

THE ESSENTIAL GUIDE

to building a business case for new laboratory
equipment and IT systems

THE FIVE ESSENTIAL STEPS TO BUILDING A BUSINESS CASE

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Discover how to quantify the real value of choosing a best-in-class vendor—beyond the initial cost—and convey this value to your C-suite.



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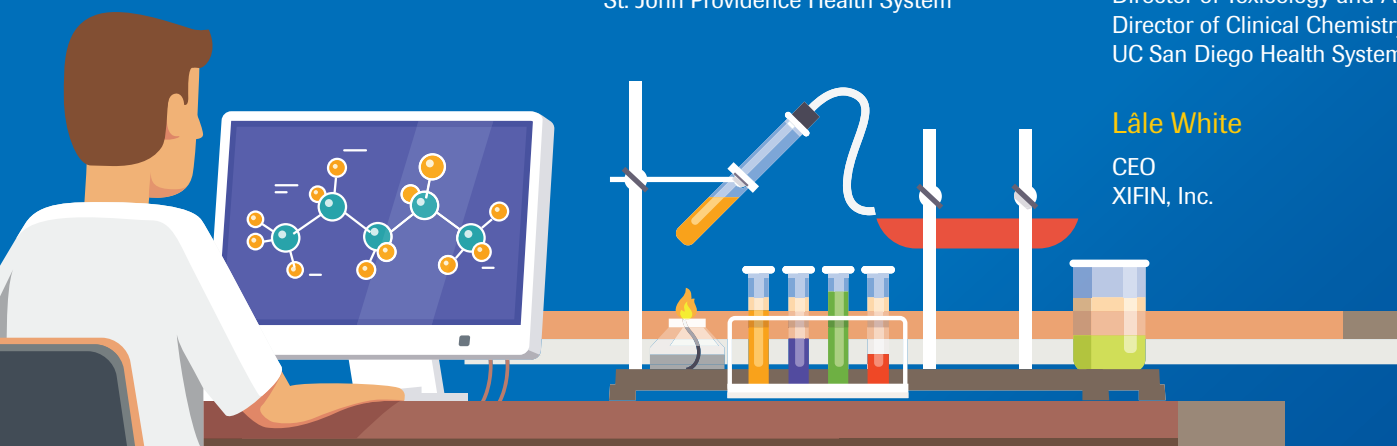
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Why is this guide essential?

In today's volatile healthcare environment, a lab's ability to thrive greatly depends on choosing the right vendor. Beyond providing industry-leading instruments, a best-in-class vendor will partner with you to achieve your high-level business goals. This involves helping you surpass today's performance standards and stay ahead of market shifts. A best-in-class vendor will also continuously deliver the innovations to keep your lab on the cutting edge.

Finding this class of vendor requires careful planning, collaboration, and evaluation. But once you've identified the right choice, you'll face another hurdle—convincing your C-suite to approve it.

Considering the immense risks and opportunities of changing vendors, this final step is a high-stakes proposition.

You and your team carry the responsibility of building a business case to help secure approval. This involves articulating a critical need, establishing a strategic plan, and identifying the solution that offers the greatest sustainable value to your lab and organization.

This guide will take you through the five essential steps to building a business case for new laboratory equipment and IT systems, and justifying your vendor choice to executive leadership.

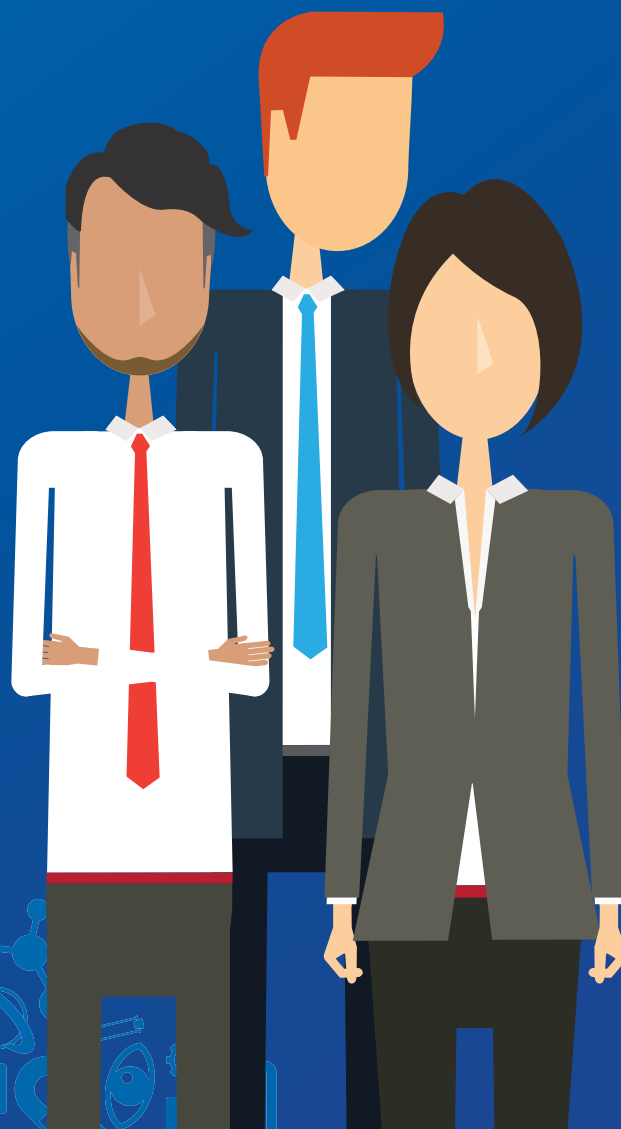
CHAPTER 1

Understanding your C-suite and their goals

The first step to convincing key decision makers to approve your request is to understand what's most important to them. You'll need to be familiar with their areas of focus and organizational goals. This information can help you deliver the most compelling pitch and anticipate challenging questions.

Chapter goal:

Highlight the key decision makers and how to engage each one for the approval of a new vendor.



VP of Lab/Ancillary Services

Their primary focus

The VP of Lab Services (or VP of Ancillary Services) is focused on the overall value of the lab and strives to enhance efficiency and quality of lab results. This person will be a primary decision maker in approving a vendor selection or any lab purchase.

How to obtain their buy-in

Highlight how your vendor selection will yield value-enhancing results. Focus your presentation on how your capital funding request or chosen vendor will lead to:

- Standardized operations
- Reduced full time employee (FTE) requirements
- Improved turnaround time (TAT) for critical results
- Reduced lab errors
- Improved reliability of lab operations
- Improved employee morale
- Increased revenue or reduction of operating costs

Critical questions to expect

- Will this vendor's solutions provide greater TAT and throughput?
- How will switching to this vendor improve physician satisfaction?
- Will this vendor drive standardization of patient results and lab processes?
- How does the reliability of their systems compare to that of our current systems?
- How disruptive would implementation be in terms of staff training, data integration, etc.? Will it cause a lapse in services?
- Does the vendor offer more advanced automation?
- How would this solution help our lab generate more revenue?
- How would this solution reduce our costs?
- What is the vendor's investment in R&D?
- What's in their development pipeline, in terms of systems, reagents, and IT?

Sizing up standardization

When investigating each vendor's standardization offerings, remember one thing: **Roche delivers true lab standardization.**

Standardized offerings by vendor

	Detection methodology/reference ranges for chemistry and immunoassay	User Interface	Open IT Middleware Solution	Reagent pack design	Same manufacturer for automation and analyzers
Roche	✓	✓	✓	✓	✓
Siemens	✗	✗	✗	✗	✗
Beckman	✗	✗	✗	✗	✗
Ortho Clinical Diagnostics	✓	✓	✓	✓	✗
Abbott	✓	✓	✓	✓	✗

Chief Medical Officer (CMO)

Their primary focus

The CMO of a healthcare organization is focused on the clinicians' ability to provide optimal care and improve patient outcomes. This person is highly involved in decisions of clinical relevance. He or she will usually be a primary decision maker in approving a vendor change—especially if it involves new assays and reference ranges.

How to obtain their buy-in

To get buy-in from your CMO, you'll need to demonstrate how your capital funding request and vendor selection can improve your organization's patient care and outcomes. Focus your presentation on how your chosen solution will lead to:

- Increased test result standardization
- Reduced TAT for critical results
- Improved patient outcomes
- Improved patient satisfaction
- Greater results accuracy and reproducibility

Critical questions to expect

- Do this vendor's solutions improve test result standardization?
- Do this vendor's solutions provide more accuracy and reproducibility of results?
- What effect will this vendor change have on ordering physicians? Will it help make their processes more efficient?
- How will this new solution enhance our service offerings?
- In what ways will this vendor help us reduce medical errors?
- Will partnering with this vendor help shorten patient length of stay? Reduce readmissions?
- How will switching to this vendor help improve patient outcomes?

