



**hVIVO**  
formerly Open Orphan plc

# Company Presentation

January 2024

Ticker: HVO

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# Presenters

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**Dr. Yamin 'Mo' Khan**  
CEO



**Stephen Pinkerton**  
CFO

# Company Overview

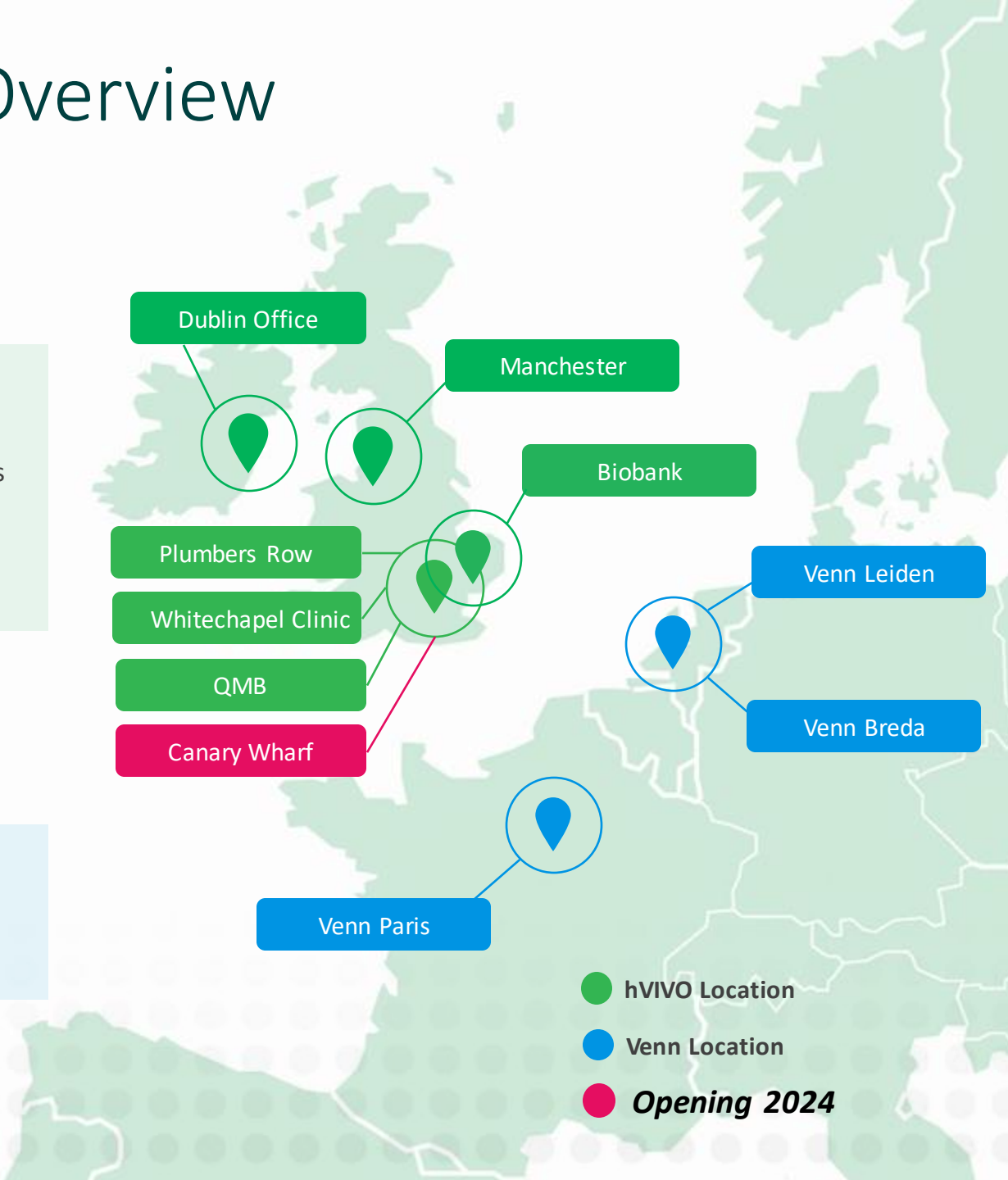


- World Leader in Human Challenge Trials
- Onsite Virology Laboratories
- FluCamp: tech-enabled volunteer and patient recruitment platform



Venn Life Sciences  
*part of hVIVO*

- Early Clinical Drug Development Services
- Biometric services



## 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

# A Record Year of Growth

 <b>Delivering Record Financial Performance</b>	<b>£56.0m</b> Revenue <sup>1</sup> 2022: £48.5m	<b>c.22%</b> EBITDA Margin 2022: 18.7%	<b>£37.0m</b> Cash Balance at 31 Dec 2023
 <b>Exceptional Operational Execution</b>	<b>9</b> Active Human Challenge Trials in 2023	<b>100%</b> Increase in Completed Lab Assays	<b>140k+</b> FluCamp Leads Generated in 2023
 <b>Scaling &amp; Driving Efficiencies</b>	<b>New Facility</b> Canary Wharf: Opening H1 24	<b>New Models</b> hMPV & Flu B	<b>New Services</b> Lab, Site, Recruitment
 <b>Well Positioned for Future Growth</b>	<b>£62m</b> FY24 Revenue Guidance <sup>1</sup>	<b>£80m</b> Weighted Contracted Orderbook (31 Dec 2023)	<b>£100m</b> Target Revenue by 2028

<sup>1</sup>Revenue excludes other income, such as R&D tax credits.



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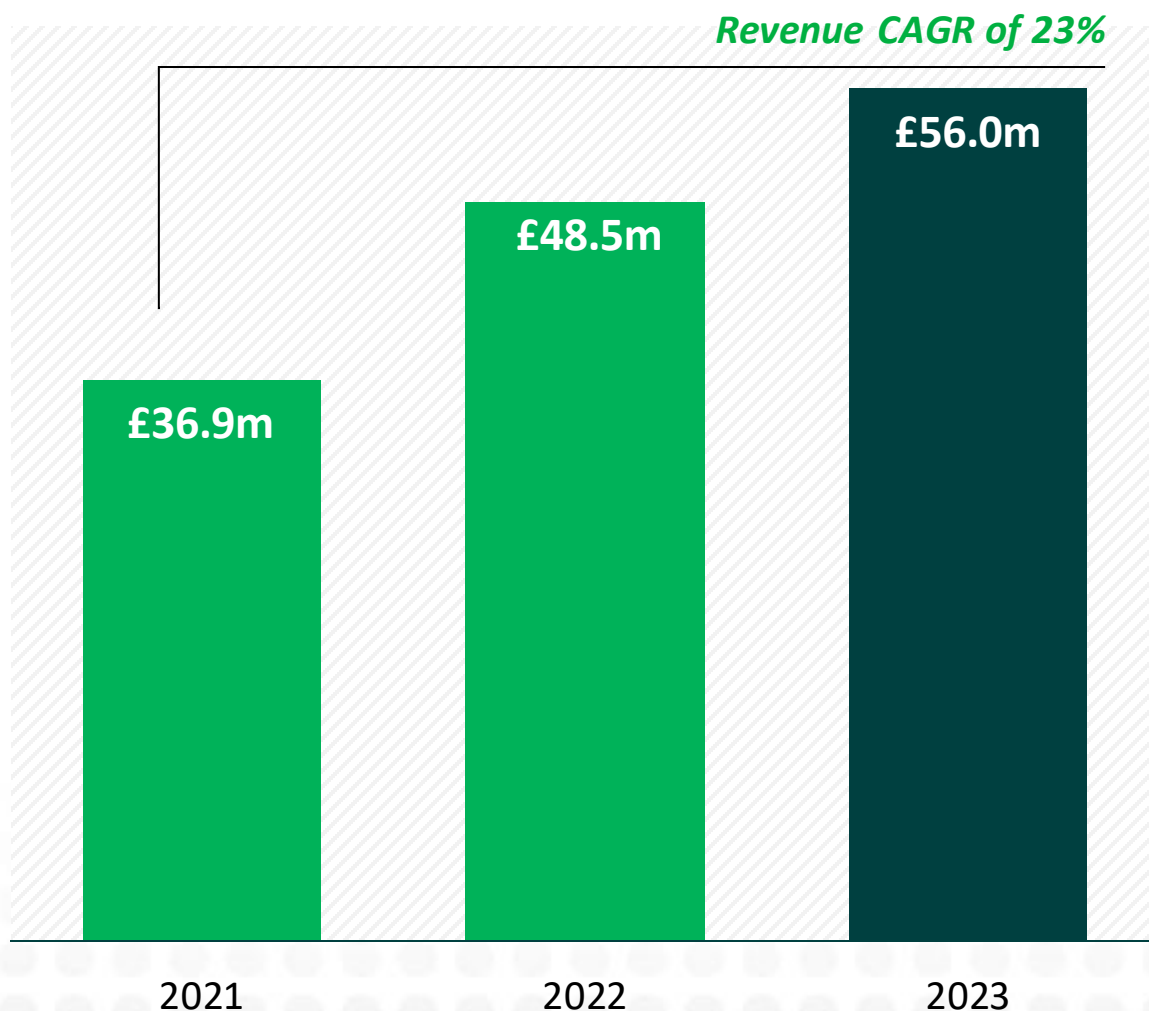
Stephen Pinkerton

