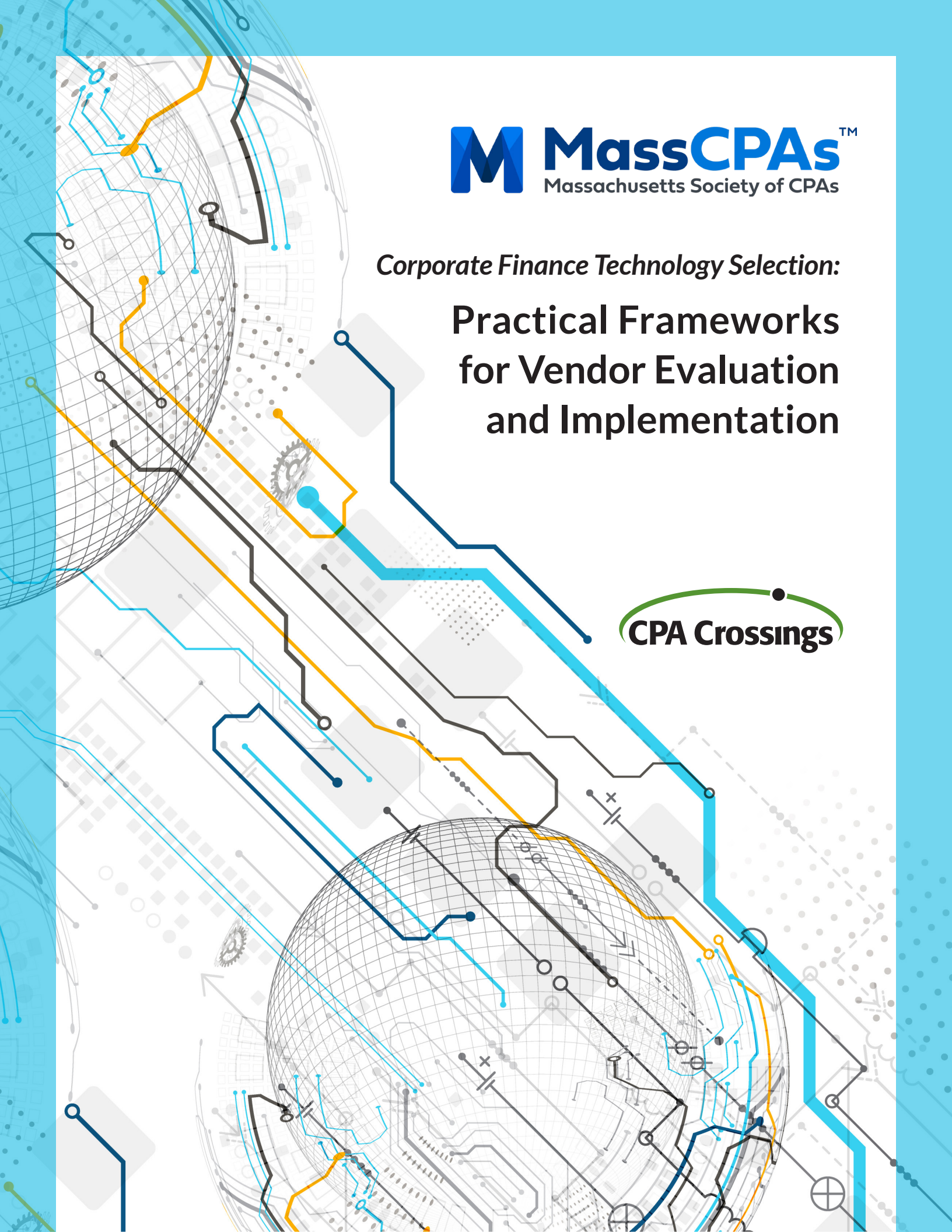
MassCPAs™
Massachusetts Society of CPAs

*Corporate Finance Technology Selection:*

# Practical Frameworks for Vendor Evaluation and Implementation

CPA Crossings



# Table of Contents

# Executive Summary

Finance technologies—cloud-based enterprise resource planning (ERP), integrated financial planning and analysis (FP&A) platforms, accounts payable (AP)/expense automation, and close and consolidation tools, to name a few—have fundamentally changed how finance operates. For midmarket organizations—those without enterprise IT departments or large consulting budgets—this creates both opportunity and risk.

***The opportunity:*** Modern systems can dramatically reduce close times, improve forecast accuracy, strengthen controls, and free your team from manual reconciliations.

***The risk:*** Technology vendors' claims about continuous close, self-reconciling ledgers, and AI-assisted accruals often obscure real implementation complexity, integration challenges, and total cost.

**This guide provides what's been missing**—practical, vendor-neutral frameworks designed specifically for midmarket finance teams navigating technology decisions. You'll find:

- **A Vendor Evaluation Scorecard** with 20 criteria across five categories, weighted for control and audit readiness.
- **A Five-Year Total Cost Framework** that captures hidden costs most vendors don't identify.
- **A Four-Phase Implementation Roadmap** with checkpoints and red flags at each stage.
- **Industry-Specific Considerations** for manufacturing, distribution, software as a service (SaaS), and professional services.

Whether you are replacing a legacy system, evaluating AI-enhanced features, or connecting new tools to your existing stack, these frameworks will help you ask better questions, avoid common pitfalls, and make decisions with confidence.

# Expert Contributors

This guide was developed with input from leading practitioners and subject matter experts in finance technology implementation.

## Mark Brousseau

Mark Brousseau is president of Brousseau & Associates.

Over the past 29 years, Mark Brousseau has established himself as a thought leader on accounts payable, accounts receivable, payments, and document automation. A popular speaker at industry conferences and on webinars and podcasts, Brousseau advises prominent end-users and solutions and services providers on how to use automation to improve document- and payments-driven business processes. Brousseau has chaired numerous educational conferences and has served on several industry committees and boards. He resides in Center City Philadelphia with his wife and three sons.

## Ellen Choi

Ellen is the CEO/Founder of Edgefield Group, a consultancy that supports CPA firms with AI onboarding and enablement to drive growth and improve efficiency.

She was named one of *Accounting Today's* 2025 Top 100 Most Influential People in Accounting and a 2025 Most Powerful Woman in Accounting by *CPA Practice Advisor.* She advises the profession as part of the AICPA ENGAGE TECH+ Planning Committee and CPA.com Digital CPA Advisory Committee, as a guest contributor for *Accounting Today,* and through regular speaking and moderating at leading alliances and associations' events.

Her past includes co-founding Aiwyn, a technology company that helps 800+ accounting firms digitize and automate their practice management and tax workflows. At Aiwyn, she held roles of Chief Product Officer, COO, and Chief Innovation Officer over a 4+ year period.

She is a Stanford Engineering alumna and a Harvard MBA who began her career at Google, automating finance processes and improving business performance. Seeing how outdated tools slowed down back-office teams shaped her interest in building modern, enterprise-grade technology.

# The Changing Landscape

## What's Different Now

Cloud systems have fundamentally transformed the way finance teams operate, shifting the profession across four critical dimensions.

The first transformation is the shift from periodic to continuous processing. Bank feeds, subledger automations, and reconciliations that once ran monthly can now execute daily or even in real-time. This fundamental change shrinks post-period adjustments significantly and dramatically improves the timeliness of financial data available for decision-making. However, realizing these benefits requires disciplined governance of exception queues and robust error handling processes. Without proper oversight, continuous processing can actually create more problems than it solves, particularly if errors compound rather than get caught in batch review cycles.

