

Australian Aluminium Council Site Visit Presentation

ABx Group Limited (ASX: ABX) ("ABx" or "the Company") provides the attached presentation from the Australian Aluminium Council site visit to the ALCORE Technology Centre.

This announcement is approved for release by the Managing Director.

For further information please contact:

Dr Mark Cooksey

MD & CEO

ABx Group

+61 447 201 536

mcooksey@abxgroup.com.au

www.abxgroup.com.au

Media

Chapter One Advisors

David Tasker / Alex Baker

+61 433 112 936 / +61 432 801 745

dtasker@chapteroneadvisors.com.au

abaker@chapteroneadvisors.com.au

About ABx Group Limited

ABx Group Limited (ABx) is a uniquely positioned Australian company delivering materials for a safer, cleaner future.

The three priority projects are:

- **Heavy rare earths:** Supplying light and heavy rare earths from Tasmania into Western supply chains
 - Maiden mixed rare earth carbonate produced and positive customer feedback received
 - Processing Options Analysis conducted in partnership with external experts
- **Clean fluorine chemical production:** Producing industrial chemicals from aluminium smelter by-product (ALCORE)
 - Continuous pilot plant under construction in Bell Bay, Tasmania
- **Near-term bauxite production:** Mining bauxite resources for the aluminium, cement and fertiliser industries
 - Agreements executed with Good Importing International for bauxite projects in Queensland and New South Wales, and \$2.7 million initial payment has been received
 - Approvals well advanced for DL130 bauxite project in northern Tasmania

ABx endorses best practices on agricultural land and strives to leave land and environment better than we find it. We only operate where welcomed.



AB*x Group*

ASX:ABX

ALC**ORE**

**Clean fluorine chemical production:
producing industrial chemicals from
aluminium smelter by-product**

AUSTRALIAN ALUMINIUM COUNCIL VISIT

MAY 2026



**Delivering materials for
a safer, cleaner future**



Heavy Rare Earths

Supplying light and heavy rare earths from Tasmania into Western supply chains



ALCORE

Clean fluorine chemical production

Producing industrial chemicals from aluminium smelter by-product



Near-term bauxite production

Mining bauxite resources for the aluminium, cement and fertiliser industries

INVESTMENT PROPOSITION

- ❑ Low-cost hydrogen fluoride production using aluminium smelter bath by-product
- ❑ Will enable hydrogen fluoride production in Australia, to reduce 100% reliance on imports



Team

Experienced and capable



Strongly increasing demand for fluorine

Batteries



Supply shortage

No hydrogen fluoride produced in Australia. Limited global fluorspar resources



New fluorine source available at low cost

Aluminium smelter by-product



Chemical process is low risk

Adaptation of existing commercial process



Pathway to production

First mover globally: at pilot plant stage

HIGHLY EXPERIENCED TEAM



DR MARK COOKSEY

Managing Director

- More than 20 years with Rio Tinto and CSIRO
- Significant experience in developing and commercialising new processes in minerals and metals industry
- PhD in Chemical & Materials Engineering

JOYCELYN MORTON

Non-Executive Chair

- Over 30 years' experience as an executive and director with Australian and international listed companies, including Argo Investments, ASC and Snowy Hydro
- Chair of the Audit, Risk and Compliance Committee for multiple boards
- Fellow and Life Member of CPA Australia, and former National President

IAN LEVY

Non-Executive Director

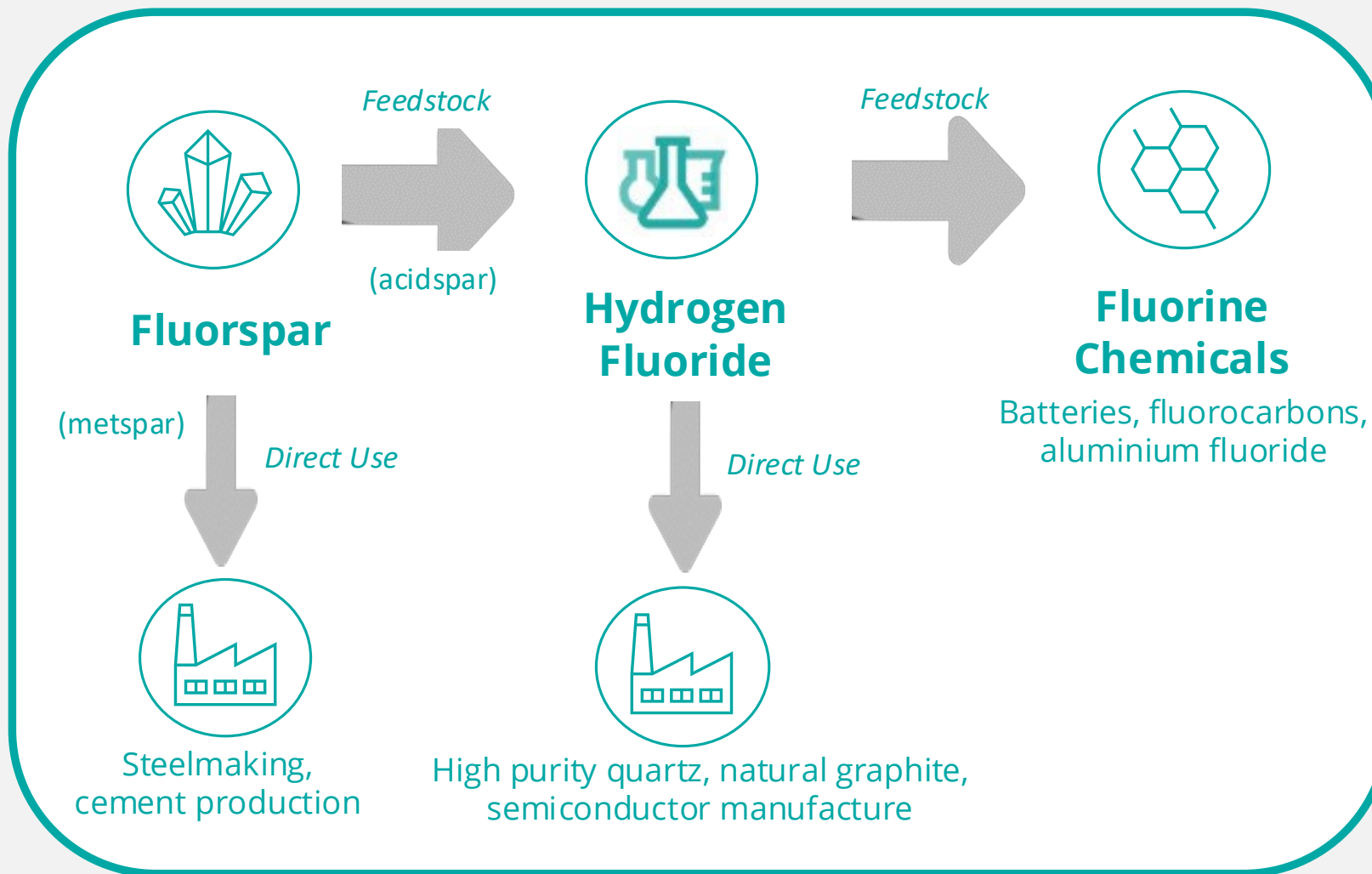
- 30 years of senior management and geological experience with multiple commodities, including at WMC
- Previously CEO of Allegiance Mining and Director of Gloucester Coal
- Member of JORC for 11 years (4 years as Vice Chairman) and Federal President, Australian Institute of Geoscientists