Chief Financial Officer



*Financial performance review*

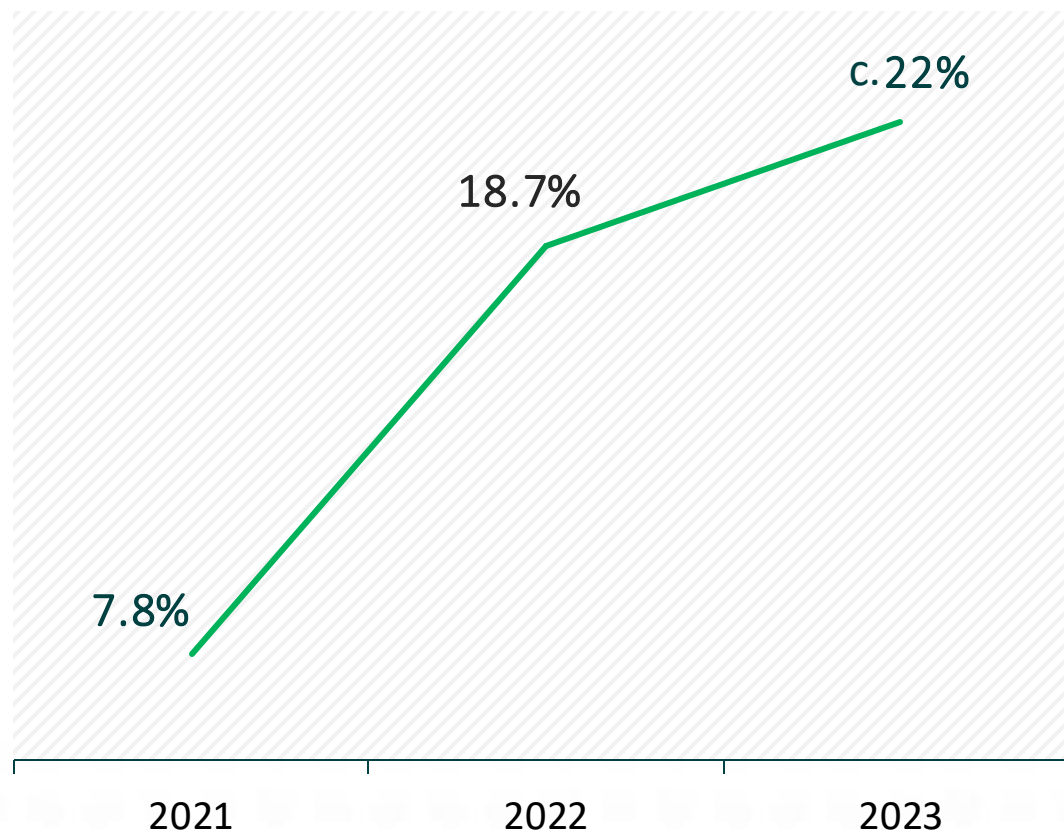
# Another Year of Record Revenue



## Revenue

- Record revenue of £56.0m for 2023
- Revenue increases 15.5% year-on-year
- 3 X bespoke / full-service contract wins
- Multiple studies run concurrently
- Venn consulting up >30%
- Larger studies and facility acceleration fees offset by impact of MHRA delays

# A Sustainably Profitable Business

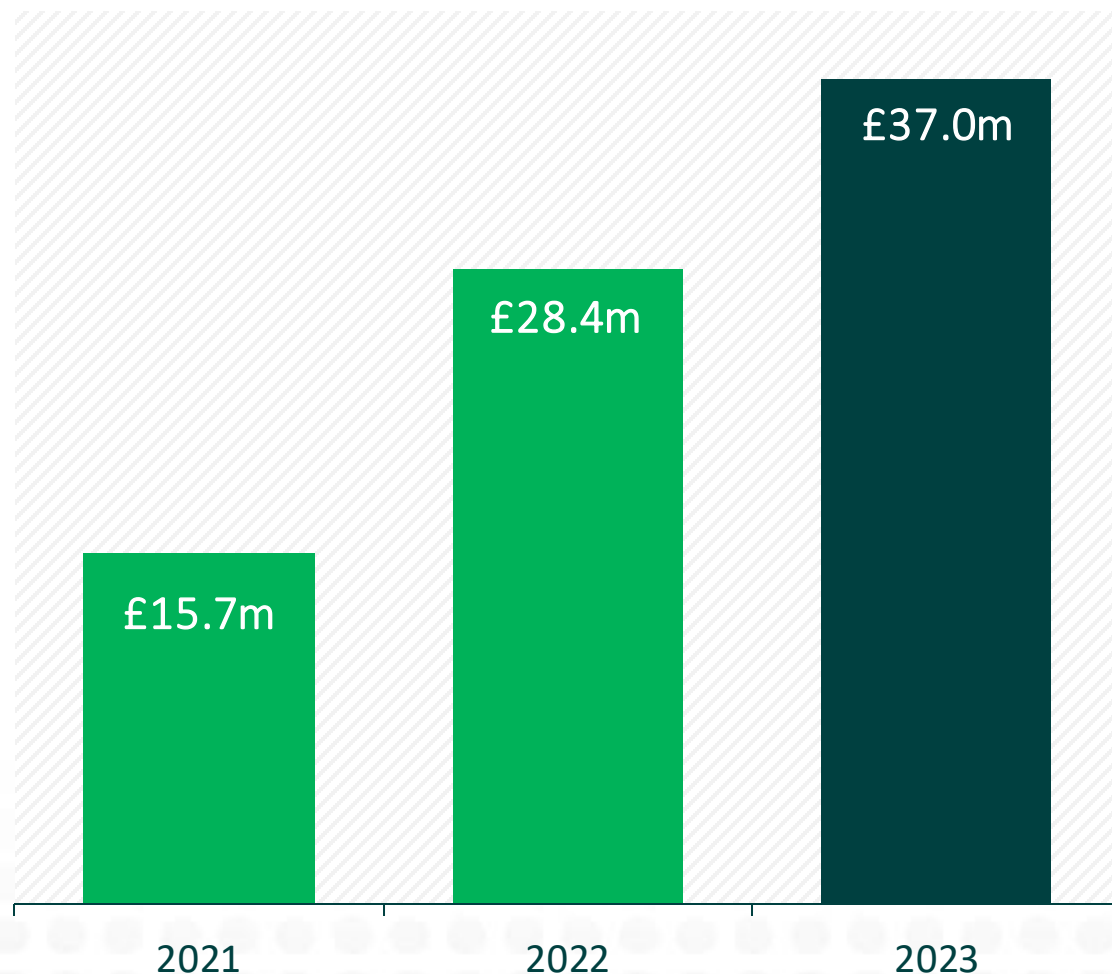


## EBITDA Margin

- 2023 EBITDA margin c.22%
- Strong operational delivery team
- Multiple studies run concurrently delivering recruitment efficiencies
- Greater volume leading to increased utilisation of staff and facilities
- Facility acceleration fees offset by impact of MHRA delays



