



ALEXIUM

**QUARTERLY ACTIVITIES REPORT
FOR THE PERIOD ENDED**

31 March 2024

Q3 FY2024 Update Contents:

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Introduction by CEO, Billy Blackburn

Q3 FY24 marked the shift in Alexium's focused priorities to more business and product development activities in areas adjacent to the Core focus of thermal regulation in the North American bedding market. It was also a period of recruiting and onboarding more expertise and manpower in the sales team. Throughout Q3, the team balanced its activities between maintaining customers and progressing new opportunities for flame resistant technologies in the bedding market. Secondly, there were significant inroads made in developing new customers abroad in the Australasian region. Both of these activities are in line with Alexium's strategy to *Grow and Diversify Revenue*.

Over the last year, demand has increased for new and safer flame resistant (FR) materials in bedding. This demand was spurred by regulation banning the use of fiber glass in FR materials in mattresses and mattress foundations. The increased demand is also being driven by regulatory initiatives to remove hazardous chemistries from FR technologies. These regulatory developments have afforded the Company many new opportunities to solve the resulting problems of meeting the new regulatory requirements for its bedding customers with Alexium's new FR technologies. 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.

As previously reported, our overall objective in FY24 is to diversify our revenue base, supported by the following objectives, which are updated below:

- **Team:** Build out direct sales and business development. Status: Two new sales executives joined the team in late Q3 and early Q4 to increase business development activities globally across all AJX product markets. AJX has retained a former senior executive of a competitive thermal management business to consult and lead product development initiatives for adjacent markets (medical, packaging and electronics).
- **Culture:** Become more sales and marketing centric. Status: The team at Alexium is highly motivated to drive the full commercialisation of all existing company technologies. They are excited to have the new team members on board so they can support our *Grow and Diversify Revenue* strategy. All team members at AJX know this phrase well: "*We are ALL in sales, because we ALL serve the customer*".
- **Diversify and Grow: Status:** All five initiatives below are on track and progressing nicely.
 - Shift Core/Adjacent/Breakthrough focus priorities from 70:20:10 → 40:20:40.

- Achieve year-on-year revenue growth in core bedding market with core product offerings (Alexicool®, BioCool®, DelCool™ and Eclipsys® products).
- Progress FR Nyco for military.
- Commercialise Eclipsys® fabric for tactical gear.
- Commercialise PCM, Eclipsys® fabric, and FR into new markets (e.g. shoes, cold chain, workwear).
- **Operations:** Secure the Company's supply chain to ensure resiliency. Status: Over the last year, Alexium has added a textile engineer to lead the qualification of additional suppliers in textile finishing to increase quality and reduce costs. Alexium has added backup sources of critical raw material ingredients to bolster our supply chain. In addition, we have identified new contract manufacturers for AJX FR technologies that have led to significant cost reductions.
- **Financial:** Cash and commercial discipline. Cashflow positive. Status: Alexium's business development pipeline has enough qualified opportunities to deliver these results in the near term. With the addition of the new business professionals, revenue growth is imminent.
- **Funding:** Adequate funding in place to execute the business plan. Status: The recent shareholder vote held at the EGM approved the recapitalisation of AJX, thus affording the company adequate funding to meet its near-term objectives.

The Company continues to progress these initiatives and is dialed-in on executing our strategy. We are building a team that can carry the Company forward for many successful years.

Q3 Highlights and Focus Priorities

In Q3 FY24 we made significant progress against these FY24 objectives, including:

Achieving year-on-year revenue growth in our core focus areas:

- ***PCM – Maintain and Grow North American share, Penetrate Global Markets***
 - Three new BioCool® product placements in OEM foam mattress production with starts intended for Q4 FY24 and H1 FY25.
 - Two BioCool® product placements in Europe in H1 FY24 open new opportunities for volume growth abroad.
 - Alexicool® and BioCool® products under review by multiple mattress producers targeting lines sold in Australasia and Europe.
- ***DelCool™ fabric sales growth in bedding***
 - Fabric: Version 2, with enhanced aesthetics, continues to run well with the new textile partners secured in H1 FY24.
 - Pillows: Orders from the initial large department store placement were flat in Q3.
 - Pillows: Placements at an additional large department store and a television shopping network projected to commence in Q4 and Q1 FY25.
 - Mattress: Product development underway for inclusion in a luxury mattress launch by a major bedding brand. If this development proves successful, the target launch would be for FY26 and could result in a significant increase in Group revenues with a conservatively estimated annual opportunity of \$3 million - \$5 million in revenue.
 - DelCool™ sales growth underpins diversification of revenue within the Company's core market (bedding)

