



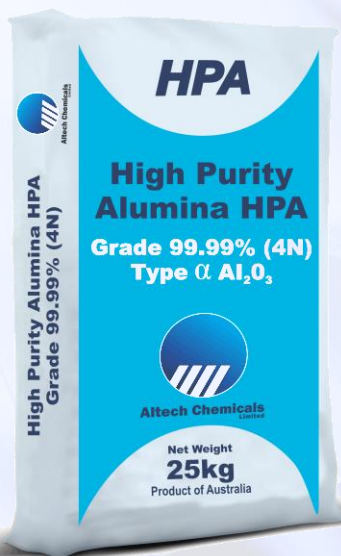
AGM Presentation

Iggy Tan

Managing Director



**To be a world leading producer of
high purity alumina (HPA)**



Our vision



- **Sapphire - natural form of high purity alumina (HPA)**
- **Formed by mother nature like diamonds**
- **Extremely hard – no. 9 on Mohs scale
(third hardest mineral behind diamond)**
- **Scratch-resistant artificial sapphire
glass made from HPA**



**Sapphire
gemstone**

- Purified alumina or aluminum oxide (Al_2O_3)
- Greater than 99.99% (4N) purity
- Lots of work to upgrade SGA (99.5%) → 4N 99.99% HPA
- Maximum allowable impurities of 100ppm
- 4N category - 99.99% pure (impurity 100ppm)
 - most sales volume
- Heat resistance, electrical isolation, abrasion & corrosion resistance, extreme hardness



What is HPA?



