

# Advancing the Competitiveness and Efficiency of the U.S. Construction Industry



**Ted Kennedy, NRC Committee Chair**



# Committee's Task Statement

**Identify and prioritize technologies, processes, and deployment activities which have the greatest potential to significantly advance the productivity and competitiveness of the U.S. construction industry.**

# Approach

- **July 17-18, 2008, 2-day meeting and briefings from BFRL staff**
- **Commissioned white papers for workshop; Carl Haas, Paul Goodrum, Jeffrey Russell**
- **November 19-21, 2008, 2-day workshop and 1 day committee meeting**
- **February 3, 2009, final committee meeting**
- **Committee report peer reviewed by 10 construction industry experts**

# Activities with Potential for Breakthrough Improvements

- **Widespread use of interoperable technology applications and Building Information Modeling (BIM)**
- **Improved job-site efficiency through more effective interfacing of people, processes, materials, equipment, and IT**
- **Greater use of prefabrication, preassembly, modularization, and off-site fabrication and processes**
- **Innovative demonstration Installations**
- **Effective performance measures to drive efficiency and support innovation**

# Recommendations for NIST

- **Recommendation #1**: NIST should work with industry leaders to bring together a critical mass of construction industry stakeholders to develop a collaborative strategy for advancing the competitiveness and efficiency of the capital facilities sector of the U.S. construction industry. The collaborative strategy should identify actions needed to fully implement the activities with potential for breakthrough improvements.

# Recommendations for NIST

- **Recommendation #2: NIST should take the lead in developing a “technology readiness index” similar to indexes developed by NASA and the Department of Defense, for high-risk, high-cost, high-impact construction-related innovations. Such an index could help mitigate the risks of using new technologies, products, and processes by verifying their readiness to be deployed on a widespread basis.**

# Recommendations for NIST

- **Recommendation #3: NIST should work with the Bureau of Labor Statistics, the U.S. Census Bureau, and construction industry groups to develop effective industry-level measures for tracking the productivity of the construction industry and to enable improved efficiency and competitiveness.**