

Meetings Critical to Construction Project Success and Best Practices: A Case Study

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This project is a case study of specific meeting tactics that are being used by “Company X”, a large general contracting company. The case study was completed by conducting semi-structured interviews of “Company X” senior management personnel. The case study looked to discover which meetings were necessary to overall project success, as well as best practices for meetings in the construction industry. Communication effectiveness of the project team is essential to the overall project outcome. The project team is a group of people with diverse backgrounds. Understanding the dynamics of a group is necessary to producing a quality product. A multitude of meetings were identified as critical to the success of a project, but are not an all inclusive list. Each project is different and demands different tactics. However, the findings of this paper highlight the minimum necessary meetings to assist a construction project meets a successful completion. These meetings are discussed in depth, offering new insight into the construction industry process. Other topics discussed include meeting etiquette and virtual meeting best practices. Virtual meetings are becoming more prevalent in today’s technological world. Better understanding virtual meeting best practices has become increasingly important.

Keywords: Construction Meetings, Communication, Group Dynamics, Virtual Meetings, Project Success

Introduction

Construction projects are driven by communication. Successful projects are due to many factors, but effective communication is possibly the single most important quality that a project team can possess. Effective communication on a construction project is a product of early and often exchanges of information. The most prevalent forum for communication in the construction industry is through meetings. Meetings in construction are frequent throughout the project cycle. Meetings dictate project direction from conceptualization to the end of the project when the final product is turned over to the client. However, while meetings are an important tool for project teams, they can also detract from the project team’s productivity if not used effectively. The purpose of this study is to determine what meetings are critical to project success. Without these meetings the project management team would not be in a position to control project outcomes. Reacting to situations as they arise instead of having a proactive plan is not a successful strategy. These plans are forged in meetings. Meetings are critical to project success and they need be run in a fashion that maximizes the value for the project team’s time. This project analyzes best practices for eliminating wasted time in meetings for all participants, enhancing the project team’s productivity in their daily project endeavours.

Construction Project Success

Construction projects can be compared to an orchestra. There are countless players of different instruments and they all create beautiful, unique sounds. Similarly, construction teams consist of diverse personnel that all have their own strengths. How a symphony needs a conductor, construction projects need project management teams to ensure the job runs smoothly. Project management walks a tightrope to ensure that a project runs successfully from kickoff to

turnover. This takes an immense amount of project planning and effective communication. But what is “project success”?

Project success can be quantifiably measured by two metrics: budget and schedule. “Three problem areas which indicate the success of a project include under-costing, overspending, and late delivery” (Bjeirmi and Munns, 1996, p.82). Measuring project success by examining the project budget after completion is a common factor to assess if the project ran smoothly. If the project budget has a surplus, the project can be labeled as a financial success. The schedule is another factor to measure project success. The schedule is the expectation between the client and the contractor for when a project should be ready for client use. An overrun in schedule is detrimental to the project budget. There are often liquidated damage clauses in contracts that act as compensation to the owner for late delivery. Quantifiable measures for project success are not the only ways to determine project success, however.

The other indicators of project success that cannot be measured with numbers are the quality of the work in place and meeting project goals. Quality of work is a large indicator of client satisfaction. Limiting rework is critical to staying on schedule for the project. Meeting the project goals is another indicator of project success. The project team needs to make comprehensive goals and milestones for the project. Goals for the project are typically set during the opening stages of the project for the contractor. By reaching the specific project goals the contractor will be in a strong position to complete a successful project.

While all of the above indicators can point towards project success, it is more likely that a project is not successful without meeting all of these measures. “The outcomes of project management success are many. They would include the obvious indicators of completion to budget, satisfying the project schedule, adequate quality standards, and meeting the project goals” (Duncan and Gorsha, 1983, p.102). It would be impossible to achieve all of these baselines without proper communication throughout the lifecycle of the project between all associated parties. The project management team is the group that is responsible to ensure that the project is run successfully.

Project Team Communication

“The completion of a project requires input from a variety of groups including the client, the project team, the parent organization, the producer, and the end user. Each party has a role in defining and determining success. They all have specific tasks and responsibilities that they must fulfill in order to achieve success” (Bjeirmi and Munns, 1996, p.83). Each party that is associated with the project will have different expectations for how to gauge the project success. It is important to reach a consensus early in the project lifecycle for project goals. Early decision making is critical to the overall success of the project. The goals created by the project team also need to keep the client’s goals paramount. “Helping the client reach their perceived values and satisfaction is key to winning future work with that client” (Bjeirmi and Munns, 1996, p.85). Project goals known to the team are essential to planning the project accordingly. Once project planning meets construction a more intimate form of project team communication must occur.

