



DEVELOPING STRATEGIC HIGH PURITY ALUMINA (HPA)  
CADOUX KAOLIN PROJECT IN WESTERN AUSTRALIA

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# INVESTOR NOTICE

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## COMPETENT PERSONS' STATEMENTS

The information in this report that relates to Ore Reserves is based on information compiled by Mr. Steve Craig, who is a Fellow of the Australasian Institute of Mining and Metallurgy. Steve Craig is a full-time employee of Orelogy Consulting Pty Ltd and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are 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". The information is extracted from the Ore Reserve announcement released 29 October 2018 and is available to view on the Company's website at [www.fyiresources.com.au](http://www.fyiresources.com.au)

The information in this report that relates to Mineral Resources is based on information compiled by Mr Grant Louw, under the direction and supervision of Dr Andrew Scogings, who are both full-time employees of CSA Global. Dr Scogings is a Member of the Australasian Institute of Mining and Metallurgy and a Member of the Australian Institute of Geoscientists. He is a Registered Professional Geologist in Industrial Minerals. Dr Scogings has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as Competent Person as defined in the 2012 Edition of the "Australasian Code for the Reporting of Exploration Results, Mineral Resources, and Ore Reserves". The information is extracted from the PFS announcement dated 25 September 2018 and is available to view on the Company's website at [www.fyiresources.com.au](http://www.fyiresources.com.au)

The information in this report that relates to metallurgy and metallurgical test work is based on information reviewed and compiled by Mr Daryl Evans, a Competent Person who is a Fellow of the Australian Institute of Mining and Metallurgy (AusIMM). Mr Evans is an employee of Independent Metallurgical Operations Pty Ltd, and is a contractor to FYI. Mr Evans has sufficient experience that is relevant to this style of processing and type of deposit under consideration, and to the activity that he has undertaken to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves". Announcements in respect to metallurgical results are available to view on the Company's website at [www.fyiresources.com.au](http://www.fyiresources.com.au).

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and that all material assumptions and technical parameters underpinning the findings in the relevant market announcements continue to apply and have not materially changed and that all material assumptions and technical parameters underpinning the estimate in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original announcement.

# INTRODUCING FYI RESOURCES

FYI is aiming to become a dominant participant in the global HPA market



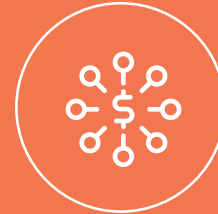
Developing the world-class Cadoux project with the goal of becoming a leading producer



Simplified, innovative and efficient flowsheet deriving HPA from kaolin



Located in a tier 1 mining jurisdiction in close proximity to infrastructure



The global HPA market is experiencing rapid demand growth that is forecast to continue



Outstanding PFS results: low opex and capex operation

## Achievements



Metallurgical results exceeded 99.99% HPA targets



Process flowsheet optimised to reduce OPEX and CAPEX



Positive environmental study completed



Positive reception received from Asian HPA marketing trips



Delivered outstanding PFS for Cadoux



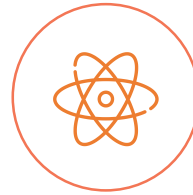
Commenced fully funded BFS for Cadoux





# HIGH PURITY ALUMINA (HPA)

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HPA is a processed premium non-metallurgical alumina product characterised by its purity level – i.e. 99.99% (4N), 99.999% (5N).



HPA is mainly used for its superior properties, such as corrosion and scratch resistance, high brightness, and its ability to withstand extreme temperatures.



Currently HPA is sourced from expensive feedstock, such as refined aluminium metal, using old processes, FYI plans to produce low-cost HPA from kaolin using optimised processing methods.



