

**Biosero Whitepaper****Breaking the Automation Barrier: How GoSimple Makes Lab Automation Accessible**

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# Breaking the Automation Barrier: How GoSimple™ Makes Lab Automation Accessible

## Executive Summary

Today's labs are caught in a "readiness gap." While high-throughput reproducibility is the goal, 90% of lab managers cite non-technical hurdles, such as lack of standardization, change management, and high upfront costs, as the primary barriers to embracing automation.

Accessible automation means starting from current workflows, not full-lab overhauls. This whitepaper details how [GoSimple Workcells](#) bridges this gap. Featuring data from a recent H5N1 antibody discovery collaboration with Sartorius, we demonstrate how standardized, ready-to-run workcells deliver enterprise-level results with benchtop simplicity.

GoSimple Workcells are designed specifically for labs taking their first automation step. Pre-configured for specific partner instruments like the BD FACSLyric™, BD FACSymphony™, and Sartorius Octet® BLI, these benchtop systems eliminate months of custom integration and deliver walkaway efficiency from day one.

## What This Whitepaper Covers

- Insights from a recent industry poll of automation stakeholders highlight the specific friction points preventing adoption, including lack of standardization (35%), change management concerns (29%), high upfront investment (26%), and systems interoperability challenges (18%).
- The main barriers labs encounter when implementing automation: Complexity, limited expertise, budget concerns, and integration challenges that prevent labs from getting started.



- How GoSimple workcells are designed to lower those barriers: Standardized systems, guided software, benchtop design, and included support that turn abstract challenges into concrete, manageable steps.
- A real-world high-throughput epitope screening workflow, based on a collaborative application note from Sartorius and Rockland (Akbari et al., 2025), that illustrates how GoSimple can support demanding discovery and applied research assays.
- What a first GoSimple project can look like in practice: A real-world scenario showing how small teams achieve meaningful automation wins without specialist expertise.

*In a partner-driven epitope binning study (Akbari et al., 2025), a GoSimple workcell automated a 72 x 72 antibody matrix on the Octet® RH96 in an 18-hour unattended run, reducing what would typically require multiple days of manual work.*

## Barriers to Automation & How GoSimple Addresses Them

### Barrier 1: Complexity & Integration

#### **The Challenge**

Manual, multi-plate workflows typically require custom integration projects to coordinate instruments, write scripts, and configure data flows. Labs without automation engineers could face months of troubleshooting just to get devices talking to each other. The complexity of making disparate systems work together stops many projects before they launch.

#### **How GoSimple Addresses This**

This GoSimple Workcells ship as predefined systems with hardware, software, and methods already harmonized for specific workflows. Plate handling, scheduling, and instrument coordination are pre-configured. Setup takes hours, not months. Labs can start running the same day the system arrives, with intuitive interfaces that eliminate custom scripting.

### **The GoSimple Evidence**

- Data: The GoSimple architecture successfully completed a complex 72 x 72 epitope binning matrix (5,184 data points) in a single 18-hour unattended run.
- Data: The Green Button Go® Scheduler provided a robust automation experience with "best-in-class error recovery," ensuring standardized execution and high-fidelity data across multiple plates.

### Barrier 2: Limited Internal Expertise

#### **The Challenge**

Most labs don't have automation engineers on staff. Scientists understand their assays, such as flow cytometry QC or kinetic characterization, but lack experience with integration or



networked systems. Hiring specialist expertise is often unrealistic for smaller teams, making automation feel like a “black box” that no one can confidently operate or troubleshoot.

### How GoSimple Addresses This

This GoSimple requires no special knowledge to operate. Guided software interfaces let scientists configure runs by choosing plate layouts, run counts, and assay types from menus. Every system includes 12 months of GoCare, including operator onboarding and remote troubleshooting, allowing teams to build internal capability without specialized training.

### The GoSimple Evidence

- Data: Using the integrated system, a research team was able to screen a cohort of 100 antibody clones for off-rate ranking, selecting the top 72 for full automated binning with minimal manual oversight.
- Data: The system’s ability to work with crude matrices (unpurified supernatants) eliminates the need for complex, manual sample preparation stages, allowing scientists to focus on data analysis rather than technical troubleshooting.

## Barrier 3: Budget & Total Cost of Ownership

### The Challenge

High upfront costs and hidden integration expenses make automation budgets balloon. Labs pay for engineering hours, design time, installation, validation, and all the “unknowns” that emerge during implementation. Without clear ROI data, like how many more samples can be processed per week, it is often difficult to justify the spend.

