ASX:FBR



EGM Presentation

16 September 2022

Introductions



Richard Grellman
Non-Executive Chairman



Mike Pivac
Managing Director &
Chief Executive Officer



Grant Anderson
Non-Executive Director



Greg Smith
Non-Executive Director



Nancy Milne
Non-Executive Director



Mark Pivac
Executive Director &
Chief Technical Officer



Aidan Flynn
Chief Financial Officer &
Company Secretary

Agenda

1. Notice of Meeting
2. Formal Order of Business
3. Voting
4. Corporate update
5. Shareholder Questions
6. Close of Meeting



Formal Order of Business

Resolution 1

Ratification of issue of 2021 Placement Shares under Listing Rule 7.1

To consider and, if thought fit, to pass the following resolution as an ordinary resolution: "That, for the purposes of Listing Rule 7.4 and for all other purposes, Shareholders ratify and approve the previous issue of 222,222,222 Shares to institutional and sophisticated investors on the terms and conditions set out in the Explanatory Memorandum accompanying this Notice."

Resolution 2

Ratification of issue of July Placement Shares under Listing Rule 7.1

"That, for the purposes of Listing Rule 7.4 and for all other purposes, Shareholders ratify and approve the previous issue of 107,201,578 Shares to Horsley Park Holdings Pty Ltd on the terms and conditions set out in the Explanatory Memorandum accompanying this Notice."

Resolution 3

Ratification of issue of June Placement Shares under Listing Rule 7.1

"That, for the purposes of Listing Rule 7.4 and for all other purposes, Shareholders ratify and approve the previous issue of 1,563,813 Shares to institutional and sophisticated investors on the terms and conditions set out in the Explanatory Memorandum accompanying this Notice."

Resolution 4

Ratification of issue of June Placement Shares under Listing Rule 7.1A

"That, for the purposes of Listing Rule 7.4 and for all other purposes, Shareholders ratify and approve the previous issue of 220,658,409 Shares to institutional and sophisticated investors on the terms and conditions set out in the Explanatory Memorandum accompanying this Notice."

Corporate Update

ASX:FBR

Corporate Snapshot

Capital structure

Market capitalisation (as at 14/09/2022)	$148m
Ordinary shares on issue	2.8b
Average daily volume (last 3 months)	3.8m
Cash balance (30 June 2022)	$11.5m

Directors & Management

Richard Grellman AM	Non-Executive Chairman
Grant Anderson	Non-Executive Director
Greg Smith	Non-Executive Director
Nancy Milne AOM	Non-Executive Director
Mike Pivac	Executive Director – MD & CEO
Mark Pivac	Executive Director – CTO
Aidan Flynn	CFO & Company Secretary
Kiel Chivers	Chief Commercial Officer
Jonathan Lawe Davies	General Counsel

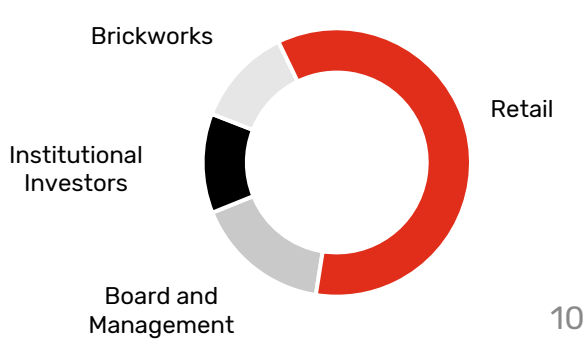
Share price performance



Shareholders

Brickworks/WHSP	11.94%
Mark Pivac (Founder)	12.0%
Fidelity	8.8%
Mike Pivac (Founder)	4.6%

Register



Automation is widely regarded as the future of construction

FBR Solution



- **Hadrian X®** is the only solution that is fully mobile without sacrificing utility, versatility, de-automation or speed of completion
- **Faster mobilisation** – no gantry setup, minimal site footprint, can build from the road or any other side of a construction site, using existing building materials
- Architectural software automates conversion of existing plans to generate **Hadrian build file**
- **Compliant with building codes** in some jurisdictions, working toward certification in others (ICC certification in the United States; CE certification in Europe)
- Prototypes are **currently providing Wall as a Service® for top tier builders** in Western Australian on commercial terms, delivering structures faster, more accurately, safer and with less waste than traditional construction methods
- **Preliminary DST testing complete on potential 3D concrete printing** application – results extremely promising using existing technology and platform

