BCO Research Specification

Fast and Slow Buildings: Responsiveness through technology and design

The BCO is pleased to invite your company to submit a research proposal for an important research study as described below.

Background

There is heightened interest in what might now be considered the *Cognitive Building* – that is a building that responds to the external and internal environment, the people within, and their activities.

Technological "fast response" solutions will require the integration and sharing of information across a range of systems and previously rigid boundaries, all with close regard to cyber security.

We are also seeing an increasing interest in the delivery of "slow-response" solutions, particularly concerning the internal environments, for instance the use of thermal massing for cooling.

Research objectives

The objectives of this research are therefore:

- To educate our members on how digital technologies and smart systems can be used to make a building more responsive to its environment and its users.
- To profile the emergence of slow response ideas and their application and any conflict with Smart Building solutions
- To predict how these trends will influence base build and Cat A design only over the medium term.
- To explore how the cross-over and integration of building data and occupier data could be presented and handled.

Scope

This study has the potential to be extremely informative and forward looking but with practical application today. We would suggest limiting the future view to within the next 5-10 years (as a maximum) ensure relevance to decision making in the short term.

Areas of study should include:

- Clear articulation of the benefits and disadvantages of "fast response" iBMS/Smart Building implementation of HVAC
- Clear articulation of the benefits and disadvantages of "slow cycle" thermal mass/structure based implementation
- The barriers to the sharing of landlord, occupier and other data and the security implications and considerations of same
- Minimum core requirements, components and systems considered necessary
- Application to shell and core design and construction
- Application to CAT A design and construction
- Procurement and deployment guidance
- Financials: costs and paybacks
- Sustainability benefits

Methodology

As a minimum, views should be formed by literature review; interviews and case studies. The BCO would welcome some indicative financial appraisals to better inform our membership's decisions.

Audience

The audience for this report will be BCO members and the wider property market

Output

The output of this project will be a concise report. The BCO Research Committee would retain the right to ask the successful party to present the findings at a maximum of two events as required, one of which will be in London.

Report structure and specifications

The final report will be text-based incorporating technical detail as required. The BCO will be responsible for design and branding. Any images or case studies submitted by the contractor should come with the necessary approvals.

We do not expect a lengthy report is required to fully address this subject and as a guide would suggest a maximum of around 20-30 pages.

The report must contain a robust executive summary which can be referred to on a stand-alone basis.

Tendering process

Proposals of no more than 4 pages will be used to determine the Contractor(s). The BCO may decide to interview potential applicants if it deems more information is required.

We suggest that your response sets out:

- how your proposed team will address the requirements of the study
- your proposed project team and their relevant experience
- your appreciation of what we're trying to do

- your knowledge of the sector
- your capacity, time requirement and fee base

Project Management

The project will be managed under BCO's standard framework consultancy contract. The content will be overseen by Bill Page, the BCO's Chairman of the Research Committee and Arezou Said, the BCO's Director of Research and Policy, who will also act as Contract Manager for the project. The BCO expects a named member of the Contractor's staff to be in sole charge of the project.

The Contractor will be required to update the above BCO contacts regularly on progress during the course of the project.

Timetable

- Invitations to tender will be concluded on or before 20th October
- The closing date for receipt of proposals will be 10th November
- A final decision will be made on or before 24th November
- We would expect to publish the report by 30th March 2018 therefore set a deadline for a first full draft of 2nd March 2018 and final submission by 16th March 2017.

Budget

The budget for this project is limited to £25,000 excluding VAT

General

Any information supplied by the client to the contractor during the project must be returned no later than one month after the end of the contract period. A copy of any materials used during the research programme will be required by the BCO for retention. The executive summary will be hosted on the BCO's website without access restriction. The final report will be restricted to BCO members only for a period of three months after which it will be freely available. The intellectual property of this project will be owned by the BCO but the contractor will be permitted to use it for their own purposes from three months after publication subject to the terms in the contract.

Further information

Any queries regarding this specification should be addressed to

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Deadline for the proposal is Friday 10th November 2017 at 5pm and it should be submitted by email to arezou.said@bco.org.uk.