- ***New Eclipsys® fabric placements in bedding underway***

- National Brand targeting placements of an Eclipsys® fabric for mattresses to be sold via a home shopping network. A small order for initial launch has been received. The size of the total opportunity is unknown at this time due to the nature of their marketing approach. If it is successful in FY25 Q1, then we expect repeat orders and will be able to better estimate the total opportunity. However, a large “big box” discount retailer is watching the success of this launch as they may also be interested in purchasing this mattress if it is successful (it would be included in their “as seen on TV” marketing).
- National Brand targeting placements of an Eclipsys® fabric for pillows in a large “big box” discount retailer. If successful, the estimated size of the opportunity is \$0.5 million to \$1.4 million in additional revenue.
- Renewed interest from a Top 5 mattress brand to launch an Eclipsys®-based mattress in FY25.

All of the above developments further diversify Alexium technologies sold in the bedding market.

- ***Progressing FR Nyco for military and commercialising Eclipsys® fabric for tactical gear Flame Resistant (FR) Technologies:***

- Alexiflam® chemistry – FR NyCo: After passing the ***Pyroman*** burn test at NC State University, product development work has continued to enhance the aesthetics of the fabric targeting a large military uniform fabric supply opportunity starting in FY26. The initial aesthetic enhancements have been approved by the military’s textile lead, which led to a request for additional fabric yardage for testing at the US Army Combat Capabilities Development Command (“DEVCOM”) before the end of their fiscal budget year (30 September).
- Product development is collaborating with a leading international brand to perfect a FR NyCo application in mattresses designed to meet unique flame resistance criteria for the hospitality industry and public buildings. Fabric has been produced and supplied with test mattress burns to occur in early Q4. New FR chemistry finalized in late Q3. The new chemistry meets the increasingly stringent environmental regulations being levied on FR chemicals in the US at the state and federal level. The new formula is in active trials at one textile finisher of FR fabrics for mattresses, with a second trial commencing in early Q4. Both textile finishers are working with AJX to support development with a top-three worldwide bedding brand. If successful, this new technology would be incorporated into a significant percentage of this customer’s mattresses. If successful, this one opportunity could result in \$1.0 to \$1.6 million in additional revenue. Furthermore, initial success should lead to significant market penetration and revenue growth thereafter.

Commercialising PCM, Eclipsys® fabric, and FR into new markets (e.g., shoes, cold chain, workwear):

- ***Eclipsys® fabric for footwear***

- Successful internal testing concluded on an athletic shoe application. Results were presented to a prospective industry-leading customer in Q3. Discussions have led to a redesign of the Eclipsys® placement in the shoe build to reduce the overall cost impact without sacrificing performance.

- Samples have been provided to an additional top-10 worldwide brand manufacturer for thermal testing in their performance laboratory. Initial results expected in Q4.
- ***Eclipsys® fabric and PCM for Cold Chain Packaging***
 - Product development is underway to extend the thermal regulation effectiveness of existing biomedical packaging. No change in Q3. Development work has been temporarily paused to allow the Company to get new team members up to speed and re-prioritize. This development project will recommence in H1 FY25.
- ***Alexiflam® products for workwear***
 - Alexium is working on improvements to the wash durability of Alexiflam® chemistry incorporated into Nylon/Cotton blended fabric to meet the rigors of industrial laundering to ready it for applications in the FR work wear market. These development efforts benefit from the continued work and learnings on the military apparel fabric. With the addition of the new sales professionals, business development efforts will ramp up in this market in early FY25.

In summary, Alexium technologies are proving to be competitive for use in a wide array of end products and market applications with both new and existing customers. With the expanded sales team, we will now increase development activities across all sectors mentioned here.

