Key Initiatives

The Strategic Plan culminates in seven key strategic initiatives that highlight prioritized recommendations and provide a framework for the future. The previous sections of this report identified 49 strategies that were proposed to the public for comment. Based on input from stakeholder and community engagement, as well as the analyses from the planning process and associated pillar studies, the seven key initiatives are:

- **Improve Where and When Buses Travel**
- **Improve How Streets Function**
- **Improve How Customers Pay**
- **Improve Passenger Safety and Comfort**
- **Engage with Emerging Technology, Data, and New Mobility**
- **Address Funding Challenges**
- **Partner to Support Vibrant Communities and Access to Job Centers**

These seven initiatives provide a framework for the future to provide a guide for enhancing the customer experience and pursuing capital improvements through the year 2030.

IMPROVE WHERE AND WHEN BUSES TRAVEL

GOALS

- ✓ **Access**
- ✓ **Customer Experience**
- ✓ **Economic Prosperity**
- ✓ **Equity**

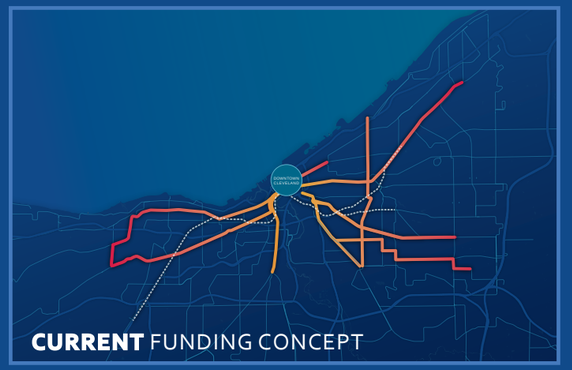
RTA'S SYSTEM **REDESIGN**

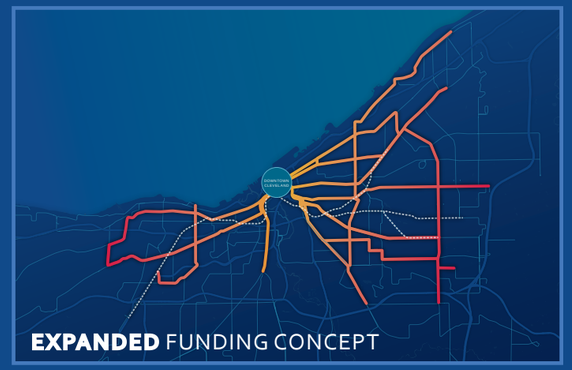
EXISTING SYSTEM	60% ridership	40% coverage
CURRENT FUNDING CONCEPT ALTERNATIVE	65% ridership	35% coverage
EXPANDED FUNDING CONCEPT ALTERNATIVE	70% ridership	30% coverage

more **availability**

increased **connectivity**

higher **frequency**





BACKGROUND

RTA completed a System Redesign study in 2019, one of several Pillar Studies that inform the Strategic Plan. With a focus on the next three years to 2023, the study sought input on two conceptual networks showing how the transit network could look if it were designed to focus slightly more on generating high ridership. Today, about 60% of RTA's service is where it would be if ridership were the only goal, while 40% of the service is focused on extending coverage to more people across the region. Alternative scenarios were presented for illustrative purposes, with the Current Funding Concept and Expanded Funding Concept further examined for their impacts and outcomes:

- **The Current Funding Concept** showed how RTA's network could look if it were designed to focus slightly more on generating high ridership, within the same funding budget (65% ridership, 35% coverage).
- **The Expanded Funding Concept** showed how the network could look if about 25% more resources were available to run bus service. In this scenario, the bus network could provide 70% ridership and 30% coverage, with an overall increase in bus service due to the increased funding.

Public input revealed positive responses to the general concepts that enhanced routes focused on increasing ridership. A balanced approach to future bus service changes is prudent within current financial constraints. Large enhancements to the bus network require finding savings elsewhere that can be reallocated or securing additional funding in order to put more service out on the street.

The System Redesign Study examined additional service in the middle of the day and on weekends. After all, many people today do not work a 9:00 to 5:00 job, for example, although many transit services are focused on peak hour services in the morning and evening. College students, retail employees, restaurant and entertainment workers, warehouse workers, second/third shift workers, and health care professionals such as nurses might need transit service at a variety of days and times. Additionally, customers visiting retail establishments or utilizing medical services desire bus service on weekends and throughout the day.

