Risk & Project Management eBook

// For IT Professionals

Created and provided by

TechInsurance
Fast Coverage. Lasting Confidence.

CONTRACTEDGE™
Quality Contracts for the IT Professional

At TechInsurance, we've helped more than 13,000 technology companies protect their businesses with insurance. Over the years, hundreds of clients have come to us with questions about how to manage risk and potential liabilities – some of which can be insured against, and some that can't.

Business insurance is just one part of an overall risk management strategy for your business. Another important aspect of managing risk is developing strong risk management and project management processes, and using them consistently in all of your client relationships.

To help our clients do just that, we've created this eBook full of informative articles designed to help you identify, avoid, reduce and insure common IT business risks**.** Many include specific examples for IT professionals working in the fields of custom programming, systems integration, IT consulting, project management and web development.

For easy reference, we've organized the articles chronologically, in the order you would encounter each topic as you progress through a typical project timeline. You'll also find relevant links in each article to access additional information and resources.

We hope you find this eBook a practical addition to your risk-management arsenal.

Sincerely,

Jim Cochran
President and Founder
TechInsurance
www.techinsurance.com

Table of Contents

For System Integrators / Custom Programmers 4

Why Clients Require You to Carry Insurance 4

Translating Customers Needs into Projects 7

Creating Project Agreements 9

Mastering the IT Project Timeline 12

No. 1 Rule for Working with Subcontractors: Put It in Writing 14

Formal Change-Control Process Helps Keep Complex Projects on Track 16

Quality Assurance Lowers Software and Systems Integration Project Risks 18

With Systems Integration or Programming Projects, an Informed Client Is a Happy Client 20

For IT Project Managers 23

Translating Customer Needs into Projects 23

Smart IT Project Managers Get It in Writing 25

Creating an IT Project Timeline You Can Stick To 27

Placing Temporary Personnel With a Client? You Need a Staffing Contract 29

Clear Documentation Equals Better Results From Your IT Project Subcontractors 31

Change-Control Process Reduces IT Project Surprises and Delays 33

Ongoing Quality Testing Cuts IT Project Management Risks 35

For Web Site Developers 37

Translating Customer Needs into Projects 37

Creating a Web Site Development Agreement 39

System Integrators / Custom Programmers

Why Clients Require You to Carry Insurance

Whether you're working directly with a client or through a staffing firm, if you're a systems integrator or custom programmer, you'll probably have at least one client who requires you to carry some level of insurance. Maybe you have a few employees, or maybe you're a one-person shop. Either way, you might wonder if all that coverage is really necessary.

You already know the bottom line: If your client says it's necessary, you've got to have the proper coverage in order to get the work. The good news is that in almost all cases, the insurance coverage your client requires can be both affordable and can reduce liability for your business.

Typically, clients want insurance for software developers, system integrators and programmers to include some or all of the following four types of coverage:

General liability insurance

General liability insurance covers damage to property or injury to people. Client companies often require every vendor – from plumbers to IT contractors – to show proof of general liability insurance. In some cases, the mandate comes from the client's risk managers, who want to reduce the company's risk of liability and financial loss due to lawsuits.

If you are a systems integrator, you know there is always the risk that you or an employee might accidentally damage hardware, or put a foot through a drop ceiling while pulling cable. If you are concerned about damage to your client's equipment while you are installing, configuring, or just moving it, you will want to make sure your general liability policy includes property coverage. This is actually coverage for your own business property but extends to your client's property "in your care, custody, or control." Liability insurance package with property coverage for systems integrators gives you peace of mind that if an accident happens, you're covered.

If you are a software developer, software engineer or programmer, even if you work at your own home or office, there's still a risk that client equipment in your possession could be damaged. General liability insurance that is packaged with coverage for your property and for software developers and engineers, as well as programmers, also provides confidence that you're covered if you accidentally drop the client's server or spill coffee onto a laptop.

Read more about how general liability insurance protects you and your business at http://www.techinsurance.com/GeneralLiabilityInsurance.aspx.

Professional liability insurance

Professional liability insurance is similar to malpractice insurance for software developers, programmers, and system integrators. It covers you for errors and omissions you make on the job. Clients require it because they know that people make mistakes.

Your client's greatest risk in hiring you is that your mistakes could spawn a lawsuit or financial loss. For example, if an error you make results in data loss, and your client spends hundreds of thousands of dollars to reconstruct those data files, your client wants to make sure that you can compensate the company.

Professional liability insurance for software engineers and programmers just makes sense. Without it, you're 100 percent liable for all legal defense costs if your client claims you've made errors or omissions. In many cases, a misunderstanding is all it takes to get sued. Once a client alleges negligence and communications break down, your legal expenses can begin to mount.

Read more about how professional liability insurance protects you and your business at www.techinsurance.com/ProfessionalLiabilityInsurance.aspx.

Workers' compensation insurance

Workers' compensation insurance is required in nearly every state if you have employees. If you are a one-person company, in most states you can opt out of workers' compensation coverage. But your client may require you to carry this coverage even if your state does not. The reason: In some states, if you're injured on the job, your client must automatically cover you with its own workers' compensation policy . Additionally, in some cases, your client's insurance carrier will bill the client to cover all subcontractors that don't provide their own certificate of coverage. Both situations mean higher premiums for your client.

If you work as a systems integrator, you're probably used to lifting heavy equipment and climbing ladders, and you know there's always potential for injury. If you're a programmer, software developer or software engineer considering insurance, keep in mind that you may be at risk for carpal tunnel syndrome. Workers' compensation insurance for systems integrators, as well as programmers and software developers and engineers, covers medical costs, plus disability and compensation in the event of such on-the-job injuries.

If you have employees, workers' compensation insurance makes sense. If you're a solo practitioner with your own health and disability insurance, it may be redundant – but you may need it to get the work.

Read more about how workers' compensation insurance can protect you and your employees at www.techinsurance.com/ce_workComp.aspx.

Fidelity bond coverage

Aptly described as employee dishonesty coverage, this type of insurance compensates your client if you or your employees steal money or property on the job. In particular, clients in the banking and financial services industries are likely to ask software engineers, software developers, system integrators and programmers to carry fidelity bond insurance because they're entrusting them with sensitive information, such as customer Social Security and account numbers.

Most self-employed IT professionals know that client information is safe with them. But if you have employees or subcontractors handling valuable property or customer information – no matter how much you trust them – anything can happen, and if it does, you could be held liable. A laptop could go

missing, or a programmer working on a financial services network could steal banking customers' account numbers and passwords to take money from their accounts. If that happens, fidelity bond insurance compensates your client for the missing money or property.

Read more about how fidelity bond insurance protects you and your company at www.techinsurance.com/ce_fidelityBond.aspx.

Translating Customer Needs into Projects

Behind almost every IT project is a business requirement – but how do you ensure that the end product truly meets that business need?

It's easy for system integrators, computer programmers or software programmers to sit in a meeting and listen to what their clients say they need a system to do. But often, what they ask for and what you think they mean are two different things. And when your solution misses the mark, there's no one to blame but you, leaving you wide open to an errors and omissions lawsuit.

With any project involving programming or system integration, E&O lawsuits are always a risk. There are many opportunities for professional liability when designing, programming and implementing these projects. For example, if there's a lapse in network reach, mission-critical applications, uptime, systems integration, scalability or network performance, there's an opportunity for your client to claim that you didn't do what they asked of you.

If that claim escalates to a lawsuit, you may be in for a lot of hassle and expense, especially if you don't have the right professional liability insurance for system integrators and programmers. And even if you're not sued, you want to get the job done right the first time to avoid costly re-work and change orders.

Good Project Management Is Good Risk Management

So how does a system integrator or computer/software programmer translate a customer's business need into a solution that solves the customer's problem? It all comes down to project management. Companies with poor project management are far more likely to have professional liability claims than those with formal project management processes in place. In other words, good project management equals good risk management.

According to project management expert Karl Wiegers, defining a project's vision and scope is a critical early step in project management. For each project, you should clearly define:

- **Business requirements.** These provide the foundation and reference for all detailed requirements development. System integrators and computer/software programmers can gather business requirements from the customer or development organization's senior management, an executive sponsor, a project visionary, product management, the marketing department, or others who have a clear sense of why the project is being undertaken and the value it will provide to the business and customers.
- **Vision of the solution.** Establish a long-term vision for the system that will be built to address the business objectives. This vision will provide the context for making decisions throughout the course of the product development lifecycle, and should not include detailed functional requirements or project planning information.
- **Scope and limitations.** Define the concept and range of the proposed solution, as well as what will not be included in the product. Clarifying the scope and limitations helps to establish realistic expectations of the many stakeholders. It also provides a reference frame against which proposed features and requirements changes can be evaluated.

