

# **“Virtual” Design-Build Teaming for Mission Critical**

**7 X 24 Exchange Northwest Chapter Meeting  
Spring 2003**

**May 13, 2003**

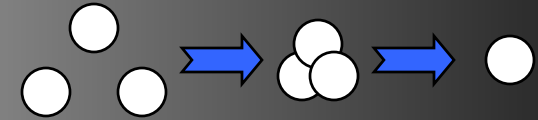
**Presented by:**

**Leonard Ruff – Callison Architecture, Inc.**

**Greg Bogard – Howard S. Wright Const. Co.**

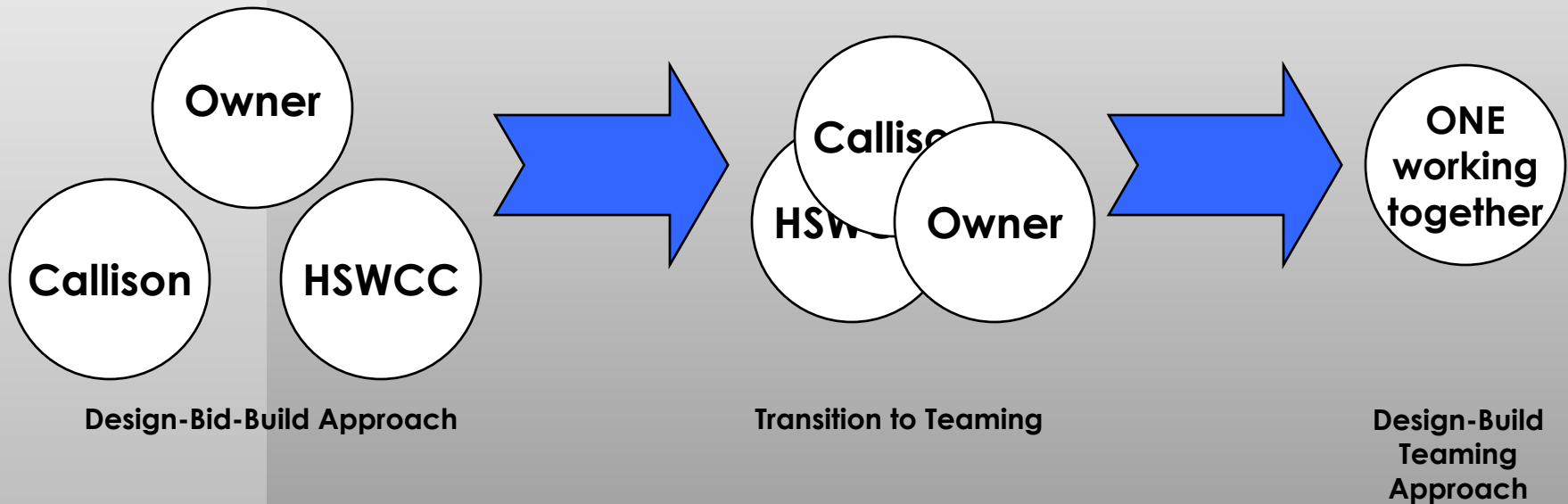
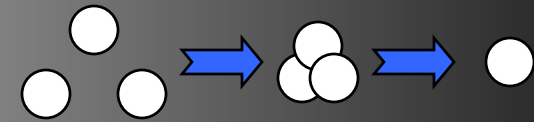
**Jim Gylling – Howard S. Wright Const. Co.**

# Why Design-Build



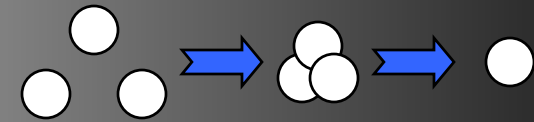
- Early Open and Honest streamlined communications
- Construction Industry Institute (CII) studies prove design-build has the following dramatic effect on projects. The following percentages are based on the number of surveyed owners asked in what ways design-build improves the delivery of a project.
  - \*\* 78% believe it increases trust
  - \*\* 82% believe it increases openness
  - \*\* 85 % believe that it is less adversarial
  - \*\* 82% believe it increases communications
  - \*\* 85% believe that it increases planning
  - \*\* 96% believe that it Improves quality
  - \*\* 90% believe it Improves safety
- Industry Trend >>> towards design-build

