

SHARED MOBILITY EXPLOSION!

NCTCOG's Flexible Parking For the Future Symposium
Arlington, Texas
August 2, 2017



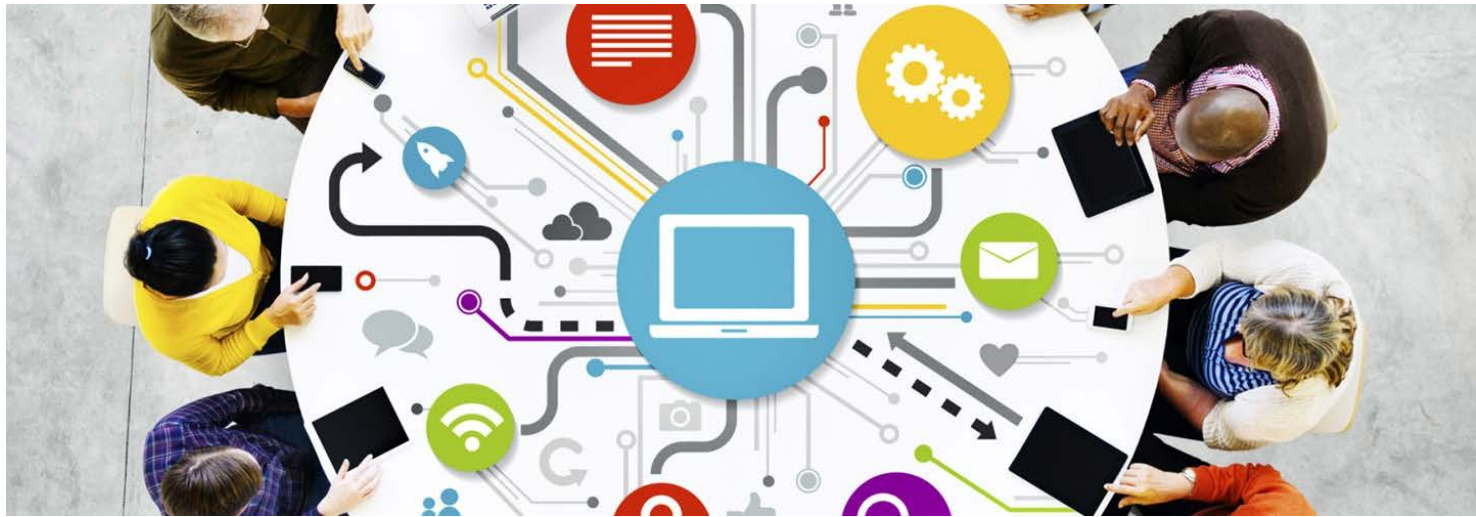
PRESENTED BY

Tom Grant, P.E., PTOE
Kimley-Horn

Credit for slides to
Dennis Burns, CAPP, Kimley-Horn

Introduction

The worlds of parking, TDM and transportation are merging together to form the discipline sometimes referred to as “integrated access management” or “mobility management”.