Cardiac results—STAT

Looking for the fastest STAT troponin reaction time? Look no further than Roche.

STAT troponin reaction times (minutes)

Roche cobas [®] analyzers	9
Abbott ARCHITECT	15
Beckman Coulter UniCel [®] DxI	13
Siemens ADVIA Centaur [®] XP	18
Siemens Dimension Vista [®]	10
Ortho Clinical Diagnostics VITROS [®] 5600 Integrated System	18

“ When we're talking about issues with the heart or the brain, those are where the minutes really matter.



-Ketan Pandya, M.D.

ED Medical Director, Florida Hospital Healthcare System - Kissimmee

Smarter, faster automation

The **cobas**[®] 8100 automated workflow series automatically prioritizes STATs, using multi-level, bi-directional lanes. This supports quicker TAT, quicker treatment, and quicker discharge.

Visit usdiagnostics.roche.com to learn more about the **cobas 8100 automated workflow series**.

Chief Financial Officer (CFO)

Their primary focus

The CFO is focused on generating more revenue, while reducing the cost of patient care. And because a change in vendor can significantly affect an organization's profits and losses, the CFO will be a key decision maker in both the distribution of capital funds and your final vendor selection.

How to obtain their buy-in

To create a compelling argument to your CFO, you'll need to demonstrate how your proposed solution will improve your organization's revenue or reduce the cost of patient care. And because funding is limited, you'll need to demonstrate how this solution creates better financial outcomes relative to other service lines within your institution. Focus your presentation on how your chosen vendor will lead to:

- Greater cost efficiency
- Greater revenue generation
- Improved operational standardization
- Improved inventory management
- Less outsourcing
- Reduced costly lab errors
- Fewer FTE requirements

Critical questions to expect

- How much will this switch cost—short-term and long-term?
- What's the potential ROI if we invest in this vendor?
- In what ways will this vendor's solutions streamline our spending?
- How will it reduce the cost of care?
- How will it reduce readmissions?
- Why are you recommending this investment now?



Roche Middleware helps you get the most out of IT in eight essential ways:

- 1. Laboratory Intelligence** supplies real-time performance metrics and actionable insights to transform your lab into a problem solver
- 2. Rules** multiplies productivity by reducing the need for sample intervention
- 3. QC Integration** catches errors before they leave the lab
- 4. CAP Proficiency Driver** automatically prepares CAP surveys, reducing unnecessary staff time and errors
- 5. Moving Averages** makes every sample a QC check so instruments are reporting quality results at all times
- 6. Tube Location** pinpoints samples in one minute, improving processes and time-efficiency
- 7. Multi-Site** connects labs within a network so they can instantly share vital resources and information
- 8. Open Middleware** integrates lab instruments through one middleware system, eliminating the inefficiencies of multiple systems

Chief Information Officer (CIO)

Their primary focus

The CIO is focused on the flow of information within your health system. This means ensuring that information is getting to the right people at the right time and that IT is being used to its greatest capacity. Because health systems and their labs continue to integrate, the CIO is a key influencer in any major lab project or capital funding request.

How to obtain their buy-in

To get buy-in from your CIO, you'll need to demonstrate how your proposed change will improve information exchange, standardization, and access, and how this will lead to enhanced productivity.

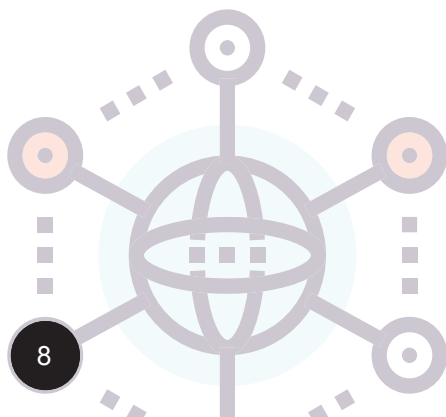
Critical questions to expect

- How will this vendor switch help us improve IT platform standardization and integration?
- How will their middleware solutions enhance our service and value?
- How will this switch affect the flow of information? Will it improve the speed/breadth of access?
- How seamless will this transition be?
- How will this affect our other integrated IT systems?
- What is their long-term vision relative to healthcare IT?

“ We cannot manage a population, or even a single patient, without accessible datasets. We need the right infrastructure, as well as the intelligence and capability to learn how to look at the data. ”

—Philip Chen, M.D., Ph.D.

Chief Healthcare Informatics Officer, Sonic Healthcare



Chief Executive Officer (CEO)

Their primary focus

As the organizational leader, the CEO is focused on the growth and profitability of your overall health system. This means thinking big and strategically navigating shifts in the healthcare landscape. Key initiatives include successfully implementing population health management and growing the brand of their health system.

How to obtain their buy-in

You'll need to show your CEO how a new vendor partnership will contribute to your health system's high-level strategic objectives, such as increased patient satisfaction, increased quality of care, and reduced costs. Today's CEOs must navigate a complex and volatile market environment. That's why they value innovative approaches and strong vendor partnerships for solving big problems.

Critical questions to expect

- How will this vendor better align with our high-level strategic objectives?
- Will switching from one vendor to another improve our profitability?
- How will this better enable us to manage the health of a patient population?
- In what ways will switching to this vendor improve our ACO status?
- How will this transition expand our in-house service offerings?
- How will this vendor help us better navigate healthcare reform?
- What is the outlook on their developmental pipeline? Investment in R&D?

“The first thing we can do in the process of negotiation is information gathering. What is on the minds of the C-suite? What are the things that they're actually studying? What are the metrics that they're shooting for? What are their high-priority items? By gathering that information, you're in a better position to negotiate for the things that you want.”

-Julia Dahl

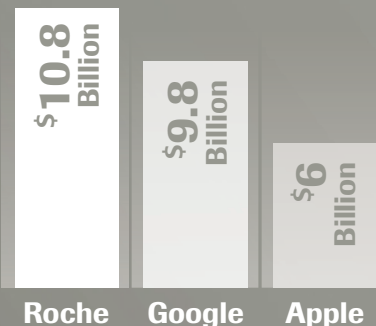
CEO and Medical Director, Mosaic Prime

Leading R&D

Roche is the

5th LARGEST
R&D spender in the world

Out-investing global
innovation leaders



Source: Jaruzelski B, Schwartz K, Staack V. The top innovators and spenders. Strategy& website. www.strategyand.pwc.com/global/home/what-we-think/innovation1000/top-innovators-spenders#/tab-2014. Accessed April 20, 2016.

Innovation starts with commitment

In 2014, Roche had

17,566

people dedicated to
innovation.



CHAPTER 2

How to build a strategic business plan

Why do you need a strategic business plan?

Before embarking on a new vendor selection process, you need buy-in from your C-suite. Not only do they have major stake in decisions that impact the organization, but they control your capital funding too.

Getting approval starts with presenting a robust business plan. This strategic document enables you to accomplish two main things:

1. **Create a link between lab and organizational goals:** Because the C-suite is often not versed in lab needs, a business plan will help you connect. It enables you to demonstrate why switching vendors and investing in new lab equipment or IT systems will create a positive impact through the lab and the organization.
2. **Enforce why switching lab vendors is the optimum use of funding:** Because the lab competes with other service lines for limited dollars, a business plan will help you make a compelling case as to why this is the best use of resources. It is also essential for competitive purposes, as many other service lines are using business plans for the same objective.

Chapter goal:

Highlight how today's most forward-thinking labs are creating strategic business plans to gain executive approval on conducting a vendor switch.

What should you include in your strategic business plan?

While business plans may differ in their structure, they generally include 7 sections:

1. Current state
2. Project proposal and key benefits
3. Assessment of options
4. Recommendation
5. Financial analysis
6. Risks and assumptions
7. Project timeline



Section 1: Current state

In this opening section, you'll lay the groundwork for your strategic plan. This section is composed of two parts.

Current problems

You'll want to start by establishing key problems that exist today in your lab. Be sure to explain them in the context of your whole organization, to help your C-suite appreciate the urgency to address them quickly.

- Example: Your chemistry analyzers provide suboptimal TAT.
- **Don't say:** Our TAT is too slow
- **Say:** Our slow TAT leads to—
 - Delays in patient care within the emergency department (ED), which increases the health system's overall cost of care
 - Reduced patient satisfaction, which can impact reimbursement
 - Slower treatment initiation, which has significant implications on quality of care

Lab requirements to fix the problems

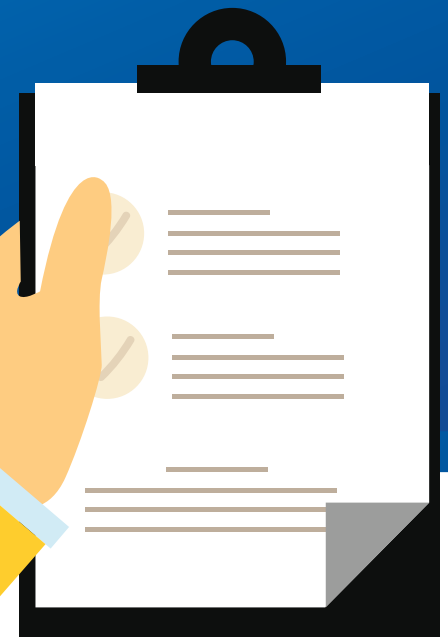
This is your opportunity to introduce your desired outcome and incorporate it into your strategic business plan. State it succinctly and clearly, as it relates to your established lab problems.

