



CLEVER CULTURE  
SYSTEMS

APAS

INDEPENDENCE

# Health Services Laboratories Case Study

The first placement of the  
APAS Independence in the UK



# Introducing the APAS Independence for automated culture plate reading

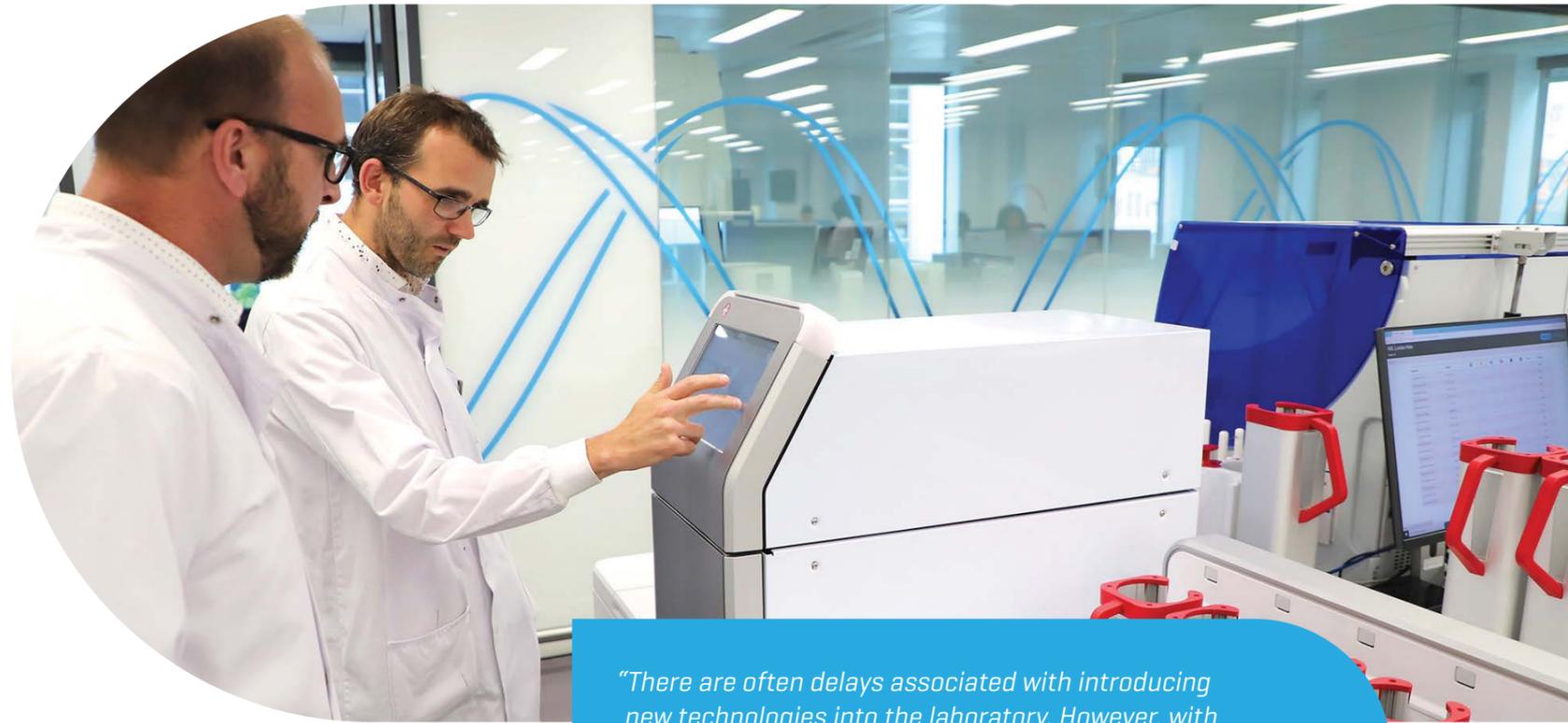
The Halo, Health Services Laboratories (HSL) flagship laboratory, is a state-of-the-art facility situated in London's globally renowned life sciences hub, 'Medcity'.

The laboratory is a clinically led provider of pathology and diagnostic services, with the purpose of delivering innovation and outstanding value to healthcare. Set up as a partnership between The Doctors Laboratory (a subsidiary of Sonic Healthcare, ASX: SHL), Royal Free London NHS Foundation Trust and University College London Hospitals NHS Foundation Trust, the laboratory combines academic excellence with industry leading workflow efficiency.

