

## THE QUADS

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The **Quads** is a simple way for a Company to understand **how to manage** and to evaluate what **zone** it is presently performing at this time: a zone with a high probability of \$ucce\$\$ or a high probability of Lo\$\$\$. Actually, the overreaching concept of the quads comes from a discussion with Minoru Yamasaki, who designed the World Trade Center in New York City. He once asked me to write a contract which would guarantee that he would not find himself on the wrong end of a jury verdict for error and omission damages. I told him I was unaware of anyone who could do so, let alone me. He then asked how to protect himself from so much litigation that seemed to go with being a designer. I thought for a moment and said: "It is pretty simple. You **know** the **right** thing to do, make sure that everyone else on the project **knows** the **right** thing to do, then **do it right, check** to make sure that it was **done right**, and **document** that you did.

Yama said: "Then all you are saying is to do things right?" I said: "Absolutely not. I am saying to do **the right things right**. A **contractor** can do a great job of cleaning up a long list of punch lists, but that is not the right thing to do. The right thing to do is to have a program of built in quality to eliminate or greatly reduce punch lists. A company doing a wonderful job of working overtime to get back on schedule is not the right thing to do. The right thing is to avoid getting behind in the first place. Project success by all the parties is a function of the right kind of thinking, thinking that is aimed at assuring the focus is on doing the right thing, and then that those things are done right." This concept applies to the **Owner and his design team**: a great contract written by super lawyers with a No Damages for Delay Clause does not prevent delays. Really swift response to Request for Information concerning conflicts in drawings still takes time and money: instead the right thing is to have a good quality and constructability program to avoid those conflicts in the first place. A good design team, adequately funded with a proper amount of time normally will prevent design issues which can create delays; effective and timely decision making and the selection of a well qualified construction team will prevent delays – those are the right things that need to be done right.

## QUAD I

### Makes Money

Knowing the Right Things  
Doing the Right Things  
Team  
Core Values  
Trust  
Content Conflict Resolution  
Built-in Quality  
Decision-Making  
Accountability

## QUAD II

### Loses Money

Re-Work  
Inspect & Correct  
Decision Delaying

## QUAD III

### Loses Money

Relationship Conflicts  
Defensiveness  
Not Accepting Accountability  
Living in the Past

## QUAD IV

### Makes Money

Raising the Bar of Performance  
Training  
Lessons Learned  
Assisting Others to do Their  
Jobs

In the foregoing we see that it is in *Quad I and Quad IV* where money is made (that is where we should be at any given time). And in Quad II and Quad III the likelihood is that something is going (or has gone) awry and that the probability of success is being diminished. We don't want to be in those quads! Each company should customize the quads based on its experience and values. The foregoing is simply a model or template for a company to discuss and develop its own approach to how it manages. But we like to have a blown up version of the Quad on the wall in the home office conference room, in the project trailer, so that in meetings or discussions, we can look up and be reminded of where we are right now. And ask the question during a meeting: "What quad are we in right now? What quad are we headed toward? Are we in the quad of making this

project a success or causing it to head south?” For example, it is rather amazing how this question will often subdue those who are yelling at each other instead of trying to solve a problem.

