

# North Metro Denver MSAA Project

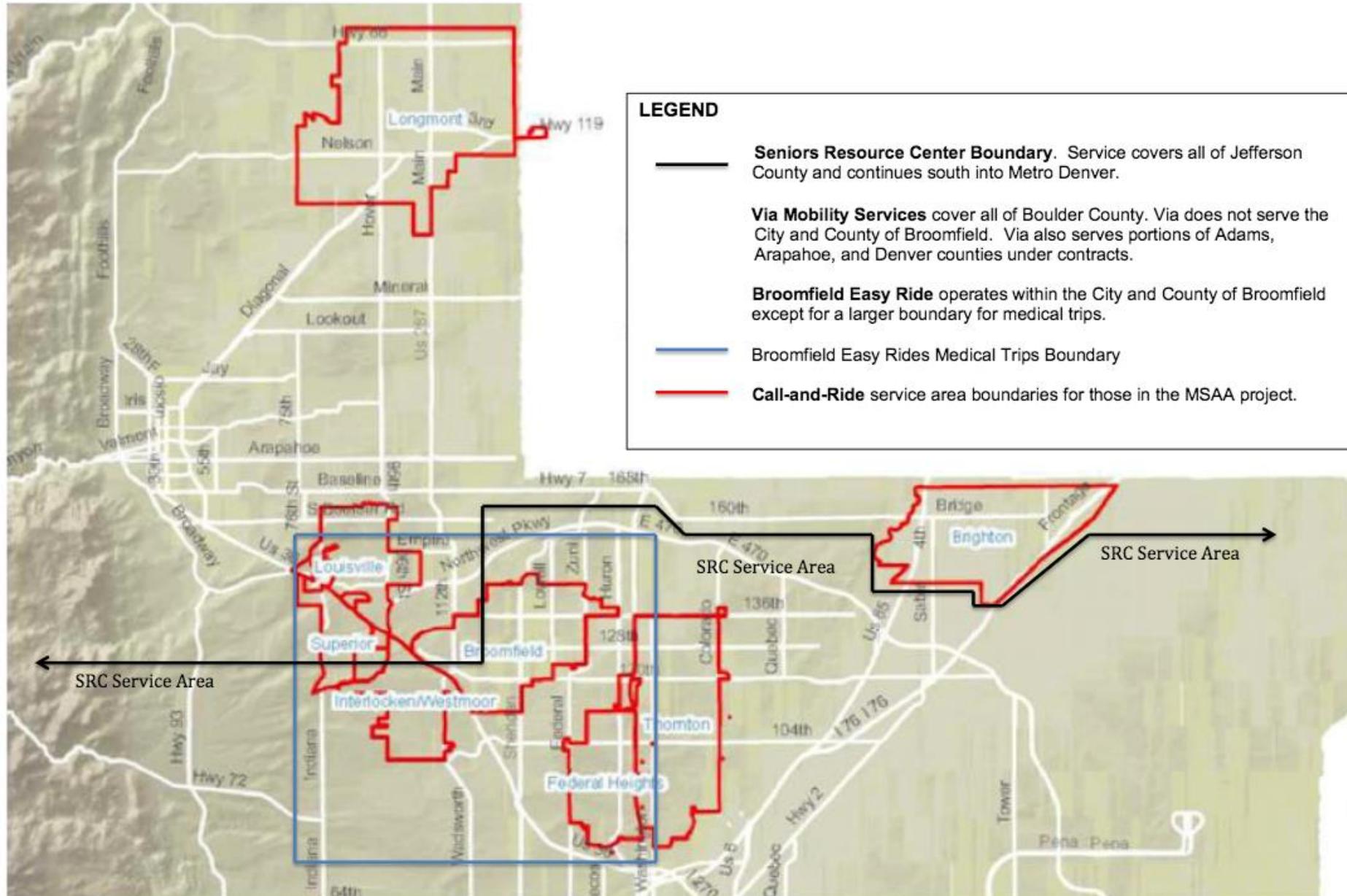
Developing a Data Exchange Hub so Multiple Providers Can Share  
Trips

DRAFT

# Project: Expand and Replicate the Longmont Coordination Model

- In the Longmont Coordination Model
  - Trips are shared between RTD's Call-N-Ride service and Via's specialized transportation service
  - Resulted in improved productivity and cost savings
- The MSAA project expands it
  - To more Call-N-Ride areas and other types of trips
  - To Seniors' Resource Center & Broomfield Easy Ride
- Increased automation is required to replicate
  - Needs *automatic* exchange of data between software systems

Figure 1: MSA Project Boundaries



# Objectives of the Longmont Model

- Coordinate independent paratransit services to improve ridership and productivity and reduce duplication.
- Employ a Mobility Coordinator to coordinate customer trips as appropriate on these services.
- Employ technology to support coordination.
- Develop a replicable model.

