



The Problem in the Box

- *Collaboration methods*
- *Integrated Solutions*
- *Getting the Problem Right*

Integrated Design Process - new roles

There are many issues of [professional practice](#). This is about how whole systems design connects with the other increasing complexities of the task. The BIM idea, of many consultants working on the same digital model of the whole project, is finally picking up speed, but it's complicated. To go with the new tools and new relationships between disciplines, there are new 'work flows'. Patric MacLeamy of HOK envisions neatly describes what's happening with a network diagram. The traditional Architect-Owner-Contractor **Triangle** is becoming a **Conversation centered Architect+Owner+Contractor+Stakeholder Network** with many more players and a permanent life-cycle role in the project.

Triangle → Network

One of the new roles then, is for people and methods to facilitate communication. In collaborative networks this is one of the places for 'boundary spanning individuals'. For architectural design, it represents yet another fragmentation of the role of 'Project Architect'. The complexity of the design leadership task has multiplied and one of the new roles needed is that of a facilitator-generalist, whose skill is in connecting the learning processes of the many decision-maker generalists involved. It may be an individual, or a way of sharing the team exploration communication tasks.

a Learning Network

The **documented learning process** is paired with the **shared building model** in a BIM centered network involving many stakeholders. Leadership is the key to making a Wiki work for that, to keep everyone informed, assist their explorations, and connect their contributions. A common project web site with shared editing works for non-simultaneous project communication if someone makes it easy and does the methodical work as a separate task. It could also serve link their explorations of the project's [Outer Connections](#) and a way for all stakeholders to [Share their learning cycles](#).

Integrated Building Systems

Integrated Design is an approach that has been developed and used at a much higher level than I could present, and there are lots of resources on the web. There is a concept development phase, where the basic elements of the building systems and how they're assembled is studied, and the building's generic 'systems body type' defined.

finding your Building Systems 'body type'

This is one of the main creative parts of design, have at least two or three cycles of exploration and coordination of multiple stakeholder perspectives before advancing to system specific design decisions.

Questioning the program

(more to follow...) making sure it's worth the trouble as a way to avoid VE...

- *does each item really serve it's purpose?*
- *are there purposes that can be combined or shared?*

Making cost estimates for more useful

(more to follow...) the secret to getting good prices for designs with few details...

C o n n e c t i o n - Inner Systems

- *don't base designs on 'eyewash'*
- *don't base estimates on empty drawings*
- *make certain the estimator understands the whole design intent*
- *base estimates on both quantity AND quality*
- *establish a clear and simple standard format to make estimates comparable.*

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