



# Full Year Results FY24

27 August 2024

[calix.global](https://calix.global)

MARS IS FOR  
QUITTERS



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# About Calix

Calix Limited is an environmental technology company solving urgent global challenges in industrial decarbonisation and sustainability.

Calix's unique patented core platform technology delivers indirect heating of raw materials to enable efficient, precise, flexible and renewably powered mineral processing and capture of unavoidable industrial emissions.

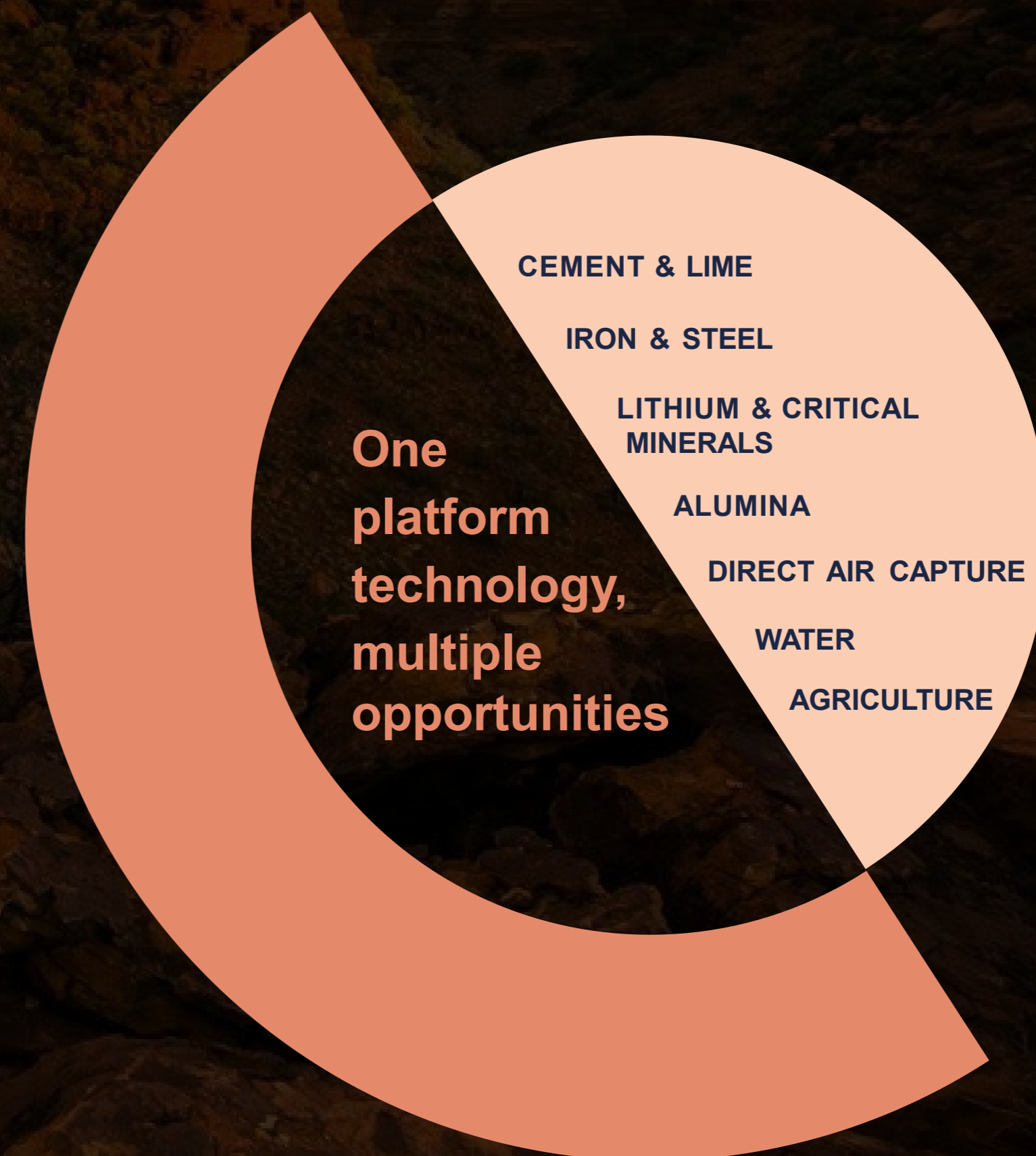
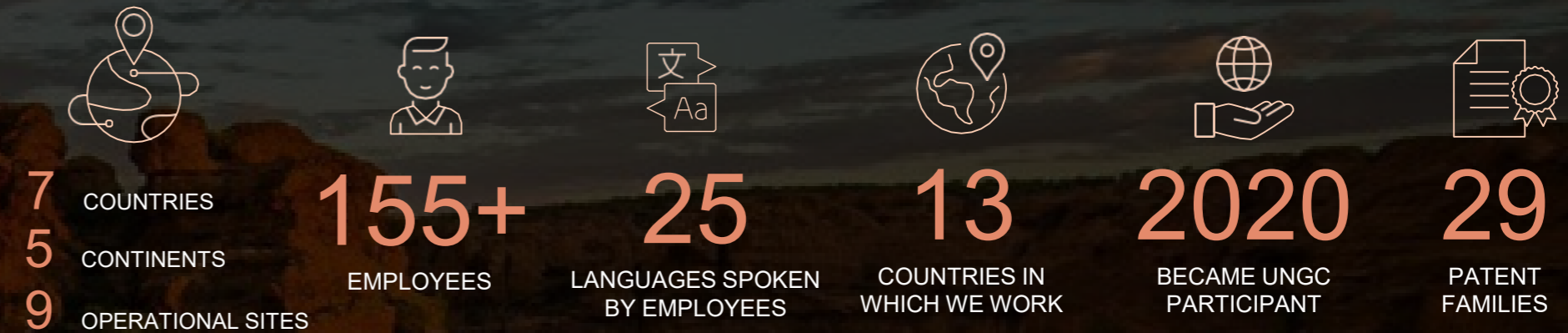
With strong and increasing demand driven by global decarbonisation commitments, Calix is applying its platform technology to the cement, steel, alumina, and critical minerals industries, as well as the direct air capture of atmospheric carbon dioxide, and the production of sustainable environmental products.

Leveraging its core platform technology and a global network of partners, Calix is urgently developing multiple businesses that deliver positive global impact. Because there's only one Earth.