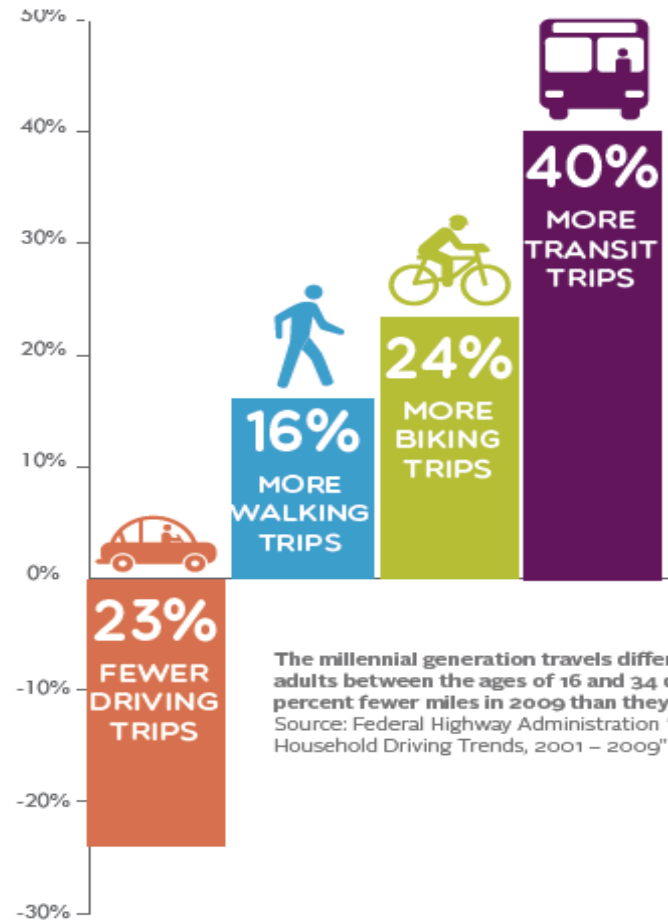
SHARED MOBILITY **EXPLOSION!**



Introduction

Driven by innovation in the technology and mobile communications areas and combined with social trends such as the "sharing economy", a new specialty area is emerging that is sometimes referred to as "shared mobility resources".

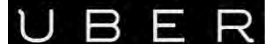
Change in Millennial Travel Patterns
Between 2001 & 2009



The millennial generation travels differently. Young adults between the ages of 16 and 34 drove 23 percent fewer miles in 2009 than they did in 2001. Source: Federal Highway Administration "National Household Driving Trends, 2001 - 2009"

Introduction

This presentation will provide an overview of shared mobility by discussing the growth and diversification of shared mobility resources, tools and strategies and then give a brief overview of some of the programs, vendors and tools.

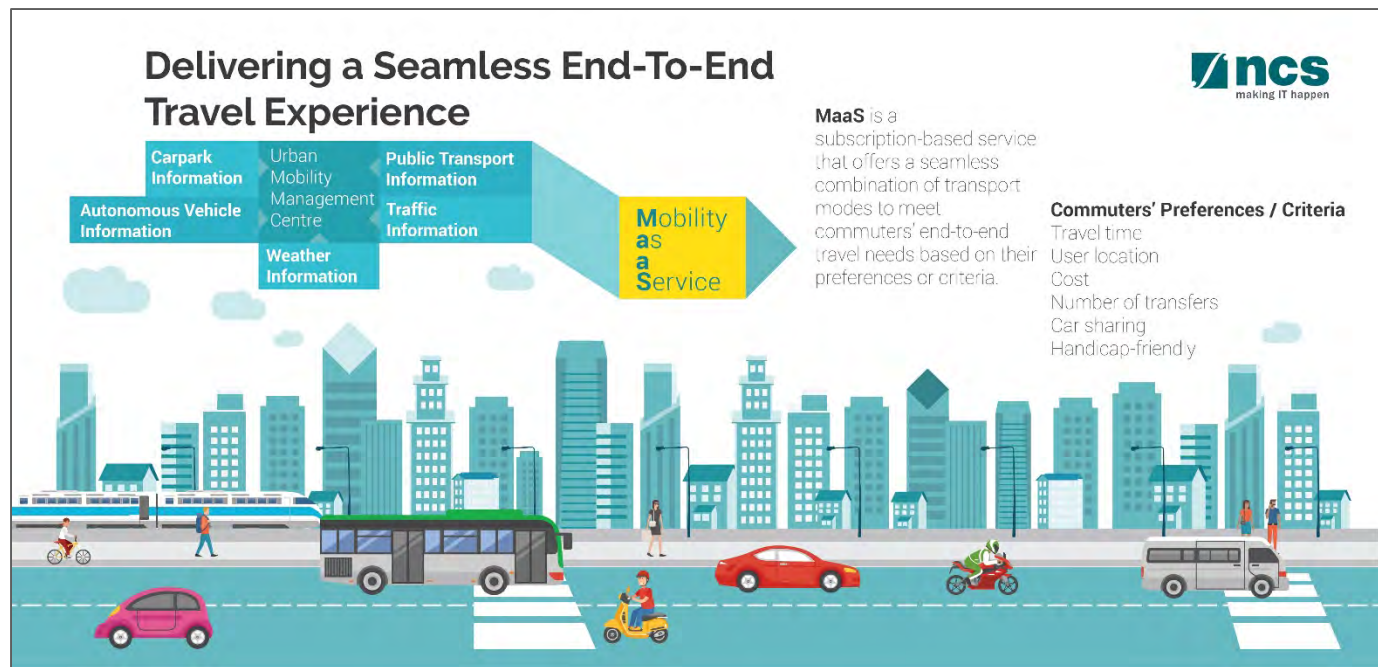


SHARED MOBILITY **EXPLOSION!**



Presentation Overview

Driven by innovation in technology and mobile communications and combined with social trends such as the "sharing economy", a new specialty area is emerging that is sometimes referred to as "shared mobility resources" or "Mobility as a Service".