- **Business context.** Summarize some of the business issues around the project, including profiles of major customer categories, assumptions that went into the project concept, and the management priorities for the project.

Following an established project initiation and management process can greatly reduce your risk. See the free downloads below for a Project Vision and Scope Template you can use with your own projects.

10 Requirements Traps to Avoid

Wiegers also points out that successful software projects are built on a foundation of well-understood requirements. However, many system integrators and software/computer programmers get caught in traps that prevent them from effectively collecting, documenting or managing their requirements. Several symptoms indicate that you might be getting caught in a "requirement trap":

- Confusion about what a requirement is
- Inadequate customer involvement
- Vague and ambiguous requirements
- Unprioritized requirements
- Building functionality no one uses
- Analysis paralysis
- Scope creep
- Inadequate requirements change process
- Insufficient change impact analysis
- Inadequate requirements version control

Speak Your Customer's Language

As you develop your vision and scope document, it's important to ensure that you and your client are speaking the same language. To reduce professional liability, system integrators, software programmers and computer programmers should keep in mind that they know the technology inside-out – but their customers usually don't. If your project documents are too technical, your client might be left to assume that they will meet its business need, when in fact you may be missing the mark.

When that happens, you may be several months into the project before the problem becomes clear, and that's when you'll see "scope creep." Suddenly, meeting the client's need is going to take longer and cost more than agreed. That's a recipe for disaster, because at this point, some customers stop paying and hire a lawyer.

By clearly defining a project's vision and scope, and paying close attention to project requirements, you can create a project proposal that will fulfill the business need, keep costs contained, and reduce the risk that you'll end up facing an E&O lawsuit down the line. Remember: for software and computer programmers as well as system integrators, professional liability and risk management go hand-in-hand with good project management.

Free IT Project Management Tools and Templates:

View and download free tools and templates at www.techinsurance.com/blog/project-management-documents/.

Creating Project Agreements - System Integrators and Computer Programmers

Before engaging in a formal business relationship, system integrators and custom computer/software programmers need to protect their business interests with appropriate legal contracts.

During the initial stages of project development, IT professionals often keep informal records by hanging on to e-mails sent back and forth with the customer. While e-mail does provide a written record of correspondence between you and your client, it's no substitute for a signed project agreement that clearly states the "who, what, when, where, how, why and how much" behind a project.

As part of a good project risk management strategy, it's especially important to have a consulting contract or project agreement in place before any money changes hands.

A Good Project Agreement Is Good Project Risk Management

Whether your business is focused on systems integration or custom computer/software programming, having a signed project agreement before you begin an engagement will reduce or eliminate potential complications that could arise during a project. Most consulting contracts clearly spell out:

- Each party's duties
- Compensation
- Terms
- Expenses
- Written reports
- Confidentiality
- Termination rules

Solid project agreements or contracts are a critical first step in project management, as well as an important element in a project risk management plan to protect your business. Defining all project elements up-front and in writing could help prevent legal trouble later, keeping you from spending thousands of dollars in legal costs and countless hours in a courtroom.

A good project contract also helps to ensure that you receive the payment that you and your client have discussed. Too often, a project is well under way when a client suddenly decides not to pay, tries to lower the price of your work, or changes the terms. If any of these things happen and your client relationship is not governed by a contract, you could lose a lot of time and money, and your good relationship with your client could quickly turn sour.

Consulting Contracts for System Integrators

For systems integrators, a typical consulting services agreement identifies the work you are to perform and specifically defines the terms of your working agreement with the client. It sets the limits of your responsibilities to the client, as well as the terms for price and payment.

The agreement also protects your intellectual property rights and establishes confidentiality standards to protect both you and your client. It limits any losses for the work you perform and prohibits your

client from hiring away your key employees. This type of project agreement also limits your liabilities in the event the client should suffer losses due to your errors or omissions.

Other, separate contracts that systems integrators may need include:

- Employment contracts
- Network installation and maintenance agreements
- Staffing and placement agreements
- Subcontractor or independent contractor agreements

The latter are particularly important because they govern the relationship between you and any subcontractors you may bring in on a project, clearly outlining who owns licenses and intellectual property. This type of agreement can also prohibit your subcontractor from taking your client's business away from you, or from being hired away by the client.

Consulting Contracts for Computer Programmers

For computer/software programmers, a typical custom software development agreement is designed to govern the relationship between you and your client.

A custom software development agreement protects your intellectual property rights whenever you are hired to develop software and applications for a client. It sets the terms of use, price and payment for your work, and gives you the right to collect payment for work performed to date, in the event the client should terminate the agreement.

This type of project agreement generally limits warranties and guarantees related to your work, and caps your total liability to the client. Such contracts can also be used to prevent your client from hiring your employees away from your firm.

In addition to the custom software development agreement, computer/software programmers might need additional project contracts in certain situations, such as:

- Custom software maintenance and support agreement
- Employment contract
- Software customization agreement
- Subcontractor and independent contractor agreement

Time to Find a Lawyer?

If you're in the early stages of project development and are worried that that you'll need to hire a pricey lawyer to write up all the necessary legal documents, think again. Knowing that many small firms and sole proprietorships don't have the financial resources to have high-quality legal agreements drafted for each engagement, TechInsurance launched ContractEdge, a company that specializes in affordable template project agreements just for IT professionals and other small business owners.

ContractEdge offers complete sets of project contract templates and samples for both system integrators and custom computer/software programmers, as well as for other IT solutions providers and other types of small businesses. Each agreement template can be customized and used again and again.

ContractEdge software guides you through a list of questions to automatically populate each template project contract, creating a solid first contract draft that will be valid in any state. If you think a contract needs further customization, ContractEdge recommends bringing in an attorney to review the initial draft – still a much more affordable alternative to having a lawyer write up your project contract from scratch.

Mastering the IT Project Timeline

The project timeline is a cornerstone of project management. But as most system integrators and computer/software programmers know, developing and sticking to a timeline can be easier said than done. From technical issues to personnel problems, unexpected complications can arise at any time, throwing an IT project team off-schedule.

Even so, a project timeline is critical to time management planning and is a necessary project management tool for keeping your client informed and your project on track and on budget. Whether your consulting project involves system integration or computer/software programming, a detailed timeline enables an IT project manager to:

- Give your client immediate, accurate, on-demand status reports on what's done, due or behind schedule;
- Always know where you are in each project, and whether you're ahead of the game or losing money;
- Identify potential delays and resolve glitches before they set your project back;
- Alert customers earlier to potential delays or scope changes, before you find out you've gone over your estimate;
- Bill your client as project milestones are achieved; and
- Keep track of how long all aspects of the project actually take, so that you can better estimate future projects and develop future timelines.

Developing timelines

At first, you may find developing accurate timelines a difficult challenge. After all, who hasn't started a consulting project with clear expectations of how long it will take, only to encounter hidden factors that push the project behind schedule?

Even if your timeline starts out as a rough estimate, it's still a useful tool for time management planning and keeping your client informed. It also demonstrates that you are organized and willing to commit in writing to achieving specific project milestones.

First, talk to the client about major project milestones you both expect to accomplish during the course of the project. Use those as the building blocks of your project timeline. Then, consider the sequential steps that must take place to get from milestone A to milestone B, C, D and beyond.

When estimating time to accomplish each step, think about who will need to be involved and the amount of time each person can commit to the project. Be sure to clearly define any project components for which the client is responsible, and set deadlines for accomplishing those tasks. Involve the stakeholders in setting these dates, and ask for a confidence level that these commitments can be met.

The more you use timelines to track your projects, the easier it will be to create future project timelines. As you continually track your progress against your timelines, you are developing historical project management data you can later use to estimate actual required time when planning future system integration or custom programming projects.

Sticking to Timelines

According to project management process expert Karl Wiegers, it may make sense for IT project managers to set internal target delivery dates that are more optimistic than the delivery dates you commit to in the timeline you share with your client. This project management method helps compensate for less-than-perfect estimates and unexpected events.

Another project management technique is to pad your timeline with a contingency buffer to protect against erroneous assumptions, estimation errors, potential risks and scope creep, Wiegers suggests. See the free downloads below for more information about these and other project management best practices.