**Smelter Grade
Alumina**
SGA 99.5%
\$0.4 per Kg



**High Purity
Alumina**
HPA 99.9% (3N)
\$1 -10 per Kg



**High Purity
Alumina**
HPA 99.99% (4N)
\$10-50 per Kg



**High Purity
Alumina**
HPA 99.999% (5N)
\$50-150 per Kg

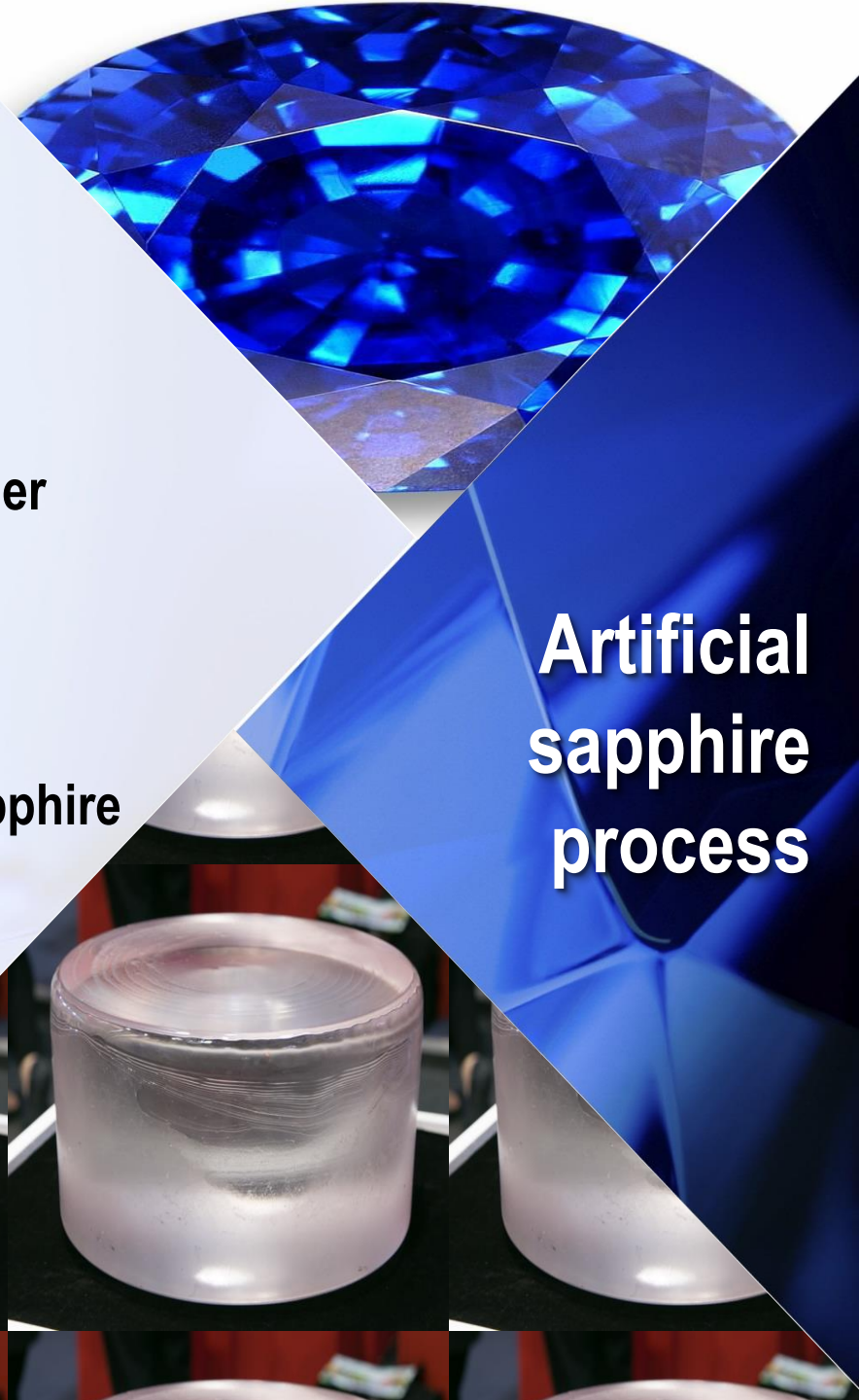
Our Target Business

HPA in Sapphire Crystal Glass

HPA substrate for LEDs

**High price
for purity**

- HPA is placed in an autoclave
- Heated to $>2,000^{\circ}\text{C}$ melting point under intense pressure
- Forms single crystal sapphire (boule)
- Allowed to cool slowly – 22 day cycle
- Diamond cutting equipment to cut sapphire shapes
- Heat & scratch resistant



**Artificial
sapphire
process**

Welcome to the world of HPA





**High Purity
Alumina
Applications**

LEDs

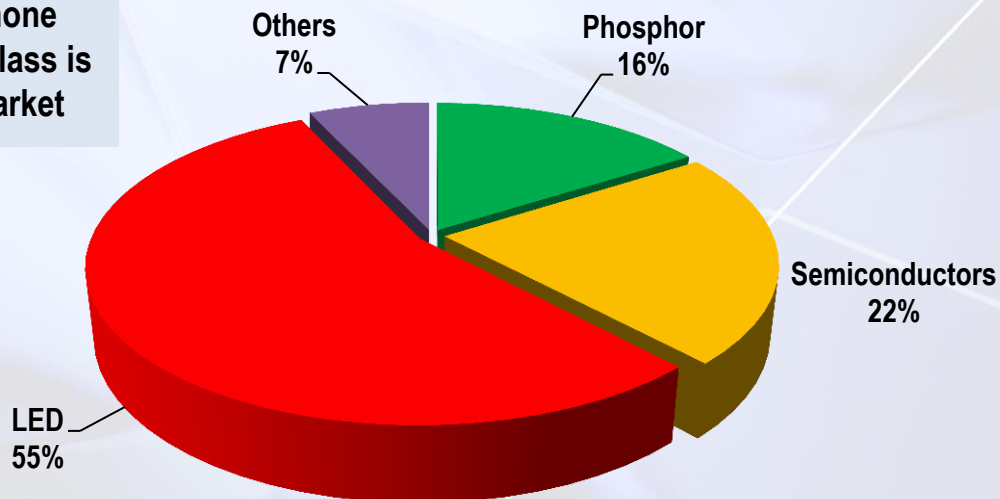
**Semi
conductors**

**Phospor
Based
Applications**

**Other
Applications**

**Uses of HPA
99.99% 4N**

**Smartphone
sapphire glass is
a new market**



Technavio Research

- Global HPA demand 19,040tpa in 2014
- Expected to increase to 48,230tpa by 2018
- Growing at a CAGR of 28%