XIAO LIANG

Principal Engineer

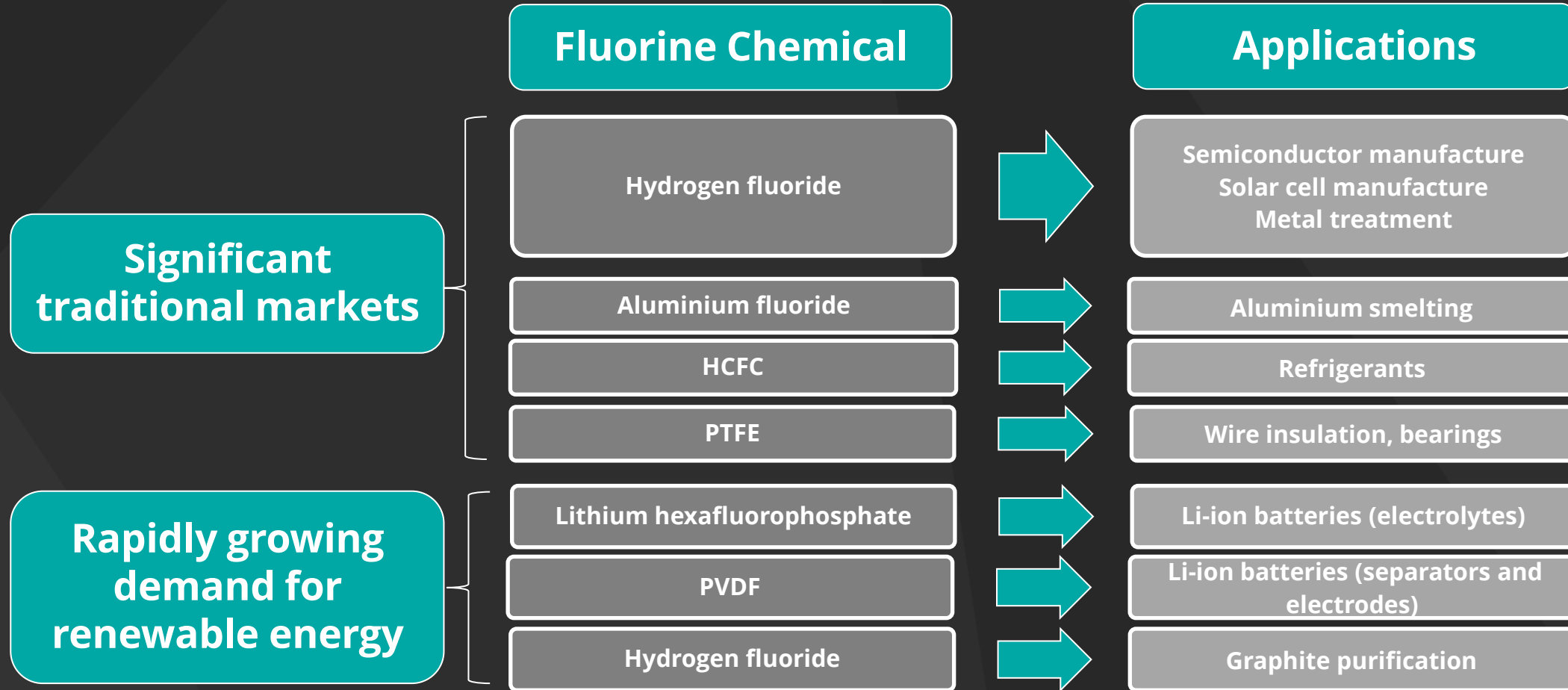
- Over 15 years of expertise in chemical process innovation and intensification, including conceptual design, fundamental research, and process scale-up.
- With extensive leadership experience, he drives cutting-edge technology development and oversees successful planning and implementation of new technologies at ALCORE

FLUORINE VALUE CHAIN



- Hydrogen fluoride used directly, and as feedstock to produce fluorine chemicals

