Selecting an ERP for Professional Services

Optimize Your Project-Driven Organization with a Purpose-Built, Cloud ERP

Unanet™

Kim Koster · Rich Wilkinson · Chris Craig · Fran Craig

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About the Book

Business excellence is required to succeed in today's world. Achieving that excellence takes a combination of people, processes, and tools. If those three forces are in strategic alignment, you will have success beyond your wildest dreams. The hub of that success is the Enterprise Resource Planning (ERP) system that you choose. As we will discuss in this book, ERPs are not all created equal. There are generic ERP systems and there are purpose-built systems for different types of industries, e.g. Professional Services, Retail, Manufacturing, Distribution, Banking, etc. Often generic systems limit your ability to support best practices for specific types of industries. The wrong choice of ERP tool is extremely costly to implement and maintain. One of the most significant impacts of a poor ERP choice is on the people in the organization. A poor ERP choice makes peoples' jobs very difficult, requires wasted effort to be expended in manual workarounds or "off the books" spreadsheets to accommodate your particular needs, causes process discipline to suffer, introduces errors, and compromises data integrity. In the chapters to follow, we will give you enough information to decide what type of system is right for you and will help your business prosper.

The topic of this book is purpose-built project based ERP systems. If projects are your WORLD, then a purpose-built ERP specializing in project accounting and management is the right answer for you. The project based ERP cuts across many different types of businesses, and the one thing these businesses have in common is that the major revenue generation is from managing and delivering projects. Examples of project based organizations are non-profits, government contractors, professional services, contract research, engineering, architecture, consulting, and life sciences, to name a few. There are project based ERP systems that concentrate on the manufacture of products, but in this book, we will focus on project based businesses that generate revenue primarily from labor.

As you read through the book you will find the following Icons:

Something for you to think about—a helpful tip.	Areas that will increase revenue, profit, new orders, growth and/or cash	Checklist
Technical Information	Proceed with caution	

Unanet and the authors of this publication wish you the best in all your business endeavors, and we hope that this book helps you select and operate the right system for your project based professional services business.

What is a Project Based ERP?

OBJECTIVES

Definition of ERP

Elements of a Project Based ERP

- CRM
- Opportunity Pipeline
- Resource Management
- Budgeting & Planning
- Time and Expense
- Project Accounting

- Billing & Revenue Recognition
- Financials
- Payroll
- Purchasing
- Real-Time Reporting, Analytics and Dashboards
- Project Management Command Center

Characteristics of a Project?

Difference between Generic and Project Based ERP

What is an ERP System?

The acronym ERP stands for Enterprise Resource Planning system. The system includes financials, pipeline, customer relationship management, time, expense, resourcing, project management, reporting, and dashboarding. When the word, system, is referenced, avoid thinking of software only. A system includes the people that operate the software and processes that keep order and discipline over the inputs and outputs of the software. This overall system is the hub of all activity in the business. It should serve as the single source of truth for business decisions.

The one source of truth is a dream state for most organizations, as many companies struggle with disparate systems, lack of processes and procedures, and untrained personnel. What happens under the hood is more like the chaos depicted below. Everyone in the organization is running around with PowerPoint charts, email is flying, and Excel is the book of record??? Projects are still being executed and completed but the inefficiencies are tangible. There is a better way and we will be discussing that throughout the book.

History of the ERP

In the 1990's Grant Thornton coined the acronym ERP. During the mid-1990's the ERP concept took off and replaced many legacy mainframe applications. Y2K also gave companies another reason to replace their old systems. This new concept become the de facto business management tool for all types of businesses. It expanded from back office use (accounting and other transactional functions) to front office, including Customer Relationship Management (CRM) and pipeline management. Today ERP systems are widely used in businesses of all sizes and industries. New technology continues to expand the ease of use of the application making it an even more important and valuable tool for organizations.
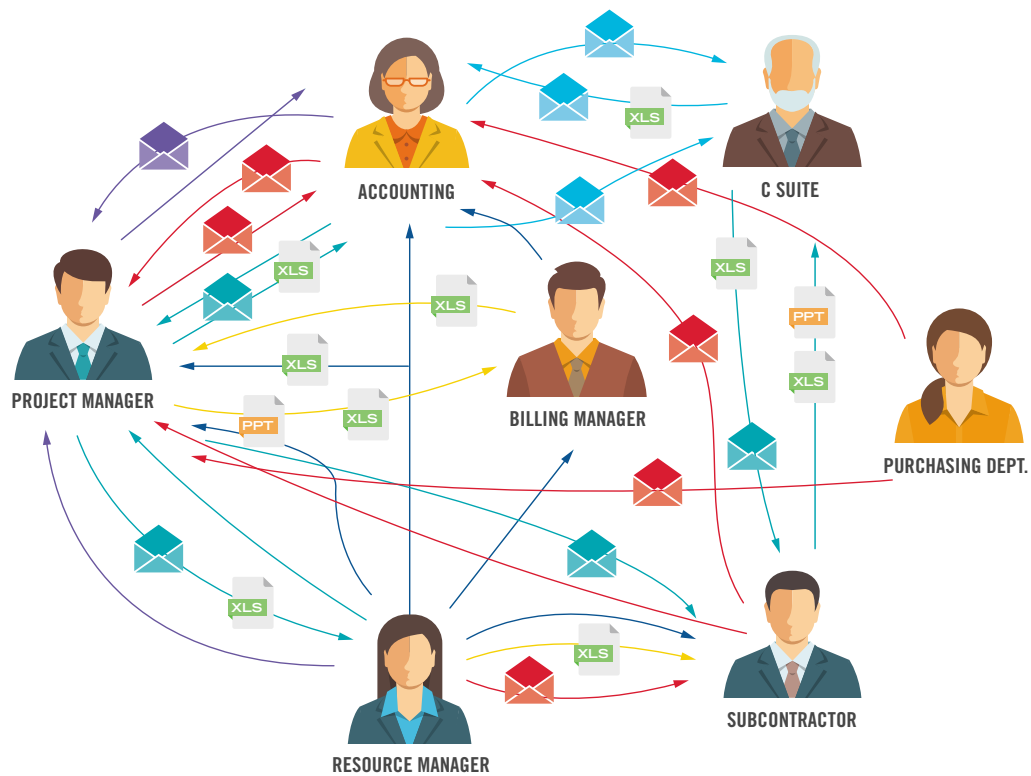
Disparate Systems • Lack of Process • Untrained Teams

Elements of a Project Based ERP

As we think about what makes up an ERP system we should consider the project lifecycle. The ERP should have all the elements of the lifecycle as a basic part of the system. It all starts with a customer with a need. That need turns into a proposal which ultimately turns into a project. That project is planned, monitored, and executed. Along the way every transaction against the project must be captured and accounted for by the system.

CRM/Pipeline Management	Proposal Generation	Project Initiation	Planning	Execution	Accounting
Creating Business Strategies	Creating Winning Bids	Establishing the Project	Resources, Budgets, and Tasks	Visibility and Control Over the Project	Billing and Financial Statements

Keep in mind that all projects, regardless of type or size, follow the exact same lifecycle. The lifecycle should be represented in the tool you select for all projects, big, small, simple, or complex.

Keep in mind the project is the center of your universe and the tool you select should reflect your world, and turn chaos into the organized flow of the project lifecycle.

Customer Relationship Management

Customer Relationship Management (CRM) is a discipline that manages your company's interaction with current and potential customers. CRM has become a priority to improve overall relationships with customers, specifically to focus on customer retention (stickiness) and to drive sales growth. Tracking and documenting customer touches is a critical part of the overall discipline because fact-based data and the resultant analytics play a major role in understanding and meeting customers' needs.

Opportunity Pipeline

An opportunity pipeline is the visualization and/or measurement of contracts or projects that you will attempt to win over time. The time horizon can be "time now" to 5+ years into the future depending on the planning needs of your business or the length of your sales cycle. It is the gauge for your business growth and it should reflect your company's overall business strategy.

The most compelling reason to have an opportunity pipeline is to understand the revenue forecast and resource needs for the future. Revenue forecasts are the barometer of your company's future financial health.

Resource Management

Resource management is the "art" of ensuring that the business has the appropriate resources it needs at the time they are needed. For professional services businesses, that resource is labor, and multiple variables can go into the definition of appropriate, i.e. skill set, location, bill rate, cost rate, etc. Resourcing involves multiple functional groups, project teams, and human resources so there are a lot of moving parts. Forecasting of resources should start during the opportunity and/or proposal phase of a project so that the stakeholders have time to plan for the needed people and skill types. Resource planning continues throughout the lifecycle of the project. Collaboration and communication are major parts of producing a resource plan.

Budgeting, Planning, and Forecasting

A budget represents what the business believes is achievable and what it intends to accomplish. The organization establishes a budget that becomes the baseline for performance management. There may be multiple budgets established such as indirect, project, capital, etc. Budgeting and Planning is typically accomplished with an Annual Operating Plan (AOP) and a Long-Range Plan (LRP). The AOP is for the current year and an LRP can go from 0–5+ years depending on the needs of the business. Budgeting can be performed "Bottom Up" or "Top Down". Forecasting is the activity of predicting what will happen in the future. A forecast can be compartmentalized as short, medium, or long-term. It is based on the best assumptions known at the time of the development of the forecast. These assumptions will change over time and the forecast will need to be updated to reflect the changes. Comparison of budget and forecast is the basis for variance analysis and corrective action plans.

Time and Expense

Capturing the time charged to a project is the basis for how much the project costs and, in some cases, how much is actually billed. Time tracking is a critical first step in improving the performance of project based services organizations, as it enables managers to understand what is being worked on, the cost, what work is billable vs. non-billable, what the margin is, and how well you are performing compared to the plan. Expense tracking is sometimes overlooked it can be quite time consuming if you do not have the right tool in place for your employees and finance team. Making sure that employee travel expenses are correct and within government or corporate regulations can be tricky, so you want to have a tool that automates this process.

Project Accounting

Project accounting, sometimes called total project accounting, is simply accounting for all projects in your portfolio. Total project accounting consists of reporting on both direct and indirect projects. In other words, every cost or transaction is attributed to a project. This gives executives, accounting, and project management insight of true costs and forecasts, ensuring that all stakeholders have the information needed to make optimum decisions. Examples of indirect costs are fringe benefits, overhead, General and Administrative Expenses (G&A).

Billing and Revenue Recognition

Cash is KING! Invoicing and revenue recognition should support all contract types (Fixed Price, Time & Materials and Cost Plus contracts), and comply with GAAP regulations. Automation of the professional services "bid-to-bill" lifecycle allows organizations to forecast and track revenue across different contract types, shorten invoice cycles, and provide authorized managers with real-time insight. By having a single integrated system to manage the entire services bid-to-bill cycle, disparate standalone systems can be replaced, resulting in greater productivity, fewer errors, lower costs, and faster invoice processing times. A CFO suggested that having an integrated system allowed the senior staff to deliver billable work rather than unbillable administration, resulting in higher utilization and more profit.

Financials

Project driven organizations are fueled by project performance. So, having a system that provides the needed timely insight is critical. Keep in mind an unbilled hour is an hour that can't be recovered. The financials consist of general ledger, accounts receivable, accounts payable, and cost pool calculations (allocations), and should be integrated with project management, project accounting, and resource scheduling. What you are really looking for is one software for pipeline, projects, people, and financials. The benefits of one software are below:

- Eliminates unproductive time managing transactions
- Creates more time to transform the performance of your organization
- Provides real-time visual insight of true costs (direct and indirect), margin, revenue, and forecasts
- Ensures managers have the information needed to make optimized decisions about the project portfolio and resource effectiveness

Payroll

We all come to work for fulfillment but also to get paid. Outsourcing or doing payroll in-house, are both acceptable practices. Either way, knowing the actual cost (i.e. direct cost + cost of benefits + federal, state & local taxes, etc.) of every employee is a must have for professional services businesses. Without this information the business will not be able to calculate profit.

Purchasing

Purchasing is the process of finding materials, services, and equipment from an external source to be used in the execution of a project. This process also includes the agreement of terms and conditions as well as the price for the goods and services. The goal of procurement is to get the best price for quality products or qualified/skilled labor within the timeline needed. A procurement system will keep track of the agreement between the buyer and seller as well as the vendor quality, billings, deliveries, etc. With so much outsourcing for specialty labor, having a robust purchasing system is important to manage costs.

Real-Time Reporting, Analytics, and Dashboards—Business Intelligence

Looking in the rearview mirror is interesting and there are reasons to do so. However, the majority of the time we are in the driver's seat we should be looking ahead, assessing what is in front of us. That same concept is especially true in managing a project based organization as project profitability is a leading, versus a lagging, indicator for the business. Having real-time information is critical, and being able to use analytics to predict the future will help make good business decisions going forward. Reports should provide useful and appropriate role-based information and so should dashboards. Dashboards also need to be real-time and have great visuals so you can quickly identify problem areas and course correct.

Project Management Control Center

A truly integrated project based ERP system will be the project manager and project team's best friend. All needed information will be at their fingertips. Looking at real-time revenue, utilization, profit, cost, schedule, etc. puts the power of information into the hands of the project manager. There are very few systems that can deliver what-if capability, revenue modeling, resource planning, budgeting, planning, billing, and financials all in one integrated tool. If you pick the right system, it will be the control center for the project team.

What are the Characteristics of a Project?

Quite simply a project is a planned piece of work. That work can be a good or a service. The characteristics of a project are:

1. Scope of work agreed to by the customer and the contractor
2. Start and stop dates
3. A cost and a projected fee

So, scope, schedule, and cost are the Big 3 of every project! Regardless of the size or nature of the project, these are always the Big 3.

There are more characteristics of a project listed below:

- Governed by a legal document or contract
- Resources are needed to execute the project
- Risk exists in the performance of the project

There are two major types of costs: direct and indirect. What differentiates them is direct costs are related to one final cost objective (project or contract) and indirect costs have multiple cost objectives (benefits more than just one project). Direct projects are billable to the customer. An indirect project collects indirect costs such as overhead, fringe, G&A. The concept of total project accounting is that every single cost has a project, and can be accomplished in a true project based system.

The people that are responsible for the project are called Project Managers (PM). The PM has a very tough job because he/she wears many hats. Leadership and social skills are critical for a PM to be effective. The PM should also be analytical, organized, prescient, and product knowledgeable. Success of a project will depend on the PM being able to communicate, coordinate, and lead a team to a common goal. They will need a system to help them coordinate all the moving parts.

Generic vs Project Based ERP?

Generic ERPs are still prevalent in the marketplace today, but they are costly and very difficult to maintain if your business is projects. These ERPs typically do not have the project as the center of the universe. Generic ERPs focus on the account and the department/organization, and the project is accounted for with a separate tool. In a generic world the project is an afterthought.

What Makes a Project Based ERP Special?

- ☑ Transactions are attached to a project, department/organization, and a general ledger account
- ☑ A time collection system attaches charges directly to the tasks that the individual works on
- ☑ Costing architecture is tailorable for each project and task (Work Breakdown Structure (WBS))
- ☑ Visibility is provided into the financials of each project (i.e. profit, cost, billing)
- ☑ A resourcing tool provides project managers with information on what skills are available at what time
- ☑ Complete financial reporting with the project in mind
- ☑ Project based key performance indicators to help drive the organizational and project goals
- ☑ System controls that send notifications when project restraints are met, configured to the needs of your business

A Work Breakdown Structure (WBS) is a hierarchical representation of the work to be accomplished. It is a way to break the work down into manageable chunks to be completed. The WBS is a common framework for planning and control, and it should be representative of the Statement of Work (SOW) or scope document. The WBS can be based on product, service, or phase depending on the nature of the project.

If projects are in your organization's DNA, a project based ERP system should be in your future.

Project Based ERP Ecosystem

A true project based ERP will revolve around the project itself. Analytics should be available natively for every function performed by the ERP. It is all about planning, performing, and accounting for the project.