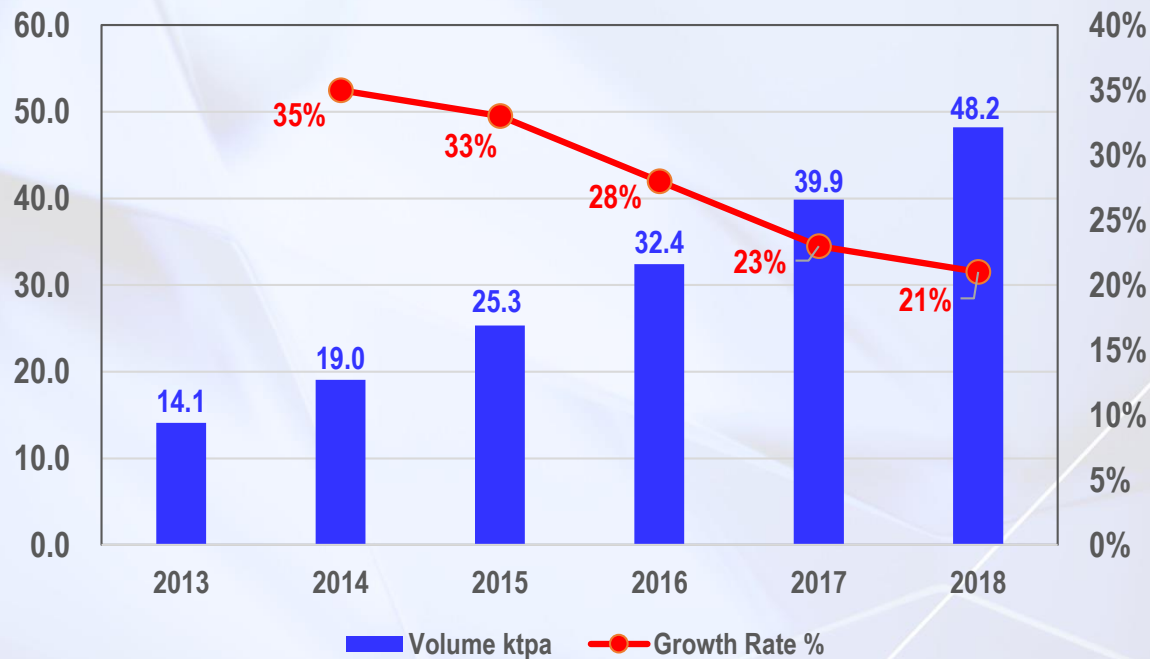
QY Research

- Global HPA demand 24,550tpa in 2014
- Expected to grow to 36,000tpa in 2017
- Growing at a CAGR of 16%