During public input for the redesign study, a majority of respondents (59%) agreed or strongly agreed that the balance of service between weekends and weekdays was right in the Expanded Funding Concept. This concept provides a higher level of service (frequency and span) on many routes on weekends than is available today. As RTA improves bus service, expansion of midday and weekend service on key routes will be a viable step forward.

IMPLEMENTATION

Implementation of the system redesign necessitates multiple departments inside RTA working together in order to adjust operations to enhance the customer experience. A single point person working in collaboration with the Executive Management Team should manage the process. To expand RTA's capacity and expertise temporarily during implementation, potential support includes a wayfinding consultant to address new schedules and maps; a sign contractor to physically change bus stop signs; a scheduling consultant; and a community relations consultant. Cross-departmental staff teams should be developed to collaborate on progress regarding several issues. *Considerations include:*

Bus Stops, Passenger Shelters, License Agreements

- Implement infrastructure improvements – potential property issues for turnarounds and bus stops have long lead times and must be initiated early.
- Deliver stop level amenities that offer customers an enhanced transfer experience.
- Maintain clear and consistent information at all bus stops.
- Engage local municipalities who own right-of-way along key alignments to create buy-in on property purchases, license agreements, or easements for turnarounds and bus stops.
- Identify capital project needs early on in order to properly expand service to facilities such as transit centers or locations with frequent transfers.

Alignments, Schedules, Maps

- Build effective schedules meeting ridership/ coverage guidelines, Title VI, and Environmental Justice principles.
- Consider Title VI and ADA issues early on, and potentially hire a Title VI consultant. Each change in the plan may require a Title VI analysis so use public input as early as possible to eliminate issues.
- Provide accurate maps on which to determine bus stop placement, build schedules, and educate the public.
- Provide more frequent, consistent access to dense populations within RTA's service area.

Marketing, Communication, Public Involvement

- Develop and execute a communication plan that will empower and educate staff, stakeholders, and leadership to communicate the benefits of the redesign to the community and create consistency in all external communications experiences.
- Wayfinding enhancements.
- Mass market outreach management and materials.
- Consider funding and space for extra staff and prepare for short-term employees in areas such as customer service around the new system launch.

Operations, Human Resources, Training, and Coordination

- Prepare, train, teach, and assist with coordination of redesign implementation to address and meet service requirements.
- Communicate effectively and clearly with staff from start to finish on changes and decision-making process to help ease transition away from the status quo.
- Meet staffing needs as required.
- Educate RTA operators by preparing internal maps for each line.
- Meet vehicle & maintenance equipment needs as required.

Government and Community Relations

- Ensure targeted stakeholder group is informed and supportive of RTA's redesign.
- Obtain Board support and maintain Board communications throughout since their buy-in will assist in refraining from the need to make changes later.
- Collaborate with elected officials to provide positive responses to constituent questions and comments regarding redesign impacts.

SUMMARY

- Begin to implement System Redesign
- Shift to the Current Funding Concept
- Expanded Funding Concept provides basis for future potential
- Focus on urban corridors with frequent service improves safe & equitable access to opportunity

TIMEFRAME

Short (2020-2022)

- Make small improvements along the way prior to a large system change
- Implement early wins that improve service while minimizing negative impacts
- Implement Current Funding Concept

Medium (2023-2026)

- Monitor redesign over time - system changes will potentially take three years to mature and establish consistent passenger levels
- Implement Expanded Funding Concept with more frequent corridors and seven day a week consistency

Long (2027-2030)

- Refine routes and schedules to maintain ridership/ coverage goals while meeting current needs and addressing feedback

RESPONSIBILITIES

Champion: RTA – Planning and Implementation

Infrastructure and community relations support:

- City of Cleveland
- NOACA
- Cuyahoga County
- ODOT
- Municipalities
- Private and nonprofit partners

OUTCOMES

Current Funding Concept
For the average resident in Cuyahoga County:

- Current Funding Concept will link people to 17% more jobs in under 45 minutes and 11% more jobs in under 60 minutes than the present-day network.

Expanded Funding Concept
For the average resident in Cuyahoga County:

- Expanded Funding Concept will link people to 42% more jobs in under 45 minutes and 38% more jobs within 60 minutes compared to the present-day network.

