THE ROOT CAUSES OF CONTRACT ADMINISTRATION PROBLEMS
Richard J. Sebastian and Bill Davison*

ABSTRACT: To help procurement professionals identify the root causes of contract administration problems, we present an organizational behavior problem solving conceptual framework which consists of a comprehensive exposition of potential personal (e.g., personality) and environmental (e.g., technology) causes of behavior. We then illustrate how the causal factors from the framework can be mapped to the procurement process and its problems. We expect that procurement professionals will be able to use the framework to identify root causes in post mortem analyses of contracts or elsewhere in the procurement process to mitigate risks. We also expect that management will use the framework to address the organizational behavior root causes of problems, thereby improving the systems and processes it controls or influences and, in turn, minimizing or eliminating contract administration risks. Future research can evaluate the usefulness of the framework.

INTRODUCTION

“The need for more affordable and effective government combined with trends towards revitalizing human resources capacity and redesigning service delivery are dramatically affecting the structure and culture of public organizations.” (Robillard, 2001) As budgets are reduced and the demands for services increase, public agency managers are looking for ways to improve the budget allocation and procurement process. An effective decision making process should incorporate an understanding of the overall costs of each of the programs and the associated risks. The public sector has begun to adopt integrated risk mitigation as a methodology to improve the decision making process. Canada has adopted, as policy, the incorporation of integrated risk...
management into project management. (Robillard, 2001) “Integrated risk management is a continuous, proactive and systematic process to understand, manage and communicate risk from an organization-wide perspective. It is about making strategic decisions that contribute to the achievement of an organization's overall corporate objectives. Integrated risk management requires looking across all aspects of an organization to better manage risk. Organizations that manage risk organization-wide have a greater likelihood of achieving their objectives and desired results. Effective risk management minimizes losses and negative outcomes and identifies opportunities to improve services to stakeholders and the public at large” (Robillard, 2001)

The four elements of integrated risk management are:

1. Developing the corporate risk profile
2. Identifying the likelihood of occurrence and consequences of problems.
3. Developing a risk mitigation plan
4. Ensuring continuous risk management learning.

Based on a conceptual model developed by Davison and Wright (2004), our past research has investigated and identified the most common contract administration problems (e.g., delays) for different types of contracts (e.g., construction) as well as the most likely consequences of these problems when they do occur and discussed how this research could be used to develop risk mitigation plans. In other words, we have collected data relevant to elements 2 and 3 of integrated risk management (Davison & Sebastian, 2009 a,b). Thus, this previous research provides information on what can happen but does not address why it happens. Our next goal, therefore, is to examine ways to incorporate continuous risk management learning (element 4) into the procurement decision making process and try to determine why these problems occur by determining the root causes.

At each step of the procurement process, Table 1, the procurement official should anticipate the potential risks and problems and develop a strategy to avoid or mitigate these problems. (Davison and Wright, 2004).

| TABLE 1 |
|Procurement Process|
PreAward Activities | Post Award Activities
---|---
Development of a Scope of Work/Specifications | Project Management
Determining the appropriate method of pricing and delivery | Inspection and Monitoring
Developing a contract with risk mitigation clauses to address insurance requirements, change order procedures, delays, termination and acceptance. | Dispute Resolution
Other factors- Environmental conditions | Acceptance

Thai (2004).

The potential contractual risk and contract administration problems are listed in Table 2.

