

CFO Technology Governance Checklist

For Civil Engineering and Professional Services Firms



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Technology governance transforms technology spending from reactive expense management into strategic investment aligned with firm profitability, growth, and client delivery. For AEC firms operating in competitive markets with tight project margins, disciplined technology governance can mean the difference between sustainable profitability and margin erosion.

This checklist provides CFOs and finance leaders with the framework, processes, and metrics needed to establish governance over technology investments. It begins with establishing clear ownership and financial visibility, progresses through quarterly and annual review cycles, and concludes with decision frameworks that tie technology spending to measurable business outcomes.

The research is clear: organizations with formal technology governance frameworks report 25% higher returns on IT investments, better control over costs, and faster ROI realization on major initiatives. For AEC firms managing complex technology stacks across multiple offices, projects, and service lines, this governance framework becomes essential infrastructure for financial control and strategic execution.

Part 1: Foundation - Governance Structure and Ownership

Objective

Establish the organizational structure, roles, and accountability for technology governance that ensures CFO-level visibility and control.

Why This Matters: Technology governance fails when accountability is unclear. Strong governance requires explicit ownership, defined decision rights, and integration of technology decisions into financial planning and performance measurement.

1.1 Governance Roles and Accountability

- Establish Chief Technology Officer (CTO) or Technology Director role with explicit CFO reporting relationship
 - Define clear responsibilities including technology roadmap, vendor management, and performance accountability
 - Document authority to approve technology spending above defined thresholds
 - Establish quarterly business review meetings with CFO to review performance, costs, and progress
 - Define escalation procedures for budget variances, risk issues, or strategic decisions
 - Document cross-functional collaboration with department heads and business unit leaders
- Identify Technology Steering Committee with clear governance authority
 - Members: CFO or Finance leader (chair), CTO/IT Director, business unit heads, project delivery leadership
 - Define meeting cadence: minimum quarterly, with executive session for sensitive vendor/contract discussions
 - Document decision authority: approval thresholds for new technology, budget adjustments, and strategic initiatives
 - Establish charter describing committee purpose, scope, and decision-making processes
 - Create agenda template: operational performance review, cost variance analysis, strategic initiatives, risk management
- Assign Business Owners for major systems and services
 - For each technology category (Project Management Platform, Finance System, CAD/BIM Tools, Cloud Services, etc.): identify primary business owner
 - Define business owner responsibilities: adoption tracking, user satisfaction, performance monitoring, change management

- Document reporting requirements: monthly usage/adoption metrics, quarterly performance reviews, annual ROI assessment
 - Establish process for business owner feedback into technology decisions and roadmap prioritization
- Assign Contract Owners for all material vendors (\$5,000+/year)
 - For each major contract: identify primary owner responsible for renewal management
 - Define contract owner responsibilities: performance monitoring, relationship management, negotiation authority, compliance verification
 - Document contract owner reporting to CFO and Technology Steering Committee
 - Establish process for contract owners to escalate performance issues or cost concerns
- Define Financial Oversight Role (often Finance Director or Controller)
 - Primary responsibility: consolidate all technology spending across departments, vendors, cost centers
 - Authority to perform unannounced spending reviews and identify unapproved or off-books technology investments
 - Reporting: monthly variance analysis, quarterly trend analysis, annual comprehensive review
 - Access rights: all corporate credit cards, department budgets, vendor contracts, SaaS management platform
- Document decision authorities and approval thresholds
 - New technology software/subscription under \$5,000/year: Department head approval + Finance review
 - New technology \$5,000-\$25,000/year: CFO approval + Technology Steering Committee review
 - New technology \$25,000+/year: CFO approval + Technology Steering Committee + Business case and ROI documentation
 - Contract renewals: Automatic renewal review at 90 days before expiration; renegotiation authority per contract owner
 - Major upgrades or technology changes: Technology Steering Committee approval + affected business unit sign-off
 - Cloud infrastructure or managed services: CTO approval + CFO review for budget and performance SLAs

Outcome: Clear organizational structure with defined roles, reporting relationships, and decision authorities that ensure CFO visibility and control over technology spending.

1.2 Financial Visibility and Consolidation

- Create centralized technology spending inventory
 - Consolidate all software, cloud services, managed support, and hardware spending into single master list

- Sources to include: accounting systems, corporate credit cards, departmental budgets, vendor contracts, cloud service accounts, managed service agreements
 - Data elements for each expense: vendor name, service/tool, annual cost, business function, department, business owner, renewal date, contract terms
 - Establish single owner (Finance Director or Controller) responsible for maintaining master list
 - Schedule for maintenance: monthly update to capture new subscriptions, quarterly complete audit to identify shadow IT
- Classify technology spending by category
 - Personnel: Full-time IT/technology staff salaries, benefits, professional development
 - Software & Subscriptions: SaaS platforms, perpetual licenses, subscription renewals (organize by function: Project Mgmt, CAD/BIM, Finance, Collaboration, etc.)
 - Cloud Services: Cloud computing (AWS, Azure, Google Cloud), hosting, backup/disaster recovery
 - Hardware: Computers, servers, networking equipment, printers, peripherals, mobile devices
 - Managed Support: Help desk, managed IT services, vendor support contracts, security monitoring
 - Infrastructure: Networking, security (firewalls, VPN), telecom, data center or co-location
 - Strategic Initiatives: Implementation projects, system upgrades, modernization efforts, staff augmentation
- Establish total technology spending baseline
 - Calculate annual technology spending across all categories
 - Express as percentage of revenue (benchmark: 3-5% for professional services, varies by firm size)
 - Segment by department/cost center to identify budget accountability
 - Segment by type (recurring vs. one-time) to identify baseline and variance
 - Document any spending uncertainty or estimates that require validation
- Identify and eliminate shadow IT
 - Conduct audit of corporate credit card statements for unapproved software subscriptions
 - Review departmental budgets and project budgets for hidden technology spending
 - Document any tools or services in active use that don't appear on official inventory
 - Create policy requiring all new technology subscriptions to be submitted for approval before procurement
 - Establish quarterly audit process to identify new tools appearing on credit cards