Real-Time Analytics & KPIs

PROJECTS

PLAN
- CRM
- Opportunity Pipeline Mgmt.
- Resource Management
- Budgeting
- Forecasting
- Pricing

PERFORM
- Project Accounting
- Billing and Revenue
- Timesheets
- Expense Reports
- Purchasing

ACCOUNT
- General Ledger
- AP/AR
- Financial Statements
- Payroll
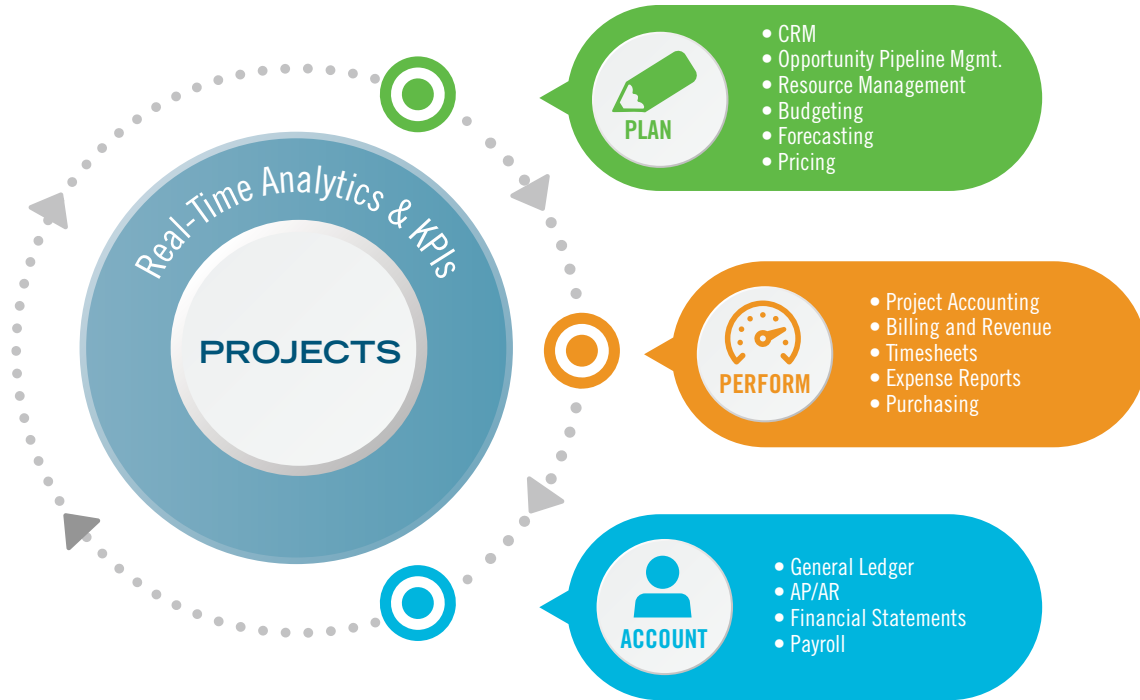
When picking and implementing a tool make sure you can answer these questions:

- ☑ Is the system you are considering truly project based?
- ☑ What is the architecture of the software? Is it web-based? One database? Multiple tools?
- ☑ Cloud ready?
- ☑ Is the company you are buying from customer centric?
- ☑ Will the system require customizations?
- ☑ Will the system meet the needs of the teams?
- ☑ Will the teams save money and time from the proper use of the system?
- ☑ What is the reputation of the software company you are dealing with?
- ☑ What is the TRUE total cost of ownership (TCO)?

PLAN

PERFORM

ACCOUNT

CHAPTER 2

Capturing and Winning Contracts

OBJECTIVES

Definition of CRM
The Customer Journey
Why CRM is Critical for Success

What is Customer Relationship Management (CRM)

CRM is simply a discipline that manages a company's interaction with current and potential customers. The reason project based organizations are making CRM a priority is to improve overall relationships with customers, specifically to focus on customer retention (stickiness) and to drive sales growth. Tracking and documenting customer touches is a critical part of the overall discipline because fact-based data and the resultant analytics play a major role in understanding customers' needs.

The Customer Journey

So, what does a customer touch mean in today's world? Traditionally we thought of a "touch" as a phone call, a face-to-face meeting, or conference, but there are so many other ways to touch a customer today—webinars, customer conferences, white papers, blogs, email, your company website, LinkedIn, Facebook, Twitter, and other marketing materials. It is important to analyze all the available customer information/touches to understand the needs and pains of your customer. Understanding who (role, title, persona) is buying your product will help you truly understand the customer's journey, which in turn will lead to increased sales and retention. "Sales" means not only the initial sale of product or service, but should also include future up-sales and renewals. Having a great relationship will build the trust your customers need to continue the partnership. The overall customer's journey could literally last years and in some cases decades.

Your contacts are one of the most prized assets of your company, so why would you trust them to silos of spreadsheets or worse, post-it notes. CRM should be managed in a tool that accounts for the entire lifecycle of the project. Customer relations go from prospect to buyer, to customer (product and services), user of customer service, and then back to buyer again in an endless loop. Well it's endless if your customer is delighted!

Personas are a great way to help your business development team understand who the customer is. Personas are short descriptions or biographies of fictitious, archetypical customers. What is keeping your buyer up at night (pain) and what does your product do to help them sleep better? Communicating a solution to the pain is a powerful selling tool. What is the difference between an archetype and a stereotype? An archetype is meant to inform, and a stereotype is meant to demean.

Because this loop is endless, you want a system that can track the entire project lifecycle. A system that is not tracking the execution of the project does not truly cover the breadth of a successful CRM practice.

> Commonly we think of CRM as important only in the initial sale, but the sale itself is a small portion of the overall interaction with your customer throughout the project lifecycle. True CRM goes on throughout the ENTIRE lifecycle of the project and all follow-on projects. You will win those future projects because you have built trust with your customer.

What are the Benefits of a Project Based CRM System?

A project based CRM system is not about a product (ex. PC) but a project. The difference is that each bid and/or proposal that you prepare will be for a specific project that has scope, schedule, and a cost profile. You will need to understand how that project fits into the existing portfolios, what resources are needed, when the resources are needed, and if the project is going to be profitable. The system that you choose should also be symbiotic with the project lifecycle. Every project will follow this simple, yet challenging lifecycle as depicted in the illustration below. Throughout this book you will see the project lifecycle mentioned, so commit this to memory. CRM is the starting discipline for the project lifecycle and it drives the remaining aspects of the cycle.

CRM/Pipeline Management	Proposal Generation	Project Initiation	Planning	Execution	Accounting
Creating Business Strategies	Creating Winning Bids	Establishing the Project	Resources, Budgets, and Tasks	Visibility and Control Over the Project	Billing and Financial Statements

Below are the benefits of a project based CRM system:

- Instant access to prospects and customers in one central location
- Track the buyer/customer journey through the entire project lifecycle
- Ability to analyze data and make good business decisions
- Capture market trends and customer pains
- Understand future revenue potential and resource forecasts
- Access to a weighted forecast based on probability percentages
- Increased visibility and control over future financials—profit, revenue, growth, and new orders

A generic CRM system with a product mentality that is not integrated with your ERP system will be costly to maintain and will not give you the vital information needed to make good project based business decisions. Choose your system wisely.
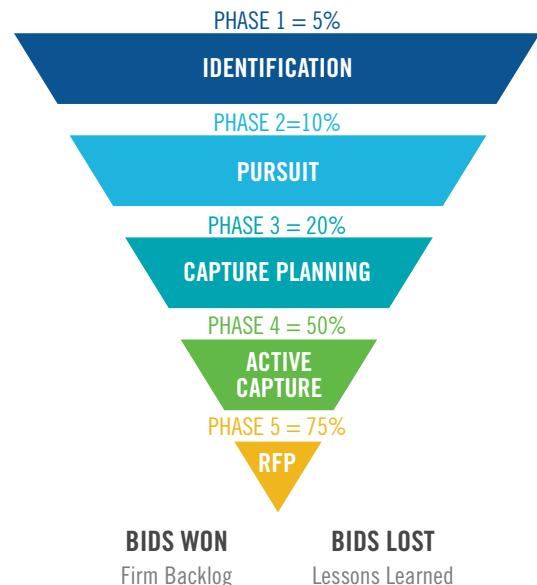
What is an Opportunity Pipeline Anyway?

CRM and pipeline management fit together like a hand in a glove. One can't exist without the other—customers need projects, and projects need a customer. An opportunity pipeline for a project based business is the visualization and/or measurement of contracts or projects that you will attempt to win over time. The time horizon can be "time now" to 5+ years into the future depending on the planning needs of your business and/or the length of your sales cycle.

A Structured Process is Needed to Manage the Pipe

Potential opportunities in the pipeline will be in different stages as defined by your company's business development processes. Often pipeline is depicted with a funnel. The top of the funnel is wide, and it is taking in potential opportunities for new and exciting projects. The opportunity will then move through the organization's development decision gates (down the funnel) designed by your company, until it reaches the Request-For-Proposal (RFP) Stage.

Out of the tip of the funnel are projects that you have won and that you must now execute. Also important are the losses, and understanding why you lost. Keeping a set of lessons learned will make sure you don't make the same strategic mistakes again. Having a gated and structured BD process will assure you are bidding on the right opportunities and making the most out of your bid and proposal budgets.

PHASE 1 = 5%
IDENTIFICATION

PHASE 2=10%
PURSUIT

PHASE 3 = 20%
CAPTURE PLANNING

PHASE 4 = 50%
ACTIVE CAPTURE

PHASE 5 = 75%
RFP

BIDS WON	BIDS LOST
Firm Backlog	Lessons Learned

We depicted a 5-step business development gate process. Is this right for all companies? The answer is no. You may require less or more steps depending on your business model. Keep in mind that as a part of the gate process there is also typically a set of standard reviews with defined teams and criteria. These teams are often referred to as the Black Hat, Pink Team, Blue Team, etc. The teams participate in capture reviews in accordance with the gates, and they provide consistency for the overall process.

The most compelling reason to have an opportunity pipeline is to understand the revenue forecast and resource needs for the future. These revenue forecasts are the barometer of your company's future financial health. Managing the pipeline will help you adjust forecasts as opportunities move through the BD gate process. Picture your opportunities moving down the funnel, some are eliminated along the way, and the opportunities that continue through the gates or funnel will see an increase in their probability. This very structured process aids in the fidelity of the forecast, so it is very important to the overall business.

Forecasting the Pipe

The pipeline is typically a part of two major forecasts, the Annual Operating Plan (AOP) and the Long-Range Plan (LRP). The AOP is a short-term, highly detailed plan used to achieve tactical objectives. The LRP is a set of financial goals (usually five to ten) that outline the path for the company's future. Without the pipeline forecasts, the operating plans will not provide the information that will be needed to drive the business. Forecasting takes place at each stage gate utilizing various techniques for forecasting. The Probability of Award (POA) can be the mechanism used to accurately estimate the real revenue opportunity. The calculations for POA are below. Changing environments can affect the Pwin and Pgo, which will change the POA.

Pwin = Probability that your company will win the business based on discriminators, competition, or other factors.

Pgo = Probability that the customer will fund the project.

**Pwin** X **Pgo** = **Probability of Award (POA)**

Modeling scenarios, sometimes known as what-iffing, are a great way to ensure you are picking the right path and maximizing resources. For example, you can ask: What if rates change (up or down)? What if we outsource instead—will that save us money or provide additional opportunity to use in-house resources more effectively (trade-offs)? If not for a specific project, will that free up resources within the portfolio of the company and save money elsewhere?

When forecasting the long-range plan, factoring will be necessary to account for uncertainty. One method to use for factoring is the POA. Having a system that will allow for what-iffing and factoring will play a huge role in the accuracy of the forecasts. POA can be a great tool for portfolio-level analysis. At lower levels in the analysis, you will want to recognize that the effort will either be won at some expected value, or lost (could be 100/0 or 80/20 or another percentage). The expected value will be more precise and should be utilized for near-term work where you are more certain of the award.

Forecasts are used in many ways throughout the business and multiple methods will be needed as we discussed above. This next point is obvious, but near-term forecasts are more accurate than long-term forecasts since there is more visibility into the scope, schedule, current economic conditions, resource availability etc. Looking in the future is more difficult and the level of granularity of the forecast will be less detailed, since many long-term projects are still in the proposal phase or in the "crystal ball" phase with many unknowns.

Grouping projects makes it easier to forecast, especially in the 2–5-year time period. Groupings may be by programs, client, product, business unit, portfolios, or department. You can look at these forecasts in aggregate and derive an accurate forecast because you understand the client demand, your capacity, and potential growth. Forecasting using constraints and other pertinent information can make for a very good forecast.
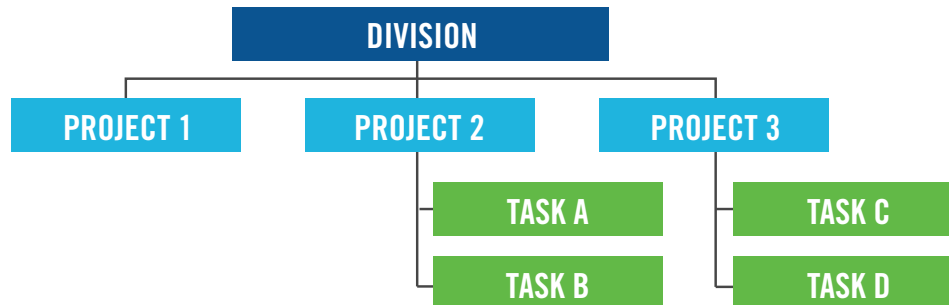
Using very detailed forecasts in the long-term will take lots of time and will not be accurate. Save the detailed forecasting for 0–2 years (unless you have a high-level of confidence in the client and market). There is also a check of reasonableness that needs to be added. C Suite members and project teams need to work together to decide on the level of forecasting needed and for what purpose it will be utilized. For example, an AOP is a short-term forecast and granularity is necessary. An LRP may need to utilize detailed forecasting for an agreed upon time period, and then utilize a grouping for out-years. One other thing to think about is the frequency of the update and who is needed to provide input.

One very important aspect of forecasting for professional services organization is labor resources. We will discuss resource management in Chapter 6. We did not forget it, we believe that resource planning deserved its own section.

Pipeline Metrics—Measuring the Pipe

Being able to measure your pipeline health will give you a depth of insight that only few companies enjoy. This insight will help to understand the past, current standing, and a view into the long-range forecast. Having real-time reports and dashboards gives all stakeholders actionable information to make decisions for their role and level in the business.

Below are some pipeline metrics that you may want to consider utilizing:

- Pipeline Snapshots (comparing the pipeline to the same time last year, quarter, month)
- Bid to Win Ratio = # of bids/# of wins
- Bid to Loss Ratio = # of bids/# of losses
- Length of the sales process = number of days from identification to contract award
- Phase statistics—what types of opportunities are in each phase, customer, etc.
- Labor Utilization
- Skill Set Utilization
- Revenue targets by region, portfolio, customer etc.
- Rate analysis by year
- Forecast comparisons utilizing POA or other % forecasting methodology

Need a Pipeline Management Tool?

When you are looking for a pipeline management tool make sure that the tool you select can do the following:

Pipeline: A CRM Tool Checklist

- ☑ The tool is 100% integrated with the project based ERP system you select
- ☑ Customer Relationship Management (CRM)—track your customer interactions
- ☑ Contact categorization for easy reference (decision maker, geographic location, golf buddy, etc.)
- ☑ Workflow optimization, assigning tasks and providing notification
- ☑ Opportunity tracking by phase
- ☑ Easy-to-use reporting, dashboards, and metrics to direct business decisions
- ☑ Real-time data
- ☑ Project notes and code fields for unparalleled analytics
- ☑ Resource demand planning with both current and TBD resources
- ☑ Ability to shift forecasts to the right or left
- ☑ Ability to make POA adjustments as opportunities move through the funnel
- ☑ One-click transformations from proposal project to an executable project
- ☑ Cloud based system so there is 24/7/365 access to your information

CHAPTER 3

Business Intel

> **OBJECTIVES**
>
> **State of Your Data**
> **Reporting**
> **Dashboarding**

State of Your Data

Have you really thought about how much money poor quality data is costing your company? IBM estimates that the yearly cost of poor quality data, in the US alone, in 2016 was $3.1 trillion. That is a flooring statistic. What are the reasons why it is so high? Below are just a few reasons that come to mind:

- Many manual processes and off-book calculations
- Reconciling and re-reconciling incorrect data
- Processes not being documented or followed
- Correcting errors and begging forgiveness
- Lots and lots of email, Excel spreadsheets, and PowerPoint
- Disparate accounting, time collection, resource management, and reporting tools
- Making poor decisions based on old or incorrect data

If this is true for your company, these extra costs are degrading your profitability.

