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Should You Use Integrated Project Delivery on Your Next Construction Project?

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Should You Use Integrated Project Delivery on Your Next Construction Project?

By R. Thomas Dunn and Thomas J. Pagliarini

Complex construction projects have many moving parts and numerous stakeholders. Each project often contains its own unique challenges and obstacles. Finding the right solution does not often come by trying to utilize a one-size-fits-all approach. Indeed, complex issues call at times for customized responses.

Discerning the appropriate solution for particular problems involves a variety of decisions. Chief among many concerns is determining what the priorities are on a given project, and figuring out the best way to achieve those aims for all involved.

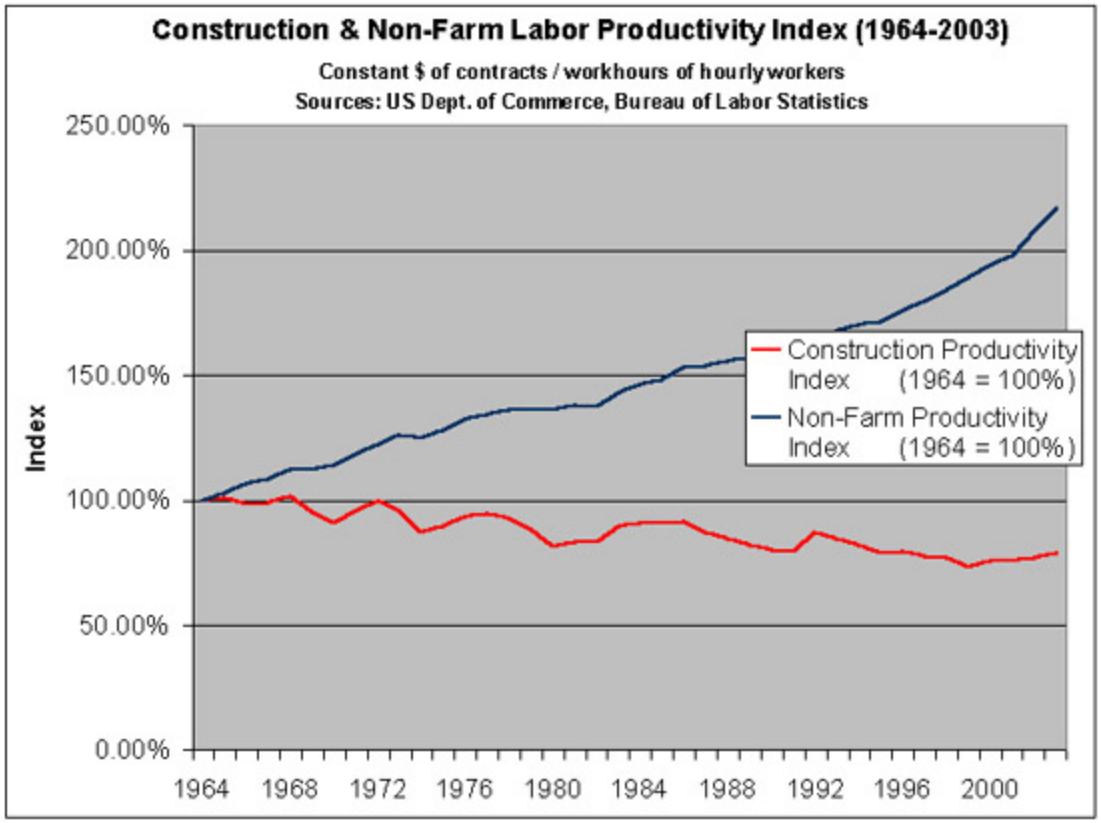
The leading solution that seeks to harness the potential of collaboration and seeking to align the priorities of all those involved in complex construction projects, is Integrated Project Delivery ("IPD"). IPD is a project delivery system that utilizes a team-based approach to construction projects where the risks and rewards of a project are shared by all of the stakeholders and, when done right, maximizes efficiency so projects are completed on time and on budget.

Like other tools, IPD is not a panacea. Nor is IPD the right solution for every project or every owner, contractor, or design professional. Still, for those willing and able to commit to true collaboration on complex

construction projects, IPD offers promising potential for addressing many common problems in the construction industry.

