



LBT INNOVATIONS

Annual General Meeting CEO Presentation

Brent Barnes
Managing Director & Chief Executive Officer

28th November 2018

ASX code: LBT

lbtinnovations.com

Disclaimer

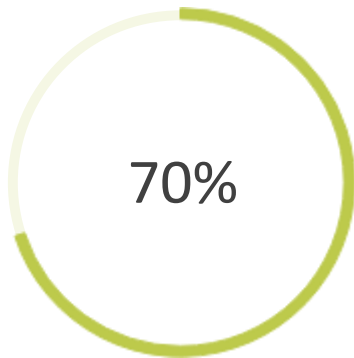
This document contains certain forward-looking statements that involve risks and uncertainties. Although we believe that the expectations reflected in the forward-looking statements are reasonable at this time, we can give no assurance that these expectations will prove to be correct.

Given these uncertainties, readers are cautioned not to place undue reliance on any forward-looking statements. Actual results could differ materially from those anticipated in these forward-looking statements due to many important factors, risk and uncertainties including, without limitation, risks associated with medical device development and manufacture, risks inherent in the extensive regulatory approval processes mandated by regulatory authorities, delays in clinical trials, future capital needs, general economic uncertainty and other risks detailed from time to time in the Company's announcements to the ASX.

Moreover, there can be no assurance that others will not independently develop similar products or processes or design around patents owned or licensed by the Company, or that patents owned or licensed by the Company will provide meaningful protection or competitive advantages.



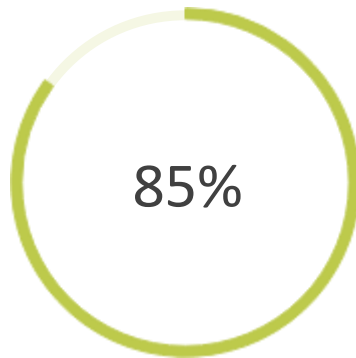
Challenges for Microbiology labs



70%

High Demand

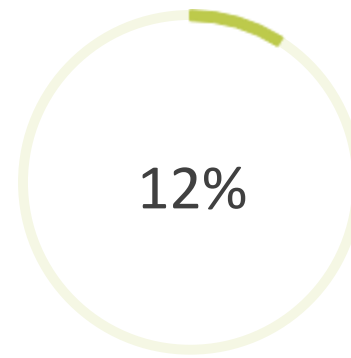
70% of clinical decisions are based on in vitro diagnostic lab results



85%

Inefficient resource utilisation

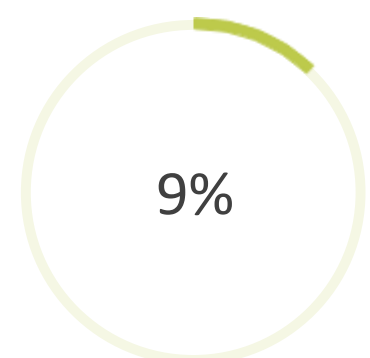
Up to 85% of plates read are negative or show no significant growth



12%

Inconsistent results

Variability in plate reading with error rates 5.5-6.6%, and 12% for morphology⁴



9%

Qualified microbiologists

9%³ vacancy rate in the US. Average age of microbiologist is 51 years (AU)¹, 42 (US)²



Solution: APAS® Independence

The **first** and only **automated culture plate reader**. Automated imaging, analysis and interpretation of agar culture. *Powered by AI.*



Improve Time Management

Remove negatives out of the workflow



Accuracy

Higher quality and consistency of results



Workplace Safety

Increase workplace safety by lowering manual handling



Cost Efficiencies

Through more efficient use of staff and reduced risk of injuries



LBT INNOVATIONS

Slide No. 4

© LBT Innovations 2018

Australia: Launch Market

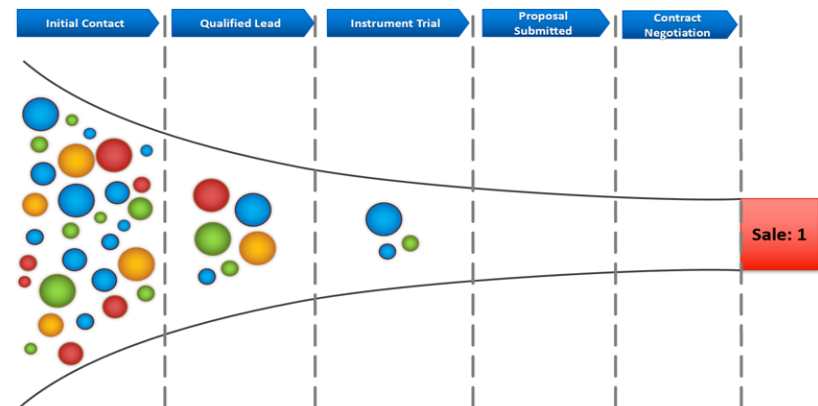


First global sale
August 2018



Channel 7 Melbourne, Sunday 8th October 2017
<https://www.facebook.com/7NewsMelbourne/videos/10155915549244301/>

- Positive market feedback
- Pipeline sales targets identified, exact sales timing difficult to predict, sales cycle 6 – 12+ months
- Multiple opportunities in pipeline
 1. Raise awareness
 2. Verify clinical utility
 3. Budget, buying decision?



