TOWN OF ERIE
1874

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

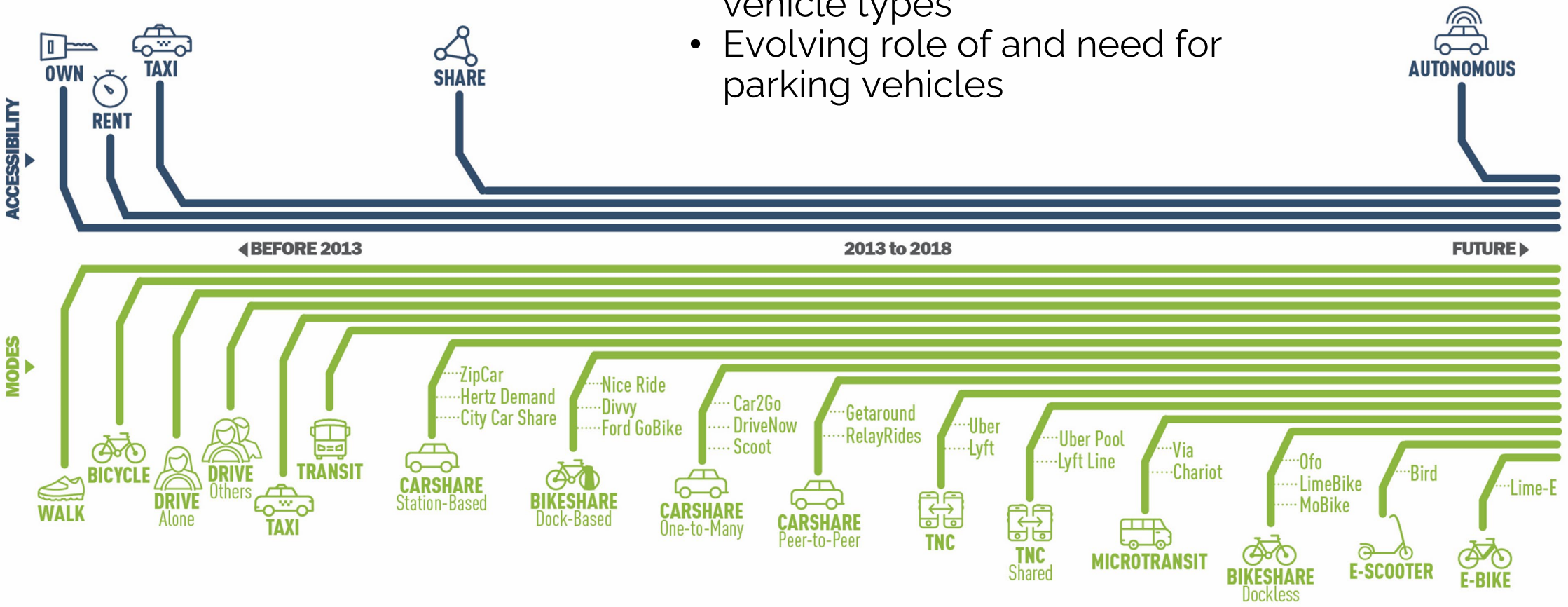
Imagine your favorite street in Erie…

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

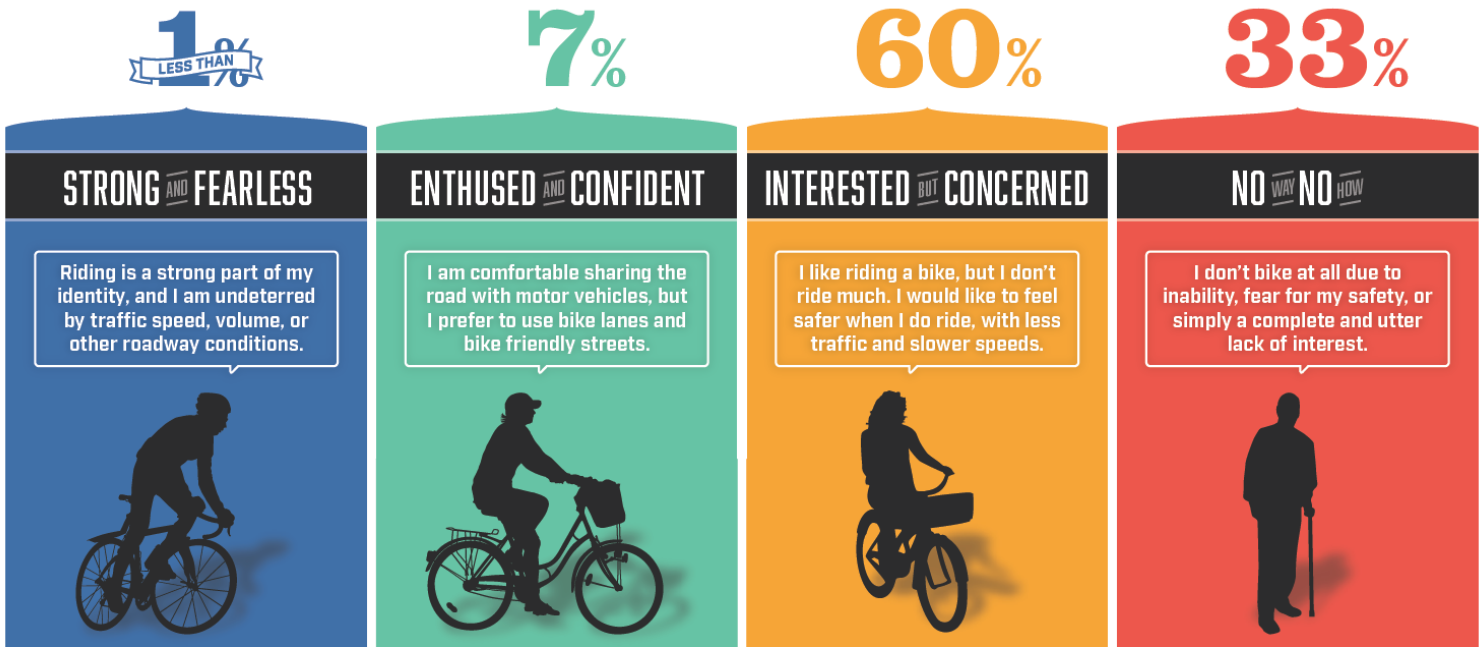
Streets to Serve…

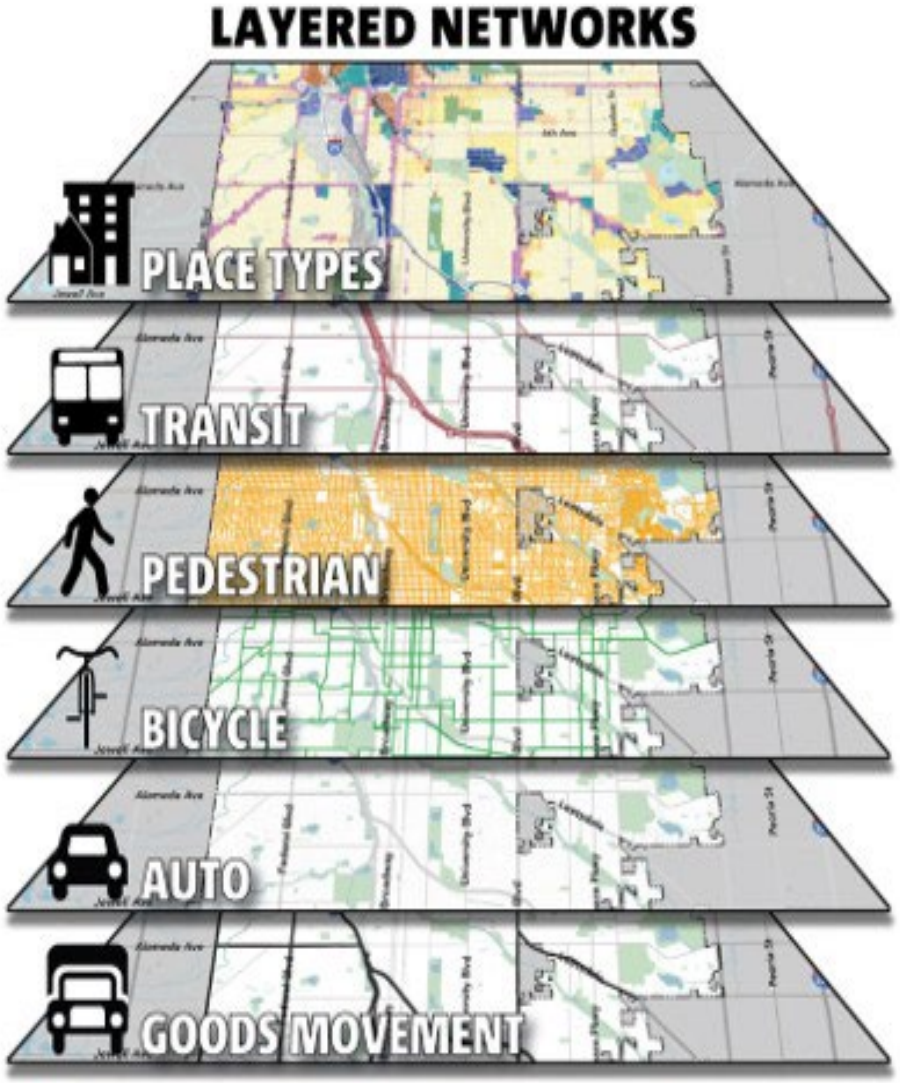
- Human connections
- Community commerce
- Events, parades, protests
- Rambunctious gardens
- Commercial value creation

