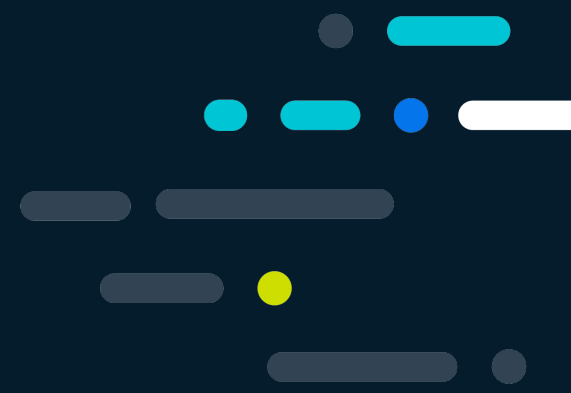**arity**
founded by Allstate

Connected Car Analytics
Chicago Actuarial Association Workshop
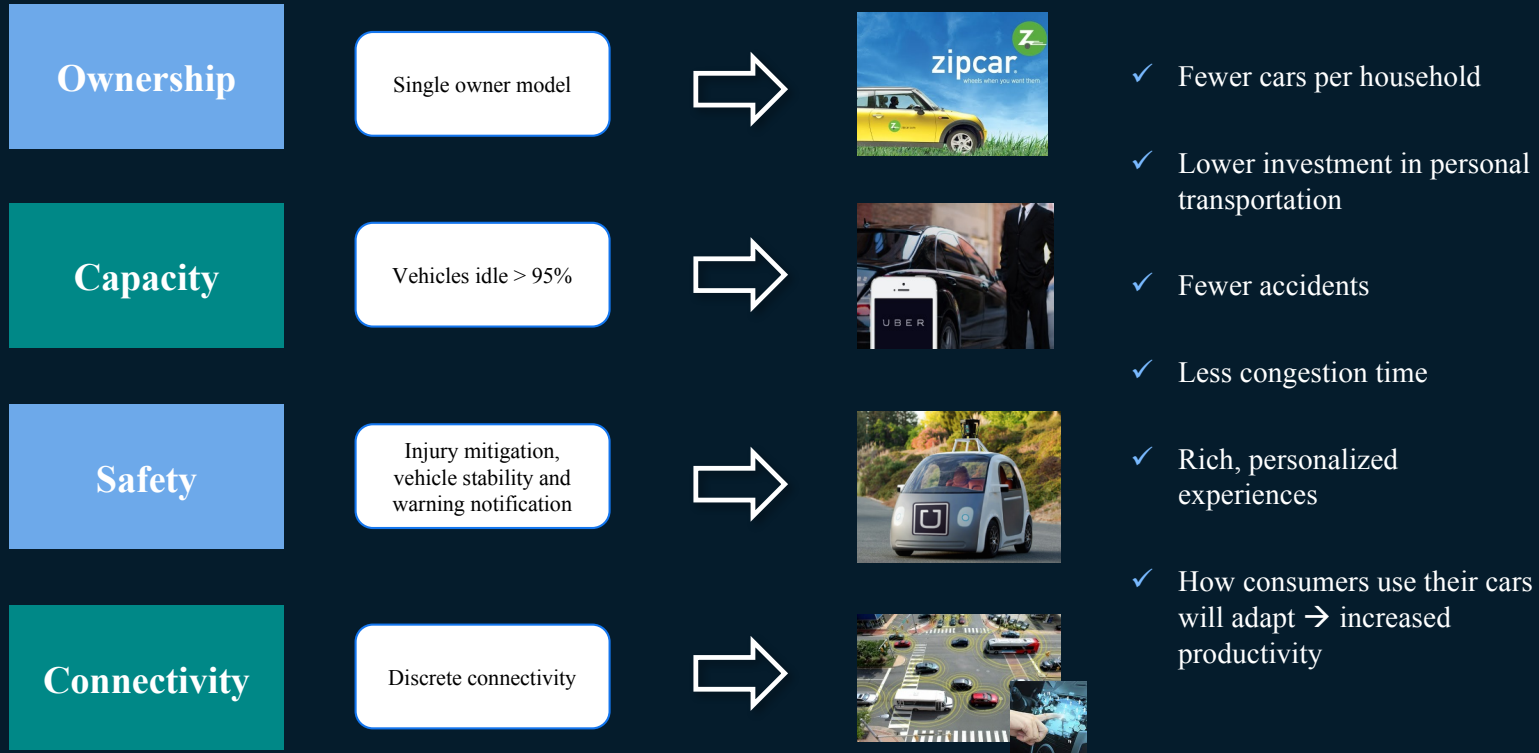
Meg Walters, Data Scientist

- **What are connected cars and how will they change insurance?**
- **Connected car analytics challenges**
- **Big data challenges and solutions**
- **Machine learning in connected cars**
- **The future of connected cars**

Connected Cars

- **Ability to transfer data in and out of the vehicle**
- **Phone pairing**
- **Navigation system**
- **Contact emergency services automatically**
- **Traffic warnings**
- **Vehicle diagnostics**
- **Many, many more!!**

The world around us is changing.
In order to stand apart and stay ahead, we must all evolve.

Ownership	Single owner model	→	
Capacity	Vehicles idle > 95%	→	
Safety	Injury mitigation, vehicle stability and warning notification	→	
Connectivity	Discrete connectivity	→	

- ✓ Fewer cars per household
- ✓ Lower investment in personal transportation
- ✓ Fewer accidents
- ✓ Less congestion time
- ✓ Rich, personalized experiences
- ✓ How consumers use their cars will adapt → increased productivity

Opportunities:
Contextual Data • Deep Insights • Integration of Services • Enhanced Risk Management

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arity

Arity turns massive amounts of driving data into insights that reduce risk and enhance driver safety, connectivity and value.

Who we are

Founded by Allstate, Arity is a technology company that leverages software, data and analytics to help businesses make better decisions and create safer, smarter driving environments.

What we do

We create models and applications that turn data from sensors in cars and mobile phones into actionable insights.

Where we operate

Arity's primary operations are in downtown Chicago, with more than 200 technologists, data scientists and developers located across North America, Europe and Asia.

Why we were built

Arity was built to leverage the power of the connected car by providing a platform that helps customers protect what matters most.

Arity today: the power behind UBI

Drivewise

Milewise

DriveSense

Streetwise

Products we power

Clients we serve

21+ billion miles of data

An expert team:
Data Science
Engineering
Platform Technology
Product Management

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The Big Data Problem

- **We have a tremendous amount of data at our disposal**

- **How do we store and access it?**

- **While the size of hard drives has increased about 2X every two years, transfer rates to access hard drives have not.**

- **A 1TB hard drive transfers on average 100MB/s.**

- **This means it takes more than 2.5 hours to read all of the data on the disk**