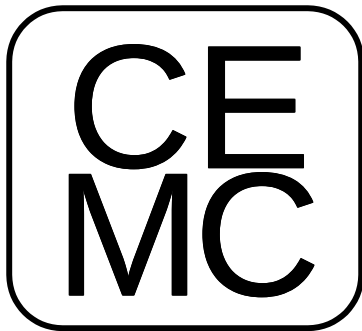


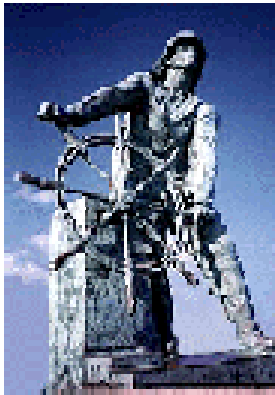
Technology for the Real World



**April 27, 2001
Washington, DC**

**John D. Macomber
BuildingVision.net**

Objectives



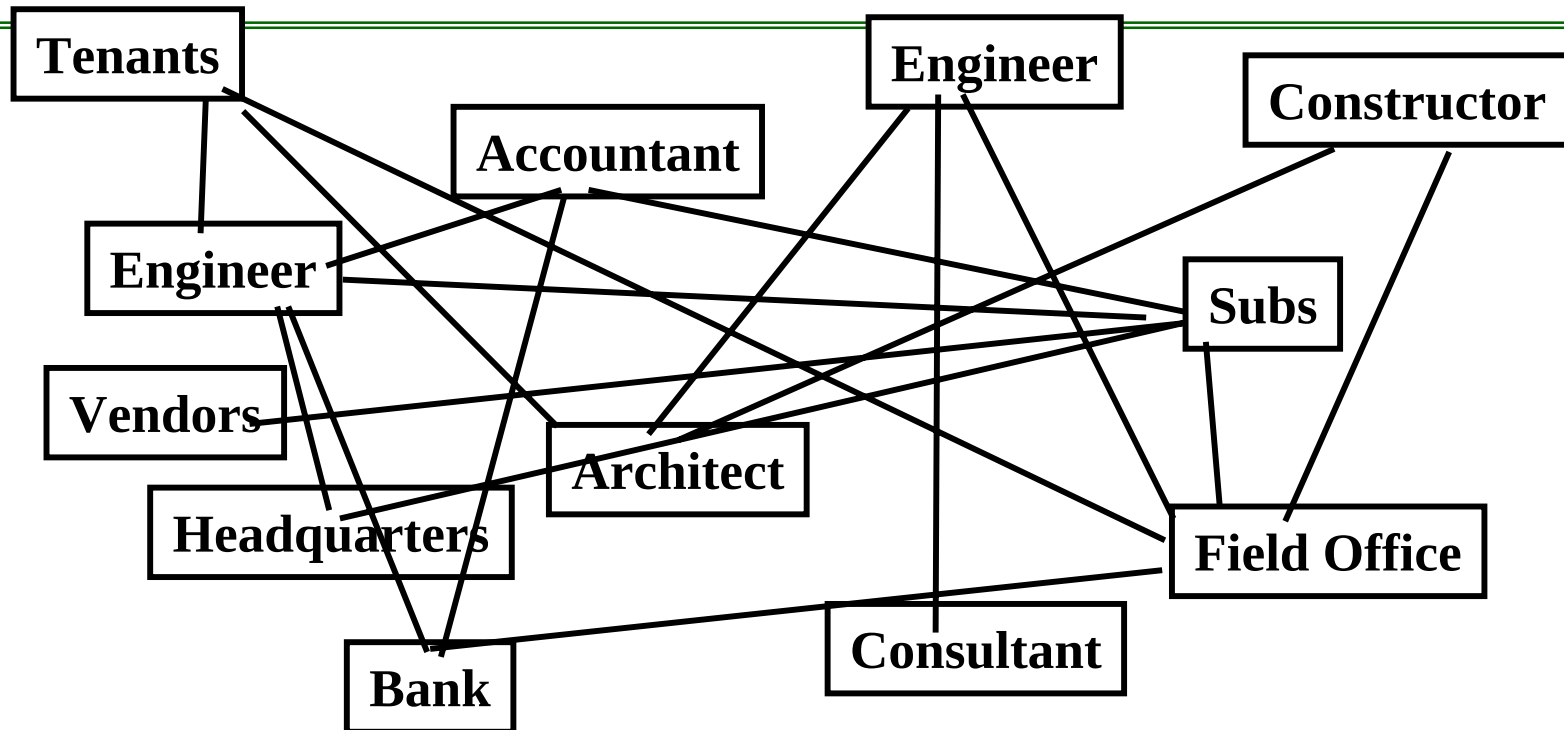
- Help with technology decisions
- Offer model for value system
- Discuss adjacent technologies
- Propose a “real world approach”
- Lead into Q & A session

Growing the Bottom Line

- Grow the top line: *more of the same*
- Increase margins: *do something differently*
- Decrease risk: *be more consistent*
- Any other ways?