- Create spending dashboard for executive visibility
 - Monthly view: Total technology spending to date, variance from budget, run-rate projection for year
 - Category breakdown: Spending by major category with trend vs. prior year
 - Top vendors: Spending concentrated by vendor, identifying largest cost drivers and renegotiation priorities
 - Departmental allocation: Technology spending by department or cost center
 - Headcount allocation: Technology spending per employee and per technical staff member
 - Distribution to Technology Steering Committee and CFO monthly
- Validate spending accuracy and completeness
 - Reconcile technology spending across multiple sources (GL, credit cards, contract list, vendor invoices)
 - Identify discrepancies and investigate: duplicate payments, unrecorded expenses, incorrect allocations
 - Document any spending not captured in master inventory and assess why
 - Implement process to flag new corporate credit card charges for approval before posting

Outcome: Complete, consolidated view of all technology spending with monthly reporting to CFO and Technology Steering Committee.

1.3 Budget Planning and Allocation

- Develop annual technology budget framework
 - Align with overall firm budget and financial planning process
 - Establish allocation targets by category (e.g., personnel 40%, software 20%, infrastructure 15%, cloud 10%, managed support 10%, strategic 5%)
 - Build budget from ground-up using detailed activity list, not percentage of revenue allocations
 - Include recurring costs (software, support, personnel) with growth assumptions
 - Reserve strategic allocation for investments tied to firm growth or modernization objectives
 - Build in contingency (typically 10% for unplanned costs or price increases)
- Create activity-based budget by business function
 - Project Management & Collaboration: All project delivery tools, communication platforms, file sharing, project documentation
 - Design & CAD/BIM: CAD software, modeling tools, rendering, visualization, file management, library maintenance

- Finance & Accounting: Finance system (ERP), cost accounting, time tracking, expense management, reporting tools
- Business Intelligence & Analytics: Data warehousing, reporting, dashboards, analytics tools, forecasting
- Human Resources & Talent: HRIS, recruiting, learning management, benefits administration, payroll
- Business Development & Proposal: Proposal management, CRM, market intelligence, pipeline tools
- IT Operations: Help desk, asset management, network, security, backups, disaster recovery, monitoring
- Client Delivery: Client portals, collaboration tools, document management, specialized tools by service line
- Compliance & Risk: Document management, quality management, audit tools, risk management, records retention
- Establish spending approval and budget monitoring process
 - Monthly: Review actual spending vs. budget by category; investigate variances over 10%
 - Quarterly: Reforecast year-end spending if variances detected; adjust future quarters if needed
 - Process for budget adjustments: Request submitted by department head, approved by CFO, reviewed by Technology Steering Committee
 - Document any unplanned spending and root cause (vendor price increase, emergency purchase, scope change, etc.)
 - Annual: Post-project review to compare estimated budget for major initiatives vs. actual spending; incorporate lessons into future budgeting
- Document budget ownership and accountability
 - Assign budget responsibility by category to appropriate leader (CTO for IT infrastructure, CFO for financial systems, Business unit heads for domain-specific tools)
 - Establish quarterly business reviews to discuss budget performance, spend trends, and planned investments
 - Create financial incentives or scorecards tying budget performance to leadership evaluation
 - Establish zero-based budgeting requirement for discretionary technology spending (every dollar justified)
 - For budget overages: require documented explanation, corrective action plan, and forecast adjustment

Outcome: Detailed annual technology budget with clear allocation priorities, monthly monitoring, and accountability for spending performance.

Part 2: Operating Practices - Quarterly and Annual Review Cycles

Objective

Establish regular review cadences that provide CFO visibility into technology performance, cost management, adoption, and risk.

Why This Matters: Governance is not a one-time exercise. Regular review cycles ensure that technology spending remains aligned with business priorities, risks are identified and addressed before they become problems, and opportunities for optimization are captured proactively rather than reactively.

2.1 Monthly Financial and Performance Monitoring

- Conduct monthly spending review
 - Reconcile invoices against master software inventory; identify any new charges or incorrect billing
 - Review corporate credit card statements for unapproved technology purchases
 - Calculate month-to-date and year-to-date spending vs. budget for each major category
 - Identify spending variances over 10% from budget and research root causes
 - Compare current month spending to prior-year run rate and document trends
 - Update 12-month cash flow projection based on actual spending through month
- Consolidate performance metrics from business owners
 - Request monthly dashboard from each major system owner: usage metrics, active users, system availability/uptime, incident count
 - Track adoption trends month-to-month for tools in ramp-up phase
 - Document any performance incidents, outages, or user issues
 - Identify tools showing declining adoption or increasing user complaints
 - Validate that tools in "maintenance mode" continue to meet minimum operational standards
- Monitor vendor performance against SLAs
 - For critical tools and services: track uptime, response times, resolution times
 - Document any vendor performance failures or SLA breaches
 - Track vendor invoices for accuracy (verify no unauthorized charges, overages, or billing errors)

- Identify any vendors showing trending performance decline
- Identify and escalate red flags
 - Tools showing zero usage or adoption below 20%
 - Vendor performance issues or recurring incidents
 - Budget variances indicating overspending or consumption growth not planned
 - Unapproved technology appearing on credit cards
 - Upcoming contract renewals without prior notice
- Create monthly technology dashboard for executive review
 - Spending summary: current month and YTD vs. budget and prior year
 - Key metrics: system availability, active users for major platforms, adoption rates, incident count
 - Trend summary: spending trends, adoption trends, performance trends
 - Red flags and escalations: any items requiring attention or decision
 - Upcoming items: contract renewals in next 60 days, planned maintenance, scheduled projects
 - Distribution: CFO, CTO, Technology Steering Committee

Outcome: Monthly visibility into technology spending, performance, and risk with clear escalation process for issues requiring management attention.

