



hVIVO

formerly Open Orphan plc

H1 23 Presentation

September 2023

Ticker: HVO

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Presenters



Dr. Yamin 'Mo' Khan
CEO



Stephen Pinkerton
CFO

Who we are

Mission

Delivering today's healthcare by empowering tomorrow's innovation.





Vision

To transform global healthcare by revolutionising the drug development process through scientific ingenuity.

Values

- ✓ *Innovation & Agility*
- ✓ *Growth*
- ✓ *Integrity & Welfare*
- ✓ *One Team*

Strong H1 Performance & Full Year Upgrade

 Delivering Record H1 Financial Performance	£27.3M Revenue ¹ H1 2022: £18.0m	19.1% EBITDA Margin H1 2022: 12.6%	£31.3m Cash Balance at 30 June 2023
 Exceptional Operational Execution	70 Human challenge trials completed	4,000 Volunteers inoculated	74k+ FluCamp Leads Generated in H1 23
 Expanding our Service Offering	New Facility Canary Wharf: opening H1 24	New Models hMPV & Flu B	Repurposing Volunteers Contract signed
 Upgrading our Full Year Guidance	£55m FY23 Forecast Revenue ^{1,2}	c.19% FY23 EBITDA Margin Guidance	£78m Weighted Contracted Orderbook (30 June 2023)

¹ The Group will now report revenue excluding other income, such as R&D tax credits. Other income in H1 2023 was £1.4 million (H1 2022: £0.9 million).

² Revenue excludes £2 million of forecasted other income, such as R&D tax credits.



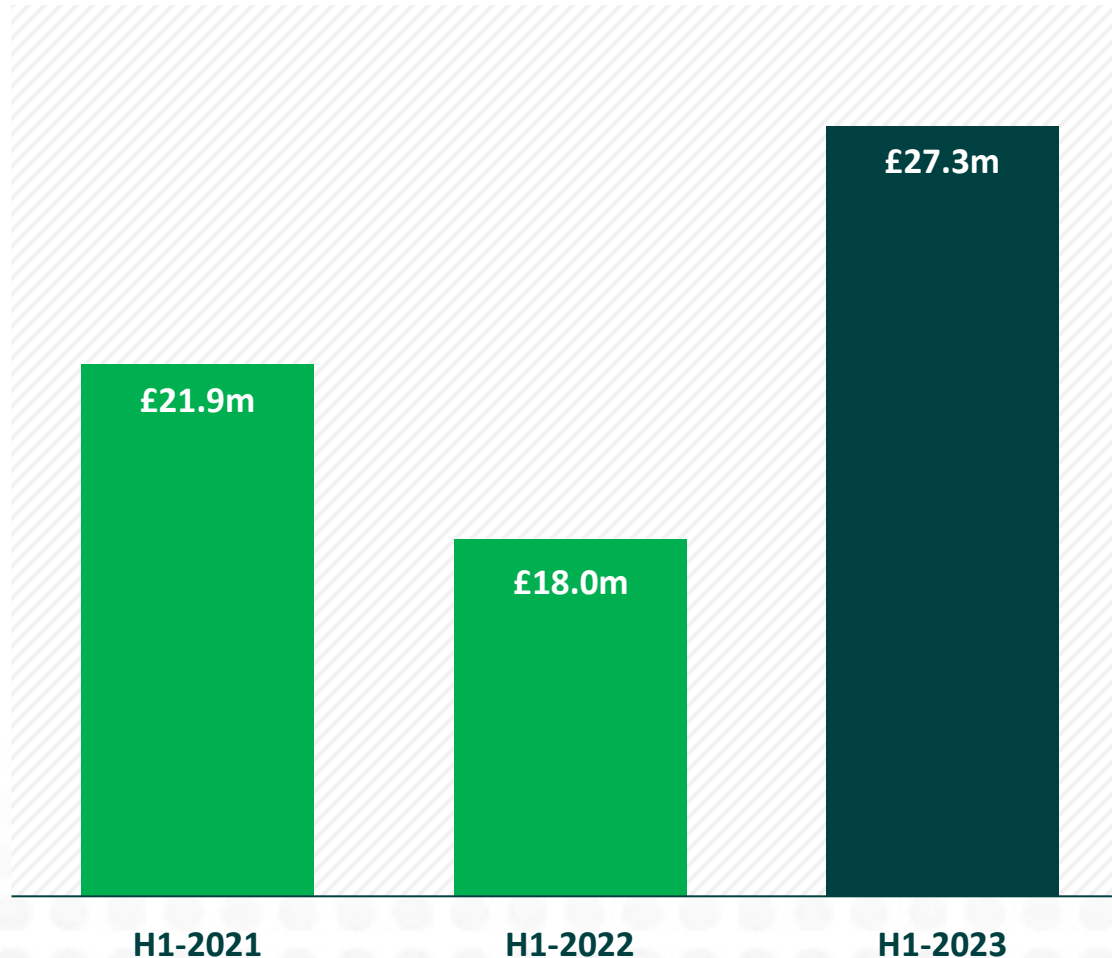
Stephen Pinkerton

Chief Financial Officer

Strong financial performance

52% Increase in Year-on-Year Revenue

Revenue¹

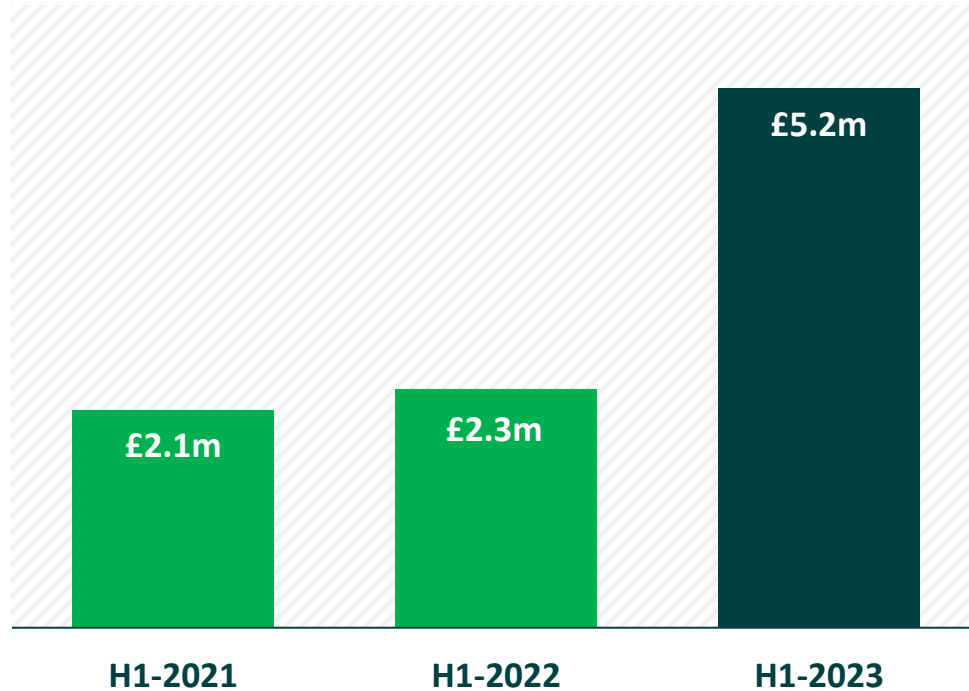


- H1 revenue 52% increase on H1 2022
- Key Drivers include:
 - Strong order book
 - Multiple studies being conducted concurrently
 - Increase in study size
 - Full service contracts with manufacturing & characterisation
- Venn Life Sciences delivering 20% + growth