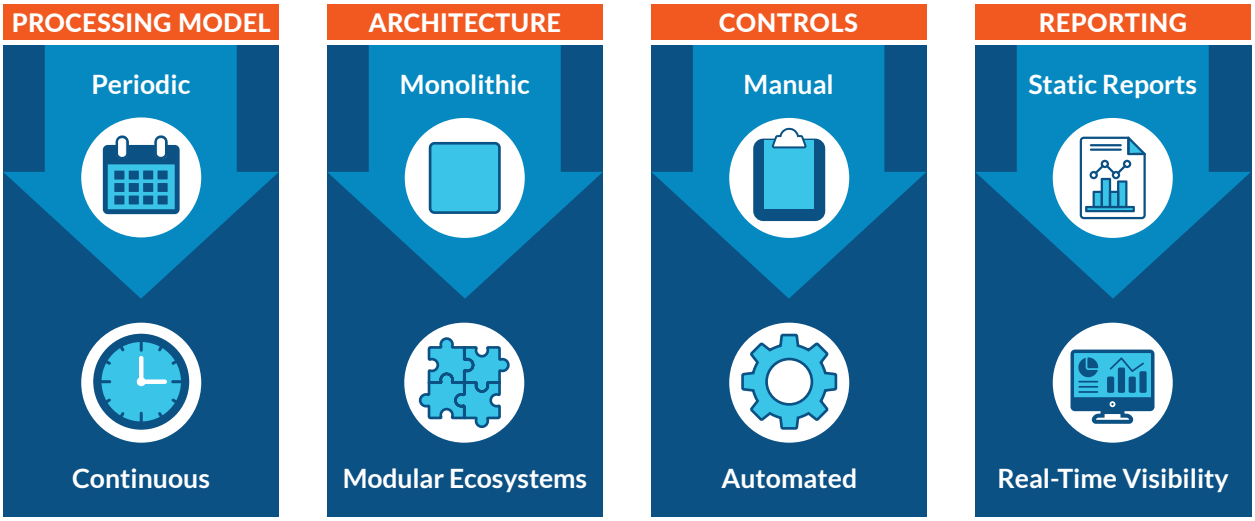
The second major shift involves architecture—from monolithic to modular. Most midmarket organizations operate an ERP core surrounded by specialized applications for accounts payable and expense management, financial planning and analysis, reporting, and treasury functions. These components connect through integrations that enable data flow across the technology stack. While this modularity offers flexibility and best-of-breed capabilities, it introduces complexity in maintaining audit trails. Without an intentional upfront design of roles, logging standards, and data lineage documentation, the audit trail fragments across systems, creating compliance risks and making it difficult to trace transactions end-to-end.

Third, as finance teams transition to automated controls, modern systems can enforce workflow approvals programmatically, prevent segregation of duties violations through access configuration, and monitor exceptions automatically through rule-based alerting. This automation reduces human error and improves consistency in control execution. Yet, automated controls are only as effective as their initial configuration and ongoing monitoring. Configuration drift, inadequate testing of control logic, and failure to review automated exception reports can undermine the protections these systems are designed to provide. Organizations must treat control configuration as a governance discipline, not a one-time implementation task.

Finally, the profession is moving from static reports to real-time visibility. Interactive dashboards and automated alerts are replacing the monthly report packages that once defined finance communication with stakeholders. This shift enables faster course correction when metrics deviate from expectations and provides current information for decision-making. However, real-time visibility is only valuable when the underlying data is reliable and properly reconciled. Dashboards built on unreconciled data or incomplete feeds can create a false sense of confidence, leading to decisions based on information that will later require correction. The imperative for finance teams is to ensure data quality keeps pace with reporting speed.

Each of these shifts creates risks that finance teams must manage. Exception queue governance, audit trail design, control configuration discipline, and data quality assurance aren't problems that solve themselves—they require deliberate attention during vendor selection and implementation. The frameworks discussed in this guide address each directly: the vendor evaluation scorecard prioritizes audit and control capabilities, the implementation roadmap builds in checkpoints for control design, and the guidance on working with advisers helps ensure these issues surface before they become audit findings.

## FOUR KEY SHIFTS IN FINANCE OPERATIONS




# Technology Trends to Understand

Several emerging technology capabilities are reshaping finance operations. Understanding these trends and their practical implications is essential for evaluating vendor claims and making informed decisions about your technology stack.

## AI Progression: From Automation to Agentic AI

Before evaluating specific AI features, finance teams need a framework for understanding what vendors mean when they say "AI". The term "AI" often lumps together fundamentally different technologies.

**Automation** represents the most straightforward level. It's deterministic: the same input always produces the same output through preprogrammed logic. In finance, this might be a rule that automatically approves expense reports under $100 from designated employees. There's no learning, no judgment—just coded logic executing consistently every time. While not technically AI, automation still delivers significant value and remains the foundation of many finance workflows.

**AI (Machine Learning)** introduces simulated intelligence through training on historical data to predict future outcomes. Unlike automation, the output is probabilistic—the system makes informed predictions rather than executing fixed rules. A practical finance example is automated journal entry classification: a system trained on a million historical entries that humans have categorized predicts with 99% confidence that the next entry should be coded to marketing expense. The system learns patterns from data but doesn't generate new content.

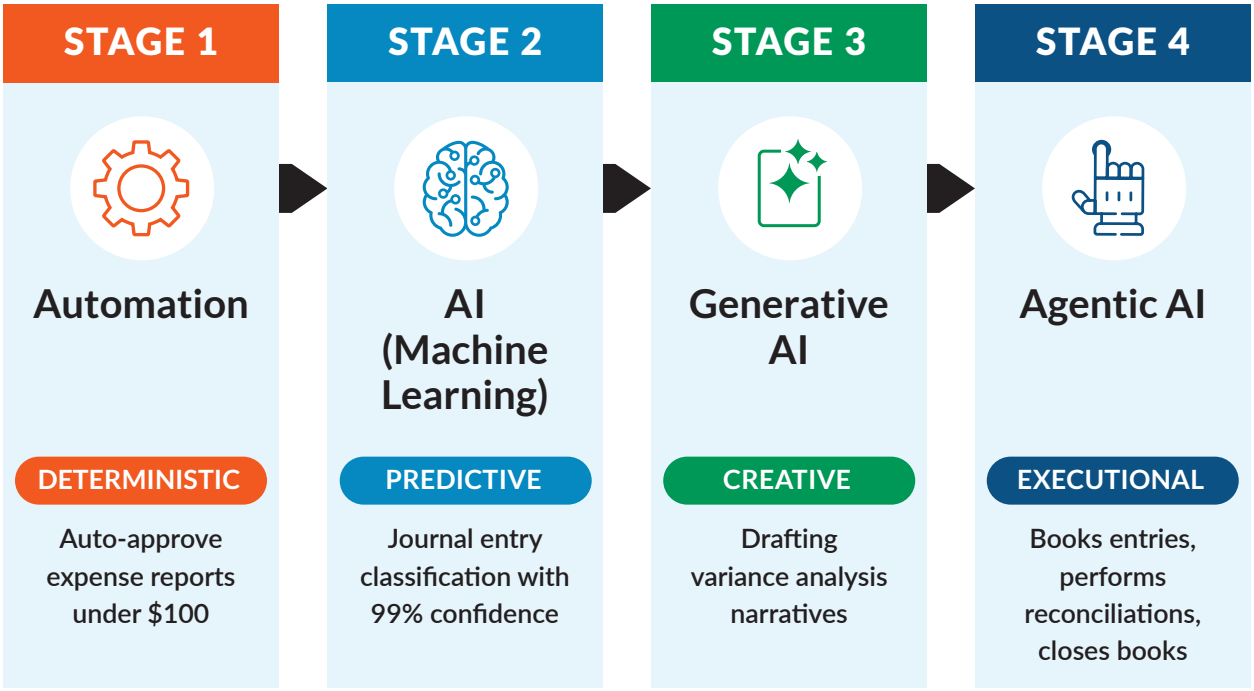
**Generative AI** builds on machine learning capabilities but adds the ability to create new content in real time. Ask the same question three times and you'll receive three different responses—hopefully with consistent substance, though not always. In finance, this might mean generating client communications, drafting variance analysis narratives, or creating journal entry descriptions. The output is generated content, but the system doesn't take actions beyond producing that content.

