



## Fastbrick Robotics September 2017 Quarterly Report

### Highlights

- Caterpillar Inc. (NYSE:CAT) MOU signed in July 2017
- Caterpillar Inc. USD\$2m Investment with further USD\$8m option
- Customer Discovery Strategy underway - MOU signed with Kingdom of Saudi Arabia
- Hadrian X Procurement Progressing
- 2<sup>nd</sup> Hadrian X prototype initiated
- Ramping up organisational build
- IP portfolio strengthened

**Tuesday 31 October 2017** - Australian robotic technology company **Fastbrick Robotics Limited (ASX:FBR)** ('Fastbrick' or 'the Company') is pleased to provide its quarterly update for the three months to the end of September 2017. The September quarter follows on from the previous quarter's achievements and culminated with Fastbrick executing a Memorandum of Understanding ("MOU") with Caterpillar Inc. (NYSE:CAT) and a MOU with the Kingdom of Saudi Arabia's Ministry of Housing.

### Hadrian X Procurement Update

During the quarter the Company progressed the procurement activity for the Hadrian X construction robot. Orders for medium lead-time items were placed, including the latest generation laser tracking system, servo drives, mechanical drive components, servo motors and hydraulic systems. Many of the bespoke machined components have already been manufactured and ready for assembly. Significant, meticulous and exhaustive 3D virtual testing and digital simulation has been undertaken to test the assembly, strength, systems, control programs and interrelated components. The control system is being developed with the help of multiple digital twins to simulate and test code before it will be used on the Hadrian X prototype. Significantly for Fastbrick, this process materially de-risks the assembly, build and physical world testing phases.

**Fastbrick's, Chief Technology Officer, Mark Pivac:** "this quarter we saw significant momentum and confidence in the Hadrian X prototype programme, that now means our committed engineering team who have worked passionately over a long period, can now move onto the next phase of the Hadrian X programme. As we move away from the 3D virtual testing and simulation test environment to the engineering floor, we will start to see progress as the procurement process gathers pace. Over the coming months and as we move into 2018, this will translate into the engineering team starting to assemble and test some of the key modules of the Hadrian X.

As part of our risk mitigation process, the board has agreed to adopt and apply the latest high technology best practice methods from the aeronautical and defence industries and has agreed to invest in a 2<sup>nd</sup> Hadrian X prototype. The 2<sup>nd</sup> Hadrian X will be assembled and tested in parallel with the current Hadrian X prototype and will allow the engineering team to significantly de-risk the assembly and test phases by applying the learnings from the assembly and de-bugging process between each Hadrian X as they progress to completion and ultimately to demonstration stage and the construction of the brick component of a house<sup>(i)</sup> within 3 days."





## Hadrian X Global Partner - Caterpillar Inc.

The Caterpillar MOU signed in July 2017, allows both companies to discuss and develop a potential framework for the joint collaboration of the Hadrian X development, manufacturing, sales, and servicing of Fastbrick's Hadrian X bricklaying construction robot.

As part of the MOU, Caterpillar invested USD\$2m at an issue price of AUD\$0.10 per share, which resulted in 26,466,000 fully paid ordinary shares being allotted by the Company to Caterpillar. In addition the MOU, granted Caterpillar an option to invest a further USD\$8 million at AUD\$0.20 per share. This option was subject to Fastbrick's shareholder approval, this was sought and received at a Fastbrick shareholder meeting held on 2 October 2017. The option expires on 30 June 2018.

Both companies are progressing a strategic alliance that intends to consider the most appropriate commercialisation pathway for the Hadrian X. The strategic alliance objectives will include the identification of early adopters in key global markets who will apply the Hadrian X disruptive technology and undertake pilot programmes.

## Hadrian X Customer Discovery Strategy – Kingdom of Saudi Arabia

Fastbrick signed the MOU with the Kingdom of Saudi Arabia ("Saudi Arabia") in August 2017. The MOU is the Company's first such agreement with a Government and positions Saudi Arabia as a potential global first adopter of Fastbrick's Hadrian X bricklaying construction robot.

The MOU contemplates the construction of 50,000 new home units (minimum) using Hadrian X construction robots, which translates into an equivalent machine requirement of 100 Hadrian X construction robots. Saudi Arabia has a new home building target of 1.5 million new homes which are to be completed by 2022, including the Innovative Construction Target.

## Organisational Build

During the quarter, Fastbrick continued to expand its team and organisation in line with the ramp-up of the deployment of resources as it progresses and moves into the Hadrian X procurement, assembly, test and building phases of the Hadrian X programme. This expansion dovetails into and follows on from Fastbrick's move to a manufacturing and test facility in High Wycombe, Western Australia.