Example: A new vendor must reduce TAT for critical STAT assays by 35% or more.



Want to learn more about aligning your RFP requirements with your strategic business plan?

Read chapter 3 for a full explanation of how to build an RFP. This strategic document will help you convey your lab problems and needs, so vendor candidates can demonstrate how their proposed solution best aligns with your organizational objectives.



Section 2: Project proposal and key benefits

Your project proposal demonstrates that you have a well-thought-out plan for addressing the critical needs of your lab and organization. It should highlight key benefits in terms that resonate with your audience. This demonstrates to your C-suite that you're considering organizational-level needs and success beyond the lab.

Ensure your key benefits achieve the following:

- **Support** the mission, vision, and values of your organization
- **Connect** to the organizational strategic plan
- **Measure** success through metrics and key performance indicators (KPIs)

Section 3: Assessment of options

Demonstrate to your C-suite that you've already explored viable solutions. In this section, you'll want to review each solution and highlight some initial details. Be sure to include measurable data whenever appropriate, to help quantify key distinctions.

For each potential solution, explain:

- **Benefits**, such as reduced TAT for critical ED assays or increased test result standardization across the health network
- **Costs**, such as the financial investment for this advantage
- **Risks**, such as potential workflow disruptions from a change in instrumentation



Which vendor option best aligns with your strategic objectives?

Today's leading labs are using a vendor evaluation scorecard to score and rank each vendor option. Be sure to read chapter 4 to learn valuable tips on what to include and how to put your scorecard into action.



Section 4: Recommendation

Though your evaluation of solutions has only begun, you'll want to give an initial recommendation on which solution is best. Be sure to account for benefits, costs, and risks of each, both short- and long-term. This will help assure your C-suite that a solution is available that not only addresses your key problems but accounts for broad organizational needs.



Section 5: Financial analysis

A thorough financial analysis is essential to a compelling business plan. Your C-suite will need to know how you plan to spend their funds and what you will get in return. One thing is for sure—you will ONLY be granted approval to select a new vendor if you can demonstrate positive financial outcomes.

Your financial analysis should include two things:

- Funding and resources required
- Projected or calculated return on investment (ROI)



Demonstrating ROI

A new vendor comes with many potential costs and benefits—but how do you quantify them? We'll show you how in chapter 5.

Section 6: Risks and assumptions

A major change, such as switching vendors, comes with its share of risks and assumptions. While you strategically work to minimize potential issues, you and your C-suite need to be aware of them.

Conduct a thorough risk analysis and strongly consider each of the following:

- **General business risks**, including quality control, distribution, marketing, and promotion
- **Industry-specific risks**, including competitive products and service offerings from other vendors
- **Company-specific risks**, including funding, finding qualified personnel for the project, and other unforeseen occurrences

Section 7: Project timeline

Your C-suite will invariably need to know the anticipated project timing. This helps them plan for a number of things, including:

- When spending will occur
- Period of implementation and training
- Concerns around noise, traffic, and workflow disruptions
- Conflicting events
- Timing of go-live needs

To account for these variables, set specific dates from the start to finish of your project. Depict these dates in an organized fashion, such as within a spreadsheet. This will help your C-suite visualize how your project will take shape over time.

A good project timeline may also include these three additional items:

1. Project objectives
2. Actions at each step
3. Progress indicators

Because time is money

Want to get a better sense of how timing may affect your organization's bottom line? Visit LabLeaders.com and explore "Financial" articles within the Resource Center. It's worth every penny of your time.

Resourceful thinking

It pays to highlight required resources at each step of your project timeline. This level of thoroughness will instill confidence in your C-suite. It shows that you've considered dependencies throughout the process, to help meet all timing expectations.



Case study:

Realizing efficiencies in short time with integrated instrumentation

St. John Providence Health System

V

Key Stats:

Largest provider of inpatient care in southeastern Michigan

- 772 beds
- More than 125 medical centers and 4 hospitals
- 10 million clinical chemistry and immunoassay tests/year

Challenge:

Increase value throughout their network by maximizing efficiency, performance, and throughput within the core lab

Solution:

Improve analytics, automation, and capacity by upgrading to fully integrated instrumentation

- **Analyzer:**
cobas[®] 8000 analyzer series
- **Automation:**
cobas[®] 8100 automated workflow series

“ These innovative systems from Roche will help improve our patient care experience by allowing us to provide accurate and timely results to our customers. ”

-Ralph Rowland

MT (ASCP) Lab Manager, St. John Providence Health System

Results

64% reduced TAT in add-on testing with automated mid-term storage buffer

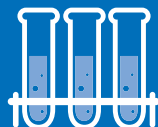
Eliminated risk of manual error with automated aliquoting

Eliminated 3 workstations and reduced send-outs to 2% with a broad test menu

Improved the speed and accuracy of results with precise analytics

Doubled capacity without adding space

Saved more than \$225,000 in the first 5 months



CHAPTER 3

How to build an RFP



When you decide to change vendors, you need to be certain that the change will set up your lab for long-term success. That's why today's leading labs are using an RFP to guide them in their decision-making process—and doing so more strategically than ever before. An RFP helps each vendor highlight their performance, offerings, and advantages, relative to your lab and organizational goals. Labs can use this tool to differentiate those in the selection pool and focus on leading candidates. However, quality output starts with carefully and thoroughly crafting your RFP. Here's how to do it.

Chapter goal:

Reveal how today's leading labs are building RFPs to ensure their vendor selection process aligns with high-level goals.



Getting started

Step 1: Assemble your selection team

Your RFP shouldn't be informed by just a few stakeholders, but rather all relevant stakeholders in your organization. This ensures you're accounting for broad needs and considerations. It also helps to create an inclusive process, which helps to:

- Maximize accountability and ownership
- Give all key members a voice
- Ensure diverse, cross-functional representation

This serves the ultimate purpose of identifying what's best for all teams—not just one.

Your inclusive selection team	
Areas	Roles
Finance	CFO, Finance Manager, Lab Director
Workflow/Operations	Lab Supervisor, Lab Manager
Users	Medical Technologist, Lab Supervisor
IT/Middleware	LIS Coordinator, Medical Technologist
Clinical	Pathologists, Cardiologists
Purchasing/Supply chain	Materials Manager, Purchasing Manager, Procurement Manager



Inclusion runs broad—and deep

Serving the service lines

When appropriate, you should reach out to specific service lines as well. The ED and cardiac service line are prime examples. If their operations will be impacted by a change in vendor, IT system, or lab instrumentation, their voices matter just the same.

Shift around the clock

Don't just include diverse roles—include members from all shifts. Third shift technologists, for example, could have an entirely different set of concerns and opportunities.



Step 2: Solicit input from RFP contributors—collaboratively

Rather than engaging each person one-by-one, it's best to convene an assembly that's led by the lab or purchasing department. This ensures higher-quality input through live, open collaboration. It will also help to ensure quality of your vendors' responses.

Step 3: Determine your top lab challenges and goals

These should align with your strategic business plan and will help lay the foundation for your RFP. You'll want to ask yourselves insightful questions to help identify the most valuable answers.

Step 4: Determine which vendors could help you attain your goals

These illuminate key selection criteria and further inform the content of the RFP.

Sample lab goals and required vendor solutions

Lab goal	Vendor Solution
More consistent workflows	Industry-leading instrument reliability
Lab consolidation	Test result standardization across platforms
Provide same-day lab results	Industry-leading STAT assay reaction times
Reduce consumable storage needs	Standardized, ready-to-use reagent packs
Increase competitive advantages	Robust product pipeline

“We were looking for a vendor who understood us as a customer and who really took the time to learn about our needs and patient population. Roche spent time in our laboratory investigating our different shifts and assessing our workflow efficiency.”

- Susan Mammina

Director, Laboratory & Pulmonary Services, Spectrum Health



Sample questions to get started

Financial

- What are our opportunities to streamline spending?
- How could we create new revenue sources?
- How could a new vendor partnership save us money, resources, and time?

Operational

- What is limiting us from further growth?
- What are our opportunities for platform consolidation?
- How can we better address the changing regulatory environment and payment models?

Clinical

- What would better enable population health management?
- How could we reduce medical or lab errors?
- How could our instrumentation better support clinicians' efforts?

