



## CIB NEWS ARTICLE

International Council for Research and Innovation  
in Building and Construction

Providing a global network for international exchange and cooperation in research and innovation in building and construction, in support of an improved building process and of improved performance of the built environment.

November 2005

### Around the Task Groups and Working Commissions

#### TG61 – Benchmarking Construction Performance Data

### Introducing the New Task Group and its Coordinators

At its meeting in September 2005 the CIB Programme Committee officially established the new CIB Task Group TG61 – Benchmarking Construction Performance Data and appointed Prof. Dean T. Kashiwagi, USA and Prof. Charles Egbu, Scotland, UK as its Joint Coordinators.

A short description of the Task Group and a brief introduction of its Coordinators follows.

#### Introducing the Task Group

*The Task Group's Objectives are:*

- to identify what performance information and indicators are, which ones can be measured, and how they can be measured.
- to identify the impact of performance information on construction performance and the determination of value
- to identify what performance information has been used to deliver construction
- to identify the different usages of performance information
- to identify the sustainability of the performance information over time,

*and in this context defined task are:*

- to identify a group of world experts and seek to achieve a form of consensus on performance indicators, definitions, experiences, and strategic implications.
- to identify the researchers and practitioners who have used performance information
- to identify uses of performance information and databases
- to identify the impact of the performance information through surveys to construction clients

- to identify areas of future research to promote the use of performance information databases to increase the performance of construction
- to publish a document of the results of the study

*The Task Group will produce the following deliverable:*

- A worldwide publication on who is measuring which performance indicators along with the processes used to realize that data. The contents of the report will seek to establish the support of all Task Group members.
- Listing of users, researchers, journal and conference papers on the use of performance information and performance databases
- Results and analysis of a survey of clients of the use, impact, sustainability and results of performance information and databases
- Listing of potential research areas pertaining to performance information, performance data, and the management of performance information
- Conference/meeting proceeding for peer reviewed works in the area of performance information implementation and value
- Recommendations of the Task Group for the collection, warehousing, implementation, and impact of performance information on construction performance
- Final Comprehensive Report and Summary Report with the previous items
- Creation of a Journal "Best Value" that will publish papers on the collection, warehousing, implementation and impact of performance information in the delivery of construction and other services. The Journal will be fully funded by Arizona State University, internet based as well as hard copy, and have an initial distribution of 300 copies worldwide to construction clients and academic researchers. The Editorial board and peer reviewers will be required to have used or tested performance information, and will include both academic researchers and construction users. The



journal will be twice a year and turnaround time on the journal will be 6 months.

#### *Leadership of Task Group:*

- Coordinator: Dean Kashiwagi, PhD, PE, Professor, Director of PBSRG
- Joint coordinator: Charles Egbu, Glasgow Caledonian University, UK , PhD, PE, Professor
- Secretary of Research: Kenneth Sullivan, PhD, Assistant Professor, Director of the Facility Management Research Institute (FMRI)

Dean Kashiwagi has done \$5M research in the area of performance information based Best Value Procurement. He has over 100 refereed journal and conference papers. He also has been involved in over 400 tests using performance information over the past ten years. Dean has also been involved with two UK universities, the government of the Netherlands, and the Helsinki University of Technology. Dean is the leading researcher in the use of performance information.

Current and future levels of funding to PBSRG/ASU allow the financial support of coordinating/hosting TG meetings. Dean has the support of Kenneth Sullivan, assistant professor at ASU. Dean, Kenn and PBSRG have the support of a full time marketing/coordination person, Sylvia Romero. PBSRG also has publication and internet support. The PBSRG team recently hosted the CIB W092 Procurement Conference which was a stunning success in Las Vegas. The conference had twice as many papers and presenters as the previous conference.

#### *Cooperation with the following CIB Working Commissions and Task Groups is foreseen:*

- W060 – Performance Concept in Building
- W070 – Facility Management and Maintenance
- W092 – Procurement Systems
- W102 – Information and Knowledge Management in Construction
- TG53 – Postgraduate Research Training in Building and Construction
- TG58 – Clients and Construction Innovation

### **Potential Contributions to the Implementation to the Priority Themes in the CIB Pro-Active Approach**

TG61 has a strong tie to the existing Priority Themes, in the CIB Pro-Active Approach, of Performance Based Building and Revaluing Construction. The Task Group's core objectives encase the idea of performance information and its impact on construction value. The concept of gathering, maintaining, and utilizing performance information on an industry scale fundamentally impacts the method of construction procurement. In the Performance Based Building priority the selection of services (design, engineering,

consulting, construction, maintenance, etc.) will be impacted by performance information. The research will explore the ability to procure based on price and performance, where the performance is not a subjective or unclear measure but an analysis of a potential vendor's ability to prove their performance on past contracts and on the current project through the identification and minimization of risk. The performance information will be researched in respects to collection, storage, implementation, and impact.

In regards to the Revaluing Construction Priority Theme the congruity of the proposed Task Group is perhaps even more evident. The idea of performance information affects construction on a systemic level. The entire process of the construction, from selection to close out, is now placed at a new risk because of the collection and storage of performance numbers. For example, if a contractor performs poorly on a project, that result will be captured and warehoused in a performance database. Any future work that contractor attempts to procure under a performance information/construction value system will be put at risk due to the contractor's poor performance on the past work. Furthermore, if the example contractor is put at risk for non-performance, the need for client driven inspection, management, and oversight erodes and the business structure of the construction client may be altered. The research effort of the Task Group is to investigate performance information to determine its impact on construction value, usage, and the sustainability to implementing a performance information construction system.

## Introducing the TG61 Joint Coordinators

### Prof. Dean T. Kashiwagi



Dean Kashiwagi is a Professor of Arizona State University, Ira A. Fulton, School of Engineering and Applied Sciences – Del E. Webb School of Construction.

#### *Current Principal Areas of Teaching and Research:*

- Efficient processes, information based systems
- Best value procurement
- Benchmarking and use of performance information
- Construction industry structure, functions, interfaces
- Theoretical modeling, prototype development and testing, and implementation of systems

#### *Examples of Recent Publication:*

- Performance Information Procurement System (PIPS)
- Information Measurement Theory (IMT)

Dean Kashiwagi [dean.kashiwagi@asu.edu](mailto:dean.kashiwagi@asu.edu)

### Prof. Charles Egbu



Charles Egbu is stated at the Glasgow Caledonian University as Professor of Construction and Project Management – School of the Built and Natural Environment.

#### *Current Research Activities focus the following topics:*

- Knowledge management and Intellectual Capital assets in diverse project management environments
- Managing innovations (process, product, technology, service and market) in construction
- Lean and Agile management in construction
- Benchmarking and key performance indicators
- Project Management processes, tools & techniques
- Information technology and its impact on team-working, communication and productivity
- Construction procurement practices (including partnering, PFI and PPP)
- Skills, knowledge and competencies for construction management

#### *Examples of Recent Publications:*

- Anumba, C; Egbu, C; and Carrillo, P (2005) Knowledge Management in Construction, Blackwell Publishing. ISBN 1-4051 2972-7
- Fryer, B; Egbu, C; Ellis, R; and Gorse, C. (2004) The Practice of Construction Management (2004). Blackwell Publishing. ISBN 1-4051 1110-0

Charles Egbu [c.egbu@gcal.ac.uk](mailto:c.egbu@gcal.ac.uk)