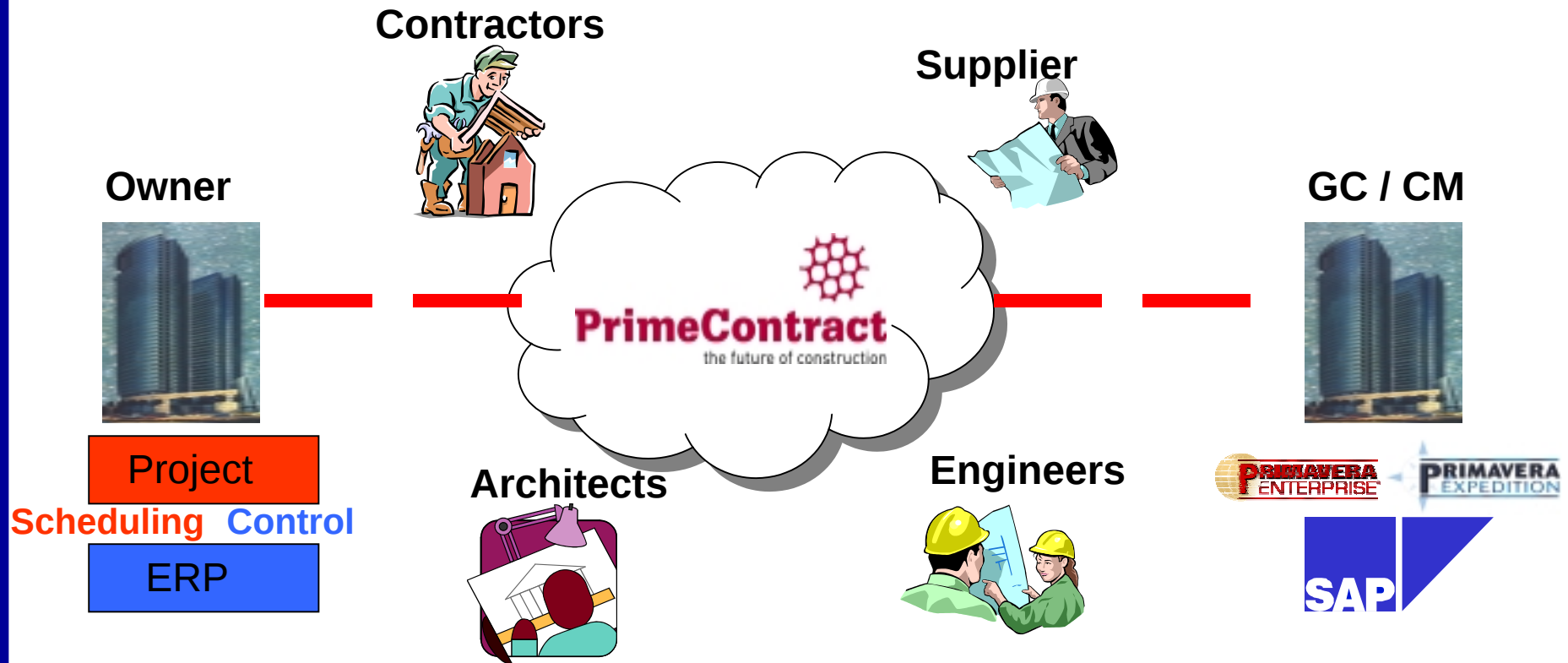


The Communication Problem: Many Participants, No Common Communication Place

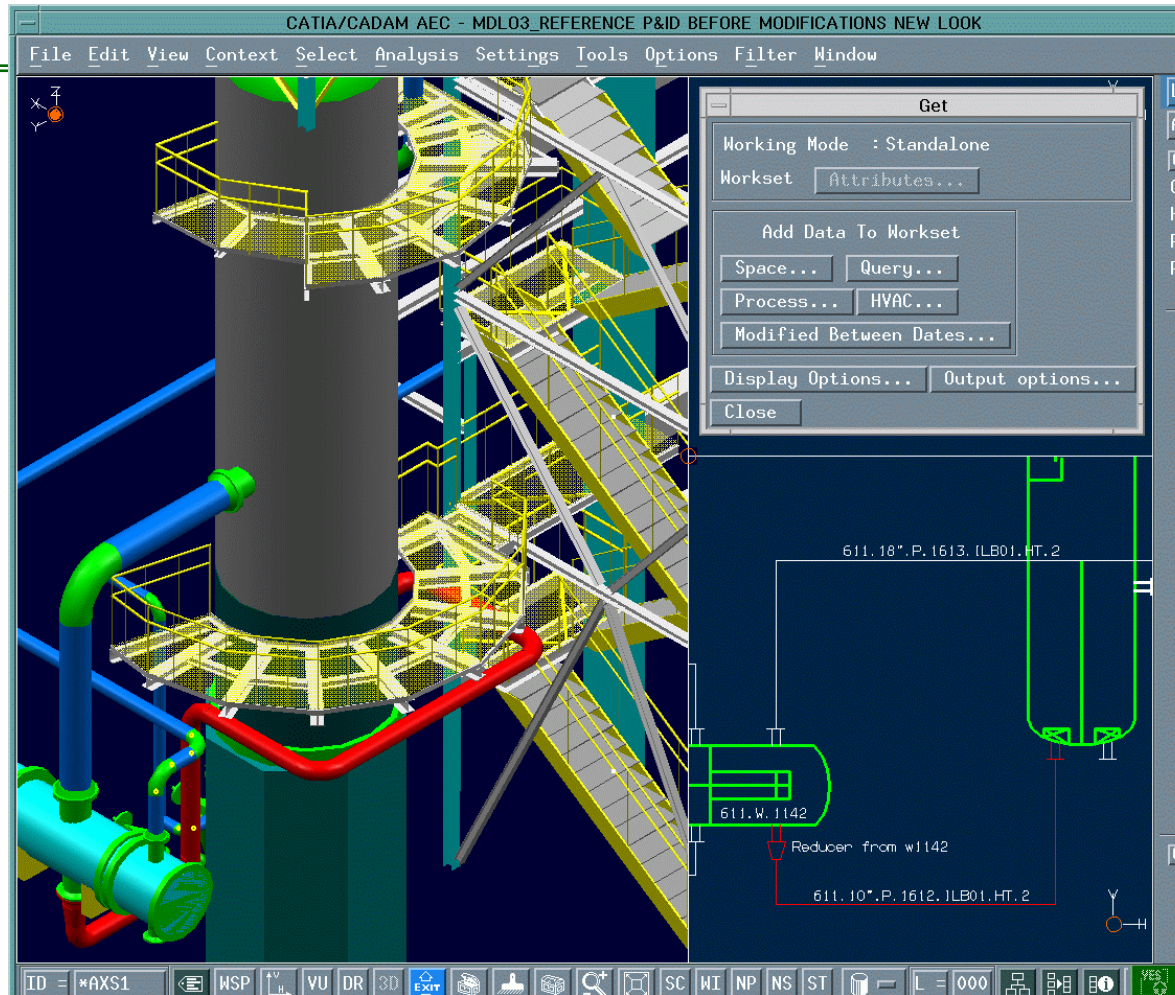


Before Extranets: There is no common way to track, communicate, and organize