



ALEXIUM

**QUARTERLY ACTIVITIES REPORT
FOR THE PERIOD ENDED**

30 June 2024

Q4 FY2024 Update Contents:

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Introduction by CEO, Billy Blackburn

Throughout Q4 FY24, Alexium continued its efforts to grow sales outside of phase change materials (PCM) in the North American bedding market. During the period, there was significant customer interest in the Company's thermal regulation and dehumidification technologies globally, and several successful customer trials of Alexium's flame retardant (FR) products were completed. Our new sales professionals are coming up to speed quickly and have been well received by existing and new customers. This market momentum is in line with our strategy to *Grow and Diversify Revenue*.

Increased market interest for new and safer flame resistant (FR) materials in bedding is being driven by regulation banning the use of fiber glass, PFAS and other halogenated materials in mattresses and mattress foundations. As a result of these bans, the Company has initiated several new customer projects to integrate the Company's FR technologies in existing product lines and new product launches. For example:

- AlexiFlam® is under review for low-cost work wear fabric
- AlexiGuard® is under review for a lower-cost, high-volume mattress and foundation line
- AlexiShield is a new product and is under review for a high-end FR sock in a memory foam mattress.

The Company is utilising its broad-spectrum FR product suite in many projects due to the versatility in applications on many substrates, such as FR Rayon, standard Rayon, Cotton and Cotton/Poly/Rayon blends. Furthermore, Alexium introduced a new FR technology in Q3 that is not only free of the recently banned materials but is also free of organophosphorus, a class of chemicals receiving increasing scrutiny at the State level in the United States.

FY24 Highlights

Throughout FY24 our overall objective was to diversify our revenue base, supported by the following objectives:

- **Team:** Build out direct sales team, add direct marketing expertise and bolster product development.

Status:

- ✓ Onboarded two new sales executives.
- ✓ Retained direct marketing expert to assist with marketing campaigns.
- ✓ Retained a PCM industry expert and added a Product Manager role.
- ✓ Added an agent to seek new business opportunities in the military sector.
- ✓ Added an agent to develop thermal regulation and FR opportunities in Europe.

➤ **Culture:** Become more sales and marketing centric.

Status:

- ✓ Alexium's staff is highly motivated to commercialise and add significant sales from all the company's technologies.
- ✓ The team has worked diligently to bring the new sales team members up to speed quickly so they can begin contributing as soon as possible.
- ✓ The AJX team has bought in to this belief: *"We are ALL in sales, because we ALL serve the customer"*.

➤ **Growth:** Diversified product and business development efforts.

Status:

- ✓ Transitioning Core/Adjacent/Breakthrough focused priorities from 70:20:10 → 40:20:40.
- ✓ Maintained the primary focus on short-term gains in our core market (bedding), while executing a disciplined plan for new developments in adjacent markets (non-bedding).
- ✓ Achieve year-on-year revenue growth in core bedding market with core product offerings (AlexiCool®, BioCool®, DelCool™ and Eclipsys® products). Look to add new sales from the Alexium FR product suite (AlexiGuard® and AlexiShield).
- ✓ Progressed FR NyCo for military apparel.
- ✓ Commercialised Eclipsys® fabric for tactical gear.
- X Commercialise PCM, Eclipsys® fabric, and FR into new markets (e.g. shoes, cold chain, workwear). Management temporarily paused these efforts in Q4 to redirect resources to near-term growth opportunities.

➤ **Operations:** Secure the Company's supply chain to ensure resiliency.

Status:

- ✓ Added a textile engineer to lead textile supplier qualifications.
- ✓ Added key raw material backup sources further derisking the supply chain and gaining cost improvements in key raw materials.
- ✓ Added new toll manufacturers for FR products, leading to improved quality and significant cost reductions.

➤ **Financial:** Cash and commercial discipline. Cashflow positive.

Status:

- ✓ Developed a pipeline with ample qualified opportunities to deliver short-term results.
- ✓ Added new sales professionals to close the pipeline opportunities.

➤ **Funding:** Adequate funding in place to execute the business plan.

Status:

- ✓ Judicious use of the recapitalisation funds to add key personnel to expedite short-term revenue growth.