## MARS IS FOR QUITTERS

# Solving global challenges

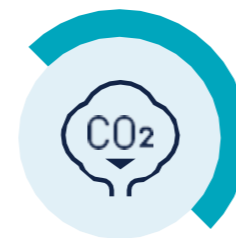
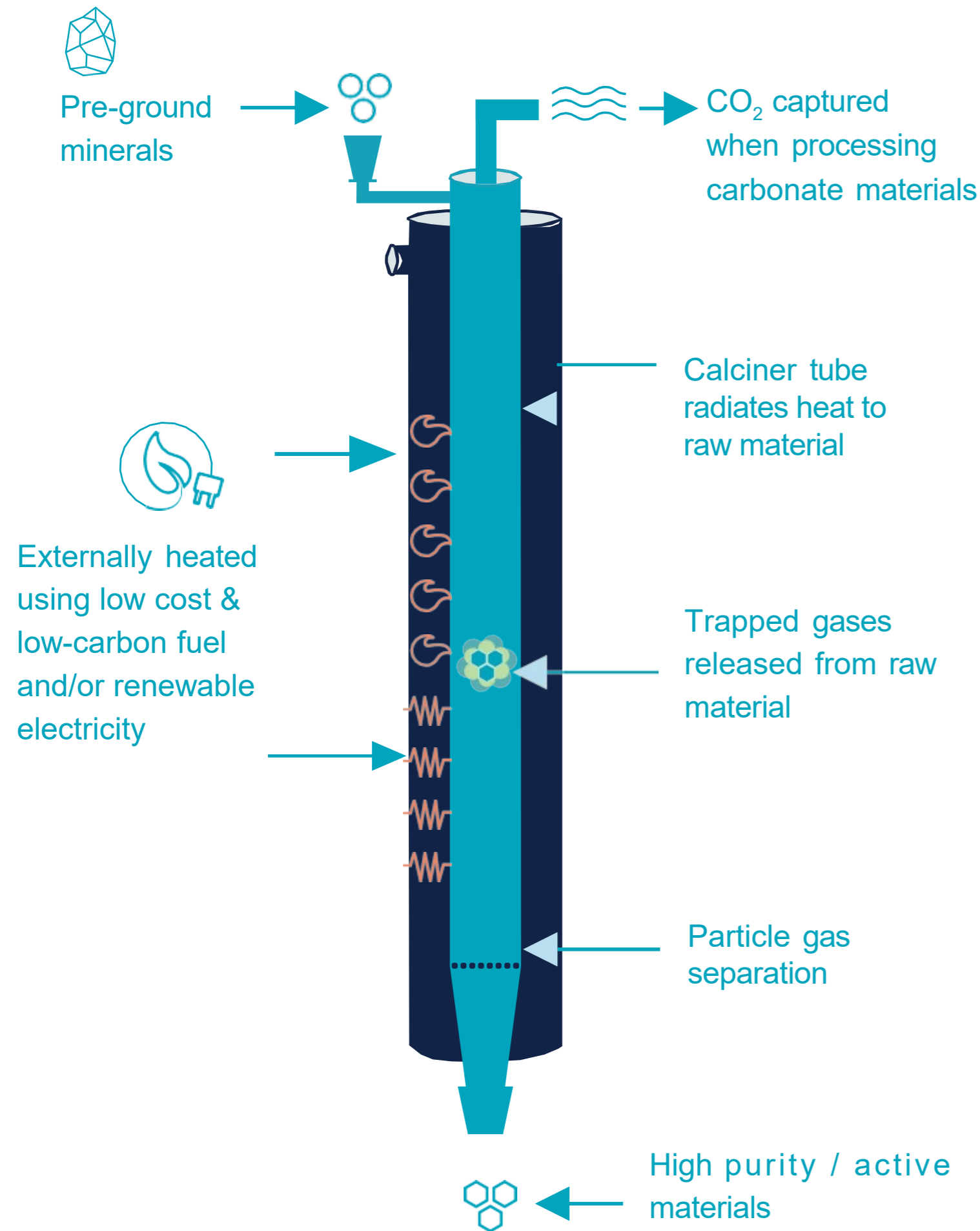
Electrification of industrial processing | Capture of unavoidable emissions | Sustainable environmental solutions





# Calix's core platform technology

A new way to "heat stuff up"



## Carbon Capture

Unavoidable process CO<sub>2</sub> emissions from cement & lime production & CO<sub>2</sub> from the atmosphere are captured for use or storage.



## Sustainable Processing

Compatible with electricity & alternative fuels to provide viable, flexible and economical pathways to sustainable processing.



## Magnesia

Produces high purity / active materials with enhanced chemical and / or bioactivity.



# Calix's structure underpins a solid foundation for growth



One core platform technology with multiple applications for global industries

	Carbon Capture		Sustainable Processing			Magnesia	
Platform output	CO <sub>2</sub>		Sustainable Processing			Magnesia	
Business subsidiary	Leilac		Pilbara Minerals UJV	ZEAL	zesty by calix	IER	
Application	Cement & lime	Direct Air Capture	Lithium	Alumina	Iron & steel	Water	Agriculture / Marine coatings / Biotech
Market Size	1.4 BTpa CO <sub>2</sub> <sup>1</sup>	Targeting > 1 BTpa CO <sub>2</sub> <sup>7</sup>	US\$7Bpa <sup>2</sup>	US\$45.5Bpa <sup>3</sup>	US\$640Bpa <sup>4</sup>	~US\$100m <sup>5</sup>	Multi-US\$Bpa <sup>6</sup>
Partners	Heidelberg Materials + multiple others	Heirloom	Pilbara Minerals	HILTCRC	HILTCRC	SAAFE <sup>CRC</sup> <small>Solving Antimicrobial Resistance in Agribusiness, Food &amp; Environments</small> Centre for Environmental and Agricultural Solutions to Antimicrobial Resistance	
Revenue model	Licence fees (\$ per tonne CO <sub>2</sub> )		Licence fees (% Total Revenues)			Growing direct / distributor sales	

1. GCCA 2050 Net Zero Global Industry Roadmap
2. Estimated as 50% of total lithium market as measured by lithium carbonate equivalent (LCE) derived from spodumene - <https://www.mckinsey.com/industries/metals-and-mining/our-insights/australias-potential-in-the-lithium-market>
3. Alumina global market revenue estimated at <https://www.precedenceresearch.com/press-release/alumina-market#:~:text=The%20global%20alumina%20market%20size,combination%20of%20aluminum%20and%20oxygen.>
4. Estimated as US\$400 per tonne of iron @ 1.6BTpa <https://www.statista.com/statistics/589979/metal-content-of-the-global-iron-ore-production/>
5. US magnesium hydroxide market management estimate, caustic replacement market likely several multiples of this
6. Frost and Sullivan – Independent Market Report – Calix IPO Prospectus 2018
7. Heirloom statement in press release <https://fox40.com/news/local-news/san-joaquin-county/heirloom-carbon-technologies-tracy-co2/>



# FY24 Financial highlights

Growing & diversified revenue streams delivered cash support in advance of licensing royalties

