FBR Corporate Presentation

November 2021

About FBR

- **FBR** designs, develops, builds and operates dynamically stabilised robots
- **FBR**'s flagship product, **Hadrian X**®, is the world's most advanced construction robot
- Capable of building the walls of brick or block houses in as little as a day, **Hadrian X®** is designed to produce brick structures safer, faster, cheaper, more accurately and with less waste than traditional construction methods
- Enabled by **FBR**'s **Dynamic Stabilisation Technology**® **(DST®)**, the **Hadrian X**® takes the precision of traditional indoor robotics into outdoor environments on a fully mobile truck-based platform
- **FBR** offers a new **Wall as a Service**® commercial model, where builders can order robotically erected walls with certainty on timing, cost, safety and waste
- **Hadrian X**® is operating in the field already, delivering **Wall as a Service**® in Western Australia
- Global brick/block low rise construction market is approximately 525 billion bricks per year, estimated to be in excess of A$500 billion per year to supply and lay

FBR Corporate Snapshot

Current capital structure

Ordinary shares on issue	2.207m
Average volume (last 3 months)	3.3m
Gross cash (30 September 2021)	$7.5m
FY21 R&D tax refund receivable (net of advance)	$1.38m
Market capitalisation (15 November 2021)	$121.4m
Shareholders (30 September 2021)	12,858

Directors & Key Executives

Richard Grellman	Non-Executive Chairman
Grant Anderson	Non-Executive Director
Greg Smith	Non-Executive Director
Mike Pivac	Executive Director – MD & CEO
Mark Pivac	Executive Director – CTO
Aidan Flynn	Chief Financial Officer
Kiel Chivers	Chief Commercial Officer
Jonathan Lawe Davies	General Counsel
Harald Apfelthaler	Engineering Manager

Corporate

$120+ million invested into technology over 10+ years

68 employees over 3 continents

R&D, Engineering & Manufacturing facilities in Western Australia

Global commercial opportunity – 100% owned

Global IP – 100% owned, no royalty obligations

Substantial Shareholders

Mark Pivac (Founder)	15.1%
FIL Limited	9.2%
Mike Pivac (Founder)	5.8%

FBR Solution

- **FBR** has the most compelling technology in robotic construction and it is widely accepted that automation is the future of the construction industry
- **Hadrian X®** is the only solution that is fully mobile without sacrificing utility, versatility, de-automation or speed of completion
- Minimal mobilisation and demobilisation time – no gantry setup, minimal site footprint, can build from the road or any other side of a construction site
- Uses existing building materials and produces walls that are visually the same as existing walls
- Architectural software automatically populates bricks from existing designs to generate **Hadrian** build file
- Already compliant with building codes in some jurisdictions, working toward certification in others
- Already in use in the Western Australian market in commercial application, delivering structures faster, more accurately, safer and with less waste than traditional construction methods
- Global scaling plan of selling robots manufactured by an OEM to local operating entity partners and leasing back to operating entities to provide Wall as a Service® with a zero capex expansion plan for FBR

Revenue generating tech

- **Record sales** – first quarter FY22 cash receipts from customers of $621,000
- **Completed builds for customers** – Three residential and two low-rise commercial structures
- **Pipeline of 24 confirmed upcoming builds** for builders with expected revenues of over $1.1 million
- **Additional three builds in Wellard committed to complete five home Wellard portfolio** – revenue in excess of $2 million in FY23 anticipated from sale of five home portfolio
- **Strong utilisation rate committed** up to May 2022, with more future work expected to be added to maximise utilisation of both existing Hadrian prototypes
- **Two additional Hadrian X® robots** at procurement stage
- **Non-binding term sheet for up to 5,000 homes in Mexico** with GP Vivienda
- **Market entry feasibility study for UAE** – MOU with Ministry of Energy and Infrastructure executed
- **International clay block market unlocked** – Hadrian X® capable of laying largest clay blocks currently in production (Wienerberger Porotherm R25s) in addition to concrete blocks
- **Builders designing Hadrian-optimised buildings** as gen 2 architectural software unveiled
- **Next iteration of Hadrian X® under development** with higher lay speed, capability to handle even larger blocks and longer reach
- **H01 laying zero waste pre-cut blocks on sequenced pallets**
- **Additional product revenue streams under development** with multiple DST and digitalisation-related R&D projects underway

Benefits of Hadrian X®

HEALTH AND SAFETY

- Removes the repetitive work, stress and injury including sprains and strains from the industry that many bricklayers suffer from due to years of hard labour
- 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)
- Less people required at work site during construction and less trips to site required by workers
- No injuries due to manual handling of products and use of hand tools. **Hadrian X**® completes all necessary brick cuts