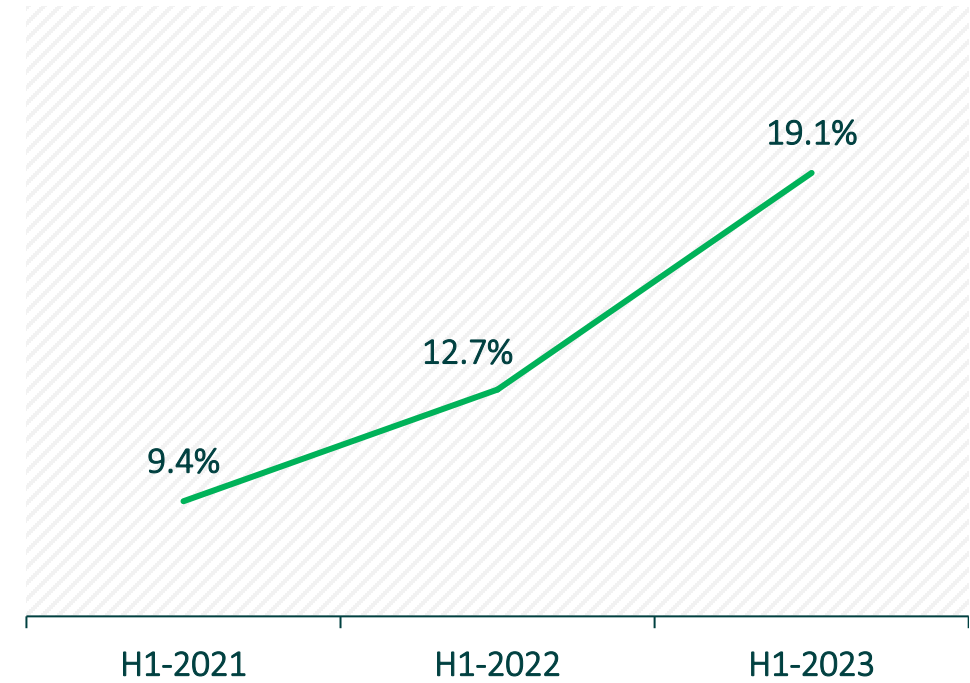
¹ The Group will now report revenue excluding other income such as R&D tax credits. Other income in H1 2023 was £1.4 million (H1 2022: £0.9 million).

EBITDA Margins Continue to Increase

EBITDA



EBITDA Margin

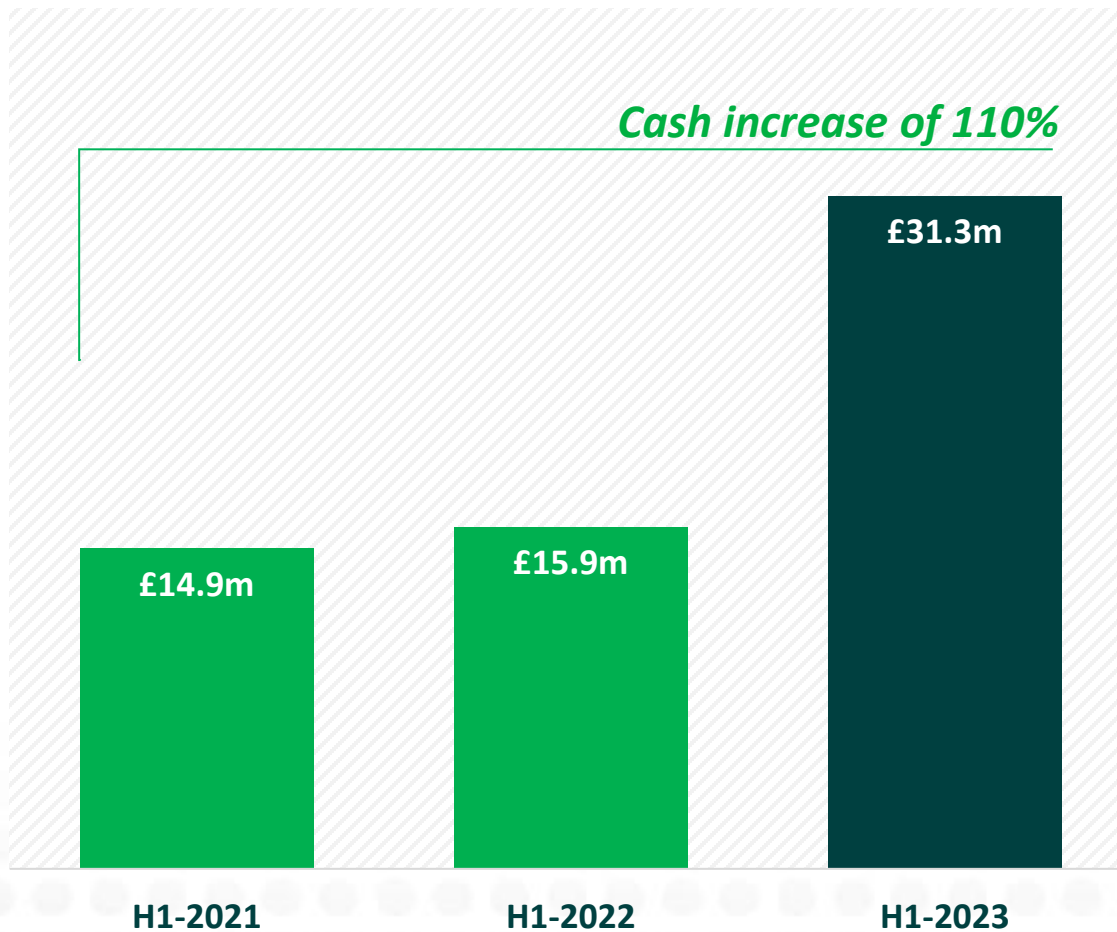


- H1 EBITDA of £5.2m, representing a 129% increase in EBITDA from H1 2022
- H1 EBITDA margin of 19.1% is a significant increase from 12.7% in H1 2022

- Margin growth is underpinned by better quarantine and staff utilisation rates
- Consistency in volume of work aligned with operational improvements have optimised our business model

