# Choosing and Implementing Airport Capital Project Delivery Methods

**September 24, 2025**
**1 -2:30 PM ET**

NATIONAL ACADEMIES Sciences Engineering Medicine

TRB TRANSPORTATION RESEARCH BOARD

ACRP AIRPORT COOPERATIVE RESEARCH PROGRAM

# Today's Learning Objectives

1. Identify alternative methods for project delivery based on the typical conditions under which they can be effectively applied

2. Select appropriate project delivery tools and strategies to help efficiently execute airport capital projects

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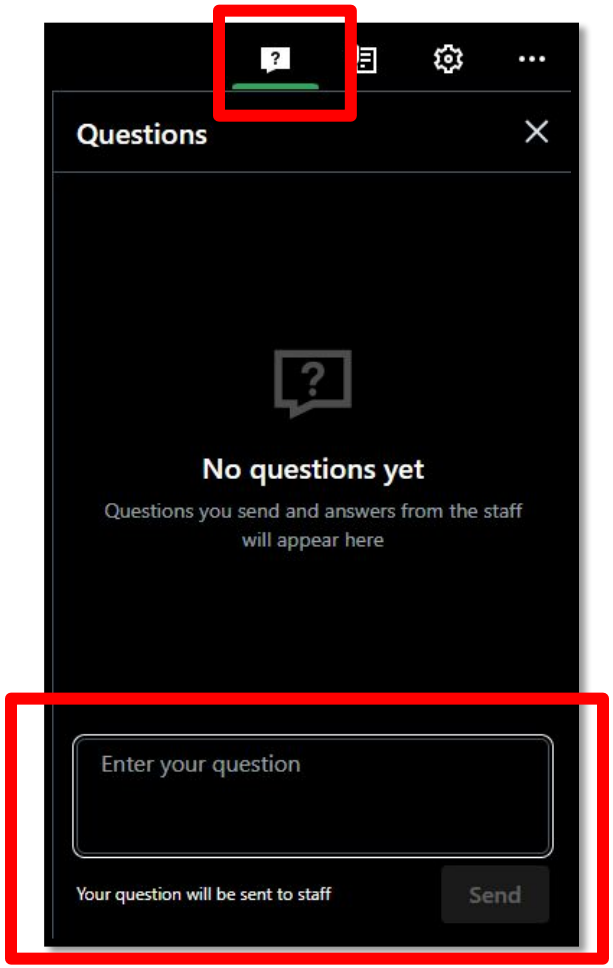
# Questions and Answers

Please type your questions into your webinar control panel

We will read your questions out loud, and answer as many as time allows

**#TRBwebinar**



# Linda Konrath
# HKA

# Sid Scott
# Partner – HKA

- **38 Years consulting for the Transportation Industry**
- **Principal Investigator for more than a dozen NCHRP, ACRP, SHRP 2 research studies/programs**
- **Development of best practices for alternative procurement and contracting methods, risk management, specifications, dispute resolution, and construction management policies and procedures.**

# Steve Cornell
# Principal – SSC Advisors, LLC

- 40+ years of experience with new greenfield airports as well as expansion, redevelopment, and rehabilitation of airside, landside, and terminal facilities across the U.S. and on four continents abroad.
- Managed Capex airport projects in San Diego (SAN), Houston (IAH), Doha, Qatar (DOH) and Incheon, South Korea (ICN).

# Shane Harbinson
# AUS – Chief Development Officer

**28 Years in the Airport Industry**
**Airport Experience at:**
**Minneapolis St. Paul International**
**Midland International**
**San Antonio International**
**Austin Bergstrom International**
**ACI-NA Subcommittee Chair Construction**

# ACRP Report 267

## ACRP 01-45: Selecting, Procuring, and Implementing Airport Capital Project Delivery Methods

**Webinar**

**Steven Cornell**
**Shane Harbinson**
**Sid Scott**

***September 24, 2025***

HKA

NATIONAL ACADEMIES Sciences Engineering Medicine
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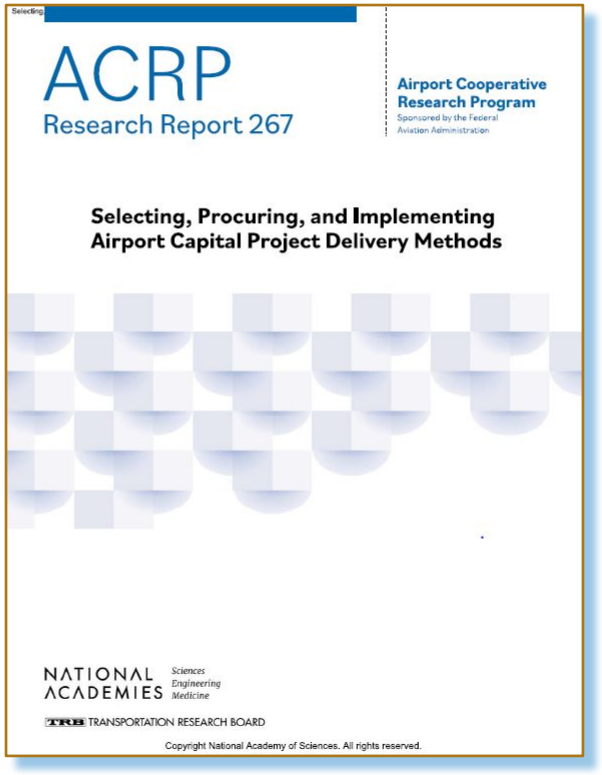
# ACRP Report 267

**BACKGROUND**

- Builds on ACRP *A Guidebook for Selecting Airport Capital Project Delivery Methods,* published in 2009
- Provides guidance on procurement and implementation of the selected PDM
- Provides a "User-Friendly" Project Delivery Method Selection Tool
- Engaged 25 Airports with interviews and focus groups regarding PDM experiences, needs, best practices and lessons learned
- Research team composed of seasoned experts in PDM performance



# ACRP Report 267

**Report 267 Guidebook Table of Contents**

1: Introduction
2: Project Delivery Methods
3: Procurement Practices
4: Contracting Methods
5: Executing Airport Capital Projects
App A: PDM Summary Tables
App B: Example Technical and Price Proposal Requirements - Nashville Concourse D and Terminal Wings PDB project
App C: Example Scope of Preconstruction Services for a Construction Manager at Risk Project - Massport
App D: Example Scope of Services for a Progressive Design–Build Project - Nashville