Many companies have what we call "Data Churn," and it is just accepted as part of the fabric of their organization. Just a quick example: Jim on Project XYZ has a spreadsheet that his PM loves. Jim hand-jams the information into the spreadsheet from the time collection system, the ERP, and an EAC tool. Sue on Project 123 also has a spreadsheet and it is being used for resource management, and she is calculating project specific metrics. Project XYZ has a different set of metrics than Project 123. All the disparate spreadsheets must then be consolidated by accounting or finance. What a nightmare! No one wants to let go of their custom spreadsheets! How many times have you heard, "My project is so unique that I can't use a standard set of processes and tools." Every time someone says that you should be hearing a LOUD cha-ching in the back of your mind. That's the sound of unnecessary expenses adding up.

As a PM or finance professional the consequences of poor quality data are a lack of confidence in your project status, long hours making reports and charts, a constant nagging feeling that the information you just gave the boss is wrong, and embarrassment both internally and externally.

For the organization, the consequences are loss of revenue, decreased profit, reputation, that the KPIs being used for decision making are wrong, and putting future wins at risk.

Now that we have established why bad data is prevalent, and how bad the consequences can be for your company, what should you do about it?

1. Admit that there is a problem with data quality

2. Make the decision that you want to fix the problem and put a plan in place

3. Involve the entire organization, and commit the discipline needed to make the changes

4. Involve executive management upfront and keep them involved to get the best results

5. Look at your current policies and procedures:

   - Interview owners of different types of projects to understand their needs
   - Review the existing policies and procedures and ask for input
   - Update as required
   - Make sure your policies and procedures are tailorable to different types of projects eliminating perceived uniqueness

4. Make sure you have a self-audit plan in place to assure adherence to the policies and procedures

5. Schedule informal internal audits to help project team readiness and compliance

6. As a part of the self-audit, perform data quality checks

7. Make sure you have tools that will enable the teams to be successful. Basic characteristics of a great ERP system for project driven organizations:

   - Cloud based to accelerate adoption
   - Fully integrated suite supporting people, projects, and financials
   - Easy-to-use for all stakeholders
   - Real-time reporting and dashboards
   - Robust resource management
   - Budgeting and Planning
   - Time Collection
   - Expense

8. Assess your current people, making sure you have the talent needed to be successful

9. Look to hire strategically in gap areas

10. Perform role-based training on policies and procedures

11. Perform tools training for all stakeholders

12. Establish standard KPIs across all projects and make sure they tie to corporate goals

13. Adjust as bottlenecks are found, and continually improve

The hidden nature of these costs and inefficiencies make them difficult to identify and hard to fix. So many times, you will hear, "Let's not fix it if it's not broken, Sally is doing fine with her Excel spreadsheets." The reality is that poor data quality is costing companies a fortune and slowing growth. Companies that recognize this will enjoy more success, both project execution-wise and financially.

The first step to insight from great reports and dashboards is having the underlying data correct.

Reporting

Reporting is a way that the information/data housed in the project based ERP can be communicated to the right stakeholders at the right time. Real-time information is key to managing the day-to-day operations of the business. In today's world many are data rich but knowledge poor for the reasons we discussed above. You will need a reporting engine to communicate status to the organization. Some ERPs have bolted-on report writing capabilities that require a separate application and oftentimes a metadata file that maps the ERP tables to the report writing tool. The authors of this book do not think that is best practice, we believe that the reporting tool should be housed natively in the project based ERP system.

If you can't measure it, you can't improve it!

Tips for Creating Great Reports:

1. Avoid terminal uniqueness—standardize on several reports for communication
2. Only put the needed information on the report—less is more
3. Real-time information must be reflected in the report
4. Make sure the users understand what is in the report and how the information is derived
5. Use the reports consistently in communications and in meetings/reviews

Types of Reports

A truly integrated project based ERP has real-time reports for all stakeholders throughout the life of the project. Standardizing on groups such as project, time and expense, financial, and resources covers the basics of the project lifecycle. The reports within the categories should be configurable, and users should be able to save their own unique configuration. Configuration is the key with standardization as the backbone. This way you are assured that the information in the report is the same for all users.

Examples of reports:

People Reports (Time & Expense Only)	Resource Reports	User Reports
Detail Reports	Detail Reports	Detail Reports
Periodic Reports	Periodic Reports	Periodic Reports
Summary Reports		Summary Reports
Status Reports		Status Reports

Financial	Project Accounting Reports	User Reports (Time &Expense Only)
Accounts Payable	Detail Reports	Detail Reports
Accounts Receivable	Periodic Reports	Periodic Reports
General Ledger	Summary Reports	Summary Reports
	Status Reports	Status Reports

Dashboarding

Dashboards are status and information for all levels within the organization. They should be a real-time visual representation of the role-based information needed to manage the business. You should be able to quickly see with colors and graphs where you are against your plans. Key Performance Indicators (KPIs) provide actionable insights to help you run your business on one single screen. The advantages of using KPIs are:

- Focus on corporate and strategic goals
- Real-time information gives you the ability to be proactive vs. reactive
- Study lessons learned so improvements can be made in the future
- Insight into what types of projects to chase

Tips for Developing KPIs for Your Organization

- Avoid KPI multiplying—KPIs should reflect overall corporate goals
- The data quality must be good to have accurate indicators
- The person responsible for the KPI must have direct control over results
- Relevance to all levels of the organization
- KPIs should be in simple terms
- Benchmark both externally and internally
- Collect lessons learned and learn from the past
- Utilize a system that has easy access to KPIs that are real-time and accurate
- Examples: Utilization, %Complete, Earned Value, Gross Margin%, Net Margin%, Burn Rate, etc.
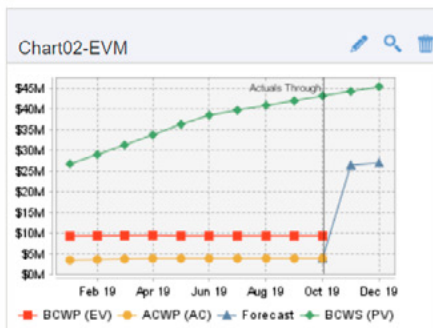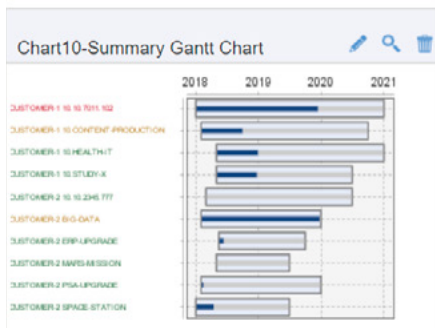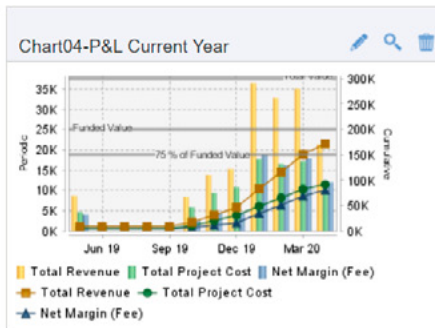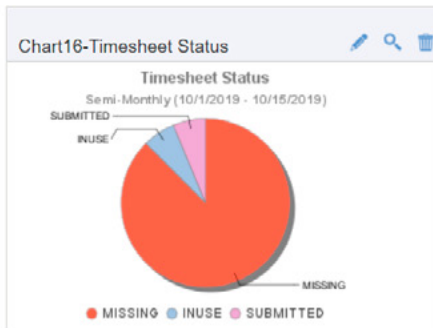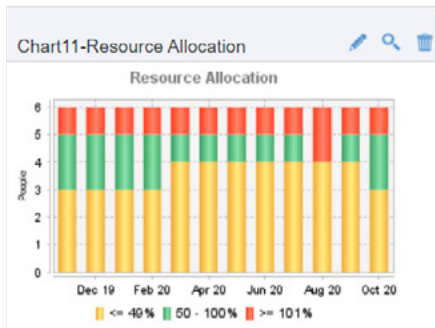
With dashboarding, just like reporting, the data must be real-time. You should be looking for a dashboarding capability inherent in your ERP system vs. exporting your data to a separate tool. A project based ERP system with defined dashboards purpose-built for project execution will save on IT costs, as well as give critical insight to managing your business according to plan. Integrated dashboards also ensure that roles which control access to information are up-to-date. In a separate system additional effort has to be expended to maintain permissions and access controls in the second system.

The Benefits of a FULLY Integrated Business Intelligence Tool

☑ Clients gain full access to their ERP data with a seamless experience

☑ Data-savvy clients can quickly build needed custom reports

☑ Ad hoc data discovery allows users to easily get role-appropriate information

☑ An optimum user experience is provided with best-of-breed report writing and formatting

☑ Data analysis results are consistent with other ERP reports

☑ The BI solution uses real-time data

☑ Updated data is immediately reflected in reports

CHAPTER 4

Project Management 101

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OBJECTIVES

PM 101
- The Project Manager
- The Project Lifecycle
  - Policies and Procedures
  - People—Collaboration
  - Tools
- Scheduling
- Budgeting and Forecasting
- Earned Value Management (EVM)

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Project Management 101

The Project Manager

A project is an effort that has a beginning and an end, defined tasks (scope), and an estimated cost for a good or service. Any deviation to scope, schedule, or cost could cause the project to go off the rails costing more and resulting in a late delivery.

The ring leader that is responsible for keeping the train on the tracks from beginning to end is called the Project Manager (PM). The PM has a very difficult job as he/she must be a jack of all trades wearing many different hats. The size and nature of the project will dictate the required number of hats.

SCOPE

COST

SCHEDULE
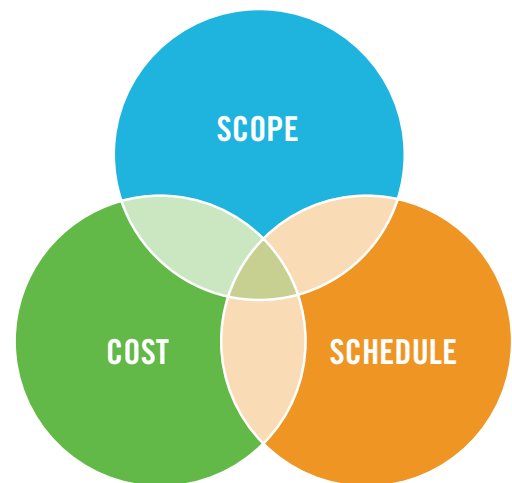
Project managers are key to the success of projects. Inexperienced PMs are a huge challenge for project based businesses today. Since they are so critical to the overall process it is important to develop and train PMs as well as provide a career path for them. In other words, recognize that project management is a discipline and it must be learned. Investing in your people will ultimately save you a lot of money. PMI is a great reference for PMs and can be found on https://www.pmi.org/.

The Project Lifecycle

The project lifecycle starts with a customer. Not all opportunities are found by business development as every so often the PM is generating new business (new and follow-on) since he/she owns the relationship with the customer. In a perfect world the PM and the Proposal Manager would be one in the same but that rarely happens. It's important that the hand-off between proposal to project initiation be handled smoothly; if not, the project is off to an unknown start.

CRM/Pipeline Management	Proposal Generation	Project Initiation	Planning	Execution	Accounting
Creating Business Strategies	Creating Winning Bids	Establishing the Project	Resources, Budgets, and Tasks	Visibility and Control Over the Project	Billing and Financial Statements

The initiation phase establishes the basic platform for a successful project. To be an executable project, the ERP captures from the proposal the business requirements, the high-level budget, a set of tasks and a preliminary resource plan. Considering the size and complexity of the project, the project manager develops a project team to help manage the project.

> The project initiation phase is critical and one aspect that MUST go well is "contracts to cash." What that means is that the contract must be entered into the system with the proper information so that there is no delay in being able to bill or recognize revenue. This process sounds easy, but many companies have not perfected it, and it can take up to 12 weeks in some cases before they can bill. Cash is KING so make sure you concentrate on perfecting your contracts to cash process.

The planning phase is when the project is detailed into consumable pieces of work. The scope is reflected in the WBS of the project. Resources, skill mixes, time-frames, and rates are planned to the lowest level of the WBS. The length and complexity of the project will dictate how far in the future it is practical to plan. For some projects you may want to detail plan the entire project, and in others you may want to plan out for 6 months and leave the remaining work in high-level planning packages. A realistic plan that all stakeholders agree on is the goal.

The execution phase is when the rubber meets the road. It is now time to implement the plans that have just been created. The project team is responsible for making sure they are executing to plan. We are not naive and do understand that not everything will go perfectly no matter how much prep work is done. Risks and issues will arise and the team will have to manage through them. How well the PM and their team handle those issues and resultant changes is a huge factor in the overall success of the project. The customer may not like it if things change but they will appreciate being kept informed and being in the loop on solutions and mitigations. During this phase of the project it is necessary that all stakeholders have visibility into their piece of the project. Real-time reports and dashboards will help keep role appropriate information flowing to ensure great business decisions.

The project closeout is also very important. Getting out the final bills, shutting down charge numbers, and archiving information is important. The execution of the closeout affects cashflow, profit, and past performance. This step is often overlooked. So, make sure it is done well with a defined process.

No matter what size or how complex the project is it will follow this lifecycle. By successfully following the lifecycle cadence your team will have the information it needs at the time it is needed. The lines of communication are open, a business cadence established, and the team will have bought off on the plans and are committed to success.

The Project Lifecycle is All About People, Processes, and Tools

To have a successful project management practice you must have integration of people, processes, and tools. If these three forces are working together in lock-step your project management maturity will continue to increase and so will your track record of successful projects.

People—It is often said, "People are our MOST important asset." Yet when budget cuts arise we see cuts in training, vacation, perks etc. People are expected to do more with less today so arm them with training, tools, and healthy culture. Training to understand the project management discipline is necessary because it is a learned skill. The more the project managers understand their role the less the likelihood is that there will be issues with projects from a cost and schedule perspective. Project outcomes are significantly better in organizations that invest in ongoing project management training, provide a career path, and establish formal processes to develop project manager competencies, when compared with organizations that invest in none of these.

> Don't forget that there are other project team members such as business analysts, schedulers, resource managers, control account managers—that need training too. That training should be role-based and cover the policies and procedures as well as tool operation.

People are social creatures and projects are social also. There is much communication and collaboration that must go on for a project to be successful. Keep this in the back of your mind…People create the policies and procedures to be followed and people operate the tools that are tracking the overall project status. We would say that people are your most important asset for sure.

Processes—A policy is a guiding principle used to set direction in an organization. A procedure is a series of steps to be followed as a consistent and repetitive approach to accomplish an end result. The documentation of the process is a policy. Having a set of policies and procedures that can be used throughout the organization will help the performance of the project teams.

Just because you have policies and procedures does not mean that your teams are following them. Make sure the policies and procedures are current and that you have buy-in from the project management community. Without buy-in the project teams are not as likely to comply. Experienced project managers may be reluctant, at first, to use a procedure that they didn't have a voice in creating.

When creating or updating policies and procedures consider the following:

- Policies and procedures should guide and establish best practices for your organization
- Ensure that the policies and procedures will help the teams be successful
- Make sure that they are tailorable to all projects in your portfolio
- Provide standardization across the enterprise
- Make sure there is a repository where all stakeholders can access the current documents
- Feedback loop to make sure policies are being followed
- Self-Audit Plan and Corrective Actions

Tools—Selecting the right tool for your project based business is a critical decision. Generic ERP systems just won't cut it if projects are the center of your world. Selecting the wrong tool can be very costly to implement and, worse, costly to maintain. A tool will not necessarily solve your problems as tools are enablers. It still takes people and processes to make the tools run and keep discipline so that the data is correct and reliable for decision making. You will have more success if you pick a tool that is truly integrated. A good way to test this is to ask to see the integration during a demo. Make sure it is not the promise of integration but a real test of how and when the data moves between systems or modules.

Watch out for tools that are truly not integrated. Make sure you are dealing with one database and one platform when you purchase you project based system. Don't be fooled by a name put on the front of a tool. Ask questions and be informed.