Strong Cash Generation Across H1 2023

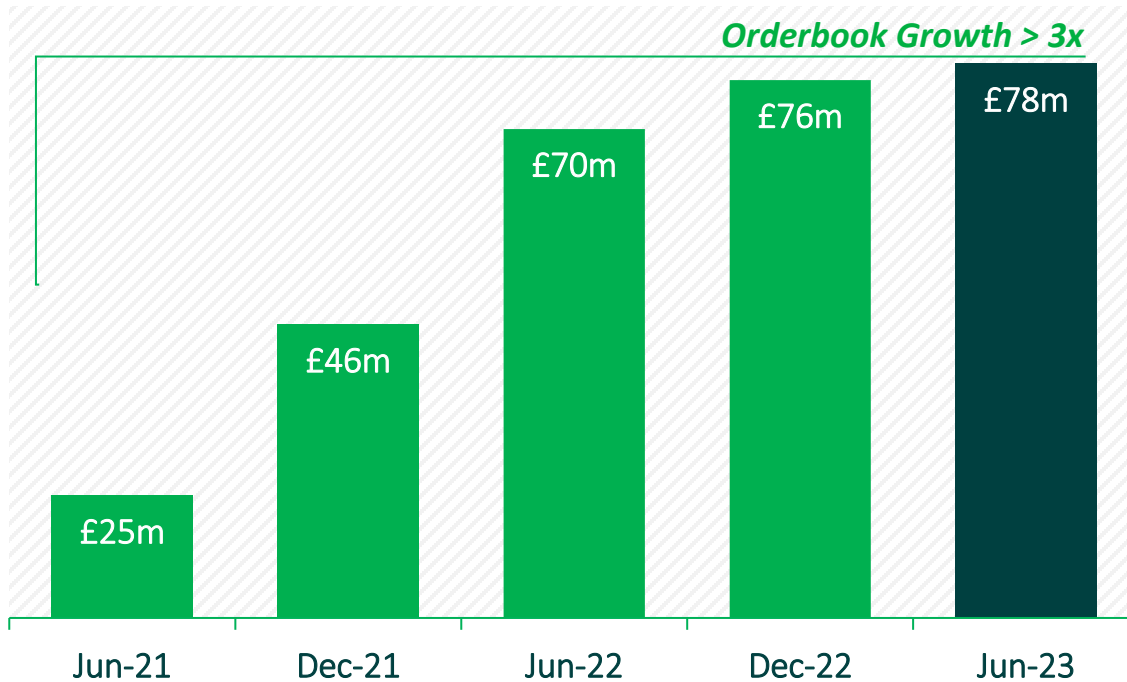
Cash



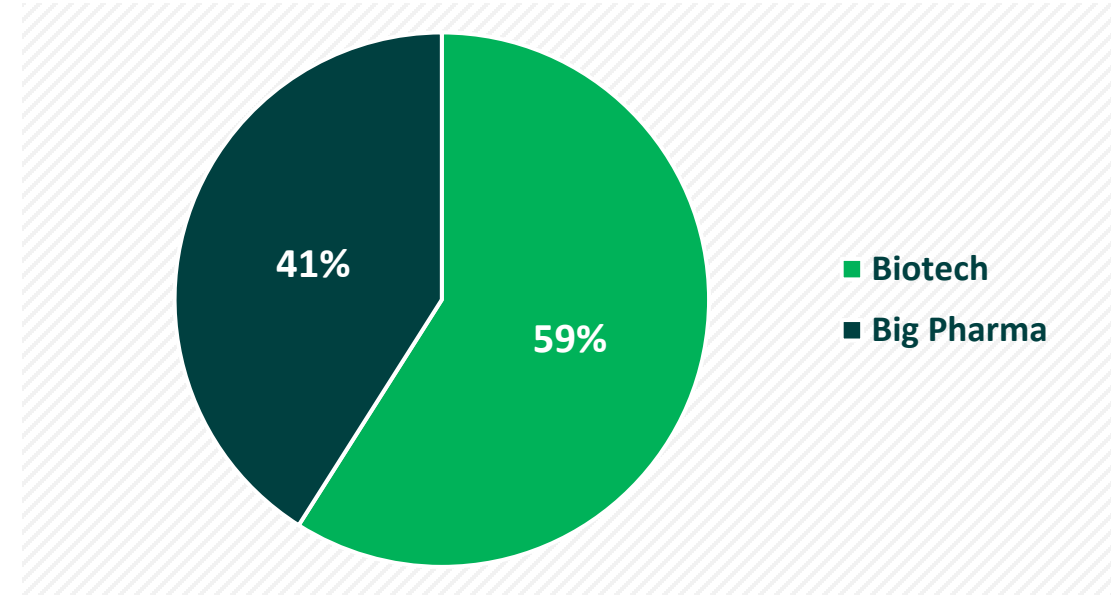
- Strong cash position with £31.3m as at 30 June 2023
- This is net of a £3m special dividend paid to shareholders on 9 June 2023
- The Company remains debt-free with robust net working capital
- Contracts structured to remain cash flow positive throughout the study
- Key drivers:
 1. Continued increase in orderbook & related advance fees
 2. Modest spend on capital
 3. Strong operational delivery

Record Net Contracted Orderbook Continues to Grow

Net Contracted Orderbook



Contracted Orderbook Weighting by Client Type



- Orderbook continues to grow after record revenue performance
- 1 full-service contract win in hMPV
- 1 bespoke challenge model contract – Flu B

- APAC Biotech challenge study win
- Global Pharma consulting contract win for Venn €3.2m
- Majority of 2024 revenue covered by existing orderbook



Yamin "Mo" Khan

Chief Executive Officer

A long-term sustainable growth model

Operational Highlights



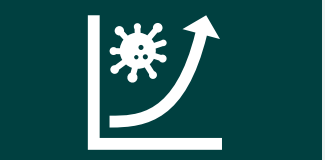
5 studies in Quarantine



*FluCamp leads generated
80% rated 4-stars+ on Trustpilot*



4 challenge models active



100%+ Y-o-Y increase in inoculations



Manufacturing in process for 4 models



*Leiden Office opened
Canary Wharf facility signed*



1st volunteer re-purposing contract signed



*Successful MHRA inspection
Mitigation of MHRA delays*



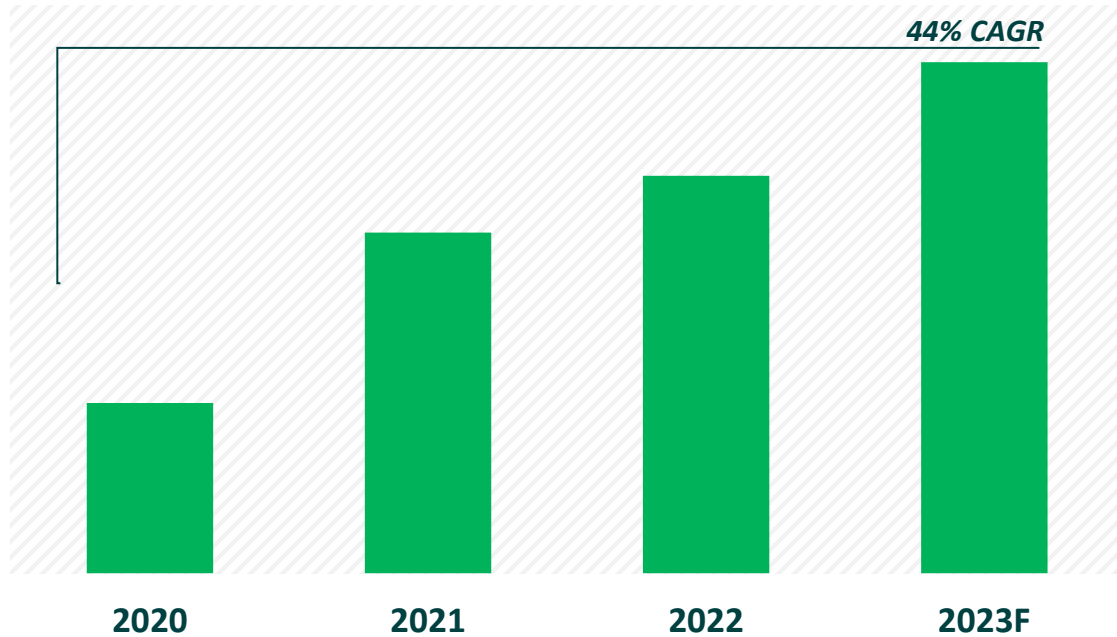
1st APAC client signed in >10 years



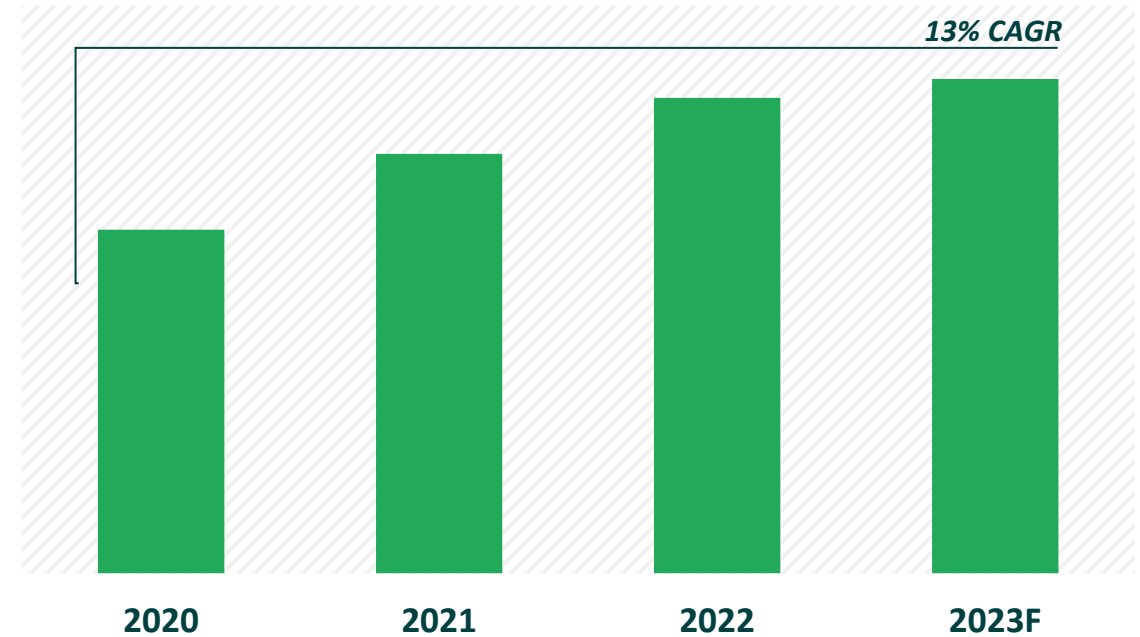
New cybersecurity system implemented

Increasing Demand for Human Challenge Trials (HCTs)

Increasing Number of Active HCTs



Increasing Number of Volunteer Inoculations per HCT per year



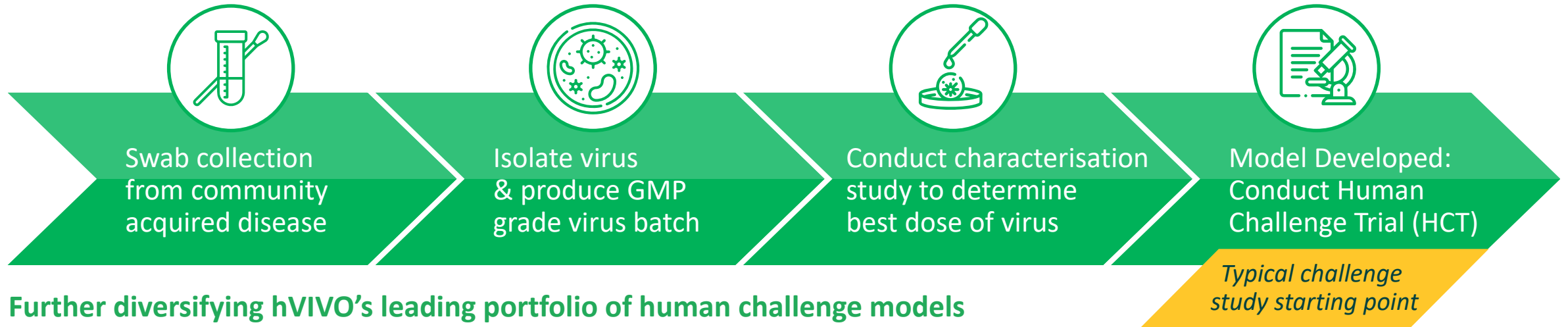
- Higher number of HCTs:

- Increased demand for HCTs
- Multiple challenge agent models
- Improved volunteer recruitment
- Concurrent conduct of trials

- Larger sample size (#volunteers/trial)

- Achieves greater utility of data
- Targeting lower frequency endpoints
- Comparing dose regimens
- Optimising platform selection

Unique End-to-End Human Challenge Service



Further diversifying hVIVO's leading portfolio of human challenge models

1

Broader scope of work resulting in increased revenue (manufacture, characterisation, challenge)

2

Bespoke end-to-end challenge service enable hVIVO to match to our clients' specific target strain

3

Subsequent use of newly developed models across new and existing clients

Recent Contracts (all £10m+)

- Bespoke Influenza model with Big Pharma client
- New Influenza model with Big Pharma client
- hMPV model with US Biopharma
- Bespoke Influenza B model with Big Pharma client

Profile of a Challenge Trial

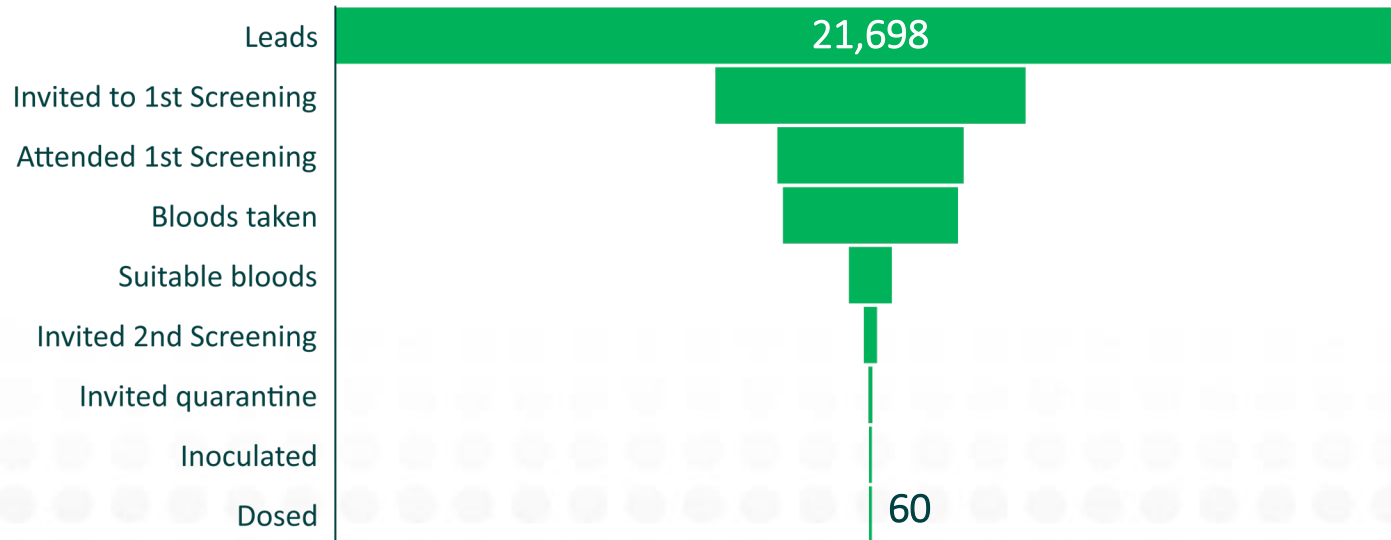
Biotech goal: use data to raise funding & de-risk late-stage field trials



7,695 Lab samples processed

11 Quarantine Days per volunteer

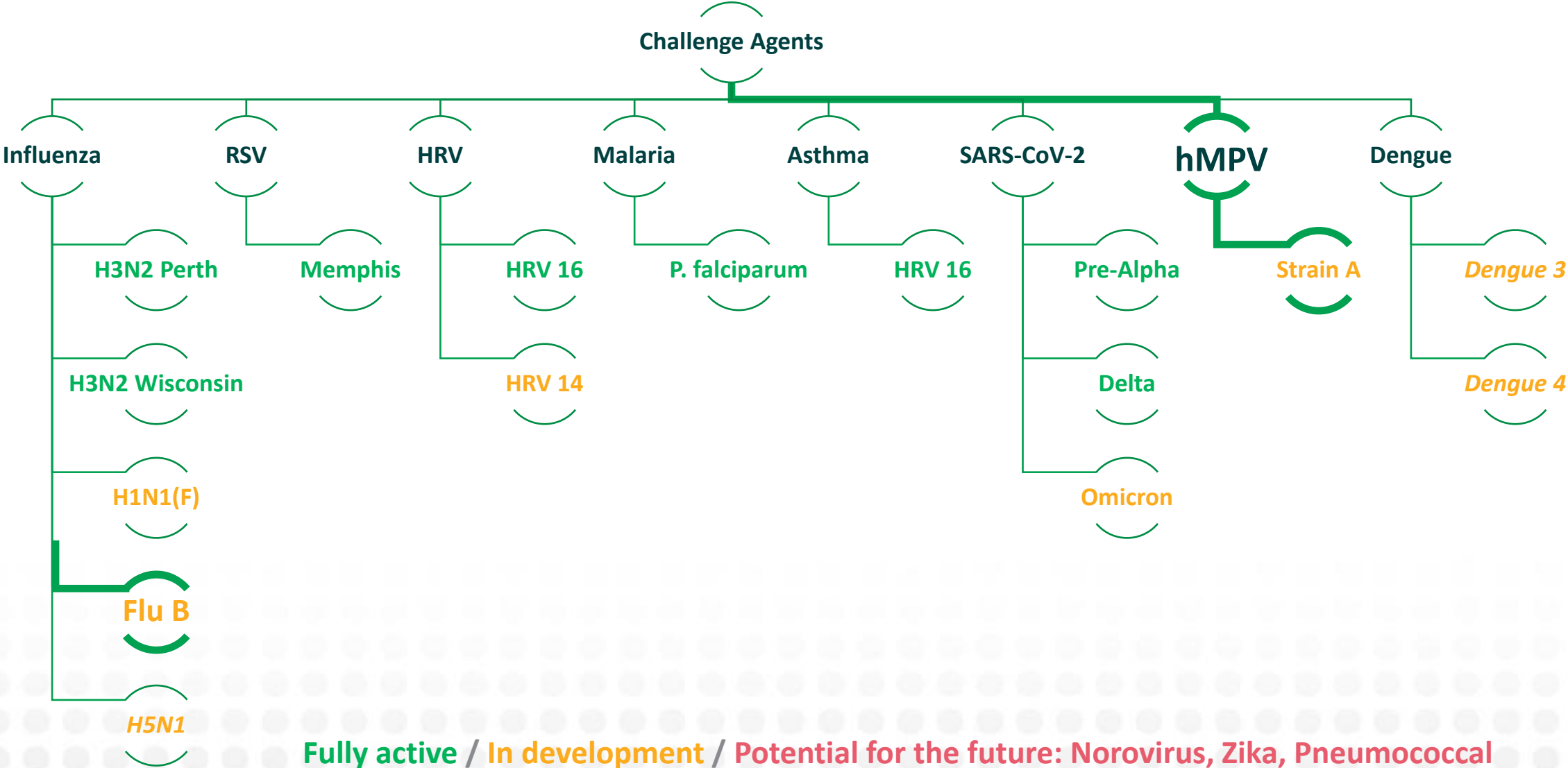
1 Out-patient follow-up visit after 1 month



The Result

- Rapid positive efficacy data
- Support fundraising activities
- Endpoints confirmed for later stage trial
- Received Fast Track designation
- Currently in late-stage trials

World Leading Human Challenge Model Offering



Fully active / In development / Potential for the future: Norovirus, Zika, Pneumococcal


