# INTEGRATED PROJECT DELIVERY: COLLABORATION THROUGH NEW CONTRACT FORMS

**Patrick J. O'Connor, Jr.**[1]
**Faegre & Benson, LLP**
**2200 Wells Fargo Center**
**90 South Seventh Street**
**Minneapolis, MN 55402**
**Tel: (612) 766-7413**
**Fax: (612) 766-1600**
**poconnor@faegre.com**

[1] Patrick J. O'Connor, Jr., is a partner with Faegre & Benson LLP in its Minneapolis office. He was counsel to the American Institute of Architect's Documents Committee Task Group responsible for drafting the C195 Family of standard forms for integrated project delivery.

## TABLE OF CONTENTS

**Page**

## I. INTRODUCTION

One of the worst-kept secrets in the construction industry is that the provision of design and construction services is egocentric and inefficient. Risk assessment is a dark art. Risk allocation is an exercise in economic Darwinism. Traditional contracts rigidly delineate responsibilities with much elaboration on the consequences of failure. These contracting approaches reinforce self-protective behavior and instill mistrust. Moreover, while many risks can be identified and evaluated such that the effort to do so is well spent, often the unknowable remains material to the success of the enterprise. Nevertheless, traditional construction contracting improperly presumes a high degree of clairvoyance when allocating risk. More often than not risk flows down the contracting tiers to those least able to bear or control the risk. Not surprisingly, classical contracts combined with traditional delivery methods often produce sub-optimal results.

The industry's problems are many and varied. There is too little investment in innovation, technology, training, and education.[2] This includes innovation in the form of collaborative delivery approaches fostered by more flexible and responsive contracts. These collaborative project delivery methods are often identified by the term "Integrated Project Delivery" (IPD). This rubric covers a spectrum of contracting – from the familiar (construction management infused with collaborative or team-based processes) to the arcane (alliance models with "no-dispute" clauses).[3]

In 2007 and 2008, two industry organizations published IPD contract forms for the domestic market. The American Institute of Architects (AIA) published two separate IPD families: the so-called transitional IPD family, built on a construction management at risk model, and the Single Purpose Entity (SPE) family, developed as the contract embodiment of the principles espoused in *Integrated Project Delivery: A Guide* (the *IPD Guide*).[4] ConsensusDOCS was first to market with its Standard Form of Tri-Party Agreement for Collaborative Project Delivery, more commonly referred to as ConsensusDOCS 300, published in 2007.[5] We first focus on the pre-requisites of collaborative contracting and then examine the

---

[2] *See* Patrick J. O'Connor, Jr., *Productivity and Innovation in the Construction Industry: The Case for Building Information Modeling*, 1 J. ACCL 135 (Winter 2007).

[3] *See* Steve Rowlinson, et al., *Alliancing in Australia: No-Litigation Contracts; a Tautology?*, J. Prof. Issues in Engr. Ed. & Prac. (Jan. 2006); J.G.J. Koolwijk, *Alternative Dispute Resolution Methods Used in Alliance Contracts*, J. Prof. Issues in Engr. Educ. & Prac. (Jan. 2006); M. C. Jefferies, et al., *The Justification and Implementation of Project Alliances – Reflections from the Wandoo B Development*, J. Constr. Procure., 7 (2) (2001); M. Motiar Rahman and Mohan Kumaraswamy, *Contracting Relationship Trends and Transitions*, J. Manage. Eng. 147 (Oct. 2004); Allen Overcash, *Will the New Contract Forms for Integrated Project Delivery Make Conflict Obsolete? (Or Are We Still Lost in our Contract Obsession?)*, 3:1 J. ACCL 19, 32-33 (Winter 2009). *See also*, The Be Collaborative contract, http://www.constructingexcellence.org.uk.

[4] AIA National/AIA California Council, *Integrated Project Delivery: A Guide*, Version 1 (2007), available for free download at the AIA's website: www.aia.org.

[5] ConsensusDOCS consists of twenty-one member organizations, including the Associated General Contractors of America (AGC), the Construction Owners Association of America (COAA), the Construction Users Roundtable (CURT), Lean Construction Institute (LCI), and a large number of subcontractor organizations. *See* http://www.consensusdocs.org.

AIA and ConsensusDOCS IPD contracts with periodic detours through other integrated contracting approaches (*e.g.*, alliancing, and the Lean Construction IPD agreement).[6]

## II. CURRENT STATE OF CONSTRUCTION CONTRACTING: THE NEED FOR CHANGE

Numerous industry professionals have lamented the inefficient and adversarial nature of construction services procurement and delivery.[7] The following assessment is gaining acceptance:

> The construction industry is highly fragmented and has been deplored for being very adversarial. Construction owners are risk evasive, while contracting parties interpret contract clauses differently and for their own benefit. Productivity levels are low compared to other industries and have even dropped over time in some countries. The design/bid/build procurement culture had, until fairly recently, influenced public-sector construction project transactions and processes. Purely price-based selection strategies entice tenderers to lower their bids to win contracts, relying on subsequent claims to recover their costs. However, this scenario could well be different in enlightened private-sector negotiated contracts with selected project teams. The significance of using other selection criteria is not merely to redress the present mismatch between client and contractor perceptions, but also to reduce the gap between expected and actual performance. Contracting parties often work at arms length in disjointed relationships, usually motivated by divergent objectives and hidden agendas. Other consequences

---

[6] *See* Matthew W. Sakal, *Project Alliancing: A Relational Contract Mechanism for Dynamic Projects*, Lean Constr. J., Vol. 2, No. 1 at 67 (April 2005); William A. Lichtig, *Ten Key Decisions to a Successful Construction Project – Choosing Something New: The Integrated Agreement for Lean Project Delivery*, Am. Bar Assn., Forum on the Construction Industry (Sept. 29-30, 2005).

[7] *See* M. Motiar Rahman and Mohan Kumaraswamy, *Contracting Relationship Trends and Transitions*, J. Manage. Eng. at 147 (Oct. 2004) ("Many reports worldwide, such as that of the Construction Industry Review Committee in Hong Kong (CIRC 2001) and other reports in Singapore (C2IC 1999), Australia (ISR 1999), the U.K. (Latham 1994), Egan (1998), and the United States (CII 1991, 1996) have identified the above self-destructive trends and suggested remedial measures to arrest and reverse them. For example, they have called for dramatic "cultural" changes and recommended cooperation and collaboration through different teamworking approaches such as partnering and alliancing. Application of these approaches, mainly between owner and contractors, have recently met with some success (Drexler and Larson 2000; Bayliss 2002).") *See also*, J. Egan, *Rethinking Construction, Construction Task Force Rep*. Dep. of the Environment, Transportation and the Regions, London (1998); M. Latham, *Constructing the Team: Joint Review of Procurement and Contractual Arrangements in the U.K. Construction Industry*, Dep. of the Environment, London (1994); Construction Industry Institute (CII), *In Search of Partnering Excellence*, Pub. 17-1, Bureau of Engineering Research, the U. of Texas (1991); Construction Industry Institute (CII), *The Partnering Process – Its Benefits, Implementation, and Measurement*, Bureau of Engineering Resources, U. of Texas (1996); Construction Industry Review Committee (CIRC), *Construct for Excellence*, Rep. of the Construction Industry Review Committee (Hong Kong 2001); Construction 21 Committee (C21C), *Construction 21 – Reinventing Construction*, Ministry of Manpower and Ministry of National Development, Singapore (1999); Ministry of Land, Infrastructure and Transport (MLIT), Japanese Procurement Procedures for Public Works, Tokyo (Dec. 15, 2003); S.D. Anderson and S.S. Patil, *Improving Organizational Effectiveness of Asset Life Cycle Management*, Proc., *Construction Research Congress in Construction – Winds of Change: Integration and Innovation*, K.R. Molenaar and P.S. Chinowsky, eds., ASCE, Restin, Va. (2003).

including time and cost overruns, poor quality, customer dissatisfaction, lengthy and costly disputes, and disruption of relationships among the contracting parties.

. . .

Classical (i.e., traditional) contractual arrangements call for clear and definitive allocations of risks (and responsibilities and liabilities) among stakeholders. But all possible risks/uncertainties are not foreseeable and quantifiable at the outset. Even the foreseeable risks may change in importance and may influence some other risks, requiring considerable adjustments during project execution. Classically "complete" contractual arrangements are therefore not suitable for proper risk management. The objective of risk management should be to minimize the total cost of risks to a project, not the cost to any parties separately.[8]

The Construction Industry Institute, touting the benefits of partnering, noted:

The U.S. construction industry, contributing over $847 billion annually to the U.S. Gross National Product, is experiencing competitive pressures which have squeezed margins to historic lows. The construction industry now ranks as the second worst performing industry in terms of return on investment – only the airline industry rates poorer. Intense competition has forced companies to seek any avenue to preserve profits, and when such is threatened, to aggressively seek to recover losses through litigation. This business climate has led to adversarial relations which greatly hinder the construction process.[9]

The U.S. Department of Commerce, Bureau of Labor Statistics, reports that, of all major industries, construction is the only one to have actually experienced decreased productivity since 1964. Whereas average productivity has more than doubled since 1964, in the construction industry it has actually declined.[10] There are a number of forces at work contributing to the low

---

[8] M. Motiar Rahman and Mohan Kumaraswamy, *Contracting Relationship Trends and Transitions*, J. Manage. Eng. at 147-148 (Oct. 2004). *See also*, P. Mitropoulos and C. Taum, *Management-Driven Integration*, J. Manage. Eng. 16(1), 48-58 (2000); S.M. Ahmed, et al., *Risk Management Trends in Hong Kong Construction Industry: A Comparison of Contractors' and Owners' Perceptions*, Eng. Constr. Archit. Manage., 6(3), 256-266 (1999); F. Hartman, et al., *Effective Wording to Improve Risk Allocation in Lump Sum Contracts*, J. Constr. Eng. Manage., 123(4), 379-387 (1997); S.R. Clegg, *Contracts Cause Conflicts*, Construction Contract Management and Resolution, P. Fenn and R. Gameso, eds., 128-144 (1992); B.R. Schwegler, et al., *Near-, Medium- and Long-term Benefits of Information Technology in Construction*, Proc. Int. Conf. on Constr., Vol. 1 (2001).

[9] Construction Industry Institute (CII), *The Partnering Process – Its Benefits, Implementation and Measurement*, Clemson Univ., Research Report 102-11 (Sept. 1996).

[10] *See* C.C. Sullivan, *Best Practices in Integrated Project Delivery for Overall Improved Service Delivery Management*, McGraw-Hill Construction: Continuing Education (May 2008) (This publication contains a well-publicized graph depicting the U.S. Department of Commerce statistics, regarding which the author notes: "Of all industries, construction is the only one to show decreased productivity since 1964, as seen in this U.S. Department of Commerce chart. Total waste is estimated at as much as 30%, according to *The Economist* magazine."). *See also*, Bernstein, *Measuring Productivity: An Industry Challenge*, Civil Engr. 47 (Dec. 2003); *Key Trends in the Construction Industry – 2006*, SmartMarket Report 18 (McGraw-Hill, July 2006); E. Allmon, et al., *U.S. Construction Labor Productivity Trends, 1970-1998*, J. of Const. Eng. and Mgt. ASCE 126 (2) 97-104 (2000). *See*

productivity in the construction industry.[11] Certainly poor contracting practices, inequitable risk allocation and inappropriate delivery approaches play a role.[12] A recent study out of Canada evaluated the premium added by contractors to cover against the five most common exculpatory/disclaimer clauses in current contracts. The result? An estimated eight to twenty percent impact due to a perception of high risk associated with "uncertainty of work conditions" or "sufficiency of contract documents."[13]

The Construction Industry Institute expressed the same concern:

> Every risk has an associated price – visible or hidden. Visible costs appear in project bids as contingency or insurance costs and can be compared. Onerous contract conditions promote hidden costs. Hidden costs (in terms of time and money) derived from this study include: (a) the cost of restricted bid competition; (b) the cost of increased claims/disputes; (c) the cost of replacing a lesser quality contractor who is more likely to unknowingly accept a grossly inequitable risk allocation; and (d) the cost of harboring an adversarial-contractor relationship in terms of final product quality, expeditious change order processing, reputation, and ultimate project outcome.[14]

---

*also*, www.bls.gov.

[11] *See* Patrick J. O'Connor, Jr., *Productivity and Innovation in the Construction Industry: The Case for Building Information Modeling*, 1 J. ACCL 135 (Winter 2007).

[12] A recent article in the ASHRAE Journal makes this point:

> Most insurance companies and legal professionals will tell you disastrous projects are typically the result of poor communication and unmet expectations on the part of one or more of the team members or third parties. These projects are fraught with multiple changes orders, hundreds of requests for interpretation (RFIs), identification of building component clashes during construction, and additional time and additional financial claims due to errors, omissions, unforeseen and unanticipated conditions, and delays as a result of poor and untimely communication during the design or construction phases. Even projects that are perceived as successes often experience many similar problems. Many in the industry blame our current forms of agreement, contracting and project delivery methods as the reason conflicts of interest and adversarial relationships between stakeholders seem to occur so often.

M. Dennis Knight, *Teams, Contracts & BIM*, ASHRAE J. at 72, 75-76 (Sept. 2008).

[13] R. Zaghloul and F. Hartman, *Construction Contracts: The Cost of Mistrust*, Int. J. Proj. Manage., 21 (6), 419-424 (2003). *See also*, Mohan Kumaraswamy, *Constructing Relationally Integrated Teams*, J. Constr. Eng. and Manage. (Oct. 2005). Much legal commentary in the United States devoted to construction contracting focuses upon the ways various participants can shift or avoid liability. These are often very fine articles that provide useful advice given the current contracting environment. Yet, most of these articles presume a win-lose contracting situation where the protection of one party inevitably results in exposure to another. A recent example providing valuable advice to an owner regarding shielding itself from liability for implied obligations is Steven Lesser and Daniel Wallach, "The Twelve Deadly Sins: An Owner's Guide to Avoiding Liability for Implied Obligations During the Construction of a Project," *The Construction Lawyer*, Vol. 28, No. 1 at 15 (Winter 2008).

[14] Construction Industry Institute (CII), *Impact of Risk Allocation and Equity in Construction Contracts*, Source Document 44 at ii-iii (March 1989). As early as 1989, CII viewed teamwork as a method of improving project outcomes:

> The Owner or its representative has an essential role in improving working relationships, contract execution and overall project performance, by the decisions made regarding risk allocation. This

Advocates of Lean construction techniques have identified at least four major systemic problems with the traditional contractual approach: (1) good ideas are held back; (2) contracting limits cooperation and innovation; (3) an inability to coordinate; and (4) pressure for local optimization at the expense of the project as a whole.[15] The authors note that while mechanical, electrical and plumbing (MEP) contractors and other major trades are generally brought into the process by the general contractor once the drawings are at the design development stage in order to establish a competitive price, they often save their best ideas in hopes of gaining a competitive edge during the "bidding process." Many times these ideas are very good. Time and the opportunity for innovation is often lost, however, as the design team struggles to accommodate these late-arriving ideas. Cooperation, innovation, and coordination are stultified by the use of long and tedious subcontract agreements that spell out in great detail what will happen in the event of failure:

> Each subcontractor fights to optimize his performance because no one else will take care of him. The subcontract agreement and the inability to coordinate drive subcontractors to defend their turf at the expense of both the client and other subcontractors. Remember that everyone on the project other than the prime contractor is a subcontractor. The subcontractors frequently, in their life outside of the subcontract, may be generous, caring and professional. However, since right or wrong is defined by the subcontract, they, more often than not, take on a very legalistic and litigious stance becoming an army where the rules of engagement are "Every man for himself."[16]

The personal observations of an executive with many years experience with a construction management firm set out at the end of his informative work entitled *Managing Integrated Project Delivery: Concepts and Contract Strategies*, is particularly poignant:

> In the 1980s, our company added CM-at-Risk to our CM and Design Service.

---

> research documents the general conclusion that use of onerous contract provisions that cause the contractor to assume inequitable, unbearable and uncontrollable risks will directly and negatively impact the owner-contractor working relationship.
>
> Beyond equitable allocation of risk there are additional steps an owner can take to improve working relationships. Several firms interviewed in this study suggested development of project problem-solving teams with owner and contractor personnel to anticipate potential project problems and provide workable solutions in advance.

Construction Industry Institute, *Impact of Risk Allocation and Equity in Construction Contracts*, Source Document 44 at v-vi (March 1989).

[15] Owen Matthews and Gregory Howell, *Integrated Project Delivery: An Example of Relational Contracting*, Lean Constr. J., 2(1) (2005).

[16] Owen Matthews and Gregory Howell, *Integrated Project Delivery: An Example of Relational Contracting*, Lean Constr. J., 2(1) (2005) at 2. *See also* American Arbitration Association, *The Dispute Avoidance and Resolution Task Force* Newsletter (February 1994), cited in D. J. Yates, *Conflict and Disputes in the Development Process: A Transaction Cost Economics Perspective* ("During the past 50 years much of the United States construction environment has been degraded from one of positive relationship between all members of the project team to a contest consumed in fault finding and defensiveness which results in litigation. The industry has become extremely adversarial. . . . A positive alliance of parties (involved in the construction process) constitutes an indispensable link to a successful project. . . . Disputes will continue as long as people fail to trust one another.")

While we usually provided CM and design services separately, we occasionally combined them (often with the addition of other companies to the team). We found great advantages in doing so. We called the package "Integrated Services." In the 1990s we met with Ellerbe Beckett to compare and benchmark our firms. We found that we were doing the same thing with the same name and were equally pleased with the result.

Clients were less enthusiastic. Perhaps it was an idea whose time had not quite come. But now, with a larger chorus of voices, Integrated Services appears to be gaining acceptance. . . .

Out of boredom with tradition, love of innovation and enthusiasm for experimentation, I typically embraced new ideas with more conviction than they deserved. Carl Sapers, my long-time friend and legal guru to the construction industry, once stated that I never saw a future I didn't like. He was right. And I like this future best of all.

However, as a septuagenarian, I have become more circumspect about breakthrough ideas that will fix our complicated industry. There is no doubt that good people have made all the other processes work – and no doubt that inept people will cause IPD projects to fail.

However, the IPD process provides owners with the ability to choose good people (if they know how to do it). Moreover, no capable designer or builder is going to join an IPD team if it has incompetent Members, so there is an element of self-correction in the system. Most of all, the process broadens the avenues for multiple talents to collaborate.

Typically, contracts have focused on defining processes and products. They have described services and the desired result. IPD contracts also describe culture. That's a refreshing addition.[17]

---

[17] Charles Thomsen, *Managing Integrated Project Delivery: Concepts and Contract Strategies* at 51-52 (A Working Draft – November 2008). *See also*, Matthew Sakal, *Project Alliancing: A Relational Contracting Mechanism for Dynamic Projects*, Lean Constr. J., Vol. 2, #1 at 67-68 (April 2005) ("In order to achieve truly outstanding project outcomes, dynamic projects require contracts that are designed specifically to embrace and manage change. Unfortunately, most traditional contracts do not embrace change, but instead treat change as if it is an anomaly. This is illustrated by the fact that traditional contracts attempt to predict and specify all possible eventualities by drafting contracts to prepare for the worst-case scenario. Unfortunately, the goal of trying to achieve '100% planning is never achieved in life.' Therefore, when changes do occur, the focus of traditional contracts is on 'the bump at the bottom of the cliff' which leads to difficulty and not on the cooperation that is necessary to embrace change and diffuse problems before they get out of control. . . . 'The success of the contractual relationship depends less upon what has been agreed than upon how the parties will agree to handle events in the future.' This is one of the fundamental issues that separates relational contracts from traditional, more discrete, transactional, types of contracts. Another problematic issue with using traditional contracts with dynamic projects is that instead of focusing on maximizing project outcomes and creating a good framework for developing a collaborative environment between the parties involved, they are generally legal shields written in a biased manner

If real improvement is to be achieved, it must be through owners demanding more innovation and collaboration from their design and construction professionals. Only owners can drive the industry toward IPD.

## III. WHY COLLABORATE?

Why collaborate? Because it works, and because we can – more now than ever, given advancements in digital technology. Why the industry has been slow to adopt new collaborative delivery approaches is deeply rooted in the fragmented and frugal nature of its membership. To foster true collaborative behavior – collaboration that can withstand the inevitable challenges presented by complex construction projects – requires the right people performing the right tasks within an environment that promotes trust and mutuality of expectation over shared project outcomes. Teamwork produces optimal results in nearly all fields of human endeavor. [18] Military engagements, marketing campaigns, and sporting contests all depend on closely coordinated team effort. The failure to work as a team often results in failure or worse.[19]

---

to protect the drafter. For the most part this is due to an overall lack of trust of one another. Owners often use contracts in an attempt to shed unbearable risk to contractors through the form of harsh exculpatory contract clauses. This subsequently leads to large contractors passing the same risk onto the shoulders of smaller subcontractors who are least able to financially bear the risk. Often owners feel that the shedding of risk to the contractor through clear documentation in the contract will reduce the number of claims and disputes. This is not correct. Not only does it not prevent disputes, it actually causes increased antagonistic relations between the owner and contractor that are clearly not in the best interests of the project.") *See also*, Arthur McInnis, *Relational Contracting Under the New Engineering Contract: A Model, Framework, and Analysis*, Soc. of Constr. Law, U.K. (2003); David Campbell, Ian Macneil, *The Relational Theory of Contract*, Center for Legal Dynamics of Advanced Market Societies (CDAMS), Discussion Paper, Kobe University (2004); Richard Steen, *Five Steps to Resolving Construction Disputes – Without Litigation*, J. of Manage. Eng. (July/Aug. 1994).