Making construction more sustainable through technology

Improving environmental impact;

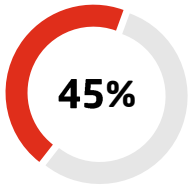
- Reduced environmental impact of construction process through **zero-waste sequenced pallet** capability:
  - maintains site cleanliness;
  - massively reduces water use, waste generation; and
  - subsequent cost of waste removal to landfill.
- **TAD software heavily reduces offcuts & waste** with virtual inventory optimisation; Hadrian X manages offcut material if required
- Up to **10% of brick/blocks are wasted** in manual bricklaying from overordering, logistics and handling, and cutting bricks onsite :
  - This equates to **~A$15 billion waste** in the A$175 billion of global brick/blocks produced and sold annually
  - **Hadrian X®** could save more than half of this global brick/block waste per year
- **Able to lay green building products** like Xella's AAC blocks and calcium silicate blocks, which have exemplary thermal and acoustic performance, reducing carbon footprint and improving energy efficiency



Construction & Demolition Waste in WA



Of WA's waste stream



Material recovered for recycling



Targeted material recovery **(2030)**

Source: Strategic Waste Avoidance and Resource Recovery Strategy 2030

No sand, cement or water required on site, eliminating;

- impact of extraction, soil screening, removal and management of leftover waste; and
- potential exposure to hazardous silica dust, protecting the local environment, workers and public within vicinity

Reducing health & safety risks

- **Construction is one of the worst industries globally in terms of safety – the Hadrian X® is part of the solution**
- **Reduces occurrences of repetitive stress injuries and strains**, while virtually eliminating risks during the undertaking of procedural construction tasks
- **Removes all manual labour** from construction site during structure build (except minimal FBR quality control interactions)
- **No working at elevated heights** during blocklaying process. Removes the need for scaffolding, trestles or boards to reach the top courses and second storey
- Due to the use of construction adhesive, there is no exposure and inhalation of cement and sand dust while mixing mortar. Both contain silica which has been recognised as a serious industry hazard
- No inhalation of dust through dry cutting bricks manually (when a brick saw is used within the machine)
- **Minimal people required at work site** during construction and less trips to site required by workers
- No injuries due to heavy manual handling of products - **Hadrian X®** handles, cuts and delivers all bricks necessary for the job

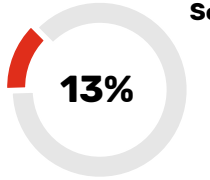


Work-related injury and disease in Australia (2020-2021)

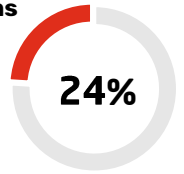


Body stress, falls, trips and slips

Serious Claims



By industry - **construction**



By occupation - **labourers**

Source: Safe Work Australia 2021

Commercial progress – FY21-22



- Two-phase MoU with Liebherr-Mischtechnik (LMT) signed in March 2022, to collaborate on the delivery of the next-generation Hadrian X®
  - Phase 1: suitability for scalable industrialisation/commercialisation, leveraging LMT expertise in componentry, design, control systems and operating environment
  - Phase 2: execution of long-term manufacturing and commercialisation agreement appointing LMT as exclusive manufacturer of Hadrian X® with joint activities to include supply, service and lease structure
- FBR expects to commence discussions around long-term manufacturing agreement for the next generation Hadrian X® once the first prototype has completed site acceptance testing

- **International clay block market unlocked** – first time in the world Wienerberger's Porotherm (R12 & R25) clay blocks have been laid by a robot in the undertaking of commercial, real-world work
- **AAC and calcium silicate block testing complete** – Xella product successfully used to build structures with the Hadrian X®
- **H01 laying zero waste** pre-cut blocks of multiple types on sequenced pallets in a suburban environment, as precursor to the future of block production
- **Market entry feasibility study for UAE** – MOU with Ministry of Energy and Infrastructure executed





