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Proceedings

Volume 1: Research Questions

Preface

Buildings and building materials industries play a significant role in affecting global energy and resource use. As with other sectors of society, the building industry has a history of reacting to environmental problems rather than anticipating and actively preventing potential problems.¹ Given the gravity of environmental degradation and the public's growing awareness and understanding, it is unlikely that it can remain passive. We face the difficult challenge of realigning the building industry with the dictates of sustainability while simultaneously operating within an existing social, political and economic context premised on growth.

The environmental agenda should bring about a profound change in the way we view and undertake the design of buildings. Addressing environmental issues will require design professionals to make difficult choices particularly since it will involve moving in to areas of knowledge which are relatively uncharted. The design community currently has very little sound advice or information for considering environmental issues in an industry driven by immediate costs and where producers are slow to take the lead in introducing necessary change. However, we can anticipate a rapid increase in information on a broad range of environmental aspects of materials and design strategies. As this information becomes available and the environmental linkages more clear, design professionals will be able to respond by adopting designs, methods and materials which reduce the environmental impact of buildings.

The building industry is fragmented and, compared with others, invests the least amount of funds into on-going research to develop new technologies and practices. Addressing the environmental agenda will require a re-examination of current methods of building materials production and the development of new environmentally responsible technologies and building design and construction practices. Research is increasing rapidly on a broad range of environmental aspects of buildings. It is currently uncoordinated and there is an urgent need to establish a consistent set of definitions and methodologies to facilitate dialogue and exchange between researchers.

An intensive two-day working session involving leading international researchers currently examining the environmental consequences of building and representatives from European and North American Architectural Associations was held at Queens' College, Cambridge University, September 27-29th 1992. The meeting had two objectives. First, to explore and define research protocols for assessing the life-cycle analysis of the environmental impacts of buildings and second, to examine what design 'tools' would be most appropriate to assist architects in making more informed environmental choices.

This volume of the proceedings records the papers and discussion related to the research component of the meeting. It is hoped that these proceedings will contribute to the current debate on life-cycle analysis techniques as they relate to buildings.

¹Lorch, R., (1990) 'Towards Green Buildings,' *Royal Institute of British Architects Journal*, February 1990, pp58-59

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