IMPROVE HOW STREETS FUNCTION

Photo Credit: https://transitcenter.org/publication/all-transportation-is-local/rewrite-the-rules-to-boost-growth-not-traffic/

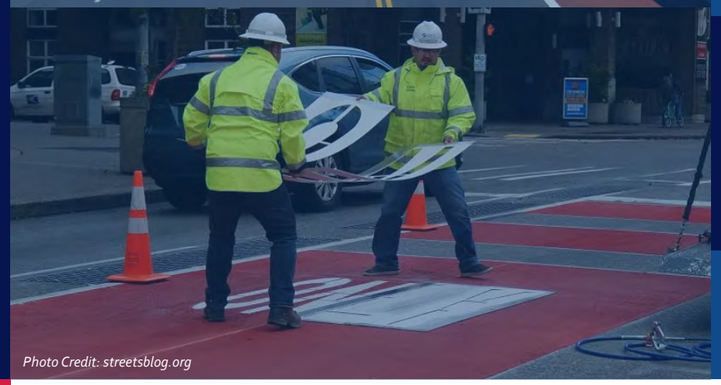
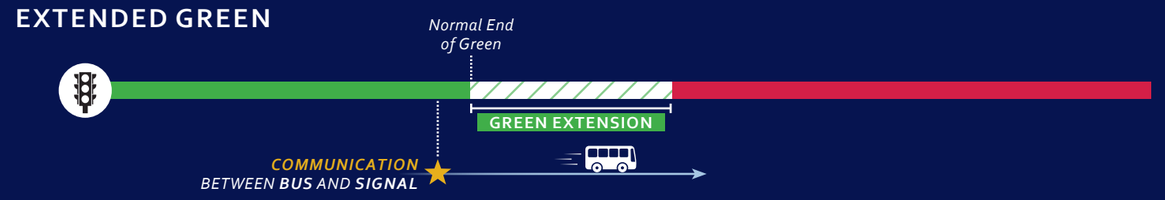
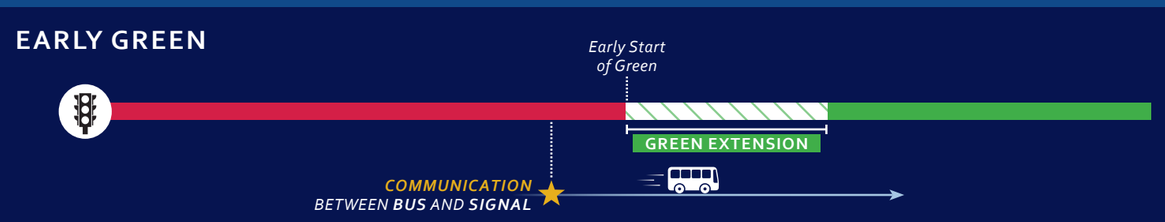


Photo Credit: streetsblog.org





COMMON TYPES OF **SIGNAL PRIORITY**

GOALS

- ✓ **Access**
- ✓ **Collaboration**
- ✓ **Customer Experience**
- ✓ **Equity**
- ✓ **Financial Stability**
- ✓ **State of Good Repair**
- ✓ **Technological Innovation**

BACKGROUND

Stakeholder and public input revealed a perception that RTA is slow and unreliable. The customer experience was repeatedly mentioned as a key element that needs to be improved. Prioritizing transit in street design means allocating appropriate space for buses to travel, making improvements that increase swift movement, and emphasizing the perpetual importance of the pedestrian experience.

An effective transit system requires reliable service and streets that support transit. A variety of street improvements can provide fast, frequent service. Some notable improvements address traffic signal operations, corridor design, and intersection design. Benefits can often be enhanced when multiple improvements work together. This initiative builds upon existing examples of innovative transit infrastructure on the HealthLine, Superior Ave, and St. Clair Ave. In addition, RTA's new CAD/AVL system will help facilitate Transit Signal Priority.

Transit Signal Priority
Transit Signal Priority can improve the transit riding experience and create more efficient operations. Transit Signal Priority describes technology that utilizes wireless communication and vehicle location to allow buses to travel through signalized intersections quickly. For example, the Chicago region has highlighted that Transit Signal Priority can reduce transit travel times by up to 15%. By either extending the green time or changing a red light to a green light, Transit Signal Priority can automatically operate in order to keep buses on time and reduce delays.

Bus-Only lanes
Bus-only lanes are corridor treatments that can improve bus speeds, improve travel time reliability, and improve headway adherence. New federal guidance from USDOT in 2019 approved innovative red pavement for bus-only lanes. The number of unauthorized vehicles in red-painted transit lanes fell by over 50% in multiple cities such as San Francisco and New York once bus lanes were redesigned with red pavement. Federal Highway Administration states that red pavement has been found to have positive impacts by reducing illegal occupancy of transit lanes by non-transit vehicles, improving travel time of transit vehicles, and reducing illegal parking in transit lanes.