DESIGN FOR LEGACY

Layered Networks

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

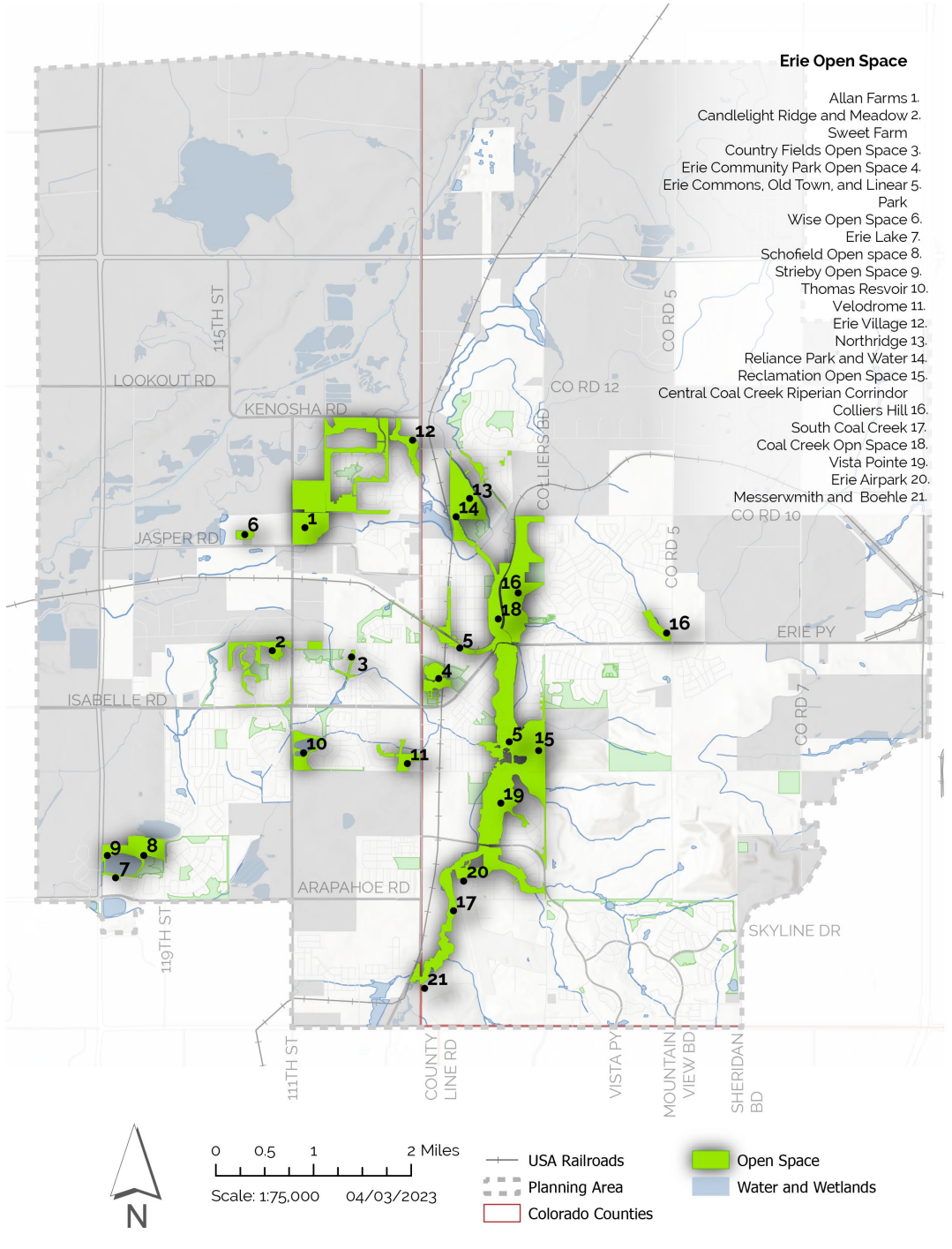




DESIGN FOR LEGACY

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:

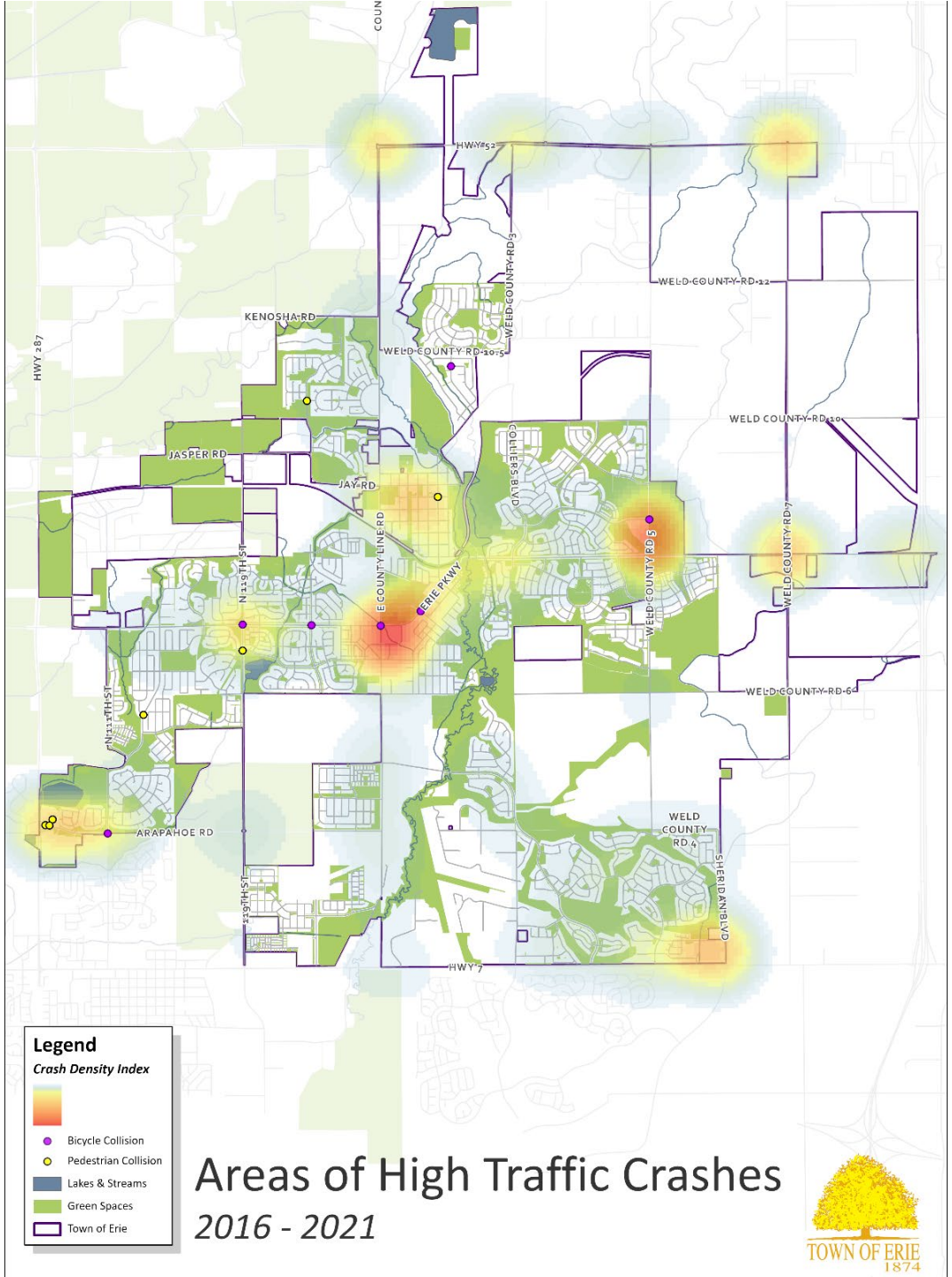
- A new and unique system that is innovating and proving up new concepts
- An efficient implementation of strategies and techniques already proven by others