**Agentic AI** represents the current frontier. It combines all generative AI capabilities but adds the crucial ability to execute actions autonomously. The distinction is significant: while generative AI might create a detailed week-long travel itinerary with hotel recommendations, restaurant reservations, and event schedules, agentic AI can actually book the hotel, make the reservations, and create calendar entries. Applied to finance, agentic AI can process information and take specific actions, such as record journal entries, execute calculations, perform reconciliations, and close books. This is the technology underlying the "continuous close" and "zero-day close" claims vendors are making. AI agents can process transactions and complete close activities without human intervention for each step.

The current state of agentic AI in midmarket finance is still emerging. Some vendors have launched AI agents with executional capabilities, primarily operating within their own ecosystems. Many vendors are using agentic AI internally to develop their services, but external-facing AI agents that finance professionals can interact with directly remain in a relatively early stage. The technology is being deployed, but widespread adoption of accurate, reliable agentic AI across midmarket finance functions is only just developing.

> "Everything gets lumped into AI. Technology has given us greater autonomy, more human-like abilities to handle complex tasks, things that are ambiguous. But you have to understand the progression: automation is deterministic, AI learns and predicts, generative AI creates content, and agentic AI actually executes actions. That's why everyone is talking about continuous close—AI agents can actually do the work, not just suggest what should be done."
>
> — **Ellen Choi**

## AI EVOLUTION FRAMEWORK



The AI Evolution Framework provides essential context for evaluating vendor claims. When a vendor demonstrates an "AI-powered" feature, finance teams should understand which level of the progression that feature represents and what that means for implementation, governance, and control requirements.

Automated transaction coding represents one of the most visible applications of machine learning within a finance system. These capabilities use algorithms trained on historical coding patterns to suggest or automatically assign account codes to transactions. The technology can significantly reduce manual data entry effort and improve consistency in coding decisions. However, finance teams must understand the implications for control and auditability. Key considerations include how the models are trained, whether override activity is logged with appropriate detail, and how to explain algorithmic decisions to auditors. Organizations should also establish governance around model retraining and drift monitoring to ensure coding accuracy remains reliable over time.

AI-powered anomaly detection offers promising capabilities for identifying unusual patterns that might indicate errors, fraud, or control breakdowns. These systems analyze transaction data against established patterns and will flag outliers for review. While the technology can highlight issues that manual review might miss, effective implementation requires careful attention to threshold calibration and false-positive management. Thresholds set too loosely will miss material issues; set too tightly, they generate so many alerts that reviewers dismiss warnings without adequate investigation. Organizations must also define clear escalation paths and ensure that human review remains central to the resolution process for any material findings.

Generative AI represents the newest frontier in finance technology, with vendors increasingly embedding large language model (LLM) capabilities into their platforms. These tools promise to automate document processing, generate narrative commentary for variance analysis, draft journal entry descriptions, and even produce first-pass financial statement footnotes: tasks that once required hours of manual drafting could be completed in minutes. However, finance teams must approach these capabilities with appropriate skepticism. Unlike deterministic automation, generative AI can produce plausible-sounding but incorrect outputs, a phenomenon often called "hallucination." For finance applications, this creates material risk. A generated variance explanation that misattributes a revenue shortfall or a footnote that misstates a contingency could mislead stakeholders or create audit issues. Organizations evaluating generative AI features should demand transparency about how outputs are generated, what guardrails exist to prevent factual errors, and how human review is integrated into the workflow. The technology is genuinely transformative, but responsible adoption requires treating AI-generated content as a starting point for human review and professional judgment.

Application programming interface (API) bank feeds and integrations have transformed the timeliness of cash reconciliation. Direct connections enable near-real-time visibility into account balances and transaction activity, eliminating the delays inherent in file-based imports. This connectivity dramatically improves the cash position reporting and enables more proactive treasury management. However, these integrations introduce dependency risks that finance teams must manage. API version changes, mapping updates, and connectivity disruptions can break feeds without warning, potentially disrupting close processes. Organizations need clear ownership of integration health monitoring, established procedures for break-fix scenarios, and contingency plans for periods when direct feeds are unavailable.

Continuous close capabilities represent the aspirational end-state that many vendors promote, with promises of "zero-day close" or "always-on financials." In concept, these capabilities maintain reconciled,

close-ready books at all times through automated daily processing of reconciliations and period-end adjustments. The reality is more nuanced. Achieving truly continuous close requires not just technology but also process discipline around exception resolution, clear policies for late-period adjustments, and robust monitoring to ensure that automated processes complete successfully. Finance teams evaluating these claims should probe whether reconciliations are genuinely complete and immutable, how exception queues are governed, and what controls prevent late adjustments from bypassing normal approval workflows.

These trends are essential context for navigating the five most common challenges midmarket finance teams face when evaluating and implementing new technology.

# Five Challenges You'll Face

**#1** 

**Cutting through Vendor Hype**
Separating genuine AI capability from marketing claims

**The Integration Maze**
Connecting tools while maintaining audit trails

**#2**

**#3** 

**Change Management Reality**
Addressing the human side of technology adoption

**Data Quality Foundation**
Ensuring data is ready for AI and automation

**#4**

**#5** 

**Risk and Governance**
Maintaining controls as systems become autonomous

## Challenge 1: Cutting through Vendor Claims and AI Hype

All vendors' demo features look very impressive, but can you separate genuine capability from marketing?

AI terminology is inconsistent: what one vendor calls "machine learning" another calls "intelligent automation." Plus, features demonstrated in controlled environments may not work with your data complexity.

Here are a few questions to ask:

- *Are AI-driven postings segregated from user-entered journals, with separate approval workflows?*
- *Can you distinguish between AI suggestions and automated actions? Are all overrides logged?*
- *Can you reproduce the decision trail—inputs, parameters, and outputs—for audit purposes?*
- *What training data does the model use, and how do you handle bias or drift over time?*
- *What happens when the AI is wrong? How are exceptions identified and resolved?*

**RED FLAG:** **Vendors who can't clearly explain how their AI features work, what data they use, or how you'll audit AI-generated entries.** Additional critical red flags include: inability to articulate data protection architecture and whether or not your data trains models for other organizations; lack of clarity on model training frequency and how the system adapts to an evolving business; absence of safeguards against hallucinations or factually incorrect outputs; no mechanism for periodic sampling or manual review of automated decisions; vague responses about integration track record with your specific ERP or accounting system.