STRONGLY INCREASING DEMAND FOR FLUORINE

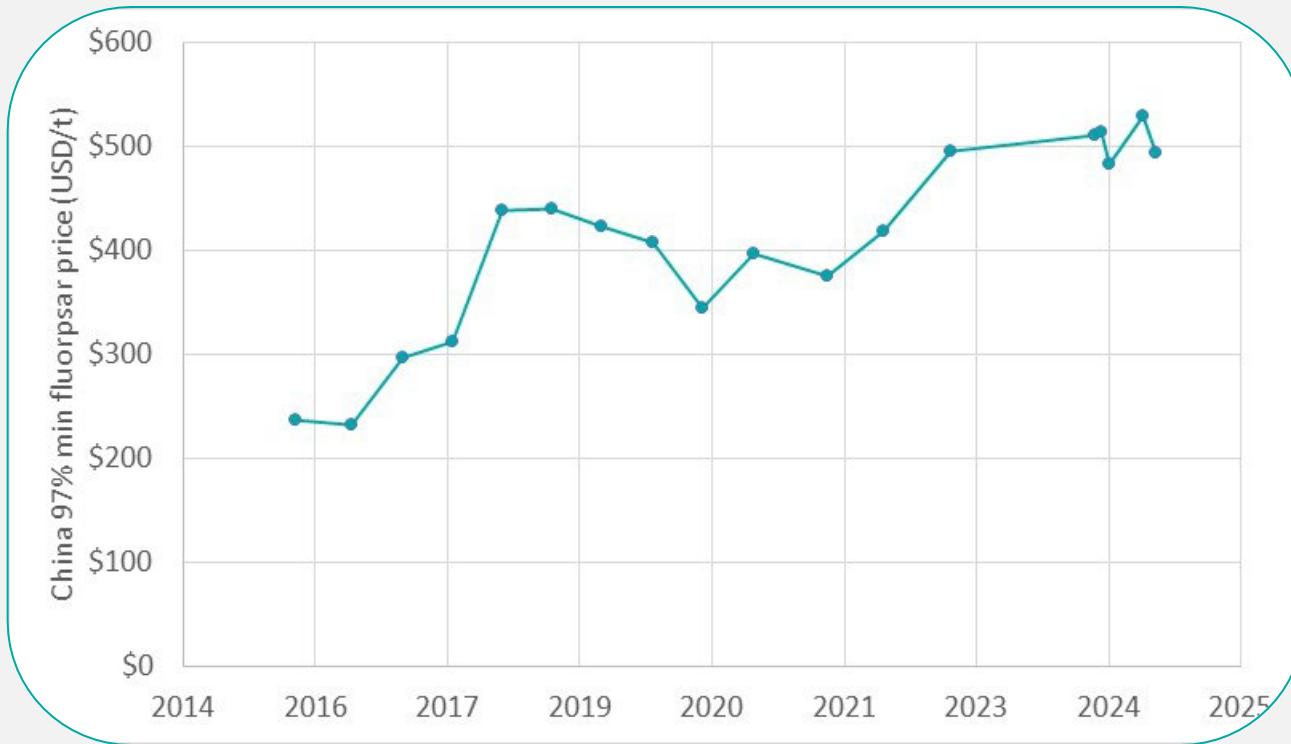


"From 2025 to 2035, fluorine demand for energy applications will increase from 5% to 22% of total fluorine demand"

US DOE Critical Minerals Assessment, 2023

SUPPLY SHORTAGE: LIMITED SUPPLIES OF FLUORSPAR

Increasing fluorspar prices



Source: Asian Metal

Government recognition

Critical Minerals Lists

Fluorspar	USA Europe Japan Canada
Fluorine	Australia

"In 2035, fluorspar demand will exceed current supply by 40-70%"

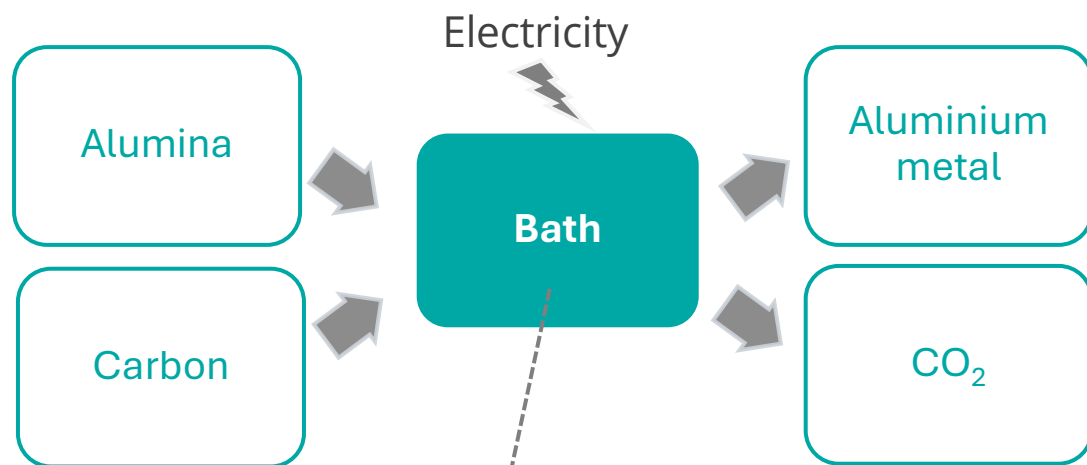
US DOE Critical Minerals Assessment, 2023



ALUMINIUM SMELTER BATH

- ❑ Used as electrolyte in aluminium smelting, because it dissolves alumina (Al_2O_3) and is electrically conductive

Aluminium smelting



Main reaction: $2\text{Al}_2\text{O}_3 + 3\text{C} \rightarrow 4\text{Al} + 3\text{CO}_2$
Side reactions: $3\text{Na}_2\text{O} + 2\text{AlF}_3 \rightarrow 6\text{NaF} + \text{Al}_2\text{O}_3$
 $3\text{NaF} + \text{AlF}_3 \rightarrow \text{Na}_3\text{AlF}_6$

Typical bath composition

Compound	Chemical Formula	Content (%)
Cryolite	Na_3AlF_6 ($3\text{NaF} \cdot \text{AlF}_3$)	88-94
Calcium Fluoride	CaF_2	4-6
Alumina	Al_2O_3	2-6
Iron Oxide	Fe_2O_3	<0.08
Silica	SiO_2	<0.08
Carbon	C	<0.4