Scheduling

Creating and maintaining a project schedule is a basic need. There is a high-level schedule for every size project—at a minimum a start and stop date. A project schedule has all tasks time phased throughout the life of the project. If you are utilizing subcontractors, they should also be a part of your master schedule.

> **Integrated Master Plan (IMP)**—is an event-driven plan that documents the significant accomplishments needed to complete the scope of work and relates each accomplishment to a project event. It defines how the project work will be organized and contains the total scope to ensure the project outcomes meet the contract requirements. This plan is not time phased. Coding your IMP and cross referencing it to the statement of work (SOW) is a great way to ensure you have all scope included in the plan.
>
> **Integrated Master Schedule (IMS)**—is a hierarchical view of a project that includes milestones, tasks/activities, and deliverables, all with start, stop, and delivery dates. Tasks or activities are linked to each other with relationships (start to start, finish to start for example). They also have a duration that can be expressed in hours, days, weeks, months. Resources can also be attached to the tasks since resource availability and skills can drive a schedule to the right or left. People planning can also be accomplished in hours and full time equivalents (FTEs).

Your schedule should correlate to the project WBS, and include every SOW reference so that all scope is included. The schedule is the performance indicator to all project stakeholders, so make sure that the status is current via a defined cadence (daily, weekly, monthly depending on the needs of the project) and that it is updated for changes to the project. Having an updated and accurate schedule is a great way to communicate to the internal team and it will delight your customer to know what is happening with their project.

Budgeting and Forecasting

Budgeting is what the organization believes is achievable. There should be an action plan in place to achieve the budget. The budget is a target which the organization sets for itself, and becomes management's commitment to action.

Forecasting is the activity of predicting what will happen in the future. A forecast can be compartmentalized as short, medium, and long-term. It is based on the best assumptions known at the time of development. These assumptions will change over time and the forecast will need to be updated to reflect the changes.

Every project should have a performance management baseline (PMB) that becomes the basis for variance analysis to plan (Budget–Actuals). The budget is the commitment of the team. The budget is a living and breathing document and should be adjusted as scope changes. If the budget is out-of-date it will not provide the metrics needed to analyze variances.

The characteristics of an adequate budget are:
- All scope is included—Budgeting tools have user-defined-fields (UDFs) so you can track the SOW or IMP references, ensuring you have all the scope budgeted. Scope comprehension is a big challenge.
- Correlated directly to the WBS which serves as a foundational structure for reporting on the project.
- Correlated directly to the schedule. The schedule also has a PMB and the schedule and the budget should correlate as far as time periods and resources.
- Time phased through the life of the project. The best practice would have the budget broken out at a minimum by month but could be done by week. The units (month or week) needed are driven by the nature of the business.
- The baseline assumptions are current, and changes are included as required. You want this to be a current representation of the work you are to accomplish.

Forecasting is done at intervals in accordance with your policies and procedures. Most times forecasting is done monthly on an as needed basis and more stringent forecasting like bottom up or grass roots done every quarter or twice a year. Keeping an accurate forecast for both schedule and cost is a project management basic activity.

Why is forecasting so hard to do? There are so many moving parts making it hard to get arms around all the components of a forecast at one time. Below are the major players just for ONE project forecast and there may be 100's or even 1,000's of projects in the portfolio.

- ✔ **Customer**
- ✔ **Project Manager**
- ✔ **Subcontractors**
- ✔ **Functional Managers**
- ✔ **Financial Analysts**
- ✔ **PMO Resource Manager**
- ✔ **Business Development**
- ✔ **Contracts Manager**
- ✔ **Sales**
- ✔ **Human Resources**

Since forecasting is so important, teams need to have refresher training on basic concepts, tools training, and role-based policy and procedure training. Completion of a budget process and a definition of minor and bottom up forecasts ensure a process perspective. Since the budget is time phased the forecast must be also. Let's not forget tools. The forecasting tools need the ability to apply rates, do what-ifs, get real-time reports, and have dashboards that provide role appropriate information for good decision making.

Earned Value Management

Earned Value Management (EVM) is a project management best practice that flows directly with your established PM policies. The basics of EVM are plan, execute, assess performance, and monitor the project. EVM is simply a set of tasks that the PM would have to perform in the normal course of business and EVM just puts structure around the process. We discussed scope, schedule, and cost earlier in this chapter and everything the project manager does relates to these. EVM simply integrates the Big 3. The idea behind EVM is to provide an objective measure of performance from both a cost and schedule perspective, and not just a comparison of cost vs. what you expected to spend that month.

Establishing a baseline (cost and schedule) gives the PM the basis to measure performance. As work is completed, both progress and the cost for each task is earned. Simply said you are measuring the work performed on the task against the budget and the schedule. You can quickly see what was spent against the amount of work that was completed.

Companies utilize EVM often because it is a requirement from their customer, however there are benefits to implementing yourself:

- Proactive vs. reactive
- More accurate forecast (cost and schedule)
- Objectively report work progress against tasks
- See and explain variances to plan
- Management of scope and scope comprehension
- Competitive differentiator

We have included the EVM metrics in the appendix of the book so that you can easily find them.

> There are many incorrect myths about EVM that make it seem big and scary. Myths are not fact, so objectively look to see if EVM is right for your organization and tailor it to your business model. Good project management will give you a competitive edge and will improve profit margins.

CHAPTER 5

Estimate, Budget, Forecast

OBJECTIVES

Establish a project plan
- Proposal Estimate
- Work Breakdown Structure (WBS)
- Scope, Schedule, and Budget

Resource Planning
Resource Planning Metrics
Top Down or Bottom Up
Estimate-at-Complete (EAC) and Estimate-To-Complete (ETC)

Establishing a Project Plan

Estimating New Work (Proposal)

The planning process starts with a proposal estimate. Taking the time and effort to make a great proposal plan is a sure way to give the executing team the best shot for project success. The proposal estimate will have scope, schedule, and a cost. Understanding the scope is the first step. Utilizing a statement of work (SOW) or any document from your customer with the work required will establish the scope to be bid. Missing work can lead to schedule delays and cost overruns. Scope comprehension is hard when timelines to submit proposals are short. Associated with scope are the resources needed to execute and when those resources are available. The when and who make up the schedule and the cost portion of the estimate. Since your projects may be similar it is also advised to have a tool that can clone, utilizing a template, the project information, tasks, timelines, and the budget or estimate.

Steps for completing the proposal estimate:

1. Understand the scope, scope comprehension is the key to accurate estimating
2. Utilize the project template to clone or populate the project information, the past estimates, and the timelines for the tasks
3. Establish a WBS
4. Estimate the resources needed to complete the work
5. Understand the timing of needed resources
6. Include all materials, services, and travel required
7. Time phase the estimates
8. Ensure that the right skill set is available when you need them
9. Use To Be Determined (TBDs) if the name of the resource is not yet available
10. Gain buy-in from the proposal team and the functional departments before submission to the customer

Once the proposal is sent to the customer and negotiated (YIPPEE You Won the Project!!) it is handed over to a project manager to execute. Since a great proposal estimate was developed by following the steps above, the project manager now has clear defined scope of work to execute, and an achievable resource plan with **currently** available resources.

What is a Work Breakdown Structure (WBS)?

A WBS is a hierarchical decomposition of the work to be accomplished on a project. It is typically outcome or product based and should make the management of scope, schedule, and cost much easier.

> A WBS should be created in the proposal phase of the project. During the proposal phase the WBS may stop at the task level. It is during execution that the detail is added to the WBS.

Example WBS
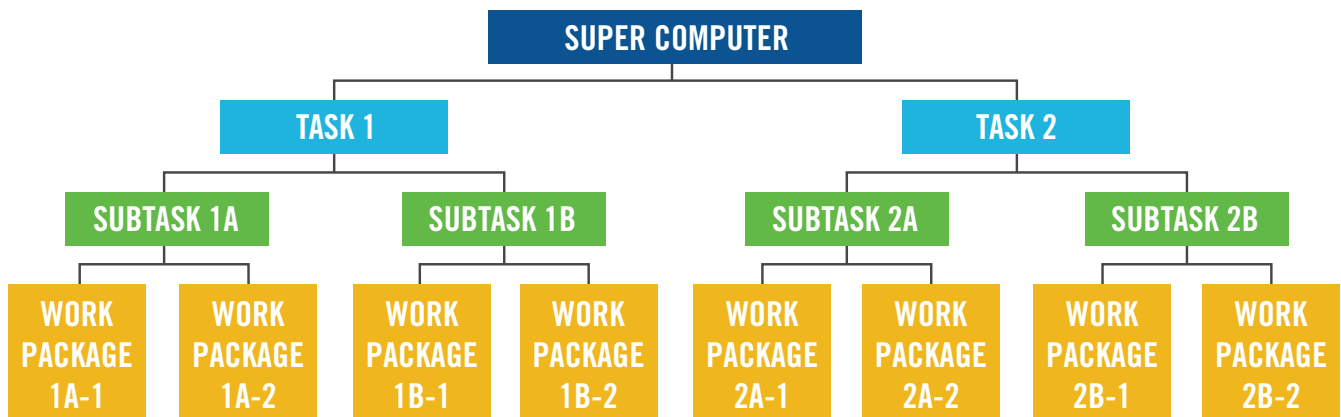
As you can see from the visual, the work is broken down into manageable chunks. The advantages of utilizing a WBS are below:

- Work is broken apart, so task management can be spread out amongst the project team
- Provides a visual representation of the project
- Provides the structure for scheduling, costing, and reporting on the project
- Gives a repeatable backbone for future projects
- Helps with scope management—comprehension in initiation phase and minimizes scope creep in execution

Scope, Schedule, and Budget

Scope comprehension is one of the toughest activities that both a proposal team and a project team must tackle. It sounds simple but with complex projects it can be difficult, because clarity of what will be delivered and what outcomes are expected are often not adequately described. Scope is tracked in a document called a statement of work (SOW). The SOW gives the teams the bones of the project and typically it has a reference number with each requirement. The reference number makes it easy to track. In fact, the SOW reference number can be attached to a task, subtask, or work package so that with a simple report you can cross reference to ensure all scope is covered. Scope creep is a continual problem and you must work hard to avoid adding scope without the associated budget and authorization. A robust change management process will help keep that from happening. Make sure your change management policies and procedures are up-to-date and that the teams have had role-based training to understand their part in the process.

> During the proposal phase make sure you have a thorough scope review with all stakeholders in the SAME physical or virtual room. If you miss scope during the proposal phase the impact will be passed down to the execution team. Missing scope on a contract takes money right out of your pocket so make sure you understand what your customer wants.

As we discussed in the Project Management Chapter a proposal and a project schedule are a must. The task need-by dates establish the schedule that provides the basis of the cost. In a professional services company the budget and resultant cost are driven by PEOPLE so our next section is on planning your resources.

Resource Planning

"Right People, Right Time, Right Task." This is especially true in professional services firms where people are the primary driver of revenue, and the primary contributor to cost.

People really are the most important asset a company, yet so many companies struggle to truly manage this resource. Many times, resource planning is done too late in the process to make a difference and the result is behind schedule and over cost projects. Even if proposal and project managers want to plan their resources, the reality is that most resource planning is done ad-hoc with Excel files at the project level. There is no consideration of skills or what other projects need, and there is no clue what new work will require from a resource perspective.

Resource Management Maturity Model

	Level 1—Ad-Hoc or Initial	Level 2—Project by Project	Level 3—Org Wide	Level 4—Data Driven	Level 5—Continue to Improve
People/Training	Minimal training on process or tools—no focus	Training is project specific on policies and procedures. There is some adhoc tool training.	Enterprise role based training on policies and procedures and tools.	People are trained regularly and certified on skills and tools. Training is a part of the culture.	The enterprise is attracting top talent and providing career paths.
Policies and Procedures	Very basic guidance that is not enforced. The resource management world is the WILD WEST.	Most policies are for a single project. Resourcing procedures are project by project.	Policies and procedures are enterprise-wide and all in the organization understand the need for a comprehensive resource planning discipline.	The organization is able to use metrics to drive business decisions around hiring and resource usage across the enterprise.	KPIs and metrics are tightly coupled with organizational goals to continue to advance the success of the business.
Tools/System	Use of spreadsheets and combo of tools (silos).	Using a project based ERP with fully integrated time/resource management. Projects are being resourced with combo of manual and automated operations.	Enterprise use of project based ERP. Resource plans are loaded and the enterprise can see supply and demand.	Enterprise use of project based ERP at an expert level. Role based dashboards and reports are delivered to resource stakeholder real-time.	The ERP is providing all necessary resource management info to everyone in the organization. The tool and its information are part of the fabric of the business.
Culture/Vision	We have always done it this way? Spreadsheets are cheaper to do resource planning on.	Need to improve project performance and resource planning is seen as a way to help improve execution.	Resource management is a key part of the overall project and org management. All recognize the importance. Operating as a matrix organization.	Resource management metrics are reviewed daily and the information is reliable and trusted for decision making.	Resource management is seen as a discipline with a career path. C-suite has the desire to continue to improve based on results.

Do We Have to Be a Level 5?

As an organization, it is important to decide what level is needed to achieve your business objectives. Some may say that level 3.5 is adequate and it will meet their needs. Others might need a complete managed process that is striving for optimization so a 4.3. Making that decision is key to establishing a roadmap and overall timeline.

Level 5
Continuous Improvement

Level 4
Managed Process

Level 3
Org Standards

Level 2
Basic Management

Level 1
Ad-Hoc

The Benefits of Maturing Your Resource Management Practice

- ☑ Improved visibility and control into enterprise resource needs and utilization

- ☑ Improved predictability and understanding of overall performance

- ☑ Common organizational standards ensuring consistent reporting, reduction of rework, and reduced dependence on heroes

- ☑ Optimization of the project management staff allowing them to focus on their customer, not on turning the crank

- ☑ More efficient communication within project teams and to senior leadership

- ☑ Delivery of real-time insight on project financials and enable resolution of identified risks

- ☑ More on-time and on-budget projects which equals a delighted customer

Below are 7 simple tips to help increase the efficiency of managing resources across the enterprise:

1. Have a centralized repository for all resource plans that is accessible for all stakeholders

2. Create a skills catalog so that the right resources will be available when (and where) you need them

3. Forecast resources throughout the project lifecycle, don't just start at contract award

4. Use a single pool of resources across your company, not just on one project or portfolio

5. Plan at the project level and roll-up to the enterprise—do not forecast by department only

6. Provide stakeholders real-time resource demand and Key Performance Indicators (KPIs) reports as well as role-based dashboards

7. Don't plan your most important resources on disparate Excel spreadsheets

Use a tool that enables all project stakeholders to visually see the availability, utilization, and time phasing of the resources. This level of visibility and control will help maximize overall performance and profitability of the project because clarity of what will be delivered and what outcomes are expected are often not adequately described for all stakeholders, but critical factors against which the success of the project will be measured.

Resource Management Basic Information

We have an Appendix assigned to metrics but if this is the only chapter you read, we want to make sure at a minimum you can answer the questions below. Metrics for resource planning/management MUST be real-time. Old data will not help you make great decisions, and can result in very costly ones.

At a minimum, you should be able to answer the following questions:

1. What utilization do you need to be profitable?
2. What utilization should you aim for to avoid burnout?
3. What is your actual billable and non-billable utilization?
4. Is your project probability up-to-date so that your people forecasting most accurately reflects the most likely billable revenue and utilization?

Estimate-at-Complete (EAC) and Estimate-to-Complete (ETC)

As the project progresses things will change from the original plan. A key resource may win the lottery or be needed on a higher priority project, and when this happens the forecast must be updated.

The EAC is the total actuals expended on the project + the dollarized time phased resources needed to complete the work. That time phased resource plan for work to be completed is called the Estimate-to-Complete (ETC). EAC and ETC can't live without each other.

$$EAC = Actuals + ETC$$

The EAC is a forecast of the project's cost when the work is complete. Throughout the project plans may change, the resources may change too, and it is the responsibility of the project manager to revise the work and replan tasks to best accomplish the end goal.

Forecasting Methods—Top Down or Bottom Up?

