

InfrastructureUSA

Guest on THE INFRA BLOG

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Conversation with Steve Anderson, Managing Director, InfrastructureUSA

The Lifecycle Reality of Our Infrastructure

Greater infrastructure investment is critical to our public health and safety and, essentially, our economy's competitiveness. There are many professional organizations that have documented the need for significant investment in our nation's infrastructure. The American Society of Civil Engineers, CG/LA's *Infrastructure Blueprint 2025* and the American Water Works have all characterized the need for infrastructure, including transportation and water. Right now, I believe, is the most significant time to invest in our infrastructure. Our nation has been building its existing infrastructure for the last 50-75 years, and we've essentially reached the lifecycle reality of having not only to continue to expand our core networks but to anticipate further population growth, and at the same time having to begin the rebuilding of our assets since they have come to the end of their useful life. We're seeing many portions of our Interstate Highway System that were designed for a 50-year life; they are decades beyond their designed life. And you could say the same thing about our water systems throughout the nation.

Funding Options at Our Fingertips

We're at a critical juncture and the needs are substantial, and they certainly outstretch our traditional funding sources. What I believe we have to do is look at the portfolio of funding opportunities that are out there and provide a customized solution for the major projects that our nation needs. There's no single funding mechanism that we should view as a silver bullet or a magic wand that's going to solve every single problem. Our infrastructure leaders need to consider the full complement of options to fit a specific project's needs and opportunities, as well as what works best for their individual organizations. I think we see, in the water industry, that we're evolving from using traditional funding vehicles to considering a broader array of innovative funding strategies. Water utilities traditionally have used things like tax-exempt bonds, general obligation bonds and, to a great extent, the State Revolving Loan Funds. But we see with some success, and certainly a lot more emerging interest, public-private partnerships. You may have heard of utilities considering the use of green bonds, which are tax-exempt bonds that can be used to fund projects that are used to create environmental or climate benefits, such as energy efficiency and other sustainable management techniques. The EPA has created the Water Infrastructure Finance and Innovation Act, WIFIA, in 2014, which provides a federal credit program to support low-cost financing. So there is a number of things out there that I think can be customized for individual client and project needs. On the transportation side, you can see funding through a combination of public and private activity from federal, state and local levels. We need to move into a better use of user fees and just like other utilities, we need to pay as we use. At the moment, from the transportation side, the biggest ideas are interstate tolling and mileage-based user fees. To me, we have got to look at the portfolio of funding opportunities and create the customized solution for individual client and project needs.

Building Public Engagement Is Critical

We're seeing, over the course of my career, the last 30-plus years, a significant improvement in the public's understanding of the state of our infrastructure. Does it accelerate that understanding when we have some significant, real and perceived, failures of systems? I think it does. It's unfortunate that that has to occur to help educate, but when that does happen we're offered a unique opportunity to expand on the work that's done, and is successful and enhances public health and public safety and the economy to get people from point A to point B. So I've seen some real, positive trends in the education of the public on the vital nature of these systems and networks to keep our country running and being competitive on a global basis. My opinion is continued education and communication on the importance and value of infrastructure is critically important, and we can do that by engaging more people in the infrastructure discussion. We need to engage the public from multiple angles. I believe that a focus on STEM programs has some ability to shine a light on the infrastructure issues in early education, as well as attracting future engineers through high school and university, and indicating the needs that we have nationwide.

Awareness Boosts Innovation

I think the awareness is increasing significantly over what it was 15, 20 years ago. An example of that is the willingness of the public to look at the reuse of highly treated wastewater for various needs, whether it be industrial reuse, whether it be wetlands enhancement, whether it be indirect, or even direct potable reuse is, perhaps, a signal that we've reached that tipping point to look at innovative solutions to solve our complex needs. It's interesting to note that there are some excellent examples of innovation, both in terms of the technology—in terms of forward-looking planning—as well as innovative financing. There are three unique projects that point to this from CDM Smith's involvement. One is in San Diego: we worked with a wide range of stakeholders to look at key factors affecting the water supply and demand for San Diego metropolitan areas for the next 25 years, basically to plan for a resilient and sustainable future for their drinking water needs. A project like that has a lot of interest. In this case, it won a grand prize for planning from the American Academy of Environmental Engineers and Scientists, which is exciting. In Houston we're partnering with the city of Houston for the largest water treatment, progressive-design-built project of its kind in the United States. They're expanding their plant significantly to increase their ability to provide support for residential and commercial growth projected by that city and its drinking water authorities that are participating. We're doing that job in a joint venture with CH2M. On the technology side, the District of Columbia Water and Sewer Agency is looking to lower their operating costs, reduce their carbon footprint and improve energy efficiency at their Blue Plains Treatment Plant in a joint venture with PC Construction. We're doing a design-build delivery of a Biosolid Main Process Train project that incorporates the use of CAMBI's Thermal Hydrolysis Project, THP, which is actually the first of its kind in the United States and the largest CAMBI plant in the world. So we have some very progressive clients that are looking for unique innovations in terms of financing, the delivery of projects, and the technology of projects—which I believe will be a part of the solutions that are needed to improve our infrastructure in the years to come.

CDM Smith: Integrated Infrastructure Solutions

CDM Smith provides integrated infrastructure solutions in the markets of water, environment, transportation, energy and facilities. We serve both public and private clients worldwide. We serve public-sector clients in local, state and federal government, and private industry from about 125 offices around the world. Additionally, we provide alternative delivery approaches—for example, design-build—in both the environmental and infrastructure segments of our business. We have about 5,000 employees and we are employee-owned, which while not unique in our space, is a differentiator for us in that we can provide focus on what we want to accomplish in the long term, given that our shareholders are our employees.

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