NEGATIVE EFFECTS OF DESIGN-BID-BUILD PROCUREMENT ON CONSTRUCTION PROJECTS

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Poor performance

Multi-party arrangements

Design-bid-build (DBB)

Negative effects
Design-Bid-Build (traditional, „stage-gate“)

- Client
- Architect
- Contractor
- Design
- Construction
Why do clients, architects and consultants choose DBB?

– Transparency, efficiency, equity.
– Preventing corruption and favoritism.
– Strict allocation of responsibilities and risks among the entities.
– Industry culture values tradition and familiarity.
– Architects remain remote from the submitting and awarding of tenders.
– Clients are cost focused.
DBB leads to flow interruptions:
- Unnecessary constraints for subsequent phases are set in the design phase.
- Little feedback for specialists.
- Lack of leadership and responsibility for the total project.

These factors lead to:
- Suboptimal solutions.
- Poor constructability and operability.
- Large number of change orders.
- Lack of innovation and improvement.
Claiming culture and opportunism:

- Parties tend to maximize their own interests and to transfer risks.
- Uncooperative behavior, non-collaboration.
- Planning for claims at tender stage.
- Conflict between the client and the contractor regarding the long-term objectives versus the short-term.
Findings

Flow interruptions

- Fragmentation of the industry
- Poor constructability
- Lack of responsibility for the total project
- Learning is hindered

Low margins

- Securing own contract
- Transferring risk
- Claims

Design-bid-build

- Short-term goals
- Change orders
- Silo thinking
- Lack of improvements
- Uncooperative behavior
- Opportunistic behavior
- Lack of trust
- Lack of trust
Prisoner’s dilemma

- **Prisoner A**
  - Confess: 5 years for A, 5 years for B
  - Remain silent: 20 years for A, 0 year for B

- **Prisoner B**
  - Confess: 0 year for A, 20 years for B
  - Remain silent: 1 year for A, 1 year for B

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Integrated forms of contract?
DBB prevents collaboration

Silo thinking

Prisoner’s dilemma
Encourage to cooperate

Admit DBB

Change the behavior

Influence the industry
Bandura’s reciprocal determinism model

- Personal factors
- Behavior
- Environment

(Wood and Bandura, 1989)
Conclusions:

1. DBB will be prevalent in the construction world in the foreseeable future.
2. DBB has negative effects on construction industry.
3. DBB creates constraints for the implementation of lean construction.
4. Can LPS help to fix the DBB problems?

Hypothesis: if personal factors can be determined and the behavior of project participants can be positively influenced by LPS, the situational context in which project participants operate can be influenced too.
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