information, view outstanding items, and provide accountability.

The Goal: Peer to Peer Project Management



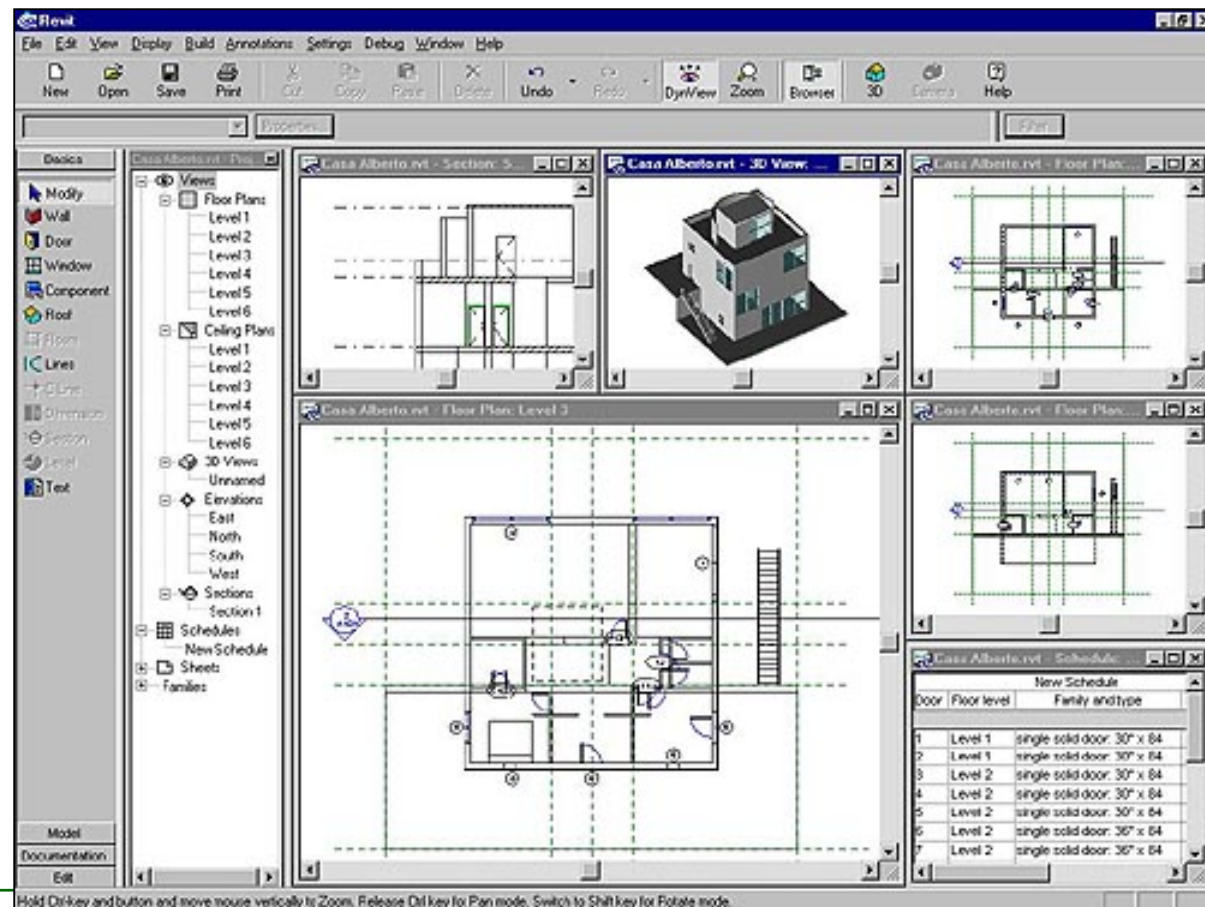
Other ways to have a central communication standard: Shared 3D Model tied to Database



