A toolbox within a toolbox

A diversity of tolling business models offers a wider toolbox of highway finance options, as the IBTTA's Patrick Jones explains.

The business models for America's tolled highways have gone through several different evolutions over the last 75 years, reflecting a succession of shifts in transportation policy and politics, financing and funding models, urban patterns, customer needs, and technology.

And with more and more decision-makers expressing renewed interest in tolling, it's that very diversity that makes it so easy for the industry to present itself as a practical solution to the transportation infrastructure funding crisis.

User financing is often described as one important part of the wider toolbox of highway funding options. But a closer look reveals that tolling is actually a toolbox within a toolbox, offering at least four distinct models that developed in response to different local or regional circumstances.

"A rural road in Pennsylvania, a commuter highway in Atlanta, and a freight gateway in New York all have different characteristics, challenges, and needs, and it would make no sense to try to impose a one-size-fits-all solution on such a diverse transportation system," says Rob Horr, president of the International Bridge, Tunnel and Turnpike Association (IBTTA) and executive director of the Thousand Islands Bridge Authority.

"The good news is that each of those roads can look to the tolling industry for a different business model that might be right for them, which means the decision on whether and how to toll in the United States is best left to local and state governments, with a blessing, but not a mandate, from the federal government."

Patrick Jones, executive director and CEO of the International Bridge, Tunnel and Turnpike Association (IBTTA)

Where it all began

The golden age of tolling in the US dates back more than three-quarters of a century. The 1930s to 1950s were the era of the cross-state toll roads like the Pennsylvania Turnpike, the Kansas Turnpike, the Ohio Turnpike, the Maine Turnpike, the New York State Thruway, and the New Jersey Turnpike. These rural, Interstate-type highways were built by toll authorities under state charters and funded by bond issues. Opened in 1940, the Pennsylvania Turnpike was the first "modern" toll road, and several other roads predate the establishment of the Interstate highway system in 1956.

The design of the road reflected the philosophy of the time, with President Dwight D. Eisenhower leading the charge for an integrated highway network that would facilitate the flow of goods and people, serving as the backbone for a stronger economy.

"The ceaseless flow of information throughout the Republic is matched by individual and commercial movement over a vast system of interconnected highways crisscrossing the country," Eisenhower said in February 1955. "Together, the united forces of our communication and transportation systems are dynamic elements in the very name we bear — United States. Without them, we would be a mere alliance of many separate parts."

Consistent with this grand vision, agencies received monopoly authority to build big routes and big institutions, with a large work force to collect tolls and maintain the roads.

It was an all-important milestone. But the original toll roads bore little resemblance to the business models that followed.

Following the demographics

From the 1970s through 2000, metropolitan areas saw the need to build circumferential, urban arterial roads to serve a growing population. The Orlando-Orange County Expressway Authority, the Miami-Dade Expressway Authority, the North Texas Tollway Authority, and the E-470 toll road in Denver were among the special-purpose authorities set up by local entities to relieve specific pressure points across the system.

E-470 is a partial ring road around Denver, and an interesting example of a consortium formed by five suburban counties — not the city, and not the state. Today, the E-470 connects with the Northwest Parkway, a 75-mile-per-hour toll road concession that serves two adjacent counties. This county-based model has become more common over the last two decades where local and regional authorities have proven very successful in building local public support.

This experience reflects the axiom that all tolling, like all politics, is ultimately local — that the need to toll depends on local circumstances, and the ability to introduce a toll road depends on local assent. Toll authorities can earn wide public support and understanding when customers can see that the tolls that they pay fund improvements to the roads they drive.

That connection is most obvious when an agency has a focused mandate in a limited geographic area. But larger agencies like the

New Jersey Turnpike Authority and the Illinois Tollway have earned strong public support for toll increases by linking the measures to individual roads and specific local conditions.

Congestion relief

A more recent trend is to increase capacity by introducing "priced" managed lanes. Interstate 25 in Denver, Interstate 394 in Minnesota, and Interstate 95 in Florida all feature high-occupancy vehicle (HOV) lanes that have been converted to high-occupancy toll (HOT) lanes that allow single-occupant vehicles to use the lanes for a fee, while still offering free or reduced-price access for HOVs.

Consultant Larry Yermack, president of Wendover Consult, sees this uptick in state department of transportation involvement as the most significant new trend in tolling.

"The state DOTs are interested in tolling because they don't have any money," he wrote. "It's been nothing but reductions in transportation funding, and nothing on the horizon to suggest that we will ever return to the previous levels of funding," so the stage is set for creative solutions. "Either the money comes from somewhere or the states reduce the size of their programs, which isn't a very good idea. So they're going to want to make up the revenue. There's clear interest in tolling at many levels of government."

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Rob Horr

The state agencies don't necessarily think of managed lanes as toll roads, but all-electronic tolling (AET) is the gateway that enables them to manage congestion through dynamic or time-of-day pricing.