Even if your committed delivery dates are farther out than your client would like, a realistic project timeline means you're more likely to fulfill your commitments and shows your clients they can count on you.

Stay flexible

It's important to remember that even when you have the best of intentions, sometimes a timeline might need to change. According to Wiegers, this can happen when:

- Requirements turn out to be technically impossible or especially challenging;
- Customers change the requirements mid-project; or
- Requirements your clients say they need turn out to be just the tip of the iceberg.

In these cases, project stakeholders must alter their expectations and commitments. As the IT project manager, you will need to adapt your timeline and inform all participants promptly. See the free downloads below for helpful project management tools you can use to evaluate and address potential IT project scope changes.

By creating and carefully monitoring your project timeline as part of your overall IT project management strategy, you can keep your programming or system integration project on-time and on-budget – or at least keep customers informed when there's a reason you can't. And that makes for a more satisfied customer who values and recommends your services.

Free Downloads and Other Resources:

- Project Initiation Handbook at www.techinsurance.com/blog/project-management-documents/Project%20Initiation%20Handbook.pdf
- Project Status Report Template at www.techinsurance.com/blog/project-management-documents/Project%20Status%20Report%20Template.pdf
- Change Control Process at www.techinsurance.com/blog/project-management-documents/Change%20Control%20Process.pdf
- Impact Analysis Checklist for Requirements Changes at www.techinsurance.com/blog/project-management-documents/Impact%20Analysis%20Checklist%20for%20Requirements%20Changes.pdf

For additional articles, templates and tools for project management by Karl Wiegers, visit

www.techinsurance.com/blog/project-management-documents/.

No. 1 Rule for Working with Subcontractors: Put It in Writing

Many growing IT companies find that working with subcontractors a great way to keep clients happy and overhead in check. Without having to bring on a full-time employee, IT companies can hire independent contractors on a per-project basis, extending their company's scope and geographical reach, while giving clients part- or full-time support for a defined period of time.

But working with subcontractors isn't without its hazards. Remember the old saying, "If you want the job done right, do it yourself"? The good news is, you can avoid many pitfalls by putting your expectations in writing, with both a detailed subcontract management plan and a legally binding 1099 independent contractor agreement signed by both you and your contractor.

Develop a Comprehensive Subcontract Management Plan

According to project management expert Karl Wiegers, a comprehensive plan for working with your freelance subcontractors should include as much information as possible about the project your subcontractor will be working on, from who will be involved to how conflicts and change requests will be resolved. For Karl Wiegers' Subcontract Management Plan Template that you can use with your own projects, see the free downloads at the end of this article.

Wiegers suggests that you start with a brief overview of the project you're outsourcing, including any issues or concerns that may require particular attention by your subcontractor. Next, clearly outline the human resources aspects of the project, including who will be involved, what their roles will be, who will serve as the principal points of contact, who will be the major decision-makers, and what processes those individuals will use in making decisions related to the project.

It's also important to clarify in writing how you expect communications to be handled with the independent contractor. For example:

- Will you work primarily by phone, e-mail, videoconference, or face-to-face?
- How often, and in what level of detail, do you want to be updated on the project?
- Will you have scheduled technical peer reviews or management status meetings?
- If these communications will take place long-distance, how much will they cost?

Your subcontract management plan could also include a detailed strategy for project tracking and oversight. For example, you may want to consider:

- How often do you want to receive written status reports from the subcontractor?
- What should these reports contain?
- How often should your subcontractor provide updates to your client company, and in what form?
- What are the metrics by which the project will be measured (time, size, cost, defects, status)?
- Who will be responsible for managing risks, and how will risks be managed?
- How will commitments and issues be tracked and resolved?
- How often and when will periodic senior management reviews take place?

Another important consideration is to have a strategy in place should the project requirements change. For example, you may need to document a plan for submission and evaluation of requested changes during the project, as well as a process and team to make decisions about them.

Finally, you may wish to plan ahead for the final stages of the project by defining how a project will be considered completed, and establishing a transition plan for supporting the delivered product over the long-term. This part of the plan might also include a section on requirements tracing, so that you can ensure that every functional requirement is actually addressed by the final solution.

Subcontractor Contracts

It's also critical to have a signed subcontractor agreement in place with any independent contractor you bring onto a project. Such contracts prevent the independent contractor from taking a job with your client, protect your company's intellectual property, clearly define your subcontractor's responsibilities, and include other provisions that can help to ensure a healthy ongoing relationship with your subcontractor.

To avoid costly legal fees, many smaller IT companies purchase standard 1099 independent contractor agreement form templates that can be used unlimited times for a single price. Then, they may pay for a lawyer or law student to review the completed contract, just to be sure all bases are covered.

The more information you can provide in writing up-front, the less confusion there will be as your subcontractor works to implement the project. Creating a clear subcontract management plan and agreement ultimately helps to ensure a smoother implementation, a stronger independent contractor relationship, and a happier client.

Free downloads and other resources:
Subcontract Management Plan Template at www.techinsurance.com/blog/project-management-documents/Subcontract%20Management%20Plan%20Template.pdf

For additional articles and templates on project management by Karl Wiegers, visit
www.techinsurance.com/blog/project-management-documents/.

Formal Change-Control Process Helps Keep Complex Projects on Track

With almost any complex information technology project, there are bound to be scope changes along the way. Often, the difference between a successful project and one that gets bogged down by "project scope creep" is the way those scope changes are managed.

As part of the project analysis and planning phase before work begins, it's important for system integrators and custom programmers to establish a process for requesting and managing project changes. This change-control process would apply to any work products related to the project, including existing software, requirements specifications for new projects, project procedures and processes, or even user or technical documentation.

Addressing the scope-creep process has many benefits. For example, a documented scope-change control plan helps to:

- Facilitate communication among stakeholders about requested changes
- Provide a common process for resolving requested changes
- Give project stakeholders a mechanism for reporting any problems they encounter
- Reduce team members' uncertainty about what becomes of requested changes

For a detailed project change-control process, as well as a helpful checklist for impact analysis of a requested project change, see the free downloads at the end of this article.

The Change-Control Board

According to project management expert Karl Wiegers, one of the first steps in the change-management process is to create a "change-control board" for each project, with the power to approve or reject proposed changes. The board should have a chairperson who has final decision-making authority and who can appoint:

- One person as an "evaluator" to assess the impact of a proposed change
- Another person as a "modifier" to make changes to the work product in response to an approved change request
- Another person as a "verifier" to ensure that the change was made correctly

Any stakeholder in the project can submit issues to the project's change-control board. Such requests might address problems with existing or beta software, suggested enhancements for current production systems, proposed requirements changes for software under development, or new development projects.

The Process: How does the change-management process work?

According to Wiegers, the change-control board chairperson assigns an evaluator to assess each issue's feasibility, quality impact, pertinence, time and resources required for implementation, risk impact, and so on.

Based on that information, the board solicits input from others affected by the change and decides whether the requested change or fix should be made now, in the future, or not at all.

If the board chooses to make the change, the chairperson assigns a modifier and schedules the work. The project manager then negotiates any necessary changes in project commitments with the affected stakeholders. The modifier makes the necessary changes in the affected work products and informs everyone involved so that they can update the related user documentation, help screens and tests.

The project manager can then update project plans, task lists and schedules to reflect the impact of the change on the remaining project work. Once the change has been made, it's the verifier's job to ensure that the work is complete and accomplishes the goals approved by the board.

Throughout the process, the board members maintain a database of information about each change request's status, time estimates and actual time spent, and other important factors and notations.

Fewer Surprises, Fewer Delays

Having a clearly defined process for handling "scope creep" requests – and a designated team to make those decisions – helps to eliminate surprises by fully analyzing the impact of a change on a product's functionality, human resources and the budget. Reducing surprises means reducing risk, and often also improves the quality of the end product.

A well-documented process also assures all team members that every change request is taken seriously; evaluated fairly; and if chosen for implementation, seen through to completion.

By streamlining change requests and tracking their progress from start to finish, an effective change management process smoothes project implementation, reduces delays, and ultimately makes for more satisfied team members and clients.

Free downloads and other resources:

- Change Control Process at www.techinsurance.com/blog/project-management-documents/Change%20Control%20Process.pdf
- Impact Analysis Checklist for Requirements Changes at www.techinsurance.com/blog/project-management-documents/Impact%20Analysis%20Checklist%20for%20Requirements%20Changes.pdf

For additional articles and templates on project management by Karl Wiegers go to

www.techinsurance.com/blog/project-management-documents/.