Expansion of Commercial Strategies

In Q3, the Company focused on two initiatives to further strengthen the commercial team and strategy:

SUPPLY AGREEMENTS WITH MAJOR CUSTOMERS: An initiative within the Company has been to enhance the predictable recurring nature of our revenue. We worked with multiple larger customers to move away from spot purchasing and specific program buying to long-term product supply agreements that define pricing, supply capabilities and Alexium's analytical support.

The first of these supply agreements with BekaertDeslee NV was announced in Q2. It has the terms for the supply of Alexicool® and BioCool® phase change material (PCM) products for bedding systems across North America with an initial term of 3 years and a provision for automatic renewal. It also paves the way for growth and collaboration on textiles finishing projects globally. BekaertDeslee NV is the world's leading specialist in the development and manufacturing of mattress textiles, mattress covers and on-trend sleep solutions with headquarters in Waregem, Belgium. BekaertDeslee NV employs 4000+ people in 27 business locations in 19 countries.

The second of these agreements was executed with Serta Simmons Bedding (SSB) in Q3. This Supply Agreement details the supply of thermal regulation technologies for applications in mattresses. It replaces multiple legacy Agreements, thus consolidating terms for ease of managing new projects and growth between the two companies. It contains pricing and details for tiered pricing based on annual volumes purchased. Serta Simmons Bedding, LLC (SSB) is one of the leading global sleep companies. With a 150-year heritage in delivering industry-leading sleep solutions and a mission to help people sleep better so they can live healthier lives, the company is headquartered in Doraville, GA, and owns top brands such as Serta®, which has five other independent licensees, Beautyrest®, Tuft & Needle® and Simmons®.

Lastly, the aforementioned regulatory changes have generated increased interest in the Company's flame-resistant (FR) technologies. This has led to the Company entering into a Memorandum of Understanding (MOU) with an industry-leading bedding brand to supply a cutting-edge FR material for incorporation into their mattresses. The two parties will be negotiating terms and working in good faith towards a Supply Agreement in the coming months.

EXPANSION OF THE BUSINESS TEAM: The Company laid out plans to restructure the sales and marketing team in Q2 FY24, then began recruiting sales/business development professionals in Q3. The Company identified and hired two new sales professionals who 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.

DIVERSIFICATION OF PRODUCTS, CUSTOMERS AND MARKETS: Alexium's business and product development pipeline is more robust than it has ever been. By bolstering our sales team with new, experienced professionals and assigning them to active pipeline projects as well as qualified prospects, we are confident that Alexium will deliver on the past 3 years of hard work developing and commercialising its significant intellectual property and product portfolio. Alexium will also embark on marketing campaigns to drive awareness of the Company's significant IP globally. Finally, the new product development efforts led by the industry advisor will expediate the company's strategy to *Grow and Diversify Revenue* in adjacent markets.

Capital Raise, Refinancing and Bridging Loan

In the previous quarter, the Company announced its intentions to enter into a capital raise and refinancing transaction ("Transaction"), pending shareholder approval (see the ASX announcement on 27 December 2023). The capital raise will provide a minimum equity of A\$4.0 million via a fully underwritten entitlement offer and placement. In addition, the Company's existing A\$7.0 million convertible note and accrued interest thereon would be retired in exchange for shares. Related to the Transaction, Colinton Capital Partners (CCP) provided a bridging loan of A\$2.0 million (US\$1.3 million) to the Company in December 2023 to allow it to continue to pursue a number of significant near-term opportunities while the Company sought the necessary shareholder approvals for the Transaction. This bridge loan carries an initial interest rate of 15% but the bridge loan principal will be applied to meet Colinton Capital Partners' commitments with respect to the equity raise.

Q3 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 in the YTD US\$0.5 million reduction year over year in cash used in operating activities. 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\$1.6 million. Cash receipts are in line with the previous quarter.