### RED FLAGS VS. GREEN FLAGS — VENDOR EVALUATION

| RED FLAGS / WARNING SIGNS | GREEN FLAGS / POSITIVE INDICATORS |
|---|---|
| Can't explain what data is used to train models | Clear documentation of AI methodology and decision logic |
| No clarity on whether your data trains models for other customers | Transparent data policies — your data stays yours |
| Missing or outdated SOC 1/SOC 2 reports | Data quality assessment tools provided before implementation |
| Unclear integration track record with your ERP | Current SOC reports with clean opinions |
| No mechanism for auditing AI-generated entries | Proven integrations with references you can contact |
| Vague about model retraining and drift monitoring | Full audit trail for all automated decisions |
| | Clear governance for model updates and accuracy monitoring |

## AI Evaluation Framework: Separating Substance from Marketing

The questions offered at the beginning of the section can help identify red flags, but evaluating AI claims systematically requires understanding the different AI capabilities. As discussed in the Technology Trends to Understand section (page 6), technology has progressed from automation through machine learning and generative AI to agentic AI, with each stage offering different capabilities and governance requirements. The framework below maps certain vendor claims to the capability levels to help you evaluate what they're actually offering.

### TYPE 1: Rule-Based Automation

Often marketed as "intelligent automation" or "smart workflows," these are deterministic systems that follow explicit if-then rules. Examples include automatic three-way matching in AP, workflow routing based on amount thresholds, or accrual calculations using defined formulas. These capabilities are mature, auditable, and predictable. The control framework is straightforward: document the rules, test the logic, and monitor exceptions. When vendors describe these as "AI," ask whether the behavior is fully determined by configured rules. If yes, you're evaluating automation, not artificial intelligence. This is fine, but it should be priced and evaluated accordingly.

### TYPE 2: Machine Learning and Predictive Models

These systems learn patterns from historical data to make predictions or classifications. Common finance applications include suggestions for transaction coding based on historical patterns, cash-flow forecasting, anomaly detection (fraud or errors), and revenue forecasting models. Unlike rule-based systems,

machine-learning models can adapt and improve over time, but they also introduce new governance requirements. Key evaluation questions might include "What training data is used, and who owns it?", "How is model accuracy measured?", "Is there human review for high-risk or high-value decisions?," among others. Organizations should establish governance frameworks that include periodic accuracy testing, drift monitoring, and clear escalation paths when model performance degrades.

### TYPE 3: Generative AI

The newest category, generative AI, creates content rather than selecting from predefined options. Finance applications include drafting variance explanations, generating footnote language, summarizing contracts, and producing management commentary. The productivity potential is significant, but so are the risks. Generative AI can produce confident-sounding but factually incorrect content. For finance teams, critical evaluation questions include: "What guardrails prevent hallucinated numbers or facts?", "How is AI-generated content flagged for human review?", and "What audit trail exists for AI contributions to financial statements?" among others. The appropriate control posture treats generative AI outputs as drafts requiring professional review, not finished work product.

## AI READINESS CHECKLIST

Before implementing any AI-enhanced finance technology, ensure your organization can answer these questions affirmatively:

### Data Quality Foundation

*Is your historical data clean, complete, and consistently coded enough to train or validate AI models?*

### Audit Documentation

*Can you produce evidence showing what the AI recommended, what humans approved, and what was posted?*

### Human Oversight Capacity

*Do you have staff with time and authority to review AI outputs before they impact financial records?*

### Vendor Transparency

*Has the vendor provided clear documentation of model methodology, training data sources, and accuracy metrics?*

### Exception-Handling Process

*Have you defined what happens when AI confidence is low or outputs appear anomalous?*

### Rollback Capability

*If AI features underperform, can you disable them without disrupting core system functionality?*

Organizations that can check these boxes are positioned to adopt AI capabilities responsibly. If you have gaps, you should address foundational issues before layering on AI complexity.

## Challenge 2: The Integration Maze and Hidden Costs

Let's say you plan to connect a new AP automation tool to your ERP, bank feeds, and expense system. Transactions now pass through multiple systems. Approvals may occur in one app, post in another, and apply consolidation rules in a third. One common failure is when revenue appears in the reporting tool before the ERP due to timing differences, creating tie-out headaches at period-end.

An even more fundamental problem often precedes integration complexity: digitizing bad processes. Finance teams frequently implement automation on top of workflows that are inefficient, poorly documented, or no longer serve their original purpose. The result is automating processes that nobody fully understands or can justify. This isn't just inefficient; it creates control risks when unclear approval chains or exception handling get baked into automated systems. Before engaging vendors, map current workflows in detail, identifying dependencies, business rules, time elements, and control points. This exercise will illuminate gaps and inefficiencies that should be eliminated before automation.

> "Reconciliation is the biggest challenge in finance today from an operational efficiency standpoint. We're paying people a lot of money to wrangle data, most cases with spreadsheets."
>
> — **Mark Brousseau**

Here are a few questions to ask before integration:

- *How are integration errors logged, alerted, and resolved? Who owns the exception queue?*
- *What happens when APIs change? How much notice do you get, and who handles updates?*
- *Can you trace a transaction end-to-end across all connected systems?*
- *What reconciliation controls exist between systems, and how often do they run?*

**RED FLAG:** **Any vendor estimates that don't include data migration, cleanup, testing environments, or ongoing maintenance.**

## Challenge 3: Change Management and Proving ROI

A new consolidation system goes live, but half your team distrusts the new numbers. This is typical. Technology implementations are as much people problems as they are technical ones. Staff worry about role changes. Shadow systems persist because changing habits is harder than installing software.

When it comes to leadership and their expectations, return on investment (ROI) can be difficult to prove to them. Benefits are often soft (time savings, fewer errors) rather than hard (headcount reduction). Without baseline metrics established before implementation, demonstrating value will be subjective.

> "I sometimes joke, technology is the easy part. People and process are the hard part."
>
> — **Mark Brousseau**

Here are some questions to ask before implementation:

- *What baseline metrics exist for current close times, error rates, and manual effort? If none, how will you establish them before going live?*
- *What does "success" look like at 30, 60, and 90 days post-implementation? Who has agreed to these criteria?*
- *What is the end date for parallel running? What criteria will trigger the cutover?*
- *How will role and workflow changes be communicated to affected staff?*
- *Who owns change management, and what resources are allocated for training and communication?*

## Tips

A successful technology implementation begins with establishing clear baselines before the project gets underway. Finance teams should document current performance across key metrics, including close days, reconciliation exception rates, forecast accuracy, and hours spent on specific manual processes. These baselines serve dual purposes: they provide objective criteria for measuring success and they create accountability for realizing promised benefits. Without baseline metrics, ROI discussions become subjective debates.

Yet, benchmarking remains uncommon, particularly among smaller organizations. This makes it nearly impossible to build credible business cases or measure implementation success. The metrics that matter most vary by organization, but common examples include cost per invoice processed, time from invoice receipt to ERP posting, percentage of duplicate payments, days sales outstanding, percentage of unapplied cash, and supplier inquiry call volume. The key is establishing these benchmarks before automation begins.

Equally important is defining success criteria collaboratively with stakeholders before implementation. Work with leadership, IT, and operational partners to establish what "working" looks like at key milestones—typically 30, 60, and 90 days post-implementation. These criteria should be specific and measurable, and address questions like "Are reconciliations completing within acceptable timeframes?", "Are exception rates within target ranges?", and "Are users able to complete their workflows without significant support?" Agreed-to success criteria prevent scope creep and provide clear goalposts.

