**Bikeshare**
*Tower Bridge, FordGoBike*

Bikeshare is a system of bicycles that is available to access as needed for point-to-point trips. They are generally unattended and established in dense urban areas. Advances in bike share locking technology have allowed for free-floating bikes within a geographic region. Bike sharing can be privately owned, public, or, most commonly, offered through a public-private partnership.

**Carshare**
*Car2go (P-to-P), Zipcar (round-trip)*

Carshare includes both point-to-point and round-trip models. Point-to-point users can pick-up and drop off cars anywhere within a defined geographic region and fares can be charged by the minute. Round-trip users reserve a vehicle from the same pick-up spot they return the vehicle to and fares are usually by the half-hour.

**Connected Freight**
*UC Berkeley PATH pilot*

Autonomous vehicle applications will provide great benefits for trucking and freight delivery as well. These benefits include platooning or convoy technology, automated parking and backup assist, and aerial drones. Platooning trucks use vehicle-to-vehicle (V2V) communication in addition to forward sensors to help maintain a constant following clearance.

**Microtransit**
*Chariot, Via, Navya’s Arma Shuttle*

Microtransit is an unsubsidized, privately operated shuttle or personalized rapid transit (PRT) service, enabled by technology that usually operates along a dynamically generated route. Microtransit services usually focus on commuters’ experience and offer bus-stop similar service to individuals willing to pay the additional price above public transit.

**Ridesharing**
*Scoop, Waze*

Ridesharing is the third-party service of matching of riders and drivers with similar shared destinations, enabling them to split the cost of the ride. Unlike ridesourcing and ridesplitting, the driver is not fare-motivated.

**Ridesourcing**
*Lyft, Uber*

Ridesourcing matches riders with drivers, on-demand. Drivers do not share a destination with their riders. Ridesourcing companies are distinguished from taxi services by the inability to street hail (ridesourcing companies can only pick up pre-arranged rides). These companies are known in California as Transportation Network Companies (TNCs).

**Ridesplitting**
*Lyft Line, Uber Pool*

Ridesplitting is the assigning of fares traveling along similar routes to one car, and enabling the splitting of the fare. Split rides are typically 60% less expensive than regular service rides. This service is also frequently referred to as pooled services.
Autonomous Vehicle

Tesla, NuTonomy

According to the UK Department of Transport “a fully autonomous vehicle (AV) is capable of completing journeys safely and efficiently, without a driver, in all normally encountered traffic, road and weather conditions. In other words, AVs need to operate on par or better than human-driven vehicles in all conditions. NHTSA defined 5 levels of automation; in 1-3 a human driver monitors the environment and in 4-6 an automated system monitors the environment.”

Big Data

Streetlight

Big data refers to the increased volumes of data available as people, products, and objects are increasingly connected to the internet, through smartphones, wearable products, and sensors. This explosion of information allows much more precise targeting of information as well as predictive capabilities. The proprietary nature of many new big data sets and the analysis skills needed to make actionable sense from them are sizable challenges in harnessing the power of big data.

Mobility as a Service (MaaS)

Transit App, Google Maps

MaaS is a transportation resource model in which travelers access a combine set of public and private transportation services through a consolidated interface. This interface would most likely be accessed through a phone app, but could also be accessed on a computer or through an electronic information board.

Mobility on Demand (MOD)

Uber, Lyft, Chariot, bikeshare

MOD refers to services that allows for the use of on-demand information, real-time data, and predictive analysis to provide travelers with transportation choices that best serve their needs and circumstances. MOD enables customers to hail or schedule a ride. Ideally, MaaS platforms also support MOD and allow customers to hail or schedule a ride.

Dynamic Fleet Management

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Dynamic fleet management is an algorithm-based approach to fleet management in which a computer model optimizes pick-up, drop-off, and routing decisions for drivers and riders based on real-time traffic information and roadway conditions. These decisions are typically communicated to riders and/or drivers through a real-time phone application.

On-Demand Delivery Services

Doordash, Postmates, Uber Eats

On-demand delivery services are companies that develop a platform to connect orders to delivery drivers utilizing their app network. These delivery platforms connect thousands of part-time local delivery folks with customers requesting products to be delivered immediately.

Integrated Fare Payment

Clipper Card, Ridescout

Integrated fare payment allows riders to access multiple forms of transit (such as trains, bikes, or buses) using a single ticket, card, or digital platform. This technology typically enables customers to use the services of multiple operating agencies and could potentially integrate the ability to pay for both public and private services. Integrated fare payment is a key element of success for the Mobility as a Service model (see definition below).

V2X

Qualcomm, Siemens

V2X is the umbrella term indicating vehicle-to-anything connections. These connections allow vehicles to communicate with each other (referred to as vehicle-to-vehicle or V2V communications), with pedestrians (V2P), with bicycles (V2B) or with roadway infrastructure, such as traffic signals and tollbooths (V2I). Sensors, wireless bandwidth, and traffic signals are examples elements of hardware and software that support this communication.