## QUAD I and Quad IV

### MakeS Money

Obviously, when the entire team knows the right things to do and executes accordingly, the likelihood of success should be very high. However, it is quite often that we find some members of the team lack high levels of competence in certain fundamental aspects of project management. For example, one that comes to mind is **effective scheduling**. Documentation is right up there, as well as contract management requirements. Coordination with the trades is often very weak and coordination drawings are underused or used ineffectively. The point is, projects like football teams suffer from their weakest links. One of the many roles of the company leader is to understand the strengths and weaknesses of the project and supervisory personnel and to assure that all personnel have the right level of competence and expertise to perform their functions . . .and to grow and get better. So, Quad I and Quad IV are intertwined: to know the right thing means that personnel must have been trained . . .and continually updated . . .to assure that they do know the right thing to do. To “be in Quad I” means there is a company culture of hiring the best possible people, to established goals and expectations for them, to provide training and coaching, evaluations. A company manual of procedures does not put a company in Quad I. **A company culture of development of personnel gets a company in Quad I and allows it to stay there. Of knowing the right thing to do, making sure everyone knows the right thing to do, doing it, checking it to make sure it was done right, then thinking about how it could be done better. Quad one is not about doing something right. A crew might work off a punchlist very well and quickly, but the right thing is not to have a punchlist.** So again, QUAD I and QUAD IV are inseparable bed fellows. **Quad IV** is often the forgotten hero of a successful company but it embodies the concept of Kaizen or continual improvement, the commitment to develop resources before growing revenue that the company can’t manage, staying on top of technology, productivity improvement plans. Making sure the company continues to operate within its values and principles.

The kick off of a project is a good venue for going through all the contract requirements, scheduling and planning processes, the concept of built in quality instead of inspect and correct, how to have more effective and timely decision making, how to work together collaboratively. And at the kickoff meeting, to establish a process for conflict resolution, for focus meetings to deal with issues which can improve the project performance. In other words, the goal of every project should be for the team to be better on the last day than on the first day, and to discuss how to make that happen.

The kick off of the project is also a good time to discuss the ingredients of a successful project which have been evaluated by Construction Industry Institute. Some years ago it determined that there was one word which almost always characterized a great project, and that word was **TRUST**. And of course, the word **DISTRUST** was the adjective that described the really poorly performed projects. In quantifying “trust”, the following were the three “C”s which did the job:

**C - Competence.** It is pretty difficult to trust someone to do their job if they are not competent to perform it. This is true not only in workmanship (a good welder) but also in management. Is the general contractor competent in scheduling; is the owner competent in decision making; is the craft contractor competent in coordinating its work with others. And in Competence we honor “**ultimate cause**” The ultimate cause of the worker being injured in the ditch cave-in which was unshored, but the commitment of the president to take care of its people, to do the things necessary for that protection, to train its supervisors in safe practices. The ultimate cause of the overtime work not that the welders were behind but that the material to them to weld was late because the shop drawing submittals were late resulting in late approval, production and shipment.

**C – Character.** A contractor can be the best scheduler around but what if he cheats on change order pricing? Or the owner tries to get something for nothing from the contractors. Or if the craft contractor endlessly promises to have an adequate crew on the project by a given date and fails to do so? Character is the glue which holds this process together. In Lean Construction, there is what is known as the “reliable promise” and the idea by Greg Howe that all successful projects are simply a series of activities held together by promises that have been fulfilled.

**C – Consistently.** This is another way of expressing “accountability”. I call it “when the rubber meets the road.” It is one thing to demonstrate accountability when you discover the last concrete placement of five yards is defective. “Hey, yeah, I will correct that!” But what if it is 100 yards? It is one thing for a craft contractor to say: “Look, I am going to work this week end to make up for the shortage of manpower I had a week ago.” But what if because he has had equipment delays or crew shortages which are his responsibility and the delay on the critical path is 30 days, is he willing to say: “Look, I blew it. I will do whatever it takes to get back on schedule!” Or will he immediately start trying to figure out an excuse and get a lawyer to file a claim? This is the ultimate test of character: when the rubber meets the road, will the contractor (or owner, or designer or supplier) do what is right?

So, **C+C+C=T (Trust)**. I believe the statistics show that only about 15% of the projects surveyed were great projects; correlatively about 15% really sucked – really tanked - and another 15% marginal at best. About 50% were ranked as “average”. Certainly, the concept of Trust (C+C+C=T) is a standard worthy of shooting for. Interestingly, a fairly recent survey of the industry also showed about three quarters of the parties in this industry ran into issues of ethical behavior annually with around a third of those surveyed saying that they ran into such behavior more than once during the year. Is overpricing a change order unethical? Is the owner’s attempt to beat the contractor’s price down unjustifiably unethical? Is the general contractor’s manipulation of a CPM schedule for its own advantage or the owner’s refusal to extend the completion date in spite of a justified request to do so . . . unethical? When a company has a “statement of values”, is following them a part of its policy to “know and do the right thing”?

