

Leveraging Private Sector Expertise to Accelerate Project Delivery: Evidence from Progressive and Hybrid P3 Approaches

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Leveraging Private Sector Expertise to Accelerate Project Delivery: Evidence from Progressive and Hybrid P3 Approaches

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1. Executive Summary

Transportation agencies increasingly face pressure to deliver major infrastructure improvements more quickly while managing growing project complexity, stakeholder expectations, and funding constraints. Conventional competitive procurement remains the preferred approach for many projects because it preserves market discipline, supports independent price discovery, and maintains owner leverage throughout project delivery. However, some projects and programs involve levels of uncertainty that make fixed-price commitments difficult to establish before significant development work occurs.

This report examines two emerging approaches that seek to leverage private-sector expertise earlier in the project lifecycle through structured collaboration: progressive public-private partnerships (P3s) and hybrid competitive-negotiated P3 models. Through case studies of the Pennsylvania Department of Transportation's Major Bridge P3 (MBP3) initiative and the Georgia Department of Transportation's I-285 East Express Lanes Project, the report evaluates why these approaches were selected, how they were structured, and the conditions under which they may be appropriate.

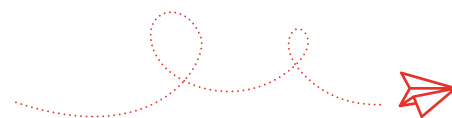
The analysis yields four principal findings.

- First, progressive and hybrid approaches are not alternatives to competition but alternative ways of applying competition and collaboration. Both approaches seek to align accountability mechanisms with project uncertainty rather than relying exclusively on fixed-price competition.
- Second, collaborative delivery is most effective when foundational project conditions have already been established. Defined project objectives, preliminary scope definition, funding strategies, stakeholder engagement, and owner capability create the conditions under which collaborative development can produce meaningful outcomes.
- Third, progressive and hybrid approaches address different uncertainty profiles and accelerate delivery through complementary mechanisms. Progressive models enable earlier resolution of scope, pricing, sequencing, constructability, risk allocation, and interface risks before commercial commitment. Hybrid models extend these benefits by allowing commercially mature phases to advance through competitive procurement while collaborative development continues on less-developed phases, preserving program momentum and continuity across successive phases.
- Fourth, governance after partner selection is as important as procurement before selection. Once competitive selection concludes, governance mechanisms – including open-book cost development, structured decision milestones, interface coordination, independent review,

and clearly defined off-ramps – become the primary tools for maintaining accountability and supporting efficient collaborative development.

For transportation agencies, the principal implication is straightforward: collaborative delivery should be viewed as a specialized tool for projects characterized by meaningful uncertainty, not as a replacement for conventional procurement. The effectiveness of these approaches depends less on the delivery model itself and more on the readiness of the project, the capacity of the owner organization, and the governance framework established to guide collaborative development. When applied under the appropriate conditions, these approaches accelerate delivery not by bypassing uncertainty, but by resolving it earlier and more systematically while preserving continuity across related phases of project development. In doing so, they enable agencies to maintain program momentum until commercial commitment becomes appropriate.

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2. Abstract

Transportation agencies across the United States face mounting pressure to deliver complex infrastructure projects more efficiently. While competitive P3 procurement remains the appropriate choice for many of these projects, emerging delivery strategies offer additional tools for programs where scope, risk allocation, and pricing cannot be established with confidence without the active engagement of a development partner. This report examines, through case analysis of PennDOT's Major Bridge P3 (MBP3) project and GDOT's I-285 East Express Lanes project, two emerging delivery strategies: progressive P3 pre-development agreement (PDA) models and hybrid competitive-negotiated P3 models.

The analysis is organized around four practitioner-oriented analytical dimensions: early private sector involvement, owner readiness and preparation, scope definition and certainty, and governance mechanisms for maintaining accountability. Both strategies represent deliberate governance choices that match accountability mechanisms to the state of project uncertainty, and their effectiveness depends less on the model selected than on whether foundational conditions support the collaborative development process the model requires. Collaborative development creates value not only by reducing uncertainty before commercial commitment but also by preserving continuity across related project packages and phases, thereby reducing interface risks that can undermine delivery efficiency in complex transportation programs. MBP3 provides a completed reference: the progressive model worked as designed, achieving convergence and advancing to construction. I-285 East provides a forward-looking complement whose CDA development phase will test whether hybrid delivery can achieve comparable outcomes under a different uncertainty profile.

3. Introduction

3.1 Purpose and Motivation

Despite increased attention and substantially expanded federal funding in recent years, the nation's transportation infrastructure continues to require significant expansion and modernization to improve levels of service and overall performance. Transportation agencies at all levels of government face a persistent and widening gap between infrastructure needs and the resources available through traditional public delivery mechanisms. Against this backdrop, agencies are under intensifying pressure not only to fund transportation improvements but to deliver them more efficiently, at lower cost, and with greater responsiveness to the conditions that make complex megaprojects difficult to manage under conventional contracting structures.

Conventional public-private partnership (P3) models, particularly long-term design-build-finance-operate-maintain (DBFOM) concessions procured through competitive fixed-price procurement, have been widely adopted as a mechanism for transferring risk to the private sector while leveraging private capital and lifecycle expertise (Bing et al. 2005; Nguyen and Garvin 2019). These structures work well when project scope, cost, and risk can be defined with

sufficient precision before financial commitments are made. For complex, large-scale projects characterized by significant scope uncertainty, phased buildout, or environmental and political complexity, however, this precondition is not always met. Fixed-price procurement under these conditions forces agencies to either accept poorly priced contracts or defer projects until certainty emerges; both outcomes undermine the goal of accelerated, efficient delivery.

In response, transportation agencies are exploring delivery structures that separate the competitive selection of a private partner from the point of full commercial commitment. Two such strategies are examined in this report: progressive P3 models, in which a pre-selected partner engages in collaborative pre-development under a Pre-Development Agreement (PDA) before a long-term project agreement is executed; and hybrid competitive-negotiated models, in which a conventional competitive concession governs an initial delivery phase while a Comprehensive Development Agreement (CDA) governs subsequent phases through collaborative development. The term 'hybrid' in this report refers specifically to the sequencing of a competitively procured initial phase followed by a negotiated development agreement for later phases, which is distinct from models in which every phase, including the first, originates outside of competitive procurement (see Section 4.3). Both represent deliberate governance choices to match accountability mechanisms to the state of project readiness and uncertainty.

3.2 Objective and Research Questions

The objective of this report is to examine these emerging delivery strategies drawing on case evidence from two major U.S. transportation projects to characterize their rationale, structure, and implementation while identifying conditions under which each model appears appropriate. Three questions organize the analysis:

- When do progressive or collaborative delivery approaches accelerate project advancement and improve outcomes?
- How do hybrid models balance competitive discipline with the collaborative development needed for complex, phased programs?
- What governance mechanisms are required to maintain accountability after competitive procurement concludes?

Finally, the limitations of this investigation are addressed, and future research opportunities are identified.