Applications include: light emitting diodes (LEDs), in the manufacture of artificial sapphire glass and in certain battery and power storage components, aeronautical and medical applications

# HPA MARKET OVERVIEW

## HPA FORMS A SIGNIFICANT PART IN HIGH-PERFORMANCE ELECTRONICS



Historically a small market – no justification for innovation



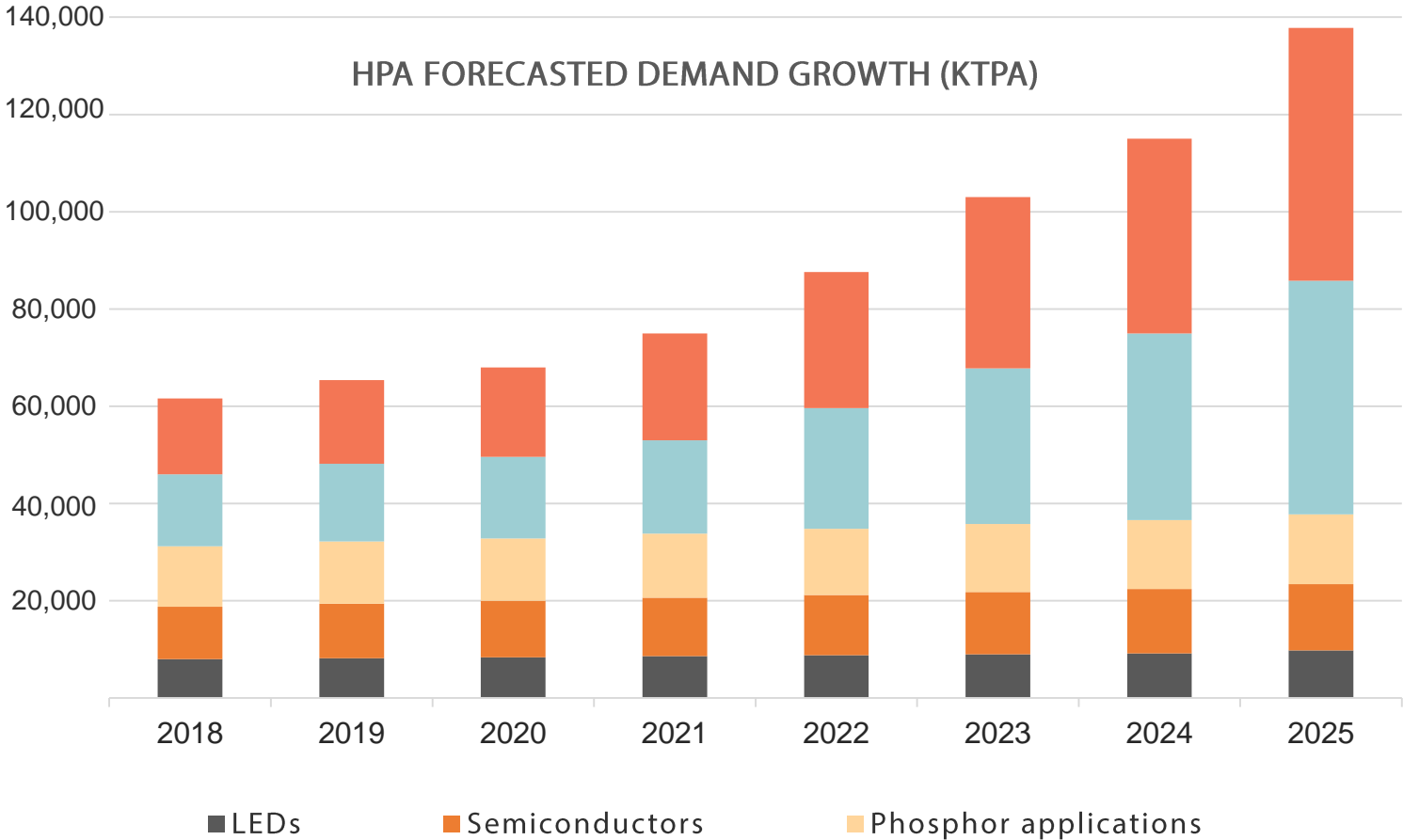
New applications have created demand and market opportunities



