



ERIE
COLORADO

ELEVATE ERIE

Planning Our Future Together



Comprehensive Plan & Transportation Mobility Plan

Transportation Futures Work Session | May 16, 2023

TRANSPORTATION FUTURES SHAPING THE PLAN

1. DESIGN FOR LEGACY
2. SAFETY FOR EVERYONE
3. INVESTMENTS THAT GROW

DESIGN FOR LEGACY

Imagine your favorite street in Erie...

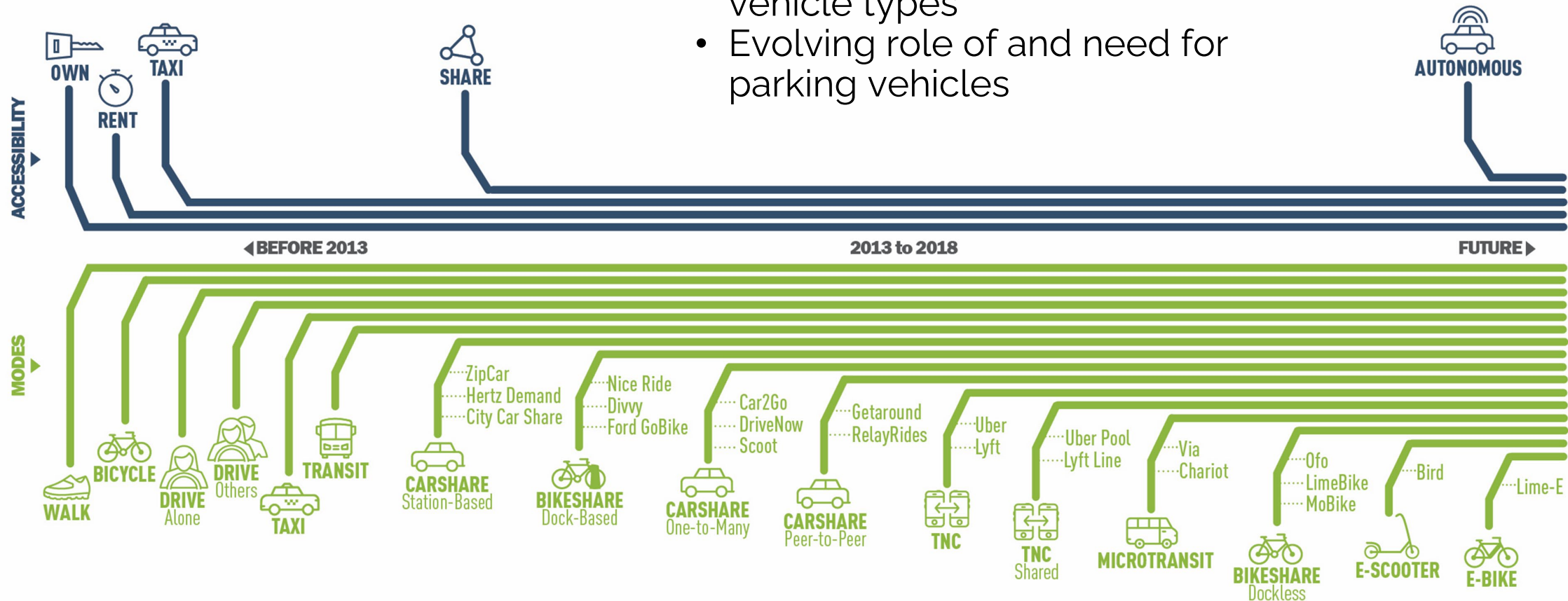
You have a once in a generation opportunity to shape what future residents will experience



DESIGN FOR LEGACY

With streets to serve...

- Durable needs for mobility and freedom to travel
- New travel patterns that are breaking old rules of thumb
- New forms of mobility and vehicle types
- Evolving role of and need for parking vehicles



DESIGN FOR LEGACY

Streets to Serve...

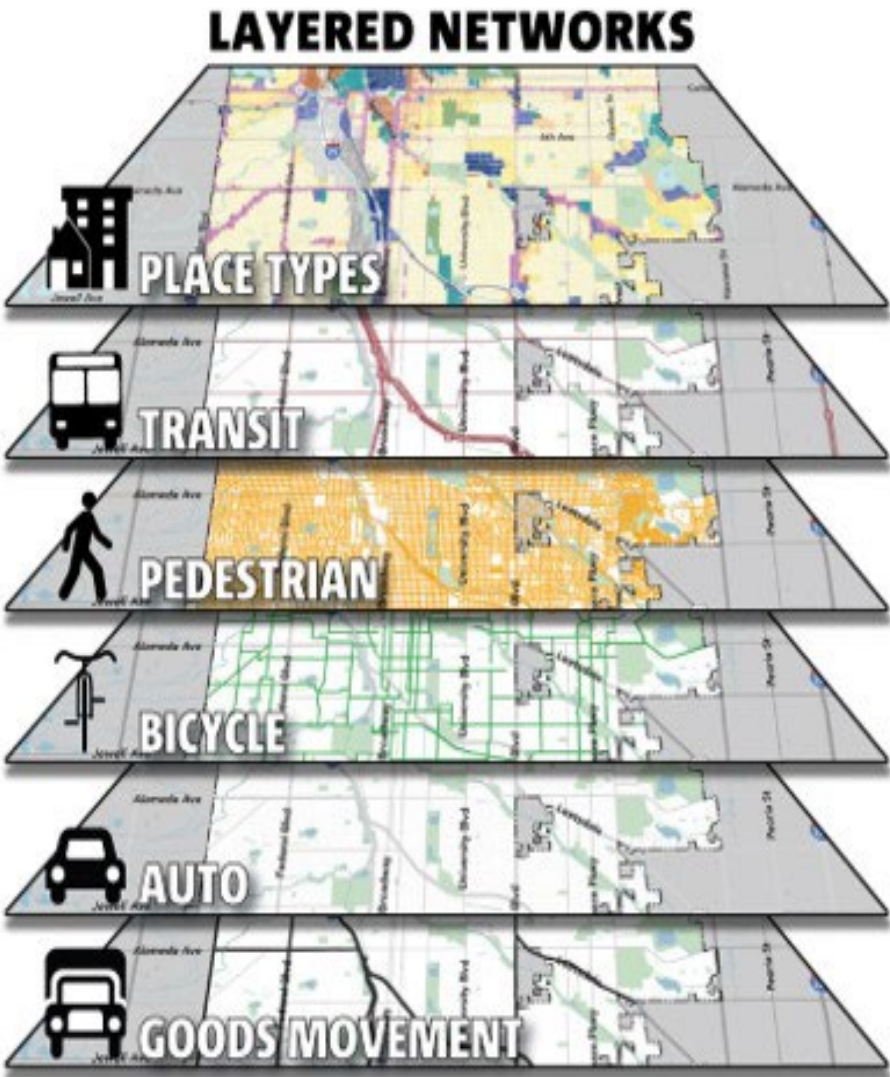
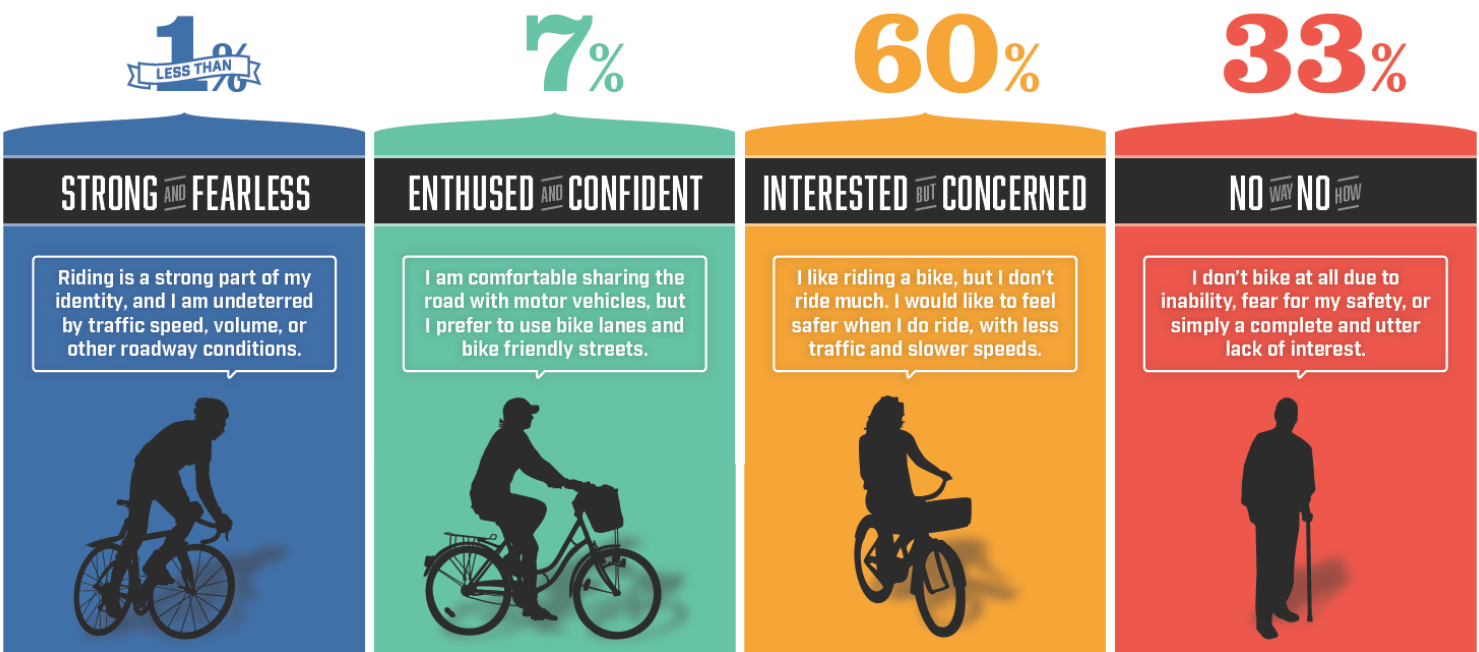
- Human connections
- Community commerce
- Events, parades, protests
- Rambunctious gardens
- Commercial value creation