The Failings of an Outdated System

While there may not be one solution that solves all problems in the construction industry, there are nevertheless certain problems that impact many, if not all, complex construction projects. Studies have shown that in the last fifty years, while all other major industries have more than doubled their average productivity, the construction industry has in contrast declined in productivity.[1]



In fact, it's presently estimated that half of all construction activity is not productive.[2] Some researchers have found that the actual time spent

working on certain projects can be lower than 20 percent.[3] One explanation for the ability of these striking inefficiencies to persist is by way of resort to the tired cliché, that the definition of insanity is doing the same thing over and over and expecting a different result. For the construction industry, its inefficiencies flow in part from trying to utilize the same antiquated approaches to project delivery and expecting to yield better, more efficient results.

One of the major drivers of such inefficiencies is the traditional project delivery system itself. Traditional project delivery systemically breeds inefficiency because it inherently contemplates that each individual participant is only responsible for their separate silo of responsibility. Both the process and the goals of individual participants are fragmented. A project could be a complete and utter failure for an owner, yet one or even several subcontractors could walk away lining their pockets, viewing the project as a tremendous success because they were able to complete their discrete task. Even if each of the individual participants recognize that "profit is a worthwhile goal" each participant is only "focused on making *their own* profit rather than on optimizing project outcome and increasing profit for all."[4]

A Shift in Thought

One way to start to break away from the inefficient, compartmentalized mindset is for project participants to start thinking

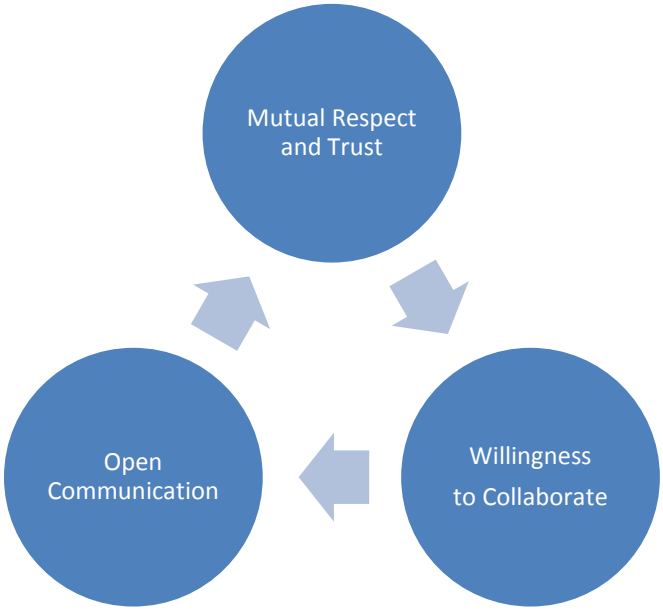
about the big picture, that is, to focus on the needs, risks, and rewards associated with the overall project. Such a focus is the foundation of an IPD mindset, which, put another way, is to get all participants thinking like owners.[5] An owner's mentality does not narrowly focus on accomplishing individual tasks, but instead recognizes how each constituent part needs to come together as a unified whole. Every decision has an eye towards improving the success of the overall project.

Traditional Project Delivery		Integrated Project Delivery
Fragmented, assembled on "just-as-needed" or "minimum-necessary" basis, strongly hierarchical, controlled	teams	An integrated team entity composed key project stakeholders, assembled early in the process, open, collaborative
Linear, distinct, segregated; knowledge gathered "just-as-needed"; information hoarded; silos of knowledge and expertise	process	Concurrent and multi-level; early contributions of knowledge and expertise; information openly shared; stakeholder trust and respect
Individually managed, transferred to the greatest extent possible	risk	Collectively managed, appropriately shared
Individually pursued; minimum effort for maximum return; (usually) first-cost based	compensation/ reward	Team success tied to project success; value-based
Paper-based, 2 dimensional; analog	communicatitons/ technology	Digitally based, virtual; Building Information Modeling (3, 4 and 5 dimensional)
Encourage unilateral effort; allocate and transfer risk; no sharing	agreements	Encourage, foster, promote and support multi-lateral open sharing and collaboration; risk sharing

Setting and Maintaining the Right Attitudes

The main shift is to develop a model for an IPD project that aligns each of the participant's interests with the overall project goals.[6] To work towards achieving such alignment, it is necessary to set the ground rules for

the appropriate attitudes that need to be maintained both at the inception and throughout an IPD project. The three essential attitudes or behavioral principles for a successful IPD project are: (1) mutual respect and trust; (2) willingness to collaborate; and (3) open communication.[7]



Each behavior is connected to the other. Mutual respect and trust is needed so that participants are willing to collaborate; open communication is more readily attainable when the parties have mutual respect and trust; and, open and honest communication is part and parcel to true collaboration.