SHARED MOBILITY EXPLOSION!

SHARED MOBILITY CATEGORIES



Kimley»Horn

Shared Mobility Categories

- Enterprise Commute Trip Reduction
- Mobility Aggregators
- Private Sector Transit
- Rideshare w/in 10 min
- Rideshare w/in 24 hours
- Taxi-like services
- Carshare
- P2P Carshare
- Bikeshare
- Personal Electric Transport
- Vanpooling
- Commute Mode Detection Technologies
- Smartphone Transit Payment
- Smartphone Parking
- Miscellaneous Apps
- Commuter Benefits
- Personal Rapid Transit
- Niche ride match
- SOV Apps



SHARED MOBILITY EXAMPLES BY CATEGORY



Kimley»Horn

Enterprise Commute Trip Reduction

- LUUM



Drive smart business decisions



Valuable Data Insights

- Commute Mode Split
- Environmental Impact
- Program Effectiveness

Optimize your transportation network



Systems Integration

- Parking Wizardry
- Shuttle Data Services
- Rideshare Solutions

Motivate commute behavior change



Employee Commute Hub

- Incentives & Challenges
- Multi-modal Trip Logging
- Tailored Commute Resources

Empower your transportation team



Comprehensive Tools

- Automated Enrollment
- Targeted Communications
- Transit Card Management

Save your team time and money



Enterprise Integration

- HR Systems
- Single Sign-On
- Payroll

Luum



SHARED MOBILITY **EXPLOSION!**



Enterprise Commute Trip Reduction

- Ride Amigos



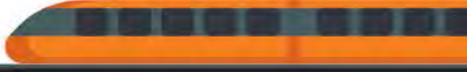
Transforming Urban Transportation

- PROGRAMS**
- Corporate Ridesharing
 - Employee Commuter Programs
 - Employee Carpool Programs
 - Employer Transportation Benefits
 - Enterprise Commuter Programs
 - Enterprise Vanpools
 - Reducing Parking Costs
 - University Vanpools

- COMMUTER TOOLS**
- Commuter Services
 - Commuter Management Apps
 - Commuter Management Platform
 - Enterprise Rideshare Solutions

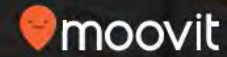


- Government Rideshare Solutions
- Transportation Demand Management Software
- University & School Transportation
- University Rideshare Solutions



Mobility Aggregators

- Moovit



Moovit is the world's #1 transit app.

Live arrivals, Schedules, Maps

Discover the best routes to anywhere in your city

Peace of mind for public transportation with all your local transit options in one app



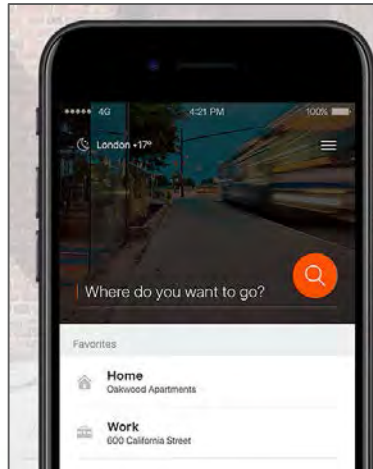
When You Need Info on Nearby Transit

- ✓ Real Time Status
Know when you actually need to be at the station
- ✓ Nearby Stations
View all lines running at stations around you
- ✓ Train & Subway Stations
Get all the crucial info you need, like platforms, schedules, & last ride of the night



When You Need Directions

- ✓ Detailed Itineraries
GPS for transit. Step-by-step guidance from A to B
- ✓ Get Off Alerts
Automatic notifications so you never miss a stop
- ✓ Your Favorite Locations
Get 1-tap directions to your most traveled places