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

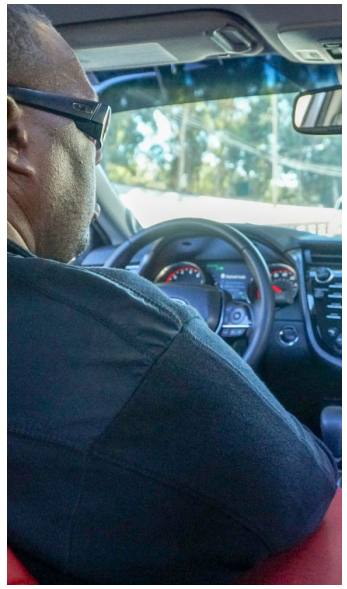
The Safe System approach aims to eliminate fatal and serious injuries for all road users by:

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

SAFE ROAD USERS

Walk

Bike

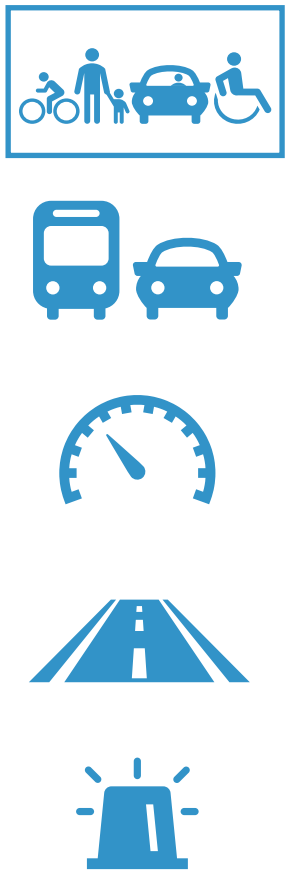


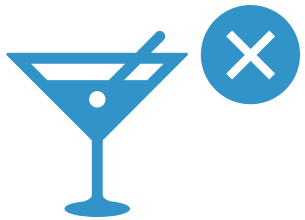
Drive

Transit

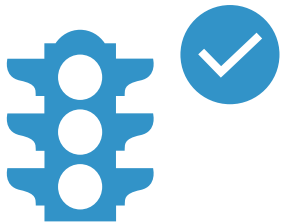
Other

SAFE ROAD USERS – CONTINUED





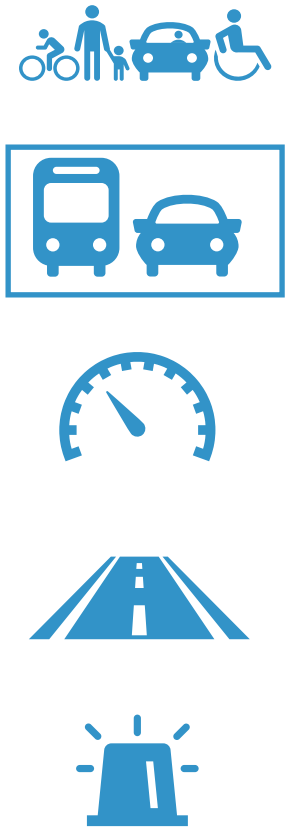
Not distracted or impaired



Follow rules

Act within the limits of the road design

SAFE VEHICLES



Active safety

Measures to reduce the chance of a crash occurring

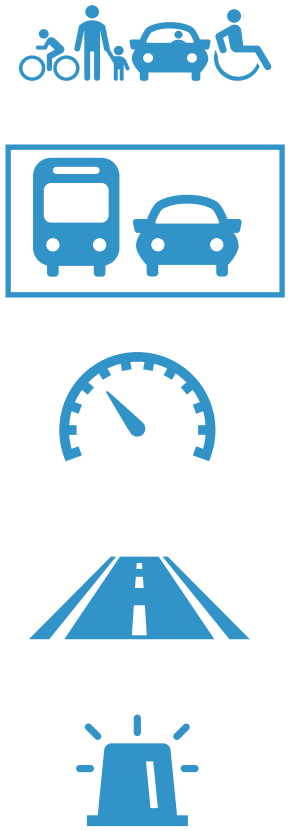
- Lane departure warning
- Autonomous emergency braking

