The Design-Build Delivery Method
Is it right for your project?

“Integration is Our Foundation”
Welcome

1. Delivery Model Basics
2. Choosing a Delivery Model
3. Industry Studies
4. Owner Testimonials
5. Example Projects
6. Moving Forward
7. Q+A
Definition of: **Design-Build**

“A system of contracting under which **one entity** performs both Architecture/Engineering design and Construction under a **single contract** with the Owner”

- DBIA Manual of Practice
Delivery Model Basics

Design-Build

Owner

One Contract

Design-Builder
Delivery Model Basics

Design-Bid-Build (Traditional / Competitive Bidding)

Owner

Step 1

Architect / Engineer

Step 2

Contractor
Part 2
Choosing a Delivery Model
Choosing a Delivery Model

Why Owners might choose

**Traditional** Design-Bid-Build project delivery;

- Familiarity with the process
- Desire for tight control of design
- Direct relationships with both A/E and builder
- Builder selected by low bid
- A/E provides check and balance on builder
- Legal Authority (Public Sector)
Choosing a Delivery Model

Why Owners might choose Alternative project delivery methods;

- Consideration of non-price selection factors
- Achieve early builder involvement
- Accelerate the schedule
- Improve budget management
- Foster innovation & integration
- Reduce claims and adversity
Choosing a Delivery Model

Change Management: Design-Bid-Build

- Owner
  - Owner's PM
    - General Contractor
      - Prime Contract
        - Trade Contractor
          - Sub-Contract
            - Sub-Sub Contractor
  - Design Professional Engineer/Architect
    - Specialty Consultants
  - Supply Chain
    - Supplier
    - Worker

Marvelous Design

SPEARIN DOCTRINE
Liability Gap

What the $#^*!!!?

GREAT LAKES REGION
ILLINOIS  I  INDIANA  I  MICHIGAN  I  WISCONSIN
Choosing a Delivery Model

Change Management: Design-Build

Design Professional
Engineer/Architect

Specialty Consultants

Trade Contractor

Sub-Sub Contractor

Supplier

Worker

General Contractor

Trade Contractor

Sub-Sub Contractor

Supplier

Worker

Supplier

Trade Contractor

Supplier

Trade Contractor

Supplier

Worker
Choosing a Delivery Model

Top benefits of Design-Build
**As identified by Owners**

- Single point of responsibility
- Ability to fast track schedule
- Ability to lower project costs
- Greater focus on project quality

2010 DBIA Conference Survey
Part 3

Industry Studies
Penn State / CII Study  
Sanvido & Konchar, 1997

Design-Build speed of delivery

- **33% Faster** than Design-Bid-Build
- **23% Faster** than Construction Management at Risk

Design-Build costs

- **6% Less** than Design-Bid-Build
- **4% Less** than CM at Risk
Industry Studies

Design Build Effectiveness Study 2006

U.S. Department of Transportation

Design-Build reduces duration 14%

Design-Build showed greater cost savings on similar projects

No loss in quality
Increased Integration ➔ Better Sustainability
Design-Build and CM-R: Best Integration
Design-Build and CM-R: Best Performance
Industry Studies

Water Design-Build Council

Project Delivery Comparative Survey 2009

Evaluation Metric
- Schedule
- Schedule Growth
- On Time
- Under Budget

Design-Build
- 23 months
- 1 month
- 38%

Design-Bid-Build
- 40 months
- 2 months
- 20%

Outperforms Design-Bid-Build
Part 4
Owner Testimonials
Indiana University

“A collaborative approach was clearly evident during the design review meetings and continued throughout the project to include clarification of several LEED credits, finish and color selections and final building acceptance.”

Bob Richardson
Senior Associate Architect
Indiana University
Elkhart County, Indiana

“Having experienced both Design-Build and Design-Bid-Build, I can enthusiastically state that Design-Build gives Owners the better opportunity to achieve their goals and realize a ‘best value’ facility.”

Michael K. Books
Sheriff
Elkhart County, Indiana
“Constant communication, innovative designs and technology – along with engineering prowess and excellent project management made for a successful project which came in on budget.”

David Wittkop  
*Director of Operations*  
Michigan Milk Producers Association
“With design-build promising lower costs, we were hoping for a 6% savings. I am very pleased that we realized a 16% cost savings amounting to nearly a $4,000,000 savings for South Adams taxpayers.”

Cathy Egolf
Superintendent
South Adams Schools / Berne, Indiana
“As Owners, Design-Build is the best way to get a building built if you can let go and let your design-builder run your job. Relationships and trust in your contractor will go far towards a successful project.”

Chris Moehr  
Project Manager  
State of Arizona / Department of Emergency and Military Affairs
Naval Facilities Engineering Command

“[Due to reliance on Design-Build,] We no longer have a Claims Division.”

Joseph E. Gott
Chief Engineer
NAVFAC / Naval Facilities Engineering Command
Owner Testimonials

McLaren Health Care, Michigan

“I can’t imagine not using a design-build model for anything of significance in the future.”