# Trust Building



- Design-Bid-Build will predominately stay on the left side of the page – more individualist, out for oneself.
- Design-Build / Teaming will yield the right side – one circle of companies working toward common goals
- Many efficiencies can be realized by the right side “Design-Build / Teaming” side of the page

# Traditional vs. Design-Build



Source: Construction Industry Institute

## TRADITIONAL PRACTICES

Suspicion and distrust; each party wary of the motives of the other

Each party's goals and objectives, while similar, geared to what is best for them

Communication structured and guarded

Single project contracting

Objectivity limited due to fear of reprisal and lack of continuous improvement opportunity

Limited access with structured procedures and self-preservation taking priority over total optimization

Normally limited to project level personnel

Sharing limited by lack of trust and different objectives

Routine adversarial relationship for self-protection

Duplication and/or translation of administrative systems with attendant costs and delays

## DESIGN BUILD PRACTICES

Mutual trust is the basis for working relationship

Shared goals and objectives ensure common direction

Open communication avoids misdirection and bolsters effective working relationships

Long-term commitment provides opportunity to attain continuous improvement

Objective critique geared to candid assessment of performance

Access to each other's organization; sharing of resources

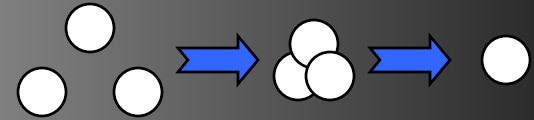
Total company involvement; commitment from CEO to team members

Sharing of business plans and strategies

Absence or minimization of contract terms that create an adversarial environment

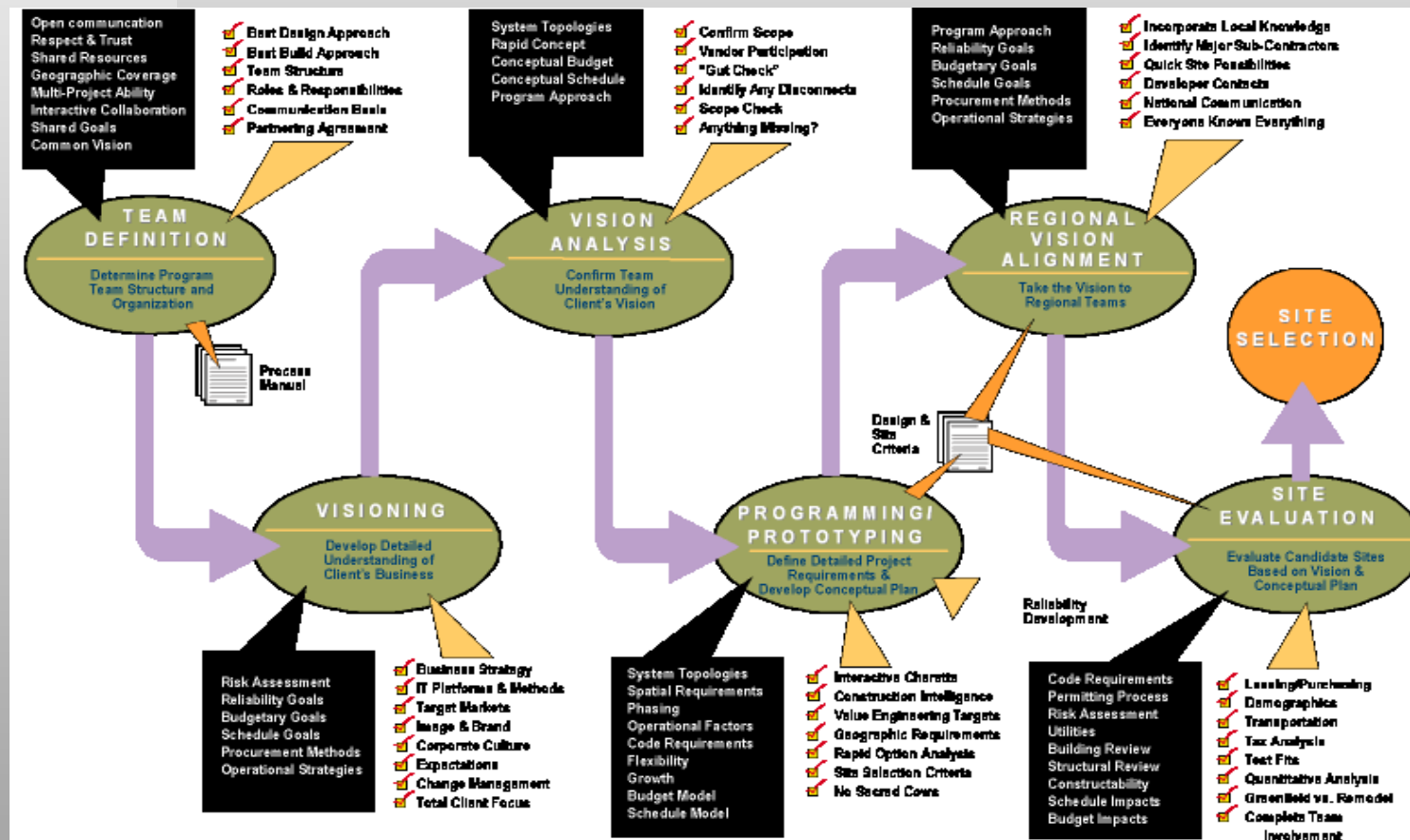
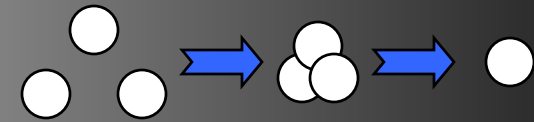
Integration of administrative systems and equipment