Queue Jump Lanes
A queue jump lane is an intersection design treatment that allows buses to bypass stopped traffic through a short dedicated transit lane. Buses are in a priority position as they re-enter traffic flow at an intersection, which reduces delay and increases reliability. Queue jump lanes combine short dedicated transit facilities with either a leading bus interval or transit signal priority. Queue jump lanes function well where the bus travels in a right lane on a congested road, but other vehicles make low numbers of right turns. Where right turns are abundant, the dedicated transit facility needs to be separate from the right turn lane.

Curb Design
If buses can travel in a straight line without having to pull out of traffic and then merge back into traffic at stops, they can go faster and avoid being late. Bus bumpouts, boarding islands, and raised cycle lanes are extensions of the sidewalk into the roadway that can bring the curb to the bus at stops.

IMPLEMENTATION

Implementation of transit-priority street treatments will rely on collaboration across agencies. RTA owns and operates trains and buses and related transportation vehicles, facilities, and infrastructure. However, RTA does not own the streets that transit relies on for accessible and fast service. RTA, City of Cleveland, and other agencies have a history of successful partnership on transit initiatives that will form the foundation for future implementation. *Considerations include:*

Transit Signal Priority

- While a variety of operational nuances are possible, transit signal priority that provides extended green lights, early green lights, and phase jumps are the most common form of priority given to buses.
- Relationships and responsibilities among partners need to be designated and reiterated over time. TSP operations should be monitored for outcome measures including travel time, on-time performance, and travel time variability.
- TSP often results in additional benefits when combined with other priority treatments such as bus-only lanes.

Bus-Only Lanes

- FHWA recommends that agencies installing red paint for bus-only lanes include educational campaigns and signage to increase compliance.
- FHWA has design guidance regarding color, brightness, pavement markings, and regulatory requirements in order to obtain the operational benefits of prioritizing transit in a travel lane.
- Monitoring technology can assist in discovering vehicles that violate bus-only lanes.

Queue Jump Lanes

- Queue jump lanes depend on available right-of-way and signal operations at the intersection. Several options exist to address the design of particular intersections, such as discontinuing on-street parking in advance of the intersection, restricting right turn movements, and providing separate green signal for buses only.
- Signage and educational campaigns should accompany new transit-priority roadway treatments.

Bicycles and Micromobility

- Where bike lanes and buses coexist, use bike-bus best practices such as boarding islands and raised cycle lanes.
- A de-emphasis on single occupancy automobiles will provide opportunities to diversify multiple other high quality transportation modes.
- Future corridor planning should consider a diversity of options for a set of roadways that could provide a spectrum of multimodal design treatments such as bicycle boulevards.

Evolution and Flexibility of the Curb

- Curbside functionality continues to expand as on-street parking and commercial freight delivery are joined by ridehailing, personal package delivery, meal delivery, and micromobility activity.
- As the year 2030 nears, it is expected that driverless vehicles will begin to appear on Cleveland's streets with increasing frequency.
- Through continual planning and analysis, RTA and City of Cleveland will need to allocate roadway space that allows flexible, safe, equitable, and predictable roadway activities over time.
- As curbside activity increases and diversifies, the importance of dedicated right-of-way for transit will become more important than ever and will continue to provide the backbone of movement along Priority Corridors.

SUMMARY

- Prioritize transit in street design
- Allocate appropriate space for buses to travel
- Work with cities to enhance signal systems
- Increase fast and reliable service
- Support pedestrian friendly and transit-oriented development

TIMEFRAME

Short (2020-2022)
- Implement and promote early spot improvements that improve service while minimizing negative impacts
- Plan four corridors and ten intersections for infrastructure enhancements

Medium (2023-2026)
- Implement four transit corridor enhancement projects
- Monitor before and after impacts and obtain ongoing community feedback
- Plan four corridors and ten intersections for infrastructure enhancements

Long (2027-2030)
- Implement four more transit corridor enhancement projects
- Monitor before and after impacts and obtain ongoing community feedback
- Plan four corridors and ten intersections for infrastructure enhancements
- Emphasize ongoing corridor planning in conjunction with emergence of driverless vehicles and associated impacts

