

MINIMIZING POLITICAL INFLUENCE IN PERFORMANCE CONTRACTING CASE STUDIES

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Political influence on procurement systems was identified at the CIB W92 conference as a major factor in the delivery of performance construction. This research addresses the issues, impacts, and sources of: information, transparency, subjectivity, corruption, and collusion. It also introduces methodologies to minimize political influence. It proposes a process and requirements to identify the opportunity to implement systems that minimize political influences. The measurement of information (IMT) and levels of information are used to provide the theoretical foundation for the methodology and processes. The research compares the political influences of various owners in 300 tests to support the hypothesis.

Keywords: political influence, overcoming bureaucracy, maintaining value.

INTRODUCTION

One of the major hurdles identified in improving construction performance is the minimization of political influence on the procurement and management of construction services in both the private and public sectors. Political influences shall be defined as any action, which purpose is not to procure the best value of construction and which does not result in a “win-win” relationship with the contractor. This includes influences on the construction process that are based on personal relationships or agreements (not performance information), which give one party an unfair advantage over the other parties. Political influence can be exerted by individuals inside or outside the procurement delivery process (user requirement, design, procurement, and construction). Based on the tests of the implementation of full information systems in the private sector (Motorola, Intel, Honeywell, McDonnell Douglas, Phelps Dodge, and United Airlines), and public sectors (States of Wyoming, Utah, Georgia, and Hawaii, and Federal Aviation Administration), a process was created to identify and minimize the impact of political influence. The process has the following steps:

- Identify the level of information and risk of the user.
- Identify the appropriate strategy.
- Identify the goals of the implementation.
- Follow guidelines for minimizing political influence.
- Document the results.

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Defining and Identifying the Political Environment Using IMT

Information Measurement Theory (IMT) states that an environment is described by characteristics of the environment, such as time, location, number of individuals, type of individuals, information technology, type of government, economic level, level of bureaucracy, culture etc... (Kashiwagi 2002) Information is a relative description of these characteristics, which will predict how an entity in the environment will react. Each environment is unique and slightly different from every other environment. IMT states that in each environment, the information that differentiates and defines the environment, exists. Each individual's perception of that information is constrained by his or her ability to perceive and process the information. This is deductive in nature. It is very easily seen that two individuals in the same environment perceive differently. One always perceives more or has a more accurate perception and understanding of the environment than the other, and no two individuals perceive exactly alike. The one that perceives less does not perceive less because the information does not exist. If that were the case, the other individual would not be able to perceive the information. Therefore, each person's perception is constrained.

The state or condition of every environment changes with time. Each instant or state of the environment is impacted by the previous instant or state. If one perceives the information at any particular instant, the next state could be accurately predicted. The more information an individual perceives, the more accurate their predictions becomes. Individuals in an environment have a major impact on the environment. Individuals change by perceiving information that is already there, processing the information, implementing the information if they understand the information, and changing because they have implemented something newly perceived. This is the process of learning or change. The more times a person goes through the cycle of change, the faster the individual increases their speed of perception, processing, and rate of change.

Therefore, the differing views of individuals are caused by their different levels of perception and processing of information. Individuals see the same environment, but due to various levels of perception of the environment, their perceptions are different. IMT states that the perception of individuals or organizations and their rate of change is constrained and is very difficult to change. Figure 1 shows Environment A, B, and C. Environment A is where the most information is perceived and used. Environment A has the following characteristics: minimum number of rules, high level of information being used, high rate of change, high level of efficiency, minimal decision making, utilization of delegation, clear assignment of responsibility and liability, minimized risk, and reduced control. Environment A is the environment defined by a leader, a facilitator, a user of information, and an environment that clearly assigns responsibility. Environment C has the following characteristics: Rule oriented, low level of using and passing information, high level of subjective decision making, low level of inefficiency, and a high level of control and management. Environment C can be considered a bureaucratic environment where information is not used or passed and the level of control is very high. By definition, Environment C is more political and more susceptible to political influences than Environment A.

Using Figure 1 and deductive logic, it can be deduced that governments or large organizations are bureaucratic, not structured using information, rule based, and made up of individuals who, in the most part, are not information workers. By the definition stated by the authors, political influences are stronger where there are personal relationships and subjective decision-making. By definition in this research, political

influences are not based on performance information. The majority of the individuals in the environment, and the environment have the same level of information usage. Figure 1 also shows the level of usage of information and characteristics of the environments. The two way models developed by the author assume that all factors are relative and related (Kashiwagi 2002). This is based on the no boundary principle (Hawking 1998) and fuzzy logic concepts that identify each unique environment as a combination of different relative levels (Kosko 1993). By using IMT, the level of bureaucracy and political influence of existing environments can be identified.

