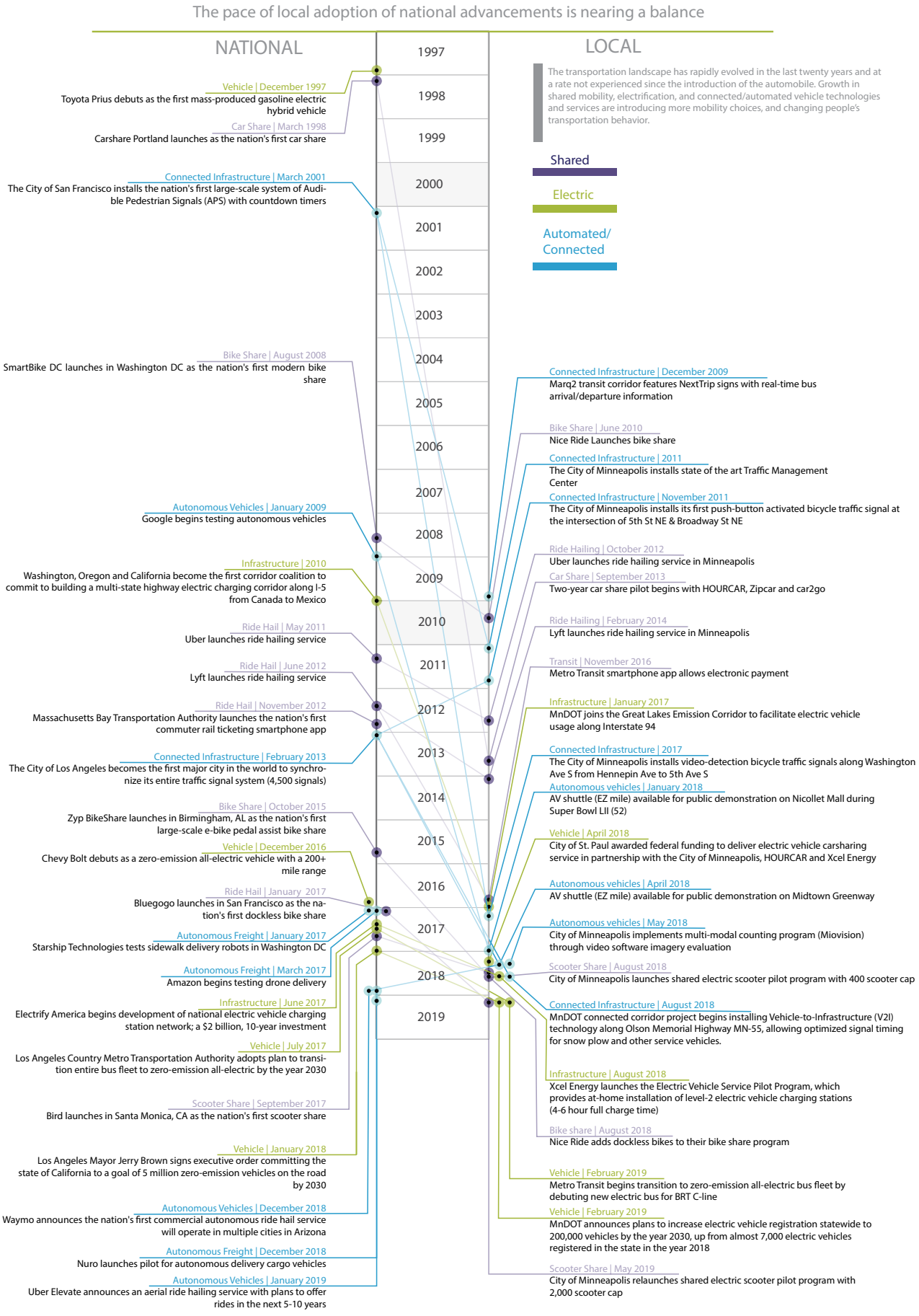
Technology snapshot in Minneapolis

THE PACE OF TECHNOLOGICAL CHANGE IN TRANSPORTATION

The pace of change in technology that impacts transportation options has been increasing. Transportation options have been increasing due to new models enabled by a few technological improvements that have enabled all new shared modes – smartphones, wifi and 5G network. The impacts of innovation can mean something that was not on our streets five years ago (scooters) are now commonplace. Focusing on preparing and setting goals allows us to effectively regulate and manage these service models through policies and design.