In order to reach these expectations, meetings happen on a regular basis throughout the construction process. These meetings involve pertinent parties and are objective based. The importance of face-to-face communication cannot be overstated for the success of a project and it’s team. (Emmitt and Gorse, 2007, p.1196) A forum for all parties to express their project concerns or opinions is necessary to work through any upcoming issues regarding the project. “When people communicate they intend to alter the cognitive environment of the persons whom they are addressing” (Sperber and Wilson, 1987). The intent of project meetings is to get ahead of potential problems and reach solutions to the problem before it can have a serious impact to the project.

Previous Studies on Construction Progress Meetings

The construction industry has had few studies completed on the meetings that occur daily on the jobsite. It is certainly possible that more studies have been completed by private companies and kept for their own use. This can be largely attributed to the razor thin margins that construction companies rely on. Conducting research on meetings is costly and time consuming. If a company has information that helps projects run more smoothly, they are

typically inclined not publish that information to the industry. That information is considered intellectual property and is key to their company’s success. However, two certain individuals from Europe have done extensive research on the topic. Christopher Gorse and Stephen Emmitt have spent countless years studying group interactions (meetings) in the construction industry. These two individuals have published studies on the topic in 2003, 2007, and 2009. These studies are not their exclusive works, they have published a myriad of works on the construction industry throughout their career. The aforementioned studies by Gorse and Emmitt on group dynamics majorly focused on the types of interaction that take place in construction progress meetings. Their study in 2007, titled “Communication behaviour during management and design team meetings: a comparison of group interaction” found that “Typical of the interaction previously observed in work groups, the participants in construction meetings use high levels of task-based interaction and low levels of socio-emotional interaction. The adversarial environment often associated with construction was not found, indeed the level of negative emotion and critical discussion was so low that it could be suggested that problems may pass unchallenged” (Emmitt and Gorse, 2007, p.1195). This 2007 study found the project management team and design team act as a cohesive team working towards a common cause of delivering a quality project to their client. Perhaps this study is not all inclusive of the industry, but their 2009 study findings also agree with this notion.

Also, Gorse and Emmitt’s study found that the group’s communication dynamic followed a rigid “task-based” interaction model compared to an emotional based model. This means that the content of the conversations in the meetings revolved around the work, tasks to be done, information passed from one party to another. Gorse and Emmitt found that this is highly common in the construction industry. There is little time to be wasted on small talk or emotional matters. Gorse and Emmitt’s study focused on utilizing the Bales Interaction Process Analysis model while conducting this research. Bales IPA method categorizes communication into three main categories: positive social-emotional, task-based, and negative social-emotional communication. Each category breaks down further (see Table 1). The task-based section is where most construction progress meetings seem to stay permanently more or less. Task-based items are used to develop information, understanding, and control. As well as acts used to seek, analyse, and explore information. Emotional areas include behaviors used to build relationships, reject task information, question commitment, and threaten relationships.

Table 1

Bales Interaction Process Analysis Breakdown

Category	Behaviors
Positive Expressive Interaction Categories <i>(Socio-emotional area)</i>	<i>Shows solidarity</i> <i>Shows tension release</i> <i>Agrees</i>
Instrumental Interaction Categories <i>(Task-based area)</i>	<i>Gives suggestion</i> <i>Gives opinion</i> <i>Gives orientation</i> <i>Asks for orientation</i> <i>Asks for opinion</i> <i>Asks for suggestion</i>
Negative Expressive Interaction Categories <i>(Socio-emotional area)</i>	<i>Disagrees</i> <i>Shows tension</i> <i>Shows antagonism</i>

Gorse and Emmitt found that without enough emotional expressive interaction, the construction team can fall prey to groupthink. If groupthink occurs, potential challenges to the project plan will be unforeseen until they become a problem. “The low level of disagreement could be detrimental to the group’s performance” (Emmitt and Gorse, 2007, p.1206). Their findings enforce the idea to be critical of the construction team’s ideas. Issues that can be

uncovered in the meeting before they are uncovered in the field save the construction project valuable time and money down the road.

The 2007 study also investigated communication mediums and their effectiveness. They found that in-person communication was the most effective, to no surprise. However, with the rise of technology in the workplace in-person communication is beginning to become less frequent. More meetings are taking place over video chat. While video chat is technically face-to-face, there is still a disconnect. "Face-to-face communication was perceived to be the most effective communication medium. The results also identified that meetings, both formal and informal, were perceived to be beneficial to the successful completion of construction projects (Emmitt and Gorse, 2007, p.1196). Gorse and Emmitt found there was a general consensus amongst the study participants that meetings were critical to project completion. Projects could not be successful without meetings that are run in an effective, efficient, and organized manner.