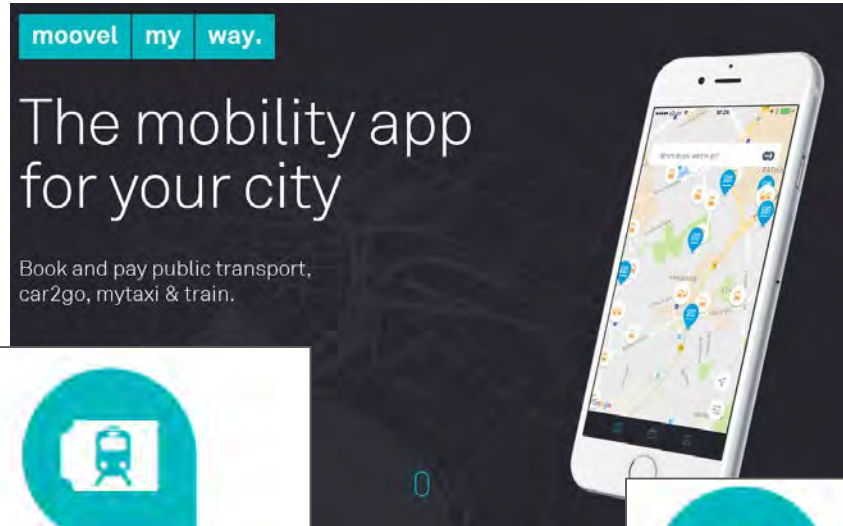
When You Need Info on a Certain Line

- ✓ Line Schedules & Maps
View times, stations, routes, and even download maps for offline use
- ✓ Service Alerts
Check transit like you check the weather and know about issues ahead of time
- ✓ Favorite Lines
Store your most used lines for quick & easy access



Mobility Aggregators

- Moovel



Book

Compare different transportation options and book the best one.



Ride

No need for cash! Pay for your ride directly with moovel.



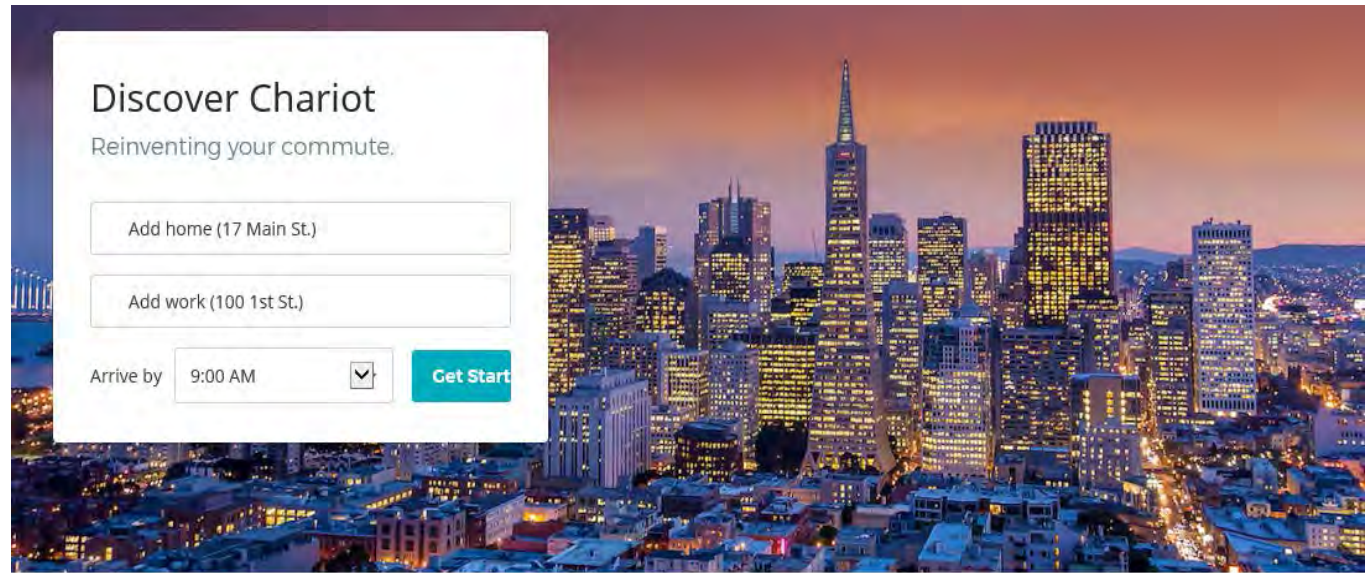
Search

moovel shows you available mobility options so you can reach your destination with ease.



Private Sector Transit

- Chariot



The New Affordable Way To Commute!

We also have monthly passes, which are a great deal for regular riders. The \$119/mo All-Access Pass allows for unlimited number of rides on our [growing network of routes](#) at all times. That's less than **\$3 per ride** when using it to and from work every day, and that's before a ~40% savings if you pay with commuter benefits

Ride pricing

Ride costs vary depending on your Chariot's pickup time at your stop.