[18] Teamwork has long been recognized as important to the improvement of the construction industry. *See* Construction Industry Institute, *Potential for Construction Industry Improvement*, Vol. I at 29 (Nov. 1990) ("An early [1979] and very comprehensive project management study . . . examined over 190 proposed determinants of project success. Their sample of approximately 650 individuals involved in projects covered a variety of project types with construction as the end product representing 43% of the respondents. . . . Their measure of success was project satisfaction. . . . Their determinants of success included many project situational or context factors such as extent of public enthusiasm, project larger in scale than most, and parent experience with similar projects. The strongest determinant of success, however, were factors relevant to coordination and relations. Included in this category were variables like project team capability, the project manager's human relation and administration skill, adequacy of change procedures, and project team participation in decision-making.")

[19] Comparisons between construction projects and military engagements are best avoided, as the differences outweigh similarities. Yet on the issue of teamwork, military history provides some valuable lessons. Until meeting Wellington at Waterloo, Napoleon and his armies subdued most of continental Europe with an army that many claimed was zealous but untrained. Why such success? To answer this, one first has to understand what war-making looked like before Napoleon:

> Drill, discipline, mechanical tactics, scientific gunnery all worked to make eighteenth-century war-making quite different in character from the chaotically experimental style of the sixteenth and seventeenth centuries. By 1700 the weapons with which battles were fought had assumed a form that did not alter for 150 years. The infantry was armed with a musket which, though almost harmless to combatants at ranges much above a hundred yards, could be used in mass volley-firing to create a deadly killing-zone immediately to the front of the battle line. Increasingly mobile and quick-firing field artillery offered the only certain means of shaking the solidity of drilled infantry

Technology changes everything. It always has. Some changes are immediate. Others take time. Take the case of refrigeration. Some of the benefits of this technology were quickly recognized and timely implemented, including its introduction into the produce and perishable goods distribution business. In the matter of a few years, the diets of millions of people significantly improved as fresh produce was able to be shipped thousands of miles to urban areas in northern climates unaccustomed to fresh fruits and vegetables during the winter. As this technology moved into the home it significantly altered the rhythm of daily life, as food

---

> formations; its safe deployment, however, could be threatened by the timely unleashing of cavalry which was increasingly committed to that subordinate activity, and to charging against infantry disorganized by artillery fire or harrying fugitives driven to fight. . . . Time and again, the liveried musketeers arrayed themselves in dense formation, fired their volleys, reeled under artillery fire, repelled or more infrequently ran from cavalry, but at the end of the day parted from each other on the battlefield with their power to fight again still intact. The "great battles" of the heyday of dynastic warfare – Bleheim (1704), Fontenoy (1745), Leuthen (1757) – were notable rather for the number of casualties suffered among the docile ranks of the participants than for any permanency of outcome achieved. It was an exhaustion of reserves of money and manpower that brought eighteenth century wars to an end rather than a decision by clash of arms.

John Keegan, *A History of Warfare*, at 344-345 (1994).

Napoleon changed these tactics. His armies were comprised of men caught up in the spirit of revolution – willing soldiers fighting for cause and comradeship:

> Most of all, success stemmed from the superior quality of the Revolutionary armies themselves. At least at the outset, they were composed of men who were genuinely willing soldiers, devotees of a "rational" state (even if its nature greatly alarmed many of the surviving rationalists of the Age of Reason), and led by officers with outstanding personal qualities. . . . When led into battle, the "amalgamated" units simply outfought their enemies, who remained trapped in the habits of doltish obedience and stereotyped tactics from which the French had escaped.

John Keegan, *A History of Warfare*, at 332-353 (1994).

A little cooperative spirit and team effort can go a long way. Witness the extraordinary efficiency with which Ground Zero was cleaned up after 9/11 due to the patriotic zeal of the men and women charged with the task (given the current health problems some of them are now experiencing, one might question whether a bit more caution may have been in order). While collaboration can produce amazing results, its absence can be disastrous. The British military's failure to properly coordinate between army and naval forces in the attack on the Dardanelles during the opening months of World War I led to a disastrous stalemate in which Britain and her allies suffered more than 200,000 casualties (the Turks a like number). Failure in the Dardanelles extinguished the prospect of a thrust through the Balkans to Germany, thereby dooming the combatants to four long years of debilitating trench warfare along the Western Front. Some have made the case that Britain's failure in the Dardanelles eventually led to the conditions causing so much conflict in the Middle East today:

> It was a decisive battle, in that the allies could have won it and, with it, the Middle Eastern war – but did not. It foreshadowed things to come: a supposedly backward Asian army had defeated a modern European one.
>
> It had the effect of drawing Europe into Middle Eastern affairs on a long-term basis. The military involvement which Kitchener had feared but failed to prevent was suspended temporarily by the allied evacuation, but would resume a year later. More important, the setback to allied fortunes drove Britain both in a specific and general sense to involve herself more deeply in Middle Eastern affairs. In a specific sense, it would be seen presently, it drove Kitchener's lieutenants to ally themselves with a Middle Eastern ruler they believed could help to safe Sir Ian Hamilton's armies at Gallipoli from perishing. In a general sense, the sheer magnitude of Britain's commitment and loss at Gallipoli made it seem vital years later that she should play a major role in the post-war Middle East to give some sort of meaning to so great a sacrifice.

David Fromkin, *A Peace to End All Peace*, at 166 (1989).

shopping no longer had to be a daily affair. As refrigeration technology evolved into air-conditioning, change once again followed a familiar pattern. First utilized by business such as textile manufacturing where it kept down dust and cloth fibers, greatly improving working conditions and worker health and safety. The golden age of cinema was due in no small measure to air-conditioned theaters which offered a cool respite to the hot and tired on a warm summer's evening. (The movie theater business has always trafficked in economic misdirection. Whereas, in the 1930s it sold a cool environment as much as what was on the screen; today it is popcorn, candy and soda that benefit the bottom line more than ticket sales.) Eventually, air-conditioning (coupled with elevator technology and advancements in the use of steel in tall structures) transformed the skyline of every major urban city from America to Europe and beyond. Cooling tall structures was impractical without air-conditioning.

The twin technologies of steam power and the precursor to modern digital telecommunications, the telegraph, permitted 19th century Britain to rule over an empire upon which the sun never set:

> At first, it is true, the Admiralty had been appalled by the advent of steam, believing it would 'strike a fatal blow at the naval supremacy of the Empire.' But quickly it became apparent that the new technology had to be adopted, if only to keep up with the French. . . . Far from weakening the Empire, steam power tended to knit it together. In the days of sail it had taken between four and six weeks to cross the Atlantic; steam reduced that to two weeks in the mid-1830s and just ten days in the 1880s. Between the 1850s and the 1890s, the journey time from England to Cape Town was cut from forty-two to nineteen days. Steamships got bigger as well as faster: In the same period, average gross tonnage roughly doubled.
>
> The telegraph was another invention the Admiralty had tried to ignore. Its original inventor, Francis Reynolds, had been rebuffed when he offered the navy his brainchild in 1816. It was not the military but the private sector that developed the nineteenth century's information highway, initially piggybacking on the infrastructure of the early railways. By the late 1840s it was clear that the telegraph would revolutionize overland communications. . . . However, the crucial development from the point of view of imperial rule was the construction of durable undersea cables. Significantly, it was an imperial product – a rubber-like substance from Malaya called gutta-percha – that solved the problem, allowing the first cross-Channel cable to be laid in 1851 and the first Trans-Atlantic cable to follow 15 years later. . . . By 1880 there were altogether 97,568 miles of cable across the world's oceans, linking Britain to India, Canada, Africa and Australia. Now a message could be relayed from Bombay to London at the cost of four schillings a word with the reasonable expectation that it would be seen the next day. In the words of Charles Bright, one of the apostles of the new

technology, the telegraph was 'the world's system of electrical nerves.'[20]

The computer (digital technology) is the telegraph of the late 20th century. This technology has revolutionized the finance, communications, and manufacturing industries. Like the major technologies of the past, it has changed the way we live and interact with one another. Surprisingly, with some limited exceptions such as scheduling software and computer-aided design (CAD), innovations in digital technology have not significantly changed the design and construction industry. This is beginning to change with the advent of very powerful computer databases permitting industry professionals to virtually "build" their projects before ever breaking ground. This technology, often referred to as "Building Information Modeling" (BIM), is a powerful collaboration tool.[21] As the AIA California Council describes the technology:

> A building information model (BIM) is a digital representation of physical and functional characteristics of a facility. As such it serves as a shared knowledge resource for information about a facility forming a reliable basis for decisions during its lifecycle from inception onward. A basic premise of BIM is collaboration by different stakeholders at different phases of the life cycle of a facility to insert, extract, update or modify information in the BIM to support and reflect the roles of that stakeholder. The BIM is a shared digital representation founded on open standards for interoperability.[22]

Building information modeling provides an excellent platform for collaboration within and across design and construction teams.[23] Indeed, BIM demands collaboration in order for the participants to obtain the benefits of this technology. The use of this technology has immediate and demonstrable benefits. Once relevant sections of a project are accurately modeled, it is possible to move through the digital structure and detect design conflicts. Clash detection alone often justifies the expense of modeling. But clash resolution is just scratching the surface, as modeling produces more riches in the form of enabling project participants to engage in meaningful and productive collaborative effort. While it is possible to deliver design and construction services in an integrated way without modeling, it is difficult to conceive why one would want to do so except in the case of the most simple and straightforward project. As a consequence, all of the current standard form IPD agreements anticipate the parties will employ BIM technology.[24]

---

[20] Niall Ferguson, *Empire: The Rise and Demise of the British World Order and the Lessons for Global Power* at 139-141 (Basic Books, 2004).

[21] *See* Patrick J. O'Connor, Jr., *Productivity and Innovation in the Construction Industry: The Case for Building Information Modeling*, 1 J. ACCL 135 (Winter 2007).

[22] AIA California Council, *Integrated Project Delivery: A Working Definition, Version* 1, Updated May 15, 2007.

[23] See AIA National/AIA California Council, *Integrated Project Delivery: A Guide* at 10 (2007) ("Because BIM can combine, among other things, the design, fabrication information, erection instructions, and project management logistics in one data base, it provides as platform for collaboration throughout the project's design and construction.").

[24] As a consequence, both the AIA and ConsensusDOCS have published separate BIM documents. *See* AIA Document E-202 – 2008, Building Information Modeling Protocol Exhibit and ConsensusDOCS 301, BIM

## IV. RISKS OF COLLABORATION

While collaboration makes sense, it is not without risk. Collaborative arrangements are built on trust. Participant selection is key. While strategic alliances present additional challenges beyond those presented by one-time project collaborations, there are lessons to be learned here. Businesses have engaged in strategic alliancing for many years. Since the 1980s, the number of alliances has increased by approximately twenty percent per year and by the 21st century they accounted for nearly twenty-five percent of firm revenue for many U.S. companies.[25] Yet, the majority, approximately sixty percent, of alliances fail.[26] Published surveys suggest that companies engaged in strategic alliances rely heavily on familiarity and trust with alliance partners as well as upon contract terms:

> The high incidence of failure of collaborative arrangements – reportedly 60 percent of alliances fail – is typically linked to the *risks* associated with collaborative organizational forms; risks associated not only with the lack of cooperation among partner firms, but also with performance failure *despite full cooperation*. Indeed, collaborative arrangements are subject to severe "business process" and "information risks." *Business process risks* include the risks associated with hold-up by a partner firm and risks associated with the inequitable allocation of collaboration returns in the absence of complete contracts. The measurement of partner performance and overall collaboration performance is difficult in many of the settings in which performance quality is not clearly defined (e.g., R&D alliances). This represents a significant *information risk* to individuals (e.g., internal auditors) attempting to monitor and control such collaborations.
>
> . . .
>
> [Firms seek to control these risks in four principal ways.] The first lever of control described in the framework is *belief systems*. These are the organizational standards that are used to reinforce the core values, purpose, and direction of the organization. Examples of belief systems include corporate credos and mission statements. *Boundary systems* comprise the second lever of control. Boundary systems indicate the minimum standards of a company and what partners are *not* to do. The third control level, *diagnostic control systems*, is defined as feedback systems and include the most traditional control practices used by management. Diagnostic control systems are designed to: (1) measure the outputs of a process, (2) identify the existence of a predetermined benchmark to which results can be compared, and (3) enable the manager to correct deviations from these

---

Addendum (2007). For a discussion of these documents, *see* Kimberly Hurtado and Patrick O'Connor, *Contract Issues in the Use of Building Information Modelling*, [2008] ICLR 262 (2008).

[25] D. Ernst, *Give Alliances Their Due,* McKinsey Quarterly No. 4 (2002).

[26] CMA Management, *Alliance Management: Five Destructive Myths*, CMA Management Vol. 73, 14-15 (2000); Shannon Anderson, et al., *Managing Strategic Alliance Risk: Survey Evidence of Control Practices in Collaborative Inter-Organizational Settings*, The Inst. of Internal Auditors (Jan. 2006).

benchmarks. Finally, the fourth lever, *interactive control systems*, is formal information systems that allow management to involve themselves regularly and personally in the partner's activities.

> [The survey results] indicate equal reliance on each of the four types of control systems: belief systems, boundary systems, diagnostic control systems, and interactive control systems. Median responses indicate that firms rely upon each lever of control to a moderate extent. Therefore, firms seek a balance in their control practices to enhance the overall control environment. By utilizing all four levers, firms are able to reveal the core values of the business, empower strategic alliance partners to strive for goal achievement, and encourage long-term success…. In general firms place moderate reliance on written codes of conduct, regardless of the type of strategic alliance in which they are involved. More importantly, all firms indicate a relative high reliance on trust between partners…. This result is consistent with the widely held belief that strategic alliance management is dependent upon both control and trust…. All firms seem to rely significantly on various contract terms. Specifically, regardless of the partner type, respondents indicate greater than average reliance on contract terms detailing specific payment terms, delivery dates, etc…. Using the Levers of Control framework, we categorized and examined the control practices firms use to mitigate the risks raised by strategic partners. Consistent with the framework, firms appears to use control mechanisms from each control lever equally. This indicates that firms use a variety of complimentary control mechanisms to minimize strategic partner risks. The data also suggest that firms rely on high levels of trust between partners to preserve the alliance and minimize the fear of opportunistic behavior. Further, respondents indicate a reliance on contract terms to manage the partnership.[27]

If partner selection and contract terms are important for managing collaborative risk in strategic alliances, there is every reason to believe they play an equally important role in integrated project delivery.

## V. KEYS TO SUCCESSFUL IPD: PEOPLE, PROCESS, AND PROMISES

### A. People: Selecting the Team

Because true and meaningful collaboration requires a high degree of trust, choosing the right people with whom to team is paramount. Not everyone can successfully perform within an IPD environment. As one commentator noted when discussing protect alliancing – a particular form of IPD:

> The first step in setting up a Project Alliance is the selection of the preferred non-owner participants. Selection of the right participants is the most important

[27] Shannon Anderson, et al., *Managing Strategic Alliance Risk: Survey Evidence of Control Practices in Collaborative Inter-Organizational Settings*, The Inst. of Internal Auditors at 3, 7, 17 and 22 (Jan. 2006).

> step…. It is absolutely critical to the overall success of the project. This is due to the fact that the Project Alliancing contract is a relational contract that requires absolute dedication to a step change in behavior between project participants in order to be successful. Therefore, besides typical technical skills, alliance proponents are chosen based on their willingness to buy-in completely to the ideas of sharing risk, open and honest communication, and creating a "no blame" culture that encourages collaboration and innovation. To this end, the selection process is very robust to ensure that it is virtually impossible to select the wrong proponents. . . . It is important to note that commercial discussions begin *after* the alliance team members are chosen and not during the selection process. The reason for this is that any conversation concerning project-related costs will increase the risk that selection process will become tainted and the wrong participant could potentially be chosen.[28]

Because IPD agreements depend upon a higher than customary degree of trust between contracting parties, the screening and selection process must be rigorous and robust. [29]

---

[28] Matthew W. Sakal, *Project Alliancing: A Relational Contract Mechanism for Dynamic Projects*, Lean Constr. J., Vol. 2, No. 1 at 74 (April 2005). The importance of proper team member selection is a common theme found in many commentaries on collaborative contracting. The following is typical:

> However, not every company will function well in such flexible contracting environments. Various 'partners' in RC (Relational Contracting) and JRM (Joint Risk Management) environments should be selected on the basis of their 'relational qualities'' A balance between different 'hard'/technical factors (e.g., price and performance on time and quality) and 'soft'/relational factors (e.g., attitude towards teamworking, negotiation and workplace relations) should also be maintained.

M. Motiar Rahman and Mohan Kumaraswamy, *Assembling Integrated Project Teams for Joint Risk Management*, Constr. Mgmt. & Econ. At 366 (May 2005).

Successful IPD implementation requires new thinking and this can sometimes be difficult for project managers and superintendents steeped in traditional construction relationships:

> On an early IPD project the General Contractor assigned a skilled and respected project manager who had been working in the industry for more than 20 years. While the President and Executive Vice President of the General Contractor partner were fully on board with IPD and attended the bi-monthly meetings, the assigned project manager just could not get his mind around the concept. He often seemed offended when he was not being asked or allowed to function in his typical role as PM. This was a man that the Team Members had enjoyed working with successfully on other more traditionally run projects, but he could not work effectively in the IPD environment.

Owen Matthews and Gregory Howell, *Integrated Project Delivery: An Example of Relational Contracting*, Lean Constr. J., 2(1) (2005).

[29] Participant selection was an eight-step selection process: (1) invite proposals; (2) receive proposals; (3) assess capabilities and suitability & commitment to alliancing; (4) short list proponents (maximum five desirable); (5) conduct interviews to consider in detail: (a) capabilities, (b) suitability & commitment to alliancing; (6) reduce list of proponents (maximum two desirable); (7) two-day workshop with each proponent to establish: (a) alliance principles, (b) commitment to outstanding results, (c) alliance board, and (d) project management team; and (8) determine preferred alliance team of consultants and contractors.

The twelve characteristics upon which potential alliance members were judged were:

> 1. Demonstrated ability to complete the full scope of works including contributing to building, structural, mechanical and landscaping design.

A related theme is the need for top management to express its full commitment to the IPD concept down to the rank and file. A case study of an alliance project between public and private organizations in Queensland, Australia, highlights the importance of top management commitment:

> The case study suggests that leadership has a strong influence on the alliance climate. Analysis of the questionnaire survey indicates that the overall mean of Work Unit Leadership is above 5 (the maximum score is 7), with little variation across the variables (vision, intellectual simulation, and inspirational communication). Commitment and action by the PAB [Project Alliance Board] (and parent organizations) have a strong impact on the team and alliance culture, indicating alliancing has a high chance of failure where there is inadequate support from top management. Inter-organizational rivalries and barriers must be quickly knocked down, and open communication and trust developed and maintained. The questionnaire survey results also reveal relatively lower ratings on the group coordination measure suggesting work units can find it relatively difficult to work well together, particularly without the presence of leaders (managers). This again reinforces the important role of the leader in an alliance project. Leadership is especially important in construction projects to facilitate and encourage timely decisions and dispute resolution, as well as clarify issues. Leaders need to act as mentors of the AMT [Alliance Management Team] and nurture a team culture. They need to be visible, available, and attentive, showing respect to AMT processes which motivate employees. Another crucial role of leaders is constant communication with their subordinates on wider goals.[30]

---

2. Demonstrated ability to minimize project capital and operating costs without sacrificing quality (value analysis and life-cycle costing).

3. Demonstrated ability to achieve outstanding quality results.

4. Demonstrated ability to provide the necessary resources for the project and meet the project program (including resumes of key staff).

5. Demonstrated ability to add value and bring innovation to the project.

6. Demonstrated ability to achieve outstanding safety performance.

7. Demonstrated ability to achieve outstanding workplace relations.

8. Successful public relations and industry recognition.

9. Demonstrated practical experience and philosophical approach in areas of developing sustainability and environmental management.

10. Demonstrated understanding and affinity for operating as a member of an alliance. (Collaborative experience and views on risk/reward schemes.)

11. Substantial acceptance of the draft alliance document for the project including the related codes of practice, proposals for support of local industry, and employment opportunities for Australian indigenous peoples.

