As a professional in the construction business, I am always looking for better ways to do business. Fortunately, so is the Concrete Sustainability Hub at MIT. And I hope leaders in Congress will take a look because this groundbreaking work could help our country maximize dollars, rebuild infrastructure, create jobs and protect the environment all at once.

This research center recently released a new study that focuses on the cradle-to-grave life-cycle environmental costs of paving and building materials. In other words, what will a construction project cost from the time it is begun throughout the life of its existence? This innovative model provides our industry with the tools to establish not just what the price is to build a new project, but what its value and cost will be for years to come. This helps us make better economic and environmental decisions at the beginning of the construction process.

The scope and focus of MIT’s Life-Cycle Assessment (LCA) model more closely captures the actual environmental impact of these materials. The scope of this research is 50-years for pavements and 75-years for buildings. And the focus of this research is on the “use phase” where the true impact and cost are involved.

And what has the research discovered so far? The environmental impact of a life-cycle approach is significant.

The study shows that 90 percent of life-cycle carbon emissions for residential buildings and up to 85 percent of life-cycle carbon emissions for highway pavements are produced during this use phase.

For highways, the research also shows that concrete pavements could potentially produce significantly more fuel efficiency savings for cars than asphalt. And these fuel efficiency savings could lead to much lower life-cycle CO2 emissions. The research also suggests that varying scheduled maintenance work and lane closures could reduce CO2 emissions for a concrete road during its 50-year life-cycle.

For buildings, the research also finds that residential structures built with insulated concrete forms will experience long-term energy savings of 20 percent or more as opposed to wood-framed structures. And for commercial buildings, concrete structures will likely produce annual energy savings of between 5 and 6 percent more than steel structures.

What’s more, MIT researchers are going a step further – the economic study is underway, and it will produce an equally comprehensive Life-Cycle Cost Analysis (LCCA) model in 2011.

Bottom line? Once the environmental report is combined with the economic report it will provide the scientific community, industry leaders, and policymakers with a real world snapshot of the environmental and economic costs of building and paving materials.

In my business, I want to have all the facts before I spend money. That’s because I want to spend money in the most efficient and effective way possible. Congress owes it to the American public to do the same thing. That’s why I call on Congress to read this first life-cycle report on the environmental costs and to get ready for the next report on the economic costs.

Our infrastructure and building investments should be guided by the best and most up-to-date empirical data – not politics. Let’s not just spend money; let’s invest it in projects that will generate the greatest returns. And let’s not just build roads and buildings, let’s build them in a way that saves money and protects the environment.