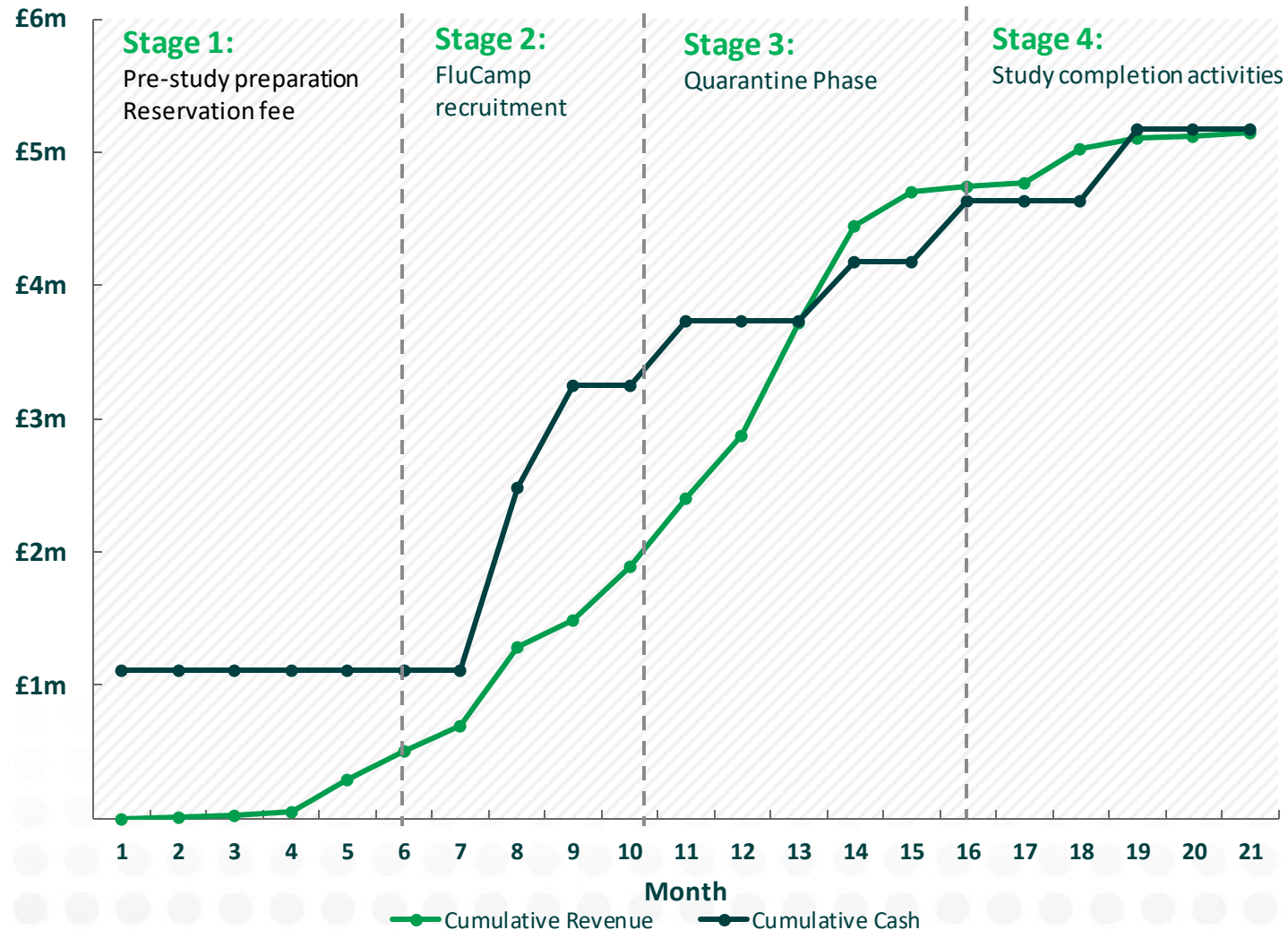
# A Sustainably Cash Generative Business



## Cash

- Strong cash position with £37.0m as at 31 Dec 2023
- Includes £3.0m dividend paid in 2023
- No debt
- Advanced fees from orderbook growth & contract delivery milestones
- Facility fee receipts in advance of spend
- Increasing underlying operating margins
- Annual dividend to be paid in 2024

# Challenge Trial Revenue Recognition Profile



- hVIVO receives an upfront, non-refundable booking of c.10-20% of total study value to reserve quarantine space
- This mitigates against the risk of cancellation or client delay
- Majority of revenue recognition relates to the recruitment and quarantine phase of the study

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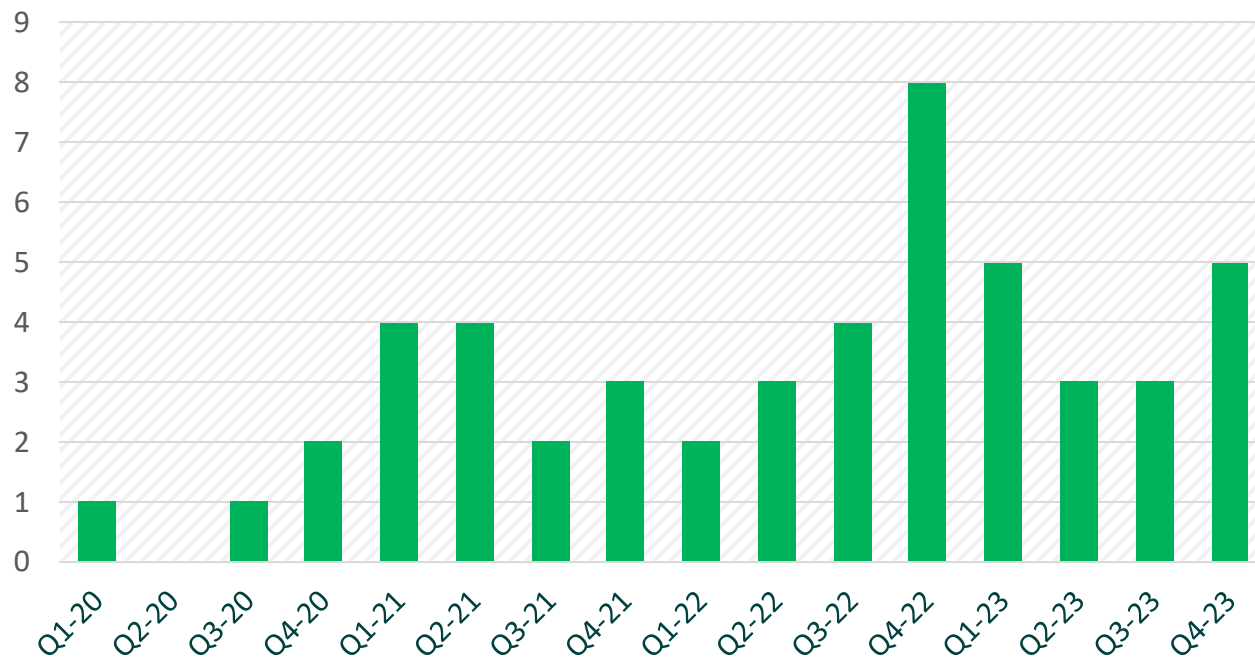
Dr. Yamin “Mo” Khan  
Chief Executive Officer



