Lessons from Recent Mobility Pilots and Building the Agency of the Future

RTD T2 Summit:
From Transit Agency to Mobility Integrator

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Shared-Use Mobility Center
Colin Murphy, Director of Research & Consulting
colin@sharedusemobilitycenter.org | @murcoi1
Overview

- About SUMC?
- Denver and its urban peers
- Lessons from recent mobility pilots
- The evolving agency role: models and risks
- Q&A
Shared-Use Mobility Center

Creating a multi-modal transportation system that works for all

Recent Studies
- TCRP 195: TNCs + Transit
- TCRP 196: Private Transit
- European Shared Mobility Best Practices (for FHWA)

MOD Learning Center
- Clearinghouse of policies, tools, and best practices

Technical Assistance & Pilots
- Providing support + evaluation in 25+ cities
- FTA MOD Sandbox Innovation & Knowledge Accelerator
- MOD On-Ramp: bringing promising MOD concepts to reality
- All-EV carsharing in low-income areas
- Green Raiteros: rural EV ridesharing
- Twin Cities and LA Shared Mobility Implementation Plans
### Population, metros 1-5 mil. Denver #10 (2.89 mil.)

#### US Census 2017

<table>
<thead>
<tr>
<th>Metro</th>
<th>Population</th>
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</thead>
<tbody>
<tr>
<td>Detroit-Warren-Dearborn, MI</td>
<td>4,313,002</td>
</tr>
<tr>
<td>Seattle-Tacoma-Bellevue, WA</td>
<td>3,867,046</td>
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<tr>
<td>Minneapolis-St. Paul-Bloomington, MN-WI</td>
<td>3,600,618</td>
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<td>San Diego-Carlsbad, CA</td>
<td>3,337,685</td>
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<td>Tampa-St. Petersburg-Clearwater, FL</td>
<td>3,091,399</td>
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<tr>
<td><em><strong>Denver-Aurora-Lakewood, CO</strong></em></td>
<td>2,888,227</td>
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<td>Baltimore-Columbia-Towson, MD</td>
<td>2,808,175</td>
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<td>St. Louis, MO-IL</td>
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<td>Charlotte-Concord-Gastonia, NC-SC</td>
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<td>San Antonio-New Braunfels, TX</td>
<td>2,473,974</td>
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*Denver and its peers*
Denver and its peers: growth

Population growth rate, metros 1-5 mil.

Denver #7 (13.5%)

US Census 2010-17

Denver-Aurora-Lakewood, CO*** 13.5%

Other metro areas with population growth rates:
- Austin-Round Rock, TX 23.3%
- Raleigh, NC 18.1%
- Orlando-Kissimmee-Sanford, FL 17.6%
- San Antonio-New Braunfels, TX 15.5%
- Charlotte-Concord-Gastonia, NC-SC 13.9%
- Nashville-Davidson, TN 13.9%
- Phoenix-Mesa-Scottsdale, AZ 13.6%
- Las Vegas-Henderson-Paradise, NV 13.0%
- Seattle-Tacoma-Bellevue, WA 12.4%
- Jacksonville, FL 11.8%
- Tampa-St. Petersburg-Clearwater, FL 11.1%
- Salt Lake City, UT 10.6%
- Oklahoma City, OK 10.4%
- Portland-Vancouver-Hillsboro, OR-WA 10.2%
Denver and its peers: mobility

% of metro residents who used ridesourcing in past month

Denver #6 (~20%)

Denver and its peers: mobility

Transit capital funding per capita, metros 1-5 mil.

Denver #2 ($435)

NTD 2014 via Transport Politic Databook
Denver and its peers: mobility

Public Transit: Expanding investment, diverse services, dedicated guideways, supportive policies

Transit and shared mobility investment and infrastructure

SUMC analysis of NTD and industry data
Lessons from recent pilots: MOD Sandbox

Complexities of agencies working with tech startups (esp. TNCs)

- Data & WAVs: stumbling blocks for every agency working w/TNCs
  - TNCs cite data concern over both PII and business secrets
  - Still no WAVs in TNC fleets—all third party or agency vehicles

- Contacting styles and paces
  - Frontline people’s agreements might not translate when the lawyers show up
  - Rapid pace of change in startups

- Competition
  - Services don’t want to show up on the same screen as competitors
  - And definitely don’t want easy price & time comparisons

- Preference for off-the-shelf solutions
  - Agency pilots not big enough for custom development

Overall: Everything’s easier if it helps open a new market for private partner
Lessons from recent pilots: MOD Sandbox

Moving towards MaaS: Platforms & Integrated Apps

• TriMet & VTrans: Getting all the services onto one platform (fixed, DRT, SUM, eventually NEMT & social services)