**Demand
for HPA**

HPA Demand & Growth Forecast



**Demand
for HPA**

- Rapid growth rates
- Estimated supply deficit

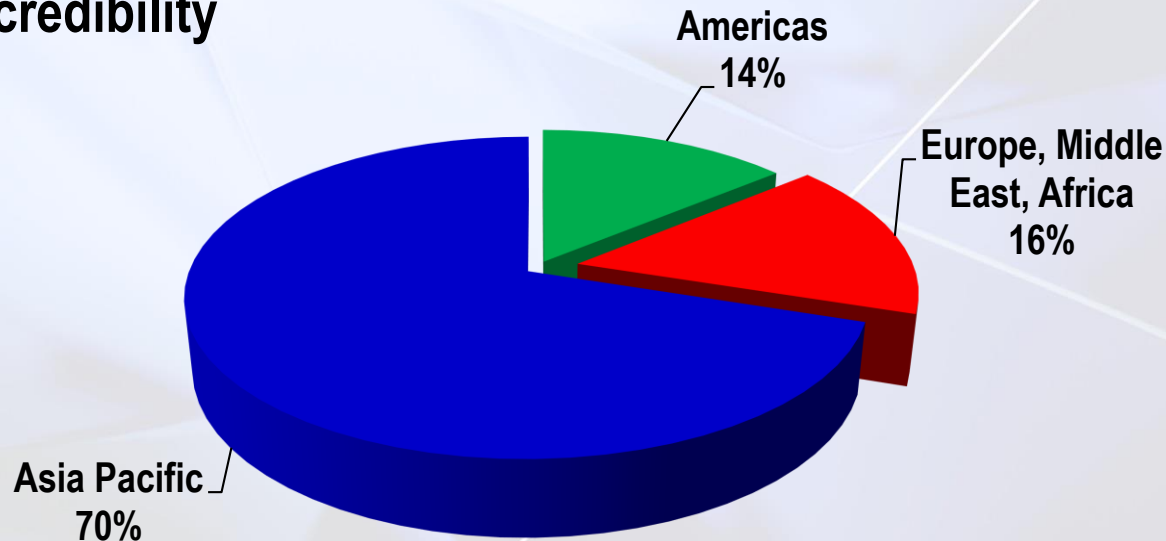
Non-scratch sapphire glass

- Estimate 30g¹ of HPA in an iPhone sapphire glass screen
- Approx. 300 million iPhones sold from 2013-2014
- 200 million iPhones estimated to sell in 2015
- 500 million smartphones sold per year
- If Apple implement sapphire glass technology
 - It would require about 6,000tpa of HPA
 - That's two of our 3,000tpa plants
- There will be a HPA supply deficit
- AMMG is in the right space!

