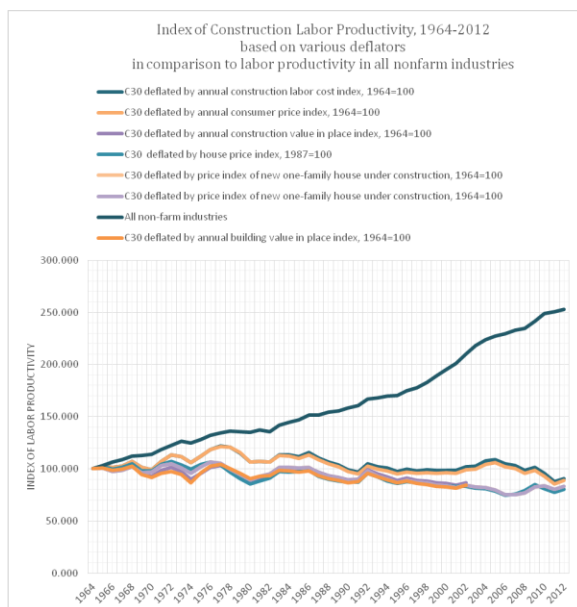


## If We Keep On Doing What We've Always Done...

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 basic than electronics and wishful thinking if we are to overcome our dismal lack of construction performance—no matter which project delivery method was used—over the past fifty years (often due to “poison pill” contract provisions that can defeat good intentions in any method, as we will see).

It is embarrassing that our industry's productivity ranks dead last among all US non-farm industries since 1964, and **much of the blame lies with 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](http://www.aecbytes.com/viewpoint/2013/issue_67.html)):



2012 All non-farm US industries  
productivity: 250

1964 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 would 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 contract terms continues to obstruct teamwork and drag down productivity.**

**Under all varieties of low-bid, no-peek delivery systems, owners are essentially hiring an opponent to construct their buildings.** We need to start operating instead as an *actual team* 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.**

Buying the creation of a one-of-a-kind building is NOT like buying paper clips. General contractors self-perform little, if any, of the physical work anymore (subs 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 *professional service*, not a guesswork lottery or no-peek, low-bid packaged product. The owner can never be served as a mutual *client* 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 team-services 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 shareholders in joint-ownership of 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 that 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.** 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 or 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):** an owner interviews and selects the best *approach* proposal by a designer *and* a builder as a team (qualified *people* do projects) with no lottery-type lowball, lump-sum-price or exploitative, unpaid design up front. In D-B avoid 'bridging' as the RFP—partial-design breeds disputes; use an owner's peer review A/E for programming and *performance* specs. As Franklin Jones rightly observed: "*when you think you get something for nothing, you just haven't been billed for it yet*".
2. **fee-based service:** in CM at-Risk or Design-Build, hire a qualified General Contractor who is capable of design phase collaboration to keep the team on time/on budget. Note: professional fee is in lieu of profit mark-ups; a competitively negotiated fee eliminates incentives for disputes or inflated claims later. When schedule is crucial, use bonus *incentives* for successfully meeting owner's targets—penalties, e.g., liquidated damages, merely shift the risk down to subs who bid higher to cover the risk, but ironically, fear *slows* progress and reduces quality & teamwork; blame then induces litigation. Incentives motivate work in the owner's interests, but penalties never do (and LDs are virtually never actually paid, either).
3. **early GMP:** set a Guaranteed Maximum Price ideally at signing of contract (to match the reality of every owner's limited budget!). Early GMP lets GC keep project in-budget from the beginning and eliminates redesign waste so one A/E can design *once*. Unused Contingency funds and savings are the owner's.
4. **open-books:** GC shares all sub-bids, subcontracts and invoices with owner and A/E (eliminates hidden profits, inflated change orders and conflict-of-interest substitutions). The owner can then make well-informed cost/benefit decisions—not something-for-nothing, but they see *and get* all that they pay for.
5. **technology** is relentlessly driving the need for earlier information, so **require joint use of collaborative 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!), Critical Path Method (CPM) scheduling, Lean Construction practices and full-access to a project website (a Project Management Information System).

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

Our industry's transition into an 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 step up and help owners adopt all five 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 as a risk-shifting, adversarial lump-sum commodity—will productively integrate the entire project delivery process and enable true teamwork among design and construction professionals, as equals. Finally.

### **About the Author**

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