### How GoSimple Addresses This

By using standardized, repeatable workcells, teams spend less time engineering and more time implementing these new automation capabilities. GoSimple delivers a walkaway operation that extends runtime into nights and weekends without adding labor costs. It is positioned as an intermediate step, letting teams validate the ROI of automation before committing to larger platforms.

### The GoSimple Evidence

- Data: The system enabled massive walkaway capacity using two static plate hotels with a 44-plate capacity, processing 27 plates in a single automated session.
- Data: Speed to Result: The automated setup enables the streamlined quantitation of 96 samples in as little as 2 minutes.
- Data: Consumable Savings: Automated biosensor regeneration allowed each biosensor tray to be reused four times, significantly reducing the total cost of the screening campaign.



## Barrier 4: Data, Compliance & Scalability

### **The Challenge**

Automation that creates data silos, cannot connect to LIMS systems or lacks audit trails defeats the purpose of integration. Regulated labs, particularly those in Cell and Gene Therapy, need audit trails, user access controls, and electronic records from day one, not bolted on later. Labs also worry about investing in “dead-end” systems that can't grow as their needs evolve.

### **How GoSimple Addresses This**

GoSimple runs on Green Button Go Scheduler, which supports secure data handling, audit trails, and user management through the 21 CFR 11 Compliance Manager module. This makes it an ideal fit for QC labs requiring strict compliance for cell counts and viability. Furthermore, starting with GoSimple lays a foundation for future expansion into larger Biosero platforms without having to learn new software.

### **The GoSimple Evidence**

- **Data:** The Standardized GoSimple architecture allowed for the seamless collection and management of over 5,000 data points in a single run, ensuring that all data was captured in a unified, accessible format ready for LIMS/ENL integration.

## Scenario, Checklist & Next Steps

### What a GoSimple Project Could Look Like in Practice

#### **The Lab**

A 7-person cell biology team runs plate-based binding assays on a Sartorius Octet® system. The workflow is repeatable but time-intensive. One scientist spends 10–15 hours per week manually loading plates, monitoring runs, and tracking samples across multiple experiments.

#### **Before GoSimple**

Plates queued up during the day while the team waited for instrument availability. Overnight and weekend capacity went unused because no one wanted to come in just to swap plates. Throughput was limited by manual intervention, not instrument capability. The team knew automation would help, but had no one with integration experience and no budget for a fully designed system.

#### **After GoSimple**

The lab installed a GoSimple Workcell for the Sartorius Octet® on their existing bench. Setup took a few hours. Now they queue plates on Friday afternoon and return Monday morning to completed runs. The scientist who used to spend 10–15 hours per week on manual plate



handling now spends 2–3 hours queuing runs and reviewing data. The lab doubled weekend throughput without adding staff or overtime costs. Six months in, they're exploring expansion with a second GoSimple workcell for a different workflow.

## Is GoSimple Right For You?

GoSimple is designed for labs that:

- Need immediate ROI: You need to maximize instrument utilization without increasing headcount. GoSimple has demonstrated an ability to double or triple weekend throughput by transforming manual workflows into unattended, 18-hour “walkaway” runs.
- Struggle with Workflow Strain: You have at least one repeatable, plate-based workflow – such as cell QC or antibody screening – that consumes 10-20 hours of scientist time per week.
- Lack of Space for Large Platforms: GoSimple workcells are designed to fit into existing lab layouts without requiring a facility overhaul.

If these criteria match your lab, GoSimple offers a practical first step into automation.

## Next Steps: Get Started with GoSimple

Accessible automation doesn't require massive budgets, specialist expertise, or lab redesigns. It starts with one focused workflow, a clear problem to solve, and a partner who understands what first-step automation actually requires.

### Ready to explore GoSimple for your lab?

Start by [exploring available workcells](#) for BD flow cytometers and Sartorius Octet® systems. You'll find detailed information on features, partner instruments, and support options. When you're ready to discuss which configuration fits your specific workflows, [contact our team](#). We'll walk you through what GoSimple can do for your lab and help you take that first step into accessible automation.



## References

The core of this whitepaper is a real-world case study and application data, complemented by a pulse poll within our professional LinkedIn community and a qualitative survey with selected Key Opinion Leaders, providing validation of observed trends and perspectives.

Akbari, F., O'Loughlin, D., Woss, G., Farrier, S., Coccie, C., Hatcher, J., Dry, C., & Apiyo, D. (2025). High-Throughput Screening of Antibody Reagents to Support Discovery and Applied Research Into Emerging Clade H5N1 2.3.4.4b. Sartorius BioAnalytical Instruments Inc. & Rockland Immunochemicals Inc.

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This work represents a shared commitment to breaking the barriers of laboratory automation through standardized, high-performance integration.