

LEADING EDGE CONSTRUCTION NEWSLETTER

A Frisby Group Construction Consultants publication for all entities in the Construction Industry (www.frisbygroup.org). Contact Tom Frisby at tffrizzle@gmail.com.

National Research Council Report on Improving Our Industry

National Research Council is a part of the National Academy of Sciences. It recently published a study entitled "Advancing the Competitiveness and Efficiency of the U.S. Construction Industry" (which you can download free of charge by going to <http://nap.edu/catalog/12717.html>). Its research team was comprised of the "who's who" of construction industry leaders and gurus. It is an important study which hopefully you will review and pass on to owners, designers, construction managers and industry associations. The recommendations are summarized below and will become the overarching concept for many subsequent articles in this newsletter. The **five key recommendations** for improvement in the report are:

- **Widespread use of interoperable technology.** For those of us who just speak ordinary English, that means systems such as **building information modeling (BIM)** and to reduce it further, "computer aided design and drafting which provide three and four dimensional visualization and modeling programs, laser scanning, cost-estimating, and scheduling tools, and materials handling." Note that the term "collaborative processes" is highlighted by the NRC and that term or concept will be a driver throughout its recommendations. A future newsletter will deal with Information Technology in the construction industry.
- **Improved job-site efficiency.** Don't we all wish for this one? Again, the concept will be improved on site collaboration in addition to "greater use of automated equipment . . .and information technologies . . .process improvements, the provision for real time information . . ." A future newsletter will deal with some of the concepts presented so effectively by Messrs Ballard and Howell regarding lean construction.
- **Greater use of prefabrication, preassembly, modularization, and off site fabrication techniques and processes.** I guess the committee observed that the Chinese are erecting 35 story buildings in as many days, and that contractors have been more than challenged in attracting and developing motivated and highly skilled work force. (In my own opinion the fault largely lays at the feet of the contractors themselves, but that is a story for a different time and place.) But we have a major challenge exists regarding field productivity and a future newsletter will deal exclusively with this subject.

- **Innovative widespread use of demonstration installations.** BIM is what I term "build it before you build it". Demonstration projects take that concept to a real world level of going beyond the computer screen into a real world demonstration of how the pieces should be put together. On a project level, owners often push back on mock-ups because they believe they are unnecessary costs without realizing that the savings in time and money can be immense.
- **Effective performance measurement to drive efficiency and support innovation.** "If it can't be measured . . ." This applies to the industry performance as well as project and task level activities. Providing on an industry basis productivity statistics is very difficult because of the differences in types of work, contractors, and just the fact that many or most contractors do not do a very good job of measuring their own performance. I would be interested in knowing how many contractors have a meaningful performance measurement program, some form of earned value. Not enough is my guess.

In addition to reviewing the report by the NRC, reading the article entitled **Collaboration** set forth in www.frisbygroup.org, under **Articles**, may provide you some additional insight into trends in the industry, from the delivery systems through project management. Your comments regarding these articles will be appreciated. The article on Collaboration remains one in process and will be updated and edited periodically.