Emphasize future orientation

While every lab may have different goals, they can all agree on one thing: the need for sustainable success. That's why today's leading labs are looking past *today* when choosing a vendor. They're insisting on a vendor with a strong future orientation.

In many ways, a vendor's investments, innovations, and developmental pipeline are more critical than their current portfolios. These things represent more than new launches. They represent how a vendor anticipates needs, creates opportunities, and supports your ongoing pursuit of excellence.

Be sure to account for these critical considerations in your RFP.

"Choosing a vendor is a complex decision with long-term implications. You're generally looking at a 10-year commitment, at least. It's crucial to consider not just current, but future needs."

-Myra Wilkerson

Chair, Department of Laboratory Medicine
Geisinger Health System

Step 5: Prioritize your lab's requirements

Your RFP should align with your lab's strategic goals. Prioritizing your most critical requirements will help clarify the most essential vendor attributes and offerings.



University of Kentucky: Automation expectations for the clinical chemistry lab

Here's an example of vendor solutions that this core lab determines essential.

Health system stats

- 2.5 million clinical chemistry and immunoassay tests/year
- 40 medical centers

Key automation needs

Error reduction	<ul style="list-style-type: none"> ▪ Decrease manual processing and operator errors ▪ Alert operators of specimen problems without process delays
Improved TAT (STATs and routine)	<ul style="list-style-type: none"> ▪ 90th percentile for assay TAT (30 minutes for chemistry and 40 minutes for immunoassays) ▪ Ability to prioritize STAT specimens ▪ System to be interfaced seamlessly and bi-directionally
Increased productivity	<ul style="list-style-type: none"> ▪ Handle most common tube types ▪ Locate and retrieve specimens for dilution, repeat, or add-on testing without technologist intervention ▪ Minimal downtime ▪ Operate independently in the event of a healthcare information system (HIS) failure ▪ Enable manual workarounds in the event of a track failure ▪ Enable autoverification, customized quality control programs, and electronic storage of patient results ▪ Vendor will provide a local service representative and 24/7 service
Labor utilization	<ul style="list-style-type: none"> ▪ Minimize occupational exposures ▪ No adverse effects in terms of generating heat, noise, or humidity
Capacity to handle increased volume/growth	<ul style="list-style-type: none"> ▪ No budget increase; create labor savings to offset initial outlay ▪ Does not require major renovations to fit in the available space

Creating the RFP document

Organize

Creating an organized, well-constructed RFP will add value in a variety of ways. It will enable vendor candidates to focus their responses on your key issues and further help you compare responses against your most important criteria.

Ask the right questions

Just as important as the topics you include is *how* you ask your questions. For a high-value RFP, you'll want to ask open-ended questions, rather than closed ones. You should also ask questions related to products, vendors, and present versus future orientation.

Sample product approach

- **Don't ask** *what* it does
- **Ask** *how* it does things better
- **Don't focus** on *specifications*
- **Focus** on the *applications* and how they create unique value within your lab

Sample vendor approach

- **Don't ask** *if* they provide a service
- **Ask** *how* they solve problems using their services and value-adds
- **Don't ask** *if* they take a particular approach to your business
- **Ask** *how* their approach best positions your lab for ongoing success

Sample present versus future approach

- **Don't focus** *solely* on the products in their current product portfolio
- **Focus** on *how* their current and future solutions will benefit your organization over a long-term partnership
- **Don't focus** *solely* on their investments
- **Focus** on *how* these investments will spawn greater innovations

Keep in mind—technical specs will show whether a vendor meets your minimal requirements. If you are narrowly focused on these specs, you will miss the big picture of value. Look at the combination of offerings—features, services, investments, and more—to determine how a vendor addresses your spectrum of needs.

Organizing tip

To help ensure clear vendor responses, arrange your document into distinct sections like these:

- Automation
- Analytics
- Reagents
- IT
- Service and support
- Consultation
- Developmental pipeline/R&D
- Training

Tips from a leading lab: Geisinger Health System

Evaluating assays & innovation

Geisinger Health System used each vendor's track record of innovation as an indicator of their commitment to ongoing innovation. They asked these two questions up-front:

1. How many new assays have been **launched** in the past five years?
2. How many assays have been **improved** in the past five years?

Evaluating reliability

Geisinger Health System prioritized questions related to these essential instrument reliability factors:

- Mean time between failure
- Average duration of failure
- Customer service/follow-up
- Maintenance requirements
- FDA recalls

Making the cut

Beyond highlighting favorable vendor candidates, an effective RFP is a useful tool for locking out those candidates that are unfit. By helping you clearly evaluate how each vendor stacks up against your prioritized needs, you are in a strong position to eliminate those that don't offer essential solutions.



How environmentally friendly is your vendor?

If your lab is trying to go green, ask how each vendor takes measures to limit use of:

- Space
- Heat
- Noise
- Water
- Excess packaging and printed materials

What does a less-than-best RFP look like?

- Contains closed-ended questions
- Asks disparate or duplicate questions without organization
- Doesn't specify the most critical customer requirements
- Focuses disproportionately on specifications versus applications
- Aims at finding out *what* a vendor does vs *how* a vendor does things better

Writing the right questions

Keep your questions focused to avoid overlapping answers. This will help your vendor candidates be specific and help you root out the information you need most.

Standardized reference ranges, standardized results

If your goal is to standardize test results, you should demand standardized reference ranges—for all assays, across all platforms, regardless of size. Roche analyzers provide this essential standardization benefit, among many others.

Want to learn more?

Visit usdiagnostics.roche.com to download the Essential Guide to Achieving True Lab Standardization.

CHAPTER 4

How to build a best-in-class vendor evaluation

While you can narrow down your vendor candidates with an effective RFP, you'll likely still have more than one to choose from. To take the next step in pinpointing the absolute best choice for your lab, you'll want to employ a best-in-class vendor evaluation scorecard. This tool will help you quantify each vendor's unique value, based on their abilities to serve your lab's strategic goals and address each stakeholder's challenges. From this, you'll be in a position of confidence to identify your preferred vendor.

Chapter goal:

Illuminate the optimal process for specifying evaluation criteria and scoring vendor candidates, in choosing a long-term partner.



Which people to involve

You'll want to solicit input from all members of your selection team. This helps you conduct a comprehensive, well-rounded evaluation of all candidates.

Throughout this process, make sure that you're not just getting lots of responses, but truly valuable responses. Choose people who demonstrate that they are invested in making a positive change. These are the people who take the time to attend vendor presentations, review key materials, and contribute positively to the process. When you build your selection team in this way, you'll receive the most constructive input.

How to conduct your evaluation

Your selection team should conduct research in the following areas:

1. **Online:** This is ideal for identifying a vendor's key differentiating features, reviewing case studies, watching videos of the lab instrument in operation, and even validating vendor claims or peer experiences
2. **Peer references:** A best-in-class vendor gives you an honest account of their solutions—but don't stop there. Connect with peer labs and tap into their firsthand experiences with vendor partnership
3. **Vendor sales representative:** A truly consultative sales force is prepared with answers to your most challenging questions—don't hesitate to ask
4. **Vendor technical experts:** Get the real deal on essential specs and performance metrics from those who know best
5. **Industry organizations & events:** These are where information comes to life—be sure to attend, engage, and keep your mind open to new opportunities and solutions

What factors to evaluate

The criteria for evaluating a best-in-class vendor are not universal, but rather depend on your lab's priorities. The one constant is: there are many things to consider.

To help your selection team conduct the richest evaluation, here is a list of product- and partnership-related criteria. This list was informed by a variety of experts in laboratory operations. It may not apply in full, but it will help you get started in accounting for key criteria.

Product-related criteria

Analyzers

- TAT (speed and predictability)
- Throughput
- Required sample volume
- Standardization of reference ranges and test results
- Scalability
- Instrument reliability
- Maintenance requirements



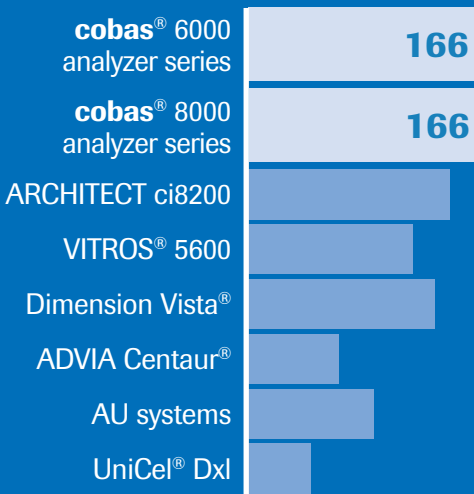
The many benefits of fast TAT

“When it comes to assay turnaround time, of course every minute counts. Not only can it save a patient's life, but it can give them a far better treatment experience. Many of our patients commute far to our hospital. When we can provide them same-day results, we help to increase their satisfaction and loyalty to our institution.”