**TABLE 2**

**Types of Contract Administration Problems**

<table>
<thead>
<tr>
<th>Contractual Risk and Contract Administration Problem</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposal risk: Unclear scope of work</td>
<td>Ambiguous specifications lead to disputes over required performance, acceptance.</td>
</tr>
<tr>
<td>Surety and Liability risk: Increased cost</td>
<td>Inadequate bonds and insurance to cover vendor failure.</td>
</tr>
<tr>
<td>Schedule risk: Wrong product</td>
<td>Purchase order or contract clearly identifies correct product, but vendor ships incorrect. No dispute involved</td>
</tr>
<tr>
<td>Schedule risk: Delay</td>
<td>Purchase order has clearly stated completion date. Completion date delayed (any length of time) due to agency or vendor (with or without cause).</td>
</tr>
<tr>
<td>Contractual risk: Change order</td>
<td>Change in the scope of work (additional work, money, time), after contract award. Can be requested by either party for any reason.</td>
</tr>
<tr>
<td>Contractual risk: Dispute resolution and personality conflict</td>
<td>Personality conflicts between agency project manager or staff and vendor project manager or employees. Disagreement between the parties that cannot be easily resolved. May involve scope of work, materials supplied, payment schedules, or</td>
</tr>
</tbody>
</table>
any other aspect of the contract.

<table>
<thead>
<tr>
<th>Performance risk: Definition of acceptance</th>
<th>Completion of project is delayed due to non acceptance of final product. Example: difference in either party’s definition of what was supposed to be delivered or provided</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance risk: Poor performance</td>
<td>Contract clearly states a level of expected performance (this is not in dispute) and quality problems with vendor’s performance of work occur.</td>
</tr>
<tr>
<td>Performance risk: Sub Contractors</td>
<td>The vendor uses subcontractors not on his payroll to perform any or all of the work. Prior approval, for use of subcontractors, was received</td>
</tr>
<tr>
<td>Performance risk: Other sources</td>
<td>There are very few vendors that can perform the work.</td>
</tr>
<tr>
<td>Performance risk: Risk of failure</td>
<td>The project has a high risk of failure. i.e. New technology, new equipment, new vendor, Project never been done before. Tight timeline or budget</td>
</tr>
<tr>
<td>Price Risk: Cost</td>
<td>Project has a high cost.</td>
</tr>
</tbody>
</table>

Davison and Wright (2004).

The procurement process requires interaction between internal members of the agency (end users, procurement staff) and external members (vendors) and is influenced by environmental factors, such as, weather, site conditions, and markets. Using the occurrence of a contract administration problem as the manifestation or end result of a series of actions/interactions undertaken by the agency or contractor that adversely affects contract performance, we propose using the Six Sigma approach of 5 whys (Six Sigma, 2009) to determine why these contract administration problems occur.

In the 5 why problem solving approach, why a problem occurs is often asked five times so that one can drill down to get to the core of a problem. In a typical procurement risk identification process a single why is asked. For example, if a construction contract is delayed, procurement professionals will ask why did this occur; the answer may be due to an external factor such as the vendor experiences a shortage of materials or an internal factor such as no one conducts a required inspection. For either case procurement officials typically use existing procurement tools (pre-award or post award) to mitigate the identified risk. For example, on the one hand, they may take action after the fact to correct the situation, such as, amending the contract by extending the due
date or imposing penalties (post award). On the other hand, they may act proactively (pre award) by evaluating the reliability of the supply chain and competency of the project team. After either of these actions, procurement officials typically consider risk mitigation complete and they take no further action.

Results from our previous research indicated that procurement officials encountered the same contract administration problems and risk factors each time they procured a product or service, for example, delays for Construction contracts. We do not think the existing single “why” approach to risk identification and the application only of procurement tools to mitigate identified risk is sufficient for identifying and mitigating the actual root causes of the risks. For our approach that is presented in this paper, we propose going beyond the identification of typical risk factors and asking “why” these risk factors occur. In this approach we first identify the potential contract administration problem. We then review each step of the procurement process and ask why these problems are occurring by identifying internal and external risks that contribute to the problem. Lastly, we ask why these internal and external risks occur by using an organizational behavioral problem solving model to identify the potential root causes of the risks.