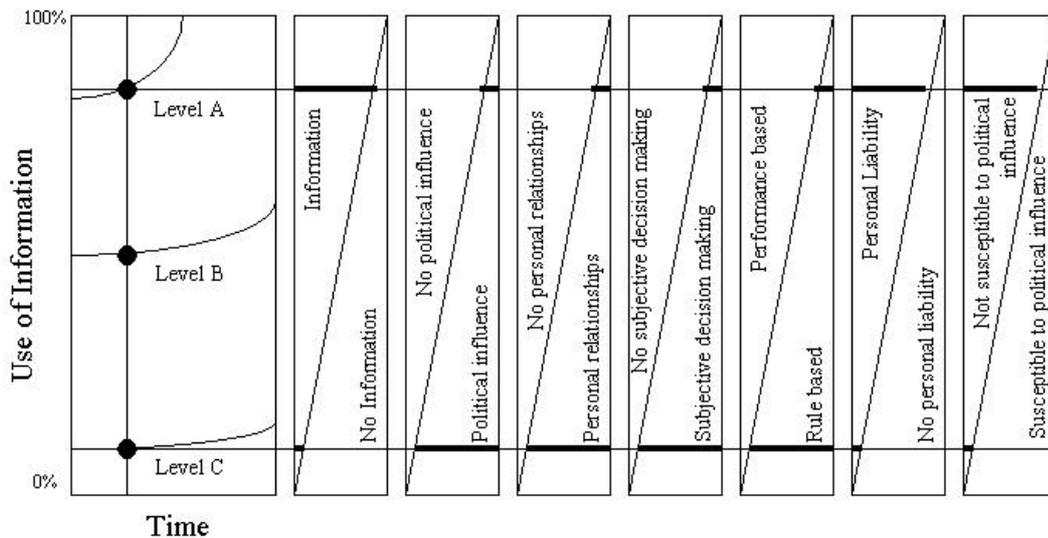


Figure 1: Rate of Change and Information Levels

Figure 1 shows that a Level C organization will not be receptive to a Level A process (minimized rules, control, and decision making). Therefore, a Level C organization can purport to be successfully implementing a high performance, full information based procurement process. However, if it is well accepted it will most probably be a modified low-bid or non-informational system, which will not increase the value (price and performance) over an extended period of time. There are two simple tests for identifying if an organization has a Level C environment. Individuals in this environment are identified as performers not for how they perform, but for whom they know and what they know about the status quo system. When change was proposed in the case studies, the Level C organization responded with the following conservative reactions:

1. It should not be implemented until it has been repeatedly and successfully tested.
2. It is unacceptable if everyone in the organization cannot feel comfortable with it.
3. The organization will participate if someone else does the work.
4. It does not meet the rules of our organization.
5. The organization is already doing something very similar.

The second method to determine if the organization has a Level C environment is to identify if the requirements of a Level A environment, or an information based procurement system is in place:

1. Contractors know their job in terms of relative performance, weak and strong points, to be able to increase their value and compete.

2. Easily accessible performance information on completed projects in terms of performance factors: number of projects, scope of the projects, % on-time, % on budget, quality, and performance numbers.
3. Correlation between 'construction performance' and 'contractor's performance barcode' in terms of customer satisfaction, honesty and ability to provide performing systems. Contractors in an information based procurement system go to extreme measures to protect their performance barcode. This is easily verified by the contractors taking responsibility for any problems that occur after construction, without cost to the owner.
4. Minimized management of projects. If a system has to be managed, the contractors are not minimizing the risk like under an information-based process and therefore the user must manage the risk by managing the projects.
5. The user representatives also measure their performance and their actions are dictated by their performance numbers.

By definition, if the organization does not readily have this information and the implemented process, regardless of any performance/information based label, a non-information based process is being used. One of the major differences between the two environments is the placement of risk. In non-information environments, the risk is transferred from the contractor back to the owner. If a subjective decision making process is used to identify the best value contractor, the decision-making has moved the majority of the risk back to the user. In an information-based process, the performing contractor identifies and manages the risk. Once a high performing contractor is selected by the system, the contractor is asked to minimize the remaining risk for the price submitted. The political owner does not realize that the performance and ability of the contractor to minimize risk within their financial constraints minimizes the owner's risk. The political owner thinks that their process and managers minimizes the risk.