Most implementations require a period when both legacy and new systems operate simultaneously. This approach provides a safety net while building confidence in the new system's reliability, but parallel running must have a firm end date. Indefinite parallel systems create several problems: they double the workload for finance teams, delay full adoption of new capabilities, and create confusion about which system is authoritative. A well-planned transition includes specific criteria for ending parallel operations and a communication plan for when the legacy system will be retired.

Communication throughout the implementation process is essential. Finance teams should communicate early and often about role changes, training schedules, timeline expectations, and how success will be measured. People resist change less when they understand the reasons behind it and can see how they fit into the future state. Effective communication also creates feedback channels that identify issues early, when they can be addressed with minimal disruption. Organizations that underinvest in change communication often find themselves dealing with adoption problems that could have been prevented with proactive engagement.

**RED FLAG:** **Any declaration of victory at go-live without measuring against predefined success criteria.**

## Challenge 4: Data Quality as Foundation for AI Success

### DATA QUALITY ASSESSMENT FRAMEWORK — THE FOUR PILLARS

#### Classification Consistency

**WHAT TO ASSESS:**
Review historical coding patterns for similar transactions. If identical or similar transactions are coded differently without clear business rationale, the data isn't ready for AI-driven classification. Only when manual coding achieves consistent results should you introduce automation.

**THRESHOLD:**
Manual coding accuracy should be 85%-90%+ before automating.

#### Master Data Standardization

**WHAT TO ASSESS:**
Assess vendor naming, customer naming, chart of accounts structure, and other master data for inconsistencies. If the same vendor appears under multiple names or account codes have proliferated, AI systems will struggle. Establish naming conventions, consolidate duplicates, and enforce standards through system controls.

**THRESHOLD:**
Duplicate rate should be less than 10%.

#### Transaction Completeness

**WHAT TO ASSESS:**
Verify that required fields are populated consistently. Missing descriptions, incomplete reference numbers, or blank coding fields will undermine AI training.

**THRESHOLD:**
95%+ field completion rate.

#### Historical Depth

**WHAT TO ASSESS:**
Most AI features require substantial training data to achieve acceptable accuracy. Vendors rarely specify minimum requirements, though meaningful pattern recognition typically requires at least 12 to 24 months of clean, consistent historical transactions. If you don't have this depth, factor additional training time into your implementation timeline.

**THRESHOLD:**
12-24 months of clean transaction history.

When evaluating AI-powered features—automated coding, smart reconciliation, predictive analytics—you may find that when you ask vendors about data requirements, the answers are vague: "The AI learns from your data," "It gets better over time," "Just feed it your history." Be careful.

Data quality is foundational for AI success, but it's often treated as just another checklist item. When data isn't standardized or is inconsistent, AI systems produce incorrect results. The problem is particularly acute in midmarket organizations where human judgment has historically compensated for data inconsistencies. Institutional knowledge works for manual processes, but it doesn't translate to AI training.

Consider a common scenario: journal entry classification. If your historical data contains inconsistent coding—marketing expenses sometimes coded to one account, sometimes to another, with no clear

pattern—the AI will learn those inconsistencies and perpetuate them. The system might deliver "99% confidence" predictions, but that confidence only reflects pattern recognition from flawed training data. Similarly, if vendor names aren't standardized ("ABC Corp," "ABC Corporation," "ABC Inc"), automated three-way matching will generate false exceptions.

> "A lot of the problems I'm seeing right now is when data is not processed, when it's not standardized, when it's not streamlined. Humans have been relying on their own internal heuristics to essentially get the job done. AI is not going to be able to solve for that. It's actually going to give you incorrect results."
>
> **Ellen Choi**

## When to Pause for Data Cleanup

The decision to pause AI implementation for data quality work is difficult, but proceeding with inadequate data quality will create worse outcomes: plausible but incorrect results, teams losing confidence, and abandonment of AI initiatives after negative early experiences.

When any of the following conditions exist, consider pausing your AI adoption:

- Manual coding accuracy for similar transactions is below 85%-90% when tested against documented rules.
- Master data contains significant duplication (more than 10% of vendors or customers appearing under multiple names).
- Required fields are populated inconsistently (less than 95% completion rates for key data elements).
- Historical data available for training is less than 12 months or includes significant structural changes (chart of accounts redesigns, system migrations) that would corrupt pattern learning.

In these situations, the right sequence is as follows:

- Establish and document data standards.
- Execute cleanup of historical data.
- Implement controls to maintain quality going forward.
- Then introduce AI capabilities.

This sequence feels slower, but it actually accelerates value realization because the AI features will work correctly from the start rather than requiring extensive troubleshooting and eventual data remediation.

## Data Quality and Vendor Selection

When evaluating vendors, ask specific questions about data requirements and quality assessment:

- *What minimum data quality thresholds must be met before AI features deliver acceptable accuracy?*
- *Does the system include data quality assessment tools to evaluate readiness before AI training?*
- *How does the system handle inconsistent historical data—does it flag quality issues or silently train on flawed patterns?*

- *What controls exist to prevent AI from learning and perpetuating coding errors?*
- *Can we review and approve training data before the system begins learning from it?*

Vendors that acknowledge data quality requirements and provide tools to assess readiness demonstrate a more realistic understanding of AI implementation. Those that claim their systems "work with any data" or "clean data automatically" likely haven't confronted the real-world complexity of midmarket finance data.

**GREEN FLAG: Vendors that provide data quality assessment as part of implementation and recommend cleanup before enabling AI features.**

**RED FLAG: Vendors that claim AI "learns from your data" without discussing data quality requirements or providing assessment tools.**

## Challenge 5: Risk and Governance

Even if your finance team is ready to move forward with AI-powered automation, leadership may still have concerns about data governance, fraud risk, and regulatory compliance. The project very well could stall.

Risk and governance concerns do stop finance technology projects in their tracks, particularly AI-enabled solutions. In accounts payable, teams worry about vendor data security and the risk of AI training on sensitive payment information. In accounts receivable, customer data privacy and credit information become paramount concerns. Treasury professionals face heightened scrutiny around AI-powered investment decisions.

The fundamental problem is that many midmarket organizations lack a formal governance framework for evaluating AI systems. They may not have dedicated audit or governance groups to assess these technologies systematically. This creates paralysis.

Here are some questions to ask with regard to risk and governance:

- *Where is our financial data being stored, and who has access to it? Is the vendor using our data to train models for other organizations?*
- *What specific safeguards prevent unauthorized access or misuse of sensitive vendor, customer, and payment data?*
- *How does the system detect and prevent fraudulent payment requests, including AI-generated deepfakes and phishing attempts?*
- *What governance controls exist for supplier onboarding and bank account verification? Can we implement OFAC (Office of Foreign Assets Control) screening and sanctions checks?*
- *For straight-through processing, what periodic sampling or monitoring allows us to verify that automated decisions remain accurate and free from manipulation?*
- *What is the vendor's incident response protocol if a data breach or fraud event occurs?*

**RED FLAG: Vendors who cannot clearly articulate their data protection architecture, training data policies, or fraud detection capabilities.** Organizations should not proceed with implementations where fundamental governance questions remain unanswered.

# The Vendor Evaluation Scorecard

Use this scorecard to evaluate finance technology vendors systematically. Score each criterion 1–5 (1 = Not present/inadequate; 3 = Adequate with gaps; 5 = Strong and evidenced). Items marked with † are potential deal-breakers if failed.