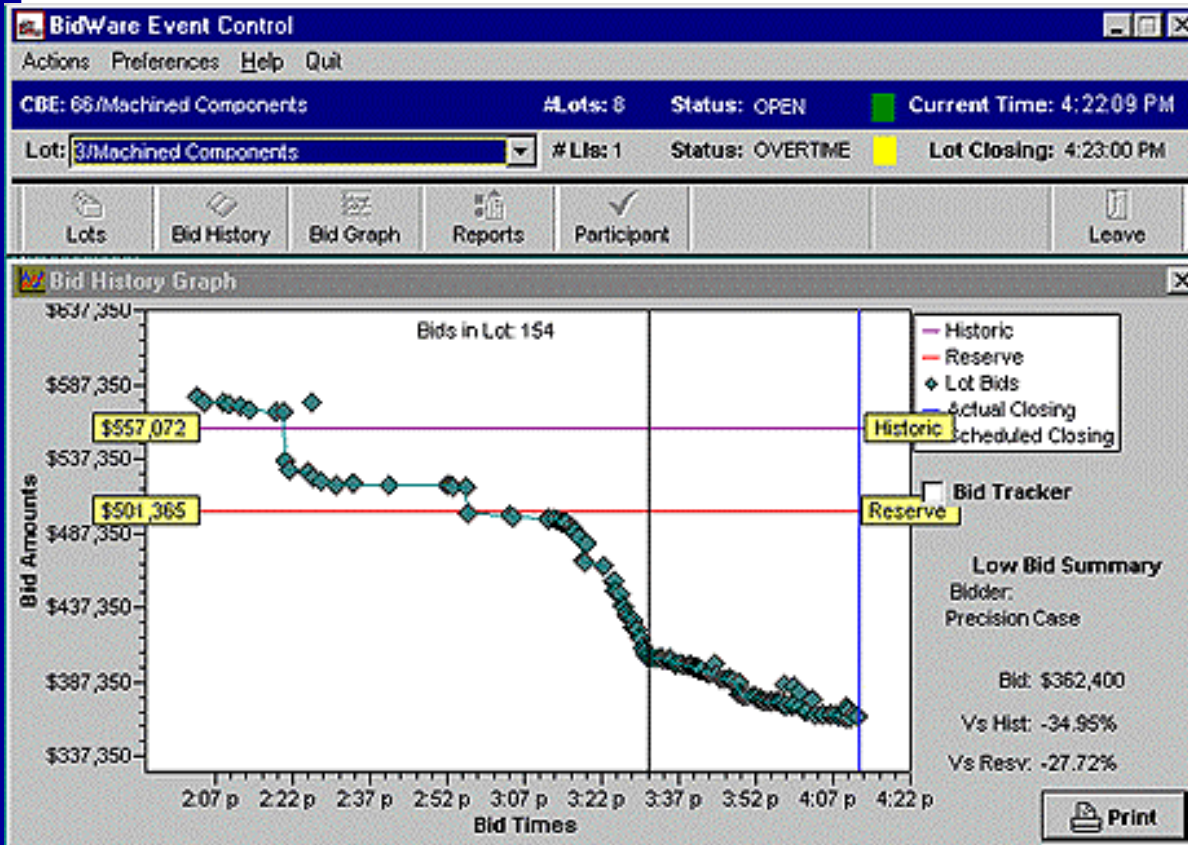
- Image captures design intent in 3D
- All components are tied to database with further information
- This can be changed in real time
- This can be shared with the team in real time
- This is different than static 2D contracts!