DESIGN FOR LEGACY

Layered Networks

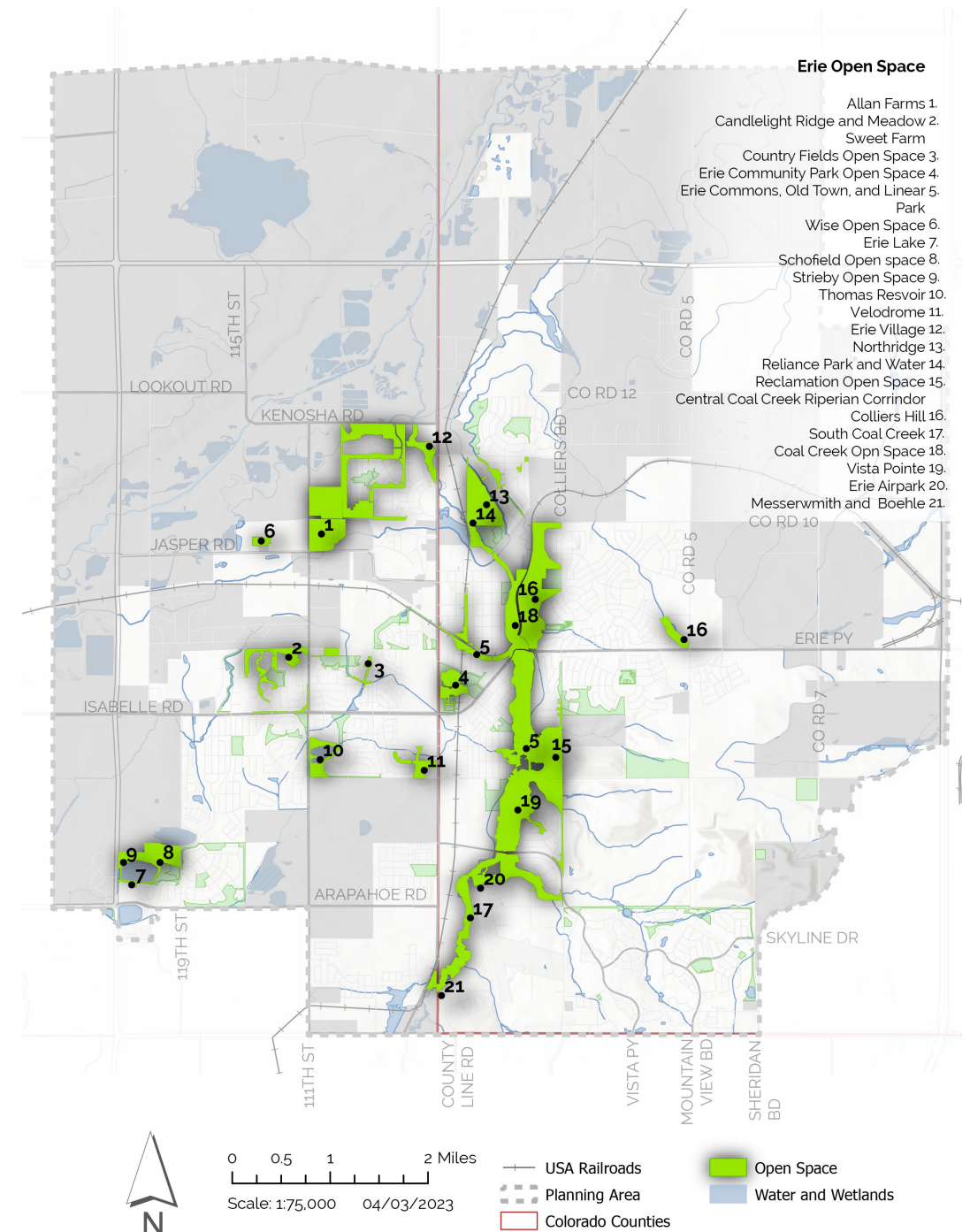
Different people need different things from the network. We can design for multiple objectives.



DESIGN FOR LEGACY

Crossings, Trails, and Transit

With much of the network yet to be developed, the current mix of crossing treatments, modal networks, trail access, and transit service can still be optimized for residents and visitors.



DESIGN FOR LEGACY

Walkable Commercial, Curbs and Parking

The best walkable commercial areas also have high demand for parking. Curb management is expected in these high demand locations, and suburban locations are increasingly questioning the need for parking minimums as demand for walkable commercial streets is rising.



DESIGN FOR LEGACY

Leanings Poll

When you think about the transportation system and the designs that Erie could pursue, are you leaning more toward:

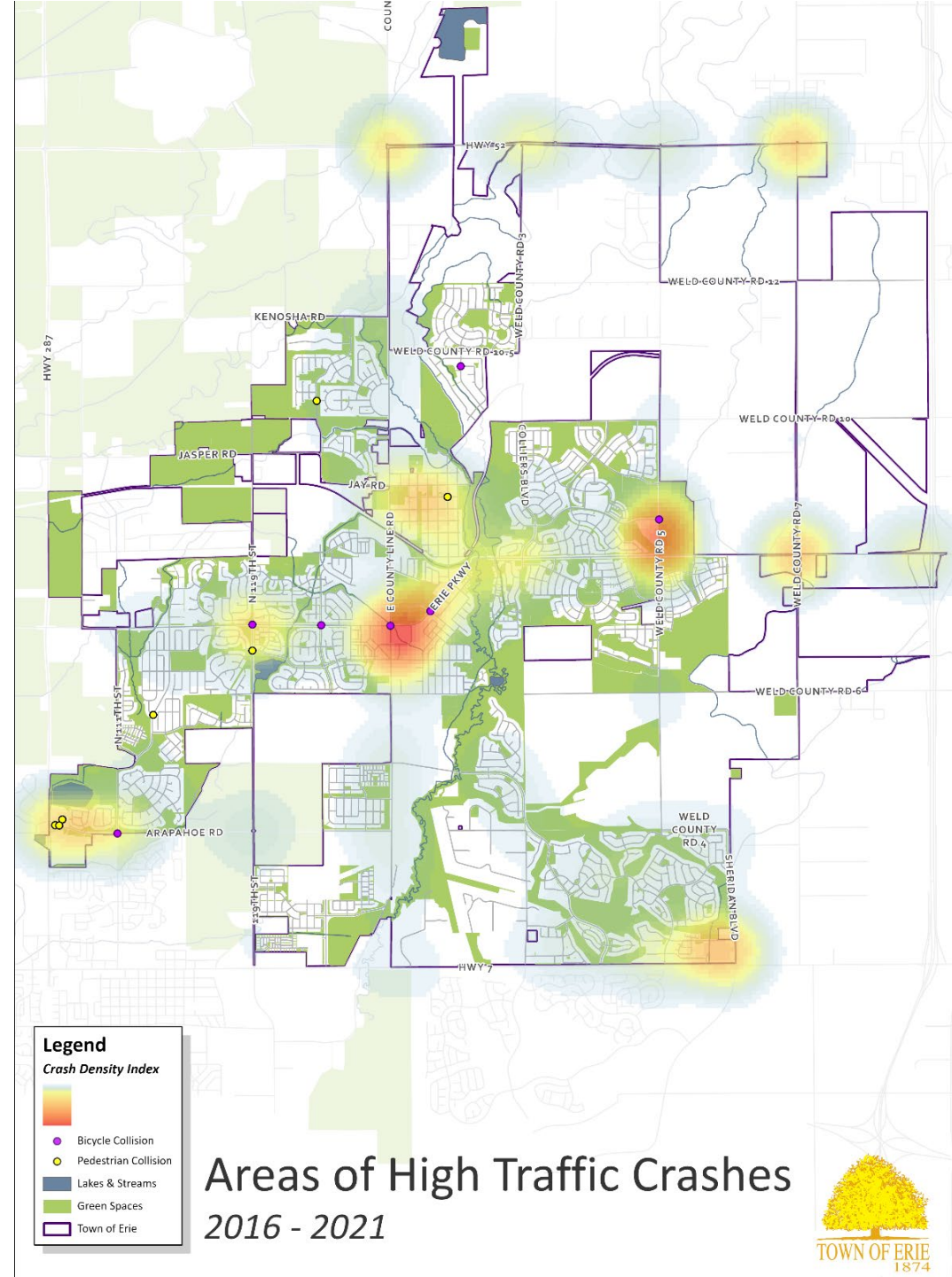
- A new and unique system that is innovating and proving up new concepts
- An efficient implementation of strategies and techniques already proven by others

SAFETY FOR EVERYONE

Vehicle Crash Data

What we are hearing

Traffic volumes are increasing and safety is a challenge for Erie. There is concern and need for regional transportation options, enhanced bike and pedestrian connectivity, and safety improvements along roads. Growth and new development is seen as a primary contributor to traffic congestion and poor road maintenance.