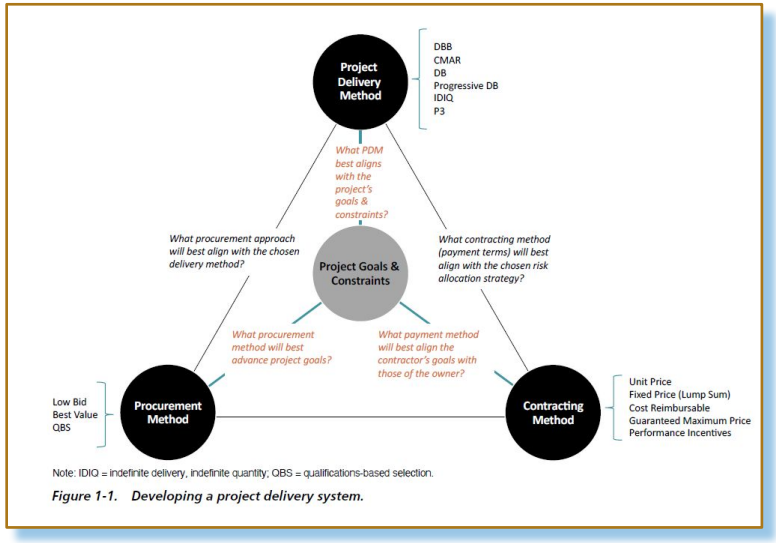
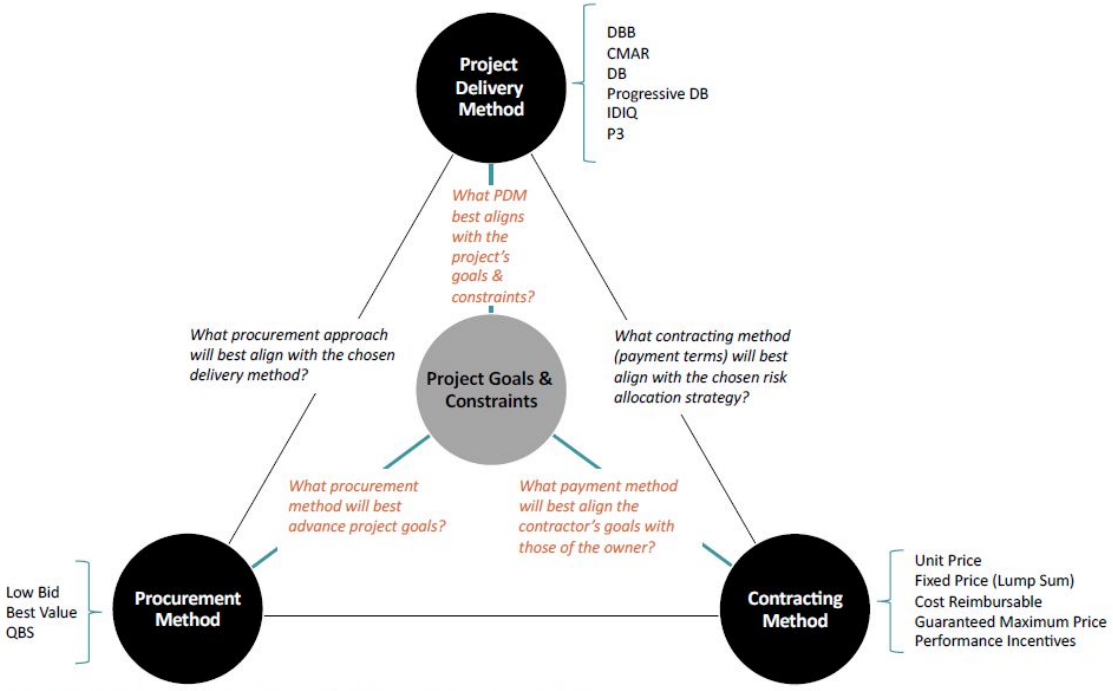


*Figure 1-1. Developing a project delivery system.*

# ACRP Report 267




Note: IDIQ = indefinite delivery, indefinite quantity; QBS = qualifications-based selection.

***Figure 1-1. Developing a project delivery system.***

# Chapter 5: Executing Airport Capital Projects

## Project Delivery Selection Tool

- Project Objective and Level of Experience
  - Design-Bid-Build
  - Competitive Seal Proposal (Best Value)
  - Construction Manager @ Risk
  - Design Build – Progressive
- Level of Experience with the Project
  - Complexity - Risk - Single Point of Contact
- Schedule
- Design Control
- Cost – Cost Certain at GMP (Bond Market and Airline Relations)

# AUS - Alternative Delivery Utilization

# Organizational Readiness

## Airport Readiness Assessment / Maturity Study

- Conduct Organizational Assessment

  Executive Program Manager
  - Culture – Change Management
  - Organizational Experience with Alternative Delivery
  - Objectives and Constraints of the Organization
  - Elected Officials Experience to Award Alternative Delivery
    - Training and Education Needed?
    - Speed of Delivery