PEAK: 7-9:15 AM and 4:30-6:15 PM


OFF PEAK: Open-7 AM and 6:15 PM-Close

Note: Open and close times vary by route.



Rideshare w/in 10 Minutes

- A **transportation network company (TNC)** (sometimes known as **mobility service providers** or **MSPs**), connects via websites and mobile apps, pairing passengers with drivers who provide such passengers with transportation on the driver's non-commercial vehicle.
- TNCs include Gett, Lyft, Juno, Cabify, Uber, goCatch, Via, Ola Cabs, GoCar, GO-JEK, Careem, Wingz, Taxify, GrabTaxi, Didi Kuaidi, Easy Taxi, and Fasten.
- TNCs are examples of the sharing economy.

The Uber logo, consisting of the word "UBER" in white, uppercase, sans-serif font centered within a solid black square.

UBER

The Juno logo, consisting of the word "JUNO" in white, uppercase, sans-serif font centered within a solid dark blue square.

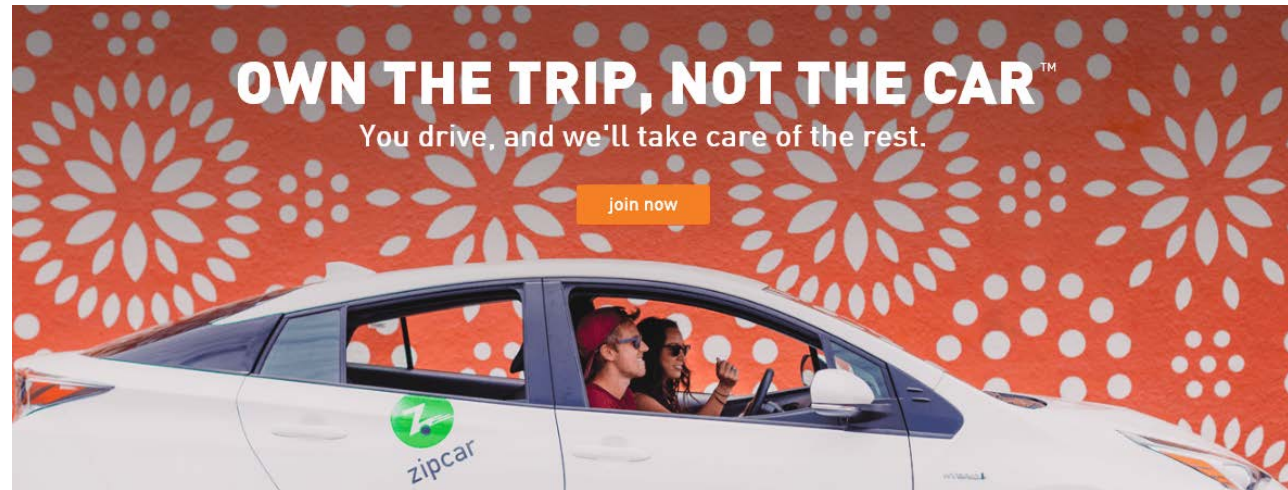
JUNO

A banner at the bottom of the slide with a dark background. On the left, there is a silhouette of a person on a bicycle, a small orange car, and a green tree. The text "SHARED MOBILITY EXPLOSION!" is written in white and blue, with the word "EXPLOSION!" in a larger, bold, blue font. The word "EXPLOSION!" has three orange location pin icons integrated into the letters 'O', 'I', and 'O'. On the right, there is a silhouette of a high-speed train.

SHARED MOBILITY EXPLOSION!

Carshare

- Car2Go, Zipcar, Enterprise Car Share



What is Car Sharing?

- Drive cars by the hour or day. Gas & insurance included.
- Now in neighborhoods, cities and airports
- Saves hundreds of \$ over car ownership
- Memberships start as low as \$7/month.



SHARED MOBILITY **EXPLORATION!**



P2P Carshare



Getaround



RC Rent Centric
On-Demand Rental Technology

- Getaround, RelayRides, Ford Car Swap
- **Peer-to-peer carsharing** (also known as **person-to-person carsharing** and **peer-to-peer car rental**) is the process whereby existing car owners make their vehicles available for others to rent for short periods of time.
- Peer-to-peer carsharing is a form of person-to-person lending or collaborative consumption, as part of the sharing economy. The business model is closely aligned with traditional car clubs such as Streetcar or Zipcar, but replaces a typical fleet with a 'virtual' fleet made up of vehicles from participating owners.

