

Project Delivery Problems: Why Can't We Make Them Go Away?

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Abstract--This application paper is based on a collection of 1200 responses regarding the critical project problems facing team members in the delivery of business and technology projects. Industry examples and applications from several Fortune 100 companies are discussed along with the authors' project experience reflecting various efforts to overcome perpetual project problems.

Business economies must keep up with technology and technology development if they have hopes of sustaining themselves. The need for "the next new thing" coupled with high speed demand to deliver with strained resources is a perpetual challenge. Developing enterprises build new facilities, add new staff and ride the wave of market demand. And, in almost all instances these efforts must navigate and overcome project delivery problems. As the project or product manager, it all comes down to you and how well that is achieved.

This paper explores the most prevalent problems facing project delivery today. Categories have been established which reflect the most common project problems. What are they, in what ways do they most often affect teams and how can they be mitigated are just a few of the questions to be addressed. Project problems exist within all enterprises, even those with strong project management foundations and disciplines. What businesses are doing about it will be explored along with applications as viable solutions for mitigating these project problems.

I. INTRODUCTION

Let's face it we all have experienced a variety of project related problems. Surprisingly, many of the same problems persist from project to project within the same organization, and these very same common problems exist in variations across all projects regardless of the nature, industry or culture that make up their landscape. As a project management (PM) consultant and trainer, I observe and encounter an endless stream of common project problems from clients across the industry spectrum. These problems are not necessarily 'project killers' although they can definitely lead to project failure. Post-project reviews do identify problems as lessons-learned and teams often utilize these for future new project success opportunities. Further, it is not that project management practices are being ignored or lacking in process to address these issues or to build contingency or eliminate the problems. We do have well trained project managers on these projects and teams can perform. We also can't ignore that business and life do happen, changes are made, operational emergencies come up, employee resources fluctuate, technical problems arise, and let's not forget, people issues happen.

With all the knowledge, books, practices and applications that exist and are accessible, why can't we make these 'typical' problems go away? Harold Kerzner [10] points out

eight potential benefits from project management in his very first chapter, Understanding Project Management, one of which is the early identification of problems so that corrective action may follow. He describes decision making and problem solving as a protocol for project management is his systems approach and systems thinking.

We have all listened to many project management experts and have read hundreds of papers, articles, books, methodologies and standards on how to deliver projects better, faster, cheaper and more successfully. These knowledge resources do hit the target in that they do establish the elements required to deliver projects. We now have more qualified individuals in project management that can make a difference and many business enterprises have achieved great successes with project management maturity and alignment with their business strategies. With 30 years of experience, I have seen the evolution of project management practices and applications across many industries and the question remains, "why can't we make these problems go away?" Are we destined to repeating the same problems from project to project because we feel it is cheaper to address problems as they arise rather than proactively? Or, do our project managers not effectively learn from one project to the next? Remember, a business definition of insanity is doing the exact same thing over and over and expecting different results. This paper presents findings about project problems from across multiple industries and offers applications for mitigating and perhaps resolving them.

First, a few qualifications: this paper does not address all problems, nor offer solutions to all problems. It does not provide an in-depth analytical basis or analysis of the problems discussed and the categories presented. It does not propose to elicit expertise in all areas or inadvertently exclude some problems and solutions for particular reasons. This paper simply gives you some thoughts regarding the trends with some applications for preventing and resolving project problems.

II. PROJECT PROBLEM CATEGORIES

Project problems come in all sizes, shapes, descriptions, and complexities. Surprisingly, the majority of these problems fall into relatively few categories that group very similar types of problems. Cadence Management Corp. (Cadence), one of the premier global project management training and consulting firms, utilizes a four step problem solving model in its training within the project problem context. Its first step is to describe the problem in a very short and concise statement to enable participants to collectively focus on the same problem. During the training

it practices with the model by having participants write down their most significant project problem. These problem statements are collected and feedback is provided on project management applications which reflect possible causes or resolutions to the problems. It demonstrates the use of the model throughout the training and its importance in managing the project problems promptly and effectively. Here are a few examples of problem statements that have been collected:

- “we are waiting for a decision from marketing,”
- “the time frame to complete the project is too short,”
- “I no longer have time to work on this project,”
- “not everyone on the team is helpful,”
- “we have a conflict between technical solutions,” and
- “requirements keep changing.”

As a senior consultant and trainer for Cadence, I began to recognize the similarities between these problems and that most fall into a relatively narrow spectrum of problem categories. I began collecting these statements for further study and comparison. In some businesses only an ad-hoc project management process was in place and in others the project management was not being administered as intended leading to more severe problem consequences. However, in almost all situations, project management did exist and in several, PM practices were very mature. The systems approach [10] is part of the logical and disciplined process of problem solving, with process indicating an active ongoing system. Kerzner, in supporting his Systems Thinking approach, describes project problems, decision making, organizational structures for prioritization and managements’ role in the problem solving effort as strategically important to the successful delivery of projects.