*A year of record growth*

# Strong Operational Delivery in 2023

## Number of hVIVO Clients Generating £1m+ per Quarter



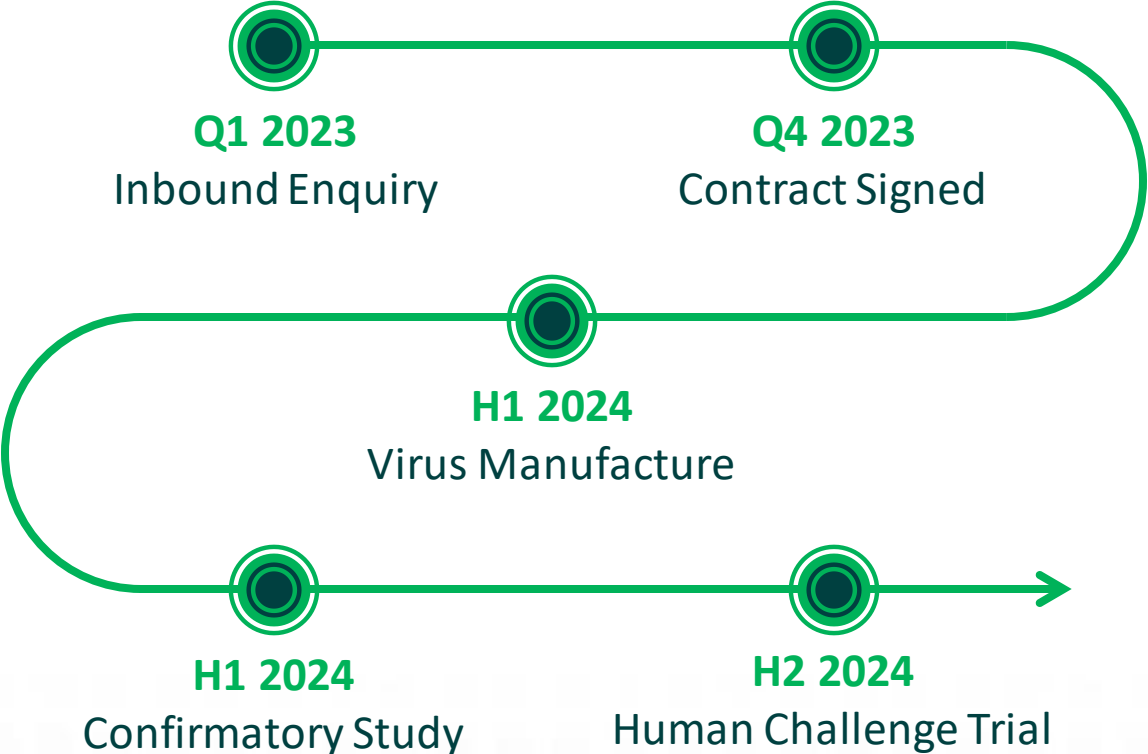
- Larger studies
- Strong volunteer enrolment
- Full-service contracts
- Concurrent trial conduct
- Stronger orderbook
- Diversification of client base

## Key Highlights





- Achieved sales target
- New and repeat customers contracted
- Multiple MSAs signed
- Record screening & inoculations
- Record laboratory assays
- 4 new models under development
- Leiden Office opened
- Construction started at Canary Wharf
- New cybersecurity system implemented
- Successful MHRA inspection
- Mitigation of MHRA delays
- ESG Group formalised

# Case Study: End-to-End Human Challenge Service

Repeat Big Pharma client goal: generate rapid data



## New Models in 2024

-  Influenza H1N1
-  Influenza B
-  Human Metapneumovirus (hMPV)
-  Respiratory Syncytial Virus (RSV)