2.2 Quarterly Business Reviews

- Conduct comprehensive quarterly review meeting
 - Participants: CFO, CTO, business unit leaders, key vendor account managers (as appropriate)
 - Duration: 2-3 hours; structured agenda with advance materials provided to participants
 - Preparation: Finance team prepares spending summary, performance dashboard, and issue list 1 week in advance
- Review financial performance and variance
 - YTD spending vs. budget by category; explain all variances over 10%
 - 3-month spending trend and projection for year-end
 - Identify any price increases, unexpected charges, or billing issues
 - Discuss upcoming renewal notices and pricing negotiations
 - Assess whether any budget adjustments are needed for remainder of year
- Assess adoption, utilization, and user satisfaction
 - Review adoption metrics for each major platform
 - Discuss tools with adoption below 50%; determine why and plan remediation (training, change management, or retirement)
 - Review user satisfaction feedback (surveys, support tickets, informal feedback from business unit leaders)

- Identify tools experiencing declining adoption or increasing user complaints
 - Document any training or change management needs
 - Discuss opportunities to improve adoption or move users to lower-cost tiers
- Review operational performance and risk
 - System availability and incident trends
 - Vendor performance against SLAs
 - Any security incidents, compliance issues, or data risk exposure
 - Identify tools or services requiring maintenance, upgrades, or remediation
 - Assess concentration risk (critical systems with single vendor or single point of failure)
- Discuss strategic initiatives and planned investments
 - Review progress on major technology projects (implementations, upgrades, migrations)
 - Discuss ROI realization and whether projects are delivering promised benefits
 - Review upcoming initiatives planned for next quarter and their business rationale
 - Discuss resource constraints and prioritization of competing initiatives
 - Identify any projects off-track or at risk
- Consolidate decisions and action items
 - Document any decisions made (contract renegotiations, tool consolidations, retirement decisions, new initiatives)
 - Assign owners for each action item with clear deadlines
 - Document any budget adjustments approved
 - Establish follow-up date and metrics to track progress
- Create quarterly report for broader leadership
 - Executive summary: technology spending status, key metrics, major decisions
 - Spending dashboard with trends and forecast
 - Major initiatives status and expected outcomes
 - Risk summary and mitigation plans
 - Upcoming decisions or actions requiring leadership awareness

Outcome: Quarterly alignment on technology spending, performance, and strategy with documented decisions and action items.

2.3 Annual Comprehensive Technology Audit and Planning

- Conduct annual technology assessment (similar to Part 1 of Technology Waste Audit Checklist)

- Validate complete software inventory: all subscriptions, costs, renewal dates, users
- Analyze adoption and utilization: active users vs. licenses purchased for each tool
- Assess redundancy and consolidation opportunities: tools with overlapping functionality
- Evaluate operational fit and risk: integration with core systems, security/compliance alignment
- Review vendor performance and contract terms: pricing, support quality, financial terms
- Update technology roadmap: planned initiatives, infrastructure improvements, system upgrades
- Establish annual budget for next fiscal year
 - Build from ground-up using detailed activity list, not percentage allocation
 - Incorporate findings from annual assessment: tools to retire, consolidations to implement, price increases
 - Account for headcount growth or organizational changes affecting technology spending
 - Plan for strategic initiatives: new capabilities, system modernization, cloud migration
 - Review prior-year actual spending to calibrate assumptions
 - Align with overall firm growth plan and margin targets
- Perform annual vendor review and negotiation planning
 - Document spending by vendor; identify top 10-15 vendors representing 80% of spend
 - For each major vendor: assess performance, relationship quality, alternative options
 - Identify vendors with upcoming renewals in next 12-18 months
 - Create negotiation priorities: cost reduction, contract term improvements, bundling opportunities
 - Assess bundling opportunities: could multiple point solutions be consolidated under one vendor?
- Refresh technology roadmap and strategic plan
 - Review firm's strategic direction and growth plan; assess technology implications
 - Identify technology capabilities needed to support firm growth
 - Assess infrastructure adequacy for future headcount, remote work, cloud adoption
 - Plan major system upgrades or migrations
 - Identify opportunities for modernization, automation, or competitive advantage
 - Prioritize investments based on business impact and strategic alignment
- Establish technology governance targets and performance goals
 - Set target for technology spending as % of revenue

- Establish targets for system availability, incident response times, and user satisfaction
- Set adoption rate targets for major platforms
- Define success metrics for major initiatives
- Document targets in writing and tie to leadership compensation or performance evaluation
- Create annual governance report for Board/ownership
 - Executive summary: technology strategy aligned with firm strategy, investment priorities
 - Spending summary: annual budget, allocation by category, comparison to prior years
 - Strategic initiatives: planned investments, expected outcomes, timelines
 - Risk summary: major risks identified and mitigation plans
 - Performance dashboard: key metrics and trends
 - Governance framework: how decisions are made, who is accountable, review processes

Outcome: Updated technology roadmap, comprehensive annual budget, vendor negotiation plan, and strategic alignment ensuring technology investments support firm growth and profitability.

Part 3: Financial Discipline - Business Cases, Approvals, and Post-Implementation Review

Objective

Ensure that new technology investments and major initiatives are justified with clear business cases, approved through documented process, and measured against promised outcomes.

Why This Matters: Without rigorous business case discipline, technology spending becomes driven by vendor relationships, personal preferences, or fashionable trends rather than business value. Business case discipline ensures that only justified investments proceed and that outcomes are measured after implementation.

3.1 Business Case Framework and Approval Process

- Develop business case template for all technology investments
 - Title and executive summary: what problem is being solved?
 - Business context: current state, pain points, constraints, and why change is needed
 - Proposed solution: detailed description of technology, features, and how it addresses problem
 - Scope and implementation: phased rollout plan, timeline, resources required, change management approach
 - Financial analysis:
 - Capital costs (hardware, implementation, training, data migration)
 - Recurring costs (licensing, support, hosting, maintenance)
 - Quantified benefits (cost savings, time savings, risk reduction, quality improvements)
 - ROI calculation: net present value, payback period, 3-year total cost of ownership
 - Sensitivity analysis: how does ROI change if adoption is slower or benefits are lower?
 - Risk assessment: implementation risks, operational risks, vendor risks, and mitigation plans
 - Alternatives considered: why was this solution selected over alternatives?
 - Success metrics: how will we measure that the solution delivered promised benefits?
 - Owner and accountability: who is responsible for implementation and outcome delivery?

