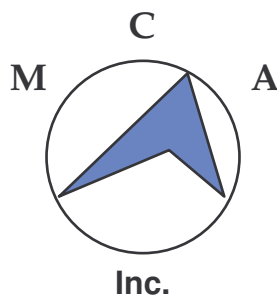


# Senior Project Management & Middle Management Symposium

**Marriott Hotel and Resort**  
Pittsburgh, Pennsylvania

**October 23<sup>rd</sup> & 24<sup>th</sup>, 2006**

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**Sr. PM Symposium**  
October 23rd & 24th, 2006

**Attendees**

**Baker Electric:** Jim Gagnon, Aaron Scott, Oscar Lopez

**Bruce & Merrilees Electric:** Chad Whelpley, Steve Telesz, Lerry Herman, Tim Quigley, Keith Shaffer, John Stewart, Larry Kenetski, Joe Martin,

**Miller Electric:** Tim Hinson, Steve Sandefer, Mike Rolison

**MCA: Phil Nimmo, Tim Kostelnik, Chris Stanko**

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## **Action Item Summary**

After working through the six steps of the procurement process with a brainstorming session following each step, the teams developed action items to help them bring the main points back to their respective companies. Although all of the participants enjoyed the same learning experience the needs of each company are slightly different, as represented by the subtle differences in the action items.

### Baker Electric:

1. Take more pictures of the jobsites for documentation.
2. Implement bins to restructure the material storage on the jobsites
3. Have vendors do more of what we want them to do, such as tracking material in real time
4. Reevaluate the material flow on the jobsites and find out if current layout is really efficient

### Bruce & Merrilees:

1. Integrate job preplanning scaled to the size of the job, with the entire project team involved.
2. Implement solution to track returns made from the jobsite.
3. Identify when is the best time to submit value engineering ideas

### Miller Electric:

1. Investigate the use of a designated procurement person
2. Start involving the foremen in the job preplanning
3. Bring in a younger foremen at the end of a job to free up the current foremen to do the preplanning for the next job, while the young foremen gains experience
4. Work towards only placing two orders for material each week

## **Opening Remarks:**

The Pittsburgh session was the fourth Senior Project Management and Middle Management Symposium in this ongoing series of collaborative workshops designed to create a peer group of contacts for project managers of progressive Electrical Contractors throughout the country. The first session of the series focused on understanding risk and the PM's role in managing project related risks. The subsequent sessions focused on resource management (the 3 Ms, Manpower, Money and Material). The Manpower session was first since this is the greatest variable in a project and thus the riskiest element of them all. The third session focused on Money; covering the management of money with regard to the financial resources of individual projects. This fourth session focused on Material. This session covered procurement, flow of material and various areas with potential for improvement. The session was based on the six step Process of Procurement.

The majority of the participants have attended some of the previous sessions which allowed for exceptional discussions right from the start. Furthermore, this session included participants from field supervision and procurement management roles.

## **Common Mistakes of Management:**

We started the session with an overview of the five most common mistakes made by management. Each of the five mistakes was discussed in detail, allowing the participants to share their experiences with specific examples and potential solutions. The five items covered were:

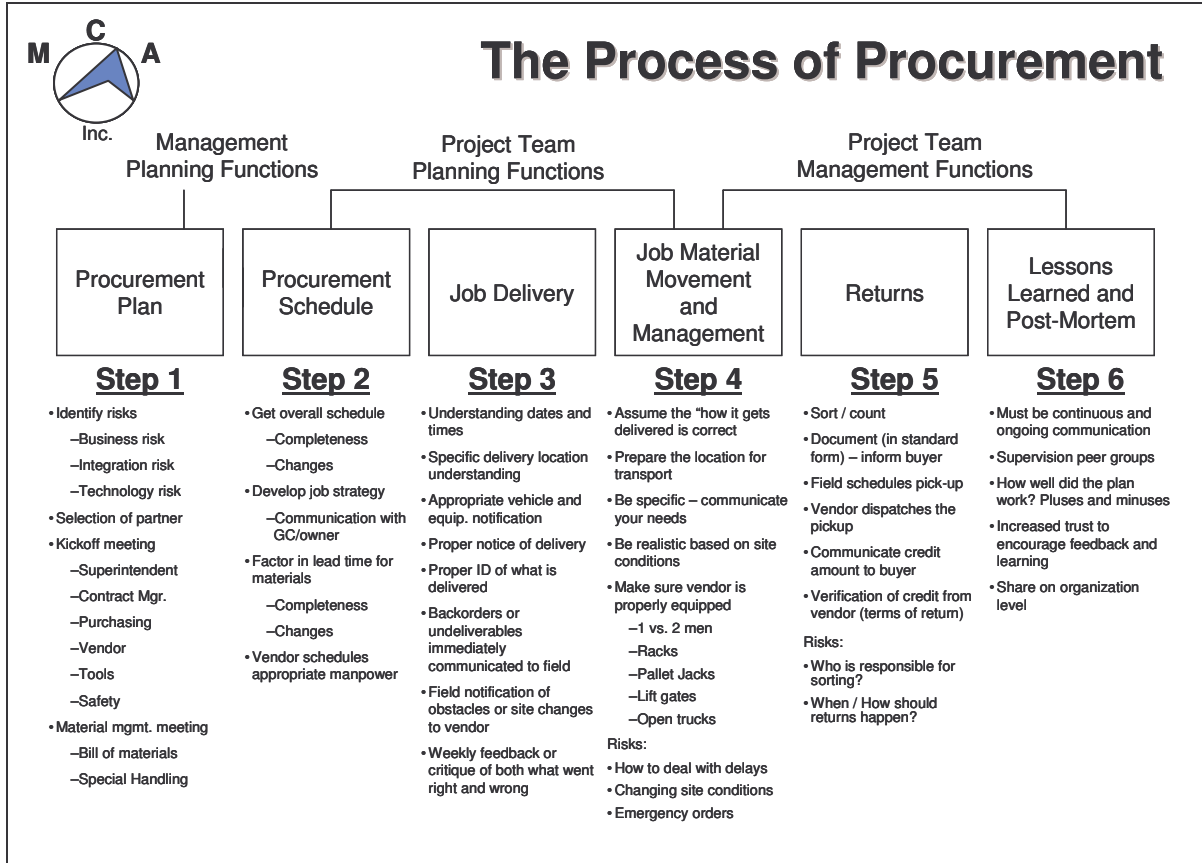
- Mismanagement of the 3Ms
- Believing that their people think like them
- Managers not recognizing the way employees think
- Managers try to implement untested theories
- Managers thinking like their employees

The following issues/problems were discussed:

- Tracking backorders
- Accuracy of %complete
- Vendor relationships (making them more personal >> stronger)
- Delivery dependency
- Material distribution
- Complete order checking
- Material organization for fast access (designated areas)
- Improvement of communication between foremen and journeymen
- Preplanning buy-in >> worker motivation
- Improvement of short term planning >> proactive vs. reactive
- Making union workers feel appreciated/valued for better labor
- Designated on-site procurement manager
- Untested theories responses:
  - Implementation takes too long >> "over-testing"
  - Getting input from the correct people in the field

- Realizing that implementation is an ongoing process
- Improvement of communication between all parties involved in the procurement chain
- Better definition and assignment of roles and responsibilities
  - Who needs to know what
  - Who needs to report what
  - Who is responsible for the resolution of the problem
- Partners and easier special orders
- Reliability of vendors
  - Cannot count on vendor promises
  - How to improve trust with salespeople of vendors
- Complete communication of plans and process status
- Implementing more standards to cope with differences in individuals more effectively without constraining flexibility
- Superintendent needs to act as a buffer between PM and foreman
- Benefit of round table like discussions without physically meeting
- Questioning validity of data due to:
  - Personal excuses
  - Pride
  - Politics
  - Ego
- Electricians need to get actual feedback for their input (e.g. %complete)
- Demand for more pre-planning
- Meeting of foremen, PM and superintendent
  - Relaxed atmosphere
  - Accountability
  - Pride
  - Positive reassurance
  - Involvement
- Anticipation of change
- Planning provides ability for faster and better adaptations
- Change management
- Ways to generate better estimates

# The Process of Procurement



## Step 1 - Plan

To begin the discussion on Procurement Planning we began by revisiting the concept of individual versus system productivity, and the role procurement planning plays in these. Without high system productivity there cannot be a high individual productivity. Prefab was discussed at length as a planned, material related event that improves system productivity and speeds up the installation process. Prefab has shown to provide project managers and foremen with the ability to identify broken material faster, increase the assembly itself by providing the most suitable environment, and enable the team to check the incoming material for correctness in type and quantity. Presently, wrong material is identified at the point of installation, which is clearly too late.

Vendor Selection was also considered in detail. At this point we discussed the differences between distributors and suppliers. Distributors are primarily representatives of the manufacturers and strive to make money through economy of scale where customer satisfaction turns out to be a lower priority. Suppliers on the other hand are focused on customer satisfaction and thus can play a key role in improving procurement management and the flow of material with regard to system productivity and onsite inventory management. The key point here was to compare the value of services

provided to the value of having the lowest cost. The outstanding service can be of significantly higher value, in the long run, than the money saved from the lowest purchase price.

Also, reasonable estimates were discussed and how to ensure them. The major guideline was to ask the question 'What do I need?' in contrast to the question "What might I need?" By making this distinction the project team can avoid accumulation of excess and unwanted material on the jobsite.

