

## Need for Global Knowledge Sharing Related to Construction Innovation

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Innovation is a key to our industry success and takes the creativity of many talented people and the sharing of knowledge from many construction participants at institutions of higher education, research institutes, private businesses, and government agencies. Facing the competitive environment of the construction industry, Ruentex has a clear mission for innovation. Innovation is to create different value for our customers that competitors cannot provide and to create the difference that our customers are willing to pay for, because customers treasure value created by services rather than price. We try continuously to improve our operations using the latest proven technologies such as RFID for tracking precast concrete panels; 3D and 4D CAD for enhanced design and construction planning; modularization, ERP for providing an open book accounting format to secure the trust of our clients; and real-time construction monitoring for more effective project control.

In the age of the knowledge economy, we believe in sharing what we do with others because this creates the greatest impact on improving the quality of life in our society. A learning organization is the key mechanism for sharing, and communication and discussion are the two most important factors for successful learning environments. Sharing not only brings improvement but also business opportunity and profit. Sharing with the global community brings regional integration and further development. It is important to share information with competitors because this can raise the level of efficiency for the entire construction industry. In order to create a better knowledge sharing environment, companies should be members of the global construction community.

The greatest impact on society will result from the sharing of knowledge and communication of successes and failures related to construction planning, designing, construction, and operations. The challenge is to provide better communication between the various parties on a global basis. Great work is being performed at universities and construction companies around the world, and this information needs to be better transferred and shared to the global construction community.

Several construction research organizations exist worldwide that need to more effectively communicate with each other in relation to common research interests and to consider the potential to jointly fund projects and collaborate in a synergistic manner. I would fully support the creation of an organization (virtual or real) that would pull together the many construction research organizations around the world, such as the Construction Research Council (CRC) and Construction Industry Institute (CII) in

the United States, the Taiwan Construction Research Institute (TCRI), and the International Institution of Engineering Project Management (IIEPM) at Tsinghua University in China, the International Council for Building (CIB), and to also include members of the design, construction, and owner organizations. This knowledge-sharing organization would facilitate the transfer of construction knowledge and innovation worldwide.

Universities could help facilitate interaction between owner organizations and design and construction firms worldwide and be responsible for performing multidisciplinary research in several areas ripe for innovation related to new technologies, financing and funding strategies, contracting approaches, project-management techniques, safety, and quality. They would also provide leadership in developing educational programs for knowledge dissemination through traditional and distance education formats. Public and private organizations would provide project ideas for research, funding support, and offer essential data to the researchers. Design and construction companies would also provide ideas for construction research and assist in funding research projects. Firms involved with this global construction clearinghouse organization would, in turn, establish a competitive advantage by learning about more efficient approaches to constructing projects and establish valuable business connections in the process. Owners would obtain more construction value for their investment. Universities would help train and educate future leaders in our industry (academic or practitioner) and act as a catalyst in stimulating greater interaction between owners, contractors, and designers.

An organization such as this would provide the mechanism to bring together all of these groups to provide greater synergy with less duplication of effort and to facilitate creation of better ideas. This organization would also be helpful for construction industry practitioners who are interested in pursuing business opportunities in other areas of the world but who need information and connections that universities can provide. It could also result in better quality research performed more efficiently with less chance of duplication of effort. Working more closely with industry will ensure that topics are practical and useful. The challenge is for construction academics to unite on a global basis.

Just as we value sharing information and helping others in our business, so should the other stakeholders. Innovation takes the creative energies of many minds—this can best be accomplished in such a global construction clearinghouse concept. In the long run, the transfer of global knowledge related to innovative construction methods around the world will lead to greater development efforts and a higher quality of life for everyone.