Gorse and Emmitt's 2009 study focused primarily on how successful project teams interact during meetings. They found that "the formal agenda of a meeting is interspersed with pockets of emotional expression to arrive at decisions" (Emmitt and Gorse, 2009, p.990). The interspersed pockets of emotion may seem detrimental to the agenda of the meeting and overall efficiency. But actually the occasional emotion is imperative to the cohesion of the project team and the project success. By using carefully measured emotion, the project team in the meeting can enhance the team's relationships with each other. Additionally, negative emotion (disagreement) is necessary to ensure that the project team has thought through the flaws of their plan.

Methodology

This report has set out with the objective of determining what meetings are critical to project success in the construction industry. Additionally, the project looks to uncover best practices for running meetings efficiently and effectively within the construction industry. Representatives from a respected general contracting company were interviewed in order to research these items. The company will remain anonymous and will be referred to as "Company X". The process was a semi-conducted interview due to its nature of open ended questions that invites room for expansion on the question. This case study of one general contractor is not an "end all, be all" approach to meetings in the construction industry. These are merely useful tactics that are used by a general contracting company. The interviewees have a collective fifty plus years of experience in the construction industry. These professionals have ample experience to offer strong insight into the art of meetings within the industry. The interviewees were directed to assume that these questions apply to a typical commercial construction project with a total value ranging from fifteen to forty million dollars. The questions asked to the interviewees are the primary study topics that this report intends to investigate. The following are the questions that were presented to each interviewee:

- What meetings must occur, regardless of project, in order for the project to run successfully? Please briefly describe the meetings, the main parties involved, typical frequency of meeting, etc.
- What must be done by the project team to ensure the meetings are effective and efficient for everybody's time? (I.e agenda, action items list, meeting structure)
- What would be considered best practices for running virtual meetings? How do you ensure that the offsite members are an active member of the project team?

Meetings Critical to Project Success

A trio of senior management professionals were interviewed who work for Company X. Although they all work for the same company, the responses were quite diverse. Yet, all of the responses were given from the general contractor's perspective. Contractors that are in the MEP specialties or typically subcontracted may have different perspectives regarding the meetings that are critical to their own success. Each project that is undertaken is different

and with that other meetings will need to be added to this list. These meetings are the minimum needed to propel the towards a successful completion.

Owner/Architect/Contractor Meetings. Owner/Architect/Contractor meetings, otherwise known as OAC meetings, are arguably the single most important meetings to take place during the construction process. OAC meetings are the most dynamic meetings to occur do to all of the parties involved. Having the project owner, designer, and builder all in one meeting allows for nearly all project issues to be addressed and discussed. Project budget and schedule are hot topics for the owner and typically the OAC meeting is the platform that is used to discuss those topics. The contractor is typically expected to produce a look-ahead schedule that details upcoming work. Updated budgeting spreadsheets should also be produced in the earlier stages of the construction project. Other topics that are discussed include reviewing outstanding changes, project logistics, quality control items, and status updates on jobsite safety. The OAC meeting is also the place to discuss potential upcoming milestones, concerns, or impacts. The OAC meeting will typically recur weekly. The parties included in the OAC meeting are typically limited to just a couple of management representatives for the contractor and the lead architect along with representatives from the client. It is important to keep the parties of this meeting limited to just the owner, architect, and prime contractor. If there are multiple prime contracts, all prime contractors should be represented in the OAC meeting.

Subcontractor Progress Meetings. Subcontractor progress meetings are incredibly important for the general contractor. The general contractor needs to have updates on subcontractor's project status. Many items are addressed in subcontractor progress meetings. These meetings are typically conducted by the general contractor's field staff either on the project or in the jobsite trailer. All mobilized subcontractors are expected to attend the subcontractor progress meeting. Each subcontractor should have one representative and is typically the most senior field staff on the project, the superintendent or general foreman. Discussions include ever changing project logistics in the field, coordinating the look ahead schedule, safety concerns, deliveries, inspections, material storage, access, quality, and documentation items such as submittals and RFI's. This meeting is critical to keeping the job productive in the field. Each subcontractor is expected to address any items in this meeting that is holding up their work. The subcontractors are also expected to give notice when their activities will be impeding the work of others. The subcontractor progress meeting is an important forum in coordinating field activities with all parties that may be affected being able to voice their concerns. The subcontractor progress meetings can take place as daily huddles, in some cases. However, at a minimum, needs to take place weekly.