Passive safety

Protective systems for when crashes do occur

- Seatbelts and airbags
- Crash-absorbing vehicle crumple zones

SAFE VEHICLES - CONTINUED



Other road user safety

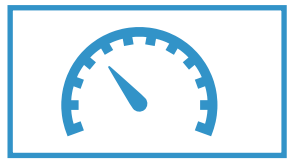
Measures that protect other road users

- 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

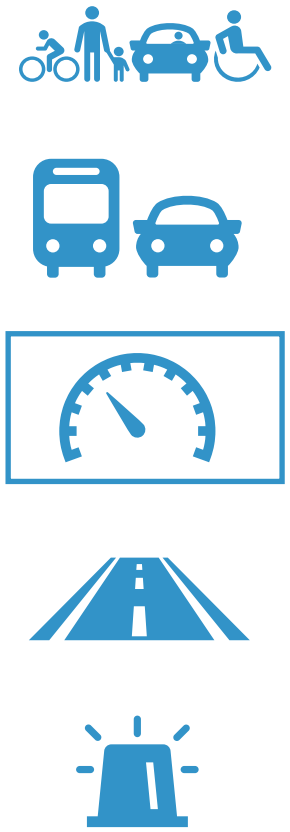
50% risk of death

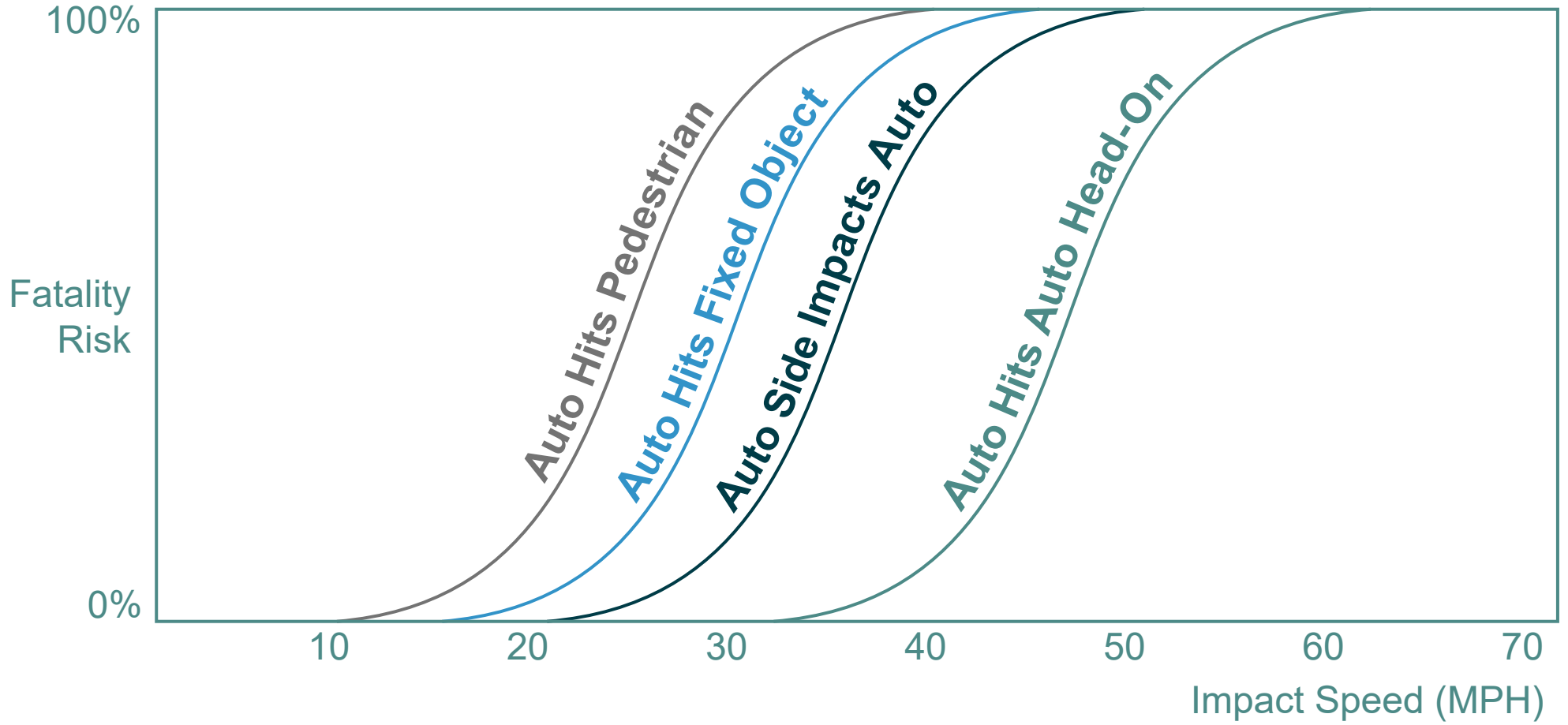
Hit by a vehicle traveling at

58 MPH

90% risk of death

SAFE SPEEDS: FATALITY RISKS





SAFE SPEED: TREATMENTS THAT MINIMIZE INJURIES

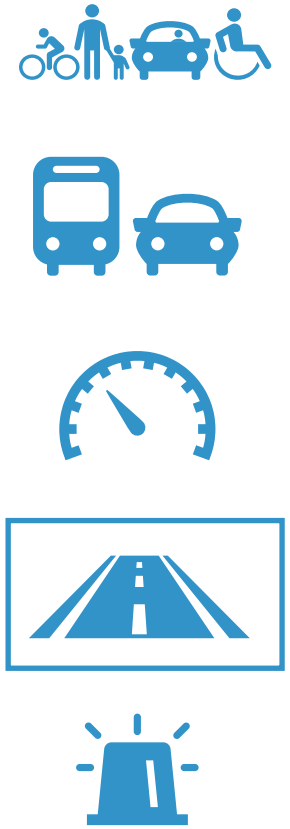
Speed through typical intersection

Source: Fehr & Peers

Speed through Safe System intersection

Source: City of Carmel, IN

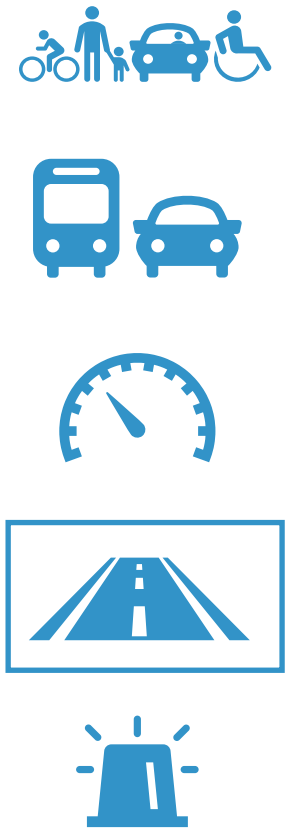
SAFE ROADS



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

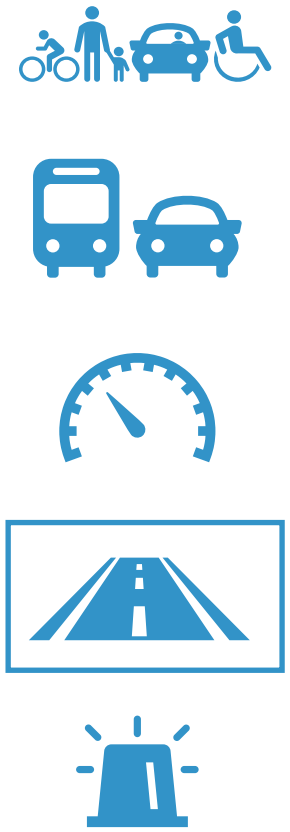
Managing crash kinetic energy involves:

Managing speed

Manipulating mass

Manipulating crash angles

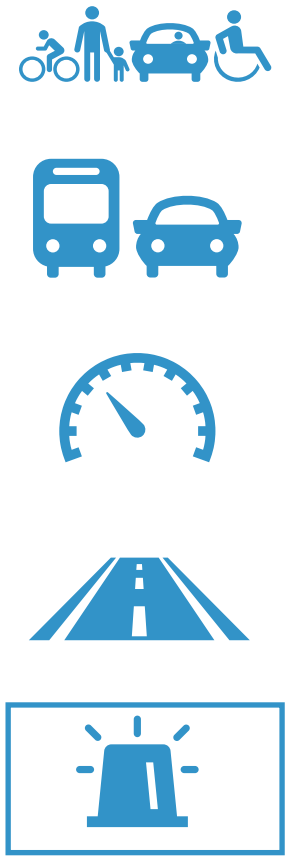
SAFE ROADS: ALL ASPECTS OF THE ROADWAY SYSTEM



