March 2016

Architectural Management
Architectural Research Roadmap
Working Commission W096


**Purpose of the workshop**
The purpose of the Architectural Roadmap workshop is to map an agenda for Architectural Research which will be developed, and to establish a network of international researchers to, amongst others:

- provide partners for research funding bids
- explore practice-based research

The workshop is part of the [CIB WBC 2016](http://www.cib-wbc.org), which will take place from May 30 till June 3, 2016 in Tampere, Finland.

**Issues to be addressed**
During the workshop issues such as Organisations, Procurement, Processes and Tools will be addressed.

The above mentioned issues will be discussed within the context of Architecture Practises and Education.

A clarification on the issues can be found attached.

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**How to contribute**
In case you would like to contribute, you can contact the coordinators of W096:

- **Professor Dr Bob Giddings**
  Chair of Architecture and Urban Design
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- **Associate Professor Dr Ir Mathijs Prins**
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or contact the press officer:

- **Associate Professor Dr Kihong Ku**
  Architecture Programme, Philadelphia University, USA
  kuk@philau.edu
Issues to be addressed

Architectural Research Roadmap

- **Organisations**
  Investigate different styles of organisation, including:
  - separate disciplines and multi-disciplinary practices
  - integration or separation of different professionals
  - composition of organisations
  - debates regarding the amalgamation of the design and construction phases within one organisation or whether distinction between the phases offers more professional integrity
  - the effect of different types of organisation on quality of products
  - the correlation between organisational types and award-winning designs

Role of vision statements

<table>
<thead>
<tr>
<th>Award Winning Practices</th>
<th>Vision Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Designing buildings is a way of thinking; a way of life. The creation of form and space that is memorable and inspirational</td>
</tr>
<tr>
<td>B</td>
<td>We design bold, contemporary, imaginative buildings that are fit for purpose, accessibly and loved by the people who use them</td>
</tr>
<tr>
<td>C</td>
<td>An inspirational, practical and resilient public architecture</td>
</tr>
<tr>
<td>D</td>
<td>We believe in: using our brains, in listening, in research, in collaboration, in innovation</td>
</tr>
<tr>
<td>E</td>
<td>We simply love design...and we love to share our enthusiasm by creating great working relationships and buildings of excellence and enduring quality</td>
</tr>
<tr>
<td>F</td>
<td>We listen, challenge and innovate in our quest for excellence</td>
</tr>
</tbody>
</table>

Knowledge Transfer Partnership KTP007705

- **Procurement**
  - new procurement systems – criticism for lack of architectural design quality
  - rationalising procurement systems
  - selecting appropriate procurement systems for particular types of projects

- **Processes**
  Architectural design process – different types of design, e.g.:

<table>
<thead>
<tr>
<th>Engineering Design</th>
<th>Architectural Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prescriptive</td>
<td>Descriptive</td>
</tr>
<tr>
<td>Rational</td>
<td>Intuitive</td>
</tr>
<tr>
<td>Linear</td>
<td>Cyclic</td>
</tr>
<tr>
<td>Algorithmic</td>
<td>Heuristic</td>
</tr>
<tr>
<td>Theoretical</td>
<td>Empirical</td>
</tr>
<tr>
<td>Problem focused</td>
<td>Solution focussed</td>
</tr>
<tr>
<td>Analytical</td>
<td>Holistic</td>
</tr>
</tbody>
</table>

Integrated design and development solutions, performance specifications, office and project management strategies etc. are good for saving time and money, and help performance attainment; but it is amenity that is at the apex of the architectural design quality hierarchy. Research is needed as to how to maintain performance attainment while also achieving amenity objectives.

Processes also involve
- feedback and post occupancy evaluation
- interpretations of Sustainability and Sustainable Development
- energy efficiency, carbon footprints etc. (e.g. CIOB Carbon Action 2050)

Architectural design quality hierarchy (intrinsic and extrinsic values)

- **Tools**
  - The advantages of Virtual Reality and BIM for design integration, clash detection etc., but concerns about the casual adoption of component libraries; and the danger of unqualified and poorly qualified staff using them.
  - Appraisal of existing design quality tools

Knowledge Transfer Partnership KTP007705

Info Section:
CIB Area of Scientific Interest:
CIB Theme:
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Around Commissions
DB + MOE

17-03-2016
Issues to be addressed
Architectural Research Roadmap

Composite digital and hand-produced drawings

City models

Architectural design quality evaluation tools – criteria

<table>
<thead>
<tr>
<th>Ref</th>
<th>Statement</th>
<th>Global Specification Requirements (checklist)</th>
<th>Criteria for Quality Assessment</th>
</tr>
</thead>
</table>
| 5.01 | Communal spaces are adequately and logically arranged within the building and rooms are easily accessible to suit residents’ needs (IRC 2007) | 1. Grouping as overall strategy (Alexander 1977)  
2. Each entrance from the outside to the main entrance directly (LeLad 1986)  
3. Arrangement of open spaces for maintaining privacy (LeLad 1986) | Y |
| 5.02 | Internal communal spaces are rationally and logically arranged (IRC 2007) | 1. Appropriate number and size of communal spaces (Alexander 1977; Hamborg 1993)  
2. Communal spaces are logically arranged (Alexander 1977)  
3. Communal spaces are sufficiently adaptable to change of use and user capacity (Farrer 1998)  
4. Communal spaces are designed for storage | Y |
| 5.03 | Communal living rooms shall be designed to create inviting environments and shall incorporate focal points | 1. Different volumes are offered to create spatial variety (Sum 2001)  
2. Maximum views and natural light (Block et al. 1977)  
3. Encourage local community integration and use by family and friends | Y |

Knowledge Transfer Partnership KTP006998

Context

- **Practice**
  Analysis of different status in architectural practice, such as the privileged and the professional
  - starchitects and communities
  - global and local influences

- **Education**
  Architecture and the built environment and greater association with Schools of Architecture
  - the nature of architectural education
  - studio culture
  - the concept of the project