MANAGEMENT OF ORGANIZATIONAL BEHAVIOR CONCEPTUAL FRAMEWORK

A management of organizational behavior or organizational behavior problem solving conceptual framework that has been adapted from several sources will now be presented (Cohen, Fink, Gadon, & Willits, 2001; Lewin, 1997; Robbins & Judge, 2009). This deductive conceptual framework will be used to attempt to identify the root causes of contract administration problems. In this framework behavior (B) is a function of the person (P), the environment (E) or situation, and the two combined. That is, Behavior = f (Person, Environment, PE). For the present purposes, the behaviors that we are ultimately trying to explain are the typical problems that arise in contract administration, such as, delays or conflicts. The major causes of behavior (that is, contract administration problems) can stem from personal (internal) factors or those that are located within the people involved in contract administration and from environmental (situational or external) factors or those located outside of the individuals involved in contract administration and from the two factors acting together. The framework is relatively comprehensive and is presented in its entirety to allow procurement professionals to
determine the potential relevance of its many factors as root causes of contract administration problems.

The major personal or internal factors (P) that will be described are:

- Demographic characteristics, such as, age (generation), gender, and education
- Knowledge, skills, and abilities (KSA’s) or competencies
- Beliefs, attitudes, and values
- Personality
- Motivation

The age, gender, and level of educational attainment (a major determinant of socioeconomic status or SES) of the contract administration personnel may affect the occurrence of problems in several ways. Whether desirable or appropriate, both age (generation) and gender may be the source of conflicts between purchasing personnel and vendors. The differences that exist among the four generations (veterans, boomers, Xers, and millennials) in the workplace have been widely chronicled (Robbins & Judge, 2009; Twenge, 2007; Zemke, Raines, & Filipeczak, 2000). Similarly, gender differences in communication and leadership style have also been identified (Tannen, 2001). Level of educational attainment may influence the incidence of contract administration in a number of ways, including problem solving ability, communication style, and conflict resolution style.

The knowledge, skills, and abilities (KSA’s or competencies) of purchasing personnel and vendors are not only related to educational level but may also make independent contributions to the occurrence of contract administration problems. Individuals’ knowledge or familiarity, awareness, and understanding of a subject gained through study or experience is clearly among the determinants of the quality of their work and consequent problems. Skills differ from knowledge and represent its effective application. Purchasing personnel and vendors with different levels of interpersonal, communication, and technical skills will also likely have different numbers and kinds of contract administration problems. Intellectual ability or general cognitive (mental) ability has been found to be a very reliable predictor of performance in all jobs and thus would, of course, affect performance in procurement (Ree, Earles, & Teachout, 1994; Schmidt & Hunter, 2004).

Individuals’ beliefs, attitudes, and values can also influence their performance in the workplace. Beliefs are ideas people have about the world and how it operates, or more simply, facts and opinions. Some widely held beliefs that would be relevant to work place performance
and contract administration problems are “It’s a dog eat dog world” and “Nice guys finish last”. Quite simply, attitudes are a person’s likes and dislikes. The most significant job related attitude is job satisfaction which is how much people like or dislike their jobs and the job’s facets (work itself, supervisor, coworkers, pay, and promotion opportunities). Job satisfaction not only predicts job performance but also absenteeism and turnover and is thus clearly relevant to the issues being addressed in this paper (Judge, Thoresen, Bono, & Patton, 2001). As opposed to beliefs, values refer to how things should or ought to be rather than how they are. More fully, values are abstract standards used for making judgments about what’s right or wrong. Generally speaking, values affect both attitudes and behavior. For example, honesty/integrity and hard work are two values that can have direct relevance to contract administration problems.

An individual’s personality, or the relatively enduring and consistent characteristics of individuals which make them distinctive, affects work performance. Research has identified five fundamental personality characteristics—extroversion/introversion, agreeableness, conscientiousness, emotional stability, and openness to experience (Digman, 1990). Conscientiousness, and to a lesser degree emotional stability, have been found to predict job performance across all jobs (Barrick, Mount, & Judge, 2001). Selecting workers on these characteristics would thus make sense.