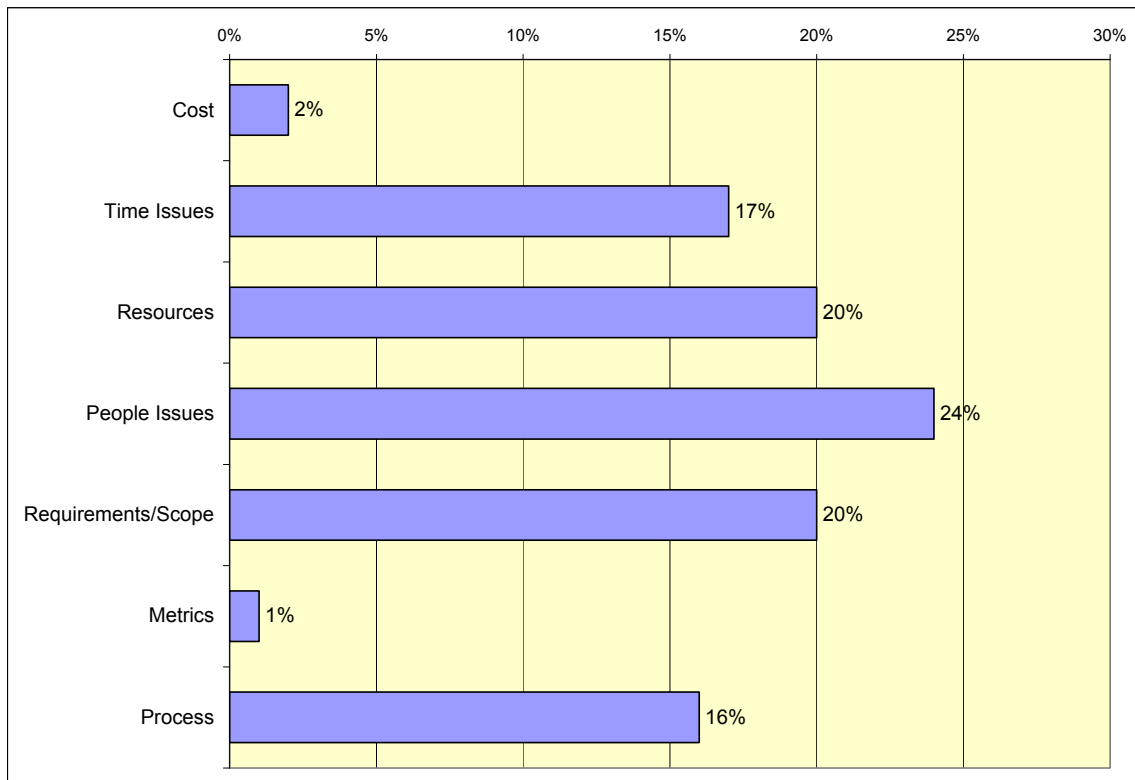


Figure 1: Major Categories of Project Problems

Figure 1 illustrates the results of the project problem categorization.

Of the seven categories, five stand out as the most prevalent and account for 97% of the problem statements collected. The largest percentage dealt with people issues, which was closely followed by Resources and Requirements/Scope type problems. The Cost and Metric problems were very low in comparison with the other problems. Consider the perspective that project cost, although recognized as important, is really not as important

as the product quality or the project delivery date. Most of the enterprises that contributed to this study do not track labor hours for work performed, thus the actual cost for projects is not truly known. Metrics are most often related to the quality of the completed product, service or result, which leads one to assume that these problems were instead described as a requirement problem. The remaining portions of this paper address only the five dominant problem categories and subsequent figures break out these major categories to provide a sub-category for each.

Steve McConnell [17] describes 36 classic mistakes that relate to ineffective development practices in product development. These classic mistakes fit well with the problem categories described in this paper such as:

- **People** with 13 mistakes ranging from motivation, to problem employees to expectations and stakeholder buy-in;
- **Process** with 14 mistakes ranging from optimistic schedules, to insufficient risk management to abandonment of planning under pressure;
- **Product** with 5 mistakes primarily ranging around requirements, feature creep; and finally
- **Technology** with 4 mistakes with reliance on benefits from technology and overestimating productivity.

III. PROJECT PROBLEMS RELATIVE TO PROJECT DELIVERY

In my experience leveraging technical tools and applications of project management are the easy part of delivering a project. Where the challenges lie are with the two most prevalent substances on every project; PEOPLE and PROBLEMS. Dealing with people and problems will consume more time than developing and maintaining the critical path schedule or monitoring project progress using earned value. We as project managers fit within these two based on how disciplined our PM practices are. There are numerous techniques and tools used widely in this profession for developing project teams and overcoming the people and

project problems. Having alternative applications for resolving or preventing problems from deteriorating the project team's effectiveness is an effort worth exploring. The following presents project problem observations along with applications for resolution.

A. Time Problems

Time Problems described by the problem statements included such scheduling terminology as; task completion, duration, calendar date, project time, project status, schedule buy-in, and communication of project time elements. Of the total time problems, 51% represent the application of scheduling itself. Such items are related to schedule development, maintenance and management throughout the duration of the project. 14% of the problems pointed towards late task completion which subsequently impacts follow-on work and perhaps cause both scheduling changes at 13% and insufficient project time at 10%. As soon as the project timeline begins to incur an impact, alterations and adjustments are made in an attempt to meet the original completion date. These alterations are often made without full understanding of the consequence or the change being communicated to the team. The team often recognizes very early that the overall time-line of completion may be too short, which becomes compounded once task completions become late. A common impact for software development and IT enhancement projects is the likely occurrence that the testing phase will suffer from schedule compression due to development tasks completing late.

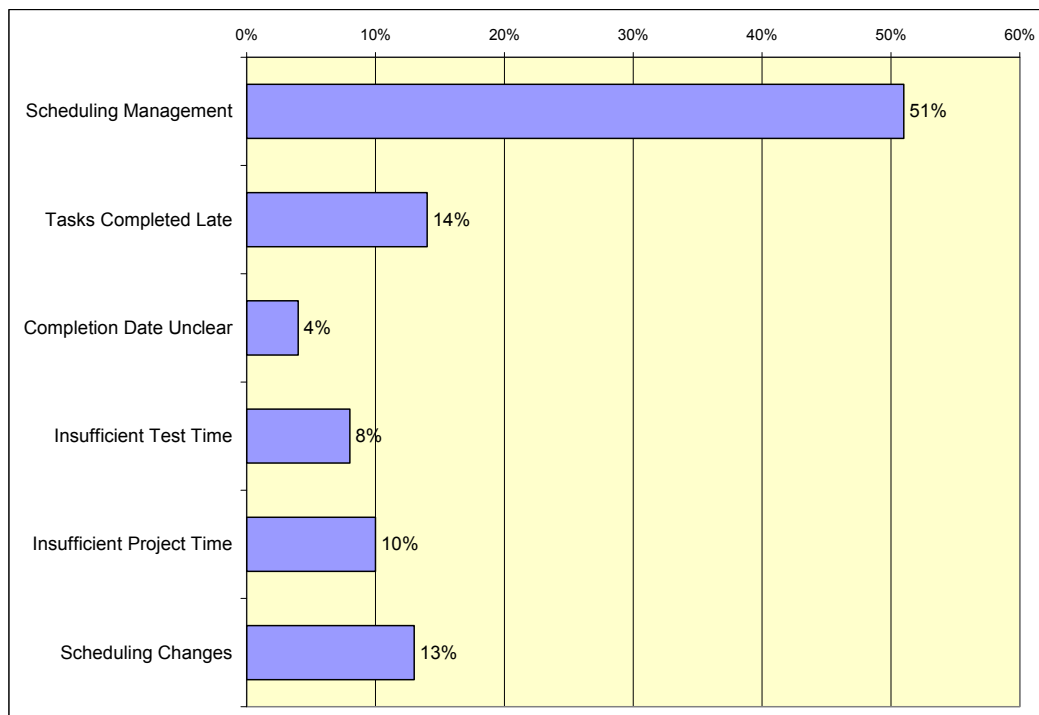


Figure 2: Time Problems Sub-categories

For many companies, the internal culture itself creates a heightened urgency to hit a pre-determined date which is often overly optimistic and results in a lesser quality delivered project. Many of the problem statements complained of not having enough time to complete their tasks or the project itself. Creation of self-imposed problems by team members to slow things down shifts the project pressure elsewhere. Enthusiasm or the fact that team members are exceedingly busy does not necessarily mean the project is making progress. Parkinson's Law states that "work expands to fill the time available for its completion." People plan their work around dates. Urgent tasks take priority over future to-do tasks. Most safety or buffer time gets consumed before the work actually starts. And as Hofstadter's Law describes, "It always takes longer than you expect, even when you take into account Hofstadter's Law." Citing a broader perspective on project problems [20] John Patton of Cadence describes his number one problem as people just aren't working projects and management doesn't know it. His described problem is a basis for many of the typical problems encountered on projects. Couple this with the prevailing problem that new projects keep getting added to the bucket and the true capacity of the organization is not known, thus projects become late. Many project managers have been self-taught on the application of scheduling. Scheduling is more than just a date on a calendar. To improve and enhance schedule management, supervisors need to address the problem and team leaders diligently need to learn and apply the best schedule development and maintenance practices.

