

# FY22 Results Presentation

Full Year Results to 30<sup>th</sup> June 2022

December 2022



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# Contents

1. Presentation team
2. Mission
3. Operational & financial highlights
4. Our business
5. Our technology
6. Financial results
7. Summary and outlook

# Presentation Team



Steve Mahon  
Non-Executive Chairman



John Wood  
CEO



Amit Gupta  
CFO & Executive Director



Thomas Maschmeyer  
Non-Executive Director,  
Founder & Principal Technology Advisor

# Mission

To provide global energy storage solutions that are robust, safe and affordable with low environmental impact, enabling the supply of clean power for all.

Through our breakthrough battery technology, we aim to place Gelion right at the centre of this clean energy transformation.



## UN Sustainability Development Goals



Goal 6  
Clean Water  
and Sanitation



Goal 7  
Affordable &  
Clean Energy



Goal 9  
Industry,  
Innovation &  
Infrastructure



Goal 11  
Sustainable Cities &  
Communities



Goal 12  
Responsible  
Consumption &  
Production



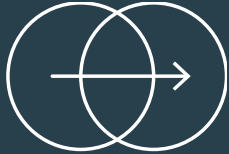
Goal 13  
Climate Action

# Operational and Financial Highlights, delivering on strategy

## Key Progress



Establishing the senior team required to grow the business



Prove the cell transition from lab to pilot production



Pilot manufacturing plant commissioned ahead of schedule



Acciona Energia selection (trial)



Substantial acceleration of Lithium Silicon Sulfur technology

# Financial Highlights

**£1.7m**

Total income

(2021: £1.6m)

**£4.1m**

Adjusted EBITDA loss<sup>1</sup>

(2021: £1.5m)

**Nil**

Debt

(2021: Nil)

<sup>1</sup> Excludes listing and other associated costs (£4.7m), which are non-recurring in nature.

**£17.0m**

Cash and cash equivalents  
and term deposits

(2021: £1.9m)

**£4.5m**

Adjusted loss after taxation<sup>1</sup>

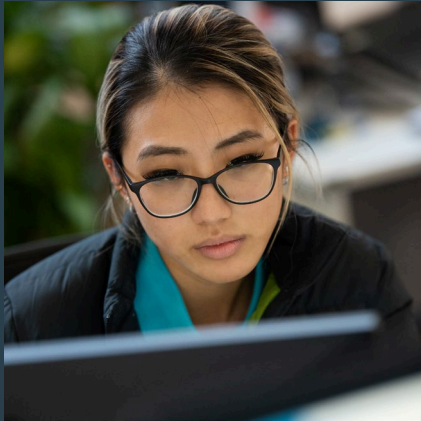
(2021: £1.8m)

**9.2p**

Loss per share

(2021: 2.0p)

# An Exceptional Team





# Our Business



# Award-Winning Technology



PROFESSOR THOMAS MASCHMEYER



## Awards for Gelion & Technology Founder Thomas Maschmeyer

### 2021

[Australian Academy of Science David Craig Medal >](#)

### 2020

[Australian Prime Minister's Prize for Innovation in Science >](#)

[Ranked #15 in World's leading Chemists 2010 – 2020 >](#)

[Times Higher Education Top Ten 'Academics Who Mattered in 2020' >](#)

[AFR Higher Education Award in Sustainability >](#)

### 2019

[European Industrial Energy Enlightenment Award >](#)

[Federation of Asian Chemical Societies' Contribution to Economic Development Award >](#)