Daniel Medrano
*Corporate Director of Facilities*
McLaren Health Care Corp. / Flint, Michigan
Part 5  Example Projects
Example Projects

Design-Build Adaptability

**Transportation**
- Highways
- Bridges
- Railways
- Tunnels
- Parking

**Education**
- Universities
- K-12 Schools
- Charter Schools
- Early Childhood

**Commercial**
- Retail
- Office
- Hotel
- Housing
- Mixed Use

**Industrial**
- Research
- Manufacturing
- Power
- Chemical
- Food Processing

**Water**
- Drinking Water
- Wastewater

**Healthcare**
- Hospital
- Clinic
- MOB
- Long Term Care

**Public**
- Stadium
- Arena
- Convention
- Airport

**Government**
- Police/Fire
- Military
- Administrative
- Criminal Justice
Example Projects

McCormick Place West Expansion

Chicago, Illinois
Metropolitan Pier and Expo Authority

2,400,000 sq. ft. addition
Overcame significant engineering challenges

$882,000,000 / Completed on budget

Completed 8 months early

LEED® certified / Largest project in the U.S.
Numerous Awards
Example Projects

I-355 / Des Plaines Valley River Bridge

Lemont, Illinois

$125,000,000 saved over $8,000,000

Reduced Schedule by 6-8 Months
Example Projects

Battle Stations 21

US Navy / Great Lakes, IL
Training Simulator

$85,000,000
On Budget

On Schedule

No Claims

Awarded DBIA Best Overall Project, 2008
**Example Projects**

**Northern Treatment Facilities**

Metro Wastewater Reclamation  
Denver, Colorado

$280,200,000  
On Budget  
On Schedule

*Progressive Design-Build*

*Awarded DBIA Best Water/Wastewater Project, 2017*
Example Projects

Claude “Bud” Lewis Desalination Plant

Poseidon Water, LLC
Carlsbad, California

$588,000,000
On Budget

On Schedule
36 Month Duration

50 MGD Production of Fresh Drinking Water

Awarded DBIA Project of the Year, 2016
Example Projects

Diverse Success Stories

Crowne Plaza Hotel
*Wauwatosa, Wisconsin*
*$21,000,000*

Prairie State Energy
*Marissa, Illinois*
*$4,000,000,000*

Michigan Milk Producers
*Ovid, Michigan*
*$62,000,000*

Fifth Third Bank
*Grosse Point, Michigan*
*$1,700,000*
Top Challenges for Design-Build

- Inexperienced Owners believe Design-Build is risky
- Owners perceive a loss of control in the project
- Owners perceive a cost advantage with low bid
- Public procurement can be difficult
Myths Persist

- Design-Build only works for large (small) projects
- Design-Build only works for simple (complex) projects
- Owner is not involved in design
- Selection is not competitive
- Costs more than low bid
- Can’t control quality
Public Sector Design-Build Authority

**Federal Sector:**
- Clinger-Cohen Act (1996)
- Federal Acquisition Regulation / Subpart 36.3

**State-by-State Enabling Legislation**
- Steady Growth (And Continuing)
Moving Forward

Public Sector Design-Build Authority

1993

Red: No Public Authority

Green: Some Public Authority [ONE STATE]
Moving Forward

Public Sector Design-Build Authority

All States
Have at least
Some Authority
Design-Build Growth in Market Share

Over 40% of Non-Residential Construction as of 2014
Design-Build Institute of America (DBIA)

- Founded in 1993
- Over 4,000 Members
  - Owners
  - Architects
  - Engineers
  - Contractors
  - Trade Partners
- Professional Certification
- Research, Education, Conferences, Publications
- Promotion of Design-Build Best Practices

“Integration is our Foundation”
How to Optimize Design-Build

1. **Pick The Best Team**
   - Three Most Highly Qualified
   - Best Value
   - Emphasize Successful Past-Performance

2. **Give Them the Flexibility to Succeed**
   - Performance Based
   - Flexible
   - Accountability

3. **Reward Them for Superior Performance**
   - Focus on Performance
   - Focus on Owner’s Goals
   - Money Motivates

**Emphasize Three Synergistic Elements**

- Great Lakes Region: Illinois, Indiana, Michigan, Wisconsin
Resources:

• Design Build Institute of America
  1100 H Street, NW, Suite 500
  Washington, DC 20005
  (202) 682-0110
  www.dbia.org

• DBIA / Great Lakes Region
  www.dbiaglr.org

• Design Build Essentials  by B. Jackson, (2011)

• Project Delivery Systems for Construction, 3rd Ed.  by M. Kenig (2011)
Discussion

Q + A
Thank You!

Daniel Rawlins, RA, DBIA
K2M DESIGN, INC.
141 East Ohio Street
Indianapolis, IN, 46204
www.k2mdesign.com
(317) 419-5440 office
(317) 441-7905 mobile
drawlins@k2mdesign.com