

## Putting the Five Big Ideas to Work

Hal Macomber

### Introduction

In the spring of 2004, Sutter Health held a conference for the companies that were designing and building their facilities. Lean Project Consulting, Inc. (LPC) designed and facilitated the conference. Participants were introduced to Sutter's \$6 billion construction program along with their interest in getting the future projects delivered on a lean basis.

At the conference LPC presented a manifesto for Sutter's future work that most conference attendee companies later signed. The manifesto was titled *Five Big Ideas that Are Reshaping the Design and Delivery of Capital Projects*.

In the time that has passed, all of Sutter's projects have been organized and managed to enable the *Five Big Ideas* through the life of the projects. Posters of these ideas hang in project offices and construction trailers. Sutter gives wallet cards to project team members.

About three years into Sutter's journey they concluded they needed a contract that reflected working in accordance with these ideas. Sutter began using a contract document now known as *The Integrated Form of Agreement* (IFOA) which was the first multi-party agreement used for design and construction in the U.S. The contract makes clear what the *Five Big Ideas* are and how the parties to the contract are to behave.

The IFOA has been so successful that other owners began using the contract document. Eventually, the industry took note forming a coalition that created an industry standard relational contract. The *Five Big Ideas* sit at the heart of Consensus Docs 300, the IPD contract that is being widely adopted.

Success? Not quite. Integrated Project Delivery in general and *The Five Big Ideas* more specifically are being adopted at the fringe of the industry. While all IPD projects to this date have been successful – most very successful – teams are just beginning to adopt the behaviors. So, in an effort to help this along we are sharing our best advice on what you can be doing on your teams.

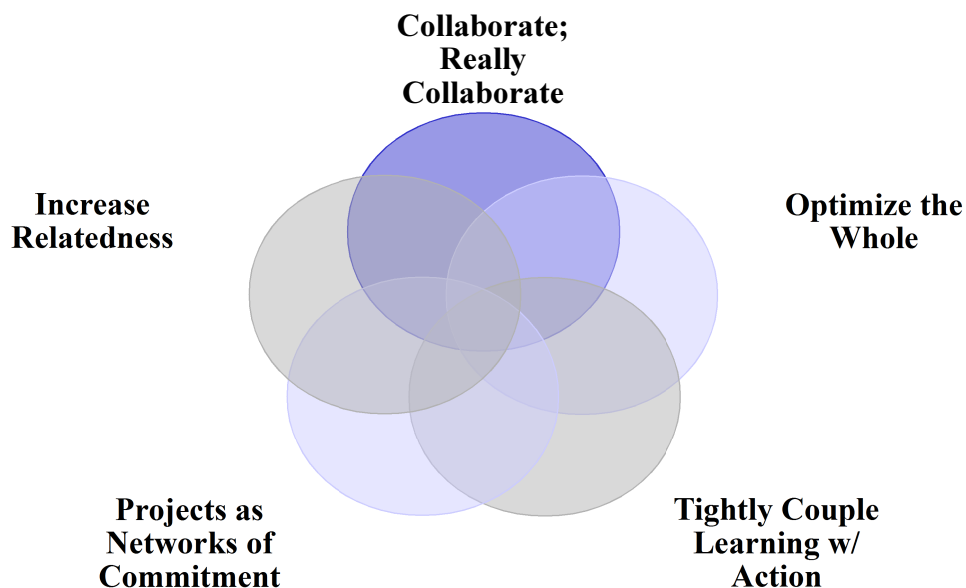
What follows as indented text is the original text from the manifesto accompanied by a commentary on what you can do on your team.

### Declaration

We are setting out to transform how capital projects are designed and delivered. This initiative is noble and necessary. We believe that capital projects cost too much; they take far too much time; they often fall short of our objectives; and they kill or injure too many along the way. It need not be this way.