Targeting a lay rate in excess of 500 blocks per hour

Next-generation Hadrian X progress









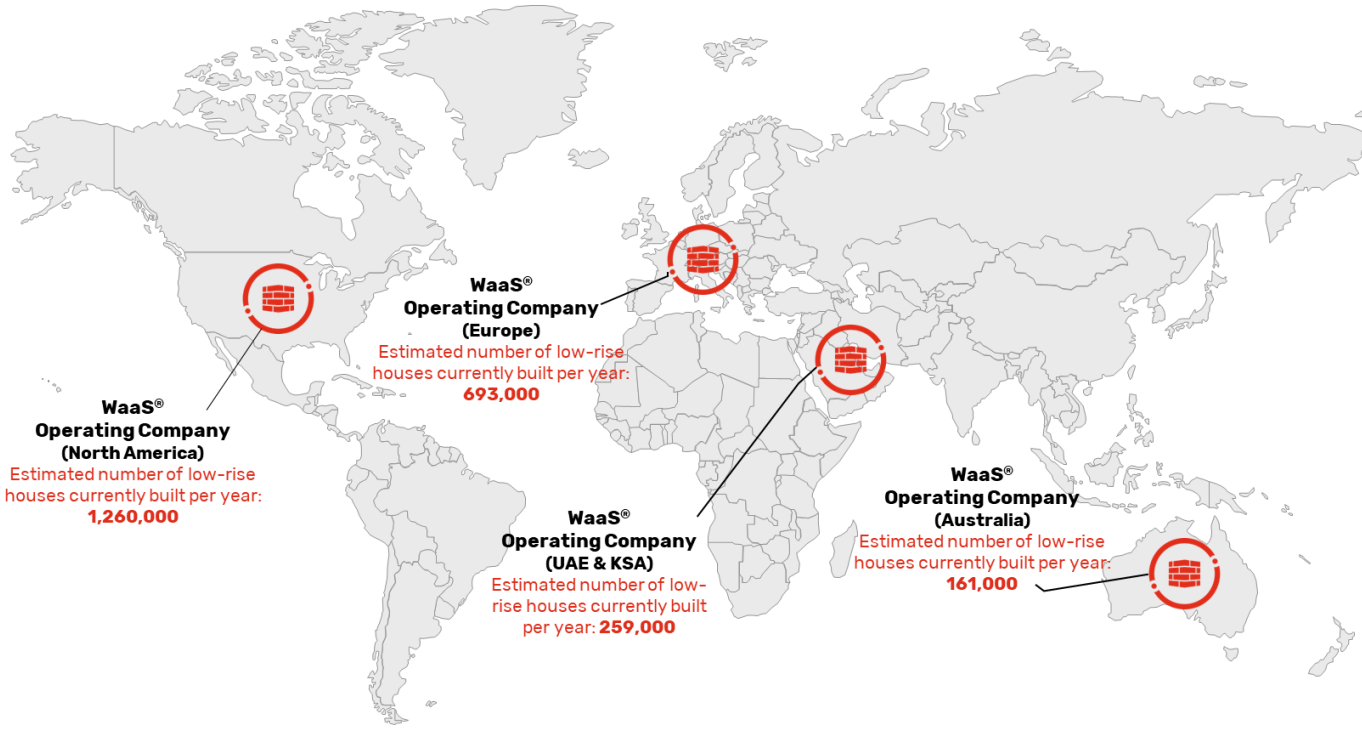
- Mechanical assembly of the first next-generation Hadrian is progressing
- Modular design and distributed control architecture of the next-generation Hadrian X allows work on individual modules to progress independently
- Supply chain disruptions have resulted in delayed delivery of some components. Expected completion of mechanical assembly now Q4 2022
- Commissioning activities have been brought forward and are ahead of schedule. Expected completion of commissioning remains March 2023

- Designed in collaboration with Liebherr-Mischtechnik to be **suitable for volume manufacturing**
- Featuring a **shuttle delivery system** capable of being adapted to lay roof tiles**, opening a new market for FBR using its existing technology**
- Shuttle system allows handling of larger blocks, **increasing targeted lay speed to ~80-120m²/hour of wall with largest format block[1]**
- Handles blocks up to **600 x 400 x 300mm (23 SBE, 45 kgs)**
- 32m boom capable of building **three storey structures from roadside**
- Saw module **capable of height, mitre and gable cuts**
- **Completes a standard house in less than a day**

