



Vendor Evaluation Checklist

32 Questions to Ask Before You Buy Lab Software

A vendor evaluation checklist for R&D, lab operations, and IT leaders comparing an ELN, a LIMS, or a unified platform.

- Bring it to every demo.
- Print a copy per vendor.
- Ask vendors to show each capability live.
- Compare side by side.



How to Use This Checklist

Use this checklist across every vendor you evaluate. The questions are grouped by category, with an empty box next to each one so you can check it off live in the room. If a vendor cannot answer any of these clearly and specifically, without deferring to a future roadmap, that tells you something important.

Insist on live answers during the demo itself rather than follow-ups after. Record responses immediately while the details are fresh, and compare vendors side by side within 24 hours before the answers start to blur.

1

Bring it to every demo

Print or pull up one copy per vendor session.

2

Insist on live answers

Ask for the answer in the session, not a follow-up email.

3

Record Immediately

Check boxes and jot notes right after each demo ends.

4

Compare within 24 hours

Line vendors up side by side before details blur together

Data Model

- ☐ How does the system handle experiment records that use multiple measurement methods with different data structures? **Ask for a live demonstration, not a slide.**
- ☐ Can we search across historical experiments by raw material, processing condition, or performance outcome? **Show us on real or representative data.**
- ☐ Show us how a single product or formulation evolves across experiments, QC, and downstream specification context in your system.
- ☐ How does a formulation record link to its QC history and related specification records in a single view?
- ☐ If we needed to add a new data type or measurement category, what does that process look like? Who does it, and how long does it take?
- ☐ How does the system handle structured versus unstructured data, such as free-text notes alongside numerical measurements?

Instrument and System Integration

- ☐ List the instruments you support natively, and show one working in the system during this demo.
- ☐ For instruments not on that list, what does integration involve, who builds it, and who maintains it ongoing?
- ☐ If we use specific instruments or software, walk us through exactly how data gets into your system.
- ☐ What happens to our integrations when you release a major software update? Give us an example of a customer whose integration broke, and how it was handled.
- ☐ Do you support bidirectional integration with ERP or manufacturing execution systems where relevant to our workflow?

Implementation and Migration

- ☐ What does data migration from our existing ELN or LIMS look like? What formats do you accept, and what gets lost?
- ☐ Give us a recent example of an implementation for an organization similar to ours: what was the timeline, and what caused delays?
- ☐ What does the implementation team look like – your staff, a partner, or us?
- ☐ What's the support model during go-live, and what does it cost?
- ☐ Can you give us a reference customer who migrated from a comparable stack to yours?

Workflow and Usability

- ☐ Walk us through a typical experiment from setup to result capture in your system. How many steps does it take?
- ☐ How do scientists search for and retrieve historical data in their day-to-day work?
- ☐ What do users typically struggle with in the first 30 days, and how do you address it?
- ☐ How do you handle changes to workflows or data structures after implementation without breaking existing records?

AI and Future Readiness

- ☐ Show us one AI feature in production, using real or representative data, and explain how it reaches its output.
- ☐ Is the data our scientists enter structured well enough to train predictive models on it? Show us an example.
- ☐ What does your AI get wrong today, and in what scenarios should we not rely on it?
- ☐ How do you handle data governance and access control as AI capabilities expand?
- ☐ If we wanted to build our own models on top of our data, what does that look like?

Security and Compliance

- ☐ Where is our data hosted, and what are our options for data residency?
- ☐ What security certifications or compliance attestations do you hold, and what evidence do you provide for Part 11 and GxP support?
- ☐ How is data access controlled across roles – R&D, QC, manufacturing, and IT?
- ☐ What does your audit trail cover, and how is it accessed for regulatory review?

Total Cost and Commercial Terms

- ☐ What's the all-in cost over three years: license, implementation, integration, support, and training?
- ☐ How does pricing scale as we add users, data volume, or sites?
- ☐ What does the contract look like if we need to exit: data portability, notice periods, migration support?

Note: point tools are often cheaper to start, but a unified platform can be lower over several years once integration overhead and duplicate vendor contracts are counted. Ask every vendor to show their math, not just their sticker price.

WATCH FOR THESE

Red Flags to Watch for

1

Deferring to the roadmap

If a capability you need is “coming in Q3,” treat it as unavailable. Roadmaps slip.

2

Demo-only data

If the vendor won't show the system working on your data or a realistic equivalent, you don't know what you're buying.

3

Vague integration answers

“We can integrate with anything” usually means “we can build a custom integration for a fee.” Ask for specifics.

4

No reference customers in your industry and workflow

Ask for references in an environment similar to yours, especially if your data is formulation-heavy.

5

Long implementation timelines without clear milestones

Ask what “done” looks like at 90 days, 6 months, and go-live.

6

Most capabilities require configuration

If almost everything needs professional services to set up, you're buying a toolkit, not a product. Ongoing cost and fragility every time something changes.

7

Different answers from sales and technical teams

If answers shift between the demo and a technical validation session, escalate immediately.

This checklist accompanies the guide: ELN, LIMS, or unified platform: which does your R&D team actually need?



SEE THE PLATFORM BEHIND THE GUIDE

Book a personalized demo

Uncountable connects R&D, quality, and product lifecycle data in one platform. We'll show you how it applies to your lab, and walk through this checklist live.

[Request a Demo](#)