SAFETY FOR EVERYONE

Safe Systems

The Safe System approach aims to eliminate fatal and serious injuries for all road users by:

- Accommodating human mistakes
- Keeping impacts on the human body at tolerable levels



SAFE ROAD USERS



Walk



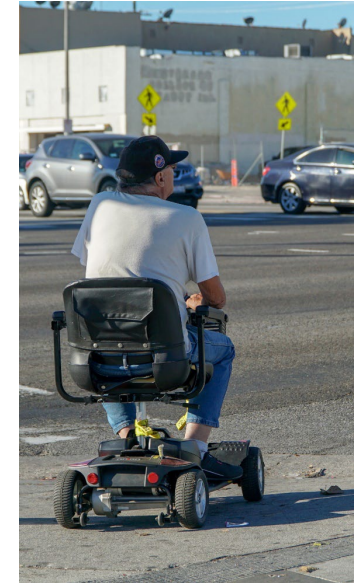
Bike



Drive

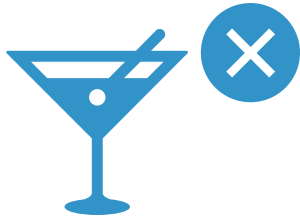


Transit

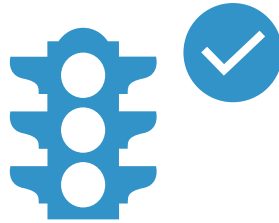


Other

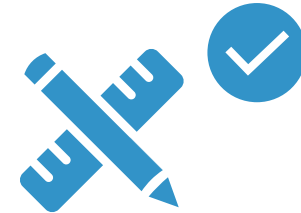
SAFE ROAD USERS – CONTINUED



Not
distracted or
impaired



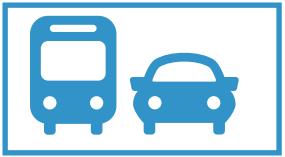
Follow rules



Act within the
limits of the
road design



SAFE VEHICLES



Active safety

Measures to reduce the chance of a crash occurring

- Lane departure warning
- Autonomous emergency braking

Passive safety

Protective systems for when crashes do occur

- Seatbelts and airbags
- Crash-absorbing vehicle crumple zones



SAFE VEHICLES - CONTINUED



Other road user safety

Measures that protect other road users

- Bicyclist and pedestrian detection
- Vehicle size and design

New technology

Leveraging connected and automated vehicle (CAV) technology to improve safety



SAFE SPEEDS



“Speed is at the heart of a forgiving road transport system. It transcends all aspects of safety: without speed there can be no movement, but with speed comes kinetic energy and with kinetic energy and human error come crashes, injuries, and even deaths.”

Organisation for Economic Co-operation and Development



SAFE SPEEDS: REDUCING PEDESTRIAN FATALITIES

Hit by a vehicle
traveling at

23_{MPH}

10% risk of death



Hit by a vehicle
traveling at

42_{MPH}

50% risk of death



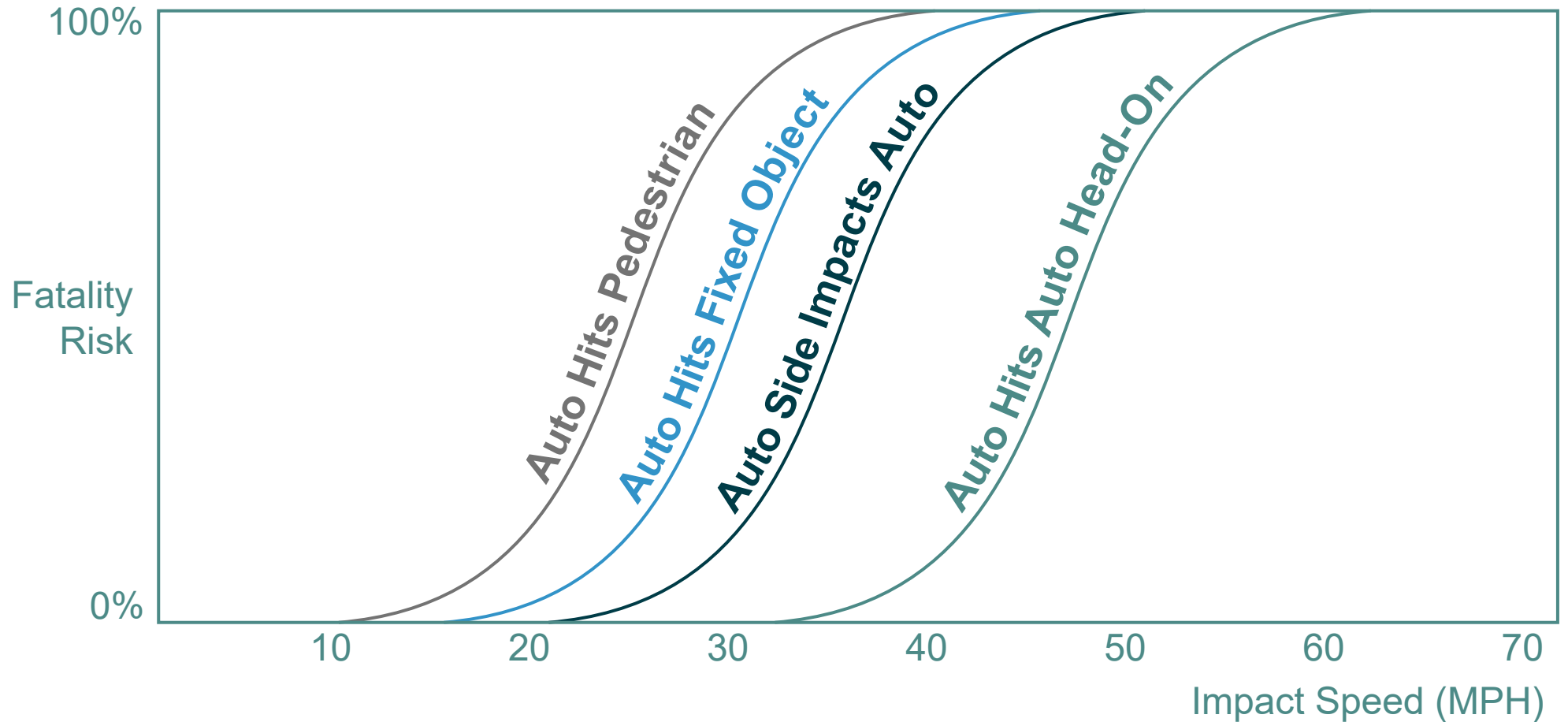
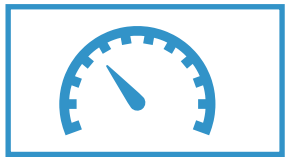
Hit by a vehicle
traveling at

58_{MPH}

90% risk of death



SAFE SPEEDS: FATALITY RISKS



SAFE SPEED: TREATMENTS THAT MINIMIZE INJURIES

Speed through typical intersection



Source: Fehr & Peers

Speed through Safe System intersection



Source: City of Carmel, IN

SAFE ROADS



Safe roads are designed and operated to:

- 1. Prevent crashes**
- 2. Keep impacts on the human body at tolerable levels**



SAFE ROADS: AVOIDING CRASHES



Avoiding crashes involves:



Separating
users in space



Separating
users in time



Increasing
attentiveness
and awareness

SAFE ROADS: CRASH KINETIC ENERGY



Managing crash kinetic energy involves:



**Managing
speed**



**Manipulating
mass**



**Manipulating
crash angles**

SAFE ROADS: ALL ASPECTS OF THE ROADWAY SYSTEM



Safe roads include all aspects of the roadway system:



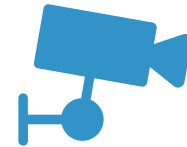
Design



Construction



Maintenance



Operation



POST-CRASH CARE



Vital post-crash actions include:



First responders



Medical care



Crash
investigation



Traffic
incident
management



Justice



SAFETY FOR EVERYONE

Enforcement, Engagement, and Equity



Speeding Countermeasure	Effectiveness	Equity Considerations
Automated Enforcement	High	No contact with officers, fine structure, camera placement
Communications and Outreach Supporting Enforcement	Medium	Low contact with officers, geographic distribution, translation needs
High-Visibility Enforcement	Low	High contact with officers, geographic distribution
Penalty Types and Levels	Low	Variable contact with officers, fine structure

Most effective = 4 or 5 stars on effectiveness, Least effective 1 or 2 stars; effectiveness ratings only shown for crash reduction; Source: Countermeasures that Work: A Highway Safety Countermeasure Guide For State Highway Safety Offices, Ninth Edition 2017 (NHTSA)

DESIGN FOR LEGACY

Leanings Poll

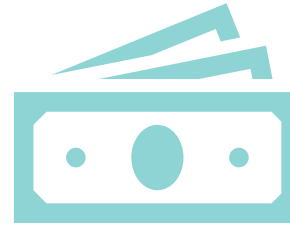
When you think about the safety of the transportation system and the strategies that Erie could pursue, where do you see the greatest need for Town action?