**HPA
demand:
smartphones**

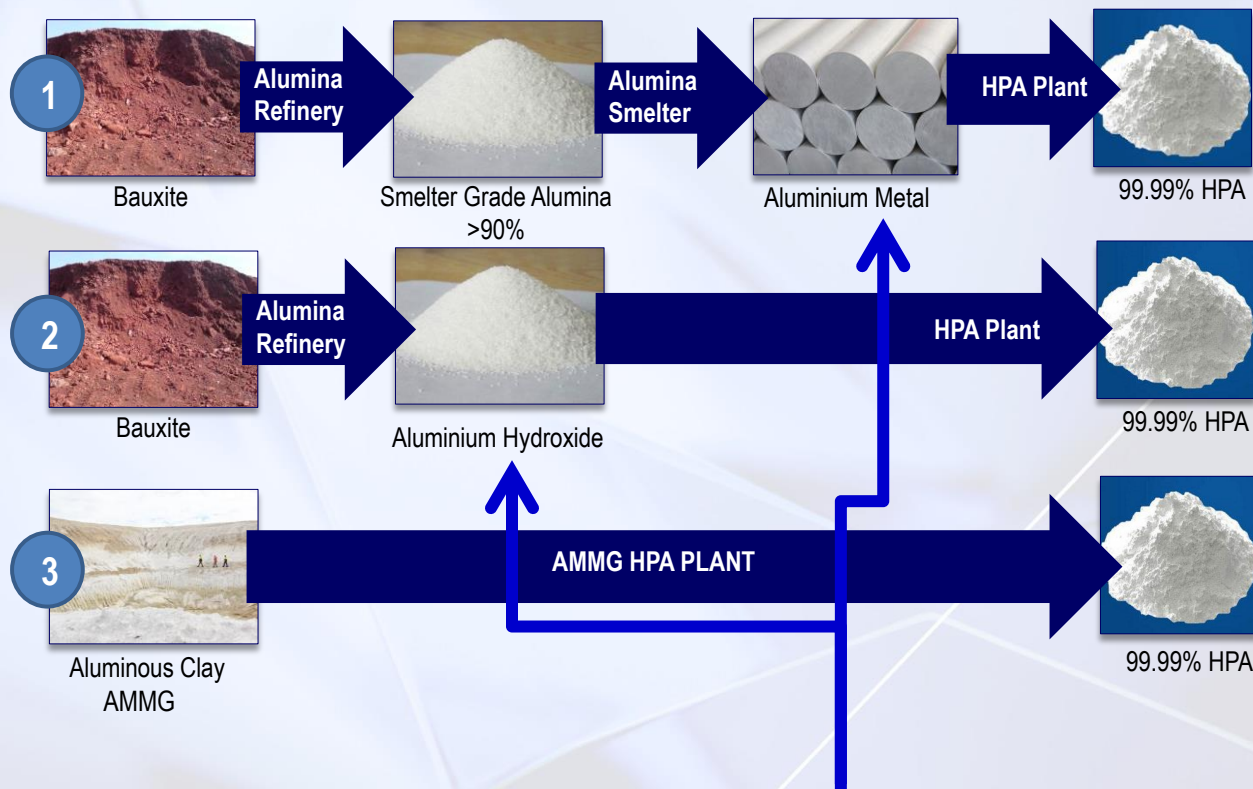
Sapphire glass in smartphones

- **70% of HPA demand is in Asia Pacific region (APEC)**
 - **Region for the world's manufacturing**
- **AMMG's HPA plant (Australia) well-positioned to service in APEC region**
- **Transport, customer service, technical credibility**



**HPA
geographic
demand**





Current HPA production processes

Current use of expensive
high purity feedstock

- Processed and purified by mother nature
- Very low impurities due to weathering
- Iron levels are 0.7% vs 21% in bauxite
- Silica is non reactive – easily removed

	Bauxite Darling Range	Canadian HPA Project	AMMG HPA Project
Al ₂ O ₃ (%)	34.5	22.77	30.5
SiO ₂ (%)	21.5	53.29	56.3
Fe ₂ O ₃ (%)	21.2	8.36	0.7
TiO ₂ (%)	2.00	0.98	0.7

Typical Mean Analysis

Typical bauxite deposit

AMMG aluminous clay deposit

**Low-impurity
aluminous clay
feedstock**

- **Majors like Sumitomo, Sasol:**
 - *Aluminum alkoxide from Al metal (1)*
- **Chinese producers:**
 - *Choline – Dissolving Al foil in choline*
- **Chinese producers:**
 - *Aluminium Hydroxide (2) (from bauxite-alumina process) with HCl*
- **All use relatively expensive feedstock**
- **AMMG aluminous clay 5 times cheaper than Al metal (3)**

Current HPA producers

Route	HPA Process Method	Feedstock Costs USD/t per 100% Al ₂ O ₃
1	Aluminium Metal	\$1,052 /t
2	Aluminum Hydroxide	\$570 /t
3	AMMG Aluminous Clay	\$220 /t

- Private freehold land
- Landowner agreement in place
- No native title
- Low environmental impact
- Previously mined for kaolin – trial pit
- Low stripping ratio
- 65Mt JORC Resource
- Approx. 130kms from capital city Perth (Kwinana industrial area)



Meckering aluminous clay deposit



- HCl process employed is a conventional, proven and robust chemical process
- Can produce >99.99% HPA from aluminous clay
- Simple recovery of acid and recycling
- HCl process was first developed in early 1980's for SGA production
 - Couldn't compete with bauxite SGA costs
- Bauxite process can't achieve >99.8% due to Na
- Demand for HPA (99.99%) developed over last decade
- Right place, right time!