The Company remains focused on progressing these initiatives and executing our *Grow and Diversify* strategy. We have assembled a team that can carry the Company forward for many successful years. Positive results will come from this team and its focused approach.

Product Strategy Highlights:

In FY24 we made significant progress against our product diversification strategy:

Flame Retardant (FR) Products

• ***FR NyCo Treatment for Military Fabrics***

- Alexium continues working with supply chain partners and decision makers within the US military to leverage our positive ***Pyroman*** burn tests at NC State University with a general objective to start fabric supply for a large military uniform placement in FY26. Alexium is working with its supply chain partners to implement the improved aesthetics of the FR NyCo treatment which will then progress to an expanded round of testing.

• ***AlexiGuard® and AlexiShield: FR treatment for Mattress Barrier Fabrics***

- In 2H FHY24, the Company has been working with several mattress market brands and suppliers to help them meet the mattress flammability test 16 CFR Part 1633. As regulatory changes continue to minimise the use of a wide range of flame retardants, the need for non-ecotoxic options is increasing. To this end, Alexium has developed its AlexiGuard® and AlexiShield product lines to bolster the flame resistance of mattress components. This technology leverages IP developed during our FR NyCo effort to enhance the burn resistance of bedding products.
- Product development efforts are underway with multiple supply chain partners in the mattress market to integrate these FR treatments. Revenue for these products is forecasted for H1 FY25.

Cooling and Thermal Management Products

• ***PCM – Maintain and Grow North American share, Penetrate Global Markets***

- Sales have begun for new BioCool® product placements in OEM foam mattress with regular ongoing sales anticipated through FY25.
- New mattress product lines introduced at the Las Vegas bedding show in July 2024 integrated BioCool® products and has opened new revenue streams for Alexium.
- Alexium’s work with international retail channels including in Europe and Australasia has increased as the Alexium team supports product development efforts by these parties.

• ***DelCool™ fabric sales growth in bedding***

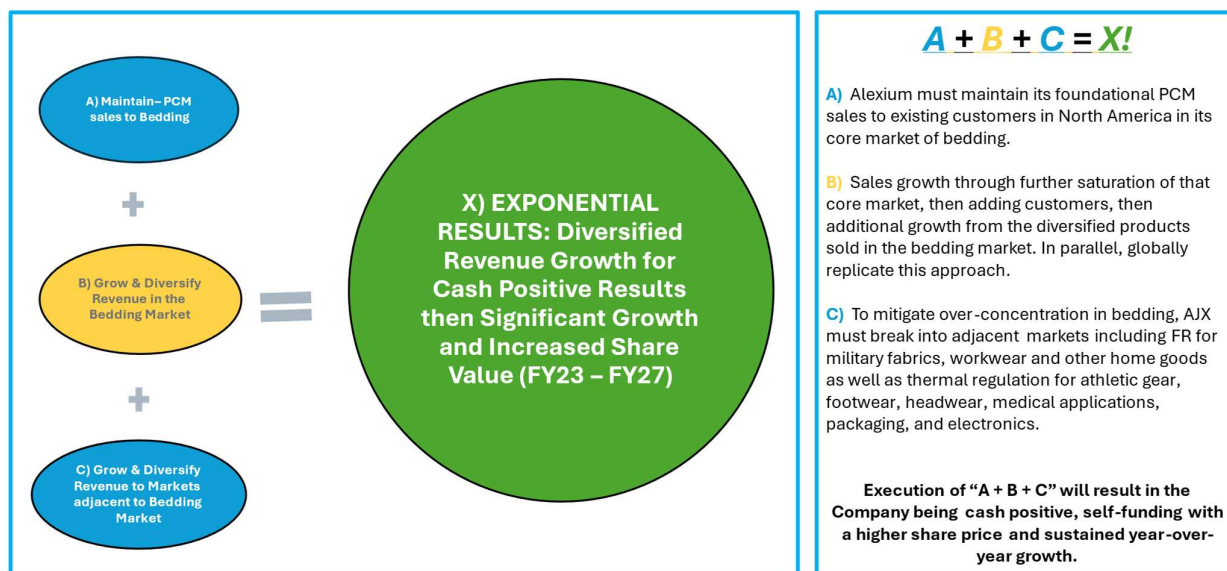
- Pillows: Additional placements at a large department store and a television shopping network are on track to begin in Q1 FY25.
- Mattress: Product development of a DelCool™- based luxury mattress is underway with a major bedding brand. This effort is proceeding very well and has the potential