1. Safe road users
2. Safe vehicles
3. Safe speeds
4. Safe roads
5. Post-crash Care

INVESTING FOR GROWTH



What do residents want to see delivered?



How well is the current mix of funding working?

Grants

Sales tax

Voter initiatives

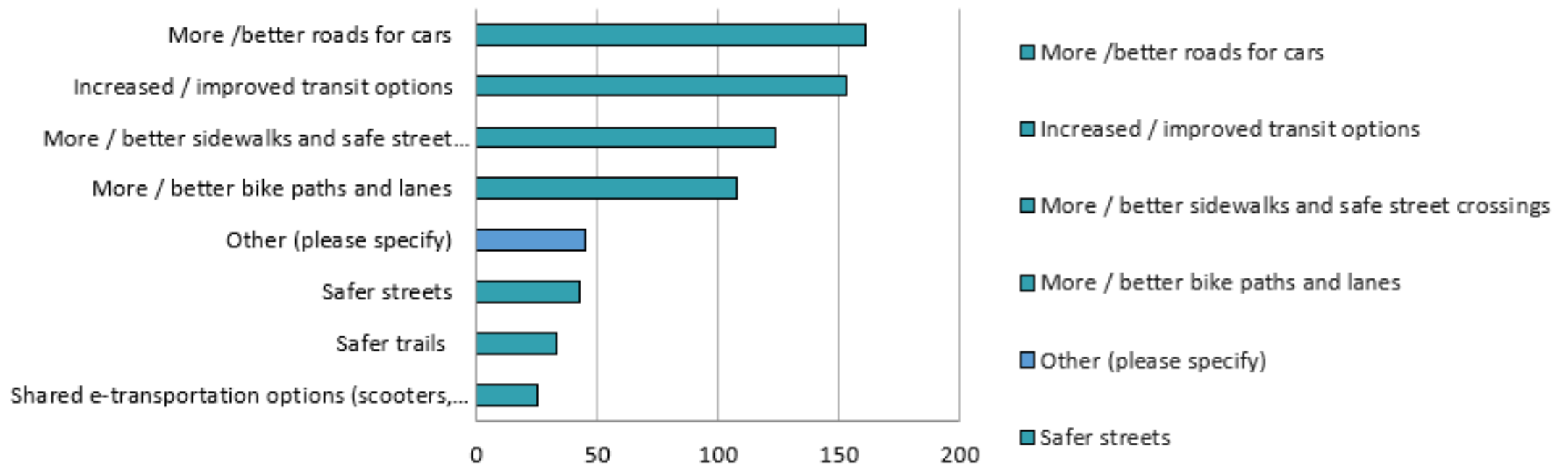
User and property fees

Developer fees

INVESTING FOR GROWTH

What we are hearing

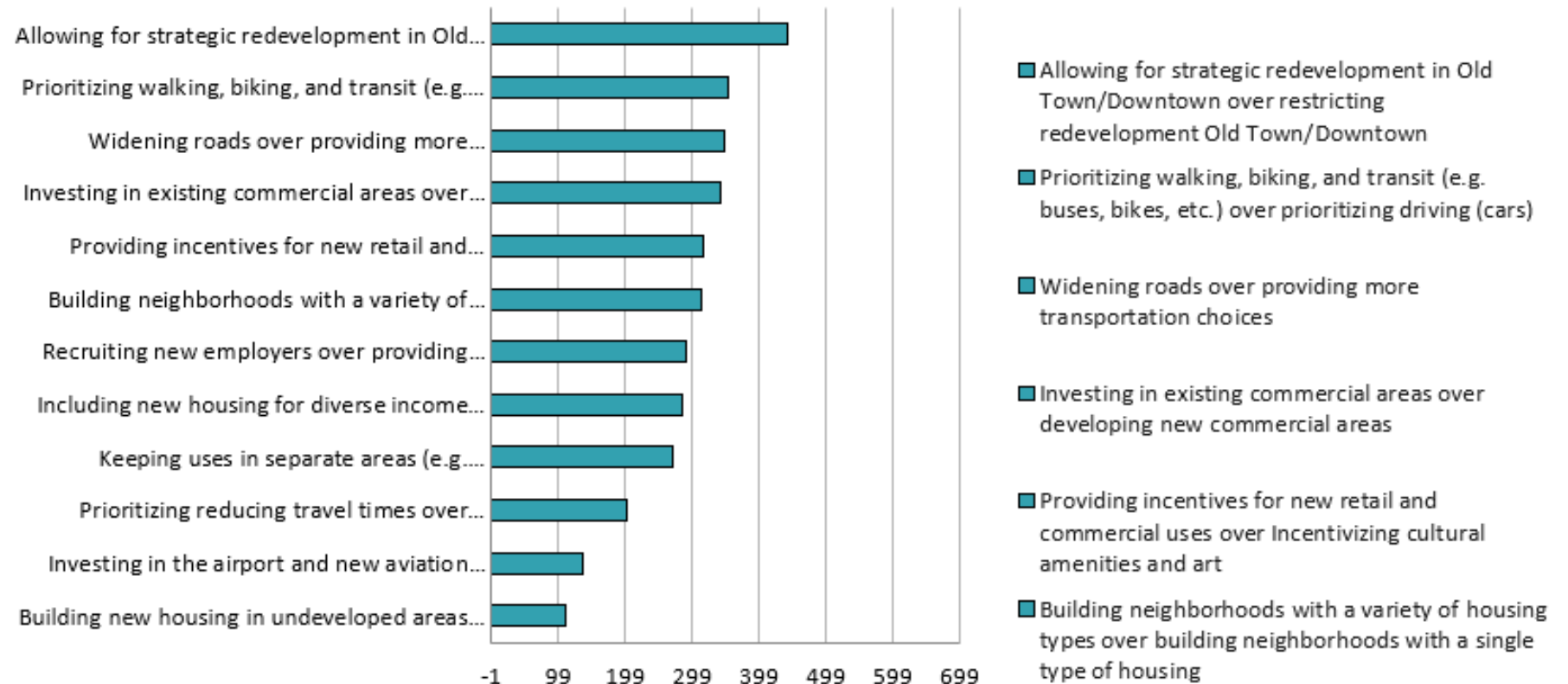
6) What is the most important change you'd like to see around transportation? (select top response)



INVESTING FOR GROWTH

What we are hearing

7) We want to better understand what direction the community wants to go in the future and what topics should be a priority. Which option do you prefer or definitely prefer?



INVESTING FOR GROWTH

Development fees in the region

Erie is charging close to the max supportable fee identified in a 2021 Impact Fee Study and remains an affordable location to develop in the region

Single Family

Communities	Parks & Recreation	Public Facilities	Transportation	Storm Drainage	Water	Raw Water	Sewer	Fire	Police	Other Total	Residential Total
Dacono	\$3,829	\$965	\$4,863	\$497	\$14,500	\$120,000	\$8,790	\$0	\$0	\$0	\$153,444
Frederick	\$2,900	\$1,500	\$0	\$977	\$20,558	\$97,500	\$5,650	\$0	\$0	\$4,000	\$129,085
Firestone	\$3,760	\$1,881	\$3,828	\$1,356	\$18,200	\$68,200	\$5,650	\$0	\$0	\$0	\$103,494
Lafayette	\$1,350	\$0	\$0	\$2,258	\$9,706	\$43,000	\$6,360	\$0	\$0	\$7,650	\$70,324
Louisville	\$6,325	\$0	\$3,052	\$0	\$14,100	\$39,400	\$5,500	\$0	\$0	\$149	\$68,526
Longmont	\$7,236	\$0	\$1,811	\$958	\$13,400	\$31,170	\$6,080	\$0	\$0	\$0	\$60,655
Erie (Proposed)	\$2,451	\$3,739	\$5,598	\$1,628	\$12,050	\$16,243	\$8,860	\$0	\$686	\$1,270	\$52,525
Erie (Existing)	\$4,100	\$2,009	\$6,231	\$1,628	\$12,050	\$16,243	\$8,860	\$0	\$0	\$0	\$51,121
Broomfield	\$0	\$0	\$0	\$4,580	\$24,756	\$0	\$12,559	\$688	\$0	\$0	\$43,283
Superior	\$0	\$0	\$0	\$3,170	\$24,808	\$0	\$5,043	\$0	\$0	\$0	\$33,021

INVESTING FOR GROWTH

External Funding Programs

DRCOG Grants, Federal Grants, and Sales Tax funding are variable year over year, but can be significant project accelerators for major infrastructure projects

Project Funding Request @ DRCOG

State Highway 52 Design

	Total	Percent
DRCOG	\$280,000	80%
Weld County	\$17,500	5%
Erie	\$52,500	15%
Total Project Cost	\$350,000	100%

I-25 Multimodal Interchange Study

	Total	Percent
DRCOG	\$400,000	80%
Weld County	\$25,000	5%
Erie	\$75,000	15%
Total Project Cost	\$500,000	100%

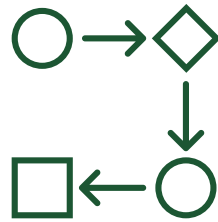


INVESTING FOR GROWTH

Grant

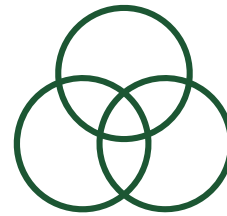
Competitiveness

Grants are extremely competitive and matching local priority projects to the best grant programs takes time and skill.



