



## Why Automation? Building the business case.



**EACH LAB HAS UNIQUE GOALS AND CHALLENGES** which drive their automation decision. This guide is intended to highlight some of the laboratory considerations when choosing an automated specimen processor and full laboratory automation.



### Employee Satisfaction and Retention

- Staffing limitations and overtime utilization
- Excess workload can result in repetitive motion-related injury



### Department Quality

- Increase in workload and decrease in staffing can impact overall department quality



### Turn-Around-Time

- Routine culture is slow compared to molecular methods
- Impact to antimicrobial stewardship programs



### Cost

- Microbiology is highly manual requiring significant hands-on time from highly trained technologists

*Bourbeau PP and Ledebor NA, Automation in Clinical Microbiology. J. Clin. Microbiol. 2013 June;51(6)1658-1665*



## Up Front Specimen Processing Automation Considerations

Evaluate switching to Liquid Based Microbiology for better pathogen recovery and automation of most samples

The WASP<sup>®</sup>DT system has the capability to use traditional fiber swabs and other non-liquid samples, however Copan's approach is to liquefy as many samples as possible to easily automate and maximize the investment in an upfront specimen processor.



Sample delivery system

Loop – 1  $\mu$ L minimum inoculum, fewer consumables, sterilize between quadrants

vs.

Pipets and “reusable” ball – 10  $\mu$ L minimum inoculum, consumables, can't sterilize between quadrants



What do you want to automate?

- WASP<sup>®</sup>DT automates planting & streaking, gram slide preparation, broth inoculation and labeling without any manual interaction
- Competitive instrument uses a mechanized manual approach which is simply the addition of a mechanical component, but users perform many tasks manually

# Full Laboratory Automation Considerations

## Electric vs Compressor System

Electric systems, like the one used for WASPLab™ typically have a smaller footprint, are quieter and require less maintenance.

## Plate Image Size

WASPLab™ software captures a 27-megapixel image with 1 cm depth of field image for highest clarity. Images and patient data are then compressed and stored at 2 MB.

## Incubators and Improved Turnaround Time

Consistent incubation environment and earlier plate reading can result in improved turnaround time\* and delivering actionable results within the therapeutic window.

*\* Based on current user experiences. Varies based on validation and user preference.*

## Additional Modules

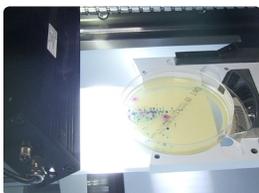
- PhenoMATRIX™ algorithms and artificial intelligence to read, interpret and segregate bacterial cultures, allow automatic segregation of plates so that users can quickly result No Growth plates, and report results to clinicians faster.
- Colibr™ completes the loop, performing colony picking, MALDI target seeding and McFarland suspension preparation & labeling automatically.



- WASP-FLO™ automatically sorts and sends specimens to the appropriate WASP®DT instrument. in labs that have multiple WASPLab™ lines.
- Collaborative Robot automatically manages traditional manual processes for improved speed, traceability and elimination of transcription and transposition errors while also reducing repetitive stress injuries.

## Future innovations and growth

- WASPLab™ system can grow with the lab and allow for new innovations to be added.
- COPAN is committed to continually innovating and improving to bring the best solutions to the Microbiology laboratory.



27 megapixel image analysis



Smart incubators with individual plate shelves



Digital microbiology with PhenoMATRIX™ algorithms and artificial intelligence to read, interpret and segregate bacterial cultures.



Colibr™ automatic colony picking



WASP-FLO™ bulk sorter