# Organizational Readiness

## Programmatic Documents

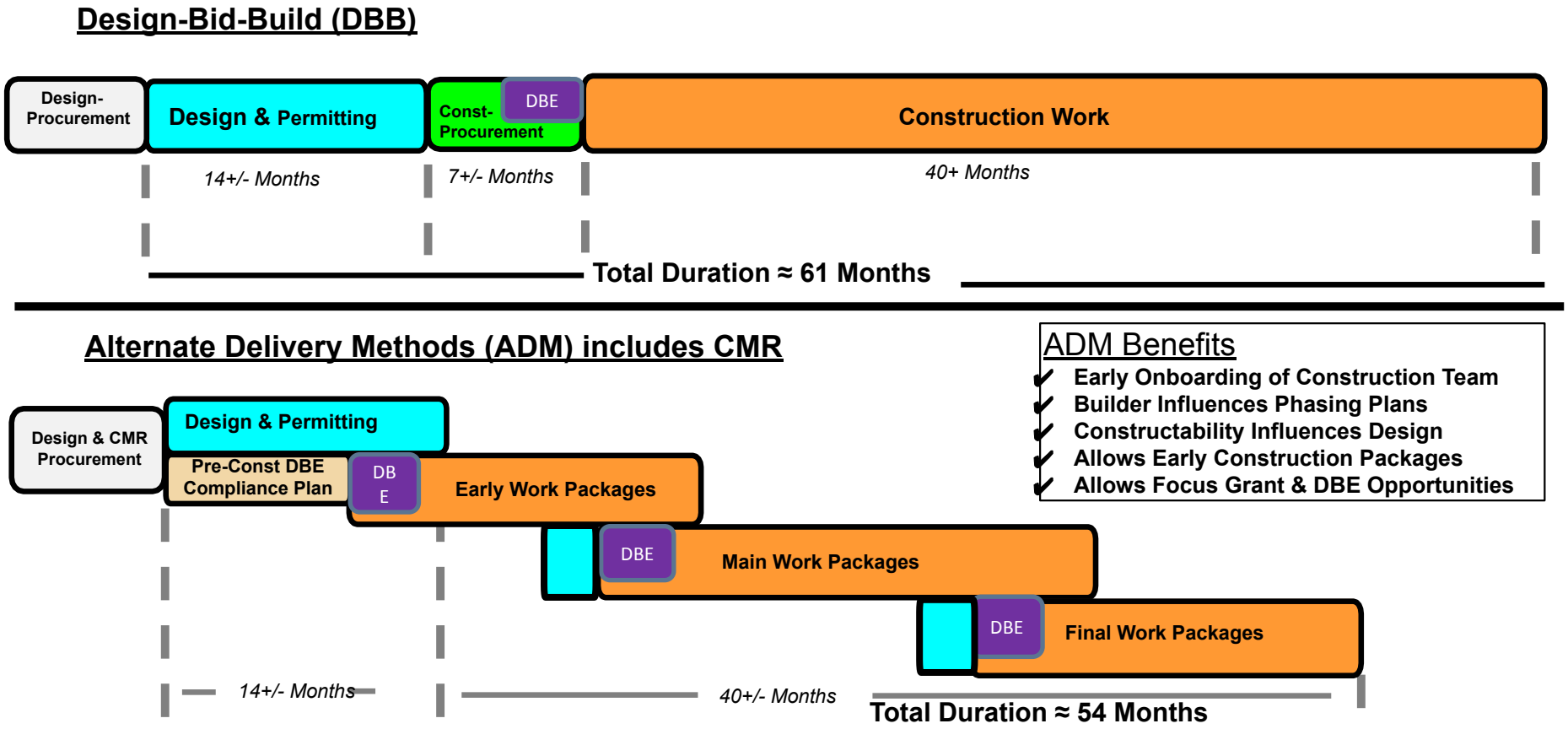
- Procurement Documents and Contracts Update Needed?
  - Consultant and Legal Team to Update Design and Construction Contracts
  - Procurement Documents Updated?
- Training Project Managers, Staff, Leadership and Key Stakeholders (Permitting and Inspections)
  - Early Component Work Packages while still final design

# Technology Tools

## Capital Delivery Technology

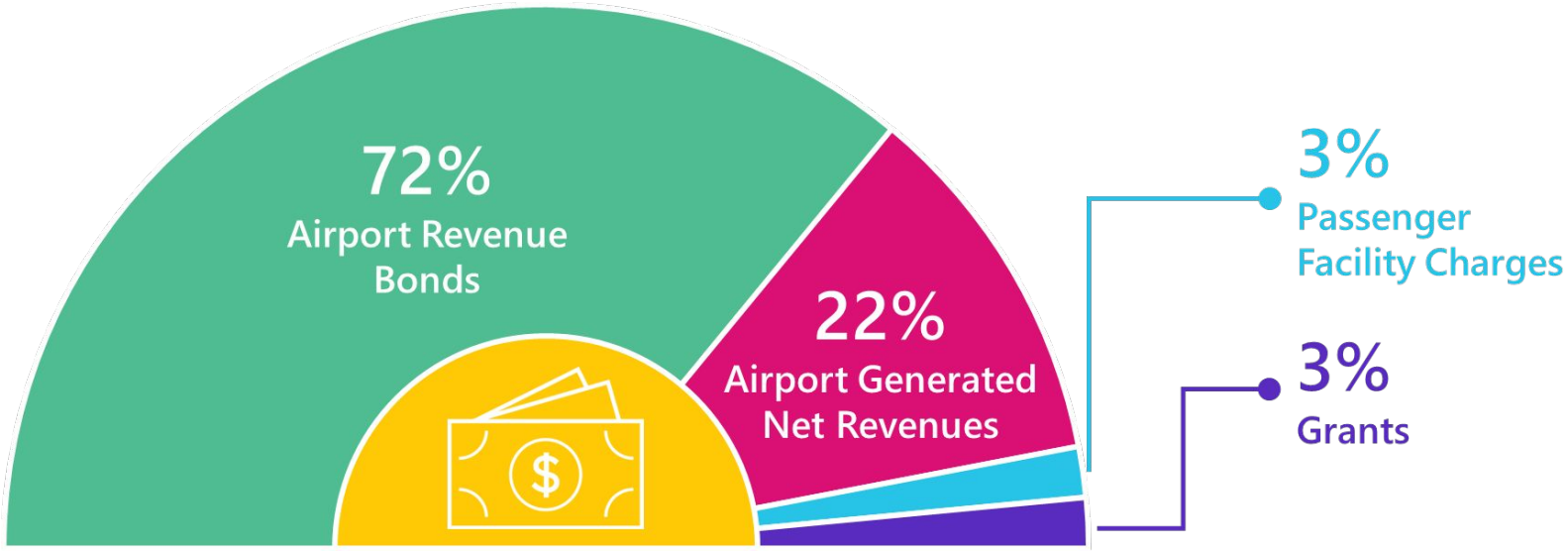
- Project Management System
  - Procure Early
    - Train Staff
    - Designers
    - Builders
    - Subconsultants and Subcontractors
- BIM Early and Use
  - Subject Matter Expert Reviews Bluebeam
  - Schedule (P6)
  - Cost Estimating

