Acceleration of eLNO® Commercialisation and Development Through a Start-up Culture

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Personal Background

JMBM
eLNO®

JM Core R&D
Catalysts, battery materials (including external projects)

PhD
‘Inorganic materials for energy conversion’

MChem
Layered Oxides

Case study explored in this talk

Accelerating progress using Start-Up principles

Customer and Production focus in an R&D environment
Our current position in the battery material value chain

- Mining
- Raw material refining
- Battery Materials
- Battery cell and pack assembly
- xEV manufacturing

Cathode Materials

- LifePower®
  - Lithium iron phosphate
- eLNO®
  - High nickel, low cobalt

Recycling
Customisation is key to capturing value

Tailoring eLNO® to meet customer requirements

Technology expertise enables rapid development and customisation

Committed to customisation with positive customer feedback:

"JM is a preferred cathode material company to work with due to fast response, willingness to customise the product [and] investing in science”

No single material meets the needs of all customers
How have we driven this?
Accelerating progress through a non-traditional R&D setting

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Embedding a ‘Production Mindset’
The Importance of Customer Focus and Taking Risks

- Minimum Viable Product
- Risk Appreciation and Mitigation
How do you know what the customer wants?

How do you get feedback from them quickly so you don’t spend time going down the wrong path?

It is not the scientist in the lab who determines if their latest material or process is better than the previous version.

Speed - not perfection - is key.

The faster you can understand what your customer wants, the sooner you can address their needs.
Taking Risks
Making decisions when we don’t have all of the data

Identify your critical path
Identify ‘pivot’ points

What you know
What you know you don’t know

Mitigations

Can you find an answer (quickly)?
How can you maximise the chance of success?
How can you quickly verify progress?
Collaboration across JM
Every team is greater than the sum of its parts

Metal procurement and management
- Long history of working with and scaling Ni compounds (100+ years of Ni based powder manufacture)
- Leveraging Ni and Co contracts
- Strategic partnership with Nemaska Lithium

Manufacturing excellence
- History of supplying battery materials into automotive customers

40+ years of automotive supply
- Largest market share of automotive catalysts
- Experience with automotive accreditation (ISO, TS16949, VDA)
- 1 in 3 cars on the road use a JM catalytic converter
Building the team for success
For now and into the future

**Recruiting Individuals**
- Skills/Experience
- Attitude/Mindset
- Team fit

**Forming a team for the present**
- Unified Purpose
- Fail fast culture

**Developing a team for the future**
- Career ambitions
- Opportunities for Development
- Vision for the team and business

Communication & leadership
Longer term team and business view
Development
What does success look like?

The importance of purpose, objectives and agility

Why are the team here?

Aligned to steer through uncertainty and change

What do we need to do, and how do we know when we’ve done it?

Targets and measures of success

Are we working on the right things?

Objectives under constant review to ensure they stay relevant

Purpose

Objectives

External alignment