- Approval chain: documented approvals from department head, business owner, CFO, CTO, and (if >\$50K) Technology Steering Committee
- Establish approval thresholds and decision authority
 - Under \$10,000 annually: Department head + CTO approval; no formal business case required (statement of need acceptable)
 - \$10,000-\$50,000: Department head approval + CTO approval + business case required; CFO review for consistency with budget
 - \$50,000-\$250,000: CFO approval + Technology Steering Committee review + formal business case; requires ROI justification
 - Over \$250,000: Board/ownership approval (varies by firm structure) + comprehensive business case + competitive evaluation required
 - Express policy: no investment proceeds without documented approval from all required parties
- Conduct evaluation of alternatives for significant investments
 - For investments over \$50,000: evaluate at least 2 alternative solutions
 - Document evaluation criteria: functionality, ease of use, integration capability, total cost of ownership, vendor viability, security/compliance
 - Score alternatives against criteria; document scoring methodology
 - Require justification explaining why selected solution was superior to alternatives
 - For major decisions: consider inviting vendors to present; ensure evaluation is competitive and documented
- Incorporate risk assessment in approval process
 - Identify implementation risks: schedule, resource availability, organizational change readiness
 - Identify operational risks: vendor viability, security/compliance, data migration, system integration
 - Document mitigation plans for each major risk
 - For high-risk projects: consider external expertise or phased implementation approach
 - Build contingency budget for high-risk initiatives (typically 15-20%)
- Document all approvals in writing
 - Business case signed by all required approvers before project begins
 - Changes to scope, budget, or timeline require re-approval at same level
 - Create project file containing all approvals, contracts, implementation plans

Outcome: Disciplined business case and approval process ensuring only justified investments proceed with clear success metrics and risk mitigation plans.

3.2 Implementation Project Management and Governance

- Establish implementation governance structure
 - For projects over \$50,000: appoint project steering committee with CFO, business owner, CTO, project manager
 - Define roles: project sponsor (business owner), project manager (usually IT), steering committee oversight
 - Establish project governance: status reporting cadence, decision authority, escalation procedures
 - Define success criteria and how outcomes will be measured
- Establish project budget and financial tracking
 - Create project budget incorporating implementation costs, vendor fees, staff time, training, infrastructure
 - Document budget owner responsible for tracking spending and controlling overages
 - Establish monthly project spending reporting to steering committee
 - Identify variance threshold triggering escalation (typically 10%)
 - Establish change control process for budget scope changes
- Monitor implementation progress and timeline
 - Establish project schedule with key milestones (design, build, test, training, go-live, stabilization)
 - Schedule weekly or bi-weekly status meetings with steering committee
 - Track actual vs. planned progress; identify and escalate delays
 - Document risks, issues, and mitigation efforts
 - Implement contingency planning if schedule is at risk
- Ensure user training and change management
 - Develop training plan addressing different user personas and roles
 - Allocate budget for training materials, instructor time, and productivity loss during transition
 - Execute training in phases prior to go-live; measure training effectiveness
 - Plan communications campaign to explain benefits and change process
 - Establish help desk escalation support for go-live period
- Execute data migration and system integration planning
 - Develop detailed plan for migrating data from legacy systems
 - Validate data integrity and reconciliation procedures
 - Plan and test integrations with other systems
 - Establish rollback procedures if issues arise during go-live
 - Document remediation procedures for data quality issues post-go-live
- Plan for go-live and stabilization
 - Develop go-live checklist and risk mitigation plan

- Establish support team availability during go-live and stabilization period (typically 2-4 weeks)
- Document known issues and workarounds; communicate to users
- Schedule post-go-live health checks (1 week, 1 month, 3 months) to identify issues
- Plan for decommissioning of legacy systems only after stability is confirmed

Outcome: Structured project management approach ensuring implementations deliver on schedule and budget with proper user support and risk mitigation.

3.3 Post-Implementation Review and Lessons Learned

- Conduct post-implementation review within 6 months of go-live
 - Schedule review meeting with project sponsor, project manager, business owner, CFO
 - Validate that system is stable and operating within expected parameters
 - Confirm user adoption and whether training was effective
 - Document any implementation issues and how they were resolved
 - Gather user feedback and satisfaction assessment
- Measure outcomes against promised business case
 - Document actual implementation costs vs. budgeted costs; explain material variances
 - Document implementation timeline vs. planned timeline
 - Measure adoption rate: actual active users vs. licensed users planned
 - Measure utilization: actual usage frequency and feature adoption vs. expected
 - Assess user satisfaction: survey or feedback on ease of use, relevance, and impact
 - Quantify delivered benefits: cost savings, time savings, quality improvements, risk reduction achieved
 - Compare quantified benefits to business case projections; explain material differences
- Identify root causes for significant variances
 - If costs exceeded budget: what caused overspending? (scope creep, unforeseen complexity, resource inflation, etc.)
 - If adoption is lower than expected: what caused lower adoption? (training gaps, user resistance, functionality gaps, ease-of-use issues, etc.)
 - If benefits are not materializing: what is preventing benefit realization? (usage barriers, process changes not implemented, organizational readiness issues, etc.)