# Alternate Delivery Methods - Work Package Flexibility



# Capital Funding Key Sources

## Different Funding Sources and Restrictions

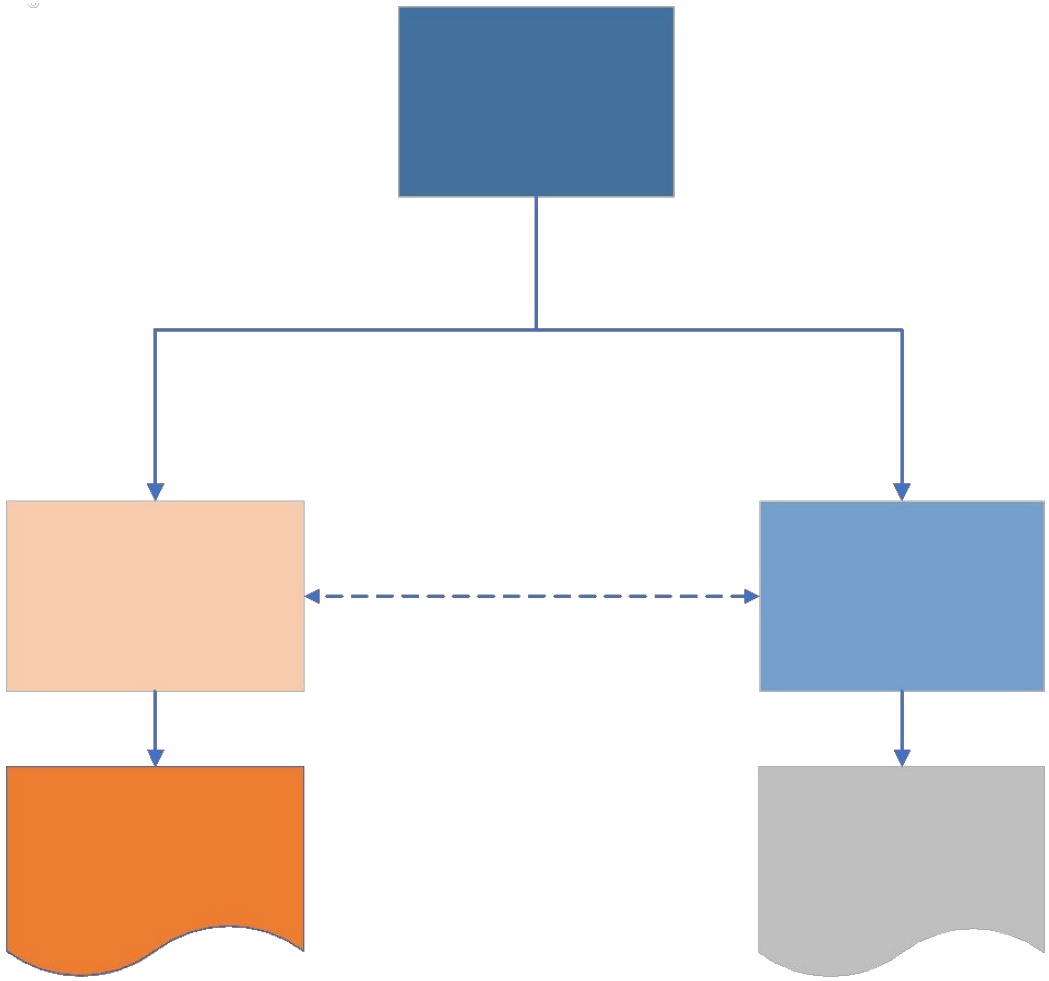


# FAA Coordination

## Early Coordination and Discussion with Airport District Office

- **ADO Approval Required**
- Contract Responsibility Matrix – Showing Contractual Relationships between all parties (Options Provided in Research Report)
- Statement/Processes in place to prevent conflicts of interest
- Proof procurement will be open and fair and objective as sealed bid method
- Requests for proposals should be publicized and identify all evaluation factors and their relative importance
- Proposals should be solicited from an adequate number of qualified sources (3 or more submitted proposals)
- Awards will be made to the responsible firm whose proposal is most advantageous to the program, with price and other factors considered

# CMAR Contractual Structure



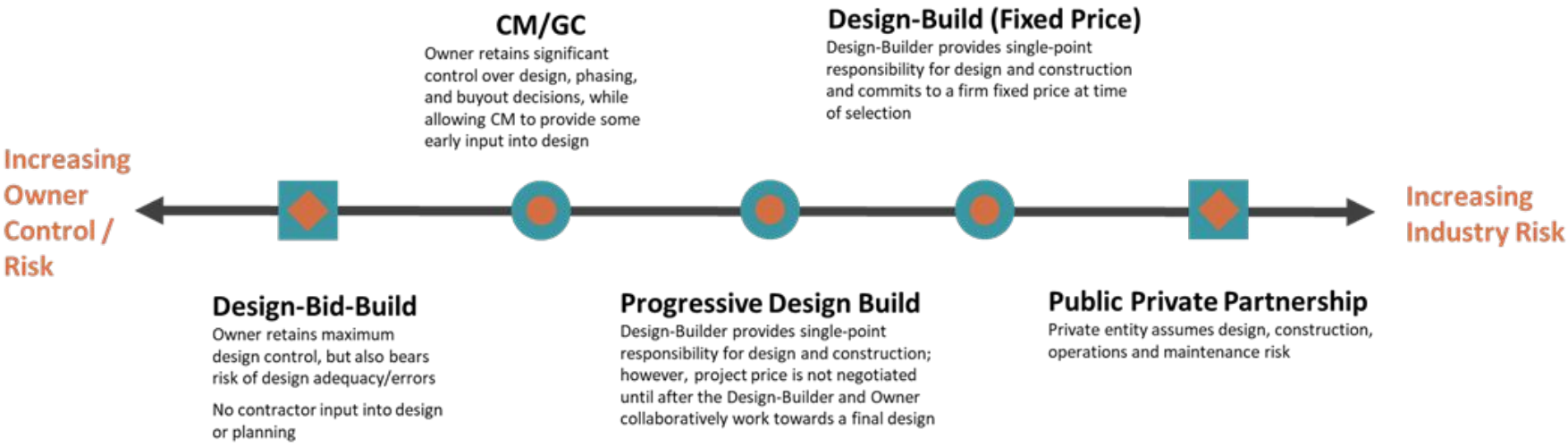
# ACRP Report 267 Oversight Panel

- Joan C. Zatopek, Port of Oakland, Oakland, CA (Chair)
- Steven Cornell, Kimley-Horn and Associates, Inc., Orlando, FL
- Roger A. Johnson, Jacobs, Rancho Santa Margarita, CA
- Margaret McKeough, Paslay Management Group (PMG)
- Andrew Rountree, Metropolitan Washington Airports Authority
- Louis Wolinetz, WSP, Washington, DC
- Patricia Dickerson, FAA Liaison
- Christopher J. Oswald, Airports Council International–North America Liaison