## OPTIMISE STAFF UTILITISATION

Screening urine and MRSA cultures is a routine task in the microbiology laboratory. The Halo is a large volume laboratory, receiving up to 3,000 MRSA and urine specimens per day. Additionally, the majority of plates show no significant bacterial growth (99% of MRSA samples<sup>1</sup>, 60% of urine specimens), which results in valuable staff time being spent reporting non-significant growth samples of very little value.

Implementing an automated plate reader, such as APAS Independence, to screen and report non-significant culture plates could improve laboratory processes and reduce time spent on manual plate reading.



*"There are often delays associated with introducing new technologies into the laboratory. However, with the APAS Independence we found Clever Culture Systems were very responsive."*

Alan Spratt, Head of Department, Infection Sciences, HSL

## Goals

- ➔ Implement APAS Independence and integrate to LIS
- ➔ Shorten turn-around-time (TAT) of results
- ➔ Reduce hands on time reading plates
- ➔ Increase consistency via automation
- ➔ Optimise staff utility
- ➔ Remove and report non-significant plates

## Getting the APAS Independence in the lab

The setup of the APAS Independence was completed by the engineer on-site in two days, one day to unpack the instrument and wheel it into the lab and one day to confirm the IT interfacing and complete staff training. The setup for routine use occurred within a month, when the Halo's internal IT department moved away from the standard LIS interface to a custom built LIS interface for the laboratory's own requirements.

### BENEFITS OF CONNECTING THE INSTRUMENT TO THE LIS INCLUDE:

- ✔ Immediate release of negative results
- ✔ Saving staff time from entering results
- ✔ Direct interface to reduce turn-around-time
- ✔ Eliminating risk of transitional errors

*"The APAS Independence helps drive consistency in the lab through the introduction of an objective automated approach to routine lab processes."*

Alan Williams, Lead Clinical Scientist, HSL

*"The LIS integration is working as the APAS Independence should. It looks at our lab numbers and is able to do a test request and identify the plates requiring an MRSA test. Results are then automatically reported to the LIS."*

Alan Williams, Lead Clinical Scientist, HSL

# How did the APAS Independence perform

Overall, ~95% of MRSA cultures and 50-60% of urine samples were screened as non-significant growth and automatically removed from the workflow without intervention.

Clinical validation<sup>1</sup>:

		Target	Actual
MRSA	Sensitivity	>98%	100%
	Specificity	>90%	94.1%
	NPV	100%	100%



View poster for more information.

*“The greater benefit of the APAS Independence will occur at the urine bench. The instrument manages the workload and prioritises plates showing significant growth for review. Plates are released to the output stacker at a constant rate, allowing the biomedical scientist to focus on and report 20 plates at a time rather than having an overwhelming 200-400 plates at a time.”*

Alan Williams, Lead Clinical Scientist, HSL

## Key benefits



Gained efficiency



Staff freed up for other tasks



Maintained TAT for MRSA



Further improvements to workflow in progress



## Advantages and future use

- ✓ Attracts staff by using latest technology – Better training opportunities
- ✓ Enables upskilling of staff by working on less mundane day-to-day tasks
- ✓ Direct release of negative results without needing a review

*“Using the APAS Independence we are able to manage our MRSA reads using only one staff member, enabling us to redeploy staff to work on developmental projects or areas of higher impact in the laboratory.”*

Alan Williams, Lead Clinical Scientist, HSL

*“The APAS Independence has been seamlessly integrated into our workflow alongside our other automation systems. Its small footprint means that it can be easily accommodated, even when space is at a premium.”*

Alan Williams, Lead Clinical Scientist, HSL

*"It's quite exciting to be the first in the UK to use the APAS Independence. The instrument has delivered on its promise, providing workflow efficiencies and is functioning well. The future potential of the instrument is great with the opportunity to expand into other areas, such as other high volume negative screening applications, additional media and antibiotic susceptibility tests (AST)."*

*"As these further applications are developed our laboratory is in a good position to take it forward and adopt them, which is one of the most attractive features of the technology."*

Alan Williams, Lead Clinical Scientist, HSL



## Staff acceptance

Laboratory staff were involved in the project from the outset ensuring they have felt engaged in the process of bringing the APAS Independence into the laboratory.

A senior member of staff was appointed to lead the implementation within the laboratory, and junior staff have been involved to provide feedback and troubleshooting. The result is that staff acceptance has been straightforward, and they could see the positive impact the instrument has made.

*"The implementation of the APAS Independence has been a really positive experience. Our staff, have found the instrument easy to use, intuitive and a real time saver, which eliminated any potential resistance to the technology."*

Alan Spratt, Head of Department, Infection Sciences, HSL

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