• VTrans: implementation of GTFS-Flex for fixed + DRT discoverability
  • Beta statewide trip planner up and running
Lessons from recent pilots: MOD Sandbox

- TriMet: open-source development & deployment of multimodal trip planner (w/bikes, bikeshare, TNCs, & carshare)
- OTP-based dev app **is running** and **code is public**
- Big questions from MaaS projects
  - Challenge in asserting public priorities when making private, auto-based services available alongside transit
  - What is appropriate agency role? Actual development (providing stronger hand for public interest) or providing data & framework and letting private sector work?
  - Can US public sector follow European examples, create new revenue streams from tech development?
Lessons from recent pilots: Beyond the Sandbox

- Earliest subsidized TNC programs starting to show results
- PSTA Direct Connect
  - Zone-based TNC/taxi F/LM, $5/ride subsidy, 8 zones
  - 12,750 rides by ~500 unique users 2/17-3/18—around 35 trips/day
  - Heaviest use by a few people—top 10 riders made up 30% of use, w/ roughly daily use
  - New phase (since 4/18) addresses key shortcomings: lack of meaningful WAV service, issues with zone design. Ridership nearly tripled since.

- PSTA TD Late Shift
  - Free TNC/taxi rides to/from work when buses aren’t running, up to 25/mo.
  - Income & transportation qualified
  - 55K rides 7/17-4/18, funded by $807K state grants (~$15/trip)
Lessons from recent pilots: Beyond the Sandbox

- Learning more about how to focus microtransit: F/LM, not competitive w/existing routes
- Cap Metro Pickup On-Demand
  - General public DRT, agency vehicles & drivers, Via tech
  - 100% accessible (used paratransit cutaways), free to riders. Mobile app & phone hailing
  - Single zone replaced low-ridership circulator route
  - About 1/3 of riders ADA-eligible
- Results:
  - ~20K rides in 1-year pilot (6/17-6/18)
  - Operating cost $10-15/pass. trip (v. $55 for ADA paratransit but $3-4 for FR)
  - Avg. 4 pax/VRH
Lessons from recent pilots: Beyond the Sandbox

Where does MOD make the most sense? Where does it compete and where complement?

• Emerging spectrum of applications:
  • TNC services—best as feeder services w/focus on specific populations or places where productive FR has proved impossible due to land use.
  • Microtransit (or just call it CNR) for middle ground: some level of density, but other issues (geography, connectivity, time, other needs) make fixed route difficult.
  • Nationally, even the “best” microtransit seems to top out around 7 pax/hr.

• Carshare: more one-way & two-way models, more market entrants even as usage contracts due to TNCs
  • OEMs testing waters as platform + fleet providers, growing role in symbiosis with TNCs for now
  • Also a vector for EV charging infrastructure expansion—growing utility role, VW settlement helping

• Micromobility:
  • Unexpected arrival upending mobility world just getting used to TNCs
  • Huge potential in core cities, whole news set of ROW issues
The evolving agency role: Models

What could the transit agency look like in 10 years?

- Connecting across services & modes: public & private, DRT, shared use, social services/NEMT
- More planning, regulation, & operations under one roof (or at least coordinated there) as modes converge
  - Private mobility service regulation & coordination
  - ROW access (curbs, streets, sidewalks, EV charging)
  - AV approaches
  - Apps, APIs and standards
- Start staking out a role now on questions & flashpoints to come
  - Data volumes continue to increase dramatically. Who owns, who stores/maintains, who analyzes? Do agencies have capacity? Role for universities or regional research consortium?
  - Consider present and future data needs: decide on approaches to sharing & care, especially data coming through agency-owned apps & tools
  - Establish standards and goals to start incorporating into procurement: service discovery, transactions & reporting, provider agnosticism, etc.
  - Next wave of preemption pushes will be on connected & AV policy. What are public goals here?
The evolving agency role: Risks

Risks to agencies betting heavily on MOD to move customers
• VC evaporates—TNC fares increase dramatically or model collapses altogether
• Opportunity cost—what is NOT being invested in, if SAEV future doesn’t arrive as expected
• Aiding erosion of transit customer base

• Nimbleness cuts both ways
  • Relying on the market to supply services—e.g. micromobility—that can disappear as quickly as they show up
  • Procurement/contracting trades speed for predictability
• Two-tiered system: different “services” (but really same underlying service) for different classes of people.
• As integrator role grows, how do agencies manage and regulate private services to encourage desired (& mandated) equitable outcomes?
Q&A

• Please pull out your phones and go to www.sli.do, using event code ‘T2Summit’

• Enter your questions or hit the to vote for a question you want answered
Thank you.

colin@sharedusemobilitycenter.org | @murcoil
www.sharedusemobilitycenter.org | @SharedUseCntr