## Revenue growth & diversification

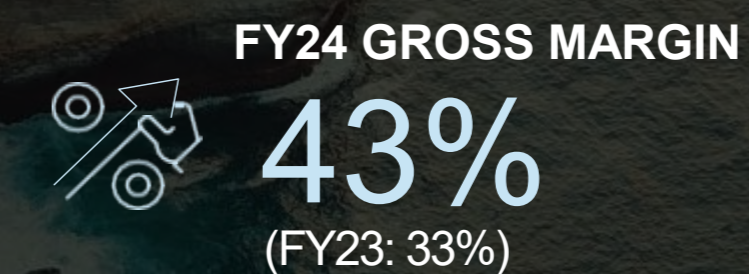
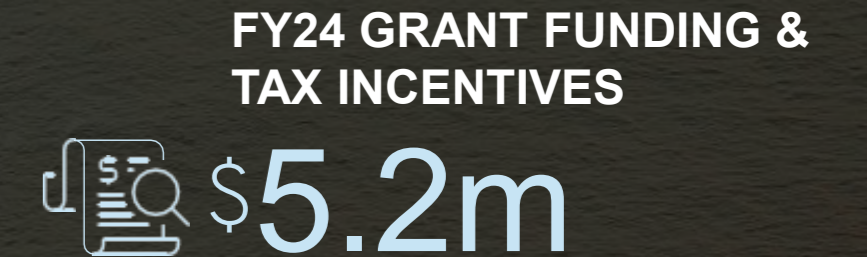
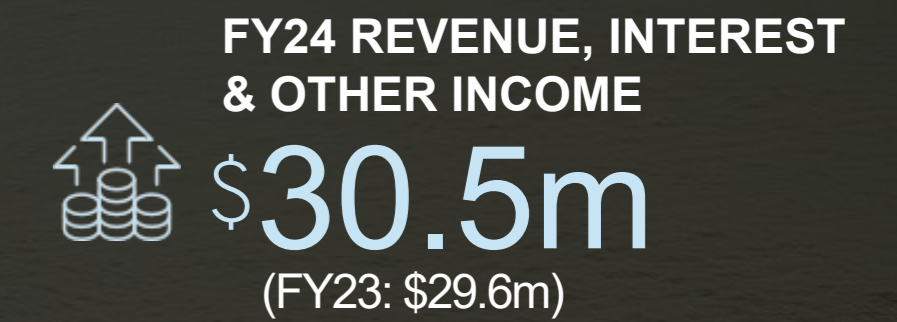
- Product & services revenue up 30% to \$24.2m
  - Magnesia revenue increased 14% to \$21.0m
  - Leilac revenues increased to \$3.2m (FY23: \$0.1m), driven by advancing pipeline to paid engineering studies
  - \$12.2m gain realised from IP contribution to PLS UJV
- Gross profit up 66% to \$10.3m

## Diligent investment

- Opex of \$42.1m (FY23: \$31.7m) is an investment in capability & capacity building for commercialisation
- Additional research, development & engineering accounted for 67% of the total increase in operational expenditure
- Investment partially offset by \$5.2m (FY23: 10.7m) in grants & tax rebates

## Capital strategy

- Cash balance of \$43.0m at 30 June 2024, down just 10% from 31 December 2023
- Balance sheet, growing revenue streams & cost management discipline to support current operations & technology development
- Capital management & funding strategy continues to focus on opportunities to secure capital in the form of equity, debt or grants at the subsidiary & project level to fund projects & accelerate industry application





# Statement of profit or loss



	FY 24 (\$m's)	FY 23 (\$m's)
<b>Revenue</b>	<b>30.5</b>	<b>29.6</b>
Magnesia revenues	21.0	18.5
Leilac revenues	3.2	0.1
Grants, other income and interest income	6.3	11.0
<b>Cost of sales</b>	<b>(13.9)</b>	<b>(12.4)</b>
<b>Gross profit and other income</b>	<b>16.6</b>	<b>17.2</b>
Sales & marketing expenses	(10.7)	(9.5)
Research & development expenses	(21.4)	(14.5)
Administration & other expenses	(9.9)	(7.7)
Depreciation, amortisation & impairment expenses	(7.4)	(5.9)
Share based payments expense	(5.1)	(2.7)
Other expenses	(0.6)	(0.4)
<b>Gain on investment in UJV</b>	<b>12.2</b>	<b>-</b>
<b>Loss from ordinary activities</b>	<b>(26.3)</b>	<b>(23.5)</b>
Income tax benefit	0.1	0.1
<b>Loss for the year</b>	<b>(26.2)</b>	<b>(23.4)</b>

## Key takeaways

- Growing & diversified revenue streams
  - Growing revenue through Leilac customer engineering studies
  - Continued revenue & margin growth in Magnesia business
  - Additional revenues from customer material testing
- Gain resulting from co-investment with Pilbara Minerals UJV
- Focused investment
  - Investment in capability & capacity building for commercialisation
  - Key projects were supported by grant funding & paid engineering
- Refer to slide 21 for indicative timelines for revenue generation by business line



# Statement of financial position



	June 24 (\$m's)	June 23 (\$m's)
Cash and cash equivalents	43.0	74.5
Trade, other receivables and other assets	4.3	10.3
Inventories	5.4	4.3
<b>Current assets</b>	<b>52.7</b>	<b>89.1</b>
Trade, other receivables, other assets & right of use asset	2.8	1.2
Intangible assets	12.6	9.1
Goodwill	3.6	3.6
Property, plant and equipment	40.6	24.4
<b>Non-current assets</b>	<b>59.7</b>	<b>38.4</b>
Trade & other payables	12.2	5.3
Borrowings	0.8	0.3
Current lease liabilities	0.8	0.3
Provisions	1.9	1.7
Deferred revenue	10.1	13.3
<b>Current liabilities</b>	<b>25.8</b>	<b>20.9</b>
Non-current lease liabilities	1.7	0.6
Provisions	0.5	0.5
Deferred tax	0.4	0.5
<b>Non-current liabilities</b>	<b>2.6</b>	<b>1.6</b>
<b>Net Assets</b>	<b>84.0</b>	<b>105.0</b>

## Key takeaways:

- Balance sheet remains strong & essentially debt free
- Flexibility retained to pursue the right capital & commercialisation strategy at the subsidiary level.
- Cash position at 31 Dec 2023 was \$47.8m, therefore, cash decreased by 10% in the second half to \$43.0m





# Statement of cash flows



	June 24 (\$m's)	June 23 (\$m's)
Receipts from customers	22.7	18.6
Receipts from government bodies	10.8	7.4
Payments to suppliers and employees	(48.2)	(43.2)
Interest received	1.1	0.3
Interest paid	(0.1)	(0.3)
<b>Net cash used in operating activities</b>	<b>(13.7)</b>	<b>(17.2)</b>
Receipts from government bodies	2.1	-
Purchases of property, plant & equipment	(15.1)	(9.9)
Purchase of intangible assets	(4.3)	(3.2)
Payments for loans to directors	(0.3)	-
Receipts of repayment of loans to directors	0.1	1.2
<b>Net cash used in investing activities</b>	<b>(17.5)</b>	<b>(11.9)</b>
Proceeds from issue of shares	-	81.6
Payment for transaction costs related to issue of shares	-	(2.0)
Payment for lease principal	(0.7)	(0.4)
Proceeds from borrowings	1.6	1.7
Repayment of borrowings	(1.2)	(2.3)
<b>Net cash (used in) / provided from financing activities</b>	<b>(0.3)</b>	<b>78.6</b>
Net movement in cash	(31.5)	49.5
Cash at the beginning of the year	74.5	25.0
<b>Cash at the end of the year</b>	<b>43.0</b>	<b>74.5</b>