A final personal cause of behavior in the workplace is motivation or how hard an individual tries and wants to accomplish a task or achieve a goal. High performing individuals are those who have high levels of ability and motivation (Pinder, 1998). Motivation is affected by the needs of individuals (a personal factor) as well as the design of jobs, performance standards, and the reward systems in place at work (environmental factors) which will be described later.

The major environmental/situational or external factors (E) that will be described are:

- Required system or job requirements
- Performance standards
- Physical environment and layout
- Technology and job design
- Reward and punishment system
- Group dynamics and structure
- Leadership and management
- Organizational culture and subcultures
Organizational structure

The required system or job requirements describe what workers’ specific tasks and responsibilities are. The required system may be found in a written job description, but not all organizations have written job descriptions and even where written job descriptions exist, the actual requirements of the job may be different from the formal or written ones. The required system can affect performance in a number of ways (Cohen et al., 2001). One obvious way exists when there is a mismatch between the job’s requirements and the job incumbent’s knowledge, skills, and abilities. When there are conflicting expectations communicated to the worker by the same (the supervisor says cut costs and write more contracts) or different individuals (do my contract first), performance may suffer as would also be true when the requirements of the job are ambiguous (Gilboa, Shirom, Fried, & Cooper, 2008).

Performance standards for a job or what is defined as acceptable performance affect an individual’s performance. On the one hand, if the standards are too low, they will not be motivating. On the other hand, if the standards are too high, they may be seen as unattainable, thereby also adversely affecting motivation and performance. Thus, the performance standards need to be set at an appropriate level to have the most beneficial effect, and when they are not, performance problems can result (Robbins & Judge, 2009).

The physical environment and layout refer to lighting, temperature, humidity, noise, crowding, air quality, and the actual arrangement of workspace, including the workstation. Physical environments that are poorly illuminated, hot, humid, noisy, crowded, and poor in air quality have known adverse psychological effects, such as, stress, and can harm work performance (Baron, 1994; Quick & Quick, 1997). The layout of work stations, their ergonomics, is very important for preventing repetitive work injuries and neck and back problems which, in turn, can hurt performance (Schultz & Schultz, 2002).

In simplest terms, technology is how the work is done. More fully, it refers to the processes, machines, equipment, and worker competencies that are used in the major transformation or conversion process of a work unit. If any aspect of how the work is done is substandard, the output of the unit will be adversely affected (Organ & Bateman, 1991). Job design basically addresses the complexity/simplicity or nonroutine/routine nature of the individual jobs. The major performance issue here concerns the match between the nature of the job and the skills and preferences of the jobholders (Hackman & Oldham, 1980).
The formal (organizational) and informal (peer group) rewards and punishments which workers receive are powerful determinants of workplace behavior. Performance that results in formal (pay raise, official recognition) and/or informal rewards (praise, gratitude) will be repeated and conversely that which leads to formal (warning, reprimand) and/or informal (ridicule, exclusion) punishments will be less likely to be repeated (Cohen et al., 2001; Robbins & Judge, 2009). Identifying the results wanted and rewarding for their achievement are fundamentally important organizational/managerial imperatives.

Group dynamics, or the structure and processes, of work groups can significantly affect individual and group performance. Among other structural features, the norms (unwritten rules about appropriate and inappropriate behavior), cohesiveness (degree to which the members like one another), size (number of members), and composition (similarity/dissimilarity of the members) can all influence the quantity and quality of work done by the group and its members. For example, if the group is cohesive and has norms limiting production, the output of the group will likely be barely acceptable or worse. Other examples are that very large groups will have coordination issues and those whose members are quite dissimilar may have more conflicts, both of which may hurt performance (Shaw, 1981).