RFI's and Submittal Meetings. RFI and Submittal meetings are important in discussing items that need to be completed in order to keep the field moving towards project completion. The general contractor is expected to run this meeting and is usually done by the project engineer. Expected parties to attend the meeting are the project architect, consultants, and engineers. The project engineer is expected to push along any outstanding RFIs or submittals, identify hot items that will soon hold up the field, and give notice for what packages are expected to be submitted in the coming week. RFI's can be discussed informally during this meeting to give background on the situation and discuss planned course of action. Discussing an RFI in this meeting will assist the project team receive a quicker RFI turnaround. These meetings should recur once a week or as needed should hot items surface unexpected. The general contractor should be expected to produce an RFI log and submittal log to be utilized during the meeting.

General Contractor Internal Team Meetings. The general contractor's project team needs to hold internal team meetings weekly. These internal team meetings are important in discussing project status for each team member. This is the forum where the project managers can assess the status of submittals and RFIs from the project engineer. The internal team meeting is the forum where the field team can utilize the office staff for assistance in keeping the field productive. The field team will discuss hot items in the field that need to be addressed with the architect or subcontractor. This is the meeting where the whole project team is downloaded on what is happening with the other team members creating stronger team cohesion and positively influencing the project as a whole.

All Hands Safety Meetings. All hands safety meetings are an important meeting that needs to take place in order to create a culture on the project. The general contractor is the party responsible for jobsite safety, although

safety is everybody's job. The general contractor will hold all hands safety meetings that will typically highlight a certain aspect of the construction process and how to do it safely. Proper ladder use is an example of a topic that may be covered. These meetings should occur once a week on the project site. Every person on the project, subcontractors, office, and field staff, is expected to attend the all hands safety meeting. Creating a culture of safety is paramount on construction projects. One serious incident on a construction project can cause the project to be halted, overrun budget, or even be shutdown.

Preconstruction Meetings. Preconstruction meetings are an important meeting for starting the project on a high note with a subcontractor. These meetings will typically take place three to four weeks before a subcontractor is mobilized on-site for their scope of work. The meeting is meant to give the subcontractor some orientation in the project. The subcontractor's material laydown area will be highlighted, direction for project access will be given, discuss lines of communication, and review of the subcontractor's scope will be reviewed. The project's quality control plan and safety plan will be reviewed. Billing procedures and insurance requirements for the project will be covered. The subcontractor preconstruction meeting is important in setting the tone for the general contractor and establishing expectations for all parties on the project.

Meeting Best Practices

Too many people in the professional realm grumble about how much time is being wasted in meetings daily. The participants give up a significant portion of their workday to be in meetings that detract from the rest of their workload. In order to avoid the distaste in meetings for a construction project, there are many techniques that industry professionals use. These best practices are used daily to keep meetings running efficiently and effectively. The first question that needs to be answered is whether or not the occasion truly calls for a meeting. Meetings occupy ample time from the project team and are costly to the project. If the desired outcome can be reached on a conference call, that route should be chosen to avoid costly time wasting. Additionally, only the required parties should be in the meeting, cut out extra waste by eliminating invitees to only the required participants for the desired outcome.

Operating the Meeting on Schedule. Best practice tip number one is to operate the meeting per schedule. The meeting should have a published start and end time. Ensure the meeting starts promptly on time and ends within the allotted time. Participants running late shall not hold up the start of the meeting. Furthermore, do not backtrack in a meeting to fill in a latecomer, this only wastes the time of the responsible, on-time attendees. Project team member's time is valuable to the project and to themselves, do not waste their time by practicing poor time management. If items in the meeting are running overtime that topic should be tabled for a breakout at a later time with the required people. Putting items to a parking lot are an important tactic to cutting waste in a meeting. To further drive the point of proper time management, plan a meeting duration to reflect the true time needed to cover the agenda. An agenda that can be completed in twenty-eight minutes should not be scheduled for an hour long meeting.

Agenda and Meeting Minutes. Agendas are another important meeting management tool that is used throughout the construction industry, if not universally. Agendas are key in controlling the flow of a meeting. The agenda organizes the talking points in a manner that the meeting can flow from topic to topic effectively. Without the organization of the agenda, meetings tend to fly off the rails with conversations that have no bearing in the meeting and drive productivity down. The agenda should have time durations next to topics in order to keep the meeting running along schedule and also to ensure that all topics on the agenda are covered. Agendas should be sent to participants before the meeting occurs to give time for preemptive thought on the topics. Meetings should not be a time for discovery of meeting topics but rather a time for project direction. An additional pro tip for agendas is to identify the person responsible for each action item on the agenda, and when it is due. It is important to give responsibility and have that information published in the agenda for all to see.