Source: IBM/Catia

2D Representation to 3D: Parametric Building Modeling Tied to Shared Data (revit.com)



Other steps to capture value: B2B Internet Bidding



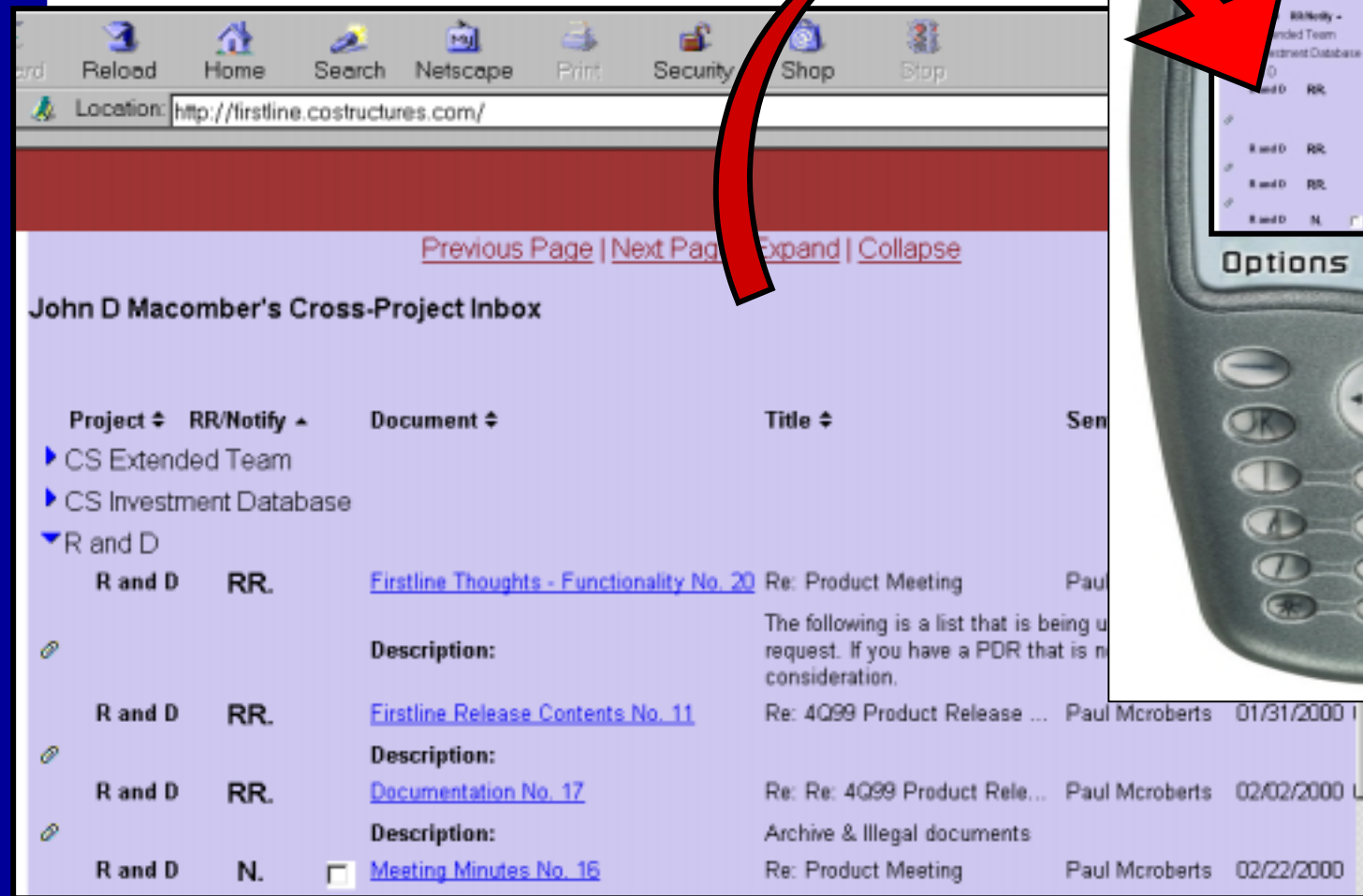
- Graph shows subcontractor price declining in open bid
- Today, Freemarkets.com targets Fortune 100
- Materials and labor are harder than industrial components
- Only big companies can do this
- Project managers could take advantage of the system yet still control the buy locally

Source: Freemarkets

Planned Coordination with Algorithms: Supply Chain Integration (supplyworks.com, i2)