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

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

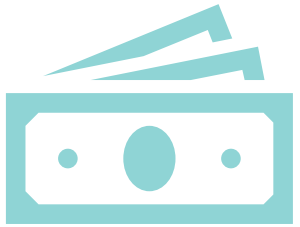
Leanings Poll

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

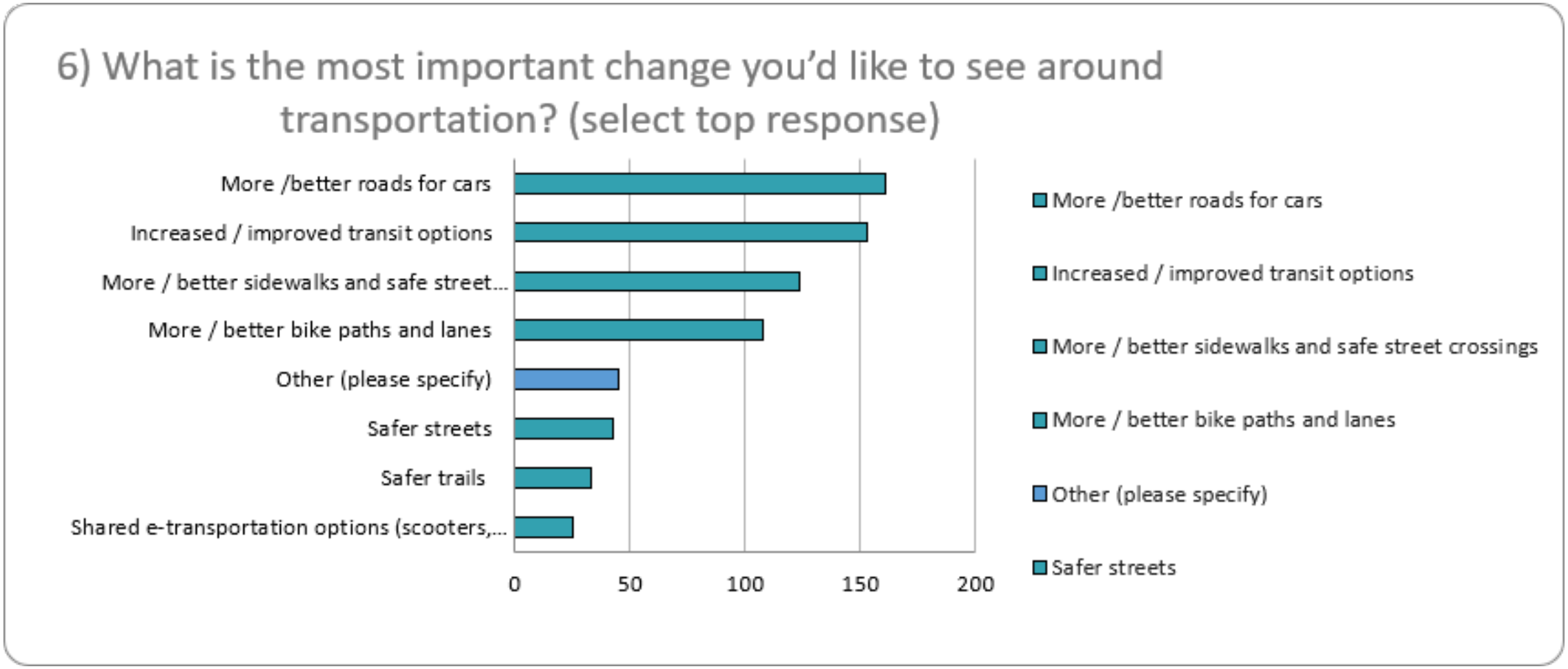
Voter initiatives

User and property fees

Developer fees

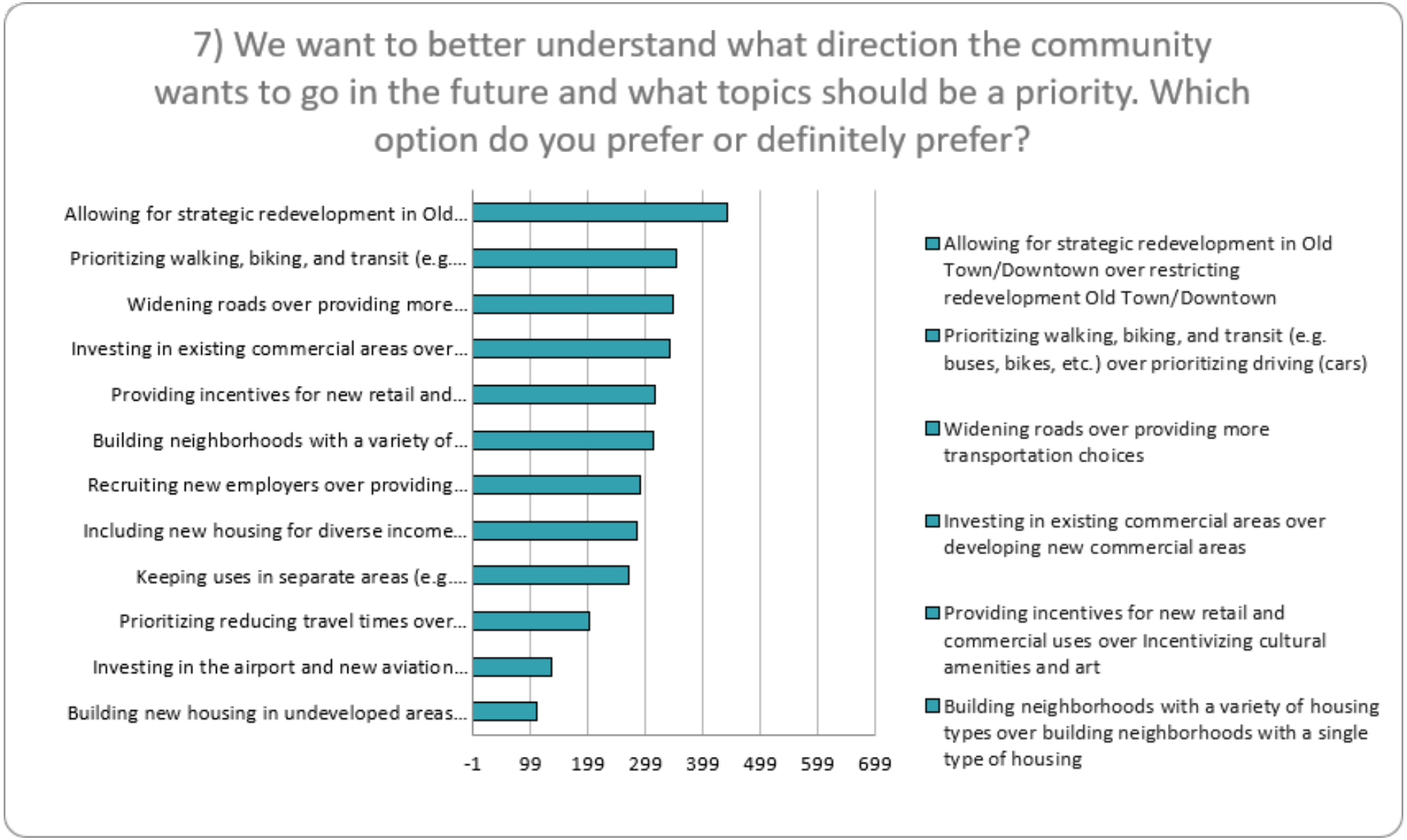
INVESTING FOR GROWTH

What we are hearing



INVESTING FOR GROWTH

What we are hearing



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%**

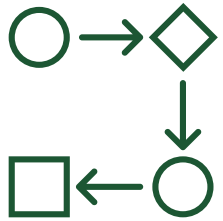
I-25 Multimodal Interchange Study

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

INVESTING FOR GROWTH

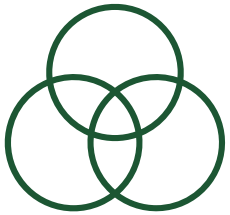
Grant Competitiveness

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



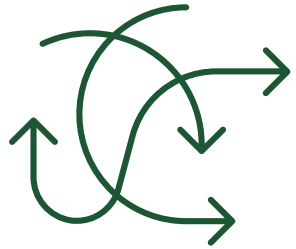
Develop Understanding

Understand the criteria and selection process for grant programs.



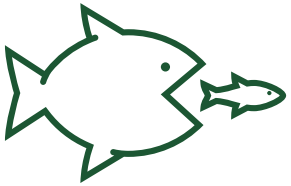
Benchmark Competitiveness

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.



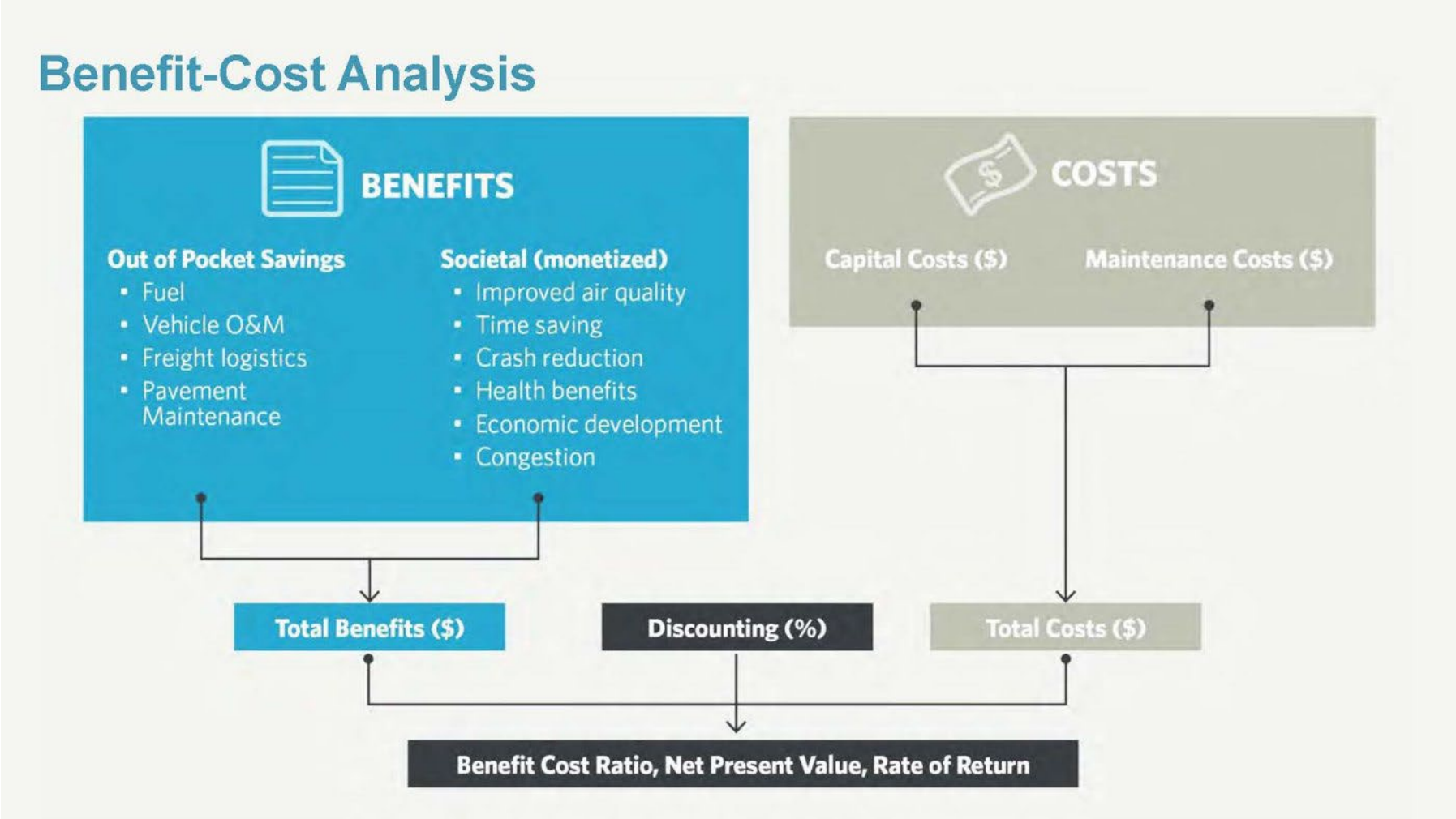
Other Reasons

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%

TOWN OF WINDSOR COLORADO

FEHR & PEERS

FOX TUTTLE HERNANDEZ TRANSPORTATION GROUP

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.

