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How Do We Become More Agile in Delivering Transportation Assets?

William N. Nickas, *Editor-in-Chief*

During my travels in the last quarter of 2022, I had the opportunity to interact with a number of engineers and contractors in places such as Miami, Fla.; Austin, Tex.; Chicago, Ill.; Albany, N.Y.; and Washington, D.C. The challenges these professionals face are as varied as their locations.

The bridge engineering community as a whole could not have been more thrilled with how calendar year 2022 started. The U.S. Department of Transportation's (USDOT's) historic Bridge Formula Program (BFP) set aside \$26.5 billion for bridge replacement, rehabilitation, preservation, and protection, as well as construction of new facilities where needed. The goal of addressing nearly 15,000 bridge issues across the national landscape is not only timely and crucial but also long overdue. I know I sound like a state bridge engineer fighting for the scraps during the state budget process back in the day. But when \$26.5 billion gets allocated for bridge issues, that's as good as it gets. It's like the best holiday morning you can think of—it's "Somebody pinch me, is this a dream?"

But at the same time, something felt off.

The old adages "If it sounds too good to be true, it probably is" and "Be careful what you wish for" kept going through my mind—but why? When was the last time we had resources within our grasp that were specifically dedicated to meeting our needs, and at such extraordinary levels? Where's the catch? Then I came across an article authored by Deloitte subject matter experts on supply chain equilibrium,¹ in which the authors advocate a "tripolar strategy" balancing agility, resiliency, and efficiency. It led me to wonder, "Are we out of balance? And if we are, how do we incorporate agility and find equilibrium in our business model?"

If we lack agility, how do we leverage collaborative efforts to become less reactive and more proactive? State transportation agencies and most institutional organizations find strength through collaboration. Can this model with a more agile approach balance

efficiency and resiliency in the current competitive, low-bid construction marketplace? For decades we have talked about minimizing user delays and integrating more prefabrication with workflow automation and tracking. Does today's operating environment bring the "tripolar" concept discussed in the Deloitte article to the forefront?

During project design, engineers strive to balance all aspects of the project, and often become reactionary to changes made post bid. Drawing from football clichés, is it time for design engineers to play more offense than defense during the construction phase of projects? Can we anticipate potential challenges and move to solutions more quickly?

The exuberance felt during the rollout of the Bipartisan Infrastructure Law and BFP was predictable. Finally, national bridge health issues were front-page news, after years of trying to get recognition, and we were eager to get moving.

The U.S. Congress and the USDOT established timelines for the expenditure of BFP funds, as is customary with traditional fiscal appropriations. These funds will expire. Is this the catch that was bothering me? The goal is to capitalize on the funding while it's available. I'd submit that, if these timelines might not be realized, conversations on expenditure, asset delivery, and modifications to the BFP ought to begin now, in earnest, to avoid the predictable "uncomfortable conversation."

The U.S. Marines motto is "*Semper Fidelis* (always faithful)." A colleague of mine prefers the waggish variation "*Semper Gumby* (always flexible)."

Timelines are finite. Our challenge is agility—to anticipate and adapt rapidly.

Reference

1. Mussomeli, A., P. Delesalle, and J. Kilpatrick. 2022. "The New Supply Chain Equilibrium." Deloitte Insights, no. 30. <https://www2.deloitte.com/uk/en/insights/focus/supply-chain/supply-chain-agility-efficiency.html>.

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Publisher

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ASPIRE (Vol. 17, No. 1), ISSN 1935-2093 is published quarterly by the Precast/Prestressed Concrete Institute.

<https://doi.org/10.15554/asp17.1>

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