Forecasting is one of the most challenging activities for finance and project teams. The project teams in the trenches often do not realize the impact they have on the company's overall forecast and ultimately the direction of the organization's strategy. The building blocks of the Annual Operating Plan (AOP) and Long-Range Plan (LRP) are the project forecasts. There is not a magic forecast that comes from the corporate finance team…it is the grass roots project plans that guide the business. These plans (AOP and LRP) are critical for all decision making and companies that do a great job forecasting will be more efficient and successful.

In this section we will discuss two types of forecasting techniques. These are not the only two methods, but they are the most common.

Bottom Up

Bottom Up or Grass Roots planning is a technique based on the concept of asking those close to the project. They will better understand the project scope, customer, and subcontractors, and they can articulate the needs from a resource perspective, what they think the risks and opportunities are, and account for any constraints (ex. Skill sets or technical).

Pros:
- Project teams actively work to establish a cost and schedule forecast
- Improved communication at the project level and buy-in for the plan
- Potentially more accurate at the project level

Cons:
- Cycle time to complete planning will be longer due to the detailed nature of the planning
- The scope of the contract or project must be crystal clear
- May not tie to the overall corporate goals
- Alternatives may not be explored to meet the corporate goals

Top Down

Total forecasts and objectives are driven from the top (typically the C Suite). The mandated forecast is moved to lower and lower levels of the organizational hierarchy (ultimately to the people doing the work) to be developed and specified.

Pros:

- C Suite typically develops the plan and already buys-in
- Quicker way to forecast—short cycle time
- Aligns with corporate strategy

Cons:

- C Suite might not understand the issues/risks at the project level
- Little to no buy-in from the project managers
- Must back into the resource plan for the top down mandates

There are pros and cons of each methodology. It is up to management to decide what is right for the business. Many factors come into play. When is the forecast needed? Is there an M&A activity so that a forecast is required quickly? If it is needed quickly, pick top down forecasting. Do you have a risky specialty project and need to hit the numbers exactly? If so, pick bottom up as you will get the most precise answer for the project. Are there demanding profit goals that must be met? Is your business made up of a group of fixed priced projects and a risky specialty project? If so, use a combination of both.

PPM Capability Checklist

Forecasting

- [x] Handle data and reporting required for both internally and externally funded projects

- [x] Set up projects in the "idea" stage and automatically transfer all data when moved to the "execution" stage

- [x] Set up Work Break Down structure to reflect project activities in varying degrees of detail with easily developed hierarchies

- [x] Identify resource requirements by project or by activity

- [x] Compare resource demand to resource supply and visualize potential optionsl

- [x] Prepare and review resource capacity plans

- [x] Capture data on non-labor requirements

- [x] Set up multiple structures for managing indirect labor costs

- [x] Identify "what if" scenarios based on options in:
    - › Planned and assigned resources
    - › Direct costs
    - › Indirect cost structures
    - › Timing
    - › Value

- [x] Prioritize projects based on completion dates, complexity, and/or value

- [x] Evaluate and select program and projects based on costs / benefits or rewards

- [x] Select best case scenario and prepare proposal / investment documents

PPM Capability Checklist (cont.)

Project Monitoring

- ✓ Edit / update WBS while maintaining planned baseline
- ✓ Edit / update resource capacity plans while maintaining planned baseline
- ✓ Forecast revenue over a specific planning horizon
- ✓ Forecast profit margin or investment over a specific planning horizon
- ✓ View staff availability and commitments in real time
- ✓ Provide bi-directional integration with
  - › AP and AR systems
  - › General Ledger systems
  - › Service Desk systems
  - › Payroll systems
- ✓ Process invoices and produce client billing and/or internal cost allocations
- ✓ Calculate revenue recognition based on user defined formulas
- ✓ Calculate Earned Value

CHAPTER 6

Executing Projects

OBJECTIVES

Time

- Workforce Authorization
- Business Rule Enforcement
- Approval Workflow
- Ease of Use and Mobile

Expense

- Per Diems
- Receipt Attachments
- Credit Card Integration
- Ease of Use
- Time and Expense Integration
- Purchasing
- Revenue Recognition
- Billing/Invoicing

Time

As a professional services organization your most important resource is PEOPLE. People are executing the tasks and ultimately delivering your projects. Along the way you will want to understand who is working on the specific tasks of the project. In project world slang, we call that "charging to the project". Charging to the project requires a charge number. Charging to the project requires a task or sub-task which are typically the lowest level of the project. A timekeeping system is used for employees to track their time spent on project tasks both direct and indirect against a charge number.

> The charge number is crucial for costing and it is directly linked to a general ledger account. The GL account records the type of expense that has been incurred for financial and project reporting. For simplicity, a timesheet can associate the charge number to a task so only the task need be known by the person.

The people that are charging to a project need to have a simple way to account for their time. A web-based timesheet application is the best answer so that time can be entered anytime and anywhere. If the application is mobile that is even better. The accounting and project teams need an easy way to get the information they need from the timekeeping system.

The accounting team is interested in compliance, payroll, invoicing, project accounting, chargeback, and job cost accounting.

Accountant Needs Checklist

- ☑ Configurable timesheet application with information such as labor category, pay codes, charge codes

- ☑ Effortless support of DCAA timekeeping requirements, ensuring auditability of time entered, for government contractors, or other organizations

- ☑ Ability to capture comments and change reasons

- ☑ Customizable time periods that align to the accounting calendar

- ☑ Automatic population for holidays

- ☑ Labor dilution—total time accounting

- ☑ Enforcement of budgets, periods of performance, and other constraints

- ☑ Implementation of customized business rules on timesheet submittal

- ☑ Timesheet save and submittal to ensure time entered complies with all corporate and project standards. This is invaluable to avoid resubmitting timesheets and adjustments

- ☑ Speed payment of salary and expenses to improve employee satisfaction

- ☑ Produce invoices or charge-backs rapidly to increase cash flow

Project teams are most interested in visibility and control over their project. They want visibility in real-time into project hours, status, comments, and costs.

Project Team Needs Checklist

☑ Ability to enter time easily, anywhere and anytime, with detailed comments

☑ Approvals by manager, project manager, and/or customer

☑ Capture Time In/Out information at the project levels

☑ Automatic reminders with email for timesheet submittal and approvals

☑ Approvals with email event workflow

☑ Assignments providing authorization for a user to charge time or expense to a project or task

☑ Status of timesheet reports and remind managers to approve

☑ Integrated comparison of actuals with budgets and plans, with variances

☑ Timesheet status in real-time and drill down to see which employees have timesheets in which category

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Work Assignments

One of the most difficult aspects of time collection is getting people to charge to the correct charge number. If allowed, people might continue to charge to a number that they have been charging to out of habit or just grab a charge number not really paying attention to what task the number is related to. You want to make sure charging is easy and can be accurately recorded with minimal risk for mischarging.

You should be looking for a system that will allow you to easily authorize who can charge to a specific charge number and for how long. It is much easier for your employees if only the charge numbers that they can charge to are visible on their timesheet. This minimizes the risk of a mischarge.

Correcting timesheets is a major headache for the accounting team. Labor corrections can affect invoices and in turn impact cashflow. Depending on when the labor error is noted it could also require an invoice rejection and resubmittal instead of a simple correction in the system. Having a system is important and you will need to continually educate the workforce on the policies and procedures around labor charging. Education and process adherence will lessen the burden of correcting entries and will make invoicing quicker and more accurate, thereby increasing cashflow.

Business Rule Enforcement

Having a system that is flexible enough to meet your specific business rules is very important. You don't want to do manual reconciliations or journal entries to ensure proper accounting of your labor. Business rules that come to mind are:

- Internal approvals
- Adherence to union regulations
- Accounting for exempt and non-exempt labor properly
- Handling of multiple overtime rules
- Tracking of Paid Time Off (PTO) and other leave categories
- Adherence to accounting calendar
- Tracking of Family Medical Leave Act (FMLA)

Automated approval of time reduces costs and helps to make sure the charge is legitimate. The result of accurate charging is accurate billing. Most approvals are done by a functional manager or a project manager. Most project based businesses use a combination of manager and project approvals.

You will be required to have a system that supports daily time entry, which is a requirement of DCAA for both paper and electronic systems, but daily approval is not a DCAA requirement. Make sure that your approval policies and procedures support your business needs.

Ease of Use—Simple and Mobile

The time collection system is being utilized by everyone in the organization so it must be easy-to-use. Employee timesheets should be intuitive and present only the information needed by the employee to charge their time correctly. Not only should the application be easy-to-use, but it should also be easy to see the information produced from the timesheet. Reports and dashboards should provide all stakeholders the information they need to do their jobs. This information includes what projects are being charged to, status of your timesheet, amount of leave by type, and leave requests.
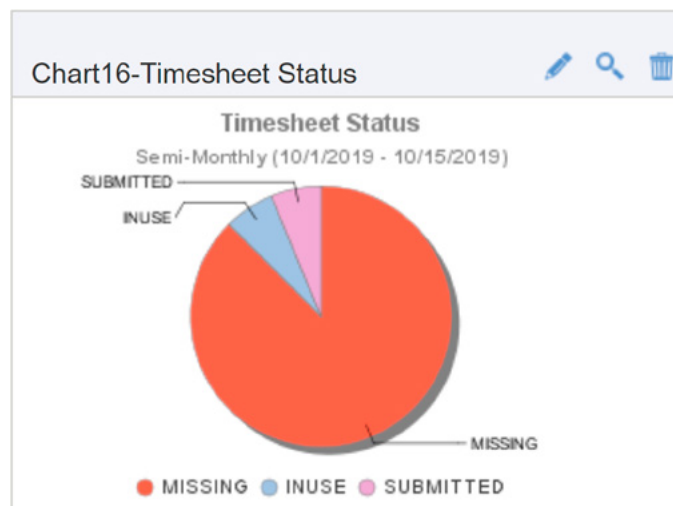
Mobility is critical in today's world. We are dependent on our phones and tablets. The smart phone has really become the hub of all activity for our lives both personal and business. So, it is only logical that time should be able to be approved and entered on a mobile device. Unless you are in a very remote area there is no reason in today's world for time policies and procedures to not be followed. This is especially important for professional services firms who may spend time on a secure customer site without access to an outside system on their desktop, or for those who want to use mobile devices for convenience when they travel.

Expense Reporting

Expense reporting is a tedious job for both the employee reporting the expense (typically travel) and the accounting team that audits the reports. There are many rules and regulations surrounding expense reporting. You want a system that enables the anytime and anywhere collection of employee travel and material expenses as well as the submission of requests for expense authorization. Having automated approval and support for Government expense reporting guidelines eliminate administrative effort will avoid errors, and increase efficiency.

You will want to have a fully integrated tool that pushes cost to the projects and to the financial system for payment. Many organizations use allowable amounts for lodging, meals and other expenses, whether determine by Federal Guidelines or internal policy. If this is the case, it is important that the tool you pick has built-in compliance with per diems. To allow for audits, increase efficiency and reduce errors, it is also important to attach electronic receipts for inclusion in the approval process, and integrate with Corporate Credit Card data to avoid errors, and ensure all charges are reimbursed.

Just like we discussed with time, you should have approvals and business rules that are applied to expense. Look for a system that lets you have the needed layers of approvals and will work in concert with your business rules as well as your policies and procedures.

Per Diems

Per Diem is Latin for per day. Per Diem is defined as the daily allowance in dollars that is given to employees per day to cover living expenses when traveling for work. Fixed per diem (and per mile) rates eliminate the need for employees to prepare, and employers to scrutinize, a detailed expense report with supporting receipts to document amounts spent while traveling on business. Instead, employers pay employees a standard daily rate without regard to actual expenditures.

GSA establishes the per diem rates for the lower 48 Continental United States (CONUS), which are the maximum allowances that federal employees are reimbursed for expenses incurred while on official travel. Most companies have per diem rates for hotels and MIE; government contractors must abide by GSA rules. The CONUS per diem rate for an area is three allowances: the lodging allowance, the meals allowance, and the incidental expense allowance. Most of the CONUS (approximately 2600 counties) are covered by the standard CONUS per diem rate. There are hundreds of Non-Standard Areas (NSAs) that have per diem rates higher than the standard CONUS rate. Use this link to access the most current rates https://www.gsa.gov/travel/plan-book/per-diem-rates.

General Service Administration (GSA) is an independent agency of the United States Government established in 1949 to help manage and support the basic functioning of federal agencies. GSA supplies products and communications for U.S. Government offices, provides transportation and office space to federal employees, and develops Government-wide cost-minimizing policies, and other management tasks.

1 Choose a Location or **Use the Old Rate Look Up**

Use Your Current Location

or

State

Select a State   ▼

City (Optional)

or

ZIP

Reset	Next

Rates for Alaska, Hawaii, U.S. Territories and Possessions are set by the **Department of Defense.**

Rates for foreign countries are set by the **State Department.**

For government contractors, it is important to have a system that has built-in Federal Per Diem Schedules and areas (locations) selectable from a dropdown. This feature is also important for the accounting team since every dollar over the per diem is considered unallowable and can't be billed to the US Government.

Receipt Attachment

For both internal and external auditors, having receipts along with the expense statement is necessary. The policies and procedures you have in place will dictate if a receipt is required or not. For instance, your company may not want to see receipts for meals less than $20, but everything over $20 the employee will need a receipt. The tool you select should have this business rule embedded so that the employee knows when a receipt is required. Employees should be able to attach the receipts to the overall expense statement so that the auditor can audit easily.

Credit Card

Whether you issue corporate cards or "bring your own card" it is so much easier for employees to be able to upload or access their credit card information. Typically, credit card transactions are loaded into a central repository where expense users can subsequently transfer line items to specific expense reports, identifying the expense type to associate with each transaction. Imported credit card transactions can be associated with the expense user via their credit card number being stored in their user profile. This makes expense reporting easier for the end-user making their expense statements more accurate and timely.

Ease of Use and Mobility

Accounting for expense is tedious and you will want a tool that is easy for large groups of employees with different backgrounds to utilize. As much automation as possible is important. Mobile applications will also help the employee with accuracy and timeliness of expense reporting.

Importance of Time and Expense Integration

There are multiple benefits of having time and expense in one integrated tool. It is even more advantageous to have both time and expense a part of your ERP. When we say "part" we mean in the same tool, same database, and the same technology.

Below are a couple of benefits you can receive by picking a truly integrated tool:

- Directly share expense types with appropriate GL codes
- See travel and ODC costs integrated with project labor reports in real-time
- Control advances to ensure correct payments
- Speed in billing and invoicing, increasing cashflow and accelerating revenue recognition

Time and Expense are two of the most critical functions for performing projects and capturing cost. Make sure you take your time and really understand the integrations of the tools you are picking.

Purchasing

Purchasing is the discipline of acquiring goods or services to accomplish the scope of a project (direct or indirect). The reasons organizations utilize a structured purchasing procedure is to maintain the value of the company's services, to minimize cash investments, and make the overall organization more competitive. Purchasing often requires the same discipline as the Contracts department requires: 1) resource (scope) definition 2) purchase requisition asking for approval to purchase something 3) bids and subsequent evaluation 4) billings 5) project status. The purchase can be done with an Accounts Payable Voucher (credit card or utility bill) or it can be recorded via a purchase order. A purchase order is a document issued by a buyer to a seller indicating the needed resources and the price for them.