As part of the organisational build, the Company will continue to add executives and human resources to ensure that the company manages and continues to de-risk its development programme and is able to successfully execute the Hadrian X prototype construction phase.

## Intellectual Property ("IP") Portfolio

Fastbrick has an integrated IP Aggregation Strategy to protect, manage and maximise the value of Fastbrick's IP portfolio. The Company has global patents in key markets and has applied for new patents related to its Dynamic Stabilisation Technology.

Fastbrick has an IP portfolio consisting of 18 patent cases, 2 design cases and a number of granted trademarks and trademark applications. The patent cases are at various stages ranging from provisional applications to PCT applications, to national phase entries and to granted status in relevant jurisdictions globally. This strategy allows Fastbrick to have a mix of IP protection now and into an extended future.





Fastbrick also has control code which is protected by copyright and by deployment protection methods including compilation, hardware key and license key protection.

As confirmed earlier in this announcement, the software for the design of brick structures and the automated programming of the Hadrian X is at a mature and advanced stage of testing.

**Fastbrick's Chief Executive Officer, Mike Pivac:** "As the CEO of Fastbrick, the September 2017 quarter was satisfying for me, as we were able to execute on 2 key important strategic objectives that we contemplated and planned for when we decided to IPO in 2015. During the quarter, Fastbrick aligned itself with its preferred Global Partner for the Hadrian X bricklaying construction robot. In parallel, we were also able to commence executing on our Customer Discovery Strategy through the MOU signed with the Kingdom of Saudi Arabia. Importantly for our Company and our shareholders, this is just the beginning, with more challenges to overcome and additional strategic accretive milestones to deliver and execute against. As we move into 2018, I look forward to being able to deliver these milestones as we enter a very exciting phase for the Company, with the Hadrian X prototype procurement process gathering pace.

We also confirmed an investment in a 2<sup>nd</sup> Hadrian X prototype, which not only de-risks the assembly and build phase of the Hadrian X, but importantly for us, allows Fastbrick to aggressively pursue its Customer Discovery Strategy and early adopter pilot programme. A 2<sup>nd</sup> Hadrian X opens up the possibility of Fastbrick pursuing 2 pilot programmes in separate key geographical markets. Following on from the Saudi Arabia MOU, we are now pursuing additional key and significant early adopter customers."

Ends

For more information please contact:

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#### About Fastbrick Robotics

Fastbrick Robotics Limited (ASX:FBR) is an Australian robotic technology company developing and commercialising digital construction technology solutions. Fastbrick Robotics' revolutionary bricklaying machine Hadrian X represents the first application of the Company's underlying intellectual property



portfolio. Hadrian X is a globally patented 3D robotic bricklaying system and marks the transition to dynamically stabilised robots (DSR) operating outdoors in uncontrolled environments.

Fastbrick is currently advancing its robotics technology through a Memorandum of Understanding (MOU) with Caterpillar Inc. (NYSE:CAT) demonstrating global scalability and a MOU with the Kingdom of Saudi Arabia highlighting customer demand for Fastbrick's technology. Fastbrick is committed to improving the safety, speed, accuracy, cost and waste management in the global construction industry through utilising the world's latest innovations in mobile robotic technology.

To learn more please visit: [www.fbr.com.au](http://www.fbr.com.au) and to watch Hadrian X in motion please visit <http://tinyurl.com/y7yrgz82>

## Footnote

(i) Construction House milestone is in line with the IPO prospectus dated September 2015 and means the brickwork from slab to cap for a residential home with:

- (a) a minimum of 3 bedrooms and 2 bathrooms;
- (b) a minimum floorplan of 180m<sup>2</sup>; and
- (c) within 3 days

which has been signed off as meeting applicable building standards by an independent qualified building inspection.



## Appendix 4C

### Quarterly report for entities subject to Listing Rule 4.7B

**Name of entity**

Fastbrick Robotics Ltd

**ABN**

58 090 000 276

**Quarter ended ("current quarter")**

30 September 2017

<b>Consolidated statement of cash flows</b>	<b>Current quarter \$A'000</b>	<b>Year to date (3 months) \$A'000</b>
<b>1. Cash flows from operating activities</b>		
1.1 Receipts from customers	-	-
1.2 Payments for		
(a) Hadrian Development costs	(280)	(280)
(b) staff costs – Hadrian Development	(764)	(764)
(c) product manufacturing and operating costs	-	-
(d) advertising and marketing	-	-
(e) leased assets	-	-
(f) administration and corporate costs	(871)	(871)
(g) staff costs – Administration	(163)	(163)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	5	5
1.5 Interest and other costs of finance paid	(1)	(1)
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	-	-
1.8 Other:		
- R & D rebate	-	-
- Commercial grants	63	63
<b>1.9 Net cash from / (used in) operating activities</b>	<b>(2,011)</b>	<b>(2,011)</b>