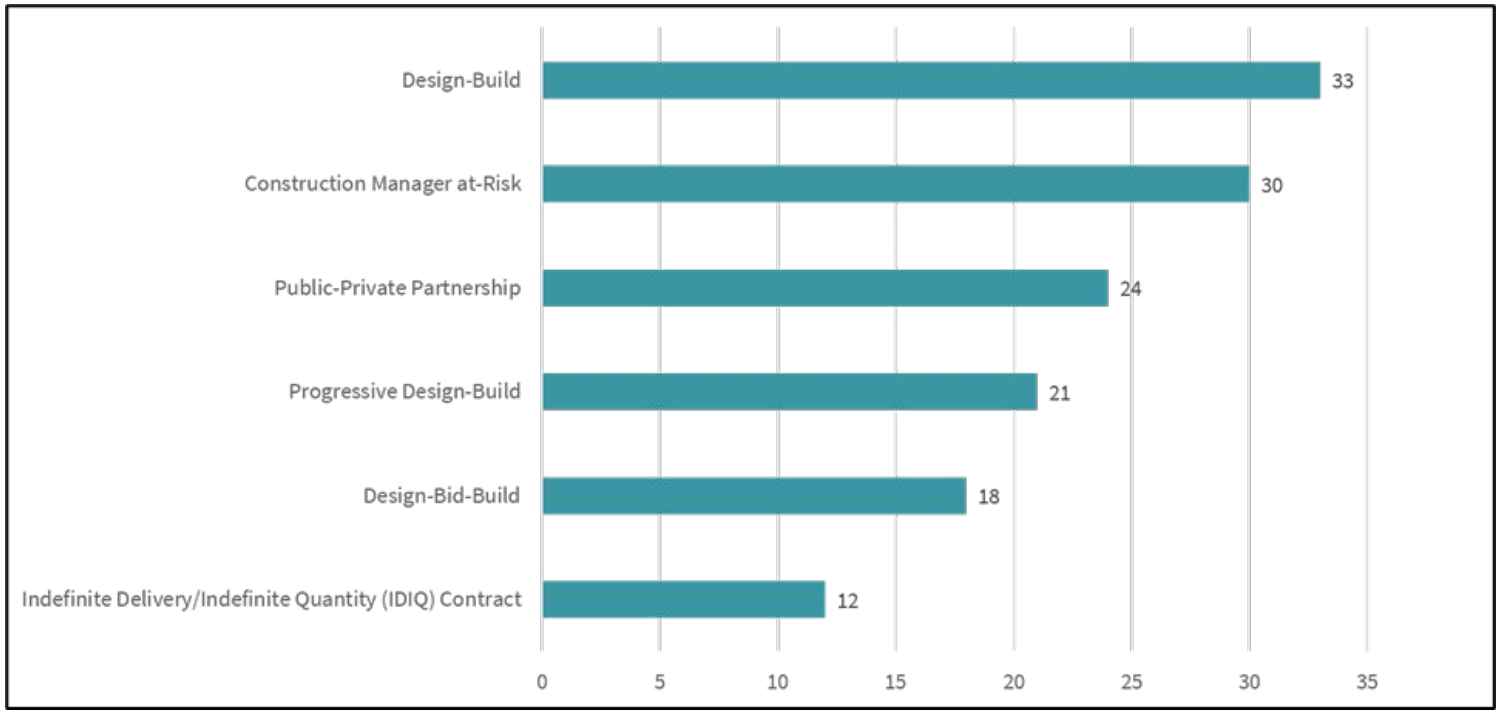
# Research Scope/Objectives

- Perceived advantages, disadvantages, and implementation challenges for existing and emerging airport capital project delivery methods (PDM)
- Decision framework for selection of PDMs
- Procurement and contracting strategies to maximize the effectiveness of the chosen PDM
- Organizational capabilities (staff skills, knowledge, and capacity) that can facilitate the implementation of PDM
- Financial planning considerations

# Range of Delivery Methods Currently in Use



# Delivery Methods of Interest



# Key Findings

- Construction Manager @Risk (CMAR) and Design-Build (DB) popular alternatives to Design-Bid-Build (DBB) delivery for major airports with large and/or complex programs/projects.
- Some airports interviewed strong advocates for Progressive DB.
- Strong preference for alternative PDM(s) where Airport has had most experience/success (serve as default delivery method).
- Several of the airports interviewed indicated that project type often drives the PDM decision.
  - Complex terminal projects, significant stakeholder engagement and complex phasing considerations, better suited to CMAR or PDB
  - Projects with D&C tied to proprietary equipment or systems (baggage screening and handling systems), good candidates for a “traditional” DB approach.
  - Projects perceived as requiring more airport control (airfield work), typically

# Decision Frameworks/Tools

- Many airports do NOT apply systematic project delivery selection processes
  - Intuitive sense of the pros/cons of different PDMs likely to meet the goals, constraints and manage risks for a particular project.
- PDMs are selected primarily based on their ability to:
  - Accelerate delivery timeframes.
  - Bring relevant industry knowledge into the delivery process at the right time.
  - Address complexity through collaboration and integrated teams ( “complexity” = complicated operational considerations, complex designs, third party risks, etc.)
  - Leverage private sector expertise and capital.
- PDM selection and guidance not comprehensive
  - Either focused on DBB, DB and CM/GC (i.e., non-P3 alternatives) or on P3 alternatives, such as DBOM and DBFOM.
  - Don’t consider procurement and contracting (payment) methods

# Guidebook Content

1. **Project Delivery Methods**–Traditional and Alternative Delivery Methods, PDM Selection Considerations
2. **Procurement Practices**–Key Attributes of Low bid, Qualifications-based, and Best-Value, Innovations in Procurement, Selection and Implementation Considerations,
3. **Contracting Methods**–Payment provisions, Performance Incentive Strategies, Payment Provision Selection Considerations
4. **Executing Airport Capital Projects**
   - Organization and Culture
   - Supporting Collaboration and Team Integration
   - Scope and Budget Management
   - Project Risk Management

# ACRP 01-45
# Selecting, Procuring, and Implementing Airport Capital Project Delivery Methods

## Project Delivery Selection Tool

## Instruction

**Project Delivery Constraints**

- Prior to using this tool, the user needs to determine whether project / airport specific constraints may limit what project delivery method can be used for the project under consideration. Some examples of questions to consider include:
  - Are there any state, local, or airport-specific regulatory and/or statutory or policy constraints that limit the use of certain PDMs?
  - Do any of the project's planned funding and/or financing sources present possible constraints on the use of certain PDMs?

