

Revolutionary Mobility

Collaborative Consumption &
Connected Computing

Crowdsourcing the Public Transit Network

Sean O'Sullivan
Managing Director, Avego
sean.osullivan@avego.com

UCD Earth Institute-NESC Workshop
UCD Richview, Dublin
16 May 2012



Look familiar?



People rarely waste space in their suitcase.

Look familiar?



Millions of Americans waste most of the unused seats in their cars every day.

collaborative consumption



When most people say “carpool,” what do they mean?

The New Oxford American Dictionary defines “carpool” as:

An arrangement between people to make a regular journey in a single vehicle, typically with each person taking turns to drive the others.



Traditional Carpooling is:



Efficient & Frequently Used: More common than public transit & good cost benefits



Not Flexible: Commuters must stick to a rigid routine



Not Convenient: Must be pre-arranged. Can't decide to carpool and go



Hard to organize: You have to seek out people on your same route and schedule



Hard to maintain: As people drop out, you have to constantly recruit new members



Internet Ride-Sharing Services

Online Ride Boards: Drivers post a future trip, looking for riders; riders browse posted trips, and contact drivers to request a ride



Easier to find carpoolers



Good for one-time rides of long distances



OK for fixed match for daily commute



Must be pre-arranged



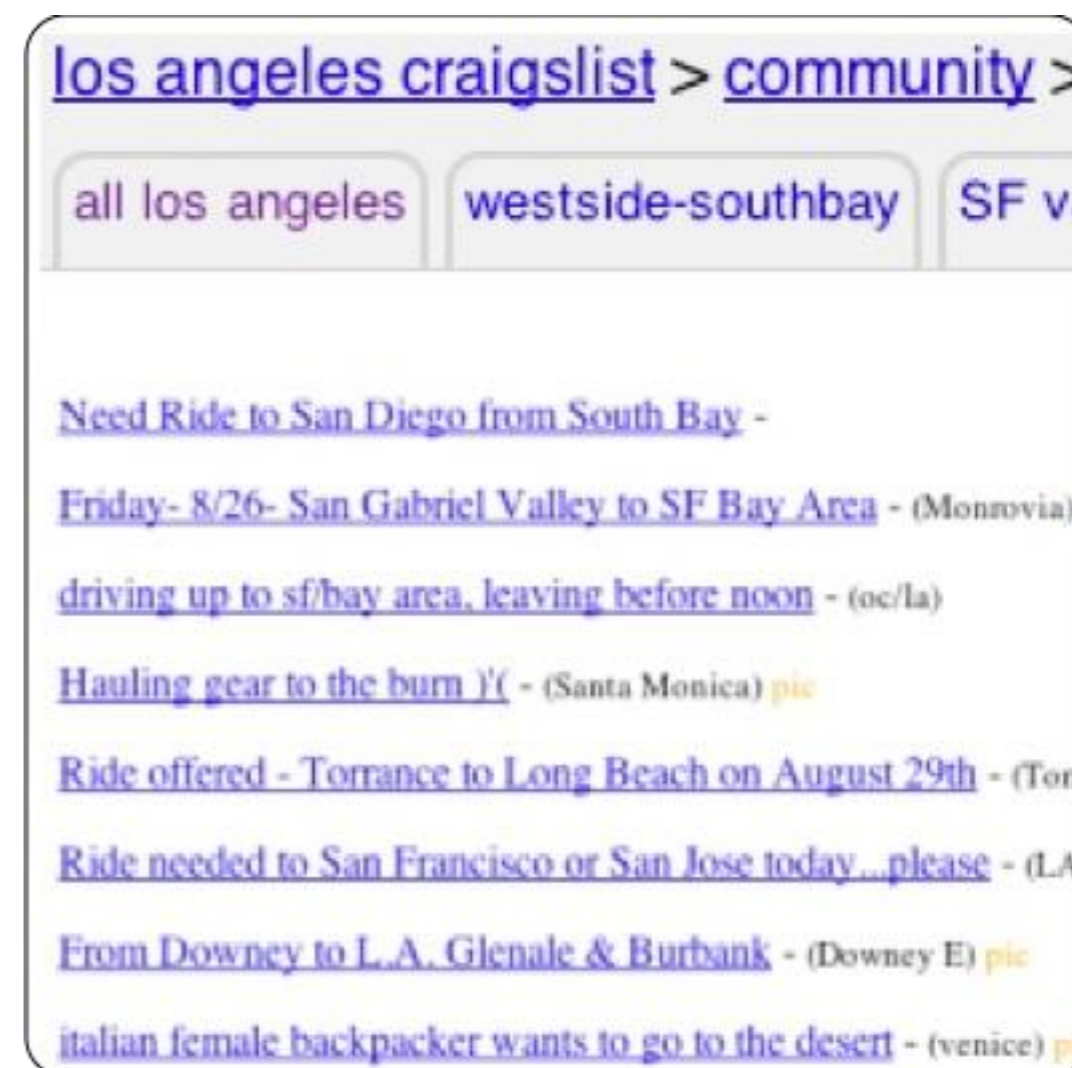
No built-in security



Data often out of date



No interoperability, users must search multiple places



Slugging



Easy to find carpoolers



Good for one-time rides



Save time and money



Proven system, efficient & safe



No built-in payment system



Geographically limited to parts of San Francisco & Washington DC & Houston



Limited Corridors only

Slugging or “casual carpooling”: Impromptu carpools formed among strangers to meet the occupancy requirements of HOV lanes.



What if carpooling was easier and more convenient?

Avego RTR: How It Works



QuickTime™ and a
H.264 decompressor
are needed to see this picture.

Crowdsourcing the Public Transit Network

Avego Real-Time Ridesharing (RTR)



Rideshare whenever you want, from wherever you are



Get matched with riders and drivers in real-time



Similar to the proven “slugging system”



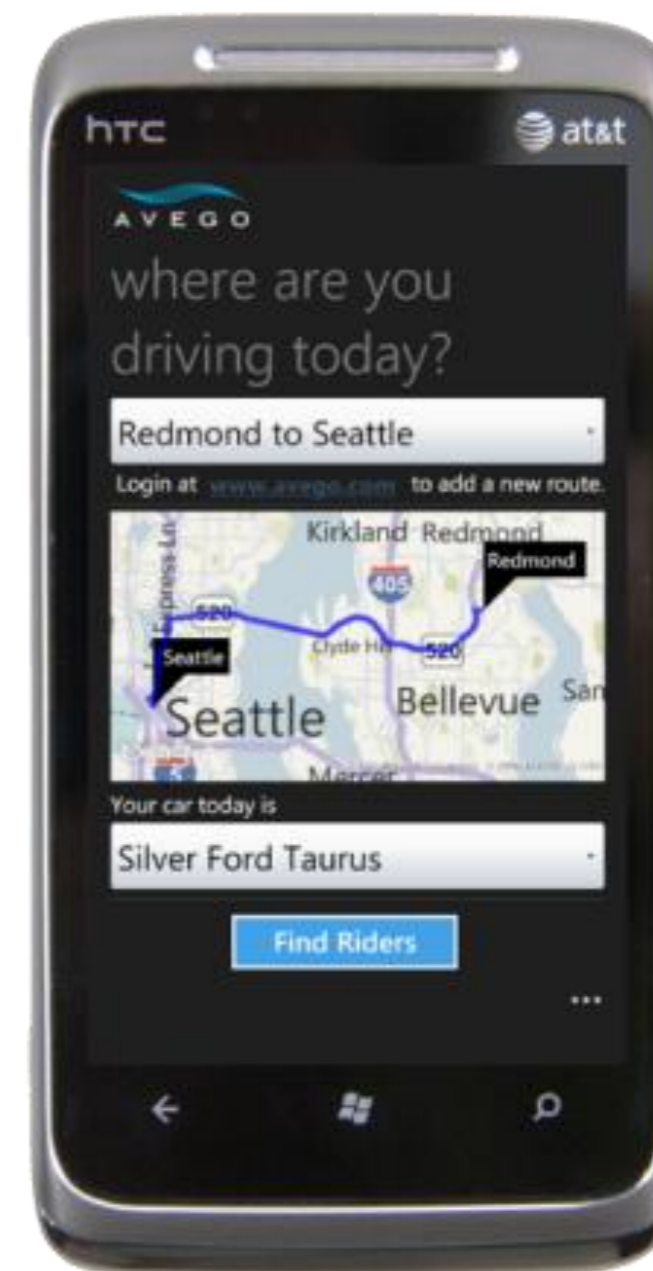
Built-in cashless payments



Built-in security features



Pre-populated and user-generated stops



Difficulties in Real-Time Ridesharing



Awareness & Critical Mass hard to establish - transportation corridor analysis required, technology still cutting edge