Influenza B: Increases capabilities to Type B Influenza

hMPV: Increasing interest by global biopharma



Influenza B has significantly increased in 2023 Flu season in Australia ⁽¹⁾

4-18% *Of people with lower respiratory tract infections have hMPV ⁽³⁾*




Generally lower incidence than Influenza A but disease is just as severe ⁽²⁾

5-16% *Of children infected with hMPV develop more severe symptoms ⁽⁴⁾*

Challenge *Very difficult to run field trials in this indication due to unpredictable incidence*

>16K *Deaths worldwide in children under 5 years could be attributed to hMPV ⁽⁵⁾*



A number of vaccines have failed in efficacy against this specific strain

0 *No vaccine or specific antiviral treatment approved to treat hMPV ⁽⁶⁾*

Increases the potential to conduct combo-vaccine HCTs

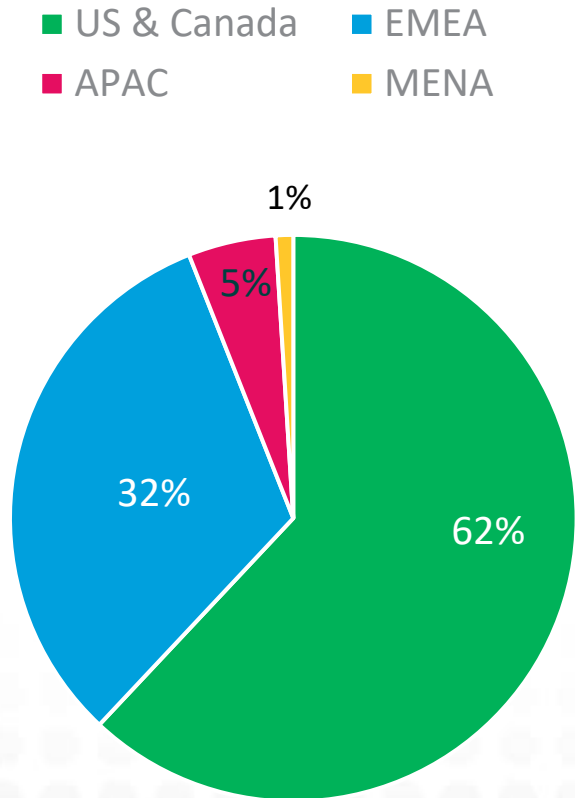
(1) NSW Health
(2) Healthline

(3) Howard LM, et al. 2021
(4) American Lung Association

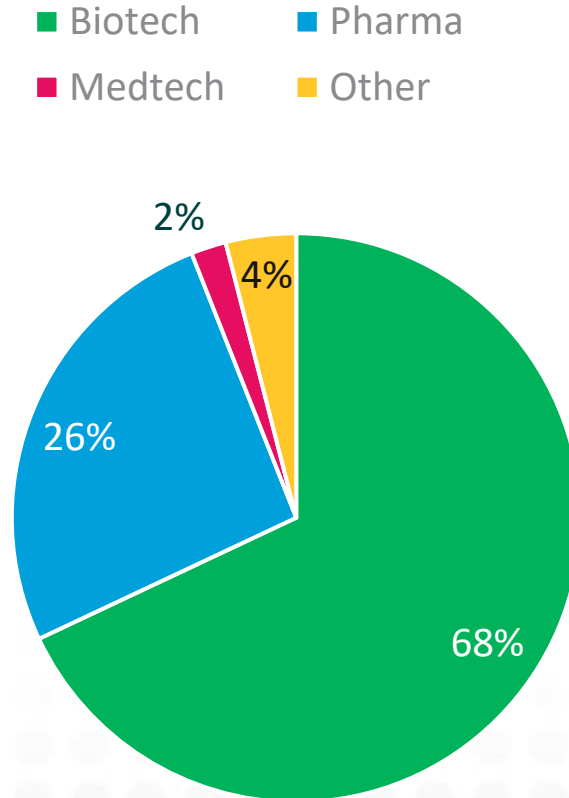
(5) Wang X, et al. 2021
(6) CDC

Diverse and Growing Sales Pipeline

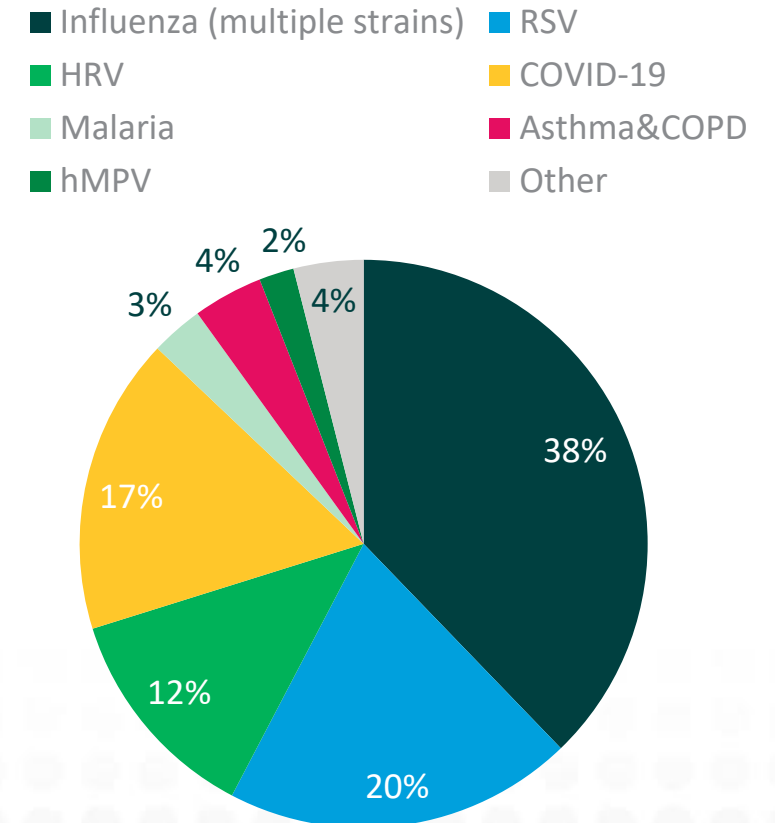
**Pipeline Distribution
by Region**



**Pipeline Distribution
by Client Type**



**Pipeline Distribution
by Model**



New Services Drives Margin Growth

hLAB

Expanded Lab Services

- Standalone lab services
- CAP Accredited
- Additional space

Phase II / III Site Services

- Single or multi-centre site
- Healthy or primary care indications



FluCamp

Clinical Trials Recruitment

Volunteer repurposing

- 1st contract signed
- Ineligible HCT volunteers
- >85% of FluCamp volunteers

Consulting Services

- Clinical development
- Regulatory guidance
- Quality Assurance

New synergistic services under review

Venn - Continuing to Grow and Expand

Seamless drug development support service (“Bench-to-Bed”)



20%+ year-on-year revenue growth driven by Venn’s early clinical services

18%

Increase in Venn employees year-on-year

New office at Leiden Bio Science Park

Driving collaboration & interaction with potential customers from the largest life science community in Benelux