The quality and nature of leadership and management within a work unit and organization influence many of the other personal and environmental factors already described in this framework. Indeed, quality gurus, such as Deming and Juran, argue that 85% of the problems in the workplace are the result of systems and processes established by management, such as, selection, training, reward, and technology (Scholtes, Joiner, & Streibel, 1996). Regardless of the validity of this position, it is clear that some management and leadership styles result in more favorable worker attitudes and productivity than others. In general, supportive leadership improves employee satisfaction which as stated previously positively affects performance (Howell & Costley, 2006). To provide just one other illustration, participative leadership is generally more effective than nonparticipative for educated, intelligent, intrinsically motivated workers (Cohen et al., 2001).

Simply stated, organizational culture is the way things are done around here, or in another sense, represents the personality of the organization. More formally, it is the shared beliefs, values, and norms of the organizational members that influence their decision-making and behavior inside and outside the organization. In an organization that values excellence and outstanding customer satisfaction, the behaviors of
members in good standing is fairly predictable. Cultures with very conservative values and norms will most likely stifle innovation and creativity (Jones, 2007).

The way in which job tasks are formally divided, grouped, and coordinated, or organizational structure is the final environmental factor in this conceptual framework. Some structures are highly mechanistic or bureaucratic while others are organic. Mechanistic structures have a narrow division of labor or high degree of specialization, functional (formed on the basis of occupational resources or common expertise, such as, accounting, procurement, etc.) departments, clear chains of command, narrow spans of control (number of individuals who report to a manager), centralized decision making (important decisions made by top management), and a great amount of written documentation resulting in a high degree of standardization. Organic structures will more likely be characterized by broadly defined jobs, relatively shorter or flatter chains of command or hierarchies, wider spans of control, decentralized decision making, less written documentation, free flows of information, and more cross functional and cross hierarchical teams. Mechanistic structures are best suited for large organizations in certain environments, with routine technology, and low cost strategies whereas organic structures are most appropriate for smaller organizations in uncertain environments, with non routine technology, and differentiation strategies. Productivity should be positively affected when the appropriate structure is present and when there is a good match between the structure and the needs and preferences of the workers (Robbins & Judge, 2009).

AN EXAMPLE OF HOW TO APPLY THE ORGANIZATIONAL BEHAVIOR PROBLEM SOLVING FRAMEWORK

To illustrate how to apply the framework and to get some feedback about its usefulness, an exercise was conducted with a convenience sample of public procurement colleagues. That is, public procurement colleagues who were taking courses on contract administration or who were attending sessions of an annual public procurement conference were asked to participate in the exercise. Using Construction as the contract type and Delay as the contract administration problem (Table 3) for the exercise, we followed an adaptation of the Six Sigma 5 Why’s approach to determine the potential root causes of delays for construction contracts. The public procurement professionals were provided with a description of the contract type, contract administration problem, and procurement process. They were then asked to go through each step of the procurement process and ask “why” the selected contract
administration problem occurred. They generally agreed that the reason “why” the problem occurred had two components: internal (agency) risk factors and external (vendor) risk factors. They also agreed that there are numerous factors for each component. For this illustration of how to apply the framework we used the most commonly identified internal and external risk factors. Specific internal and external risk factors for each step in the procurement process are described in columns 2 and 3 in Table 3. For the final step in this root cause analysis, participants were provided with written information as well as an oral presentation on the organizational behavior problem solving framework described in this paper. Using the organizational behavior problem solving framework as causes, the participants were asked to state “why” each of the specific risk factors occurred. The outcomes of this exercise are shown in column 4 of the table. Upon completion of the exercise, there was extensive discussion regarding the usefulness of this approach for identifying root causes of contract administration problems. All participants agreed that this approach and framework would be useful in developing a project specific risk mitigation plan that went beyond typical risk identification and could be used for identifying root causes of contract administration problems.

