Accelerating Change

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The American Institute of Architects (AIA), with the AIA California Council, has published Integrated Project Delivery: A Guide. This excellent document explains how project teams might move from a traditional approach to project procurement and delivery to a more collaborative, integrated team model. There are similarities with U.K. initiatives earlier this decade, but this guide also highlights more than any industry document I have previously seen the detailed role for Information and Communications Technology (ICT).

IPD — What is it?

The document defines integrated project delivery (IPD) as:

> *"a project delivery approach that integrates people, systems, business structures and practices into a process that collaboratively harnesses the talents and insights of all participants to optimize project results, increase value to the owner, reduce waste, and maximize efficiency through all phases of design, fabrication, and construction."*

IPD principles can be applied to a variety of contractual arrangements and IPD teams can include members well beyond the basic triad of owner, architect, and contractor. In all cases, integrated projects are uniquely distinguished by highly effective collaboration among the owner, the prime designer, and the prime constructor, commencing at early design and continuing through to project handover.

The guide's contents will therefore be very familiar to many people in the U.K. who have been involved with teams that have sought to adopt similar approaches in the years following the 1994 Latham and 1998 Egan Reports.[1] Notable initiatives include the OGC's Successful Delivery Toolkit (*Procurement Guide 05: The Integrated Project Team,* teamworking *and* partnering being the highlight) and the Strategic Forum for Construction's Integration Toolkit, both published in 2003. (The AIA guide quotes the OGC document at some length.)

The ICT Angle

So far as construction collaboration technologies are concerned, both toolkits made fairly general recommendations about "shared IT" and "integrated systems." The Strategic Forum, for example, talked about:

> *"common systems and open information channels for use throughout the IPT for: design and drawings, project planning and resourcing, safety management, value management, cost planning, cross-disciplinary training"*

[1] United Kingdom, HMSO Department of the Environment, *Final Report of the Government/Industry Review of Procurement and Contractural Arrangements in the U.K. Construction Industry: Constructing the Team,* by Sir Michael Latham (1994); and *Rethinking Construction,* Report of Construction Task Force chaired by Sir John Egan (DETR: London, 1998).

The AIA guide has the benefit of being published more than four years later, with technology continuing to advance and with the benefits of new technology becoming ever more apparent. Technology is highlighted as early as the AIA document's foreword, which contrasts traditional and IPD approaches. With the former, "communicatitons [*sic*]/technology" is described as "Paper-based, 2 dimensional; analog"; in IPD, it is "Digitally based, virtual; Building Information Modeling (3, 4 and 5 dimensional)."

The technology theme is then continued in the introduction, touching on the NIST report (see my post "Software incompatibility bar to interoperability" last month), and forms one of the nine key IPD principles. Under 3.8, Appropriate Technology, it says:

> *"Integrated projects often rely on cutting edge technologies. Technologies are specified at project initiation to maximize functionality, generality and interoperability. Open and interoperable data exchanges based on disciplined and transparent data structures are essential to support IPD. Because open standards best enable communications among all participants, technology that is compliant with open standards is used whenever available."*

The following chapter (4), on setting up an integrated project, then goes into some detail about BIM and its role in supporting the IPD team (section 4.1.4). From chapter 5 onwards, while acknowledging that BIM is a tool to support the IPD process, it says "the full potential benefits of both IPD and BIM are achieved only when they are used together. Thus, the IPD phase descriptions . . . assume the use of BIM."

I was pleased also that the document explicitly acknowledged the need for other project-related issues to evolve to support the technology, notably *insurance* (section 4.4.3), for example, where it says:

> *"Using BIM and other tools to construct a building virtually in advance of actual construction substantially diminishes the risk of design errors and omissions. . . . It is now incumbent upon the insurance industry to develop and offer alternative insurance products that align with the project goals and the specific risk allocation terms established among the IPD project participants."*

U.K. advocates of early supply chain involvement (including my colleagues in Constructing Excellence's Collaborative Working Champions initiatives) will find strong support for similar ideas in this AIA document. And the guide goes into a good level of detail about how BIM could be employed by firms engaged in different roles within the IPD team.

Technorati tags: AIA, US, integrated project delivery, IPD, UK, OGC, Strategic Forum for Construction, Integrated project team, BIM, building information modelling, construction collaboration, interoperability, Constructing Excellence, Collaborative Working Champions