

Considerations for Your Next LIS



According to a 2021 survey conducted by XIFIN, Inc., one-third of respondents stated they are unsatisfied or highly unsatisfied with their current laboratory information system (LIS). As you think about whether your current LIS is well-suited to support your future growth plans, there are a few important considerations to keep in mind:

1. Is your current LIS a good fit for your current and future testing needs? For example, can it be configured to quickly process and report on new diagnostic tests and prognostic tests, including workflows, data components, screens, and data layouts?
2. Are your LIS patient reports tailored to your business?
3. Do your LIS management reports provide you with the actionable data you need to monitor and improve operational performance?
4. Is your current LIS reliable, or does it suffer from outages that affect your organization's throughput?
5. Does your current LIS easily integrate with other systems (e.g., EMRs/EHRs, RCM, instruments, etc.)?
6. Do you believe that your current LIS is secure (e.g., from ransomware, virus attacks, etc.)?
7. If you have multiple locations, can you run all locations from the same LIS?

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XIFIN LIS QUICK-REFERENCE GUIDE

Here are six principal areas where LIS providers can fall short. Each area contains questions or concepts you and your colleagues should consider when discussing your growth plans.

Flexibility & Scalability

Business needs change, and your LIS needs to be adaptable to respond to new market dynamics and opportunities. Can your LIS:

- Support multi-specialty test menu expansion, workflows, and new test reporting requirements?
- Support your anticipated volume growth?
- Manage multiple physical locations (e.g., molecular, anatomic pathology, NGS, and clinical trials)?
- Provide the ability to handle global cases, TC/PC cases or mixture of both?

Security

Protected Health Information (PHI) is a favorite target of cybercriminals. Your LIS MUST be secure. Do you know if your LIS has this level of security?

- Is the data center located within a world class Tier 4+ Gold facility?
- Is the data center monitored 24/7 and have an incident response team that is well-trained, prepared, and quick to respond to remediate threats?
- Does regular testing for vulnerabilities using the MITRE ATT&CK® framework and other tools occur?
- Are best practices followed using the National Institute of Standards and Technology (NIST) Cybersecurity Framework?

Visibility & Control

You need complete visibility at every stage of the testing process.

- Can you see what tests are running, where they are in the process, and what the steps are?
- Plate map management: Seek out a LIS that has the flexibility to scan specimens into well plates and categorize well plate locations or color codes.
- Does your LIS support configurable lab SOPs for specimen handling (audit trail), control, and reagent management?
- Does your LIS provide configuration tools to manage workflow updates, user privileges, and dynamic ranges such as reference ranges?

Collaboration

Increased collaboration among multi-disciplinary care teams is shown to improve the quality of care. Multi-disciplinary care teams need to have shared access to data to support collaboration.

- Can your LIS support team securely upload and share whole-slide digital images, genomic test results, radiologic DICOM images, and relevant patient data?
- Does your LIS have advanced quality reporting capabilities that document clinical improvement activities and collaboration between pathologists, radiologists, and oncologists?
- Laboratory optimization capabilities are essential, seek a LIS with prior authorization automation, speech recognition for easier dictation, AI-driven digital pathology, and AI-enabled NGS analytics.

Cloud-based Infrastructure

Organizations of all types are turning to the cloud to minimize the time and money spent on maintaining complex hardware and software environments. Consider the following when thinking about the future of your LIS:

- Frequency, timeliness, and ease of upgrades to keep you consistently on the most up-to-date software version.
- Breadth and ease of interoperability with key systems and instruments.
- Is the vendor a true Software-as-a-Service provider?

Expertise

Utilizing expertise in processing efficiency, workflow optimization, quality assurance, and data validation, the XIFIN LIS team is committed to helping you stay competitive in an increasingly complex market.

- Does your LIS vendor provide expertise across diagnostic modalities, including clinical pathology, molecular, toxicology, NGS, etc.?
- Can your LIS vendor provide recommendations garnered from hundreds of labs to improve your operational and financial performance?
- Bring to bear valuable data scientists and other specialized resources?
- Have expertise in the end-to-end laboratory workflow from patient to payment?
- Facilitate engagement across specialty physician offices and pharmacies?