## Category 1: Audit & Control Capabilities (Weight: 25%)

- **Audit trail completeness and immutability†:** Are all postings, approvals, and configuration changes recorded with user, timestamp, and before/after values?
- **Role-based access and segregation of duties†:** Can you enforce least-privilege, maker/checker, and sensitive-access combinations across modules?
- **Change management documentation†:** Are configuration changes and integration mappings version-controlled with approvals and rollback capability?
- **Independent assurance:** Is a current SOC 1 (for financial controls) or SOC 2 (for security/availability) report available? Are subservice organizations disclosed?

## Category 2: Financial Reporting & Compliance (Weight: 20%)

- **Standard financial statement production:** Multi-GAAP dimensions, audit-ready tie-out, drill-down to source transactions.
- **Multi-entity consolidation:** Ownership percentages, intercompany eliminations, currency translation.
- **Tax support:** Sales/use tax, indirect tax connectors, audit logs for returns.
- **Regulatory reporting flexibility:** Disclosures, XBRL support (if applicable), custom footnotes.

## Category 3: Data Integrity & Integration (Weight: 25%)

- **Reconciliation tools and exception management†:** Aging, service-level agreements (SLAs), evidence of resolution.
- **Integration error handling and logging†:** Alerts, retry logic, dead-letter queues.
- **Data validation rules and controls†:** Pre- and post-load checks; rounding/precision handling.
- **Backup and recovery:** Recovery-point and recovery-time objectives (RPO/RTO), restore test results, documented procedures.

## Category 4: Vendor Stability & Support (Weight: 20%)

- **Financial viability and roadmap:** Funding, customer growth, product investment trajectory.
- **Industry expertise:** Experience with your vertical, referenceable customers in your space.
- **Implementation partner ecosystem:** Quality, certifications, accountability structures.
- **Support SLAs:** Response times, escalation paths, documentation quality.

## Category 5: Total Cost Transparency (Weight: 10%)

- **Transparent pricing model:** Base fees, modules, integrations, overages clearly documented.
- **Implementation cost clarity:** Fixed vs. variable components, change-order policies.
- **Training requirements:** Initial and ongoing; in-house vs. vendor-provided.
- **Ongoing costs:** Support tiers, upgrade fees, integration maintenance.

# A Five-Year Total Cost Framework

Vendor quotes typically show Year 1 software costs. True cost, however, includes everything below. Build a five-year model to compare options honestly.

## Cost Categories to Include

### Software & Licensing

- Base subscription *(assume 3%–5% annual increases)*
- Additional modules *(FP&A, reporting, consolidation)*
- User tier upgrades as you scale
- Third-party connectors or middleware

### Implementation & Consulting

- Vendor or partner implementation fees
- Configuration and customization
- Project management *(internal and external)*
- Contingency *(add 15%–20% to quoted estimates)*

### Data Migration & Cleanup

- Data extraction from legacy systems
- Data cleansing and standardization
- Historical data conversion
- Validation and reconciliation testing

### Integration Development & Maintenance

- Initial integration builds *(AP, bank feeds, payroll/human resource information systems, electronic data interchange - EDI)*
- Testing environments
- Ongoing maintenance *(typically 15%–20% of build cost annually)*
- Break-fix for version changes and API updates

### Internal Costs

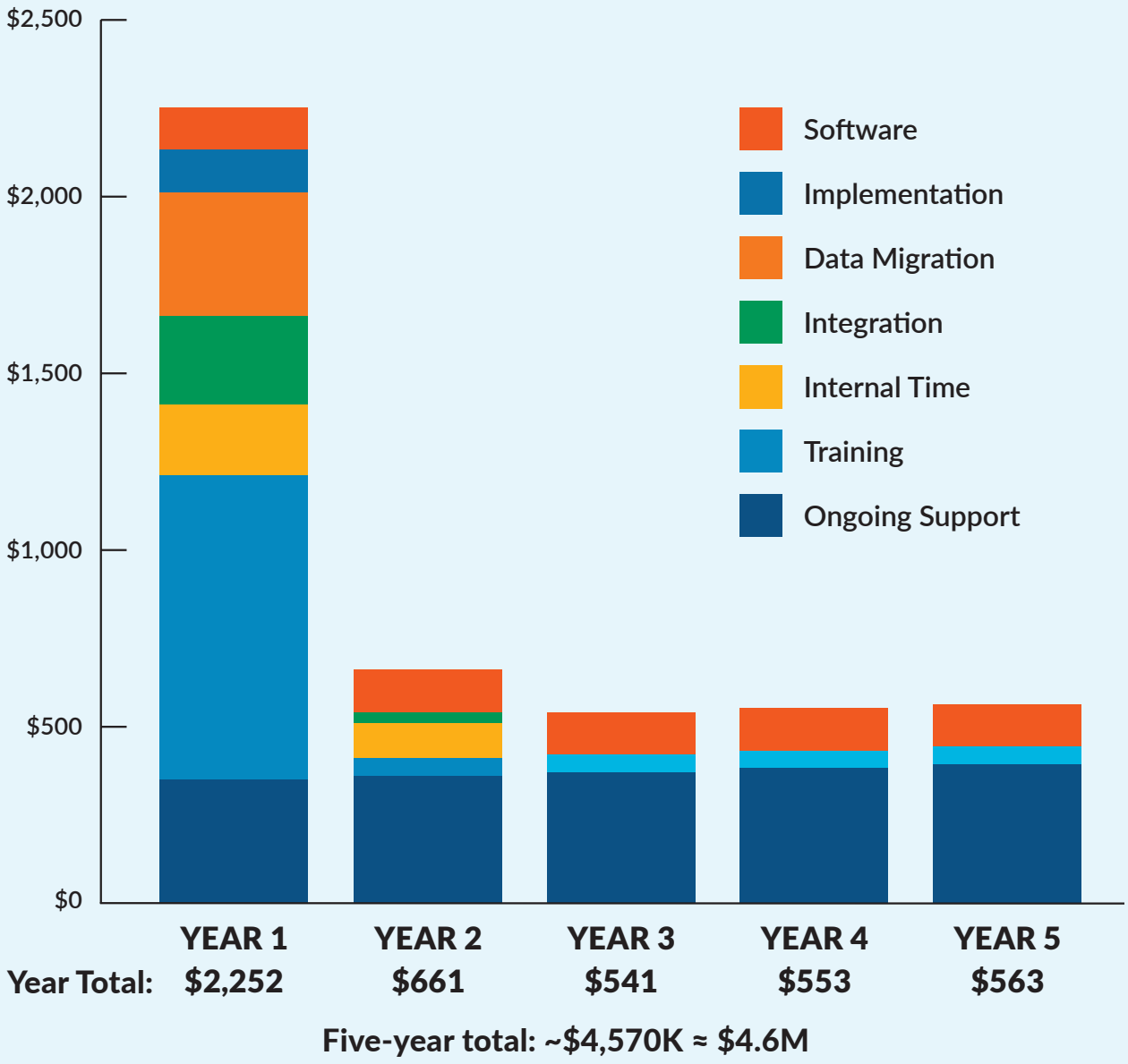
- Staff time for requirements, testing, training *(value at loaded cost)*
- Productivity loss during transition
- Training *(initial and ongoing for new hires)*
- Change management and communications

**Commonly underestimated cost areas:** Midmarket organizations frequently underestimate professional services costs for upskilling and training. Many lack internal resources to train both their teams and the AI systems themselves, leading to ongoing consultant engagement that becomes an unexpected cost drain. Additionally, AI implementations can result in workforce transitions—some team members may not adapt to new roles, requiring replacement hiring or role restructuring with associated salary implications. Organizations should budget conservatively for professional services and maintain clear accountability for who handles training and ongoing system optimization.