12. Demonstrated commitment to exceed project objectives.

Matthew W. Sakal, *Project Alliancing: A Relational Contract Mechanism for Dynamic Projects*, Lean Constr. J., Vol. 2, No. 1 at 75 (April 2005).

[30] Steve Rowlinson, et al., *Alliancing in Australia: No-Litigation Contracts; a Tautology?*, J. Prof. Issues in Engr. Ed. & Prac. at 79 (Jan. 2006). The problems posed by an uncommitted member were discussed in connection

Building the proper team is paramount. No contract, whether based on traditional or relational concepts, can save one after making the wrong choice with whom to collaborate. It's all just a matter of damage control then, and while a well-crafted contract can be useful here, this is not the way to start a successful IPD project. But if proper due diligence is performed and the right team assembled, the results can be remarkable.[31]

### B. Process: Managing the Team

One of the reasons team selection is so crucial and challenging is because IPD team members interact with one another in ways different from traditional project delivery. For many, the IPD process is little more than early interaction between design and construction teams with an eye toward problem solving.[32] While this is undoubtedly better than little or no early interaction, it is not, in and of itself, IPD. In many cases, early interaction takes the form of the construction team giving advice with respect to constructability and offering "value engineering" tips on a proffered design. Integration requires a deeper collaboration than simply one set of

---

with another case study:

> IPD team members were carefully selected and had significant history working together on design-build and design-bid-build projects. Nonetheless, they still had a team member who wasn't suitable for the IPD process. The managing partner and majority shareholder of that member of the Team had very little personal involvement with IPD. As a result, the representative of that company experienced significant internal pressure to revert to the old self-preservation concepts. At the conclusion of the project, the member withdrew from the IPD Team through mutual consent.

Owen Matthews and Gregory Howell, *Integrated Project Delivery: An Example of Relational Contracting*, Lean Constr. J., 2(1) (2005).

[31] Of course, you need more than just the right team. The team needs to develop the right collaborative procedures and protocols and operate within an incentive framework that encourages superior performance. Where this occurs, the results can be spectacular:

> The incredible results of the Andrew Field Project [one of the first project alliance arrangements involving North Sea oil exploration by British Petroleum (BP)] clearly illustrate the resounding success of BP's new relational contracting tool (Project Alliancing). Before instituting these new innovative contracting methods and after many attempts to re-engineer the project using the latest technology, estimates for the Andrew Field Project originally stood at £450 million – well above the necessary development cost to achieve profitability. In order to send a clear message and show prospective contractors BP's sincere desire to change the way it did business, BP initially set an astonishing target estimate of £270 million as part of the Project Alliance bid documents. After a rigorous contractor selection process and six months of intense collaboration with the partners, the project team agreed to a target cost of £373 million; almost £80 million lower then [sic] the previous low estimate! Then, due to unprecedented dedication to teamwork and growing trust, within 3 months after the project commenced, the alliance had already revised this estimate down to £320 million and the team felt the project could be finished 3 months earlier than originally scheduled. Ultimately, the final cost ended up at, amazingly, just under £290 million and the project began producing oil 6 months before originally scheduled!

Matthew W. Sakal, *Project Alliancing: A Relational Contract Mechanism for Dynamic Projects*, Lean Constr. J., Vol. 2, No. 1 at 68 (April 2005).

[32] Integration should be driven within disciplines as well as across them. *See* Busby, Perkins & Will and Stantec Consulting, *Roadmap for the Integrated Design Process*, at 9 (2007) ("Perhaps the most important principle for a successful IPD relates to inclusiveness and collaboration which should translate into the establishment of a broad collaborative team.")

professionals commenting upon the work of another set of professionals. "Target Value Design," as envisioned by the Sutter Health/Lean Project Delivery model reveals meaningful collaborative effort:

> The goal of Target Value Design is to enable the design to proceed informed, on a real time basis, by the cost, quality, schedule and constructability implications of proceeding with a design concept. Traditionally, the construction team participated, if at all, only after designs have been committed to paper and thrown over the wall – performing "un-constructability analysis" and de-value engineering." At best, this results in negative iteration and waste when designs have to be changed when they prove to be over budget or not constructible. Instead, the Integrated Agreement seeks to create the equivalent of "paired programming," where individuals with different backgrounds and expertise simultaneously, side-by-side, attack the same problem, allowing each to benefit from the expertise of the other. The team is expected to engage in design reviews with an eye toward value – constantly exploring whether other construction options would better serve the owner's value proposition.[33]

Because IPD approaches stress relationships, collaboration and mutual goals rather than individual responsibilities and the consequences of failure commonly emphasized in more traditional contracts, IPD agreements often contain detailed provisions setting forth team structure and expectations with respect to team interaction. Article 4 of ConsensusDOCS 300 provides a representative format. There is a Management Group that serves as the decision-making body and consists of an authorized representative of the owner, designer and constructor. In addition to the Management Group, there is also a Collaborative Project Delivery team (CPD). Trade contractors and consultants participate with the owner, designer and constructor in the CPD by signing joining agreements accepting the principles and methods of collaboration set forth in the integrated agreement. The CPD is a more "hands-on" group responsible for facilitating the design, construction, and commissioning of the project. Article 4 contains an elaborate protocol of communications and meetings among and between the two teams. Article 23 sets forth the process by which teams resolve disputes.[34]

---

[33] William A. Lichtig, *Ten Key Decisions to a Successful Construction Project – Choosing Something New: The Integrated Agreement for Lean Project Delivery*, at 16-17, Am. Bar Assn., Forum on the Construction Industry (Sept. 29-30, 2005).

[34] ConsensusDOCS 300, Standard Form of Tri-Party Agreement for Collaborative Project Delivery (2007). The AIA's integrated agreement involving a Single Purpose entity (Document C195) also contains a rather elaborate team management structure. The Single Purpose Entity (SPE), a limited liability company, has a Governance Board which manages the business and affairs of the company. The company is responsible for furnishing the design and construction services necessary to complete the project. Article 8 sets forth the structure and decision-making process of the Governance Board. The project is managed on a day-to-day basis by a Project Management Team. Exhibit D sets forth the composition and responsibilities of the Project Management Team. Article 18 sets forth the dispute resolution process which includes the creation of a dispute resolution committee in the event conflict cannot be resolved at lower levels. *See* AIA Document C195 – 2008, Standard Form Single Purpose Entity Agreement for Integrated Project Delivery (2008).

Alliance agreements often contain similar team structures. For example, the Acton Peninsula Alliance

Team structure is not optimized unless teams work together in ways materially different than the coordination efforts of traditional project delivery methods. Decision-making within IPD teams is not hierarchical but proceeds on a "best person" principle.[35] The most knowledgeable or capable person about a given matter takes responsibility and the rest of the team provides input and support. Changing traditional allegiances by co-locating team members and placing workers under the supervision of the team can be important steps to creating a collaborative atmosphere.[36] Traditional roles may be altered under an IPD arrangement:

> For a regular DBB [Design-Bid-Build] or D-B [Design-Build] project, an architect usually leads the design phase and hires engineers and consultants to develop design documents. A GC [General Contractor] is in charge of the construction phase by hiring contractors and suppliers to perform construction jobs.
>
> On an IPD project, however, the IPD Team establishes the lead position in a different way. The team determines early on who will lead the project delivery process based on the nature of the project. If a project is mechanically intensive, for example, and the architect needs only to "box" the facilities, it would make

---

Agreement, entered into for the development of a new National Museum in Australia, called for the creation of an Alliance Leadership Team ("ALT") responsible for creating project vision, insuring corporate management support in resolving conflicts. The ALT, in turn, established the Project Management Team. The Project Management Team effectuated the day-to-day overall management of the work and administered the trade contracts. *See* Allan Hauck, et al., *Project Alliancing at National Museum of Australia – Collaborative Process*, J. Constr. Eng. Manage., 130(1) at 143-152 (2004).

[35] *See* AIA Document C195 – 2008, Standard Form Single Purpose Entity Agreement for Integrated Project Delivery, § 5.2.3 (2008) ("Unless mutually agreed otherwise, risks will be managed on a "best person" principle depending upon the person's ability to control the risk.")

[36] As one practitioner described the process on a particular IPD project on which he was involved:

> All of the primary team members wear the same hardhats on the job with the same logo. They all work under one general superintendent who has total authority from the Primary Team Members to direct the project to achieve the most efficient and lowest overall cost delivery. Field problems are quickly resolved based upon the lowest perceived overall cost and least impact principle.
>
> The Team decides what positions such as Project Executive, Director Of Design Services, Director of Construction Services, Project Manager, Project Superintendent, Project Accountant, Manager of Information Technology and Systems Manager need to be filled for the particular project at hand. These positions are filled with the best available person from any of the Primary Team Members. They become direct job costs and the company from which they came is reimbursed for the time they spend on the project.
>
> Each person assigned a project leadership position works for the Team, is paid by the Team, and is responsible to the Team. In this way, their allegiances to the Team and the Project and not to their own sponsoring company. All have the traditional authority and responsibilities of the positions that they are filling.

Owen Matthews and Gregory Howell, *Integrated Project Delivery: An Example of Relational Contracting*, Lean Constr. J., 2(1) (2005). *See also*, AIA National/AIA California Council, *Integrated Project Delivery: A Guide, Version 1* at 9 (2007) ("Once a team is formed, it's important to create a team atmosphere where collaboration and open communication can flourish. Locating the team in a joint facility may facilitate open communication and cooperation, and regular meetings and video conferences may be useful when co-location is impractical.")

sense for the mechanical contractor to take the lead.

> The lead position within IPD has two key roles. First, it offers effective project management with the help of that PTM's [Project Team Members] professional expertise and experience. Second, it provides one entity to deal with external administrative issues (e.g., communication with client). For internal issues, the IPD management team makes unanimous decisions, handles and resolves all conflict. The management team consists of representatives from all the PTMs.[37]

If IPD is to have a future, the processes by which teams provide their design and construction services must produce measurably better results than traditional methods. At present, there are few empirical studies providing this information. Anecdotally, there are reasons to be encouraged. One case study involving a 60,000-ton chiller plant in downtown Orlando, Florida, is a case in point. The IPD team worked through a number of design and construction challenges that brought real savings, including developing an efficient pipe fabrication and installation process:

> The original pipe design and installation process exposed two major problems: (1) redundant work between Peninsula [mechanical engineer] and Westbrook [mechanical contractor], and (2) time-consuming and inefficient field installation. In contrast, the innovative process indicates how these problems could be addressed. First, Westbrook and Peninsula eliminated design waste by working together. This made a lot of sense 'as high as 50% of design time is spend on needless iteration that can be eliminated without value loss.' Second, Westbrook figured out an efficient way to resolve their limited manpower problem by implementing off-site prefabrication to lower cost, improve productivity and quality, and reduce safety risks. Third and last, the innovation also demonstrated how team members used all means to reduce cost and schedule. For example, the team improved efficiency of pipe and equipment installation by using the powerful cranes from the steel erector. The work flows of the innovative pipe design and installation process demonstrate considerable collaboration between the involved parties. Again, this should be attributed to relational relationships within IPD. On the one hand, relational relationships fostered full collaboration and insured the realization of the innovation. On the other hand, all the PTMs benefited from the outcomes of the innovation, which strengthened relational relationships.[38]

---

[37] Jilei Wang, *Integrated Project Delivery – Achieving Relational Contracting Through Traditional Project Management Methods*, Graduate Thesis, University of Cincinnati at 32-33 (Aug. 2008).

[38] Jilei Wang, Integrated Project Delivery – Achieving Relational Contracting Through Traditional Project Management Methods, Graduate Thesis, University of Cincinnati at 67 (Aug. 2008). *See also*, Renaye Peters, et al., *Case Study of the Acton Peninsula Development: Research of the Case Study of the Construction of the National Museum of Australia and the Australian Institute of Aboriginal and Torres Strait Islander Studies*, Queensland University of Technology (July 2001); NAP/DACE, *Alliance Projects in the Petrochemical Industry, Clustering of Theory and Experience*, The NAP Red Management Guide, Pallas Offset, The Hague, The Netherlands (in Dutch); M. Bresnen and N. Marshall, *Building Partnerships: Case Studies of Client-Contractor Collaboration in the U.K.*

### C. Promises: Motivating the Team

Collaborative behavior is more than just getting along. IPD is an approach that deeply instills collaborative behavior through the employment of intelligently-crafted incentives. The rationale behind most IPD incentives is to reinforce project-centric behavior and to diminish the natural tendency to protect oneself at the expense of the community. While teamwork is built on trust, the IPD community is not altruistic. Incentives must be crafted so as to provide the real prospect of economic benefit for high performance. As a consequence, most IPD contracts contain elaborate positive incentive provisions. Most traditional contracts which, if they contain any incentives at all, tend to focus on negative incentives.

Incentives work.[39] The wildly successful book, *Freakonomics*, was so popular in part because it revealed that seemingly disparate behavior (*e.g.*, school teachers' role in test scores and sumo wrestlers' match results) was influenced by similar hidden incentives. In case after case, while the incentive underlying and motivating the behavior might be hidden, it was nevertheless quite powerful. While a bit of an exaggeration, from the author's point of view all of economics is at its core really a study of incentives; and, more to our point, that incentives, once they are understood, are very powerful agents of change:

> Economics is, at root, the study of incentives: how people get what they want, or need, especially when other people want or need the same thing. Economists love incentives. They love to dream them up and enact them, study them and tinker with them. The typical economist believes the world has not yet invented a problem that he cannot fix if given a free hand to design the proper incentive scheme. His solution may not always be pretty – it may involve coercion or exorbitant penalties or the violation of civil liberties, but the original problem, rest assured, will be fixed. An incentive is a bullet, a lever, a key: an often tiny object with astonishing power to change a situation.[40]

---

*Construction Industry*, Constr. Manage. Econom., 18(7), at 819-832 (2000); Construction Industry Institute (CII), *Costs of Quality Deviations in Design and Construction*, Pub, 10-1 (average re-work on industrial projects exceeds 12%, equating to waste of $17 billion annually); E.A. Edkins and J.H. Smyth, *Contractual Management in PPP Projects: Evaluation of Legal versus Relational Contracting for Service Delivery*, J. Prof. Issues Eng. Ed. and Prac., 132(1), 82-93 (2006).

[39] *See* Construction Industry Institute, *Potential for Construction Industry Improvement*, Vol. I at 29 (Nov. 1990) ("Contract Incentives are rarely used as a mechanism to improve project performance (37% utilization). Positive incentives have been cited as being very successful. Appropriate use of positive incentives is needed.")

[40] Steven D. Levitt and Stephen J. Dubner, *Freakonomics*, at 16 (William Morrow, 2005). The authors expound upon their theme that incentives "make the world go round":

> This book, then, has been written from a very specific worldview, based on a few fundamental ideas:
>
> *Incentives are the cornerstone of modern life.* And understanding them – or often, ferreting them out – is the key to solving just about any riddle, from violent crime to sports cheating to online dating.
>
> *The conventional wisdom is often wrong.* Crime didn't keep soaring in the 1990s, money alone doesn't win elections, and – surprise – drinking eight glasses of water a day has never actually been shown to do a thing for your health. Conventional wisdom

Incentives come in a number of different flavors. While economic incentives are readily understood, particularly by commercial entities, there are powerful social and moral incentives at work in society.[41] A well-fashioned IPD contract does not rely on economic incentives alone. Collaborative behavior is encouraged through the creation of an environment that reinforces teamwork through moral and social incentives. This process can begin with an initial session between all major team members, such as a partnering workshop, wherein behavioral norms and expectations are explained to and instilled in the participants. A survey of industry professionals from seventeen different countries reveals a common recommendation in favor of implementing such initial collaborative workshops:

> The common recommendation was to establish and maintain "good relationships" among the parties, on a project basis, for successful RC[relational contracting]-based teambuilding exercises. 'Partnering workshop" is a means to establish and maintain good relationships. Contractor and engineer may share the same office to enable teamworking to develop faster and better. Offices of the engineer, contractor, designer and client can be electronically linked for faster and smoother

---

> is often shoddily formed and devilishly difficult to see through, but it can be done.
>
> *Dramatic effects often have distant, even subtle, causes.* The answer to a given riddle is not always right in front of you. Norma McCorvey [the "Roe" of *Roe v. Wade*] had a far greater impact on crime than did the combined forces of gun control, a strong economy, and innovative police strategies. . . .
>
> *"Experts" – from criminologists to real estate agents – use their informational advantage to serve their own agendas.* However, they can be beat at their own game. And in the face of the Internet, their informational advantage is shrinking every day – as evidenced by, among other things, the falling price of coffins and life-insurance premiums.
>
> *Knowing what to measure and how to measure it makes a complicated world much less so.* If you learn to look at data in the right way, you can explain riddles that otherwise might have seemed impossible. There is nothing like the sheer power of numbers to scrub away layers of confusion and contradiction.

Steven D. Levitt and Stephen J. Dubner, *Freakonomics*, at 11-12 (William Morrow, 2005).

Many of these "lessons" can be applied with equal force to the design and construction business. The key to understanding why so many projects underperform lies in an examination of the incentives underlying modern construction contracting. Conventional wisdom about the industry is often wrong. The way to secure the best price for your project is not necessarily to fully design it and have a number of contractors hard-bid the construction. Nor does the secret to successful contract performance always lie with harsh penalties for failure. Dramatic effects can have subtle causes such as British Petroleum's success in the North Sea due to effective teamwork under a project alliance arrangement. Experts, including design and construction professionals will use their informational advantage to serve their own agendas unless sufficiently powerful incentives are provided to counteract this behavior. Finally, metrics are the measure of success and, in order for IPD to take off in the marketplace, the numbers must tell the story.

[41] Steven D. Levitt and Stephen J. Dubner, *Freakonomics*, at 17 (William Morrow, 2005):

> There are three basic flavors of incentive: economic, social, and moral. Very often a single incentive scheme will include all three varieties. Think about the anti-smoking campaign of recent years. The addition of a $3-per-pack "sin tax" is a strong economic incentive against buying cigarettes. The banning of cigarettes in restaurants and bars is a powerful social incentive. And when the U.S. government asserts that terrorists raise money by selling black-market cigarettes, that acts as a rather jarring moral incentive.

> communication. Some other suggested strategies include: public decision-making, generating enthusiasm in people, encouragement, recognition of good work, clear instructions to people, and explaining the reasons to people to whom instructions are made. Of course, some of these strategies may be the basic management strategies.[42]

If incentives work, why does the construction industry largely shun them? As the Construction Industry Institute points out, neither owners nor contractors employ "incentives," by which they mean positive incentives, on any uniform basis. In fact, of all the management practices employed by owners and general contractors to accomplish desired project outcomes, the use of positive incentives ranks at the bottom.[43]

Perhaps the more accurately phrased question is not "Why are incentives so seldom employed?"; but rather, "Why are the wrong incentives so persuasive?" The answer lies in how industry participants perceive their roles in traditional project delivery. Take, for example, the role of the subcontractor:

> Prior to forming IPD, they [subcontractors] were working in a system that guaranteed that each participant would vigorously work to optimize his own part of the project without regard to the effect on the other parties or the over all project. Typical subcontracts confer on the subcontractors an autonomy that always works to the detriment of the project. Instead of becoming a team working in harmony toward a goal, they often become separate warring factions. The structure of IPD also supports innovation and improvement within each craft and between them. As a result, they may shift work and cost across traditional boundaries to reduce total expenditures and to improve total project performance.[44]

In other words, in traditional contracting incentives work at cross purposes to optimal project outcomes and are deeply embedded within the very framework of the process. It is difficult to "tinker" with this system and achieve desirable results. While process innovations, such as what one might expect to see with design/build, can improve performance, this is not equivalent to the

---

[42] M. Motiar Rahman and Mohan Kumaraswamy, *Assembling Integrated Project Teams for Joint Risk Management*, Constr. Manage. & Econ. At 370-371 (May 2005). The AIA's SPE integrated project delivery agreement takes a page out of this book by requiring the members to conduct a Collaboration Standards Workshop. This workshop is intended as a way for the members to "establish protocols, standards and tolerances required for the proper execution of the Work." AIA Document C195 – 2008, Standard Form Single Purpose Entity Agreement for Integrated Project Delivery, § 5.2.2 (2008).