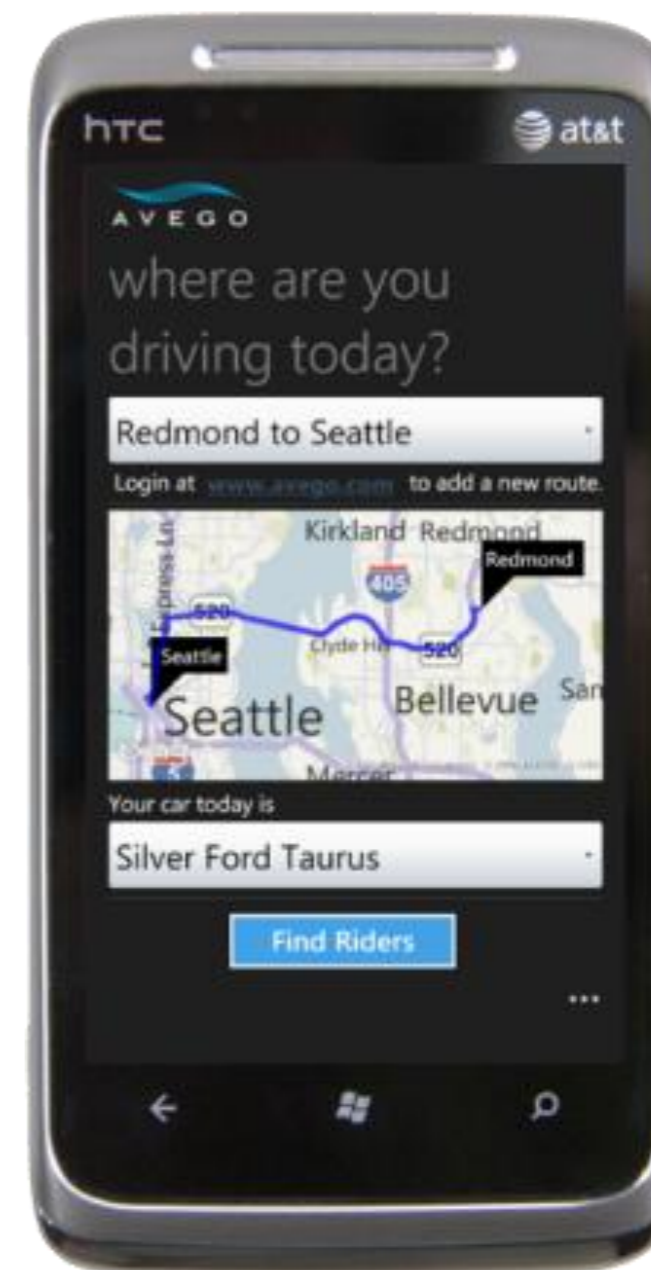
Richest user experience with smartphones... but only >50% penetration first time Christmas 2011



Variety of smartphones means only larger software developers can support all necessary platforms (iPhone, Android, WP7, various browser types, etc)