### 2018

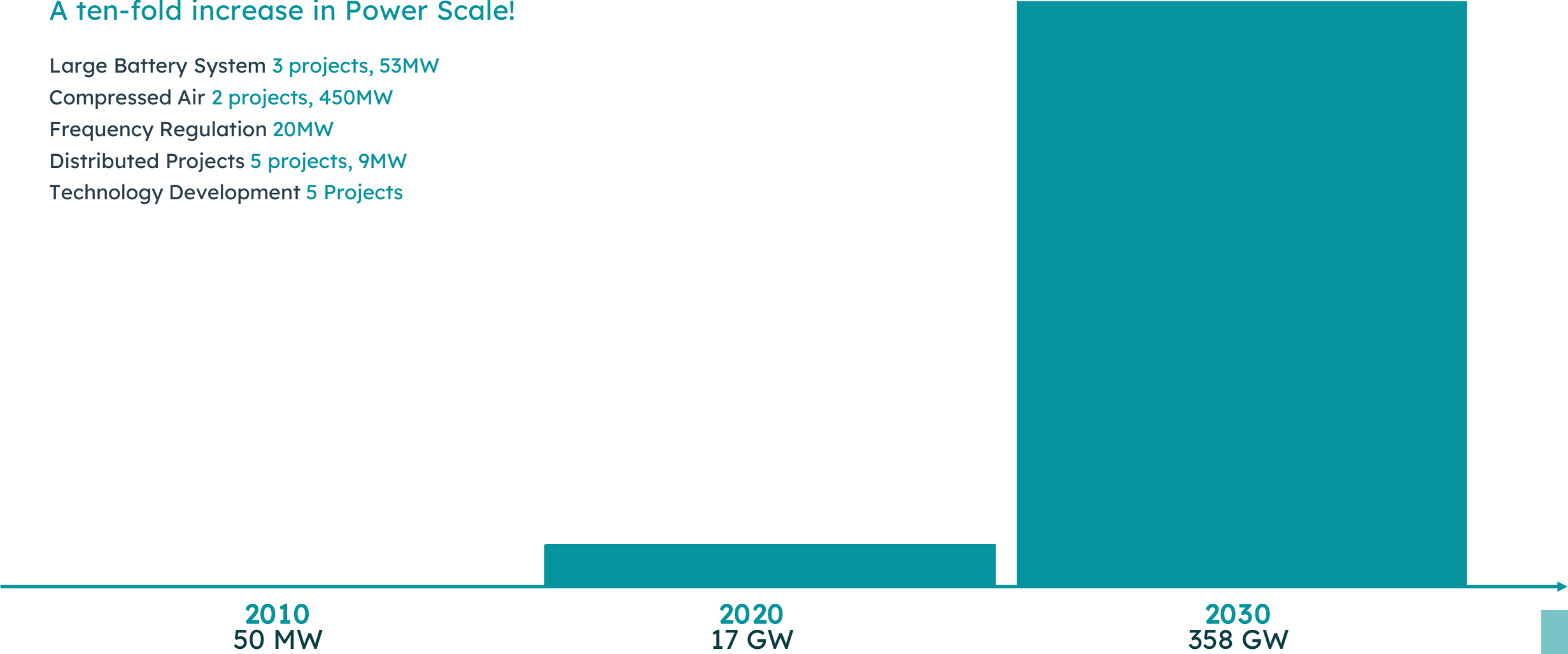
[CSIRO Eureka Prize for Leadership in Innovation and Science >](#)

[RACI R.K. Murphy Medal >](#)

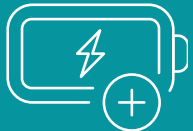

# Stationary Energy Storage Opportunity

It all started with the ARRA Stimulus Funding for Storage Demonstration Projects in 2009.  
A ten-fold increase in Power Scale!

- Large Battery System 3 projects, 53MW
- Compressed Air 2 projects, 450MW
- Frequency Regulation 20MW
- Distributed Projects 5 projects, 9MW
- Technology Development 5 Projects



# Lead-Acid (PbA) Batteries

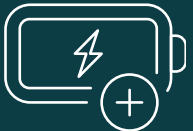

Market Size	 415 GWh	 \$38 Billion
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Market Growth at a steady increase ~2% CAGR  
**490GWh (2030)**

VS

# Lithium-ion Batteries

Market Size	 230 GWh	 \$49 Billion
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Market Growth will **ACCELERATE** at ~46% CAGR  
**1.3TWh (2030)**



Source: AVICENNE Energy, BOI Information (Confidential)

CONFIDENTIAL GELION 2022

# Lead-Acid (PbA) Batteries



Market Growth at a steady increase ~2% CAGR  
490GWh (2030)



1.6v cells for Acciona system

# Lithium-ion Batteries



Market Growth will ACCELERATE at ~46% CAGR  
1.3TWh (2030)