SHARED MOBILITY **EXPLOSION!**



Bike Share

- Motivate, Deco Bike, Bcycle, NextBike
- A **bicycle-sharing system**, is a service in which bicycles are made available for shared use to individuals on a very short term basis.
- Bike share schemes allow people to borrow a bike from point "A" and return it at point "B". Many bike-share systems offer subscriptions that make the first 30–45 minutes of use either free or very inexpensive, encouraging use as transportation.



DECOBIKE

motivate

get going



Personal Electric Transport

- Enzo foldable ebike, GenZe electric bikes, Scoot



The electric moped scooter



The electric skateboard



The electric scooter



The Segway E+ /
Airwheel S3 & clones



The electric unicycle
(aka self-balancing
unicycle)



The electric bicycle /
electric folding bike



Vanpooling

- Enterprise, Vride, Pool Rewards
- **Vanpools** are an element of the transit system that allow groups of people to share the ride similar to a carpool, but on a larger scale with concurrent savings in fuel and vehicle operating costs.



'POOL REWARDS'
it pays to rideshare

'Pool Rewards' is a special incentive program available through Commuter Connections designed to encourage current drive alone commuters to start or join a vanpool.



Commute Mode Detection Technologies

- Strava, MapMyRide, Moves
- GPS has been gaining importance for travel surveys since the 1990s.
- While it is successfully used to collect accurate information about traveled routes and travel times, it is also beginning to extract added information like transport modes and trip purposes.
- A participant's habit in route choice, travel times, travel mode changes and travel modes is extracted and stored in a profile.
- Using this, at the beginning of a commute, routes that the commuter is likely to take are determined and used to provide personalized real-time time traffic information.



mapmyride



Smartphone Transit Payment

- Passport, GlobeSherpa, Masabi
- Portland startup GlobeSherpa, which makes TriMet's mobile ticketing app, has been acquired by a company called RideScout. RideScout plans to integrate GlobeSherpa's online tickets into its own guide for finding urban transportation options.
- It integrates car-sharing options, transit times and other features in a single format so travelers can pick among several options to reach their destination.



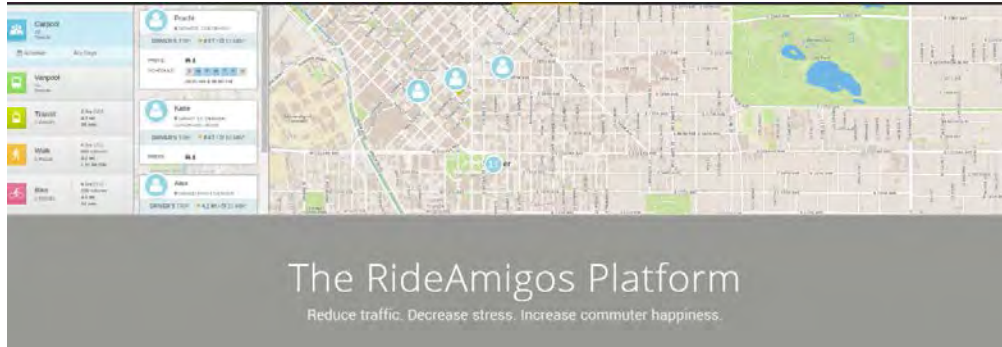
Smartphone Parking

- ParkMe, Parkmobile, Pay-by-Phone
- Pay-by-phone parking allows any driver parking in a fare required space the option to divert the expense to a credit card or to a mobile network operator via the use of a mobile phone, mobile application or computer, opposed to inserting cash into a parking meter or pay and display machine.



Miscellaneous Apps

- City Mapper, Transitscreen, Modeify – TDM Trip Planner



TRANSITSCREEN

Platform Features



Multi-Modal
Commuter Trip
Planner

Don't let your commuters miss out on any commute options again. Help them use all available modes of transportation, including ridesharing, vanpooling, transit, bus, biking, and walking.



Interactive
Commuter
Dashboard

Provide users with the most important information all in one place, including trip logging, personal statistics, virtual badges, leaderboards, challenges, and more.



Advanced
Rideshare
Matching

Users can make use of our advanced rideshare matching algorithms to connect with other carpool drivers or passengers quickly and easily.



SHARED MOBILITY **EXPLOSION!**



Commuter Benefits

- Commuter Check Direct, Commuter Benefits, Wageworks



- Commuter Check Direct offers a full suite of commuter products packaged in a low-hassle self-service employee program. This fully-comprehensive platform has all the bells and whistles needed to make your transit benefit program a total success.

