

Executive Summary

Our Mega Question for this symposium was “How can Michigan create consensus for a model comprehensive construction implementation standard that will serve the needs of the 21st century?” Once again, the question imbeds the importance of consensus and our future.

Workgroups for this symposium answered this question with breakthrough ideas relating to construction best practices. These practices were based upon proven and cutting-edge methods like BIM, lean principles, integrated project design, workforce training and development, prefabrication, modularization, and commercial and legal innovations. We summed up the practices with the term Integrated Delivery. At the conclusion of the symposium, the attendees unanimously embraced the use of Integrated Delivery. There was little, if any, disagreement among our diverse stakeholders representing some of the very best of the owner, contractor, A/E, and labor communities about what was needed to advance the industry. That’s the good news.

Now for the other side of the coin. How could these great ideas be achieved? Some data highlights from symposium presentations may be useful to set the stage for our recommendations:

- The U.S. share of global construction in 1988 was 25 percent. In 2009, it was 15 percent. What will be our percentage in 2012 or beyond? The numbers are not currently available by accountants, but our construction practitioners sense the downward curve.
- The U.S. is still the most productive construction environment in the world, but our productivity growth rate is declining.
- For a representative project, BIM/Lean-Enabled Design results in a 40-week build out. Design/Build-Build Fast Tracked is 50 weeks. Design/Bid/Build Fast Tracked runs 60 weeks.
- Waste in manufacturing here is 26 percent of the pie with value-added content at 62 percent. Waste in construction is 57 percent with value added content at only 10 percent.

Is construction lagging because our domestic market for years was insulated from global competition? While it is maddening to consider that the supply of a second bridge to San Francisco will come from China, shouldn’t we be thankful for this external force? Shouldn’t we take to heart that the kind of global competitive forces that changed our manufacturing might do the same for construction?

One informative presentation at the symposium, entitled “Enlightened Project Delivery,” gave us hope.

It’s subtitle, “How to Make Sure That You Design What’s Wanted and Build What’s Designed, on Time and Budget” tells it all. When the arrows of owner, prime, and subcontractors, A/E firms and labor are aligned, risk and waste are driven out and consensus decision-making brings the project to a successful conclusion. To foster trust building, the owner in this case study took the jump to a new contract model: a single contract signed by all the project stakeholders. That was key. If one failed, all risked failing with a safety net of a cost reimbursement formula after profits were lost. It’s a step beyond the open-book approach and not dictated by an owner’s need of control for control’s sake alone.

With this in mind, symposium attendees at the beginning were energized and focused on a model construction contract including collective risk management, labor/management operating agreement, shared risk and reward, metrics for construction productivity, and last but not least owner leadership. Like those who love construction, the goal was simple. Let’s roll up our sleeves, apply Integrated Delivery, and get the job done on time and within budget.

In the panel discussion midway in the symposium, members offered some healthy reality checks. First, a fundamental problem was lack of trust and today’s contract documents take the trust out of everything. The second monster they shared was the fear. Fear rarely fosters collaboration. Without collaboration, the chances of enjoying the benefits of “win-win” thinking and acting are slim. Or to put it another way, the fruits of conflict are often inefficiency and waste. And finally the panel identified the beast of lack of commitment or avoidance of accountability. All hail to the god of waste!

Near the end of the symposium, the strategy workgroup reported out a consortium body that would take a leadership role giving Michigan’s construction industry one voice focusing on marketing the positives of Integrated Delivery. This workgroup examined past efforts like the Great Lakes Construction Alliance, Michigan Construction Industry Partnership, and the Michigan Owners Contractors Association and concluded that while well-intentioned, these efforts lacked sustainability due to, among other things, reduction in owner commitment, inability to reach consensus, lack of authority, and no dedicated staff or resources. Perhaps best said, its members were in the business, but not of the business of managing a major start up or organizational entity to drive change. Figure 46 of this report captures well the outcomes from the strategy workgroup.

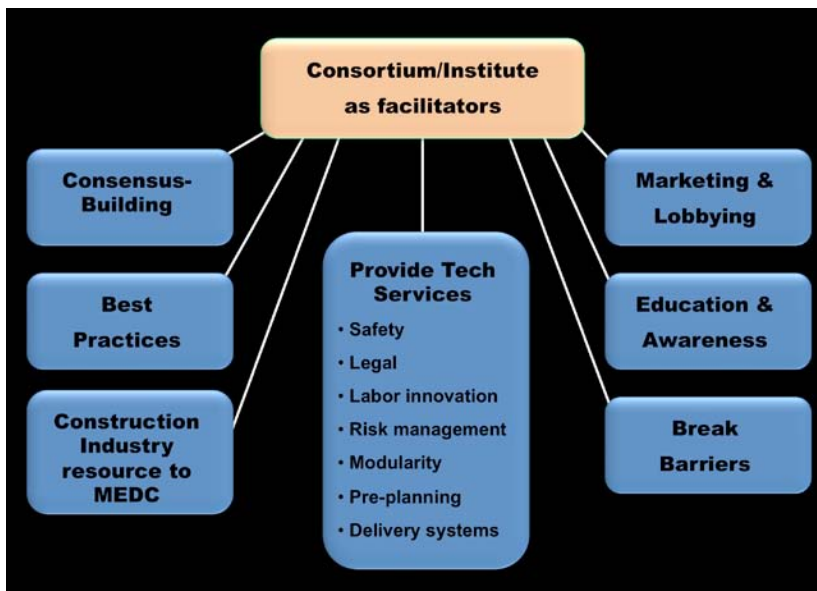


Figure 46 (duplicated from page 55): Strategy Workgroup Consortium Model

All of our attendees concluded that this model could be the catalyst for critical transformation and implementation of today's well-recognized and tomorrow's newly generated best practices to distinguish Michigan as our nation's construction thought and action leader. The workgroup's work product is a great roadmap that the Institute wholeheartedly endorses. It takes past efforts to the next level, especially in terms of the need for a viable business plan, organizational governance structure, and sustainable funding and staffing.