TABLE 3
Root Causes of Construction Contract Administration Problems (Delays*)

<table>
<thead>
<tr>
<th>Procurement Phases</th>
<th>Internal (agency) Risk Factors</th>
<th>External (vendor) Risk Factors</th>
<th>Possible Organizational Behavior Root Causes for the identified risk factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre Award Activities</td>
<td>Development of Scope of Work/ Specifications</td>
<td>- No previous experience with this type of project, unable to draft adequate specifications</td>
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<tr>
<td></td>
<td></td>
<td>- Failure to investigate vendor’s ability to perform skills</td>
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<tr>
<td></td>
<td></td>
<td>- No firm definition of quality or delivery date established</td>
<td></td>
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<tr>
<td></td>
<td>- Knowledge Skills and Abilities. Inadequate writing skills. No experience with this type of project.</td>
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<tr>
<td></td>
<td>- Complex/ new technology, requiring numerous integrations or cooperative efforts</td>
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<td></td>
<td>- Long schedule</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>- Numerous deliverables</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Faster than normal (for this</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Physical work environment. Unexpected work environment (site conditions, working conditions, weather, project long distance from office)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Technology and Design. Technology needed is not understood.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Group Dynamics. The members of the project team have different goals. The wrong mix of personnel on the project team.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Determining the appropriate method of pricing and delivery | - No firm delivery date established  
- Inadequate method to determine contract pricing  
- Incorrect vendor is chosen | - Unrealistic deliverable schedule  
- Unrealistic prices | - **Knowledge Skills and Abilities.**  
Inadequate writing skills. No experience with this type of project. Misunderstanding of specifications.  
- **Technology and Design.**  
Technology not available to determine all of the project costs.  
- **Group Dynamics.** The members of the project team have different goals. The wrong mix of personnel on evaluation team. |
| --- | --- | --- | --- |
| Developing a contract with risk mitigation clauses to address insurance requirements, change order procedures, delays, termination and acceptance | - Differences in contract interpretation.  
- Failure to agree on the meaning of key terms. | - Differences in contract interpretation.  
- Failure to agree on the meaning of key terms | - **Knowledge Skills and Abilities.**  
Inadequate contract development skills. No previous risk mitigation experience.  
- **Belief** *(Vendor is always at fault)*  
- **Group Dynamics.** The members of the project team have different goals. The wrong mix of personnel on evaluation team *(no legal personnel)*  
- **Reward/punishment system**  
No incentive to perform on time at a specified quality or within budget  
- **Organizational structure.**  
Flawed decision making process *(long, many or wrong people involved)* |