Level of Risk of the Environment Defined by IMT

If the level of information in the organization is Level A (Figure 1), by the author's definition, the organization will be very open to an information system. If it is Level C, efforts to implement information systems will be minimally successful. The factors of implementation are: length of time, scope of implementation, cost of implementation, and the amount of education and instructions needed for implementation. The last factor is perception of risk. If the organization is a Level C, the perceived risk in the environment must be very high to be open to an information system. The problems being minimized by the implementation of information must be perceived as significant. In this case, other solutions will have already been tried, with unsuccessful results. Implementation of a full information process is a very uncomfortable experience for many large organizations. They, by the author's definition, are bureaucratic, do not minimize risk, and are staffed with individuals who resist change due to their inability to use and pass information, and will be very defensive against an information process which will provide better results. In most cases, the Level C organization will attempt to use the *buzzwords* of performance and modify their current practices with what they think performance means. These efforts usually cannot bring change and increased value.

The danger of implementing the process in a perceived high-risk environment is that once the risk is minimized, the organization may revert back to a comfortable state of bureaucracy or modify the information system to minimize the amount of information.

Test results show that individuals in the Level C organization state that other processes would also work (even though there is no proof), and oftentimes change the process before the results are documented. This usually results in more subjective decision-making, less information available to the parties who minimize risk, and lower performance (Figure 1).

Identify the Appropriate Strategy

The author has found that Type A organizations are few in number and very difficult to find. By definition, they will be in the private sector. The company may be large, but horizontal, with few management levels between the facilities group and directors of the company. They will have the following performance information readily available: number of construction jobs, average size based on price, change order rate, on-time percentage, and quality measurement. They will have a method to factor in rework and maintenance problems caused by the construction quality. They will be looking to improve, to do more with less, and minimize their function as managers. They will be computer literate, provide project management from scope to construction completion by the same person, and have information workers who contract others to minimize risk and be liable for performance. Type A organizations define everyone's job in terms of performance (risk minimization in delivering the end product). When approaching Level A organizations with the information environment, they need an education on the process. They will be very adept to using the information system. The minimized political influence will be overridden by the susceptibility of the majority to the information environment.

This is not true of a Level C organization. By definition, the majority of organizations have Level C environments. This may be the reason why there is a lack of documented cases of government organizations, which have been successful at the four requirements of information-based procurements, or environments that are previously identified. To be effective in a Level C environment, efforts have to be small in scope, with a small team of information workers, handpicked based on their affinity for information theory. The process and the performance results must be carefully documented. The only way to proliferate the process to the rest of the organization is through a continuous education program and the information environment defined by rules.

It is important to note that not all individuals in the Level C environment are Level C processors. The key to the following strategies is that if a few Level A processors can be equipped with information technology, they can do more work and increase value. Various strategies can be used with Level C organizations:

1. Use the process on a very risky project where there are no alternative solutions. The downside to this strategy is that if the process is run successfully, the in-house personnel are not as well trained as if they had run a simpler project that is better suited for training. Also on large, risky projects, the in-house project manager is selected based on their performance in the status quo processes. They will do only one project, and may not be committed to doing more projects using performance information.
2. Contract the testing to private sector implementers who run the tests for the user. Allow the construction management @ risk firm to procure the services and setup the information environment. The downside to this alternative is that if the user wants to adopt the process, they must either sole source to the trained consultants who were trained on the project (which may not be politically acceptable), or train

their own staff adding on additional funding which may not exist. The user also does not know if the process will work as well with in-house personnel.

3. Identify a small core group of in-house employees that are comfortable with the information theory of transferring risk to the contractor by minimized decision-making and documented performance. Start with a small scope and slowly increase the scope, documenting the process into a rule based process that can be used by Level C personnel.
4. Use a combination of in-house and contract personnel, using a similar strategy as in the previous option.

The authors propose that the type of strategy used depends on the environment, availability of information workers, and funding type (some organizations have an easier time contracting out the delivery process). The author recommends the last strategy of a combination of in-house and contract personnel. Tests have shown that the political influence comes from those that fear that the information process is replacing their function (design/project management/consultants/contract services) due to the capability of the information environment to do more with less, fear of losing their political standing built on relationships and not performance, and fear of not being able to compete based on their lack of performance. A combination of in-house and contract service personnel doing the design and technical review will assist the consultant community to understand that their job is not being eliminated, but is being made more efficient with less risk.