Further diversifying hVIVO's leading portfolio of human challenge models

# FluCamp – Driving Efficiency in Volunteer Recruitment



**Simply smarter**  
Well established,  
cost effective  
and tailored  
recruitment.

**Target the right people**  
using an ever-expanding database.

**300,000+**  
Highly engaged &  
motivated volunteers

**100,000**  
Asthmatics

**97%**

Volunteers who complete a trial would recommend FluCamp to others<sup>1</sup>

Current TrustScore ⓘ  
**4.0** ★★★★★  
Based on 247 reviews

Average **Trust Pilot** rating

More 5-star reviews than competitor clinical trials companies

**88%**

Volunteers rate enrolment process as **GOOD to EXCELLENT**<sup>1</sup>

**>50%**

**UNIQUE** website visits to FluCamp.com in 2023 than our nearest CRO competitor<sup>2</sup>

**>17k**

**Volunteers** screened in 2023



**PROFESSIONAL** UK based engagement centre supporting enrolment and onboarding activities

# Venn – Continued Strong Delivery

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



>30% revenue growth driven by Venn’s early clinical services

# 18%

Increase in Venn employees year-on-year

# 75%

Repeat Business

# 100%

Customers surveyed would work with Venn again



Investment in key growth areas - ATMP & Drug Device Consulting



Cross-selling clients to hVIVO services

## New office at Leiden Bio Science Park

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

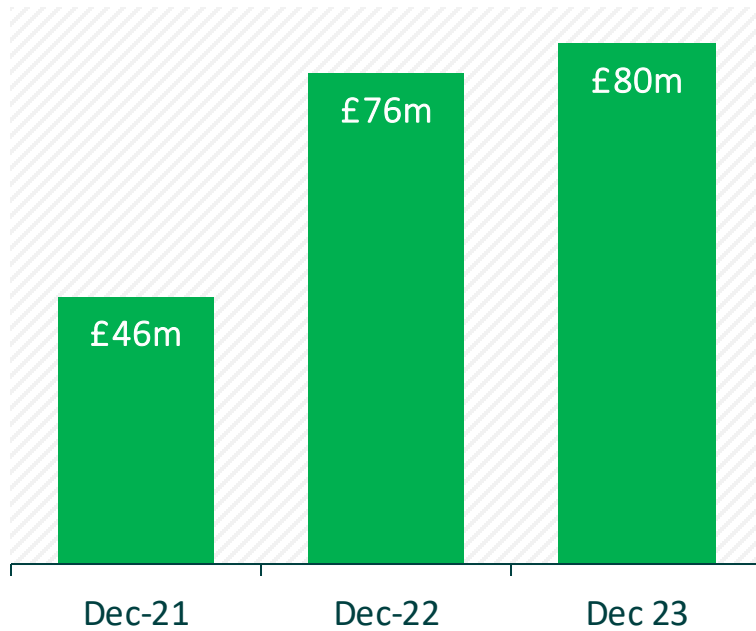


Building momentum into 2024

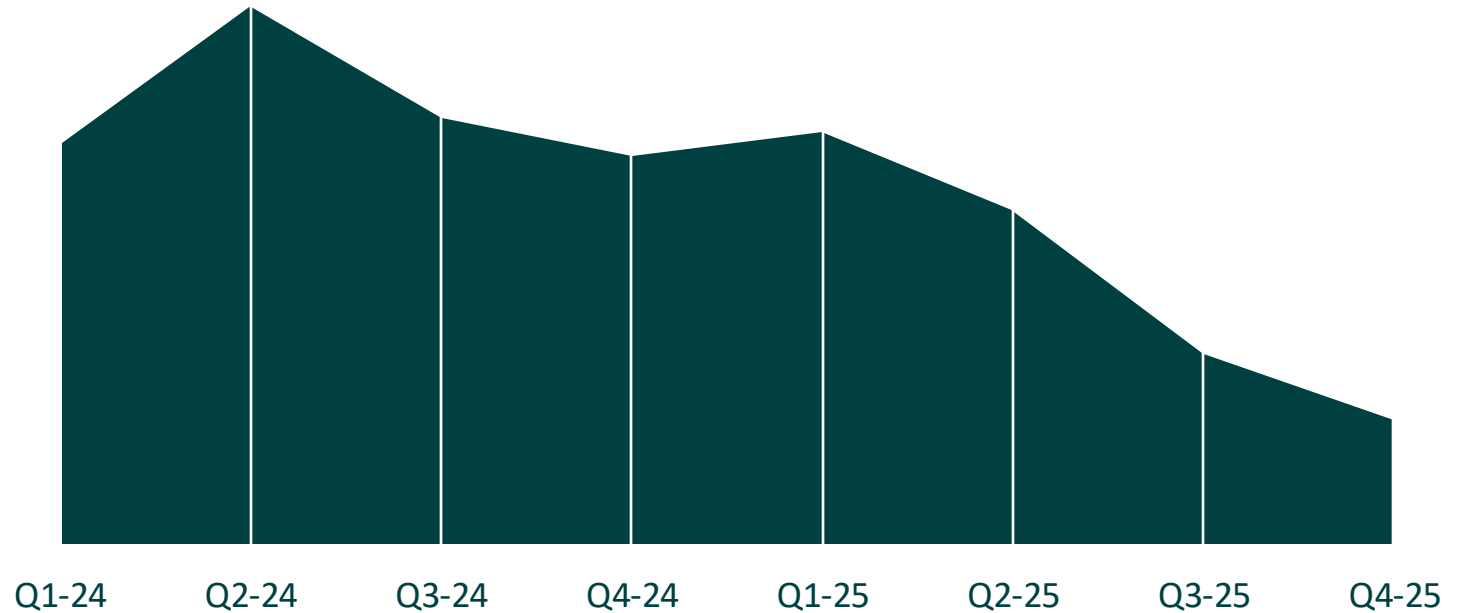


# Record Contracted Orderbook

## Net Contracted Orderbook



## Gross Orderbook Providing Record Visibility

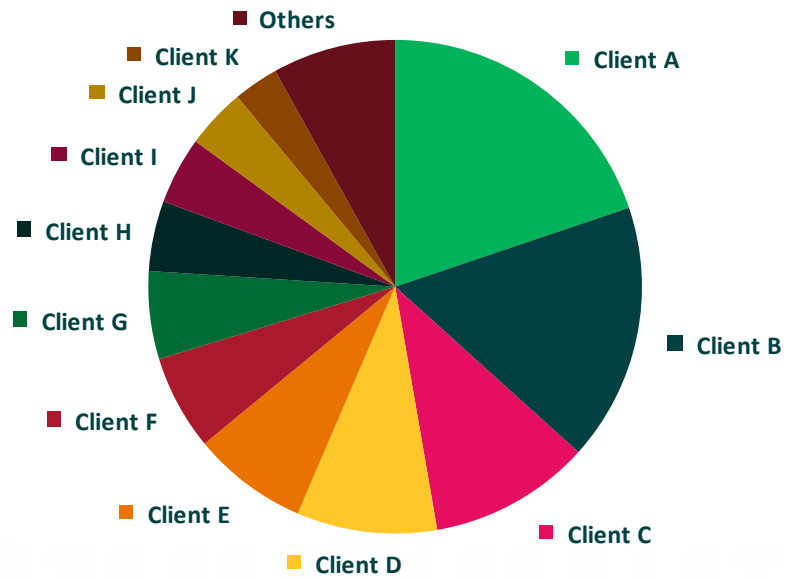


- Strong sales performance in 2023
- Growing orderbook after record revenue performance
- 90% of 2024 revenue covered by existing orderbook
- Good visibility into 2025

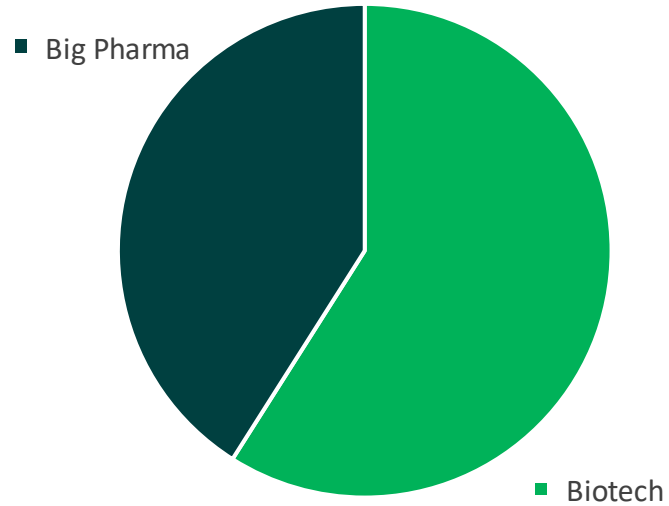
- £16.8m full-service RSV contract
- Bespoke hMPV challenge model contract
- £13.1m bespoke Flu B challenge model contract
- €3.2m Global Pharma consulting contract with Venn

# Diverse Contracted Orderbook

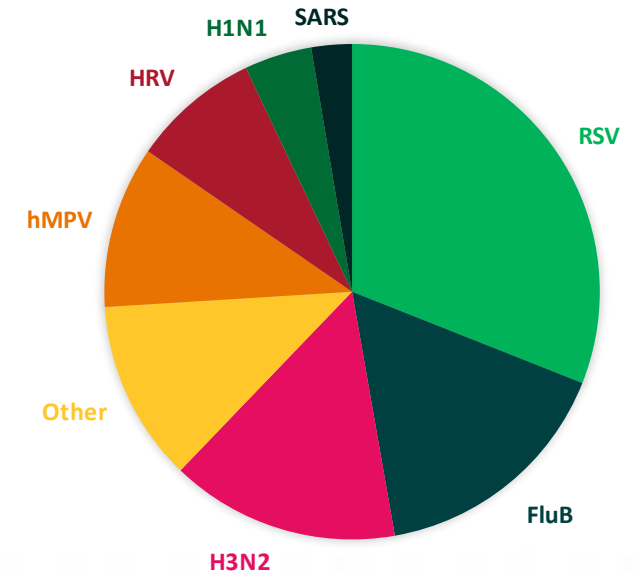
### Customer



### Client Type

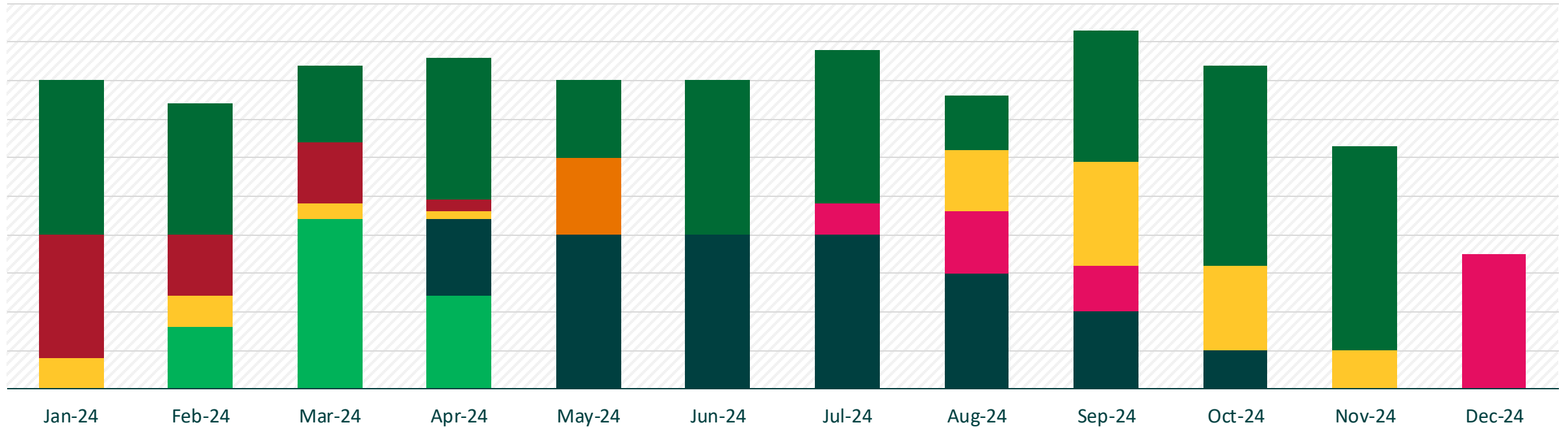


### Challenge Agent



# Diverse Orderbook - Driving Efficiencies

## #Inoculations by Challenge Model 2024



- Goal: utilise 3 different virus agents per month
- Multi-agent screening of volunteers
- Improves project delivery

- Increases efficiency
- Improved resource and site utilisation

# New State-of-the-Art Facility at Canary Wharf

## On track to open H1 2024

- 50 quarantine bedrooms
- Virology and immunology lab
- CL-3 Lab
- Outpatient unit
- Corporate office

## Foundation for growth

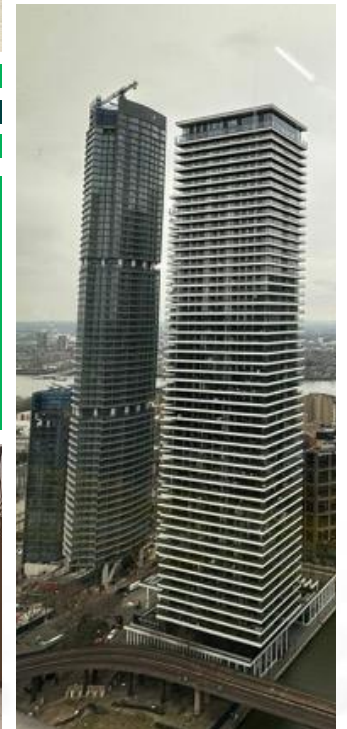
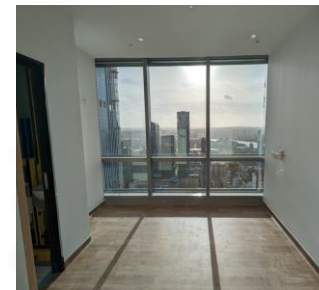
- Largely funded by clients
- Reduced cost per bed
- Aligned with current leases
- Potential to improve margins
- Increased revenue cap