## Key takeaways:

- Healthy cash position to pursue our opportunities
- Net cash movement in 1H was (\$26.7m) and in 2H was (\$4.8m)
- Investment in property, plant & equipment to drive future growth:
  - Two new US manufacturing plants
  - Built and successfully commissioned a next-gen electric calciner at Bacchus Marsh
  - Investment in Mid-Stream Demo Plant together with Pilbara Minerals





# FY24 Operational Achievements

Focused delivery across all lines of business

## KPI Dashboard for FY24

- Competed
- Part completed
- Pivot
- Not delivered

**GATEWAY**  
All High Level SHESQ action items completed on time

### Carbon Capture

6.7 / 10

- Leilac-2 – all permitting & civil works complete<sup>1</sup>
- Continue to move projects down the pipeline
- BOD for green methanol consortia project

### Sustainable Processing

8.0 / 10

**Spodumene**

- Spodumene Project construction commenced

**Iron & Steel**

- Successful expanded ore program
- Completed FEED study leading to FID

**Alumina**

- First successful pre-FEED

**Advanced Batteries**

- First battery module in consumer product<sup>2</sup>

### Magnesia

9.5 / 10

**Water**

- Continued revenue growth US, Asia

**Mg Metal**

- BOD for Mg metal plant

**Specialities**

- Continued commercialisation of Agriculture, Marine Coatings and Biotech applications





# Direct Air Capture with Heirloom



Leilac



Project	Partner	Partner funding support	Industry	Market size
Heirloom – LA, USA	Heirloom	U.S. DEPARTMENT OF ENERGY	Direct Air Capture	>1 BTpa CO <sub>2</sub> <sup>1</sup>

## Objectives

- Build Leilac’s electric calcination and carbon capture technology at Heirloom DAC facilities in Shreveport, Louisiana, USA.
- A first facility aims to enable CO<sub>2</sub> removal of ~17,000 tons per year
- A second, co-located facility aims to add an additional ~300,000 tons per year of CO<sub>2</sub> removal capacity as a part of Project Cypress<sup>2</sup>

## FY24 achievements

- Signed a global & perpetual licence agreement for the exclusive use of Leilac’s technology by Heirloom<sup>3</sup>, US\$3 / tonne CO<sub>2</sub> base royalty rate
- Commenced paid engineering for the design of electric single & multi-tube modules for Heirloom’s DAC process
- Conducted a second successful R&D campaign with Heirloom using Calix’s BATMn electric calciner

## Targeted next steps

- Continue to deliver paid engineering services to complete detailed engineering & design work
- Construct a ~17,000 tons of CO<sub>2</sub> per annum facility, with operations targeted to commence in 2026
- Construct a ~300,000 tons of CO<sub>2</sub> per annum facility, with operations targeted to commence in 2027

## Indicative timeline



FY24 Results  
27 August 2024

1. Heirloom statement in press release <https://fox40.com/news/local-news/san-joaquin-county/heirloom-carbon-technologies-tracy-co2>  
 2. U.S. DOE: *Biden-Harris Administration Announces Up To \$1.2 Billion For Nation’s First Direct Air Capture Demonstrations in Texas and Louisiana*. 11 Aug 2023  
 3. ASX Announcement. *Calix announces Heirloom licence agreement*. 30 Oct. 2023  
 4 ASX Announcement. *Calix announces update on DAC projects*. 25 Jun 2024

\*Project timelines are indicative only. Please refer to ASX announcements for latest project timelines  
 \*\* 1 ton = 0.91 tonnes



Project	Partner	Funding support	Industry	Market size
Leilac-2	 Heidelberg Materials	 European Commission    Horizon 2020 European Union funding for Research & Innovation	Cement & lime	1.4 BTpa CO <sub>2</sub> <sup>1</sup>

### Objectives

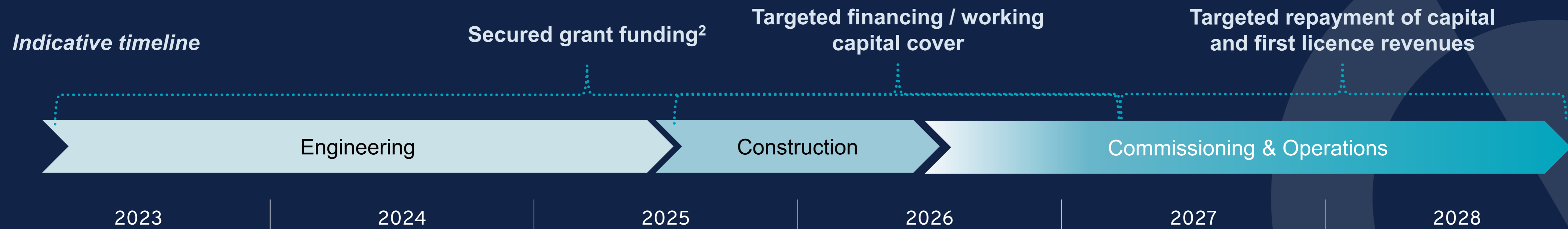
- Demonstrate a replicable module that can efficiently capture up to 100ktpa of unavoidable process emissions
- Successfully retrofit the Leilac module to an operational cement plant with minimal downtime
- Demonstrate the ability to use low-cost and low-carbon fuels

### FY24 achievements

- Project successfully relocated to Heidelberg Materials' Ennigerloh cement plant, following closure of Hannover plant<sup>3</sup>
- JV formed with Heidelberg Materials for the construction, operation & future ownership of the Leilac-2 plant, subject to performance testing
- Upon transfer of ownership, Heidelberg Materials would repay Leilac's capital contribution, less depreciation

### Targeted next steps

- Complete permitting process
- Commence construction in 2025
- Begin commissioning & operations in 2026





Project	Partners	Funding support	Industry	Market size
Project ZETA	 		Cement & lime	1.4 BTpa CO <sub>2</sub> <sup>1</sup>

