

# **Bern Grush**

**Strategy | Vice President Innovation at Grush Niles Strategic | PayBySky**

Toronto, ON, CA

Transportation innovator, writer, speaker. Deployment and social policy: automated vehicles, parking, mobility as a service, & road tolling.

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## **Biography**

Bern Grush (@TransitLeap) is a founder of Grush Niles Strategic and EndOfDriving.org. He is an innovator, speaker, and author on automated and autonomous vehicles as well as parking reform and road pricing. He has published over 400 papers and articles on transportation demand management issues, most recently detailing opportunities to re-think and re-deploy urban transit in the lead up to vehicle automation. He uses the EndOfDriving.org site to advance preparation for fleets of self-driving taxis and buses. Bern holds degrees in Human Factors and Systems Design Engineering from the Universities of Toronto and Waterloo. Bern has developed patents and technologies for telematics for autonomous road tolling, self-paid parking, HOT tolling and usage-based insurance. His work with ISO standards included the innovation and launch of the charging-performance standard for autonomous road and parking tolling systems (ISO-TS-17444). He lives in Toronto.

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## **Availability**

Keynote, Panelist, Workshop, Author Appearance

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## **Industry Expertise**

Transportation/Trucking/Railroad, Automotive

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## **Areas of Expertise**

Autonomous Vehicles, autonomous cars, automated vehicles, automated cars, Self-Driving Cars, self-driving vehicles, driverless vehicles, Driverless cars, Parking Reform, Road Tolling, Mobility as a Service

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## **Affiliations**

Grush Niles Strategic : Partner, The End of Driving : Author, PayBySky: VP Innovation

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## **Sample Talks**

### **Keynote at Mississauga Moves**

Here is a video of me speaking in 2015 at the 'Mississauga Moves' transportation event. At the end, an audience vote was taken: 'Who thinks a consideration of automated vehicles should be in Mississauga's next transportation plan?' all in the audience (except 2 of about 300) voted 'yes'.  
<https://www.youtube.com/watch?v=jcqExB9iy90&feature=youtu.be&t=7126>

### **What difference will automated vehicles really make to you?**

This is a non-specialist talk for non-planners, non-car-geeks and generally the other 99% of us interested in when all this will happen and what it will mean to them personally. I review a couple of the fun technical elements before going into the issues of expected social changes for our urban and suburban lives. When will you likely to get one and exactly how 'automatic' will it be? When can you send it off to pick up your daughter from hockey practice or take your grandmother to her bridge game? What is really meant by 'ready in the market by 2021'? When will congestion and parking go away? Or will it? Will there really be separate lanes? Won't this cause more sprawl? I already can't afford my car, I'll never afford this! What do mean this will affect house prices? When will they make us stop driving altogether? I keep hearing about hacking and safety and privacy - who is sorting all that out? Forget it? I will never give up the wheel! This talk separates hype from hope (and singles out some of the false news!) while injecting both a little excitement and a dose of sobriety into the anticipation about automated vehicles.

### **Two Markets for Automated Vehicles (and what to do about them)**

This is talk for urban planners, regulators, urbanists, transportation planners, and change activists. Automated vehicles serve two distinct markets: the private household market and the shared taxi/transit market. The competition between the market for selling vehicles and the market for selling rides will continue from their current configurations which are biased toward selling vehicles and will be shaped by a number of forces that will dictate the future of congestion, parking, sharing, sprawl, and transit. This presentation looks at two future paths and proposes a way for regional government and its transportation planners to navigate toward a preferred path.

### **Curbside management tools for congested cities**

Curbside in cities is high-demand asphalt. Delivery zones, turning lanes, bike lanes, parking, handicapped spaces, no parking, no stopping, snow removal and more. Every congested city struggles with this. It is not easy. In this talk, Bern Grush will review ways pricing has been used to address this in some cities and how wireless technology can help with short-stay delivery vehicles while providing big-data solutions to better curbside activity management. This for city planners and regulators looking to think outside the box.

## **Automated Vehicles - Virtue or Vice**

Two distinct markets are developing for vehicle automation: semi-automated vehicles for personal/household ownership and fully automated vehicles for shared and public service use as robo-shuttles and robo-taxis. These two markets will compete for consumers (car-buyers vs. ride-buyers), as household vehicles and public transit do now. As these markets develop, the competition between them will complicate infrastructure, require complex regulations, delay our path to the promised 90% reduction in crashes and fatalities, and push out the time at which we can achieve a hoped-for new level of optimal land-use and optimal urban mobility given by lowered pressure from massive storage of parked vehicles and the flaws of human drivers. This paper outlines why this is competition unavoidable and will mean a significant period of difficulty on the way to a new era of mobility.

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## **Education**

**University of Waterloo**

Ma.Sc. Systems Design Engineering

**University of Toronto - Victoria University**

Ba.Sc. Cognitive and Human Factors Psychology

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## **Testimonials**

**Macleans Magazine**

"A fascinating and carefully argued report." In article: "Rise of automated vehicles influences infrastructure project selection". <http://www.on-sitemag.com/features/rise-automated-vehicles-influences-infra-project-selection/>

**Alain L. Kornhauser, PhD**

Bravo! This is a really excellent report. Probably best that I've seen. The Key Findings & Recommendations ? Ch 5.1: Tension between the two streams of vehicle automation? and, of course Ch 10: Ownership (the business model) is more important than technology.

**Robert W. Poole, Jr**

Everyone involved with planning the transportation infrastructure for the next 40 years should download and read this very important study.

**Michael Roschlau**

This is an excellent report ? one of the best I've seen on the topic. Bravo!!!

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