## Progress Report

- |                                   |                     |
|-----------------------------------|---------------------|
| ✓ Floor plan and interior design  | ✓ Flooring          |
| ✓ Electrical & mechanical install | ✓ Painting          |
| ✓ Wall installation               | ✓ Lighting          |
| ✓ Ventilation system              | ✓ Quarantine doors  |
| ✓ Nursecall system                | ✓ Ensuite bathrooms |

## CANARY WHARF



# Improving Automation – Driving Efficiency

Shifting from paper-based processes to a fully integrated digital system

## Lab Information Management System (LIMS)

- Streamlined lab processes
- Enhanced interrogation readiness
- Integrated lab operation
- Improved efficiency

## Volunteer Management System

- End-to-end visibility of volunteer journey
- State-of-the-art CRM system
- Improving volunteer recruitment process
- Segmentation & profiling driving efficiency

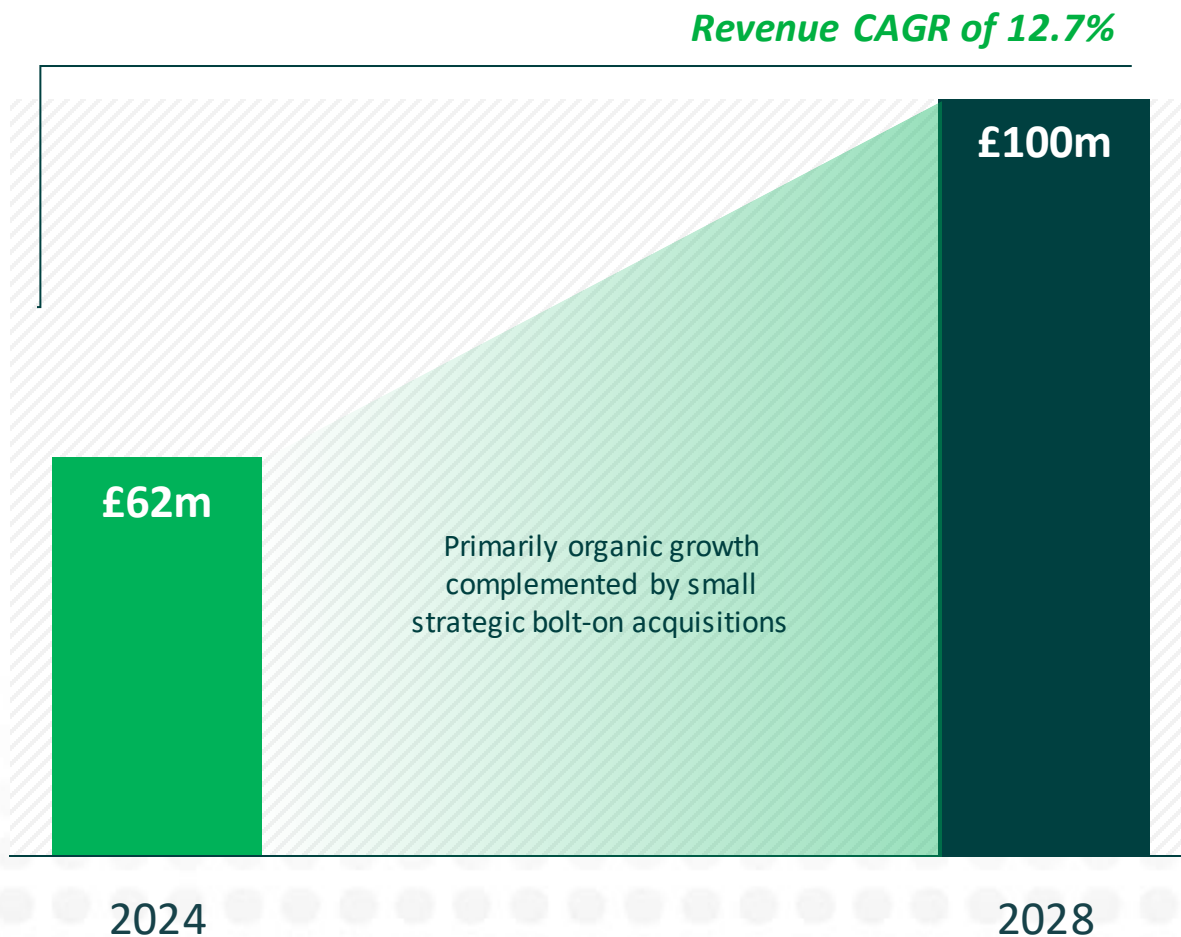
## eConsent / eSource / EDC

- Volunteer consent
- Instant access to data
- Increased compliance
- Enhanced study oversight



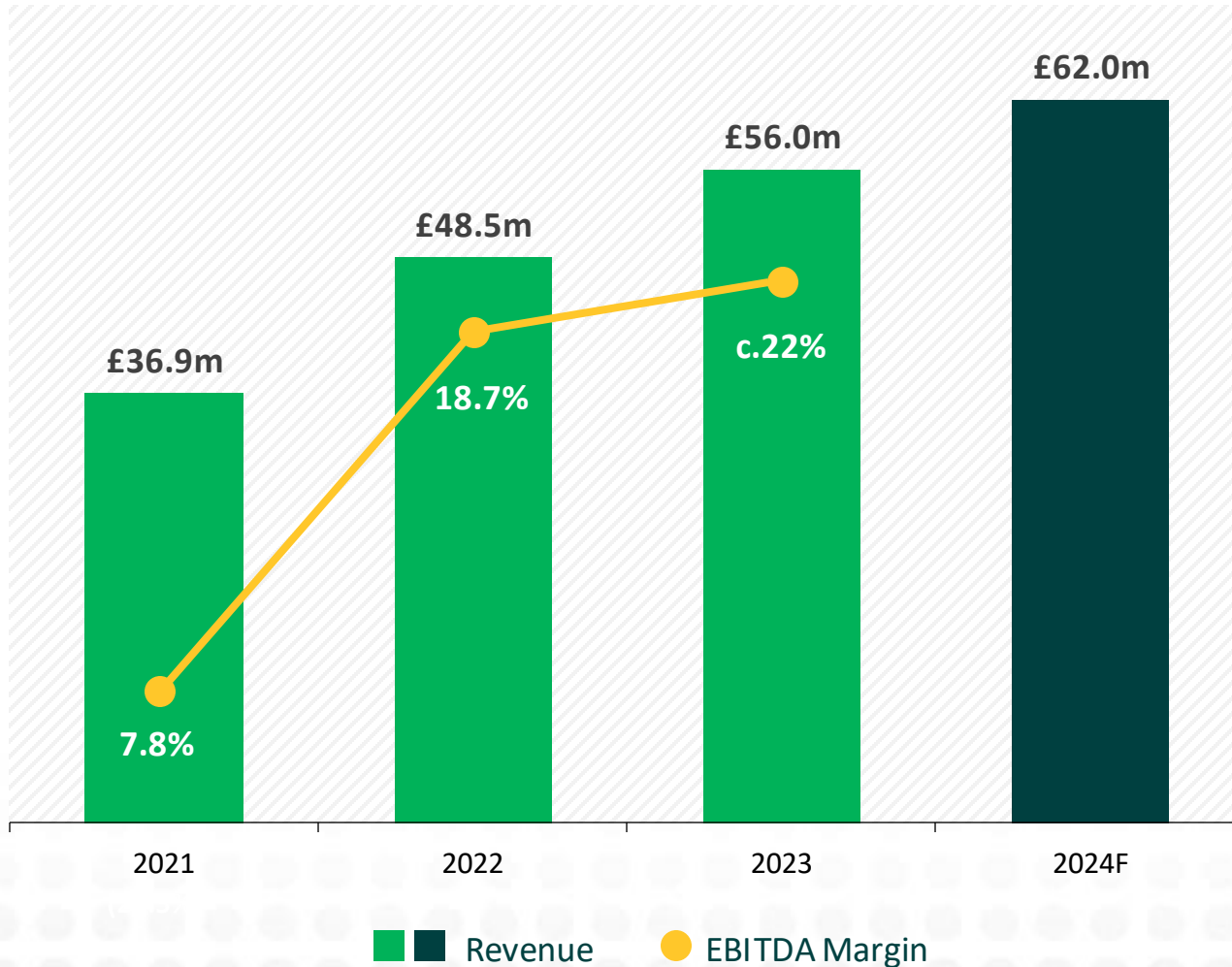
# Targeting £100m Revenue by 2028

Achievable through a combination of strong organic growth complemented with small bolt-on acquisitions that meet our disciplined strategic and financial criteria



