

PROJECT DELIVERY OPTIONS

So Many Options... But Which Is Right for Me?

A Comparative Evaluation of Project Delivery Methods
for Solid Waste and Recycling Facilities

Danielle Dorley, EI & Bob Curtis, PE
SCS Engineers

SWANA FL Summer Conference | Orlando, FL | July 20, 2026



Robert B. Curtis, PE

Project Director
Civil Engineer

SCS Engineers

PE Licensed in 7 States

About Bob

37+ years of experience

Civil & environmental project delivery

Cradle to Closure

Design, permitting, construction, and CQA

BACKGROUND

- BS in Engineering (University of Maine, 1990); licensed Professional Engineer in 7 states
- 37+ years designing, permitting, managing, and overseeing construction of civil and environmental projects for public and private clients
- Specializes in landfill development, horizontal/vertical expansions, closure, LFG collection systems, stormwater management, and remedial action projects
- Member: SWANA, American Society of Civil Engineers (ASCE), US and Florida Composting Council

About SCS Engineers

Founded 1970

55+ years of practice

~1,200 staff

70+ offices nationwide

Employee-owned

ENR top-ranked firm

Core capabilities: solid & hazardous waste · landfill gas · renewable energy · remediation · environmental compliance



Danielle Dorley, EI

Project Professional
Environmental Engineer

SCS Engineers

ddorley@scsengineers.com

About Danielle

Both sides of the table

Owner + consultant experience

Public agency → private practice

LA County San. Districts → SCS

BACKGROUND

- Environmental Engineer specializing in solid waste management, facility planning, waste resource recovery, and procurement
- Previously with the Los Angeles County Sanitation Districts — managed capital projects in solid waste energy recovery and wastewater from the owner's perspective
- Now at SCS Engineers, advising public-sector clients on sustainable materials management, solid waste optimization, and contract management
- Has evaluated and structured RFPs under Design-Bid-Build, Design-Build, and Design-Build-Operate frameworks

About SCS Engineers

Founded 1970

55+ years of practice

~1,200 staff

70+ offices nationwide

Employee-owned

ENR top-ranked firm

Core capabilities: solid & hazardous waste · landfill gas · renewable energy · remediation · environmental compliance

Today's Agenda

01 The Decision Framework

04 Design-Build (DB)

02 Design-Bid-Build (DBB)

05 Design-Build-Operate (DBO)

03 Construction Manager at Risk (CMAR)

06 Choosing Your Method

The Decision Framework



**Cost
Control**



Schedule



**Risk
Allocation**



Ownership



Familiarity



**Control vs.
Innovation**

Choosing Your Method

Key questions to guide your decision

Q1 Does your agency want to own the facility?

Merchant model eliminates capital outlay; all others require ownership

Q2 Does your agency want to operate the facility?

DBO transfers operational risk; DB + separate ops retains it

Q3 How much cost certainty do you need upfront?

DB and DBO fix price earlier; DBB delays certainty to bid day

Q4 What is your risk tolerance?

Higher owner control = higher owner risk; performance specs shift risk to contractor

Q5 How experienced is your vendor market?

DBB has deepest contractor pool; DBO market is more specialized

Q6 What is your target total lifecycle cost?

DBO most directly aligns incentives for long-term performance optimization

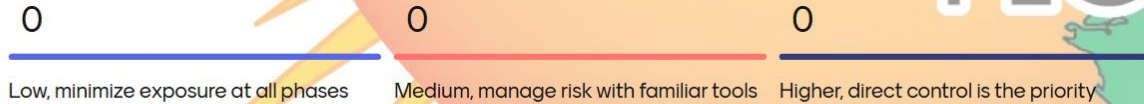






Risk Tolerance: How would you characterize your agency's risk tolerance?

SWAN FLORIDA



menti.com
1221 4711

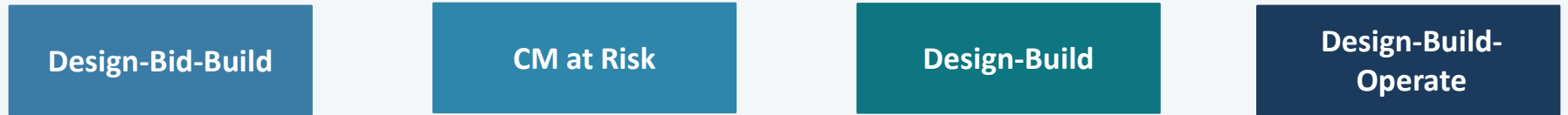
Waiting for participants





The Delivery Spectrum

Balancing owner control, innovation, and lifecycle integration



Design-Bid-Build (DBB)