-Myra Wilkerson
Chair, Department
of Laboratory Medicine
Geisinger Health System

Rely on Roche for the biggest menu on one platform

Number of assays



Sources: 1. <http://www.abbott.com>. Accessed May 2015. 2. <http://www.orthoclinical.com>. Accessed May 2015. 3. <http://www.siemens.com>. Accessed May 2015. 4. <http://www.beckmancoulter.com>. Accessed May 2015. All other product names and trademarks are the property of their respective owners.

Roche's broad and growing menu

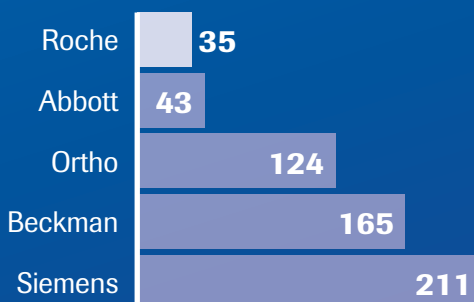
The **cobas**® family of analyzers offers 166 different assays, covering areas of thyroid function, cardiac, fertility/hormones, anemia, tumor markers, maternal care, critical care, infectious disease, bone markers, and many others.

FDA recalls revealed

How do the following numbers impact your confidence in your vendor?

Number of FDA recalls

Jan 2010 – December 2015

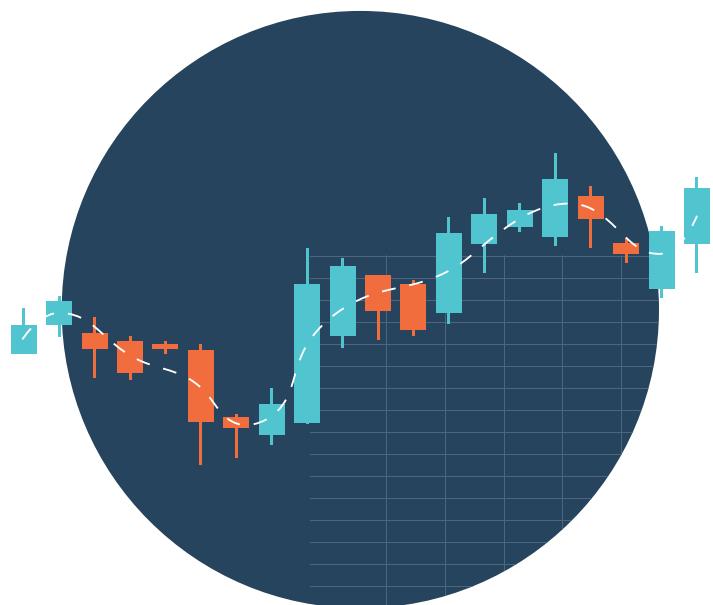


Source: FDA Class II recalls January 2010–December 2015. FDA.gov.



Reagents

- Breadth of current assay menu
- Ongoing investment in menu expansion and assay refinement
- Reagent preparation requirements
- Assay quality
 - Carryover claims
 - Clot detection
 - Indices
 - Accuracy
 - Reproducibility
- Lot-to-lot stability
- Number of FDA recalls
- On-label testing options



Automation

- Lack of user interaction
- Track design
- Specimen receipt by automation
- Sample identification
- Quality checks
- Online and offline aliquoting
- Tube sizes/caps accepted
- Modularity/scalable configurations
- Centrifuge design and capacity
- Workflow flexibility
- Refrigerated storage and retrieval
- STAT handling
- Add-on testing management
- Efficiency at any volume
- Decapping and recapping capabilities
- Connects to third-party instruments
- Instrument reliability



Is your add-on testing adding too much time?

A small percentage of overall workload could be taking up a large percentage of your manual processing time.

- 5-10% of tests are typically add-on/repeat tests
- 90% of add-on tests generally occur in the first 24 hours

How is your automation system supporting efficient workflows for add-on/repeat testing?

Automate positive outcomes

The **cobas**® 8100 automated workflow series enables labs to run both primary tubes and aliquots at once, based on workflow needs. This gives greater flexibility to manage TAT, cost, waste, and overall operations.

“With our high testing volume, there’s no room for manual error in aliquoting. Our pathologist required 1 person to aliquot a sample and a second to monitor for quality control. The 8100 fully automated this process, ensuring reliable top quality while also freeing up our staff.”

-Angela Leslie

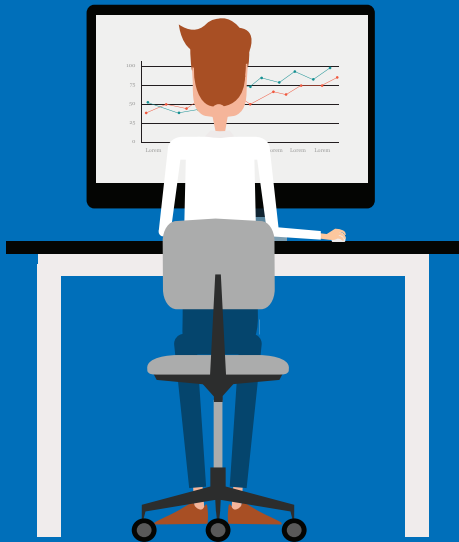
MT (ASCP), Automation Technical Specialist, St. John Providence Health System

The **cobas** 8100 automated workflow series also automatically ensures sample quality at multiple points, for greater assurance down the line. This not only enhances efficiency and quality, but also supports employee morale at every step.

“Our lab staff is truly pleased with the big efficiency gains we’re already feeling. You can really see how the energy of our lab has changed for the better. Now our staff knows they can focus in on the valuable work they need to do, and more people are requesting to join our team every day.”

-Ralph Rowland

Lab Manager, St. John Providence Health System



“Autoverification has taken a lot of stress off the staff. Now, they are actually able to pay better attention to the things that need to be looked at.”

-Amy Rockefeller

Clinical Laboratory Scientist and Senior Specialist
UC San Diego Health System

How does each vendor answer these essential assay questions?

How will you equip my lab to:

1. Handle more testing in-house?
2. Generate more revenue?
3. Standardize our results?
4. Broaden our service offerings?
5. Enhance our diagnostic abilities?
6. Stay ahead of our organization’s needs?
7. Outperform the competition?



IT

- Availability of rules-writing support
- Inventory solutions and support
- Dashboards, reporting capabilities, and laboratory intelligence
- Integration capabilities with third-party manufacturers
- Platform consolidation and standardization
- Level of IT support
- Capacity to operate independently in event of hospital system failure
- Autoverification
- Quality control programs
- Connects to third-party instruments
- Electronic storage of patient results
- Proprietary hardware needed
- Virtual server option
- Available security levels
- Number of users that can access middleware at one time
- Screen has image support
- CAP Proficiency Driver available
- Customized, vendor-specific rules package

“We started with Roche Middleware in our chemistry department alone. It worked so well, we quickly expanded it to hematology, urinalysis, coagulation, and immunoassay. Now, our entire core lab is outfitted with the IT that keeps us working smart and in control.”

-Scott Davis

Medical Laboratory Scientist Supervisor, University of Iowa Hospitals and Clinics

IT support

- Quality of in-person support
- Quality of remote support
- Availability of consulting services (i.e. rules writing)
- Holistic approach: consideration of LIS functions and integrations
- Availability of an inventory management solution
- Availability of mobility solutions/ remote instrument monitoring

Service and support

- Implementation accuracy
- Customer support response time
- Support personnel's average distance from lab/travel time
- Industry experience held by support personnel
- Project management qualifications/certifications
- Average duration of instrument downtime
- Service contract
 - Length of service contract
 - Auto-renewal policy
 - Guaranteed response time
 - Duration of warranty
 - Available terms and conditions after warranty (and related costs)

Roche's project management team: Key accolades

- ✓ 96.5% go-live accuracy rate
- ✓ 305 systems implemented

Roche Middleware is backed by outstanding support that places a premium on a laboratorian's time

- ✓ 84% of calls to the Roche Middleware Support Technical Call Center are resolved in less than one day
- ✓ 98% of issues are resolved in-house without having to consult an outside vendor

Source: CMS, CISCO, Confrimit Customer Sat, and PRISMA

Middleware consulting services: Rules writing

If you're considering implementation of a middleware rules package, you've taken an important first step to maximizing your efficiency and workflow. But writing rules can be a daunting task. That's why Roche offers two essential levels of consulting services to help you reach your goals.

Gold Package (remote service)

Roche provides:

- CC/IA Rules Package
- Project management
- Enhanced remote technical support
- Expanded training sessions

Customer writes/customizes rules

Best for labs that are able to take on some technical and implementation tasks

Platinum Package (on-site service)

Includes everything in the gold package, plus:

- A purchased consultation package that does all the heavy lifting
- Enhanced on-site Roche assistance
- Roche writes/customizes CC/IA Rules Package

Best for labs with limited time and staff resources



Visit the Strategic Resource Center on usdiagnostics.roche.com to learn more about Roche Middleware Solutions.

