

Means to an end

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Terry Stocks explains why the end user's aspirations for an asset should be embedded in the scheme options from the outset

Constructors and clients alike are guilty of considering the capital cost of delivering assets as the primary concern. However, the main goal should always be an end product or operational environment that works for the asset user, remembering that they may not always be its owner ? different clients and occupants may have varying views on the ideal conditions.

The offset of capital cost against the building environment might not seem to be the most commercially advantageous, but thought leadership on the operational benefits of good design seeks to challenge this perception.

Generally, how do we go about defining the type of environment for our end user ? and do we even know who our end user will be? Usually we do, and as such we can work with relevant information at the business case stage to support better decision-making and testing throughout the delivery and operational life cycle.

How is this information typically obtained? Many projects undertake a ?lessons learned? process and some carry out a post-occupancy evaluation, but how often are the lessons learned actually used to improve a process on a continuous basis? Post-occupancy reviews tend to be little more than recording outstanding defects. To get the best value from these reviews we need to have benchmarks, articulated and achievable targets, and stated benefits in the business case from the start so we can establish criteria to check against.

Capital cost is an important part of any business decision to build ? but can we afford for it to be the most influential?

Whether for educational, retail or service buildings, good design can benefit operations. The World Green Building Council's business case for green buildings states that with the right environment young people can gain 5%?14% higher test scores and learn 20%?26% faster, retail sales can be improved by 15%?40%, and staff in call-processing centres can be 6%?12% more efficient. These figures are validated and backed by major contractors, developers and the World Bank.

The question is, therefore, why are we not more demanding of the assets we specify? There is still a tendency for contract awards to be overly influenced by the capital cost, in most cases to the detriment of business outcomes and operational costs for the asset's whole life. A project's capital cost is an important part of any business decision to build ? but can we afford for it to be the most influential? Is a focus on capital cost driving poorer outcomes on the business front line? We need to think more about this when procuring an asset.

Setting criteria

To create an asset that can provide the optimum environment for its users, we need to define criteria to be measured and checked against throughout the project, and specify who should be responsible for checking these factors through the project's life cycle. While there has been much written about early contractor engagement within a project, early professional service provider engagement tends to fall by the wayside, and it appears this could be the answer to the question.

The RIBA Digital Plan of Works starts at Stage Zero ? Strategic Definition, where the client's professional service provider can add most value. A well-facilitated strategic business review can set the course for the whole project and the operational attainment of the asset. Why would we miss it out? The ratio of life-cycle expenditure ? capital investment to energy/maintenance cost to business outcomes influenced, at 1:4:30 ? suggests that the size of the prize is such that any fees spent on good advice will be recouped many times over, and early service provider engagement can facilitate this.

Additionally, the Publicly Available Specifications (PASs) 1192 ? 2: 2013 and 3: 2014 promote best value outcomes. The PAS 1192 series is best known through its support of building information modelling (BIM). PAS 1192 ? 2 and 3 introduce documents known as the operator's information requirements (OIRs), the asset information requirements (AIRs) and the employer's information requirements (EIRs).

In reality, the documents exist to collect a list of the data required to operate the asset (AIR) in support of the operator's aspirations (OIR). These are collected and included in the capital build tender documents as the EIRs. The EIRs make it clear what information is expected at what stage of a project to what level of detail and format. The process of capital project delivery stated in PAS 1192 ? 2 should help reduce capital cost delivery by limiting overproduction of data; reduce project risk via in-flight checking and validation of data; and improve stakeholder engagement through federated 3D models and collaborative delivery.

Reviewing and articulating an end user's aspirations for an asset can be embedded in the project's business case. Each option should have capital and whole-life costs assigned to it, which can be improved through better inclusion of the physical requirements that support improved user environment.

These requirements are included in the project EIR data requirements, and when delivered through the PAS 1192 ? 2 and 3 system will focus on achieving the stated benefits throughout the capital delivery phase. In this way, we can also establish a baseline and targets for post-project and post-occupancy evaluations.

In parallel with the above, Lean delivery techniques ? which minimise waste of materials, time and effort to help generate maximum value ? and adopting soft landings ? a way to improve performance of buildings and meet the requirements of their users ? both support improved delivery. As a large part of a project cost is time related, Lean techniques focus on improving the actual delivery process.

A slicker process will increase the reliability of a project delivery to time, help to reduce risk and ultimately support lower-cost delivery through efficiency. Soft landings serve to engage the end user and facilities management team throughout the process. Most importantly, the focus is shifted to project handover and efficient operation is maintained from project inception ? which all facilitates an improved end user environment.

All of these processes form part of the toolkit that we require to innovate and deliver sustainable projects, facilitating better business outcomes and improved quality of life for all asset end users and operators.

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Further information

- [Cost reporting](#) , RICS guidance note, 1st edition, 2015
- Related competencies include [Development appraisals](#)
- This feature is taken from the RICS *Construction* journal (February/March 2016)