B. Process Problems

Project problems in this area reflect what and how the project team implements its business processes, even if the business itself enforces these practices on a regular basis. 41% of process problems reflect technical problems that are encountered during project execution. The problem statements most often described the related frustrating events and processes such as awaiting the authority from the decision makers, debating lines of code, or the business data actually required by the system analyst. Further, technical conditions encountered during development, testing or implementation and caused by the enterprise, lead to further technical issues that require resolution outside of the immediate project requirements. Scheduling the unknowns at 5% is often accommodated by building in task duration buffers. However, high risk technical unknowns can have far reaching consequences for the team in which more knowledge or research is required than what can adequately be resolved within a buffer of time. Technical problems of this nature need a schedule process to adequately accommodate the unknowns. Without it every project team creates its own buffer and subsequently expends large amounts of time and subjects the project to potential huge risks. Project prioritization of projects at 32% is purely a business process problem. These prioritization processes should include the major products, programs, business

initiatives, departmental objectives, organizational development projects and even the direct-report managers' problems or pet projects. Business capacity can only handle so many projects before it overloads the system. People, as the resource, make their own determination of which project has the higher priority when the business importance of projects is not communicated. The findings of Dick Billows [2] support the extreme need for organizations to build cross-functional prioritization, allocation and authority processes. He cites resource pool problems as a lack of decision-making information. He faults executives that are not able to set a strategic course for projects or make effective trade-offs for business results and they can't set priorities. He goes on to say that the lack of decision making yields people to guess at work priorities, cope with the workload that prevents good work and receive assignments with vague and changing end results. Conflicts also reign between departments where common resources are needed.

The last three items in this category reflect not only what the team does when problems are encountered but how the team functions and responds to project conditions. Not having a definitive process for the delivery of projects at 8% reflects the ad-hoc style within business functions that work on projects. Decision making or lack thereof contributes 10% of the problems and is often cited as a barrier to project progress. Teams that encounter situations in need of a decision, often experience a slow down in project momentum, shifting of project priorities, and tasks being placed on hold. The ability of the team to quickly raise the importance of the decision-dependent-consequences requires a diligent effort by the team. Lastly, problem solving at 4% can be a problem upon itself. Teams need a simple step by step problem solving model. Many models exist, however the problem morphs when teams make choices not to use these models by thinking they can reach a quicker decision without its use. The urgency is reflected in statements such as not having the time to use a model; "we just need to fix the problem."

A process does not need to be an elaborate system for getting things done. It just needs a simple and well understood strategy that moves projects through the business. In a PMI article [14] Janet Liao quoted David Gee, a VP at HP Software, that two main reasons for late project delivery are; mid-stream changes and lack of coordination between IT and business managers. Consider the business environment and the belief that the application of a Project Management Office (PMO) strategy is the best process and it should correct the shortcomings of a project delivery process. In the PM Network magazine, the Viewpoints section [1] Bud Baker references two authors and their best practice traits for a PMO: They are run like a business and need a clear focus with an emphasis on results. They must have strong executive support and are a learning organization pointing to the future. A few others that come to mind are consistency in the expectations for results and flexibility in its application.

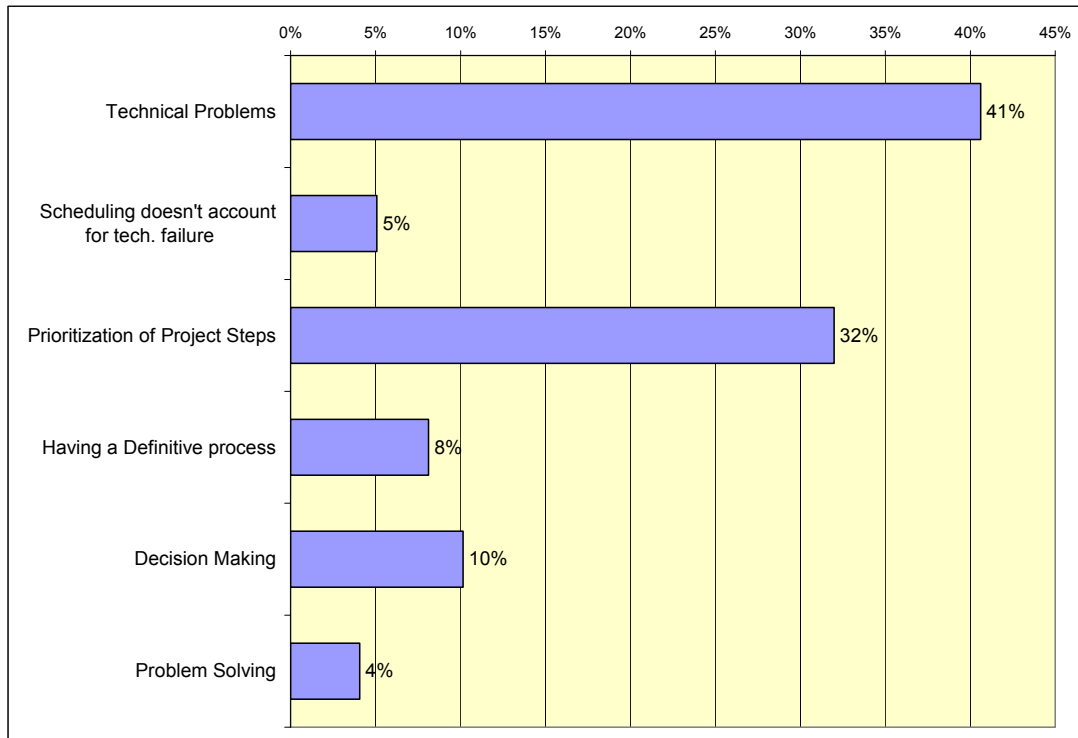


Figure 3: Process Problems

With respect to prioritization, product development is mostly followed by business initiatives and then departmental projects, where managers with resource prioritization responsibilities are in charge. The emphasis by [2] Billows is for a consistent PM process, primarily one that sets project priorities, with rules that only allow the allocation of resources once executives have accepted the project's business value and assigned it to their portfolio. He concludes that organizations won't make these process changes until the pain of project failure becomes so severe. It is the portfolio manager or business unit executive that should manage and be responsible for project relevance and priority. I believe in project management and recognize that too much process in project delivery stifles the project teams' creativity. Project management needs flexibility.