Roche Diagnostics University (RDU): anywhere, anytime training

Roche appreciates the need to maximize instrument proficiency.

To help labs get the most out of their Roche purchases, RDU provides the entire continuum of training in many ways:

- **At your place:** on-site training at your lab
- **At our place:** training at Roche offices
- **Any place:** virtual training online

To access RDU, simply head to usdiagnostics.roche.com, and click on "Training & Education."

LabLeaders

Redefining the value of the laboratory. Together.

Creating the lab of tomorrow starts today

LabLeaders is a Roche initiative that's dedicated to the lab leader and those aspiring to be one. Not only does it provide exclusive strategies, insights, and action plans from today's industry innovators, but it also represents Roche's commitment to helping labs stay ahead of the curve.

As LabLeaders is helping redefine the value of the lab, Roche is helping redefine what you can expect from a partner. When choosing a new vendor, don't overlook the value they bring in helping to overcome your most pressing issues.

Training

- On-site training options
- Off-site training options
- Number of training slots
- Virtual training offerings
- Communication of latest market trends and clinical standards of care

Peer-to-peer resources

- Peer-to-peer events
- User community for best-practice sharing
- On-location lab tours
- Virtual lab tours
- Clinician education groups

Track Record

- Number of placements
- Go-live accuracy rate
- Partnership experience in the past 5 years

Ensuring quality beyond today

Make it a priority to evaluate each vendor's future orientation. These should be some of your most heavily weighted criteria, as they reflect a vendor's ability to perpetuate your growth into the future.

Be sure to consider these two things:

1. Invention of new products and services
2. Investment in vital areas that are shaping the future of laboratory medicine
 - Population health
 - Predictive biomarkers
 - High-impact disease states
 - Companion diagnostics

Visit LabLeaders.com to learn how you can turn your biggest challenges into opportunities.

Putting your scorecard into action

To use your vendor evaluation scorecard, follow these steps.

Step 1: Prioritize your evaluation criteria so they align with your RFP and strategic business plan

Ranking these items will allow you to more objectively rank your vendor candidates. Designate each item as top, middle, or low priority.

Step 2: Score each vendor across key evaluation criteria

Use a weighted scale to rate each vendor at each item. You can assign a greater number of points to your higher priority criteria. This will help you quantify total offerings relative to your higher-level objectives.

Committed to your future leadership

Roche is investing in novel ways to redefine lab value, to help shape new opportunities for future leadership. Here are 3 prime examples of how:

- More than 5500 SWA patents and growing
- More than \$10.8 billion invested in R&D each year
- Only major lab vendor with sole focus on healthcare

Vendor Scoring System Example

Category	Evaluation Criteria	Weight <i>High importance: 3</i> <i>Medium importance: 2</i> <i>Low importance: 1</i>	Vendor A		Vendor B		Vendor C	
			Score <i>Did not meet expectations (1) to exceeded expectations (5)</i>	Weighted Score	Score <i>Did not meet expectations (1) to exceeded expectations (5)</i>	Weighted Score	Score <i>Did not meet expectations (1) to exceeded expectations (5)</i>	Weighted Score
Analyzers								
Assays								
Automation								
IT								
Partnership								
			Total		Total		Total	

Using the scorecard:
Multiply the **weight** and the **score** for each evaluation criterion to determine your weighted score.

Example scorecard for multiple vendors

Here's a hypothetical scorecard filled in, following a thorough review of three vendors. It clearly shows how each criterion is weighted and scored, to derive total scores.

Vendor Scoring System Example

Category	Evaluation Criteria	Weight <i>High importance: 3</i> <i>Medium importance: 2</i> <i>Low importance: 1</i>	Vendor A		Vendor B		Vendor C	
			Score <i>Did not meet expectations (1) to exceeded expectations (5)</i>	Weighted Score	Score <i>Did not meet expectations (1) to exceeded expectations (5)</i>	Weighted Score	Score <i>Did not meet expectations (1) to exceeded expectations (5)</i>	Weighted Score
Analyzers	Test result standardization	3	4	12	4	12	3	9
	Instrument reliability	3	4	12	3	9	4	12
	Throughput & capacity	2	5	10	3	6	4	8
	Scalability	1	5	5	3	3	3	3
Assays	Quality/FDA recalls	3	4	12	4	12	4	12
	STAT assay turnaround time	2	4	8	4	8	3	6
Automation	STAT prioritization	3	4	12	2	6	2	6
	Sample quality verification	2	5	10	3	6	2	4
	Add-on testing capabilities	1	4	4	4	4	3	3
Partnership	Innovation pipeline	3	5	15	4	12	4	12
	Service response time	2	4	8	5	10	2	4
	Continuing education opportunities	2	5	10	5	10	3	6
			Total	118	Total	98	Total	85

Step 3: Add up each vendor's weighted scores

This will provide a metric for how each vendor delivers according to your prioritized needs.

Step 4: Discuss and debate

The vendor with the highest score isn't necessarily the clear winner. Other qualitative factors may come into play. But weigh them cautiously—emotional decisions don't always add up.

Step 5: Select your preferred vendor

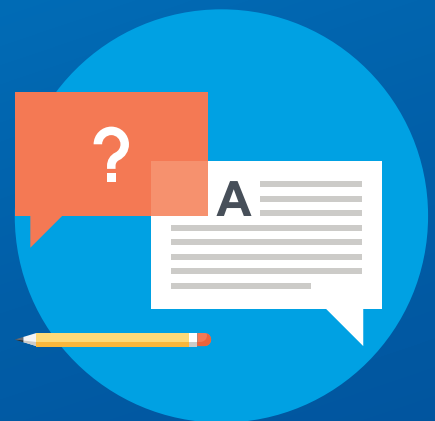
Sometimes the decision is easy, sometimes not. While a committee helped get you to this point, all members won't necessarily agree on the final selection. You'll ultimately want to appoint one final decision maker to represent your selection to your administration.

Congratulations! You've determined your preferred vendor! But you have one final step—justifying your choice to the C-suite. Read the final chapter for strategies to help ensure your choice isn't rejected for the wrong reasons.



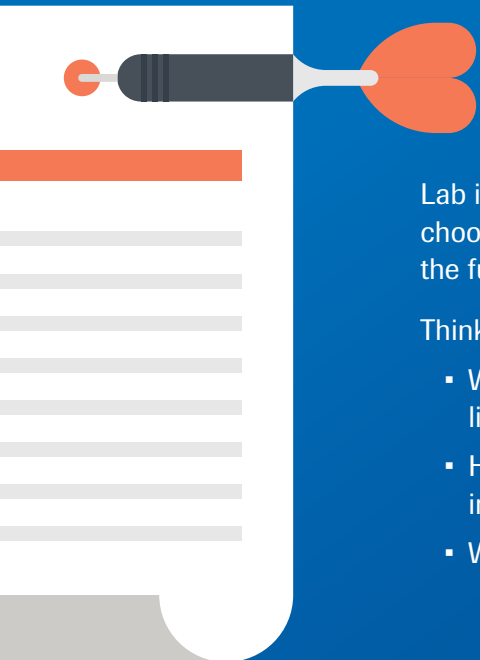
How *not* to conduct a vendor evaluation

- Ignoring decision makers outside the lab
- Limiting the decision to leadership only
- Focusing on cost instead of value
- Not conducting adequate research
- Not considering the breadth of evaluation criteria
- Sticking with a short-term view of a vendor partnership, without regard to long-term investments
- Failing to implement a thorough and thoughtful evaluation process altogether



CHAPTER 5

How to justify your vendor choice and demonstrate ROI to your C-suite



Lab instruments and IT systems can be purchased for a price... but what's the *true cost* of choosing a new vendor? As this value encompasses the total cost to your organization into the future, it must be considered more broadly.

Think about these sample questions:

- What is the cost of unplanned instrument downtime or FDA assay recalls over the lifetime of a vendor contract?
- How much will emergency department or operating room costs decrease by introducing faster STAT assays?
- What is the cost of non-standardized patient test results within a health network?

Because these costs go far beyond initial spend, it is fundamental to account for them in making an appeal to your C-suite.

While some labs see the short-term benefits of paying less for vendor solutions, the larger organization may suffer in the long-term as additional costs add up. But today's leading labs take a big-picture orientation to vendor value. They appreciate the full extent of a vendor contract and interpret value beyond the present.

So before embarking on a new partnership, ask yourself, "What is the true cost of a small assay menu? Lack of modular design and scalability? Higher mean time between failure?"

While the answers may seem sensible to you, convincing your C-suite to pay *more* up-front will take a strategic approach.