The current global 4N HPA market demand is ~38-40ktpa; this is expected to increase to ~60ktpa by 2020 and >120ktpa by 2025\*



The market for HPA is witnessing dramatic consumer driven growth, with the HPA market forecasted to be US\$4.49Bn by 2022\*\*



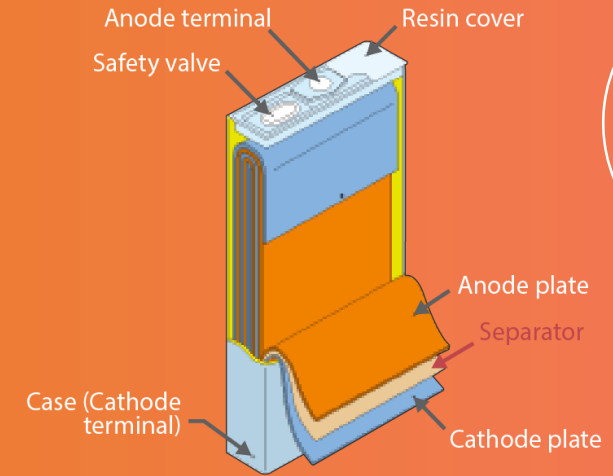
# KEY HPA INDUSTRY CATALYSTS

## EV/ Battery Revolution

- HPA is a major input into ceramic coated separators (CCS) in batteries
- Battery performance (energy density) is increasing dramatically
- Providing greater protection, battery integrity at much higher temperatures
- EV battery market forecast to grow from US\$450Mn (2016) to US\$35Bn (2025)\*

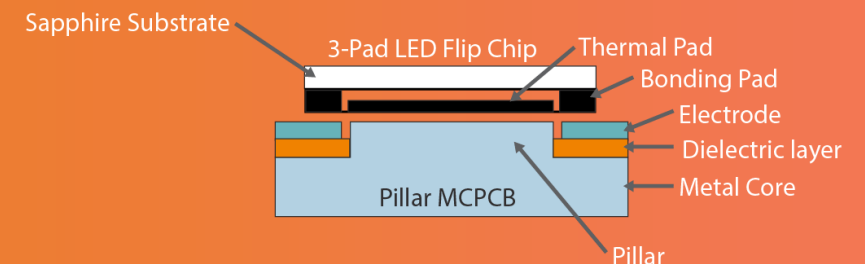
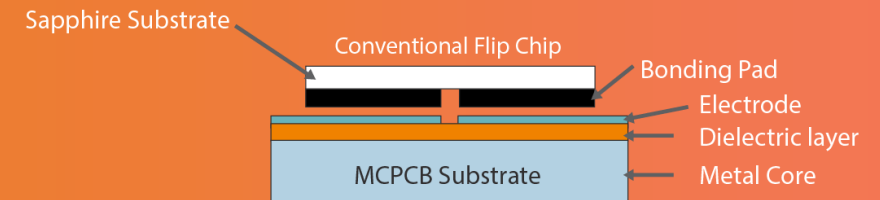
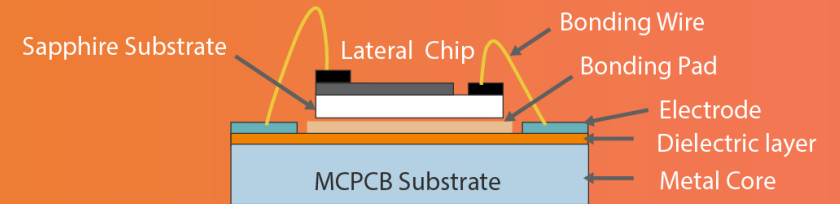
## Light emitting diodes (LED)

- Increasing environmental awareness and strict Government power and emission policies
- Phasing out of old and inefficient technologies (eg incandescent, neon, halogen)
- Providing assurance of a reliable and consistent supply of HPA to manufacturers
- LED market is forecast to grow from US\$26Bn (2016) to US\$54Bn by 2022 and progressively take the major share of the global market of US\$110Bn\*\*