C. People Problems

People problems account for the largest percentage, 24%, of all problem categories and have the largest number of subcategories. These subcategories illustrate the different perspectives that project team members have about fellow team members and reflect the amount of disruption and frustration that is felt by a team member. Commitment/buy-in at 15% reflects that a persons' work performance is often disrupted by conflicting priorities, unclear project objectives, undefined deliverables or overloaded resources as probable causes for their lack of buy-in to the project. Project development has a high reliance on clearly interpreting the stakeholder's intent or choices. Stakeholder problems at 9% are not uncommon as stakeholders often fail to follow their

own rules. They may be slow to make business/product decisions and may tend to overload the capacity of the organization. Further, they may not always be clear as to what they really want. In some cases, the stakeholder or sponsor has moved on, thus leaving the project team with an unsponsored project. Projects of this nature are costly to an organization and are especially wasteful in the use of resources. Adequate and complete project scoping with performance metrics should be a prerequisite for any project. Performance Requirements at 8% relate to unclear expectations or interpretations of the project intent. This problem results in team members not performing fully to the expectation of others and that individual project performance is not good enough to keep pace with the team. No Organizational Responsibility at 11% is closely related to the stakeholder problems such that most initiatives and product development projects are performed by cross-functional teams. Depending on which department is to receive the largest benefit from the project may depict the departmental commitment to support that project. The Project Manager Process at 5% is a dilemma for deciding who is the project manager and which department will they come from. Enterprise Resource Planning (ERP) and business improvement projects largely affect the entire organization, so is a financial analyst the project manager or is it preferred to have IT in that role? Many corporate discussions and arguments have preceded the project managers' selection for these large cross-functional projects. Who really controls the business processes [13] and can IT operate effectively across the enterprise is a present day discussion. Some argue that IT

knows more about the entire enterprise because they operate in all areas, whereas others argue that IT will not understand the business drivers. These arguments carry over to the individual style of the project manager and many respondents found that some were disruptive and contradictory to their own style. The creation of the project culture, lead by the project manager, affects team members and their Lack of Motivation at 3% and their choices for Priorities at 5%. Project Manager Changes at 1% and Supervisory Sign-offs at 3% both reflect the issues that occur on projects and affect team member participation. Supervisors that do not support projects with resources and remove or substitute the resources mid-stream during the project also lead to disruptive environments. In situations where the project manager is not from ones' department has potential for conflict, as does a personality conflict, a sloppy style or an authoritarian style. Conflicting Ideas/Disagreement at 2% often lead to individuals not being committed to the project choices or the solution chosen by other team members. A surprising item within this category was the effect of Training at 10% as a problem. The statements reflected the lack thereof and not the overabundance of it. Individuals felt that they did not have the proper training to either participate as a project team member or did not know what was expected of them while participating on a project. Regardless of the training type, these individuals suggested the outcome of the training effort would have helped overcome any project or people issues. In a thesis [5] on the project manager in meeting the needs of the project team, Beverly George examined project manager activities that may need to be structured to support the project

team's goals and to further create knowledge. One of her conclusions pointed to the project managers' role and the additional need to be concerned with the learning and development of the project team as it moves across the team development stages. The project managers' capability often establishes three variables that will be exercised during project delivery. These are the norms associated with the project manager role, the behaviors utilized in implementing the role and the tools associated with the role. She also concluded that enterprises often see project managers as a means to sort good ideas from bad, to understand the complexity and risk of each project and to provide estimates of costs and schedules. As we probably have all experienced, project managers are often unprepared for the assignment. She reiterates other findings and noted that in many business environments, the project management skill has been called a no-brainer and a skill everyone should possess. Understanding the role of the project manager and how that role can affect learning within the project team is important and does contribute to successful delivery of projects.

Communication Issues at 28% is the largest subcategory and probably always will be a leading problem especially with the growing diversity of global cultures, styles and business environments. Whatever the medium is for conveying the message or technical data, the communication process can not be overlooked or assumed that people do it correctly. Even the best of the best project managers encounter communication problems. Simply put, it is not how much we communicate but rather what importance we timely communicate to the right people.

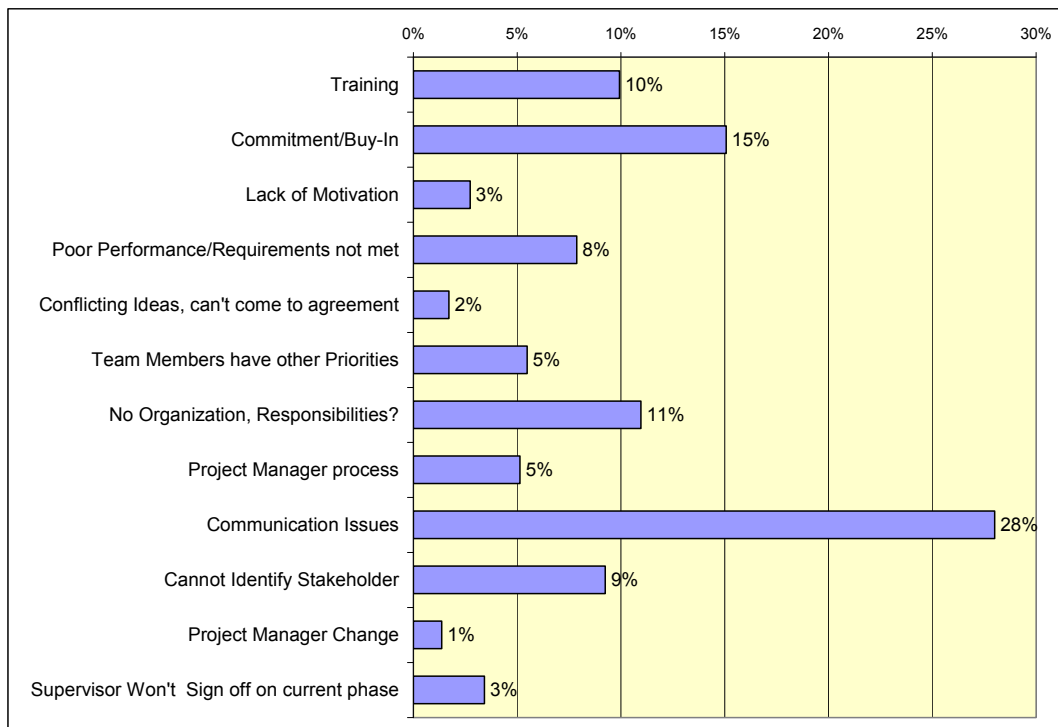


Figure 4: People Issue Problems

Problem statements where the project lead abandoned the project and someone else inherited it, or people have too many opinions and bad communications with 3rd party key players were common. We want to believe that people are hard working individuals. At the same time it can be easy for us to find fault or frustration with projects that aren't going well. Consider Littlewoods Law which gives us a profound thought that individuals often expect miracles at the rate of about one per month! Does this become ones' expectation that someone will pull the ultimate all-nighter and turn a disaster into a pretty good project delivery? When one considers accountability, [7] people have a tendency to make their own decisions based on their own needs and often what is demanded of them. It is not the time you get to work, but the time you start work that really matters. Clearly defined roles and task responsibilities are vital. In a PM Network article [7] several citations illustrate accountability. Steven Lang, PMP, a program manager with Project Management Leadership Group promotes a strong emphasis on building in accountability both individually and for the team and to focus on honesty and transparency. Ed Blow, managing director at Nielson-Wurster Asia-Pacific Pty, Ltd. goes on to state that alignment of the executive messages and sponsorships are important to communicate at all levels, consistently and for the duration of the project.