75%

Repeat Business



Investment in key growth areas - ATMP & Drug Device Consulting

Paris

Delivering key services to hVIVO’s challenge studies

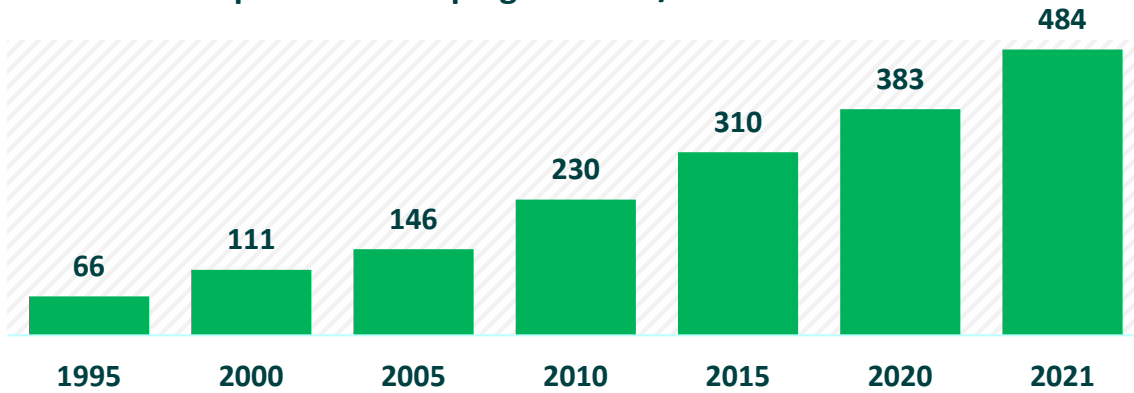


Cross-selling clients to hVIVO services



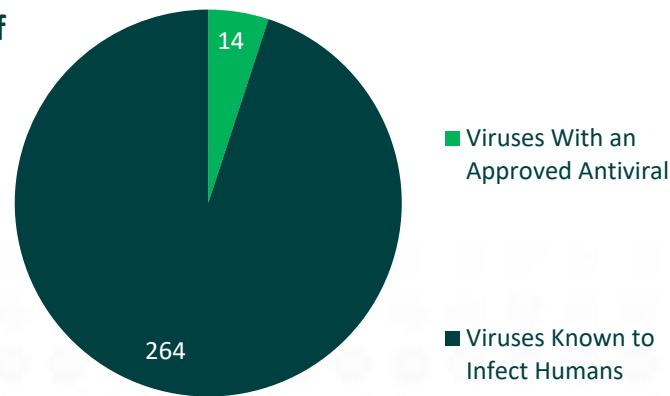
A Growing Market

Companies Developing Vaccines/Antivirals Over Time



- Increasing number of vaccines and antivirals in development
- Need for new and improved vaccines & treatments
- Increased awareness of the value of HCTs
- Tighter funding environment increases HCT need

Antiviral development has been strong, but there is still plenty of room for further research.



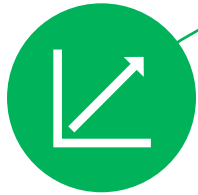
Source: Informa (Mar 2022).
The Economist (Mar 2022).

Active Challenge Studies over Time (academic & commercial)



Source: MCSI, Informa (Mar 2022)

New Facility – Canary Wharf



WHY NOW?

- Customer demand & orderbook
- Lack of space – beds & lab
- Availability of right facility, right price
- Customer funding
- Current leases



OPERATIONAL IMPACT

- Expedite delivery
- Multiple concurrent trials
- Increased lab capacity
- Consolidation of quarantine beds
- Improved bed / staff utilisation



FINANCIAL IMPACT

- Nominal cost to the Company
- Similar lease costs over 10 yrs
- Reduced cost / bed
- Potential to improve margins
- Raised revenue cap
- Potential for future growth




EMPLOYEE IMPACT

- Company culture
- ESG
- Improved facilities for our staff and volunteers

New State-of-the-Art Facility to Meet Growing Demand


50 quarantine bedrooms with potential to increase to 70



Larger virology and immunology lab




Outpatient unit to facilitate Phase II and III field trials



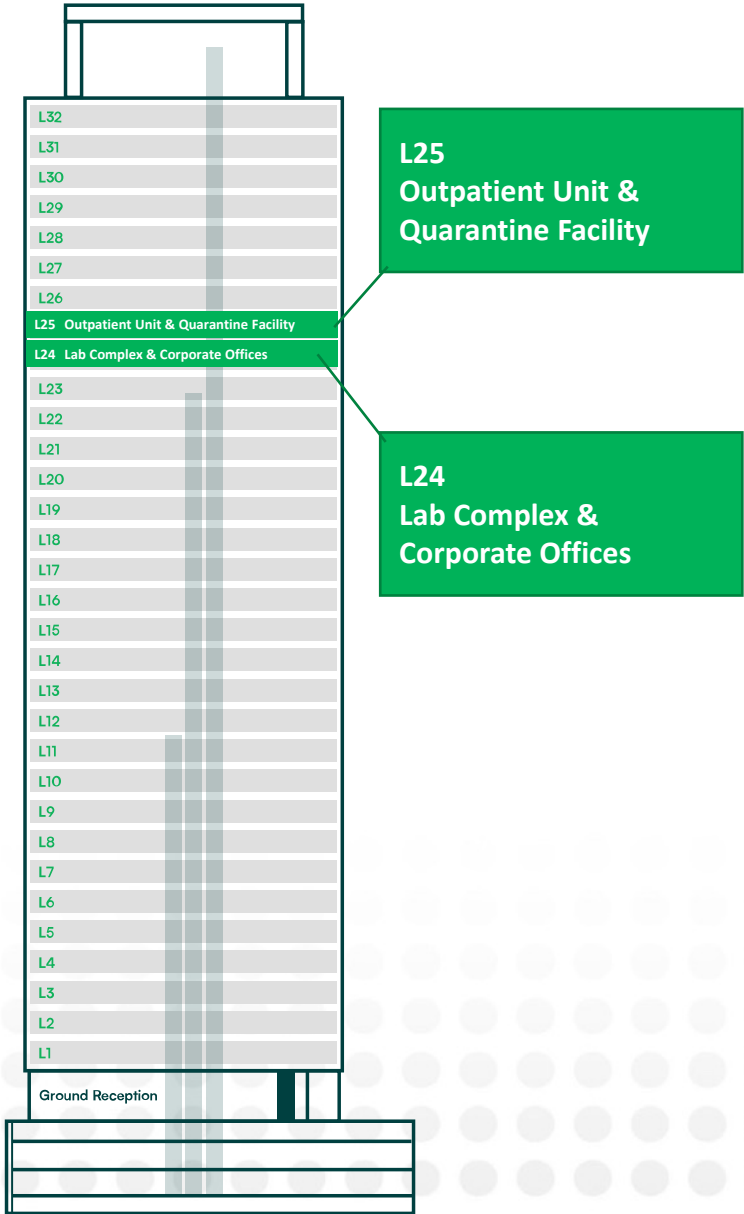
Corporate Offices



- 10-year lease, 5-year break
- Reduced aggregate rent per sq ft
- Rent cap in place
- >30% more usable space

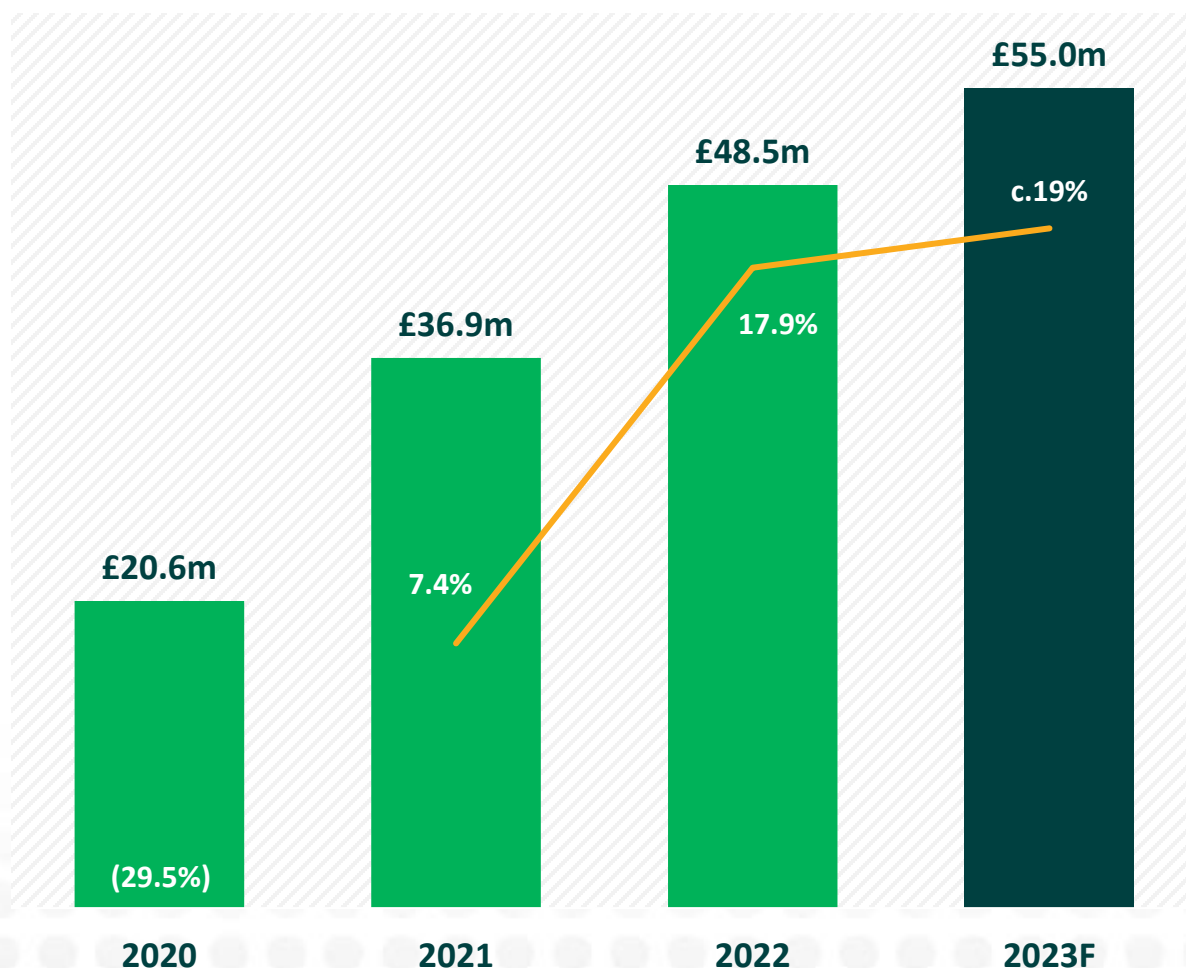


Plumbers Row and Manchester FluCamp screening facilities and outpatient unit will continue to serve as convenient locations for prospective volunteers