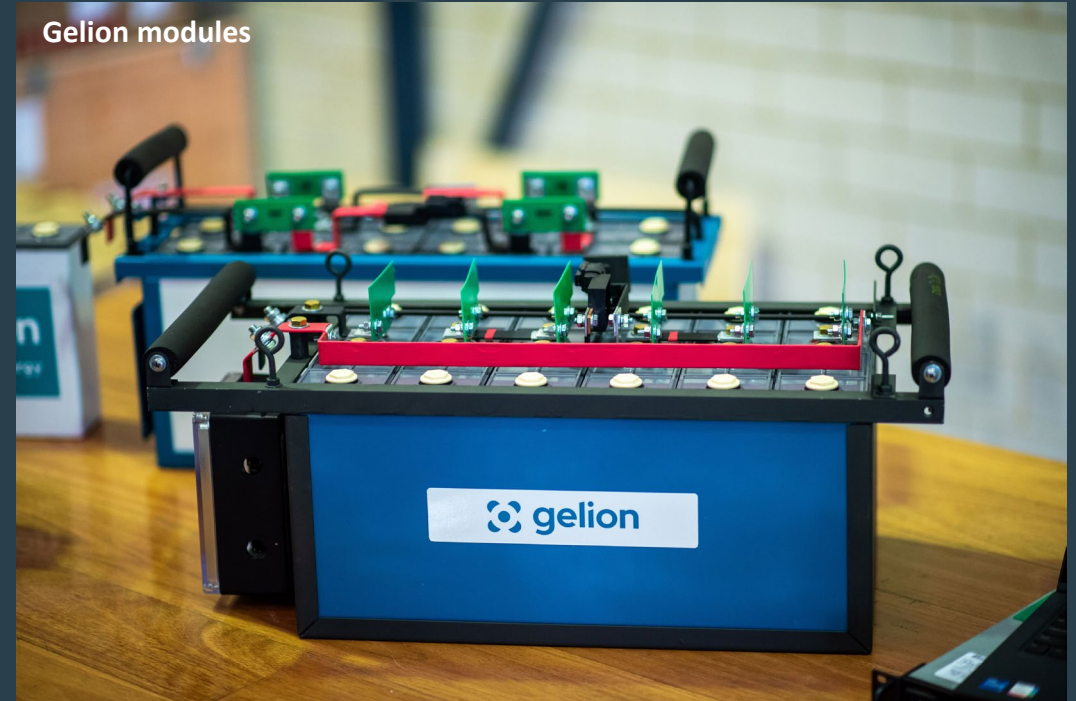
R&D li-ion pouch cell format

# Gelion Zinc Bromide Batteries

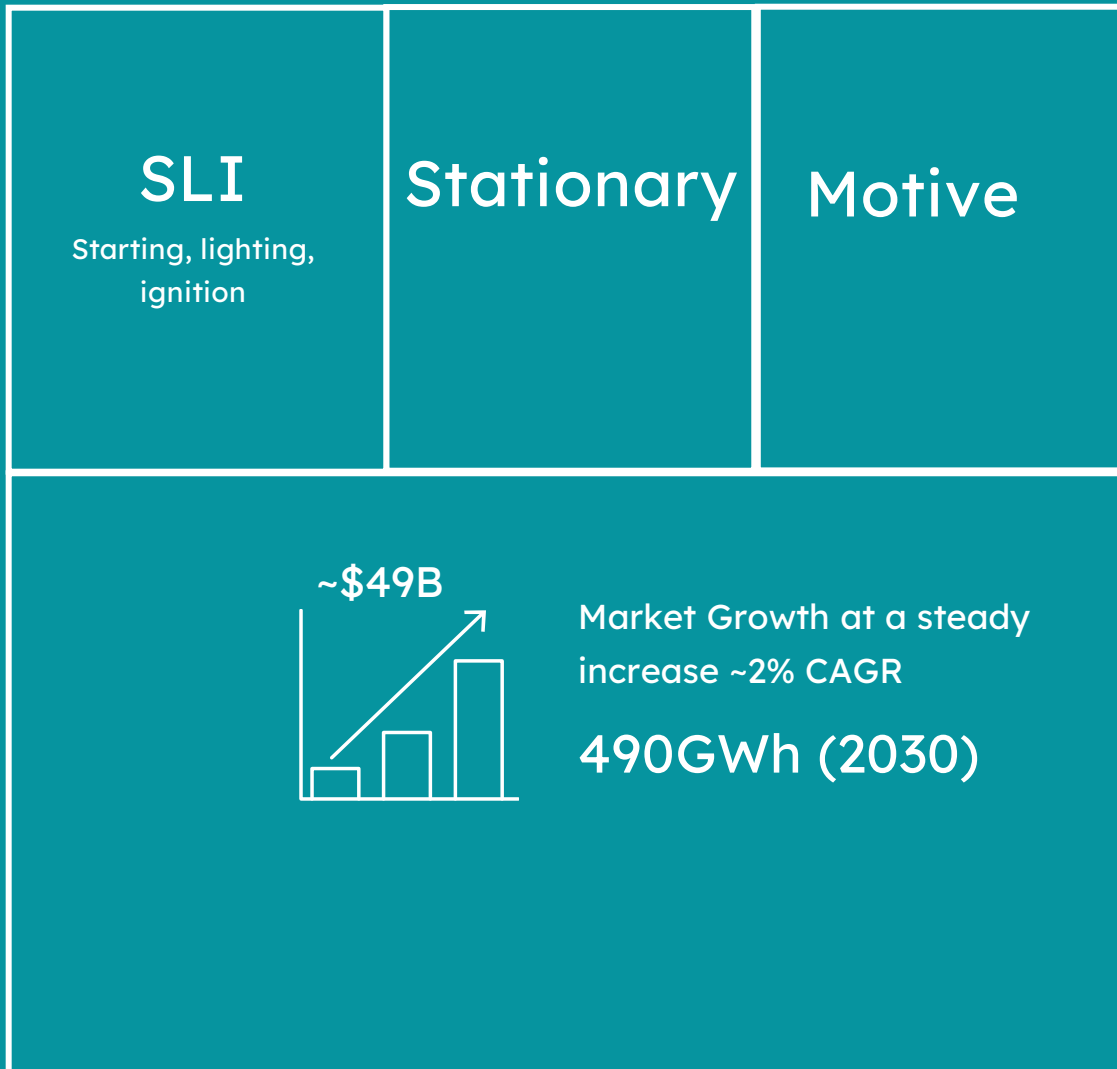
Gelion cells



Gelion modules



# PbA Battery Markets

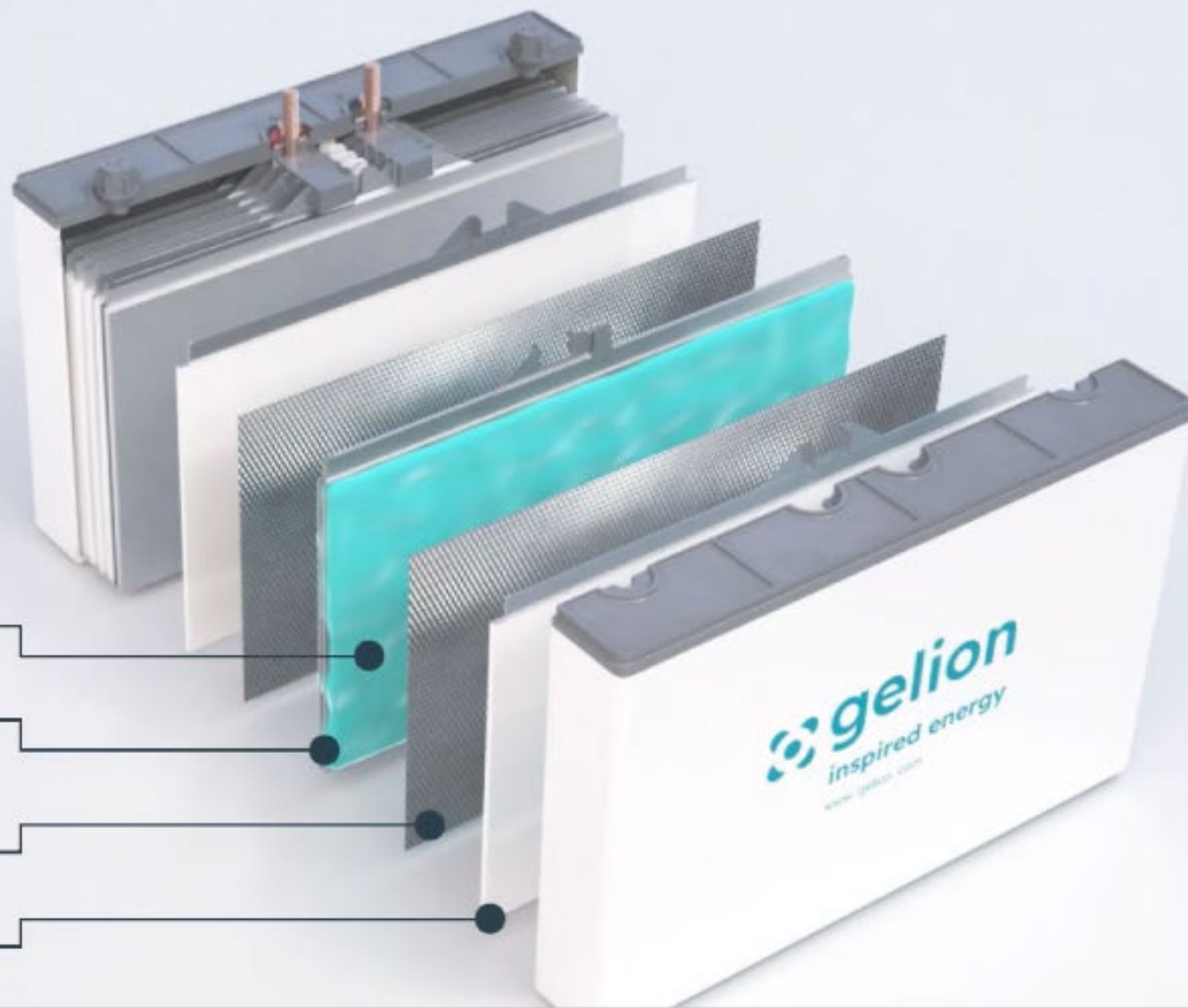


# Gelion Zinc Bromide

- Zinc bromide has PbA like format
- Safe chemistry, fire resistant
- High and low temperature tolerant without HVAC
- Better cycle performance
- Robust, 100% DOD (depth of discharge)
- Can remain uncharged without accelerated degradation
- Highly recyclable

# The Revolution within.

Gelion's Endure™ uses a unique gel electrode that transforms zinc-bromide technology into a high-efficiency non-flow battery.