**Post Award Activities**
| Project Management | - Inadequate project management experience  
- No previous experience with this type of project  
- Inadequate communication skills  
- Personality conflicts within agency  
- Personality conflicts with vendor  
- Inadequate monitoring of delivery schedule and enforcement. | - Demographics. Age, gender, education differences.  
- Knowledge Skills and Abilities. Inadequate project management skills. No experience with this type of project. Inadequate communication skills.  
- Beliefs (the vendor is always wrong)  
- Personality Introversion, conscientiousness  
- Technology and Design. Technology not available to track project progress.  
- Group Dynamics. The members of the project team have different goals.  
- Leadership and management. Conflicting direction or absence of leadership.  
- Reward/punishment system. No incentive to perform on time at a specified quality or within budget  
- Organizational structure. Flawed decision making process (long, many or wrong people involved) |
|---|---|---|
| Inspection and Monitoring | - Inadequate monitoring, testing, documentation  
- Inadequate project management experience  
- No previous experience with this type of project  
- Inadequate communication skills  
- Personality conflicts with agency  
- Inadequate monitoring of delivery schedule and enforcement. | - Knowledge Skills and Abilities. Inadequate skills to perform required tests.  
- Beliefs. (if it isn’t broke don’t fix it).  
- Technology and Design. Technology not available to track project progress or perform tests.  
- Reward/punishment system. No incentive to perform on time at a specified quality or within budget |
| Dispute Resolution | - Personality conflicts within agency  
- Personality conflicts with vendor  
- Different interpretations of | - Demographics. Age, gender, education differences.  
- Knowledge Skills and Abilities. Inadequate project management skills. No experience with this type of project. Inadequate communication skills.  
- Beliefs (the vendor is always wrong)  
- Personality Introversion, conscientiousness  
- Technology and Design. Technology not available to track project progress or perform tests.  
- Reward/punishment system. No incentive to perform on time at a specified quality or within budget  
- Group Dynamics. The members of the project team have different goals.  
- Leadership and management. Conflicting direction or absence of leadership.  
- Organizational structure. Flawed decision making process (long, many or wrong people involved) |
<table>
<thead>
<tr>
<th>Vendor</th>
<th>Scope of work or progress</th>
<th>Type of project. Inadequate communication skills.</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Different interpretations of scope of work or progress</td>
<td>- Personality (Introversion, conscientiousness)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Beliefs (the vendor is always wrong).</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Group Dynamics. The members of the project team have different goals.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Leadership and management. Conflicting direction or absence of leadership</td>
<td></td>
</tr>
<tr>
<td>Other (Environmental)</td>
<td>- Unanticipated site conditions</td>
<td>- Knowledge Skills and Abilities. No experience with this type of project.</td>
</tr>
<tr>
<td></td>
<td>- Unanticipated weather conditions</td>
<td>- Physical work environment. Unexpected work environment (site conditions, working conditions, weather, project long distance from office)</td>
</tr>
<tr>
<td></td>
<td>- Supply chain problems</td>
<td>- Technology and Design. Technology not available to identify potential problems</td>
</tr>
<tr>
<td></td>
<td>- Supplier cost increase</td>
<td></td>
</tr>
</tbody>
</table>

Notes: Purchase order or contract has a clearly stated delivery completion date. Delivery/completion is late (any length of time) due to either vendor or agency cause (any reason).

**CONCLUSION**

By identifying the likely root causes of contract administration problems, procurement professionals and management can develop strategies to minimize their impact or eliminate them altogether. In this paper using a problem solving conceptual framework from the management of organizational behavior discipline, we mapped causal categories from the framework to the procurement process and its problems to aid procurement professionals and management in the identification of the likely root causes of the most common contract administration problems.

The traditional risk mitigation model provides procurement officials with an effective tool to identify the contract administration problem and to develop a risk mitigation plan specific for that project but does not
address the root cause of the risk. If the root cause of the risk is an identifiable determinant of organizational behavior, then the real root cause of the risk is untreated and remains, much like a virus, available to infect the next project. By examining the potential organizational behavior determinants of risk, management can identify effective strategies to treat the persistent root causes of recurring risks.

To meet the demands of more affordable government, risk management practices need to be integrated into existing decision making processes. A key tenant of integrated risk management is the need for ongoing feedback about the effectiveness of individuals, groups, and organizations in the decision making process. The proposed problem solving approach can be used by public procurement professionals to conduct a post mortem analysis of projects to identify the internal and external causes of contract administration problems and then develop project specific risk mitigation plans that include the use of existing procurement tools (pre-award and post award). More importantly, management can use the approach to address the organizational behavior root causes of problems and thus improve the systems and processes it controls or influences including: selection, training, performance management (required system, standards, reward and punishment system), technology and job design, group structure and dynamics, organizational structure and culture. Ultimately, management can use the framework to improve individual, group, and organizational effectiveness and avoid recurring risks.

Future research could survey procurement professionals to find out which of the many personal and environmental factors in the framework they think are most likely the root causes of the contract administration problems they encounter. Assessing the usefulness of the framework for integrated risk management would be an important aim of future research.

REFERENCES


Scholtes, P. R., Joiner, B. L., & Streibel, B. J. (1996) *The Team Handbook*. (2nd ed.). Madison, WI: Joiner