Guidance Upgrade

Upgrading Revenue¹ & EBITDA for 2023



¹Revenue excludes other income, such as R&D tax credits

Full Year Outlook

- Upgrading full year revenue guidance to £55m for 2023
- Upgraded 2023 revenue guidance is fully contracted
- Upgrading 2023 EBITDA margin to c.19%
- Visibility of contracted revenue into H2 2024
- Intention to pay a nominal annual dividend, dividend policy to be set out in 2024

Investment Case



Excellent Performance

- Strong revenue, EBITDA, and sales
- Robust cash position
- Improving operational efficiencies and margins



Growing Revenue Streams

- New 50-bedroom facility
- Increased lab capacity
- Increase outpatient capacity
- New services



Record Visibility

- Guiding £55m revenue 2023
- c. 19% EBITDA margin 2023
- Fully contracted for 2023 revenue
- Significant visibility into H2 2024
- Nominal Annual Dividend

A long-term sustainable growth model



**World Leading
Capabilities**



**Expanding
Market**



**High Barrier
to Entry**



**Strongest Ever Sales
Pipeline**

Questions

Appendix

History of hVIVO

1946

UK Government establishes the human challenge Common Cold Unit in Salisbury, UK.



RETROSCREEN VIROLOGY
CONQUERING VIRAL DISEASE

1989

Common Cold Unit closes. Retroscreen Virology is founded by Prof John Oxford & Pat Meeking

2001

Retroscreen's first human challenge trial

2001-2007

Retroscreen recruits 800+ influenza volunteers



Dec 2019

hVIVO acquired by Open Orphan

June 2019

Venn acquired by Open Orphan

hVIVO

2015

Retroscreen Virology rebrands as hVIVO

2011-2015

Major investment in facilities & challenge model development



2008

Dedicated Volunteer recruitment platform

UK COVID CHALLENGE

2020

hVIVO partner with UK Government to conduct world's first COVID-19 challenge trial



2021

Spin out of infectious disease product portfolio: Poolbeg Pharma plc

FluCamp

Clinical Trials Recruitment

2022

Expanded facilities; increased lab offering and expanded clinical trial offering

hVIVO

Open Orphan plc rebranded to hVIVO plc

Continuing to expand offering to drive new streams of revenue

Benefits of Human Challenge Trials

SCIENTIFIC



Generates invaluable dosing, safety and efficacy data

Helps optimise for larger field trials

De-risks Phase III programs

CLINICAL DEVELOPMENT



Requires fewer subjects

Significant time savings

No seasonal dependence

REGULATORY



Potential for Fast Track or Breakthrough designation - accelerating time to market

Potential approval and Emergency Use Authorisation

FINANCIAL



Significant valuation uplift for Biotech sponsor

Quick, cost-effective data in a tight funding environment

Allows products to “Succeed fast” or “Fail Fast”

FluCamp Recruitment Platform

Volunteer recruitment is the #1 challenge for all CROs

230,000+

Volunteers in Database

100%

Trial Recruitment Success

Improvements

Driving increased throughput and efficiency

940,000

FluCamp.com visits H1 23

225,000

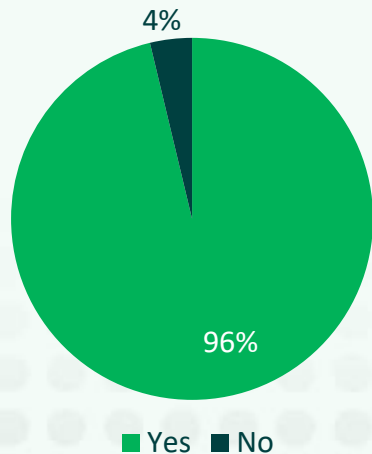
Calls made H1 23

74,000

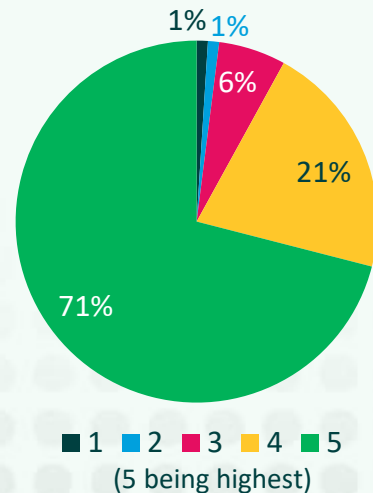
Leads generated H1 23



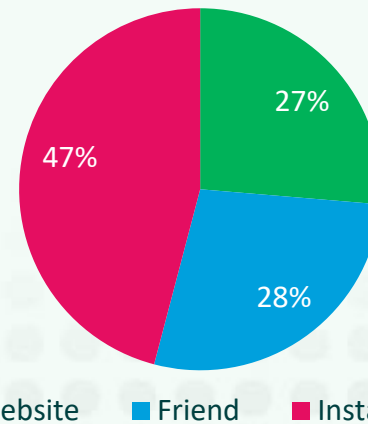
Would you recommend FluCamp?



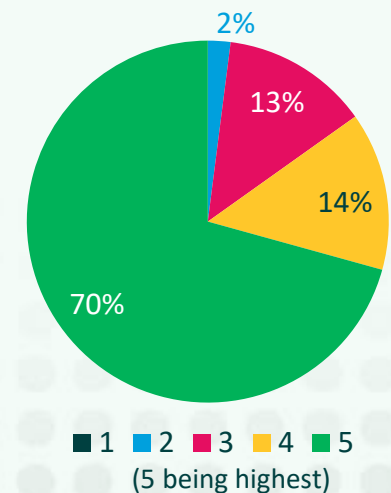
How would you rate the food?



How did you hear about FluCamp?



How do you rate the information provided before the trial?



Note (1): Sources: Perspective in Clinical Research
Note (2): Sources: GlobalData

Significant Barriers to Entry

1. World leading challenge model portfolio

- The broadest range of challenge agents on the market
 - Continuing to expand our offering based on market demand
-

2. Unparalleled expertise & experience

- History dating back to 1945 Common Cold Unit
 - UK regulators are strong supporters of challenge trials
 - Highly efficient in challenge virus manufacturing and characterisation
 - Team of world leading experts
 - Excellent track record of success for our clients
-