[43] *See*, Construction Industry Institute, *Potential for Construction Industry Improvement*, Vol. II at 273, Source Document 62 (Nov. 1990) ("Contract Incentives are rarely used [by owners] to improve project performance (37% utilization). Positive incentives have been cited as being very successful. Appropriate use of positive incentives is needed.")/

[44] Owen Matthews and Gregory Howell, *Integrated Project Delivery: An Example of Relational Contracting*, Lean Constr. J., 2(1) (2005).

fundamental change offered by IPD.[45]

While certain design/build approaches take on a number of IPD characteristics, particularly where a design/builder works closely and repeatedly with particular design professionals and trade contractors, the network of promises still evokes traditional contracting. While design/build is particularly well-suited for certain IPD processes, such as early introduction of construction expertise into the design process, the risk allocation and incentive structure is often quite traditional. Moreover, owner involvement in many design/build delivery approaches is quite minimal. As described in the *IPD Guide*:

> Like many of the other traditional models, one of the more common characteristics of Design-Build serves as one of its largest challenges to IPD. Under traditional Design-Build, the owner usually participates through completion of the design and then seeks to minimize input and involvement to protect the clear silos of responsibility and risk. As a result, opportunities for project improvement and innovation are, unfortunately, also minimized. Accordingly, in order to achieve integration, the owner must adjust its traditional involvement in Design-Build. The increased owner involvement necessary for IPD is a significant shift from traditional Design-Build delivery and should be reflected in the owner/design-builder agreement.[46]

A web of economic, social and moral incentives provides the fuel for innovation and collaboration. Structuring appropriate incentives can be a challenge.[47] Just as challenging,

---

[45] As one practitioner described the difference between IPD and design/build:

> The Integrated Agreement is a single agreement that is signed both by the architect and the construction manager/general contractor. It is not a design/build agreement, where one entity takes total responsibility for all aspects of project delivery. Instead, the agreement describes the relationships that are established among each of the members of the Integrated Project Delivery (IPD) Team. Recognizing that different members of the team, whether traditionally a consultant or a subcontractor, may have design responsibility. From the outset, the agreement seeks to create coherence between the interests of the project and the participants and to align the interests of the project performers.

William A. Lichtig, *Ten Key Decisions to a Successful Construction Project – Choosing Something New: The Integrated Agreement for Lean Project Delivery*, at 13, Am. Bar Assn., Forum on the Construction Industry (Sept. 29-30, 2005). The role of subcontractors in most design/build arrangements is not much different than found in the design/bid/build method. Subcontractors still have a basic incentive to maximize their portion of the project, thereby increasing the chances they will personally benefit from the undertaking. Of course, in order for IPD to change this dynamic, it requires bringing many of the major subcontractors within the IPD-incentive plan. Current IPD contracting approaches do not emphasize this aspect, although the standard forms are flexible enough to permit subcontractor involvement.

[46] AIA National/AIA California Council, *Integrated Project Delivery: A Guide*, Version 1 at 48 (2007).

[47] The authors of *Freakonomics* begin their work with a cautionary tale of a day-care center penalizing tardy parents. An Israeli day-care was troubled by the fact that parents were often late picking up their children and sought to do something about it. With the help of a couple of economists, they decided to fine tardy parents. Any parent arriving more than ten minutes late would pay $3 per child for each incident. The fine would be added the parents' monthly bill, which was roughly $380. Before instituting the fine, the day-care incurred on average eight late pickups per week. After the fine was enacted, the number of late pickups promptly soared. Eventually there were more than twenty late pickups per week. What went wrong? You guessed it – the fine was simply too little.

however, is developing a rational framework for evaluating whether incentives have been successfully achieved and, if so, the measure of reward. In the final analysis, incentives must be clear, achievable, and appropriate. Because IPD, if it is to be successful, must engage the owner enough to want to "take the risk" of seeking better project outcomes through collaborative contracting. Incentives must present the owner with the prospect of value.[48]

## VI. BUILDING A COLLABORATIVE AGREEMENT

### A. Are IPD Agreements a New Breed of Contract?

It is difficult to perform any amount of research on IPD without quickly running into articles discussing the concept of "relational contracting."[49] The thrust of much of this

---

But why did pickups actually increase rather than remain steady? Because the day-care had inadvertently put a price on the moral stigma of being late. Many parents were willing to pay $3 to absolve themselves of moral guilt for being late. Steven D. Levitt and Stephen J. Dubner, *Freakonomics*, at 15-16 (William Morrow, 2005).

As a construction lawyer, this story brings to mind the role of liquidated damages in construction contracting. It is difficult to find a construction law practitioner who has not encountered the situation of a tardy contractor who appeared to have little concern about finishing late because the contract stipulated an insufficient liquidated damage. Setting liquidated damages can be a tricky business. Set them too high and they may be judged a penalty and unenforceable. Set them too low and they may actually reinforce the behavior the owner seeks to avoid in the first place. The same can be said with respect to IPD incentives. They can be tricky, and careful thought must be given when fashioning them.

[48] This point was discussed in connection with public owners evaluating project alliance approaches:

> One concern that clients may have with Project Alliancing is the value that is generated for the money spent. Since the project is not competitively bid, many clients (especially in the public sector) may be hesitant or unwilling to enter an arrangement where risk is shared and participants are selected before the target cost of the project is defined. Also there is the fear that, even once the target cost is developed, there is still a lack of certainty in the overall cost outcome. While there is obviously some uncertainty with project alliancing costs, competitively bid project costs are also far from certain. The lowest competitive bid is seen by many owners are the best value option, but when conflicts arise resulting in costly litigious claims, the real cost to the project is often much higher than the initial winning bid. The failure to understand that bid price does not equal final project costs is a major cause of the overall downward spiral of the construction industry. Also, when dealing with complex, uncertain projects that have tight budget and time constraints, it is very difficult to imagine that a collaborative, innovative project team would produce a more costly project than a traditional project team where individuals have far less incentive to share information and work together.

Matthew W. Sakal, *Project Alliancing: A Relational Contract Mechanism for Dynamic Projects*, Lean Constr. J., Vol. 2, No. 1 at 76 (April 2005)

[49] *See* S. Rowlinson and F. Y. K. Cheung, "*Relational Contracting, Culture, and Globalization*," Reprinted in Proc., Int. Symp. of CIB. W. 107/TG23; Joint Symp. On Globalization and Construction, Bangkok, Thailand (2004); M. Rahman, et al., *Transformed Culture and Enhanced Procurement: Through Relational Contracting and Enlightened Selection*, in Proc. of the CIB, W. 92, Int'l Symp. Procurement Systems and Technology Transfer, Trinidad & Tobago (2002); M. Motiar Rahman and Mohan Kumaraswamy, *Joint Risk Management Through Transactionally Efficient Relational Contracting*, Constr. Manage. & Econ., 20(1) (2002); Barbara Colledge, *Relational Contracting – Creating Value Beyond the Project*, Lean Constr. J., 2(1) (2005); I. Macneil, *Contracts: Adjustment of Long-Term Economic Relations Under Classical, Neo-Classical, and Relational Contract Law*, Northwestern Univ. L. R., Vol. 72 at 854-905 (1978); M. Eisenberg, *Relational Contracts in Good Faith and Fault in Contract Law*, J. Beetson and D. Friedmann, eds. (1995); Jilei Wang, *Integrated Project Delivery – Achieving Relational Contracting Through Traditional Project Management Methods*, Graduate Thesis, University of

commentary is to draw distinctions between traditional contracts and their relational brethren. Some proponents of relational contracting contend that it is premised on a different theory of contract law than either classical or neo-classical contracts. To some extent, this debate is a continuation of the tension in contract law doctrine, as envisioned first by Williston and later by Corbin. For Williston, contract interpretation and enforcement was largely dictated by rigid rules. For Corbin, contract theory necessitated a more contextual approach, where one needed to know about the facts underlying the dispute before making a determination about contract interpretation or enforcement. Relational contracting emphasizes the parties' underlying relationships more than classical and neo-classical contract theory. Whether this necessitates a different theory of contract is debatable. The general trend in American jurisprudence is that relational contracting is simply a species of traditional contract doctrine and the latter is equipped to handle questions of interpretation and enforcement.[50]

ConsensusDOCS 300 directly incorporates the concept of relational contracting into the body of the agreement. Paragraph 3.2 states in relevant part: "The Parties agree that the Project objectives can be best achieved through a *relational contract* that promotes and facilitates strategic planning, design, construction and commissioning of the Project through the principles of collaboration and lean project delivery."[51] The AIA IPD forms do not incorporate the concept into the agreements. The *IPD Guide*, however, discusses relational contracts in two separate ways. The *Guide*'s glossary defines relational contracts in the manner most often found in the commentary, as: "Construction contracts that focus on communications and relationships between the parties as well as their specific rights, obligations and deliverables."[52] Elsewhere, the *Guide* describes relational contracts as "similar to Project Alliances."[53] In this discussion, "relational contracts" are characterized as a particular contract type, where the parties create a virtual organization and agree to limited risk sharing with collective decision-making tempered by the owner's right to make a final decision in the absence of team consensus. Nevertheless,

---

Cincinnati (Aug. 2008); S. O. Cheung, et al., *How Relational are Construction Contracts?*, J. Prof. Issues Eng. Ed. & Prac., 132(1) (2006); A. J. Edkins and J. H. Smyth, *Contractual Management in PPP Projects: Evaluation of Legal versus Relational Contracting for Service Delivery*, J. Prof. Issues Eng. Ed. and Prac., 132(1) (2006); G. B. Baker, et al., *Relational Contracts and Strategic Alliances* (2002); Y. Ling, et al., *Incorporating Contractual Incentives to Facilitate Relational Contracting*, J. Prof. Issues. Eng. Ed. and Prac., 132(1) (2006); Owen Matthews and Gregory Howell, *Integrated Project Delivery: An Example of Relational Contracting*, Lean Constr. J., 2(1) (2005).

[50] Traditional contract law concepts, such as "course of dealing," "course of performance," and "usage of trade," have been emphasized by those claiming that traditional contract theory is encompassing enough to address interpretation and enforcement of "relational" contracts. *See* UCC §§ 2-208 and 2-314(3) ("course of dealing" sufficient to create implied warranties). *See also*, Jay Feinman, *The Reception of Ian Macneil's Work on Contract in the USA*, in *The Relational Theory of Contract: Selected Works of Ian Macneil*, David Campbell, ed. (Sweet & Maxwell 2001).

[51] ConsensusDOCS 300, Standard Form of Tri-Party Agreement for Collaborative Project Delivery, ¶ 3.2 (italics supplied). The term surfaces again in ¶ 3.8.1 discussing the intent behind collaborative risk allocation:

> The purpose of the Collaborative Project Delivery approach, established by this tri-party relational contract, is to minimize the risk of delay, conflict and increased cost typically experienced by Project participants in non-integrated project delivery.

[52] AIA National/AIA California Council, *Integrated Project Delivery: A Guide*, Version 1 at 55 (2007).

[53] AIA National/AIA California Council, *Integrated Project Delivery: A Guide*, Version 1 at 33-34 (2007).

 

this discussion ends with the statement: "These combinations [relational contracts] are governed more by personal relationships than by the terms of any formal contract."[54] This statement is typical of the legal commentary on relational contracting. It suggests that relational contracts are sufficiently unlike their traditional brethren to warrant different interpretation and enforcement approaches.

One has to be careful about making too much out of the characterization of IPD agreements as "relational." Relationships, trust, and collaborative undertakings certainly play a heightened role in IPD contracts. This makes them unique and a bit more unpredictable than traditional contracts as they call upon parties to perform differently from what is expected under more traditional design and construction arrangements. Little benefit is gained, however, by treating IPD agreements as a different kind of contract for interpretation and enforcement purposes. While IPD agreements are founded upon different expectations with respect to the parties' rights, responsibilities, and rewards than traditional design and construction contracts, they should be interpreted and enforced employing the same legal principles.

### B. Prerequisites for Successful Collaborative Undertaking

A survey conducted out of Hong Kong sought answers from industry participants about the importance of different items for building a successful relational contract.[55] The respondents, from seventeen different countries, were asked to rank and weigh (measured on a scale of 1 to 10: 1 being least important and 10 being most important) twenty-five items. They placed "mutual trust" at the top of the list with an average weighted importance of 9.10. What follows are the rank and weight of all twenty-five items in descending order:

> 1. Mutual Trust (9.10); 2. Open Communication Among Parties (8.85); 3. Understanding Each Other's Objectives (8.76); 4. Equitable and Clear Allocation of Foreseeable and Quantifiable Risks (8.69); 5. Attitude of the Project Participants (8.57); 6. Readiness to Compromise on Unclear Issues (8.28); 7. Awareness of Risks and Rewards (8.24); 8. Effective Co-ordination (7.94); 9. Collective Responsibility Instead of Personal Responsibility (7.87); 10. Alignment of Objectives (7.83).
>
> 11. Professional Ethics (7.79); 12. Agreed Process for Dispute Resolution (7.39); 13. Frequent Formal and Informal Meetings (7.55);[56] 14. Develop a Partnering Culture, First, Within the Organization (7.28); 15. Agreed Mechanism for Performance Appraisal (7.20); 16. Compatible Organizational Cultures (6.94); 17. Possibility of Future Work (6.91); 17. Pioneering Role of the Owner/Client (6.91); 19. Partnering Workshop (6.77); 20. Partnering Experience (6.75).

---

[54] AIA National/AIA California Council, *Integrated Project Delivery: A Guide*, Version 1 at 34 (2007).

[55] M. Motiar Rahman and Mohan Kumaraswamy, *Assembling Integrated Project Teams for Joint Risk Management*, Constr. Manage. & Econ. at 365 (May 2005).

[56] Given the higher average weight for number 13 compared to number 12, these items may be inadvertently transposed.

21. Role of Partnering Facilitator (6.52); 22. Legal Implications (6.29); 23. Cost of Implementing Partnering (5.69); 24. Jointly Organized Social/Cultural Activities (5.17); and 25. Traditional Owner, Contractor, Subcontractor Hierarchy (4.05).[57]

There are a number of conclusions that one can draw from this information. First, with the possible exception of the last three items, all of these subjects are viewed with relative importance given an average weight of 6.29 or above. Second, quite a few of these items can be materially influenced by how parties negotiate and structure their agreements. Nevertheless, the most important item – mutual trust – is not something that can be created by contract but must exist independently of it. The issue of trust relies heavily upon the team selection process. The parties' contract, however, is not irrelevant to mutual trust. A well-crafted contract that creates appropriate incentives and calls for a reasonable sharing of risk will reinforce mutual trust; whereas, a poorly-crafted contract will do the opposite.

Many of the other items important to creating a successful collaborative relationship are directly influenced by the parties' contract: Open communication (2), understanding each other's objectives (3), and equitable and clear allocation of foreseeable and quantifiable risks (4) are items that should be directly addressed in an IPD agreement. The management/governance provisions common to these agreements are intended, among other things, to encourage open and frequent communication. Another common feature of IPD agreements is language directing the parties to collaborate upon developing project goals.[58] Clearly defining project goals goes a long way toward achieving a mutual understanding with respect to each other's objectives. IPD agreements commonly contain explicit provisions calling for risk sharing in an effort to achieve equitable and clear allocation of foreseeable and quantifiable risks.[59]

Other items identified in the survey that are directly influenced by the IPD agreement are (7) awareness of risks and rewards; (9) collective responsibility, instead of personal responsibility; (10) alignment of objectives; (12) agreed process for dispute resolution; (13) frequent formal and informal meetings; (19) partnering workshop; and (22) legal implications. A well-crafted IPD agreement will address many of these issues. A review of the standard form IPD agreements currently in circulation reveals they address many of these items. Moreover, as you would expect from any thorough contractual agreement, the standard forms address many other issues including scope of work, payments, warranties, and the like.

---

[57] M. Motiar Rahman and Mohan Kumaraswamy, *Assembling Integrated Project Teams for Joint Risk Management*, Constr. Manage. & Econ. at 368 (May 2005).

[58] *See* AIA Document C195 – 2008 Standard Form Single Purpose Entity Agreement for Integrated Project Delivery, § 5.2.4 (2008). The C195 contains a detailed process by which the parties come to a mutual understanding with respect to project definition, which is based upon the owner's criteria. AIA Document C195 – 2008 Standard Form Single Purpose Entity Agreement for Integrated Project Delivery, § 5.2.1 (Developing a Project Definition) and Exhibit B (Owner's Criteria).

[59] While less common, provisions calling for the parties to engage in risk identification and quantification exercises have merit. *See* AIA Doc C195 – 2008 Standard Form Single Purpose Entity Agreement for Integrated Project Delivery, § 5.2.3 (2008) (calling for the development of a risk matrix).

## VII. REVIEW OF CURRENT STANDARD FORM IPD AGREEMENTS

### A. Basic Features of AIA and ConsensusDOCS IPD Agreements

#### 1. ConsensusDOCS 300

In 2007, ConsensusDOCS published its tri-party IPD agreement. ConsensusDOCS 300, Standard Form of Tri-Party Agreement for Collaborative Project Delivery weighs in at over fifty pages. It is a carefully crafted agreement that incorporates not only IPD principles, but also lean construction methodology. The economic model appears to be built on a Target Cost approach (Article 8) with a provision requiring the parties allocate responsibility for costs over the Target Cost where an adjustment to the Target Cost is unavailable (Article 11). Savings in the form of actual costs less than the Target Cost are shared according to agreed-upon percentages (¶ 11.4).

The reason for the equivocation with respect to the economic model employed by ConsensusDOCS 300 is that others have interpreted it as a GMP contract and it contains language which, on first reading, might suggest a Guaranteed Maximum Price (GMP).[60] Articles 8 (Project Budget, Cost Modeling and Project Cost Estimate), 11 (Incentives and Risk Sharing), and 17 (Cost of Work) suggest a Target Cost approach. Moreover, the elaborate collaborative processes mandated under the agreement, particularly those geared toward establishing, monitoring and maintaining the Target Cost are consistent with a cost reimbursement platform. Why go to all the trouble creating such an elaborate structure if, at the end of the day, the constructor guarantees the construction price? Yet, the language of Article 10 (Constructor's Compensation) arguably suggests a GMP limitation on the constructor's right to recover for costs over the approved Target Cost.

Exploring this question in greater detail, it is appropriate to start with Article 8. Article 8 provides the process for reaching a Target Cost, known as the Project Target Cost Estimate (PTCE) in ConsensusDOCS 300 parlance. Upon acceptance by the Management Group of the Target Cost, the agreement is amended (Amendment No. 1) so as to set forth the Target Cost and its basis.[61] Article 11 addresses what occurs in the event Actual Cost exceeds Target Cost (termed "losses"). The agreement sets forth two possibilities: (1) the excess costs are borne by the owner, or (2) the excess costs are shared by the parties as they specify in the agreement.[62] If the parties share losses, the agreement calls for them to decide whether the designer's and constructor's fees are at risk and whether the total amount of each fee represents their respective limit of liability for costs in excess of the Target Cost.[63] Article 17 requires the owner to pay the

---

[60] Allen Overcash, *Will the New Contract Forms for Integrated Project Delivery Make Conflict Obsolete? (Or Are We Still Lost in our Contract Obsession?)*, 3:1 J. ACCL 19, 32 (Winter 2009) ("It would be easy to overstate the "collaborative" nature of the ConsensusDOCS 300 form of agreement. While the "collaborative principles" described in the agreement are well-stated, and theoretically govern the parties through the entire performance of the project, they are most important through stage one. However, once the price of the project is fixed, the contractor agrees to complete the project for no greater sum than that price.")

[61] ConsensusDOCS 300 at ¶ 8.3.6.

[62] ConsensusDOCS 300 at ¶ 11.5.

[63] ConsensusDOCS 300 at ¶ 11.6.

constructor for the Cost of the Work as defined in the Article.[64]

This structure, of course, suggests a Target Cost platform. Article 10, on the other hand, requires the owner to compensate the constructor for Work on the following basis: (1) preconstruction services on a lump sum, actual cost or other basis; (2) for the Cost of the Work pursuant to Article 17; and (3) the constructor's fee subject to adjustment for changes, delays, or managing the replacement of insured or uninsured loss.[65] Paragraph 10.2 places a limitation on the contractor's compensation:

> The compensation to be paid shall be limited to the PTCE established in Amendment No. 1, as the PTCE may be adjusted and subject to the incentive and risk sharing provisions of Article 11.[66]

What is the significance of this language? Does the constructor receive no additional compensation once the PTCE is exceeded? Because "compensation" is defined to include "Cost of the Work," such as interpretation would act as a guaranteed maximum price (GMP).[67]

The ConsensusDOCS drafters, at least those participating in the preparation of the ConsensusDOCS Guidebook, do not understand the Target Cost under the ConsensusDOCS 300 to act as a GMP:

> Project Target Cost Estimate: There is no lump sum or guaranteed maximum price established for the project that can create competing interests and counterproductive behavior among the Parties. Instead, the Parties establish a Project Target Cost Estimate under Article 8 that serves as a benchmark for measuring the Project's overall success, the performance of each Party and to what extent each will participate in any savings or losses.[68]

The key language in Paragraph 10.2 appears to be "subject to the incentive and risk sharing provisions of Article 11." If the parties elect, under Paragraph 11.5, to have either the owner bear all costs in excess of the PTCE or share the losses, then the constructor's compensation is limited only to the extent of the parties' election under Paragraph 11.5.[69] Of

---

[64] ConsensusDOCS 300 at ¶ 17.1.

[65] ConsensusDOCS 300 at ¶ 10.1.

[66] ConsensusDOCS 300 at ¶ 10.2.

[67] Assuming the constructor had the obligation to complete the Project.