Mechanism of surplus bath formation

Alumina contains sodium oxide (Na_2O) impurity

→ Na_2O reacts with aluminium fluoride (AlF_3) in the bath to produce sodium fluoride (NaF) and alumina (Al_2O_3)

→ AlF_3 additions required to maintain AlF_3 content

→ Production of NaF and addition of AlF_3 means that bath (Na_3AlF_6) is produced

NEW FLUORINE SOURCE AVAILABLE: ALUMINIUM SMELTER BY-PRODUCT

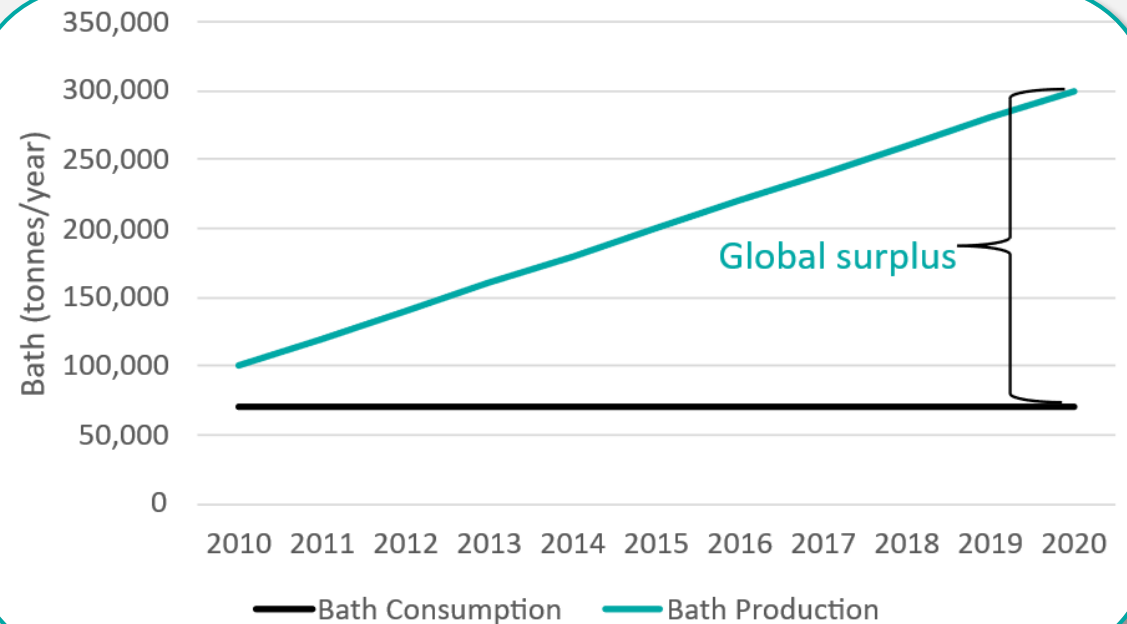
- ❑ Aluminium fluoride is an essential chemical for aluminium smelting
- ❑ 50% of fluorine leaves aluminium smelting process as aluminium smelter bath by-product

- ❑ New smelter requires bath to commence operations
- ❑ So new smelter creates short term bath demand, but contributes to long term bath surplus

Fluorine process flow in aluminium smelters



Increasing global surplus of aluminium smelter bath



Source: S.J. Lindsay, Bath generation and management, 10th Australasian Aluminium Smelting Technology Conference, 2011

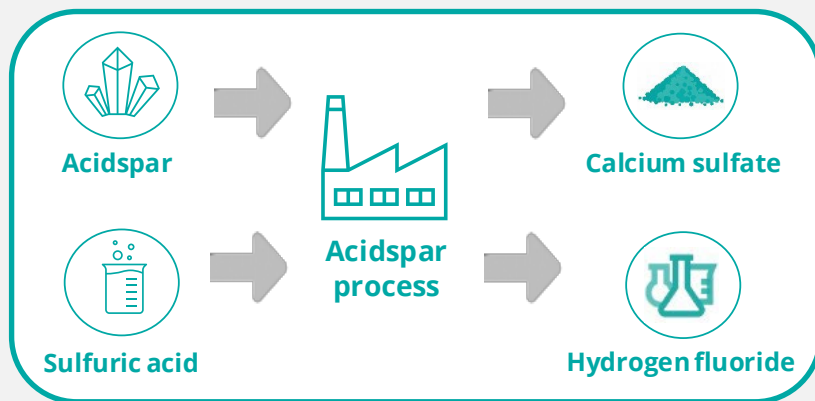
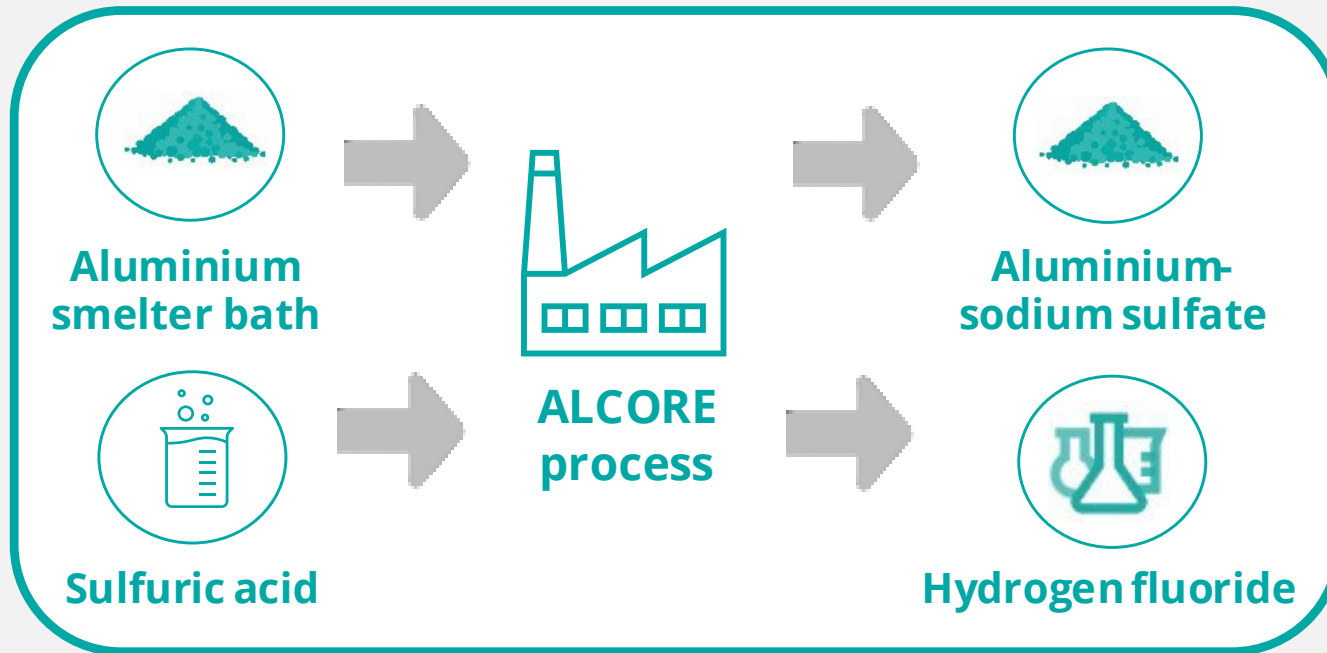
The ALCORE logo features the word "ALCORE" in a white, sans-serif font. The letter "O" is replaced by a stylized circular emblem containing a yellow and red gradient, with a white swoosh element on the left side of the circle.