1. Vertical square metres

Global scaling strategy

- **Ongoing strategic partnership process** to further relationships with preferred partners in targeted jurisdictions
- Machines ordered from FBR then supplied to WaaS® operating entities, allowing **rapid, capex-free scaling for FBR**
  - Operating entity profits for local partners will **be invested in growing the fleet of Hadrian X® robots**
- FBR working closely with market leading block supplier to execute US market entry strategy
- **Non-binding term sheet signed for up to 5,000 homes in Mexico** with GP Vivienda
- **Hadrian X® projected to be economically viable for all labour cost markets**
  - Higher build volume in greenfields developments
  - Ability to operate the Hadrian X® 24 hours a day, seven days a week
- **ESG mandates to adopt cleaner construction methods** coming into play in key FBR markets around the world
- **FBR and Liebherr-Mischtechnik collaborating on future manufacturing of Hadrian X®**

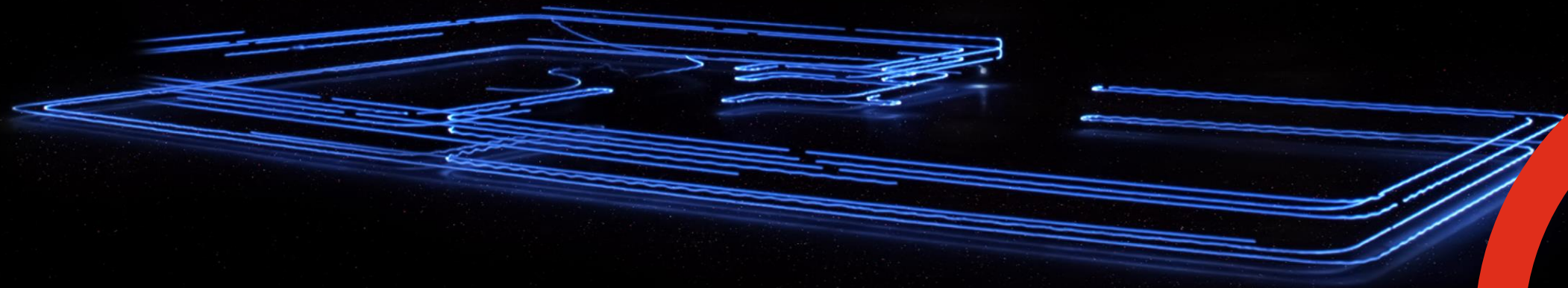


- **Wall as a Service®** operating entities to be established in key target markets around the world
- **Hadrian X® units to be sold** to local entity partners and then leased back into operating entities in-line with market demand and utilisation
- **Selection process for entity partners in key regions has commenced**

Additional application testing of DST®

- Robotics, automation and 3D printing are increasingly viewed as **central facets to the future of the construction industry**
- FBR undertook testing to highlight the potential of DST® by **undertaking similar sorts of tasks completed by other existing robotics / automation / 3D printing solutions**
- Utilisation of DST® greatly **enhances versatility and mobility** which improves speed and economic outcomes
- FBR technology could be **easily integrated with various additive materials** used in 3D printing such as cement, polymers and metals
- **Further testing and engagement with industry participants may be conducted** to determine commercial viability of DST® licensing in select markets





Next 12 months for FBR



- **Complete mechanical assembly of the first next-generation Hadrian X® in Q4 2022**
- **Completion of commissioning of first next-generation Hadrian X® in Q1 2023**
- **Establish US entity** and complete build demonstrations with assistance from market leading block suppliers
- **Obtain binding orders for robots** to be positioned into operating entities
- **Establish European entity** and complete build demonstrations with assistance from market leading block suppliers
- **Complete International Code Council (ICC) certification** of Fastbrick Wall System - United States currently in progress, followed by Miami Dade County certification for Florida operations
- **Further develop BIM architectural software** to enable integration into construction design and planning with customers and allow for full handover of software to future partners
- **Undertake testing with new shuttle architecture** of next-generation Hadrian X® for other applications (such as roof tiling)
- **Introduce next-generation Hadrian X®** into Western Australian building market followed by overseas demonstrations to further solidify market entry strategies

Questions

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