Sales for the quarter at US\$1.6 million were up US\$0.3 million versus the prior quarter and is the strongest quarter thus far this fiscal year. Overall, US mattress market conditions remained soft amid inflationary concerns, high interest rates and geopolitical concerns. However, the Company has seen some volume improvement at 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 1.2) primarily consist of raw material purchases, manufacturing costs, staffing costs, and corporate/administrative costs. The Company experienced a quarter-over-quarter increase in raw material purchases and production-related costs of US\$0.3 million due to the timing of raw material purchases and higher sales. Q3 staff costs were up US\$0.1 million versus Q2 largely due to the addition of new positions. Other cash outflows are in line with typical quarterly expenses. Total aggregate payments to related parties for the quarter equal US\$228 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 while YTD activity includes the proceeds from the bridging loan (A\$2.0 million) provided by CCP (see above discussion under the Capital Raise, Refinancing and Bridging Loan section).

The outstanding balance on the Line of Credit at the end of the period was US\$96 thousand on the total eligible borrowing base of US\$885 thousand leaving US\$789 thousand available for use. This line availability plus the cash on hand of US\$723 thousand gives the company total available funding of US\$1,512 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	31-March-2024

Consolidated statement of cash flows	Current quarter \$US'000	Year to date (9 months) \$US'000
1. Cash flows from operating activities		
1.1 Receipts from customers	1,395	4,652
1.2 Payments for		
(a) research and development	(134)	(354)
(b) product manufacturing and operating costs	(828)	(2,329)
(c) advertising and marketing		(3)
(d) leased assets	(20)	(63)
(e) staff costs	(524)	(1,737)
(f) administration and corporate costs	(322)	(981)
1.3 Dividends received (see note 3)		
1.4 Interest received	8	14
1.5 Interest and other costs of finance paid	(19)	(53)
1.6 Income taxes paid		
1.7 Government grants and tax incentives		
1.8 Other (GST received)	9	45
1.9 Net cash from / (used in) operating activities	(435)	(809)

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		(116)

(f) other non-current assets		
Consolidated statement of cash flows	Current quarter \$US'000	Year to date (9 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		(116)

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		
3.3 Proceeds from exercise of options		
3.4 Transaction costs related to issues of equity securities or convertible debt securities		
3.5 Proceeds from borrowings	1,255	5,838
3.6 Repayment of borrowings	(1,816)	(4,668)
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	(561)	1,170

4. Net increase / (decrease) in cash and cash equivalents for the period		
4.1 Cash and cash equivalents at beginning of period	1,756	513
4.2 Net cash from / (used in) operating activities (item 1.9 above)	(435)	(809)
4.3 Net cash from / (used in) investing activities (item 2.6 above)		(116)
4.4 Net cash from / (used in) financing activities (item 3.10 above)	(561)	1,170
4.5 Effect of movement in exchange rates on cash held	(37)	(35)
4.6 Cash and cash equivalents at end of quarter	723	723

Appendix 4C
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	723	1,756
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)	723	1,756

6.	Payments to related entities of the entity and their associates	Current quarter \$US'000
6.1	Aggregate amount of payments to related parties and their associates included in item 1	228
6.2	Aggregate amount of payments to related parties and their associates included in item 2	
	6.1 Total payment of \$228K for non-Executive Directors fees and payroll for Mr Blackburn, Managing Director and Dr Brookins, Director	

7.	Financing facilities	Total facility amount at quarter end \$US'000	Amount drawn at quarter end \$US'000
7.1	Loan facilities	5,317	5,317
7.2	Credit standby arrangements	885	96
7.3	Other (please specify) - Bridging Loan	1,357	1,357
7.4	Total Financing facilities	7,560	6,771
7.5	Unused financing facilities available at quarter end		789
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 maturing on 27-Dec-25 but will be converted to shares in the pending capital raise transaction approved by shareholders		
7.2	Alterna CS - Asset based loan secured with working capital accounts with \$96K drawn on a total availability of \$885K as of the reporting date. Interest is variable based on 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) due on 23-Jun-25 but will be offset in shares in the pending 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)	(435)
8.2	Cash and cash equivalents at quarter end (item 4.6)	723
8.3	Unused finance facilities available at quarter end (item 7.5)	789
8.4	Total available funding (item 8.2 + item 8.3)	1,512
8.5	Estimated quarters of funding available (item 8.4 divided by item 8.1)	3.5
	<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: 22 April 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 – eg 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.