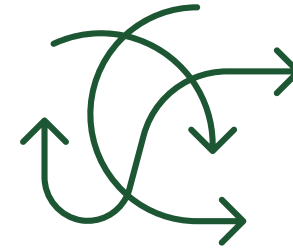
Develop Understanding

Understand the criteria and selection process for grant programs.



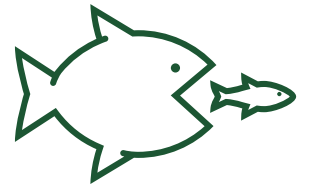
Benchmark Competitiveness

Use this to benchmark how the project/ agency are likely to compete.



Facilitate Hard Conversations

Sometimes a project isn't very competitive. In those situations, resources could best be used to position that project and others for the best grant source.



Other Reasons

Sometimes there are other reasons to submit including getting the materials together for another program.

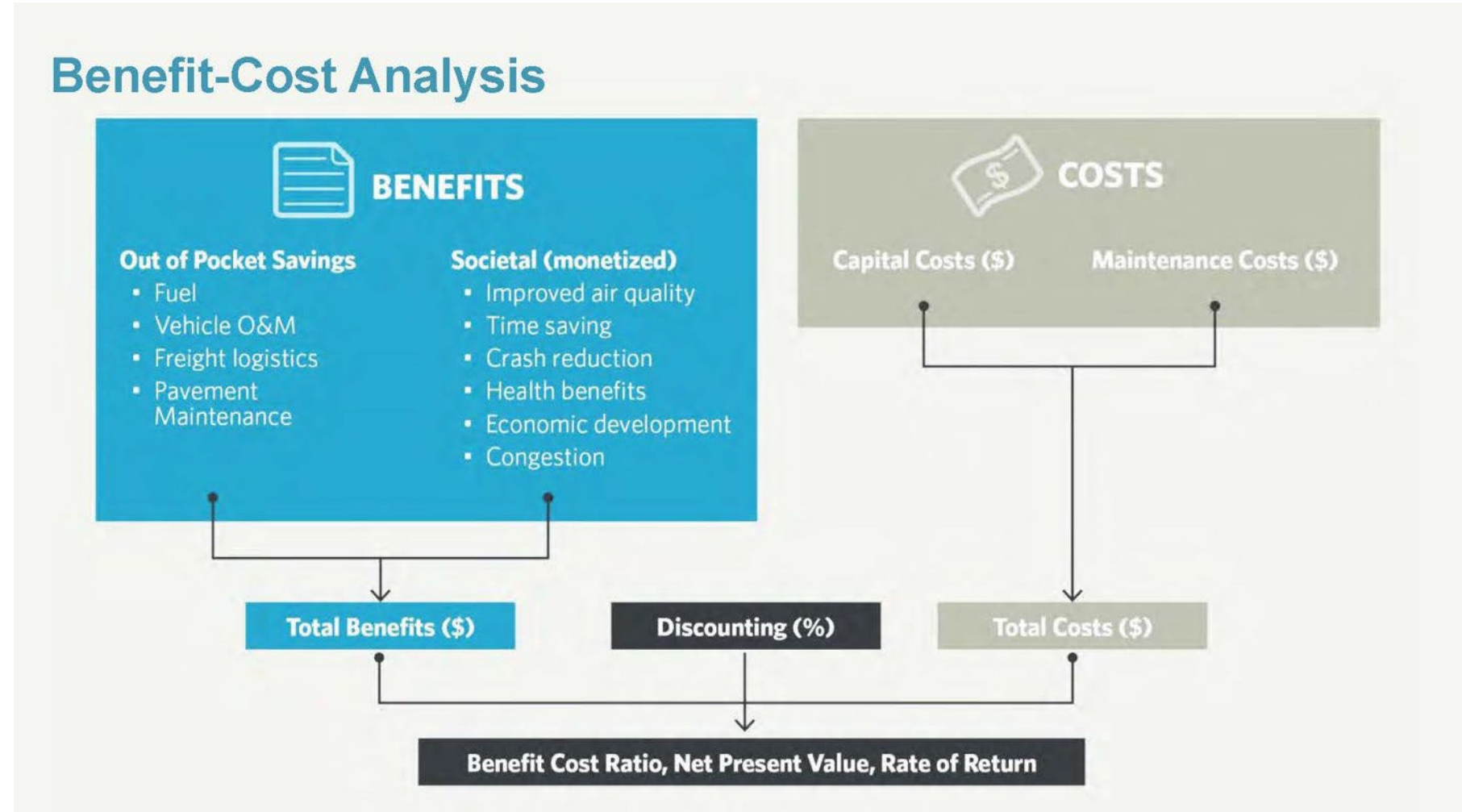


INVESTING FOR GROWTH

Grant

Competitiveness

Presenting the benefits and costs in a comprehensive, accurate, and easy to read format will help reviewers and legislative representative understand the project's value to the region and the community.



FUNDING

2019 Town of Windsor Transportation Improvement Projects = \$12.7 million*



78%



11%



11%

**Transportation reserves and TMP cost not included in \$14M total*

Future Town of Windsor and External Grant Funding Goals



33%



33%



33%

INVESTING FOR GROWTH

Investment risk and security

Some sources of funding are more durable through the ups and downs of recessionary cycles. Transportation maintenance and operations are critical to community health and well-being and many older cities have built more infrastructure than their annual budget can maintain.



BUDGETING FOR OUTCOMES

Neighborhood Livability
& Social Health



Culture & Recreation



Economic Health



Environmental Health



Safe Community



Transportation
& Mobility



High Performing
Government



DESIGN FOR LEGACY

Leanings Poll

When you think about the transportation system and the investments that Erie could pursue, are you leaning more toward:

- Sources that maximize external funding potential
- Sources with secure and ongoing self-sufficiency

MICROTRANSIT IN ERIE

1. WHAT IS IT?
2. SOME EXAMPLES AND USE CASES
3. HOW IT COULD BE DEPLOYED IN ERIE

MICROTRANSIT BASICS

Characteristics

Demand response transit using a smartphone app (or dispatch) to fulfill trips in real-time

Corner to corner drop off and pick up

Connects lower to mid-density residential to key activity centers and/or high frequency transit

Smaller vehicles such as vans or even small electric shuttles

Operational considerations

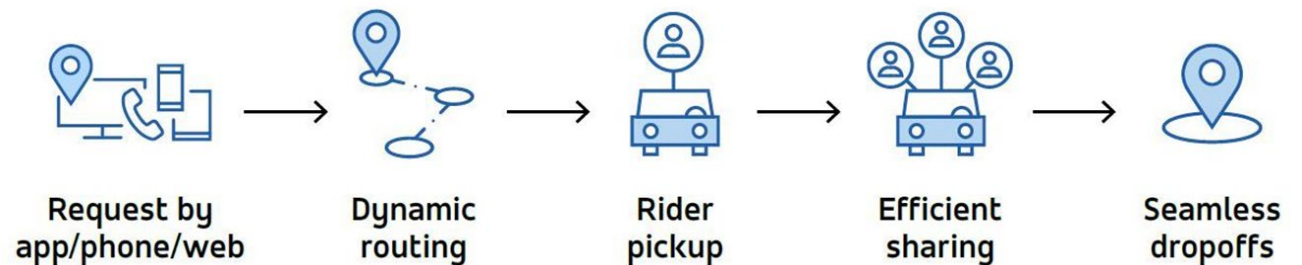
Operates as point-to-point within a defined zone or as a flex route with established time points

Can be contracted turn-key or agency operated with purchased ride-matching technology

Productivity is generally lower (3-6 passengers per hour) compared to fixed route

How it works:

Source: High Valley Transit (UT)



MICROTRANSIT USE CASES

1. First-last mile connections to/from high frequency transit
2. Coverage option for areas difficult to serve with fixed route, to replace fixed route or expand connectivity
3. To expand hours of public transit availability
4. Enhancing ADA paratransit or existing demand response services
5. Comingling ADA and general public trips
6. Downtown circulation, parking relief



LESSONS LEARNED

- Riders love it
- Elected officials, board members love it
- Zone size and response time estimates are critical
- Microtransit is not a silver bullet – set expectations early
- Microtransit is not cheap - success often means more funding required
- Most rides are not being shared
- Large #s of riders would have walked if service didn't exist
- Most rides are being booked through the app and not call-in
- Stay flexible and adaptable