3.3 Case Selection and Report Organization

Two cases anchor the analysis. PennDOT's Major Bridge P3 (MBP3) project represents a progressive P3 model in which a PDA brought the selected private partner into collaborative scope refinement, pricing, and risk allocation before commitment to a long-term project agreement. MBP3 has advanced through the development phase and entered construction, providing a reference point of a project that has successfully progressed from collaborative

development into implementation. GDOT's I-285 East Express Lanes project, part of Georgia's Major Mobility Investment Program (MMIP), represents a hybrid competitive-negotiated model in which a conventional revenue-risk concession governs the first delivery phase while a CDA governs subsequent phases. Presenting MBP3 first establishes a baseline of an active progressive P3; I-285 East then introduces the more complex hybrid variant against that benchmark.

Section 4 provides background on the evolution of project delivery and introduces the analytical framework. Sections 5 and 6 present the MBP3 and I-285 East case studies, respectively. Section 7 provides a comparative analysis of the two approaches, including how progressive and hybrid models can accelerate project delivery under different uncertainty conditions. Section 8 discusses implications for policy and practice, including circumstances under which each model appears most appropriate and the governance challenges they present. Section 9 presents recommendations for agencies considering collaborative delivery approaches, and Section 10 concludes with key findings, limitations, and future research opportunities.

4. Background: Evolution of Project Delivery

4.1 Conventional P3 and Design-Build Models and Their Limitations

Long-term P3 concessions have become a standard tool for delivering major transportation infrastructure, offering agencies a mechanism to bundle design, construction, financing, operations, and maintenance within a single performance-based contract while drawing on private capital and lifecycle expertise (Bing et al. 2005; Nguyen and Garvin 2019). The bundled structure enables agencies to set performance standards across the full project lifecycle and to leverage private-sector innovation in ways that segmented, sequentially contracted delivery cannot replicate (Nguyen et al. 2018).

These structures perform well when scope, cost, and risk can be defined with reasonable precision before competitive proposals are solicited — and when they are, well-structured competitive procurement with alternative technical concepts and meaningful industry engagement delivers clear advantages: independent price discovery, market discipline that holds through financial close, and preserved owner leverage throughout delivery. When those preconditions cannot be met because a project is in early environmental review, scope is still being refined, or a corridor program spans phases with very different commercial readiness, then fixed-price competitive procurement can create problems. Private bidders price uncertainty conservatively, inflating costs. Agencies accept scope limitations or pricing errors to achieve financial close. The collaborative relationship needed to manage a complex project effectively is adversarial from the outset because each party enters having transferred risk on terms that may not reflect project realities (Hardcastle and Boothroyd 2003; Bing et al. 2005; Dudkin and Vålilä 2006).

4.2 Emergence of Collaborative and Progressive Models

Recognition of these limitations has driven increasing interest in delivery structures that bring private partners into project development earlier and that substitute governance mechanisms for competitive pressure during the development phase (Miller et al. 2000; Fischer et al. 2017). Progressive design-build approaches formalized this concept for design-build delivery (Alleman and Tran 2021; Shang and Migliaccio 2020; Gransberg and Molenaar 2019). Progressive P3 models extend this logic to the full DBFOM bundle: a PDA brings the selected concession partner into collaborative pre-development, with the PDA establishing the governance structure, including joint oversight, open-book cost development, defined decision milestones, and exit options, that replaces market competition during development (Walker and Lloyd-Walker 2015). Competitive tension is front-loaded into partner selection; governance replaces market discipline for all subsequent development decisions. This transition is consequential: the governance mechanisms deployed post-selection must provide the discipline and accountability that market competition would otherwise supply, and they require deliberate design to do so effectively.

The deliberate adoption of progressive strategies as a planned delivery approach rather than as a managed response to unsolicited proposals is a relatively recent development (Casady and Garvin 2022). Empirical evidence on their implementation and outcomes remains limited, making the MBP3 case especially valuable as one of the clearest documented examples of a progressive P3 advancing to implementation.

4.3 Hybrid Competitive-Negotiated Models

A second emerging structure applies competition and collaboration in sequence across project phases rather than integrating collaboration into a single development process. In a hybrid competitive-negotiated model, a conventional competitive procurement governs an initial delivery phase that is technically and commercially mature, while a linked development agreement grants the selected partner exclusive rights to develop subsequent phases collaboratively. The term 'hybrid' is used here to distinguish this procurement structure from seemingly similar arrangements elsewhere; most notably the Virginia Department of Transportation's (VDOT) I-495 and I-95 Express Lanes projects. In

Practitioner Perspective

Collaborative Delivery Is Not a Substitute for Project Preparation

The cases examined in this report suggest that collaborative delivery approaches are most effective when they are used to refine an already viable project rather than create viability where it does not yet exist. Progressive and hybrid models can help agencies address uncertainty related to scope development, pricing, constructability, and risk allocation. They are less effective when fundamental project conditions remain unresolved.

Collaborative delivery should not be viewed as a substitute for:

- Environmental approvals and regulatory readiness
- Stakeholder and political alignment
- A viable funding and payment strategy
- Owner organizational capacity
- Basic project definition

Agencies should view collaborative delivery as a mechanism for refining and advancing projects that are fundamentally sound but still require development before full commercial commitment can be made.

those cases, the original I-495 and I-95 Express Lanes concessions were initiated through Virginia's Public-Private Transportation Act (PPTA) unsolicited proposal process, while subsequent corridor expansions including the I-395 Express Lanes, the I-95 Fredericksburg Extension, and I-495 NEXT were implemented through negotiated amendments to the existing comprehensive agreements. GDOT's I-285 East approach resembles VDOT's in that both rely on negotiated agreements with the incumbent partner to advance subsequent phases. The two approaches diverge, however, in when and how those development rights are established. GDOT is conducting a competitive, multi-stage, best-value procurement, an RFQ followed by an RFP, to select a Phase 1 Developer, and plans to perform development activities for remaining phases through a negotiated CDA that gives the CDA Developer the exclusive right to submit a proposal for those remaining phases once the associated development work is complete. It is this combination, a competitively procured first phase paired with a negotiated, progressive-style process for subsequent phases, that the term 'hybrid' is meant to capture. The hybrid model applies competitive logic where it fits and collaborative logic where it does not, preserving full market discipline for the mature phase while creating development flexibility for subsequent phases.

A related concern is whether progressive and hybrid structures carry a cost premium relative to fixed-price competition. Open-book cost development, paired with a negotiated rather than competitively bid profit margin, can create pressure toward larger project management and overhead allowances than fixed-price bidding would typically produce. The private partner also tends to hold a real information advantage in this setting: cost estimating and market pricing are core to its business, and it understands current input costs, subcontractor markets, and how to structure pricing and productivity assumptions in its favor in ways that owner agencies, who do not price and deliver this work themselves, typically do not. For this reason, independent cost estimators (ICEs) play a central role in agency practice, testing the reasonableness of proposed pricing and overhead rather than relying on market competition to discipline it directly (see Section 5.5 for how this played out in MBP3).

Both strategies reduce reliance on competitive pricing after partner selection but differ substantially in where competitive discipline sits relative to project commitment, how scope certainty is distributed, and what governance mechanisms are deployed to maintain accountability. These differences are central to understanding when each model is appropriate.

4.4 Analytical Framework

To support structured comparison across both cases, this report organizes its analysis around four dimensions that address the questions practitioners and agencies should ask when evaluating whether a progressive or hybrid delivery approach is appropriate. These dimensions adapt and reorient the research framework developed in Garvin et al. (2026) from a focus on how collaborative processes operate toward the preconditions and management challenges that determine whether those processes succeed.