But does it go far enough? Can a report's conclusion of a new entity alone make the slogan "Made in Michigan" a reality for the creation of wealth and jobs? Would a new entity assuage our current worries—real or perceived—of the decline of Michigan and the U.S. as a construction powerhouse? Will this model, as the culture workgroup noted, transform the current construction culture? Indeed, the culture workgroup's work product should be incorporated into the strategic workgroup's model. Great so far, but again will it make the difference?

The technology workgroup had it relatively easy. Many of the best construction practices are generally known. Some, however, are closely held and protected by companies hoping to maintain a competitive advantage. When combined with the work of the legal workgroup, Integrated Delivery begins to take shape driving out commercial risk, optimizing collaboration, and adding value instead of waste.

In the view of the Institute, the present economic and political climate is a disincentive for the broad voluntary application of best practices in

the construction industry in part due to the fragmentation of the owner stakeholder base being both public and private. Owners purchasing "silos" dominate the landscape, resist innovation, and hold fast to what has been done in the past. The risk of advancing or of experimenting with different practices beyond the lowest bidder approach outweighs the chance of future benefits.

For example, one university buys and builds its way and another in a different way. There is no consistency of construction buying practices and frankly it's no secret that hard times make for a buyer's market. So, "Why change?" is the conventional

thinking. And a low bidder is too often the winner at the award stage only to become the loser at the end of the project after the cost overruns, change order battles, bonding disputes, threats of default, or, worse, the litigation. Survival of the fittest. Darwin would be proud.

So, how do we change the rules of engagement for the better and do so on a sustainable basis? The recommendations of the Institute set forth below are geared to answering this fundamental question.

RECOMMENDATION 1:

The Governor of the State of Michigan should appoint a blue-ribbon voluntary task force made up of key public and private stakeholders from the owner, contractor, architect/engineering, and labor communities, as well as management, insurance, bonding, and financial professionals to assess the findings of this report and other pertinent information. Within six months from its formation, the task force would be asked to submit its white paper recommendations for implementation of best construction practices for any construction project funded by public funds in whole or in part.

To jumpstart the work of this symposium and move this report from the shelf to reality, we see

the best fast-track opportunity through action by the governor's office. The governor holds the purse strings for the funding of publicly funded infrastructure, medical, and higher education construction projects and has an oversight responsibility to make certain the funds are wisely spent. This recommendation would not require legislative action and could be implemented by executive order across the board.

As an "owner," the State of Michigan has substantial buying power. If transformed by the application of best practices, this power could relieve budgetary pressures and offer immediate savings for taxpayers and for those served by state government. For the same dollars or less, more could be accomplished. For example, university construction costs are a significant driver of educational costs in total. Construction savings will translate into reduction of the costs of education. For parents planning for their children's education, lean construction would suddenly take on a whole new meaning. All of this translates into lower operating costs for the state and benefits for all Michigan citizens. Streamlining and harmonizing current buying and construction regulations through uniform best practices would also be a worthy byproduct. Over 180 current approvals may apply to construction on a university campus in Michigan. Enough said.

Do we want a bronze plaque that says "Made in China" or "Made in Canada" on our future construction works in Michigan? The Institute is "global blind" respecting and recognizing all construction leaders, but advises us not to rest on our laurels in the daunting face of world competition. Now is the time to be proactive and realize the benefits of this recommendation.

RECOMMENDATION 2:

Building on the results of past ESD Institute symposia, legislation should be enacted to create an authority under Michigan law that would mandate the use of best construction practices within the jurisdictional scope and purpose of the authority.

The ESD Institute Symposium report "Building Consensus for Michigan's Integrated Global Freight Hub," published March 9–10, 2011, offered a fortuitous opportunity for the application of this recommendation. All stakeholders either

for or against a second bridge across the Detroit River agree that unless built without public funds, an authority of some sort is needed for its construction, operation, and maintenance. This authority would offer a vehicle for the implementation of best construction practices if a second bridge is constructed.

On a larger scale, the Institute's symposium report "The Michigan Green Enterprise Zone Initiative," published March 19–20, 2009, as further refined in our subsequent symposia provides a Michigan-wide investment authority that would optimize the benefits of the cutting-edge application of best practices for construction undertaken by the Zone.⁴ This, together with the application of other best practices relating to labor, legal, medical, and other innovations, is the unifier and enabler for economic turnaround and for the realization of Michigan as an export state of choice. Enabling legislation for this purpose is available on our website.⁵

RECOMMENDATION 3:

The Engineering Society of Detroit and its Institute welcomes the opportunity to serve in a facilitative and supportive role in order to make the above recommendations a reality.

Given the board reach of ESD to over 60,000 professionals including corporations, architectural, technical and construction entities, educational institutions, building owners and managers, and unions, we believe that our role as an independent, neutral, and nonpartisan entity should be used by all stakeholders as referenced by the work product generated from our symposium workgroups. ESD would host a steering group over the near term to achieve these ends. Subject to ESD board approval, members of a task force would be identified for this purpose.

In conclusion, we accept the challenge offered by David A. Skiven, co-founder of the ESD Institute, "Why not search for those solutions that are just in front of us? They are ours to find and implement for this generation and next."

4. An excellent summary of ESD Institute work is available in our 2011 Portfolio on our website at www.esdinstitute.net.

5. See www.esdinstitute.net/greenzone for the draft legislation for the Michigan Investment Corporation Act.