ALCORE

**Clean fluorine chemical
production:** producing
industrial chemicals from
aluminium smelter
by-product



ALCORE PROCESS



Low technical risk

- Process is adaptation of existing commercial process to produce hydrogen fluoride from fluorspar

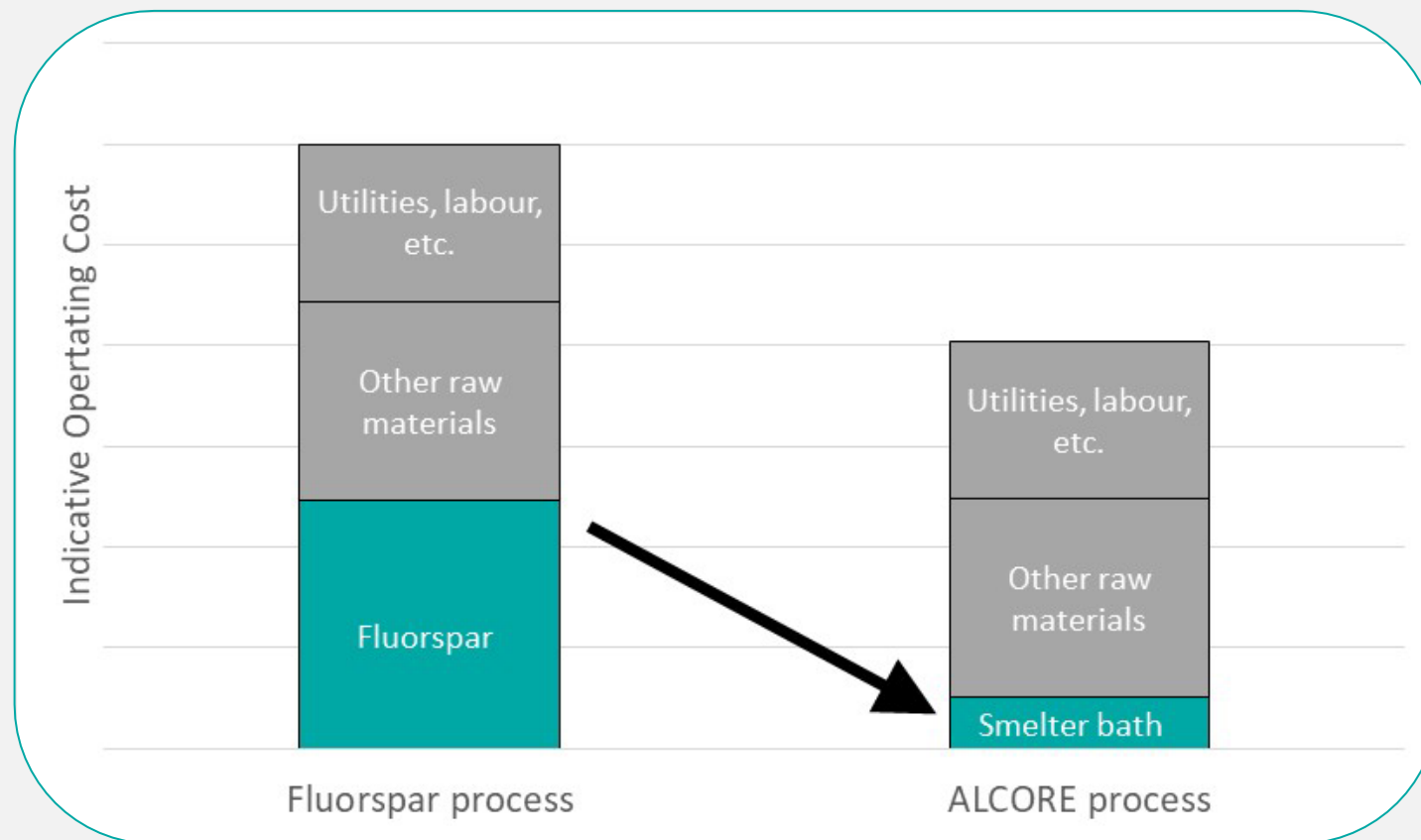
Exemplary demonstration
of circular economy

SIGNIFICANT COST ADVANTAGE OF REPLACING FLUORSPAR WITH SMELTER BATH

A rare opportunity that is financially, strategically and environmentally attractive

