MATERIALS WEEK EUROPE

The next speaker is...

Thibaud Martin
CEO
Altrove

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Sustainable magnetic materials development through AI-driven high throughput lab

Scan below for Conference Agenda

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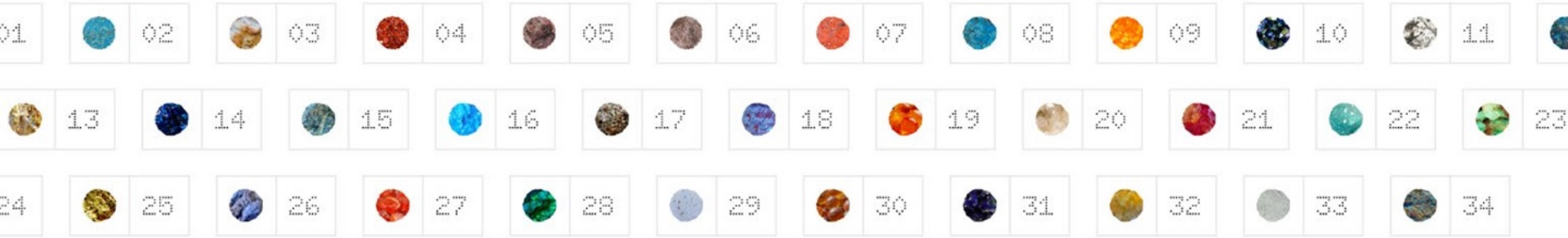
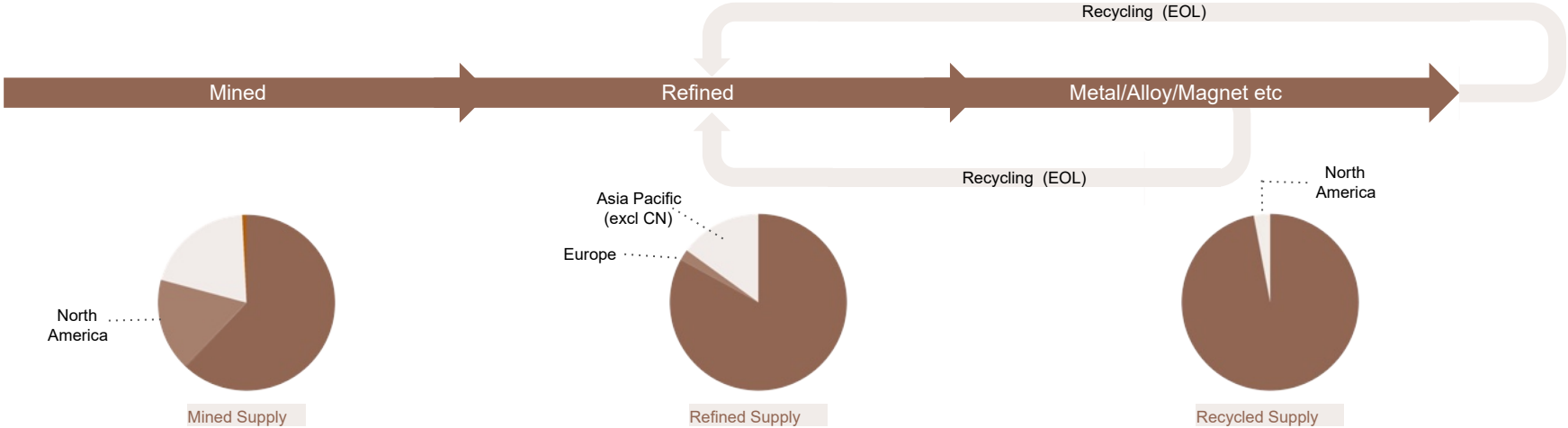
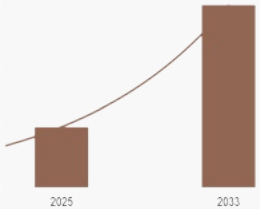
End-to-end substitution of critical inorganic materials.

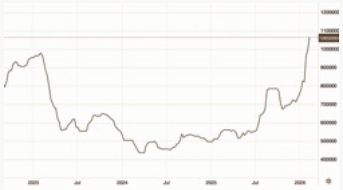






Why Materials?

