

## NEW COMPANY PRESENTATION

*Presented at ShareCafé Hidden Gems webinar series, 12 May 2023*

**Adelaide, Australia, 12 May 2023:** Australian medical technology company LBT Innovations Limited (ASX: LBT) (**LBT** or the **Company**), a leader in microbiology automation using artificial intelligence, is pleased to share an updated Company Presentation which will be presented to investors at the ShareCafé Hidden Gems webinar series focussed on micro and small-cap ASX-listed companies.

Approved for release by the Chair of the LBT Board.

– ENDS –

### About LBT Innovations

LBT Innovations (LBT) improves patient outcomes by making healthcare more efficient. Based in Adelaide, South Australia, the Company has a history of developing world leading products in microbiology automation. Its first product, MicroStreak®, was a global first in the automation of culture plate specimen processing. The Company's second product, the Automated Plate Assessment System (APAS® Independence) uses LBT's intelligent imaging and machine learning software to automate the imaging, analysis and interpretation of culture plates following incubation. The technology remains the only US FDA-cleared artificial intelligence technology for automated culture plate reading and is being commercialised through LBT's wholly owned subsidiary Clever Culture Systems AG (CCS). Thermo Fisher Scientific, Inc is exclusive distributor of the APAS® Independence in the United States and selected countries in Europe.

### INVESTOR ENQUIRIES

LBT Innovations
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## ASX: LBT COMPANY UPDATE

# Proven AI technology disrupting microbiology

Brent Barnes, CEO and Managing Director  
May 2023



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**CLEVER CULTURE  
SYSTEMS**



**LBT INNOVATIONS**





# Investment Highlights

## **Validated hardware platform, multiple AI products**

- APAS® Clinical + APAS® PharmaQC

## **APAS® Clinical ~US\$1.4b<sup>1</sup> addressable target market**

- Compelling value proposition, 18+ month sales cycle
- Thermo Fisher exclusive distributor
- Key Opinion Leaders / reference sites established
- 13 sales achieved globally

## **APAS® PharmaQC ~US\$2b<sup>2</sup> global addressable market**

- Development funded by AstraZeneca & Thermo Fisher
- Market dynamics point towards rapid adoption
- Expect AstraZeneca roll-out and additional pharmaceutical manufacturer placements in 2024

## **APAS® Compact product extension for Clinical + PharmaQC markets**

- Government matched funding of \$1.5m awarded

## **Lean cost base. Momentum to positive cashflows**

<sup>1</sup> Internal company analysis and estimates. <sup>2</sup> Global Pharmaceuticals & Medicine Manufacturing; IBISWorld Industry Report C1933-GL; Eva Koronios; June 2021 ([https://www.contractpharma.com/contents/view\\_blog/2018-02-02/an-interactive-global-map-of-pharma-manufacturing-sites/](https://www.contractpharma.com/contents/view_blog/2018-02-02/an-interactive-global-map-of-pharma-manufacturing-sites/)) + internal company analysis and estimates [assumes 50% of total manufacturing permits issued for sterile manufacturing]





# Microbiology market overview

## Ripe for disruption

**Petri dish developed in late 1800's**  
Manual plate reading unchanged today

**High volume, growing demand for microbiologists**  
Rising labour costs and >10%<sup>3</sup> vacancy rates in US

**Inconsistent, inefficient results**  
Microbial counts subjective prone to human error

**Data integrity and traceability challenges**  
Increasing data integrity requirements, including second analyst verification



**Robert Koch** – Petri dish inventor<sup>4</sup>  
*Pioneer of microbiology, late 1800's*



<sup>3</sup> MLO's 2021 Annual Salary Survey of laboratory professionals; Feb. 22, 2021

<sup>4</sup> <https://www.nobelprize.org/prizes/medicine/1905/koch/biographical/>



# Microbiology market

## Our Solution

Validated AI + hardware to read and interpret microbial growth on culture plates



### Cutting edge AI technology

Machine learning for different applications



### Improved productivity and cost savings

Optimise microbiologists labour time



### Demonstrated performance – 3X faster

Extensive scientific data, faster than microbiologist



### Easy Integration

Simple plug and play technology



### Improved data integrity

Automatic data trails and audit reports



# Microbiology Market

## Clinical microbiology & Pharmaceutical Quality Control

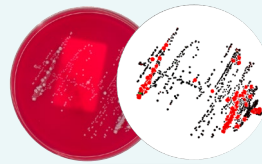
**APAS** CLINICAL

← **One Instrument. Multiple segments** →

**APAS** PharmaQC

**\$1.4 Billion<sup>1</sup>**  
Addressable market

**\$2 Billion<sup>2</sup>**  
Addressable market



Infectious diseases testing used by hospitals, reference/private laboratories.