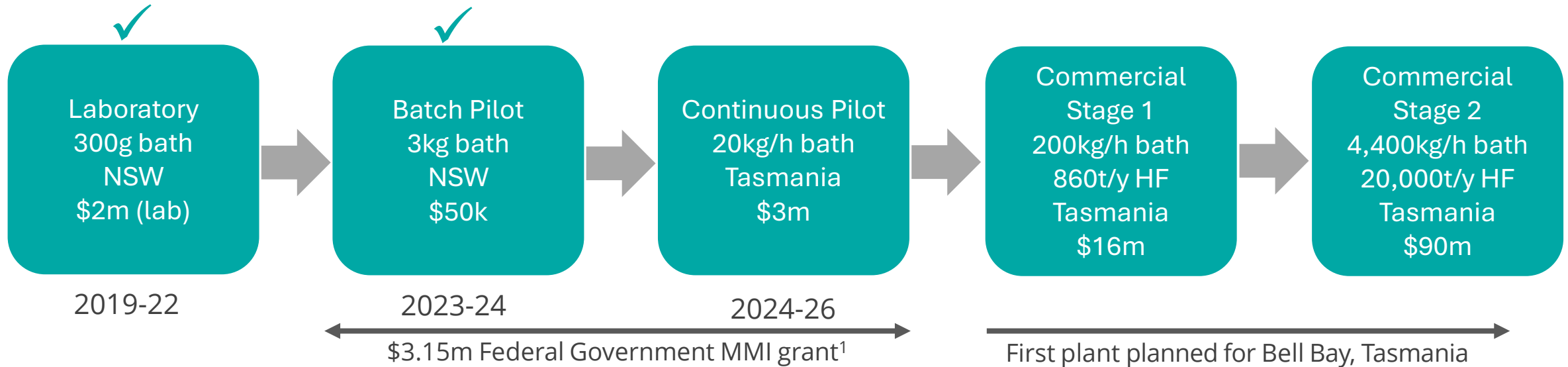
- ❑ ALCORE process produces same hydrogen fluoride product using a much lower cost feed material
- ❑ Aluminium smelter bath is a good quality material (low impurities)

Potential for significant profit margin



PATHWAY TO PRODUCTION: PROJECT DEVELOPMENT

ALCORE has first mover advantage



Critical process steps demonstrated²



Achieved target fluorine recovery³

- Produce saleable hydrogen fluoride for evaluation by customers
- Determine design and operating parameters for commercial plant

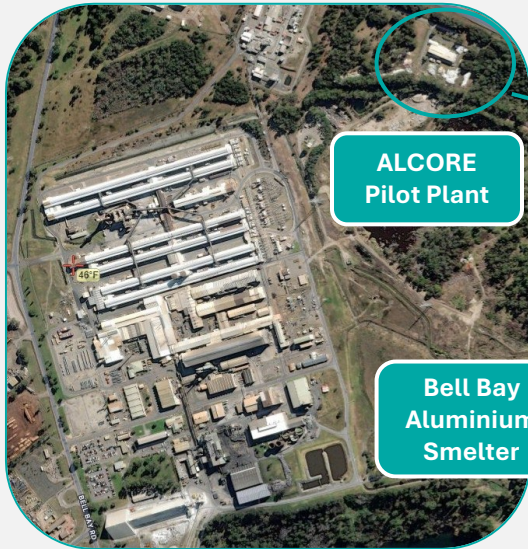
¹ABX ASX Announcement, 26 June 2025

²ABX ASX Announcement, 24 October 2022

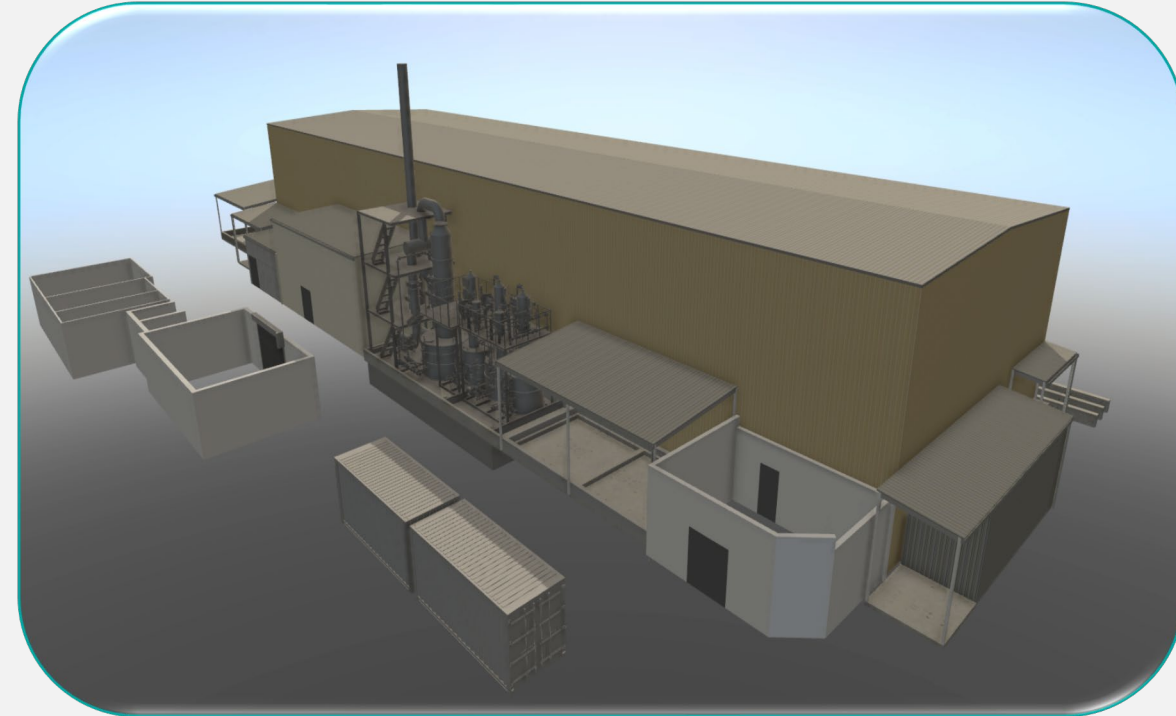
³ABX ASX Announcement, 4 June 2024

ALCORE TECHNOLOGY CENTRE – BELL BAY, TASMANIA

Location



Facility



3D Model

- ❑ Leased from Rio Tinto at reduced rate¹
- ❑ \$1m conditional loan from Tasmanian Government²
- ❑ Pilot plant under construction³
 - ❑ Environmental Effects Report submitted
 - ❑ First equipment will be delivered in May
 - ❑ Commissioning expected to commence late Q3 2026