# Tools for Design Build

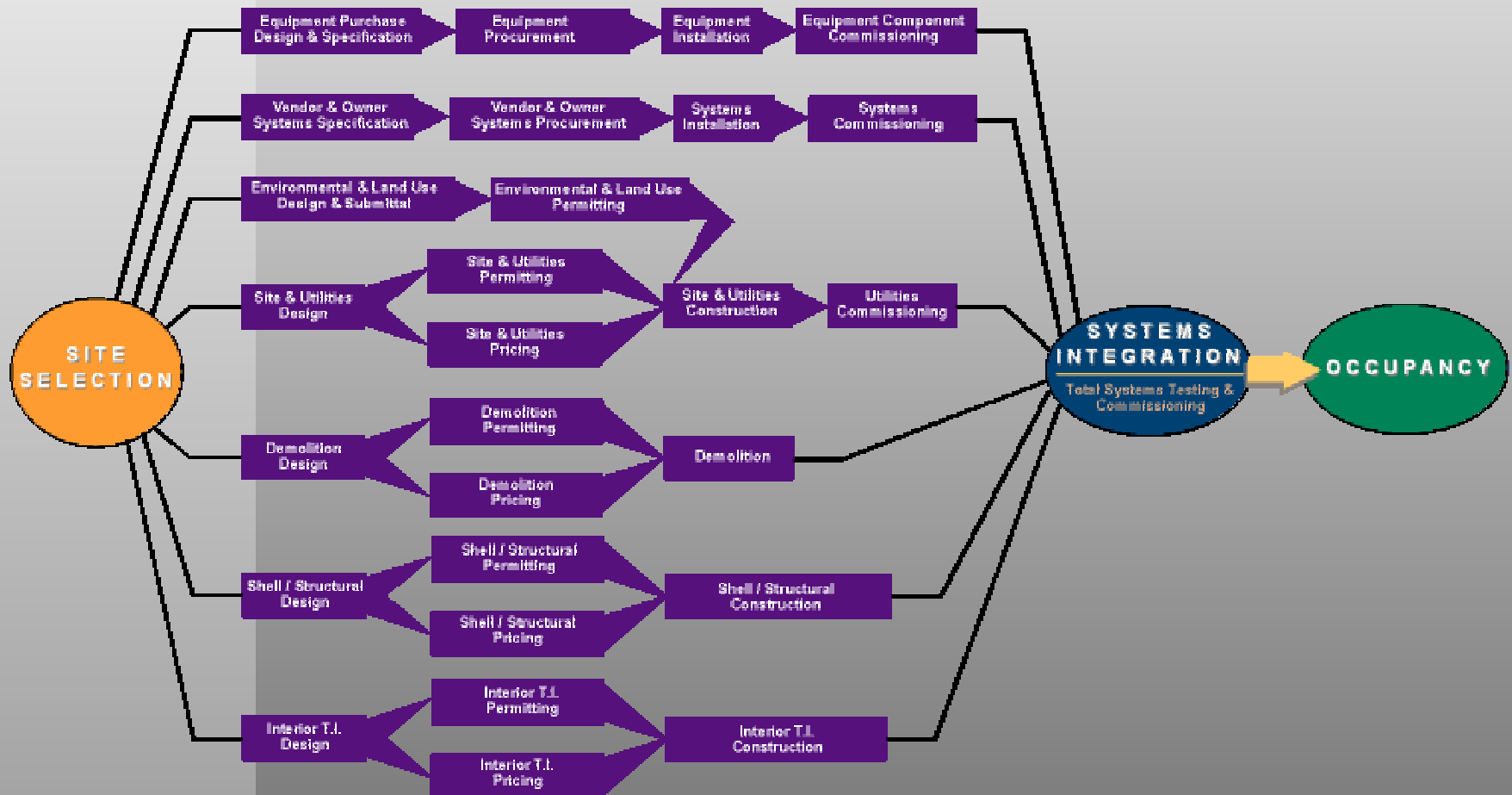
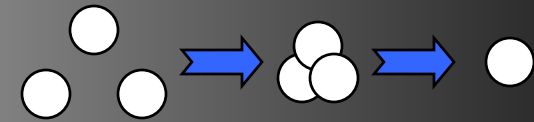


- RACI matrix (Responsibility, Authority, Consult, Inform)
- Charter
- Benchmarking
- Self evaluation
- Roles / Responsibilities Definitions