1. Expansion of Lab Services
2. Full Service CRO Offering
3. Phase II / III Site Services
4. Volunteer Repurposing
5. Expansion of Venn Consultancy Services

# Financial Outlook into 2024



- Full year revenue guidance of £62m
- 90% of 2024 revenue contracted
- Record visibility into 2025
- Supported by weighted orderbook of £80m

<sup>1</sup>Revenue excludes other income, such as R&D tax credits



## Continued Delivery

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



## Scaling & Driving Efficiencies

- New CL-3 50-bedroom facility
- Increased lab capacity
- Increase outpatient capacity
- New challenge models
- New services



## Well Positioned for Future Growth

- Guiding £62m revenue 2024
- £80m weighted contracted orderbook
- 90% of 2024 revenue contracted
- Annual dividend
- Medium-term target of £100m revenue

A long-term sustainable growth model



World Leading  
Capabilities



Expanding  
Market



High Barrier  
to Entry



Strongest Ever Sales  
Pipeline

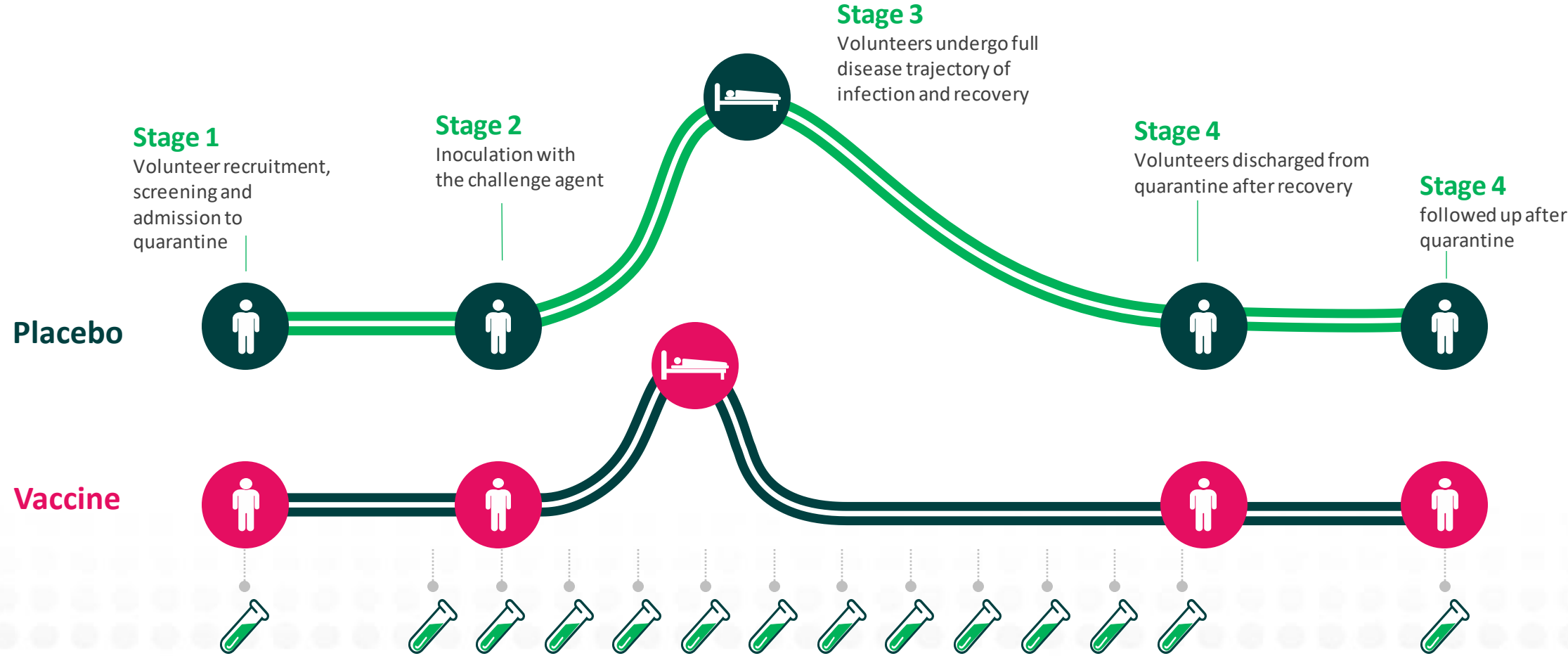


# Questions

# Appendix

# What is a Human Challenge Trial?

A clinical trial where healthy volunteers are exposed to a pathogen to test the effectiveness of vaccine and treatments...



...in a faster and more efficient setting.

# 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



Venn Life Sciences  
Think Research

**June 2019**

Venn acquired by Open Orphan



**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



**2022**

Expanded facilities; increased lab offering and expanded clinical trial offering



Open Orphan plc rebranded to hVIVO plc

*Continuing to expand offering to drive new streams of revenue*

# World Leading Human Challenge Model Offering

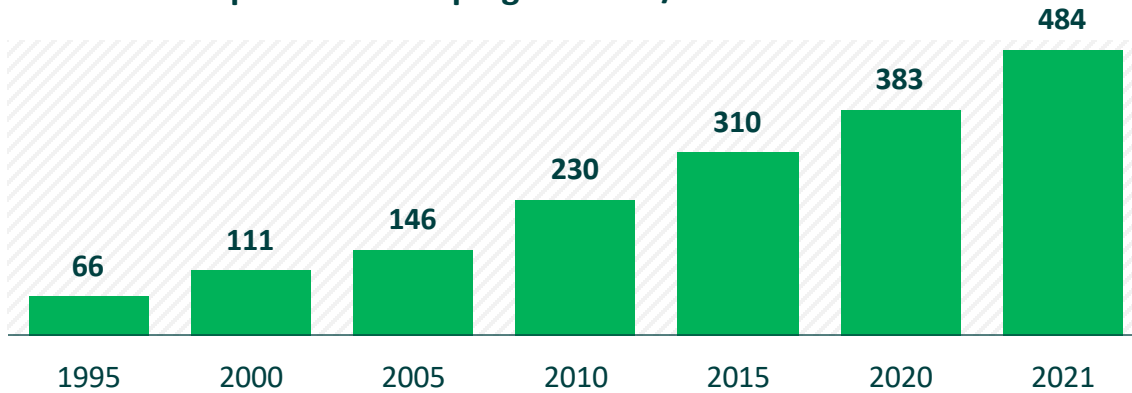
	Influenza	RSV	HRV	Malaria	Asthma	SARS-CoV-2	hMPV	Dengue
Virus Strain	H3N2 Perth	Memphis	HRV 16	P. falciparum	HRV 16	Pre-Alpha	Strain A*	Dengue 1*
	H3N2 Wisconsin		HRV 14*			Delta		Dengue 3*
	H1N1(F)					Omicron*		Dengue 4*
	Flu B*							
	H5N1*							