Meeting minutes are important to recap the covered topics in a meeting. The meeting minutes should include the agenda topics with notes written about discussions, outcomes, and action items for each topic. The meeting minutes

should be thorough and concise. At the conclusion of a meeting, minutes should be compiled and published to the meeting group as quickly as possible. Meeting minutes are a strong tool for reminding participants of action items, involving participants that may have missed the meeting, and ensuring consensus for the next occurrence of that certain meeting.

Additional Best Practice Tips. There are countless techniques for enhancing construction meeting effectiveness. The project team needs to be actively listening to other speak to ensure that all points being made are being thought about critically. Many times people are thinking deeply about the point they will bring up that they mentally cannot focus on what is being said at that moment. Also, side conversations should be disallowed. The side chatter is distracting to participants working on listening to the meeting content. Multiple conversations create confusion and waste the time of all participants when items need to be re-hashed because some were not listening.

Participants should be giving their undivided attention to the meeting. Laptops and cell phones should be put away. It is extremely discourteous towards the speaker to be on the a device during their oration. Not to mention people cannot possibly focus on the meeting as well if they are distracted. The keeper of the meeting minutes is exempt from the device shutdown if they are keeping the minutes electronically. Being courteous towards others is important in meetings to maintain strong project team chemistry. Disagreements happen, but heated arguments should not take place in a meeting with others acting as an uncomfortable audience.

Finally, cut out waste. Run the meeting as lean as possible. Items from the last meeting should not be brought up again. Those notes should be in the previous meeting minutes and that book should be closed. Disallow cyclical discussions. If a conclusion cannot be reached quickly, table the topic and create an action item with a responsible party to be completed before the next meeting. If participants no longer need to be included in the meeting, cut them out of the invite. However, they should still receive meeting minutes even though they are not necessary to the discussion. The construction industry needs to cut out waste and meeting management is no different.

Virtual Meetings

Virtual meetings are becoming more and more prevalent in today's construction world. Architects and engineers join in on meetings via webcam from their office offsite. Material suppliers attend the meeting an a similar fashion. Strong, effective communication strains to keep up in this process. With the world already shifted towards the adoption of technology, how does the industry adapt to virtual meetings? How can the project team onsite feel as though the offsite members are still part of the team? Project team comradery hinges heavily on performance of others. Slackers are often identified quickly and detract from the team cohesion needed to produce a successful project. Additionally, if screen sharing is occurring in the meeting, then participants should have their front facing cameras on so the project audience can see that the person is actively engaged in the meeting. Further, when not speaking, participants should have their camera on mute to avoid ambient background noises. Virtual meetings will soon be the most common type of meeting medium in construction and further research will soon need to be conducted on the effectiveness of virtual meetings compared to in person, face-to-face conversations. As Gorse and Emmitt concluded in 2007, face-to-face communication is the most effective communication medium.

Conclusion

Success on each and every construction project hinges on the project management team's ability to effectively and efficiently communicate. Meetings take place during the project cycle to provide a forum for decision makers to offer direction to the project. These meetings take place for the singular purpose of producing a successful project. Project success is based on a combination of budget fulfillment, schedule performance, quality, and safety execution. A project can be completed, but without meeting the expectations of that criteria the project will more than likely not be successful. In order to meet these expectations project teams need to be able to convey information effectively. Project teams have a variety of backgrounds. Being able to communicate effectively to each team member is massively important to ensuring messages are being received. Little research has been completed on construction meetings. What has been completed has mostly been focused on group interaction to study how the

construction industry differs from other sectors. Those findings found that construction meetings focus more on task-based information compared to emotional conversation. The lack of disagreement in construction interaction can cause project teams to fall prey to groupthink.

The findings of the case study for this project were simple. Certain meetings are required to assist in the project success. The OAC meeting, subcontractor progress meeting, RFI and submittal meeting, general contractor internal team meeting, all hands safety meeting, and preconstruction meeting were identified in the interviews to be critical to project success. These responses come from one general contracting company and should not be viewed as exclusive critical meetings, however. Meeting best practices were also identified as paramount. Respecting the time of others is the most important takeaway from meeting best practices. Learning to manage the meeting and its participants comes with time, but the best practices identified in this case study offer great expertise. Project teams with the ability to run effective, lean meetings with clear goals will be in a strong position to produce a successful project.

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