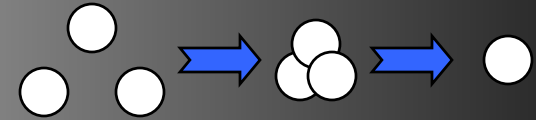
# Programming Process



# Prioritized Design



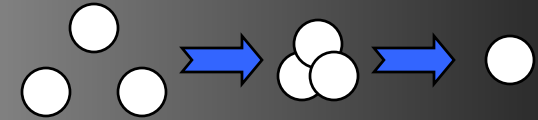
# Costs Less



## Overall Project Costs 6% Less

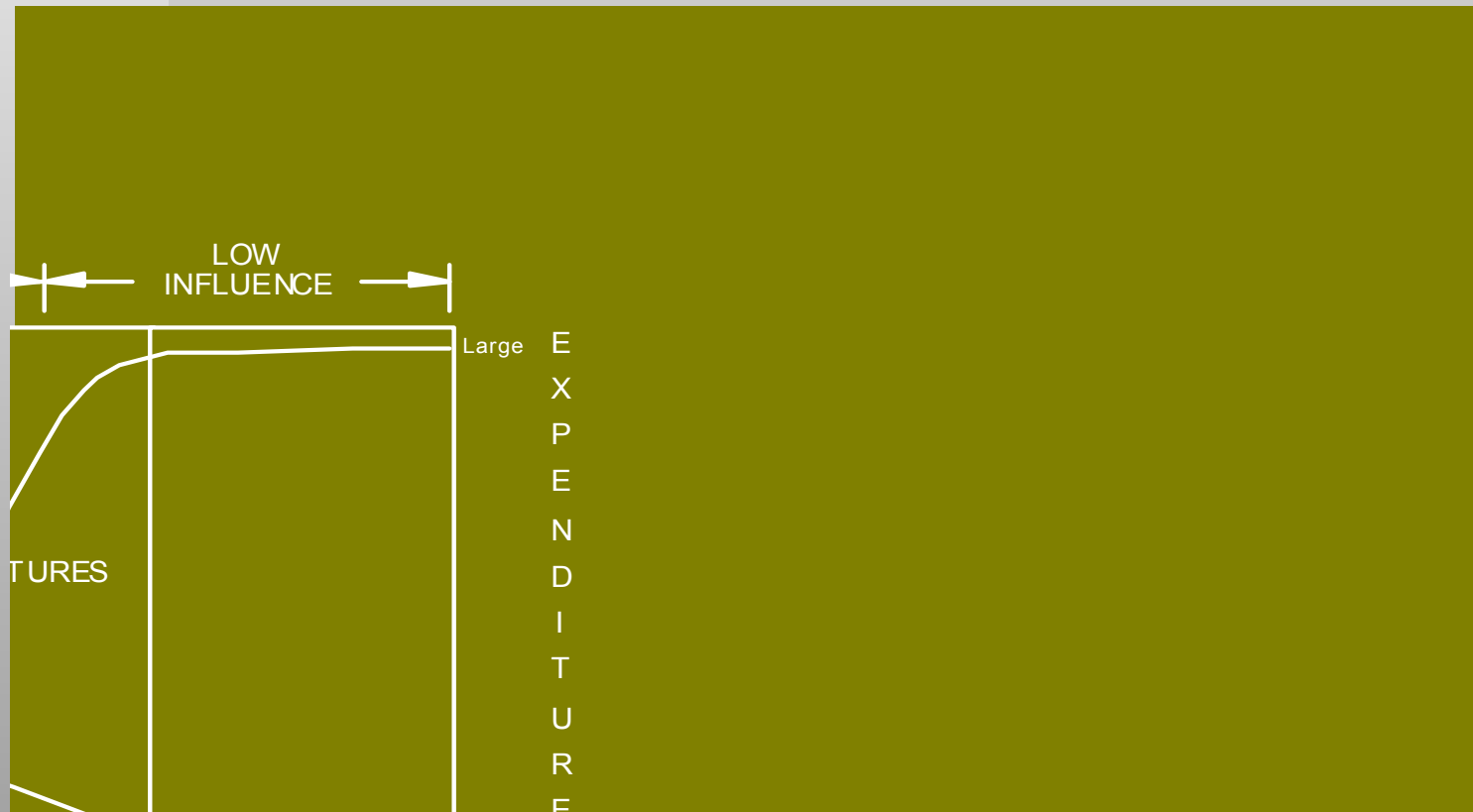
- Contractor can influence design with their means and methods and product selection early in design process.
- With contractor involvement early in process, drawing revisions are minimized.
- The overall design and construction schedule is shortened.
- Design costs are less due to reduced CA's and detailing.
- Reduce drawing requirements on “typical” and shop drawing related work.
- Construction process is more organized which will lead to more productivity thus reducing overall project costs.

