TECHNOLOGY

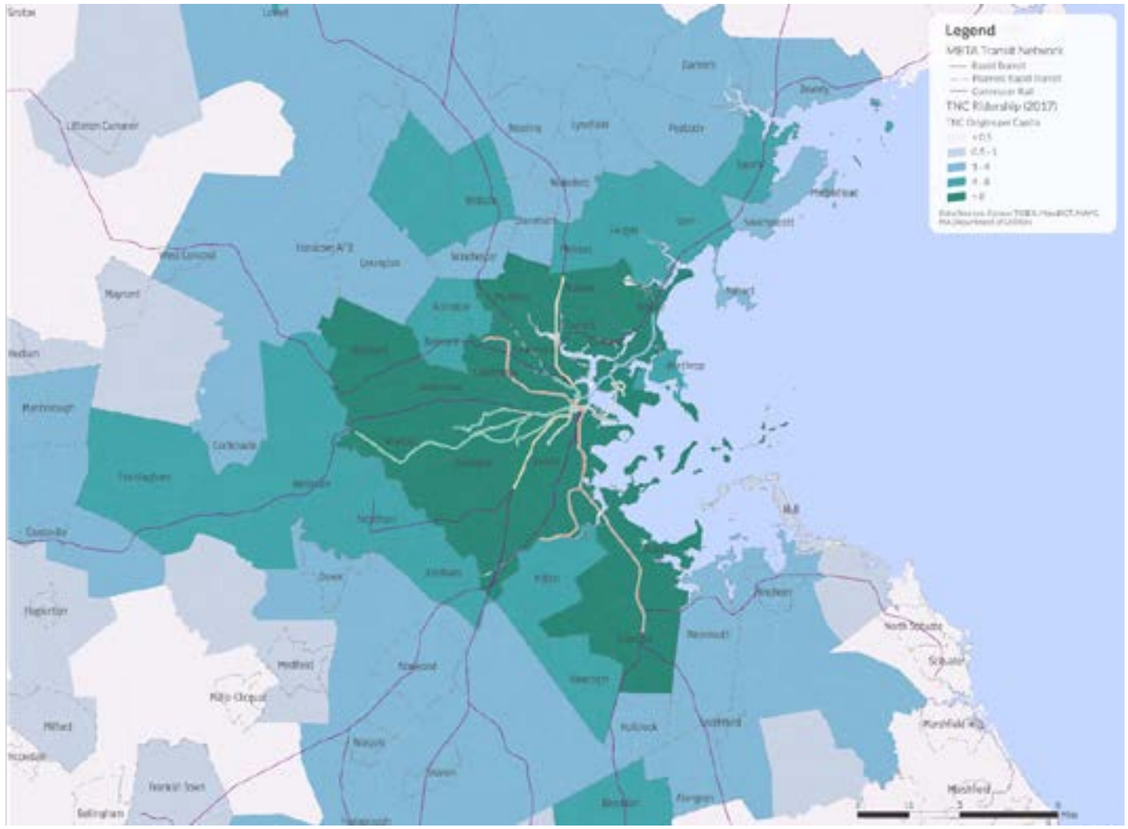
The proliferation of smart phones and the resulting near-universality of internet access have transformed American life in wide-reaching and often unpredictable ways. As have many other facets of society and the economy, transportation has been disrupted by new players and new services, many looking to improve upon existing mobility options. The taxi industry has been reduced to a fraction of its prior role due to the rapid rise of ridesharing services. Car-sharing and bike-sharing are expanding non-vehicular options, and providing new and more flexible options both for mobility and for ownership. Driving decisions are informed by real-time traffic data, tolls are collected automatically, and on-street parking can be paid for by app.

The MBTA has also been significantly impacted by changing technology – in ways both positive and negative, and in ways that are not yet clear. Real-time information has made taking the bus or a late night subway trip much more time-efficient and user-friendly. Occasional riders can more easily understand routes, fares, and schedules from home or while holding their phone, and can access the first- and last-mile connections that can make transit a viable option. Smartphones are an easy method of payment on the commuter rail system. At the same time, new technology has brought new competition into the space traditionally occupied by public transit, underscoring the inability of the MBTA to move quickly to meet changing consumer demand.