RESPONSIBILITIES

Planning Champion: RTA

Implementation Champion: City of Cleveland

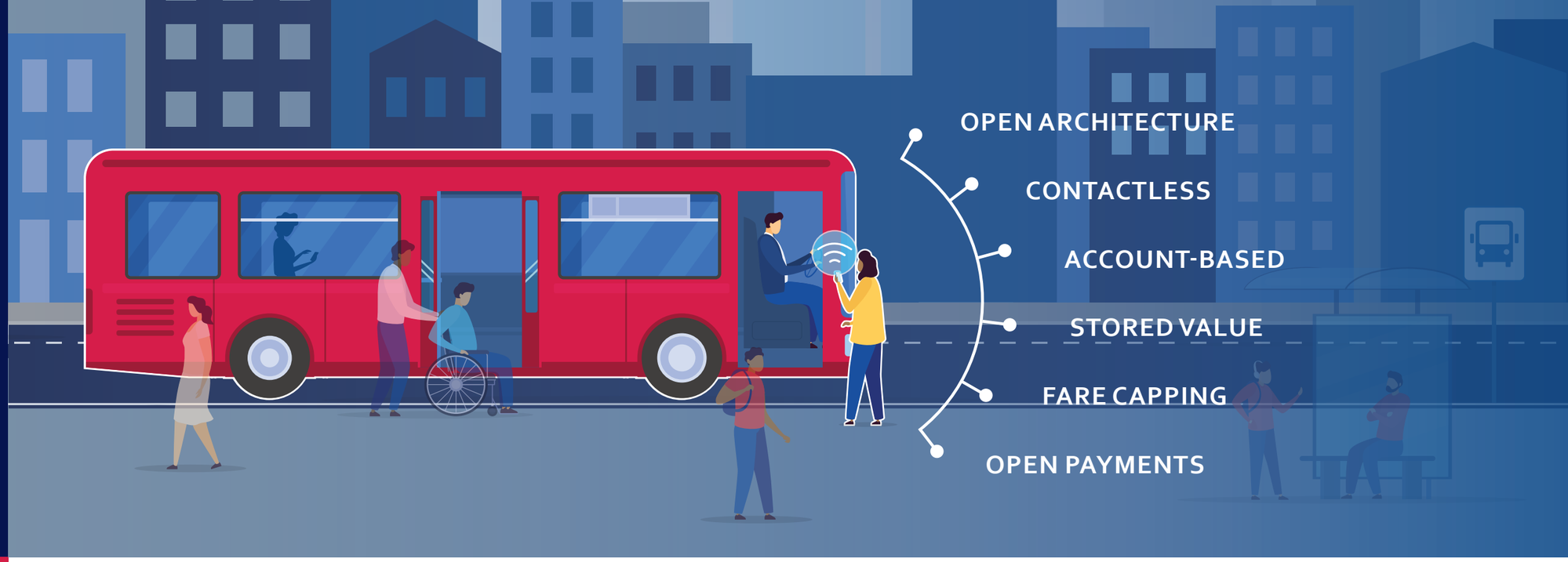
Supporting partners:
- NOACA
- Cuyahoga County
- ODOT
- Municipalities
- Private and nonprofit partners
- Neighborhood groups

OUTCOMES

Outcomes include:

Travel times will be reduced on Priority Corridors. Customer satisfaction will increase, reliability will increase, and agency operating expenses will decrease. Shorter travel times will allow RTA to run the same bus frequency with fewer vehicles. Improving travel time reliability allows RTA to reduce extra time in the schedule, further improving speed, and improving the customer experience.

IMPROVE HOW CUSTOMERS PAY



GOALS

- ✓ **Access**
- ✓ **Customer Experience**
- ✓ **Economic Prosperity**
- ✓ **Equity**
- ✓ **State of Good Repair**
- ✓ **Technological Innovation**

BACKGROUND

RTA completed a Fare Equity Analysis in 2019 as one of the Pillar Studies of the Strategic Plan. It suggested changes to RTA fare collection to improve customer experience and better reflect best practices in the US. A survey of riders revealed that the largest gaps between how well RTA does versus how important certain issues are included:

- Fares should be easy to understand
- Fares should be affordable
- Process should be convenient
- Fare payment should be fast

The study identified that confusion arises among customers from multiple fare types and policies. The study revealed that the fare payment process inadvertently penalizes people with low incomes and slows down the boarding process.

RTA's Fare Equity Analysis pillar study determined that over half of trips are taken by riders who are best served by a monthly or weekly pass. However, about half of these trips, especially those taken by people with low-incomes and people of color, are paying more than they should because they do not purchase a pass or purchase a weekly instead of a monthly pass. In addition, RTA's System Redesign bus network would require about half of all riders to transfer, but some riders, especially people with low incomes and minorities, pay excessively for transferring.