Dimension 1 — Early Private Sector Involvement: *When and how should the private partner be brought in and does the delivery structure create space for meaningful input?* This dimension examines whether the delivery structure creates a role for the private partner during development that is substantive and outcome-shaping, rather than procedural and consultative only. Indeed, timing matters: private expertise adds the most value when deployed before key commitments weaken collaborative input. The practitioner question is whether the delivery structure creates the right entry point for private expertise and whether that expertise is deployed on the decisions it can most influence.

Dimension 2 — Owner Readiness and Preparation: *Is the agency prepared to enter and actively sustain collaborative development not just to procure it?* This dimension examines three preconditions for effective collaborative development. Program definition examines whether project concepts, payment structure preferences, candidate assets or phases, and basic technical parameters are established before development begins. Institutional capacity asks whether the agency has the staffing, advisor resources, and governance infrastructure to actively manage a collaborative partner. Market engagement explores whether the agency has done the pre-procurement work – through industry forums, requests for information, and market outreach – to understand private-sector appetite, refine the delivery model, and calibrate market expectations.

Dimension 3 — Scope Definition and Certainty: *How much scope certainty exists, and how is it distributed, and does the delivery structure match that profile?* Scope certainty is the most direct driver of delivery model choice. Where scope is uncertain in detail but bounded in concept across the full program, a progressive PDA is potentially appropriate because collaborative pre-development can resolve that uncertainty iteratively. Where scope certainty is unevenly distributed across phases where some are technically and commercially ready while others are dependent on outcomes such as environmental, stakeholder coordination, and similar external factors, then a hybrid model applying different procurement logic to different phases is likely more suitable. The practical implication is straightforward: applying a single procurement logic uniformly across phases with fundamentally different uncertainty profiles will either over-commit the agency on phases not yet ready for fixed-price contracting or under-utilize the collaborative development capacity that progressive and hybrid models are specifically designed to provide.

Dimension 4 — Governance Mechanisms for Maintaining Accountability: *How does accountability function once competition ends and are those mechanisms designed before development begins?* Both models reduce competitive pressure after partner selection, and governance mechanisms are the primary substitute. Cost discipline is maintained through open-book pricing, independent cost review, and milestone payment structures. Scope discipline requires governance structures that prevent drift favoring the developer's interests. Orderly termination requires that the agency retain meaningful off-ramps if development is not producing convergence. The critical insight is that governance structures must be deliberately

designed and embedded in the development agreement before collaborative development begins since they are difficult to improvise after partner selection.

5. Case Study 1 – PennDOT Major Bridge P3: A Progressive P3 in Practice

Project Snapshot

Agency	Pennsylvania Department of Transportation (PennDOT)
Program	PennDOT Pathways Major Bridge P3 Initiative
Scope	6 Interstate bridge replacements / rehabilitations (Package 1); originally 9 candidates
Delivery Model	Progressive P3 / Pre-Development Agreement (PDA)
Selected Partner	Bridging Pennsylvania Partners LLC (BPP): Macquarie Capital & S&B USA Concessions
Payment Structure	Availability payments (35-year term post-construction)
Key Milestone	Financial close December 2022; Final Design commenced March 2023
Status	Package 1 under construction; scheduled completion June 2028

5.1 Project Need and Genesis

The Major Bridge P3 (MBP3) project emerged from Pennsylvania's bridge infrastructure crisis. With more than 25,000 bridges, which is the third-largest state inventory in the nation, Pennsylvania also ranks among the highest in bridges in poor condition. As of 2019, roughly 10 percent of its bridges were rated poor, with an average age exceeding 50 years. Although PennDOT had reduced the percentage of structurally deficient bridges from 24 percent in 2008, funding constraints and declining gas-tax revenues widened the transportation funding gap. The 2021 PennDOT Pathways Planning and Environmental Linkages study concluded that financial limitations could delay essential maintenance, potentially increasing long-term costs and raising the risk of disruptive closures imposing significant economic, mobility, and safety consequences (PennDOT 2021a, 2021b).

PennDOT's Pathways initiative identified nine candidate Interstate bridges based on location, structural condition, rehabilitation cost, traffic volumes, geographic balance across the Commonwealth, and ability to begin construction within two to four years (PennDOT 2021a, 2021c). Bundling bridges into packages was central to the initiative's rationale: grouping

multiple assets enabled faster development, more efficient financing, and earlier project benefits than addressing each bridge individually.

5.2 Rationale for the Progressive Approach

PennDOT's selection of a progressive P3/PDA structure reflected a deliberate assessment of the limitations of conventional fixed-price procurement for a program of this type. The agency's documented rationale grouped around three practical imperatives (PennDOT 2023a, 2023b). First, a conventional fixed-price RFP would have required PennDOT to fully define scope and price the bridge packages before engaging any private expertise, the conditions under which pricing errors and scope mismatches are most likely. Second, the PDA structure shifted predevelopment workload to the selected partner, enabling PennDOT to concentrate limited staff resources on governance and oversight rather than internal project definition. Third, open-book predevelopment with lender involvement would validate financial feasibility and surface risk allocation questions before financial close, producing more accurate and structurally resilient project agreements.

5.3 Owner Readiness and Pre-Procurement Preparation

Before initiating formal procurement, PennDOT undertook extensive market engagement. An informational forum on January 7, 2021 drew over 300 participants, and a Request for Information issued February 22, 2021 generated 23 responses from firms. Two additional outreach sessions in March and May 2021 each attracted more than 200 attendees. PennDOT also conducted public engagement for seven of the nine candidate bridges and coordinated with a seven-member Public-Private Transportation Partnership Board (PennDOT 2024; Walzak 2022).

Critically, PennDOT entered development with several foundational conditions already established: defined bridge candidates based on systematic condition assessment, a clear preference for availability payments decoupling the delivery model from revenue risk, and governance experience from the earlier Rapid Bridge Replacement bundled program. This readiness meant that collaborative development could focus on refinement of an established program concept through packaging, sequencing, and cost details rather than on fundamental project definition. PennDOT representatives later acknowledged that early legislative outreach could have been stronger, a lesson that proved consequential during tolling litigation, though the foundational structural decisions gave the program sufficient resilience to absorb that disruption (Garvin et al. 2026).

5.4 Procurement and PDA Structure

PennDOT used a two-step procurement process. An RFQ issued June 2021 generated four Statements of Qualifications evaluated across technical capability (60%), investment and financing experience (30%), and project development understanding (10%), with three teams shortlisted in September 2021 (PennDOT 2021d). The RFP, issued December 15, 2021, differed

fundamentally from conventional P3 procurements in its scoring emphasis: proposals were scored out of 1,000 points, with the Technical Proposal weighted most heavily. The PDA work approach received 400 points – covering predevelopment strategy, packaging strategy, preliminary schedule, partnering and collaboration, and quality management (PennDOT 2021e). This structure explicitly rewarded collaborative capability, establishing the evaluation basis for selecting a partner whose post-selection behavior would be governed by relational mechanisms rather than market competition.