**AMMG's
HPA
process**

- **Laboratory test work simulates process**
- **Final product achieves 99.99% (4N) HPA**
- **Integrated Plant Study (IPS)**
- **Larger optimisation pilot plant test work**
- **Process works and is robust**
- **IPS opex around A\$8.6/kg**
- **IPS capex for 700tpa (now 3,000tpa)**



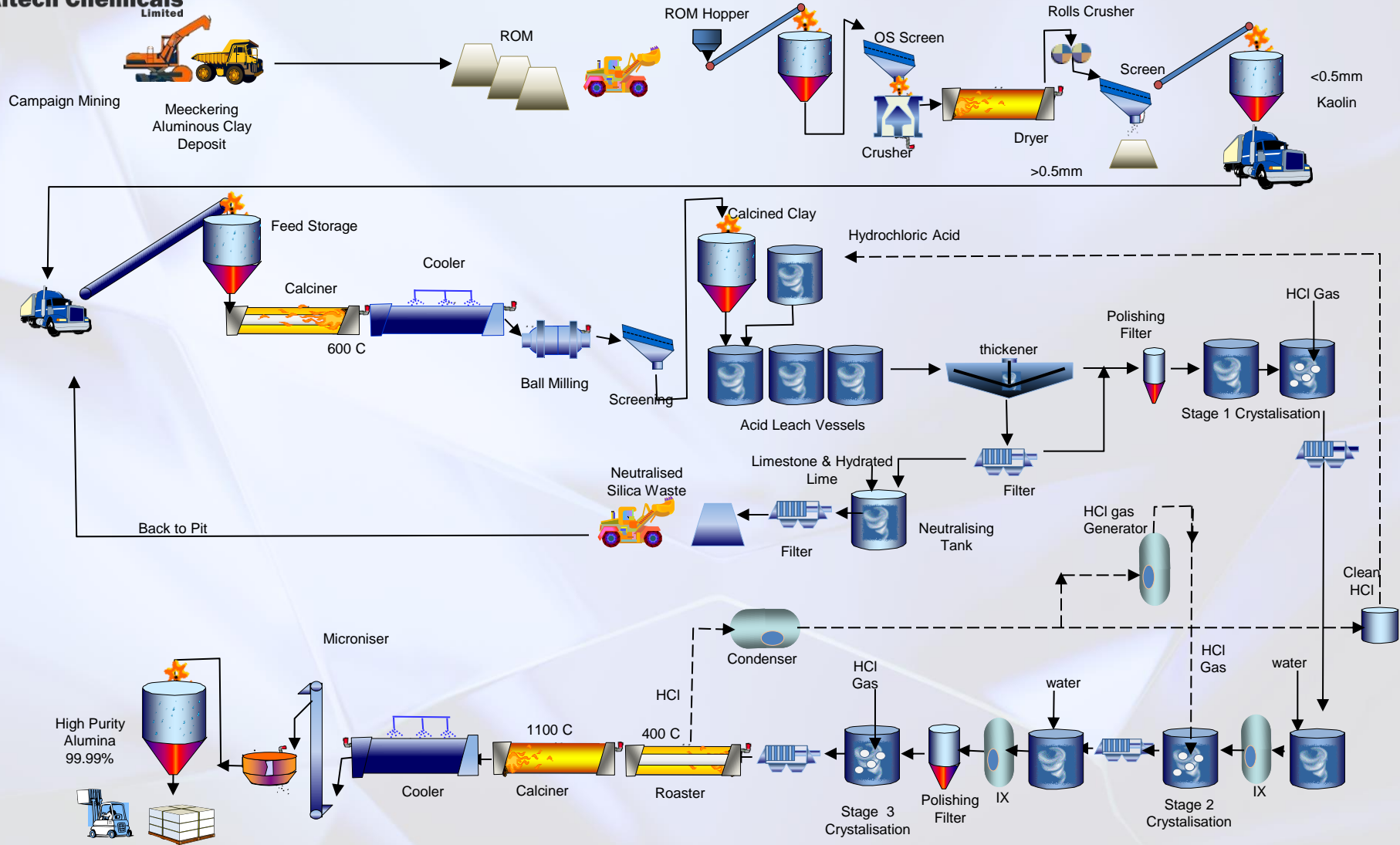
**Our success
so far**





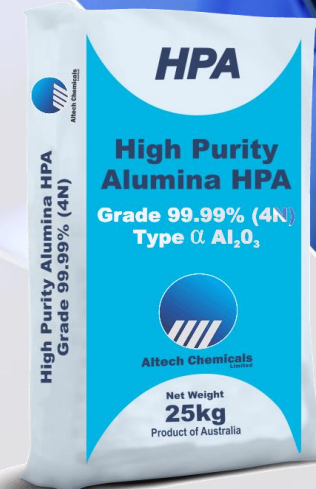
Altech Chemicals
Limited

AMMG's HPA Process



- **Target: to be a top 3 HPA producer in the world**
- **Launched BFS for 3,000tpa HPA**
 - **BFS completion: end Q3 2015**
- **In parallel, progress necessary approvals, funding, off- take agreements etc.**
- **Subject to funding:**
 - **In position to order long lead capital items (plant equipment)**
 - **Then detailed design, site works, construction**
- **Continuous laboratory pilot plant work**

Bankable Feasibility Study (BFS)



Highly experienced board:

- Fundraising
- Project building
- Industrial chemical processing
- Alcoa Alumina management
- Sherwin Alumina management
- High purity chemicals



Iggy Tan
Managing Director



Luke Atkins
Chairman



Dan Tenardi
Non Exec Director



Peter Bailey
Non Exec Director

**Experienced
board**

- **Strategy to focus on HPA – divest exploration projects**
- **Name change and re-branding – Chemicals focus**
- **Bypass pilot plant**
- **Expand project to 3,000 tpa**
- **Launched Bankable Feasibility Study**
- **Focus on one deposit only – Meckering**
- **Technical review of previous process work**

**Company in
transition**

- **Clarity of vision first**
- **Deliver clear, simple value proposition**
- **Educate & energise existing shareholders first**
- **Sell the new focus and vision**
- **Regular communication of achievements**
- **Direct mail communication – improved penetration rate**
- **Word of mouth will drive liquidity**
- **Other retail investors, then funds on register**

Investor Relation and PR Strategy

- **South West Titanium Project**
- **Joint venture agreement signed with Midas Engineering Group (formerly METS)**
- **Midas will conduct a series of engineering studies at the project for a potential 50% earn-in interest**
- **Scoping study first step**

**SW Titanium
Project JV
with Midas**

***Right Place
Right Time
Right Feedstock