**APAS** INDEPENDENCE



Sterility monitoring in aseptic manufacturing. Example: drug manufacturing.



# Microbiology Market

## Attractive revenue model across segments

Total Value	US\$500,000 - \$600,000 (50% CAPEX   50% Annuity)
Instrument	US\$300,000
Analysis Module (AI Software)	US\$20,000 – US\$30,000 per year
Service	US\$20,000 – US\$30,000 per year <sup>5</sup>
Sales Agreement	5 years (typically)

*Engineering useful life 7-10 years*

*Typical customer payback 2-4 years*



<sup>5</sup> Service revenue managed by distributor / 3<sup>rd</sup> party



# Growing sales with exclusive distributor Thermo Fisher



## United States

Addressable market:  
1,500 laboratories

**Market size: US\$845m<sup>1</sup>**

Launched Jan-2022



## Europe – 34 countries

Addressable market:  
1000 laboratories

**Market size: US\$560m<sup>1</sup>**

Launched Jan-2023

**ThermoFisher**  
SCIENTIFIC



# Extensive global clinical scientific data confirms efficiency, savings and performance for customers

25+ publications<sup>6</sup> in laboratories globally covering over 75,000 specimens processed by APAS®

Only regulatory cleared automated culture plate reader – powered by AI



<sup>6</sup> <https://cleverculturesystems.com/scientific-library/>



# Improving quality control in drug manufacturing is a key benefit to pharma companies

## Industry drivers for change

### Failed results of quality control for pharmaceutical companies

- Up to ~US\$1bn lost revenue<sup>16</sup>
- ~US\$1m per event for failed product<sup>17</sup>

### Increased regulatory observations and warning letters

- 2022: 116% increase in regulatory observations to drug establishments<sup>7</sup>
- 86% warning letters cite data integrity issues<sup>8</sup>
- Most common cause: failure to maintain procedures & poor traceability<sup>9</sup>

### Industry bodies and regulations are driving change *eg EU GMP Annex 1*

<sup>7</sup> <https://www.fda.gov/inspections-compliance-enforcement-and-criminal-investigations/inspection-references/inspection-observations>. <sup>8</sup> <https://redica.com/pharma-medical-devices-data-integrity-breaking-down-keywords-and-citation-trends-from-the-fda/>. <sup>9</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7993007/>. <sup>16</sup> [www.researchandmarkets.com](https://www.researchandmarkets.com), Global Pharmaceuticals Market Report 2021: Covid-19 Impact and Recovery to 2030. <sup>17</sup> [www.marketwatch.com](https://www.marketwatch.com), Biopharmaceuticals Growth Statistics 2021





# \$1.7m contracted R&D funding. Market dynamic anticipates rapid adoption. **Sales expecting to start in 2024**

AstraZeneca cornerstone customer - ~\$1.1m funded development, roll out expected starting 2024



ThermoFisher - ~\$0.6m development funding to support their media



Product development – expected to be ready for customer evaluation in 2023

At least 1 additional pharmaceutical manufacturer evaluation expected to commence in 2023

Sales strategy - Land and expand. Validate 1 location, expand across all manufacturing locations.

~600 manufacturing facilities across 20 top pharmaceutical companies



# Product pipeline: APAS® Compact increases addressable market opportunity by estimated \$2bn

Lower cost platform utilising same AI algorithms allows smaller microbiology laboratories benefit from intelligent automation



## APAS® Compact

- Benchtop system
- Capacity: ~40 plates
- US\$50,000 – US\$80,000

**In-development**

## Product Development

- \$1.5m matched Government funding
- Positive market research completed
- Development expected to start H2 2023
- Prototype available in 2024