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

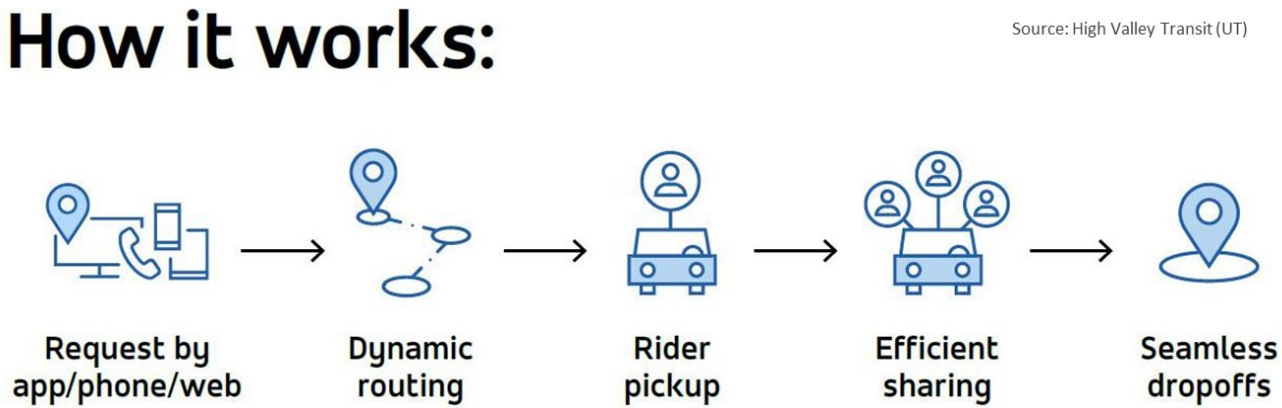
MICROTRANSIT BASICS

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



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

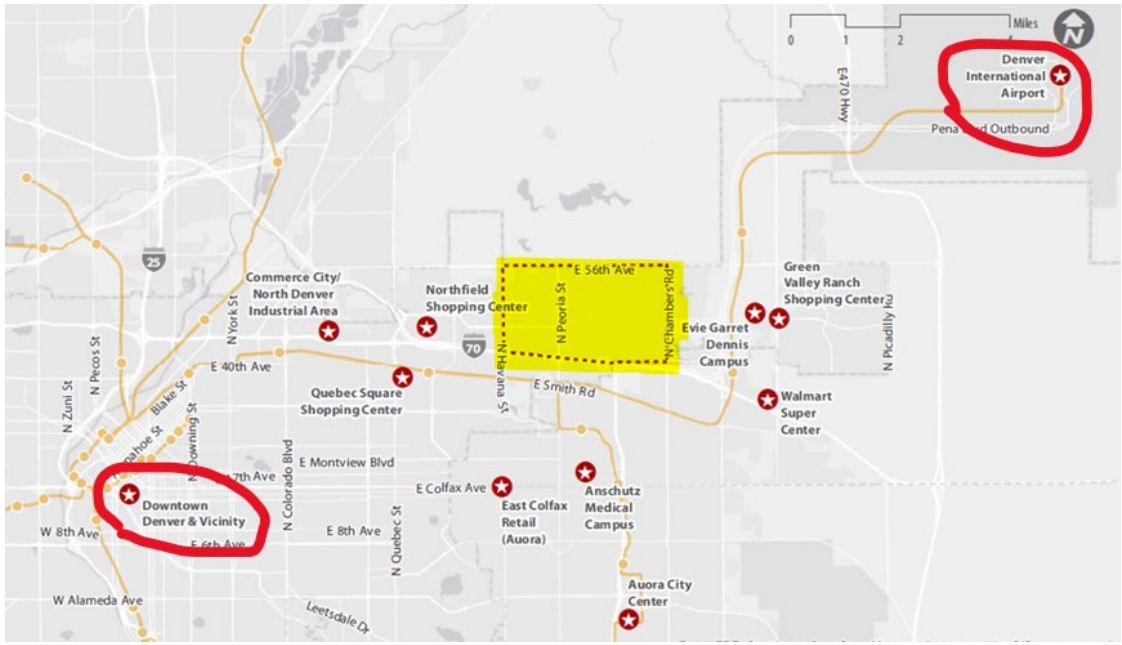
- Riders love it
- Elected officials, board members love it
- Zone size and response time estimates are critical
- Microtransit is not a silver bullet – set expectations early
- Microtransit is not cheap - success often means more funding required
- Most rides are not being shared
- Large #s of riders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

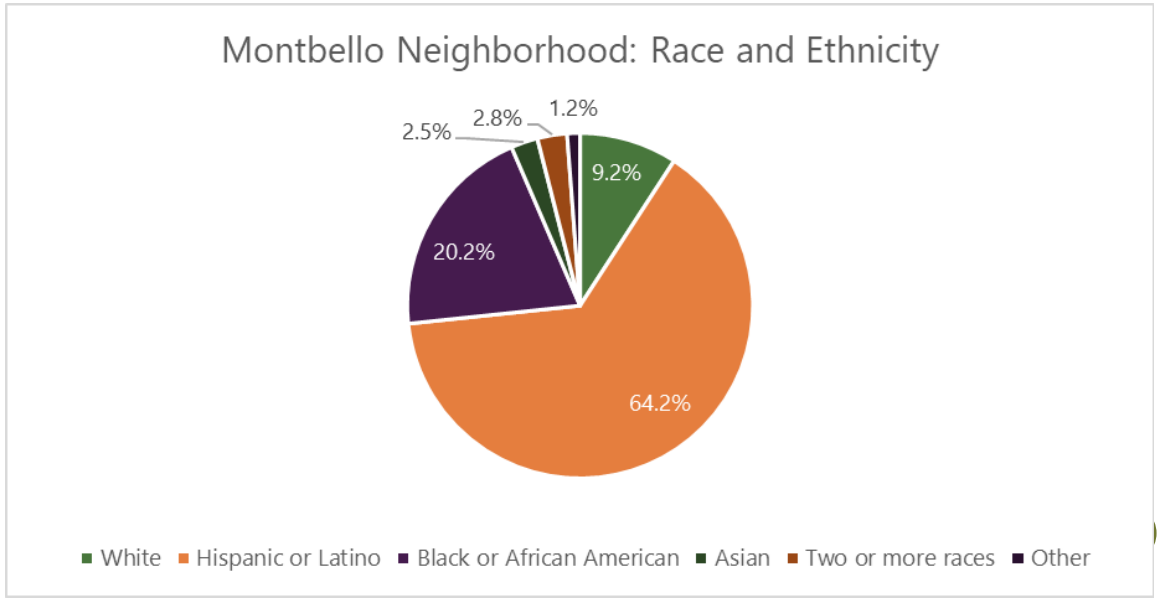
Answer the "why microtransit?" question and how it fits within broader network

