

If We Keep On Doing What We've Always Done...

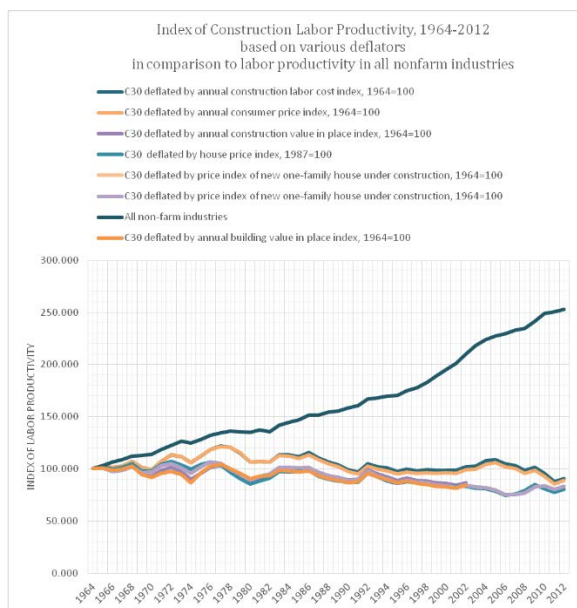
By Dale Munhall, AIA

We architects and builders often imagine that advancements in computer technology will single-handedly propel the construction industry into a promised land of teamwork and high productivity. In reality, though, progress will require changes that are far more fundamental than electronics and wishful thinking if we are to overcome our industry's dismal lack of progress—no matter which project delivery method was used—over the past fifty years (often due to adversarial “poison pill” contract provisions that can defeat good intentions in *any* method, as we will see).

It is embarrassing that construction industry productivity ranks dead last among all US non-farm industries since 1964, and **much of the blame lies with traditionally-adversarial project delivery conditions** where...(emphasis mine):

*“...there is a **lack of integration of design and construction**, and often **poor collaboration among team members**. This leads to risk-averse behavior as team members try to protect themselves.... the low bidders receive awards and then try to benefit from extra work. **The results are projects that are over budget, behind schedule, and more claims.** It is not surprising that labor productivity suffers under these conditions.” (per Government data in “Labor-Productivity Declines in the Construction Industry: Causes and Remedies, Another Look” by Dr. Paul Teicholz, Stanford Univ.*

http://www.aecbytes.com/viewpoint/2013/issue_67.html):



2012 All non-farm US industries productivity: 250

1964 US productivity baseline: 100

2012 Construction industry: ~85

Owners need, and deserve, building design and construction that is not only less wasteful and contentious but also vastly more efficient and cost-effective than what they have been paying for this past half-century. If construction efficiency had kept pace with the rest of American industry, buildings could cost owners 20-30% less than they now do, and without question, the profitability of all participants

would be greater as well. But our history of risk-shifting and adversarial contractual terms, in design *and* construction, obstruct teamwork and drag down productivity.

Under all traditional low-bid, closed-books delivery systems, owners are essentially hiring opponents to construct their buildings. We need to start operating as an *actual team* of collaborative professionals serving the interests of a mutual client where owner, architect and general contractor openly share the *same*—not opposite—financial interests. We deceive ourselves whenever we give lip service to ‘*teamwork*’ while contractually pitting project participants against each other in closed-book, I-win-you-lose contests, as we have unwittingly done for generations now. There can be no teamwork when hostile inducements for conflict and self-benefit are built into everyone’s contracts. A ‘gotcha’ mentality benefits no one, so this legacy of adversarial risk-*shifting* based on lump-sum-price, hidden-profit project delivery has got to stop.

Confronting reality is uncomfortable, and change is hard, but we can—and we *must*—do better. All of us.

For owners, buying the creation of a one-of-a-kind building is NOT like buying paper clips. It is an increasingly complex risk-*management* process that requires a broad range of skills and knowledge. General contractors self-perform little, if any, of the physical work anymore (an array of specialized trade subcontractors do), so we architects have to help our clients see that, like design, the entire process of managing delivery of a modern building has become a complex professional service, not a guesswork lottery or financially opaque, low-bid packaged product.

The traditional owner/customer can never be served as a client whose interests are protected throughout the process until we allow the *whole* delivery team to manage risks for the owner’s benefit. Clearly, our industry is in need of a less disjointed, professional services team-mindset for project delivery that is fair, collaborative and financially transparent while helping owners to more productively control cost, time and quality. Such a solution is closer than you may think.

Several organizations, including DBIA and AIA, have already begun to develop multi-party contracts for Integrated Project Delivery (IPD) in order to collaboratively bring all project participants to the table up-front. One prominent version of IPD makes contractors, owners and designers become shareholders in the project as a way to align the financial interests of all parties. However, trying to change our industry in such a radical way is too cumbersome for all but the very largest projects, and a true joint-ownership format will be slow to evolve in any event.

