

Elizabeth Powers

Dr. Norris

STR 328

March 5, 2020

Dr. Urmson's Rotary Club Speech

Community. I want you to think about that word for a second. Its meaning. What comes to mind when you think of your community? How do you believe you could better your community? How about, make it safer, more secure if you will. Increase efficiency. Or better yet, better the environment within your community. Now the images and feelings that came to mind when I said the word community were different for each of you. Each of you has a unique community that you want to protect, that you want to be free from all the dangers we encounter in our daily lives. Well, my community here at Aurora Innovation, shares in those same goals. Today I'm going to talk about how Aurora Innovation will better your community, giving you and your loved ones the freedom to be. In 2019, Chicago saw 118 deaths caused by car accidents within the city limits alone. These deaths included pedestrians, cyclists, children as young as 5 months old, and pregnant women. All innocent individuals going about their day unaware of the dangers that awaited around the corner, due to a vehicle, operated by a human. So, I won't lecture you about the dangers of driving, but what I will offer you as business women and men, is strategies and solutions to ensure the accidental dangers of vehicles operated by human drivers will cease to affect your community. Most vehicles operate anywhere between a Level Zero to a Level Two, which at most means cruise control and assistance with rear-end collision. Now even with these available functions, humans are responsible for the majority, if not all of the operation of the vehicle. I'm sure most of you are familiar with the autonomous work of Tesla that functions around a Level Four. Breaking this down, as a human driver in a Level Four car you are still

required to be concentrated in case the technology requests human intervention for a situation beyond its capacity. But for the most part, the car is capable of safe operation from point A to point B. What if I told you, the community of engineers and tech specialists at Aurora Driver have created and are now perfecting the technology to successfully reach a Level Five fully autonomous vehicle. I know what you're thinking. This isn't realistic. How will a fully autonomous vehicle benefit you in your everyday lives? How will it benefit your community? Well, we have created technology that has the ability to predict the unpredictable. Aurora Driver considers it all. We have strategically combined localization, perception, simulation, planning and control to create technology that not only enhances your daily commute, alleviating all your responsibilities, it predicts it. We have done over three million miles of testing, crafting and recording the individual experience of each vehicle. I've seen it all. We have to see it all, this has allowed us to train the technology to make decisions more than 10 times per second or 1,000 per mile. Every drive is so distinctly different, no two experiences are the same. Let's take a second. Think about your drive today, the route you took that got you to this talk, alive and in one piece. I'm going to estimate that for some of you from the suburbs this drive was about 30 miles with traffic give or take. Well on that route, how many times did you make a decision? Experience a potential danger or inconvenience that frustrated you? Maybe misjudged the distance between you and the person in front of you that caused you to do hit the breaks and do that slight jolt where you look up from your phone and you hear yourself saying "I'm paying attention, I swear!" Well, imagine instead you're on that same route but this time, you're in an autonomous car. The vehicle has made over 30,000 decisions for you to safely ensure that you arrived on time, all without you having to look up from your phone, not once. It considered cyclists, fluxes in traffic speed, predicted when your neighbor's dog was going to run across the street right at

the worst possible time, and even knew when that rev-heavy sports car was going to fly across all four lanes right before the I -94 exit. The truth is, this scenario is soon to be the reality. But let's take it a step further. Not only does the Aurora Driver technology eliminate the safety hazards associated with the tough realities of driving and increase the safety of your loved ones within your community. Autonomous vehicles can also minimize the traffic congestion and unnecessary emissions that pairs with opting for a car service instead of taking your own car. Aurora Driver aims to minimize the environmental hazards associated with driving. Chicago ranks in the top 20 of most polluted cities in the nation. Realistically as the third largest city in the nation, with around 2.7 million residents, it's natural to assume at least a third of those residents own vehicles. Also considering the two thirds of residents utilizing public transportation and car services, it's understandable that the emissions released from the vehicles are rapidly increasing. The implementation of autonomous vehicles within the Chicago community would simultaneously decrease the percentage of emissions released as the need for extra car services and public transportation would decrease. This would allow anyone within the community to successfully complete their commute in the same amount of time, without opting for any extra service that would further increase the amount of emissions released into the environment. Alleviating yet another hazard associated with human operated vehicles while providing equal opportunity within the community for all. The tough realities of driving today create barriers that unnecessarily complicate our everyday lives. Practically hindering the health, safety and stability of our community. And that's exactly what Aurora Innovation is here to resolve. Through the strategies discussed today and explanations of my community's solutions to the barriers in your reality we want to offer you more, we want to provide you with freedom. Freedom from the stress and dangers of driving. Freedom from the unsolicited health risks on your environment.

Freedom from the unpredictable. Here at Aurora Innovation, we are crafting the technology that will give your community the freedom to be. Thank you.