<b>2. Cash flows from investing activities</b>		
2.1 Payments to acquire:		
(a) property, plant and equipment	(265)	(265)
(b) businesses (see item 10)	-	-
(c) investments	-	-

<b>Consolidated statement of cash flows</b>		<b>Current quarter \$A'000</b>	<b>Year to date (3 months) \$A'000</b>
	(d) intellectual property	-	-
	(e) other non-current assets	-	-
2.2	Proceeds from disposal of:		
	(a) property, plant and equipment	-	-
	(b) businesses (see item 10)	-	-
	(c) investments	-	-
	(d) intellectual property	-	-
	(e) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other	-	-
<b>2.6</b>	<b>Net cash from / (used in) investing activities</b>	<b>(265)</b>	<b>(265)</b>

<b>3.</b>	<b>Cash flows from financing activities</b>		
3.1	Proceeds from issues of shares	2,647	2,647
3.2	Proceeds from issue of convertible notes	-	-
3.3	Proceeds from exercise of share options	447	447
3.4	Transaction costs related to issues of shares, convertible notes or options	-	-
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	-
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	-	-
<b>3.10</b>	<b>Net cash from / (used in) financing activities</b>	<b>3,094</b>	<b>3,094</b>

<b>4.</b>	<b>Net increase / (decrease) in cash and cash equivalents for the period</b>		
4.1	Cash and cash equivalents at beginning of quarter/year to date	8,651	8,651
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(2,011)	(2,011)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(265)	(265)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	3,094	3,094

<b>Consolidated statement of cash flows</b>		<b>Current quarter \$A'000</b>	<b>Year to date (3 months) \$A'000</b>
4.5	Effect of movement in exchange rates on cash held	-	-
<b>4.6</b>	<b>Cash and cash equivalents at end of quarter</b>	<b>9,469</b>	<b>9,469</b>

<b>5.</b>	<b>Reconciliation of cash and cash equivalents</b> at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	<b>Current quarter \$A'000</b>	<b>Previous quarter \$A'000</b>
5.1	Bank balances	870	499
5.2	Call deposits	8,549	8,102
5.3	Bank overdrafts	-	-
5.4	Other (Security deposits for corporate credit cards)	50	50
<b>5.5</b>	<b>Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>9,469</b>	<b>8,651</b>

**6. Payments to directors of the entity and their associates**

- 6.1 Aggregate amount of payments to these parties included in item 1.2
- 6.2 Aggregate amount of cash flow from loans to these parties included in item 2.3
- 6.3 Include below any explanation necessary to understand the transactions included in items 6.1 and 6.2

<b>Current quarter \$A'000</b>
224
-

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**7. Payments to related entities of the entity and their associates**

- 7.1 Aggregate amount of payments to these parties included in item 1.2
- 7.2 Aggregate amount of cash flow from loans to these parties included in item 2.3
- 7.3 Include below any explanation necessary to understand the transactions included in items 7.1 and 7.2

<b>Current quarter \$A'000</b>
-
-

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**8. Financing facilities available**

Add notes as necessary for an understanding of the position

Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
-	-
-	-
-	-

8.1 Loan facilities

8.2 Credit standby arrangements

8.3 Other (please specify)

8.4 Include below a description of each facility above, including the lender, interest rate and whether it is secured or unsecured. If any additional facilities have been entered into or are proposed to be entered into after quarter end, include details of those facilities as well.

n/a

9. Estimated cash outflows for next quarter	\$A'000
9.1 Research and development <sup>(i)</sup>	2,035
9.2 Product manufacturing and operating costs	-
9.3 Advertising and marketing	-
9.4 Leased assets	-
9.5 Staff costs	175
9.6 Administration and corporate costs	195
9.7 Other (provide details if material)	-
<b>9.8 Total estimated cash outflows</b>	<b>2,405</b>

(i) R&amp;D costs includes capitalised costs related to the development of the Hadrian X construction robot

10. Acquisitions and disposals of business entities (items 2.1(b) and 2.2(b) above)	Acquisitions	Disposals
10.1 Name of entity	n/a	n/a
10.2 Place of incorporation or registration	n/a	n/a
10.3 Consideration for acquisition or disposal	n/a	n/a
10.4 Total net assets	n/a	n/a
10.5 Nature of business	n/a	n/a

**Compliance statement**

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

*Gabriel Chiappini*

**Gabriel Chiappini**

**Director & Company Secretary**

**31 October 2017**

**Notes**

1. The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity that wishes to disclose additional information is encouraged to do so, in a note or notes included in or attached to this report.
2. If this quarterly 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 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.