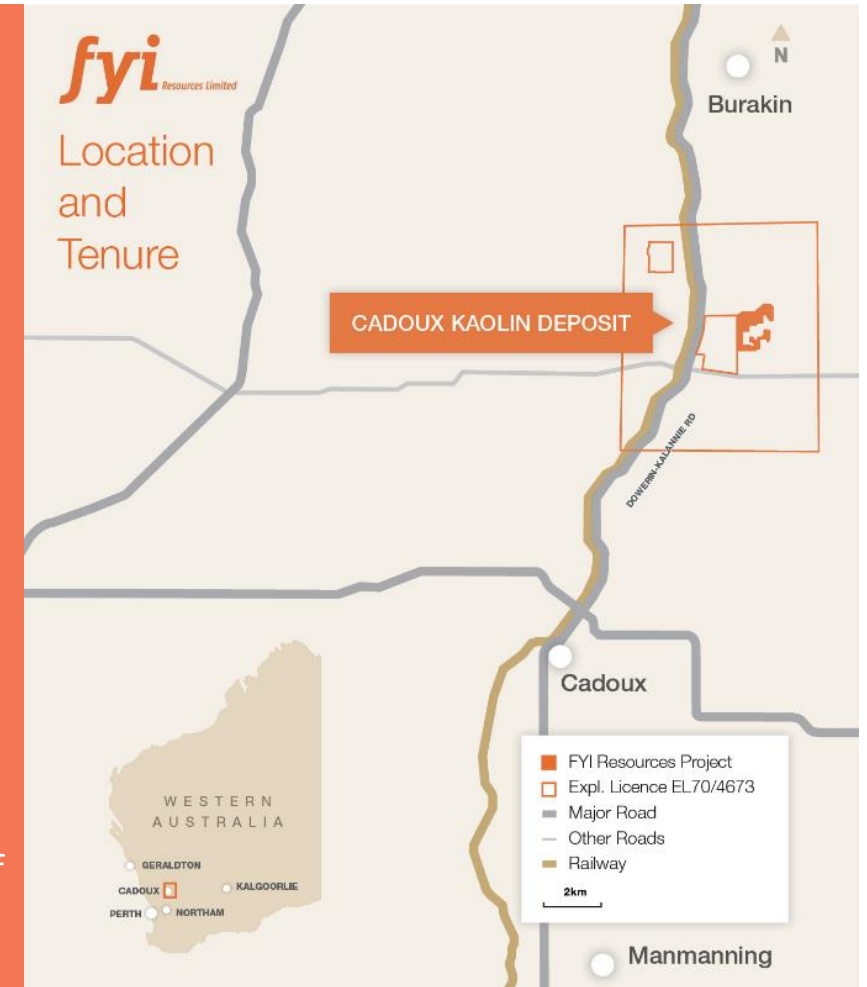
Cross-Sectional view of lithium-ion battery

