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Why we don't need light rail

Let's take the lead in autonomous vehicle technology

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Manchester needs to connect with Boston, but is a train the best way? A September 2014 study by the Cato Institute concluded that autonomous vehicles (AV) are coming to market faster than anyone suspects, and will vastly change public transportation. The report warned Congress not to spend any more time or money building last century's technologies, like light rail.

New Hampshire should heed this warning and use new technologies to build a transportation system that is less expensive and more efficient than light rail. By building this new system, we create an economic opportunity for the state to be an exporter of the next century's public transportation technology.

As of now, AVs use technology such as GPS satellites, cameras and radar to read the outside environment and react in real-time, but these technologies have their problems. As a result, Volvo has created "road-integrated" magnets that sit below the pavement. Cars then run along the road like an "invisible rail." Unlike GPS and cameras, the system is unaffected by physical obstacles and poor weather conditions, with a positioning inaccuracy of less than one decimeter. Volvo has tested the system at speeds of up to 90 mph.

Imagine that instead of cars on this invisible rail, buses run along it. Additionally, the buses operate in "platoons" – two or three connected vehicles. You now have a system that is significantly cheaper, safer, faster and flexible than a light rail system.

A state report found building such a lane would cost $17 million. University studies have found integrating magnets into road construction would cost around $30,000 per kilometer (or $1.5 million to "magentize" the $17 million lane). Volvo retrofitted old cars with the magnet systems for $109 (that's right, $109).

In total, you could build this system for as low as $20 million to $40 million. Compare this with the train estimates of $240 million to $350 million.

Our other option is to let someone else develop the technology and the expertise. We can spend $250 million importing outdated light rail. Then, down the line, we can pay top dollar importing invisible-rail technology, consulting and gaining expertise from somebody else.

Or we can seize an opportunity for New Hampshire's economy, become an exporter in the trillion-dollar public transportation market and change the perception of New Hampshire from a technological laggard to a technological leader.