In the meantime, **I submit that it is NOT necessary to reinvent the contract wheel in order for all parties to share in the major benefits of IPD now on current typical-size projects.**

Here are the ‘IPD-ish’ principles that my firm has helped a number of proactive clients to successfully apply on offices, athletics, infrastructure, hospitality and healthcare projects:

The following five simple IPD-ish provisions can easily be woven into any of the industry’s existing ‘standard’ construction contracts—including AIA, DBIA and AGC Agreements—whether for CM at-Risk or for Design-Build on private as well as government projects (some of these concepts could even be

modified to improve traditional old Design-Bid-Build contracts where public owners are statutorily required to use that slow, inefficient and unnecessarily contentious method).

1. **Qualifications-Based Selection (QBS):** This is the key first step toward construction as a professional service. At the end of Schematic Design, an owner and their A/E interview and select the best qualified GC/CM's *approach* proposal with no lump-sum-price or unpaid design up front. As Philadelphia humorist Franklin P. Jones rightly observed: "*when you think you get something for nothing, you just haven't been billed for it yet*". So, in D-B, use an owner's peer review A/E for programming only (not schematics) with *performance* specs, and avoid using 'bridging' as the RFP—bucket-brigade design just breeds disputes.
2. **fee-based service:** In CM at-Risk or in Design-Build, hire a well-qualified General Contractor/Construction Manager who is capable of design phase collaboration (not all are) to keep the project team on time/on budget. Note: a professional fee is in lieu of—not in addition to—traditional profit mark-ups. A competitively negotiated fee eliminates profit incentives for disputes or inflated claims later. When schedule is crucial, use bonus *incentives* for successfully meeting owner's targets because penalties, e.g., liquidated damages (LDs) merely shift the risk down to subs who have to bid higher to cover the risk—but this hidden higher-bid cost is not visible to the owner, and it is not refundable if LDs do not arise later. Ironically, subs' fear of devastating LDs *slows* progress, increases the owner's costs, and reduces project quality and teamwork. And if delays do happen, the inevitable blame-shifting storm then induces wasteful litigation expense for everyone. And even more ironically, LDs are seldom, if ever, actually paid to the owner. Carefully crafted incentives, however, can motivate progress in the owner's interests, but penalties never do. The reason for this is that the GC gets to keep an incentive for themselves, but they pass all risk of LDs through to subcontractors, so a GC is not as motivated by fear of LDs as many owners and their attorneys might imagine.
3. **early GMP:** set a Guaranteed Maximum Price as early as possible to match the reality of every owner's limited budget--ideally after Schematic Design at GC/CM selection, and sign it into their contract. Why in the world has our industry for so long waited until *after* all design is done and bids opened to find out if our client can afford the project? It makes no cost-effective sense, and neither does 'Value Engineering' after design. Early GMP with a Contingency lets the GC/CM help designers keep in-budget without redesign waste so that *one* A/E can design *once*. That's the whole reason to hire a professional manager: to advise designers on budget and schedule instead of the usual lump-sum bid surprise after design is done. Unused Contingency and other savings should always remain with the owner (note: so-called 'shared savings' with the contractor is counterproductive and reverts the project to adversarial old self-serving conflicts of interest—don't allow it).
4. **open-books:** the GC/CM shares all sub-bids, subcontracts and invoices with owner and A/E (this eliminates hidden profits, conflict-of-interest substitutions and inflated change orders). **The owner can then make informed cost/benefit decisions—not something-for-nothing, but they see and get all that they pay for**. Financial transparency is essential.

5. **technology** is relentlessly driving the need for earlier information, so always **require joint use of these tools for design and construction**: Building Information Modeling (BIM) for managing 3-D details, 4-D time and 5-D cost (get independent cost estimates, too!), and Critical Path Method (CPM) scheduling, Lean Construction techniques with full-access to a project website (Project Management Information System). These tools are our IPD future.

NONE of these common-sense IPD-ish contract provisions are radical or untried, but only if all five are applied together, by all of us, the resulting collaborative framework would absolutely revolutionize—and professionalize—the construction industry (while also complying with the Brooks Act's QBS requirement for selecting professional *services* on government projects). Note: team management of projects' risks to the benefit of all participants can also be extended to key trade subcontractors on the same QBS, open-book, GMP professional fee-basis. It just takes an awareness that we can do better.

Our industry's transition into a collaborative integrated-delivery future that is fairer, less adversarial and far more productive is long overdue. Technology-driven evolution seems inevitable, but architects and forward-thinking construction professionals need to jointly step up and help owners creatively adopt all five of these IDP-ish provisions on their projects sooner, not later.

Transparent management of construction risk as a fee-based professional *service* in the owner's interests—not the same old risk-shifting, adversarial lump-sum contracts—will productively integrate the entire project delivery process and enable true collaborative *teamwork* among design and construction professionals, as equals. Finally.

About the Author

Dale Munhall, AIA, is Director of Construction Phase Services for Leo A Daly at their national headquarters office in Omaha. He is a registered architect, certified by the National Council of Architectural Registration Boards (NCARB), and is a LEED Accredited Professional. During his four decade career he has developed a unique perspective on the entire project delivery process via his early experience as a construction manager and field superintendent, real estate broker and part-time building code official. He actively serves on committees of the American Institute of Architects (AIA) and the Design-Build Institute of America (DBIA), and he has written and made national presentations on various aspects of design and construction. He can be reached at DLMunhall@leoadaly.com

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