- Develop remediation plan to address adoption or benefit shortfalls
- Document lessons learned and incorporate into future projects
 - What worked well that should be repeated in future projects?
 - What should be done differently in future projects?
 - Were estimates accurate? How should we calibrate future estimates?
 - Were risks properly identified and mitigated? What were we surprised by?
 - Incorporate lessons into project management methodology and business case template
- Validate ongoing operational performance and support
 - Confirm that system is operating within SLA targets (uptime, response time, etc.)
 - Assess ongoing support model: is current support level adequate or should it be adjusted?
 - Document recurring costs and whether they align with budget
 - Assess whether system is delivering expected value to business
 - Identify any planned enhancements or upgrades needed to maximize value
- Create post-implementation review report
 - Executive summary: project success status, lessons learned
 - Financial summary: costs vs. budget, benefits realized vs. projected
 - Adoption and utilization metrics
 - Risk and issue log: what went wrong and how it was handled
 - Recommendations for enhancements or future projects
 - Distribution: project sponsor, CFO, Technology Steering Committee, board/ownership

Outcome: Documented assessment of project outcomes vs. business case; lessons learned to improve future projects; remediation plans if outcomes are not meeting expectations.

Part 4: Strategic Alignment - Technology Roadmap and Governance Integration

Objective

Ensure that technology investments are aligned with firm strategy, support growth objectives, and are sequenced based on strategic priorities and financial constraints.

Why This Matters: Technology governance that is purely about cost management misses the strategic dimension. Technology should actively enable firm growth, competitive differentiation, and profitability improvement. Strategic alignment ensures that technology investments are not just controlled—they are prioritized based on strategic impact.

4.1 Firm Strategy and Technology Implications Assessment

- Document firm strategic direction and objectives
 - What market segments is the firm targeting?
 - What is the firm's growth strategy? (organic growth, geographic expansion, service expansion, acquisition strategy)
 - What is the competitive positioning? (low-cost, differentiated service, innovation, technical expertise)
 - What are the margin improvement targets?
 - What does the firm plan to do in next 3-5 years?
- Assess technology implications of strategic direction
 - What technology capabilities are needed to support growth strategy?
 - What technology is required to compete effectively in target markets?
 - What technology will enable margin improvement? (automation, efficiency, remote delivery models)
 - What infrastructure and platforms will be needed if firm doubles in size?
 - What risks emerge if technology capabilities are not adequate? (competitive disadvantage, delivery risk, margin pressure)
- Identify technology capability gaps
 - What capabilities exist today?
 - What capabilities are needed to execute strategy?
 - What gaps exist?
 - What is the priority for closing each gap?
 - What is the timeline for closing gaps? (critical for strategy execution, important, opportunistic)

- Develop technology roadmap aligned with strategic direction
 - 1-2 year initiatives: critical for near-term strategy execution (new service capabilities, market expansion, efficiency programs)
 - 3-5 year initiatives: building long-term competitive advantage (platforms, infrastructure, automation, analytics)
 - Ongoing operations: maintenance of existing systems, support for ongoing business
- Establish strategic initiative prioritization framework
 - Evaluate each initiative: strategic impact (high/medium/low), financial impact (savings/revenue), implementation complexity, resource requirements, risk
 - Score initiatives and rank by impact relative to effort
 - Sequence initiatives considering dependencies and resource constraints
 - Document prioritization logic and approval by leadership

Outcome: Clear alignment between firm strategy and technology roadmap; prioritized list of strategic initiatives positioned to execute on strategic direction.

4.2 Resource Planning and Capacity Management

- Assess technology staffing and capacity
 - Current IT/technology staff: headcount, skills, experience level
 - Current resource allocation: what % time on operations, maintenance vs. strategic projects?
 - Capacity analysis: can current staff support planned roadmap and initiatives?
 - Skill gaps: what skills are missing to execute roadmap? (cloud architecture, data analytics, security, etc.)
 - Staffing plan: what additional resources will be needed? (hiring, outsourcing, consulting)
- Plan resource requirements for major initiatives
 - For each planned initiative: identify resource needs (FTE time, consulting, vendor resources, training)
 - Assess whether initiative can be resourced with existing staff or requires external help
 - Identify peak resource periods and plan for surge support if needed
 - Develop business cases incorporating staffing/consulting costs
 - Plan hiring or outsourcing arrangements to support roadmap
- Establish ongoing operations capacity plan
 - Identify baseline staffing needed for ongoing support (help desk, infrastructure, security, systems management)
 - Document SLAs and support commitments that drive staffing requirements
 - Plan for staffing growth as infrastructure and user base grows
 - Document ongoing training and professional development budget

- Assess outsourcing options for functions better handled by managed service providers
- Develop outsourcing strategy
 - Identify functions best handled internally vs. outsourced (typically: project delivery internal, help desk/infrastructure can be outsourced)
 - Develop managed services strategy: cloud infrastructure, managed IT services, security monitoring
 - Build vendor relationships with IT services providers, implementation partners, specialized consultants
 - Evaluate total cost: internal FTE + overhead vs. outsourcing fees; factor in flexibility and skill access
 - Develop contracts and SLAs with preferred partners

Outcome: Staffing plan that adequately resources both ongoing operations and strategic initiatives; identified outsourcing partners for capability/capacity gaps.

4.3 Financial Capacity Planning

- Establish technology spending targets aligned with strategy
 - Base target: steady-state technology spending as % of revenue once roadmap is executed
 - Ramp plan: how will spending increase during strategic transformation? What is peak spending year?
 - Timeline: when will initiatives complete and run-rate stabilize?
 - Impact on profitability: how will technology investments affect firm EBITDA? When will ROI materialize?
- Develop multi-year financial plan for technology spending
 - Year 1: ongoing operations + early strategic initiatives
 - Year 2-3: major strategic initiatives, infrastructure modernization
 - Year 4-5: completion of roadmap, stabilization at new run-rate
 - Identify total capital required for technology roadmap
 - Identify funding sources (operating budget, capital budget, partnership funding, etc.)
- Integrate technology plan with firm financial planning
 - Present technology roadmap and financial plan to executive team and ownership
 - Assess whether technology investments can be funded within firm financial targets
 - Evaluate impact on firm profitability and cash flow
 - Identify trade-offs: if technology investment increases, what business priorities are deferred?
 - Obtain approval from leadership on technology spending envelope
- Monitor spending performance against multi-year plan
 - Quarterly: track actual vs. planned spending and update forecast

- Annually: reassess plan based on strategic progress, market conditions, technology changes
- Document any significant deviations from plan and adjust subsequent years
- Maintain disciplined allocation toward strategic initiatives; resist ad-hoc additions outside plan

Outcome: Multi-year financial plan for technology spending aligned with strategic direction and firm financial constraints; integrated into overall financial planning.