Key market areas driving long-term growth for HPA



# FYI HAS A RESOURCE IDEAL FOR HPA

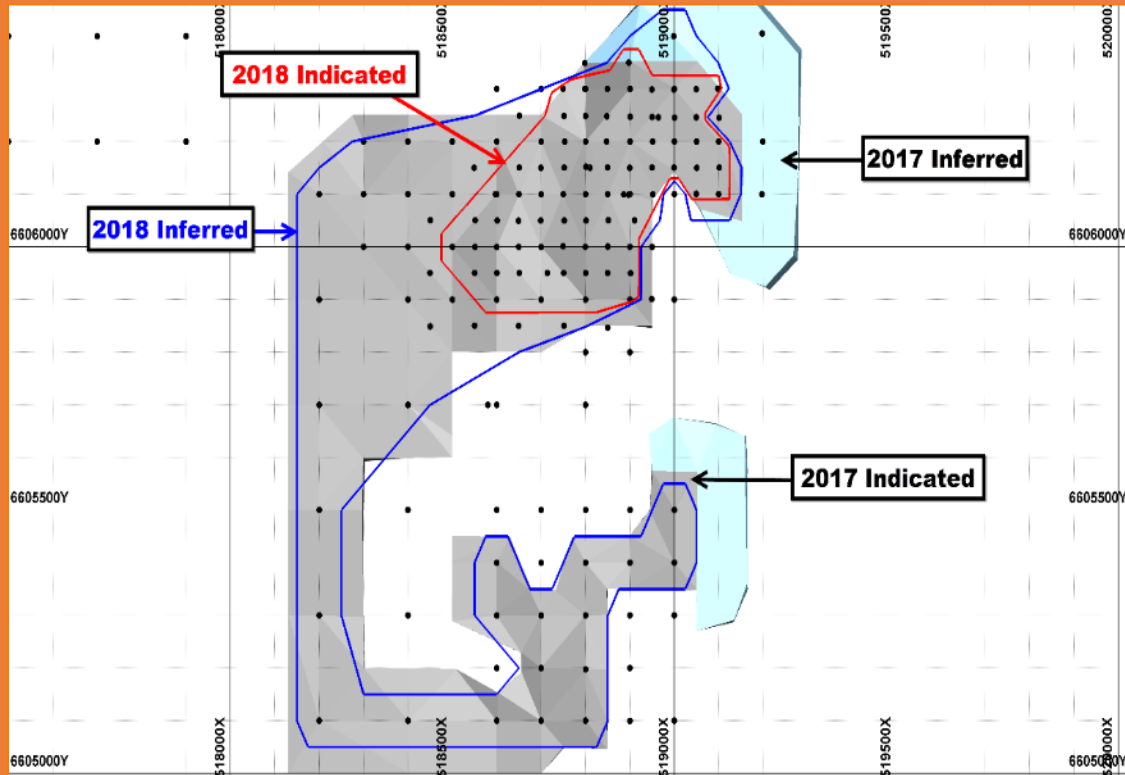
- ⇒ The Cadoux Kaolin Project area boasts excellent infrastructure
- ⇒ Deposit geology is ideal – shallow, flat lying, low strip, free digging, homogenous excellent quality & easily accessible
- ⇒ Extensive drilling, well understood geology and chemistry
- ⇒ Completed detailed Mine Study
- ⇒ Ideal characteristics quality, grade and low deleterious elements – very amenable to HPA processing
- ⇒ 100% owned project area private land, no native title, minimal EPA. Permitting straightforward.
- ⇒ Maiden Reserve of 2.89 million tonnes grading 24.4% Al<sub>2</sub>O<sub>3</sub> supports PFS mine life of 25+ years





# QUALITY RESOURCE

## CADOUX RESOURCE – QUALITY BASE



*Cadoux resource outline*

- Revised MRE specific to optimised HPA feedstock production
- First class study managers (qualifications & experience)
- Extensive representative and variability testwork
- Very well understood resource applied to flowsheet
  - Geology
  - metallurgy
- Resulting in excellent metallurgical response
  - Grade – 99.999% (*independently verified*)
  - Recovery – 97.2%
- Over 50 years mine life (PFS modelled on 25 years)
- Assuming 100% high confidence mining material

# OUTSTANDING PFS DELIVERED (SEPT 2018)

ITEM	UNIT	AMOUNT
HPA production	tpa	8,000 (with capacity to expand)
Production grade	Al <sub>2</sub> O <sub>3</sub>	> 99.99%
Capital cost	US\$m	178.8
Capital cost / t	US\$/t	22,344
Forecast average cost of production (C1)	US\$/t	6,467
Assumed HPA selling price / t	US\$/t	24,000
Operating margin	US\$/t	17,533
Operating margin	%	~270
Exchange rate	A\$:US\$	0.75
Average annual EBITDA	US\$m	128
First phase of operations - total revenue (> 50 years)	US\$m	11,376
First phase of operation - annual revenue	US\$m	190
Project NPV (@10%)	US\$m	506
Project IRR	%	46
Project payback	yrs	3.6