Quality Assurance Lowers Software and Systems Integration Project Risks

Like any professional service, engineering and integrating software systems carries some risk. A minor miscalculation in a line of code can bring down an entire system, causing your client to lose time and money. That's why quality control should be at the forefront of your mind throughout any software or system project, and a formal quality assurance program should be in place to prevent or catch any errors or issues before they can cause problems.

According to Bender RBT Inc., a firm specializing in requirements-based testing, there are three key reasons for a strong focus on improving the quality of your software solution:

- Reducing the costs to detect and remediate defects
- Reducing the time it takes to deliver the software
- Improving the probability of successfully installing the right solution

By focusing on quality assurance and testing from the start, you can detect any problems early and minimize the cost of fixing them, while reducing the risk of system and software failure for your client. At the same time, a thorough QA methodology reduces the risk of being sued by your client for delivering a product that doesn't do what it's supposed to do – or worse, that damages other system components.

What Is Quality Assurance?

Conducting quality assurance involves using systematic processes to examine the quality, efficiency or effectiveness of a system or software. These processes are designed to identify opportunities for improvement and develop ways to implement those improvements, as well as to continually evaluate the project and the improvements made to it.

In the software world, QA means monitoring software development processes to ensure quality, and often involves ensuring compliance to standards such as ISO 9000 or CMMI (Capability Maturity Model Integration). Both of these approaches give developers and systems integrators a framework to guide process improvement for virtually any type of project.

Regardless of the method used, quality assurance is an ongoing process – starting before a project begins and continuing even after it's complete. For a software designer, quality assurance might encompass careful advance planning and design before any code is written, a comprehensive process for making and documenting changes, and a detailed QA testing methodology to flush out any defects in the product so they can be corrected before release.

According to Bender, it's about shifting from a focus on defect detection to a focus on defect prevention. Bender notes that the requirements-based testing process addresses two major issues: first, validating that the requirements are correct, complete, unambiguous and logically consistent; and second, designing a necessary and sufficient set of test cases from those requirements to ensure that the design and code fully meet those requirements.1

The overall requirements-based testing strategy, Bender notes, is to integrate testing throughout the development lifecycle and focus on the quality of the requirements specification. This leads to early

defect detection, which has been shown to be much less expensive than finding defects during integration testing or later.1

Done well, an ongoing quality assurance process with thorough QA testing involves the entire project team and calls upon each person to take responsibility for the quality of the end product. Accurate record-keeping and a focus on continuous improvement are critical, as is the need to continually monitor the QA process itself to ensure that it's effective.

How Does QA Help Control Risk?

A quality assurance methodology is a valuable part of an overall risk management strategy designed to protect you and your business.

Careful project management and QA documentation typically result in a better-quality product that's less vulnerable to scope creep and delays, resulting in a more satisfied client and better management of risk for your business. But more importantly, a solid QA and testing methodology helps you reduce your exposure to a lawsuit from your client.

Without ongoing QA, your project could fail to meet identified objectives, creating delays that cost your client both time and money. At the same time, your software or system's failure or inability to integrate could have a negative impact on other system components, causing downtime or financial loss for your client. Any of these scenarios open your company to liability if a client should decide to sue you for damages.

A controlled development and quality assurance testing strategy helps you create a better-quality product that requires less maintenance and repair over time, keeping clients happy and helping you avoid potential lawsuits. At the same time, a solid QA strategy, implemented early on in the project, reduces costs for your client because it's less expensive to fix a problem the earlier it's identified.

Once the work is complete, you'll also be able to draw upon your QA testing documentation to show your client evidence that any defects have been identified and corrected, and that the product accomplishes the client's intended objectives. Such documentation reflects well on you as a systems integrator or software programmer who can manage your work and deliver a product that meets the client's needs. Plus, it could serve you well in court if you should ever have to defend yourself against a professional liability lawsuit.

With Systems Integration or Programming Projects, an Informed Client Is a Happy Client

When it's your job as the systems integrator or custom programmer to make sure that a project stays on track, your reputation – and future business prospects – are on the line. No client wants to hire a consultant, only to be surprised to learn months later that the project is over budget, beset by technical problems or plagued by unexpected delays.

Because some delays and glitches are simply unavoidable, the secret to ensuring a happy client lies in managing – or even exceeding – the client's expectations. With ongoing evaluation, documentation and planning, you can keep your client informed about the project and any factors that may affect its success, reducing the possibility of unpleasant surprises.

While documentation may seem like a distraction from the actual work that needs to be done, it doesn't have to be difficult or time-consuming. Start with a quality set of documents you can customize for any project, and you'll be off and running. According to project management process expert Karl Wiegers, one of the best places to begin is with a project management plan.

The Project Management Plan

By providing your client with a detailed project management plan, you can clearly set the scope of the project and define its motivation, objectives and goals, success criteria, and major deliverables. To help manage customer expectations, the plan should also include any constraints that could potentially have an impact on the project's success or the client's outcomes.

By defining project assumptions from the start, you can detail any external events or externally supplied items on which the project depends. This way, should factors outside the project have a negative impact on the work, your client will be prepared for it.

Your project management plan can also include a section defining how the project will be organized, including interfaces with external entities and within the organization itself. Clearly defining all stakeholders' roles and responsibilities can go a long way toward preventing communication breakdowns later.

You can also use the project management plan to define the necessary personnel and other resource requirements to get the job done, as well as any training needed to ensure the necessary skills are in place for a successful project. The plan should also include details of commitments to internal and external stakeholders, as well as a work plan that includes major deliverables and scheduling.

The plan can also let your client know exactly when and how you'll be monitoring and reporting on project progress, as well as a summary of your risk management, technical process and issue-resolution strategies.

Managing your clients' expectations is all about keeping them informed. The more information you can give your client before the project begins, the better. For helpful tips and a tool to develop your own project management plan, see the Wiegers' Project Management Plan Template at

www.techinsurance.com/blog/project-management-documents/Project%20Management%20Plan%20Template.pdf.

The Risk Management Plan

To give your client confidence that you're doing all you can to avoid project pitfalls, it's a good idea to create a detailed risk management strategy supported by a written plan. A good place to start, says Wiegers, is with a workshop that calls upon all team members to help identify and prioritize risks that could bring the project down or otherwise have a negative impact on the client's business.

The key deliverable from the workshop is a prioritized risk assessment that identifies the "Top 10 Risks" to the project: those with the highest estimated risk to customer outcomes. Once the "Top 10" are set, the next step is to create a risk management plan that includes mitigation, avoidance or prevention strategies to address these critical risk factors, as well as identifies individuals responsible for bringing each risk to resolution.

Progress toward risk resolution should be carefully monitored, and the level of risk related to each item should be reassessed as each item is addressed and new risk items are identified. Each risk item's status should also be revisited, and the plan updated, during each new project phase.

The risk management documentation can also include each stakeholder's risk management roles and responsibilities, as well as a clear definition of where and how risk management information will be tracked and documented.

By proactively identifying and addressing potential project risks on an ongoing basis, you can keep your clients apprised of what might go wrong, while also letting them know you're doing everything in your power to prevent any problems from arising in the first place.

For tips and templates you can put to work immediately on your own project, see Wiegers' Risk Management Plan Template at www.techinsurance.com/blog/project-management-documents/Project%20Management%20Plan%20Template.pdf.

Project Status Reporting

As your project progresses, be sure to give your client regular updates. Start by asking your clients how often they would like to receive a status report, and define a schedule of reporting periods that meets their needs.

Then, create a brief project status report that begins with a management summary of key status indicators, critical issues and risks, trends and other information. Share the good news: milestones reached to date, risks controlled and issues resolved. And, include your assessment of the not-so-good news as well: deviations from plan, defects identified, and any new issues or risks that popped up during the reporting period.

Your project status report is also an opportunity to let your client know how you're tracking against your time and cost estimates. You may wish to include details about consumption of critical computer resources, the amount of labor hours expended to-date and since the previous report, and planned and

actual costs spent to-date and since the prior reporting period. The metrics by which progress can be measured will vary depending on project parameters.

For a convenient reporting template to get you started, see Wiegers' Project Status Report Template at www.techinsurance.com/blog/project-management-documents/Project%20Status%20Report%20Template.pdf.