BPP, a consortium including Macquarie Capital and S&B USA Concessions, was selected as Development Entity in March 2022. Their proposal offered a credible six-bridge commitment for Package 1, contrasting with competitors' overcommitted proposals, a signal of the collaborative discipline and realism the model requires post-selection (Garvin et al. 2026). The PDA established the governance structure for collaborative development: joint field reviews, iterative submission and review of cost models, transparent design and construction cost reasonableness assessment, and defined milestones with exit options (PennDOT 2023a).

5.5 Predevelopment Phase and Scope Refinement

BPP's involvement during pre-development was substantive and outcome-shaping. BPP directly influenced the definition of Package 1, reducing the bridge bundle from nine to six and providing a clear analytical basis for that decision. Open-book cost development and constructability review shaped the sequencing and staging of bridge replacements in ways that produced a more accurate and financeable project agreement. One public agency representative described the PDA as "valuable for open collaboration... allowing us to apply lessons around proper risk allocation and establishing clear roles and responsibilities early on" (Garvin et al. 2026).

The institutional and political context produced significant disruption during predevelopment. Tolling litigation and ultimately Act 84 eliminated the toll revenue basis originally contemplated for the project (Commonwealth of Pennsylvania 2022). However, the availability payment structure that was established as a preference before PDA execution proved sufficiently resilient: the project adapted to a non-toll financing structure without invalidating the delivery model. PennDOT terminated the PDA for Package 2 in March 2023 and is evaluating alternative delivery options for the remaining bridges, illustrating the progressive model's capacity for sectional reassessment (PennDOT 2024).

Yet, reaching agreement on price and risk allocation within this open-book framework required sustained, detailed negotiation. BPP submitted its initial cost model on October 7, 2022, and PennDOT conducted detailed review sessions from October 18 to 20, examining assumptions, identifying discrepancies, and exploring potential savings. A private-sector representative described the process as "a very exhaustive open book process; we were pricing the work ourselves and then all of that was reviewed by the client in totality. Issues were discussed and refined." Risk was not priced into fixed positions at the outset; rather, as the same representative explained, "the risk component was a conversation that was had during the design development

and the pricing" (Garvin et al. 2026). BPP submitted a revised cost model on October 28 that PennDOT confirmed aligned with industry standards and reflected current market conditions (PennDOT 2023a).

The process was not without friction. Public agency interviewees noted that a compressed timeline created pressure on collaborative decision-making; as one put it, "we didn't have time to say, well let's talk about this a little bit further" and that achieving pricing convergence was not always straightforward: "they didn't budge too much. Maybe it's because they knew of our time constraint" (Garvin et al. 2026). PennDOT concurrently managed NEPA compliance during this period, securing all approvals by October 2022. The negotiation phase concluded with restatement and amendment of the PDA on November 29, 2022, and financial close was achieved on December 22, 2022, seven months after the PDA was first halted by litigation.

5.6 Outcomes and Lessons

Package 1 achieved financial close in December 2022, entered Final Design in March 2023, and is now in construction with scheduled completion in June 2028 (Pennsylvania Public-Private Transportation Partnership Board 2024). The progressive model produced its intended outcome: a refined, financially closed project agreement with more accurate pricing and better-structured risk allocation than a fixed-price competitive procurement on a program of this scope and complexity could have likely generated at the same stage of project definition. Four lessons stand out for agencies considering progressive delivery:

- Pre-procurement market engagement is essential. PennDOT's forums and RFI process shaped both the delivery model and private-sector expectations in ways that made procurement more efficient (PennDOT 2024; Walzak 2022).
- Realistic packaging proposals are a meaningful discriminator. BPP's credible six-bridge commitment was a signal of collaborative discipline that proved predictive of post-selection behavior (Garvin et al. 2026).
- Political alignment is a foundational condition that collaborative development cannot substitute for. Early legislative outreach should be treated as a procurement prerequisite, not a parallel activity (Garvin et al. 2026).
- Availability payment structures provide resilience because they decouple the delivery model from revenue risk, preserving financial viability when revenue assumptions change during development (PennDOT 2023b).

6. Case Study 2 – GDOT’s MMIP & I-285 East Express Lanes: A Hybrid Competitive-Negotiated P3

Project Snapshot

Agency	GDOT (lead); SRTA (Phase 1 counterparty)
Program	MMIP — Major Mobility Investment Program, Atlanta region
Overall Scope	~30 centerline miles of barrier-separated express lanes on I-285 and SR 400 (DeKalb and Fulton Counties)
Phase 1 Scope	~19 centerline miles; 5 direct access interchanges; 50-year operating period
Delivery Model	Hybrid: Phase 1 DBFOMT revenue-risk concession (SRTA) + CDA for Remaining Phases (GDOT)
Shortlisted Teams	285 East Peach Partners; East Perimeter Partners; Top End Mobility Group (Jan. 2025)
Financing	Revenue-risk (toll); TIFIA / PABs contemplated; milestone payments for CDA development work
Status	Phase 1 RFP underway; Phase 1 Agreement and CDA award anticipated Q2 2026

6.1 Overview of MMIP

The Major Mobility Investment Program (MMIP) is Georgia DOT’s umbrella program for major express-lane and mobility investments in the Atlanta metropolitan region. MMIP is not a single procurement or a conventional capital program; it is a coordinated pipeline of projects organized around a regional express-lane network strategy. The program’s purpose is to expand managed-lane continuity across major regional corridors, improve trip reliability, and create system-to-system connectivity among employment, residential, and freight corridors in metropolitan Atlanta. This network orientation that treats corridor investments as components of an integrated mobility system rather than isolated widening projects is fundamental to understanding why different corridors within MMIP have been structured under different delivery models (Major Mobility Georgia n.d.; Georgia DOT 2024).

MMIP is implemented through coordination between GDOT and the State Road and Tollway Authority (SRTA), which plays a distinct tolling and contractual counterparty role for certain program agreements. The program is supported by a multidisciplinary advisor team including HNTB (Program Management Consultant), Jacobs (General Engineering Consultant), Ernst &

Young (Financial Advisor), Ashurst, McGuireWoods, and Nossaman (Legal Advisors), Atkins Réalis (Tolling Advisor), Ames & Gough (Insurance Advisor), and C&M Associates (Traffic and Revenue Advisor) (Major Mobility Georgia n.d.).

6.1.1 Delivery Strategy Variation Across the Program

MMIP currently encompasses three corridor projects, each structured differently in response to corridor-specific conditions. SR 400 is being delivered as a conventional long-term DBFOM concession; this financially closed agreement represents the most conventional end of the MMIP procurement spectrum (State Road and Tollway Authority 2024). The SR 400 procurement illustrates what a well-structured competitive concession procurement can achieve: a technically complex managed-lane corridor procured through a fully competitive process, with revenue risk transferred to the private sector and a financially closed agreement reached on a defined and environmentally advanced project. Its success reflects GDOT's institutional capacity and the corridor's readiness for competitive commitment, conditions that informed GDOT's decision to apply a different model to I-285 East, where those conditions do not uniformly hold across phases. I-285 Westside remains in environmental and project development stages following a delivery model shift to a revenue-risk P3 concept, with its commercial structure continuing to evolve. I-285 East, which is the focus of Case Study 2, represents the most novel structure in the program: a hybrid competitive-negotiated model combining a conventional Phase 1 concession with a Comprehensive Development Agreement for remaining phases (Georgia DOT 2024; Major Mobility Georgia n.d.).