[68] ConsensusDOCS, *ConsensusDOCS Guidebook* at 7 (April 2, 2008).

[69] The "subject to," under this reading, modifies "limited" rather than "PTCE." This appears to be the correct reading as nearly identical language appears at ¶ 9.1.1 addressing the designer's compensation except in that instance there is a comma after the term "adjusted", which clarifies the intent behind the language. Moreover, the PTCE is not adjusted pursuant to Article 11. Rather, adjusting the Target Cost is addressed in Article 8 (pre-acceptance) and throughout the document (*e.g.*, ¶ 13.14 – Concealed or Unknown Site Conditions). This might seem to be "much ado about nothing," but punctuation (or the lack thereof) can be critical. The case of *Potomac Constructors v. EFCO Corp.*, 530 F. Supp. 2d 731 (D. Md. 2008) comes to mind. As a well-placed comma in a supplier's purchase order saved it from a $13 million delay claim. A contractor on a multi-billion dollar bridge project sued a steel supplier, alleging delay damages due to its failure to deliver formwork on time. The supplier's

course, this result places a premium on making an election as the failure to do so will create confusion as to the role of the PTCE.

Given the complexity of many IPD contract forms, it should not be terribly surprising that some confusion as to their meaning might arise. None of the IPD forms are immune from this problem. Moreover, because the IPD approach is substantially different from traditional delivery methods, and the contract forms contain language and features unlike anything found in other standard agreements, there are bound to be issues of interpretation. One has to be careful when interpreting IPD contracts by analogizing to their more traditional brethren.

### 2. AIA A295 Family (Transitional IPD)

In 2008, the AIA published two families of IPD documents. One built around the A295 (General Conditions for Integrated Project Delivery), and the other the C195 (Single Purpose Entity Agreement). The A295 IPD Family is considered a transitional IPD form. It is built on the AIA's Construction Management at Risk platform. Most of the changes institute IPD processes rather than alter risk allocation or create incentives. The A295 IPD Family will be quite familiar to most practitioners, although it adopts the IPD phasing first announced in the AIA California Council's *IPD: A Working Definition* and later adopted in the *IPD Guide*.[70]

Article 1 of the IPD Owner-Contractor Agreement addresses preconstruction and construction phase services and insurance by reference to A295 General Conditions and enumerates the additional services the contractor may perform before the owner and contractor establish a Guaranteed Maximum Price (GMP).[71] The additional services provisions are essentially the same as the additional services provisions of the AIA B-series agreements between owner and architect (including B195, §§ 1.5.2.1 through .7). This similarity between the architect and contractor agreements is attributable to the role IPD requires of the contractor in the design phases of the project.

---

purchase order stated that it was not responsible for loss from "delay, or no [sic] fulfillment of contract by reasons of fires, strikes, delays in transportation, regulations of the United States Government, or any cause which is unavoidable or beyond its control." The supplier claimed that this language shielded it from all delay damages. The contractor claimed that it only limited the supplier's liability for delays due to the specific enumerated causes (*e.g.*, fires, strikes, etc.). The comma saved the supplier, as it created a separate and distinct clause after the word "delay" which did not modify the term:

> Maryland courts recognize a rule of construction which dictates that a qualifying clause ordinarily is confined to the immediately preceding words or phrase – particularly in the absence of a comma before the qualifying clause. . . . Under [this] rule of construction . . ., the word "delay" is not modified by the phrase "by reasons of fires, strikes, delay in transportation, regulations of the United States Government, or any cause which is unavoidable or beyond its control." Rather, a comma following the word "delay" creates a separate and distinct clause. Therefore, under both a plain reading of the text and the [above-stated] rule of construction, Plaintiff is contractually barred from seeking damages for delays.

*Potomac Constructors, LLC v. EFCO Corp.*, 530 F. Supp. 2d 731, 735-36 (D. Md. 2008) (citations omitted).

[70] AIA California Council, *Integrated Project Delivery: A Working Definition*, Version 1 (Updated May 15, 2007); AIA National/AIA California Council, *Integrated Project Delivery: A Guide*, Version 1 (2007).

[71] AIA Document A195 – 2008 Standard Form of Agreement Between Owner and Contractor for Integrated Project Delivery, Article 1 (2008).

The IPD owner-contractor agreement contemplates that the owner and contractor will execute the "GMP Amendment"[72] after the owner, contractor, and architect have completed the "Detailed Design Phase" under A295. The GMP Amendment follows the format of AIA Document A102-2007 and A121-2003, (1) requiring an itemized statement of trade categories, allowances, contingencies, alternatives, and the contractor's fee, (2) incorporating a definition of "Cost of the Work" and specific requirements about items that the contractor can and cannot include, and (3) establishing standards for accounting and recordkeeping. The GMP Amendment also establishes the Anticipated Date of Substantial Completion and the issuance dates for the Implementation Documents upon which the Anticipated Date of Substantial Completion relies.

The structure of the IPD owner-architect agreement[73] is almost identical to the IPD owner-contractor agreement. Its substance is essentially an abbreviated version of B101, with essential business terms (compensation), architect-specified matters (standard of care, insurance), and certain additional services set out in the document with detailed service descriptions, dispute resolution provisions, and other matters that apply to both the architect and the contractor, addressed by reference to A295.

The IPD general conditions are the foundation of the IPD "transitional approach." The roles and responsibilities of owner, architect and contractor are similar to those assigned in A121CMc, A201 and B101, but, because of the desire for a higher degree of integration of services, these roles and responsibilities are all in one place (*i.e.*, the general conditions) rather than in the separate agreements between the owner and the architect and between the owner and the contractor.[74]

Article 2 of the IPD general conditions is substantially the same as Article 2 of the A201 General Condition, to the extent both require the owner to provide information about the owner's requirements for the project, the physical characteristics of the project site, and the financial arrangements the owner made for the project.[75]

Article 4 describes the contractor's general responsibility for consultation with the owner and the architect during the preconstruction phases "on proposed site use and improvements, selection of materials, and building systems and equipment . . . constructability; availability of materials and labor; time requirements for procurement, installation and construction; and factors related to construction cost including, but not limited to, costs of alternative designs or materials, the Owner's Budget for the Work, and possible cost reductions."[76]

---

[72] AIA Document A195 – 2008 Standard Form of Agreement Between Owner and Contractor for Integrated Project Delivery, Exhibit A (GMP Amendment) (2008).

[73] AIA Document B195 – 2008 Standard Form of Agreement Between Owner and Contractor for Integrated Project Delivery (2008).

[74] *See* AIA Document A295 – 2008 General Conditions of the Contract for Integrated Project Delivery (2008)

[75] AIA Document A295 – 2008 General Conditions of the Contract for Integrated Project Delivery, Article 2 (2008).

[76] AIA Document A295 – 2008 General Conditions of the Contract for Integrated Project Delivery, Article 4 (2008).

The contractor must also provide cost estimating services throughout the design of the project, for review by the architect and acceptance by the owner. At each phase of design, the contractor's estimates will "increase in detail and refinement. . . ."[77] The contractor is responsible for design services only if the agreement specifically delegates authority to the contractor and the architect or the owner specify all performance and design criteria. The IPD general conditions describe the contractor's services and responsibilities in more detail in Articles 5 through 10, along with the responsibilities of the other project participants.[78]

The IPD general conditions describe the design and construction process in phases that are similar to, but different from, the standard AIA Schematic Design, Design Development, Construction Document, Bidding and Negotiation and Construction Phases. Because IPD requires a high degree of cooperation and coordination, the IPD general conditions describe the responsibilities and authority of the owner, the architect, and the contractor in each phase. The AIA uses new terms for the Project Phases:

> (1) Conceptualization Phase, (2) Criteria Design Phase, (3) Detailed Design Phase, (4) Implementation Documents Phase, and (5) Construction Phase

The requirements for the contractor's IPD GMP proposal are essentially the same as the requirements for a construction manager's GMP proposal under A121. The contractor meets with the owner and architect to review the GMP proposal. Once accepted by the owner, the GMP, including the written statement of its basis, will be set forth in an amendment to IPD owner-contractor agreement, a copy of which will be provided to the architect. Upon the owner's acceptance of the GMP proposal, the Detailed Design Documents become part of the GMP Documents.

The Construction Phase processes, right, and responsibilities are virtually identical to those described in B101-2007, A121-2003, and A201-2007, with the advantage of having all provisions related to the owner, architect and contractor compiled in one section.

### 3. AIA C195 Family (Full Integration)

The C195 Family, on the other hand, is a complete IPD form built upon a Target Cost approach with risk sharing, claim suppression, and incentive provisions encouraging collaboration while discouraging claim assertion. The C195 Family is an attempt to create a contractual model containing many of the principles espoused in the *IPD Guide*. Of the three IPD agreements, the C195 will appear the most different from traditional design and construction contracts.

The Single Purpose Entity IPD Agreement (C195) creates a limited liability company ("LLC" or "Company") for the sole purpose of designing, financing and constructing the project.

---

[77] AIA Document A295 – 2008 General Conditions of the Contract for Integrated Project Delivery, Article 4 (2008).

[78] AIA Document A295 – 2008 General Conditions of the Contract for Integrated Project Delivery, Articles 5-10 (2008).

The owner, architect, and construction manager are Members of the Company (other members of the project team may also be Members of the Company).

The Single Purpose Entity Agreement requires the LLC to retain the architect and construction manager (C197), who are Members of the LLC as the architect and construction manager for the project under separate agreements. The Company also contracts with the owner (C196) for funding and other matters.

The Single Purpose Entity Agreement contains several exhibits:

| | |
|---|---|
| Exhibit A | **Legal Description of the Project** |
| Exhibit B | **Owner's Criteria**. Owner's Criteria is similar to "Owner's Initial Information" under B101, A141, and A295: Owner's program, general description of the physical parameters for the Project, Owner's budget and schedule, and other "special characteristics or needs of the Project…." |
| Exhibit C | **Member Agreements.** Agreements between Company, Non-Owner Members *e.g.*, Architect and Construction Manager) (C197). Agreement between Company and Owner (C196). |
| Exhibit D | **Workplan**. Provides for appointment of a "Project Management Team," with one representative from each Member of the LLC, "responsible for managing and planning design and construction activities required to complete the Project in the collaborative, integrated process intended under the Agreement" for completing the project, including schedule and assignment of responsibilities, subject to updating through all phases of the Project. Exhibit D addresses project phases and use of Building Information Modeling in substantially the same way as AIA Document A295. |
| Exhibit E | **Target Cost Amendment**. Amendment to the Single Purpose Entity Agreement, adopted after the Members of the Company define the scope of work and accept a budget, schedule and allocation of responsibilities for completing the Project. It is upon this modification of the LLC agreement that a full-blown IPD agreement to design and build a project comes into existence. Prior to this amendment, the owner is essentially buying pre-construction services at cost. The Target Cost Amendment is composed of the following: |
| Exhibit AA | **Target Cost Breakdown**: Itemized cost estimate or schedule of values |
| Exhibit BB | **Project Definition**: Detailed statement of program, site information, design criteria, and identification of consultants and contractors. |
| Exhibit CC | **Project Goals:** Statement of "Project Goals" (*e.g.*, cost and schedule) and "Goal Achievement Compensation" (payments to Members for achieving goals). |

| | |
|---|---|
| Exhibit DD | **Integrated Scope of Services**: Detailed list of project responsibilities and assignment of responsibilities among Members. |
| Exhibit EE | **Project Schedule**: Time for completion. |
| Exhibit FF | **Digital Data Protocol**. Agreement about standards for sharing electronic information. |

The two AIA IPD Families of agreements and the ConsensusDOCS 300 are sufficiently different in style and format to make comparison challenging. Many of the differences are more cosmetic than substantive. Moreover, similarities are also important to understand. Therefore, a limited number of critical topics have been selected for analysis and comparison.

### B. Cost Control: The Economic Model

If IPD is to become a viable project delivery method, owners are going to have to come around to the belief that the approach holds more promise for creating value for the money spent than other, more traditional, delivery methods. A key ingredient in value is cost – in whatever measure (*e.g.*, construction cost per square foot, total expected life-cycle cost, actual cost versus budget, etc.). Just as important, for many owners, is cost predictability. The expectation that an agreed-upon cost will not be exceeded. Cost and cost predictability are related. The one influences the other. Greater cost predictability generally entails greater overall cost. This is most commonly seen in lump sum or GMP projects, where cost predictability in the form of a contractor guarantee, is acquired by paying a risk premium.

Under traditional lump sum/GMP contracts, the owner's cost control rests primarily upon the strength of the contractor's promise to complete the work for the sum stipulated (lump sum) or for an amount no greater than a specified sum (GMP). This cost model places the owner's interests in conflict with those of the contractor. From the owner's perspective, once the price is fixed, "value" no longer contains a cost component, as that element has been placed on the contractor's side of the ledger. Instead, value to the owner is measured in terms of work quality, work quantity, and speed of completion. To the extent these "value" components compromise the contractor's price commitment, which often they do, there is the potential for conflict. Too much conflict and litigation results. In the final analysis, the owner's cost control under lump sum or GMP contracts pursued within the framework of traditional delivery approaches rests largely on the character and financial capacity of the contractor. There is, of course, always litigation or the threat of litigation. But litigation is a very inefficient way of managing cost.

Cost control in most IPD models is a more nuanced affair. The AIA IPD transitional model (A195, A295 and B195) is built on a guaranteed maximum price platform.[79] The GMP is given at the end of the Detailed Design phase.[80] The Detailed Design Phase is roughly

[79] *See* AIA Document A195 – 2008, Exhibit A, Guaranteed Maximum Price Amendment.

[80] AIA Document A295, § 7.6 (2008).

equivalent to the Construction Documents phase of more traditional approaches.[81]

Most IPD agreements do not call for one of the participants to provide a cost guarantee. It is difficult to align all the participants' interests if one of them has taken on the significant responsibility of guaranteeing project cost, particularly where the guarantor has no long-term interest in the project.. The contractor, unlike the owner, has no long-term interest in the project and, therefore, is not assuaged by any long-term benefit the project provides it. The AIA C195 proceeds on a "Target Cost" basis. So does the ConsensusDOCS 300. The primary difference between a GMP and a Target Cost is the consequence of exceeding the set price. Whereas, under a GMP, one party bears all of the economic consequence of failure; the pain is distributed more evenly under a Target Cost model. At paragraph 11.5 of the ConsensusDOCS 300, the parties are required to select a "loss allocation" approach. One alternative is for the owner to bear all costs in excess of the Target Cost, which in effect turns the agreement into a pure cost reimbursable arrangement. The other alternative calls for a sharing of the excess based on specified percentages. If cost overruns are shared, the parties must also decide whether the designer's and constructor's fee is at risk and, if so, whether the fee represents their limit of liability for losses "apportioned pursuant to Paragraph 11.5."[82]

### 1. Assuring Cost Integrity Through Incentives

How does an owner reach a level of comfort with respect to cost containment under an IPD Target Cost approach? Most IPD arrangements have a number of features that operate to mitigate against costs exceeding the Target Cost. One method is by constructing incentives to hold down costs while maintaining schedule and quality.

A key feature of most IPD agreements is an alignment of all major participant's interests with achieving defined project goals. Managing costs is nearly always an important project goal. Interests are aligned through the use of incentives. For example, the C195 uses a mix of positive and negative incentives. Positive incentives include a sharing of cost savings below the Target Cost.[83] The C195 contains a web of tailored negative incentives, encouraging the Members to

---

[81] *See* AIA National/AIA California Council, *Integrated Project Delivery: A Guide*, Version 1 at 26 (2007) ("The Detailed Design Phase includes the WHAT phase of the project. During this phase, all key design decisions are finalized. Detailed Design under IPD comprises much of what is left to the Construction Documents phase under traditional practice, thus the Detailed Design Phase involves significantly more effort than the traditional Design Development phase.")

[82] ConsensusDOCS 300, Standard Form of Tri-Party Agreement for Collaborative Project Delivery, ¶ 11.5 (2007). The parties at ¶ 3.8.2 are asked to make selections with respect to broader risk allocation matters. Under ¶ 3.8.2.2, the parties can elect to limit the designer's and constructor's total liability to a sum certain. Even if the parties do not agree upon such liability limitations, the agreement at ¶ 3.8.3 contains a mutual waiver of consequential damages. Therefore, if the parties agree to cap the designer's and constructor's liability for cost overruns at the amount of their respective fee, their total exposure to the owner is fairly well contained, given the complete waiver of consequential damages.

[83] Under the C195, this savings is characterized as "incentive compensation." AIA Document C195 – 2008, Standard Form Single Purpose Entity Agreement for Integrated Project Delivery, § 10.1 (2008). The actual allocation is set forth in the member agreements. AIA Document C197 – 2008, Standard Form of Agreement Between Single Purpose Entity and Non-Owner Member for Integrated Project Delivery, § 6.2 (2008). It is important to understand that the percentage interests in the SPE held by Members (§ 4.1 of C195) plays no direct

beat the Target Cost. Members are entitled to recoup only their costs unless Actual Cost comes in under Target Cost.[84] In other words, under the C195 incentive compensation represents the Non-Owner Members' fee.[85] An even stronger negative incentive for the Non-Owner Members is the obligation to provide their services at no cost once the Target Cost is exceeded.[86]

---

role in the distribution of compensation. The SPE is not expected to earn any income or incur any loss. Its expenses are covered under the owner's funding obligation (§ 7.2 of C195) and any monies received are paid out to the Non-Owner Members, trade contractors and others performing services or are otherwise entitled to project funds.

[84] The Target Cost is subject to adjustment under circumstances where the owner initiates changes in the project definition or the project schedule (C195 at § 5.6.2). Moreover, events falling within Article 14, Force Majeure, giving rise to increased costs, may justify adjusting the Target Cost. The Target Cost is subject to reduction where a project goal identified in the Target Cost Amendment is not achieved and, therefore, goal achievement compensation is not paid (C195 at § 5.6.3).

[85] *See* AIA Document C195 – 2008, Standard Form Single Purpose Entity Agreement for Integrated Project Delivery, § 6.2.1.2 (2008); AIA Document C197 – 2008, Standard Form of Agreement Between Single Purpose Entity and Non-Owner Member for Integrated Project Delivery, § 6.1.1 (2008).

Under the C195 approach, Non-Members providing consulting and construction services are to be contracted with on stipulated sum or GMP arrangements where possible (§ 6.1.5 of C195). The Target Cost is given at an earlier point in the process than contemplated under the A295 Family or possibly the ConsensusDOCS 300 (¶ 8.3.1). Section 5.1.2 of the C195 requires the construction manager and architect to present the Target Cost to the owner no later than at the conclusion of the Criteria Design Phase. Under IPD phasing, Criteria Design is essentially an expanded schematic design which includes a number of activities and elements performed during the design development phase of more traditional delivery approaches. *See* AIA National/AIA California Council, *Integrated Project Delivery: A Guide*, Version 1 at 25 (2007). Depending upon the level of design completeness, it may not be feasible to secure certain Non-Member commitments under a lump-sum or GMP basis, as this would entail paying too much for uncertainty – *i.e.*, contingency amounts built into the price. Moreover, the Members may find that it is advantageous to bring certain Non-Members under the same incentive scheme as applies to the Non-Owner Members.

Where the price (Target Cost/GMP) is provided later in the design process, there is greater opportunity to obtain price certainty in the form of lump-sum/GMP subcontracts. Price certainty, however, is acquired at the expense of the potential for cost savings. This same tradeoff makes it less likely that the designer and constructor under the ConsensusDOCS 300 would consider working at cost and look to the fee in the form of any savings off the Target Cost the later in the process the Target Cost is given. As more of the design is finalized, the less likelihood there is for beating the Target Cost as this must be done primary during the construction phase (which is possible, but once the design is fixed one of the primary avenues of cost reduction is eliminated). Another risk one runs by postponing the Target Cost later in the design process is the creating of unintended incentives to withhold good alternative ideas until they are difficult to implement given the advanced state of the design.

[86] AIA Document C197 – 2008, Standard Form of Agreement Between Single Purpose Entity and Non-Owner Member for Integrated Project Delivery, § 6.1.2 (2008). The C195 Family is loosely built on an agency construction management platform. The architect and construction manager provide services but are not directly responsible for the construction. Non-members contracting directly with the company are responsible for actual construction. But this is not written in stone and it is possible to include as members entities that perform actual construction. When this occurs, it is unlikely that § 6.1.2 of C197 would apply to a member performing actual construction services, as the risk/reward balance would likely be unacceptable to most members. Because the ConsensusDOCS 300 platform anticipates the constructor performing construction or holding subcontracts for construction, the C195's "work at no cost" negative incentive in such a setting would present a materially different risk/reward calculus.

