











different responsibilities, requires an end-to-end risk-management view, as opposed to a siloed, individualized process-step responsibility. There is a clear need for strong risk-management processes from the outset, and for these to be applied and continuously developed throughout the life of the project.<sup>39</sup>

One common example of the problems inherent in a “siloed” approach to infrastructure development is the “design liability gap” that can occur in projects using the traditional design/bid/build delivery method. In this approach, the public project owner initially retains a designer to fully design the facility and then awards a construction contract to the lowest responsive and responsible bidder. In such situations, the public owner is held to have impliedly warranted to the contractor the adequacy and completeness of the design. The design the public owner receives from its designer, however, is not similarly warranted; instead, the designer merely warrants that its design is only as good as that produced by a reasonably prudent designer under similar circumstances. This can create a “liability gap” for the owner if the errors and omissions of the designer do not fall below the applicable standard of care, but nevertheless cause problems in the project for which the owner is liable.<sup>40</sup>

**In summary, the LAO Report concluded that neither project used clear P3 best practices, nor was either appropriate for a P3 model.**

A well-designed P3 agreement is structured to incentivize the private partner to attempt to avoid those things that could create the liability gap by aggressively anticipating that risk throughout the entire project and developing ways to avoid it. P3s that maximize autonomy on the front end, while keeping the same private entity “on the risk” for all or a substantial portion of the life of the facility, provide the best means of implementing an “end-to-end” risk management approach. When a single private partner is required and incentivized to focus on the lifespan of a facility, not just initial construction, the focus on prudent and cost-effective design, construction, and management of the facility increases.

In the context of a wastewater treatment plant, for example, an optimal P3 agreement might require the plant to treat a certain quantity and quality of influent to a certain level, while maintaining certain odor controls, meeting certain energy efficiencies, and remaining capable of future expansion, with the payment stream to

the private partner based on the completed facility’s performance with respect to these criteria. But aside from setting these goals, the agreement would allow the private partner maximum latitude to design and build the facility. After construction, the private partner would assume the risk of operating and maintaining the facility, which in the context of a wastewater treatment plant would include the risk of liability for the unauthorized release of untreated or undertreated wastewater. At the end of the P3 agreement, the infrastructure facility would be returned to the public entity in a contractually predetermined condition, and the public entity would then operate and/or maintain the facility itself or outsource this work to the private sector.<sup>41</sup>

In this example, the private partner is best served by setting clear goals on the front end and partnering those goals with proper incentives. When implemented correctly, the result is a cost-effective project that minimizes risk. That was the result with the Moray Coast Wastewater project in Scotland. In 2001, a private consortium was awarded a 30-year contract to design, build, finance, and operate three sewage treatment plants; a sludge dryer; 20 pumping stations; two new, long sea outfalls; and a 47-km pipeline network. In designing the project, environmental issues were paramount because of the natural beauty and fauna of the Moray coast. Indeed, the contract required that the consortium build facilities that could maintain extremely low levels of effluent release, and payments were based, in part, on the consortium’s ability to meet these goals. Managing a wide variety of contractors throughout all stages of the project and often employing new state-of-the-art technology, the consortium was able to finish the project ahead of schedule. It is currently servicing the surrounding areas.<sup>42</sup>

### **Pitfalls and Best Practices to Avoid Them**

Experience and the studies undertaken to evaluate P3 experiences around the world have highlighted a number of common pitfalls associated with P3s. Not coincidentally, most of these pitfalls involve mistakes at the very outset of the project. The adoption of procedural modifications to P3 arrangements and the development of best practices to guide the P3 process can improve the selection mechanisms for P3s at the front end and maximize the chances for long-term success. These key pitfalls and best practices to avoid them are discussed below.

### ***Select the Right Project***

One of the biggest mistakes that tends to occur in the project delivery process is the use of P3s on the wrong types of projects. As discussed above, each P3 agreement is unique, and there is no “form” P3 agreement, particularly in countries like the United States that do not have extensive P3 experience. If the P3 project is to have the best chance of success, both the public and private partners will find themselves investing a not-insignificant amount in attorneys and consultants well before