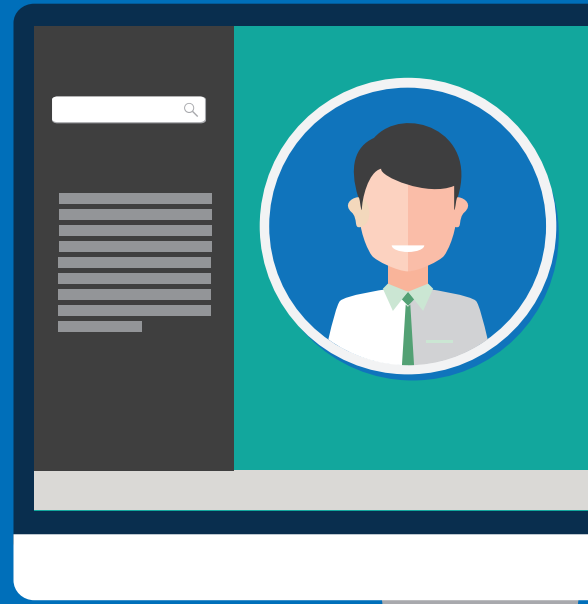
Chapter goal:

Illustrate how leading labs quantify the value of a vendor solution—both short- and long-term—and convey this value to your C-suite

Discovering the true cost of your selected analyzer

Reliability and unplanned downtime

When your analyzer goes down without warning, your lab shifts focus from operational excellence to crisis management. This includes scrambling to create manual workarounds, requiring lab staff to deal with the burden of maintenance, increasing the number of send-out tests, and elevating demand for point-of-care (POC) testing. All of this can have a significant impact on your lab staff's morale, quality of patient care, and revenue. What's the cost of that?



Calculating the true cost: Reliability and unplanned downtime

Cost of lower employee productivity and morale
+ Lost revenue (send outs and POC testing)
+ Cost of investigation and troubleshooting
+ Cost of remediation and corrective action
= **Cost of unplanned downtime per event**

Cost of downtime per event
x Average number of unplanned
downtime events per year
= **Annual cost of unplanned downtime**

Length of contract
x Annual cost of downtime
= **Total cost of downtime**

Calculating the true cost: TAT for intra-operative PTH

Number of cases per year
x Difference in STAT assay TAT
= **Annual OR time savings**

Annual OR time savings
x OR time cost per minute
x Number of PTH tests per case
= **Annual OR cost savings in dollars**

Length of contract in years
x Annual OR cost savings
= **Total OR cost savings**

Analyzer footprint and scalability

A relatively compact analyzer can mean avoiding the cost of remodeling your space. Also be sure to question: is your vendor's system scalable? This feature enables you to scale smart without needing to buy and support an entirely new line. It promotes long-term efficiency of space and labor cost.

TAT

Industry-leading TAT for critical assays can save your lab and institution much more than money. First and foremost, its value can be quantified in lives saved. Having rapid STAT assays means faster results and faster treatment in critical cases. But this has major financial implications as well. Treating patients faster means avoiding such things as costly treatment delays and extended lengths of stay in some of the most expensive areas of the hospital—the ED and operating room (OR).

Throughput

High throughput isn't just about supporting a high volume of tests. It's about ensuring responsiveness in your highest-demand periods. Clinicians and patients rely on your lab for timely results—and being prepared to handle any need at any time can't be undervalued. What's the cost of your lab being the bottleneck that's delaying care and driving up related costs?

But the value of high throughput goes beyond meeting needs *today*. Securing high throughput is a strategy for accommodating future growth, capturing new sources of revenue, and sustaining peak performance however your institution evolves.

Discovering the true cost of your selected reagents

Current and future assay menu

The quality of an assay menu is largely defined by its size. A broad and continuously expanding menu helps increase revenue and avoid unnecessary costs by reducing the need for send outs and allowing for an investment in fewer analyzers and service contracts.

Background:

- **Vendor of choice: Vendor A (less expensive option today)** offers only 120 tests in its menu and invests little in innovation, test menu expansion, and instrument consolidation
- **Non-chosen vendor: Vendor B (more expensive option today)** offers more than 165 tests in its menu and invests heavily in R&D and test menu expansion

Consequence 1: Your lab needs multiple analyzers

Lab needs to buy three stand-alone analyzers to meet its testing needs. Will likely need to buy more analyzers in the future, as their test menu broadens with new available therapies, standards of care, and pharmaceutical drugs.

Results: wasted space, more needed FTEs, and higher costs for additional systems, maintenance, service contracts, and employee training.

Calculating the true cost: Buying multiple analyzers for changing testing needs

	Analyzer Cost (Today)	+	Service Cost (Today)	+	Standalone Analyzer Cost (Future)	+	Service Contract Cost (Future)	=	Total Cost of Needing Multiple Analyzers
Vendor A: Limited test menu and low R&D investment	\$\$\$	+	\$	+	\$\$\$	+	\$	=	\$\$\$\$\$\$\$\$
Vendor B: Broadest test menu and largest R&D investment	\$\$\$\$	+	\$	+		+		=	\$\$\$\$\$

Although choosing Vendor A is initially less expensive, your lab faces the future cost of stand-alone analyzers and new service contracts. This is due to Vendor A's stagnant test menu and lack of R&D investment over time.

Consequence 2: Your lab sends out more tests to reference labs

In order to accommodate test menu gaps, your lab needs to send out a broader range of tests to a commercial lab.

Results: lost revenue, additional costs, slower TAT, and sacrificing of standardized results—which significantly limits successful population health management

Calculating the true cost: Sending out tests to accommodate menu gaps

	Reagent & Consumables Cost (Today)	+	Send-Out Testing Cost (Today)	+	Reagent & Consumables Cost (Future)	+	Send-Out Testing Cost (Future)	=	Total Cost of Menu Gaps
Vendor A: Limited test menu and low R&D investment	\$	+	\$\$\$	+	\$\$\$	+	\$\$\$\$	=	\$\$\$\$\$\$\$\$\$\$\$\$
Vendor B: Broadest test menu and largest R&D investment	\$\$\$	+	\$	+	\$\$\$	+	\$	=	\$\$\$\$\$\$\$\$

Choosing Vendor A would likely result in a higher percentage of more expensive send-out tests to commercial reference labs. Your lab's future send-out costs will significantly increase as testing needs change over time.

Which consequence would your C-suite choose? Or, would they see the value in a vendor that delivers a more robust and faster growing assay menu?

“Patients today have choices in where they go for care. If an institution doesn't do it right, the patients are gone. And they're not coming back.”

-John Marzinik

President and CEO, Frisbie Memorial Hospital

Assay quality

The true cost of assay quality can be measured in four key areas: accuracy, onboard stability, standardization, and calibration and QC frequency.

Accuracy: Getting a right result the first time doesn't just lead to appropriate treatment. It leads to faster initiation, fewer exacerbations, and fewer readmissions—all of which result in lower costs. It also helps maximize patient satisfaction through proper and efficient care delivery, which can positively impact your reimbursement.

Onboard stability: Longer onboard reagent stability allows a reagent to be used longer, which reduces waste and scrap costs. It also gives you the power to create new revenue streams, by consolidating lower volume or esoteric tests onto your instrument rather than sending them out to a reference lab.

Standardization: Your lab gains many cost efficiencies through a platform with standardized reagents and reference ranges. These include better space efficiency through easier reagent storage, lower training costs, and increased ability for staff to cover for each other when needed. This flexibility limits negative impact on workflow and keeps operations running smoothly.

Calibration and QC frequency: The need for less frequent calibration and QC directly lowers expenses. It also enhances productivity, resource allocation, and time spent on high-value tasks, which result in further economic gains.

Calculating the true cost: FDA recalls

Cost of lower employee productivity & morale

+ Lost revenue (send outs and POC testing)

+ Cost of investigation and troubleshooting

+ Cost of remediation and corrective action

= **Cost of FDA recall**

Cost of FDA recall

x Average number of FDA recalls per year

= **Annual cost of FDA recalls**

Length of contract

x Annual cost of FDA recalls

= **Total cost of FDA recalls**

FDA recalls

These recalls are more than inconvenient. They can seriously impact your workflow and finances through:

- Service delays
- Impact to results quality
- Need for manual workarounds
- Disrupted staff productivity
- Reduced in-house test menu

So, does the value of a less-than-best vendor with less-than-reliable systems really add up?

Discovering the true cost of your selected automation

Pre-analytical workflows

By taking the labor of pre-analytical steps away from your staff, you not only increase their focus on higher-value tasks. You also create greater savings through more efficient FTE allocation and error reduction. How much could your lab save through leaner staffing, more strategic distribution of skilled technologists, and quality assurance?

Completing more work at a lower cost also opens possibilities for additional sources of growth and income, such as outreach.

Calculating the true cost: Automated pre-analytical workflows

Number of billable tests or procedures before automation
÷ Number of FTEs applied
= FTE efficiency before automation

Number of billable tests or procedures after automation
÷ Number of FTEs applied
= FTE efficiency after automation

FTE efficiency after automation
- FTE efficiency before automation
= Gain in FTE efficiency due to automation

Lab errors

Fewer touchpoints and manual processing steps dramatically lower the risk of costly human errors. This minimizes unnecessary expenses while supporting more cost-efficient treatment from the start.