The real world:
The field world.
Future access = wireless

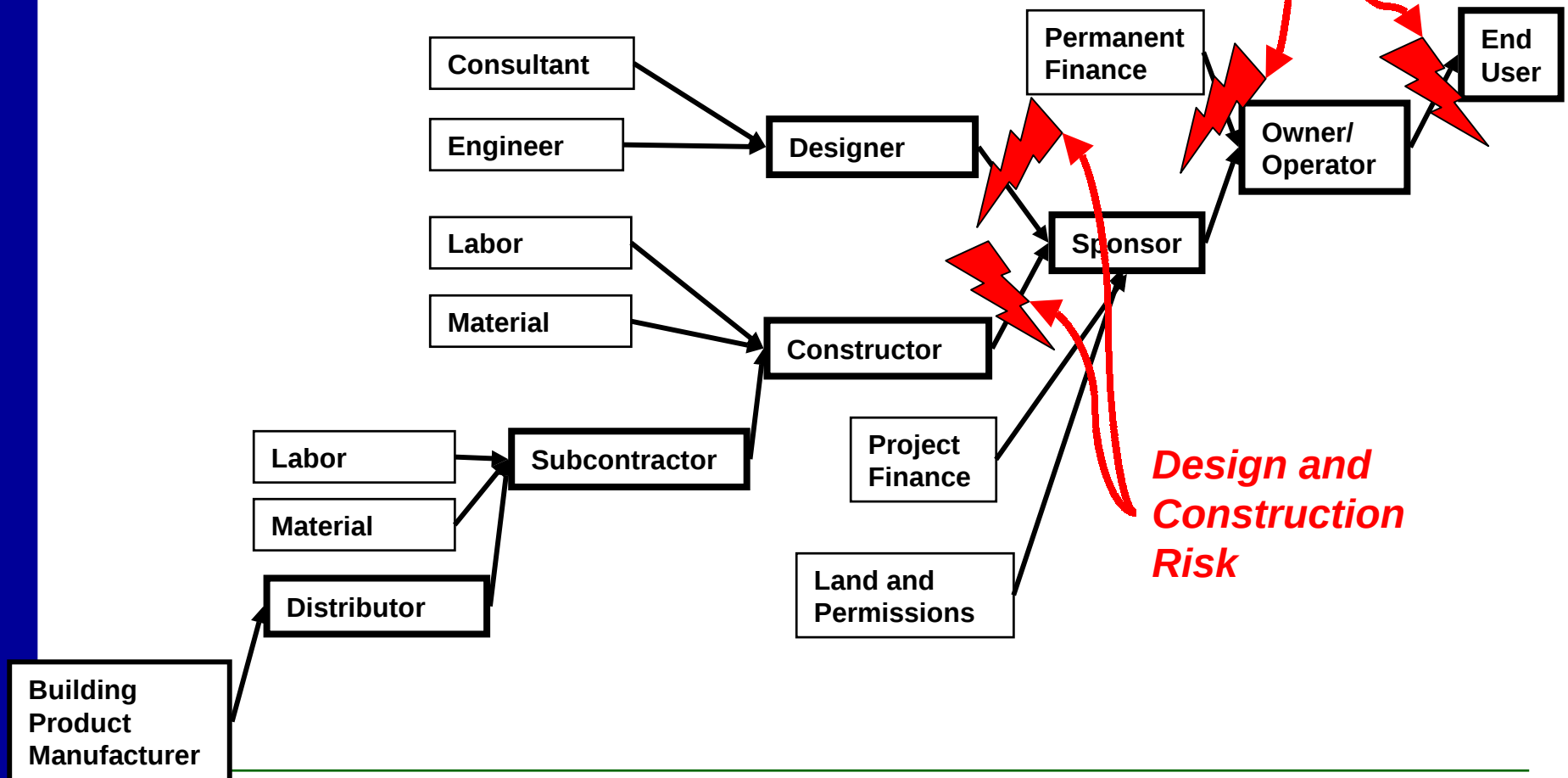


CEMC April 27, 2001

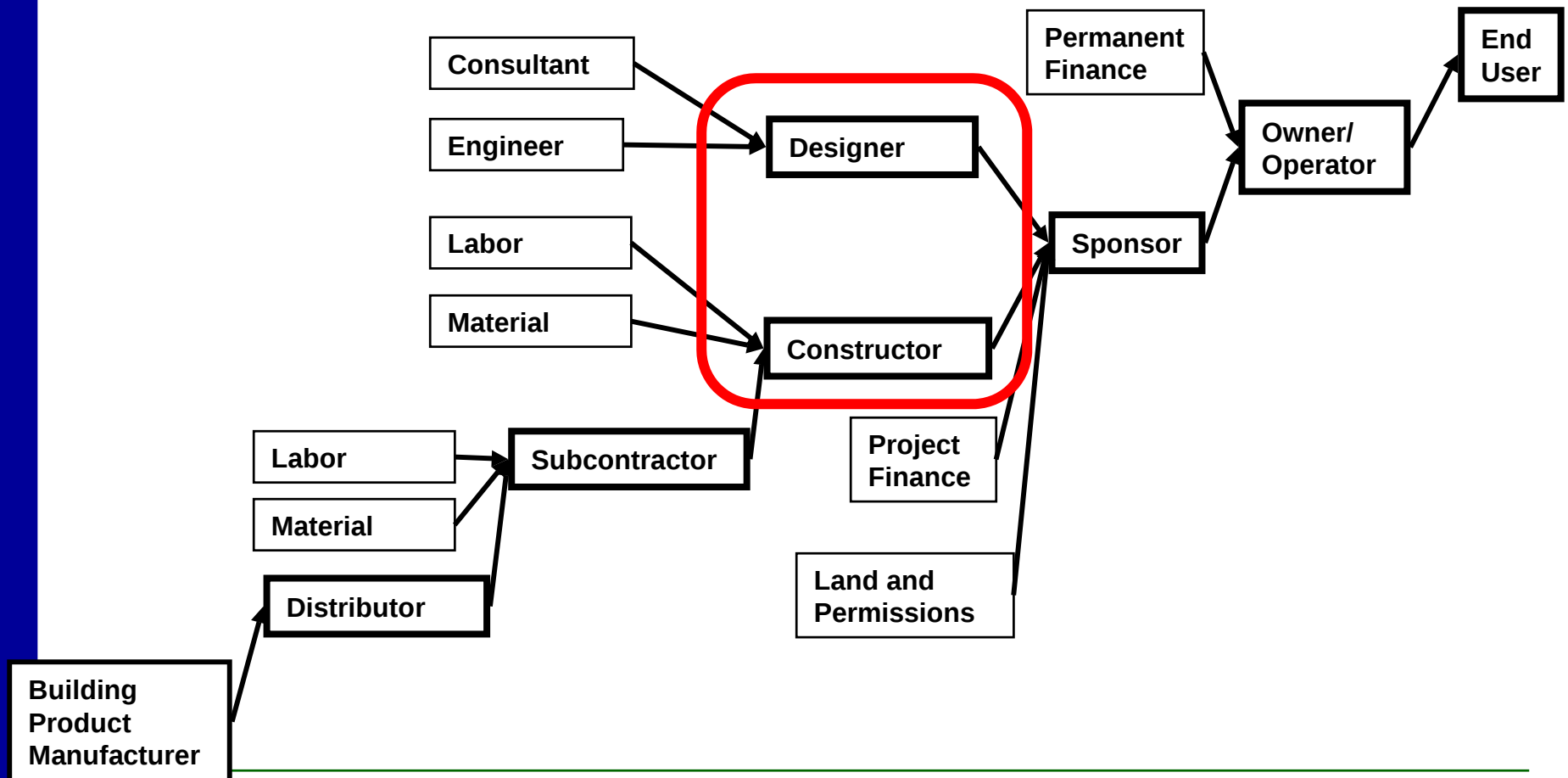