Part 5: Risk Management and Compliance

Objective

Identify and manage risks related to technology systems, vendors, security, compliance, and data privacy.

Why This Matters: Technology risk can manifest as security breaches, compliance violations, vendor failures, data loss, system outages, or operational disruptions. Effective risk management proactively identifies risks and implements controls to mitigate exposure.

5.1 Cybersecurity and Data Risk Management

- Establish cybersecurity governance
 - Define clear accountability: CTO responsible for security posture; CFO responsible for security investment and risk acceptance
 - Security committee: periodic (quarterly minimum) review of security incidents, vulnerabilities, and risk status
 - Identify security threats relevant to firm: data breach, ransomware, third-party vendor compromise, compliance violation
 - Assess current security controls and identify gaps
 - Develop security roadmap with prioritized improvements
- Implement data classification and access controls
 - Classify data by sensitivity: public, internal, confidential (e.g., client data, financial, personnel)
 - Establish access controls based on data classification: who can access what data?
 - Implement multi-factor authentication for sensitive systems
 - Document and monitor privileged access (admin accounts, system access)
 - Regularly audit access: ensure access rights are current and appropriate
- Manage third-party vendor risks
 - For each vendor with access to firm data: assess security practices, certifications (SOC 2, ISO 27001)
 - Require vendors to meet security standards; include security requirements in contracts
 - Conduct periodic security assessments of critical vendors
 - Develop vendor risk score incorporating security posture, financial stability, market position
 - Monitor vendors for reported breaches or security incidents
- Implement incident response planning
 - Develop incident response plan: roles, escalation procedures, communication plan

- Identify critical systems requiring rapid recovery (typically project delivery systems, finance systems, client data)
 - Establish data backup and disaster recovery procedures
 - Test recovery procedures regularly (at least annually)
 - Document post-incident review process to identify improvements
- Monitor security and compliance metrics
 - Track security incidents: number, severity, root causes, resolution time
 - Monitor vulnerability scanning results and remediation progress
 - Track security training completion rates
 - Monitor compliance assessments (audits, regulatory reviews)
 - Report security status quarterly to Technology Steering Committee and annually to board/ownership

Outcome: Documented security governance, access controls, vendor management, and incident response procedures; quarterly reporting on security status.

5.2 Compliance and Regulatory Risk Management

- Identify compliance requirements
 - Industry regulations: professional licensing requirements, design standards, safety regulations
 - Data regulations: GDPR (if applicable), CCPA, HIPAA (if applicable), data privacy laws
 - Financial regulations: SOX (if applicable), tax requirements, audit requirements
 - Document all applicable regulations and compliance requirements
- Assess compliance status of technology systems
 - For each major system: does it support compliance requirements?
 - Are there gaps where current systems cannot support compliance?
 - Document compliance-related risks and mitigation plans
 - Identify any tools or processes that create compliance risk (e.g., personal cloud storage for confidential data)
- Implement compliance controls and monitoring
 - Document retention policies for different data types
 - Establish audit trails for sensitive transactions and data access
 - Implement data encryption for sensitive data (in transit and at rest)
 - Establish user authentication and access control standards
 - Monitor compliance through internal audits and third-party assessments
- Manage compliance obligations in contracts

- For critical vendors/systems: establish SLAs for compliance support (e.g., vendor provides compliance certifications, audit reports)
- Include compliance requirements in data processing agreements
- Require vendors to notify firm of security breaches or compliance incidents
- Establish audit rights: firm can audit vendor compliance practices
- Plan for regulatory change
 - Monitor regulatory trends and upcoming changes
 - Assess implications for firm technology and operations
 - Plan for system changes required to support new regulations
 - Include regulatory compliance in technology roadmap if significant changes anticipated

Outcome: Compliance assessment and roadmap; documented controls supporting compliance; vendor contracts including compliance requirements.

5.3 Vendor Risk and Business Continuity

- Assess vendor financial stability and market viability
 - For each critical vendor: assess financial health, market position, product viability
 - Monitor vendor news, funding, acquisition activity, market share
 - Identify vendors at risk of financial failure or product discontinuation
 - Develop contingency plans for critical tools where vendor risk is elevated
 - Diversify critical services across multiple vendors where practical
- Plan for business continuity and disaster recovery
 - Identify critical business functions that depend on technology
 - Document recovery time objectives (RTO) and recovery point objectives (RPO) for critical systems
 - Establish backup and recovery procedures for critical systems
 - Test recovery procedures (full recovery test at least annually)
 - Document supplier relationships for critical services; ensure adequate support levels
- Manage vendor concentration risk
 - Identify single vendor dependencies for critical functions
 - Assess risk: what happens if vendor goes out of business or has major outage?
 - Develop mitigation: can function be replaced with alternative? What is transition plan?
 - For high-risk scenarios: maintain backup vendors or alternative solutions
 - Reduce concentration where practical; negotiate data portability and transition assistance

- Monitor ongoing vendor performance
 - Establish vendor scorecards: uptime, support response time, quality, cost competitiveness
 - Conduct quarterly vendor reviews: assess performance against SLA, identify issues
 - Document vendor performance trends
 - For underperforming vendors: establish improvement plans or identify alternatives
 - For critical vendors: maintain regular business reviews to assess relationship health

Outcome: Vendor risk assessment and mitigation plan; documented business continuity procedures; quarterly vendor performance monitoring.

Part 6: Governance Integration and Executive Reporting

Objective

Integrate technology governance into executive decision-making and ensure board/ownership is aware of technology strategy, investments, and risks.