The idea is to manage your customer's expectations by keeping surprises to a minimum, and to give him or her the opportunity to ask questions early, before any potential red flags become bigger problems. Because every client appreciates being fully informed, sharing both the good news and the bad goes a long way toward improving customer satisfaction.

Free Downloads and Other Resources:

- Project Management Plan Template at www.techinsurance.com/blog/project-management-documents/Project%20Management%20Plan%20Template.pdf
- Project Status Report Template at www.techinsurance.com/blog/project-management-documents/Project%20Status%20Report%20Template.pdf
- Risk Management Plan Template at www.techinsurance.com/blog/project-management-documents/Risk%20Management%20Plan%20Template.pdf

For additional articles, templates and tools for project management by Karl Wiegers, visit www.processimpact.com or www.projectinitiation.com.

IT Project Managers

Translating Customer Needs into Projects

Every IT project is driven by a business requirement. For an IT project manager, the hard part is translating that business requirement into an end product that fully meets that business need.

It's easy for a project manager to sit in a meeting and listen to what the clients say they need their new system to achieve. But what happens when what the client asks for and what you think they mean are two different things? When your solution misses the mark, you're the one your client will blame, leaving you wide open to a lawsuit.

In fact, lawsuits are always a project management risk because there are so many opportunities for professional liability when designing, programming and implementing IT projects. If the solution you or your team implements results in downtime or a failure of network reach, mission-critical applications, integration, scalability or network performance, your client could claim that you didn't do what was asked of you.

If that claim results in a lawsuit, expect a lot of hassle and expense – especially if you don't have the right IT project manager insurance to protect your business. Beyond avoiding lawsuits, it just makes good business sense to get the job done right the first time to avoid expensive re-work and change orders.

Good Project Management Equals Good Risk Management

So how does an IT project manager translate a customer's business needs into a system that solves the customer's business problem? The key is good project management. Companies with lax project management are far more likely to have professional liability claims than those with formal project management processes in place. Well-thought-out project management processes significantly reduce your IT project management risk.

According to project management expert Karl Wiegers, one of the critical first steps in IT project management is defining a project's vision and scope. For each project, you should clearly outline in writing:

- **Business requirements**. All detailed requirements should be based on clear business needs. IT project managers can gather business requirements from the client's senior managers, an executive sponsor, a project visionary, product management, marketing department, or anyone else who has a clear understanding of the need for the project and the value it will provide to the client company and its customers.
- **Vision of the solution.** A long-term vision for the new system will provide context for decision-making throughout product development. The vision statement should not include detailed functional requirements or project planning information.
- **Scope and limitations.** It's critical to define the proposed solution's concept and range, along with what will not be included in the product. Clarifying the project's scope and limitations

establishes realistic expectations for the various stakeholders, as well as a reference frame against which the team can evaluate proposed features and requirements changes.
- **Business context**. Any business issues related to the project need to be clarified and summarized. These might include profiles of major customer categories, assumptions that went into the project concept, and the management priorities for the project.

To reduce your own IT project management risk, it may be wise to follow an established project initiation and management process. For a Project Vision and Scope Template you can use with your own projects, see the free downloads at the end of this article.

10 Requirement Traps You Should Avoid

According to Wiegers, successful software projects are built on a foundation of well-understood requirements. Yet too often, tech project managers get caught in traps that prevent them from effectively collecting, documenting or managing project requirements. Several symptoms indicate that you might be getting caught in a "requirement trap":

- Confusion about what a requirement is
- Lack of customer involvement
- Vague or ambiguous requirements
- Unprioritized requirements
- Functionality that no one uses
- Analysis paralysis
- Scope creep
- Inadequate requirements change process
- Insufficient change impact analysis
- Inadequate requirements version control

Speak Your Customer's Language

As you develop your vision and scope document, be sure that you and your client are speaking the same language. To reduce tech project management risk, keep in mind that although you know the technology inside-out, your client probably doesn't. If your project documents are too technical, your client might be left to assume that your plan will meet its business need, when in fact your assumptions may be off-base.

If that happens, your team could be several months into the project before the misunderstanding becomes clear. That's when IT project managers commonly see "scope creep." Suddenly, meeting the client's need is going to take more time and money than planned. At this point, you're facing a huge project management risk, as some customers will stop paying and hire an attorney.

Taking a careful and thorough approach during the early stages of project management greatly reduces your project management risk. By clearly documenting a project's vision and scope in writing, and fully clarifying project requirements, you can create a proposal that will meet the business need, contain costs, and reduce the risk that you'll end up battling a lawsuit down the line.

Smart IT Project Managers Get It in Writing

Before establishing a formal business relationship, wise IT project managers protect their business interests with appropriate legal contracts.

During the initial stages of project development, IT professionals often rely on informal records based on e-mails sent back and forth with the client. While e-mail does provide a record of communication between you and your customer, legally, it can't stand in for a signed project agreement that clearly outlines the scope and expectations of a project.

As part of a good project risk management strategy, it's especially important to have a consulting contract or project agreement in place before any money changes hands.

A Project Agreement Is the Foundation of Project Risk Management

Having a signed IT project management agreement before you begin an engagement can reduce or eliminate complications that could spring up during your project.

Solid project agreements or contracts are a critical first step in project management, as well as a vital part of your project risk management plan to protect your business. Defining all project elements early and in writing may help prevent legal trouble down the line, saving you thousands of dollars in legal costs and countless hours in a courtroom.

A sound project contract also helps to ensure that you receive the compensation that you and your client have agreed upon. Too often, a project is well under way when a client suddenly decides not to pay, tries to lower the price of the job, or changes project terms. If any of these things happen and your interactions with your client are not governed by a contract, you could lose a lot of time and money, and your good relationship with your client could quickly go south.

Consulting Contracts for IT Project Managers

In general, consulting contracts spell out each party's responsibilities, as well as:

- Compensation
- Expenses
- Terms
- Confidentiality
- Project reporting
- Termination rules

For tech project managers, a consulting services agreement typically spells out the work you are to do and defines the terms of your working arrangement with the client. It lays out the limits of your responsibilities to the client, as well as the terms for your pricing and payment.

A consulting agreement also protects your intellectual property rights and establishes confidentiality standards that protect both you and your client. It limits any losses for the work you perform and

prevents your client from hiring away your key employees. This type of project agreement also limits your liabilities should your client suffer any losses as a result of errors or omissions on your part.

In addition to the main consulting agreement, depending on the job, project managers may need other, additional contracts. These agreements might include employment, network installation and maintenance, staffing and placement, or subcontractor and independent contractor agreements.

Subcontractor or independent contractor agreements are particularly important because they govern the relationship between you and any subcontractors you may hire to work on a project. Such contracts clearly outline who owns licenses and intellectual property, and prohibit your subcontractor from stealing your client's business or from being hired away from you by the client.

Is it Time to Hire an Attorney?

If you're in the early stages of project development, and think that you'll have to spend a lot of money on a lawyer to create all the contracts you'll need, don't worry.

Knowing that many small IT firms and sole proprietorships don't have the financial resources to have a legal professional draft agreements for every engagement, TechInsurance launched a company that specializes in affordable template project agreements just for IT project managers and other tech professionals and small-business owners.

ContractEdge offers complete sets of project contract templates and samples for tech project managers online at www.contractedge.com/consulting.html. ContractEdge software guides you through a list of questions to automatically populate each template project contract, creating a solid first contract draft that will be valid in any state. Each agreement template can be customized and used again and again.

If you think a contract might need further customization, you can always hire an attorney to review the initial draft, at a much lower price than if the lawyer had drawn up the contract from scratch.

Creating an IT Project Timeline You Can Stick To

Developing a project timeline is a cornerstone of any project management strategy. But as many IT project managers have learned, developing and adhering to a timeline isn't easy. From technical glitches to human resource problems, unexpected complications can pop up at any time, quickly throwing an IT project off-track.

Regardless, a project timeline is an important component of time management planning and a useful project management tool for keeping your client informed and your project on target. A project timeline allows an IT project manager to:

- Identify potential problems before they delay your project;
- Give customers earlier notice of potential delays or scope changes – before you go over your estimate;
- Provide immediate, on-demand status reports regarding which aspects of the project are complete, due or running behind;
- Always know where you stand in regard to each project, and whether you're coming out ahead or behind financially;
- Bill your client as project milestones are attained; and
- Track the actual time spent on all aspects of the project, so you can better develop future estimates and timelines.

Developing a timeline

At first, developing accurate timelines may be tough. After all, what IT project manager hasn't committed to a specific timeframe for a consulting project, only to encounter obstacles that set the project back?