## Five Big Ideas

These big ideas can transform projects. Together they form the foundation for innovating project delivery systems and approaches. There are solid historical and theoretical foundations for this claim. Companies around the world have adopted one or more of these ideas to improve their practices. These companies report significant gains. We aim to transform the industry by applying these ideas.



### 1. Collaborate; really collaborate, throughout design, planning, and execution.

Constructable, maintainable, and affordable design requires the participation of the range of project performers and constituencies. Since abandoning the master-builder concept, and separating design from construction, we have been patching a poorly conceived design practice. Value engineering, design assist, and constructability reviews mask an underlying assumption – that design can be successful when separated from engineering and construction. Design is an iterative conversation; the choice of ends affects means and available means affects ends. Collaborative design and planning maximizes positive iterations and reduces negative iterations.

Whether you believe two are smarter than one, or three are smarter than two, all but trivial projects depend on more than one person to complete. Large projects might number in the thousands of performers. Why isolate people from each other? Both learning and innovation are social processes. Judgment also benefits from broad perspectives and experience. Here are 5 questions to get you started to make collaboration your habit:

1. Who could help me with this?
2. What do I have to offer others?
3. What new ways can we meet on a regular basis?
4. How can we stay in tune with each others' changing project work?
5. What can you do to be more responsive to each other?

Bring this up to your team at your next meeting. Use the five questions to generate actions you will take as a group. Revisit how you are doing each time you meet.

## **2. Optimize the Whole**

Project work is messy. Projects get messier and spin out of control when contracts and project practices push every activity manager to press for speed and lowest cost. Pushing for high productivity at the task level may maximize local performance but it reduces the predictable release of work downstream, increases project durations, complicates coordination, and reduces trust. In design, we incur rework and delays. In the field, this means greater danger. We have a significant opportunity and responsibility to reduce workers' exposure to hazards on construction projects. Doing so can bring about greater than 50% improvements in the safety on the work site. We are committed to do all that is possible so that the people who build these projects are able to go home each night the way they came to work. The way we understand work and manage planning can increase that messiness or reduce it.

AEC projects are contracted in ways that usually result in optimization at local or subcontract levels. Consulting engineers manage their work to maximize engineering utilization. Plumbers do what is good for the plumbers. Other performers do the same. Some people say that if we do well with each of the parts, the whole will do well too. That is blatantly not true. And, people on the project know it. Sometimes it takes one group going slow so that the project can proceed more effectively. However, the incentives are not set up to accomplish that.

Optimizing the whole requires on-going attention. Circumstances change. What appears to be good for the whole at one point in the project may not be so at other points. It takes a recurring conversation and assessment among the many project participants to continue to act for the general well-being of the whole project.

Try asking just one question at each of your coordination meetings:

What is the best we can do for the project in the coming week?

Answer the question in the group setting. Be open to adjust scope, fees and plans accordingly. As the result, you'll do better for you client and the team.

### **3. Tightly Couple Learning with Action**

Continuous improvement of costs, schedule, and overall project value is possible when project performers learn in action. Work can be performed so that the performer gets immediate feedback on how well it matched the intended conditions of satisfaction. Doing work as single-piece flow avoids producing batches that in some way don't meet customer expectations that later on must be reworked. The current separation of planning, execution, and control contributes to poor project performance and to declining expectations of what is possible.

We learned from Toyota not to produce in large batches. Doing so creates wastes in storage, in tracking, in rework, in movement, and in space. Toyota's goal is *single-piece flow* at the signal of the customer. But why is it so important to do just one at a time? The answer is we want to learn from each action we take. Toyota sees it as the opportunity to test and re-test their hypothesis of how to do work effectively. The approach is generally known as the *Deming Cycle*: Plan – Do – Study – Act. Here are six ways you can begin adopting the principle *tightly couple learning with action* on your projects:

1. Meet at the end of each day for just 5 minutes with the last planners on your project to give them the opportunity to report on the work they finished for the day as they had promised to do. Identify at that time any reasons for not finishing promised work. Re-plan as necessary.
2. Do detailed planning for short horizons (6 weeks). Review the outcome, then do more detailed planning.
3. Conduct a plus-delta review at the end of each planning meeting. Ask all attendees, (plus) "What produced value for you?" and (delta), "What could we change to produce more value for you?" Start the next meeting by referring back to the last review. Select one item from that list for focus during the meeting.
4. Conduct a Good 5-Why™ for something that needs to be reworked, repaired or replaced. Getting to the root causes of why something occurred will lead to actions you can take to avoid recurrence of the variance or problem.
5. Have a conversation with the whole team on something that needs improvement. Take action based on an 80% complete solution. Try it out. Review the results. Then create an 80% solution for the balance of the issue.
6. Attack the delays on your project. Explore with your team what keeps them from more closely coupling one person's work with another person's work. Do an experiment. Learn. Re-do the experiment.

Put these to work on your project immediately. Start by discussing this with your team. You might want to create a contest with them to see who can generate the most ways for coupling learning with action.

#### **4. Projects Are Single-Purpose Networks of Commitments**

Projects are not processes. They are not value streams. The work of management in project environments is the ongoing articulation and activation of unique networks of commitment. The work of leaders is bringing coherence to the network of commitments in the face of the uncertain future and co-creating the future with project participants. This contrasts with the commonsense understanding that planning is predicting, managing is controlling, and leadership is setting direction.

A project is a single-purpose network of commitments performed by a temporary social system. Unlike recurring business processes, the network of commitment on a project emerges rather than is designed and refined as performers have experience in the network. Performers in a project get one shot through the network. To complicate this project performers come together as strangers. They often lack experience with each others' reliability to perform within the network. Without the experience with each other, project performers will hold out on making their best commitments.

Your role as project leader is to *activate the network of commitment* on your project. Here are four actions you can take:

- Set an example of making offers (promises) that take care of the concerns and needs of project performers. People will follow your example.
- Encourage project performers to make offers and promises that they can reliably deliver. Help them as needed to improve on reliability.
- Be a good customer for the promises made on your project by offering your help to performers and announcing your anticipation of completion.
- Be quick to show your appreciation for the completion of promises including being notified at completion rather than at the next project team meeting.

These actions begin to bring project performers together as team members who are taking care of each other while they take care of the project. Doing this publicly provides the basis for people to develop trust in each others' competence and reliability to perform. And it is just the beginning. Your role as project leader requires continued attention on the functioning of the network of commitment.

#### **5. Intentionally Build Relationships on Projects**

People come together on AEC projects as strangers. They too often leave as enemies. Facilities projects today are complex and long-lived, requiring ongoing learning, innovation, and collaboration to be successful. The chief impediment to transforming the design and delivery of capital projects is an insufficient relatedness of project participants. Participants need to develop relationships founded on trust if they are to share their mistakes as learning opportunities for their project, and all the other projects. This will not just happen. However, we are learning that relationships can be developed intentionally.