This intentional variation in delivery strategy is analytically significant. It demonstrates that GDOT is matching each procurement's commercial structure to corridor-specific conditions including environmental readiness, scope certainty, financing opportunity, and institutional complexity. The SR 400 to I-285 East progression illustrates a deliberate spectrum from conventional competitive concession to hybrid phased delivery, with the delivery model chosen to fit the uncertainty profile of each corridor.

6.1.2 Relevance to This Study

The MMIP context matters for interpreting the I-285 East case for two reasons. First, it confirms that GDOT's hybrid model is a programmatic choice made within an established governance structure, not an ad hoc response to project-specific problems. GDOT entered the I-285 East procurement with experienced advisors, an institutional coordination framework already operating across MMIP, and the precedent of SR 400's conventional concession to draw from. Second, the MMIP framework with its shared advisor team, GDOT/SRTA coordination mechanisms, and corridor sequencing logic provides the institutional foundation upon which the more complex I-285 East hybrid structure is built.

6.2 I-285 East

6.2.1 Project Need and Genesis

The I-285 East Express Lanes Project is a major managed-lane corridor initiative designed to add approximately 30 centerline miles of new barrier-separated express lanes on I-285 and SR 400 across DeKalb and Fulton Counties, connecting major employment centers, residential communities, and regional freight corridors in metropolitan Atlanta (Georgia DOT 2024). The Eastside segment involves a 12.8-mile corridor on I-285 East between Henderson Road and just south of I-20, where two barrier-separated express lanes are planned in both directions (Georgia DOT n.d.).

The project's origins reflect a deliberate evolution of delivery strategy. GDOT fact sheets indicate that the Eastside segment originally contemplated one buffer-separated lane in each direction before a June 2021 delivery model change shifted the approach to two barrier-separated lanes and a revenue-risk P3 financing structure, positioning the corridor for private financing through toll revenues rather than public capital appropriations (Georgia DOT 2021).

6.2.2 Rationale for the Hybrid Approach

The hybrid structure was driven by two defining characteristics of the project. First, the corridor's scale and phased buildout require simultaneous near-term delivery action and long-term development flexibility. At approximately 30 centerline miles across multiple project phases, the full corridor cannot be commercially closed in a single procurement without likely accepting enormous pricing uncertainty for phases that are years from construction readiness. Second, scope certainty is unevenly distributed across phases: Phase 1, which is roughly 19 centerline miles on I-285 and SR 400, is sufficiently defined and environmentally advanced to support competitive procurement, while remaining phases depend on ongoing NEPA review (the Eastside environmental document was not expected until 2026), traffic and revenue analysis, and network sequencing decisions that cannot be resolved before Phase 1 award (Georgia DOT 2024). See Section 4.3 for a more thorough discussion of why this structure is termed 'hybrid.'

The RFQ explicitly describes the CDA as having similarities to a progressive design-build model, stating it is intended to allow open dialogue and an interactive process between GDOT and the CDA Developer to refine scope, schedule, and cost before later phases are advanced to full P3 delivery agreements (Georgia DOT 2024). This language demonstrates the hybrid structure is a deliberate design choice applying competitive logic where conditions support it and collaborative logic where they do not.

6.2.3 Procurement Structure

GDOT issued the RFQ on September 16, 2024, with Statements of Qualifications due December 3, 2024. Three teams were shortlisted in January 2025: 285 East Peach Partners, East Perimeter Partners, and Top End Mobility Group (Georgia DOT 2025). Award of the Phase 1 Agreement and CDA is targeted for the second quarter of 2026 (Georgia DOT 2024).

The commercial structure encompasses two concurrent but distinct agreements. The **Phase 1 Agreement** is entered between the selected developer and SRTA (with GDOT as SRTA's agent and project manager), under which the developer designs, constructs, finances, operates, maintains, and tolls the Phase 1 segment for a 50-year operating period, bearing revenue risk while receiving the contractual right to set and collect toll revenues for the 50-year operating period. The **Comprehensive Development Agreement (CDA)** is entered directly between the developer and GDOT, granting the developer exclusive rights to perform collaborative development work for the Remaining Phases and, upon completion of that work, the exclusive right to submit proposals for subsequent phase agreements. The CDA also provides milestone payments for completion of development work, while GDOT retains discretion to accept or reject any committed phase proposal. (Georgia DOT 2024).

This dual structure creates a hybrid model in which competitive discipline governs Phase 1 through a competitive RFP, concession pricing, and revenue-risk transfer, while collaborative governance applies to development of the Remaining Phases under the CDA. Although the Phase 1 Agreement is executed with SRTA and the CDA with GDOT, this distinction reflects Georgia's statutory and institutional framework rather than a defining feature of the hybrid model. The defining characteristic is the use of two linked but distinct agreements: the Phase 1 Agreement establishes the commercial framework for a competitively procured concession, while the CDA establishes the governance framework for collaborative development of the remaining phases.

6.2.4 Procurement Evaluation Framework

The RFQ evaluation allocated 60% of the total score (600 of 1,000 points) to Phase 1 criteria focused on technical, operational, tolling, and financial capabilities. The remaining 40% (400 points) was allocated to CDA-related criteria: collaborative project experience, development and financing expertise, and long-term financial capacity. This weighting reflects GDOT's dual requirement: strong near-term delivery capability for Phase 1, alongside the financial strength and collaborative capability needed for the CDA development phase (Georgia DOT 2024).

6.2.5 Key Analytical Insights

I-285 East presents a structurally novel model whose effectiveness will be demonstrated by the CDA development phase that follows Phase 1 award. Three features warrant emphasis for practitioners.

Competitive discipline through financial close on Phase 1. Phase 1 is subject to a complete competitive RFP process that includes competitive pricing, agreed upon risk allocation, and concession governance before the collaborative CDA phase begins. Unlike the progressive PDA model, where governance replaces market competition across the entire program from partner selection onward, the hybrid model preserves full competitive forces for the technically and commercially mature segment and provides a market-calibrated cost and risk reference for evaluating CDA development on remaining phases.

Owner readiness: strong for Phase 1, conditional for CDA. GDOT's readiness for Phase 1 is strong: a seasoned multidisciplinary advisor team, MMIP governance infrastructure built across multiple corridor procurements, and SR 400 precedent to draw from (Major Mobility Georgia n.d.). CDA-phase readiness is more conditional and dependent on environmental completion for the Eastside segment, sustained GDOT/SRTA coordination across phase transitions, and the development of CDA governance mechanisms not yet tested in practice.

CDA governance design as the central challenge. How GDOT designs and implements governance mechanisms for the CDA development phase including open-book cost development, scope discipline, milestone payments, and exit options is likely to be the central determinant of whether the hybrid model delivers on its design promise. These mechanisms deserve at least as much institutional attention as the Phase 1 procurement process that precedes them (Garvin et al. 2026).