Even if it feels like you're guessing at how the project will go, a timeline is still a useful tool for time management planning and keeping your client informed. Creating one demonstrates that you are committed to achieving specific project milestones and to tracking progress toward them.

Where to start? First, talk to your client about the major project milestones that need to be achieved over the course of the project. Those milestones can become the building blocks of your project timeline. Fill in the space between them with the sequential steps that must be performed to move from one milestone to the next.

When estimating the time required to accomplish each task, consider which team members must be involved, as well as the amount of time each individual can commit to the project. If your client is to be responsible for any aspect of the project, clearly define those tasks and set deadlines for accomplishing them. Involve the responsible team members in defining those deadlines, and ask for their commitment.

The more you track your progress against timelines, the easier it will be to develop them for future projects. Each timeline represents historical project management data you can later use to estimate the actual time needed for similar IT projects in the future.

Be realistic

According to project management process expert Karl Wiegers, some IT project managers prefer to set internal target deadlines that are more optimistic than the dates you commit to in the timeline you give to your client. This project management method is a good way to offset any unexpected delays that may arise.

Another project management technique is to build in a little extra time to deal with any possible wrong assumptions, estimation mistakes, risks and scope creep, Wiegers says. Check out the free downloads at the end of this article for more information about these and other project management best practices.

Even if the delivery dates you commit to are farther in the future than your client would prefer, keeping your project timeline realistic helps you fulfill your commitments and shows your clients they can trust you to be honest about what it will take to get the job done.

Adapt when necessary

Sometimes, due to circumstances beyond your control, a timeline must change. According to Wiegers, it often happens when the requirements for an IT project turn out to be technically impossible or exceedingly difficult, when customers change their minds in the middle of a project, or when the initial project requirements turn out to be just a small part of a larger issue that must be resolved.

In cases such as these, all project stakeholders must adjust their expectations and commitments. As the IT project manager, that means adjusting your timeline, and being sure to advise all participants of the changes immediately. For helpful project management tools to evaluate and address potential IT project scope changes, see the free downloads below.

By carefully drafting and tracking progress against a project timeline as part of your overall IT project management strategy, you'll be more likely to keep your IT project on-time and on-budget. Your customers will respect the fact that you can keep them informed, even when a project falls behind schedule. And that means they'll be more likely to value the services you provide and recommend you to their peers.

Free Downloads and Other Resources

- Project Initiation Handbook at www.techinsurance.com/blog/project-management-documents/Project%20Initiation%20Handbook.pdf
- Project Status Report Template at www.techinsurance.com/blog/project-management-documents/Project%20Status%20Report%20Template.pdf
- Change Control Process at www.techinsurance.com/blog/project-management-documents/Change%20Control%20Process.pdf
- Impact Analysis Checklist for Requirements Changes at www.techinsurance.com/blog/project-management-documents/Impact%20Analysis%20Checklist%20for%20Requirements%20Changes.pdf

For additional articles, templates and tools for project management by Karl Wiegers, visit

www.techinsurance.com/blog/project-management-documents/.

Placing Temporary Personnel with a Client? You Need a Staffing Contract

Placing personnel at a client company to perform IT services can be a great solution for everyone involved. Your people get work, you get income, and your client gets the service it needs without the expense of hiring a full-time employee. But before your contractors report for their first day on the job, be sure to protect both yourself and your client with a signed staffing and placement contract.

This type of independent contractor employment agreement governs the relationship between your IT consulting services firm or staffing agency and your client. To reduce your company's risk, it is a must to use this type of professional contract for temporary staffing services whenever your company provides a client with personnel to perform technology-related services on an independent contractor basis.

An IT staffing contract protects you against the various liabilities associated with placing temporary independent contractors on a client's job and job site. The idea is to clearly establish the rights and responsibilities of each party over the term of the staffing agreement, reducing the possibility of any misunderstandings that could arise from a lack of communication.

Who, What, When, Where, Why, and How

A key function of an IT staffing contract is to clearly establish the relationship of your personnel as independent contractors with the client.

A staffing contract for technical services typically prevents the client from soliciting or hiring away your employees, and limits the amount of a time that a client can seek remedies for alleged deficiencies in your work. It can also limit the dollar amount of liability that your IT company would have to the client if anything goes wrong.

Other important elements of the client relationship are also usually spelled out in a staffing contract, including the agreement's term, a procedure for either party to terminate the agreement, and who owns intellectual property.

These types of IT agreements typically include a detailed statement of work, which clearly defines the scope of the services you and your temporary staffers will perform on an ongoing basis. It might include key tasks and milestones, as well as who will pay for expenses incurred during the engagement. The statement of work also identifies the locations where the services will be performed, as well as the client representatives for whom your personnel will perform their work.

And of course, a technical staffing contract generally includes price and payment terms to help ensure that your company gets paid as agreed upon. This is especially important when you've got employees or subcontractors working for the client while on your payroll.

Get the "Legalese" Right

If it sounds like your staffing and placement contract needs to contain a lot of legal jargon, don't worry. You could hire your own lawyer to draw up a staffing agreement from scratch, but you can save money by using an existing form or template contract as a starting point.

A template staffing contract simplifies the process, guiding you through development of your statement of work and other contract components. This comprehensive, question-and-answer approach helps to ensure that you've covered all your bases when it comes to placing your personnel at a client site. Many staffing contract templates provide examples and sample contract wording, eliminating some of the guesswork for you. To ensure you're protected, you can always have a lawyer give the final "OK" to your completed template or form contract.

If the personnel you place are subcontractors or independent contractors, you'll probably need separate agreements to cover your relationships with them as well. And, depending on which other services you provide, you may also need separate IT contracts addressing other project aspects, such as:

- Consulting services
- Employment
- Network installation and maintenance

Many IT consulting firms and IT staffing agencies choose to buy a contract template package that includes forms for these and other commonly required legal documents. Such packages allow unlimited, on-demand use of the contracts at an affordable cost.

Clear Expectations Mean Happy Customers

A dependable temporary staffing contract, signed by both parties, protects you against financial and material losses. At the same time, your contract will establish clear expectations at the outset of your staffing services engagement, reducing the possibility of surprises and increasing the probability of a satisfied customer.

Clear Documentation Equals Better Results from Your IT Project Subcontractors

Many IT project managers find that using subcontractors is an excellent alternative to hiring full-time staffers. IT project managers may choose to hire independent contractors to assist with one project, or bring them on-board on a long-term basis. Either way, using subcontractors gives clients the support they need while extending your company's presence – without your company having to pay for employee benefits and other perks.

However, working with subcontractors isn't risk-free. That's why the No. 1 rule in this situation is: "Document, document, document." Before you formally begin a subcontractor engagement, be sure to thwart misunderstandings and missteps by clearly documenting your expectations with both a subcontract management plan and a 1099 independent contractor agreement signed by both you and your contractor.

If It Matters to the Project, Put It in Writing

When creating a subcontract management plan, no detail is too trivial. According to project management expert Karl Wiegers, any plan for working with freelance subcontractors should include as much information as possible about your subcontractor's project. For a Subcontract Management Plan Template and other resources by Karl Wiegers that you can adapt for use with your own projects, see the free downloads at the end of this article.

First, Wiegers says, your plan should include a brief overview of the project that your independent contractor will be involved in, including any concerns or potential problems that might need to be addressed. Then, you'll need to define the human resources components of the project:

- Who will be involved?
- What roles will each person play?
- Who are the primary contacts?
- Who are the major decision-makers?
- What processes will those decision-makers use to resolve issues related to the project?

Be sure to document the way you expect to communicate with your independent contractor:

- Will you work primarily by videoconference, phone, e-mail or in-person?
- How often do you want to receive project updates, and how detailed should they be?
- Will there be regular technical peer reviews or management status meetings?
- If these interactions will take place long-distance, how much has been budgeted to pay for them?

You might also wish to outline a strategy for project tracking and oversight:

- How often do you want your subcontractor to update your client company, and how?
- How will the project be measured (time, size, cost, defects, status)?
- Who will be in charge of risk management, and what will that process entail?
- How will commitments and problems be tracked and resolved?
- When will periodic senior management reviews be scheduled?

As with any IT project, there's always a chance that project requirements will change. Before that happens, it's a good idea to have a written strategy that details how changes should be submitted and evaluated, who will be involved in decision-making related to change management, and what process those decision-makers will use.