Some of the attendees suggested creating an improved work structure where roles and responsibilities are clearly defined and centrally assigned to particular people. The intent is to avoid having two people doing the same task or everyone overlooking a critical task. However, the system still needs to allow flexibility, so everything gets done in a timely manner.

### **Schedule:**

The schedule is a very vital part of the planning process. As you might recall, there is considerable data, from many sources, which shows that every hour spent planning yields 17 hours of savings by the end of the job. During discussion, one of the field managers pointed out that he was able to adapt much faster to change on the job when an adequate amount of preplanning had taken place.

Baker Electric presented the project planning process that they have developed, called P3 (Project Pre Planning). The P3 process now includes a schedule template for a three week preplanning period, which can be scaled for smaller projects. One of the most critical elements of the P3 is the PIR (Project Implementation Review). The PIR is the exit review at the end of the preplanning process where participants report the specific results of their three week process directly to the group manager and company president. This makes each individual accountable for their part and evokes a different level of involvement by the participants. The PIR forces members from all management levels to be present, allowing for excellent communication across the company.

Project scheduling was discussed, not only in terms of the preplanning, but also in terms of the short term lookahead. The lookahead gets everyone involved in the project work in a proactive manner rather than in a more traditional reactive manner. This makes the flow of material and work on the job a lot more predictable and efficient while providing a means to capture issues and hindrances to productive installation.

### **Job Delivery:**

The job delivery discussions included selection of actual locations where the incoming material is to be dropped. Another part of the discussion focused on the frequency in which we want the material to be delivered.

The group concluded that an important element in successfully managing job deliveries is the interaction between the contractor and vendor. Making the partner vendor partially responsible for the logistics management can be extremely valuable and efficient, but requires considerable oversight by the project manager and the foreman.

### **Job Material Movement and Management:**

The first component of onsite material management is the general job site layout. The best locations for office trailers, material staging or storage, and material receiving are defined. Most likely the toughest part in this is the successful communication with other crews on the jobsite to avoid excessive relocation throughout the job.

The participants raised a few questions that allowed them to discuss their experiences and ideas regarding onsite material management. The question of ‘Do we want/need a dedicated inventory manager?’ or ‘Is it enough to assign handling of inventory as a side responsibility to one of the foremen?’ The group agreed that the roles and responsibilities for this function have to be clearly defined and assigned to one person or one group in order to have an efficient operation including accountability. The jobsite layout process should include consideration of getting the material needed for the day to the locations where it is needed and who will perform this task.

Discussion regarding vendor managed vs. company managed inventory brought out several good and bad experiences. Generally the participants spoke in favor of vendor managed inventory. The primary reasons for this were that the vendor did a good job at keeping the inventory stocked with the right material in the right quantity. Also, the material that was not used was returned timely and in resalable condition.

Excess material and leftovers also came up in the conversations. Four different ways of dealing with this material were mentioned. First there was the possibility of taking the material to another jobsite. Alternatively, it can be stored in the contractor’s warehouse where it often sits for years before being discarded. This leads to the next solution – discarding it immediately at the close of the job. Lastly, there was mention of instances where workers will take the material home and store it in their garage in case they need it.

### **Returns:**

Keeping track of returns that have been made is one of the most important parts of the returns process. In most cases the contractor relies solely on the vendor. Only when the returns are properly recorded on the jobsite, can the contractor’s procurement manager check the incoming credits to assure the actual refund.

The timeliness of the returns was also discussed; first waiting inventory unnecessarily ties up cash and second some vendors have deadlines for returns.

It was agreed that the key to solving return problems lies in the communication with all involved parties; foremen, procurement manager, project manager, accounting and vendor.

### **Lessons Learned and Post-Mortem:**

We revisited the concept of individual vs. corporate learning models and the benefits of post-mortem. The group quickly reached consensus that many positive procurement efforts have not been effectively transferred from job to job. Much of the discussion centered on the resurrection of already identified best practices.

### **Closing Comments and the Next Session:**

The session ended with the participants rejoining with their coworkers to create a few simple action items that will allow them to bring the concepts discussed in this session back to their companies where it can be shared with other PMs and project team members. Additionally, each team was asked to regroup within a week to layout the specific goals and timelines to achieve improvements appropriate for the needs of their own companies.

At the close of the session all of the participants related positive experiences from this and from the previous symposiums. Several of the participants expressed an increased interest in developing some ongoing dialog with one another. The next symposium will serve as a feedback session. We will allow each company's participants to report back on the efforts that they have made to implement concepts and ideas from each of the previous symposiums. This discussion will focus on what was attempted, what issues were encountered, how they were resolved, and what the current benefits have been.

The next session will be held in spring of 2007; the dates and location will be announced prior to the end of the year.

## Appendix A

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