Right Technology***



Thank you

Forward-looking Statements

This announcement contains forward-looking statements which are identified by words such as 'anticipates', 'forecasts', 'may', 'will', 'could', 'believes', 'estimates', 'targets', 'expects', 'plan' or 'intends' and other similar words that involve risks and uncertainties. Indications of, and guidelines or outlook on, future earnings, distributions or financial position or performance and targets, estimates and assumptions in respect of production, prices, operating costs, results, capital expenditures, reserves and resources are also forward looking statements. These statements are based on an assessment of present economic and operating conditions, and on a number of assumptions and estimates regarding future events and actions that, while considered reasonable as at the date of this announcement and are expected to take place, are inherently subject to significant technical, business, economic, competitive, political and social uncertainties and contingencies. Such forward-looking statements are not guarantees of future performance and involve known and unknown risks, uncertainties, assumptions and other important factors, many of which are beyond the control of our Company, the Directors and management. We cannot and do not give any assurance that the results, performance or achievements expressed or implied by the forward-looking statements contained in this announcement will actually occur and readers are cautioned not to place undue reliance on these forward-looking statements. These forward looking statements are subject to various risk factors that could cause actual events or results to differ materially from the events or results estimated, expressed or anticipated in these statements.

Competent Person Statement

Technical information in this report is based on information compiled by B.Sc. Geology, AMMG Chief Geologist and a member of the Australasian Institute of Geoscientists. Mr O'Mara has sufficient exploration experience which is relevant to the styles of mineralisation and types of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' ("JORC 2004"). Mr O'Mara consents to the inclusion in this release of the matters based on his information in the form and context in which it appears.