# Teaming – Cost Savings

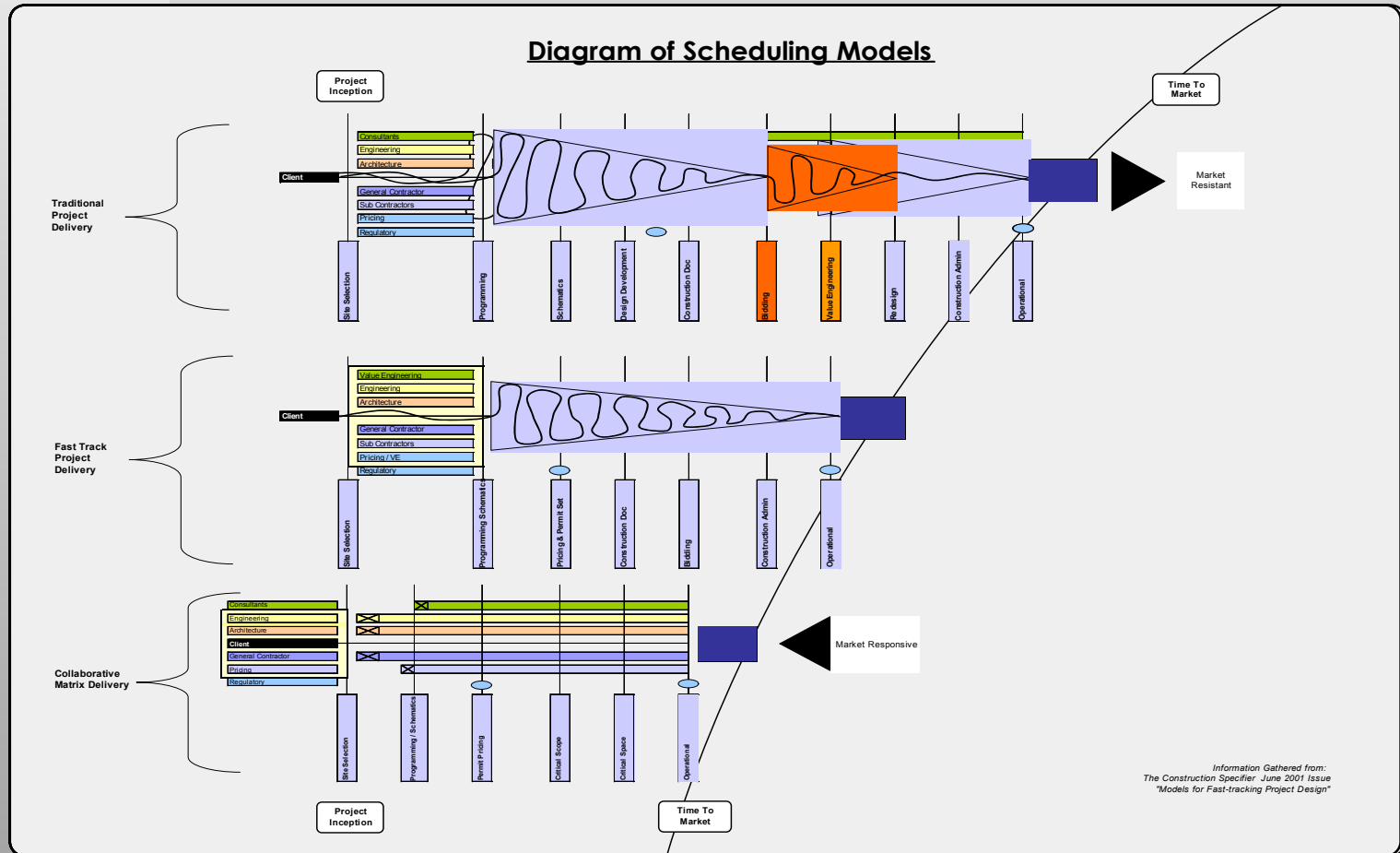
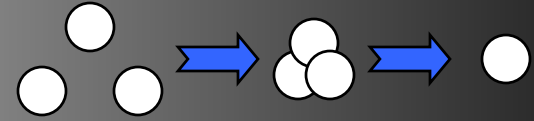


## Influence vs. Expenditure Curves

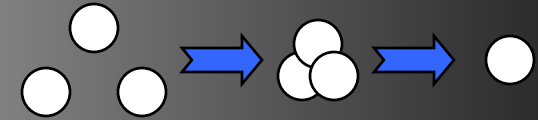
Design-Build Team on-board early allows best opportunity to achieve objectives