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

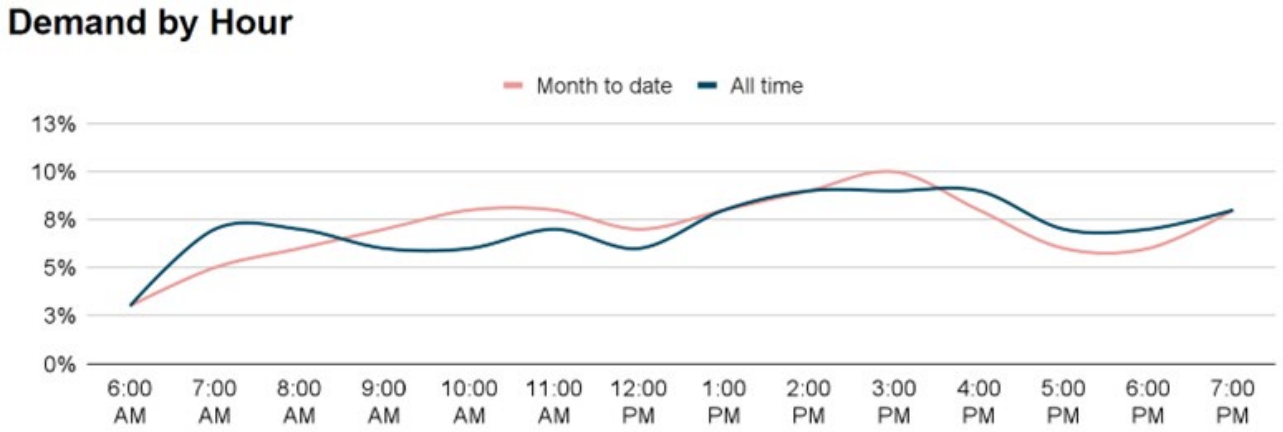




CONNECTOR: MONTBELLO PERFORMANCE YEAR 1

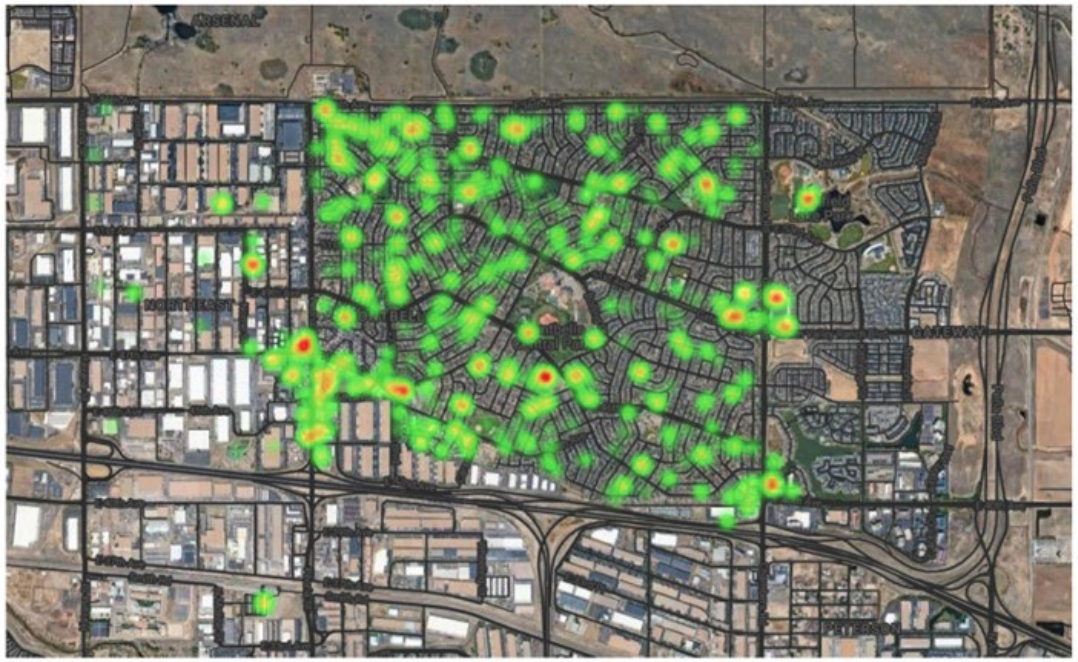
October 2021 through July 2022

- 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%



CONNECTOR: MONTBELLO TRIP TYPES

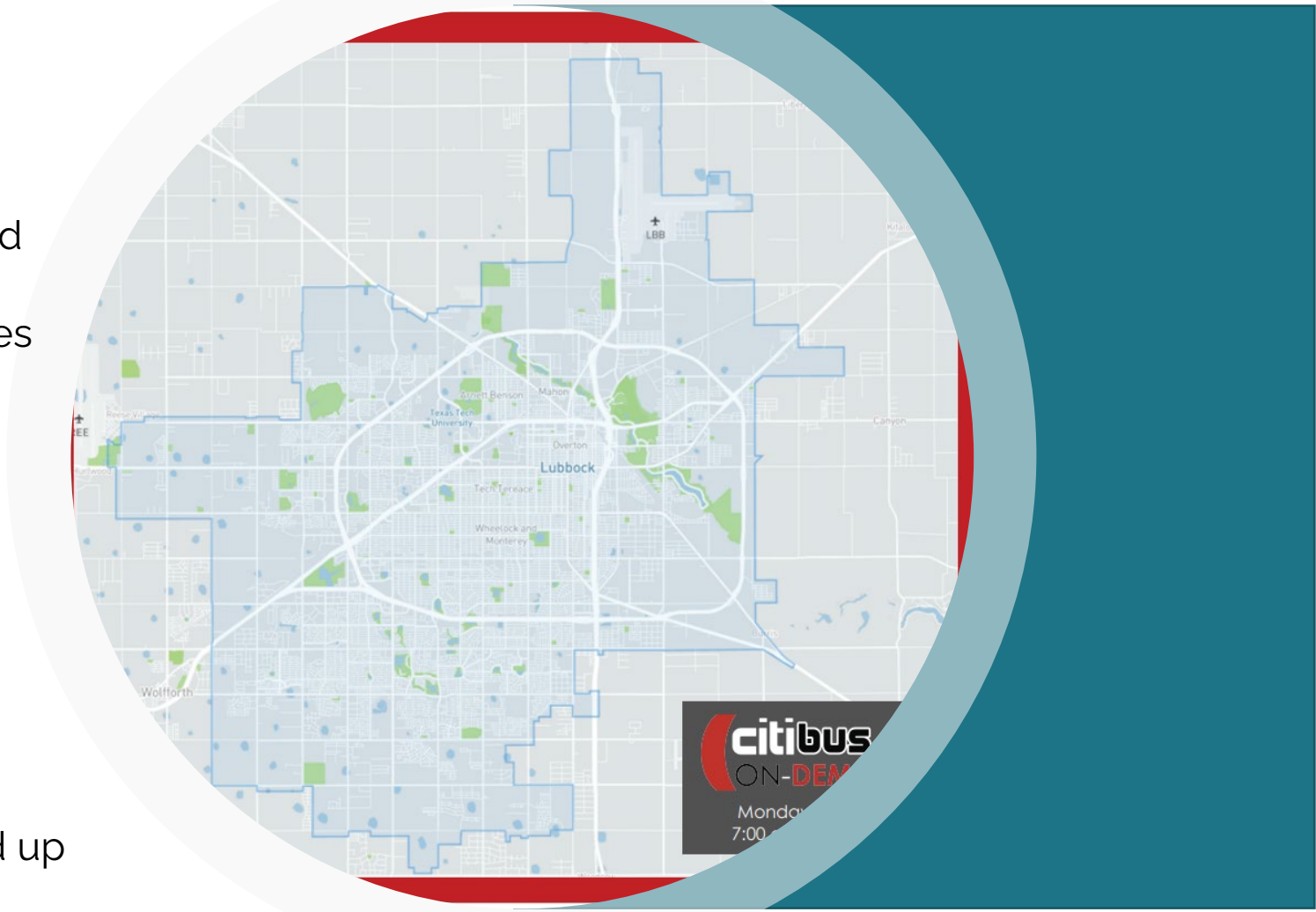
Pickups Heat Map



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

CITIBUS ON-DEMAND IN LUBBOCK, TX

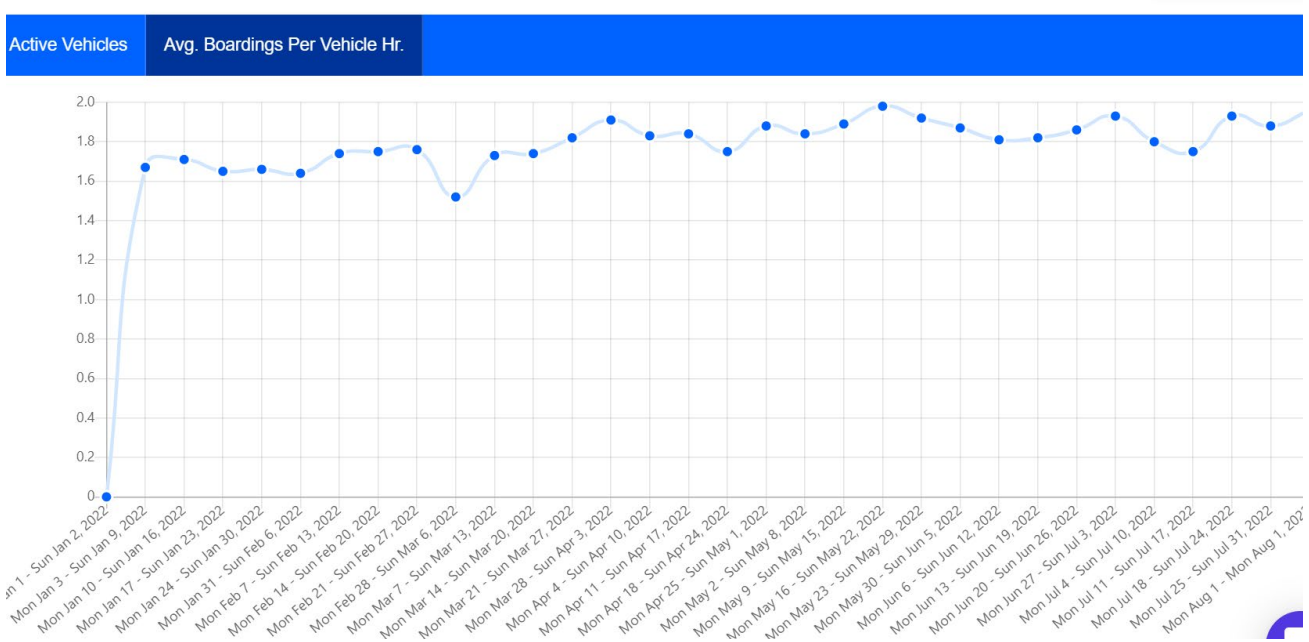
- Unique aspects
  - Full microtransit zone for entire city and beyond
  - Runs in areas where fixed route services also exist
  - Paratransit and microtransit trips are comingled
- Planning started in 2019, implementation in 2020
  - Pushed up in response to COVID and launched May 2020
  - Agency-operated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