\* In development

Potential for the future: Norovirus, Zika, Pneumococcal

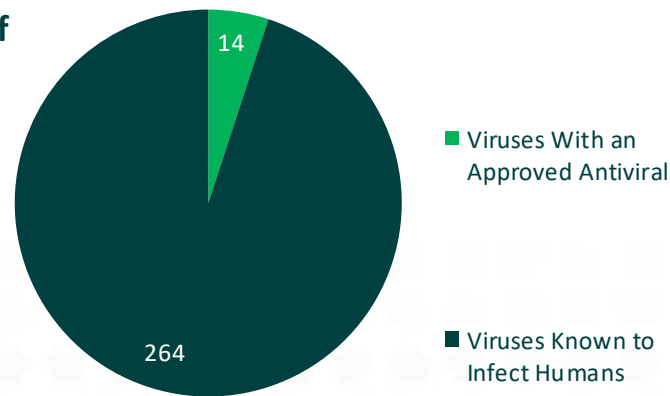
# A Growing Market

Companies Developing Vaccines/Antivirals Over Time



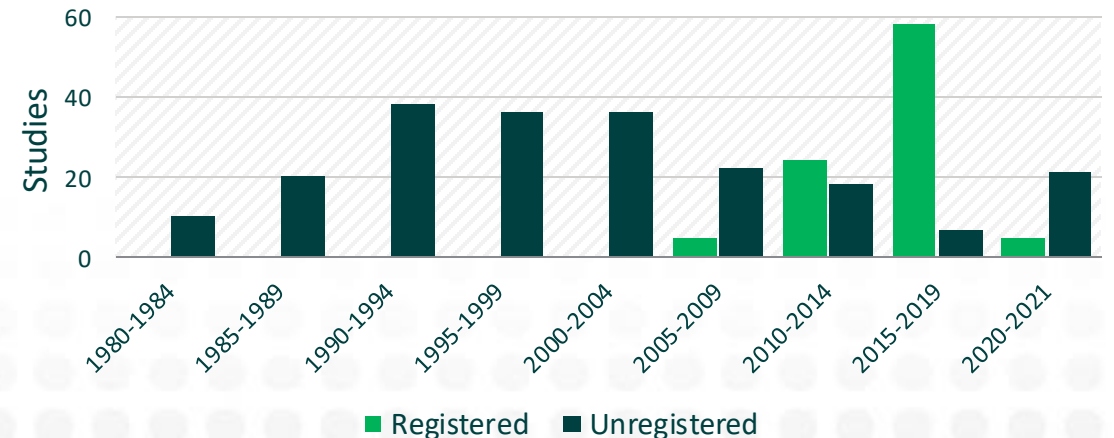
- Increasing number of vaccines and antivirals in development
- Need for new and improved vaccines & treatments
- Increased awareness of the value of HCTs
- Tighter funding environment increases HCT need

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



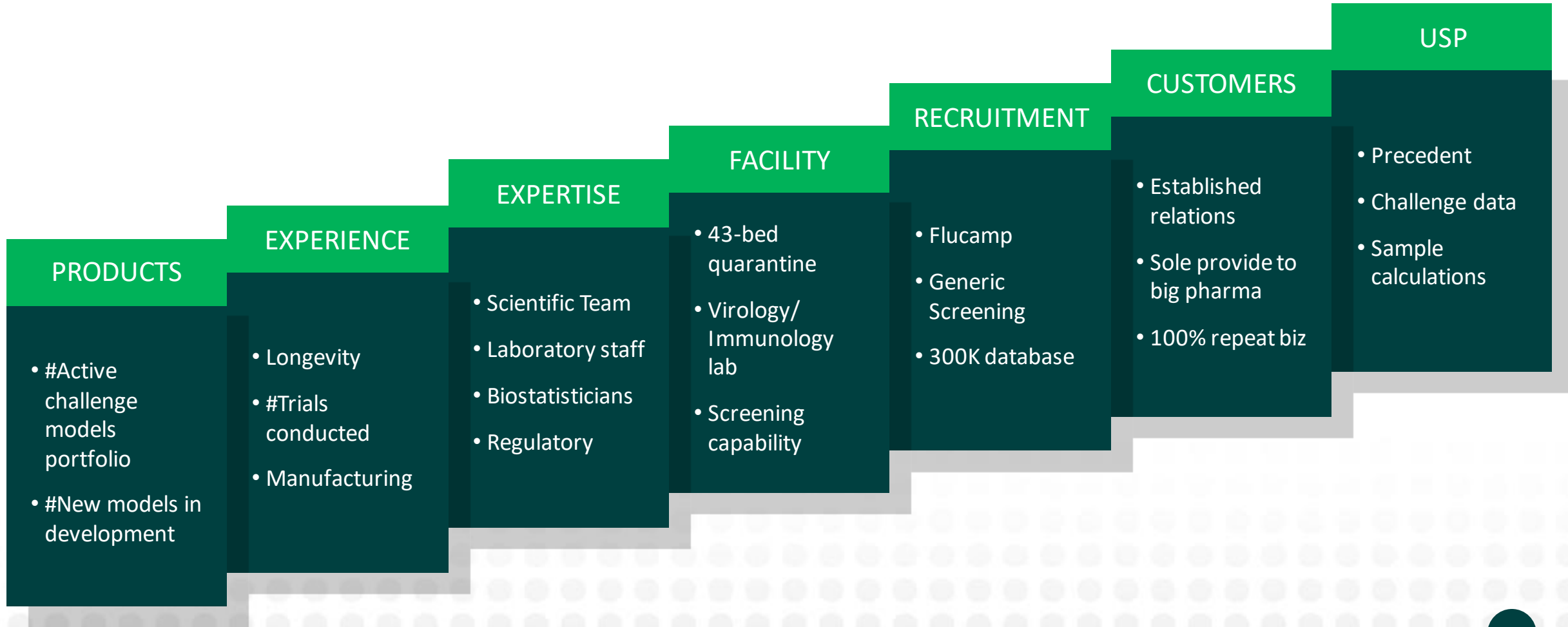
Source: Informa (Mar 2022).  
The Economist (Mar 2022).

Active Challenge Studies over Time (academic & commercial)



Source: MCSI, Informa (Mar 2022)

# Significant Barriers to Entry



# 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”




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**  
1<sup>st</sup> 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

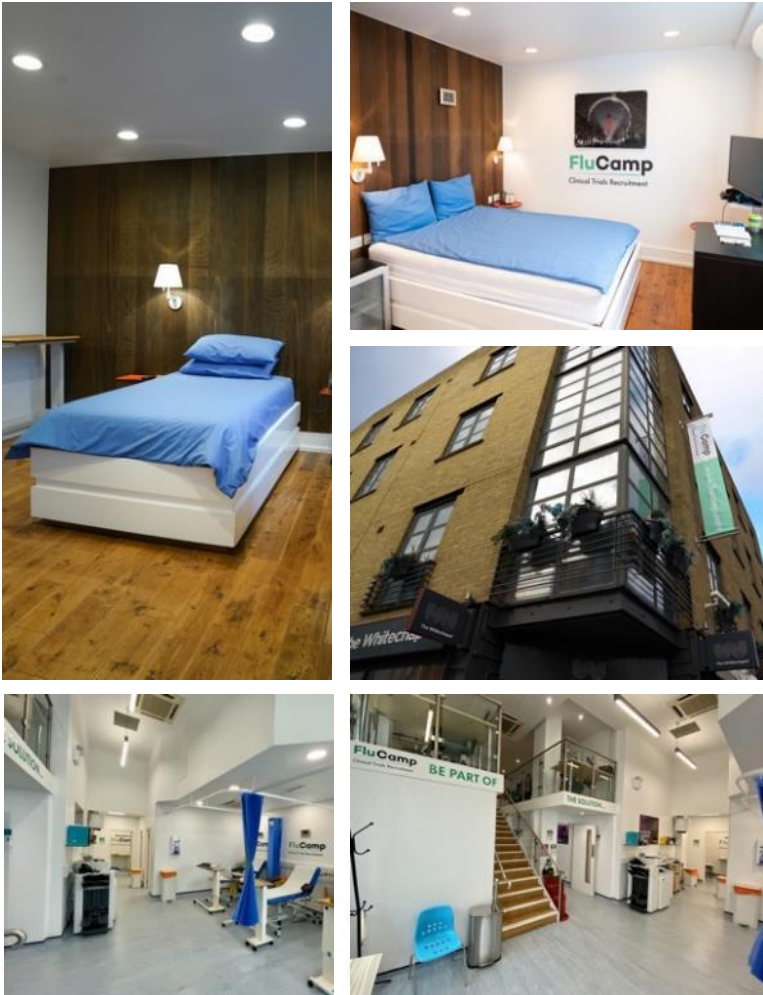


## QMB Laboratories



# 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