To avoid confusion, many IT project managers also include in their plans a clear definition of when a project will be considered complete. Requirements tracing is useful here, as it gives you a methodology for ensuring that all functional requirements your client asked for are actually addressed in the end product. You may also wish to establish a plan for how you'll transition the resulting IT solution over to the client, and how you and your team will support it over the long term.

Subcontractor Contracts

Once your independent contractor has agreed to your plan and is ready to begin work, there's still one more important detail you need to address: securing his or her signature on a subcontractor agreement.

These types of contracts contain specific language to prevent your independent contractor from being hired away by your client. At the same time, your contract can be designed to protect your company's intellectual property; outline your subcontractor's responsibilities; and help to ensure a healthy, longstanding business relationship with your subcontractor.

Creating a contract from scratch is a costly proposition, especially if you need to do it every time you outsource work. Many IT project managers simply buy standard 1099 independent contractor agreement form templates. Such form contracts are designed to be customized and can be used repeatedly for a single, low price. Once you adapt your contract to fit your needs, you may want to pay an attorney to look the agreement over, just to be sure there's nothing you overlooked.

By providing your subcontractor with detailed information about your expectations before a project begins, you can avoid misunderstandings, pave the way for smooth project implementation, and strengthen your professional relationship with your contractor. Most importantly, you can avoid many of the project pitfalls that can result in a dissatisfied client.

Change-Control Process Reduces IT Project Surprises and Delays

Scope changes are so common in IT projects that many IT project managers have learned to expect them and simply take them in stride. But there's no reason to let "project scope creep" slow your implementation down. Starting out with a good plan for managing scope changes can help you keep your project on track and your clients happy.

While you're still in the early project analysis and planning phase, it's a good time to outline a defined process for managing any requested project changes. The change-control process you develop can apply to all work products related to the project, including existing software, requirements specifications for new projects, project processes and procedures, or even your technical documentation.

There are many benefits to creating a methodology that keeps you one step ahead of scope creep. For example, a documented scope-change control plan helps to:

- Open the lines of communication among project stakeholders regarding requested changes
- Establish a common process for resolving requested changes
- Give team members a forum to report any problems they encounter
- Keep project contributors informed about the progress of their requested changes

For a detailed project change-control process, as well as a handy checklist to assist with the impact analysis of requested project changes, see the free downloads at the end of this article.

Create a Change-Control Board

According to project management expert Karl Wiegers, at the heart of the change-management process is a "change-control board" that's responsible for approving or rejecting proposed changes for each project. Leading this board is a chairperson who has final decision-making authority. The chairperson is responsible for appointing:

- An "evaluator" to assess the potential impact of a proposed change
- A "modifier" to revise the work product according to an approved change request
- A "verifier" to ensure that the change was made appropriately

The change-management plan should include a process by which any stakeholder involved in a project can submit ideas or issues to the project's change-control board. These requests might range from identified problems with existing or beta software, to ideas for enhancing current production systems, suggested requirement changes for in-progress software, or even entirely new development projects.

The Change-Management Process

A well-defined process for managing and tracking changes makes it easier for the project team to juggle multiple priorities at once. From the outset, the board should create and continually update a database or spreadsheet detailing each change request's status, time and resource estimates, actual time spent, and other important notes.

In creating a change-management process, Wiegers suggests that the change-control board chairperson first assign an evaluator to consider whether the issue in question:

- Is feasible
- Is pertinent to the project
- Would positively or negatively affect quality
- Carries any risk

The evaluator should also assess the amount of time and resources required to implement the change. Once the evaluator has reported back to the board, the group can solicit input from other people who would be affected by the change. Then, as a group, the board can decide whether the requested change should be made immediately, later, or not at all.

If the board approves the change, the chairperson then appoints a modifier who will implement the changes, and schedules the work. It's the IT project manager's role to negotiate any revisions to project commitments with all affected team members. The modifier then makes the requested changes to the products, keeping all team members aware of the changes so any related user documentation, help screens and tests can be updated.

It's also the IT project manager's job to update project plans and schedules, if necessary, to incorporate the effect of the change on the remaining project timeline. Once the change has been implemented, the verifier steps in to confirm that the task is complete and has accomplished the goals approved by the board.

Reducing Surprises, Reducing Risk

Establishing a clear methodology for handling "scope creep" requests – and a board to make informed decisions about them – reassures all stakeholders that their change requests are thoroughly evaluated and, if selected for implementation, seen through to completion. Because the change-management process provides a complete analysis of the impact of a change on the product's functionality as well as related resources, it helps to reduce risk by reducing the possibility of unwanted surprises.

By staying on top of change requests and carefully managing and tracking their implementation, you and your project team can expect a smoother implementation, fewer delays, a better quality product, more effective teamwork, and a happier client.

Free downloads and other resources:

- Change Control Process at www.techinsurance.com/blog/project-management-documents/Change%20Control%20Process.pdf
- Impact Analysis Checklist for Requirements Changes at www.techinsurance.com/blog/project-management-documents/Impact%20Analysis%20Checklist%20for%20Requirements%20Changes.pdf

For additional articles and templates on project management by Karl Wiegers visit

www.techinsurance.com/blog/project-management-documents/.

Ongoing Quality Testing Cuts IT Project Management Risks

Because risk management and IT project management go hand-in-hand, experienced IT project managers never start a project without a risk-management strategy in mind. Often, at the heart of that strategy is a strong focus on quality control.

Before the ink on your IT consulting agreement is even dry, it's time to start developing a formal quality assurance strategy to prevent or detect any errors or issues before they can cause problems.

According to Bender RBT Inc., a firm specializing in requirements-based testing, there are three good reasons to focus on improving the quality of your solution:

- Reducing the costs to detect and remediate defects
- Reducing the time it takes to deliver the software
- Improving the probability of successfully installing the right solution

By focusing on quality assurance and testing from the very beginning of a project, you're more likely to detect potential problems well before they become costly repairs that drive the project over-budget. At the same time, you'll improve the quality of your solution, which in turn reduces your client's risk of system failure.

Planning a solid QA program benefits your own IT project management business as well, because a well-designed QA methodology may cut your risk of your client suing you for delivering an IT solution that doesn't do what it's supposed to.

Key Considerations in Quality Assurance

We've all heard the term used as a business buzzword, but what exactly what does "quality assurance" mean in the IT world? In essence, QA involves using systematic processes to examine the quality, effectiveness or efficiency of systems and software. Such processes are designed to:

- Identify opportunities for improvement,
- Implement those improvements, and
- Continually evaluate the project and the improvements made.

When it comes to software development, QA means monitoring development processes for quality, which often means adhering to standards such as ISO 9000 or CMMI (Capability Maturity Model Integration). Both approaches give developers and IT project managers a model to direct process improvement for virtually any type of project.

Regardless of the method used, quality assurance should begin before a project even starts and continue after the solution is delivered. A quality assurance methodology may involve advance planning before work begins, a detailed process for making and documenting changes, and a thorough QA testing methodology to identify and correct defects before release.

According to Bender, the idea is to move away from a focus on defect detection and toward a focus on defect prevention. Bender notes that the requirements-based testing process addresses two major

issues: first, validating that the requirements are correct, complete, unambiguous and logically consistent; and second, designing a necessary and sufficient set of test cases from those requirements to ensure that the design and code fully meet those requirements.1

The overall requirements-based testing strategy, Bender notes, is to integrate testing throughout the development lifecycle and focus on the quality of the requirements specifications. This leads to early defect detection, which has been shown to be much less expensive than finding defects during integration testing or later.1

A well-designed quality assurance process with thorough QA testing typically includes the entire project team, asking each stakeholder to take on responsibility for the quality of the solution. Careful record-keeping is crucial, along with continuous monitoring of the QA process itself to gauge its effectiveness.

QA and Risk Management

A quality assurance methodology can be a valuable part of the overall risk management strategy for you and your IT project management business.

Without ongoing QA, your project could fall victim to costly and time-consuming setbacks, or even fail to meet established requirements. Even worse, a problem with the new solution might have a negative effect on other system components, causing downtime or financial losses for your client. In any of these situations, you could face a lawsuit.

On the other hand, the benefits of QA are clear. A controlled development and quality assurance testing strategy is likely to result in a better-quality solution that requires less maintenance, which makes for a satisfied client. Implementing a QA strategy early on also saves time for you and cuts costs for your client. After all, it's easier and cheaper to fix a problem early in the course of a project, before it causes a snowball effect that requires extensive and costly rework.

