

# W065 - Organisation and Management of Construction

<http://www.salford.ac.uk/time/cibw-65>

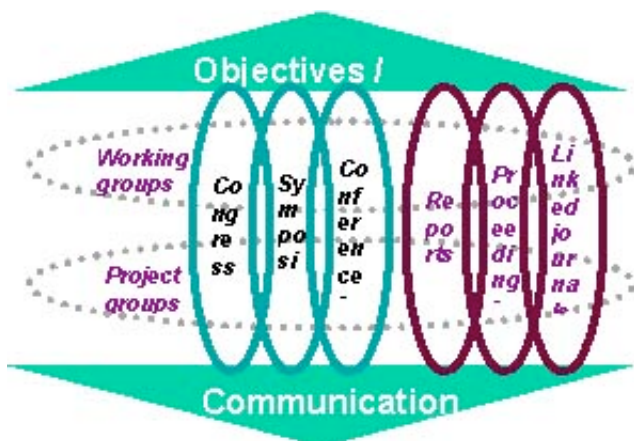
## Commission Meeting

Coordinator Peter Barrett welcomed upwards of 50 members from 16 countries to the Business Meeting of W065 held in conjunction with the W055 and W065 Triennial International Symposium on Customer Satisfaction in Cape Town in September.

A careful review was made of the various follow-up action points arising from last year's meeting.

States Peter:

The diagram below gives a visual summary of the main elements of W065's strategy. An innovation this year was a personal progress report by the Coordinator against the agreed strategy. This was presented to Commission Members as a stimulus. The overall conclusion is that "... W065 has maintained and consolidated its traditional role as planned. The more ambitious aspects of the strategy will take a concerted effort over the longer term, but some 'green shoots' are evident and must be carefully tended!" A key building block of future developments is identified as W065 project groups and their reports. These groups are described in more detail below.



As noted above, this meeting took place within the wider framework of the International Symposium and so it gave the opportunity for an initial feedback. Reactions were decidedly positive. 160 delegates had presented 125 papers and a very busy programme of social activities had been provided, including a visit to a Township. The programme had included workshops on the last day (after the Commission Meeting) on themes that emerged from the Symposium. 50 people had attended and they were a definite success. It was agreed that overall the whole event had been very professionally organised and Bob Hindle, Paul Bowen, PD and their team were warmly thanked for their efforts by all the W065 members. (Bob Hindle's own bird's eye-view of what took place is to be found [here](#).)

## 'Shop Window'

The Coordinator pointed out to members the availability of a "shop window" on the W065 web page for publications by members that others can purchase.

## W065 Task/Project Groups

Referring to the Coordinator's schematic representation of the Commission's strategic elements shown above a detailed description is given of each of its five project groups.

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## **W065 - The Five Project Groups**

### **Title: DEVELOPMENT OF INTERNATIONAL CONSTRUCTION LABOUR PRODUCTIVITY INDICES**

#### **Leaders:**

- H. Randolph Thomas, Penn State University, USA
- Ivica Zavrski, University of Zagreb, Croatia

#### **Rationale for Project:**

Most efforts to compare the construction labour market across international boundaries are based on economic indices and cost comparisons. Little work has been done on comparing actual performance on an individual project.

#### **Objective:**

The objective is to organise researchers to assemble the necessary databases to compare the labour performance in one country to that of another or to a standard database. The methodology will permit the comparison of management performance once design influences have been excluded.

#### **Overall Approach:**

The conceptual model has been developed by researchers at Penn State and the University of Zagreb. A report is in preparation that describes the model and illustrates the theory and procedures using five databases from the U.S., Croatia, and the UK. The report will be offered as a joint CIB publication. Another report will be developed that explains the procedures for data collection. This report will also be offered as a CIB publication.

Participating researchers in each country will select projects and construction activities, collect data, and organise databases detailing the construction labour performance in their country. These databases will be sent to Penn State where they will be assembled and analysed. Each participating researcher will be provided with a copy of all databases for their own use. Periodic results will be presented at annual meetings and tri-annual symposia of the two Commissions W055 and W065.

#### **Expected Results:**

Upon successful conclusion of this project, one will be able to assess the overall performance of a particular project activity and attribute various aspects of performance to design or management. If the management is deficient, the apparent reasons will be evident. Also, contractors working in international markets will be able to determine the relative difference in labour performance on particular activities and on overall performance.

#### **Time Frame:**

It is expected that the project will last 5-6 years.

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## **Title: INTEGRATED DELIVERY SYSTEMS FOR SUSTAINABILITY IN CONSTRUCTION**

### **Leader:**

- Martin Sexton, Research Centre for the Built and Human Environment  
University of Salford, United Kingdom

### **Rationale for Project:**

There is a growing consensus that appropriate and integrated objectives, strategies and actions are needed to make global built environments and construction activities sustainable. Appropriate objectives, strategies and actions, however, are contingent on the unique characteristics and demands of individual countries. There is an urgent need to build on such documents as Agenda 21, and debate and crystallise what these should be, and how they can be integrated across countries to form an appropriate global response.