## Market-leading project economics:

- Lowest sector quartile:
  - Opex - US\$6467/t
  - Capex - US\$178m
- Lowest capital intensity of US\$22,344/t
- All-in NPV<sub>10%</sub> - US\$506m
- IRR of 46%
- High margin >US\$17,000/t
- Project payback of 3.6 years

## Modelled using:

- Most conservative discount (10%)
- Conservative selling price (\$24,000)

# STRONG FOCUS ON MARKET ENGAGEMENT



FYI's 99.999%  
final product  
HPA

TOTAL HPA DEMAND FORECAST FOR 2025		
FORECASTER	DEMAND (TPA)	MULTIPLE (OF FYI PRODUCTION)
PERSISTENCE	62,000	7.8X
ALLIED	86,000	10.7X
CRU	125,000	15X
<b>AVERAGE</b>	<b>91,000</b>	<b>11.3X</b>

## FYI IS HEAVILY ENGAGED IN PRODUCT MARKETING AND OFF-TAKE

- FYI heavily focused on market engagement
- Structured approach to achieving off-take and financing
- Multiple rounds of meetings conducted (China/Korea/Japan)
- HPA trial product to be shipped by request from market participants (HPA manufacturers, traders)

## FUNDING OPTIONS

FYI is examining a number of funding options to finance its future activities and development costs. These include:

- Off-take
- Joint venture
- Cornerstone investor
- Project debt
- Equity

# FYI'S SIMPLE FLOWSHEET DESIGN



Low industry capex and low opex



Developed for Cadoux's exceptional quality and characteristics



Optimised designed for efficiency, heavy duty and long life



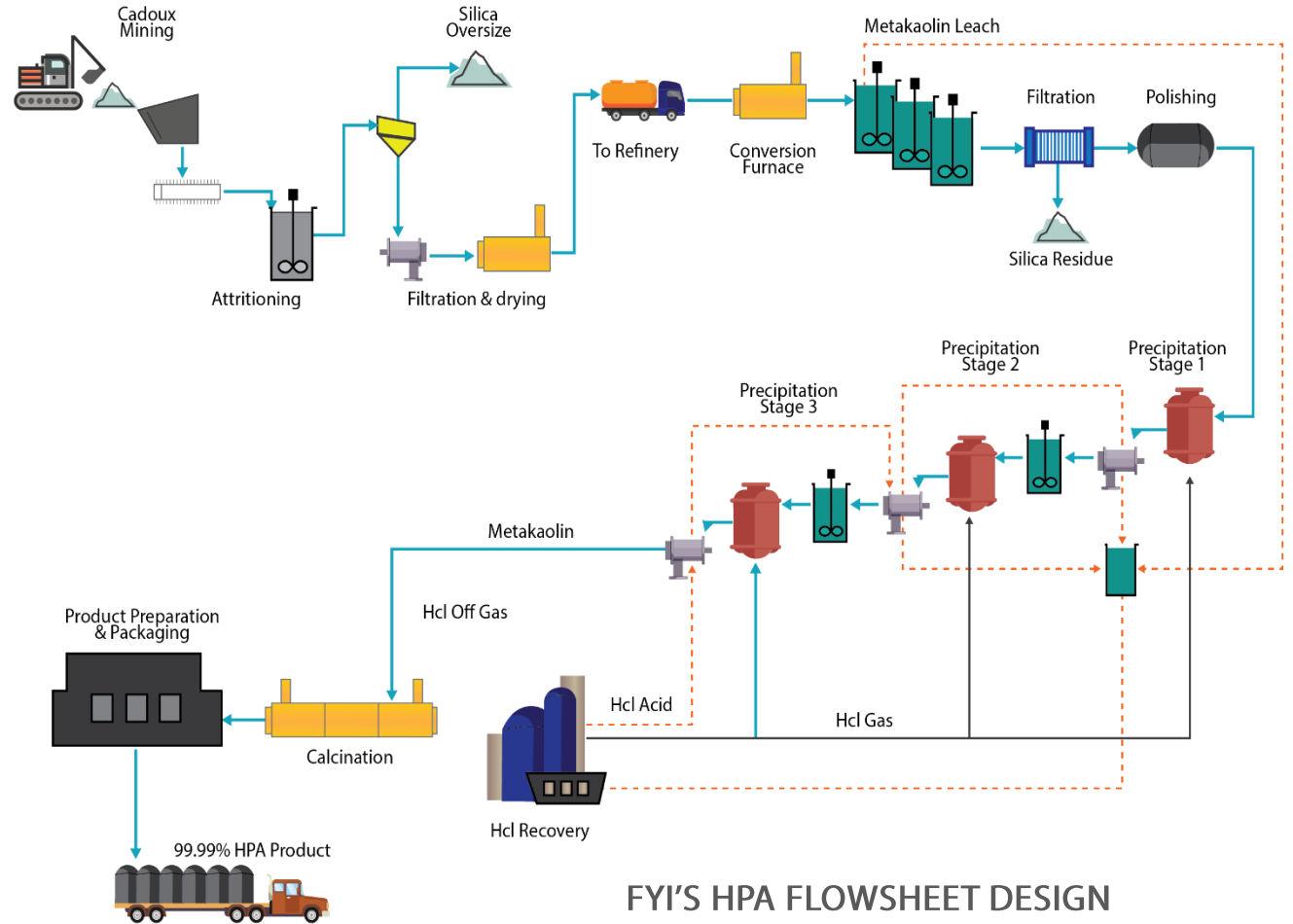
Successfully demonstrated high grade and excellent recoveries