Let’s examine for a moment the concept of “content conflict resolution”. A construction company and a construction project are both laden with potential conflicts. The conflict between the home office and the needs of the field, the conflicts between the various trades vying for space on a project, the conflict in interpretations of plans and specifications. The conflict between the cost of providing safety for personnel and meeting the labor budget. Conflicts exist and will always exist. There are now tools such as BIM and coordination drawings to assist in preventing many of these conflicts “in the office instead of the field” and

doing the right thing means to do everything possible to do so. Planning and look ahead meetings are tools also for using making your foresight as good as your hindsight. Doing the right thing is to work collaboratively to identify and prevent potential conflicts to the maximum extent. But when they do arise, the question becomes: how are they resolved? In so many instances, the approach is a series of screaming matches, letters which attack the very character of the other parties. The approach so often used is to *attack the person and not the issue*. To know and do the right thing is to only attack the content of the issue, that is, to identify what the real issue is, do the research, develop solutions and present them reasonably.

To never attack the person.

## **QUAD II**

### **LoseS Money**

Quad II is just a home for screwing up. Whether a concept of inspect and correct instead of built in quality which results in punch lists, failed commissioning and start-up, delays for whatever reasons . . . Someone didn't know the right thing, or if they did, failed to do the right thing. It could have been the Owner's team or the construction team. But it costs money. If the project is delayed, the Owner loses use of the facility and LDs are seldom adequate to reimburse actual losses. In such a case, even if the contractor wins a delay or impact damages case, the amount is inadequate to cover all its losses. Everyone loses. So everyone should begin with an obsession to live in the QUAD I and Quad IV world and to avoid through outstanding performance, the losses which go with Quad II and Quad III. Again, a discussion of the Quads in the kick off and at future partnering and project meetings is highly recommended.

## **QUAD III**

### **LoseS Money**

Quad III is the source of countless disputes. Quad III is what I call the "ego" quad. It is the scenario in which one of the parties loses cool and makes personal attacks on the other party instead of sitting back and trying to objectively evaluate the issues and resolve them on a reasoned approach. It is the quad where one of the parties (sometimes both of the parties) refuse to accept

accountability and try to unreasonably others for their own problems, without facing up to them (the third "C" in the C+C=C=T). I think "no damages for delay" clauses are in this category for it is a manifestation that the owner or whomever inserts the clause into the contract is saying: "I may have screwed up but I am not paying for it." This is the clause where unethical behavior often raises its ugly head, or "playing lawyer" to escape a liability which is truly yours. Being in Quad III seldom is a money maker. Unethical behavior is seldom a money maker. Trying to take advantage of a weaker party is seldom a money maker, at least intermediate or long term. Sometimes, I guess. If that is what floats your boat. But not for those who wish to sleep well at night. Every night.

The use of the quad on the wall is a good tool, as said before, to ask questions. Instead of saying: I think you are cheating or being unethical, one can simply ask: What quad are you in right now? Justify to me how you are in Quad I instead of Quad III?

And a last point in Quad III is the "living in the past". When a contractor's mission statement is to be the "best and preferential contractor" in the market area, this is a representation that indeed the contractor will be technologically and best practices current or even ahead of the pack. That instead of continuing to do the things "the way we used to do them", we will do them consistently with the current best practices, and that our personnel are trained to do just that. Okay, maybe in the old days we did things by handshake and today we must document them. Well, that is the current way and we must follow current practices as old customs have always seemed to die away with time. If the industry is to be dynamic, then we must be dynamic as a company. This project must be dynamic as well. This is an accountability issue. The company's leader is accountable to both outside and inside customers to provide the best people, process, practices and people to perform the work. "Living in the past" is not consistent with that accountability.

So, in what quads do you find yourself today? On each of your projects?