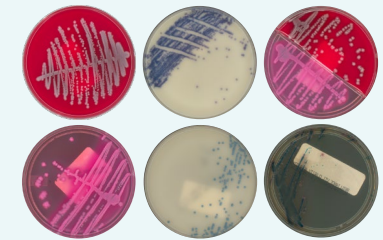
## APAS® Independence

- High-throughput automation
- Capacity: 240 plates
- US\$300,000

**Available**

## APAS® Analysis Modules

Immediately compatible for both APAS® Clinical and APAS® PharmaQC



# Path to break-even Revenue drivers

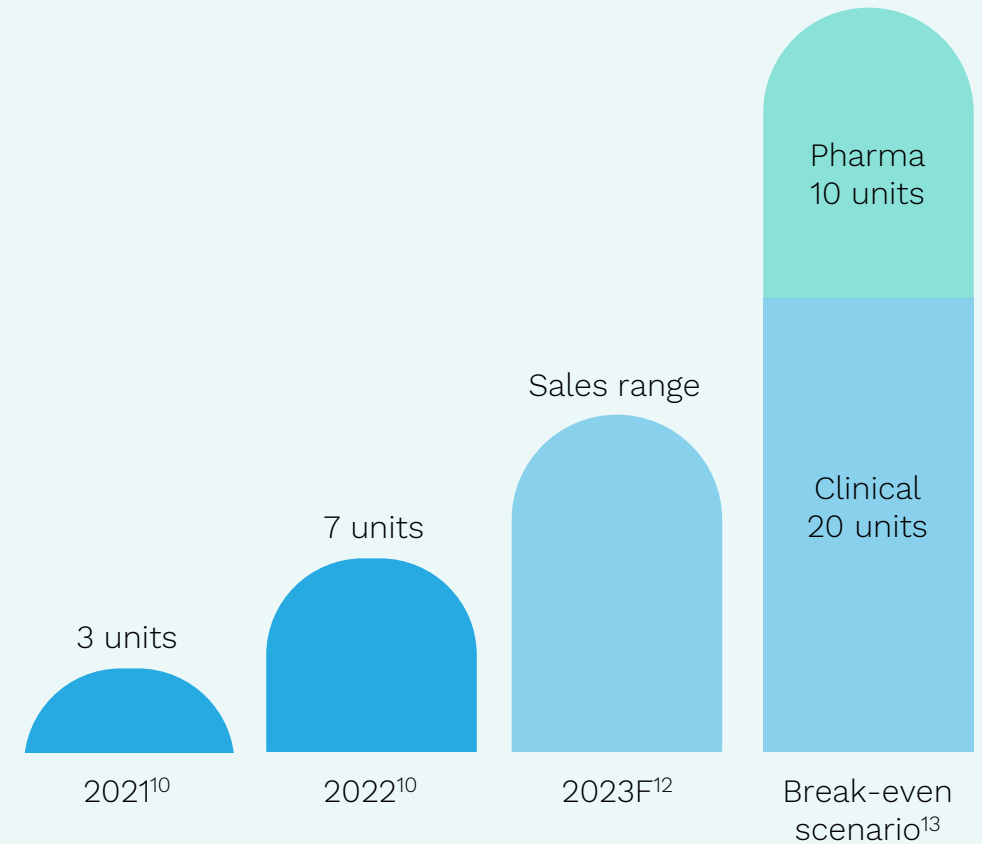
**Lean cost base – primed for increased sales**

**Funded R&D expected to continue**



Annual Cost Base <sup>14</sup>	-\$4.9m
Product development (net R&D)	-\$1.1m
Sustaining engineering + support	-\$0.7m
Sales & marketing	-\$1.1m
Corporate & overhead	-\$2.0m

**APAS® Independence unit sales<sup>11</sup>**



<sup>10</sup>Actual unit sales reported. <sup>11</sup>Calendar years. <sup>12</sup>Outlook is not a financial forecast. Illustrative growth scenario. High risk for new technologies. <sup>13</sup>Not linked to a specific year, estimated revenue split of sales. <sup>14</sup>Excludes financing cashflows



# Summary. Path to significant value creation.

## Foundations delivered

\$50+ million invested on APAS® technology development  
10 years R&D. Platform product – multiple AI product applications.

Thermo Fisher backing APAS® Clinical sales – EU + US exclusive distributor  
Growing global sales, approach cashflow break-even.

**ThermoFisher**  
SCIENTIFIC

AstraZeneca + Thermo Fisher invested in APAS® PharmaQC  
Funded R&D expands APAS® market opportunity.

**AstraZeneca**

## Outlook

### APAS® Clinical

- Increasing product sales in H2 2023 and 2024

### APAS® PharmaQC

- 2023: AstraZeneca milestone delivery
- 2023: additional placement - verification
- 2024: first sales

## 2024 expectations

**Launch APAS® PharmaQC**  
**Launch APAS® Compact**

**Expected cashflow break-even<sup>15</sup>**

<sup>15</sup>Model assumes 10 APAS® PharmaQC + 20 APAS® Clinical sales



- Appendix

