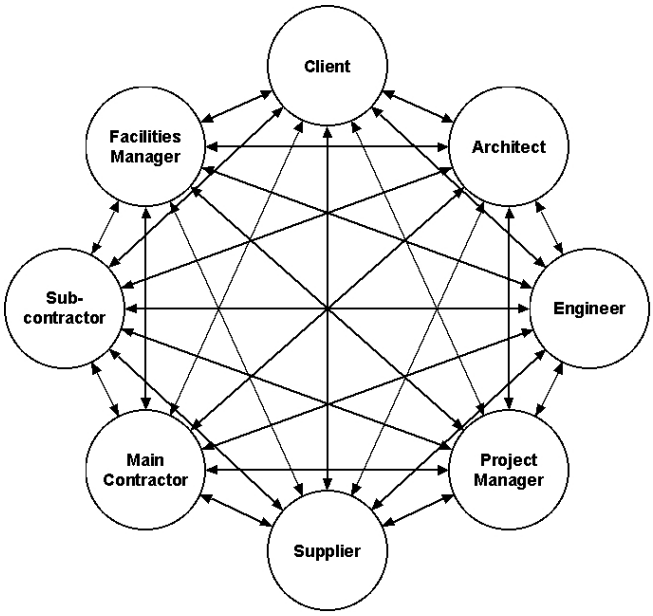
Construction collaboration technology explained
(NCCTP data sheet 1)

The architecture, engineering and construction (AEC) industry is highly dependent on information. Successful projects require timely exchange of the latest and most accurate information between project team members – the right information needs to go in the right form to the right person at the right time.

The challenge

If everyone worked in the same location this would not be a major problem. However, in most AEC projects, the client, consultants, contractors, sub-contractors and suppliers may be working in different offices in different towns, many of which may be far removed from the actual construction site.

Traditionally, the various team members have used post and fax to send paper-based drawings and other documents to each other. Physical documents, drawings and correspondence, with all their attendant amendments, many out-of-date before they reached recipients by conventional means of delivery, remained the main communication media. During even very modest projects, project teams created, copied, distributed and stored huge volumes of information. Production and exchange of data was slow and labour-intensive, and there was considerable duplication. Team communications on the vast majority of AEC projects were still achieved through traditional means: face-to-face meetings, telephone calls and paper-based communications between individual team members. Until recently, information technology has done little to reduce this mountain of paper (the key industry tendency was almost always to turn the end product back into paper).



The short duration and insularity of many project team relationships are also inefficient. A team is often assembled only for the time taken to complete an individual project, and many of its members will never be co-located. Whether office- or site-based, all team members would be constrained by conventional technology from sharing information freely, and the status of the project would vary according to the perspective of the individual concerned and the information he or she had received. And at the end of the project, of course, the team was disbanded, dispersing the ‘islands’ of accumulated knowledge.

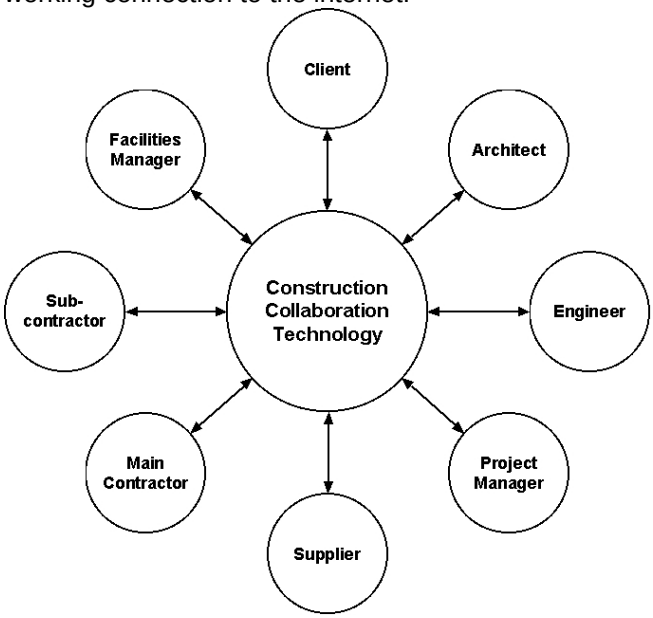
Sharing accurate, timely information is critical for all participants. Wasted time and cost can almost always be traced back to poor co-ordination caused by late, inaccurate, inadequate or

inconsistent information - sometimes a combination of all four. Moreover, conventional AEC industry IT applications do little to improve matters, mainly being designed as stand-alone tools with little integration between them. Clients and project teams need a way to communicate, centralise and share information more quickly and efficiently, while building up a data bank that can be re-used in future.

The solution

Instead of linear communications and separate 'islands' of information, construction collaboration technologies offer a more efficient and less complex way to manage communications. At their heart is a single, shared environment accessible to all authorised team members.

Moreover, they do not require team members to have sophisticated IT systems or to all use the same software applications. Broadly, all such systems can be accessed from a normal computer equipped with a standard computer browser (eg: Microsoft Internet Explorer) and a working connection to the internet.



The same basic functions are common to all. Authorised users, no matter where they are located or when they use the system, can get immediate access to a single, central repository of project data that grows as information about the built asset (a building, a road, a bridge, a water treatment works, etc) is developed by the team. Feasibility studies, budgets, sketches, drawings, approvals, schedules, minutes, photographs, specifications, standards, procedures, virtual reality models, etc, can all be viewed; team members can add comments, issue notices, instructions and requests for information (RFIs), and publish drawings and documents, singly or in batches. Everyone works on the most up-to-date, accurate and relevant information, backed by all the archive material.

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