**Patented Electrode Gel Layer** >

**Bromide Positive Plate** >

**Separator Membrane** >

**Zinc Negative Plate** >



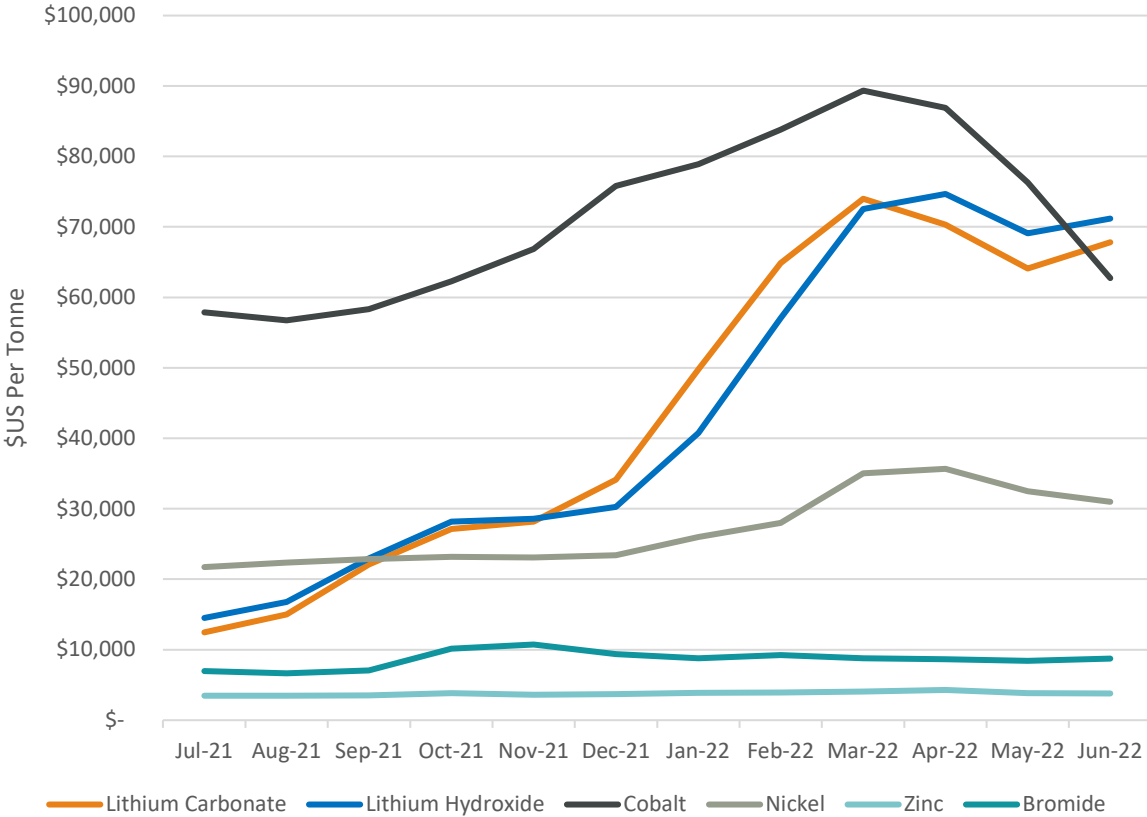
# Gelion Lower Cost Inputs

Gelion uses raw materials that are abundant, accessible, recyclable and lower cost.

<p><b>Lithium carbonate**</b></p> <p><b>US\$67,992</b></p> <p>metric tonne</p> <p>FY22: <b>+444%</b></p>	<p><b>Zinc**</b></p> <p><b>US\$3,161</b></p> <p>metric tonne</p> <p>FY22: <b>+10%</b></p> <p><small>**Commodity price June 30, 2022, Bloomberg Commodity Pricing Data Jul y 2021 to June 2022 (FY22), Bloomberg</small></p>
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Gelion’s zinc bromide chemistry utilises raw materials that are far less affected by current market volatilities

Comparison of lithium NMC battery input costs versus zinc comparable cost stability



Source: BloombergNEF

# Gelion and PbA Partner – Battery Energy Power Solutions

Significant milestone achieved - first industrial pilot line production near Sydney, Australia



- Manufacturing - transitioning from R&D to industrial process production.
- First manufacturing pilot line at PbA battery partner
- Completed ahead of schedule
- End-to-end line using > 70% of the standard PbA processes
- Provides input for future manufacturing blueprint

**Gelion's inaugural pilot line production commencement.**  
Chris Bowen, Australian Minister for Climate Change & Energy;  
Ed Husic, Australian Minister for Industry & Science;  
Professor Thomas Maschmeyer, University of Sydney, Gelion Founder.

# Acciona Energia Project

- Phase 1 is progressing as per plan and includes the initial virtual simulation battery system string testing, characterisation and in-field simulation.
- Phase 2 will see the deployment of Gelion's 120kWh system at Acciona's test solar farm in Spain in 2023.



Acciona remote access battery system (string)