- to be a significant revenue stream.
- Development of a high-tech pillow utilising Alexium's DelCool™ and mPCM technologies to be sold to brands under a private label arrangement. Note: this is a paradigm shift from selling the company's technologies through textile and foam producers who then sell the finished goods to the brands. Alexium will hire textile and foam producers to incorporate its technology, then sell the finished goods to the brand via private label licenses. This will lead to a significant increase in revenue per unit sold.
 - **New Eclipsys® fabric placements in bedding underway**
 - Commercial launch of an Eclipsys®-based mattress by a national brand is nearing completion with the scheduling of a product launch by a home shopping network in Q1 FY25.
 - For mattresses as well as top-of-bed applications, numerous US and international brands are evaluating the Eclipsys® fabric for additional product lines. These new opportunities have been driven by greater market awareness of the Eclipsys® technology and increased sales activity by the Alexium team.

FY25 – Looking ahead:

In FY25, Alexium embarks on the next phase of our *Grow and Diversify Strategy*.

FY25 - Strategic Plan - Growth drivers



The key pillars of the FY25 Strategic Plan are to:

- I. Maintain the Company's key accounts and sales in the North American bedding market
- II. Saturate the North American bedding market through diversification of product/customer mix
- III. New sales growth by breaking new accounts abroad in the APAC, LATAM and EU bedding markets

- IV. Diversified revenue growth from new sales of the company's existing technologies into adjacent markets (Eclipsys®, DelCool™, AlexiFlam®, AlexiGuard® & AlexiShield)
- V. Rollout adapted mPCM strategy to the bedding market
- VI. Bed down and expand the business team

- **Diversification of products, customers and markets:** Alexium's business and product development pipeline is more robust than it has ever been. The addition of the new executives has already improved the quality of activity progressing the company's Pipeline opportunities towards closing.

In FY25 Alexium will support our sales efforts with targeted marketing campaigns to drive awareness of the Company's intellectual property globally. Additionally our new Product Manager will use prototypes to drive faster adoption of the Company's technology in components that command a higher revenue per unit sold. Finally, the new product development efforts led by our industry advisor will expediate the company's strategy to Grow and Diversify Revenue in adjacent markets.

- **Adapted mPCM strategy:** The company has made a change in its PCM sales approach, leveraging our unique position as a producer. Alexium is a microencapsulated phase change materials (mPCM) manufacturer that produces its products from scratch. Many of the Company's competitors are formulators that purchase mPCM from other producers. Alexium has shifted focus from only selling these products to bedding brands to also offering our mPCM products to the formulators and distributors. This strategy is expected to lead to new sales volumes with select strategic partners with already established relationships and positions in key bedding brands.
- **Expansion of the business team:** The Company laid out plans in Q2 FY24 to restructure the sales and marketing team, against which it began recruiting sales/business development professionals in Q3. Two new sales professionals joined the Alexium team in Q3/early Q4. The Company also set out to recruit a new marketing consultant as well as an industry advisor to lead efforts to diversify sales to non-bedding adjacent markets.

The industry advisor started in late January and is already making significant contributions. The Company's textile engineer has been repositioned to a market and customer-facing product development role and will drive the development of prototypes of components utilising AJX technologies for adoption in private label product opportunities. The military sales agent will work to demonstrate AJX's Eclipsys® cooling technology to military branches and large public institutions like the Border Patrol, the Federal Prisons System and large metropolitan police forces. The European agent will seek new customer adoptions of the Company's thermal regulation and FR product suites in the EU bedding and furniture markets.