The C195's "work at no cost" obligation probably falls most heavily on the construction manager, as most of the architect's services would have been provided prior to exceeding the Target Cost. This unbalanced risk is tempered somewhat by the Members' requirement to prepare Recovery Plans if the Target Cost is threatened (C195 at §§ 5.7.5 to 5.7.6). The architect is likely to play a significant role in the development of Recovery Plans, and if its services are not compensated for this work (which is not automatically the case), then there is more balance between

Other approaches include creating varying levels of "cost buffers," where the non-owner team members take responsibility for specified percentages of costs over the Target Cost.[87] For ease of administration and dispute avoidance, it is best to avoid "claw back" situations where team members must disgorge money received. There are a number of ways to do this, including pooling retainage or escrowing other project funds for this purpose. This approach provides much flexibility for spreading the risk of cost creep. It is a bit like what one sees in the property insurance field where policies spread risk and encourage sound risk management practices through the use of sub-limits on particular risks and self-insured retentions/deductibles.

### 2. Assuring Cost Integrity Through IPD Processes

Most IPD contracts, particularly those built on some form of cost reimbursement basis, contain a good deal of planning, budgeting, and cost evaluation and control process. The C195 is a case in point. Prior to establishing the Target Cost, the parties must engage in a series of collaborative undertakings, including:

-- **Project Definition**: This activity should result in a mutually understood project scope.[88]

-- **Collaboration Standards Workshop**: Here the parties establish protocols, standards, and tolerances for executing the work (*e.g.*, establish quality standards) and modeling protocols.[89]

-- **Risk Matrix**: The Members jointly discuss and identify major risks to successful project completion and develop a game plan for handling such risks.[90]

-- **Project Goals**: This is a key concept in most IPD agreements as the parties

---

the construction manager and architect on this score. Nevertheless, it may be necessary to make some adjustments given the potential for unbalanced risks once the Target Cost is exceeded.

[87] *See* ConsensusDOCS 300 at ¶ 11.5.2.

[88] AIA Document C195 – 2008 Standard Form Single Purpose Entity Agreement for Integrated Project Delivery, § 5.2.1 and Exhibit E (BB) (2008). Reaching a clear understanding with respect to project scope, both early on and as the project proceeds to the design phases, is critical. Owner and contractor groups have long recognized that poor project scope definition is a leading cause of projects exceeding their budgets:

> The Business Roundtable Report A-6 stated that "poor scope definition at the time of budgeting ranks as the highest impact item that causes projects to run over budget. Loss of scope control during design ranks second in impact. [Others have] reported that construction industry officials consider lack of scope definition to be the most serious problem on construction projects.

Construction Industry Institute, *Control of Construction Project Scope*, at 5, Source Document 6 (March 1986).

[89] AIA Document C195 – 2008 Standard Form Single Purpose Entity Agreement for Integrated Project Delivery, § 5.2.2 and Exhibit E (BB) (2008). At the time the C195 was developed, the AIA had not yet prepared its modeling protocol exhibit (E202 Document). The modeling exhibit is now available and should be consulted when conducting a collaboration workshop. *See* AIA Document #202 – 2008, Building Information Modeling Protocol Exhibit (2008).

[90] AIA Document C195 – 2008 Standard Form Single Purpose Entity Agreement for Integrated Project Delivery, § 5.2.3 and Exhibit E (BB) (2008). The concept of a Risk Matrix is not new. The U.K.'s Be Collaborative Contract employs a similar concept with its Risk Register, *see* http://www.constructingexcellence.org.uk.

commit to make a priority the achievement of mutually agreed-upon project goals – even at the expense of personal gain. As a consequence, project goals must be developed in such a way that all parties willingly buy-in to them. Clear standards need to be developed to determine whether they have been met and what is the consequence of success or failure.[91]

-- **Integrated Services Matrix**: This exercise focuses upon who is responsible for doing what so that reasonable expectations can be developed between the Members as to what promises and commitments each is making to the others.[92]

-- **Project Schedule**: Because schedule can have a direct bearing on cost, the Members are required to jointly develop a project schedule.[93]

-- **Funding Schedule**: Obviously, it is difficult to finalize a funding schedule until the Members have settled upon a Target Cost, but this exercise is valuable as it necessitates an examination of the Project's cash flow requirements and serves as another tool for evaluating the Target Cost.[94]

Most IPD agreements require the Target Cost be communicated with specificity. Again, the C195 Family follows this approach. The C195 model defines what costs are subject to reimbursement.[95] The Target Cost is required at a minimum to be broken down to provide costs to plan, design, estimate, schedule, manage, construct, commission, and closeout the Project.[96] The breakdown must also set out any sums for contingencies, insurance, administrative expense, dispute resolution (*i.e.*, the cost of the "neutral" under § 2.19 of C195) and goal achievement.[97]

---

[91] *See* AIA Document C195 – 2008 Standard Form Single Purpose Entity Agreement for Integrated Project Delivery, § 5.2.4 and Exhibit E (CC) (2008).

[92] AIA Document C195 – 2008 Standard Form Single Purpose Entity Agreement for Integrated Project Delivery, § 5.2.5 and Exhibit E (DD) (2008).

[93] AIA Document C195 – 2008 Standard Form Single Purpose Entity Agreement for Integrated Project Delivery, § 5.2.6 and Exhibit E (EE) (2008).

[94] AIA Document C195 – 2008 Standard Form Single Purpose Entity Agreement for Integrated Project Delivery, § 5.2.7 (2008).

[95] Because it is built on a cost reimbursement platform (at least as respects the architect and construction manager), the C195 Family defines the costs which are subject to reimbursement under the Non-Owner Member agreements. *See* AIA Document C197 – 2008, Standard Form of Agreement Between Single Purpose Entity and Non-Owner Member for Integrated Project Delivery, Article 7 (2008).

[96] AIA Document C195 – 2008 Standard Form Single Purpose Entity Agreement for Integrated Project Delivery, § 5.3.1 and Exhibit E (AA) (2008).

[97] AIA Document C195 – 2008 Standard Form Single Purpose Entity Agreement for Integrated Project Delivery, § 5.3.2-5.3.6 and Exhibit E (AA) (2008). It should be stressed that these are "minimum" requirements and that for a project of any complexity, the Target Cost Breakdown is likely to be quite detailed. Whether the breakdown will include price quotes from trade contractors is largely a function of design completeness, which, under the C195 program, is somewhere in the traditional Design Development stage. The C195 addresses the question of contingencies at § 5.1.3: "All fees and contingency amounts in the Target Cost proposal shall be clearly identified and explained." The issue of contingencies in cost reimbursement contracts is often complex and misunderstood. The requirement that the Members jointly develop a Risk Matrix (§ 5.2.3) is expected to inform the

IPD agreements also focus on monitoring and maintaining the target cost. The C195 requires the Company to make periodic cost projections necessary to satisfy all Members that the Target Cost is being maintained.[98] These projections are distributed to the Members for review and approval. If any periodic cost projection reveals that the Target Cost is projected to be exceeded, the Company is required to develop a Recovery Plan to maintain the Target Cost.[99] The Recovery Plan is subject to approval by all of the Members. Moreover, if any Member believes or acquires information suggesting that the Target Cost might be exceeded it is required to notify the other Members, who are required to meet to evaluate the matter. Once again, if the consensus of the Members is that the Target Cost is threatened, the Company shall develop a Recovery Plan.[100] If the Owner declines to approve a Recovery Plan, the Company is required to proceed with the work and take such mitigation steps as are reasonable to keep cost escalation to a minimum.[101]

The ConsensusDOCS 300 contains a host of mechanisms intended to maintain the integrity of the Target Cost labeled the "Project Target Cost Estimate" or "PTCE". The owner provides the Management Group its project budget.[102] The designer, in collaboration with the owner and constructor, develops a design budget.[103] The constructor provides the Management Group with a construction budget, which includes a preliminary estimate of the total cost of construction, a design contingency, a construction contingency, and other contingencies to cover costs for securing bids and material price escalations.[104] The Collaborative Project Delivery (CPD) Team is required to use "diligent" efforts to design the project so it may be constructed without exceeding the construction budget. The construction budget cannot be revised without the owner's approval.[105]

Whereas the construction budget is established "at the beginning of the project" (¶ 8.1.3), at such time as the Management Group determines that the project design is sufficiently complete, the parties shall jointly develop a Project Target Cost Estimate (PTCE).[106] The agreement does not address the factors relevant for determining whether the project design is "sufficiently complete" to provide a PTCE. Timing of the Target Cost is a critical issue, as the earlier it is given the greater the incentive and opportunity to innovate during the design phase, thereby enhancing the potential for sharing in cost savings; whereas the later it is given, the more

---

explanation of contingency amounts in the Target Cost.

[98] AIA Document C195 – 2008 Standard Form Single Purpose Entity Agreement for Integrated Project Delivery, § 5.7.1 (2008).

[99] AIA Document C195 – 2008 Standard Form Single Purpose Entity Agreement for Integrated Project Delivery, § 5.7.2 (2008).

[100] AIA Document C195 – 2008 Standard Form Single Purpose Entity Agreement for Integrated Project Delivery, § 5.7.3 (2008).

[101] AIA Document C195 – 2008 Standard Form Single Purpose Entity Agreement for Integrated Project Delivery, § 5.7.5 (2008).

[102] ConsensusDOCS 300 at ¶ 8.1.1.

[103] ConsensusDOCS 300 at ¶ 8.1.2.

[104] ConsensusDOCS 300 at ¶ 8.1.3.

[105] ConsensusDOCS 300 at ¶ 8.1.4.

[106] ConsensusDOCS 300 at ¶ 8.3.1.

 

price certainty one acquires but the less opportunity there is for cost savings.

The PTCE includes sums for a variety of contingencies: (1) a contingency for further design development; (2) a permit contingency covering changes required by permitting agencies; and (3) a construction contingency. The use of the construction contingency is subject to the prior approval of the Management Group.[107] Unused contingency monies fund the incentive programs created under the agreement.[108]

If the proposed PTCE exceeds the project budget, the owner may either approve an increase in the project budget or terminate the project.[109] In the event the owner elects neither alternative, the Management Group may authorize rebidding or renegotiating any portion of the project or direct the CPD Team to collaborate on revising the project scope to bring it within the project budget.[110] Once the PTCE is accepted by the Management Group, the contract shall be so amended to reflect the agreed-upon Target Cost. The constructor agrees not to seek a change in the Target Cost based upon inadequate or insufficient design documents.[111] The rationale for this limitation is the fact that the constructor has collaborated with the design team during the preconstruction phase.

The ConsensusDOCS 300 allows for the parties to structure incentives, including incentives that bear on project cost. Savings in the form of actual costs less than the PTCE shall be shared as negotiated and set forth in the agreement.[112] Losses, in the form of costs in excess of the Target Cost, may be shared or borne entirely by the owner, as set forth in ¶ 11.5 of the agreement. To the extent that the parties share costs in excess of the PTCE, they shall also indicate whether the designer's and constructor's fees are at risk and whether the fee is a limitation of liability for cost overruns.[113]

The ConsensusDOCS 300, like the C195 Family, contains a great deal of process intended to monitor and maintain the Target Cost:

-- **Target value design**: This approach to design is intended to "inform the overall project design with the critical criteria of quality, cost, schedule and constructability."[114] The Management Group shall develop target value design methods for the designer, constructor, and trade contractors addressing

---

[107] ConsensusDOCS 300 at ¶ 8.3.2.

[108] ConsensusDOCS 300 at ¶ 8.3.2.3.

[109] ConsensusDOCS 300 at ¶¶ 8.3.5.1 and 8.3.5.4.

[110] ConsensusDOCS 300 at ¶¶ 8.3.5.2 and 8.3.5.3. Revising the project scope may necessitate the designer having to revise the drawings and specifications to allow the PTCE to be reduced to 100% of the project budget. Moreover, if the Management Group determines that changes in market conditions, or other conditions beyond the control of the CPD Team, are the cause of the PTCE proposal exceeding the project budget, it may authorize reimbursement for such services from applicable contingency funds (¶ 8.3.5).

[111] ConsensusDOCS 300 at ¶ 8.3.7.

[112] ConsensusDOCS 300 at ¶ 11.4.

[113] ConsensusDOCS 300 at ¶ 11.6.

[114] ConsensusDOCS 300 at ¶ 6.13.1.

the establishment of initial target costs for major project components and systems, the formation and conduct of the project design, and cost analysis procedures.[115]

-- **Value identification and creation**: The designer and constructor and their consultants shall continually seek to create value by identifying options to improve constructability and functionality, reduce capital or life-cycle cost, and provide operations flexibility consistent with the owner's programmatic needs.[116] As a result of these efforts, a CPDT member may submit a Value Creation Proposal to the Management Group and, if accepted, the designer shall ascertain the design feasibility, compatibility and compliance with buildings regulations and professional standards of care.[117]

-- **Constructability**: The constructor shall conduct constructability reviews in collaboration with the designer to determine that the design documents will result in construction drawings sufficiently complete to reduce the risk of disruption, delay, change orders, and potential claims.[118]

-- **Preliminary planning**: The designer and constructor shall review the owner's program and meet with trade contractors to confer on and verify the requirements of the project.[119] The designer and constructor shall provide to the Management Group for its written approval a joint preliminary evaluation of the owner's program and the project requirements, addressing all issues bearing on the success of the project. The joint preliminary evaluation shall propose alternative architectural, civil, structural, mechanical, electrical and other systems for review by the Management Group, to determine the most desirable approach on the basis of cost, technology, quality, and speed of delivery.

-- **Cost modeling**: The constructor shall provide on-going cost modeling to inform and promote its target value design efforts.[120] The constructor shall generate cost model reports as directed by the Management Group. If building information modeling is utilized, the cost reports shall be generated at appropriate milestones, as designated by the Management Group. The agreement sets forth four separate cost models: (1) preliminary cost model; (2) schematic design cost model; (3) design development cost model; and (4)

---

[115] ConsensusDOCS 300 at ¶ 6.13.2. It is not entirely clear what is meant by the Management Group addressing the establishment of, among other things, "the formation and conduct of project design." Professional licensing requirements dictate that the design be within the control of licensed professionals.

[116] ConsensusDOCS 300 at ¶ 6.14.

[117] ConsensusDOCS 300 at ¶ 6.14. Essentially, this process is a value engineering protocol.

[118] ConsensusDOCS 300 at ¶ 6.15.

[119] ConsensusDOCS 300 at ¶ 7.1.

[120] ConsensusDOCS 300 at ¶ 8.2.

construction document cost model.[121] Essentially, the constructor is required to update its cost model during the various design phases with the last cost model developed when the designer's completion of construction documents reaches approximately 50%.[122] Cost models shall be reviewed on an ongoing basis to determine that the models conform with approved budgets and target costs developed as part of the target value design efforts. To the extent that cost models to not conform with budgets and target costs, the Management Group shall give direction on what actions shall be taken by members of CPD Team.[123]

-- **Lean project delivery methodology**: The agreement adopts a number of lean construction concepts, including the making of "reliable commitments," "pull-based design," and "pull planning."[124] To the extent that the construction team is comprised of individuals familiar and committed to lean construction principles, the incorporation of these methodologies creates value. On the other hand, confusion can result where the construction team is unfamiliar with lean construction methodology.[125]

-- **Quality plan**: Because quality, and particularly the failure to achieve it, can negatively impact cost, the agreement requires the designer and constructor,

---

[121] ConsensusDOCS 300 at ¶¶ 8.2.1-8.2.4.

[122] ConsensusDOCS 300 at ¶ 8.2.4.

[123] ConsensusDOCS 300 at ¶ 8.2.7.

[124] ConsensusDOCS 300 at ¶¶ 3.9, 6.5, and 7.2.1.

[125] This point is made by Jilei Wang in his Masters Thesis, discussing an IPD case study in which lean principles were employed:

> At the time the IPD team did not know much about "lean." Initially Westbrook CEO, Owen Matthews, educated himself on "lean" and held in-house classes to train the rest of the team members. When the IPD team started implementing "lean," they felt excited about it. They planned to implement "lean" on large construction projects if they had direct control over them. On smaller jobs, they would use many lean principles such as the Last Planner System (LPS – developed by Lean Construction Institute). Since then, the IPD team has tried to utilize lean whenever and wherever they can. It allows the team to maximize its most limited resource – people. . . .
>
> "[L]ean" is not a solution to all problems. When the IPD team started the implementation of "lean," they planned to use the LPS on every job. But later on they realized that it was not the case since the LPS worked well for some projects but poorly on other jobs. The LPS is not applicable for all projects and should be applied case by case. Projects not subjecting [sic] to a lot of changes are not suitable to use the LPS. It is necessary to evaluate each project in terms of its potential for changes before deciding whether or not to use the LPS.
>
> [Moreover], it was tough to sell "lean" to everybody, especially those who are unfamiliar with it. Many GCs knew little about the LPS and the Last Responsible Moment (LRM) so they were suspicious. They believed late decisions would create poor schedules to release work to downstream crews. It was difficult for them to understand and accept those concepts.

Jilei Wang, *Integrated Project Delivery – Achieving Relational Contracting Through Traditional Project Management Methods*, Graduate Thesis, University of Cincinnati at 32-33 (Aug. 2008).

> in collaboration with the CPD Team, to develop a quality plan.[126] The quality plan shall, at a minimum, address eleven separate issues including clear communication of contract documents to project participants, training workers on standardized work practices and continuous improvement of work practices, quality check lists, training onsite managers in quality assurance, developing work "handoff" protocols, and creating standards by which to measure and track quality performance.[127]

### 3. Assuring Cost Integrity Through Cost Transparency

IPD models built on cost reimbursement provide for full examination of all cost information. The development of the Target Cost proceeds on a "open book" basis. Under the C195 Family, the Company is required to keep full and detailed records related to the cost of the work, and the owner and its auditors are afforded access to those records.[128] The owner has similar audit rights under the ConsensusDOCS 300 agreement.[129]

The owner may also conduct verification such as counting employees at the project site, witnessing the distribution of payroll, verifying information and amounts through interviews and written confirmations with employees, subcontractors, and material suppliers.[130] The designer and constructor shall require their consultants, trade contractors, subcontractors, and material

---

[126] ConsensusDOCS 300 at ¶¶ 3.10 and 3.10.1.

[127] ConsensusDOCS 300 at ¶ 3.10.1. Since the time of the pyramids, managing design and construction quality has been a difficult challenge. Management of quality has two broad components: (1) quality assurance, and (2) quality control. Quality assurance are the planned or systematic actions necessary to provide adequate confidence that a product, process, or service will conform to established requirements. Quality control, on the other hand, is inspection, testing, evaluation, or other necessary actions to verify that a product, process, or service conforms to established requirements. *See* J. L. Burati and J. J. Farrington, *Cost of Quality Deviations in Design and Construction,* Construction Industry Institute, Source Document 29 (Aug. 1987). An example of quality assurance might be reviewing a request for quotation for an equipment item to assure that the design documents for the equipment agree with project specifications. Quality control might include inspecting the equipment during fabrication to ensure that it is manufactured according to specification. *See* Construction Industry Institute, *Potential for Construction Industry Improvement, Vol. 1 – Assessment Methodology,* § 5.1.2.5, Source Document 61 (Nov. 1990). Beyond managing quality at the project level, emphasis needs to be placed on quality of organizational and management structures within design and construction firms. Commitment to Total Quality Management (TQM) principles is an important partner selection criterion. *See* Construction Industry Institute, *Guideline for Implementation of CII Concepts: Best Practices for the Construction Industry,* Implementation Resource 42-2 at 13 (Sept. 1995) (identifying "continuous improvement" or Total Quality Management (TQM) as one of thirteen "best practices" for the construction industry).

The quality plan addressed in § 3.10.1 focuses primarily on quality assurance matters, which is appropriate given that quality control is a standard subject covered in construction contracting and a routine practice (performed to varying levels of exactitude) in the field. Paragraph 13.2 calls upon the constructor, trade contractors, and subcontractors to submit to the Management Group for its approval a construction operations quality plan that addresses clean-up, materials management, and standardized construction operation practices. Workmanship, tests and inspection, and correction of work are addressed in Article 13.

[128] AIA Document C196 – 2008, Standard Form of Agreement Between Single Purpose Entity and Owner for Integrated Project Delivery, § 7.1 (2008).

[129] ConsensusDOCS 300 at Article 19.

[130] ConsensusDOCS 300 at ¶ 19.2. This is the construction equivalent of the "trust but verify" principle.

suppliers to comply with the record-keeping and auditing requirements.[131]

The ConsensusDOCS agreement contemplates a final accounting where the owner's accountants must seek to conduct this exercise within fifteen days after the constructor's delivery of the final accounting to the Management Group.[132] Based upon such Cost of the Work as the owner's accountants report as substantiated by the constructor's final accounting, the Management Group either issues a final certificate for payment or notifies the constructor in writing of the reasons for withholding its certificate. Any dispute that arises in connection with the final accounting is resolved pursuant to the agreement's dispute resolution provisions. Pending a final resolution of disputed amount, the owner shall pay the constructor the amount certified as indicated in the final certificate for payment.[133]

### C. Project Control: The Management Model

IPD proceeds by consensus. Consensus requires joint decision-making on most major issues affecting the project. On the other hand, IPD recognizes that the most significant stakeholder in the project is the owner. It is the owner's needs and desires, the most important of which are set forth as mutually agreed-upon project goals, that all participants seek to satisfy. It is the owner's money that funds most, if not all, project activity and, at the end of the day, it is the owner that must live with the outcome. As a consequence, IPD must strike a balance between the owner's right of ultimate control with the collaborative decision-making that is a hallmark of any integrated project delivery approach.