Bottom-up transport network more difficult to understand



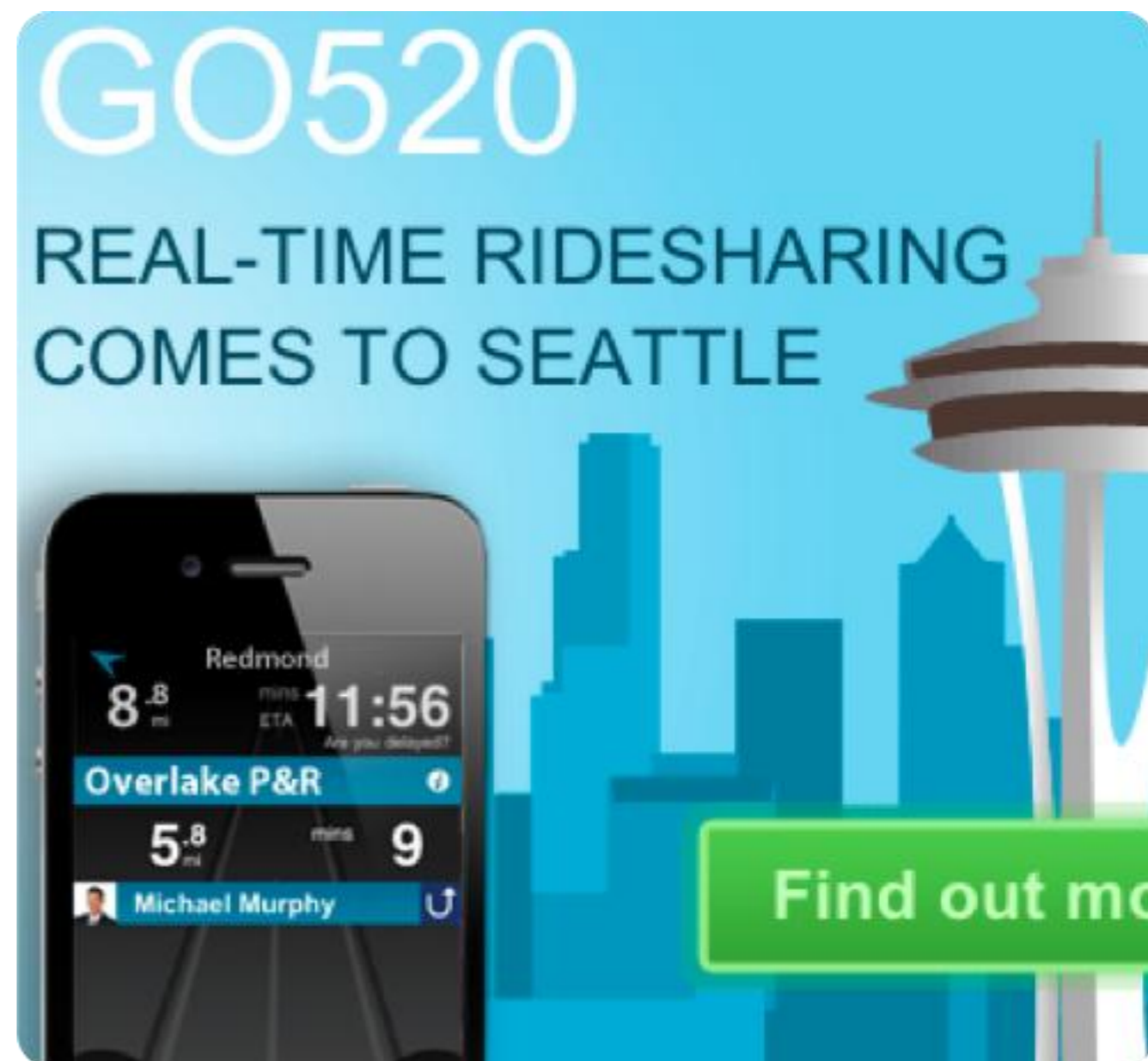
Critical Mass Is Key

- Research conducted by the University of California, Berkeley Transportation Center suggests that successful “casual carpooling” can only occur when riders are able to find rides for at least 3 out of 5 attempts to carpool on the fly.
- Avego RTR pilots seek to build critical mass on ***busy transport corridors***



go520: Seattle, Washington

- In September 2010 WSDOT awarded Avego a \$400K grant to pilot a real-time ridesharing system on the SR-520 corridor in Seattle.
- External factors
- One of the most congested roadways, 115,000 vehicles per day
- Many commute alternatives
- Coincided with the planned introduction of tolling on the 520 bridge
- Tech friendly commuters (UW, MS)