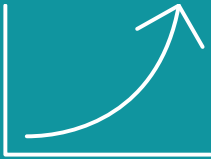


Gelion Zinc Bromide battery modules

# 2023 Outlook - Zinc Bromide



In-field and laboratory testing of battery systems and cell optimisation



Match to market, prioritising the compelling proposition to underpin scale up



Manufacturing process development

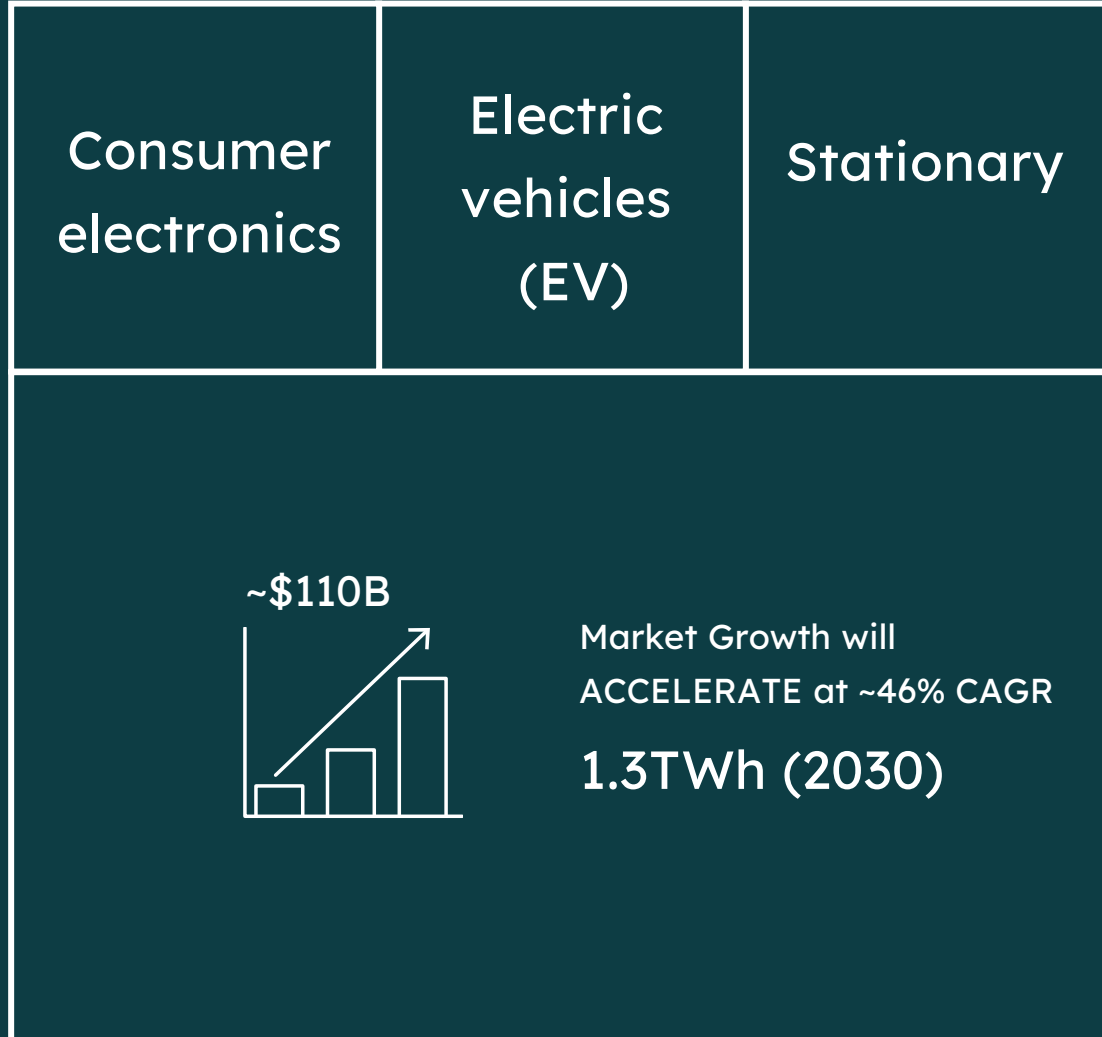


# Lithium Silicon Sulfur (LiSiS)

Performance Additives



# Lithium-ion Battery Markets



# Gelion Lithium silicon sulfur (LiSiS)

- Gelion is developing advanced LiS cathodes.
- Safer, higher gravimetric energy density and lower cost
- Ahead of schedule
- Improve EV performance, enable significant e-aviation and unlock new application opportunities

Source: AVICENNE Energy, BOI Information (Confidential)

# LiSiS

By enabling advanced sulfur cathodes with silicon-based anodes, Gelion seeks to develop safe, high to ultra-high energy density batteries.