Traditional contracting contains an odd mixture of control points. The owner has nearly unfettered discretion to change project program requirements at any time.[134] This is the intent behind the typical "changes" clause. As long as the change is not so drastic as to amount to a completely new undertaking (*i.e.*, an abandonment of the original contract sometimes referred to as a "cardinal" change in federal contracting), the owner is free (in a manner of speaking) to make unilateral changes to project scope.[135] Changes to project scope and the owner's right to

---

[131] ConsensusDOCS 300 at ¶ 19.3.

[132] ConsensusDOCS 300 at ¶ 19.4.

[133] ConsensusDOCS 300 at ¶ 19.4. It is not clear what happens if the Management Group fails to reach consensus with respect to either issuing a final certificate for payment or agreeing upon the reasons for withholding its certificate. Borrowing from language that is commonly found in agreements addressing similar issues arising in connection with change orders, the owner could be obligated to pay that amount for which there is consensus, with the parties proceeding through the dispute resolution process on the disputed amount.

[134] Traditional contracting strategy places heavy emphasis on unilateral decision-making with respect to changes while de-emphasizing incentives:

> Contract clauses related to change provisions and project control requirements appear to be standard practice with 84% utilization on projects. Alternatively, incentives are only used at a rate of 33% on owner projects. This low level of utilization could be due to recent good economic climate for owners [this study was done in the late 1980s] with its predominance of lump sum contracting as well as the difficulty often associated with administering incentive clauses.

Construction Industry Institute, *Potential for Construction Industry Improvement, Vol. II – Assessment Results, Conclusions and Recommendations*, Source Document 62 at 169 (Nov. 1990).

[135] *Bruner & O'Connor on Construction Law*, § 4.13 (West Group 2002, Supp. 2008).

make unilateral changes under the changes clause has generated a fair amount of controversy over the years.[136] The possibility that the owner may make changes to the work often plays as prominent role in risk surveys.[137] Many owners believe that contractors unfairly use their leverage when pricing change order work. In contrast, many in the construction community believe that owners do not appreciate the disruption that changes can mean to workflow and, ultimately, the "bottom line." As a consequence, the owner's unilateral right to make changes has been the source of much dispute over the years.

Traditional contracting approaches, while giving the owner great discretion in making changes to program requirements, also seek to isolate the owner from the decisions of its design and construction professionals. The owner throws its project requirements "over the transom" to the designer, who, in turn, hands over its design to the contractor for execution. The contractor's choice of "means and methods" are its alone, for which neither the owner nor designer provide any input or take much interest. This segregation of activities is liability driven. The less one knows and plays a role in what others are doing, the more one is shielded from liability in the event they do something wrong. While this approach is understandable, given the current liability environment in the design and construction industry, it makes for poor overall project management and all too often proves counterproductive.[138]

---

[136] *See* Construction Industry Institute, *Control of Construction Project Scope*, at 40-44, Source Document 6 (March 1986) ("Why do problems with changes persist on these [poorly scoped] projects?. . . . Without exception, company representatives indicated the need for operator input in project scope development. They listed late input from these personnel as a primary reason for owner-initiated changes and problems. The most vehement complaints, as could be expected, came from contractors. For example, one contractor said of operating personnel, 'These people are dangerous. They have no concept of what their requests will mean to the project.' The same contractor encouraged early input followed by a frozen design basis. . . . The difficulties in freezing design on cost-reimbursable design are obvious. As stated earlier, owners often choose to perform the project cost-plus because it affords them the freedom to change their mind. With only one exception, owner organizations admitted in one form or another, 'We like to say design is frozen, but you never can really freeze it on this type [industrial] project.' A majority of firms identified piping and instrumentation diagrams as the point in design where a freeze would be most beneficial. . . . While contractors' change control systems may be capable of reflecting any request's costs, the time required to provide the estimate might render it useless. Owners complain that contractors are able to provide estimates quickly on lump-sum jobs, but not on cost-plus jobs. Owners admit that this slow turnaround may lead them to request changes without respect to their cost, or to bypass the control system. . . . On cost reimbursable jobs, particularly on those where there is no guaranteed maximum price or where the fee is a percentage of project cost, contractors are economically motivated to permit higher project costs. If changes make projects more expensive, then contractors have incentive to allow changes on projects. The incentive for controlling changes comes from contractors desiring to maintain good client relations. Owners do not like surprises, and mounting change costs that are reported only after they have occurred, may surprise owners. Contractors, then, are in a difficult position. They attempt to provide the project as the owner wants it, but they must provide it at an acceptable cost. Some others have complained that contractors go too far in change control, that owner suggestions are met with artificially high cost estimates to discourage changes.")

[137] *See* American Society of Civil Engineers, *Construction Risks and Liability Sharing*, Vol. II, Appendix 1 (1980); Kumaraswamy & Yogeswaran, *Significant Sources of Construction Claims*, 15 Int'l Constr. L. Rev. 144 (1998).

[138] The liability concerns that construction presents inevitably leads, under traditional contracting schemes, to clauses seeking to shift liability from one player to another. Inequitable risk allocation, at least as it is so perceived by certain project participants, generates mistrust and can lead to dispute. From a management perspective, risk allocation that places liability on parties who do not have the ability to control or manage the factors essential to

Collaborative contracting approaches are built on a different management model. While the owner retains essential control over its program and project requirements, most other decisions are collective. Moreover, under many IPD models, the owner's program requirements are evaluated by other team members so that the owner may have their input early and make whatever changes it believes are appropriate based upon their review and evaluation.

Most IPD contracts seek to strike a balance between collaborative decision-making and the owner's right of control over major program requirements and project developments. This is often achieved through creation of various management and implementation teams within a contract structure that still provides the owner with unilateral control over changes to its program and the right to terminate the contract at its convenience. The ConsensusDOCS 300 is typical. Under Article 20, the owner may order changes in the work.[139] Under Article 22, the owner has

---

controlling the risk is inherently flawed. Nevertheless, this is a typical result of traditional contracting. Risk is flowed downstream to subcontractors, but project control remains largely in the hands of those upstream. Complaints about inequitable risk allocation and the owner's lack of participation in project decision-making have been around for some time:

> The owner or its representative has an essential role in improving working relations, contract execution and overall project performance by the decisions made regarding risk allocation. This research documents the general conclusion that use of onerous contract provisions that cause the contractor to assume inequitable, unbearable and uncontrollable risks will directly and negatively impact the owner-contractor working relationship.
>
> Beyond equitable allocation of risks, there are additional steps an owner can take to improve working relationships. Several firms interviewed in this study suggested the development of project problem-solving teams with owner and contractor personnel to anticipate potential project problems and provide workable solutions in advance. Another contributed suggestion was to give increased authority to the owner's on-site project manager so decisions can be made a levels closer to the work.
>
> Improved contract execution can result from owner investment in preconstruction studies to better define risks. Execution can also be facilitated by development of a project execution manual consisting of detailed procedures for handling indemnity problems, consequential damages, differing conditions and delays when they occur. Another suggestion was for more aggressive owner administration and documentation of project problems to prevent unnecessary claims and disputes.
>
> Owners typically resist changing contract content for fear that such changes will adversely disrupt their means of purchasing construction services. The modifications that do occur often focus on allocating additional risks to the contractor. Recommendations included in this report may represent for many firms a dramatic shift from present methods of allocating contractual risk. The research evidence supporting these recommendations, however, is substantial. Both owners and contractors are thus encouraged to use the information contained within this document to stimulate development of contract terms that more positively support project performance and participant working relationships.

Construction Industry Institute, *Impact of Risk Allocation and Equity in Construction Contracts*, Source Document 44 at v-vi (March 1989).

Many of these recommendations are addressed, but at a much more fundamental level, through IPD.

[139] ConsensusDOCS 300 at ¶ 20.2.1. The clause also permits the constructor to "request" changes in the work. Presumably the difference between "requesting" and "ordering" is one of control. The owner has the right, and therefore controls, changes in the work whereas the constructor does not. Of interest is the fact that the designer is absent from the changes process under the ConsensusDOCS 300 approach.

the right to suspend performance or terminate the contract for its convenience.[140] The project is managed collectively. Article 4 creates a Management Group consisting of representatives from the owner, designer and constructor. Decision-making is by consensus, although the owner "breaks all ties" by having the right to make determinations in the absence of consensus.[141] Where the owner makes a decision with a lack of consensus, it is subject to the dispute resolution process in Article 23.[142] Decisions implicating life, health, property and public welfare, and which are required to be made by a licensed design professional, shall be made by the designer.[143] The Management Group does not make the day-to-day decisions to move the project forward. This is delegated to another collaborative team – the Collaborative Project Delivery (CPD) Team.[144] The CPD Team includes representatives of the owner, designer and constructor as well as design consultants and trade contractors important to the preconstruction phase. These parties are required to sign Joining Agreements as they become members of the team, accepting the principles and methods of collaboration set forth in the ConsensusDOCS 300.[145] The agreement also sets forth meeting requirements and communication protocols between and among teams.[146]

Much of the focus of collaborative management under the ConsensusDOCS 300 is on the preconstruction phases:

> It would be easy to overstate the "collaborative" nature the ConsensusDocs 300 form of agreement. While the "collaborative principles" described in the agreement are well-stated, and theoretically govern the parties through the entire performance of the project, they are most important through stage one. However, once the price of the project is fixed, the contractor agrees to complete the project for no greater sum than that price. The contractor then performs its work according to the provisions of the contract, which resemble those of most standard

---

[140] ConsensusDOCS 300 at ¶ 22.1 (Suspension by Owner for Convenience) and ¶ 22.4 (Termination by Owner for Convenience). The owner also has the traditional right to terminate for default (¶ 22.3). The construction and designer also have the right to terminate (¶ 22.5). One of the bases upon which the constructor or designer may terminate is where the owner suspends performance for its convenience (¶ 22.5.1.3). As a result, the owner's suspension rights are not unfettered, as invoking this right gives either the designer or constructor the right to terminate.

The ConsensusDOCS 300 agreement does not discuss the consequences of contract termination by one of the other parties. What is the effect on the tri-party agreement if one of the parties chooses to terminate another? What rights does the constructor have if, for example, the owner chooses to terminate the designer? Contract termination is a tricky concept in the context of collaborative undertakings. How vital are team members to a team? Employing traditional contract termination concepts to collaborative undertakings is a bit incongruous, as it suggests that team members may be eliminated or exchanged without materially altering the team. Nevertheless, allowance should be made for team members to withdraw or be replaced upon good cause shown or with the consensus of the other team members.

[141] ConsensusDOCS 300 at ¶ 4.1 (Management Group) and ¶ 4.6 (Decision-Making).

[142] ConsensusDOCS 300 at ¶ 4.6.

[143] ConsensusDOCS 300 at ¶ 4.6.

[144] ConsensusDOCS 300 at ¶ 3.3.

[145] ConsensusDOCS 300 at ¶ 3.3.

[146] ConsensusDOCS 300 at ¶¶ 4.7, 4.8, and 4.9.

> general conditions. These include the standard remedies for disputes that may wind up in court or arbitration. Thus, for the bulk of the project, the contractor is performing the project under a detailed agreement with the owner similar to traditional agreements, the terms of which were fixed prior to the start of the parties' collaborative efforts.
>
> Unfortunately, this agreement seems to fall into the same trap as previous forms dealing with simpler projects. While the first stage of the project is characterized by collaboration and flexible compensation arrangements, the construction of the project in the second stage involves the parties following a detailed script dictated by the contract with a fixed price. Except for the fixing of the price, this script was written before the project's scope and nature were defined. Much of the advantage of the parties' earlier collaboration is wasted by the structure of the second stage agreement. Is it reasonable to expect that this agreement will be any more likely to avoid disputes by attempting to forecast all of the project's issues than previous forms?[147]

The AIA's C195 is perhaps the most aggressive form when it comes to creating novel project management structures. The owner, architect and construction manager (as well as any other primary project participants chosen to be Members) form a separate Company through which to manage the Project. The Company, a limited liability company, holds no property, has no employees, and is only minimally funded.[148] While the structure of the Company is intended to generate no significant profits of losses *at the Company level*, as all revenue is distributed in the form of payments to Members and others providing design and construction services, the creation of a separate legal entity through which to manage the Project is more than a symbolic act. The forming of a company, while a bit more involved than simply writing up a contract, furthers the parties' collaborative undertaking as it requires them to carefully consider governance and financial incentive questions critical to Project success.

Like the ConsensusDOCS 300, the C195 creates a two-tier management structure that presumes consensus decision-making. The mechanics of how this is achieved, however, are different. The limited liability company structure provides a natural platform for collaborative

---

[147] Allen Overcash, *Will the New Contract Forms for Integrated Project Delivery Make Conflict Obsolete? (Or Are We Still Lost in our Contract Obsession?)*, 3:1 J. ACCL 19, 32-33 (Winter 2009). While it is understandable how someone might conclude ConsensusDOCS 300 is a fixed-price contract, in reality it more closely resembles a cost reimbursement form.

Others have characterized the ConsensusDOCS 300 as "not significantly different from a design/build contract." Victor O. Schinnerer & Co., Inc., *Guidelines for Improving Practice*, No. 1 at 3 (2008). Whether this assessment is entirely accurate is open to question, but it does highlight some of the perception issues that IPD agreements raise. These agreements are quite different from traditional contracts and yet it is difficult to categorize or understand them entirely separate from familiar customs and practices. The tendency to equate IPD contracts with more familiar contracts and project delivery approaches, while understandable, can lead to some unintended misunderstandings.

[148] At least this is the AIA model. Of course, parties may choose to create a more substantial entity, although this would require a rethinking of the capitalization, distribution and governance provisions which are beyond the scope of our examination.

governance. Article 8 of C195 sets forth the Company's management structure. A Governance Board is created consisting of the five board members, or such other odd number of board members as the Members may determine from time to time.[149] The rationale behind this uneven numerical arrangement is to avoid a deadlock on those matters that the Members have chosen may be decided through majority vote. Authorizations, approvals, or other actions subject to majority rule are essentially within the owner's control because it maintains one more representative on the Governance Board than the total of the other Members.[150] One of the owner's representatives serves as the Governance Board.[151]

Notwithstanding the owner's numerical control, the underlying governance assumption is unanimity.[152] As a consequence, the Members must give careful thought as to which matters shall be carved for majority rule (*i.e.*, those matters within the owner's unilateral control). The C195 Family does not contain a number of the standard clauses found in construction contracts. For example, there is no changes clause contained in either the C195, C196 or C197. This is not an oversight. Many of the traditional construction contract clauses, including the changes clause, have been sources of much controversy and dispute. The C195, which is the AIA's most aggressive expression of collaborative project delivery, seeks to avoid many of the common pitfalls by hewing closely to tenets of the *IPD Guide*.[153]

Is it imperative for an owner to carve out the right to unilaterally control project scope under the C195? There is, of course, a natural tendency for owners to want to control their own programs. From this perspective, it would not be unusual for the owner to set aside changes in project scope for majority decision-making. Yet, under the C195 model, the failure to carve scope change for majority rule may not make much of a difference. If the Members have done their due diligence and put together a well-functioning team, it is unlikely that disagreement would arise over changes the owner desired to make to the project. While changes to project scope might well have financial consequences to the Members, and therefore a discussion about

---

[149] AIA Document C195 – 2008, Standard Form Single Purpose Entity Agreement for Integrated Project Delivery, § 8.2.1 (2008).

[150] AIA Document C195 – 2008, Standard Form Single Purpose Entity Agreement for Integrated Project Delivery, § 8.2.1 (2008) ("The Owner shall appoint a number of representatives to the Governance Board such that the total number of Owner representatives on the Governance Board shall be one more than the total number of Non-Owner Members.")

[151] AIA Document C195 – 2008, Standard Form Single Purpose Entity Agreement for Integrated Project Delivery, at § 8.2.1 (2008).

[152] AIA Document C195 – 2008, Standard Form Single Purpose Entity Agreement for Integrated Project Delivery, § 8.2.3 (2008) ("Except for those matters specifically set forth in § 8.2.4 allowing the Company to take action by majority vote, all authorizations, approvals, or other actions of the Governance Board shall require the unanimous affirmative vote of the board members.")

[153] AIA National/AIA California Council, *Integrated Project Delivery: A Guide*, Version 1 at 7, (2007) ("Traditional delivery and contracting approaches contemplate separate silos of responsibility that, in practice, yield inefficiencies whenever there is a hand-off from one silo to another. Additionally, projects delivered traditionally suffer because participant success and project success are not necessarily related. Indeed, it is quite possible for one or more project participants to "succeed," notwithstanding overall project failure. IPD, however, represents a behavioral sea change in the industry by breaking down the silos of responsibility, requiring close cooperation among all major participants, and aligning participant success to project success.")

adjusting the Target Cost might be in order, neither the architect or construction manager are performing construction activities (except in the unusual case) and neither of them guarantee construction cost. Moreover, the owner always has the unilateral right to terminate its agreement with the Company at its convenience.[154]

Day-to-day management of the Project is accomplished through the Project Management Team.[155] The Project Management Team consists of one representative from each Member. Moreover, the Project Management Team may choose to include, as advisors, representatives, certain Non-Members under contract either to a Member or to the Company in order to bring to bear their unique skills and expertise on particular matters.[156] Exhibit D, the Work Plan to C195, sets forth the structure, duties, and protocols of the Project Management Team. Exhibit D also covers the use of Building Information Modeling (BIM). The Project Management Team commits to use BIM to the greatest possible extent.[157] Models are considered contract documents, although it is anticipated that the Members may supplement these understandings with regard to BIM with supplemental agreements specifying, among other things, which particular models are considered contract documents.[158]

The AIA's transitional IPD Family (centered around the A295) achieves collaboration through more traditional means. There are no separate formal committees established. Instead,

---

[154] AIA Document C196 – 2008, Standard Form of Agreement Between Single Purpose Entity and Owner for Integrated Project Delivery, Article 6 (2008).

[155] AIA Document C195 – 2008, Standard Form Single Purpose Entity Agreement for Integrated Project Delivery, Exhibit D (Work Plan), § D.1.1 (2008) ("The Members, under their respective Member Agreements, shall establish a Project Management Team responsible for managing the planning, design and construction activities required to complete the Project in the collaborative, integrated process intended under the Agreement. Among other things, the Project Management Team shall be responsible for monitoring and stimulating the progress of the Project and for developing periodic cost projections, benchmarks, metrics, and standards for evaluating the performance of all Members and Non-Members in the achievement of timely and cost effective services and construction on the Project.")

[156] AIA Document C195 – 2008, Standard Form Single Purpose Entity Agreement for Integrated Project Delivery, Exhibit D, § D.1.1.3(2008).

[157] AIA Document C195 – 2008, Standard Form Single Purpose Entity Agreement for Integrated Project Delivery, Exhibit D, § D.3.1 (2008).

[158] AIA Document C195 – 2008, Standard Form Single Purpose Entity Agreement for Integrated Project Delivery, Exhibit D, § D.3.2 (2008). *See also*, AIA Document E202 – 2008, Building Information Modeling Protocol Exhibit (2008). The E202 Document sets forth a detailed matrix referred to as the "Model Element Table" utilizing the Construction Specification Institute's UniFormat that allows the project participants to identify the Level of Development (LOD) of particular model elements for purposes of reaching shared expectations with respect to the amount of reliance that may be placed upon model elements for a specified LOD.

The ConsensusDOCS 300 also anticipates the parties will likely utilize BIM technology:

> The Parties may establish a building information modeling (BIM) approach to design and construction of the Project, providing continuous and immediate availability of reliable, integrated and coordinated design, scope, schedule and cost information. The use of a building modeling approach, and the processes and technologies necessary to fully utilize such an approach, shall be established as an addendum to this Agreement. If a BIM approach is elected, the Management Group shall establish the BIM parameters, standards and technological requirements.