3. FluCamp volunteer recruitment

- In house recruitment capabilities with 100% success rate

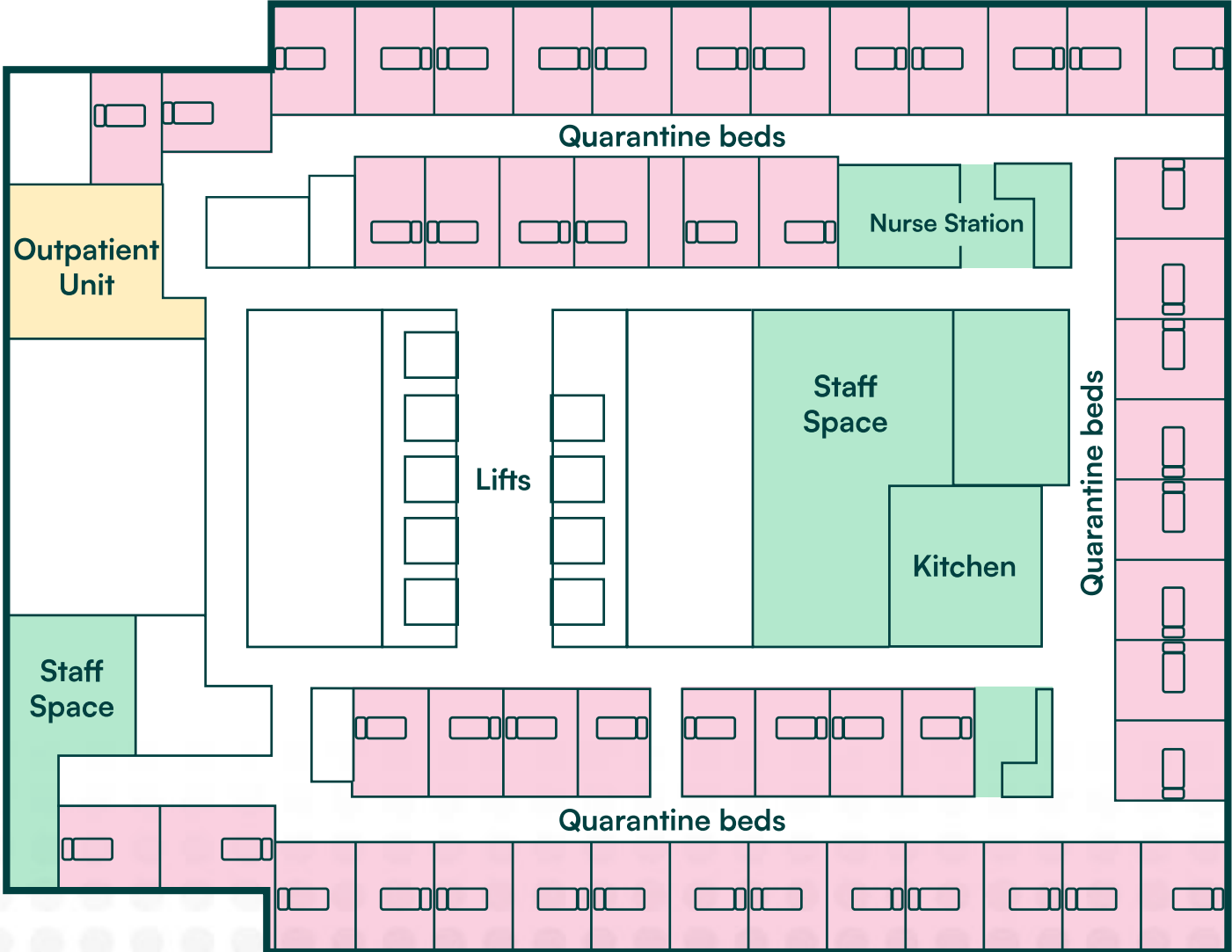
4. Strong client base

- Diverse customers across the biopharma sector
 - Preferred partner for 4 of the top 10 global biopharma
 - Expected that these influential decision makers will continue to have a positive impact on demand
-

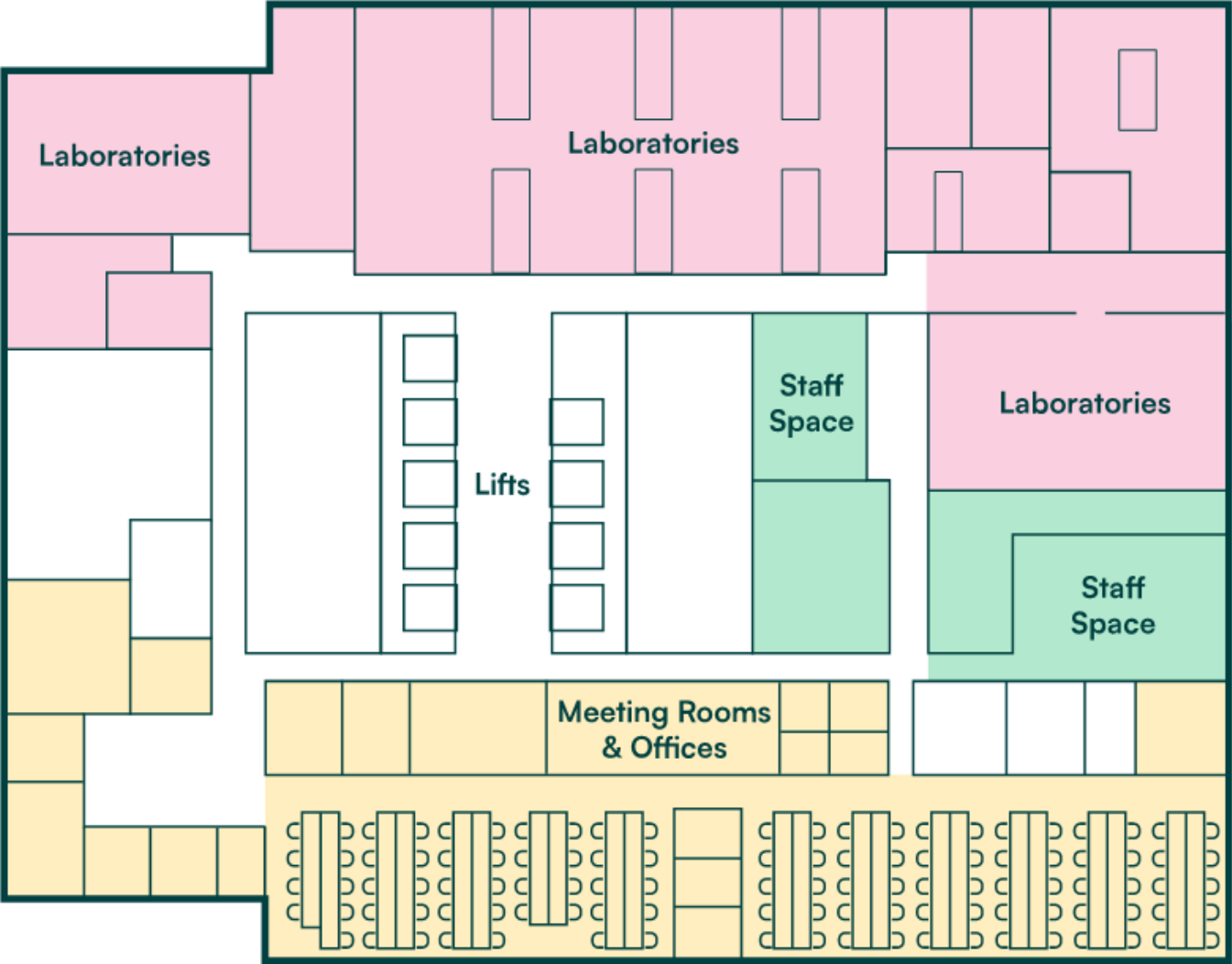
5. State-of-the-art facilities

- Multiple quarantine sites - the only commercial-scale infection control facility
- Volunteer screening sites in London & Manchester
- Specialised onsite virology and immunology
- Vaccine field study site in Central London

Level 25 - Quarantine



Level 24 - Labs & Corporate Office



hVIVO ESG Group established in 2023 for initiating, progressing, and monitoring our ESG objectives

Canary Wharf have a strong focus on ESG and will help us to reach our goals for improving and enhancing or corporate social responsibility

hVIVO's ESG Values

- 1 *Commitment to ethical & compliant business practices*
- 2 *Advancing Health & Research*
- 2 *Commitment to Volunteers & Patients*
- 4 *Commitment to our Staff*
- 3 *Social & Community Investment*
- 6 *Operating Sustainably*

Canary Wharf ESG



5G & WIFI
Future proofed, superfast connectivity
Cisco, Vodafone, AWS, O2, Virgin, EE

ALL WOOD FROM FSC CERTIFIED SUSTAINABLE FORESTS

LARGEST SUSTAINABLE DEVELOPER IN THE UK

ZERO WASTE TO LANDFILL FROM MANAGED AREAS SINCE 2009

AMAZON CLIMATE PLEDGE
The first in our sector to join

25% LOWER NOX EMISSIONS THAN THE REST OF CENTRAL LONDON*

100% ELECTRICITY PURCHASED FROM RENEWABLE SOURCES
since 2012

NET ZERO CARBON BY 2030

PLASTIC FREE
1st commercial centre to be awarded
communities status from environmental charity Surfers Against Sewage

BREEAM®
Targeting Outstanding

9 MILLION
single use plastic (SUP) items eliminated and recycled

EPC 'B' RATING

Facilities Overview

QMB Clinic



QMB Laboratories



Facilities Overview

Whitechapel Clinic and Screening Centre



Plumbers' Row Corporate Office & Screening Facility



Manchester Screening Centre



Biobank



hVIVO
formerly Open Orphan plc

Stay in touch



Ticker: HVO