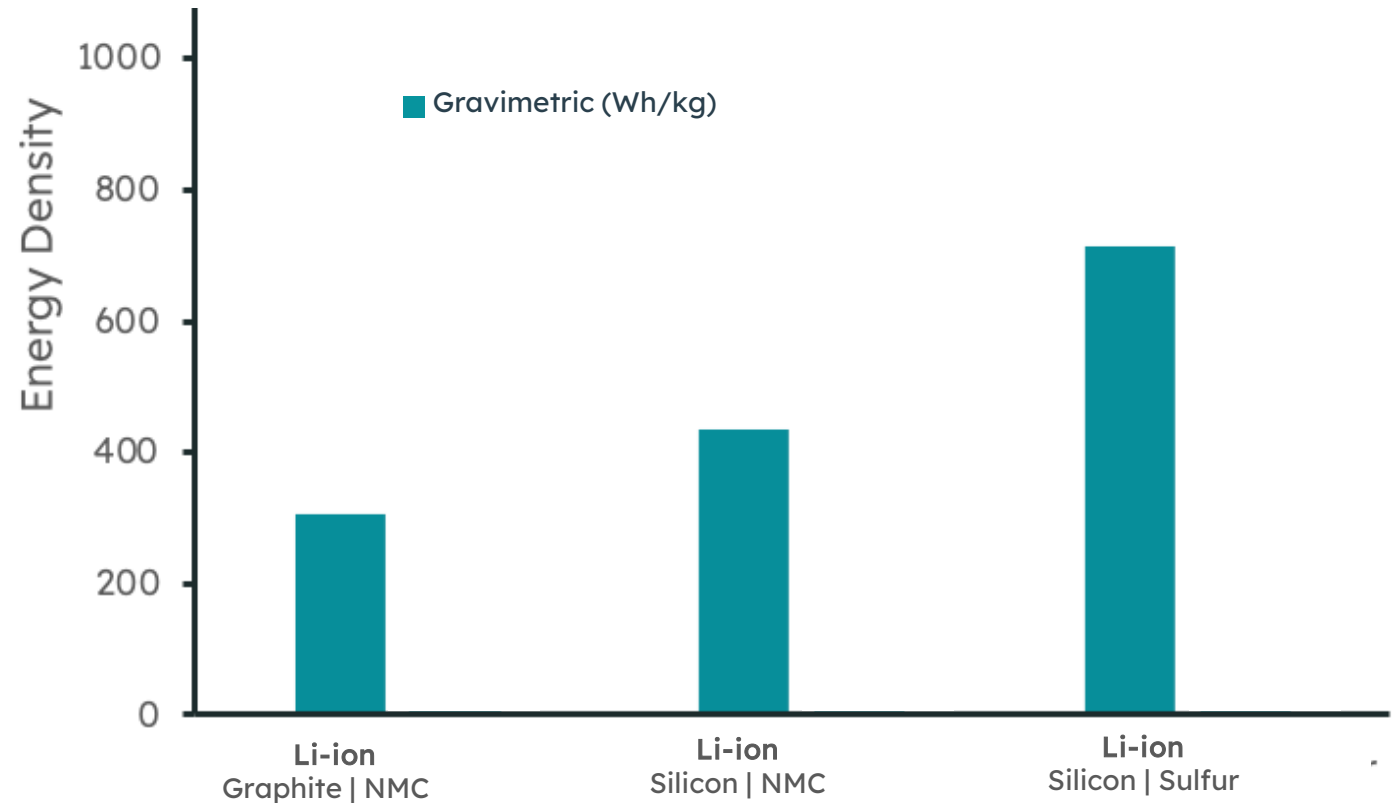
## Lithium-Silicon-Sulfur

High energy silicon anode with sulfur cathode, dendrite-free ultra-high density cells to unlock unique applications.

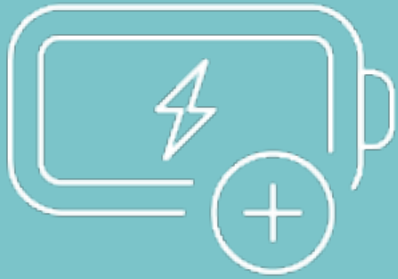
Sulfur cathode stable in event of short circuit, minimising thermal runaway.



Safe failure mechanism



# LiSiS Advantages



Safer, improved  
gravimetric energy density  
and lower cost



Utilises innovative  
technology proven to  
substantially enhance  
lifetime



Leverages Gelion's strong  
R&D team internal team  
and support from  
University of Sydney



# Financial Results



# FY22 Actual Results vs analyst' expectations\*

## Financial Highlights FY 2022

£m	Gelion Actual	Analysts Estimate
<b>Total income</b>	<b>1.7</b>	<b>1.2</b>
Adjusted EBITDA loss	(4.1)	(4.9)
Adjusted EBITDA loss per share	4.1p	5.0p
Cash & cash equivalents & term deposits	17.0	14.2

## Results exceeding analysts' expectations\*

- Increase in total income predominantly due to higher R&D incentives
- Adjusted EBITDA loss lower than expected driven by better cost management leading to lower overheads
- Cash position & term deposits at 30 June 2022 of £17.0m which is c. £2.8m (20%) above expectations

\* FinnCap, Sept 2022

# FY22 Results

## Financial Performance

£m	FY22	FY21
<b>Total income</b>	<b>1.7</b>	<b>1.6</b>
Administrative expenses	(3.2)	(1.5)
Research and development expenditure	(3.0)	(1.9)
<b>Adjusted EBITDA loss</b>	<b>(4.1)</b>	<b>(1.5)</b>
Listing & other associated costs	(4.7)	-
Depreciation & amortisation	(0.3)	(0.3)
<b>Operating loss</b>	<b>(9.1)</b>	<b>(1.8)</b>

## Key Highlights

- Successfully raised £16m at IPO listing on AIM in November 2021
- Increase in administrative expenses reflecting the additional headcount and costs of being a public company
- R&D expenditure increase reflecting additional headcount costs and development activities to support stationery and mobile storage solutions
- Non-recurring items related to one-off listing costs and accelerated vesting of options (non-cash)