Benefits of Hadrian X®

ENVIRONMENTAL

- A much cleaner site with no materials dispersed across the build zone
- Reduced waste and exposure to environmental incidents. H01 zero waste sequenced pallet capability massively reduces waste produced on site and cost of waste removal
- No sand, cement or water required on site, eliminating the impact of extraction, soil screening, removal and management of leftover waste
- No hazardous dust from the use of cement and sand (both containing silica) with the potential exposure to the local environment, workers and public within vicinity
- TAD software heavily reduces offcuts & waste from block manipulations due to virtual inventory optimisation and the machine managing all offcut material
- Site cleanliness maintained reducing waste to landfill and the high cost associated with this
- Up to 10% of brick/blocks are wasted in manual bricklaying from overordering, logistics and handling, and cutting bricks onsite
  - This is equivalent to up to A$15 billion waste in the A$175 billion of global brick/blocks produced and sold per year
  - **Hadrian X®** will save more than half of this global brick/block waste per year

Benefits of Hadrian X®

OPERATIONAL

- Block laying speed significantly faster than manual labour
- Greater accuracy and repeatability than human bricklaying
- Build cost significantly reduced through faster build, greater accuracy and reduced waste
- Digitalises the construction process and helps stakeholders to better understand the structure from inception to delivery to recycle use
- Disruptor to the economic modelling and planning of building structures on residential and commercial sites. When considering the total ‘time value of money’, there is significant opportunity to not only reduce the time to build the structure, but by using the same single source of CAD information, other ‘off site’ manufacturing can be carried out concurrently without the need for ‘as built’ site measurement
- Machine can run 24/7 when required with no onsite human constraints during build cycle
- Solving genuine global skill shortage that will affect future business growth, while improving working conditions for existing and future bricklayers

Hadrian X® Economics in Australia

The larger the block used, the more economical the **Hadrian X**® becomes and the greater the benefit passed on to **WaaS**® customers. The costs below are direct laying costs and exclude all the other ancillary benefits enjoyed by the customer derived from the **Hadrian X**® from its improvements to safety, speed, accuracy and waste.

Iteration of Bricklayer	Block Type	Laying Speed (blocks p/hr)	Times faster than single manual bricklayer	Cost of laying wall ($/sqm)	Standard double brick houses built per year
Manual Bricklayer	**Standard Clay Maxibrick** 305 x 162 x 90mm	42	1x	$57	10
H109 (Hadrian X®) – current performance	**Concrete Masonry Unit** 390 x 230 x 90mm	**174**	**7x**	**$35**	**59**
H109 (Hadrian X®)	**Porotherm Clay Block** External: 500 x 249 x 250mm Internal: 500 x 249 x 115mm	**174**	**14x**	**$18**	**166**
H109+	Concrete Masonry Unit	250	10x	$25	119
H109+	Porotherm Clay Block	250	20x	$13	238
H110	Concrete Masonry Unit	500	20x	$14	237
H110	Porotherm Clay Block	500	41x	$7	476

Key Assumptions: Hadrian X® manufacturing cost at scale: $1 million. Hadrian X® crew: 2 people per 12 hour shift. Hadrian X® useful life: 12 years. Number of 12 hour shifts per year for Hadrian X®: 252. Hadrian X® maintenance and fuel cost per year: $175,000. Hadrian X® laying cost excludes corporate overheads. Standard double brick house has 351 vertical sqm of wall (237m² internal facing and 114m² external facing). Manual bricklayers work in a crew of three (two bricklayers and one labourer). Crew lays 1,000 maxibricks per eight-hour day. Equivalent to 108 standard bricks per hour per person. Manual maxibrick laying cost, taking one to two weeks (laying only) would be currently $2.50 per maxibrick laid in Perth, WA, plus allowing for mortar and sundries and cut bricks this equates to approximately $57/sqm wall laid. Hadrian X® laying speeds are averages ignoring planned and unplanned maintenance.

Completed jobs

Job	Type	Standard Brick Equivalents (SBEs)	Revenue
Dayton	Residential	13,759	$491,556
Byford	Commercial	20,300	$6,717
Amberton Beach	Commercial	36,496	$91,800
Wellard #1	Residential	19,008	FBR Inventory
Wellard #2	Residential	23,900	FBR Inventory

Dayton

- The first display home built by an end-to-end autonomous bricklaying robot anywhere in the world
- 3 bed x 2 bath home bordered by seven occupied homes at the time of building
- Sale settled in July 2021

Byford

- FBR’s first non-residential structure featuring cavity walls with slab step down
- Currently tenanted by real estate company

Amberton Beach

- Largest structure built by Hadrian to date requiring five different building positions and comprising walls up to 4.8m high
- Completion of the childcare centre is expected in early 2022

Wellard #1

- Structure owned by FBR, with walls completed in August 2021
- Following trades are continuing to finish the structure with sale expected in FY23