Answer the “why microtransit?” question and how it fits within broader network

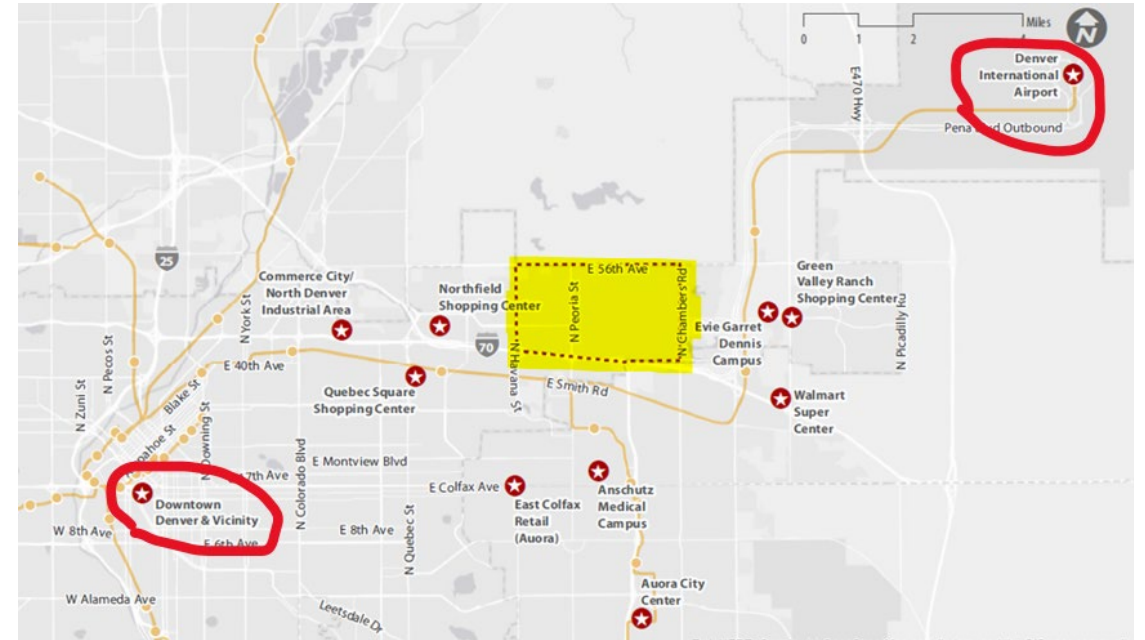


VMT reduction benefit limited

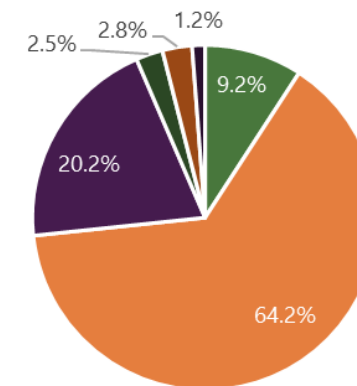


DENVER CONNECTOR: MONTBELLO

- Unique aspects
 - Historically disadvantaged community
 - Operated turn-key by microtransit vendor
 - Intra-neighborhood connections and first/last mile
- First Denver neighborhood microtransit service
 - Launched in October of 2021
 - GES neighborhood launched in October of 2022
- Service area of 5 square miles with three vehicles
 - Being extended with more vehicles this fall



Montbello Neighborhood: Race and Ethnicity



■ White ■ Hispanic or Latino ■ Black or African American ■ Asian ■ Two or more races ■ Other