- WageWorks, Inc. engages in administering consumer-directed benefits (CDBs), which empower employees to save money on taxes, as well as provides corporate tax advantages for employers in the United States.



Personal Rapid Transit

- 2getthere, Ultra Global (London Heathrow)

2get³there

- **Personal rapid transit (PRT)**, also referred to as podcars, is a public transport mode featuring small automated vehicles operating on a network of specially built guideways.
- PRT is a type of automated guideway transit (AGT), a class of system which also includes larger vehicles all the way to small subway systems.



SOV APPS

- WAZE Social Traffic
 - Get the best route, every day with real-time help from other drivers.
 - Waze is the world's largest community-based traffic and navigation app.
 - Join other drivers in your area who share real-time traffic and road info, saving everyone time and gas money on their daily commute.
- Outsmarting Traffic, Together.



In Summary...

- **PEOPLE CENTRIC PLANNING AND DESIGN**
 - There was positive recognition that beyond all the technical aspects of the conference that ultimately we need to remember that all the programs, technology and innovation needs to retain a "people focus".
- **BETTER AND DIFFERENT DATA PLATFORMS AND ANALYTICS**
 - There was a strong and recurring focus on the need for better and different types of data (that goes beyond traditional metrics such as vehicles miles travelled and planning for additional roadway capacity). A new focus on problem identification and desired outcomes that embrace the larger goals reflected in programs such as the FTA's "Smart City" initiative.



In Summary...

- **TRANSPORTATION AS A SOCIAL EQUITY SOLUTION**
 - There was a sensitivity to and understanding of the importance of "social equity" issues as it relates to transportation. This issue has tentacles that impact job creation, social justice and an embracing of diversity in many forms and environments.
- **MULTI-MODAL SYSTEMS INTEGRATION**
 - Another related theme was the promotion of multi-modal systems integration into a comprehensive and seamless customer experience that promotes all forms of transportation as the best way to improve access. This theme harkens back to the "connected traveler" concept that promoted dissemination of information on all modes via the new universe of communications options available today.
- **CARPE DIEM! (Seize the Day!)**
 - Finally, there was a real "sense of urgency" that now is the time that we need to embrace the change that is not coming, but that is **ALREADY HERE** to help solve many of the larger issues that are emerging as our urban environments continue to densify.



Legacy Business Area Working Together on Mobility Solutions



INTRODUCTION TO THE LBA TRANSPORTATION MANAGEMENT ASSOCIATION

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Glenn Gadbois
Gadbois Consulting