ConsensusDOCS 300 at ¶ 6.9. The ConsensusDOCS 301 is the organization's BIM protocol document.

the parties are required to coordinate the services provided by their consultants and subcontractors.[159] Section 4.2 sets forth the contractor's general consultation responsibilities, which include advising the owner and architect on proposed site use and improvements, selection of materials, building systems and equipment. The contractor is also required to provide recommendations on constructability, availability of materials and labor, time requirements for procurement, installation and construction and other factors related to construction cost including, but not limited to, costs of alternative designs or materials.[160]

During the various pre-construction phases, the contractor takes on consultation or coordination responsibilities. For example, during the Conceptualization phase, the contractor periodically updates the project schedule in collaboration with the architect and, together with the architect, provides a preliminary evaluation of the owner's program and budget for the work.[161] During the Criteria Design phase, the architect and contractor consult on the preliminary design and the criteria design documents.[162] During this phase, the contractor also is charged with obtaining information from subcontractors and material suppliers regarding proposed systems or products, including material procurement scheduling product data sheets, life-cycle and energy efficiency data, cost data necessary to validate estimates and schedules for their scopes of work, tolerances and prefabrication opportunities.[163] The Criteria Design phase concludes with the owner, architect and contractor meeting to review the criteria design documents, and the contractor updating its estimate and project schedule.[164]

During the Detailed Design phase, the architect meets with the owner and contractor as appropriate to review the detailed design documents.[165] The contractor continues to update its estimate and project schedule and, if at the end of the Detailed Design phase the contractor's estimate exceeds the owner's budget, the owner may elect to increase its budget or, in consultation with the architect and contractor, revise the project program or implement any other mutually acceptable alternative.[166] At the conclusion of the Detailed Design phase, the architect submits its detailed design documents which, if approved by the owner, obligates the contractor to prepare a Guaranteed Maximum Price (GMP) proposal for the owner's review and

---

[159] AIA Document A295 – 2008 General Conditions of the Contract for Integrated Project Delivery, § 1.6 (2008).

[160] AIA Document A295 – 2008 General Conditions of the Contract for Integrated Project Delivery, § 4.2.1 (2008).

[161] AIA Document A295 – 2008 General Conditions of the Contract for Integrated Project Delivery, § 5.2 and 5.5 (2008).

[162] AIA Document A295 – 2008 General Conditions of the Contract for Integrated Project Delivery, §§ 6.1 and 6.2 (2008).

[163] AIA Document A295 – 2008 General Conditions of the Contract for Integrated Project Delivery, § 6.4 (2008).

[164] AIA Document A295 – 2008 General Conditions of the Contract for Integrated Project Delivery, §§ 6.6 and 6.7 (2008).

[165] AIA Document A295 – 2008 General Conditions of the Contract for Integrated Project Delivery, § 7.2 (2008).

[166] AIA Document A295 – 2008 General Conditions of the Contract for Integrated Project Delivery, § 7.4.1 (2008).

acceptance.[167]

Upon joint review of the GMP proposal and the owner's acceptance, the parties move on to the Implementation Documents phase.[168] The architect and contractor prepare implementation documents.[169] The implementation documents illustrate and describe the further development of the approved GMP documents and set forth in detail the requirements for the construction of the work. [170] Under a BIM approach (which the A295 Family anticipates will be utilized) the Implementation Documents phase is a naturally collaborative effort with designers, contractors and material suppliers all contributing to the model. During the Implementation Documents phase, the contractor makes recommendations for substitutions which shall be considered by the architect and both of them incorporate into the implementation documents the design requirements of governmental authorities having jurisdiction over the project.[171] At the conclusion of the implementation documents phase, the owner, architect and contractor meet to review the implementation documents and, upon the owner's approval, they become part of the GMP Documents and take priority over the detailed design documents.[172] As the Project moves into the construction phase, the collaboration efforts diminish and the Project takes on more of a traditional flavor.

### D. Risk Control: The Liability Model

A principal feature of many IPD agreements, particularly those that strive to realign incentives to foster collaboration, is a new liability model. In some respects, the economic and liability models go "hand-in-hand." A *quid pro quo* for service providers sharing in the

---

[167] AIA Document A295 – 2008 General Conditions of the Contract for Integrated Project Delivery, §§ 7.5 and 7.6 (2008).

[168] Under IPD phasing, the implementation documents process merges traditional shop drawing activities with the design professional's preparation of construction documents.

[169] AIA Document A295 – 2008 General Conditions of the Contract for Integrated Project Delivery, § 8.1 (2008).

[170] AIA National/AIA California Council, *Integrated Project Delivery: A Guide*, Version 1 at 27 (2007) ("The goal of the ID [implementation documents] phase is to complete the determination and documentation of how the design intent will be implemented, not to change or develop it. The traditional shop drawing process is merged into this phase as constructors, trade contractors and suppliers document how systems and structure will be created. In addition, this phase generates the documents that third parties will use for permitting, financing, and regulatory purposes. Because the Detailed Design Phase concludes with the design and all building systems "fully and unambiguously defined, coordinated and validated," the Implementation Documents phase comprises less effort than the traditional Construction Documents phase.")

[171] AIA Document A295 – 2008 General Conditions of the Contract for Integrated Project Delivery, §§ 8.3 and 8.4 (2008). The extent of the contractor's efforts in reviewing, evaluating, and making recommendations on the design documents must be understood in the context of the A295's general guidance that the contractor is not required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the GMP Documents for a portion of the Work, or unless the contractor needs to provide such services in order to carry out the contractor's responsibilities for the construction means, methods, techniques, sequences and procedures. AIA Document A295 – 2008 General Conditions of the Contract for Integrated Project Delivery, § 4.2.6 (2008).

[172] AIA Document A295 – 2008 General Conditions of the Contract for Integrated Project Delivery, § 8.7 (2008).

enterprise risk (under the C195 model working at cost, or perhaps without any reimbursement if actual costs exceed the Target Cost) is the restructuring of traditional risk allocation and liability assessment.

Why change the familiar pattern of allocating risk down the contracting chain and leaving the parties, more or less, unfettered to seek redress from one another? Because the current approach simply doesn't work very well. Under traditional contracting schemes, risk is often allocated to parties who are unable to control it or bear its consequences. Seeking redress through arbitration or litigation is highly inefficient, resulting in substantial additional costs and disrupting the parties from tending to more productive matters, often for months and years after project closure. From an industry-wide perspective, utilizing lawyers to move money around from one project participant to another is a highly inefficient and costly process. Nor is litigation consistent with or conducive to collaborative undertakings.

Nevertheless, the need to "blame someone" and exact retribution runs strong in our culture. Moreover, the perceived economic benefits of litigation (often more theoretical than real) are difficult for some to relinquish. Others believe that litigation, or perhaps more precisely the threat of litigation, ameliorates bad behavior and otherwise quells the natural tendency of people to cause harm – a kind of Hobbesian view of project development. All understandable, given the current contracting environment. But under an integrated delivery model, litigation and unenlightened risk allocation are counterproductive. Why misallocate risk when all share in project failure? Why sue someone who is collaboratively working with you to accomplish a mutual goal?

These considerations have a tendency to move IPD participants toward more facilitated dispute resolution models, rather than rigidly formalized dispute processes. IPD liability models often shield participants from liability arising from collective decision-making.[173] Similarly, service providers, particularly those part of the collaborative team, agree to limit their rights of recovery against other team members, including the owner. Some models, like the Project Alliance, severely limit team members from seeking redress from one another.[174]

As between the ConsensusDOCS 300 and the two AIA IPD approaches, the C195 Family presents the greatest departure from traditional construction contracting liability models. On the one hand, the C195 follows the exculpation and indemnification approaches frequently found in limited liability company agreements. Article 12 covers Liability, Exculpation, and Indemnification. Members, *acting in their capacity as members* (as distinct from acting pursuant to separate agreements with the Company) are not liable to the Company or any other Member for good-faith reliance on the provisions of the SPE agreement.[175] Members (including those affiliated with them or their agents – designated as "Covered Persons") are not liable to the

---

[173] *See* ConsensusDOCS 300, ¶ 3.8.2.1.

[174] *See* Steve Rowlinson, et al., *Alliancing in Australia – No-Litigation Contracts: A tautology?*, J. Prof. Issues in Eng. Ed. & Prac. (Jan. 2006); J. S. J. Koolwijk, *Alternative Dispute Resolution Methods Used in Alliance Contracts*, J. Prof. Issues in Eng. Ed. & Prac. at 44 (Jan. 2006).

[175] AIA Document C195 – 2008, Standard Form Single Purpose Entity Agreement for Integrated Project Delivery, at § 12.1.2 (2008).

Company or to any other Member (Covered Person) for any loss due to an act or omission performed by it in good faith on behalf of the Company and in a manner reasonably believed to be within the scope of its authority.[176] The Company indemnifies each Member (Covered Person) for acts or omissions performed by it in good faith on behalf of the Company and reasonably believed to be within the scope of its authority.[177] The limitations on Members' liability contained in Article 12 are all limited to the Members' activities as a Member under the SPE, as opposed to the Members' responsibilities under separate contracts with the Company, such as the design and construction management contracts (C196 and C197).

The C195 Family's liability model seeks to contain claims within the membership without jeopardizing rights under required insurance coverages. Article 9 of C197 (Company/Non-Owner Member agreement) and Article 5 of the C196 (Company/Owner Member agreement) contain the key liability provisions. The Company and Members waive the right to make claim against one another, except as otherwise provided in Articles 9 and 5, respectively. Any claim a Member or the Company is entitled to pursue, against one another or other Members, must be done through the dispute resolution process set forth in Article 18 of C195 (the SPE agreement).[178] The heart of the liability scheme with respect to Non-Owner Members is laid out in sections 9.3 through 9.6 of the C197:

> **§ 9.3 Members Liability to Company Limited to Required and Available Insurance:** Except for liability arising out of a Member's willful misconduct, its liability (and the liability of its principals and employees) shall not exceed the proceeds of insurance required under the Agreement and available for the Member's liability.
>
> **§ 9.4 Limitation of Member Liability to Other Member Limited to Required and Available Insurance; Member Assigns Claims Against Other Members to Company**: With the exception of liability due to a Member's willful misconduct, no Member may recover against another Member for amounts in excess of required and available insurance. Moreover, Members assign to the Company all claims against other Members and empower the Company to resolve the assigned claims and distribute recoveries as it sees fit, subject to the dispute resolution process of C195.
>
> **§ 9.5 Company Indemnifies Members Against All Claims Not Paid by Insurance with Exception of Willful Misconduct:** Company defends and indemnifies Members (its consultants, contractors, agents and employees) from claims not paid by insurance whether or not the dispute is caused in whole or in

---

[176] AIA Document C195 – 2008, Standard Form Single Purpose Entity Agreement for Integrated Project Delivery at § 12.2 (2008).

[177] AIA Document C195 – 2008, Standard Form Single Purpose Entity Agreement for Integrated Project Delivery at § 12.3.1 (2008).

[178] AIA Document C196 – 2008, Standard Form of Agreement between Single Purpose Entity and Owner for Integrated Project Delivery, § 5.2 (2008); AIA Document C197 – 2008, Standard Form of Agreement between Single Purpose Entity and Non-Owner Member for Integrated Project Delivery, § 9.2 (2008).

part by the Party indemnified. Company has no obligation to indemnify any Member for claims arising out of willful misconduct.

**§ 9.6 Members Assign to Company all Claims Against Non-Members:** Members assign to the Company all claims against Non-Members providing services or performing work for the Project and empower the Company to resolve or compromise those claims and distribute any recoveries as it sees fit, subject to the Members' rights under the dispute resolution process of C195.

A similar risk allocation scheme is set forth in Article 5 of the Company/Owner Agreement (C196), except the owner is not shielded from liability to the Company because the owner has the obligation to pay the Company for services provided by or through it with respect to the project.[179] This liability scheme has the effect of funneling claims, whether they be against Members or non-members, through the Company's dispute resolution process.[180]

The limited liability structure has the effect of shielding Members from non-members' contract claims. To the extent the organizational structure is recognized and enforced, there should be no joint venture liability between Members.[181] Both the C196 and C197 contain standard waiver of subrogation provisions, thereby shielding Members from claims by any insurers "standing in the shoes" of a Member by virtue of paying a claim pursuant to a policy issued pursuant to the terms of the Member's agreement with the Company.[182]

The dispute resolution process under the C195 is also non-traditional. Article 18 of the C195 calls for a laddered dispute resolution process. Presumably, most disputes will be resolved in the field or within the Project Management Team. Members endeavor to resolve all disputes amicably and through mutual consensus. If any Member has a dispute with the Company or another Member (the latter of which is assigned to the Company under § 9.4 of C195), it shall timely give notice of the dispute and a meeting shall be held within fifteen days between representatives of all affected Members in an attempt to reach a mutual resolution. In the event a

---

[179] AIA Document C196 – 2008, Standard Form of Agreement between Single Purpose Entity and Owner for Integrated Project Delivery, §§ 5.3, 5.4 and 5.5 (2008).

[180] The reason for requiring Members to assign claims against non-members is to avoid the potential or other Members brought into litigation by way of contribution or indemnity due to another Member's attempt to seek redress from a non-member

[181] For a discussion of joint venture liability issues arising from construction activities, *see Bruner & O'Connor on Construction Law*, § 7:58 (West Group 2002, Supp. 2008). Moreover, both the C196 and C197 contain the following language:

> Nothing contained in this Agreement shall create a contractual relationship of any kind between (1) the Member and any non-member contracting directly with the Company, or (2) the Member and any consultant or subcontractor of any other Member or a non-member.

AIA Document C197 – 2008, Standard Form of Agreement between Single Purpose Entity and Non-Owner Member for Integrated Project Delivery, § 11.6 (2008). *See also* AIA Document C196 – 2008, Standard Form of Agreement Between Single Purpose Entity and Owner for Integrated Project Delivery, § 7.5 (2008).

[182] *See* AIA Document C196 – 2008, Standard Form of Agreement Between Single Purpose Entity and Owner for Integrated Project Delivery, § 7.2 (2008); AIA Document C197 – 2008, Standard Form of Agreement between Single Purpose Entity and Non-Owner Member for Integrated Project Delivery, § 11.3 (2008).

mutual resolution cannot be achieved, the matter proceeds to the Governance Board for resolution. The Governance Board shall confer on the dispute for the purpose of reaching consensus, and shall render a mutually agreed-upon decision within thirty days of receipt of written notice of the claim or dispute.[183] If the Governance Board is unable to reach a resolution, the matter is referred to arbitration through a Dispute Resolution Committee for full and final resolution.[184] The Dispute Resolution Committee consists of the chief executive of each Member and the neutral identified in Article 2 of C195. If the Members have failed to select a neutral, the neutral shall be selected by the chief justice of the state supreme court in which project is located.[185]

The Dispute Resolution Committee is chaired by the neutral and is entitled to consider such information as the Members mutually agree upon or that the neutral deems appropriate. The neutral first acts as a facilitator, seeking to have the Member representatives of the Dispute Resolution Committee reach a mutually acceptable resolution. If this cannot be achieved within sixty days of the dispute being referred to the Dispute Resolution Committee, the neutral shall decide the matter.[186]

The neutral's decision must be consistent with the risk allocation principles set forth in the C195, including any applicable limitations of liability.[187] The neutral shall request the Members provide him or her with whatever documentation they believe is appropriate for resolution. The neutral shall issue a decision within sixty days of the request for documentation, or within such time as the Dispute Resolution Committee deems appropriate. A neutral's decision is final and binding, and any Member may seek entry of judgment on behalf of the Company in accordance with applicable law in any court having jurisdiction thereof.[188]

The C195 incorporates a *force majeure* concept excusing performance and allowing an adjustment to the Target Cost for various events beyond the control of Members which adversely impact their ability to perform their contract obligations. Section 14.1 defines "*force majeure* event" by way of example. Section 14.2 sets forth the terms under which performance is excused as a result of the occurrence of a *force majeure* event. Section 14.3 permits the Target Cost to be adjusted based on the reasonable costs incurred as a result of a *force majeure* event.[189]

---

[183] AIA Document C195 – 2008, Standard Form Single Purpose Entity Agreement for Integrated Project Delivery, § 8.2 (2008).

[184] AIA Document C195 – 2008, Standard Form Single Purpose Entity Agreement for Integrated Project Delivery, § 18.3 (2008).

[185] AIA Document C195 – 2008, Standard Form Single Purpose Entity Agreement for Integrated Project Delivery, § 18.3 (2008).

[186] AIA Document C195 – 2008, Standard Form Single Purpose Entity Agreement for Integrated Project Delivery, § 18.4 (2008).

[187] The C195 in Article 6 sets for the risk allocation principles incorporated into the Members' agreements with the Company.

[188] AIA Document C195 – 2008, Standard Form Single Purpose Entity Agreement for Integrated Project Delivery, § 18.4 (2008).

[189] AIA Document C195 – 2008, Standard Form Single Purpose Entity Agreement for Integrated Project Delivery, §§ 14.1, 14.2, and 14.3 (2008).

The liability model of the ConsensusDOCS 300 is more of a menu approach. While the agreement contains a mutual waiver of consequential damages (¶ 3.8.3) and a waiver of subrogation claims by property insurers (¶ 21.4.3), the parties are required to elect other risk allocation alternatives. For example, under ¶ 3.8, the parties either agree to release one another from liability for loss occasioned from collaboratively reached and mutually agreed-upon Project decisions, or elect the traditional risk allocation approach of each party being fully liable for its own behavior.[190] If the parties choose traditional risk allocation, they have the opportunity to make a further election with respect to limiting the designer's and constructor's liability.[191]

Article 11 contains another opportunity for risk allocation election. With respect to liability for actual costs exceeding the Target Cost, the parties are required to decide whether the owner bears the excess costs entirely or whether they are shared between the parties.[192] If the excess costs are shared, the parties are required to elect whether the designer's and constructor's fees are or are not at risk, and whether the total amount of each fee shall or shall not represent the designer's and/or constructor's limit of liability for losses apportioned to Paragraph 11.5.[193]

The ConsensusDOCS 300 contains a number of common construction contract risk allocation provisions. For example, delays encountered by the constructor due to acts or omissions of the owner, the designer, or others shall entitle it to an equitable adjustment of the Target Cost.[194] Some of these clauses are altered due to the integrated and collaborative undertaking. For example, the differing site conditions clause incorporates only Type II conditions (*i.e.*, unusual or unknown physical conditions materially different from those ordinarily encountered). The owner may adjust or reject the constructor's payment obligation for defective work, repeated failure to perform, and other commonly enumerated reasons.[195]

The ConsensusDOCS indemnity provision is a bit involved. It consists of three paragraphs, as each party provides indemnity to the other two. Each party's indemnity is limited to the extent caused by its negligent acts or omissions, or anyone else's acts or omissions for which it may be liable. Each party is entitled to reimbursement of any defense costs paid above its percentage of liability for the underlying claim.[196] Under ¶ 21.4.4, the constructor indemnifies and holds harmless the owner for loss arising out of damage or alleged damage to any of the owner's existing adjacent property to the extent of the negligent acts or omissions of the constructor up to the limits of the constructor's commercial general liability insurance.

---

[190] ConsensusDOCS 300 at ¶ 3.8.2. Even if the parties release one another for loss arising from collaborative decisions (called "safe harbor decisions"), there is an exception for acts or omissions amounting to "willful default" of a contract obligation. ConsensusDOCS 300 at ¶ 3.8.2.1. The "willful default" exception is not expressly incorporated into the traditional risk allocation scheme where the parties agree to a limitation on the designer's or constructor's liability. ConsensusDOCS 300 at ¶ 3.8.2.2.

[191] ConsensusDOCS 300 at ¶ 3.8.2.2.

[192] ConsensusDOCS 300 at ¶ 11.5.

[193] ConsensusDOCS 300 at ¶ 11.6.

[194] ConsensusDOCS 300 at ¶ 15.6.2.

[195] ConsensusDOCS 300 at ¶ 18.3.

[196] ConsensusDOCS 300 at ¶¶ 21.1.1, 21.1.2, and 21.1.3.

The risk allocation program set forth in the AIA's transitional IPD documents follows closely that set out in the Institute's CM-at-Risk documents. There is, however, at least one significant exception. Because the contractor is intimately involved in the design process under IPD, it agrees to forego looking to either the owner or architect for damages resulting from errors, inconsistencies, or omissions in the GMP documents. Section 9.2.4 reads:

> Due to the responsibility the Contractor assumes throughout the development of the GMP Documents, neither the Owner nor the Architect shall be liable to the Contractor for damages resulting from errors, inconsistencies or omissions the Contractor reports pursuant to § 9.2.2. However, if the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's request for information pursuant to § 9.2.3, the Contractor shall make Claims as provided in Article 13. If the Contractor fails to perform the obligations of either sections 9.2.2 or 9.1.2 the Contractor shall pay such costs and damages to the Owner as would have been avoided if the Contractor had performed such obligations.[197]

## VIII. CONCLUSION

Integrated Project Delivery holds the prospect of real productivity gains in the provision of design and construction services. Project delivery innovation is long overdue in the construction industry. At present, there are few projects moving forward on an integrated model and, therefore, there is little in the way of hard empirical information as to the expected performance of this delivery model. Nevertheless, there is little doubt that more can be accomplished working collaboratively than not, and much can be done to improve upon traditional delivery models. The industry understands change is necessary and two organizations are leading the way with standard form Integrated Project Delivery agreements. The American Institute of Architects and ConsensusDOCS have issued contract forms that should be of real value to practitioners interested in making a difference by changing to more collaborative delivery models.

fb.us.3522176.06

[197] AIA Document A295 – 2008 General Conditions of the Contract for Integrated Project Delivery, § 9.2.4 (2008).