### Ongoing Operations

- Vendor support fees *(often tiered)*
- System administration *(internal or managed service)*
- Periodic health checks or optimization projects
- Audit support *(SOC report review, control testing)*

## EXAMPLE OF 5-YEAR TOTAL COST BREAKDOWN — $50M MANUFACTURER




**Five-year total: ~$4,570K ≈ $4.6M**

*Note: Adjust figures to your revenue scale, complexity, and number of integrations. The structure matters more than the specific numbers.*

**Realistic Timeline:** For a $50 million to $100 million company replacing its ERP or core finance system, expect **one to three years** from selection to full implementation. The wide range reflects the level of customization required. Organizations that can minimize customization and adopt standard processes may complete implementations in 12 to 18 months. Those with complex reporting requirements, extensive customization, or multiple integrations should plan for 24 to 36 months. Midmarket companies typically rely heavily on their ERP for customized reporting that has evolved over years, and replicating or redesigning these reports often takes longer than anticipated.

# Industry-Specific Considerations

## PRIORITIES MATRIX

### MANUFACTURING

#### Inventory and Standard Costing

Standard costing, variance analysis, and inventory valuation drive ERP requirements. Ensure the system handles your costing method with proper audit trails for cost changes.

#### EDI Integrations

Supplier and customer EDI connections are critical. Budget for more integration complexity and ongoing maintenance.

#### Shop Floor System Connectivity

Production systems feeding financial data create additional reconciliation requirements.

### DISTRIBUTION & WHOLESALE

#### High Transaction Volumes

Reconciliation and exception management become critical at scale. Prioritize automated matching and aging capabilities.

#### Rebates and Complex Pricing

Revenue recognition and accrual accuracy require specialized functionality.

#### Warehouse System Integration

Warehouse management system-to-ERP data flows affect inventory accuracy and cost-of-goods-sold timing.

### SAAS & TECHNOLOGY

#### Revenue Recognition (ASC 606)

Contract modifications, variable consideration, and multielement arrangements require robust revenue recognition engines.

#### Subscription Metrics

Annual recurring and monthly recurring revenue, churn, and cohort analysis often require specialized billing or FP&A tools beyond core ERP.

#### Multicurrency at Scale

Global customer bases create currency translation and hedging complexity.

### PROFESSIONAL SERVICES

#### Project Accounting

Time and expense capture, project profitability, and work-in-progress management are core requirements.

#### Utilization and Resource Planning

Professional service automation tools may need to integrate with ERP for billing and financial reporting.

#### Revenue Timing

Milestone billing, retainers, and percent-complete methods require flexible revenue recognition.

# Implementation Roadmap

Before diving into implementation, it's important to acknowledge the one big barrier that stops many finance teams from beginning their technology journey: not knowing where to start. The hesitation is understandable with all the uncertainty around which specific processes to automate, which AI features to enable first, and how to sequence multiple initiatives. Identifying the high-impact starting points requires guidance that vendors often don't provide.

> The most common question we get asked is: 'What are all the use cases?' It's like, I want to do something, but what exactly do I do? What I find with finance people is that once you tell them exactly what they could be doing, they'll do it. They're very excited for it."
>
> **Ellen Choi**

The implementation roadmap below provides structure for this decision-making. Phase 1 specifically focuses on identifying which processes deliver the highest value for automation, which data quality prerequisites exist, and how to sequence initiatives for manageable change. The goal isn't to implement everything at once—it's to identify the two or three highest-impact opportunities and execute those well before expanding scope.

## IMPLEMENTATION ROADMAP TIMELINE — 4 PHASES

### 1 Assessment & Planning

***Key Checkpoint:***

Requirements documented before vendor demos

***Red Flag Warning:***

Rushing to vendor demos without documented requirements

### 2 Selection & Negotiation

***Key Checkpoint:***

Control design requirements included in contract

***Red Flag Warning:***

Selecting based on user interface alone without testing integrations

### 3 Implementation & Testing

***Key Checkpoint:***

Parallel testing complete with sign-off

***Red Flag Warning:***

Inadequate testing of close/consolidation paths

### 4 Optimization & Ongoing Governance

***Key Checkpoint:***

Benefits tracked against Phase 1 baseline

***Red Flag Warning:***

Declaring victory at go-live with no ongoing governance plan

## Phase 1: Assessment & Planning

### *Your Team's Focus:*

- Document current processes, pain points, and control objectives.
- Inventory existing systems and integrations.
- Define measurable success criteria (close days, exception rates, forecast accuracy).
- Establish baseline metrics before implementation begins.

### *Key Checkpoint:*

Requirements matrix aligned to Scorecard categories; preassessment of SOC report availability for critical vendors.

**RED FLAG:** **Rushing to vendor demos without documented requirements and control priorities.**

## Phase 2: Selection & Negotiation

### *Your Team's Focus:*

- Shortlist vendors based on the requirements fit.
- Run scenario-based demos (month-end close, bank reconciliation, consolidation).
- Apply the Scorecard systematically; request SOC reports.
- Test segregation of duties, change logging, and error handling in sandbox environments.
- Negotiate contract terms: data export rights, rate transparency, support SLAs.
- **Involve frontline staff in demos and evaluation**—The people who actually perform the work daily often spot issues that managers miss. While there's natural hesitation about involving staff who might feel threatened by automation, these individuals know the processes most intimately and can identify whether proposed solutions will work in practice. Frame their involvement positively: automation eliminates the manual drudgery they dislike (data entry, invoice fetching, repetitive reconciliations) and frees them for higher-value work like analysis and exception resolution.

### *Key Checkpoint:*

Completed Scorecards for finalists; reference calls with similar-sized organizations in your industry.

**RED FLAG:** **Selecting based on user interface impressiveness rather than control capabilities and total cost.**

> The CFO—she owns the overall strategy of the finance organization, including governance and implementation. The controller is responsible for managing and executing those systems. There needs to be close collaboration between these roles, aligned not just with finance strategy but with the company's broader AI strategy. The CFO is responsible for understanding how finance strategically fits within all departments, while the controller ensures executional and strategic excellence for the finance team."
>
> **Ellen Choi**

## Phase 3: Implementation & Testing

***Your Team's Focus:***

- Establish governance structure and decision rights.
- Design controls into workflows from the start (not bolted on later).
- Execute data migration with completeness/accuracy validation.
- Define exception queues and ensure all approvals/overrides are captured.
- Run user acceptance testing with period-end scenarios.

***Key Checkpoint:***

Successful parallel run with reconciliation to legacy; documented control configurations; training completion.

**RED FLAG:** **Inadequate testing of close/consolidation paths; skipping change management documentation.**

## Phase 4: Optimization & Ongoing Governance

***Your Team's Focus:***

- Track benefits against baseline metrics established in Phase 1.
- Remediate control gaps identified in first close cycles.
- Tune roles, thresholds, and automated rules based on experience.
- Review vendor SOC reports annually; track subservice organization changes.
- Plan for first external audit with new systems.