# What We Learned from Longmont Coordination

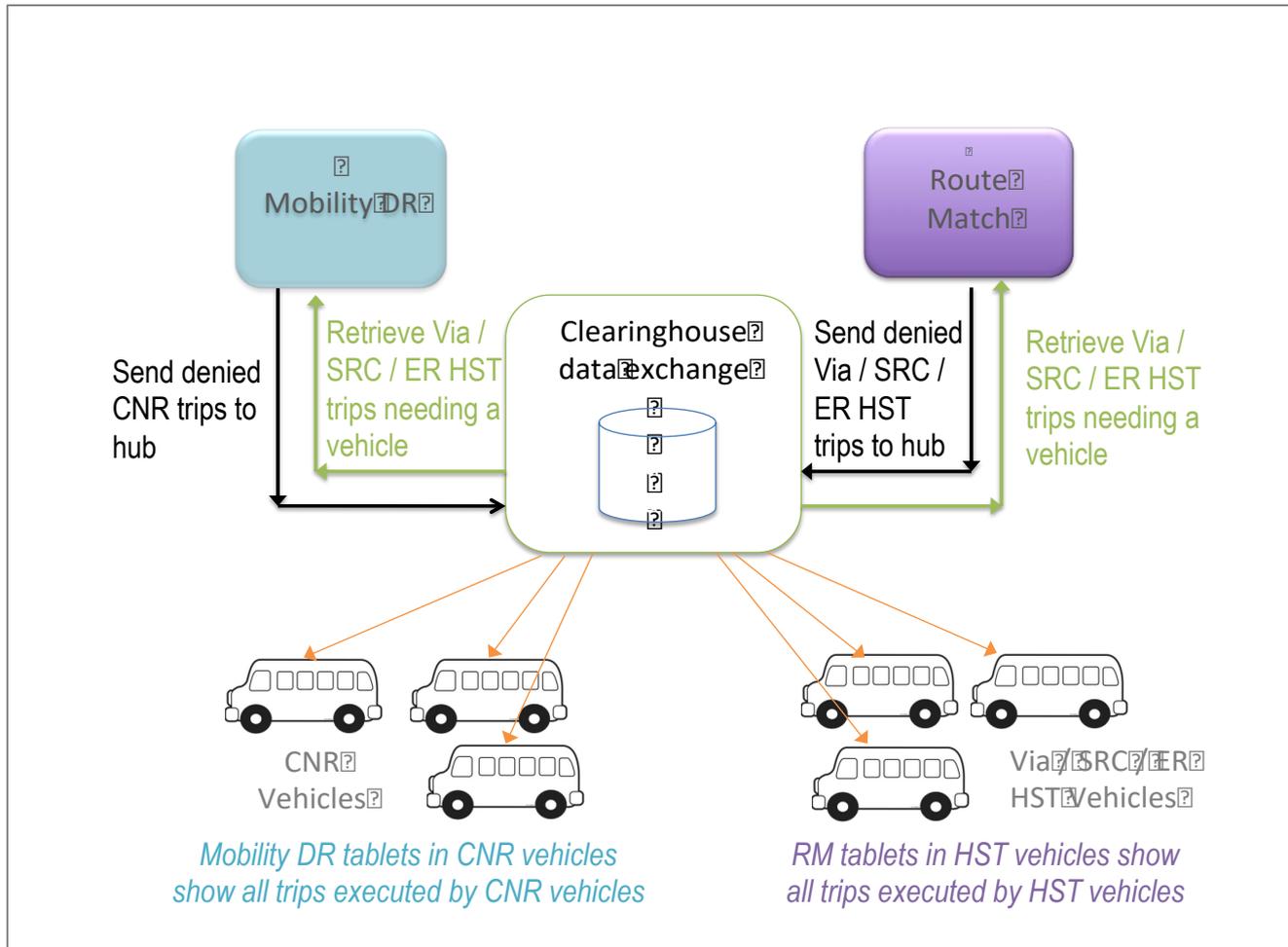
## Achievements

- Significant increases in productivity:
  - Longmont ridership increased 36% and productivity increased 25%
- A system is in place for exchanging trip information between two software programs
  - Data files and messages are defined
  - Screens are set up
  - Processes in place

## Areas to Improve

- Reduce the manual labor / increase the automation
  - Needs to be part of regular dispatch flow
  - Needs to function without a full-time mobility coordinator
  - Needs “filters” to identify trips to automatically move
- Enable trip exchanges between different providers
  - Institutional issues
  - Practical considerations

# Solution: A Data Exchange Hub



# Requirements

- A data exchange hub capable of the desired functions.
  - Agreement on functions & data that will be transmitted.
- Modifications to the scheduling software programs so they can *automatically* send data to, retrieve from, and use data from the hub.
  - Versions of RouteMatch are used by HST providers
  - Mobility DR is used by Call-N-Ride
- Agreements on institutional, practical, and reporting methods among providers.

