

## **TCM-3444**

# **Key Partnership Indicators in Project Cost Management**

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### **Abstract**

Cost engineers usually think of their work on projects in terms of data, analysis, reports, plans, and schedules. However, producing superior plans and schedules, collecting the most relevant data for the best analysis, and sharing valuable, usable reports require effective communication within the project's working relationships.

On each project, every cost engineer has many working relationships that affect the product produced. These are active partnerships. Also, less noticeable relationships exist between the cost engineer and the end-users who access their work for decision-making. The authors will present a map for tracking these relationships, highlight the ones that most often hinder or harm project delivery, and outline the top five ways to improve them.

## Contents

Abstract.....	1
Introduction .....	3
Failing to Communicate .....	3
Key Partnerships .....	4
Key Partnership Indicators.....	8
5 Bonus Solutions.....	10
Conclusion.....	13
References.....	14

## Introduction

“What do you do?” Few have escaped this question when making a new acquaintance. Defining occupations by the tasks performed and the tangibles produced is prevalent among people. Cost engineers, project managers, and superintendents are no different. If a cost engineer answers, “I’m a cost engineer,” what are the odds that the profession is understood? A more detailed answer includes, “I manage cost throughout the life of a program or project through planning, data collection, analysis, reports, and schedules.” [1] Yet, how can this be done without interacting with others? Few cost engineers, project managers, or other professionals involved in project delivery would automatically include communicating as part of their skill set.

Project management, including cost management, is people management. There are myriad working relationships involved in delivering projects, and each one, especially key ones, positively or negatively affects the project's outcome.

The paper identifies a significant factor in project failure, heavily influenced by stakeholder relationships. These relationships are partnerships. The introduction of a mapping tool assists project leaders, including and especially cost engineers, in identifying their project partners among all stakeholders. Understanding four partnership categories enables better project management by providing stakeholder management, communication management, resource management, and cost management. The most important partners are key partners.

The authors propose a list of key partnership indicators. These key partnership indicators are for the periodic assessment of partnerships to ascertain their health and effect on the project's health. When specific problems (identified later) occur during the project's execution, using the key partnership survey in conjunction with the key partnership indicator list helps isolate relational issues. Five tips are offered to cultivate key partnerships. They enhance communications, transparency, and project team performance.

## Failing to Communicate

What is the most significant cause of project troubles? A lack of or miscommunications. A single Google search yielded thousands of articles, papers, and blogs that inform the reader about causes and solutions. From this one search, the authors read 24 articles and papers among the first 40 entries. All 24 mentioned communications issues as among the top ten, but some identified communications as the #1 cause of project failure<sup>1</sup>.

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<sup>1</sup> [38] [37] [36] [35] [34] [33] [32] [31] [30] [29] [28] [27] [26] [25] [24] [23] [22] [21] [20] [19] [18] [17] [16] [15]

According to PMI, one-third of projects fail due to poor communications. Out of the remaining two-thirds, fifty percent were negatively impacted [2]. Most project sponsors, owners, and leaders do not fully realize or value the cost of communications. Few would be surprised that project failure due to poor communications results in unexpected costs. The tools and personnel necessary to facilitate communications have a price. Yet some industries overlook a less conspicuous cost: wasted time.

Cost engineers should take note. The average person spends 80% of their waking hours communicating. For each employee working eight-hour shifts, a company pays for 6.4 hours of communication. Multiply those hours by an hourly wage, \$20, for example, and the cost for communication for that day is \$128.00, a week is \$640 (5 days), a month is \$2,560, a year is \$30,700 [2]! Companies with tens, hundreds, and thousands of employees are paying a fortune just for communications time!

*What do these figures mean to cost engineers?*

Cost engineers (CEs) specialize in work that helps with cost estimates, risk assessment, project cost control, and improvements in cost management [1] [3]. They prepare budgets and programs and track investments to achieve a healthy balance between price, quality, and time constraints. They devote hours to project planning and scheduling, as well as to project controls. Should poor communications sabotage their brilliant work, causing hours of further communication and rework? With new or renewed awareness of the influence of communications upon projects, CEs must fine-tune their communications skills.

Five components comprise communication: who, what, when, how, and sometimes where.

1. Whom are the entities communicating?
2. What information is being communicated?
3. What information is necessary to know?
4. How is the information being communicated?
5. What is the process of communication?
6. What is the quality of communications?
7. When is the information to be communicated?
8. Where is the communication to take place?

This paper's primary focus is on the who and the how. The *who* concerns the relationships involved in cost engineering in project management and the quality of those relationships. In these relationships, cost engineers must have excellent leadership and people skills in addition to their specialized skills.