In a project world every purchase is made directly to a project. The high-level process looks like the diagram below and the needed features in the project based ERP are also included in the diagram.
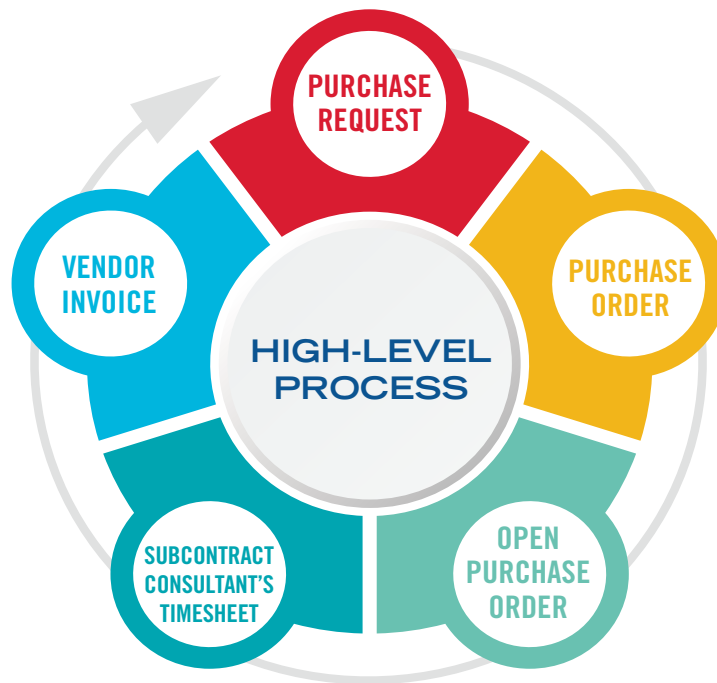
Contractor Purchasing System Review (CPSR)*

While the prime contractor has the responsibility of managing its purchasing program, the DCMA CPSR Team is responsible for evaluating the contractor's overall purchasing system to ensure that it is efficient and effective in the expenditure of Government funds and in compliance with contract requirements. The objective of a CPSR is to evaluate the efficiency and effectiveness with which the contractor spends Government funds and complies with Government policy when subcontracting. The review provides the Administrative Contracting Officer (ACO) a basis for granting, withholding, or withdrawing approval of the contractor's purchasing system.

The CPSR shall be conducted in accordance with this Guidebook, DCMA instruction 109, the Federal Acquisition Regulation (FAR) subpart 44.3, and the Defense Federal Acquisition Regulation Supplement (DFARS) subpart 244.3. A CPSR is conducted when a contractor's annual sales to the Government are expected to exceed $50M in a 12 month period. These Government sales include all Government contracts/subcontracts minus those competitively awarded firm-fixed-price, competitively awarded fixed-price with economic price adjustment contracts, or sales of commercial items pursuant to FAR part 12. Ultimately, the ACO shall determine the need for a CPSR based on, but not limited to, the past performance of the contractor, and the volume, complexity and dollar value of subcontracts. All CPSRs, except a Follow-up review, are predicated on a Risk Assessment (RA) evaluation.

Contractor Purchasing System Review (CPSR) Guidebook
May 9, 2017

* This audit is for government contractors only.

The reason that having a fully integrated or ONE system is important is so that purchasing will integrate with the timesheet and expense reports. This provides optional validation of subcontractor labor and expenses against the purchase order (PO) at the project level, and maps the subcontractor's timesheet and expense report lines back to the PO. The automation saves manual effort and time that can be turned into real profit.

Open commitments tell you the amount of committed dollars you have on purchase orders less recorded actual expenditures. This is a very important calculation when completing a monthly ETC as it tells you precisely what is left to be spent on each purchase order and each project. Having a purchasing system that is part of a completely integrated ERP system gives project managers a true advantage when forecasting.

Revenue Recognition

Revenue is the amount of income the organization is making. It is one of the most important metrics/KPIs that a business tracks. Revenue recognition is a cornerstone of accrual accounting along with the matching principle. They both determine the accounting period, in which revenues and expenses are recognized. According to the principles, expenses and revenues are recognized when they are incurred or performed, regardless of when the cash is paid or received, respectively. Revenue is accounted for in two types of accounts.

- Accrued revenue: Also known as unbilled revenue where the revenue is recognized before billed to customer. (Cash receipt is inapplicable because it would sit on AR anyway.)
- Deferred revenue: Cash is received before the revenue is earned or recognized.

Make sure the system you choose can handle revenue recognition the way you need it to be calculated for your organization. Look too for a system that automates the professional services "bid-to-bill" lifecycle, and allows your organization to forecast and track revenue across different contract types, shorten invoice cycles, and provide authorized managers with real-time insight.

Revenue realized during an accounting period is included in income. Revenues from rendering services are recognized when services are completed.

Some revenue recognition formulas are called Percentage-of-Completed-Contract Method, Completed-Contract Method, and Cost to Cost. There are many other formulas that can be utilized and will depend on the type of contract—Cost Plus, Fixed Price, or T&M.

Financial personnel are not the only people that are interested in revenue recognition. The Project Manager is also responsible for meeting revenue goals on his/her project. To provide the PM with the amount of visibility and control needed over the project, the tool will need to be capable of performing revenue modeling for forecasting and planning. An additional capability the tool will need to have is visibility into revenue calculations prior to posting. Information is power and staying on top of the project in real-time will help the chances of execution success.

Billing and Invoicing

As a professional services company, it is critical to be able to automate and shorten the bid-to-bill lifecycle. Professional services organizations need revenue recognition and billing to be completely in lock step. The concept of billing and invoicing does not need much explanation as we deal with bills continually in our daily lives. Billings/Invoices typically are a form that contain information like name, address, payment terms, a unique id, elements of cost, direct costs, and indirect costs applied.

Billing and Invoicing Tool Checklist

- ☑ A time application that is a part of the project based ERP system so that billing can be done quickly

- ☑ Traceability of all transactions

- ☑ Ability to create multiple, standard invoice formats to be used across projects, showing summary or detailed level information

- ☑ Hide or show Cost Element detail on Cost Plus Invoices

- ☑ Include Fixed Price, Time & Materials, Pre-Bill Labor, and Additional Items on the same invoice

- ☑ Defer items from the current invoice for future invoicing

- ☑ Add one-time items such as additional fees or discounts

Special Topic on SubK Labor

As a professional services firm your business is PEOPLE, and you make money by turning people into revenue. So, it is easy to understand why it is important to collect labor accurately and in a timely manner, so that you can bill and recognize revenue as quickly as possible. This process is difficult enough internally, but when you add subcontract (SubK) labor, the challenges are even greater. The process can tak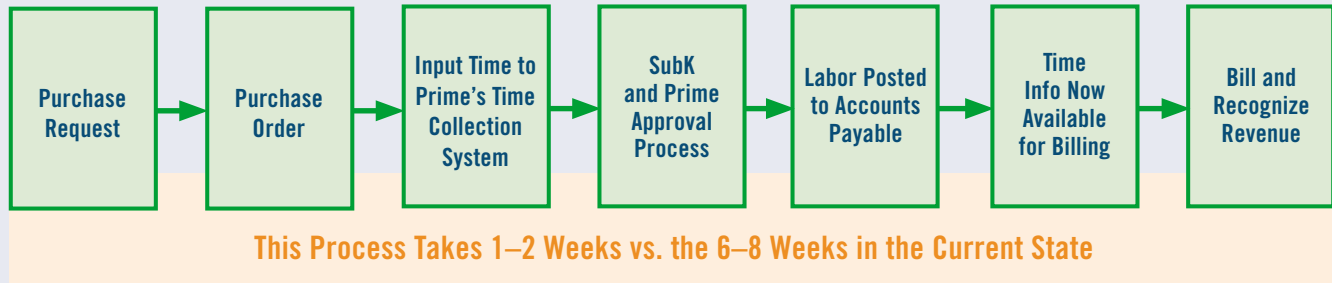e up to 8 weeks from the time labor is charged until is it billed and there is significant manual effort involved. Time collection systems that are client server, disparate, and paper driven will slow down the process costing the business big bucks. So, what is the solution?

In the current state SubK employees are charging to their own time collection system. All the work authorizations are done on the SubK side. Billings are then submitted to the Prime in a lump sum format with time sheets attached as backup. The submittal can be via snail mail or email. The Prime has no idea what is coming in the billing or who has charged what. The labor reconciliation and approval process for the Prime is time consuming and manual. Time and expense entry is disconnected from the Prime PR and PO process. If there are issues the billing must be sent back to the SubK and additional time and effort are put into the process. This cycle could be 6–8 weeks from the initial labor input. Putting an additional month or more into the cycle is costly.
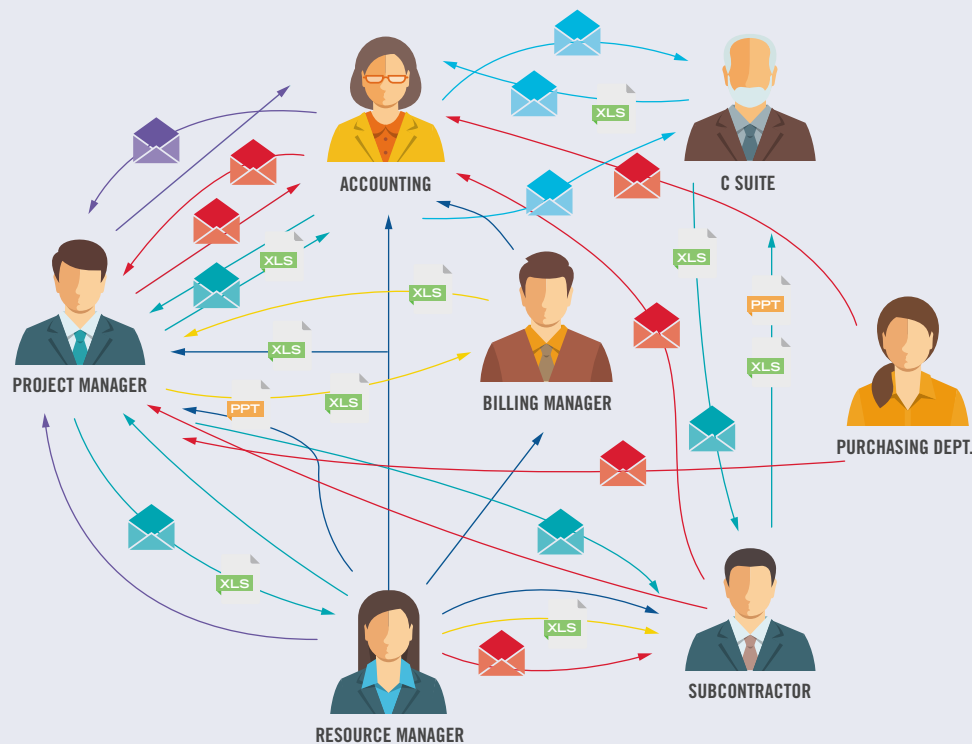
The process can be dramatically improved by utilizing a system that all SubK's can access for charging and billing. For example, utilize a web-based project based ERP solution so that all parties are operating from one system. This Best Practice Process helps both the SubK and the prime collect money faster and more efficiently, a complete win win! SubK's input their time into the Prime's time collection system. The approvals are done real-time by both the SubK and the Prime. Labor is then posted to AP, and the time is now available for billing and revenue recognition. There is no manual activity, reconciliations, or mailing of invoices. Best of all, there are no surprises!

| Purchase Request | → | Purchase Order | → | Input Time to Prime's Time Collection System | → | SubK and Prime Approval Process | → | Labor Posted to Accounts Payable | → | Time Info Now Available for Billing | → | Bill and Recognize Revenue |

This Process Takes 1–2 Weeks vs. the 6–8 Weeks in the Current State

A large government contractor has implemented a process around SubK labor charging and invoicing that is saving 4–8 weeks of cycle time, and so can you!

The Best Practice Process helps save time and money for both the Prime and the SubK.

Best Practice Process Benefits for Prime:

- Increase in efficiencies in the SubK's cycle from incurring labor to collecting cash
- Decrease in cash cycle time of 4–8 weeks per SubK to send invoices
- Decrease in accrual amounts
- Decrease in days working capital through reduced days sales outstanding
- Enhance project execution with real-time visibility and front-end controls over SubKs on project
- Ability to dial in the funding and maximize every penny
- Increase profits and cash flow
- Eliminate need to reconcile SubK invoices to contracts/project budgets
- Improve relationship with SubKs
- 2- and 3-way matching for subcontract consultants
- Optional approval process
- Commitments decrease as time and expenses are entered in Unanet
- Period sensitive commitments reporting
- Assign subcontract consultants and PO to Project

Best Practice Process Benefits for SubKs:

- Faster payment cycle, increasing cash flow
- Less manual effort and fewer mistakes
- No invoices are produced and mailed
- No rework cycle
- Increase profits and cash flow
- Improve relationship

Needed Functionality for Project Execution

Day to Day Execution

- ☑ Day-to-day sharing, collaboration and communication through
    - › Notes and issue tracking
    - › Document sharing
    - › Project alerts
    - › Automated Reporting

- ☑ Receive and catalog personnel and resource requests via workflow

- ☑ Manage and reassign resources as needed

- ☑ Capture and validate time and expense entry via workflow and wizards

- ☑ Provide approval workflow for validated time and entry expenses

- ☑ Provide mobile device support for time and expense entry and approval

Control and Risk Management

- ☑ Optimize utilization through real-time monitoring of staff availability

- ☑ Optimize labor costs through real-time visibility into mix of internal and external resources

- ☑ Send automated alerts when projects hit user-defined thresholds for specific variances

- ☑ Manage sub-contractor time and expense

- ☑ Standard reporting that identifies project variances from plans in terms of
    - › Direct costs
    - › Indirect costs
    - › Resource utilization
    - › Time delays
    - › Scope changes

Needed Functionality for Project Execution (cont.)

Control and Risk Management (cont.)

- ☑ Reporting that identifies:
  - › True and real-time profit margin
  - › Time spent on value-adding tasks
  - › Time spent in administrative and support activities
  - › Over and under-utilized staff and external resources

- ☑ Report delivery based on:
  - › Automated schedule
  - › Event triggers
  - › Special needs

- ☑ Visibility into current and future project pipeline

- ☑ Ability to identify issues and risks and monitor mitigation activities

Other Capabilities

- ☑ Social networking tools, issue tracking, threaded discussions, email alerts

- ☑ Support and structure to implement best processes and procedures

CHAPTER 7

Financials

Accounting is a critical component in running a successful business. Accounting software records and processes accounting transactions such as accounts payable, accounts receivable, general ledger, payroll, and trial balance. Accounting is telling the business by category what is being spent and on what.

The chart of accounts (COA) is the WBS of the accountant's world and it provides a complete listing of every account in the ERP system. An account is a unique record for each type of asset, liability, equity, revenue, and expense.

Quick Term Refresher

Asset = resource with economic value
Liability = monies owed
Equity = ownership interest in a business
Revenue = income produced by a given source
Expense = money spent on something

Since accounting is so important to the organization it is critical to have a financial system that accurately reflects the cost and resultant profit your business is making by completing projects for a customer.

Generally Accepted Accounting Principles (GAAP)

GAAP (pronounced gap) is a collection of commonly-followed accounting principles, rules, conventions, and standards for financial reporting that are typically used by US companies. The American Institute of CPAs maintains and decides on the standards used in GAAP. All companies that are public are required to report their financial statements using GAAP standards. GAAP changes over time. Be sure to apply the latest GAAP principles.

General Ledger (GL)—Accounts Receivable (AR)—Accounts Payable (AP)

The general ledger or GL is where the recorded costs, debits, and credits, are collected by account (COA) to be assimilated into the organization's financial statements. In a project world each transaction must be tied directly to a project and an organization to avoid manual reconciliations that cost time and money.

There are circumstances when privately held companies need to report in accordance with GAAP—banks, lenders etc. may require compliance to the standards before issuing a loan. Other stakeholders may also want you to meet the GAAP standards, such as your customers and Government agencies (DCAA for example). Maintaining GAAP compliant financial statements will only help you in the long run, especially if you are looking to sell your business and it is an overall competitive advantage.

The advantages of a project based ERP GL:

- Tightly integrated with the project, eliminating errors and reconciliation
- Multi-version budgeting
- Bank account reconciliation

Accounts receivable (AR) is money owed to a company by its debtors. It is money you are counting on to run your business. AR is considered an asset.

Advantages of Project Based ERP AR

☑ Tightly integrated with powerful billing capabilities

☑ Unparalleled traceability into all transactions

☑ Customer payment application and deposit

☑ Automated receipts discount calculations based on invoice terms

☑ Small balance write-offs

☑ Can provide visibility to the project manager of customer or projects AR; this can be invaluable where the PM is responsible for managing the customer relationship

Accounts receivable aging reports are a must, and the report should run easily out of your project based ERP system and give you the days past due by customer and/or project.

Accounts payable (AP) is money that an organization owes to its creditors. AP is a liability and because the payback terms are very short it is considered a current liability.