### **Objectives:**

To classify and integrate different international responses to sustainable development by:

- Developing a holistic understanding of the varying sustainable development objectives, strategies and action being pursued and deployed in different countries.
- Assessing national and international effectiveness of these responses.
- Identifying commonalities and tensions between different objectives, strategies and actions.
- To recommend priority areas for future research in the sustainable development area which focus on both sharing best practice and developing international synergies.

### **Overall Approach:**

The Dynamic PSR model will be used, along with supporting methodological tools, to investigate current trajectories and effectiveness of sustainable development. The model was developed and used in a research project in the UK originally stimulated by CIB working with the US Civil Engineering Research Foundation. The model and its application is described in Barrett, P.S., Sexton, M.G. & Green, L., (1998), *Integrated Delivery Systems for Sustainable Construction*, DETR: London, UK.

Participating researchers in each country will collect data on the current approaches to sustainable development in their countries using the Dynamic PSR model. The various data will be sent to the University of Salford where they will be analysed and integrated to provide an overall international picture of current responses to sustainable development. Each participating researcher will be provided with a copy of all populated Dynamic PSR models for their own use.

### **Outputs:**

It is planned to publish the on-going results of the Project in various forms:

- Final findings will be presented at the Joint Meeting of W055 and W065, September 2000, Reading, UK.
- Articles in CIB and members' own countries.
- Information on the World Wide Web.
- Final CIB project report.

**Time Frame:**

It is expected that the Project will last twelve months.

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**Title: CONSTRUCTION COMPARATIVE ANALYSIS**

**Leader:**

- Jean Carassus, Economics and Human Sciences Department, Centre Scientifique et Technique du Bâtiment (CSTB), Paris, France

**Rationale for Project:**

Jean Carassus states:

We are executing research concerning an overall framework for the economic analysis of construction in developed countries. Our aim is to seek to acquire an understanding of the construction industry in its complexity and its diversity including:

- specifics of construction as compared to different manufacturing sectors
- building and civil engineering
- new construction and repair and maintenance
- production (flow approach) and property management (stock analysis)

**Objectives:**

1. To agree on an overall framework for the economic analysis of construction in developed countries.
2. To test this framework in five or six countries.
3. To publish the results of the work.

**Overall Approach:**

The project group could deal with:

1. National context and evolution of essential indicators: percentage of construction in GDP, clients' weights, building / civil engineering shares, new construction / repair and maintenance parts, production flows / property stocks etc.
2. Concepts of construction industry or construction meso-system, structuring particularity, life cycle

- of structures. Definition of the construction industry and of its main characteristics.
3. The three kinds of processes: continuous on-site management, short-lived on-site production processes, manufacturing processes without site constraints.
  4. The three types of players: specialised or construction players, non-specialised or other players, institutional players.
  5. Concept of configurations of players and examples of configurations of players for production and property management of several representative products (plant, bridge, offices, new housing, housing repair and maintenance).
  6. Concept of sub-system and definition of five or six sub-systems such as:
    - o international civil engineering and building
    - o national and local civil engineering (new, repair and maintenance)
    - o national and local non residential building (new, repair and maintenance)
    - o local new housing
    - o local housing repair and maintenance

**Time Frame:**

The aim is to achieve significant results within one year.

**The planned schedule is:**

- October 1999-February 2000: first part of the work.
- March 2000: Meeting in Paris.
- April-August 2000: second part of the work.
- September 2000: Meeting in Reading at W065 Meeting.

**Output:**

A joint W065 report, plus possibly joint conference or journal papers.

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**Title: SPICE: A PROCESS IMPROVEMENT TOOL FOR PROCESS ASSET MANAGEMENT****Leader:**

- Dr Marjan Sarshar, School of Construction and Property Management, University of Salford, United Kingdom

**Rationale for the Project:**

For many years, businesses within the construction sector have been applying new methods of working and technologies to improve productivity and attain quality gains. However, until now, the industry has not had a recognised methodology or framework on which to base a process improvement initiative. The absence of guidelines has meant that any improvements are isolated and benefits cannot be co-ordinated or repeated. The industry is unable to systematically assess construction processes, prioritise process improvements, and direct resources appropriately. Moreover, it is difficult for companies to benchmark and measure their performance relative to other organisations.

A current research project at Salford University is attempting to address these issues. SPICE aims to develop a framework, which can distinguish levels of increasing process capability. In this framework, 'immature' organisations will be characterised by difficulties with project costs and timescales. They often face product quality problems and have difficulty in managing people as well as the introduction of new technologies. Organisations of increasing maturity will be characterised by capabilities to progressively master project costs timescale, and product quality. Mature organisations align technology and people management with process improvement efforts.

SPICE currently has a national (UK) scope. However, the concepts behind SPICE are generic and could be applicable on an international scale. This project attempts to identify if the SPICE process improvement framework is applicable internationally.

### **Objectives:**

- To establish an evolutionary process improvement framework, for construction firms.
- To establish an assessment tool for the framework.
- To test the applicability of the framework, on an international scale.
- To assess the applicability of the framework to improve supply chain relations.
- To assess the possibility of expanding the framework to include FM and property management.
- To determine priorities for research into process and business improvement.