# Approach

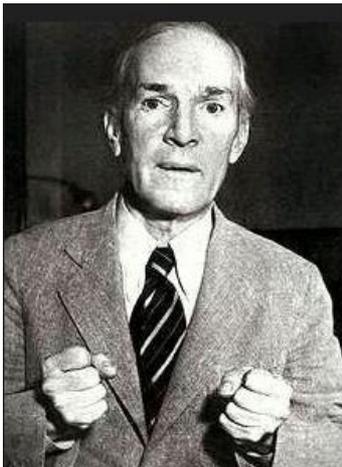
- Provide for the functional exchange of trip information.
- From Ride Connection's Clearinghouse program
  - Use the functionality, data table structure and RouteMatch adapter
- Enhance with needed features – such as notifications
- Scheduling vendors will adapt their software to automatically produce and consume data streams of trip information.
  - Scheduling / dispatch interface
  - Driver manifest
  - Reporting

# Issues in Longmont

- HST passengers have longer boarding times than general public (5-7 minutes vs. 2 minutes)
- Resistance to mixing HST and general public riders
- Boundaries
- Door-to-door vs. door-through-door
- Similar but different vehicles
- Seat belts, child seats, driver training, etc.
- Fares vs. donations

# Issues

- Expanding to additional providers adds complexities
- Building a common understanding and working toward a common goal has been challenging.
  - The providers have different interests, objectives, & approach than the vendors.
  - The stakeholders each have different perspectives, language, agendas, skills, knowledge, and understanding



"It is difficult to get a man to understand something, when his salary depends upon his not understanding it."

-Upton Sinclair

# Issues

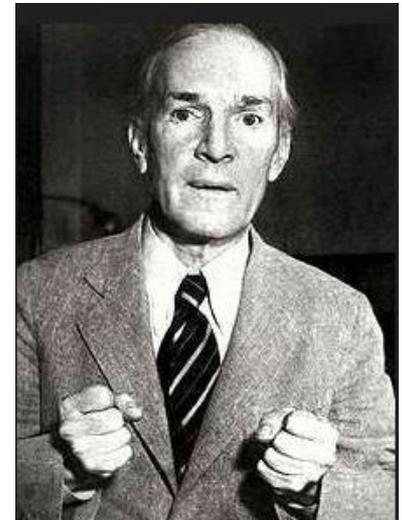
- Agencies must actively work with a complex technical system (not just buying them off the shelf and making do)
  - Requires training to expand their core competency
- Wish to maintain as an open source platform
- We do not have a viable plan for creating an ecosystem around the hub
  - Multiple installations will be needed

# Issues in MSAA Project, continued

- Building a common understanding and working toward a common goal has been challenging
  - Ten months into project, we are not yet under contract with RouteMatch.
  - We do not have a viable plan for creating an ecosystem around the hub.

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# Issues in MSA A Project,

continued

- While our vision has remained the same, the way in which we are achieving it is unexpected.
  - This required a willingness to adjust
- Major change: went from DRMAC regional data exchange hub to the need to build a hub
  - Limited available funding to build out connections to scheduling software programs
  - Decided to use Ride Connection's Clearinghouse
  - Decided to translate the Clearinghouse from Ruby on Rails to JAVA script

# Issues in MSAA Project, continued

- Open source platform:
  - Clearinghouse is open source, and providers wish to maintain
  - Our vendor does not work in Ruby on Rails language, so is shifting to JAVA script
  - This does not support a single program ecosystem
- Major change: went from DRMAC regional data exchange hub to the need to build a hub
  - Limited available funding to build out connections to scheduling software programs
  - Decided to use Ride Connection's Clearinghouse
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# Next Steps

- Complete development of data exchange hub
  - Need decisions on a variety of functionalities and business rules
- Vendors adapt their software
- Test programs in Longmont:
  - Are data flows clean?
  - Can programs produce and consume data flows?
- Test in Seniors' Resource Center and Broomfield Easy Ride
  - With CNRs and other services
  - Test all aspects of operation
  - Verify user interfaces are effective and reports provide needed information