

# Memphis Daily News

**Expert: Built Environment to Blame for High Energy Use**

**By Sarah Baker, March 28, 2011**

Contrary to popular belief, automobiles are not to blame for the highest energy consumption and carbon emissions in the U.S.

The bulk of energy – 70 percent – is used in the built environment, and therefore it's where most of the greenhouse gases are emitted.

That was the message Chris Leinberger, professor and founding director of the Graduate Real Estate Development Program at the University of Michigan, told members of the Economics Club of Memphis meeting on Thursday.

“In real estate, there's a structural shift in how we're building the built environment and either you accept the structural change in the marketplace and give the market what it wants or you're going to be left in the dust,” Leinberger said.

The built environment is composed of real estate and infrastructure – the transportation systems that have been put in place, the sewer and phone lines. The sum of those assets is 35 percent of the country's entire asset base, the largest class in the entire economy.

For two generations, the nation only put in highways, building what is known as drivable suburban development in response to overwhelming demand.

But if a more complex transportation system is installed, including rail transit and bike lanes, a different kind of development pattern called the “walkable urban” can emerge.

“Think of transportation as the rudder on a ship,” Leinberger said. “It dictates where the rest of the built environment goes. It dictates where the rest of the built economy goes.”

The average U.S. household spends 19 percent of its income on transportation, almost entirely cars. A suburban household spends 24 percent of its household income on cars and transportation.

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History proves that the nation is still an agricultural and industrial economy, but society has gotten much more efficient in building those environments, Leinberger noted. Still, development moved farther away from urban areas.

“This didn’t happen by accident, this wasn’t just the market at work, it was really our domestic policy as a country,” Leinberger said. “My feeling is that this was the largest social engineering project in the country’s history.”

For every 1 percent population growth, the U.S. has seen its metropolitan regions grow anywhere from 4 to 8 percent in land use. In turn, subsidized low density, drivable suburban development is what caused the Great Recession.

The new economy, Leinberger said, is the knowledge economy, and it’s demanding a different form of the American dream.

Back in the 1950s and ’60s, 50 percent of all households had children living in them, while 50 percent were singles and couples – the target market for walkable urban development. Today, only one-third of all households have children living in them.

“We in real estate got really good at driving NASCARs that go straight or turn left, they never turn right, and they go 150 miles per hour,” Leinberger said. “We now have to learn how to fly jets that go straight, turn right, turn left, or crash and burn in seconds at 600 miles per hour. A fundamentally different skill set, but that’s what the market’s demanding.”

It’s a skill set that may be difficult, but is attainable. Indeed, there’s such a high level of demand for it, walkable suburban has caused a tremendous affordable housing problem.

But once the ball gets rolling and each new element is added – each hotel, apartment building, retail store and new restaurant added to the mix – an upward spiral of value is created.

Take a look at cities like Chattanooga, Asheville, N.C., and Roanoke, Va. – all cities that in the last 10 years have turned their Downtowns into regionally significant walkable urban places.

In order to do that, Leinberger said, Memphis must determine where its walkable urban places will be.

With 1.25 million people, the Memphis area needs between four and five regionally significant walkable urban places, with Downtown being just one piece of the puzzle.

It’s also imperative that Memphis starts the discussion about rail transit, he said. It is as important an infrastructure component for the future as building the highways were in the ’60s and ’70s.

“Either take charge of change or change will take charge of you,” Leinberger said. “The world, it’s a-changin’. And if you don’t change with it, you’re going to be left in the 20th century.”