Wellard #2

- Structure owned by FBR, with walls completed in October 2021
- Following trades are continuing to finish the structure with sale expected in FY23



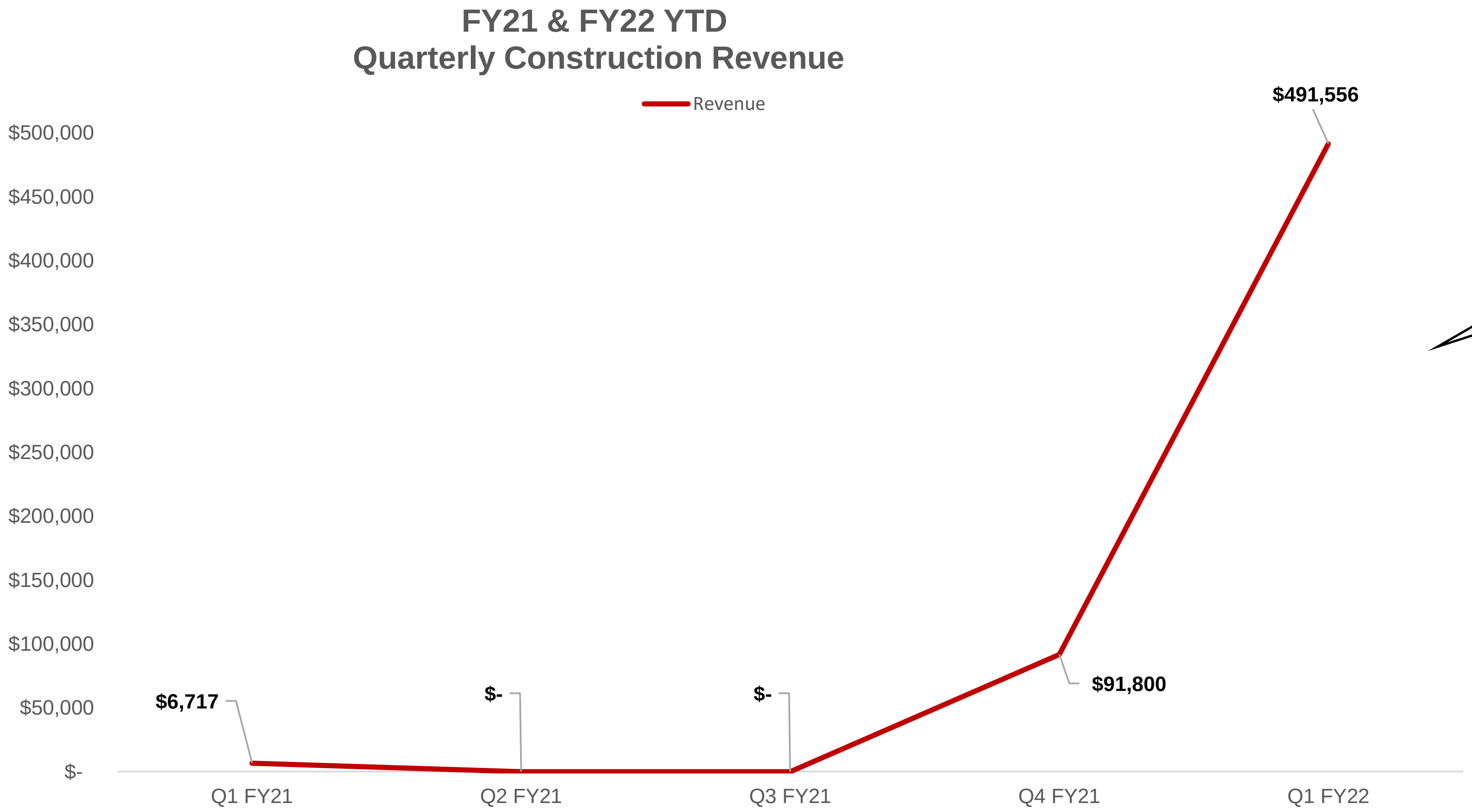



Pipeline of contracted builds

Job	Location	Type	Expected revenue (approx.)	Expected completion
16 townhouses	Willagee, Western Australia	Residential	$630,000	May 2022
8 townhouses	St James, Western Australia	Residential	$500,000	June 2022
Wellard 3	Wellard, Western Australia	Residential	FBR Inventory	To be sold in FY23
Wellard 4	Wellard, Western Australia	Residential	FBR Inventory	To be sold in FY23
Wellard 5	Wellard, Western Australia	Residential	FBR Inventory	To be sold in FY23