jdmacomber@buildingvision.net

10

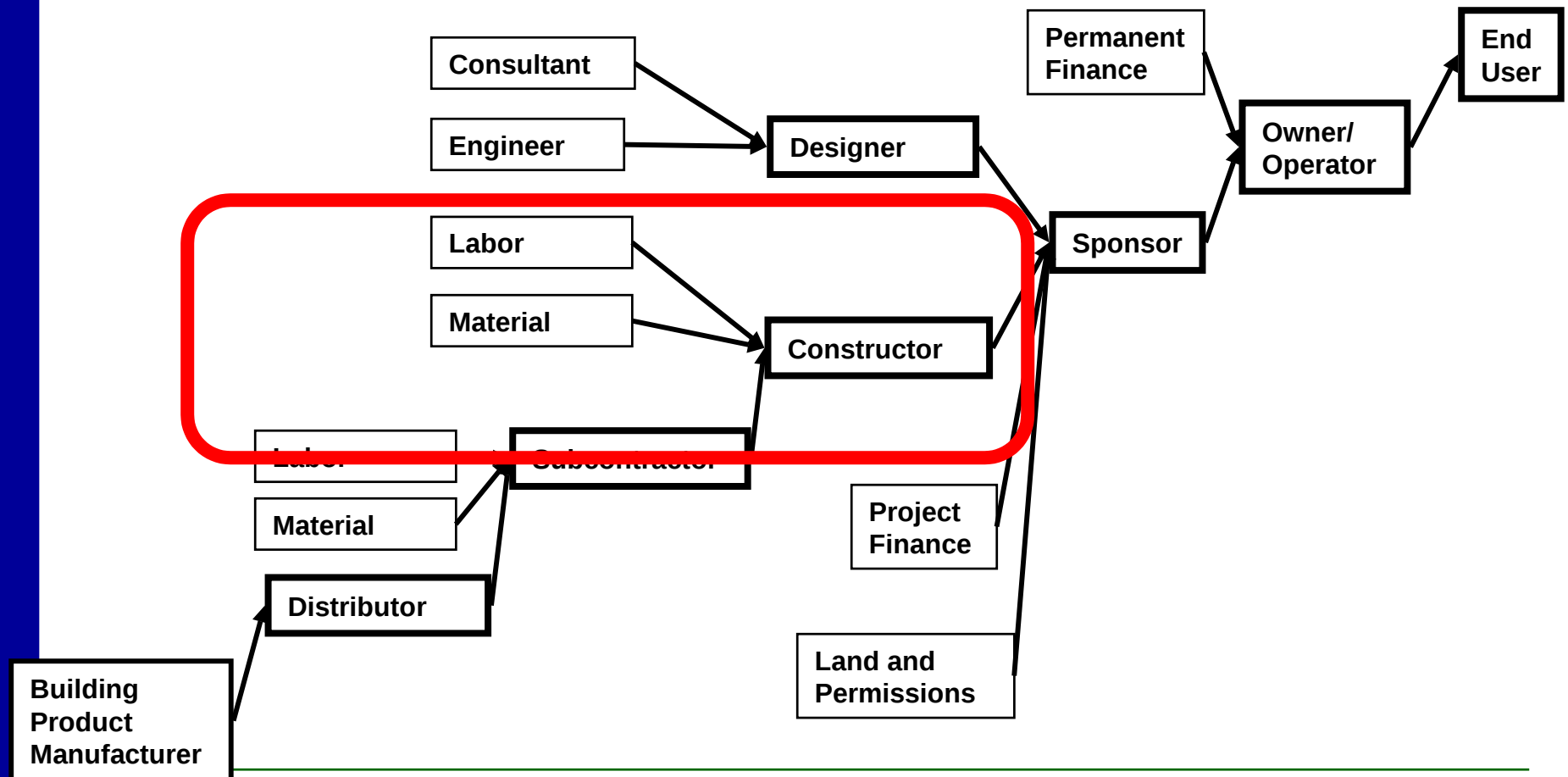
AEC/EPC Supply Chain in the Real World: Owner/Sponsor Isolating Risk