### **Key Partnerships**

Those involved in project management are familiar with the term *stakeholder*. A stakeholder is any individual or organization interested in or concerned about an organization or project. If a

project affects them, they are a stakeholder in the project [4] [5]. Some of the research contends that they fall into three main categories [5]:

1. Primary – Those affected by the work, beneficiaries of the project, such as customers.
2. Secondary – Those affected indirectly by the work. Project support teams or anyone impacted by the project’s outcome fall into this category.
3. Key – Anyone in a position to modify the work with a stake in its success—executives, for example.

Some research sources use a stakeholder analysis tool, similar to Figure 1, that creates four levels of prioritization [5] [6] [7].

Figure 1 is the partnership prioritization tool, a stakeholder analysis matrix used to prioritize stakeholders and classify them by their needs and the partnership's needs. It is a modification of these similar matrices that was deemed by the authors to be simple and yet educational [6]. To understand levels of collaboration, communication, and improved work performance, the term *partner* is more appropriate than *stakeholder*. The four quadrants represent four combinations of project power and interest.

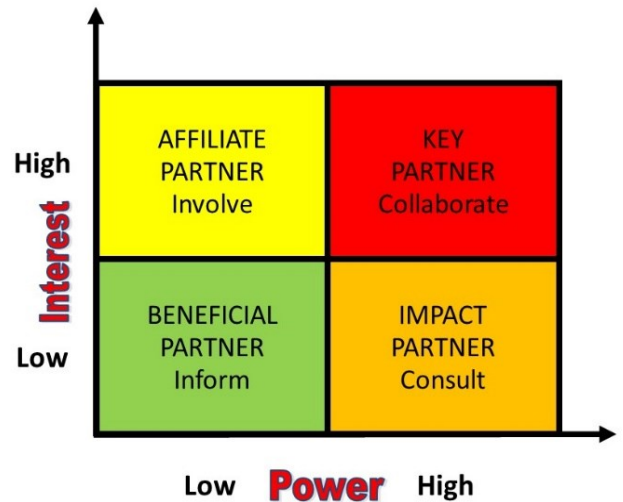


Figure 1 -Partner Prioritization Tool

The key partner quadrant includes partners with high power and high interest. Key partners could include the project sponsor, chief executive officer, senior leadership, and main customers [8] [9]. They provide input, decisions, financing, and more, necessary for the cost engineers to do their work. They have the power to make or break the project’s success. If these partners are not happy, then the accomplishment of deliverables and objectives accounts for little. The project’s success is in question [10]. Stakeholders, from the perspective of cost engineering and cost control management, are any stakeholders who need the knowledge, skills, or experience of the cost engineer or are affected by their influence.

In conjunction with their efforts, the cost engineer collects, monitors, and provides analysis of crucial data to project leaders to support well-informed decisions that drive the project’s progress forward promptly. These partnerships are massively collaborative and require ongoing participation, communications, monitoring, and adjustments [6].

- The Affiliate Partner quadrant includes partners that have a high level of interest but no power to negate or change decisions. Feeling the project’s effects, they want to influence it. Regularly involve them and keep them engaged. Inviting them to review meetings and encouraging their feedback are options for involvement. These partners

can be useful to secure buy-in. Use caution before approving their every idea and request. Assess them for feasibility and value-added to the project [6].

- The Impact Partner quadrant includes partners that have a low interest in the project but have high power to impact project conditions. Consult them regularly. One-on-one meetings provide the ideal format to ensure these partners know their concerns and input are understood, helping to avoid unexpected roadblocks. They should not be allowed to intimidate or be dictatorial. Make the appropriate decisions that are most beneficial to the project [6]. Falling into this category are legal and procurement personnel [8].
- The Beneficial Partner includes partners with little interest and little power. Their goodwill is desirable. Keep them in the loop by giving them access to the project's dashboard, newsletter, or general progress updates [6].

Partnering implies teamwork. Teamwork is a collaborative effort to accomplish tasks. Examples of its necessity and effectiveness in survival fill the natural world. Consider bees, ants, lions, and wolves, to name a few. Project survival also relies upon teamwork [39].

All projects have a project team, even if it is only a loosely affiliated set of stakeholders. All complex construction projects are completed by multiple fragmented teams. While each team might perform well together, fragmentation results in the groups failing to integrate as a single team. Stakeholders should be designated as partners to foster a team mindset.

Cost engineers, along with project managers and other team members, are busy, their heads filled with information relevant to the day's priorities. Tapping their brains for names of people other than the most immediate team members is onerous.