- **16 townhouses in Willagee**
  - Contract with prominent Perth builder Inspired Homes to supply Wall as a Service® and concrete slabs for 16 townhouses
  - Contract value of approximately $630,000
  - Works expected to be completed by May 2022
- **8 townhouses in St James**
  - Slab and roof trusses for eight two-storey townhousesContract with property developer Riculallo Pty Ltd to construct the slab, footings, structural walls, second storey
  - Contract value of approximately $500,000
  - Works expected to be completed by June 2022
- **Wellard 3, 4 and 5**
  - Structures to be owned by FBR, with walls to be completed in due course
  - Completed houses expected to be sold in FY23

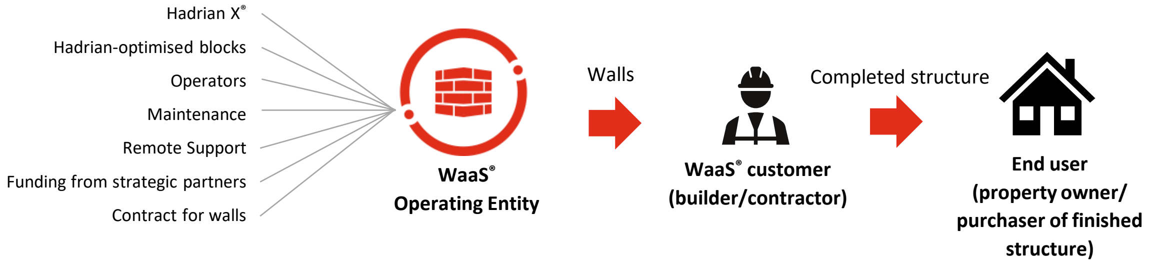
FBR quarterly revenue growth



399% year on year revenue growth already achieved in Q1 of FY22

Wall as a Service® - commercial model

- **WaaS®** is the servitisation and digitalisation of the old way of selling bricks and manual bricklaying labour separately
- **WaaS®** is sold as a fixed price single delivered service to customers
- The **WaaS®** operating entity supplies the blocks and robotically constructs walls onsite to the precise specification of a digital architectural plan
- **WaaS®** allows customers to directly access the benefits of robotic construction such as improvements in speed, accuracy, safety and waste, without having to build robotics capability into their businesses
- Acquisition of order:
    - Builder requests quote to build walls of house(s) and sends architectural plans to **FBR**, including brick specification
    - **FBR** runs plans through its proprietary architectural software and delivers fixed price lump sum quote for supply and lay of walls to plans specification
    - **FBR** sends fixed price quote to builder, guaranteeing price for 24 months, and provides total estimated build time
    - Builder agrees to quote and requests date for service
    - **FBR** orders bricks from preferred supplier and arranges for delivery direct to site on specified day
    - **FBR** sends **Hadrian X®** to site on appointed day and builds house
    - **FBR** bills for 100% of work



Potential global demand

- **Wall as a Service®** operating entities to be established in key target markets around the world
- Hadrians to be forward 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

Global scaling strategy

- Strategic partners can access equity in local operating entities by purchasing Hadrian X® robots from FBR and supplying those machines for free to WaaS® operating entities, allowing for rapid, capex-free scaling for FBR
- Operating entity profits for local partners will be invested in growing the fleet of Hadrian X® robots
- Soft order program underway to demonstrate significant global demand for Hadrian X®
- Non-binding term sheet signed for up to 5,000 homes in Mexico with GP Vivienda
    - Foothold in North America working with high volume Mexican builder
    - FBR permitted to invite guests to sites including US builders
- MOU with the UAE Ministry of Energy & Infrastructure in place
    - Joint feasibility study for market entry commencing
- Hadrian X® projected to be economically viable for both high and seemingly low labour cost markets
    - Access to low-cost machine operators
    - Higher build volume in greenfields developments
    - Ability to operate the Hadrian X® 24 hours a day, seven days a week
- Software play in developing markets likely to be a long-term benefit
    - FBR will track data from creation of block to placement in a wall according, with applications for builders, home-owners, insurers, aftermarket sellers of household items
- Mandates to adopt cleaner construction methods coming into play around the world
- Increased global focus on sovereign labour security due to pandemic
- Significant OEM interest to be exclusive manufacturer of Hadrian X®

Next 12 months for FBR

- Complete 27 builds in pipeline, plus additional builds yet to be committed
- Complete assembly of two additional Hadrian X® construction robots to meet demand in Australian market
- Complete the design of the next iteration of the Hadrian X® and commence manufacturing
- Obtain soft or contingent orders for robots to be leased into operating entities
- Continue scale up of organisational capability post-COVID
- Further development of BIM architectural software to enable integration into construction design and planning with customers
- Further advance DST and digitalisation-related R&D projects with a view to opening a new market vertical for FBR
- Unveil new zero waste potential of H01 by utilising pre-cut sequenced pallet methodology in suburban environment
- Committed pipeline of work will keep existing Hadrian prototypes well utilised until May 2022
- FBR will now focus on winning work to maximise utilisation of existing prototypes and develop a pipeline of work for future Hadrians

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