

Information Technology Strategy for Smart Builders

How Information Gives You Competitive Advantage

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What problem are We Trying to Solve - Strategic Level?

About the Construction Industry:

Characteristics

- Huge - \$4 tr worldwide
- Local
- Project Based
- Unique end product
- Hundreds of firms all working with dozens of firms
- Low barriers to entry
- High barriers to exit

Traditional Implications

- Few economies of scale
- Fragmentation
 - (ENR 400 in aggregate < 25% of US market)
- Low margins
- High risk
- Same in related sectors - A/E, RE

Strategic approach to IT in FAECOM

Who are you?

What are you trying to do?

Who are You?

(Company Role, Your Rank)

	Building Products Manufacturer	Subcontractor Consultant Engineer or Distributor	Designer	Constructor	Sponsor/ Developer	Owner/ Operator or Investor/ Owner	Tenant
Investor							
C - Suite (CEO, COO, CFO, CIO)							
Executive (Office leadership)							
Project Manager (field leadership)							

What are You Trying to Do?

Who are you?

- Helping a large “at risk” company compete
- Helping an existing service provider compete
- Starting a new company
- Playing with computers

How ambitious is the strategy?

- Restructure the Industry
- Build Sustainable Advantage
- Increase Revenue
- Reduce Cost
- Play with computers

Analytical Framework - Technology Strategies

Scope of IT Initiative:

Intent of IT Initiative:

Change
Industry
Structure

Compete
in Same
Arenas

External
Advantage

Internal
Processes

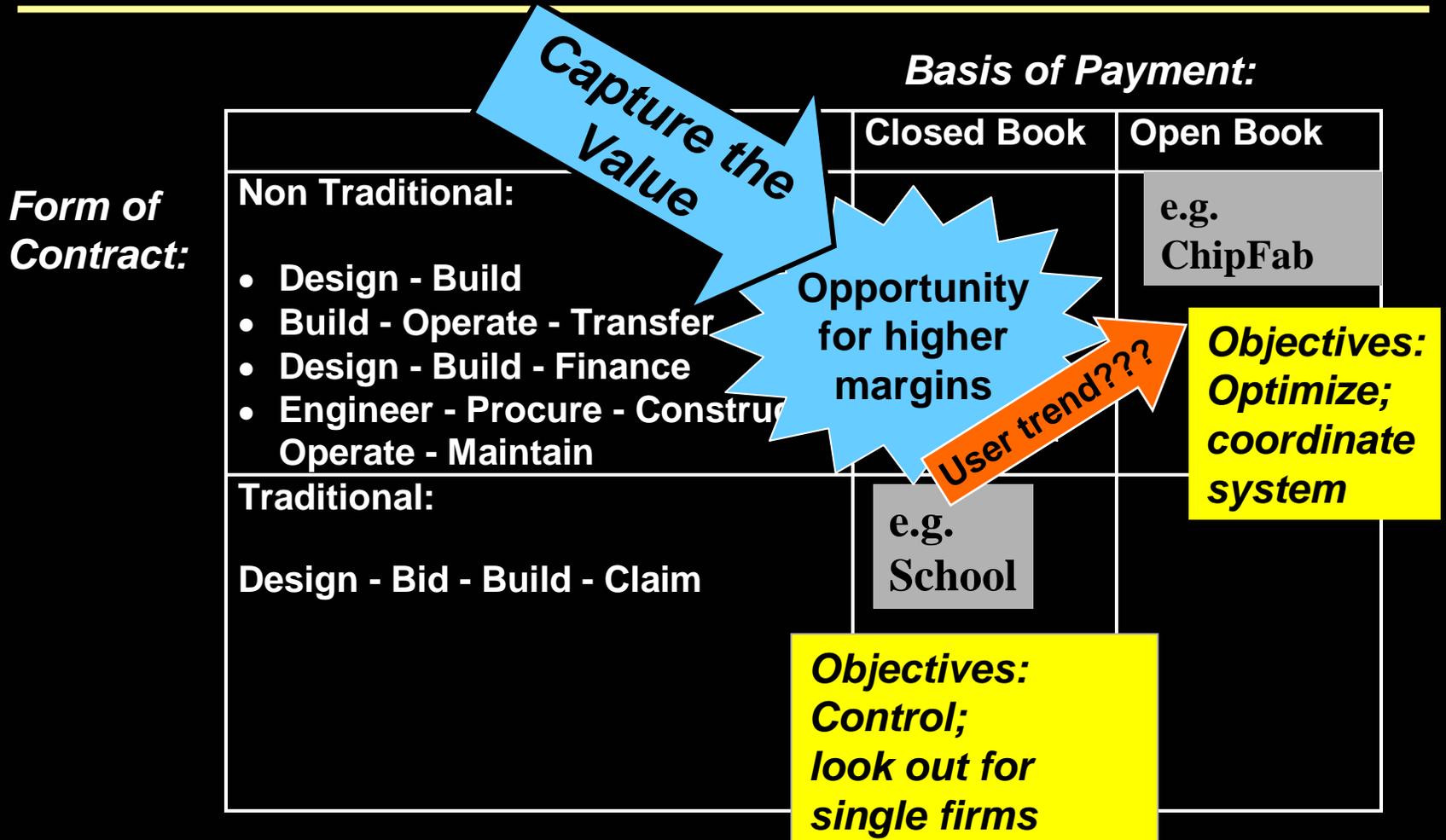
DELL

WALMART

L.L. Bean

BECHTEL

Why Bother? Who Retains the Value Created by Innovation?



What “Big Wins” do:

Overcome fragmentation
Manage vertical integration
Create barriers to entry
Use economies of scale
Change negotiating power
Retain people
Increase margins

! But Most Firms are Not Trying to Restructure the Industry.

So: How Information Technology Gives You Competitive Advantage

(Michael Porter, Harvard Business School)

- 1. Grow the top line (IT investment helps you get more work)**
- 2. Grow the bottom line (IT reduces cost structure)**

That's it.

Remember, customers won't pay for differentiation that they don't value!

My Personal Vision:

- 3D solid models
- tied to databases
- acting to optimize the system across material and labor
- with multi-firm visibility into constraints
- with compensation based on a multiparty agreement and coordinated by a profit-based algorithm

Reduce time 50% and reduce cost 25%

E-Business Strategies

- MIT 1.464 (and 1.961)
- Spring 2003
- Topics in implementing e-business strategies, including:
 - Supply chain
 - 3D modeling
 - Auctions and procurement