### *Mapping relationships*

Cost engineers and any other project team members benefit from visualizing their working partnerships. These partnerships are not random, fragmented lines. They are a part of the big picture of executing the cost engineer's role in project delivery success.

While Figure 2 is not the only mapping tool, it is an effective visual aid for the elemental bond in stakeholder relationships. Figure 2 is color-coded to coincide with Figure 1. The central gray circle on the map represents a team member, such as a cost engineer, visualizing their functional partnerships. Print this map for use during partnership mind-mapping exercises. Blank paper and hand-sketched maps are useful, as well. Use different-colored pencils or ink to make identifying the partner type easier. Write in the partner's name or initials and position.

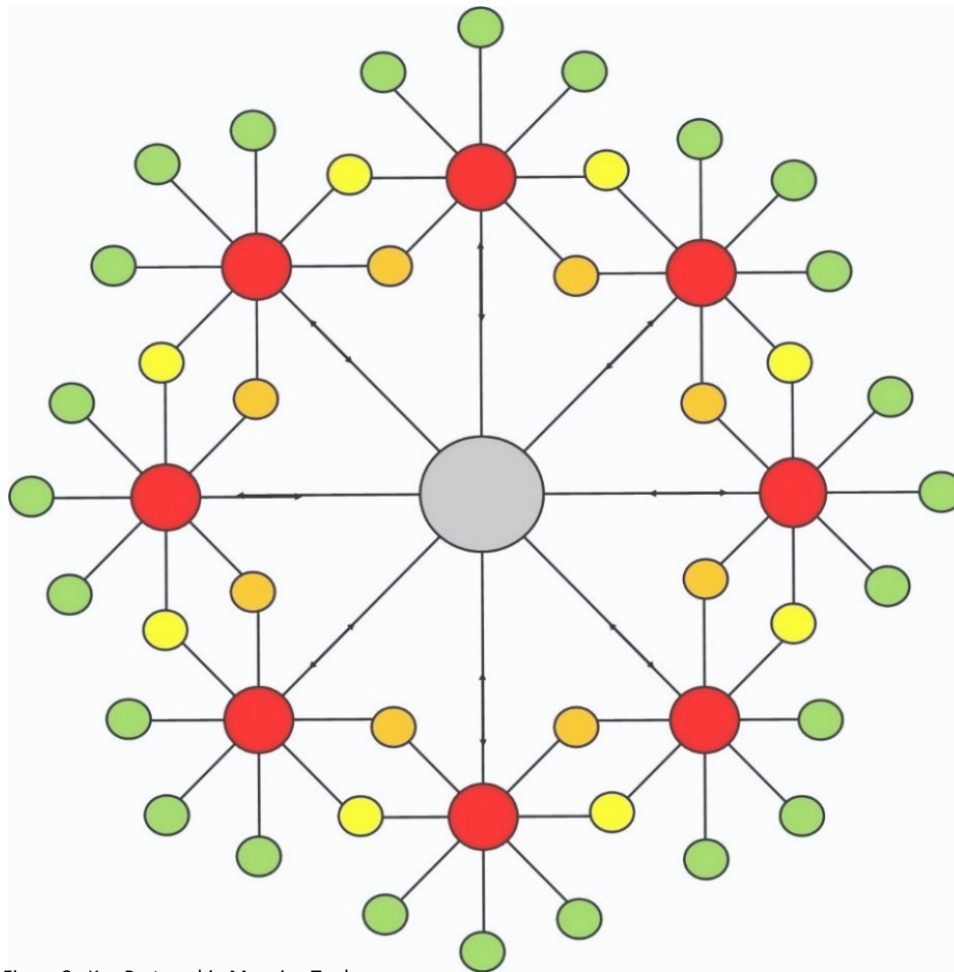


Figure 2 –Key Partnership Mapping Tool

The circles represent partners. Each color represents a different priority level for partners, as shown in Figure 1.

Red = Key Partner

Orange = Impact Partner

Yellow = Affiliated Partner

Green = Beneficial Partner

Multiple secondary partners branch out from each key partner. Some partners are shared, some are not. Knowing who works with whom is advantageous in setting up a partner management and communications plan. For instance, these connections affect meeting attendance and schedules. Who is relevant to the meetings, and who is not? Who is copied on emails? The map is useful for these decisions. Therefore, keeping this map up to date is prudent for communications.

Because project stakeholders or their power and influence change during the life of a project, habitually reassessing partnerships is recommended [9]. Start the assessment with the current, updated version of the key partnership map. Any discrepancy between partners can lead to a new identification and prioritization. The key partnership map, partner register, and communication plan are updated accordingly.