Features of Project Based ERP AP

☑ Tight integration with projects

☑ Recurring vendor invoices

☑ Period-sensitive AP aging and bank account reconciliation reports

☑ Flexible automated system check payment selection and check printing process

☑ 1099 support

☑ Journal entry supports automatic recurring and reversing entries, document voiding, role-based posting authorization, and attachments

Cost Pools

Cost Pools are groupings of individual costs of a similar type. In a project world, organizations pool similar indirect costs and then allocate them to the project or projects that benefit from the costs. Once costs are allocated, total project cost, including both direct and indirect costs will be understood.

> Much can be learned by referencing FAR Part 31—Contract Cost Principles and Procedures. Take some time and study before setting up your cost pools.

Direct costs are easy to identify:

- Direct Labor (employee & subcontractor timesheets)
- Direct Travel (employee & subcontractor expenses)
- Direct Materials
- Other Direct Costs (ODCs)

Indirect Costs are not directly identified with a single, final cost objective, but identified with two or more final cost objectives or an intermediate cost objective. After direct costs have been determined and charged directly to the contract or other work, indirect costs are those remaining to be allocated to several cost objectives.

Common indirect cost pools are:

- Fringe Benefits—expenses associated with employee welfare. (example: PTO, health insurance premiums)

- Overhead—costs required to run a business, but which cannot be directly attributed to any specific business activity, product, or service. Examples of overhead expenditures are electricity, rent, and computers to name a few.

- General & Administrative (G&A)—refers to expenditures related to the day-to-day operations of a business that are not directly associated with production of goods or services. G&A includes things like bank fees, your accounting team, legal costs, etc.

- Subcontractor Handling—costs associated with subcontract work for a project. These costs are typically for AP, purchasing department, etc.

- Service Center—costs that are collected and then allocated to other pools, or directly to projects. Example is a centralized Project Management Office (PMO) where costs are allocated or charged out based on an appropriate metrics such as the direct labor hours or cost of the project.

- Cost of Money—COM is intended to compensate contractors for the capital cost of certain facilities in the performance of contracts, and therefore has many of the characteristics of a reimbursement for interest.

Indirect cost rates will ensure that the proper share of the indirect costs that the organization incurs in support of that direct effort are charged to the contract.

Indirect cost rates are expressed in terms such as dollars per hour or percentage of cost. Indirect cost rates are calculated for each accounting period by dividing a pool of indirect costs for the period by the allocation base (e.g. direct labor hours or direct labor cost) for the same period.

$$\text{Indirect Cost Rate} = \frac{\text{Indirect Cost Pool}}{\text{Indirect Cost Allocation Base}}$$

Once a rate is established, you can use it to determine the amount of indirect cost that should be allocated to the project. Simply multiply the rate by the estimated or actual amount of the allocation base in the project for that period. Projects with a greater share of the allocation base (e.g., direct labor dollars) will be charged a greater share of the related indirect cost pool. Projects with a smaller share of the base will be charged a smaller share of the related indirect cost pool.

Cost pools are divided into categories:

Primary Cost Pools—cost pools used to make the final allocation of indirect costs to cost objectives.

Secondary Cost Pools—an intermediate pool that is used to allocate costs to primary pools (example: a building shared by multiple departments and the allocation should be based on floor space occupied). If the costs are grouped for allocation, the cost grouping is known as a secondary pool.

Service Centers are unique in that they include costs that can be allocated as a direct cost or an indirect cost depending on the circumstances. Primary allocation concerns include identification of:

- The user of the service and
- The purpose of that use

An indirect cost allocation base is some measure of direct contractor effort that can be used to allocate pool costs based on benefits accrued by several cost objectives. Examples of typical bases: Direct labor hours and dollars. The type of base determines whether the indirect cost rate will take the form of a percentage or a dollar rate per unit of measure.

An example is *Dollars per Direct Labor Hour = Pool Dollars/Direct Labor Hours*.

Whatever the allocation base, the larger a project's share of the allocation base for the accounting period, the larger the contract's share of the related indirect cost.

> An entire book could be written about cost pools as there are many variations and each organization has their own way of handling them. You need a system that is flexible enough to handle many variations of pools, so be sure to look closely at the tool you are selecting and assure yourself it will handle the complexity of your pools.

When selecting an allocation base for the indirect cost pool, firms consider the type of indirect costs in the pool and whether the base will provide a reasonable representation of the relative consumption of pooled indirect costs by direct cost activities. Each allocation base should be representative of the breadth of activities supported by the pooled indirect costs.

CHAPTER 8

Complying with Regulations

OBJECTIVES

Government Contracting
- Definition of DCAA
- FAR and CAS
- Frequent Audits
- Definition of DCMA

How to Prepare for an Audit

Being a government contractor requires familiarity with the rules and regulations that will be imposed. The purpose of this chapter is to give you an overview of the audit agency and a high-level overview of key audits for which you will need to prepare.

What is the DCAA?

Let's quickly level set on the mission of the Defense Contract Audit Agency (DCAA). Their primary function is to perform contract and financial audits for agencies that are responsible for acquisition and contract administration for the US Government. DCAA audits ONLY government contractors. They conduct these audits in accordance with the Generally Accepted Government Auditing Standards (GAGAS). The principles that GAGAS embodies are unbiased audit conclusions based on facts.

> If you are interested, there is a wealth of information on the DCAA website www.dcaa.mil to help you more thoroughly prepare for impending audits. You can find lots of audit information in the DCAA Letter to Congress on the same website. Bookmark the site so that you have easy and repeatable access to the information.

DCAA is a very vital part of the acquisition process for the Department of Defense (DOD) and certain other agencies. Their charter is to make sure that the taxpayers' money is spent responsibly and ethically by conducting audits that ensure the validity of costs throughout the acquisition process. They have a tremendous amount of influence because they communicate with the Contracting Officer (CO) and make recommendations that have an impact on contract negotiations. The recommendations help the CO understand what the price of the contract should be. In the past the relationship between the government contracting community and DCAA has been strained. DCAA is making a concerted effort to improve overall relationships with government contractors by improving communication and coordination.

FAR and CAS

In government contracting circles you will hear the words COMPLIANCE and COMPLIANT over and over. So, you may be asking, "What Governs Compliance?" There are two major sets of rules that apply: FAR and CAS. The Federal Acquisition Regulation (FAR), is the holy grail of acquisition. It is used to guide agencies when they are buying goods and/or services. The FAR can be found online or you can grab it at your local library. Cost Accounting Standards (CAS) were established to drive standards into cost accounting practices. There are three major pillars of CAS that include measurement of cost, cost in the proper accounting period, and proper allocation to cost objectives. These two sets of rules are used by DCAA as the basis for all audits. The cost of not complying can be expensive. Not following the rules can lead to billing withholds, loss of certifications, loss in the bidding process, fines, and if the non-compliance is deemed very serious can result in jail time for the employee violating the rules.

> Don't forget that there are other rules and regulations that need to be complied with. Generally Accepted Accounting Practices (GAAP) outline how to report financial statements. Also, in 2002, the United States Congress passed the Sarbanes-Oxley Act (SOX) protecting shareholders and the public from accounting errors and fraudulent practices in enterprises, and is meant to improve the accuracy of corporate disclosures.

Common Audits

Each audit that DCAA completes, whether before or after contract award, supports Government officials who negotiate prices and award contracts for goods and services.

Forward Pricing

Forward pricing audits are conducted on contract proposals, are related to a specific contract, and are conducted prior to award (usually during the selection process). Forward pricing audits are conducted on a Forward Pricing Rate Proposal (FPRP) that is related to a base year, usually the current year and 2 or more "out years." This FPRP is not specific to a contract. This audit is generally completed before contract award and will usually result in a forward pricing rate recommendation (FPRR). The intent is to ensure out year rates are reasonable and realistic for use in forward pricing. Infrequently, the Government will enter into formal negotiations with the contractor based on the FPRP, resulting in a bilateral Forward Pricing Rate Agreement (FPRA) wherein the contractor agrees to use the negotiated rates in all proposals for the current year. There are less than 200 negotiated FPRAs in all of DOD. Simply said, DCAA agrees with the future rates you are using to bid. The auditor will evaluate the estimate and verify that the Government is paying a reasonable price for goods or services. Accurate contract prices are the starting point for fair and reasonable prices throughout the acquisition process because negotiation of subsequent modifications to a contract are often based on the initial estimated contract costs.

Pre-Award—Accounting System Audit

The Accounting System Audit is considered a pre-award audit and is necessary for the award of any Cost Type contract. What you are looking for is an "Acceptable" rating. An acceptable accounting system meets the following criteria; laws and regulations are complied with, the accounting system and cost data are reliable, risk of misallocations and mischarges are minimized, and contract allocations and charges are consistent with billing procedures. Like pricing audits, there are two different examinations of the accounting system. The "Pre-Award Survey" is conducted prior to award and is contract specific. It results in an opinion that the system is "acceptable" for use on the contemplated contract. It should be noted that this is NOT an audit because it does not look at any actual costs—only the system capabilities. It is referred to as a "Survey" in the document and it is considered a "review" in auditor terminology. It can be, and often is, done on a system that is not yet implemented based on the software capabilities and pro forma company policies and procedures. The other is a true audit and does look at actual costs as recorded in the system. This audit is not related to a specific contract, but the system status as of a point in time. It usually results in an opinion that the system, as operated, is "adequate" or "not adequate." A "not adequate" opinion is an absolute killer because it will be reported to every Contracting Officer when they query DCMA's system and could disqualify an offer or an award. The Survey is a Pre-Award Survey known as Standard Form (SF) 1408 which is asking questions about your accounting system. Below are some of the inquiries of the form:

1. Is the accounting system in accordance with GAAP?
2. Accounting System provides for
   - Proper segregation of direct and indirect costs
   - Method for allocation of indirect costs
   - Timekeeping System
   - Labor distribution
   - Segregation of unallowable costs
   - Accumulation of costs under General Ledger Control
3. Accounting System provides financial information
4. Is the accounting designed to have reliable and accurate data?
5. Is the accounting system fully operable?

> This overall process can be tricky for new government contracts and it is highly suggested that a process and tool partner be obtained to ensure success.

Timekeeping

Timekeeping audits are being called out separately because it is one of the most prevalent audits reported year over year. In the 21st century there is no reason to not have an electronic timekeeping system to capture your employees' daily activities. A web-based timesheet allows the employee to input time daily no matter where they are working and supervisors to approve. Time collection systems should also give the employee the ability to track by project number, task, charge number, and include change reasons. It is best if your timekeeping system is really integrated with your accounting system. The purpose of this audit is to:

- Ensure the contractor's compliance with its timekeeping internal controls and procedures
- Verify the reliability of employee time records
- Verify employees are at work
- Verify employees are performing in assigned job classifications
- Make sure time is charged to the proper cost objective

DCAA labor floor checks can be scary for the employees being audited. It is the ONLY audit performed by DCAA that is done on an unannounced basis. It is suggested that a self-audit procedure is put into place to make sure employees understand what is expected, and to keep them fresh on the timekeeping policies.

Special Audits

Special audits are a high priority due to the nature and timing of the audits. They can be conducted before or after contract award. These special requests come from a Contracting Officer needing an independent financial opinion on specific portions of a contract or a contractor's accounting business system so that contract work can proceed. Special audits that are conducted after contract award primarily address circumstances where contracts are adjusted for changes or are in some stage of termination. These circumstances represent complex and high-risk audits where DCAA must carefully evaluate the cost of original contract work from the changed scope of work.

Other Audits

Other audits are typically initiated by DCAA when there is potential for a high-risk of misallocation or mischarging of costs. Most of the audit efforts in this category focus on adequacy of the contractor's Cost Accounting Standards Disclosure Statement, compliance with cost accounting standards, assessment of contractor Cost Impact Statements for non-compliance, review of contractor business systems, and contractor compliance with the Truth in Negotiation Act (TINA).

Incurred Cost

This audit is by far the most common. The Incurred Cost is a financial representation of the work that you performed as a contractor for a specific period. It is used to make sure that claimed actual cost and billed cost reconcile. The audit regulations are in FAR 52.216-7. The clause addresses two key areas, interim reimbursement of costs and determination of final indirect rates and billing rates. The overall submission (Incurred Cost Electronically—ICE) can be difficult and you must identify items such as your rate structure, direct cost to cost objectives (contracts), and identify both indirect and unallowable costs. The ICE excel format that contains the schedules can be found on www.dcaa.mil. You need an accounting system to ensure that all types of cost are properly accounted for and reportable. This audit is required for contracts when the contract amount is not fixed and when the contract contains the Allowable and Payment Clause at FAR 52.216-7 (all cost type and T&M contracts). The audit is due within 6 months following the end of each fiscal year. Extensions are granted on an exception only basis. The request must be in writing and the Contracting Officer must also grant the exception in writing. If you are not granted an extension and do not submit on time, there is a danger that the Contracting Officer will unilaterally set your indirect rates and their rates will be low enough to ensure the Government is not paying for unallowable costs. In other words, COMPLY! The project based ERP system (accounting, timekeeping, and expense solution) you purchase will have a bearing on the success you have in overall compliance today and in the future. A project based ERP system in conjunction with your policies, procedures, practices, and qualified personnel will ensure that you can meet the CAS and FAR requirements.

NIST (SP) 800-171

Every day, the news is filled with stories about cyber-attacks or breaches. What if one happened to your company, would you be ready? How do you get started?

One of the best ways to protect your company is to begin to define security processes, procedures, and controls, and the time to start is now.

Being prepared to handle cyber-attacks will ensure that your business operations and valuable data are protected. As a government contractor, you have the added responsibility of safeguarding our nation's valuable data assets. To guarantee that risks are mitigated, cyber risk standards are now being applied to contracts that are issued by the DoD.

The standards are outlined in the Defense Federal Acquisition Regulation Supplement (DFARS). The DoD requires contractors to demonstrate cybersecurity adherence for protection of Covered Defense Information (CDI) and Controlled Unclassified Information (CUI), or Unclassified Controlled Technical Information (UCTI). If there are any doubts about the nature of your data, make sure to discuss with your Contracting Officer (CO).

CDI	Covered Defense Information—Unclassified information provided to the contractor by or on behalf of DoD in connection with the performance of the contract, or collected, developed, received, transmitted, used, or stored by or on behalf of the contractor in support of the performance of the contract (reference DFARS 252.204-7012)
CUI	Controlled Unclassified Information—Information that law, regulation, or government-wide policy requires to have safeguarding or disseminating controls, excluding information that is classified (see CUI Registry at www.archives.gov/cui)
UCTI	Unclassified Controlled Technical Information—Technical data or computer software (as defined in DFARS 252.227-7013) with military or space application that is subject to controls on the access, use, reproduction, modification, performance, display, release, disclosure, or dissemination.

Exhibit—Types of Information

Expect to see the following DFARS references in your contract. You will be expected to demonstrate compliance to these standards.

> **DFARS 252.204.7008—Compliance with Safeguarding Covered Defense Information Controls**
>
> **DFARS 252.204.7009—Limitations on the Use or Disclosure of Third-Party Contractor Reported Cyber Incident Information**
>
> **DFARS 252.204.7012—Safeguarding Covered Defense Information and Cyber Incident Reporting**

Exhibit—DFARS Clauses—Cybersecurity

The three DFARS clauses above mandate that defense contractors adhere to the security requirements, demonstrating cybersecurity protections are adequate to protect information from attack. The security requirements are specified in National Institute of Standards and Technology (NIST) Special Publication (SP) 800-171, "Protecting Controlled Unclassified Information in Nonfederal Information Systems and Organizations."

For ease of use, the security requirements are organized into fourteen families. Each family contains the requirements related to the general security topic of the family. There are 110 controls around non-classified controlled information. This sounds like a lot, but keep in mind the type of information that is being protected. In many cases, these controls represent best practices that you may already have adopted.

Exhibit Control Families

14 Control Families:

- Audit and Accountability
- Identification and Authentication
- Awareness and Training
- Incident Response
- Media Protection
- Risk Assessment
- System and Information Security

- Physical Protection
- System and Communication Protection
- Security Assessment
- Personnel Security
- Maintenance
- Configuration Management
- Access Control

Defense contractors must also have in place a mechanism and communication plan if they identify an incident or breach. The notification must happen within 72 hours of the breach. Incident reporting is done via the DoD's Defense Industrial Base (DIB) Cyber Incident Reporting & Cyber Threat Information Sharing Portal. Be prepared to address the necessary information on the form and provide supporting documents and evidence relating to the breach.