***Key Checkpoint:***

Documented benefits realization; clean first audit; decommissioned legacy/shadow systems.

**RED FLAG:** **Declaring victory at go-live; parallel systems still running months later; integration drift discovered at audit.**

# Working with External Advisers

Most midmarket finance teams will engage external help at some point—implementation partners, consultants, or their CPA firm. Here's how to get the most value.

## When to Involve Your CPA or Auditor

- **Early in selection:** They can help evaluate control capabilities, interpret SOC reports, and identify audit implications before you commit.
- **During control design:** They understand what auditors will test and can help design configurations that withstand scrutiny.
- **Before first audit on new system:** Early coordination prevents surprises during fieldwork.

## What to Expect from Implementation Partners

- **Settle the scope and change-order policies:** Understand what's included and what triggers additional cost.
- **Get references in your industry and of your size:** Ask about similar implementations; call those references.
- **Knowledge transfer plan:** You shouldn't be dependent on a partner for routine operations after the new system goes live.
- **Accountability for outcomes:** Not just deliverables completed, but systems that work.

## Common Deficiencies to Avoid

- Superusers with access to post journal entries (segregation failure).
- Unreviewed exception queues that grow indefinitely.
- "Temporary" manual journals that bypass approval workflows.
- Undocumented configuration changes or hotfixes.
- Integration mappings that no one fully understands.

# Looking Ahead: What's Next in Finance Technology

While this guide focuses on current technology selection and implementation challenges, several emerging trends will shape the finance technology landscape over the next few years. Midmarket teams should understand these developments to make decisions that remain relevant as the market evolves.

## ERP Vendors Expanding Into AI-Powered Line-of-Business Applications

ERP vendors are developing purpose-built, AI-powered applications that extend from their core platforms into treasury, AP, AR, payments, and payroll functions. This represents a partial return to integrated suites after years of best-of-breed specialization. The benefit: tighter integration and potentially simpler vendor management. The risk: organizations may become dependent on ERP vendors that don't maintain innovation pace in specialized areas or whose roadmaps diverge from business needs.

## Enterprise-Grade Functionality Reaching Midmarket Pricing

AI is democratizing capabilities that were historically available only to billion-dollar organizations. Advanced data capture, sophisticated cash application, predictive cash forecasting, and real-time exception monitoring are now accessible at midmarket price points. This compression means that $50 million organizations can deploy tools that match what Fortune 500 companies use. Finance leaders should reassess what's possible—functionality they dismissed as unaffordable two years ago may soon be within reach.

## Banks Offering AI-Powered Tools to Corporate Clients

Banks are recognizing that stable, well-managed corporate clients serve their interests and are developing AI-powered services beyond traditional deposit and lending products. Expect banks to offer money market portals that aggregate balances across institutions and enable automated fund movement, enhanced AR tools that go beyond basic lockbox processing to include automated cash application, and treasury services with embedded cash forecasting and working capital optimization. These bank-provided services may compete with or complement existing finance technology stacks, creating new sourcing decisions for finance teams.

## Escalating Fraud and the AI Arms Race

Deepfake videos requesting wire transfers, sophisticated phishing that mimics vendor communications, and fake bank account change requests are proliferating with the growth of AI. Midmarket companies are particularly vulnerable because they often lack dedicated fraud-prevention resources. Organizations will need AI-powered defenses: automated supplier onboarding with identity verification, OFAC and sanctions screening, anomaly detection for payment patterns, and multifactor authentication for bank account changes. Some banks are beginning to offer these services to protect corporate clients.

These trends point to a finance technology landscape where AI capabilities become ubiquitous and security concerns intensify. The frameworks in this guide—particularly the emphasis on control design, vendor stability, and governance—become even more critical as the pace of change accelerates.

# Conclusion

The right finance technology system, well-implemented, can transform your team's effectiveness by shortening close cycles, improving forecast accuracy, strengthening controls, and freeing capacity for analysis rather than data wrangling. The wrong choices, or poor implementation, can create years of workarounds, integration headaches, and audit complications.

The frameworks in this guide—the Vendor Evaluation Scorecard, Five-Year Total Cost Framework, and Implementation Roadmap—are designed to help you navigate these decisions systematically. They won't eliminate complexity, but they'll help you ask better questions, avoid common pitfalls, and make decisions with appropriate rigor.

> "This isn't something we're experimenting with anymore. This is something that's becoming embedded in our processes. AI really changes the stakes when it comes to automation. You're really making some pretty long-term decisions about how things get done, how decisions are made, how much judgment we're delegating to technology versus our teams."
>
> — Mark Brousseau

## KEY TAKEAWAYS

1. ***Look beyond the demo.***
   Evaluate control capabilities, integration complexity, and total cost—not just features and interface.
2. ***Plan for the real cost.***
   Annual software licensing may represent just 20%–30% of five-year total ownership cost. Build comprehensive models.
3. ***Design controls in, not on.***
   Control requirements should drive configuration, not be retrofitted after go-live.
4. ***Establish baselines and measure.***
   You can't prove ROI without preimplementation metrics.
5. ***Involve your auditors early.***
   They'll test these systems eventually; their input during selection and design prevents surprises.

## Next Steps by Organizational Readiness

**Just beginning:** Start with the Scorecard on your next vendor evaluation. Focus on understanding control and audit implications before committing. Partner with implementation firms that have experience at your scale.

**Some experience:** Formalize your evaluation methodology. Build the Total Cost Framework for your next project. Establish relationships with advisers who can help with control design and SOC report interpretation.

**Ready for optimization:** Review existing systems against the Scorecard criteria. Identify control gaps and integration risks. Plan technology health checks as recurring governance activities.

# Appendix: Supplemental Tools and Resources

The following tools complement the frameworks in this guide. Develop these for your organization or request them from your advisers:

- **Control Design Checklist:** Role design, segregation of duties, change management, error handling, data lineage.
- **SOC Report Evaluation Guide:** How to read and rely on SOC 1/SOC 2 reports—scope, subservice organizations, complementary user entity controls, exceptions.
- **Data Migration Validation Procedures:** Completeness and accuracy testing, sign-off requirements.
- **Integration Mapping Template:** Source, target, transformation logic, error handling, owners.
- **First-Year Audit Planning Guide:** Timeline, population access, IT-dependent control testing approach.

For deeper understanding of the control and assurance concepts referenced throughout this guide, review these resources:

- **COSO Internal Control—Integrated Framework:** The foundational framework for internal control design and assessment.
- **SOC 1 and SOC 2 Reports:** AICPA resources on understanding and relying on service organization controls.
- **NIST SP 800-53:** Security and privacy controls, useful for evaluating access, change management, and logging.

# About MassCPAs

The Massachusetts Society of Certified Public Accountants (MassCPAs), a 501 (c) 6 organization, is the state's premiere professional organization with more than 11,500 members in public accounting, industry and business, government, and education. Through its advocacy, continuing professional education, membership, communications, and academic and career development departments, the Society provides services that allow its members to learn, connect, and prosper in the accounting profession.

MassCPAs™
Massachusetts Society of CPAs

# About CPA Crossings

The CPA Crossings Research Program provides comprehensive research with data and analysis on the hottest topics trending in the accounting profession. We create the research instruments, conduct the data collection, analyze the results, and produce reports or presentations of findings. Some research is based on national data; other research includes specific state data. We can also help with the launch of your research by providing webinar presenters and support, infographics, blogs, social media videos, and more.

CPA Crossings