### Objectives

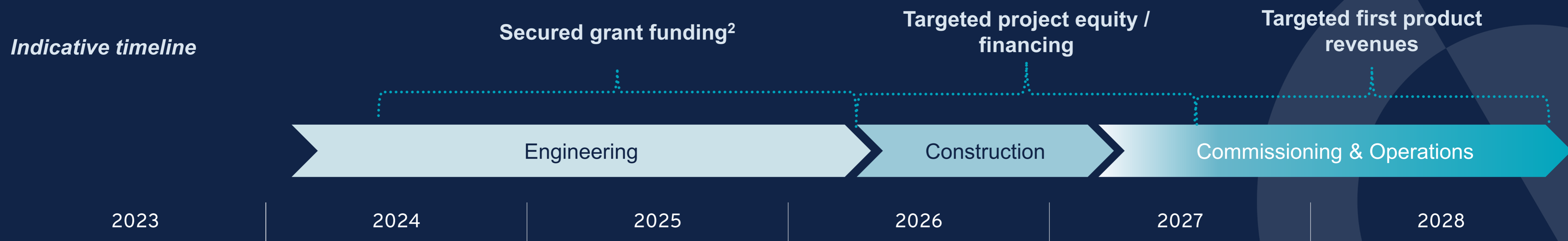
- Build a commercial demonstration electric calciner for near zero emissions lime & cement
- Sell captured process CO<sub>2</sub> emissions to the Solar Methanol 1 project<sup>3</sup> to produce green methanol
- Sell decarbonised lime products in collaboration with partners
- Develop a novel zero emissions cement making process that reduces cost, energy consumption & footprint

### FY24 achievements

- Strengthened collaborations & partnerships in first-of-a-kind Carbon Capture & Use project
  - Progressed engineering & design of the plant
- July 2024**
- Awarded a \$15m grant from the Australian Government

### Targeted next steps

- Complete pre-FEED study
- Progress FEED study to enable a Final Investment Decision







# Leilac-3: Full-scale cement & lime deployment



Leilac



## Projects

## Partners

## Funding support

## Industry

## Market size

Multiple in development



+ others

TBC

Cement & Lime

1.4 BTpa CO<sub>2</sub><sup>1</sup>

### Objectives

- Deploy Leilac’s technology at full-scale with multiple partners in the cement & lime industry
- Commercial demonstration of Leilac’s technology as the leading decarbonisation solution in key target markets

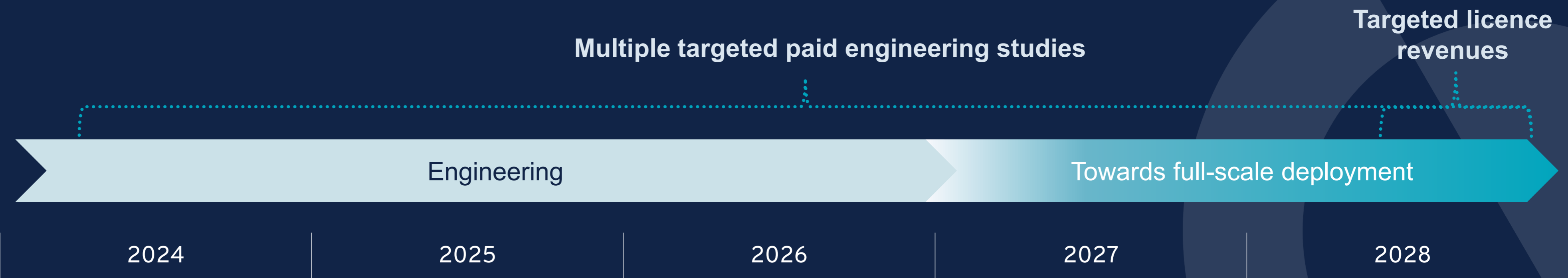
### FY24 achievements

- Heidelberg Materials & Leilac committed to explore the development of a full-scale commercial installation<sup>2</sup>
- Progressed multiple projects in the pipeline
- Progressed technology development & engineering work for full-scale designs

### Targeted next steps

- Continue to progress commercial partnerships for full-scale applications of the Leilac technology
- Pursue funding support in target markets
- Continue to progress technology development & engineering work for full-scale designs

### Indicative timeline



FY24 Results  
27 August 2024

1. GCCA 2050 Net Zero Global Industry Roadmap  
2. ASX Announcement. Calix announces Leilac and Heidelberg Materials JV for L-2. 11 Jun 2024

\*Project timelines are indicative only. Please refer to ASX announcements for latest project timelines





# Mid-stream demonstration plant with Pilbara Minerals UJV



Project	Partner	Funding support	Industry	Market size
PLS UJV Mid-Stream	Pilbara Minerals	Australian Government Department of Industry, Science and Resources	Lithium	Royalty % of US\$7Bpa <sup>1</sup>

## Objectives

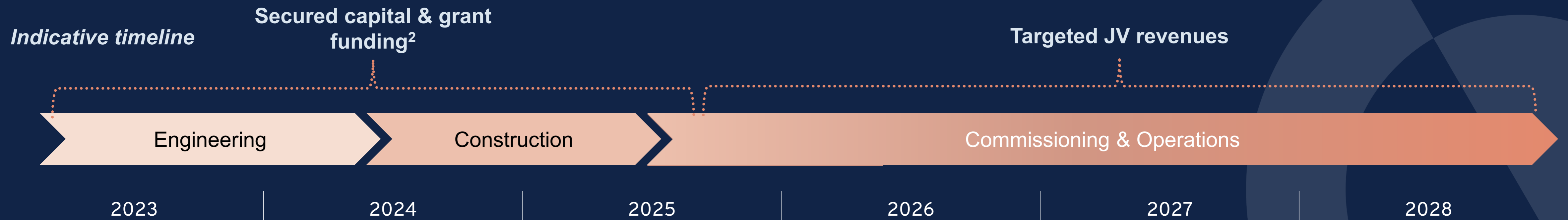
- Demonstrate lower CAPEX & OPEX for mineral processing with electric calcination
- Create a concentrated & low-carbon lithium product at the mine site
- Demonstrate the ability to simplify supply chains and unlock logistically challenging ore deposits

## FY24 achievements

- Project remains on time & budget<sup>3</sup>
- Construction commenced – bulk earthworks complete & preferred contractors selected
- Off-site fabrication of key equipment well progressed

## Targeted next steps

- Commissioning due to commence in the March Quarter 2025
- First lithium salt production targeted for the June Quarter 2025





Project	Partner	Funding support	Industry	Market size
ZESTY Green Iron Demo	 HILTCRC Heavy Industry Low-carbon Transition	 Australian Government Australian Renewable Energy Agency 	Iron & Steel	Royalty % of US\$640Bpa <sup>1</sup>

### Objectives

- Develop industry leading H<sub>2</sub>-DRI technology
- Demonstrate green iron production from Australian ores & fines
- Minimise hydrogen use & green iron costs
- Enable multiple decarbonisation pathways for iron & steel