Key Contractual Principles

Having the right mindset and attitudes, while critical, is only part of what it takes for the successful implementation of IPD. Without the proper contractual foundations, even with the most collaborative-minded of participants, a project would not be able to achieve the full benefits of IPD.

Among the most critical contractual principles necessary for successful implementation of IPD are:[8]

Key Participants Bound Together as Equals

Whether it is a minimum of Owner, Architect and Contractor, or a broader group including all project participants essential to project success, a contractually defined relationship as equals supports collaboration and consensus-based decisions.

Shared Financial Risk and Reward Based on Project Outcome

Tying fiscal risk and reward to overall project outcomes rather than individual contribution encourages participants to engage in "best for project" behavior rather than best for stakeholder thinking.

Liability Waivers between Key Participants

When project participants agree not to sue one another, they are generally motivated to seek solutions to problems rather than assigning blame.

Fiscal Transparency between Key Participants

Requiring and maintaining an open book environment increases trust and keeps contingencies visible—and controllable.

Early Involvement of Key Participants

Projects have become increasingly complex. Requiring all participants essential to project success to be at the table early allows greater access to pools of expertise and better understanding of probable implications of design decisions.

Intensified Design

The cost of changes to projects increases in relation to time. Greater team investment in design efforts prior to construction allows greater opportunities for cost control as well as enhanced ability to achieve all desired project outcomes.

Jointly Developed Project Target Criteria

Carefully defining project performance criteria with the input, support and buy-in of all key participants ensures maximum attention will be paid to the project in all dimensions deemed important.

Collaborative Decision-Making

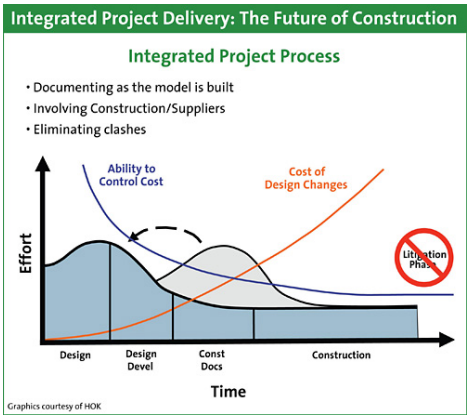
Requiring key project participants to work together on important decisions leverages pools of expertise and encourages joint accountability.

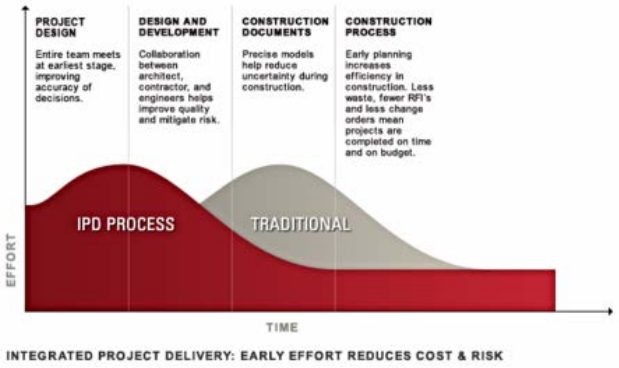
A successful IPD project utilizes the above contractual principles to effectively bind the participants together to achieve the common goal of an efficient and profitable project. These principles should ideally be discussed at a "pre-negotiation workshop" which provides the opportunity for all stakeholders to become acquainted with these key IPD principles.[9] Later, when negotiation of the actual IPD agreement or agreements takes place, certain critical decisions will need to be made, including determining which participants will actually end up as part of the group that will share in the risks and rewards of the overall IPD project.

The Benefits of Using IPD

No Litigation

Utilizing IPD can yield numerous benefits for all participants involved in such projects. One key benefit is that true IPD removes the cost and uncertainty of litigation from the construction process. At the turn of the millennium, studies had shown that construction litigation expenditures were increasing at an average rate of 10 percent per year for over a decade.[10] Current trends show likely increases in litigation into the foreseeable future.[11] True IPD seeks to remove litigation from the construction process entirely by having all of the parties enter into liability waivers.