Critical materials demand has doubled in the last five years, and will double again by 2033.



Volatile Prices

The prices of rare earths are highly volatile and hit an all time high in recent times.

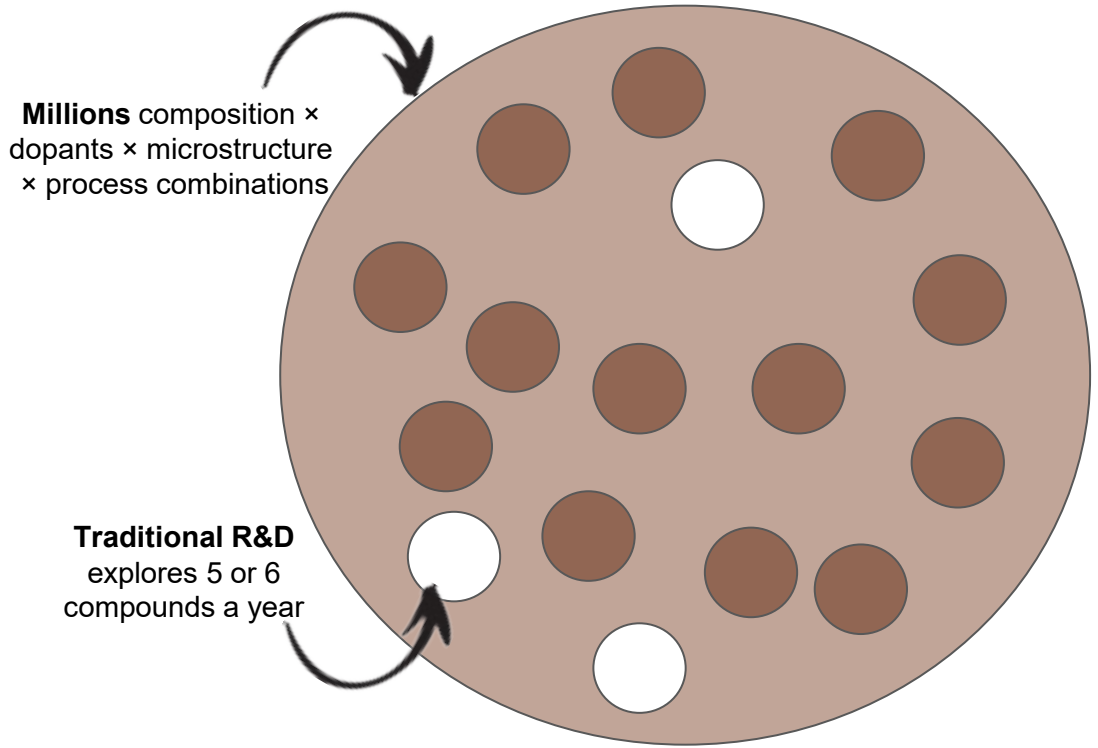
The search for REE-free/light alternatives

Limitations of Ferrite Magnets

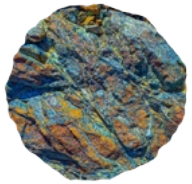
1. Low magnetic strength
2. Highly brittle
3. Bulkier designs for similar performance

Limitations of Manganese Magnets

1. Low magnetic performance
2. Complex processing
3. More phase instability



This is where AI helps



DFT and DFT-like approaches predict

Ideal Crystals

But they do not predict

Dopant Solubility Limits

Metastable Phases

Sintering Reality

Prediction without fabrication is just very expensive speculation

The Altrove Approach

Material Characterisation

Know what we made using lab & proprietary tech.

Data Generation

Very useful in a low data space to optimize for the 'perfect' material.

Dopants Optimisation

Key for stability and improved **properties** , yet doping is not taken into account by state of the art AI models.