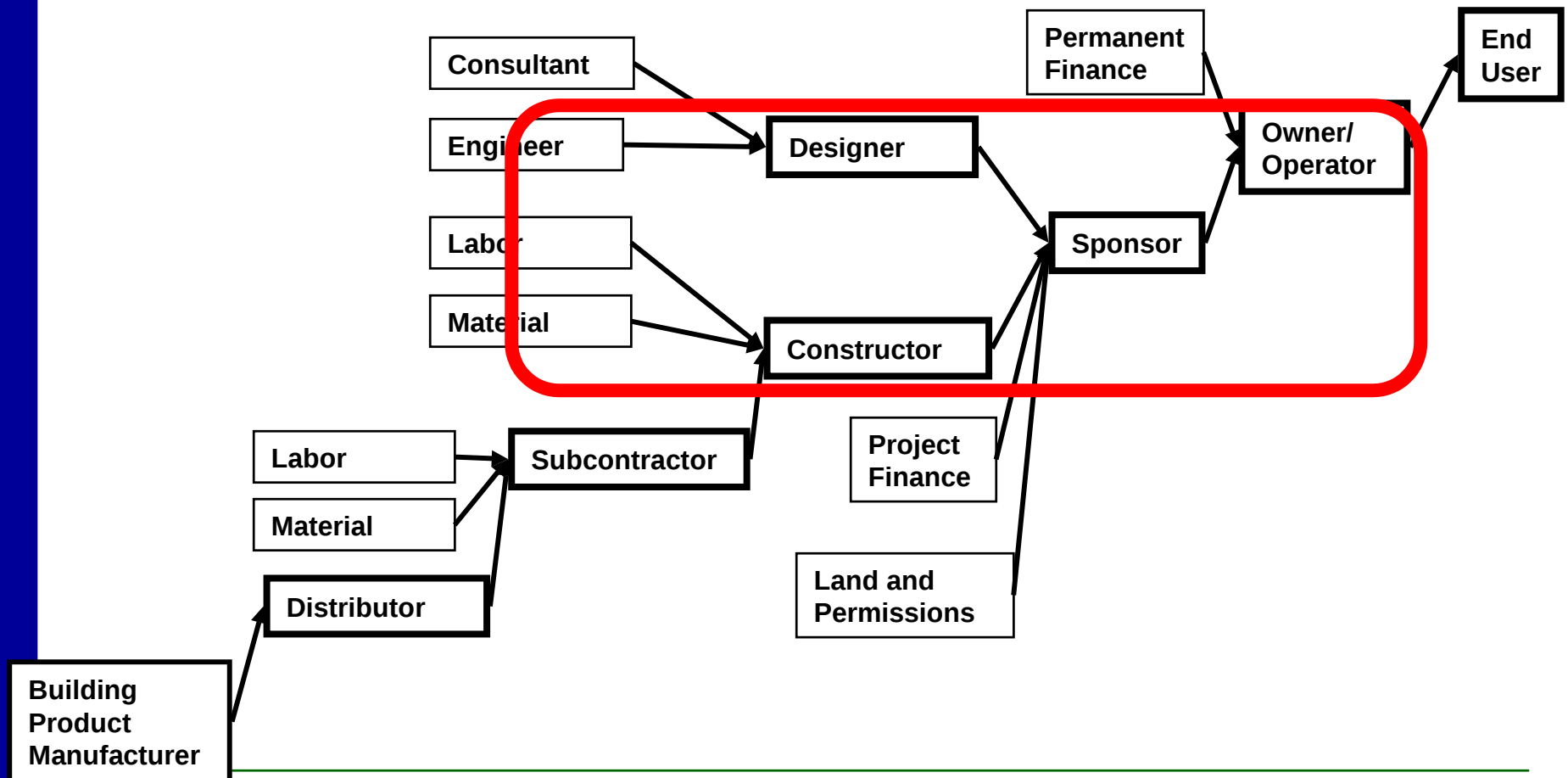
AEC/EPC Supply Chain Business Models:



AEC/EPC Supply Chain Business Models: GC with Direct Hire



AEC/EPC Supply Chain Business Models: EPCOM



Technology for the Real World: Considerations for Businesses

Personal comfort
Economic risk

Transparency of information
Personal effectiveness