Low environmental impact (non-toxic waste) / low energy requirements



Processing plant planned for Kwinana's 'Battery Alley'



FYI'S HPA FLOWSHEET DESIGN



# PILOT PLANT

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DEMONSTRATING QUALITY END PRODUCT FOR REAL END USERS



Critical pathway  
to successful  
commercialisation of new  
process flowsheet



Continuous  
and up-scaled production



Important data discovery and  
development learning process  
for project de-risking

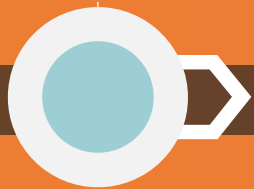


Essential step for project  
metrics / funding,  
fully funded from R&D

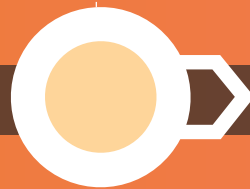
# KEY MILESTONES

Progressing towards mine construction at the Cadoux project following an excellent PFS and commencement of a BFS.

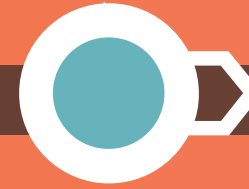
Pilot plant scoping



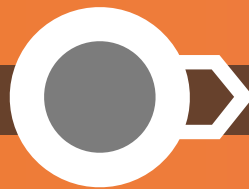
Project cost refining



Complete BFS



Final flowsheet design



Ongoing product marketing & offtake discussions