Managing interface risk across phases. Beyond maintaining program momentum, the CDA provides a mechanism for managing the technical, operational, commercial, and institutional interfaces between adjacent project phases. More broadly, collaborative development enables agencies to preserve continuity across related project packages or phases by carrying forward assumptions regarding geometry, traffic operations, environmental commitments, tolling strategy, financing, and construction sequencing rather than re-establishing those interfaces through separate procurements. In the I-285 East hybrid model, this continuity is maintained while allowing commercially mature phases to advance through competitive procurement. For large corridor programs, preserving continuity across successive phases while reducing interface risks may prove to be one of its most significant advantages on large, phased corridor programs.

7. Comparative Analysis

7.1 Conceptual Distinction: Progressive vs. Hybrid

At the conceptual level, the progressive and hybrid models address the same underlying challenge: how to structure delivery for complex projects where scope, cost, and risk cannot be fully resolved through conventional competitive procurement processes before financial commitment is required. However, each does so through different structural strategies. The progressive model integrates collaboration into the development phase from the outset, with competitive tension front-loaded into partner selection and governance mechanisms replacing market discipline for all subsequent development decisions. The hybrid model sequences competition and collaboration across project phases, applying conventional competitive procurement to an initial phase that is commercially mature while deploying collaborative development for subsequent phases where fixed-price commitment is premature.

These are not simply variations of the same approach. They reflect different judgments about how scope certainty is distributed across the project, how much competitive discipline can be preserved without sacrificing collaborative flexibility, and what governance structures are

needed to maintain accountability. The choice between them is a matter of fit with the project's uncertainty profile, not preference.

7.2 Analysis Across the Four Analytical Dimensions

The following sections assess each case across the analytical dimensions identified previously.

Early Private Sector Involvement. In MBP3, early involvement was substantive and outcome-shaping from the outset. BPP directly influenced package definition, construction sequencing, and the open-book cost model during pre-development in ways that materially shaped the project delivered (Garvin et al. 2026). In I-285 East, early involvement differs by design. Phase 1's competitive procurement bounds the developer's involvement in conventional concession terms. The CDA provides for substantive collaborative involvement in refining scope, schedule, and cost for remaining phases – a structural parallel to the MBP3 PDA, applied only where scope uncertainty makes it appropriate (Georgia DOT 2024). Whether CDA-phase participation proves substantive in practice depends on conditions that are not yet observable. MBP3's experience provides a benchmark.

Owner Readiness and Preparation. PennDOT entered MBP3 development with defined bridge candidates, a clear availability payment preference, 300+ participant market forums, 23 RFI responses, and governance experience from the Rapid Bridge Replacement program, which allowed collaborative development to focus on refinement rather than fundamental definition (PennDOT 2023a; PennDOT 2024). GDOT enters Phase 1 with comparable readiness: mature procurement infrastructure, a well-resourced advisor team, and MMIP governance developed across multiple corridor procurements. CDA-phase readiness is more conditional and dependent on environmental completion, GDOT/SRTA coordination across phase transitions, and CDA governance mechanisms not yet tested in practice.

Scope Definition and Certainty. In MBP3, scope was uncertain in detail but bounded in concept: bridge locations and conditions were known, and the progressive model resolved packaging, sequencing, and cost detail through collaborative pre-development (PennDOT 2023a). In I-285 East, scope certainty is uneven across phases. Phase 1 scope is reasonably defined and environmentally advanced; remaining phase scope depends on environmental outcomes, traffic and revenue studies, and network sequencing that cannot be resolved before Phase 1 award (Georgia DOT 2024). The scope-certainty profile appears to be the primary driver of each model's design.

Governance Mechanisms for Maintaining Accountability. In MBP3, the PDA established joint oversight, open-book cost development, iterative cost model review, and defined exit options (PennDOT 2023a). The availability payment structure retained demand risk with the public sector while transferring delivery risk to BPP, a risk allocation that proved resilient when toll revenues were eliminated. Exit options were preserved and exercised for Package 2 when continued development was not warranted (PennDOT 2024). In I-285 East, Phase 1 is governed by conventional concession accountability through competitive RFP. The CDA governance

mechanisms for remaining phases are the critical institutional design challenge, which is potentially a gap in GDOT's readiness, and it deserves at least as much attention as the Phase 1 procurement process (Garvin et al. 2026).

7.3 Comparative Summary

Table 1 summarizes the comparison across the four analytical dimensions and two additional contextual dimensions: competitive structure and development phase outcome.

Table 1. Comparative Assessment of MBP3 and I-285 East

Dimension	MBP3 (PennDOT)	I-285 East (GDOT)	Comparative Insight
Early Private Sector Involvement	Substantive from outset. BPP shaped package definition, sequencing, and open-book cost model during pre-development.	Competitive for Phase 1; CDA mirrors PDA logic for Remaining Phases. CDA substantiveness is prospective.	MBP3 is the empirical benchmark. I-285 East CDA is designed for similar engagement but depends on conditions still being established.
Owner Readiness and Preparation	Strong: defined candidates, clear AP preference, 300+ participant market forums, 23 RFI responses, prior bundled bridge program experience.	Strong for Phase 1: seasoned MMIP advisor team, SR 400 precedent. CDA-phase readiness conditional on NEPA completion and untested governance.	Both agencies demonstrate readiness commensurate with the phase being committed. CDA-phase readiness is the key open question for GDOT.
Scope Definition and Certainty	Uncertain in detail but bounded in concept. Bridge locations known; progressive model resolved packaging, sequencing, and cost detail.	Uneven across phases. Phase 1 commercially mature; Remaining Phases depend on NEPA, T&R studies, and network sequencing.	Scope-certainty profile drives model choice. Bounded uncertainty favors progressive PDA; uneven certainty across phases favors hybrid.
Governance for Accountability	PDA: open-book cost review, joint field reviews, iterative milestones, exit options. Availability payment decoupled	Phase 1: conventional concession accountability. CDA governance for Remaining Phases is the	Post-selection governance is as consequential as the procurement process. Both models require deliberate design

Dimension	MBP3 (PennDOT)	I-285 East (GDOT)	Comparative Insight
	delivery from revenue risk.	critical untested design challenge.	before development begins.
Phase 1 Competitive Structure	Competition governed partner selection only; governance replaced market discipline across the entire program from that point forward.	Phase 1 is a fully competitive DBFOM concession before the CDA phase begins; provides market-calibrated cost and risk baseline.	Hybrid model preserves full competitive discipline through Phase 1 financial close: a meaningful value assurance advantage.
Development Phase Outcome	Convergence achieved. Package 1 at financial close Dec. 2022; Final Design Mar. 2023; under construction, completion June 2028.	Prospective. Phase 1 award anticipated Q2 2026; CDA development phase follows. MBP3 is the empirical benchmark for convergence.	MBP3 provides the reference point. Whether I-285 East CDA phase converges depends on conditions observable only after development begins.

7.4 Additional Structural Observations

Competitive tension and value assurance. The most fundamental structural difference is where competitive discipline sits relative to project commitment. In MBP3, competition governed partner selection only. In I-285 East, competition governs a complete delivery phase before the CDA begins, providing a market-tested cost and risk basis that the progressive model does not generate.