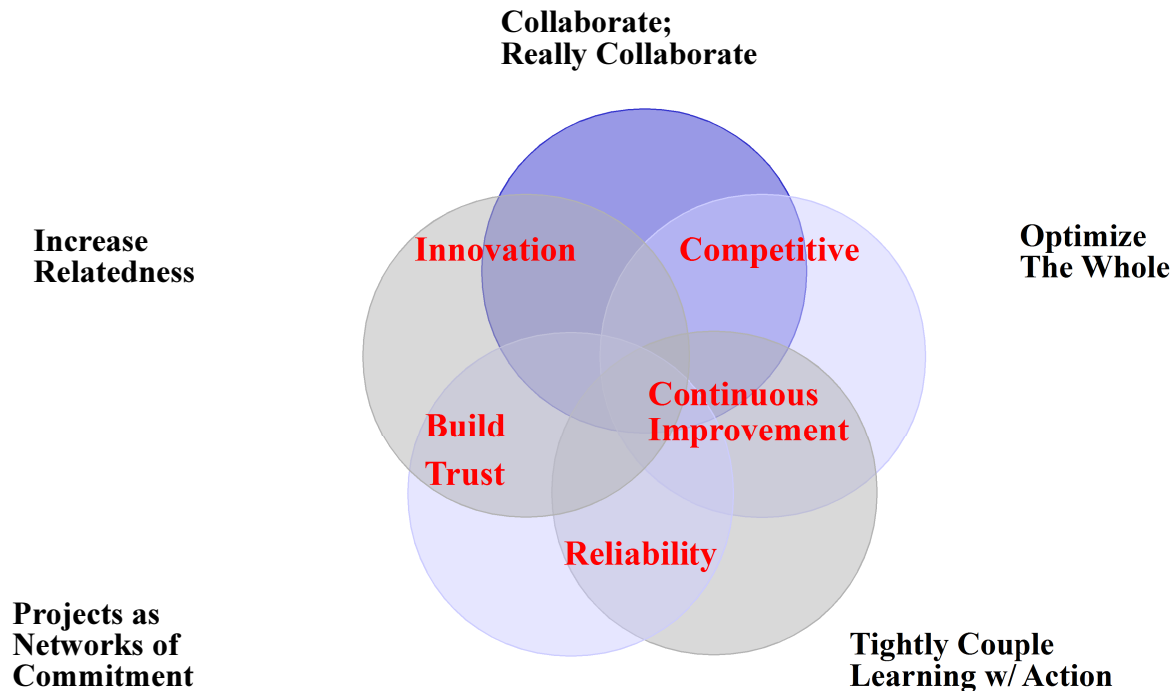
We can't be learning, collaborating, optimizing the project or making commitments without relationships built on trust, respect, appreciation, care for each other and practices of commitment-making. Strangers don't start out that way. The faster project team members become friends, the sooner the project will be on track for success.

Building relationships is a matter of intentionality and a few simple practices. I see far too many situations where the urgencies of the project or another project get in the way of taking the steps to produce sufficient relationships to meet the challenges of the project. Whether you are a leader or team member see to it that you take time up front to build your team. What does that take? Try these five steps:

1. Explore each others' personal intentions and ambitions. Projects offer sufficient opportunities to take care of individual needs and desires. We just need to find out what they are. Then bring those intentions into alignment with the promise of the project.
2. Cultivate practices of commitment-making. At the very first opportunity begin practices of making promises in front of each other. This practice provides a factual basis for making assessments of trust-worthiness and care for the team.
3. Make it your habit to acknowledge and appreciate team members. Become a mutual admiration society. High performing teams are characterized as environments where people are acknowledged at least once every seven days for the talents, efforts, and contributions each team member brings.
4. Foster an environment for healthy conflict. Encourage team members to express alternate views. Even in the face of agreement have someone create a different perspective.
5. Make the project setting a place where people can be their authentic selves without fear of judgment or mockery. Granting each other their legitimacy is the basis for the healthiest of relationships.

Simple practices? Yes. And powerful practices for enriching relationships. Where will these practices lead you. We have seen a glimpse of the emergent outcomes at the intersection of the *Five Big Ideas*.





**We are setting out to change project design and delivery for ever.  
Please join us.**

Hal Macomber is a Principal with Lean Project Consulting, Inc., Bloomington, MN. He has authored or co-authored numerous articles on lean design and construction and Integrated Project Delivery. Some of the text in this paper appeared in Hal's weblog in 2004 [www.reformingprojectmanagement.com](http://www.reformingprojectmanagement.com).

For more information on conducting a Good 5-Why read *No-Fault Problem-Solving*, by Rebecca Bettler and Hal Macomber.

**Transforming the experience of project work  
from frustration and conflict  
to trust and mutual respect**