A majority of RTA riders' household income is less than $25,000 per year. RTA's Fare Equity Analysis Pillar Study's rider survey found that over 30% of respondents do not buy a monthly pass because they "can't afford it." For a frequent rider, the monthly pass offers the cheapest fares over time. Those who would benefit most from this deal are boxed out of this opportunity by their economic situation. Additionally, a majority of respondents to the Fare Equity Analysis pillar study survey revealed that they do not use a monthly pass or a 7-day pass because they either "don't use transit enough" or they "can't predict transit use." For these riders, they risk buying more than they need due to the uncertainty of their lives, a risk that can have devastating consequences for people with low incomes.

The study recommended a new fare collection system in its discussion of long-term improvements. A cloud-based open architecture would allow RTA to avoid being locked into a certain expensive proprietary system with a single vendor. Transparent standards could empower RTA to keep pace as technology evolves and allow RTA to save money when updating outdated technology. An account-based, contactless system that allows open payments will create a seamless boarding experience for customers. With options for customers to pay using a smartcard, contactless credit card, or smartphone, riders will experience the flexibility and frictionless experience they desire. A new payment system could support the development of Mobility-as-a-Service (MaaS), which describes a potential future in which RTA offers seamless integration with private transportation providers.

IMPLEMENTATION

Implementation of customer fare payment improvements will be a multifaceted process. The Fare Equity Analysis pillar study began a planning process that will necessitate retiring out-of-date technology and engaging RTA's technology team, financial department, and outside vendors. RTA should adopt updated policies and transition to the creation of a new fare collection system with a cloud-based open architecture that provides a seamless, equitable customer experience. *Considerations include:*

Fast, easy boarding

- Boarding processes can occupy significant amounts of travel time on heavily used corridors.
- RTA customers are often not aware of the best fare pass for their travel, which is particularly true for people with low incomes since they transfer among RTA services at higher rates. This inadvertently slows down the boarding process.
- Better education and promotion of fare processes will help customers become aware of their best fare choices for their circumstances.

Fare capping and free transfers

- RTA should change its fare policy to eliminate the cost for transfers between RTA services.
- Fare capping refers to a policy that is becoming best practice with today's fare payment technology. Fare capping makes the equivalent of transit passes available to people who can't cover the full cost at once.
- Technology to allow fare capping and policies to allow free transfers will promote equity.

Equitable policies and workforce programs to assist low income riders

- The majority of RTA riders are employed full-time and are headed to a workplace. Approximately 10-15% of RTA riders are not currently employed but are seeking work.
- RTA should continue to support the equitable access to opportunity of residents with low incomes and those seeking jobs through equitable fare policies in partnership through workforce development programs.
- RTA should expand vendor network of storefront partnerships to provide equal access to fare products for the unbanked population.

New fare collection system and coordinated mobility app for seamless transit experience

- RTA's Fare Equity Analysis pillar study concluded that aging fare equipment will be increasingly expensive to maintain and does not meet the needs of RTA's future.
- By expanding on the RTA CLE app's success and developing new capabilities, the app would provide one-stop-shop access to trip planning, fare payment, and vehicle arrival times across all mobility providers with transit at the core.
- New technology has given rise to new business models, such as real-time incentives for riders, in which gamification supports transit riders by earning points for trips and redeeming discounts. In times of poor customer service, an app would be able to provide real-time refunds.
- Future evolution of a mobility app reveals the potential for Mobility as a Service (MaaS), a single point of access through a subscription account to public and private mobility services through which users travel across a variety of modes.

SUMMARY

- Implement recommendations from Fare Equity Analysis pillar study
- Change RTA fare collection to improve customer experience and better reflect best practices
- Seamless, equitable fare practices

TIMEFRAME

Short (2020-2022)

- Improve communications about fare products and how to buy them
- Make 5-Trip Farecards available at more locations, and revise 5-Trip farecards to be fewer trips at the same price per trip
- Adjust Paratransit fares and passes
- Planning, policy development, and procurement for new fare collection system
- Reduce All-Day passes to equal 2 ride fare cost

Medium (2023-2026)

- Launch new fare collection system that is cloud-based and contactless with open architecture, regional multimodal accounts, stored value, fare capping, and open payments
- Launch coordinated mobility app
- Launch public education campaign to create a seamless transition and promote benefits

Long (2027-2030)

- Launch mobility as a service that is nimble and flexible to new modes and business models as autonomous vehicle fleets begin to go into service
- Maintain transit's role as backbone of Priority Corridors in midst of increasing transportation change

RESPONSIBILITIES

Champion: RTA

Supporting partners:

- NOACA
- Private mobility providers

OUTCOMES

Outcomes include:

Short term improvements can improve equity and communications to address findings in Fare Equity Analysis pillar study. A new fare collection system will provide a seamless customer experience that is cloud-based and contactless with open architecture, regional multimodal accounts, stored value, fare capping, and open payments. RTA will be positioned for a changing mobility landscape with an innovative, modern fare system.