LBA Mobility Study

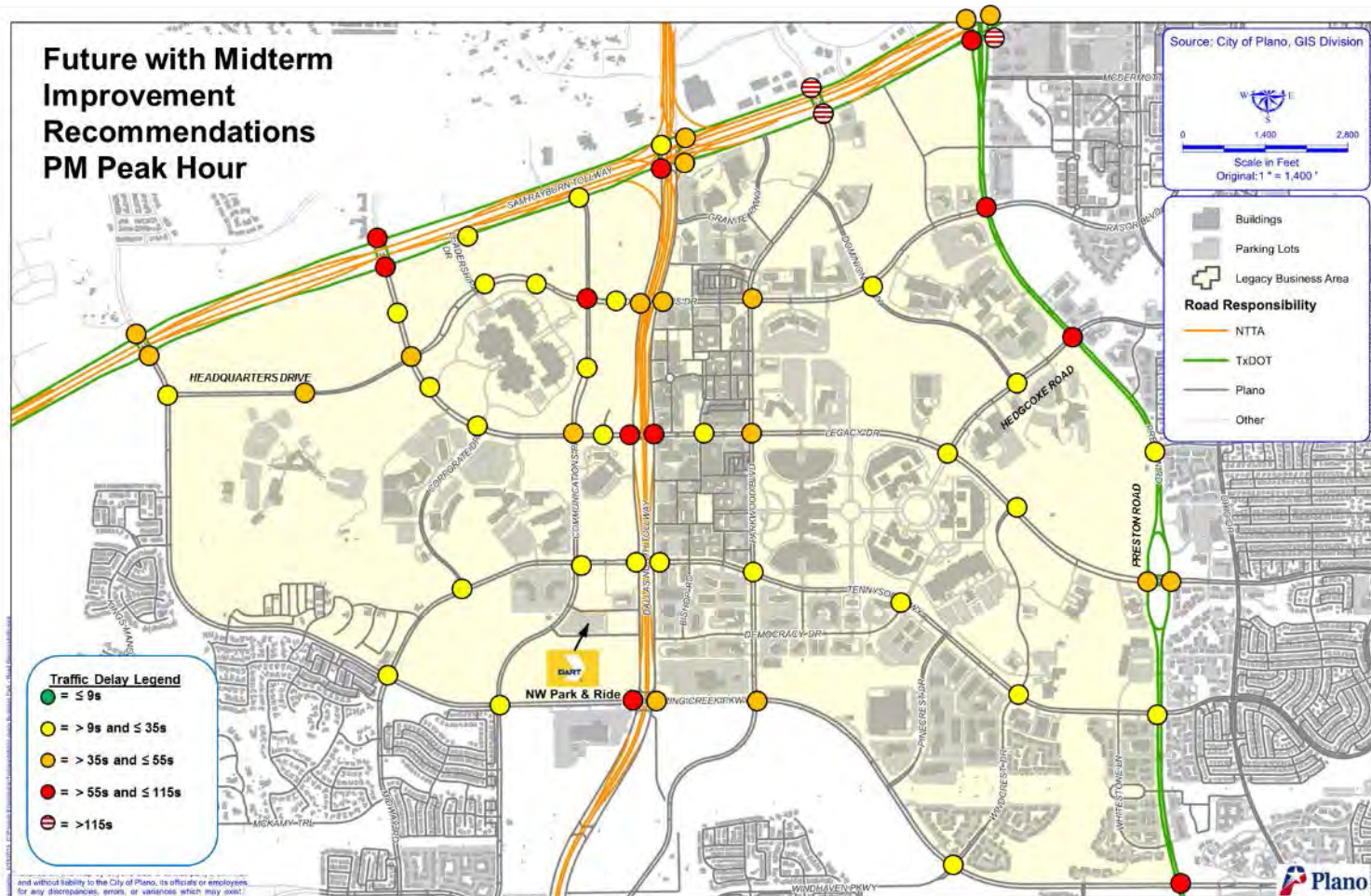
- Involved stakeholders with two committees
- Collected feedback from employees/residents
- Determined current & future roadway infrastructure needs
- Developed/prioritized transportation demand strategies

Legacy Business Area Representation:



LBA Mobility Study

➤ Projected future traffic growth with improvement recommendations



LBA Mobility Study

- 40% of the LBA driving population open to change in mode of travel



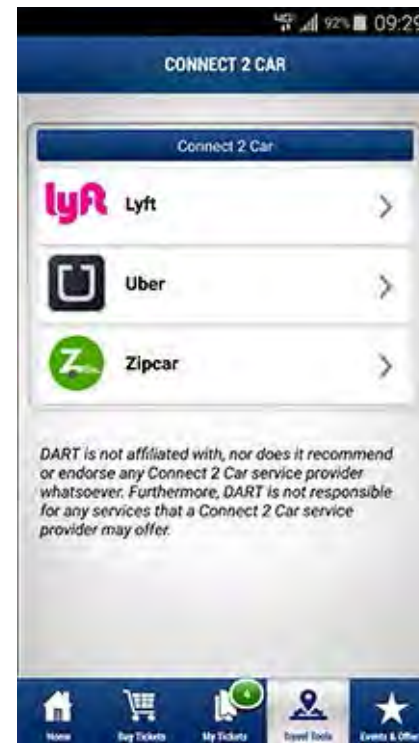
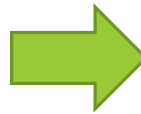
DART – Beta Testing in LBA

➤ *DART Mobility on Demand*

- City of Plano first in the region to use GoPass beta mobile platform



EXISTING VERSION



BETA VERSION

LBA TMA

- Represents and connects employers, employees, and government agencies to mitigate traffic congestion challenges through TDM strategies
- Allows businesses to pool resources to:
 - Support commuter transportation strategies
 - Act in an advocacy role with local government
 - Expand knowledge of alternatives to commuting in a single occupancy vehicles



Future LBA TMA Services:

Potential FY 2018/2019 Services:

- Bike-share program
- Local Shuttle services
- Connections to DART Rail and the airport.
- Parking Management
- Additional Uber, Lyft, Zipcar, Car2Go and other shared mobility options





Thank You!

Questions?

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