Why This Matters: Technology governance fails if leadership doesn't understand technology's strategic importance and financial impact. Executive reporting ensures that technology decisions are made with full information about costs, benefits, risks, and strategic alignment.

6.1 CFO and Executive Team Integration

- Establish CFO role as central technology finance leader
 - CFO or Finance Director: primary owner of technology financial planning and control
 - CFO participates in all major technology decisions (approval authority, not just awareness)
 - CFO chair of Technology Steering Committee (or designate as chair)
 - CFO and CTO jointly own technology strategy and roadmap
 - CFO integrates technology planning into overall financial planning and budget cycles
- Build technology considerations into executive team discussions
 - Strategic planning: discuss technology requirements to support growth strategy
 - Quarterly performance reviews: discuss technology spending, key metrics, progress on initiatives
 - Risk management: discuss technology risks alongside operational and financial risks
 - Opportunity assessment: discuss technology investments enabling competitive advantage or margin improvement
- Ensure technology considerations in M&A and major decisions
 - For firm acquisitions: conduct technology due diligence; assess acquired firm's systems, technology debt, integration requirements
 - For major client wins: assess technology capability to deliver; identify any infrastructure investment needed
 - For market expansion: assess technology requirements to support new market or service offering
 - For service line expansion: assess systems and tools needed to deliver new service
 - For cost reduction initiatives: evaluate technology-enabled solutions (automation, efficiency)

- Create executive awareness of technology's financial impact
 - Regular reporting: monthly spending, quarterly performance review, annual strategic review
 - Communicate technology roadmap and strategic initiatives to executive team
 - Explain how technology investments support firm strategy and financial targets
 - Educate on technology trends impacting professional services (cloud adoption, remote delivery, AI, automation)
 - Build business acumen for executives on technology value creation

Outcome: Technology is treated as core strategic and financial topic, not just IT operations; CFO plays central oversight role.

6.2 Board and Ownership Reporting

- Develop annual technology report for board/ownership review
 - Executive summary: technology strategy aligned with firm strategy
 - Strategic initiatives: major planned investments, timeline, expected outcomes
 - Financial overview: annual technology spending by category, allocation priorities, comparison to prior years
 - Key performance metrics: system availability, user satisfaction, adoption rates, incident trends
 - Risk summary: major risks identified and mitigation plans in place
 - Governance structure: roles, decision processes, oversight mechanisms
 - Multi-year roadmap: 3-5 year outlook on major initiatives and expected spending levels
- Conduct annual board presentation on technology strategy
 - Presenter: CFO and CTO jointly present
 - Timing: annual planning cycle (typically Q4 for next-year planning)
 - Purpose: ensure board understands technology strategy, investment needs, and risks
 - Content: strategic alignment, major initiatives, financial plan, risk management, governance
 - Board questions and discussion: ensure ownership understands rationale and supports direction
- Provide quarterly updates to board on major initiatives
 - For material strategic initiatives (>\$250K), provide quarterly status updates
 - Report project status: on track, at risk, or complete
 - Report financial status: actual vs. budgeted spending
 - Report adoption/benefit realization progress
 - Flag any material issues or risks requiring board attention
- Report major incidents or compliance issues to board

- Security incidents (data breach, ransomware, unauthorized access): immediate reporting of material incidents
- System outages affecting client deliverables: prompt notification if business-impacting
- Compliance violations or regulatory findings: immediate reporting
- Vendor failures or significant performance issues: timely notification of material issues

Outcome: Board/ownership has clear understanding of technology strategy, major investments, key risks, and governance; maintains visibility through periodic reporting.

6.3 Communication and Change Management

- Communicate technology governance to organization
 - Publish written technology governance policy
 - Document approval process for new technology subscriptions; communicate to all staff
 - Publish technology standards and policies (security, data handling, acceptable use)
 - Conduct training for business unit leaders on governance process and their role
 - Establish escalation path for questions or exceptions to policy
- Build organizational awareness of technology strategy
 - Communicate firm's technology roadmap and major initiatives to all staff
 - Explain how technology investments support client delivery and firm growth
 - Share updates on major projects; celebrate successes and share lessons learned
 - Gather feedback from staff on technology priorities and pain points
 - Build enthusiasm and engagement around technology-enabled improvements
- Plan change management for major initiatives
 - For each strategic initiative: develop communications and training plan
 - Identify potential user resistance and plan mitigation
 - Engage department heads and power users in planning and design
 - Plan rollout sequencing and phasing to manage disruption
 - Establish support mechanisms during transition period

Outcome: Clear, consistent communication of governance expectations, strategy, and major initiatives; organization understands why technology decisions are being made.

Part 7: How InfraTech Strategy Group Helps

Establishing and Strengthening Technology Governance

InfraTech works with CFOs and technology leaders to establish governance frameworks that transform technology spending from reactive expense management into strategic investment aligned with firm profitability, growth, and client delivery.

Our Governance Engagement Approach

- **Strategy Alignment Assessment:** We evaluate whether current technology investments align with firm strategic direction. We identify capability gaps where technology must evolve to support growth, competitive positioning, or margin improvement.
- **Governance Structure Design:** We work with leadership to establish clear organizational structure, roles, decision authorities, and accountability for technology investments. We develop charters and decision frameworks for governance committees.
- **Financial Planning Framework:** We help establish comprehensive technology budgeting practices, including activity-based budgeting, multi-year planning, and contingency planning. We develop financial dashboards that give CFOs real-time visibility into spending and performance.
- **Business Case Discipline:** We develop templates and processes for rigorous business case discipline, ensuring that new investments are justified with clear problem statements, expected outcomes, and success metrics.
- **Review Cycle Implementation:** We design and facilitate quarterly and annual review processes that provide ongoing visibility into performance, costs, adoption, and risk.
- **Vendor Management Optimization:** We work with procurement and technology teams to establish vendor management practices, develop negotiation strategies, and optimize contracts and pricing.
- **Performance Measurement:** We develop dashboards and reporting frameworks that track technology spending, system performance, user adoption, and strategic initiative progress. We establish metrics linking technology investments to business outcomes.