CONNECTOR: MONTBELLO PERFORMANCE YEAR 1

October 2021 through July 2022

Ridership = 32,000

Passengers per service hour = 5.7

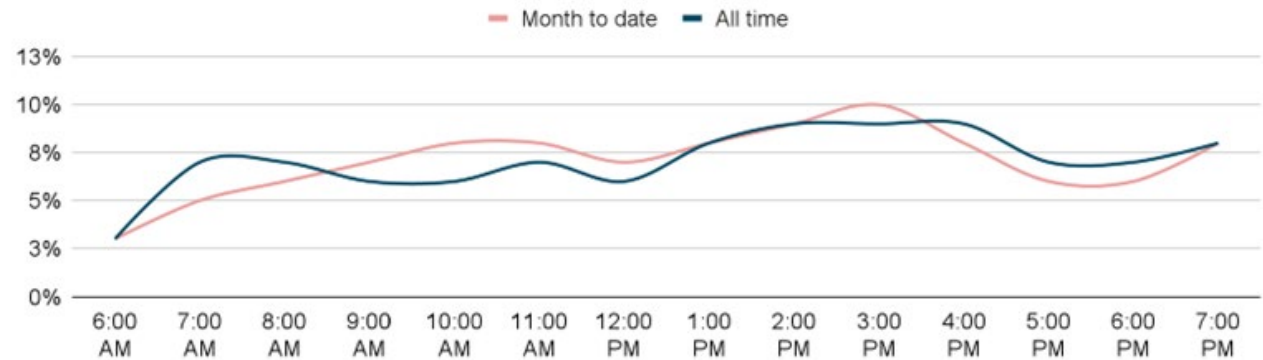
Avg. wait time = 19 minutes

Avg. customer rating = 4.8 out of 5

Shared rides = 25%

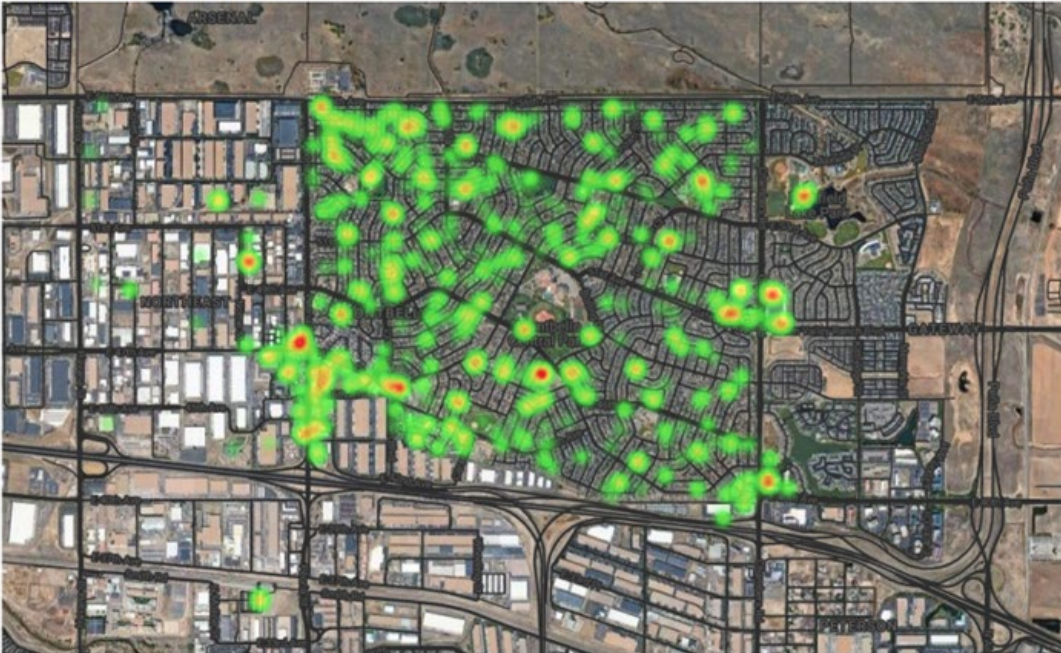
Call-in rides (dispatch created) = 7%

Demand by Hour



CONNECTOR: MONTBELLO TRIP TYPES

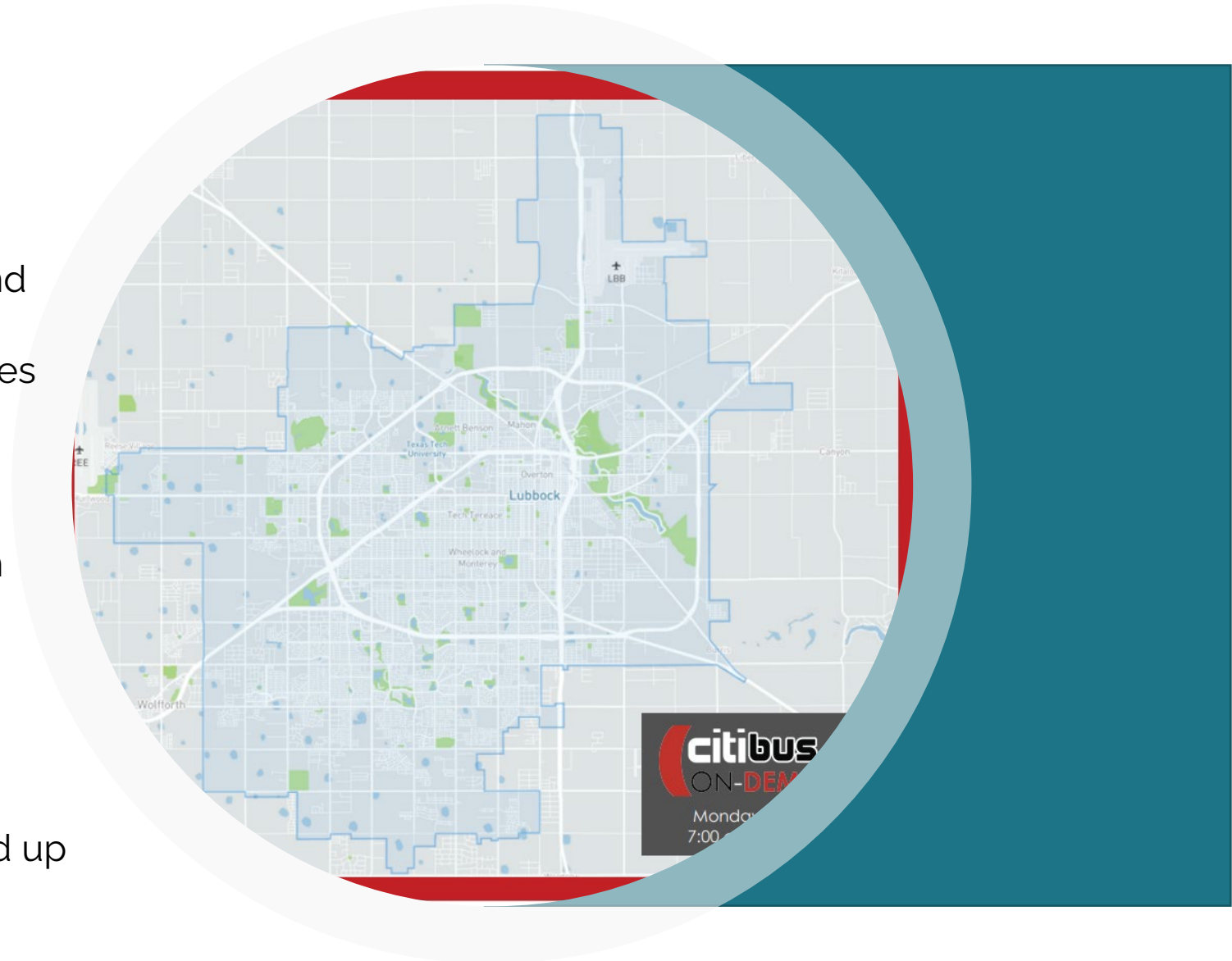
Pickups Heat Map



- Top destinations
 - Community Rec Center
 - Peoria train station
 - Walmart
 - Boys and Girls Club

CITIBUS ON-DEMAND IN LUBBOCK, TX

- Unique aspects
 - Full microtransit zone for entire city and beyond
 - Runs in areas where fixed route services also exist
 - Paratransit and microtransit trips are comingled
- Planning started in 2019, implementation in 2020
 - Pushed up in response to COVID and launched May 2020
 - Agency-operated with technology partner for ride-matching platform
- Huge service area of over 100 sq. miles and up to 24 vehicles



CITIBUS ON-DEMAND RECENT PERFORMANCE

Past 12 months

Ridership = 69,000

Passengers per service hour = 1.9

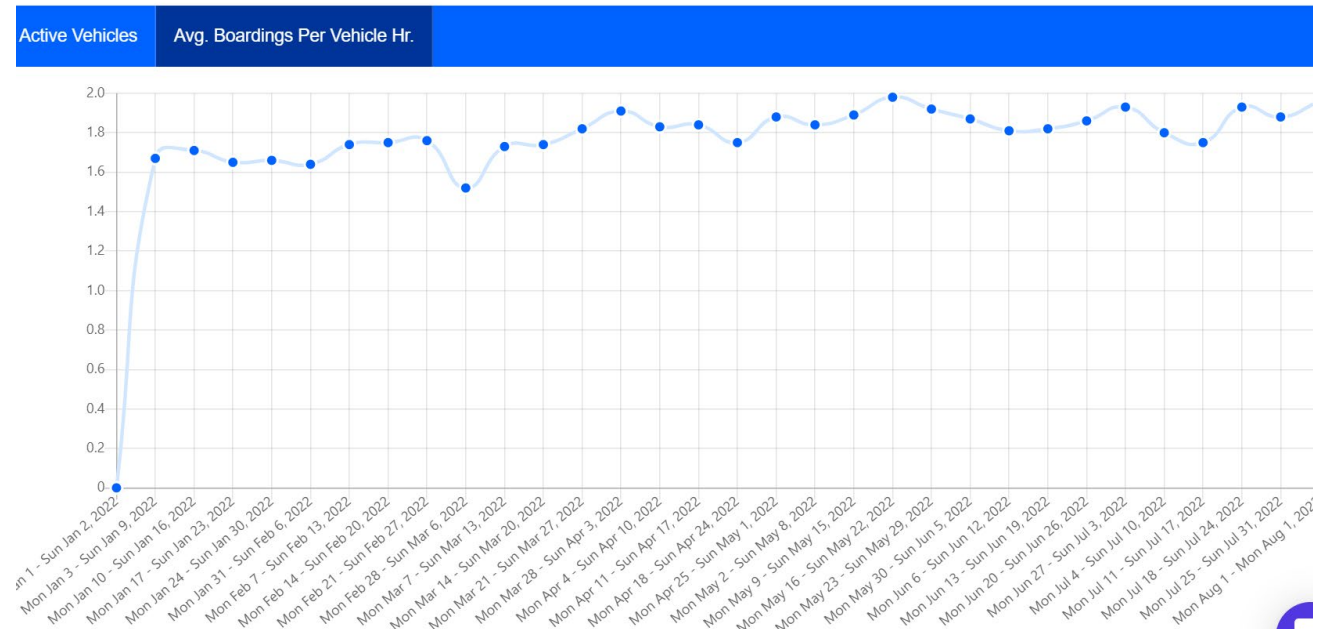
Avg. wait time = 28 minutes

Avg. customer rating = 96%

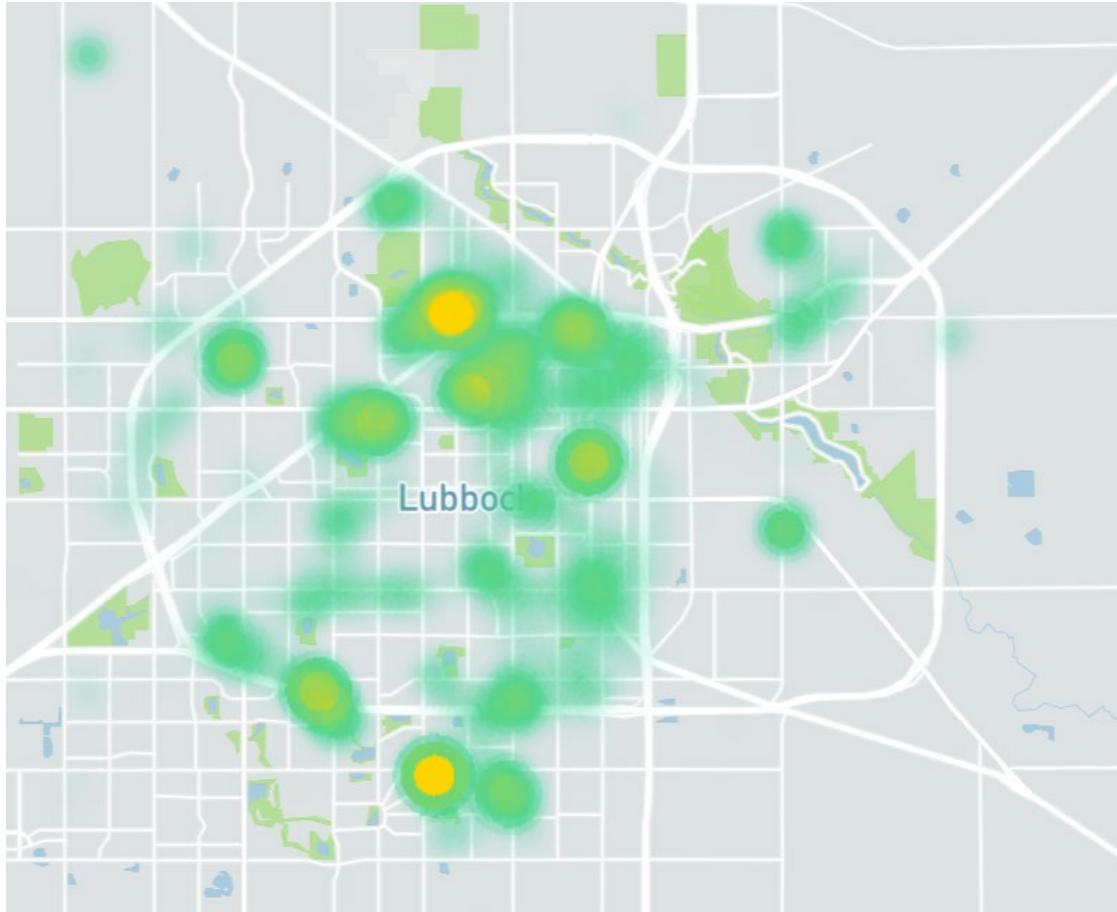
Avg. requests per rider = 30

Call-in rides (dispatch created) = 60%

Shared trips = 53%



CITIBUS ON-DEMAND RECENT PERFORMANCE



- Top destinations
 - Texas Tech
 - Shopping areas
 - Medical services
 - Downtown (incl. transit center)