Discovering the true cost of your selected IT

Autoverification and rules writing

These capabilities promote quality and efficiency by limiting user interactions. In turn, they enable labs to save on staff and reallocate resources for higher-level gains.

The pitfalls of less-than-best automation

- Lower productivity
- Increase in errors
- Delays in appropriate care
- Exacerbation of patient conditions
- Additional costs for reactive care
- Low patient and HCP satisfaction
- Diminished lab quality

Roche's **cobas**® 8100 automated workflow series optimizes outcomes with:

- Multi-level, bi-directional transport
- Self-balancing centrifuge
- Up-front quality checks
- Add-on buffer
- Workflow your way

The value of data replication

As a part of its dedication to IT support, Roche implements shadows with all IT solutions. These are replicas of the main data system, which are designed to reinforce reliability and boost your bottom line.

Multiple software and hardware redundancies	→	Prevent downtime in the event of system failure
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Calculating the true cost: Autoverification and rules writing

Time required to manually verify a normal sample
x Number of autoverified samples per year
= Time saved with autoverification

Time saved with autoverification
x Cost of labor
= Annual cost savings with autoverification

Case study: Automating high performance with autoverification

Upon instituting autoverification with Roche Middleware, The University of California, San Diego (UCSD) Health System realized significant benefits.

UCSD Health System background

- 2 hospitals with 565 beds and a level I trauma center
- More than 850 physicians
- Clinical labs produce more than 4.5 million reportable chemistry tests per year
- Includes 2 rapid-response labs and the Center for Advanced Laboratory Medicine (CALM)

Before implementing autoverification

Verification was handled manually by individual lab techs. This involved techs reviewing every value, which was less than ideal for a number of reasons.

- Took longer to identify abnormal values that needed attention
- Increased risk of human error
- Caused variable interpretations
- Was a poor use of time

After implementing autoverification

- Time savings: 178 hours over 3 months
- The launch of CALM: completed with no additional FTEs
- Better use of staff: able to focus on higher-value tasks
- **Financial savings: \$51,035 per year**

“Keep in mind spending 8 hours automating a process that takes 30 seconds of manual labor may seem counterproductive, but when you perform that 30-second task hundreds of times a day, it doesn’t take long to see the benefits of autoverification.”

-Rob Fitzgerald

Director of Toxicology and Associate Director of Clinical Chemistry, UC San Diego Health System



LIS interfacing

Does your vendor provide an allowance for interfacing your lab’s analyzers and LIS? This interfacing step can be costly—especially if needed for multiple analyzers. Don’t underestimate this expense or the value of a vendor that helps to offset it.

LIS downtime

One of the biggest crises for a lab is when the LIS goes down unexpectedly. This can freeze the accessibility and flow of information and require your staff to manually input all new results once the system is back up. The cost can be astronomical, in terms of both wasted finances and lost productivity. Fortunately, a robust middleware system can keep the lab running at full speed in this event. Be sure to find out how a vendor’s middleware system is designed to prevent disaster.

Discovering the true cost of your selected service and support

Service contract and warranty

Out-of-pocket repairs can be extremely costly, which reinforces the value of a robust service contract and warranty. Be sure to review these considerations, as they relate to your long-term finances:

- What is the duration of the manufacturer's warranty?
- After the warranty expires, what terms and conditions are available? At what cost?
- For how long does the vendor provide a warranty for the instrumentation?
- Is the service contract short- or long-term?
- Is there an auto-renewal clause?
- What are the cancellation fees?
- Is there a guaranteed response time?
- Are parts and travel included in the contract cost?

Technical support

This support should be readily available via a toll-free number. Determine whether your vendor can provide service over the phone or in-person at your lab. Ideally, both options are available to meet your different needs while minimizing your costs.

- **Phone service:** provides an efficient solution for many types of issues, yet may not be adequate for complex problems
- **Field support:** may be suited for more advanced service needs. Investigate a vendor's capabilities to provide adequate support, in terms of response time and expertise

System updates

If your vendor's goal is to eliminate malfunctions and enhance performance of lab equipment, system updates should be provided at no cost. Is your vendor charging extra for them?



CONTRACT

The illustration shows a hand in a dark suit sleeve holding a black pen, positioned as if about to sign a document. The document is white with a blue header containing the word 'CONTRACT' in white capital letters. Below the header, there are several horizontal blue lines representing text on the contract. A yellow circular stamp or seal is visible on the document, partially overlapping the pen's tip.

Low morale costs more than you may think

Engagement matters

- **Disengaged employees** are estimated to cost the U.S. economy as much as \$350 billion per year in lost productivity, accidents, theft, and turnover (2013)
- **Engaged employees** take fewer sick days, are more productive, are more likely to stay in their jobs, have a greater understanding of their customers' needs, and are more likely to recommend their company and its products

The staggering cost of replacing employees

- **Entry-level employee** (\$40,000/year salary)
Replacement cost: 30-50% of their annual salary—up to \$20,000
- **Mid-level employee** (\$80,000/year salary)
Replacement cost: 150% of their annual salary—\$120,000
- **High-level employee** (\$120,000/year salary)
Replacement cost: 400% of their annual salary—\$480,000

Costs associated with replacing an employee

- Recruiting
- Interviewing
- Hiring
- Orientation
- Training
- Compensation and benefits while training
- Lost productivity
- Administrative costs

Other considerations that impact the ROI of a vendor choice

Training

In partnering with a new vendor, more effective training means faster speed to value. On-site, off-site, and virtual training resources offer invaluable flexibility. Ongoing, on-demand programs result in continuous knowledge building. For experienced staff, this means reinforcing and supplementing knowledge. And for new staff, this means getting up to speed as efficiently as possible. A robust training program can keep you operating at full capacity and therefore limit the expenses of low productivity.

Infrastructure requirements

These unexpected costs can add up to a not-so-good surprise. If your new system requires more water than your current source can support, you'll need to introduce a new water supply. And don't overlook the lifetime maintenance costs for the water system—these will be significant. And, as part of your budget, you'll also have to account for additional electrical and waste disposal requirements.

Environmental friendliness

While going green may be an important consideration for your lab, you may find the selection of green lab equipment is limited and doesn't meet your needs. These products, however, have some important value-based considerations. The initial purchase may be higher than expected, yet lifetime maintenance costs are usually significantly reduced.

Employee morale and turnover

These costs can't be measured in dollars. They stem from operating a platform or dealing with a vendor that is simply less-than-best. Frustration. Dissatisfaction. Resentment. These factors can affect staff morale, motivation, and turnover rate. So if your vendor's products and services are leading to an irritated staff, what's the potential cost?

Making the case for value

Because of the magnitude of a new vendor selection, creating a business case to the C-suite is no small task. You need to effectively:

- Identify a critical business need
- Communicate your strategic business plan
- Analyze project risks and opportunities
- Demonstrate a strong ROI compared with other service line proposals
- Get buy-in to act now

If you follow the steps in this essential guide, you'll be in a leading position to make the case for value. And *value* is exactly what will compel your C-suite.

But compelling these decision makers to approve your plan is not the ultimate gain. It rather opens the door to implementing a critical and practical solution. It enables you to usher in benefits that go far beyond the lab to improve clinical and financial performance across your enterprise. And it demonstrates your ability to help your organization do more with less, to meet today's unforgiving and ever-changing healthcare demands.

Making a successful business case is a challenge, but worth every ounce of effort.

"Diagnostics can be the fastest and easiest target for hospital administration to control healthcare costs, produce the best outcomes, and change the entire continuum. But the lab has to have the right technology in place, and they have to be treated as a business center."

-Lâle White
CEO, XIFIN, Inc.



Are you ready to make your case to your C-suite?

Use this checklist to find out



The decision makers

- ✓ I am aware of the key decision makers in my C-suite, as well as the top priorities of each
- ✓ I am prepared to answer key questions related to each member's concerns

The need

- ✓ I have identified key strategic needs in my organization that can be addressed through a vendor switch
- ✓ I can explain how we arrived at these needs by engaging stakeholders across departments and roles
- ✓ I am prepared to demonstrate the link between lab and organizational goals
- ✓ I can establish why switching lab vendors in a particular period is the optimum use of funding

The solution

- ✓ I can demonstrate how my preferred vendor addresses our prioritized needs better than any other
- ✓ I can demonstrate how this solution supports the mission, vision, and values of my organization
- ✓ I can address any risks related to my proposed solution
- ✓ I am prepared to discuss the true cost of choosing this vendor, considering long-term value implications
- ✓ I can demonstrate positive, sustainable ROI based on key performance criteria
- ✓ I can map key milestones along a project timeline, leading up to go-live



NOTES