What Do You Have to Do to Be Compliant?

Stay current on the compliance requirements as new information is continually available as to how to attain compliance with all the security requirements in NIST SP 800-171. Contractors that don't have all the NIST controls implemented must submit a written explanation of how 1) the required security control(s) is not applicable, or 2) an alternative control or protective measure that is used to achieve equivalent protection. All controls must be addressed, either through implementation, remediation, and/or documented explanation of non-applicability. Currently Cybersecurity Maturity Models (CMM) that assess overall maturity are being considered (levels 1-5). These certification levels will show the degree of cybersecurity maturity just like the assessment of processes and compliance required processes just like Capability Maturity Model Integration (CMMI) certification program.

Being prepared for this requirement is important for your company. You may consider hiring a consulting service to assist you on this journey. It is critical for the overall success of keeping and winning new Government contracts. Use of a SaaS licensed ERP often provides many of the security requirements.

What is DCMA?

Defense Contract Management Agency (DCMA)—is the Department of Defense (DoD) component that works directly with Defense suppliers to help ensure that DoD, Federal, and allied Government supplies and services are delivered on time, on cost, and meet the contract requirements. DCMA professionals serve as "information brokers" and in-plant representatives for military, Federal, and allied Government buying agencies—both during the initial stages of the acquisition cycle and throughout the life of the resulting contracts. Before contract award, DCMA provides advice and information to help construct effective solicitations, identify potential risks, select the most capable contractors, and write contracts that meet the needs of our customers in DoD, Federal and allied Government agencies. After contract award, DCMA monitors contractors' performance and management systems to ensure that cost, product performance, and delivery schedules are in compliance with the terms and conditions of the contracts.

Tips to Prepare for an Audit:

- Prepare a strategic plan for compliance
- Prepare yourself with policies, procedures, and tools
- Understand the purpose of the audit
- Look up the audit program on the DCAA website and print
- Choose a point of contact to be a liaison with your auditor
- Understand the record keeping requirements in FAR 4.7
- Insist DCAA hold entrance and exit conferences
- Keep DCAA within the scope of the audit

It's All About Unanet Unanet

Unanet Philosophy

Over 1,200 professional services organizations trust Unanet's Cloud ERP platform to scale their businesses while drastically reducing G&A in a "Single Source of Truth". Unanet optimizes resource scheduling, budgeting & planning, skills management, time & expense reporting, purchasing, real-time project management analytics and dashboards, billing & revenue recognition, and GL, AP, AR, cost pool calculations, and indirect allocations. Our customers report 50% lower G&A headcount than those running competitive systems and can reduce effort on administrative processes by 90%. Unanet was founded in 1998 and is based in Dulles, Virginia. For more information visit www.Unanet.com.

The Unanet Financials Difference

With over 1,200 customers, Unanet has the proven leadership, innovative technology, and domain expertise to address the demands of today's business environment. Unanet provides end-to-end services automation for organizations seeking to improve profitability. Unanet web-based software for managing people and projects employs one database, one look and feel, and one connected set of applications. The "Una" in Unanet is for that one database, one look and feel and one connected set of applications.

Using the Unanet one database solution, you manage customers, opportunities, projects, people, knowledge and processes to maximize your organization's potential. By automating basic business processes, you can better manage your business, anywhere and anytime.

MANAGING THE ENTIRE PROJECT LIFECYCLE

PLAN	EXECUTE	MONITOR	BILL	ACCOUNT
■ CRM and Pipeline Mgmt ■ Purchase Requisition ■ Budgeting & Revenue Forecasting ■ Resource Scheduling ■ Skills Mgmt ■ Scenario Planning ■ Pricing	■ Timesheets ■ Expense Reports & Per Diems ■ Purchase Orders ■ Approvals ■ Collaboration and Notes ■ Contract Mgmt	■ Real-Time Dashboards and KPIs ■ Project Status, Utilization, & Burn Rate ■ Open Commitments ■ Gross and Net Margin ■ % Complete & EVM ■ Backlog	■ GAAP Compliance ■ Billing & Invoicing ■ T&M, FP, and CP ■ Revenue Recognition— As Worked, % Complete, & Schedules	■ General Ledger ■ Accounts Payable ■ Accounts Receivable ■ Cost Pools ■ Indirect Rates ■ PO Match: 2-way or 3-way match

With over 1,200 customers, Unanet has the proven leadership, innovative technology, and domain expertise to address the demands of today's business environment. Unanet provides end-to-end services automation for organizations seeking to improve profitability. Unanet web-based software for managing people and projects employs one database, one look and feel, and one connected set of applications. The "Una" in Unanet is for that one database, one look and feel and one connected set of applications.

Using the Unanet one database solution, you manage customers, opportunities, projects, people, knowledge and processes to maximize your organization's potential. By automating basic business processes, you can better manage your business, anywhere and anytime.

8 Signs You Have Outgrown Your ERP System

☑ Excel Chaos

Do you have three or more Excel spreadsheets open on your computer at all times? Excel is a great tool—but it makes having one single source of truth difficult.

☑ Scalability

Whatever tool you choose to manage your projects, people, and financials should be able to allow you to grow. Is your current system scalable?

☑ Compliance/Security

Remaining compliant and secure tops the list of concerns for many companies. Are you compliant? How are your security protocols?

☑ Project Management

Is your project management discipline maturing but you lack the tools your team needs? Having a tool that is purpose built just makes everything easier for your team.

☑ Manual Billing

Is your finance team processing billings manually? Do you have GAAP compliant revenue recognition? The longer the bills take to go out—the longer you go without that cash.

☑ The Dreaded Audit

Are you being audited and find yourself scrambling to find the information your auditors need? Finding a tool that is battle tested with GAAP, SOX and DCAA is key.

☑ Overhead Keeps Growing

Do your expenses just keep going up? Do you need to hire more finance people? Finding a tool that can streamline your business and increase efficiencies is key.

☑ Partners

Going it alone is tough. You should look for a tool that can help you transform your business—but more importantly a team who will partner with you to make it happen.

Commonly Utilized Metrics (Financial and EVM)

Financial	
Annual Billable Utilization	Billable Hours/Total Hours or Billable Days/Total Days
Booking	A commitment by a customer to buy your goods or services.
Backlog	Total Bookings—Delivered Goods or Services.
Billing	An invoice requesting payment for goods delivered or services rendered.
Revenue	The amount of earnings that can be recognized.
T&M Revenue per Employee	Actual Bill Rate x Hours Charged + ODC
Margin (can be project, program or enterprise)	Revenue—Cost
Margin %	(Revenue—Cost)/Revenue x 100
Year over Year Revenue Growth %	((Current Year Revenue—Prior Year Revenue)/Prior Year Revenue) x 100
Days Sales Outstanding (DSO)	Accounts Receivable/(Annual Sales/365 Days)
Invoice Cycle in Days	The # of Days that the billing process begins to customer acceptance
Goal Bill Rate	Forecasted Services Revenue/Estimated # of Billable Hours
Pipeline	
Win Rates	# of Wins/# of Bids
Pipeline Management	
Bid to Win Ratio	# of Bids/# of Wins
Bid to Loss Ratio	# of Bids /# of Losses
Length of the Sales Cycle	Number of days from lead identification to contract award
Phase statistics	The types and number of opportunities which are in each phase, customer, etc.
Pipeline Snapshots	Comparing the Pipeline to the same time last Year, Quarter, Month
Forecast comparisons	Utilizing POA or other % forecasting methodology
Revenue Target Factors	Identify revenue targets by region, portfolio, customer, etc.

Pipeline Management/Resource Management

Skill Set Utilization	The % of specific skill sets that are being utilized and forecasted
Rate Analysis by Period	Look at labor rates year over year, quarter over quarter, and month over month

Project Management

Project Spend Variance	Budgeted Costs–Actual Costs
% Spent	(Contract-to-Date Actual Costs/Budget at Complete) x 100
Estimate-to-Complete	Cost to Complete the Work
Estimate-at-Complete	Contract To Date Actual Costs + Estimate To Complete
Burn Rate	Rate at which the company is utilizing assets (cash, labor, etc.)
Planned work	Rate of effort apportioned over the remaining period versus total—actual spread over the remaining time

Resource Management

Utilization %	Hours Billed/Total Available Hours
65% Utilization	1352 hours per year, 338 hours per quarter
Cost per Person	Base Salary + Fringe Benefits + Other Comp (Bonus)
Burdened Cost per Person	Base Salary + Fringe Benefits + Other Comp (Bonus) + applicable % of corporate OH and G&A Rates
Average Bill Rate	Actual Services Revenue/Total # of Billable Hours
Actual Net Labor Multiplier	Actual Revenue/Direct Labor Cost
Target Net Labor Multiplier	Forecasted Revenue/ Direct Labor
Wrap Rate	Fully burdened labor rate that is required for an organization to cover the costs of direct labor wages, fringe, overhead, G&A and other costs.
Realization Rate	Billable Time Recorded/Actual Time Paid by the Customer

Important Terminology for Government Contractors

Unique language of GovCon differs from common usage

Solicitation

Common Usage	criminal activity in most jurisdictions
GovCon Usage	request for proposals, bids, quotations or other offers

Award

Common Usage	an honor or accolade, a prize
GovCon Usage	the execution or signing of a contract by the Government or a prime contractor

Obligate

Common Usage	to compel
GovCon Usage	to modify a government contract to provide funding for performance

Commit

Common Usage	to carry out an act or to institutionalize
GovCon Usage	to dedicate funds for a future contract

Fee

Common Usage	the total contract price including the cost
GovCon Usage	a guaranteed return over and above the cost of performance (not to be confused with profit, which is the difference between cost and price)

Procurement (not to be confused with procuring)

Common Usage	the act of obtaining something
GovCon Usage	collective noun referring to the GovCon solicitation/source selection/award process

Success Stories

Unanet has helped many businesses, large and small, in multiple industries, run their businesses more efficiently and really grow and transform their operations. We have many success stories on our website at (www.unanet.com/success), but we wanted to share a few with you here:

Consulting—The Rehancement Group

The Rehancement Group provides world-class management consulting services to public and private sector clients. They had previously used Deltek GCS and then made the switch to Costpoint. They found Costpoint to be cumbersome and the inability to quickly grab data or generate reports in real-time was really hindering their business. With 125 team members, they needed an ERP system that would support their organization, while allowing them to better streamline their operations.

The Rehancement Group made the switch to Project Portfolio Financials to streamline internal operations and drive efficiency. The Rehancement Group is able to make informed decisions thanks to more accurate, real-time information. They can get invoices out and close the books faster, allowing for revenue to come in sooner.

"With Unanet, not only did we gain a great product, we gained excellent support. We are no longer at odds with our software provider; we have a true partner who is there at all stages to ensure our success," said David Baker, President of The Rehancement Group.

Engineering—Frontier Technology, Inc.

Frontier Technology needed a full project ERP system that would handle their rapid growth. They required a software that would provide a single integrated platform with one source of data in order to smooth processes and seamlessly manage projects, people, and financials. Their Deltek Costpoint system required multi-step processes for simple data requests and created many inefficiencies, so they looked to Unanet for help.

Frontier Technology moved from Deltek to Unanet Project Portfolio Financials Plus and gained real-time data and reporting capabilities in one single source. Since implementing Unanet, Frontier Technology has the tools they need to profitably manage their business during a time of immense growth. They have improved efficiency for administrative efforts and project managers, can maintain accurate people resourcing information, and can run financial reports based on real-time data at the click of a button.
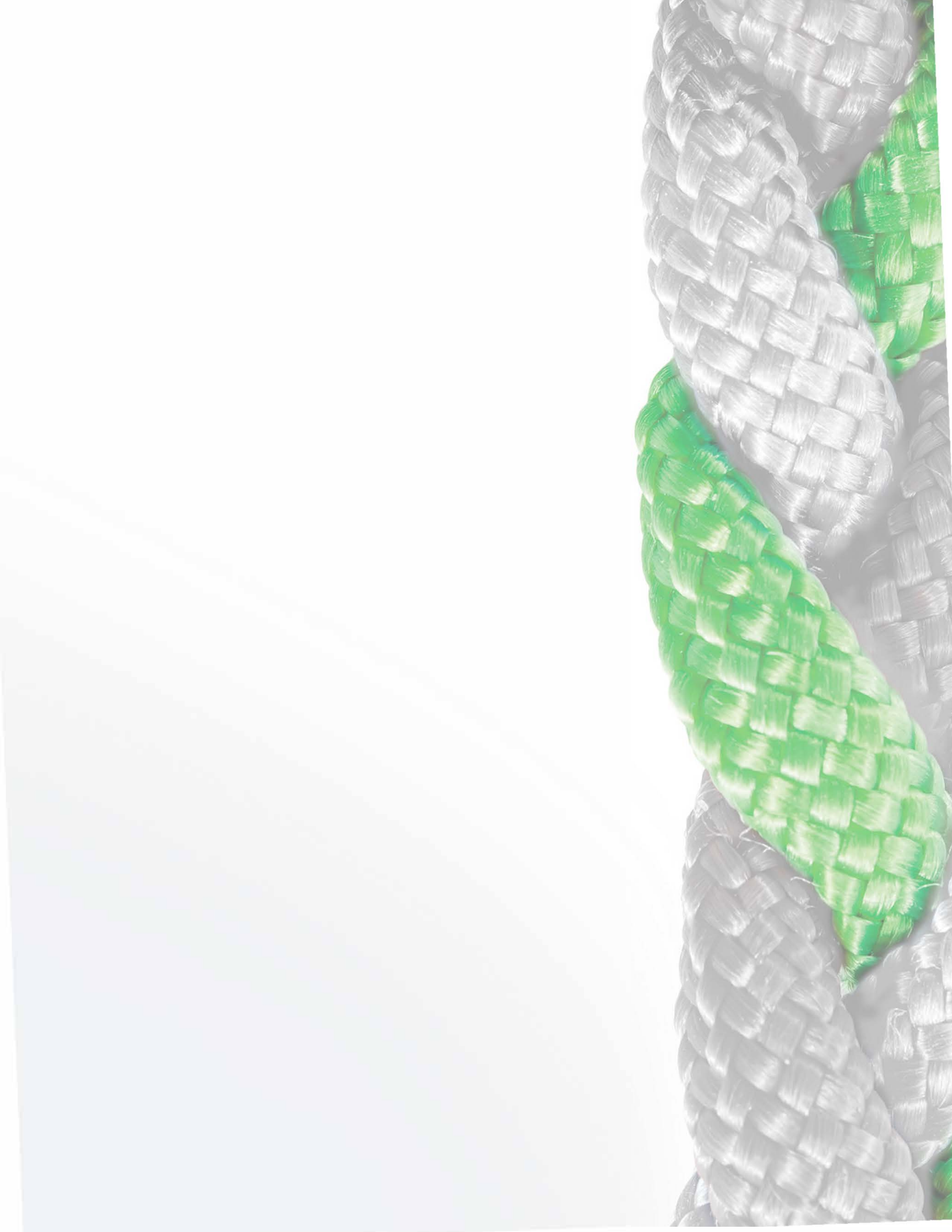
Tom Batty, Director of Corporate Staff Operations at Frontier Technology, Inc, reported, "I have done a lot of enterprise data work, and I can see that the architecture of the Unanet system was done correctly to handle a company like ours with rapid growth."

Government Contracting—G2 Ops

G2 Ops, a cutting edge cyber and IT firm, was experiencing some growing pains and was particularly concerned about compliance issues for their government contracting business. They were using QuickBooks and knew it would not keep them compliant. With 70 team members, they needed an ERP system that would support their organization while allowing them to better streamline their operations.

G2 Ops selected Unanet and the impact has been dramatic. Unanet and Unanet's Automated Analyst tool have saved G2 Ops over $100,000 in potential labor needs. During their CPARS review, G2 ops received honorable mention for their high level of accuracy in the accounting and cost control process on their Contractor's Administration. They have also been able to solve problems they never even knew they had.

Matthew Chadwick, Program Project Manager of G2 Ops, commented, "We have decreased overhead burden for data review & validation by 15% since implementing Unanet. With the Automated Analyst tool, we have reduced the number of errors by 27% and we've been able to increase bi-weekly labor efficiency by 33%. The Automated Analyst just pointed the way for us."