Scope-certainty gradient as a decision rule. Where scope is well-defined, risks are allocable, and pricing is reliable, conventional competitive procurement remains the strongest delivery choice; it maximizes market discipline, generates independent price discovery, and preserves owner leverage. Where uncertainty is bounded but not fully resolved across the full program, a progressive PDA is likely appropriate; where uncertainty is uneven across phases – high in some, low in others – a hybrid model applying different procurement logic to different phases is likely more suitable. The practical cost of ignoring this gradient can be significant: applying a single procurement logic uniformly across phases with fundamentally different uncertainty profiles may either over-commit the agency on phases not yet ready for fixed-price contracting or under-utilize the collaborative development capacity that progressive and hybrid models are specifically designed to provide.

Governance design as a procurement-equivalent priority. Both cases reinforce that the design and resourcing of governance structures after competitive selection are likely as

consequential as the procurement process that preceded them. Standard agency practice devotes considerably more attention to procurement design than to post-selection governance; both cases suggest this allocation should be revisited.

Interface continuity across phased delivery. Large, corridor programs create interface risks wherever adjacent phases meet technically, operationally, commercially, and/or institutionally. If those phases are developed independently through separate procurements, assumptions regarding design, traffic operations, environmental commitments, financing, and construction sequencing may need to be revisited repeatedly as the program advances. Collaborative development reduces these risks by maintaining continuity across related project packages or phases. In hybrid delivery, this continuity is preserved while commercially mature segments proceed independently through competitive procurement. In this respect, the hybrid model contributes not only to uncertainty management but also to more efficient long-term program integration.

7.5 How These Models Can Accelerate Delivery

The central premise underlying both progressive and hybrid delivery approaches is that earlier and more structured involvement of the private sector can help projects advance more efficiently when uncertainty would otherwise delay procurement or implementation. Importantly, these approaches do not accelerate delivery automatically. Rather, they create opportunities for acceleration by addressing project uncertainties that might otherwise prevent advancement through conventional procurement.

In the MBP3 case, acceleration was pursued through several mechanisms. Early involvement of the development partner enabled constructability review, packaging decisions, and open-book cost development before execution of the long-term project agreement. This collaborative process allowed PennDOT and the development partner to refine project scope, sequencing, and risk allocation before committing to construction and long-term maintenance obligations. In addition, the ability to package bridges strategically created opportunities to advance projects more quickly than if they had been developed individually.

The I-285 East case illustrates a different pathway to acceleration. Rather than delaying procurement until all phases of a large corridor program achieved the same level of readiness, GDOT structured the procurement so that a commercially mature Phase 1 could advance through competitive procurement while subsequent phases continued development under the CDA framework. This approach seeks to maintain program momentum while avoiding premature fixed-price commitments on portions of the corridor that remain subject to environmental review, traffic and revenue analysis, and network development decisions.

Beyond reducing uncertainty, collaborative development also provides a mechanism for managing interface risks across related project packages or phases. Whether implemented through a PDA or CDA, continuity of development allows technical assumptions, operational concepts, environmental commitments, financing strategies, and construction sequencing to

evolve consistently rather than being recreated through separate procurements. Hybrid delivery extends this benefit by allowing commercially mature phases to proceed through competitive procurement while preserving collaborative continuity for phases that remain under development.

The cases suggest that collaborative delivery approaches may support acceleration through several mechanisms:

- Earlier integration of design, construction, operations, and financing expertise during project development;
- Earlier identification and allocation of project risks;
- Improved confidence in project pricing before commercial commitment;
- More effective project packaging and sequencing decisions;
- The ability to advance mature phases while less-developed phases continue refinement; and
- Reduced technical, operational, commercial, and governance interface risks between adjacent phases through continuity of collaborative development.

Viewed in this way, acceleration is not the direct result of collaboration itself. Rather, collaboration serves as the mechanism through which uncertainty is reduced before commercial commitment, thereby addressing uncertainties that might otherwise delay project advancement or lead to inefficient procurement outcomes. Further, collaboration provides a structured mechanism for coordinating adjacent project phases, preserving continuity across interfaces, and maintaining program momentum before commercial commitment.

8. Discussion: Implications for Policy and Practice

8.1 When Are Progressive Models Appropriate?

The MBP3 case suggests a coherent set of conditions under which a progressive PDA model is most likely to produce substantive delivery outcomes. Progressive delivery works best when three conditions are present.

First, the program concept must be sufficiently defined before collaborative development begins, not in every detail, but enough that predevelopment focuses on refinement and validation rather than fundamental project definition. In MBP3, PennDOT entered development with identified bridge locations, known structural conditions, and a clear payment preference; the collaborative process resolved packaging, sequencing, and cost detail, not the basic question of what was being built (PennDOT 2023a).

Second, the key risks facing the program must be resolvable through the collaborative process itself through design iteration, open-book cost validation, and constructability review rather than dependent on external decisions such as unresolved environmental approvals or contested political support. When critical risks require external resolution, iterative development is unlikely to produce convergence regardless of the quality of collaboration.

Third, the agency must have the institutional readiness to actively govern collaboration after competitive selection concludes: staffing, advisor capacity, governance structures, and the organizational discipline to sustain an extended development process rather than defer to the private partner's agenda. These conditions are demanding, and their absence does not argue for progressive delivery; rather, it argues for the preparation that would make competitive procurement viable. Progressive delivery is not a shortcut around the discipline of project preparation; it is an alternative structure for programs where that preparation has been done but residual uncertainty still makes fixed-price commitment premature, or where the owner would benefit from early contractor involvement to resolve scope and pricing questions that preparation alone cannot answer. Where scope can be adequately defined before procurement, a well-structured competitive process with alternative technical concepts and meaningful industry engagement is often the stronger choice.

8.2 When Are Hybrid Models Appropriate?

The I-285 East case illustrates a different set of conditions, one in which scope certainty is unevenly distributed across project phases. When one phase of a large corridor program is technically and commercially mature enough for conventional competitive procurement while subsequent phases carry too much environmental, financing, or scope uncertainty for fixed-price commitment, a hybrid model offers a structure that applies competitive logic where it fits and collaborative logic where it does not.

Hybrid delivery may also be particularly advantageous where successive project phases share significant technical, operational, environmental, or commercial interdependencies. In these circumstances, collaborative development under a continuing CDA can preserve continuity across phase boundaries, reducing interface risks that might otherwise require redesign, repeated coordination, or renewed commercial negotiations as the program advances. This advantage is likely to be most pronounced on large corridor programs delivered over multiple phases and extended time horizons.

The hybrid approach is particularly suited to large, phased corridor programs with significant scale and regional complexity, where the full project may not be commercially closed in a single procurement without accepting pricing risk that private parties may not reasonably absorb. It is also suited to contexts where the agency has strong institutional infrastructure including experienced advisors, established interagency coordination, and precedent from prior procurements because the governance complexity of managing concurrent agreements with different counterparties requires more institutional capacity than a single integrated PDA.

8.3 Governance as the Central Practitioner Challenge

Both cases converge on a finding that deserves emphasis: the effectiveness of collaborative delivery depends as much on governance design after competitive selection as on the quality of the procurement process before it. In MBP3, the PDA governance framework was the mechanism through which collaborative development produced convergence. In I-285 East, the CDA governance framework for remaining phases is the critical institutional design challenge. Agencies considering either model should treat governance design as a procurement-equivalent priority and embed accountability mechanisms in the development agreement before collaborative development begins.