INTEGRATED PROJECT DELIVERY: EARLY EFFORT REDUCES COST & RISK

Only True Change Orders

Some early case studies into IPD projects have shown successful completion of projects with no litigation.[12] Similarly, IPD seeks to remove change orders, as they are currently utilized, from the construction process. Some estimates show that change orders account for approximately 8 to 14% of the cost of capital construction projects.[13] However, under IPD, with

liability waivers and other contractual language in place, change orders are not – and cannot – be utilized as a means of generating additional profit for contractors and subcontractors. Instead, ordinary change orders are pre-determined to become the responsibility of the entire team. The only change orders that remain are those in which the owner expressly decides to add scope to the project.

Fewer Requests for Information

The early engagement of key participants as well as the increased role of all stakeholders in the design process also results in few Requests for Information ("RFIs"). RFIs are issued by contractors and subcontractors when they believe they need something regarding the design clarified.[14] One study of non-IPD projects estimated that the average cost per RFI review and response was approximately $1,080 and there were an average of nearly 10 RFIs for every $1 million in construction cost.[15]

CONSTRUCTION VALUE	# OF PROJECTS	# OF RFIs	AVERAGE # OF RFIs/$1 MILLION
$5million - $50 million	333	349	17.2
$50 million - $100 million	173	587	8.3
$100 million - $250 million	143	715	5.0
$250 million - $500 million	90	757	2.3
$500 million - $1 billion	37	1016	1.6
$1 billion - $5 billion	50	1676	1.1
Grand Total	**826**	**617**	**9.9**

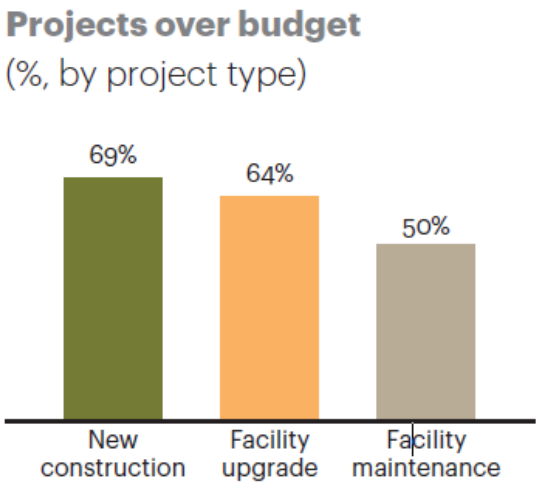
In an early case study of IPD projects, the majority of the projects analyzed had only between 100-300 RFIs, with a large percentage of those RFIs

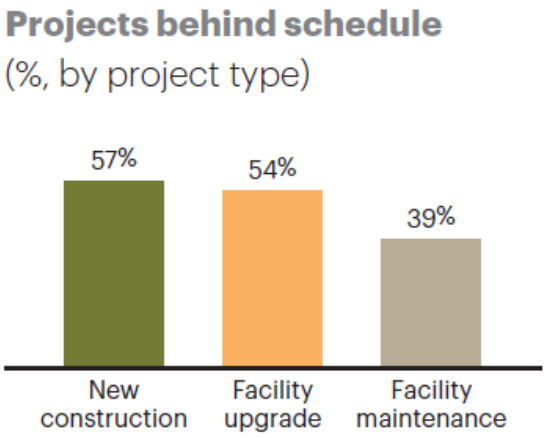
merely being used to document the ultimate decision made by the members of the project team.[16]

Early involvement of key stakeholders in the design process also benefits such contractors and subcontractors because it allows for them to better price their work as they have a more intimate understanding (as actual participants in the process) of the actual design.[17]