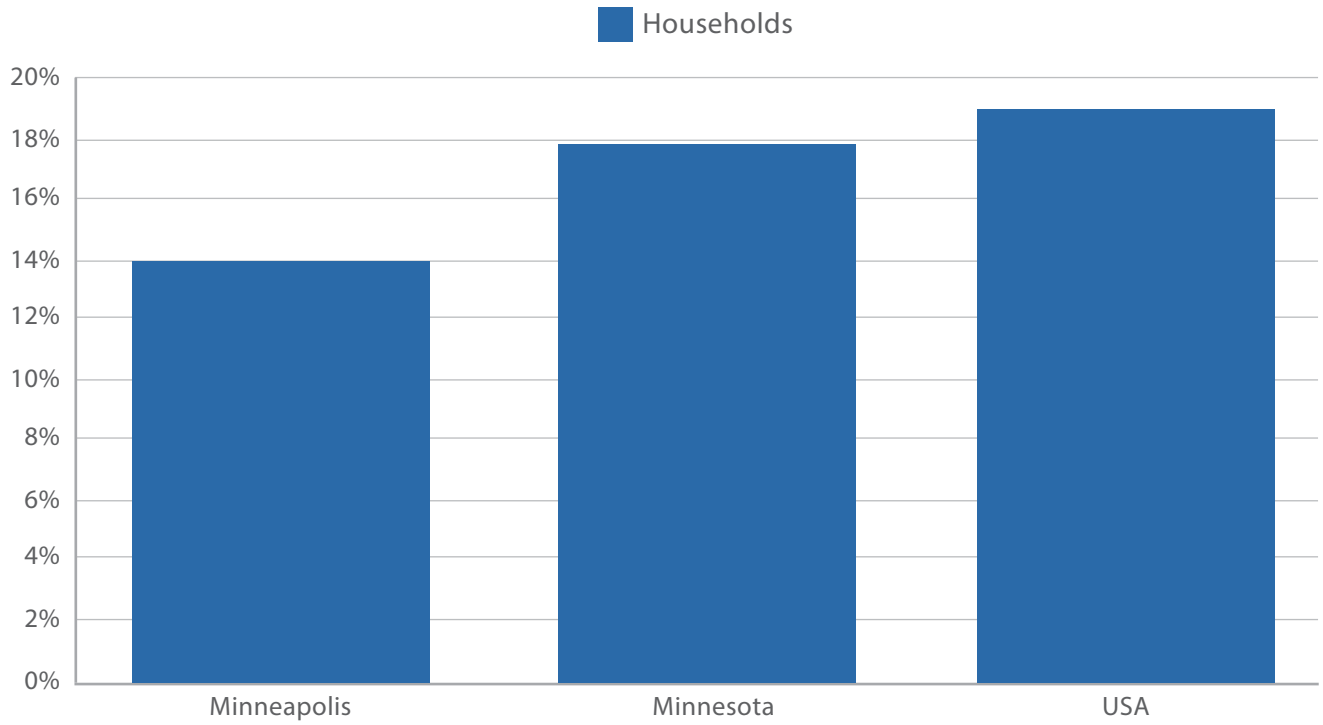
Figure 13: Timeline of advanced mobility



ACCESS TO TECHNOLOGY

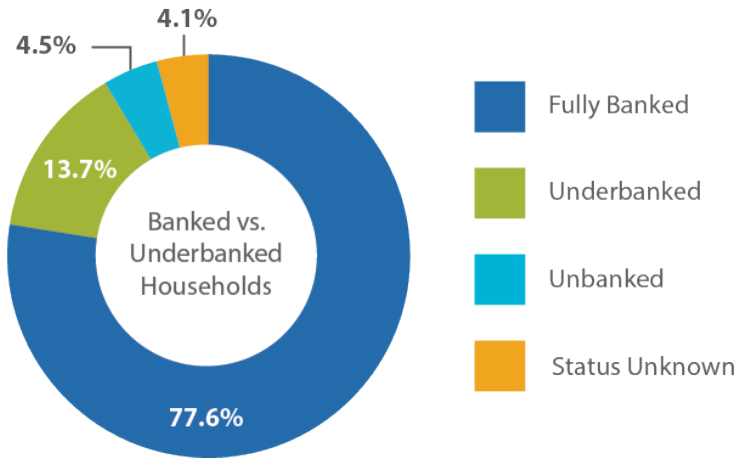
Access to technology is critical to ensuring everyone benefits from new transportation options. As shared mobility services grow in popularity, solutions for those without smartphone and banking access are needed. In the City of Minneapolis, 23.3% of households do not have access to a smartphone.[12]

Figure 14: Households without smart phone access



Additionally, in the Twin Cities metro region, 1.5% of households are categorized as unbanked, meaning they are not a member of a bank or similar financial institution.[13] These groups are limited in their ability to utilize popular shared mobility services which typically require a smartphone and banking access. For this survey, the term underbanked refers to households that had an account at an insured institution but also obtained financial products or services outside of the banking system.[14]

Figure 15: Banked and underbanked households



[12] FDIC, 2017 Banking Status Survey
[13] FDIC, 2017 Banking Status Survey
[14] FDIC, 2017 Banking Status Survey

AUTOMATED TECHNOLOGY

Done correctly, automated vehicles could be a tool for future mobility that can be applied to a variety of service models, including transit, urban delivery and ride sharing. Despite much speculation around when the fully autonomous vehicle will enter the mainstream market, it is important to consider that the transition to full automation is an evolution. Vehicles currently operate on our streets that already have a certain level of automation inherent to them. Level 1 vehicles are those where the driver is in control, but some assistance is given – tools like adaptive cruise control, lane-departure assistance and automated braking to avoid collisions. Some new models of vehicles integrate Level 2 technologies, which automate both speed and steering. The integration of higher levels of automation will continue to impact all people who use the public right of way, including those walking, biking, taking transit and operating analog vehicles.

Figure 16: Levels of automation