Results - APAS Independence vs St Vincent's Pathology standard workflow

Methodology at St Vincent's

Automated chemistry and microscopy performed (AV Inc, Japan). In addition, urines are cultured, using (Vibrance UTI chromogenic agar (Thermo Fisher) and incubated aerobically at 35°C for 18 hrs. Generally, three levels.

	APAS classification
units (CFU) detected	No growth
CFU/L detected	Doubtful
CFU/L detected	Probable or Review

ng compared to standard

by APAS Independence and then assessed and results reported by St Vincent's were extracted from the analysis variable was bacterial growth enumeration (CFU/L). Similarly, APAS Independence calculated using the largest enumeration of the two agars. erated results generated by St Vincent's Pathology es were evaluated using a multiclass composite ant results to be resolved in an unbiased manner via processed and used for investigation of microbiologist

dependence into routine workflow

atory were routinely processed by APAS Independence. estigated and subsequently improved to facilitate ing this time laboratory efficiencies and staff utilization olved in the both the process of specimen preparation

Table 1: Confusion matrix outlining average sample classifications by SVP and APAS Independence after the unbiased discrepant resolution method.

SVP	APAS Independence	
	NSG	SIG
	NSG	SIG
		333
	SIG	35

These data demonstrated a high level of agreement [91.8% Table 1]. Where the and APAS NSG disagreement ($n=35$), a large percentage were urogenital and at low levels above the 10^3 threshold, and 2 were slow growing alpha hemoly which presented as a hazy growth after 18 hours. In the case of the latter, flagged for review under normal SVP workflow, by virtue of a raised white APAS Independence would re-route the plate away from NSG plate classification.

Sensitivity and specificity were estimated and 95% confidence limits Wilson score method [3] within the unbiased discrepant resolution is defined as the probability of APAS Independence detecting significant growth where SVP has determined significant growth, and specificity as the probability reporting non-significant growth where SVP has determined non-significant growth. Analysis was performed in R 3.4.3 [3] and the results can be seen

Table 2: Significance of sensitivity of APAS

	Upper
	0.958
	0.939

evaluation, APAS Independence was not interfaced to the laboratory workflow. Considering that approximately 70-80% of urine cultures return results of significant growth, there exists a potential for significant reduction (up to an estimated 20%) in microbiologist time for reporting.

Operator feedback

Microbiologists rated the Instrument's usability on a scale from 1 to 5, with 1 being "very complex to use" and 5 being "very easy to use". Three of the four microbiologists rated APAS Independence usability as 5, whilst the other rated it as 4. They considered the availability of imaged cultures to be a key feature, along with the speed of APAS Independence in both sorting and reading agar plates. Both the microbiologist and laboratory assistant groups cited the benefits of a simplified workflow, particularly in specimen set-up, as a major advantage of the Instrument.

Published confirmation of clinical utility and efficiency in a lab

Conclusions

APAS Independence performed with a high level of sensitivity and specificity and facilitated operational efficiencies in both specimen processing and culture reading.

By removing the negative and non-significant urine cultures from the hands of microbiologists, APAS Independence allows for the redirection of microbiologist time to more complex tasks. Users reported a high level of engagement with the technology, most frequently citing the instrument's ease of use, high-quality image resolution and accuracy as the primary benefits.

Strategic placements: centre of excellence

DE: Sales Executive
Dec-18



Labor Dr Wisplinghoff
Cologne, Germany



St Vincent's Hospital
Melbourne, Australia

Hennepin Health System
Minneapolis, USA



AU: Sales Executive
Apr-18



Innovating AI and intelligent imaging for the future of healthcare



Future: Building Strategic Capability

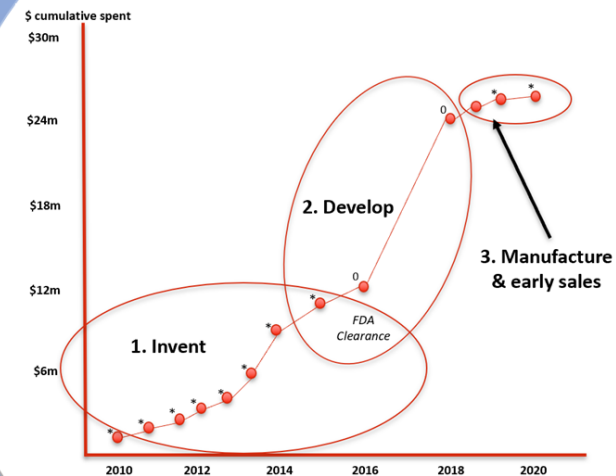
Transitioning from outsourced development to internal capability. Critical to develop future analysis modules

Our Values:



- People investment: Artificial intelligence, software engineering, science. *Unique value proposition.*
- Technology proven -> insourcing increases efficiency and reduces cost
- Directly control development of additional analysis modules in sustainable way

APAS Development History (*outsourced*)



Outlook

2019



Regulatory

Submit 510(k) for APAS
Independence (*update to be
given by 31-Dec-18*)

FDA clearance



Market Development

Present publications

- ECCMID
- ASM

Expand reference sites

Analysis module development



Sales Activity

Develop international sales
pipeline, leading to local
distributor(s) placement

Modest sales – building
adoption during CY2019





LBT INNOVATIONS

Brent Barnes

Managing Director & CEO
Level 8, 44 Waymouth Street
Adelaide SA 5000
+61 (0)8 8227 1555
info@lbtinnovations.com

lbtinnovations.com