Capital Raise and Refinancing

The Company entered into a capital raise and refinancing transaction ("Transaction"), following shareholder approval at the EGM on 4 Apr 2024. The capital raise provided \$3.0 million in additional funds before expenses. Of the total funds, \$1.3 million had been previously received via a Bridging loan by Colinton Capital Partners (CCP) in December 2023. The bridging loan was then

applied to CCP's commitments with respect to the equity raise once the Transaction was completed. In addition, the Company's A\$7.0 million convertible note and accrued interest thereon were retired in exchange for shares as part of the Transaction.

Q4 FY2024 Cash Flow Commentary

Alexium continues to apply a disciplined approach of prioritising short-term revenue opportunities while advancing secondary new business focus areas to ensure medium to long-term growth objectives are met. The Company has been applying the same level of discipline to managing expenses, timing of raw material purchases and the entire cash conversion cycle. This is evidenced by keeping the year-over-year cash used in operating activities relatively flat to last year even though cash receipts have decreased by \$.6 million due to lower sales. In addition, the Company has been successful in negotiating cost reductions in several raw material products used in both current and future sales opportunities. This combined disciplined approach positions the business to meet the near-term objective of cash-positive operating results as we shift focus to longer-term significant revenue gains to meaningfully increase the profitability and, ultimately, the value of the Company.

Cash receipts for the period were US\$1.4 million with revenue of US\$1.5 million. Cash receipts are in line with the previous quarter.

Sales for the quarter at US\$1.5 million were down US\$0.1 million versus the prior quarter, but sales for the second half are up 13% versus the first half. Overall, US mattress market conditions remained soft amid inflationary concerns, high interest rates and geopolitical concerns. However, the Company has seen some volume improvement for specific customers. In addition, there has been an increase in the sales of products adjacent to the mattress industry (i.e. Top of Bed and DelCool™).

Operating activity outflows (refer to Appendix 4C Item 1) primarily consist of raw material purchases, manufacturing costs, staffing costs, and corporate/administrative costs. The Company experienced a quarter-over-quarter decrease in raw material purchases and production-related costs of US\$0.1 million due to the timing of raw material purchases and lower sales. Q4 staff costs were exactly in line with Q3. Other cash outflows are in line with typical quarterly expenses, with the exception of interest expense payments which were higher than normal due to the payment of the accumulated interest on the Bridging Loan as part of the Transaction (see Capital Raise and Refinancing section above). Total aggregate payments to related parties for the quarter equal US\$238 thousand which include payments to non-executive directors and compensation for executive directors, William "Billy" Blackburn, CEO and Robert "Bob" Brookins, CTO.

Cash flows from financing activities for the quarter include the normal activity on the Line of Credit. The outstanding balance on the Line of Credit at the end of the period was US\$383 thousand on the total eligible borrowing base of US\$792 thousand leaving US\$409 thousand available for use. This line availability plus the cash on hand of US\$2,053 thousand gives the Company total available funding of US\$2,461 thousand.

Appendix 4C

Quarterly cash flow report for entities subject to Listing Rule 4.7B

Name of Entity	
ALEXIUM INTERNATIONAL GROUP LIMITED	
ABN	Quarter ended
91 064 820 408	30-June-2024

Consolidated statement of cash flows	Current quarter \$US'000	Year to date (12 months) \$US'000
1. Cash flows from operating activities		
1.1 Receipts from customers	1,394	6,046
1.2 Payments for		
(a) research and development	(106)	(461)
(b) product manufacturing and operating costs	(765)	(3,094)
(c) advertising and marketing		(3)
(d) leased assets	(20)	(83)
(e) staff costs	(523)	(2,260)
(f) administration and corporate costs	(312)	(1,294)
1.3 Dividends received (see note 3)		
1.4 Interest received	12	27
1.5 Interest and other costs of finance paid	(80)	(133)
1.6 Income taxes paid		
1.7 Government grants and tax incentives		
1.8 Other (GST received)	17	62
1.9 Net cash from / (used in) operating activities	(383)	(1,193)

2. Cash flows from investing activities		
2.1 Payments to acquire or for:		
(a) entities		
(b) businesses		
(c) property, plant and equipment		
(d) investments		
(e) intellectual property	(40)	(156)
(f) other non-current assets		