go520: Media Reaction

WIRED

Ridesharing In The Palm Of Your Hand
January 8, 2011

The New York Times

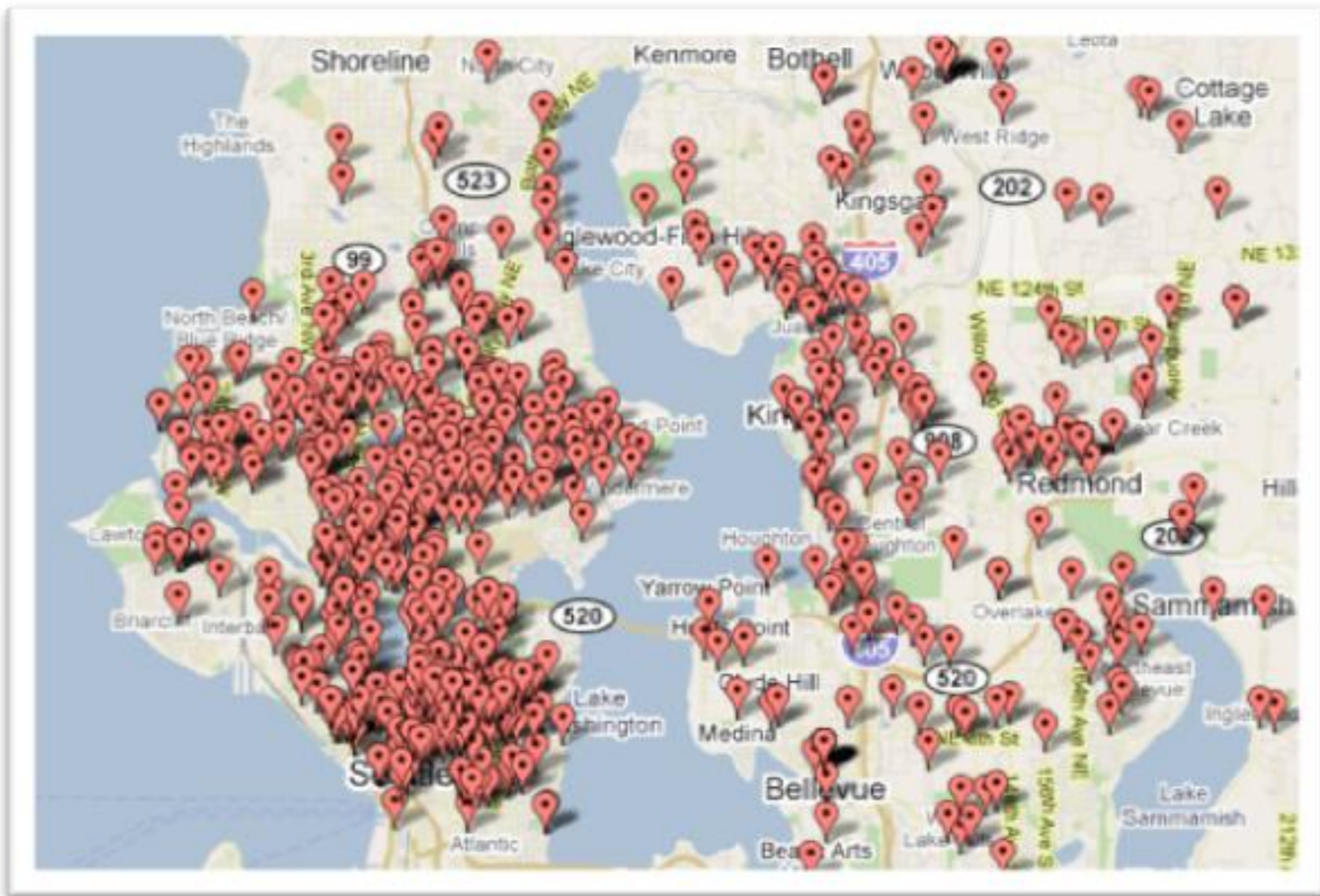
Need a Ride? There Are Apps for That
January 20, 2011



