

Students draft county's driverless car future

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Grad students at the University of Minnesota are imagining a day when Shakopee residents wake up every morning and order a driverless car for their morning commute or the residents of Belle Plaine get into cars that park and stop themselves at the grocery store.

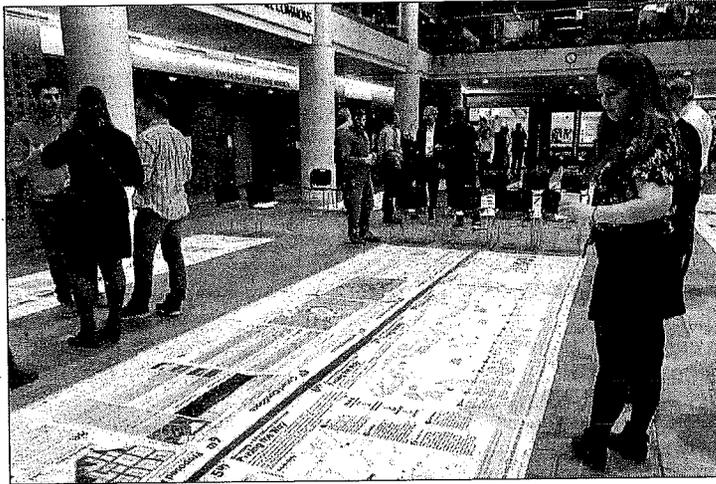
For this year's group of Urban Planning students, this is no Jetsonian future, but one that may arrive by 2040.

Professor Fernando Burga's Land Use Planning class is taking a close look at Scott County's future with connected and autonomous vehicles, known as CAVs.

A broad umbrella term, CAVs include a range of vehicles with technology meant to reduce the amount of human input to operate them. If this group of vehicles were to be mapped on a spectrum, at one end might be a 2018 Toyota Camry with stop-and-go adaptive cruise control; on the other end would be one of Waymo's self-driving cars launched in Phoenix, Arizona, earlier this week.

On Friday, Burga's class presented seven case studies, six of which are based in Scott County, to a crowd of Public Affairs and Urban Planning students and Scott County officials.

Burga said the student's work is cutting-edge, keeping pace with work currently being done by Minnesota's De-



'A student reviews a poster on pedestrian safety in a world with connected and autonomous vehicles. The poster series is one of six projects that attempts to help Scott County officials plan for the benefits and unexpected consequences of CAVs' predicted arrival in 2040.

partment of Transportation.

"Basically these are the first-ever products in Minnesota that look at what this future (of these vehicles) would look like. I mean right now we are at the level of MnDOT producing a report that has a lot of recommendations," Burga said. "Because literally nobody really knows what this is going to look like in the future. Right now we are designing an ideal future city."

Students aren't planning the future from scratch though. Projects deal with the current landscape, imagining how places like the Ports of Savage, Shakopee crosswalks and transportation networks to the Renaissance Festival grounds would look with CAVs.

Grad students Emily Houser and Koehl Simmons teamed up to reimagine the future Canterbury Commons

45-acre parking lot.

"One of the assumptions with connected and autonomous vehicles is that they will require a lot less space for parking and that people won't own CAVS, they'll be shared. So we see this as an opportunity," Houser said. "We're proposing that this parking lot could be redeveloped into an urban village, incorporating some of these design features that we believe are important like green space and mixed-use zoning, human-scale design."

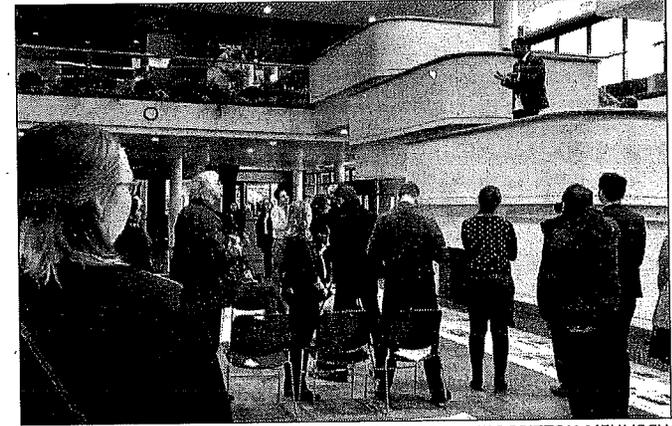
Houser and Simmons created a development plan for the 10,000 space parking lot with the employees of local industry centers in mind.

"The city Shakopee is anticipating population growth within the next 20 years, and we also know that the median housing cost in Shakopee is not affordable to people who work at some of the employ-

ment centers in the city," Houser said. "So we're hoping that our design for the neighborhood plan could allow for some of the people who work nearby, like at Canterbury Park or Amazon's distribution center, to actually live in the community where they work."

Critics may have some trepidation about planning developments and infrastructure changes for technology that may not arrive in the next 10 to 20 years. But for one attendee, Prior Lake Mayor Kirt Briggs, the students' plans are in step with regional developments.

"Already today we're having these conversations and people are saying, 'Mayor, chill. It's not going to be here for a while,'" Briggs said. "But as a city, anything we do has to last 50 years. As a taxpayer dollar, we can't think in terms of five years,



PHOTOS BY MEG BRITTON-MEHLISCH

Professor Fernando Burga addresses the audience of an open house presentation of Planning for Connected & Autonomous Vehicles. The event featured six projects that envisioned a future with CAVs in Scott County.

10 years, we have to think of redoing our roads every 50 years, five zero, as we do our projects."

While Briggs said CAVs weren't accounted for in all of Prior Lake's upcoming developments, he sees great potential in thinking about how CAVs may shape continuing conversations around citizens' needs. "One of the things that we hear as elected officials is that our citizens are looking for more spaces to socialize," Briggs said. "They're in their technology, whether it's an app or a personal device, computer, tablet. And in autonomous vehicles, they're not going to have to worry about driving, which creates this kind of dilemma of no human-to-human contact. So some of

the spaces we must think in terms of providing spaces for socialization." Scott County has been what Burga calls the "perfect project" for his students to understand all the possibilities with land use and urban planning. Briggs said the area could also be the perfect place for early implementation of CAVs.

Quoting one of the presentations, Briggs said "three of four fatalities on Minnesota roads are out in the sticks."

"Suburbia, Scott County," Briggs continued. "What's the cost of a life saved? I would argue more that more lives could be saved in rural areas than in urban areas. So if we just start from, say, the life perspective, adoption could occur more rapidly."