*What is involved in the partnership?*

The requirements for each partnership need to be clarified now that the partners have been identified, prioritized, and mapped. The use of a partner register and a communications management plan is advisable to track the requirements. Each partner needs to answer at least these three questions for the other [38].

1. What does the partner need to know?
2. What does the partner care about?
3. What does the partner need to do?

Document these answers using a register template, such as Table 1, and create a plan like that in Table 2 for periodic reference. Cost engineers and other project team members have many partners involved with fulfilling their roles as part of the project management team. Mentally tracking each partner's requirements and communications plan is a sure way to forget who, what, when, and how. Where possible, keep the partner names color-coded to match the map and prioritization tool.

Partner name	Title	Role	Power (H, L)	Interest (H, L)	Needs	Concerns

Table 1-Partner Register Example

Partner name	Engagement action*	Originator	Medium	Frequency

\*Manage closely/Keep satisfied/Keep informed/Monitor

Table 2-Communications Management Plan

**Key Partnership Indicators**

*Signs of Trouble*

Dark clouds are often a precursor to a violent storm. Hot weather and long periods with no rain are signs of a drought. Fever, body aches, and a stuffy nose indicate the body has a virus or bacterial infection. Likewise, there are warning signs that partnerships are in trouble.

The following signs among key partners harm the partnership and the project’s success:

- Unanswered calls
- Emails, texts, or voice mail messages not returned
- Emails, texts, or voice mail messages not returned in a timely manner
- Missing scheduled meetings
- Missing deliverable deadlines
- Inputs fail to meet needs
- Unwillingness to cooperate
- Decision delays prevent work from progressing
- Communication misunderstandings
- Unresolved conflicts
- Partner changes of persons or prioritizations
- Skillset inadequacies

These problems indicate unhealthy partnerships, and they can be monitored and measured. Therefore, they are performance indicators. Since these performance indicators damage the partnership and the project, they are key partnership indicators. Note that there is no mention of the reasons behind these; they are not relevant to tracking the partnership's health. Emotions, politics, and personalities are difficult to measure. Indicators that cannot be measured do not qualify as key partnership indicators. However, the reasons *are* relevant to the bonus solutions covered later in the paper.

Table 3 incorporates the key partnership indicators in a tracking sheet for weekly or monthly reports for communications and stakeholder management. The report includes the key partner, the partner’s role, the weekly and monthly report dates, and the increase or decrease from the previous month. Notice the issues column. If the key partnership indicator directly or indirectly harmed the project’s progress, record that result here.

Key Partnership Indicator Tracker				Table 3—Key Partnership Indicator Tracker		
Key Partnership Indicators	KP Name	Role	Week	Month	Increase or Decrease from Prior Month	Resulting Issues Affecting Project (Time, Cost, Quality, Other)
Percentage of Return Communication Failures						
Number of Missed Scheduled Meetings						
Percentage of Late Deliverables						
Percentage of Missed Deliverables						
Number of Decision						

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Delays						
Frequency of Miscommunication/ Misunderstanding						
Unresolved Conflicts (Y/N)						
Lack of Cooperation (Y/N)						
KP Changes (Y/N)						Who/What: Effect:
KP Additions (Y/N)						Who: Effect:
Skill level inadequacies (Y/N)						What: Effect:

The intent of this report is not for disciplinary purposes, though it may be taken into consideration if deemed necessary. The intent is to recognize that the partnership is not sufficiently synchronized and needs attention. The next step is to determine the emotional, political, physical, character, personality, educational, or cultural reasons underlying the problems.

**Five Bonus Solutions**

Since this paper is about key partnerships, mostly as they relate to cost engineers, the solutions proposed focus on improving relational and communications problems that hinder their work and, thus, project delivery. These problems are human, so emotions and egos are involved in the challenges they cause, as are the solutions to resolve them, which are a mix of discipline and finesse. Here are the five suggested solutions.

*Solution 1—Get to know your partners.*

The following suggested questions are useful for identifying, prioritizing, mapping, and monitoring key partnerships. They help assess the quality of the partnerships necessary for improved work performance and overall project delivery success. This survey is not exhaustive, but it is enough to begin an assessment of the partnerships. Though this paper primarily addresses the cost engineer, the survey is not exclusive. Project managers, team leaders, schedulers, superintendents, and executives—all should use this survey and the key partnership indicator tracker. As a group, consider which other questions to add to facilitate better partnerships. These questions are posed in the second person because the reader is both asking and answering them.