Going from 10 years to a few months, with ideation, synthesis, optimization, scale

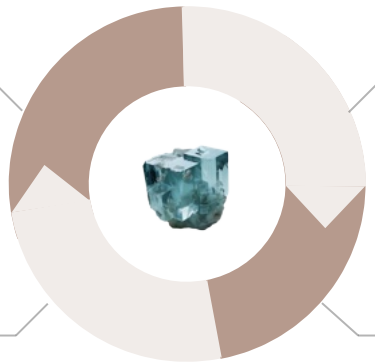
Traditional R&D process

Altrove's Process

Ideation	Recipe prediction	Property Optimisation	Scale
Time: 1-2 months	Time: 3 months	Time: 6 months	Time: 1 year

Meaning for buyer : earlier "kill" decisions, less dependency, more optionality

The lab is not validating the model. The lab is training the model.



Generate Recipe

Predict how to synthesize a candidate

Test Recipe

In our automated high-throughput lab

Learn

Evaluate recipe and improve at each iteration

Analyze Result

Evaluate material structure and properties using our proprietary algorithms

Our Focus

Active Learning

every failed sample improves the next one

Scale-up as a precursor

Manufacturing partners involved from day one.

What we've achieved so far

Dozens of experimentally accessible magnetic candidates identified in <18 months

First AI-designed magnets pressed in <9 months

Performance optimization cycles in <12 weeks, not years

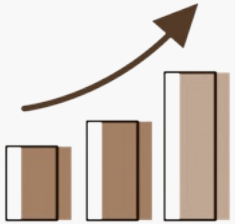
We are not looking for the NdFeB killer.

We're designing application -specific magnets that match real -world requirements:

- Temperature Window`
- Actual BHMax needed
- Corrosion Constraints
- Cost Ceilings

Rare Earth Crunch Hits Peak Demand

Increased Electrification Demands



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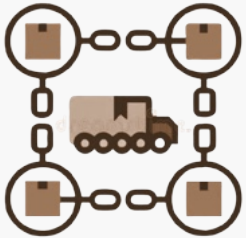
Non-diversified Supply Network



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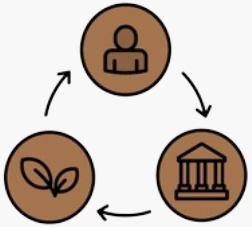
Strict Regulations + ESG scrutiny



We don't sell magnets, we build unfair advantages and optionality in an insecure world

We work with a **small number of highly -curated partners** in each big industry

Low-risk, high-reward for **vertical exclusivity**

Integrate **manufacturing constraints** from day 1

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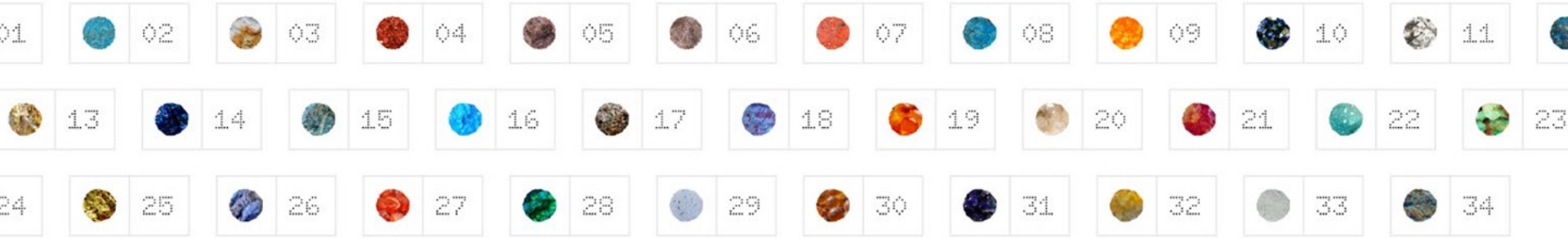
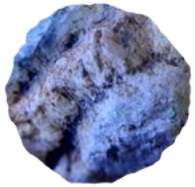
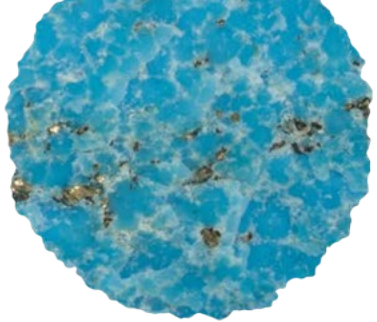
End-to-end substitution of critical inorganic materials.







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Q&A