The Traditional Method

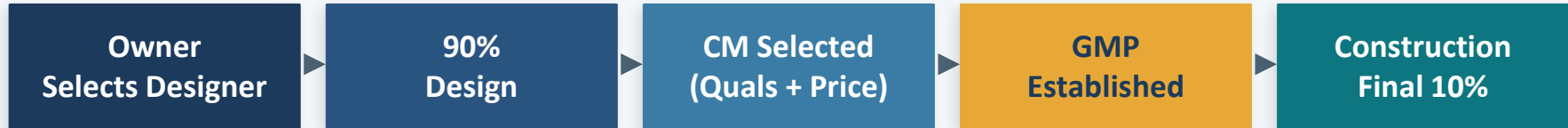


KEY CONSIDERATIONS

- ✓ Clear separation of design and construction responsibility
- ✓ Fully defines project scope before construction begins
- ✓ Promotes open, competitive bidding
- ✗ Capital costs not known until bids received
- ✗ High change-order potential; adversarial relationships
- ✗ Operational costs remain unknown at project award

Construction Manager at Risk (CMAR)

GMP, Contractor Input, Improved Constructability



KEY CONSIDERATIONS

- ✓ **Key Feature: Guaranteed Maximum Price (GMP)**
- ✓ Contractor input during design improves constructability and coordination
- ✓ GMP caps cost exposure — savings below GMP can be shared with owner
- ✗ Competitiveness of GMP can be difficult for owner to independently verify
- ✗ Overall schedule is similar to DBB; operational costs still unknown at award
- ✗ Dual contracts (designer + CM) can create adversarial dynamics

Performance-Based Specifications

Essential for DB and DBO — defining outcomes, not methods

The owner's primary tool to manage risk and ensure project success.

Material Processing & Throughput Capacity

Minimum tons per hour / day
accepted and processed

Recovery Rates

% recovery by material stream
(fiber, containers, etc.)

Material Quality

Contamination limits for each
outbound commodity

Energy Consumption

Maximum kWh per ton
processed

Facility Availability & Reliability

Minimum uptime %, scheduled
maintenance protocols

Staffing Levels

Minimum staffing by position (if
applicable)

Design-Build (DB)

Single Entity, Fixed Price, Concurrent Phases



KEY CONSIDERATIONS

- ✓ Fixed lump-sum price established upfront
- ✓ Shorter schedule than DBB/CMAR
- ✓ Single point of accountability for design & construction
- ✗ Owner must clearly define performance requirements
- ✗ Operational risk not inherently covered
- ✗ Less suited if scope/technology/budget may change mid-project

Design-Build-Operate (DBO)

Lifecycle Alignment & Performance Incentives



KEY CONSIDERATIONS

- ✓ Capital AND operational costs fixed through performance contract
- ✓ Shortest implementation schedule of any in-house delivery method
- ✓ DBO entity incentivized to install better equipment (they operate it)
- ✓ Lifecycle cost optimized through single-entity accountability
- ✗ Requires careful, measurable performance criteria (throughput, recovery rate)
- ✗ Less direct owner control over day-to-day operations

Public-Private Partnerships (P3)

Financing and ownership structure, shifting capital investment and long-term risk to a private partner.



KEY CONSIDERATIONS

- ✓ Eliminates or defers large public capital expenditure
- ✓ Transfers design, construction, and operations risk to concessionaire
- ✓ Long-term performance guarantees aligned with public interest
- ✗ Rate-setting and tipping fee flexibility may be constrained
- ✗ Political optics: public concern over privatization of services
- ✗ Requires sophisticated procurement — legal and financial advisory essential

Comparison Matrix

Evaluating methods across key decision factors

Factor	Design-Bid-Build	CM at Risk	Design-Build	Design-Build-Operate
Cost Certainty	Low — after bids	Medium — GMP	High — fixed price	Highest — cap + ops
Schedule	Longest	Similar to DBB	Shorter	Shortest
Owner Risk	Highest	High	Moderate	Lowest
Owner Control	Highest	High	Moderate	Lower
Ops Integration	None	None	None (separate)	Fully Integrated
Best For	Simple/familiar projects	Phased flexibility	Speed + certainty	Lifecycle optimization

KEY TAKEAWAYS

01 Integration and Coordination Drives Efficiency

02 Performance-Based Specifications Are Essential

03 Lifecycle Cost Matters More Than Upfront Cost

Try It Yourself

Interactive project delivery decision tool

- 1 Scan the QR code or visit the URL below
- 2 Answer 6 questions about your project
- 3 Receive a ranked recommendation with rationale



<https://tinyurl.com/swana2026>

SCAN TO OPEN LINK



QUESTIONS & DISCUSSION

Thank you for your time today.

CONTACT

Danielle Dorley, EI

SCS Engineers

ddorley@scsengineers.com

Bob Curtis, PE

SCS Engineers

bcurtis@scsengineers.com

METHODS COVERED

Design-Bid-Build

Traditional; longest schedule

CM at Risk

GMP; contractor input in design

Design-Build

Fixed price; concurrent phases

Design-Build-Operate

Full lifecycle integration



<https://tinyurl.com/swana2026>