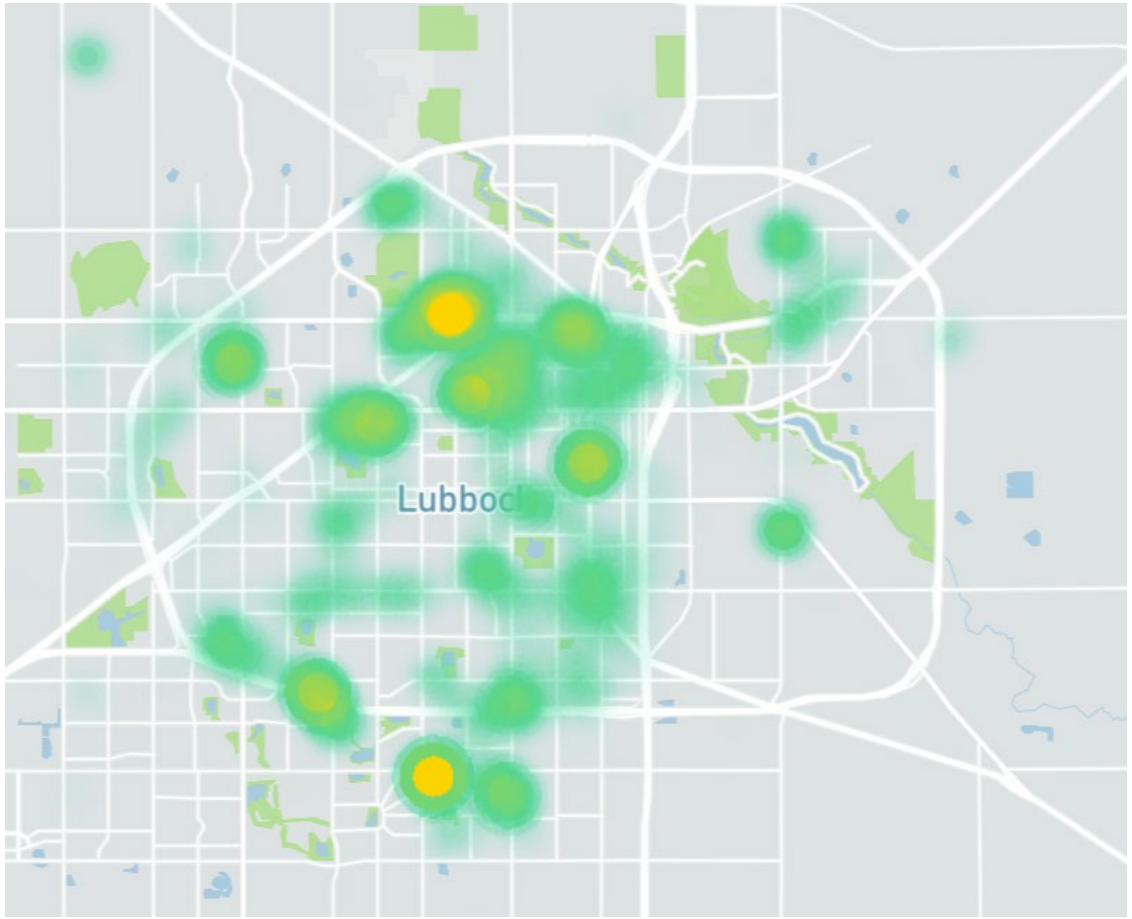
CITIBUS ON-DEMAND RECENT PERFORMANCE

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

MICROTRANSIT IN ERIE

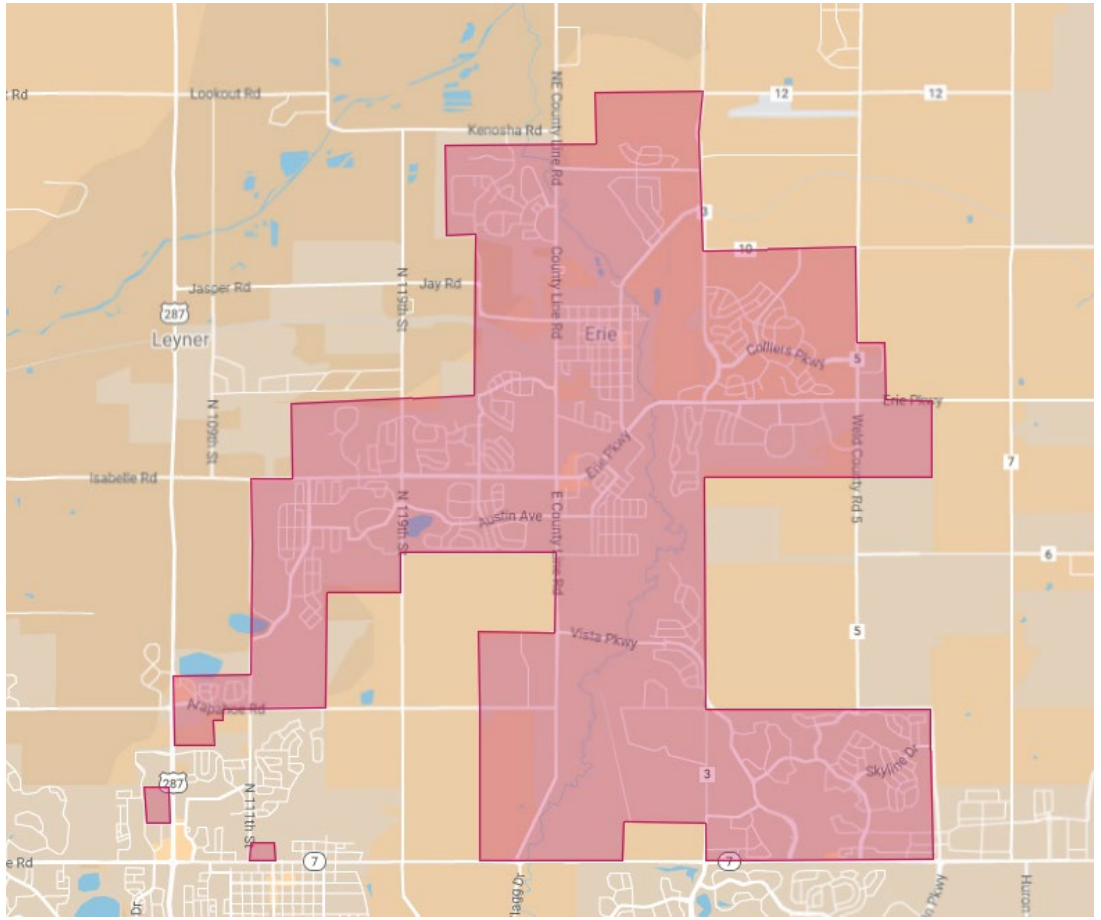
WHAT IT COULD BE

THE OPPORTUNITY

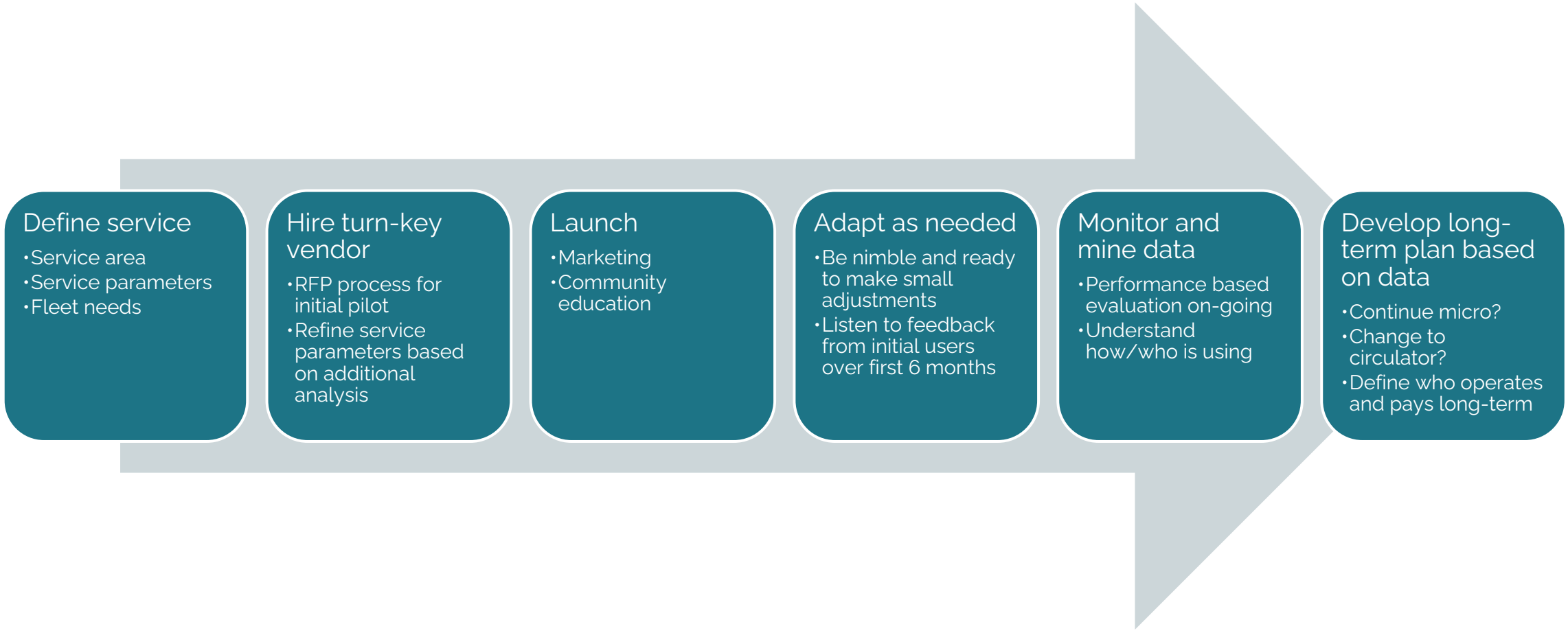
- Improve access for target populations – youth, older adults, commuters
- Connect with broader regional transit network
- Support Erie transportation, sustainability, quality of life goals
- Enable more travel within Erie for community-based trips (shopping, services, recreation)

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



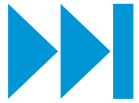
MICROTRANSIT PILOT PROCESS



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