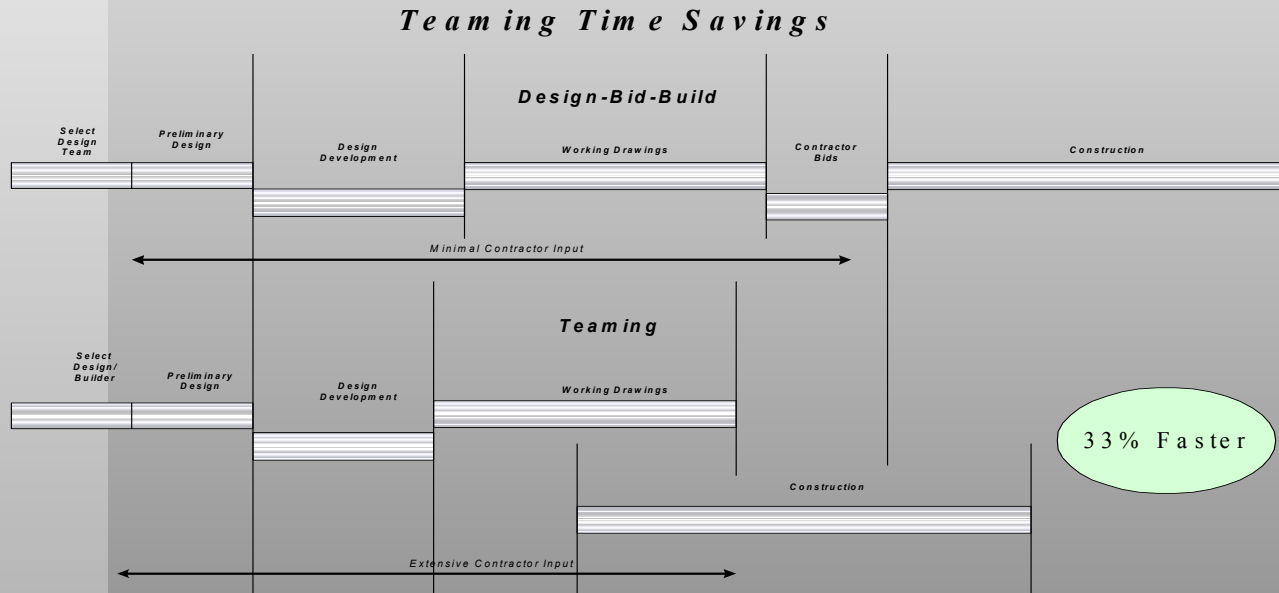
# Collaboration – Potential Savings



# Design-Build – Time Savings

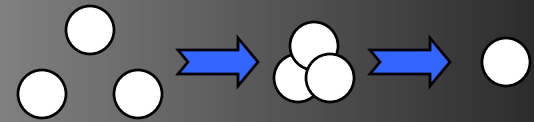


- **Concurrent vs. Consecutive activities**



- **Continual improvement / higher quality**
- **Efficiency (packages as project dictates)**
- **Proven 33% reduction in project schedule using the Design-Build Team Approach**

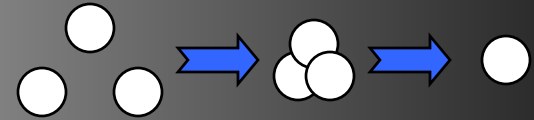
# Faster Design & Construction



## Design and construction delivered 33% faster than traditional delivery method

- Overlap of design and construction activities due to the extensive project knowledge gained by the design and construction team members.
- Reduced drawing revisions due to contractor early involvement in the design process.
- Contractor can influence proper means and methods prior to drawings being completed.
- Contractor / Designer to coordinate overall schedule to achieve “Just-in-time” design delivery.
- Expedient response to RFI through design-build.
- Early “Long Lead” procurement of materials.
- More pre-construction time to identify potential schedule impacts. Re-sequence as required.

# Key Success Points



- Establish mutual trust and respect
- Bring in contractor intelligence early
- Bring correct personalities to mix
- True collaborations spirit – “Fess & Fix”
- Define roles and responsibilities via charter / RACI / conflict resolution ladder
- All team members need to understand process
- Owner integral part of process
- “Challenge innovation – collaboration”