Detailed QA documentation also helps you reduce scope creep and delays, both of which can add to costs and frustration levels for your client. At the same time, your business gets a better handle on the management of risk because your QA and testing methodology reduces your exposure to a client lawsuit.

Should any question arise about how project glitches are being handled, you'll be able to show the client your QA testing documentation to prove that any defects have been identified and addressed, and that progress has been monitored to ensure that the solution will meet requirements.

If the worst happens, and you find yourself facing a professional liability lawsuit, your QA documentation may come in handy in court. Regardless, having detailed documentation on hand shows that you're an expert project manager who is taking every precaution to deliver a product that will meet or exceed the client's needs.

Web Site Developers

Translating Customer Needs into Projects

Behind almost every web site development or graphic design project is a set of business requirements. The hard part is making sure that the site you build meets those business needs, 100 percent.

It's easy for a web site developer or designer to listen to what the clients say they want for their site. But often, what they're telling you and what you think they're saying can be two different things. And when your completed project falls short of the mark, you will be the one to blame, leaving you wide open for an errors and omissions lawsuit.

With any project involving web development and design, E&O lawsuits are always a risk. There are many opportunities for professional liability claims when designing and implementing a web site project. If your client claims that you didn't do what they asked you to, that claim could escalate into a lawsuit. And if that happens, it could cost you a lot of time and money, especially if you don't have the right web design insurance coverage to protect you from liability.

Even if you don't end up being sued, your goal is always to get the job done right the first time. Doing so preserves your hard-earned business reputation, and prevents costly re-work.

Good Project Management Means Good Risk Management

So, as web developer or graphic designer, what's the best way to translate a customer's business needs into a solution that solves the customer's problems? The answer lies in strategic project management. Companies with careless project management practices – or none at all – are far more likely to have professional liability claims than those that use an established project management process. In other words, good project management is good risk management, and a good way to avoid having to fall back on your web development business's E&O insurance.

According to project management expert Karl Wiegers, one of the most important early project management steps involves carefully defining a project's vision and scope. Before you begin any web site development project, be sure to clearly define:

- **Business requirements:** This is the foundation and reference for all detailed requirements development. You should gather business requirements from the customer or development organization's senior management, an executive sponsor, a project visionary, product management, the marketing department, or others who have a clear sense of why the development project is being done and the value it will bring to the business and customers.
- **Vision of the solution:** It's important to clarify the long-term vision for the site to be built, as this will provide the context for making decisions throughout the course of site development. Note: this vision statement is not the place for detailed functional requirements or project planning information.
- **Scope and limitations:** Carefully define the concept and range of the proposed web site solution, as well as what will not be included in the end product. Clarifying the scope and limitations helps to establish realistic expectations of the many stakeholders. It also provides a

frame of reference against which the team can evaluate proposed features and requirements changes.

- **Business context:** Summarize some of the business issues surrounding the project, such as profiles of major customer categories, assumptions that went into the site concept, and the client's management priorities for the new site.

To be sure you've got all your bases covered, you might want to try following an established project initiation and management process. See the free downloads below for a Project Vision and Scope Template you can adapt for use with your own projects.

10 Requirement Traps to Avoid

As Wiegers points out, successful IT and web development projects are built on a foundation of well-understood requirements. Even so, many web site developers tend to get caught in traps that prevent them from effectively collecting, documenting or managing project requirements. There are several symptoms that indicate you might be getting caught in a "requirement trap":

- Confusion about what a requirement is
- Lack of customer participation
- Vague or ambiguous requirements
- Requirements that aren't prioritized
- Site functionality that no one uses
- Analysis paralysis
- Scope creep: the project parameters keep shifting
- Inadequate requirements change process
- Insufficient change impact analysis
- Inadequate requirements version control

Speak Your Customer's Language

As you develop your vision and scope document, strive to ensure that you and your client are speaking the same language. To reduce professional liability, web site developers and designers should keep in mind that although they understand the technology backward and forward, their customer probably doesn't. If your project documents are too technical, your client might be left to assume that what you're doing is going to meet its business need, when you may actually be off the mark.

Should that happen, you could be deep into site development before any disconnect becomes apparent, and that's when you'll experience "scope creep." Meeting the client's need is suddenly going to take more time and cost more than you and your client expected. And that means trouble, because this is the point when some customers stop payment and talk to a lawyer.

By clearly outlining a development project's vision and scope, and carefully documenting project requirements, you can create a thorough project proposal that will meet the business needs, keep costs within budget, and reduce the risk that you'll end up facing an E&O lawsuit. The bottom line: for web site developers and designers, professional liability reduction and risk management go hand-in-hand with careful project management.

Creating a Web Site Development Agreement

Developing even a simple web site can quickly become a complex job, so clarifying expectations at the beginning of the project is always a good idea. That's why an experienced web developer's first move is to get the client's signature on a comprehensive website development contract before starting any project.

A website development agreement governs the relationship between you – the web site developer – and your client. Having this type of agreement in place makes good business sense whenever you're hired to develop, design or implement a web site for one of your clients.

A web development contract protects you against the various liabilities associated with the development of web sites. The idea is to clearly establish the rights and responsibilities of each party over the term of the website development agreement, eliminating the possibility of any misunderstandings that could arise from a lack of communication.

Keep It Clear

These agreements typically include a detailed statement of work, which clearly defines the scope of the services you'll perform on an ongoing basis. This might include key tasks, project milestones and deliverables, time and cost estimates, and project organization and personnel requirements. Additionally, web development agreements usually include price and payment terms that can help you avoid "scope creep," which is a common problem during web development.

Other important components of a website developer's contract may include limitation of remedies and limitation of liabilities clauses. A limitation of remedies clause might state that the client's sole remedy is the correction of material defects or deficiencies brought to your attention within 90 days of completion, while a limitation of liabilities clause might cap your total liability at the amount you are paid for your services.

A sample website development contract might also include provisions for the termination of the agreement, ownership of intellectual property, warranties and disclaimers, confidential information, and employee solicitation and hiring.

Too Much "Legalese"?

If it sounds like your contract needs to contain a lot of legal jargon, don't worry. While you could hire your own lawyer to draw up a web development agreement from scratch, it is likely to be much more affordable to use an existing form or template agreement for website developers.

A template website design and development contract makes the process easy by guiding you through development of your statement of work and other contract components, and helps ensure that you've addressed the key variables you may encounter during the project. Often, web development agreement templates provide examples and sample contract wording, eliminating some of the guesswork for you. It is recommended that you have a lawyer review your completed website development template or form contract for your peace of mind.

Depending on which other web development or design services you provide, you may also need contracts addressing ASP relationships, web content contributors, web site advertising, web site hosting, and web site terms of use. Other helpful contracts may include employment contracts and agreements for subcontractors and independent contractors. And, you may need a template privacy policy for use on your own or your client's site.

Many website developers prefer to purchase a web design and development contract template package that includes all of these documents, allowing unlimited, as-needed use at an affordable package price.

Clear Communication Makes for Happy Clients

Having a legally sound website development agreement, signed by both parties, protects you from financial and material losses, while helping to ensure clear communication with your client. By setting clear expectations at the outset of a web development project, you're much more likely to end up with a satisfied customer, a good reputation and repeat business.

Provided Compliments Of

About TechInsurance

TechInsurance is a web-based e-agent that offers IT businesses and professionals fast, easy, one-stop shopping for all their business property insurance and liability needs. TechInsurance was founded in 1997 in response to the difficulty IT services firms had finding high-quality, affordable business insurance. With more than 12,000 businesses insured, the company has grown to become America's leading online provider of business and professional insurance for computer consulting, web services companies and other IT service businesses. For information, visit www.techinsurance.com.

TechInsurance
www.techinsurance.com
(800) 668-7020
info@techinsurance.com

About ContractEdge

Founded in 1999, ContractEdge has provided legal forms for more than 14,000 information technology businesses. All ContractEdge subcontractor agreements can be downloaded and used unlimited times with no additional fees, and software and contract updates are free for life. Unlike ASP or subscription-based models, users house their contract templates on their own computers, ensuring the security of sensitive business information. ContractEdge drafting software is easy to use, featuring a simple question-and-answer process that automatically populates each legal form. Individual independent contractor agreements can be purchased at www.contractedge.com for as little as $10, or service-specific packages of agreements are available with discounted pricing.

ContractEdge
www.contractedge.com
(800) 357-1343
support@contractedge.com