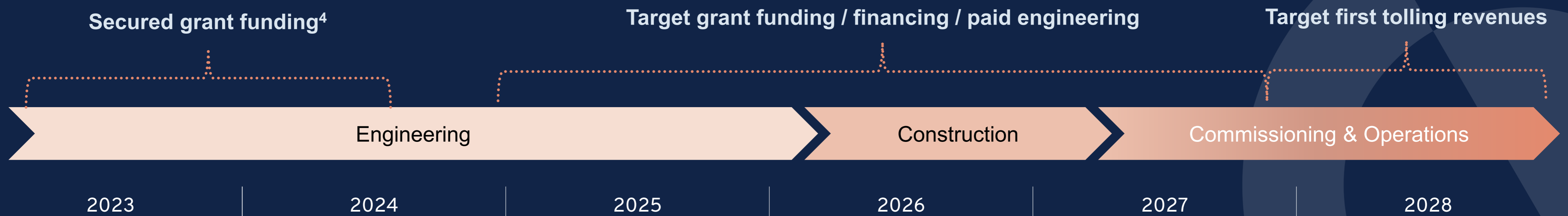
### FY24 achievements

- ZESTY proven at pilot scale, with metallisation rates up to 98% from Australian hematite/goethite ores<sup>2</sup>
- First green iron briquettes produced
- FEED Study completed<sup>2</sup>
- Prospective techno-economic findings<sup>2</sup>
- Progress towards FID<sup>3</sup>



### Targeted next steps

- Finalise commercial & financing contracts for ZESTY Demo plant
- Reach FID
- Continue to test & develop the technology

### Indicative timeline





Product	Partners	Funding support	Industries	Market size	
Magnesium Hydroxide Liquid			N/A	Water, Agriculture, Bio	Multi US\$Bpa <sup>1</sup>

### Objectives

- Grow sales of MHL products for sustainable water & wastewater treatment
- Develop crop protection products using Calix’s safe & sustainable bioactive materials
- Develop non-toxic marine coatings solutions
- Develop non-lethal control of pathogens to help prevent antimicrobial resistance

### FY24 achievements

- \$21.0m revenue (↑14%)
- \$7.0m gross profit (↑16%)
- Opened 2 new hydration facilities, increasing U.S. production capacity by up to 50%
- Excellent results for BOOSTER-Mag in the control of fungal disease in olive trees in Greece
- CRC SAAFE study confirmed control of drug-resistant animal & human bacteria
- Long-term testing of marine coatings continued successfully
- New Patent filed for magnesium metal process

### Targeted next steps

- Accelerating revenue growth in Calix’s Water business
- Completing the pre-FEED study for a magnesium metal plant
- Continuing to develop and commercialise Calix’s platform technology for applications in agriculture, marine coatings & biotech

Growing direct sales

2023

2024

2025

2026

2027

2028



# Sustainability | FY24 Key Achievements



## AMBITION

## FY24 KEY ACHIEVEMENT

### Minimise impacts on the environment

#### Decarbonise operations

Reduce emissions in line with a 1.5-degree pathway

Completed a more robust and accurate greenhouse gas emissions footprint, including detailed Scope 3

#### Address resource consumption

Addressing the sustainability of the materials and resources we use in our business

Distributed 38 Intermediate Bulk Containers (IBCs) for reuse and trialed cardboard IBCs for recycling

### Protect and invest in people

#### Increase diverse representation

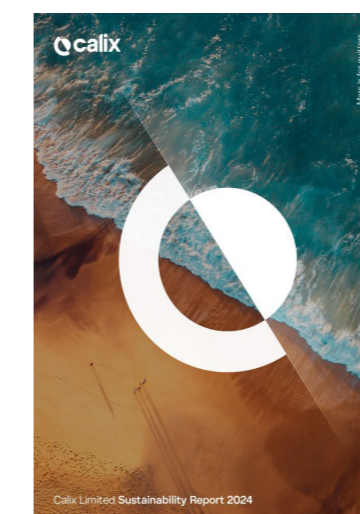
Achieve gender balance of 40:40 at all levels of the organisation by 2030

Launched our first Diversity, Equality and Inclusion (DE&I) series

#### Ensure zero harm

Realise zero harm through a safe workplace

Enhanced company-wide Health & Safety management system to improve usability & effectiveness





# FY25 SUMMARY & OUTLOOK





# FY25 KPI Dashboard Targets

Key priorities – Initiatives driving revenue growth

## KPI Dashboard Targets for FY25

### Corporate 10%

- Corporate Affairs, Sustainability, People & Culture KPIs

**GATEWAY**  
All High Level SHESQ action items completed on time



### Carbon Capture

30%

- Leilac-2 – Ennigerloh – site works commenced
- Pipeline – at least 3 x Scoping / BOD complete leading to contracted pre-FEED studies
- Heirloom – Project DOS construction commenced
- Pre-FEED complete for green methanol “HyGATE” project



### Sustainable Processing

30%

#### Spodumene

- PLS UJV Project commissioned
- At least 1x 3<sup>rd</sup> party contracted ore study