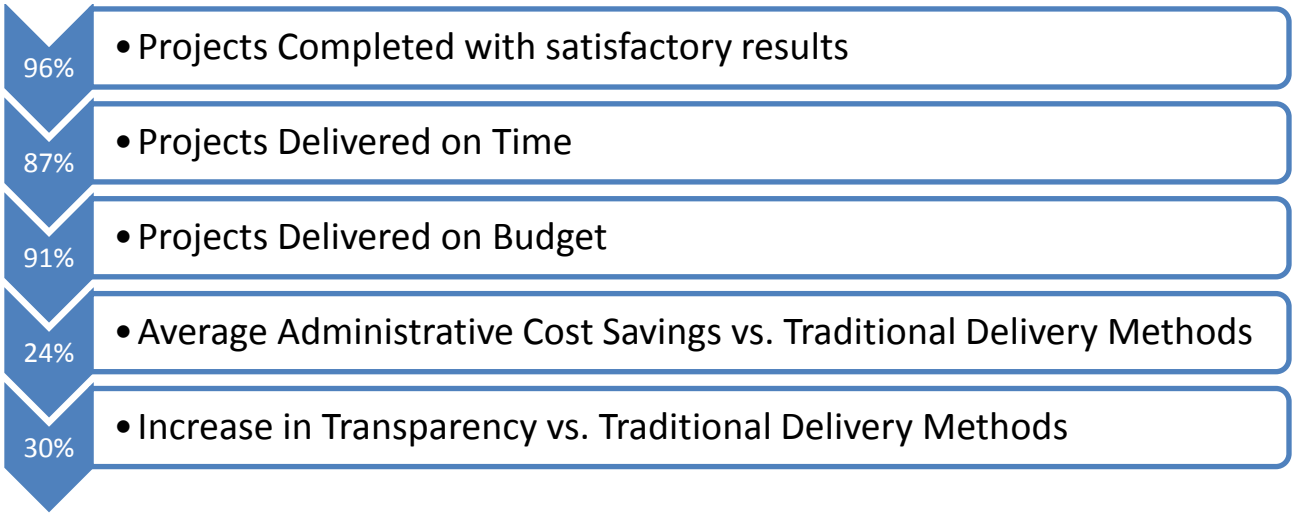
On Time, On Budget, Done Right

While the prospect of no litigation and a reduction in change orders and RFIs are desirable in their own right, the ultimate concern is whether the finished project meets expectations. One study found that approximately 75% of capital construction projects do not meet schedules and that 63% are over budget.[18]





In contrast, a recent study found the following regarding IPD projects:[19]



All of which, because of the incentive structures in IPD, redounds to the benefit of all stakeholders.

Potential Risks of IPD

Notwithstanding the numerous benefits and potential of IPD, its implementation is not without risk. As with anything new, participants will have to adjust to its differences. Most of the key adjustments pivot around the impact of the more collaborative framework. The increased participation of more stakeholders early in the design phase shifts the bulk of the costs toward the beginning of IPD projects. Owners must be prepared to adjust their financing arrangements accordingly.

Additionally, the increased focus on collaboration places even more significant emphasis on trust between participants.[20] If participants are unfamiliar with each other, which can often occur in large, complex one-off projects, meaningful collaboration can be difficult. However, the biggest risk

posed by IPD is that the owners bear the risk in the rare event of a catastrophic overrun, that is, cost overruns that are so significant that they completely consume all of the profit that was set aside to be potentially shared by the owner and non-owner participants.

Successful Implementation of IPD

With proper planning, IPD can be successfully implemented to avoid the potential risks. While there are some key factors that improve the likelihood of successfully implementing IPD, the lifeblood of an IPD project that must permeate every facet of such a project is a concrete commitment to collaboration by all stakeholders. This includes total buy-in on the part of the project owner. While all participants must fully engage in the collaborative endeavor, it is the owner who must first establish the collaborative tone.

Selection of the right team to collaborate with the owner is the next critical step.[21] Ideally, the more participants that have been exposed to IPD and collaborative design concepts the better. Still, prior exposure to such concepts, though important, is not necessarily as critical as the selection of participants with whom the owner has mutual respect and trust, and whom are willing to collaborate and embrace the IPD mindset. However, to supplement for any lack of familiarity with IPD among participants and also to bolster and facilitate the successful implementation of the IPD project, the guidance of IPD consultants and legal advisors should also be sought at as

early as possible. In particular, legal counsel and consultants can help educate key participants, facilitate negotiations, and also address critical side issues like financing, insurance, and legal entity structure.