REGIONAL EXAMPLES

- Link on Demand
- Ride Free Lafayette



Link On Demand





MICROTRANSIT IN ERIE

WHAT IT COULD BE

THE OPPORTUNITY



Improve access for target populations – youth, older adults, commuters



Connect with broader regional transit network



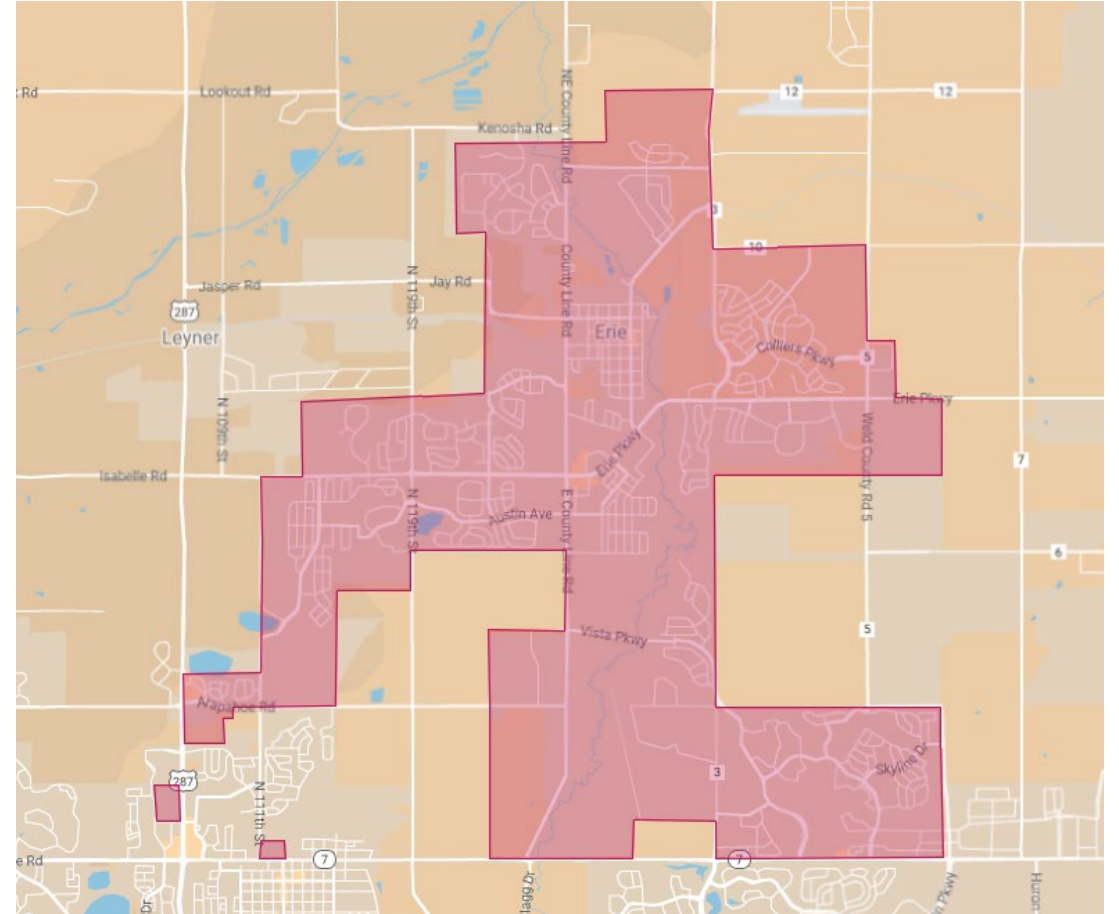
Support Erie transportation, sustainability, quality of life goals



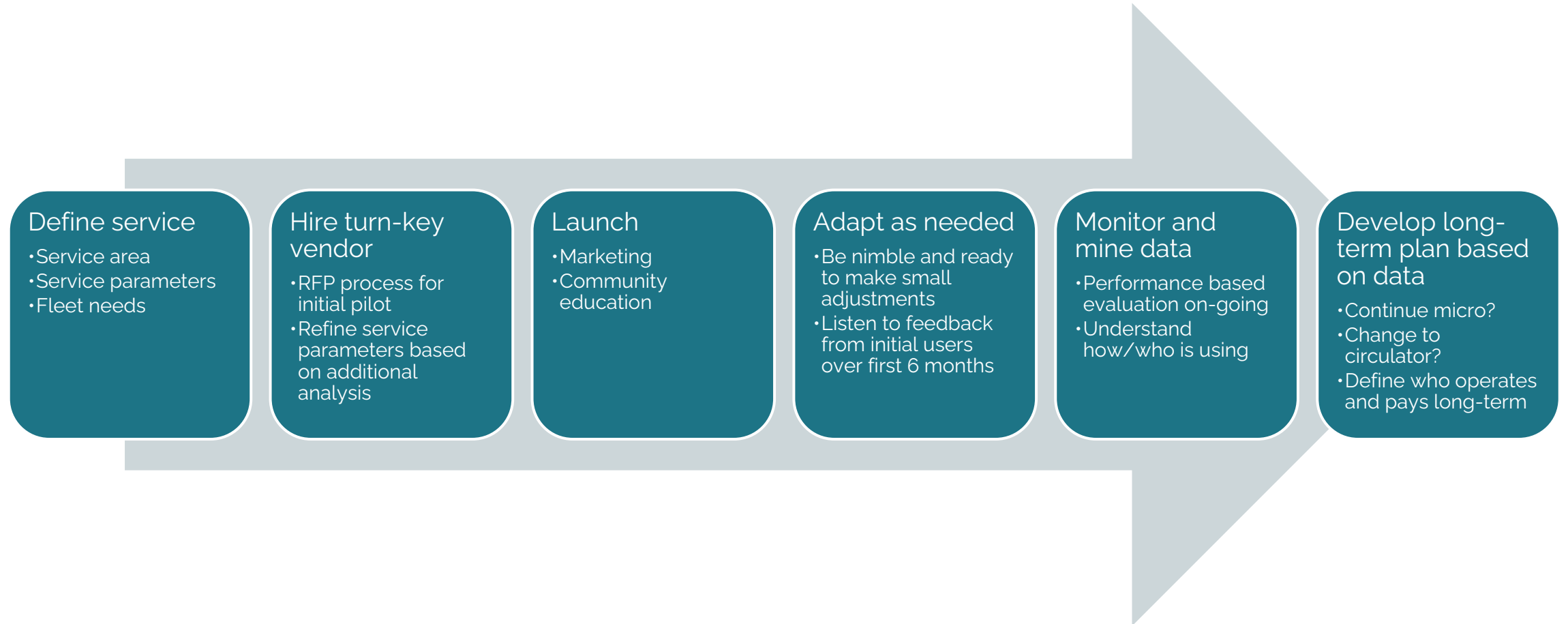
Enable more travel within Erie for community-based trips (shopping, services, recreation)

THE CONCEPT

- Fare free microtransit service
- Service area encompassing all of Erie
- Monday-Friday service
 - 10 hours per day
- Reservations by app, online, or phone
- Responsive and flexible
- Step 1 towards informing future Erie transit options



MICROTRANSIT PILOT PROCESS



IMPLEMENTATION: TURN-KEY MODEL

PROS

Fast
implementation



Low capital
costs



Vendor offers
expertise and scale



CONS

Potentially higher
ongoing cost



Less flexibility
and control



KEY POINT: Turn-key contractors are responsible for supplying everything necessary to deliver day-to-day operations including: vehicles for operations, spare vehicles, supervision of service, drivers, dispatch function, and necessary smart phone app/ridematching technology, in case of microtransit on-demand solution.



FEHR & PEERS SUPPORT OF MICROTRANSIT

1. Stakeholder outreach including community survey
2. Travel needs assessment to refine traveler market informed by location-based cellphone data
3. Refinement of microtransit configurations and set-up parameters
4. Procurement support
5. Implementation support



2023 IMPLEMENTATION SCHEDULE

May/June

- Information sessions with service providers
- Prepare RFP for pilot service providers
- Identify preliminary service plans, branding and other details
- Community outreach (zoom and pop up at ECC)
- Revise preliminary service plans and branding

July/August

- Issue RFP for a service provider
- Select vendor and begin prelaunch activities

September/October

- Service Launch



POLLING QUESTIONS

Q1 - When thinking about microtransit for Erie, what are the top 1-2 ways you see it being used? 1. To get to/from Erie area services (schools, rec center, library, shopping) 2. To get to/from work within Erie 3. To get to/from areas outside of Erie to access medical services, shopping areas, or other services perhaps not available in Erie 3. To get to/from work outside of Erie 4. To get to/from bus stops in order to make longer distance connections.

Q2 - Could you see yourself using a new microtransit service within Erie? 1. Yes 2. No 3. Not sure

Q3- Q3 - Do you think that Erie should take a more active role in management of microtransit and perhaps other transit services long-term? 1. Yes 2. No 3. Not sure