**Input**

- Read through the questions on the Input sheet. Based on the specific project conditions as well as the airport's goals and priorities, enter the relative weight (%) for each question. Make sure that the sum of the weights equals 100%.
- Answer question 1-9 by responding "Disagree", "Somewhat agree", or "Agree" as approprite.
- Answer question 10 by scoring the airport's experience with each project delivery method: "Significant", "Some", or "None".

**Calculations**

- Review the Calculations sheet to get a better understanding of how the scoring is calculated.
- Read the discussion on the scoring logic.
- Confirm that you are comfortable with the default scores provided. If you believe that the default scores require changes, you can change the orange-shaded cells but make sure the proposed changes are consisten with the scoring logic described.

**Output**

- In the Output sheet, review the results and confirm that you understand the scoring.
- Select the project delivery method with the best evaluation based on the overall ranking score.
- In case of a tie, please consult the ACRP 01-45 Guidebook and/or the PDM Summary Tables (see below) for additional guidance.
- Record any important selection committee comments in the space provided.

**PDM Summary Tables**

- You can use the "DBB", "CMAR", "DB", and "PDB" sheets as resources to learn more about:
  - Contractural structure, key attributes, perceived advantages, and potential challenges of each PDM;
  - Typical procurement and payment methods used; and
  - Common use of each delivery method.

# ACRP 01-45
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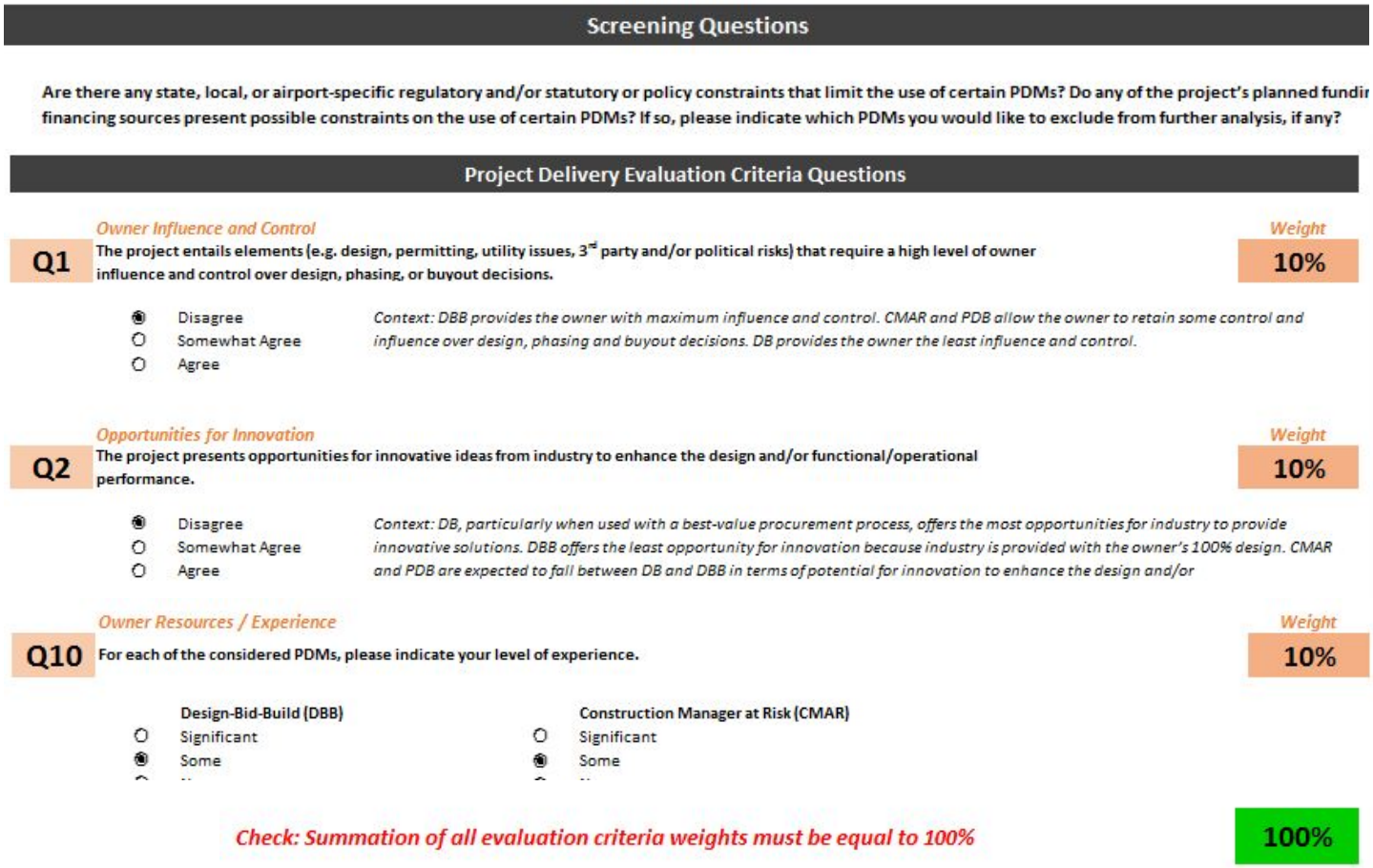
## Project Delivery Selection Tool

**Input**



**Screening Questions**

Are there any state, local, or airport-specific regulatory and/or statutory or policy constraints that limit the use of certain PDMs? Do any of the project's planned fundir financing sources present possible constraints on the use of certain PDMs? If so, please indicate which PDMs you would like to exclude from further analysis, if any?

**Project Delivery Evaluation Criteria Questions**

*Owner Influence and Control* — *Weight* 10%

**Q1** The project entails elements (e.g. design, permitting, utility issues, 3rd party and/or political risks) that require a high level of owner influence and control over design, phasing, or buyout decisions.

- (●) Disagree
- ( ) Somewhat Agree
- ( ) Agree

*Context: DBB provides the owner with maximum influence and control. CMAR and PDB allow the owner to retain some control and influence over design, phasing and buyout decisions. DB provides the owner the least influence and control.*

*Opportunities for Innovation* — *Weight* 10%

**Q2** The project presents opportunities for innovative ideas from industry to enhance the design and/or functional/operational performance.