From the reactions from the users who have tested the process, the strategy that an information based “best value” process can replace the non-effective, Level C low-bid, non-informational, bureaucratic processes, within a short period of time in a Level C environment, is not a viable option. In all the test cases, the attempt to use this strategy caused opposition that slowed or stopped the implementation. It has never been successfully done. Reasons include:

1. As stated by IMT, the status quo, non-information based specification low-bid process represents the Level C organization and the majority of their personnel. Level C individuals bring about change by producing another Level C environment that is made to look different with the latest buzzwords, but delivers the same performance.
2. The organization does not use performance information because they feel uncomfortable with it and the accompanying assignment of responsibility and liability that it brings. By definition, the personal relationships in a Level C organization will usually defeat performance information due to the enormity of effort to have an efficient information environment.
3. The potential change will threaten everyone in the organization and they will proceed to alienate anyone who is trying to bring the mandated change.

This reaction was observed with the State of Hawaii, the US Coast Guard, and the State of Utah. In all three cases, the using agency attempted to use the process to replace the existing process. In all three cases, this task became impossible, and the strategy was unsuccessful. In the first two cases, the Level C response was to minimize the efforts of the personnel who understood the information environment, and the third wanted to modify the process to a more subjective process that they felt comfortable with.

Identification of Goals

The identification of goals in the case studies has been very critical to the success of the implementation. The goals structure the information environment and should cover the following:

1. The amount of resources (manpower and cost) to run the process.
2. The difference in performance of construction in identifiable terms (on-time, on-budget, customer satisfaction and performance of systems).
3. The minimization of problems that existed before. The existing problems should be stated in terms of cost, time, and quality.

If the goals are not stated clearly in the beginning, the Level C personnel will attempt to stop implementation by identifying the tests as inconclusive. Without information on the goals and results of the goals, Level C personnel will make the following conclusions such as: the project was not a good test, results would have been the same with the status quo system, it takes too much effort, the contractors are too expensive, the same performing contractors get the work, there is too much risk without rules, and other open ended conclusions. Goals need to be clearly stated in terms of performance, and the status quo conditions must be documented. Goals should be stated in terms of the differential with existing environment and processes. Test cases have shown that political influences always use the unknown and a confusion of objectives to stop the implementation of performance information.

By definition a bureaucratic or political organization does not perform well (Kashiwagi and Gardener 2002). Political influence does not need performance numbers. This is because political efforts are the effective management style of Environment C: no information, defense by using rules which proliferate bureaucracy, no direct liability as long as the rules are followed, and subjective interpretation of the rules and direction by those who are in authority. Concise and documented goals (in comparison with the existing environment) will minimize political influence.

Guidelines to Minimize Political Influence

Results of the case studies show that the following guidelines may minimize political influences. These guidelines were the results of lessons learned from the tests with the 11 users. These guidelines would have made the implementation of information systems much easier and minimized the political influences. Of the 11 users, both private and public sector organizations, all were Level C environments.

Identify a small core group. Identify and educate the key personnel, and make sure they understand the information environment. Key personnel must include a decision maker in upper management that understands the cost of bureaucracy and wants to change the environment, an administrator who will enforce the information environment, a midlevel manager who has experience in the procurement of services, a project manager that will run the projects, and a consultant who will handle any design or identification of requirements. The midlevel manager and administrator can be the same person. The administrator is the most important member of the team and must have the best understanding of the Information Measurement Theory (IMT). The administrator must be the shadow of the facilitator. Without these key personnel, the political influence of the rest of the organization will make it very difficult to sustain the implementation. Comparing the results of the states of Wyoming, Utah, Hawaii, and Georgia, performance results were best in Hawaii due to their core group (Kashiwagi, Savicky and Kashiwagi 2002). The other three groups did not have a complete cell or core group.

Information Theory. Identify a facilitator who has actually implemented and documented the performance of an information environment in a bureaucratic environment. Do not use a facilitator with a background working for a bureaucratic organization. The facilitator needs a theoretical foundation in information measurement theory or related area, as well as an operational structural plan for the information environment. The theoretical foundation cannot be from one area of expertise (procurement or the technical area.) It must be applicable and referenced from scientific, sociological, and management areas. The largest obstacle is political, and not technical. Interface between the core group and the facilitator is the most critical component of the implementation process.