IMPROVE PASSENGER SAFETY AND COMFORT

GOALS

- ✓ **Access**
- ✓ **Customer Experience**
- ✓ **Environmental Sustainability**
- ✓ **Equity**
- ✓ **State of Good Repair**
- ✓ **Technological Innovation**

BACKGROUND

During the Strategic Plan and associated pillar studies, stakeholder and public input revealed a desire for better transit vehicles and waiting areas. The riding experience was too often characterized as unclean and uncomfortable, which in turn led to a perception of unsafe. By continuing to improve areas where people access transit as well as the riding experience while in RTA vehicles, customer confidence and comfort will increase.

Transit Stops
Customers access RTA through Rapid stations, bus stops, and associated transit facilities. With over 6,000 bus stops that have approximately 1,100 bus shelters, RTA is challenged with providing access to transit stops while also deploying limited resources appropriately. Public engagement revealed that customers want improved bus stops with more shelters, amenities, real-time information, and lighting.

Rail Cars
RTA's 33-mile rail network is a multibillion dollar infrastructure asset to the community, as highlighted by the Rail Car Evaluation pillar study. RTA's heavy rail vehicles (HRVs) and light rail vehicles (LRVs) have approximately five and ten years of remaining useful life, respectively. As fleets age, in-service failures increase, customer service degrades, service reliability suffers, and maintenance costs increase.

Bus Fleet
The bus fleet represents the workhorses of the agency's service. More than 22 million trips are taken annually on RTA's buses, providing the majority of RTA's rides for customers. RTA has a plan in place to purchase 30-35 new transit vehicles per year and retire old ones over the next five years. RTA's 2020-2024 Capital Improvement Plan continues a planned bus replacement program, begun in 2013, that plans to continue until the entire fleet is replaced.

Safe and comfortable riders during a global pandemic
The transit riding experience, like so many of life's experiences, was thrown into disarray in early 2020 with the COVID-19 global pandemic. Among many impacts, public health and cleanliness became a focal point for transit. Notably, public input before the pandemic revealed that cleanliness was a key topic while discussing the perception of RTA.

According to the Centers for Disease Control and Prevention, the virus that causes COVID-19 is thought to spread mainly from person to person. It may be possible that a person can get COVID-19 by touching a surface that has the virus on it and then touching their own face, but this isn't the main way the virus spreads. Much continues to evolve on the scientific understanding of the virus. In our new normal, RTA is cleaning and disinfecting all vehicles and facilities daily.

IMPLEMENTATION

Implementation of passenger safety and comfort improvements includes transit waiting areas, rail procurement, bus procurement, and COVID-19 response. *Considerations include:*

Transit Stops

- Implementation of changes outlined in the redesign pillar study provide an opportune time to review bus stops and amenities.
- Many agencies that have undergone service redesigns have experienced an overall decrease in bus stops across the bus system, while also seeing increased activity at several bus stops.
- These changes provide opportunities to enhance real-time information and lighting at key locations that will serve the most people and improve valuable transfer points.

Rail Cars

- The Rail Car Evaluation pillar study concluded that a $240 million program of rail car replacement and infrastructure upgrades is a prudent course of action. The report recommends RTA begin procuring HRVs by 2020 for delivery no later than 2023, followed by procuring LRVs by 2025, for delivery no later than 2028. The recommendation includes associated infrastructure upgrades to the rail maintenance facility, equipment and stations.
- As of early 2020, RTA has been awarded approximately $61 million, with another $57 million committed, approximately halfway toward the program goal of $240 million. Funds include awards and commitments from NOACA, ODOT, Federal Formula Funding as well as the self-funded Rail Car Replacement Fund.