Development planned to commence Dec 2019

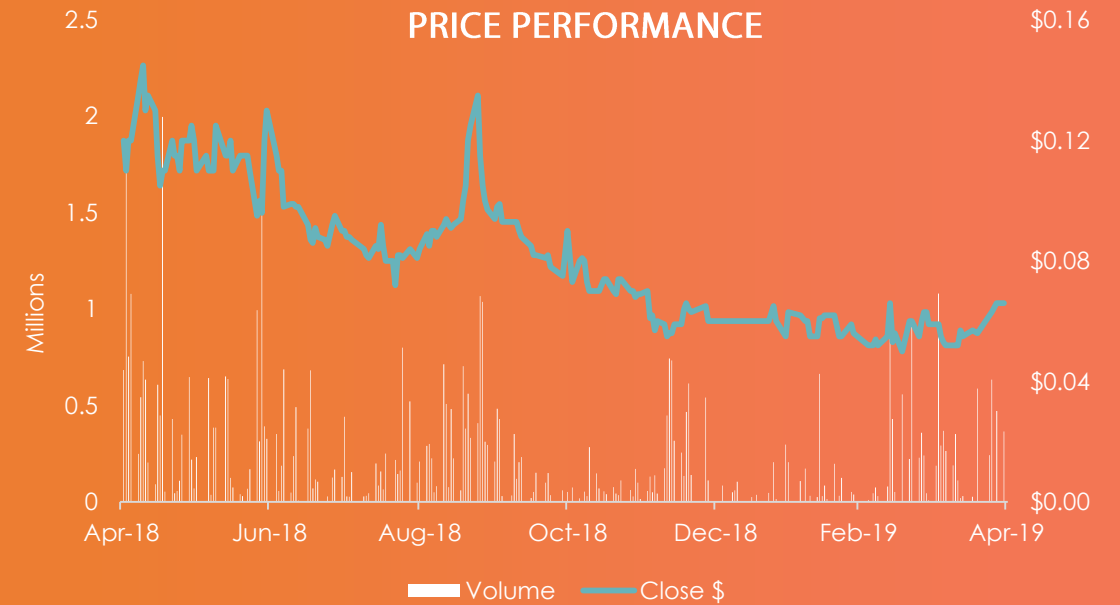


# CORPORATE OVERVIEW

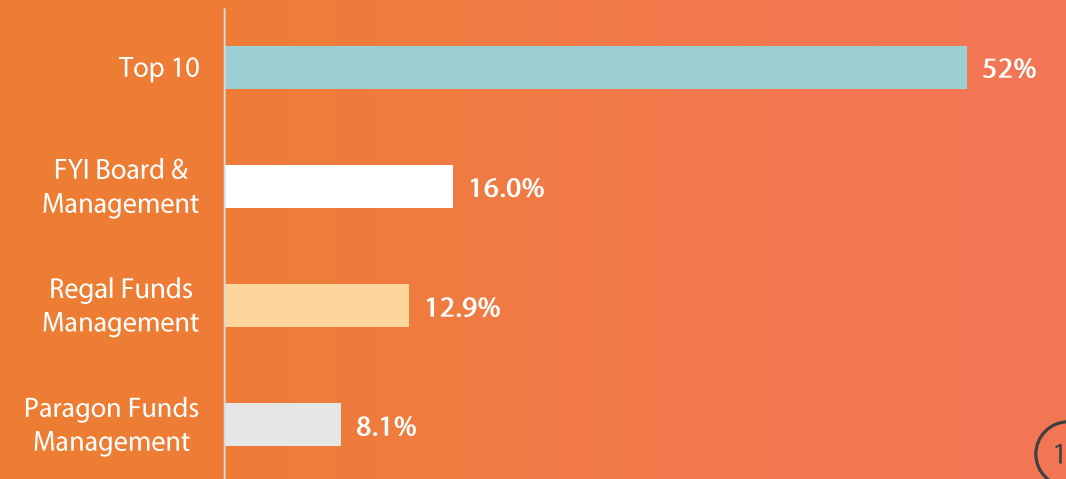
## CAPITAL STRUCTURE

	AMOUNT
Total issued shares	196.5m
Options (unlisted)	4.25m
Share price	\$0.061
Market cap (fully diluted)	\$12.1m
Cash as at 30 <sup>th</sup> April 2019	\$1.33m

## 12-MONTH SHARE PRICE PERFORMANCE



## SHAREHOLDER PROFILE



# FYI SUMMARY

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ASX-listed company,  
fully funded to BFS



High purity alumina (HPA)  
Cadoux Kaolin Project in  
Western Australia



Positive long-term market  
fundamentals



Ground floor entry to an  
emerging growth sector



Compelling technical &  
geographical advantages



Modern processing  
methods using cheaper  
feedstock



Demonstrable record of  
successful project development



Excellent exploration,  
development, operations,  
marketing and corporate  
capabilities





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