

Delivering in a down economy: 10 ways to bring projects to life

From 3-D design to P3 HOT lanes, critical mobility projects are getting off the ground during the most challenging period in U.S. DOT history.



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State departments of transportation are under tremendous financial stress. Nearly all are reducing the number of full-time employees. Departments that do not have protected road funds are seeing their monies siphoned into states' general funds to cover other critical needs. And, the deep gas tax revenue streams DOTs once enjoyed now are running dry as car sales slump, Americans drive less and miles per gallon increase.

Dealing with any one of these issues would be difficult enough. Unfortunately, today they have combined to produce the most challenging time in U.S. DOT history.

State agencies are experiencing severe budget cuts. While DOT's role is critical, many policymakers and legislators believe transportation agencies simply need to make cuts.

The encouraging news is that DOTs still are delivering critical mobility projects under these difficult circumstances. Tough economic times often breed innovation. And, those innovations are helping cash-strapped DOTs bring projects to life:

1. Contracted quality control and quality assurance. On large projects, DOTs are outsourcing the quality control and quality assurance role to private-sector firms while DOTs audit the overall process. This process reduces the need for DOT staff on project inspection and allows the department to focus on its most critical areas within the project.

2. Outsourcing program management and public involvement. These areas are very complex and can consume a great deal of time. To perform them correctly, DOTs realize they need specialized talent. Outsourcing both areas is producing high-quality results, which translates to greater public support for the project during the planning phase and throughout construction.

3. Virtual public meetings. This is an exciting area for DOTs. Whereas a single, live public meeting might yield 15 attendees, a more cost-effective, virtual meeting can have 200 participants logging on. The larger sample size broadens taxpayer input and results in a project that pleases more than just the "regulars" who attend.

4. Practical Design. Several states have adopted a system-centric approach to making investment decisions that prioritizes the entire system's needs over individual project wants. The result has been significant cost savings being directed toward both safety and overall improved system conditions.

5. 3-D design. By using 3-D technology, DOTs are exposing problems that typically would not be apparent until construction. Avoiding such glitches is incredibly helpful in ensuring that agencies have "buildable" projects that are completed faster and for less cost.

6. Design-build-to-budget. In this role reversal, DOTs dictate a project's price and timeline and bidders outline what they can deliver under those terms. The key is not to tell the proposing teams how to deliver the project. This strategy creates a very competitive environment and has produced, in every instance I've seen, more project than imagined by the DOT at inception.

7. Bundling projects under one bid. When DOTs package multiple projects with similar attributes, such as repairing a number of bridges in one lump-sum bid, they save time and money by not having separate procurements. Plus, the greater volume of work increases interest from and competition among contractors and generates efficiencies once work begins.

8. P3 HOT lanes. This is a sweet spot for DOTs. Instead of converting existing interstate lanes to tolled lanes, DOTs are adding new capacity in the

form of high-occupancy toll lanes financed by public-private partnerships. These new lanes allow emergency vehicles, transit and passenger vehicles with multiple occupants to travel free. All other users pay a toll in exchange for a reliable travel time. A positive side effect is that HOT lanes also help to decongest the general-purpose lanes they parallel.

The public generally is more accepting of new HOT lanes, and bond markets — long-time skeptics of greenfield toll developments — favor HOT lanes because they have a known traffic volume, which takes away some of the financial risk.

9. Alternative funding sources. The very nature of highway construction means you need a long-term stream of revenues to provide certainty for planning and multi-year construction. States simply can't rely on the existing financing of the Federal Highway Trust Fund, which is being kept alive by a series of short-term extensions and general fund transfers.

As a result, many DOTs are turning to alternative funding sources. One of the newest is Build America Bonds. These bonds don't work in the short-term, but they are a less expensive way to borrow long-term debt. There also seems to be a growing interest in funding transportation with sales taxes, and a number of areas are using transportation development districts, which levee a tax over a geographic area to pay for specific infrastructure.

10. Joint housing. States are successfully placing entire project teams — the contractor, the designer, the DOT and FHWA representatives — in a single office at the project site. The result streamlines and speeds communication and interaction between team members. And, it means small problems don't turn into big ones.

DOTs are being forced to innovate, and they are producing. In the next decade, I believe we'll see this list of new approaches become commonplace, only to be replaced by an entirely new list as DOTs create a new paradigm in which to deliver critical mobility projects and achieve their missions. ■

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