021

# CHINA REFRACTORY MINERALS **FORUM 2021**

InterContinental Dalian  
25-27 October 2021



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- **Launched in January 2015**
- **Extensive experience & reputation**
- **Specialising in conferences & market research in:**
  - **Industrial Minerals Supply/Demand**
  - **Magnesia**
  - **Refractory Minerals**
  - **China**
  - **Mineral Recycling**
  - **Fluorine**
  - **India**
  - **Oilfield Minerals**