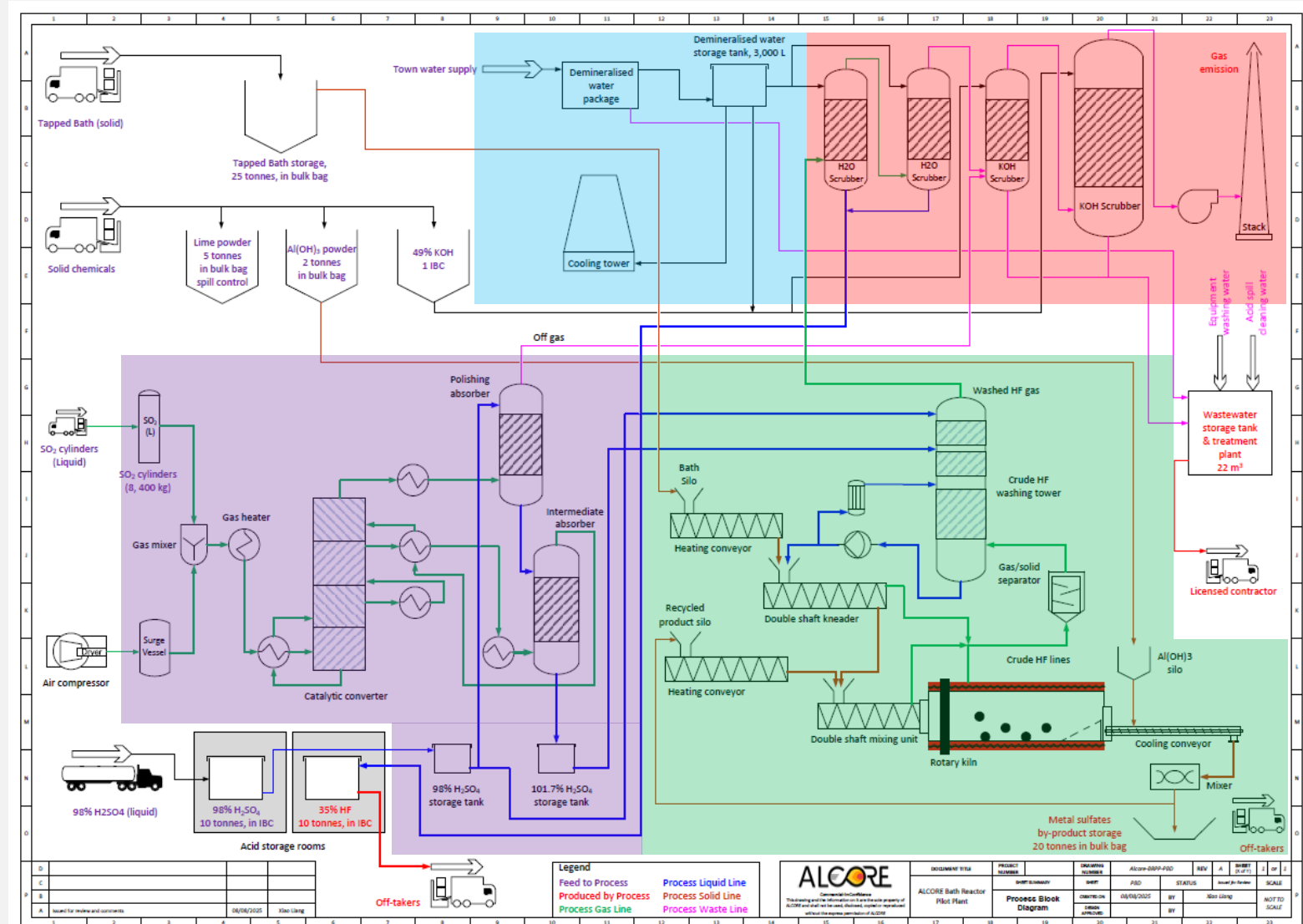
¹ABX ASX Announcement, 15 January 2025

²ABX ASX Announcement, 19 December 2024

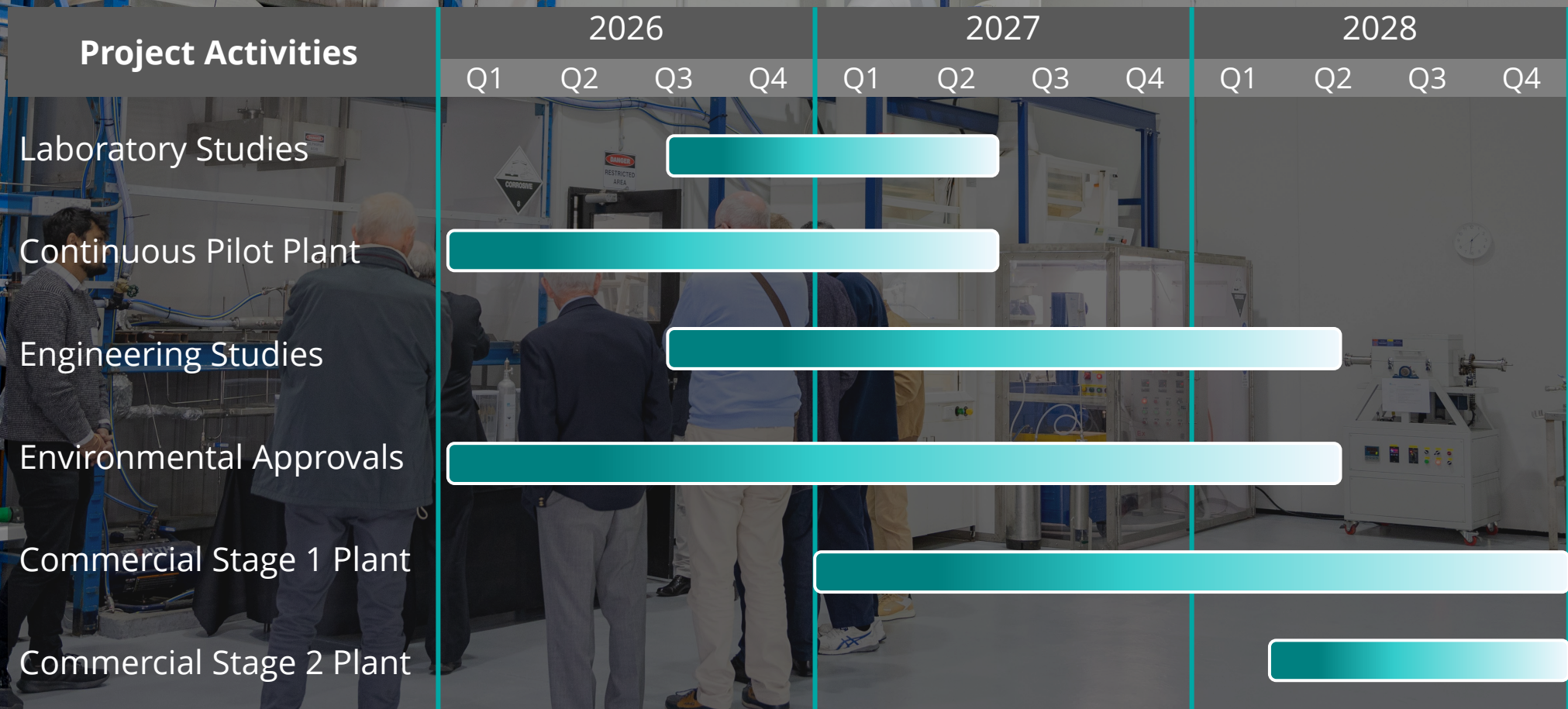
³ABX ASX Announcement, 27 March 2026

CONTINUOUS PILOT PLANT OVERVIEW

- ❑ Nominal 20–40 kg/hr. bath throughput
- ❑ Continuous operation mode
- ❑ Modular Design
 - Oleum production
 - Bath reaction and HF production
 - Gas scrubbing and absorption
 - Utilities
 - Material and waste storage
- ❑ High flexibility for optimisation
- ❑ Products with market demand (35%HF acid & metal sulfates)
- ❑ Engineered to stringent safety standards



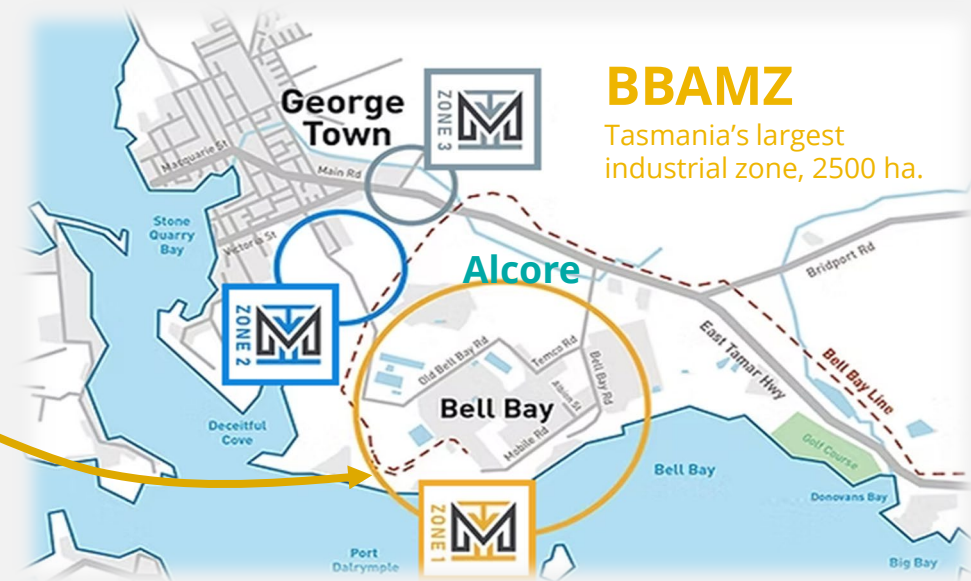
ANTICIPATED PROJECT MILESTONES



COMMERCIAL SCALE – REGIONAL SIGNIFICANCE

Boost Regional Growth

- ❑ Creates high-skill jobs and technical training
- ❑ Stimulates demands for local engineering, logistics and supply chain services
- ❑ Positions Bell Bay as a long-term fluorine industrial hub



INVESTMENT PROPOSITION

- ❑ **Low-cost hydrogen fluoride production using aluminium smelter bath by-product**
- ❑ **Will enable hydrogen fluoride production in Australia, to reduce 100% reliance on imports**



Team

Experienced and capable



Strongly increasing demand for fluorine

Batteries



Supply shortage

No hydrogen fluoride produced in Australia. Limited global fluorspar resources



New fluorine source available at low cost

Aluminium smelter by-product



Chemical process is low risk

Adaptation of existing commercial process



Pathway to production

First mover globally: at pilot plant stage

A man with glasses and a blue jacket stands in a laboratory setting, looking towards the right. In the background, there is a large blue industrial pump or motor mounted on a yellow base, with various pipes and equipment visible.

ABx Group

ASX:ABX

www.abxgroup.com.au

Suite 2, Level 11, 385 Bourke St
Melbourne VIC 3000
Australia

Phone: +61 3 9692 7222

E: investors@abxgroup.com.au

Mark Cooksey

Managing Director and CEO

E: mcooksey@abxgroup.com.au