On leadership, Max DePree [3] discusses many things that he feels are important in order to make teams work including the leaders' ability to shape what followers actually want to do and not by the act of enforcing compliance using rewards and punishments. Some of his leadership discussions include a common agreement on high expectations and responsibility for the work that must be done with honest and open communication. The team should have a common access to information and support for decisions made. The team needs to build a climate of trust and individual team members should acquire a feeling that one can influence results. Teams must also keep a focus on process as well as the expected results. People get excited about contributing, so create the project culture that is conducive for doing so.

John Doel, Director of Technology Practice with Optimum Solutions, a partner with Oracle, does purely project implementation services in the ERP environment. In interviewing Mr. Doel he conveyed that many of his projects are a repetitive type of system installation, so the types of problems most often encountered are not time, requirements, cost, process or resource type, but almost entirely within the people category. Not that the other types of issues do not arise, but they are easily overcome by the dedicated project implementation team. For example on a recent 10 month, \$2.1M labor installation contract for a health care provider, the project included a blended 25 person team. The organizations' team members were not familiar with project terminology or many PM tools such as WBS or Gantt chart schedules. Checklists even became a struggle, so much so, that the project manager created so-called 'softer tools' such as a calendar with daily tasks, to cater explicitly to the non-

traditional project team members. Another emphasis was the consistent communication of urgency. With a 10-month project many individuals felt that there was plenty of time to perform their tasks. Any forecast of work activities further out than one week were not paid attention to. Thus perseverance to complete daily activities became the team driver. A focus on tailoring work efforts and processes towards the experience of each team member was the solution to their people problems. Building relationships with top management also became imperative in order to indirectly influence the direct report managers and staff. Poor performance was encountered on occasion, but with the focus towards daily tasks, these were discovered quickly and promptly corrected. Sarah Fister Gale [4] cites Keith Carlson president and CEO of Innotas, a project portfolio management systems provider, that most dysfunctional teams don't know they are dysfunctional and that it comes down to the leader's responsibility to model the right behavior. [4] Gale cites Patrick Lencioni president of the Table Group, a consulting group and author who suggests asking certain questions looking for signs of team dysfunction. There are many characteristics of these teams, but the issues and problems always circle back to a lack of trust and communication.

D. Requirements Management/Scope Problems

The November 2005 cover story [15] in CIO magazine described the requirements process a mess, and that the mere decision process on what should be included in software is destroying projects in ways that are not evident until it's too late. The article went on to cite that as many as 71% of software projects that fail, do so because of poor requirements management, making it the single biggest reason for project failure. Even now in 2008 the percentage has not changed much in spite of strategies being used to stifle the problem. Strategies such as electronic tools, RUP (Rational Unified Process) applications, embedded responsibility around the project participants, agile programming or the detailed documentation which ties every line of code to a business process are not making large progress.

Requirement problems accounted for 20% of the categories and had eight sub-categories. The largest of these subcategories at 45% is Undetermined Scope followed by Deliverables Undetermined at 16%. From a project a management perspective, a significant amount of these requirement problems can be attributed to the lack of planning. It is not that project teams do not organize the project work to be performed, but rather that much of the focus is driven by what needs to be built and not necessarily on how it is going to be done. It is the how component that is often taken for granted, subjected to assumptions, considered to be easy and assumed to be part of one's job. The coordination between the various departments involved takes time and must be planned. The coordination of critical resources and the product development logistics are also

elements which take time and often lead to slow progress and statements such as, “I didn’t know we had to do that” or “where did that work item from.” Teams often attribute the lack of adequate project definition and planning as scope creep which registered 12% of the requirements total. Task Breakdown at 13% directly relates to ones’ specialized task, which often becomes an assumption in that people know what to do and therefore it doesn’t need to be planned. How one breaks a project down into deliverables, tasks and sub-tasks has a direct relation in the ability of the team to understand both what and the how of project work to be done. The Work Breakdown Structure (WBS) is one of the best PM tools for such an effort, but during the project planning meetings teams often opt for shortcuts to the planning effort and do what is easy, not necessarily what is important. Businesses also tend to rely on their Product Development Process (PDP) which describes all the things that need to be done to pass from one stage gate to another, but do not specifically describe how to do it. The last three items are a

Poor Planning Process at 5%, Performance at 4% and Customer Change Requirements at 5%. Poor planning is directly related to project definition and the respondents recognized that what is being done in their organization is not enough to adequately address what is needed for project planning. Performance is a metric and often associated with individual deliverables and project outcomes. However, unless performance is clearly defined in terms of both the product performance and the resource effort expectations, it will get overlooked and the target missed. Often stakeholders and teams can not entirely define metrics at the start and they may not be entirely known for some time. Rather than wait for the surprise at the end of the project when time is short and at a premium this should be the first early warning that performance measures may be a problem. With respect to customer changes, the low percentage indicates that teams manage this aspect rather well. Most project teams have some form of change management system or process to modify the requirements or the features of the product.