A shining example in this generation of regional tolling agency, the Central Texas Regional Mobility Authority (CTRMA), celebrates its tenth anniversary this fall, with two toll roads open and nearly $1 billion in assets. In contrast to more established agencies that formed around large, iconic highways, CTRMA took over an existing road, streamlined its management, eventually rebuilt it, then used that asset as an anchor for further development.

The vision is less grand, more metropolitan than Eisenhower's original plan for the Interstate system, but in its time and context, it works. In a recent news article in the Austin American-Statesman, the agency earned praise for running a lean, efficient, stable operation.

Georgia's State Road and Tollway Authority (SRTA) was established to operate a few miles of urban highway, but legislators eventually expanded its charter to cover the entire state. SRTA's history and focus make it much more amenable to coordinating or even underwriting public transit, an expectation that doesn't always sit well with more traditional agencies with a fixed focus on the construction and operation of a roadway, bridge, or tunnel.

Public-Private Partnerships

The US has seen some private toll road development, although it has not been widespread. The 91 Express Lanes were developed by a private consortium, sold to Cofiroute USA, a wholly-owned subsidiary of Cofiroute, SA of France, and then sold back to the local agency, the Orange County Transportation Authority. Segments of the Trans-Texas Corridor were built by Cintra US, a private developer/operator that joined the state in a 50-year strategic partnership under Comprehensive Development Agreement legislation. Abertis recently inked a deal to reconstruct and operate the majority of Puerto Rico's toll roads.

Bob Poole, director of transportation policy at the Reason Foundation, sees the introduction of long-term toll concessions as the most important long-term tolling trend in the last 15 years in the United States. For both "brownfield" and "greenfield" sites, the model involves private firms in toll road design, finance, construction, operation, and maintenance.

"Toll concessions bring much-needed additional capital investment into the highway sector, along with innovations in pricing and design," Poole wrote. "Rather than being seen as a threat by established toll authorities, they should be embraced as expanding the toll sector overall, both to take on projects that may not fit the risk profile of a toll agency and to expand tolling into non-toll states."

"There's clear interest in tolling at many levels of government"
Larry Yermack

But Yermack said the ability of US public agencies to borrow funds under tax-exempt debt drives public-private partnerships toward the status of "niche business." Private concessionaires often make a convincing case that they can get the job done faster, better, and cheaper. But "they're competing with people who already have the authority to do it themselves, so it's a hard argument to win."

Competition or interdependence?

At first glance, the new generation of nimble, focused, all-electronic toll operations might appear to be a counterpoint to the more established, state-wide business models. The transition is often reflected in the organisation charts of the engineering and consulting firms that serve the tolling industry: while the tolling divisions emphasise roadway management and highway infrastructure, the ITS teams focus on the gantries and sophisticated technologies that support AET and dynamic pricing on specific roads and lanes.

But on the front lines, the reality is that the different business models for tolling are interdependent and mutually supportive. We use different models to accomplish different things. A carpenter would never use a plane to hammer nails or a screwdriver to carve wood. That's why the tolling industry is so emphatic that tolling need not, and should not, be mandated for all uses. But it should be available as an option for state and local authorities that are searching for new, effective funding and financing options for highway infrastructure.

When a jurisdiction opts for tolling, it should have the flexibility to pick the option from within the tolling toolbox that best suits its business needs. There are vast differences in function, volume, and funding requirements between a rural highway with a high proportion of out-of-state traffic, a downtown commuter lane with nearby rapid transit, or a major freight route between urban centres. So the decision to consider tolling — in any or all of those scenarios — is just the first step in exploring a wide variety of business models.

What's old is new

It's been nearly 75 years since America's first "modern" turnpike authority opened its roads, but the need to manage and spread out the financial risk of major infrastructure development is still the guiding motivation behind toll road development. In the first wave, quasi-governmental authorities were formed to issue bonds, fund them with tolls, and develop the large highway systems that formed the backbone of the Interstate system. Over time, a new generation of agencies formed around the idea that shorter, urban toll roads were possible, more plausible, and perhaps preferable to legislators and customers. And in some jurisdictions, tolling supported a search for public-private partnership models that would work well for all parties.

"Toll concessions bring much-needed additional capital investment"
Bob Poole

At every step, the driving force has been the need for safe, reliable mobility, and for the funding to keep America moving forward. As the nation's highway infrastructure deficit increases and gas tax revenues erode, the circumstances bring us back to a very familiar theme: Tolling is not the only choice for highway funding and financing, but it has to be an option for state and local authorities with major infrastructure projects to fund.

"The toll industry has significantly raised its profile over the past decade, and that is a very positive sign for its future growth, particularly given the need to phase out fuel taxes and phase in mileage-based user fees (MBUF)," Poole wrote. "There will be considerable debate over whether MBUFs should be seen as a new form of tolls (a dedicated user fee for specific facilities) or as a general transportation tax. The user-fee approach is far wiser, but it will take a concerted effort by the toll industry and state DOTs to bring about this version of MBUFs." ■

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