- (●) Disagree
- ( ) Somewhat Agree
- ( ) Agree

*Context: DB, particularly when used with a best-value procurement process, offers the most opportunities for industry to provide innovative solutions. DBB offers the least opportunity for innovation because industry is provided with the owner's 100% design. CMAR and PDB are expected to fall between DB and DBB in terms of potential for innovation to enhance the design and/or*

*Owner Resources / Experience* — *Weight* 10%

**Q10** For each of the considered PDMs, please indicate your level of experience.

| | Design-Bid-Build (DBB) | Construction Manager at Risk (CMAR) |
|---|---|---|
| | ( ) Significant | ( ) Significant |
| | (●) Some | (●) Some |

*Check: Summation of all evaluation criteria weights must be equal to 100%* — 100%

# ACRP 01-45
# Selecting, Procuring, and Implementing Airport Capital Project Delivery Methods

## Project Delivery Selection Tool

## Calculation

| Legend | |
|---|---|
| Aqua-shaded cells | These cells are automatically populated as the users selects answers on the Input sheet. Users should not modify aqua-shaded cells in the Calculation |
| Orange-shaded cells | These cells are pre-populated with default scorings. Users can modify these default scorings if desired (1 being worst scoring and 5 being best scoring |

**Section A: Screening Questions**

| | | | | |
|---|---|---|---|---|
| Selected Answer | 2 | 2 | 2 | 2 |
| Excluded/Included? | Included in analysis | Included in analysis | Included in analysis | Included in analysis |

**Section B: Project Delivery Evaluation Criteria Questions**

| Q1: The project entails elements (e.g. design, permitting, utility issues, 3rd party and/or political risks) that require a high level of owner influence and control over design, phasing, or buyout decisions. | | | | |
|---|---|---|---|---|
| Project Delivery Method | Design-Bid-Build | Construction Manager at Risk | Design-Build | Progressive Design-Build |
| Selected Answer | 1 | | | |
| A. Disagree | 3.0 | 3.0 | 3.0 | 3.0 |
| B. Somewhat Agree | 4.0 | 3.0 | 2.0 | 3.0 |
| C. Agree | 5.0 | 3.0 | 1.0 | 3.0 |
| Selected Score | 3.0 | 3.0 | 3.0 | 3.0 |
| Allocated Weight | 10% | | | |
| Weighted Result Q1 | 0.30 | 0.30 | 0.30 | 0.30 |

| Q2: The project presents opportunities for innovative ideas from industry to enhance the design and/or functional/operational performance. | | | | |
|---|---|---|---|---|
| Project Delivery Method | Design-Bid-Build | Construction Manager at Risk | Design-Build | Progressive Design-Build |
| Selected Answer | 1 | | | |
| A. Disagree | 3.0 | 3.0 | 3.0 | 3.0 |
| B. Somewhat Agree | 2.0 | 3.0 | 4.0 | 3.0 |
| C. Agree | 1.0 | 3.0 | 5.0 | 3.0 |
| Selected Score | 3.0 | 3.0 | 3.0 | 3.0 |
| Allocated Weight | 10% | | | |
| Weighted Result Q2 | 0.30 | 0.30 | 0.30 | 0.30 |

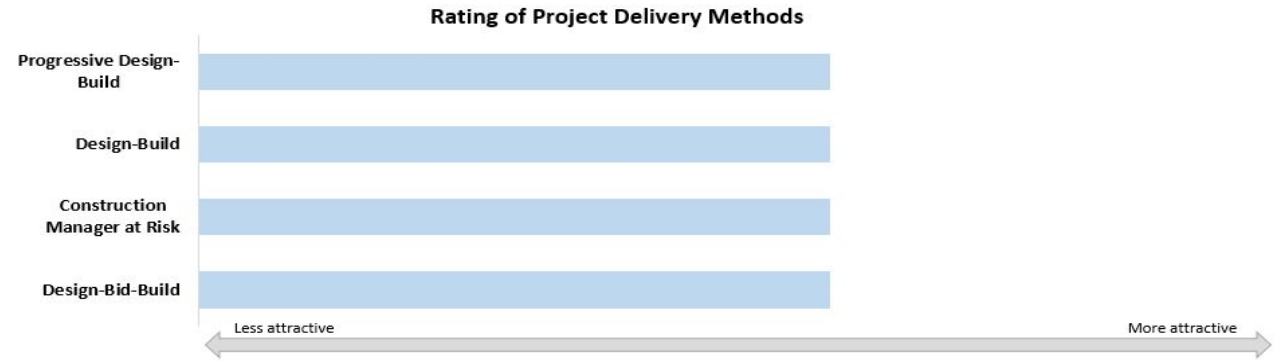
# ACRP 01-45
# Selecting, Procuring, and Implementing Airport Capital Project Delivery Methods

## Project Delivery Selection Tool

## Output

### Project Delivery Selection Dashboard

| Project Delivery Method | Design-Bid-Build | Construction Manager at Risk | Design-Build | Progressive Design-Build |
|---|---|---|---|---|
| Project delivery method considered in analysis? | Included in analysis | Included in analysis | Included in analysis | Included in analysis |



