GOVERNMENT AGRI RESEARCH AGENCY

Advancing DNA Sequencing Services in a Public Sector AgBio Research Facility

A government agri-research agency was facing an urgent digital roadblock. For years, it relied on a legacy system to manage its internal DNA sequencing services. But when technical support for the tool was discontinued, the software quickly became unstable and eventually unusable.

This wasn't just a minor inconvenience. The lab supported researchers across the broader organization by providing sequencing and analysis, including Sanger sequencing and library preparation. Without a functioning system to manage orders, track sample progress, and communicate results, the lab's ability to fulfill requests, generate reports, and manage billing was severely compromised. Researchers needed more than just new software; they needed a long-term solution that could restore and elevate its lab efficiency. That's when they turned to L7 Informatics.

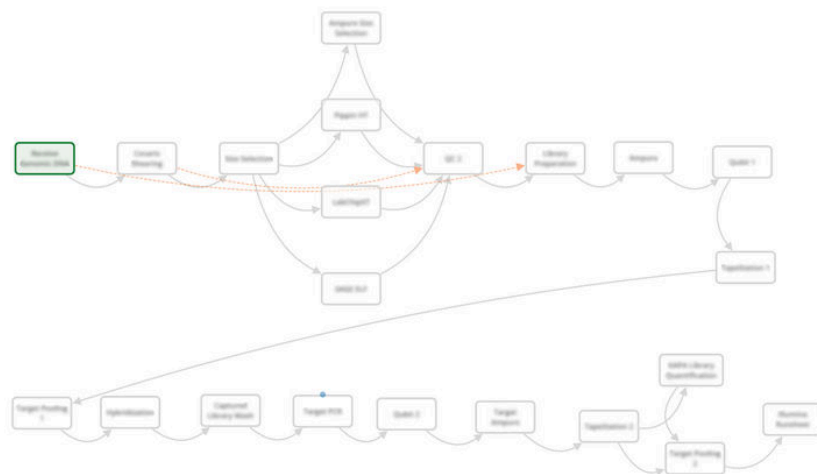## BUILDING A DIGITAL FOUNDATION FOR DNA SEQUENCING OPERATIONS

The organization selected L7|ESP® to replace its legacy system, not only to recover lost functionality but to modernize how sequencing services were delivered. The initial phase of implementation focused on migrating all usable data from its legacy vendor into L7|ESP, followed by reconfiguring the core DNA sequencing workflows. This required close collaboration between the lab and the L7 team to rebuild order intake processes, instrument tracking, sample handoffs, and internal reporting mechanisms.

Today, lab staff can receive orders directly through L7|ESP, with researchers selecting from a standardized set of services and identifying their lab affiliation. Once an order is submitted, it automatically triggers a workflow chain that manages the entire sequencing process, from plate preparation and instrument integration to result reporting and billing. Samples are tracked throughout the process, with their location,

instrument status, and results updated in real time, providing full traceability from intake to output.

Beyond the lab, L7|ESP has also streamlined administrative operations. Billing is now handled automatically, with service charges applied based on the type of analysis and the submitting lab. This ensures accurate invoicing and reduces the administrative burden on both lab technicians and finance teams. What once required manual reconciliation is now embedded directly into the system's logic, making internal cost recovery faster and more reliable.

Just as importantly, all sequencing data is collected, organized, and made accessible through a centralized reporting interface within L7|ESP. This not only improves turnaround time but also ensures that researchers can reuse and reference prior results with minimal effort. The platform supports internal communications across departments as well, helping bridge the gap between lab technicians and their internal customers. Whether it's confirming the completion of a sequencing run or issuing a service notification, L7|ESP ensures nothing gets lost in the handoff.

WORKFLOW CHAIN INTENTIONALLY BLURED

LONG-TERM GAINS FROM A PLATFORM BUILT TO LAST

Replacing the legacy system with L7|ESP delivered immediate operational stability, but the long-term value came from the platform's configurability, support, and continuity. The organization was able to standardize eight core workflow chains that continue to serve its DNA sequencing needs to this day. Rather than constantly adjusting or expanding their workflows, the team chose consistency and reliability, knowing that L7 would evolve in step with their system upgrades.

Over time, the platform helped improve multiple aspects of their operations:

- **Instrument integration** eliminated manual data entry, saving lab staff time and reducing the risk of transcription errors.
- **Reports** are automatically generated and formatted for easy interpretation, complete with visual outputs and downloadable summaries that aid in internal documentation and research reuse.
- **Transparency and communication** improved significantly. With L7|ESP, staff can easily verify sample progress, trace issues when they arise, and ensure timely result delivery.
- As an internal service provider, the lab now supports researchers more efficiently, with **greater visibility into operations, clearer reporting, and streamlined billing**.

Years after their initial deployment, L7|ESP remains the backbone of this organization's sequencing operations, delivering the consistency they depend on today and the scalability they may need tomorrow. The platform has grown alongside them, evolving through system upgrades and continuous improvements, all with the support of a responsive, knowledgeable team. And should they choose to expand their services, embrace new data-driven research methods, or explore AI-powered insights, L7|ESP is already equipped to support that next chapter.

L7 INFORMATICS®

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L7 Informatics reimagines data intelligence for modern life sciences and healthcare organizations. Beyond simple data management, L7 provides tools that optimize the flow of information between processes and people, unlocking innovation at every stage of the clinical, research, and manufacturing value chains.