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Thinking of infrastructure globally, acting locally:

An interview with Lee McIntire

How small changes could make a big difference.

Rik Kirkland,
McKinsey & Company

Lee McIntire is the former executive chairman of CH2M HILL. Founded in 1946, the employee-owned, US-based company builds energy, infrastructure, transportation, and water projects in more than 100 countries. In this interview with McKinsey's Rik Kirkland, conducted in the summer of 2014 when McIntire was still with CH2M HILL, he explains why social media is good for infrastructure and discusses the state of productivity in the construction business.

McKinsey: *Give us a long-term view of how you see infrastructure in the global economy.*

Lee McIntire: It goes back to the early 1990s, after the Berlin Wall came down and democracy had a global breakout. People figured out pretty

quickly that without infrastructure there is no economic growth.

Infrastructure investment has been shown to produce economic development faster than anything else. You can't have a good economy without good water, transportation, and power, plus hospitals, schools, and data bandwidth. So every government is working on infrastructure. Also, in the past couple of decades, public-private partnerships have received a lot of interest as a way to finance infrastructure needs.

Over the next couple of decades, the world is going to need something like \$57 trillion worth of infrastructure. If you look at the numbers, there is funding for only about half that. So we

need to get creative. One way to do that would be to reduce that \$57 trillion figure by doing a better job with operations and maintenance, which, for example, could mean things like having different kinds of transport work together. Public-private partnerships could be part of that.

McKinsey: *My impression is that compared with two decades ago, the infrastructure industry is more global than ever. Is that right?*

Lee McIntire: Absolutely, globalization is huge. Just in terms of travel, places have become hubs of transportation that weren't five years ago. Every country has its own globalization plan. That's something I've discovered in the past couple years. As a business, if you don't fit into their globalization plan, you won't be able to reap the benefits that the specific country offers.

The other important thing is that the world is getting richer. Yes, there are haves and have-nots, but overall the world is getting richer and the middle class is growing. This middle class has new transportation needs, new standards, and new demands.

Then there is urbanization: Everybody is moving to the cities. It won't be long before 80 to 90 percent of the world's population will live in cities. Already in Latin America, it's 80 percent. So all these forces are coming together at once, and infrastructure is rising to be one of the top issues of almost every country.

McKinsey: *What are some of the most important challenges?*

Lee McIntire: Governments change, and a new government might have different priorities. Infrastructure is a 20-, 30-, 40-year item. Not

every project is a great project. Not every project is even a good idea. So it's important to have really good master planning and the wisdom to plan and build and finance the right things. That's not trivial. It's pretty hard for any single government entity to pull this off in a well-communicated and constructive manner.

What can we do about that? Technology and data management could really change how we do everything, whether it's water, transportation, power, or conservation and efficiency. The question is how to manage that: for example, in transport, you can give people information so they can pick their own routes and their own times. All this is difficult, but it's also exciting.

McKinsey: *Construction is a difficult business because it's often bespoke. Is that why it hasn't seen the kind of productivity gains we've seen in other industries?*

Lee McIntire: You're right that productivity has not been improving, and there are a lot of studies trying to figure out why that is the case. It's something I've observed myself. When you see a road being built, it looks a lot like it might have 20 years ago.

Or look at engineering. While the drawings for engineering are now in 3-D and color and easier for contractors to use, it still takes as long to do an engineering drawing as it used to. Considering all the technology and the billions invested in computer-aided design, it's disappointing.

Do I see any big breakthroughs coming? No, actually, I don't. I see small technology moves and approaches and more mechanization and less labor. That's been going on for 30 years. But I don't see anything big coming.

Lee McIntire



Vital statistics

Born in Nebraska, 1949

Education

MA, finance,
Thunderbird School of
Global Management

BA, civil engineering,
University of Nebraska

Career highlights

CH2M HILL

(2014)

Executive chairman,
board of directors

(2009–13)

CEO and president

(2006–09)

COO and president

That's the opportunity for my industry. It might take a revolutionary change in thinking and approach.

McKinsey: *What are some ideas that might help?*

Lee McIntire: I'm a big believer in spending a lot of time planning before you put a shovel in the ground. Good planning is money well spent.

You might think I'd be biased the other way: let's get going on the job so we can win one. But I believe that more needs to be done early on. Get all the smart people and stakeholders in a room. Don't just have a government agency produce a request for proposal; it's better to have the players come in and talk because they can really help the government. Infrastructure tends to be government-oriented, but it is really all about people. Roads are about people. Sewage and water treatment plants and communication are about people. Everybody's a transportation expert.

McKinsey: *What are you doing differently, compared to, say, five years ago?*

Lee McIntire: We started using social networks to assist management, to recruit and hire people, and to change the way we do business. I am not sure how they will apply, but social networks could help us with infrastructure, too. About four years ago, a presenter told our board that if we didn't understand social networks we'd be out of business in five years.

I never really quite believed that. But we thought we ought to look into it, and we went after it. For one thing, social media has totally changed the way we recruit people. We used to get a few thousand CVs a year. Now we get multiples of that. People who don't want to join a company like ours simply don't, so we are expecting less turnover. The people we're trying to attract and keep energized are in the age group that uses social networks continuously. So if you're not in, you're out. And that doesn't make good sense. ○