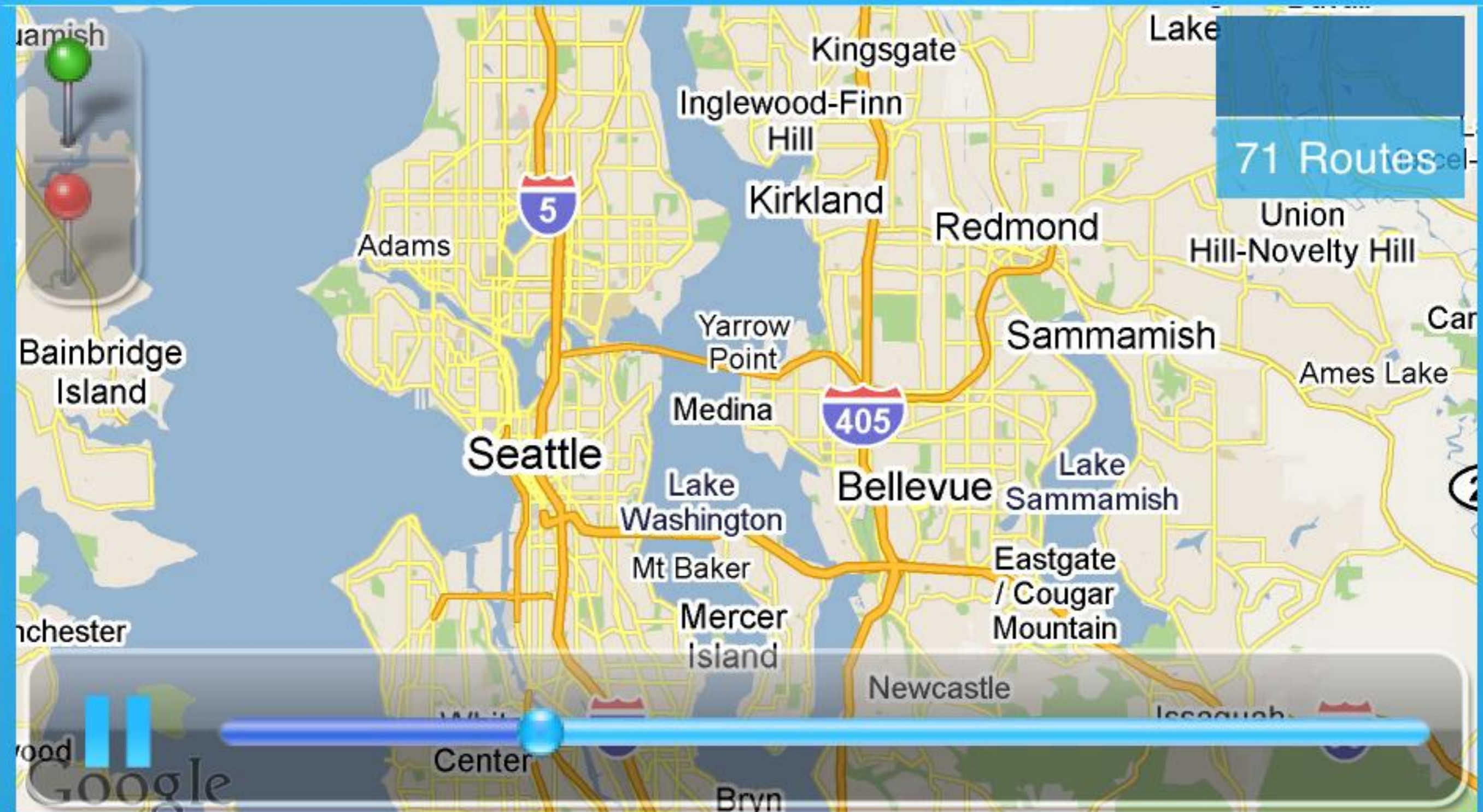
TechCrunch

Avego Debuts go520 Mobile App In Seattle To Encourage Carpooling, Ease Traffic
January 27, 2011

go520: Establishing Corridors



Avego Activity in Washington State



go520: Guaranteed Service

- Operating 10 times a day between Capitol Hill and the Overlake Transit Center
- Runs up to every 15 minutes during peak hours



go520 Phase Two Outcomes

1100+
participants

up to **100** *trips per day*
on the MSFT-Cap Hill corridor alone

out of **168** *participants*
on the MSFT-Cap Hill corridor

46%
repeat ridership

46 *drivers*
successfully used RTR so far

13% *monthly growth*
in users since Phase II began
(primarily viral)

49%
per month growth
in RTR journeys
(since Phase II)

2012 Avego Pilots

San Francisco

Bay Area

Sonoma

Contra Costa

Marin

3 different pilots; ~10,000 users

Bergen, Norway

phase II: 8,000 users to participate

Santa Barbara

college campuses

6,000 students

in target corridor

Northern Virginia/DC

50,000 military

Policy Changes to Support Real-time Ridesharing



Involvement of TDM Community; Metropolitan Planning Organizations, etc.