Governance Maturity Model

We assess current governance maturity and develop implementation roadmap:

- **Level 1 - Ad Hoc:** Limited visibility into technology spending; decisions made without formal process; no regular performance monitoring
- **Level 2 - Repeatable:** Documented procedures for some decisions; periodic spending reporting; basic vendor contracts

- Level 3 - Defined: Documented governance framework; quarterly reviews; business cases required for major decisions; performance dashboards
- Level 4 - Managed: Mature governance with clear roles and decision authorities; integrated financial and strategic planning; vendor performance management; post-implementation reviews
- Level 5 - Optimized: Continuous improvement of governance practices; strategic insights from performance data; proactive risk management; technology roadmap fully aligned with strategy

Typical Engagement Timeline

- Month 1-2: Discovery of current governance maturity, technology spending, major initiatives, organizational structure
- Month 2-3: Assessment of strategic alignment and technology capability gaps
- Month 3-4: Development of governance framework, process templates, decision authorities
- Month 4-5: Leadership training and change management; communication of new framework
- Month 5-6: Facilitation of first quarterly review cycle; refinement of processes based on experience
- Ongoing: Quarterly facilitation of business reviews; annual strategic planning support; quarterly reporting to board/ownership

What You Receive

- Governance Framework Document: Comprehensive policy describing roles, decision authorities, and processes
- Process Templates: Business case template, project charter, quarterly review agenda, vendor scorecard
- Financial Planning Model: Multi-year technology spending plan aligned with strategy
- Dashboard and Reporting Framework: Monthly spending dashboard, quarterly performance report, annual strategic review
- Training Materials: Presentation decks, process guides, decision-making tools
- Ongoing Support: Facilitation of governance committee meetings and annual strategic planning

Why Partner with InfraTech?

We understand the unique challenges of AEC and professional services firms: complex technology stacks supporting project delivery, margin pressure driving need for efficiency, organizational growth creating scaling challenges. We bring expertise in both technology and finance, ensuring that governance frameworks are practical, focused on business value, and integrated with financial management.

Many organizations that implement disciplined technology governance report:

- 15-25% improvement in technology spending efficiency through better vendor management and tool consolidation
- Improved project margins through technology-enabled delivery and efficiency
- Faster implementation of strategic initiatives through disciplined project management
- Better organizational alignment around technology priorities and strategy
- Reduced technology-related risks through structured risk management and vendor oversight

Getting Started

This checklist provides the framework for establishing technology governance in your organization. The sections build progressively from basic governance structure through financial oversight, strategic alignment, and risk management.

Key Implementation Principles:

1. **Start with structure:** Establish clear roles, decision authorities, and financial visibility before attempting complex strategic planning
2. **Build processes:** Implement regular review cycles and documented approval processes
3. **Measure and report:** Develop dashboards and reporting to create visibility and accountability
4. **Integrate with strategy:** Ensure technology investments support firm strategy and are prioritized accordingly
5. **Continuous improvement:** Treat governance as evolving practice; learn from implementation and refine over time

Common Implementation Timeline:

- **Months 1-2:** Establish governance structure, CFO-CTO relationship, Technology Steering Committee
- **Month 2:** Implement monthly spending dashboard and financial consolidation
- **Month 3:** Conduct first comprehensive quarterly review
- **Month 4:** Develop annual technology budget and roadmap
- **Months 5-6:** Implement business case discipline for new investments
- **Months 6-12:** Mature review processes, develop post-implementation review discipline, strengthen vendor management

Questions? Contact InfraTech Strategy Group to discuss how we can help you establish technology governance aligned with your firm's strategy and financial objectives.

Appendix: Key Governance Metrics and Definitions

Technology Spending Metrics:

- Technology Spend as % of Revenue: Total annual technology spending ÷ firm annual revenue. Benchmark: 3-5% for professional services; varies by firm size and technology maturity
- Spend per Employee: Annual technology spending ÷ number of employees. Use to benchmark against peer firms
- Recurring vs. One-Time Spend: Percentage of annual spending that is recurring (software, support) vs. one-time (implementations, hardware). Target: 70-80% recurring, 20-30% for strategic/project spending
- Spending by Category: Breakdown of spending by personnel, software, hardware, infrastructure, cloud, managed support, strategic initiatives. Use to assess balance between operations and strategic investment
- Cost Variance: Actual spending vs. budgeted spending. Track by category and month. Target: variance under 10%

Performance Metrics:

- System Availability/Uptime: Percentage of time critical systems are available for business use. Target: 99%+ for mission-critical systems
- User Satisfaction: Percentage of users satisfied with technology tools and support. Measured via surveys. Target: 75%+ satisfaction
- Incident Response Time: Time from problem report to resolution. Target: varies by severity (critical: <4 hours, high: <1 day, medium: <3 days)
- Adoption Rate: Active users ÷ licensed users. Target: 80%+ for mature tools; 50%+ is warning threshold

Strategic Metrics:

- Strategic Initiative ROI: Actual benefits realized ÷ total implementation costs = ROI percentage. Track 1 year and 3 years post-implementation. Target: payback within 18-24 months
- Technology Roadmap Completion: Percentage of planned initiatives completed on time and on budget. Target: 80%+ on time, 85%+ within 10% of budget
- Strategic Alignment: Percentage of technology spending supporting firm strategic objectives. Target: 70%+ of annual investment supporting strategic initiatives
- Vendor Concentration: Percentage of technology spending with top 5 vendors. Target: <50% to reduce risk from vendor failure or performance issues

Risk Metrics:

- Security Incidents: Number and severity of security incidents. Track by type and root cause. Target: zero material incidents
- Compliance Issues: Number of compliance violations or audit findings. Target: zero material violations

- System Outages: Number of system outages affecting business operations. Track by duration and business impact. Target: <2 per year for critical systems
- Vendor Risk Score: Composite score of vendor financial stability, market position, performance, and security posture. Target: all critical vendors score above risk threshold