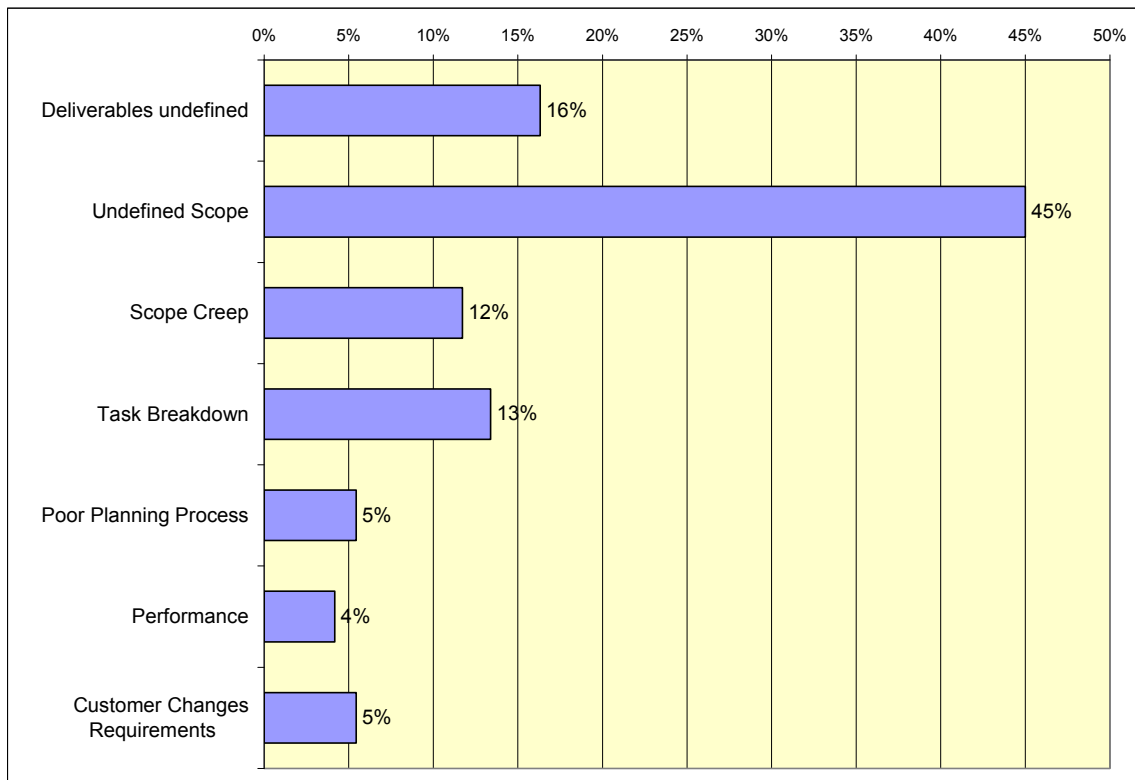


Figure 5: Requirements Management/Scope Problems

Project teams often spend considerable time on the functional requirements such that the non-functional requirements are taken for granted or mistakenly overlooked. Non-functional requirements describe the operation of the system, not the specific functions of what it should perform. Examples include the host environment as in the software/hardware platform or products, usability such as HTML or PC based, legal both local and international, data

privacy and access, language, bandwidth, connectivity and response time.

A significant amount of scope creep is by nature either missed scope, unclear requirements or purely inadequate project planning. Consider Murphy’s Law, “if anything can go wrong, it will” and subsequently generalized by Finagle’s Law which states, “anything that can go wrong, will.” Knowing how and when to respond promptly to changes is

just part of the team's responsibility along with recognizing where the change is occurring. Keep in mind that not all changes are added by the sponsor. Change, if not managed is a problem; otherwise, it is just a normal event that is part of project management. Making a statement that scope-creep should be illegal might be extreme, however, using scope creep as a reason to justify project shortcomings or failure should qualify for additional management scrutiny. Patton [20] cites inadequate scope_definition as his number two major problem. Yes changes occur, but teams often bypass adequate planning and fail to complete the planning process. In my perspective this brings to light that a significant amount of scope creep is self-inflicted due to planning inadequacies. Andrew Makar, [16] a senior IT Program Manager addressed a portion of the problems when he cited the Chaos Report that provides statistics on IT implementation. A few of his high-level categories for requirement failures are: Poorly Defined Requirements; Poorly Communicated Requirements, including language barriers; Poorly Interpreted Requirements; Changing Requirements such as adding nice features; and Poor and/or Missing Non-functional Requirements. Makar also describes solutions to preventing problems such as ensuring requirements are properly reviewed, controlled and managed through the project life cycle, both functional and non-functional requirements prior to detailed design and construction. He offers either a waterfall approach or an iterative methodology for doing so in which project teams should baseline and obtain agreement on the business requirements the same as they would baseline the project schedule. Maintaining change control and tracking the overall business requirement metrics, as in the types of changes being made or new requirements added, are also important. Business needs should be tracked from their source through design, user acceptance and testing all of which could be placed into a requirements traceability matrix. The use of a project control book also has benefits as do software packages to perform these functions.

In spite of the requirements management progress that has been made. Jama Software [9] narrowed the requirements management problem down to what they call myths.

- Myth #1 - A requirements document = requirements management (RM) which describes the myth of reliance upon the requirements document as a tool to also do the management. The requirements document is not good enough.
- Myth #2 - We already started the project, it's too late for RM. This myth points toward teams waiting to start RM at the right time, such as near the end of the product development cycle when there is something to compare

to. The right time never comes because teams become too busy in the work environment to start something new, like management.

- Myth #3 - A requirements tool = requirements management. We can all relate to process and know that a good solution does not occur by just adding technology. Reinforcing the commitment to the process, elevating accountability for all team members and maintaining process discipline are needed for proper, timely and visibility of the requirement elements.

E. Resource Problems

Resources are a major contributor to the project problems dilemma. At 20% of the total, this category is entwined in several of the other categories in that it involves people, it involves process and it requires allocation to specific requirement functions or project tasks. Businesses need to be profitable, yet businesses can not afford to have extra resources on standby. Combined with project back-log and over-committed resources in IT departments, the resource demand as a business condition will not likely go away soon. As demonstrated by the subcategories, General Resources accounted for 65% of this problem. Expressions such as not enough resources, resources being pulled off and the open ended statement "resources" support this problem as significant and widespread. Employees on Other Projects at 11% represent that project allocated resources are just not working on their project. Project managers can almost always make a strong case for projects that go foul and feel safe in doing so by stating it was a resource problem. Upper Management Direction at 4% is the quasi-typical battle for use of the department specialist that is being tugged in multiple directions. This specialist finally will spend more time where their manager wants them to spend it. Equipment Needed at 6% relates to the development cost of the project in which teams are limited in spending. Instead, teams must make do with what they have, look for existing alternative equipment or wait until equipment becomes available. All of these can jeopardize the project progress and performance benefits. Shifting Project Priorities at 6% is directly related to a lack of project prioritization or the lack of effective communication. Both fail to convey the relative importance to the overall business initiative and benefit. Employees often choose their daily work based on the urgency to deliver by a due date or based on the number of emails, text messages or voice mails received over the weekend. Technical Resources Elsewhere at 5% reflects the problem of the rare specialist that is the only one who can perform the task. Businesses should expand and satisfy the need for certifications and capabilities and these must remain a driver for the department manager.

