The Hyperloop Has Taken a Detour

It was supposed to be the future of transportation. For now, it's borrowing ideas from the past.

For transportation nerds, Elon Musk's Hyperloop holds a special place in the imagination. Progress in the space usually involves incremental steps to suit the places we've already built. Road tolls and electric scooters are what passes for exciting. The Hyperloop, as described by Musk in a 2013 white paper, is a 760 mph leap that promises whole new patterns of settlement and activity to follow behind it.

The real Hyperloop will be powered by magnets, but so far it has made its way through the world propelled by hot air. Credulous, click-chasing reporters have broadcast the claims of various Hyperloop entrepreneurs who have run with Musk's idea of shooting pods through a sealed tube at high speeds, and local governments have gone right along with it. A working full-scale Hyperloop is still years away from reality, but I, for one, already feel like I've been taken for a ride.

Last year, I checked in with Hyperloop Transportation Technologies, a company that hopes to pioneer terrestrial transit at the speed of sound using a cadre of far-flung engineers collaborating on Google Docs. It has been two-plus years since HTT's co-founder told Wired, "We've solved all the technical issues," but the team has yet to test a full-scale prototype. That hasn't stopped HTT from getting government funding from Ohio to the Chinese hinterland.

Something interesting is happening as HTT and other firms move forward with their plans: The Hyperloop is starting to look more familiar than space-age. The HTT car, for example, is not the bobsled-size carriage imagined by Musk, but closer to the size of a needle-nosed Shinkansen train car. That design choice brings the idea of Hyperloop infrastructure away from Musk's initial vision of a nimble, easy-to-build pipeline and closer to the costly, time-consuming right-of-way whose pursuit characterizes the construction of roads and railways.

The vehicle isn't the only part of the Hyperloop that's coming to resemble more traditional transportation options.

Recently, I sat down with Josh Geigel, the co-founder and chief technology officer of Virgin Hyperloop One, the more serious Hyperloop venture. What Hyperloop One has going for it is an actual test track where reporters have been invited to watch a pod achieve speeds of 240 miles per hour.

But that's just the technology. As a transportation solution, Hyperloop One is starting to lay down some parameters on what will and won't work. (It may be the influence of CEO Jay Walder, who ran transit systems in Hong Kong and New York.) Carrying small numbers of people, as the initial concept aimed to do? "I can't imagine a system moving less than 4,000–5,000 people an hour and paying for itself," Geigel said. Routes stretching across the country? The sweet spot, said Geigel, would be under 200 miles.

When Geigel outlined how his tubes would load up 16,000 passengers per hour on its first projected route near Mumbai—a carrying capacity approaching the Tokyo–Osaka Shinkansen, the world's busiest high-speed train line—he explained that the system would launch "convoys" of "pods" that would leave the hub together and wind up in different destinations.

In short, Hyperloop One's project is beginning to sound a bit like a high-speed rail line. Not coincidentally, Geigel is now estimating the system costing 60 to 70 percent the cost of high-speed rail—not, as Musk once projected, 10 percent or less.

No one is making more Hyperloop plans than Musk, whose Boring Company has committed with varying degrees of seriousness to build tunnels under Washington, D.C., Chicago, and Los Angeles.

But at the prototype tunnel in the company's L.A. headquarters, the model has evolved from tunnels carrying cars on skates to, well, a kind of infernal transportation Cat-Dog.

Aaron Gordon at Jalopnik sums it up:

> Yes, for those keeping score, in a mere two years we've gone from a futuristic vision of electric skates zooming around a variety of vehicles in a network of underground tunnels to—and I cannot stress this enough—a very small, paved tunnel that can fit one (1) car.

Asked to describe why he had moved from the "cars on skates" plan to a regular one-lane auto tunnel, Musk said on Twitter, "This is simple and it just works."

In its first public-facing commission, beneath the Las Vegas Convention Center, the Boring Company is working on something that will sound familiar to anyone who's been to an airport: autonomous, electric buses with rubber wheels driving around a closed system underground.

So, will we one day travel from town to town like spitballs in a straw? Maybe! But not if, when starry-eyed technologists come to face the reality of regulations, rights-of-way, and economics, they find something to like in the way things have always been done. Turns out it’s easier to use the wheel than to reinvent it.