Incentivize people with better access to HOV lanes or reduced tolls on HOT lanes



Tax deduction for verified carpooling (use transit plan tax deductions)



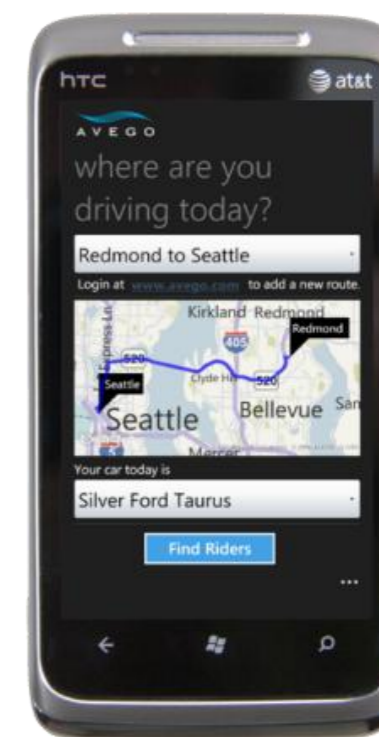
Reduce incentives for SOV usage (highway subsidies, congestion charges)



Multimodal interoperability, Open Data & APIs



Enabling pick-ups at non-"city center" public transit stops; or other infrastructure enablement



Real-time Ridesharing

Lessons Learned & Moving Forward

Sean O'Sullivan
MD & Co-founder, Avego
sean.osullivan@avego.com

Urban Sustainability
Berkeley, California
23 February 2012





The Transport Network

Public Transit & Cars



- Already successful in many places
- Park & Rails (Park-n-Rides)
 - SF Bay Area’s BART Network
 - Washington DC’s Metro Parks
 - New Jersey/New York (NJ Transit, LIRR, Metro-North, etc)
 - Amtrak’s MetroPark (NJ)
 - Seattle’s Park-n-Ride network
- Vanpools
 - People take cars to go to unofficial park-n-rides, and vanpool in from there
 - Working in hundreds of cities across the US, thousands of vehicles
- “Kiss-n-Rides” etc

Park-n-Rails



BART Millbrae

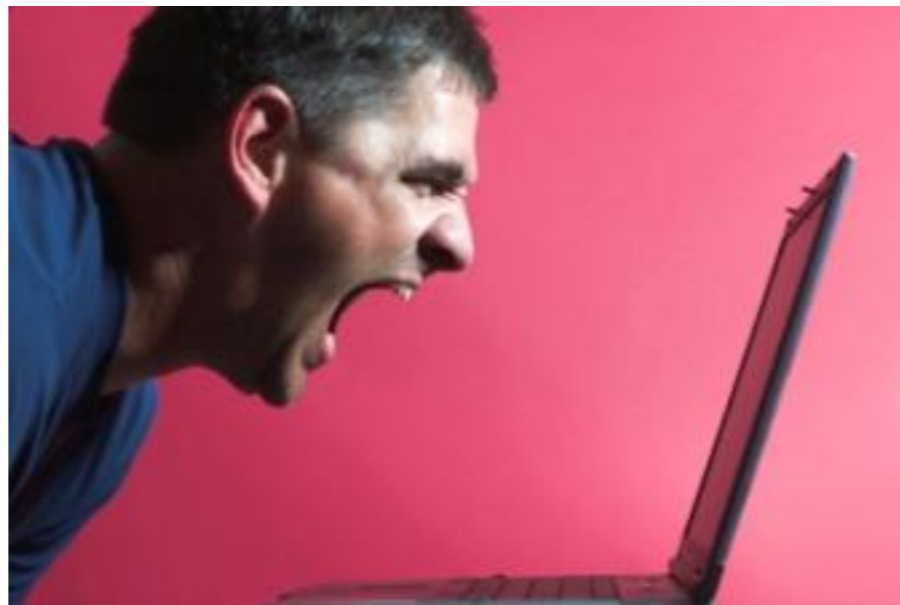
Amtrak Metropark

Great Example P&R



- Wouldn't it be great to use all highway interchange cloverleafs as Park-n-Rides? (this one is from Belgium)





FEAR



A darkroom where
negatives are developed

Change is our Friend

Revolutionary Mobility

Collaborative Consumption & Connected Computing

Sean O'Sullivan
Managing Director, Avego
sean.osullivan@avego.com

UCD Earth Institute-NESC Workshop
UCD Richview, Dublin
16 May 2012