Appendix 4C
Quarterly report for entities subject to Listing Rule 4.7B

Consolidated statement of cash flows		Current quarter \$US'000	Year to date (12 months) \$US'000
2.2	Proceeds from disposal of:		
	(a) entities		
	(b) businesses		
	(c) property, plant and equipment		
	(d) investments		
	(e) intellectual property		
	(f) other non-current assets		
2.3	Cash flows from loans to other entities		
2.4	Dividends received (see note 3)		
2.5	Other (provide details if material)		
2.6	Net cash from / (used in) investing activities	(40)	(156)

3.	Cash flows from financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)		
3.2	Proceeds from issue of convertible debt securities	2,984	2,984
3.3	Proceeds from exercise of options		
3.4	Transaction costs related to issues of equity securities or convertible debt securities	(171)	(171)
3.5	Proceeds from borrowings	1,537	7,376
3.6	Repayment of borrowings	(2,610)	(7,278)
3.7	Transaction costs related to loans and borrowings		
3.8	Dividends paid		
3.9	Other (provide details if material)		
3.10	Net cash from / (used in) financing activities	1,740	2,911

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	723	513
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(383)	(1,193)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(40)	(156)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	1,740	2,911
4.5	Effect of movement in exchange rates on cash held	13	(22)
4.6	Cash and cash equivalents at end of quarter	2,053	2,053

Quarterly report for entities subject to Listing Rule 4.7B

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$US'000	Previous quarter \$US'000
5.1	Bank balances	2,053	723
5.2	Call deposits		
5.3	Bank overdrafts		
5.4	Other (provide details)		
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	2,053	723

6.	Payments to related entities of the entity and their associates	Current quarter \$US'000
6.1	Aggregate number of payments to related parties and their associates included in item 1	238
6.2	Aggregate number of payments to related parties and their associates included in item 2	
	6.1 Total payment of \$238K for non-Executive Directors fees and payroll for Mr. Blackburn, Managing Director and Dr Brookins, Director	

7.	Financing facilities	Total facility amounts at quarter end \$US'000	Amount drawn at quarter end \$US'000
7.1	Loan facilities	-	-
7.2	Credit standby arrangements	792	383
7.3	Other (please specify) - Bridging Loan	-	-
7.4	Total Financing facilities	792	383
7.5	Unused financing facilities available at quarter end		409
7.6	Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.		
	7.1 - Colinton Capital Partners 3-year 10% A\$7.0M secured convertible note was converted to shares in the capital raise transaction on 8 May 2024		
	7.2 - Alterna CS - Asset based loan secured with working capital accounts with \$383K drawn on a total availability of \$792K as of the reporting date. Interest is variable based on the Wall Street Journal published Prime Rate + 5% spread for a current rate of 13.5%. Loan ends on 05-Apr-25 but is auto-renewable for a 1-year period		
	7.3 - Colinton Capital Partners - Unsecured bridging loan of A\$2.0M (US\$1.4M) was offset in shares on 6 May 2024 in the capital raise transaction		

8.	Estimated cash available for future operating activities	\$US'000
8.1	Net cash from / (used in) operating activities (item 1.9)	(383)
8.2	Cash and cash equivalents at quarter end (item 4.6)	2,053
8.3	Unused finance facilities available at quarter end (item 7.5)	409
8.4	Total available funding (item 8.2 + item 8.3)	2,461
8.5	Estimated quarters of funding available (item 8.4 divided by item 8.1)	6.4
	<i>Note: if the entity has reported positive net operating cash flows in item 1.9, answer item 8.5 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.5.</i>	
8.6	If item 8.5 is less than 2 quarters, please provide answers to the following questions.	
8.6.1	Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?	
	Answer: N/A	
8.6.2	Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?	
	Answer: N/A	
8.6.3	Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?	
	Answer: N/A	
	<i>Note: where item 8.5 is less than 2 quarters, all of questions 8.6.1, 8.6.2 and 8.6.3 above must be answered.</i>	

Compliance statement

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Date: 31 July 2024

Authorised by: The Board of Directors

Notes

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, AASB 107: Statement of Cash Flows apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standard applies to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee – e.g. Audit and Risk Committee]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's Corporate Governance Principles and Recommendations, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.