#### Iron & Steel

- FID – Demo Plant leading to Detailed Engineering

#### Alumina

- 1 x FEED study commenced with 3<sup>rd</sup> party for Demo Plant



### Magnesia

30%

#### Water

- Continued revenue growth US, Asia

#### Mg Metal

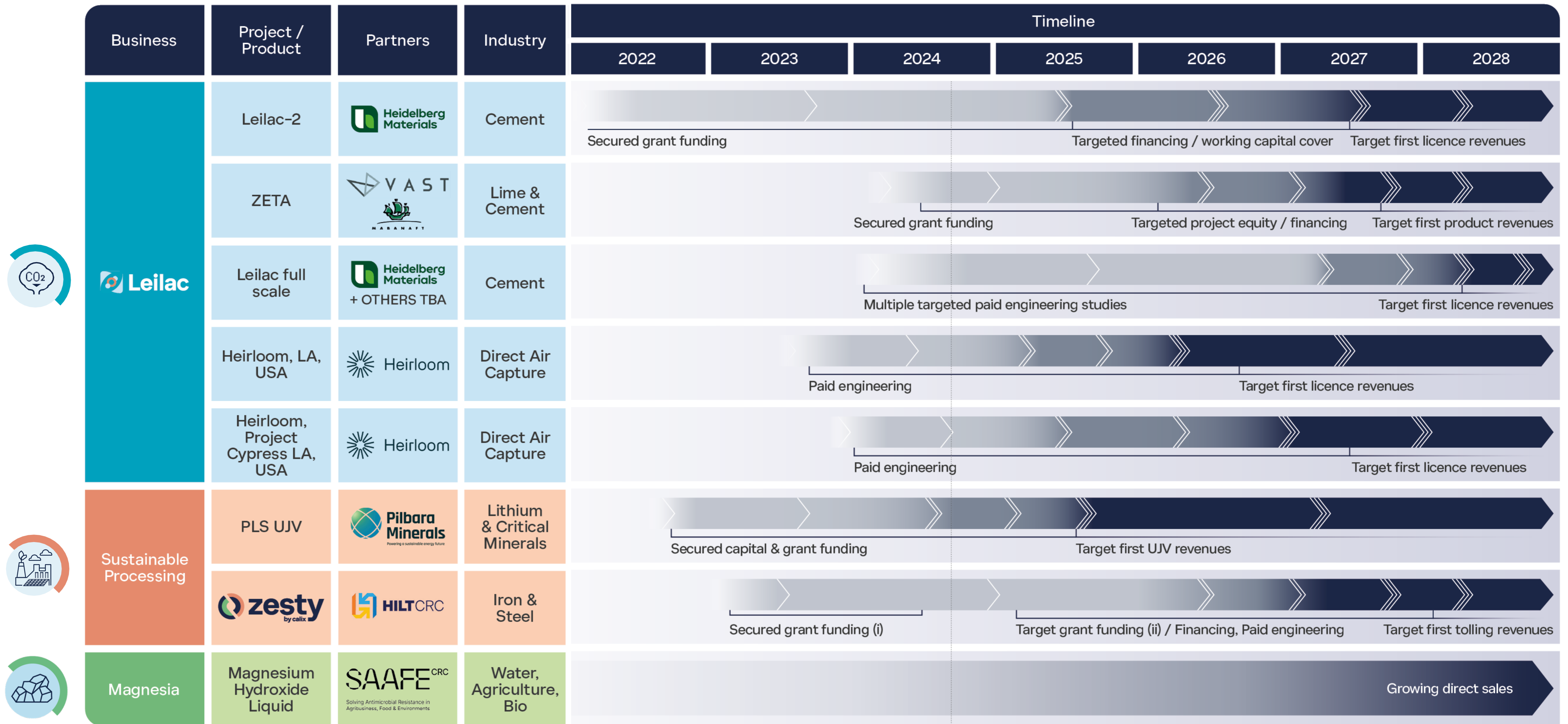
- Pre-FEED completed for Mg metal plant

#### Specialities

- Continued commercialisation of Agriculture, Marine Coatings & Biotech applications



# Indicative project & revenue timeline



Engineering
 Construction
 Commissioning & Operations

\* Project timelines are indicative only. Please refer to ASX releases for latest project timelines



# Summary and FY25 Outlook

## Growth focused strategy

- Demand for Calix's technology continues to grow, driven by government policy & the need for cost-effective & low-carbon mineral processing solutions
- Industry demand is being translated into new revenues through paid engineering & customer material testing
- Core focus is on progressing priority projects to commercially demonstrate core technology in cement & lime, iron & steel, lithium & Direct Air Capture industries
- Magnesia business is targeting continued growth in revenue & margins with the expanded production platform
- Growing & diversified revenues, coupled with secured grant funding & a strong balance sheet, provide the cash support required to fund current operations & technology development
- Diligent cost management will continue to be focused on key project delivery
- Capital management & funding strategy continues to focus on opportunities to secure capital in the form of equity, debt or grants at the subsidiary & project level to fund projects & accelerate industry application



### Calix Limited FY24 Reports



Annual Report  
2024



Sustainability  
Report 2024



Corporate Governance  
Statement 2024



# Board of Directors



Board further strengthened with appointments of Dr Sarah Ryan and Peter Dixon  
Alison Deans to become Chair following Peter Turnbull's retirement on 30 Sept 2024



**Peter Turnbull, AM**  
Non-Executive Chair  
(Retiring 2024)

- Experienced Chair and Non-Executive Director
- Significant board and senior executive experience in the Australian and global resource, energy and technology sectors
- Non-Executive Director of Karoon Energy Ltd. (ASX: KAR), Chair of Canadian medtech Auxita Pty Ltd, and Immediate Past President of the Chartered Governance Institute (London).
- Member of People, Culture and Nomination Committee, and Member of Audit and Risk Management Committee



**Alison Deans**  
Non-Executive Director  
(Chair-Elect)

- Experienced Chair and Non-Executive Director
- Significant board and senior executive experience in technology-enabled growth companies.
- Chair of Cochlear Limited (ASX: COH), Non-Executive Director at Ramsay Health Care Limited (ASX: RHC), & Non-Executive Director at Deputy Group Pty Ltd & Fitness Passport Pty Ltd.
- Investment Committee member at Main Sequence Ventures
- Previously CEO at eBay Australia and New Zealand,
- MBA from the Stanford Graduate School of Business and a MA from Cambridge University.



**Helen Fisher**  
Non-Executive Director

- CEO and Managing Director of Bio Capital Impact Fund (BCIF)
- Chair of Victorian branch of AusBiotech
- Previously a partner of Deloitte for 11 years
- Led Deloitte's life sciences practice in Australia for 5 years, specialising in the financial services sector, with significant M&A transactions and strategic tax advice to publicly listed and large multinational companies.
- Chair of Audit and Risk Management Committee and Sustainability Committee



**Dr Sarah Ryan**  
Non-Executive Director

- Non-executive director of Viva Energy Group Limited (ASX:VEA), Aurizon Holdings Limited (ASX:AZJ), Transurban Group (ASX:TCL) & the Future Battery Industries CRC
- Previously a non-executive director of Oz Minerals Limited (ASX:OZL) and Woodside Energy Group Limited (ASX:WDS)
- Strategic Advisory Panel Member of the ARC Centre of Excellence for Green Electrochemical Transformation of Carbon Dioxide
- Fellow of the Australian Academy of Technological Sciences and Engineering Chair of the Energy Forum
- BSc from the University of Melbourne, BSc from the University of Adelaide, PhD from the University of Adelaide
- Chair of Technology committee



**Peter Dixon**  
Non-Executive Director

- Over 25 years of diverse corporate experience across the legal, investment banking, strategy & funds management sectors
- Deep expertise in corporate strategy, investment management, corporate advisory & legal governance
- Chief Strategy Officer for HPX Group Pty Ltd
- Non-executive director at Johns Lyng Group Limited (ASX:JLG).
- Formerly at Mallesons Stephen Jacques (Sydney), Linklaters (London), MA Financial Group (ASX:MAF) & Macquarie Group Limited (ASX:MQG).
- Bachelor of Commerce (Finance) and a Bachelor of Laws from the University of New South Wales.
- Chair of People, Culture & Nomination Committee



**Dr Phil Hodgson**  
Managing Director & Chief Executive Officer

- 14 years of multidisciplinary experience with Shell, including as the General Manager and Alternate Director of its subsidiary Fuelink Pty Ltd, a \$700m revenue, 300-employee distribution and sales subsidiary.
- 7 years running a private consultancy providing strategy and M&A services across energy, food, infrastructure and water sectors.
- Joined Calix in 2013 as CEO, became a Director in 2014.
- Member of Calix's Technology Committee.



**Dr Mark Sceats**  
Executive Director & Chief Scientist

- Co-founder of Calix
- Physical chemist with numerous academic roles, fellowships & recognitions
- CEO of the Australian Photonics CRC for 14 years
- Fellow of the Australian Academy of Technological Sciences and Engineering (ATSE)
- Author of more than 165 academic papers in physical chemistry and inventor of 55 patented inventions
- Member of Calix's Technology Committee



# Calix Limited FY24 Results

27 August 2024



**Thank you**

## Acknowledgement of country

Calix acknowledges the First Nations people and traditional custodians of the lands upon which we live and work, and recognise their deep, ongoing connection to the land, waters and community. We pay respect to their Elders and leaders, past, present and emerging, and extend that respect to all First Nations people.