MBTA IMPACTS

New technologies can make it easier for anyone trying to navigate the MBTA system, and the T has been successful at integrating Internet-based tools into its public information and payment systems. At the same time, it is not at all clear whether the new menu of technology-enabled mobility choice is expanding the pool of potential MBTA users, or pulling those who can afford it away from the T to other options that appear more comfortable, more convenient, and faster. Recent ridership data both here and nationally would suggest the latter, at least during off-peak periods and for bus riders. And potentially the biggest disruption of them all – the widespread introduction of autonomous vehicles – lies somewhere in the future, promising to change transportation perhaps more than any innovation since the advent of is human-operated forebears.

TNC Users in Massachusetts, Trip Origins per Capita

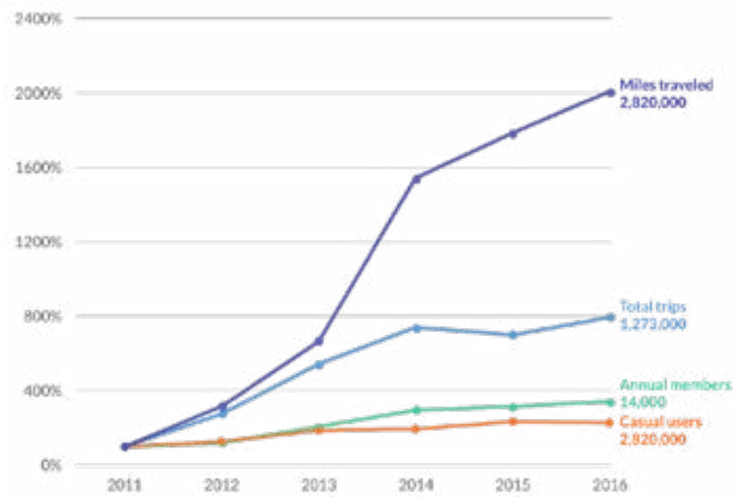


In 2017, there were approximately 64.8 million rideshare trips started in Massachusetts. For context, there were more than 408 million public transit trips during the same time period.

In 2017, trips per person were highest in Cambridge, followed by Boston. With the exception of Arlington and Belmont, every Inner Core community had at least 8 trips started per person.

Source: Massachusetts Department of Public Utilities, 2018

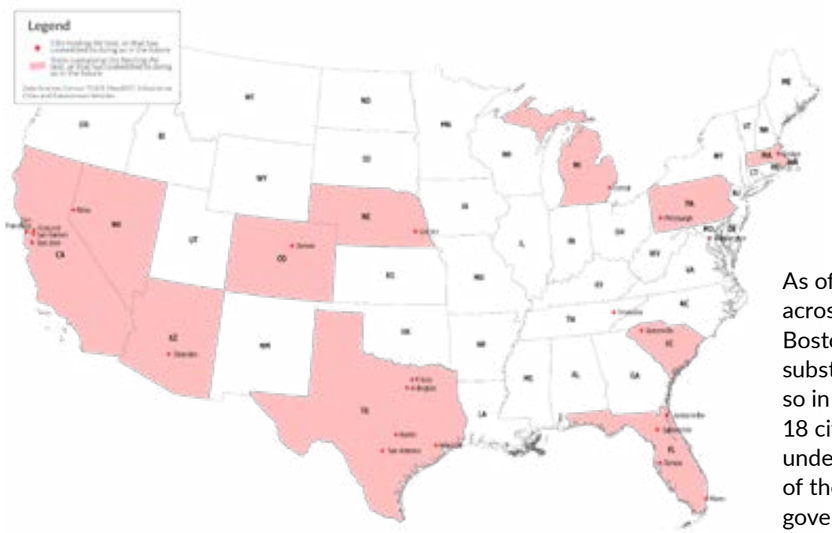
Bikesharing in Greater Boston



In Boston, individual bikeshare trips increased from 140,974 in 2011, the year the service was introduced, to 1,313,837 by the end of 2017. During the same period, annual Blue Bike memberships increased by 355%

Source: Blue Bikes Media Kit

Automated Vehicle Pilots in United States



As of October 2017, 24 cities across the United States, including Boston, have piloted AVs or have substantially committed to doing so in the coming year. A further 18 cities in the United States are undertaking long-range surveys of the regulatory, planning, and governance issues raised by AVs, but have not yet started piloting.

Source: Bloomberg Philanthropoies, The Aspen Institute, 2017