# Strong Balance Sheet: Significant Cash position & Nil Debt

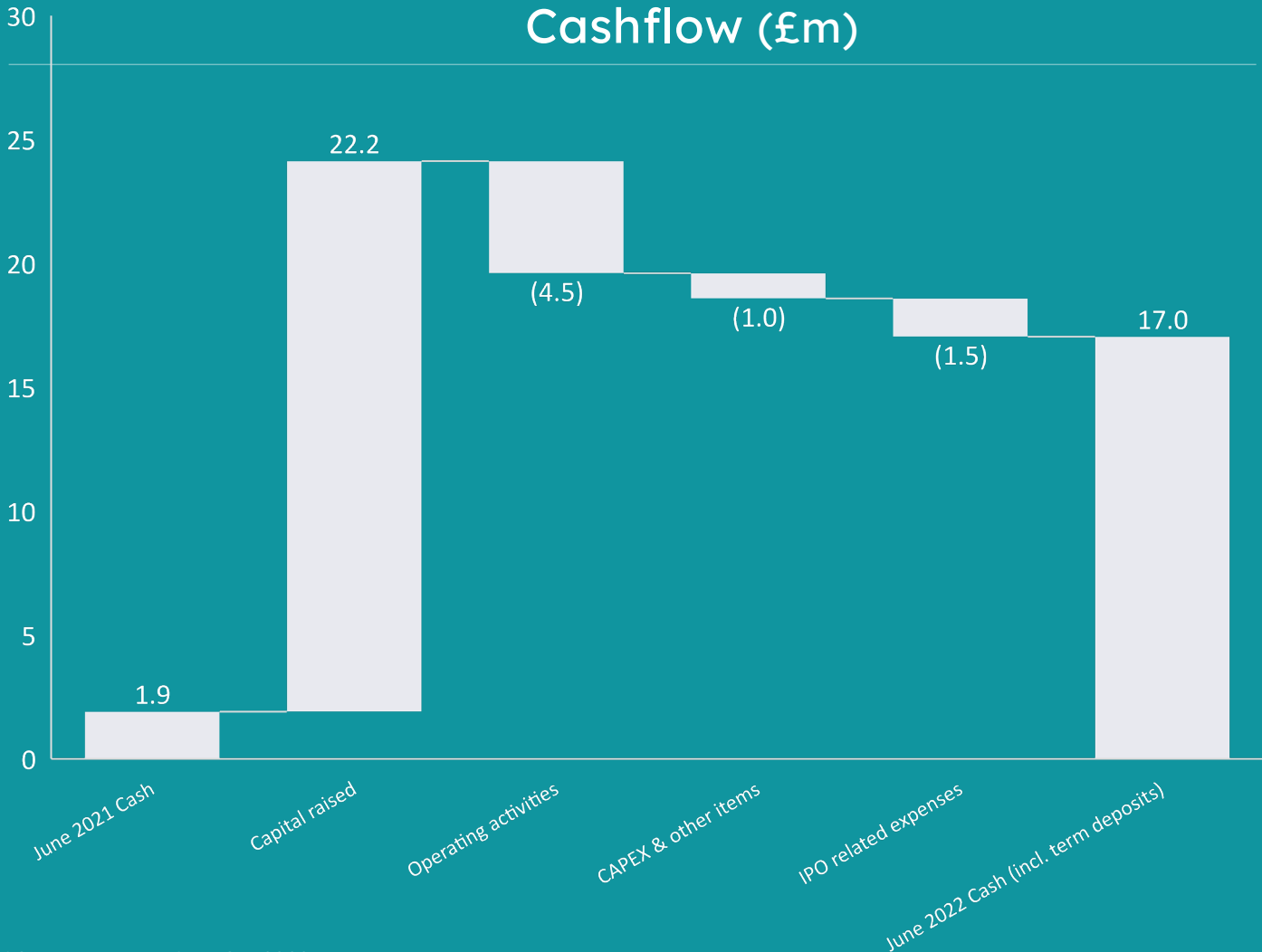
## Balance Sheet

£m	30-Jun-22	30-Jun-21
Cash and cash equivalents (incl. term deposits)	17.0	1.9
Other receivable	2.2	1.3
Intangible assets	0.4	0.3
Property, plant and equipment	1.0	0.5
Trade and other payables	(0.9)	(0.4)
Net assets	19.7	3.6

## Key Highlights

- Net increase in cash reflecting proceeds from IPO
- Other receivables include the R&D tax incentive of £1.7m. This was received in full in November 2022.
- Nil debt at 30 June 2022
- Net assets of £19.7m at 30 June 2022

# Substantial Cash Available to Drive Future Growth



**(£4.5m)**  
Cash from operations

**£20.7m**  
Cash from financing activities (net of listing costs)

**£17.0m**  
Cash (incl short term deposits) at 30 June 2022

# Conclusion



# Summary and Outlook

## 2021/2022

- IPO
- Manufacturing facility set up and industrial cell production
- Proof point of battery cell manufacturing and battery system build

## 2023

- In-field and laboratory testing and cell optimisation for Zinc Bromide and LiSiS
- Match to market, prioritising the compelling proposition to underpin scale up
- Manufacturing process blueprint update

## 2024

- Progression of commercialisation process
- Battery certification towards manufacturing scale up



Team in place to pursue and deliver battery commercialisation



Energy storage market growth accelerates



Gelion well positioned to execute strategy and agile to adapt to dynamic market

# Q&A





# Thank you



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