## Social inclusion statement

Calix embraces diversity and inclusion. It is one of our core values. We promote an inclusive and safe space for all and proudly welcome and support people of any race, ability, gender and identity.

## Sustainability statement

At Calix, sustainability means meeting our own needs without compromising the ability of future generations to meet their own needs. It is deeply embedded in our purpose: solving global challenges. Because Mars is for quitters.



# Glossary





# Glossary

Term	Meaning
Aluminium (Al)	Chemical element with the symbol Al
Antimicrobial	Antimicrobial products kill or slow the spread of microorganisms, including bacteria, viruses and fungi.
AMR	Antimicrobial resistance – the development of resistance in bacteria, viruses, fungi and parasites to antimicrobials
ARENA	The Australian Renewable Energy Agency
ASX	The Australian Securities Exchange
APVMA	Australian Pesticides and Veterinary Medicines Authority
ASRS	Australian Sustainability Reporting Standards
BATMn	Calix’s core kiln technology – electrified – for battery and catalyst materials production and other applications testing
BOD	Basis of Design
BOS	Basic Oxygen Steelmaking
CAGR	Compound Average Growth Rate (%)
Calcium (Ca)	Chemical element with the symbol Ca
Carbonation	The capture of carbon dioxide by contacting with lime (calcium oxide), to form limestone (calcium carbonate)
Cathode	The positive electrode of a battery
CBAM	Carbon Border Adjustment Mechanism
CBP	Community Benefits Plan
CCS	Carbon Capture and Storage
CCU	Carbon Capture and Use
CCUS	Carbon Capture, Utilisation and/or Storage
CEA StAR	Centre for Environmental and Agricultural Solutions to Antimicrobial Resistance
CO <sub>2</sub>	Carbon Dioxide
Copper (Cu)	Chemical element with the symbol Cu



# Glossary

Term	Meaning
CRC	Cooperative Research Centre – Australian Government supported industry-led collaborative research centres
CRC SAAFE	Cooperative Research Centre Solving Antimicrobial Resistance in Agribusiness, Food, and Environments
DAC	Direct Air Capture – the extraction of carbon dioxide directly from the atmosphere
DE&I	Diversity, Equality and Inclusion
EAF	Electric arc furnace – a furnace that heats material by means of an electric arc between two electrodes
EAP	Employee Assistance Program
EBITDA	Earnings Before Interest, Tax, Depreciation and Amortisation
EIS	Employee Incentive Scheme
ESF	Electric Smelting Furnace – Used to convert Direct Reduced Iron (DRI) to iron suitable for a Basic Oxygen Steelmaking (BOS) process.
ESG	Environment, Social and Governance considerations
EU	European Union
ETS	Emissions Trading Scheme
FEED	Front-End Engineering Design
FID	Final Investment Decision
Fines	Small particles, which are usually very difficult to handle in mineral processing and are often discarded as waste
FY	Financial Year
GHG	Greenhouse gas, often measured in tonnes of CO <sub>2</sub> equivalent (tCO <sub>2</sub> e)
Green Hydrogen	Hydrogen that is produced from an electrolyser using renewable energy
Goethite	A mineral that is an ore of iron
HBI	Hot Briquetted Iron – “bricks” of relatively high purity iron ready for steel-making
H <sub>2</sub> -DRI	The process of directly reducing iron ore to metallic iron with hydrogen as the reductant



# Glossary

Term	Meaning
Hematite	A mineral that is an ore of iron
HILT CRC	Heavy Industry Low-carbon Transition Cooperative Research Centre
Hydrometallurgy	A metal recovery method used to obtain metals from ores and waste materials
HyGATE	German-Australian Hydrogen Innovation and Technology Incubator
IBCs	Intermediate Bulk Containers
IFRS	International Financial Reporting Standards
Iron (Fe)	The chemical element, represented by “Fe” on the periodic table
Iron Ore	Iron oxide mixed with various other minerals, as mined and “pre-processed” (purified) as best as possible
JV	Joint venture
LCA	Lifecycle Assessment or Lifecycle Analysis, is a methodology for assessing environmental impacts associated with all the stages of a product or process
Leilac	Calix’s core calciner technology for Low Emissions Intensity Lime and Cement production with CO <sub>2</sub> capture of process emissions
LFP	Lithium Iron Phosphate – a battery cathode material
Lithium (Li)	Chemical element with the symbol Li
Lithium-phosphate / Lithium Salt / “Mid-Stream” Lithium	A form of lithium that is high in lithium content, to be shipped and utilised by battery producers
Lithium ion	The ionic form of lithium (Li+) – a positively charged atom of lithium
Manganese Carbonate (MnCO <sub>3</sub> )	Form of manganese used mainly in agriculture as a fertiliser supplement
Magnesium (Mg)	Chemical element with the symbol Mg
Manganese (Mn)	Chemical element with the symbol Mn
Magnetite	A mineral that is an ore of iron
Metallurgical Coal	Very high carbon coal
MgO	Magnesium Oxide





# Glossary

Term	Meaning
MHL	Magnesium Hydroxide Liquid
MOU	Memorandum of Understanding
Nanoporous	A material with a regular, porous structure, with a pore size generally less than 100 nanometres.
Pelletisation	The formation of pellets from finer materials to aid in handling
PLS	Pilbara Minerals, an Australian lithium mining company
Potassium (K)	Chemical element with the symbol K
Process emissions	Process emissions are inherent to the chemical reaction and are released directly and unavoidably from the chemical processing of raw material.
SDGs	The UN's Sustainable Development Goals designed to serve as a "shared blueprint for peace and prosperity for people and the planet, now and into the future."
Siderite	A mineral that is an ore of iron
Spodumene	A high lithium-containing ore, and the source of the majority of the world's lithium supply
$\alpha$ -Spodumene	A tight Li-crystal formation, from which extraction of Li is difficult
$\beta$ -Spodumene	A loose Li-crystal formation, from which extraction of Li is much easier than the alpha-form
Reduce / Reduction	The process by which oxygen is removed
Reductant	A material that, through its chemical properties, carries out reduction
RDF	Refuse-derived fuel – a fuel produced from various types of waste
Sponge Iron	Iron Ore that has been reduced (had the oxygen removed) to form metallic iron
Steel	Mainly iron, with some carbon and other trace metals such as nickel, manganese etc depending upon the grade of steel being made
TAM	Total Addressable Market
Tpa	Tonnes per annum
TRL	Technology Readiness Level, as measured on the NASA scale
UJV	Unincorporated Joint Venture
UNGC	The United Nations Global Compact, the world's largest corporate sustainability initiative
Wh / kWh	Watt-hours / kilowatt-hours – a measure of energy
ZEAL	Calix's Zero Emissions ALumina technology
ZESTY	Calix's Zero Emissions Steel TechnologY
ZETA	Calix's 'Zero Emissions Technology Made in Australia' CCU project for zero emissions lime and cement in South Australia





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