### **Overall Approach:**

The SPICE framework has been developed at Salford University. Several successful industrial case studies have been conducted (<http://www.surveying.salford.ac.uk/spice/>).

Participants will identify industrial case studies. Salford University will provide the initial framework and assessment mechanism. The participants will conduct case studies in their country and submit the results to Salford University for assessment, evaluation and reflection.

To improve the learning curve and resourcing of the project, it is possible for industrial partners to join a distance learning postgraduate (Masters or PhD) degree, by research, at Salford University (<http://www.surveying.salford.ac.uk/buhu/PGresearch/pgresearch>).

### **Outputs:**

- The documented framework.
- The documented assessment mechanism.
- Articles and presentations at national and international (CIB) conferences.

### **Time Frame:**

It is expected that the project will last twelve months.

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**Title: AN INTERNATIONAL COMPARATIVE STUDY OF CULTURE, ORGANISATION AND PERFORMANCE IN CONSTRUCTION FIRMS**

### **Leader:**

- Graham Winch, Bartlett School of Graduate Studies, University College London, United Kingdom

**Rationale for the Project:**

While there has been a growth of international comparative studies of the organisation of construction firms and projects, many of them are methodologically unsatisfactory with poor operationalisation of the measures of culture, organisation and performance deployed. The aim of this proposal is to implement a rigorous methodology for comparative research in construction based on the organisational assessment methodology deployed on a study of the French and British managers who built the Channel Tunnel.

**Objectives:**

To mount a multi-country study of culture, organisation and performance in construction firms. Through the auspices of the CIB, national teams would implement a common methodology providing both an organisational assessment of firms in their own country, and the data-base for a comparative study. The methodology will be that used for the comparative organisational assessment of culture and organisation on the channel tunnel project.

**Overall Approval:**

A research instrument exists which, with only minor development, can be deployed in a multi-country study of culture and organisation of construction firms. With the addition of simple performance measures (perhaps taken from the PROBE benchmarking instrument) this could provide a powerful tool for comparative research in the construction industry.

The Project Group will:

- develop the instrument and agree protocols for its implementation (led by Graham Winch, UCL)
- implement the instrument in as many countries as wished to participate and provide national data-sets (co-ordinated by Peter Barrett, Salford)
- conduct a comparative analysis of culture organisation and performance in construction firms (co-ordinated by Graham Winch).

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In addition to these Project Groups a Task Group is in operation and its Coordinator Dr. Christopher Preece gives an overview below.

**W065 - TASK GROUP 1**

**Title: INTERNATIONAL CONSTRUCTION MARKETING**

**Leader:**

- Dr Christopher Preece, Construction Management Group, University of Leeds, United Kingdom

**Rationale for Task Group:**

Because of the many changes that are taking place in construction, with regard to demand, competition

and construction delivery systems, marketing has become an essential activity for successful firms and practices. It could be said that marketing is at an embryonic stage of development in the construction industry and that its unique nature requires special adaptation of marketing theory.

The TG will provide an international focal point for the development of information on construction marketing and to discuss and develop appropriate theories, concepts, models, tools and methodologies for the study of the sector most applicable in the context of businesses domestically and in a global environment.

### **Objectives:**

- A Task Group will be formed to bring together those researchers across the Globe who are working, or wish to work, in this field in order to define and develop construction marketing as a distinct academic discipline.
- To act as co-ordinator for research that will be intended to establish the discipline.
- To act as a forum for discussion and debate concerning theories, concepts, models, tools and methodologies for the study of marketing in construction.
- To gather and review data on existing applications and to compare this with the findings of best practice benchmarking in other industries.
- To produce a research report or book to disseminate the findings of the Task Group.
- To produce a longer term research agenda.

### **Overall Approach:**

- The initial focus of the TG will be to establish a network of researchers in this field in order to facilitate a regular exchange of information, proposals and data. International co-operation and collaboration involving researchers and representatives from industry from developed, transitional and developing countries will form an essential element of this Group's work.
- The Group will develop a Work Programme and Task List, with a defined outcome of the production of a "Report on the State of International Construction Marketing".
- The target for the production of the report is three years from the inception of the TG.
- At this stage the status of the Group will be reviewed in the light of the progress achieved and the research agenda produced.

The construction-marketing mailbase will be used as a principal vehicle for sending and receiving information amongst members of the Group. To join this please send the following message to [mailbase@mailbase.ac.uk](mailto:mailbase@mailbase.ac.uk):

join construction-marketing <first name> <second name>

### **Outputs:**

It is planned to publish the on-going results of the Task Group (and its regional sub-groups) in various forms:

- Workshop reports
- Articles in CIB and members' own countries
- Information on the World Wide Web
- Reports will be based on each phase of the programme and will provide the results of research projects

A Homepage on the World Wide Web will be produced, as soon as the Task Group is established. This will aim to become a principal resource for academia and industry involved in marketing in the construction industry.

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