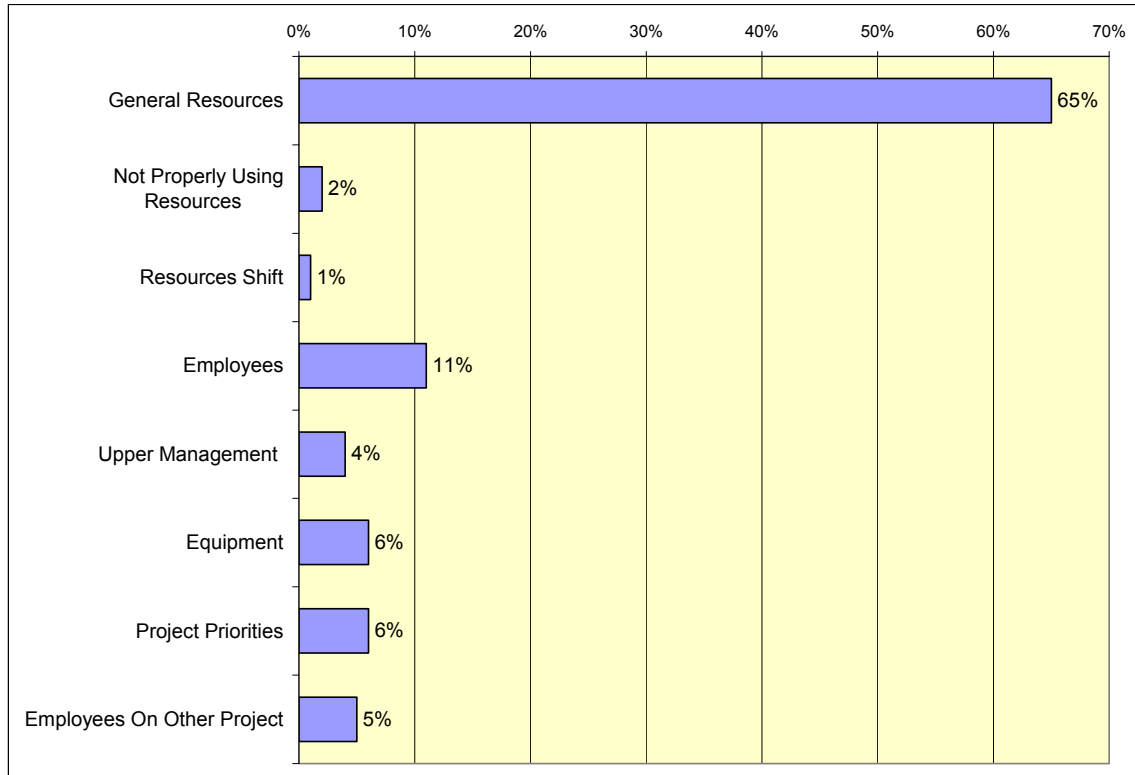


Figure 6: Resource Management Problems

Brooks' Law states that adding manpower to a late software project makes it later. Management should know what is going on within the organization, especially when it comes to resources to avoid problems such as upper management pulling resources for their favorite project or incorrect skill-sets available to timely complete the work, or key resources leaving (being pulled) during project implementation. David Thielen, [21] describes this as a fundamental importance in his book on the 12 secrets about Microsoft® management. It includes knowing the capacity of your staff, their work load and priorities. Organizations that have a form of project prioritization view the capacity line of available resources as equally important. Aligning project deliverables and tasks is a planning function which must identify resources as an extension of that planning.

The software giant, Microsoft® [19] on its blog, cited a case study at Polkomtel, a US\$3billion telecommunications services company in Poland that enjoyed pretty good project management success at its operational level. The problem was the continual challenges of too many projects, limited resources and a poor efficiency in prioritization for projects that were important to the organization. A Portfolio Management Server was part of the solution to gather and display critical business information. However, organizational buy-in up and down the structure was the real key for achieving objectivity for decisions on business initiatives, acceptance of priorities across the entire organization, and efficiency in resource usage. Sticking to

the process, remaining organizationally committed and communicating its importance to all managers and employees helps ensure continued progress and success.

In a discussion with a senior manager at one of the leading global medical device companies, he cited that its top reason for issues and project delays in its product development were a result of resource problems. Specifics included leveraging and changing resources across multiple projects which slowed all projects, changes in project leadership lead to project delay and the use of inexperienced resources contributed to further delays. When asked what it is doing to combat the problem, he responded with an emphasis towards the project managers to work more closely with the functional managers for resource support for their projects. They now conduct quarterly reviews to allocate resources to ensure the planned commitment is met. Further, should projects begin to extend beyond the planned finish dates or if a top priority project needs additional resources, the steering board gets involved to make priority decisions to slow down, delay project starts, or cancel projects in order to accommodate resource demands.

IV. APPLICATIONS FOR THE PROJECT PROBLEM ENVIRONMENT

Given the abundance of project problems we are still left with the fact that business executives, project sponsors and team members will be faced with project problems. Being

aware of the causes for project problems may make them easier to understand, but it does not make them more acceptable. Regardless of our perspective, the project work environment has problems. If we choose to recognize this as a hurdle in successful project delivery and then proactively commit to do something about it, we can greatly diminish the consequences of their impact, but we will not be able to make them go away entirely. The following presents some practical perspectives and applications for working in this environment.

Establish the Project Environment: Jack R. Meridith and Samuel J. Mantel, Jr. [18] present two conditions needing special attention for project management. The first being support from top management and the second is the general orientation of the project team members. If teams are oriented towards the project, which is problem oriented, instead of their individual discipline, the likelihood of success is much greater. The book goes on to discuss motivation and the demands on the project manager and team and that the most important characteristics are: high-performing technical skills, political sensitivity, high self-esteem, strong goal orientation and strong problem orientation.

Overcome barriers: When faced with senior management obstacles such as project delays awaiting decisions, one has to remain diligent in both moving the project forward and obtaining the decision. Presenting the facts in a manner that begs for a response is a project manager's responsibility. In his article on leadership, Allen Holmes [8] a Bureau Chief with CIO, cited Peter Walton, CIO of Hess a global energy company, who places a high reliance on the presentation of facts provided from experts. Walton's approach is to present to your audience, materials that have a "wow" factor and add real case studies for powerful influences. Managers don't have a lot of time for dialog and debate; therefore you often get only one opportunity to explain the situation. Decision cases made with powerful facts and justifiable alternatives are seldom ignored.

Christopher Koch [11] in his CIO cover story on the new science of change cites 10 nostrums that have been heard over and over, but he goes on to say that scientific research now proves they work. A number of these directly reflect strategies for overcoming project problems when people and process are involved. Here are his nostrums: 1. Stay on message; 2. Keep it simple; 3. Expect fear; 4. Let them own the change; 5. Lead by not leading, (in other words don't order people around); 6. Show, don't tell; 7. Provide experience; 8. Focus on the big picture; 9. Seek compliance before commitment; and 10. Make it a personally relevant story.