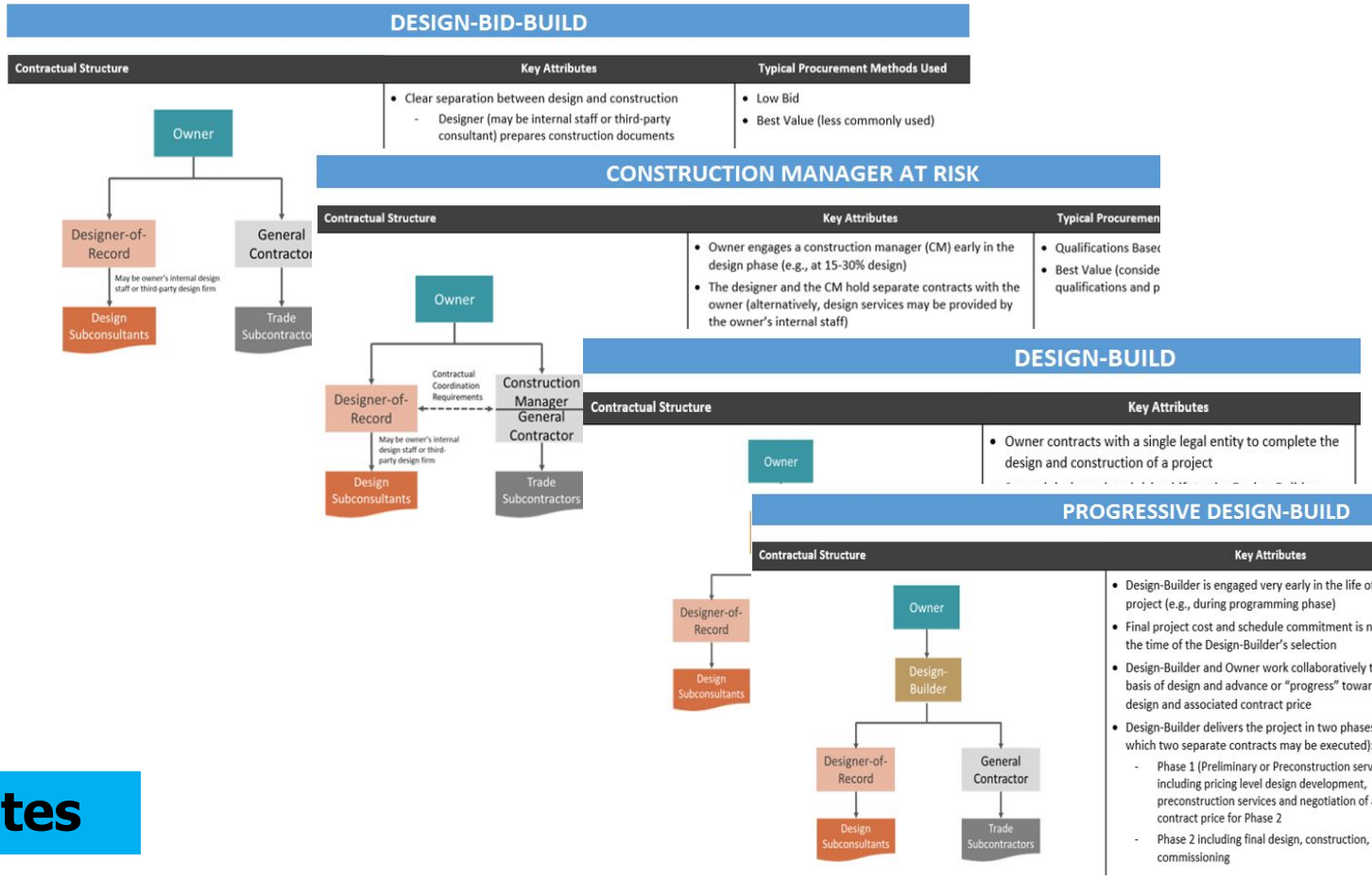

### Summary of Evaluation Criteria

| Question | Criteria/Description | Weight | Design-Bid-Build | | Construction Manager at Risk | | Design-Build | | Progressive Design-Build | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Score | Weighted Score | Score | Weighted Score | Score | Weighted Score | Score | Weighted Score |
| 1 | Owner Influence and Control | 10% | 3.00 | 0.30 | 3.00 | 0.30 | 3.00 | 0.30 | 3.00 | 0.30 |
| 2 | Opportunities for Innovation | 10% | 3.00 | 0.30 | 3.00 | 0.30 | 3.00 | 0.30 | 3.00 | 0.30 |
| 3 | Operational Constraints and Stakeholder | 10% | 3.00 | 0.30 | 3.00 | 0.30 | 3.00 | 0.30 | 3.00 | 0.30 |
| 4 | Schedule Compression | 10% | 3.00 | 0.30 | 3.00 | 0.30 | 3.00 | 0.30 | 3.00 | 0.30 |
| 5 | Time to get to Contract Award | 10% | 3.00 | 0.30 | 3.00 | 0.30 | 3.00 | 0.30 | 3.00 | 0.30 |

### Comments

# ACRP 01-45
# Selecting, Procuring, and Implementing Airport Capital Project Delivery Methods

## Project Delivery Selection Tool




## Key Attributes

# FOR ADDITIONAL INFORMATION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*Getting involved is free!*

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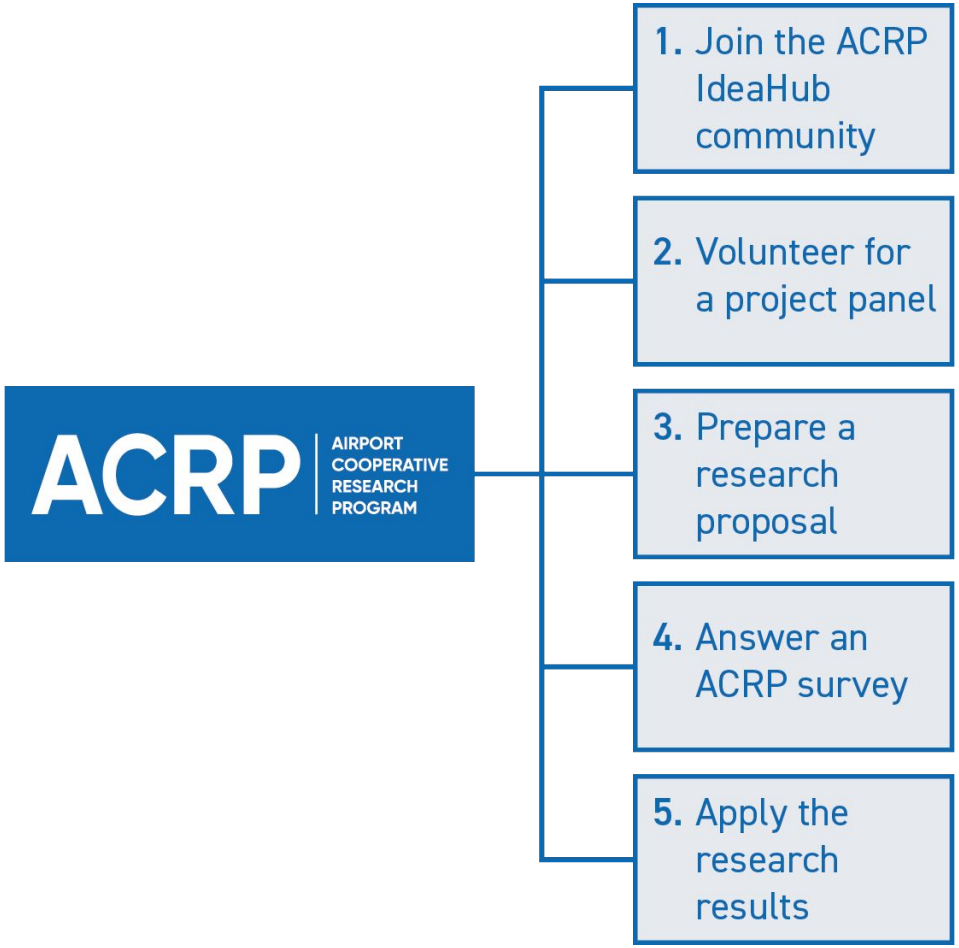


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