Questions 1-11 help identify and prioritize partners and establish the parameters of the partnership.

1. Who are the partners with whom you need to communicate?
2. With which project role players do you currently interact the most to perform your responsibilities and deliver your tasks? For example, PM, superintendents, estimator, architect, owner, supplier rep, and team leads.
3. Who are the five main people/roles that you currently work with internally, and the five externally, to build, maintain, and update the schedule accurately and in a timely manner?
4. Where do these partners fit in on the partner prioritization tool and the key partnership map?
5. What is their stake in the project and how do the results of your work affect them: financially, emotionally, or professionally? [11]
6. What drives them [11]?
7. What data do they require from you, and what method of communication do they prefer [11]?
8. What information is necessary to know?
9. What information is unnecessary?
10. What do they think of your work? Is their opinion reasonably justified [11]?
11. Do they have partners that influence them, including their opinion of you? Should any of them become your key partners? [11]?

Questions 12-14 facilitate the design of a communications plan.

12. What is the process of communication? The process is the who, what, when, where, and how. The *where* can include the physical location from which the communication is coming. Face-to-face meetings could take place at the office, the project site, or a casual public setting. Conference calls or online meetings involving participants from different time zones or countries must consider appropriate meeting times when planning communications.
13. How is the information to be communicated? The *'how' of communication is an element of planning in project communication* management.
14. When is the information to be communicated? In project management communications management, the *when* of communication is an element of planning and *monitoring*.

Questions 15-25 are useful for examining the workability and quality of the partnerships. They help fill in the key partnership indicator tracker for weekly or monthly reports.

15. What information has been duplicated unnecessarily?
16. What is the quality of communications?
17. Which key partners actively utilize your reports, dashboards, and other work that keep the project progress transparent to them for informed decision-making?
18. Which key partners missed calls or were excessively late returning your calls?

19. Which key partners did not return emails or other messages?
20. Which key partners did not give you the feedback needed?
21. Which lower-priority partners make the most demands for information?
22. Which roles/relationships hinder your ability to perform your job as a project controls or cost engineer?
23. Have there been any changes in personnel not reflected in the key partnership map?
24. What are the primary causes of breakdown in these relationships--lack of communication or poor quality of communication; personality conflicts; knowledge or skill level inadequacies; other?
25. If they are disinterested or opposed to the project or partnering with you to provide needed pieces of the project, how will you manage their resistance [11]?

*Solution 2—Understand Your Partners—Get personal.*

The difference between success and failure is about building strong relationships. To do so requires establishing a friendship, trust, and respect. Learn to network with partners, which requires listening and building rapport. Shared interests make connections, so use them to engage partners. Ask genuine questions and then listen.

Being honestly interested in people, professionally and personally, builds strong relationships. Not every conversation needs to be about business. Make deeper connections with partners by learning personal details such as hobbies, family, favorite fun things to do, or birthdates. Peppering work conversations with personal information is okay. Break down the walls of formality and resistance to achieve better interaction [12].

*Solution 3—Listen!*

Negative feedback should not result in closing lines of communication between partners. Empathy—walking in their shoes—encourages approaching the criticism from their viewpoint. Partners need to feel their opinions matter and, even without agreeing, understanding it helps validate them. Treat them respectfully, even when tempers flare. The culture of the partnership should encourage open communication.

*Solution 4—Be transparent.*

- Keep communications honest to maintain trust.
- Keep communications as simple as possible.
- Give credit where credit is due.
- Give compliments freely.
- Give criticism tactfully.

*Solution 5—Stay committed to the plan and the process.*

Since problems in project communications are one of the top factors in project failure, stay committed to the communications plan. Practice effective communication management by properly planning, monitoring, updating, and executing the plan.

## **Conclusion**

This paper has highlighted communication problems within project management as a significant cause of project failure. An underlying factor of communication failure is stakeholder relationships. Communications and relationship failures affect the performance and appreciation of the cost engineer's work.

Viewing stakeholder relationships as partnerships is a more appropriate perspective of the collaboration involved between stakeholders. Healthy partnerships are necessary for successful project delivery.

Included within this paper are the top five means of improving key partnerships:

1. The partner prioritization tool
2. The key partnership mapping tool
3. The partner register table
4. The communications plan table
5. The key partnership indicator tracker

The use of each was explained and encouraged. Five bonus solutions were presented to improve non-measurable communication and partnership challenges. These tools and solutions help readers improve working partnerships and project delivery performance.

Sir Isaac Newton said, "When two forces unite, their efficiency doubles." [13] Working as partners is more effective than working as two individuals toward a common end.

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