Building Teams and Project Managers: Project teams come together for the purpose of delivering the project. Our society places great value [12] on the teamwork spirit. It is obvious that teams need sufficient resources to succeed despite periods of cutbacks and resource shortages. One has to question the wisdom of managers that believe more can

always be accomplished with less. The emphasis needs to focus on early creation of a contributing team into an effective work group. Establishing relationships with all team members and optimizing face-to-face meetings as key attributes for building better teams. And, in addition to technical skills, teamwork skills allow teams to learn from each other and improve performance. Project managers not only have to lead the project but also care-take the team members. Their responsibilities are not just with project deliverables but in keeping peace amongst the team and building an environment conducive for making team members feel good.

On becoming an effective project manager, Clifford F. Gray and Erik W. Larson [6] emphasize leadership as an extremely valuable role. The role not only requires a highly visible, interactive management style that is essential to building and sustaining cooperative relationships, but they cite Tom Peters in his book The Leadership Challenge, that it allows project managers to utilize their most powerful leadership tool, which is their own behavior. Grey and Larson go on to discuss six aspects of leading by example: Priorities, Urgency, Problem Solving, Cooperation, Standards of Performance and Ethics. On problem solving, it informs the reader as to how the project manager must respond to problems and to set the tone for how others will tackle problems. Greeting bad news with verbal attacks and finding out who caused the problem rather than how to resolve or prevent the problem, leads team members to cover their tracks and cast blame elsewhere. Lastly, focusing on how to turn a problem into an opportunity is driven by learning from mistakes and adapting proactive approaches to problem solving.

Enhancing Project Management Practices: With the proliferation of individual project management certifications and movements to increase PM maturity, organizations are delivering more and faster projects than ever before. However, these organizations still encounter the very same problems. Of the companies that I have consulted with Nike stands out in its PM efforts and not just in their IT department. The company produces great products, but they also depend on their project management savvy for growth. Nike is simply not satisfied with the status quo and has on-going efforts for PM optimization and maturity. A senior manager conveyed that it has internal on-going efforts that recognize PM from the top to the bottom. It has launched global program management for consistent processes and practices and coupled this with its PM Circle of Excellence. It has board level authority processes for prioritization and for requirements management. It has implemented enterprise-wide portfolio resource management, a mentor program and conducted its own effectiveness survey, conducted by its PMO Executive Council, with the sole purpose to drive its PM to the next level of maturity.

The medical device company previously mentioned is also a tremendous leader in its PM development and maturity. It is not satisfied with typical problems and is working with its

supervisors to overcome these such as providing management with highly accurate and current project information which enables data driven decisions. They are working on PM culture to become more strategic and as stated by a senior manager, even more “planful”. Gut feelings don’t work, and they are moving to an enriched process culture that requires decisions to be made earlier. There is a lot of energy in the organization, its project teams and project managers, that they can make things better and improve how it does business. There is little tolerance for acceptance at this time that problems and issues should be the norm. It sponsors team building exercises to ensure that team members are feeling valued, beginning with an all team kick-off meeting. Marketing may provide the alignment of how this project fits the business strategy, meets the market needs, who the competition is and why it is vital to the business. Even team social activities are practiced during the course of the project to maintain the sense of team and belonging.

Managing Assumptions and Risks: Sturgeon’s Law states that “Nothing is always absolutely so”, therefore, by making an assumption or not monitoring a potential risk, we often create a problem and its consequence. Assumptions and risks are not initially a project problem, but rather an item that requires disciplined practice to manage. A project environment with a geographically dispersed team is a prime example for significant communication problems.

I view the following as vital applications to reduce risk and its subsequent consequences. Perform risk management on a regular basis by practicing risk identification, evaluation and contingency planning steps during regular project status or team meetings. Embed a column on the project schedule that flags risks, problems and assumptions. Create and maintain a Running Issues Chart. Treat issues and risks as if they were a project task by assigning them to a team member. Work diligently to permanently resolve issues and problems. Emphasize risk assessments during project transitions, hand-offs, and with 3rd party stakeholders. And, don’t make the choice to hope for the best and wait to see what happens.

V. CONCLUSION

Most organizations do not have a large contingency of 15 to 20 year project management veterans to plow through the project problems. But they do have lots of project managers that need the everyday discipline of effective PM practices. Project managers need to practice self-discipline for managing people and problems. They need to create and maintain team processes to manage the project areas where problems are most likely to occur and remain diligent and proactive do something about it. Project managers need to avoid throwing in the towel and accepting the way it is. [7] Greengard looks at institutionalizing accountability in order to move teams beyond turf wars. He discusses accountability and what it means, such as finding ways to torpedo the blame game and defining accountability at all levels in the organization. Of his 8 biggest problems, [20] Patton’s #8 is

that project managers are passive. This he feels could be #1 in many companies, meaning that project managers and their organizations share the responsibility to get things done, to follow process, to prioritize and to perform project planning and control activities, but they don’t.

My Six Best Performance Applications:

PMAP: Working together is only a problem when time, money, personal space and opinions are stake! With the steady growth of outsourcing the need for the strong relationships between the parties is vital, especially when problems arise, when scope changes and when conflict comes into play. Utilizing a Project Management Alignment Program® (PMAP) is focused on aligning the diverse project teams and their objectives. The intent is to focus on a project oriented mind-set of project first thinking in a partnering mode. The full application extends beyond individual projects and is used to create and establish the business focus on projects. This focus elevates the critical nature of working relationships, whether it’s contractual with primary customers or with internal operations. It is more than just “What” is done on projects but “How” are we going to do business. It requires diligence and persistence with a foundation of trust! PMAP includes processes such as communications, contract management, change management, requirements management and prompt problem and issue resolution. It also builds discipline and embeds business metrics for Project Management.

Measure CSP: This emphasis is the philosophy of Cadence Management and their focus on embedding a complete understanding, application and management of project Cost, Schedule and Performance.

Problem Resolution: Project teams need to utilize a problem solving methodology or model beginning with clearly stating the problem and its impact on the project. These are project problems and are not labeled with a person or a profession. The team must work collaboratively and be persistent to resolve it. Remember, hard on the problem and soft on people.

Trust Me: Project Managers need to actively demonstrate and exhibit leadership with the team. Build trust with counterparts from day one, talk about trust and be the first to demonstrate it. Do what you say, clearly define expectations and understand your behavior and the potential impact it has on others.

Never Let Go: When an issue or problem arises never let it go until resolved. If delegated, we should never assume that someone else will resolve it. The brutal facts need to be presented to decision makers. Very successful business leaders did not necessarily get there by luck. Most did so through perseverance and a very strong attribute of persistence! Be persistent in resolving problems.

Listening: Teach yourself and practice the ability to suspend judgment while learning about a project problem. Practice patience while listening by not talking, interrupting or attempting to solve the problem while initially listening.

Once defined and understood, then move forward with responsive questions, alternatives and recommendations.

Albert Einstein once said: "The mere formulation of a problem is far more essential than its solution.....To raise new questions, new possibilities, and to regard old problems from a new angle requires creative imagination and marks real advances...."

As the project, product or program manager, it all comes to you.

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