9. Recommendations

The comparative analysis suggests that agencies should treat delivery-method selection as a structured decision rather than a preference for collaboration or competition. Table 2 summarizes practitioner-oriented screening questions that emerge from the two case studies.

Table 2. Screening questions for evaluating collaborative delivery approaches

Question	If Yes	If No
Is the project or program concept reasonably well defined?	Collaborative delivery may help refine scope, pricing, and risk allocation.	Additional planning and project development may be needed before procurement.
Are key stakeholders generally aligned on project objectives?	Collaborative development can focus on implementation and refinement.	Stakeholder engagement and consensus-building should remain priorities.
Does the agency have the capacity to actively govern the development phase?	Progressive or hybrid approaches may be viable options.	Consider strengthening internal resources or engaging experienced advisors.
Is project uncertainty significant enough to complicate fixed-price procurement?	Collaborative delivery may provide value.	Conventional competitive procurement may remain preferable.
Is uncertainty concentrated in only certain phases of the project or program?	A hybrid approach may be appropriate.	A conventional or fully progressive approach may be more suitable.
Are decision milestones and off-ramps acceptable to all parties?	Collaborative development can proceed with greater accountability and flexibility.	Governance structures should be strengthened before procurement.

The following recommendations build on these considerations and are intended to support the effective implementation of progressive and hybrid delivery approaches.

- **Conduct an honest agency readiness assessment** before selecting a collaborative delivery model. These approaches require sustained governance capacity, not simply procurement skill, and agencies with limited experience managing relational development processes should invest in advisor resources and governance design before initiating procurement.
- **Establish foundational project conditions** before entering collaborative development. Environmental readiness, payment structure preferences, institutional alignment, and stakeholder consensus are preconditions for effective collaborative development, not problems the PDA or CDA process will resolve on its own.
- **Invest adequately in pre-procurement market engagement** to shape the delivery model, confirm market appetite, and build shared understanding of project structure and risk. MBP3's 300+ participant forums and 23 RFI responses shaped both the model and the procurement in ways that made later stages more efficient (PennDOT 2024; Walzak 2022).
- **Design deliberate governance mechanisms** including transparent cost development, structured decision milestones, and defined exit mechanisms before collaborative development begins. Governance structures must be embedded in the development agreement and actively managed; they cannot be improvised after partner selection (Garvin et al. 2026).
- **Align the delivery model with the scope-certainty profile of the specific project.** Where scope is well-defined, risks are allocable, and pricing is reliable, conventional competitive procurement likely remains the strongest delivery choice. Where uncertainty is bounded but not fully resolved across the full program, a progressive PDA is likely appropriate. Where uncertainty is uneven across phases, a hybrid model applying different procurement logic to different phases is more suitable. Applying a single procurement logic to a program whose phases have fundamentally different uncertainty profiles is likely a structural mismatch with concrete costs.
- **Consider interface management explicitly when structuring phased corridor programs.** Where successive phases share significant technical, operational, environmental, or commercial dependencies, collaborative development can preserve continuity across phase boundaries while reducing the need to revisit key assumptions through subsequent procurements.

10. Conclusions

10.1 Key Findings

This report examines two emerging delivery strategies through comparative case analysis of PennDOT's MBP3 project and GDOT's I-285 East Express Lanes. Four findings stand out.

Both the progressive and hybrid models represent deliberate governance choices to match accountability mechanisms to the state of project uncertainty; they are neither ad hoc responses nor replacements for competitive procurement where conditions support it, but structurally coherent responses to programs where scope, risk allocation, and pricing cannot be established with confidence without the active engagement of a development partner in the process of resolving them.

The effectiveness of collaborative delivery depends on foundational conditions established before or at the start of the development phase. These are not the same conditions that the collaborative process is engaged to resolve — scope detail, pricing, and risk allocation are precisely what the development partner works through with the agency. Rather, they are the upstream preconditions that make productive collaboration possible: a defined program concept, a clear payment structure preference, identified project candidates or phases, and the institutional capacity to actively govern the process. In MBP3, conditions of this kind established before PDA execution gave the project structural resilience that absorbed significant institutional disruption and achieved convergence: availability payment preference, modular packaging, defined bridge candidates, and extensive market engagement (PennDOT 2023a, 2023b). Foundational conditions cannot be manufactured by the collaborative process itself; they must be in place before it begins.

The two models serve different strategic purposes, and the cases illustrate those purposes concretely. MBP3 demonstrates progressive delivery working as designed on a program whose uncertainty was bounded and resolvable through collaborative pre-development. I-285 East demonstrates hybrid delivery addressing a different problem: a large corridor program whose Phase 1 is commercially mature while remaining phases carry uncertainty that makes fixed-price commitment premature. Matching the model to the uncertainty profile of the specific program is among the practical implications this comparison most directly supports. The comparison also suggests that collaborative development may provide additional value by preserving continuity across related project packages and phases, thereby reducing interface risks that might otherwise undermine project integration and delivery efficiency. The hybrid model extends this benefit by allowing commercially mature phases to advance independently through competitive procurement while collaborative development continues on subsequent phases.

Governance mechanisms for accountability after competitive selection are as consequential as the procurement process that precedes them and receive considerably less attention in standard agency practice (Garvin et al. 2026). Both models require deliberate design of these mechanisms;

this is not unique to collaborative delivery, but the absence of ongoing market discipline in progressive and hybrid models makes it especially consequential.

Taken together, the cases suggest that successful application of progressive and hybrid delivery approaches depends on two related considerations: aligning delivery structures with the project's uncertainty profile and ensuring that the foundational conditions required for productive collaboration are established before collaborative development begins.

10.2 Future Research

Several directions for future research emerge. First, additional case studies are needed as hybrid and progressive models proliferate. The I-285 East case will become more informative once the CDA development phase is underway; longitudinal study of its governance mechanisms and development outcomes could provide empirical evidence on whether the hybrid model produces the convergence outcomes its structure is designed to enable. Second, quantitative or mixed-method approaches could examine whether progressive and hybrid models produce performance advantages in schedule, cost, and risk allocation outcomes relative to conventional concessions on comparable project types, though the limited population of completed cases will constrain the strength of conclusions for some time. Third, the role of governance design — specific mechanisms, their sequencing, and their interaction with project conditions — warrants dedicated investigation as a research priority distinct from procurement process analysis; the cases examined here suggest its importance but cannot establish the conditions under which particular governance mechanisms are most effective.

Several limitations of this investigation should also be acknowledged. First, the analysis is based on two cases, which provides analytical depth but limits generalizability; findings about the conditions for model effectiveness should be treated as provisional observations to be tested across a broader population of progressive and hybrid procurements rather than established conclusions. Second, the I-285 East case is prospective at the time of writing; Phase 1 has not yet been awarded and the CDA development phase has not commenced, meaning that the comparative analysis rests on design intent and procurement structure rather than observed outcomes. Third, the investigation draws primarily on procurement documents, project records, and a limited number of interviews; agencies and private partners with direct experience of both competitive and collaborative P3 structures may hold perspectives on the comparative advantages of each that are not fully captured here. These limitations point toward the same research agenda identified above: longitudinal, multi-case investigation that can assess whether the conditions for effectiveness identified in this analysis hold across a wider range of programs, project types, and institutional contexts.

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