Keep the scope of the implementation small. Present the information environment as a novel idea that will be tested on a very limited level. The information based process should be tested as an alternate delivery process. The development of the core group and the number of projects should be slow and careful. The implementation of other processes should be encouraged. The information environment should be identified as a possible method of increasing performance. Hawaii started with roofing and has been the most successful. Wyoming jumped into copy machine procurement and ran into problems. Utah did not form a core group, tried to get different project managers to do the process, and were unsuccessful in sustaining their capability or getting funding to train the core group. The State of Georgia did not have an operational person in the core group doing the process.

Minimize Level C characteristics. Do not compromise the information technology features of the environment that minimize decision making, control, management, and risk of nonperformance. Features such as allowing the contractors to identify themselves by selecting their own references, minimizing risk by considering the number of references, forcing the contractors to identify and minimize risk, value engineer, and manage their own construction, using a multi-criteria decision making tool to prioritize, and forcing continuous improvement by linking the performance on a project to their future competitiveness should not be compromised. Results have shown that the transfer of risk to the contractor brings Level A value and performance. Every user has modified the information environment. However, the University of Hawaii, that has modified it the least, has been the most successful. One state tried to select using performance, and then manage using a Level C environment. Every political influence will minimize the value to the user.

Do not negotiate with contractors. Performance is defined by the user. Keeping the scope small, allows contractors to choose if they wish to participate in the information based procurement or participate in the low-bid arena. If contractors wish to participate in the information environment, they need to meet the requirements. If they cannot meet the requirements, they should not participate in this test. The requirements should not be changed to allow a contractor to become eligible. Negotiating with non-performing contractors or in-house personnel will result in confusion and failure. The test should be run as set out by the goals and should not be changed until the test is over.

Do not use personnel who are not in the core group. Do not use project engineers, inspectors, or construction managers who are not a part of the core group in Phase I (testing and implementation by core group). Personnel who are not trained will not be effective. They will create unneeded work, paperwork, meetings, suspicion and fear. They will increase the cost of the delivery of the service. They will cause problems

for the performing contractor. They will attempt to control the contractor under the guise of protecting the user. Under no circumstances should non-core group personnel who have not been educated be allowed to participate in the tests in any way. If personnel other than the core group are to be used in follow on tests, appropriate rules and directions must be created that the Level C personnel can follow. Without complete documentation, Level C personnel will not be able to successfully implement a performance environment.

Continuous Education Program. The core group and contractors participating in the performance-based work must be continually educated. An ongoing program requires education at least once a month for a minimum of two complete days. The core group should also participate with other core groups who are implementing the information environment once a year. All parties should be educated continuously.

Accessible performance information and tracked goals. Make performance information accessible to all. This is the most important task for the core group. Performance information must be updated expediently and accurately after projects are complete. The performance on each project must be factored into the future competitive performance line of a contractor. Tests have shown that the performance ratings are one of the biggest motivators of performance.

Table 1: Matrix of Implementation of Information Environment

Item	Hawaii	University of Hawaii	Utah	Wyoming	Georgia	FAA	Private Sector
Defined goals	X	X			X		
Goal is to implement information environment	X	X	X			X	
Goal is to solve problems	X	X	X	X	X	X	X
Identified core group	X	X		X			X
Understood IMT	X	X	X				
Tracked goals		X					
Small scope	X	X		X		X	X
Slow development		X		X		X	X
Minimize Level C characteristics	X	X			X		
Did not negotiate with contractors	X	X					
Did not use personnel outside of core group		X		X			
Continuous education of theory and practice		X					
Accessible performance information in timely fashion		X					

CONCLUSIONS AND RECOMMENDATIONS

Level C individuals and organizations cannot be changed overnight. If Level A processors can be identified and equipped with information technology, a small environment in the Level C environment can produce Level A results. The required core group includes the director or top person, an administrator who solves disputes, and an operational or project manager. Ten of the past eleven major users have had difficulty maintaining the process due to the inability to identify and follow the guidelines that are listed in a timely manner (Table 1). Many of the unsuccessful implementation attempts were due to the incomplete understanding of the authors in

assisting the owners. The lessons learned are captured in this research and are now being applied to the latest tests implementing the process. Success in the implementation of information environment requires the management and minimization of risk. The implementation of information based performance processes requires accurate assessment of a core group's capability to use information and a movement to trust the information environment. The environment will force participants to identify risk, minimize the risk, and use performance to become more competitive and profitable. Most organizations are Level C organizations and require implementations that have small scopes, implemented slowly with a small core group of information workers who are constantly educated and work in the information environment. It is important to setup and maintain the information environment (minimize subjectivity, and document performance, and quickly disseminate the information).

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