Once all of the key participants have been identified, each should be brought together for a "pre-negotiation workshop" which provides the opportunity for all stakeholders to become acquainted with the key IPD principles and concepts.[22] Following this, the participants can then proceed to actual negotiations. As opposed to other forms of project delivery, IPD negotiations, at least initially, do not focus on the contractual terms. Rather, the focus is on setting the goals for the overall project, while also providing the opportunity for participants to express their interests and concerns. Later on in the negotiation (or likely subsequent negotiations), the parties will begin to distill the key terms that need to be addressed. Only after agreement as to the overall project goals are established and the key terms and issues have been addressed will the IPD contract then materialize.

In addition to embodying the overall project goals and addressing the key terms and issues, the IPD contract must also provide a stable (yet flexible) underlying framework. The contract must provide an appropriate balance between allowing for joint control and decision making, while also still recognizing the owner's ultimate control over the entire project.[23] Further, the contact needs to appropriately address the shared risks and

rewards for the project by customizing the incentive structure for non-owner participants to drive shared accountability.[24]

Throughout the project, there are also certain best practices that can be utilized to help foster the collaborative framework established by the IPD contract. One is physical, the other is technological. As for the physical, best practices suggest that all key participants gather in person or co-locate on a continuous basis throughout the course of the project, otherwise called establishing the "Big Room."[25] Such close physical proximity fosters an environment for true collaboration by increasing the "quality and quantity of interactions" and helping to build "the relationships that create trust."[26]

On the technological side, best practices suggest utilizing Building Information Modeling ("BIM"). BIM is a "database that stores building information and translates it into a three-dimensional model."[27] BIM allows for the sharing and integration of all designs and specifications, which not only provides a common repository of all critical documents, but also helps to identify and correct design conflicts.

Conclusion

Integrated Product Delivery, while not appropriate for every project or every owner, presents a unique opportunity for all members in the construction industry to come together to solve its deep rooted issues. It is an approach that allows all those impacted by the failures of the stubborn and static system that has grown ever more litigious and inefficient to take

part in the solution. IPD is a fresh approach to old problems. It holds significant promise for those stakeholders willing to commit. Learning about the great potential of this revolutionary method is one of the first steps in the right direction. Working together with all those in the industry is the next step.

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[1] Patrick J. O'Connor, Jr. "Integrated Project Delivery: Collaboration Through New Contract Forms" (2009)

[2] Howard Ashcraft, Jr. "Integrated project delivery: a prescription for an ailing industry." Construction Law International, Volume 9, Issue 4, December 2014 ["Prescription"].

[3] Id.

[4] Howard Ashcraft, Jr. "The Transformation of Project Delivery." The Construction Lawyer, Volume 34, Number 4 Fall 2014.

[5] Doug Mangers, "Thinking like Owners: How Integrated Project Delivery Helps Achieve the Best Final Outcome." McCarthy: Insights that Build, Winter 2012, Volume IV.

[6] Prescription.

[7] National Association of State Facilities Administrations et al. "Integrated Project Delivery for Public and Private Owners." (2010)

[8] Id.

[9] Howard Ashcraft, "The IPD Framework," Hanson Bridgett LLP.

[10] American Bar Association, "Construction Disputes."

[11] Gogulski & Associates, Inc., "Construction Litigation: Learning to Love Lawsuits."

[12] Joseph A. Cleves, Jr. and Lisa Dal Gallo, "Integrated Project Delivery: The Game Changer." American Bar Association (2012) (citing "Integrated Project Delivery Case Studies." AIA California Council, (2010)).

[13] Gordian, "Industry Challenges: Cost of Change Orders."

[14] Cleves and Dal Gallo.

[15] Navigant, "Impact & Control of RFIs on Construction Projects." (2013).

[16] Cleves and Dal Gallo (citing "Integrated Project Delivery Case Studies." AIA California Council, (2010)).

[17] Id.

[18] A.T. Kearney, "ExCap II: Top-Level Thinking on Capital Projects." (2012).
[19] "LEAN Construction Project Delivery Methods – Job Order Contracting, IPD, 5D BIM."
[20] O'Connor.
[21] Id.
[22] Howard Ashcraft, "The IPD Framework," Hanson Bridgett LLP.
[23] O'Connor.
[24] Cleves and Dal Gallo.
[25] Id.
[26] Howard Ashcraft, "Negotiating an Integrated Project Delivery Agreement." Hanson Bridgett LLP.
[27] Cleves and Dal Gallo.