Bus Fleet

- RTA's procurement plan calls for purchase of new CNG vehicles for the foreseeable future. While a variety of vehicles will remain in RTA's fleet throughout the life of this Strategic Plan, RTA should transition toward a pilot program for zero emission vehicles, supported by federal grants.
- Zero emission vehicle transition implementation includes:
  - *Research and Planning* - Evaluate fleet and operations to assess power needs and delivery to address how, when, and where fleets will be charged and associated costs.
  - *Development* - Design for installation of needed equipment and infrastructure.
  - *Pilot* – Identify realistic and predictable pilot based on planning.
  - *Implementation* - Operations and Maintenance policy and procedures to transition to zero emissions vehicles.

COVID-19 Response

- Continue to provide service with a focus on essential workers getting to jobs at locations such as medical facilities and grocery stores.
- Provide service with a focus on equity – the Priority Corridors of frequent service include neighborhoods with high levels of poverty, joblessness, and vulnerable health populations.
- Frequent service to job hubs will be essential going forward to maintain social distancing.
- Follow cleaning and disinfecting guidelines as they evolve from the CDC and American Public Transportation Association.

SUMMARY

- Purchase new rail cars
- Improve transit stops and infrastructure
- Continue to upgrade bus fleet
- Experiment with Zero Emission Vehicles
- Create safe and comfortable customer experience

TIMEFRAME

Short (2020-2022)
- Continue and enhance cleaning procedures to address COVID-19
- Continue to provide service with a focus on essential workers getting to jobs at locations such as medical facilities and grocery stores
- Provide service with a focus on equity – the Priority Corridors of frequent service include neighborhoods with high levels of poverty, joblessness, and vulnerable health populations
- Begin procuring new heavy rail vehicles
- Evaluate and improve stop amenities on Priority Corridors during implementation of Current Funding Concept
- Pilot ten zero emissions vehicles with support from federal grants and with feedback on passenger comfort

Medium (2023-2026)
- Discontinue the practice of purchasing diesel vehicles
- Integrate zero emissions vehicles into bus fleet procurement strategy
- Begin procuring light rail vehicles
- Delivery of heavy rail vehicles and placement into revenue service
- Evaluate and improve stop amenities on Priority Corridors during implementation of Expanded Funding Concept

Long (2027-2030)
- Delivery of light rail vehicles and placement into revenue service
- Move from CNG to zero emission vehicles

RESPONSIBILITIES

Champion: RTA

Supporting partners:
- City of Cleveland
- NOACA
- Cuyahoga County
- Power utilities
- Municipalities
- Private and nonprofit partners
- Neighborhood groups

OUTCOMES

Outcomes include:
- Increased passenger comfort to resume or continue riding during and after COVID-19 pandemic
- New rail car fleet
- Upgraded bus fleet
- Transition away from purchasing diesel buses to CNG
- Transition from CNG to zero emission vehicle purchases
- Enhanced customer experience as a result of transit stop improvements

ENGAGE WITH EMERGING TECHNOLOGY, DATA, AND NEW MOBILITY

GOALS

- ✓ Access
- ✓ Collaboration
- ✓ Customer Experience
- ✓ Economic Prosperity
- ✓ Environmental Sustainability
- ✓ Equity
- ✓ Technological Innovation
- ✓ Transparency

BACKGROUND

There are fundamental changes for transportation underway and on the horizon. Emerging technologies are coming together at an unprecedented pace in ways that will shift the underlying assumptions about and operation of our transportation network. Data management and analytics, once a slow and static task within many government agencies, is transforming the potential for positive and negative impacts on individuals and transportation systems. New mobility options are beginning to emerge as corporate investment is pairing with technological advancement and new approaches in transportation network analysis and design.

Transportation system optimization connects systems and vehicles with smart technologies to improve safety and operations. Data analysis of travel datasets from public and private mobility providers improves transportation system performance while maintaining security and protecting privacy. Smart parking systems can use parking occupancy sensors to provide information to users and add or remove on-street parking restrictions digitally as needed to expand or restrict right-of-way uses. Vehicle technology is expanding so that connected vehicles have the capacity to communicate with other vehicles and infrastructure through interoperable networked wireless communications. The future of automation is rapidly expanding with automated driver assistance features, eventually paving the way for advanced versions of driverless vehicles.

Stakeholder and public engagement revealed nuances in the ways people think about emerging technologies and businesses. Partnerships with transportation network companies such as Uber and Lyft were viewed with skepticism at worst and cautious optimism at best. While the potential for better customer experience and travel time savings exists, Strategic Plan input revealed that many people view those companies as competitors that have an overall negative impact on RTA. Partnerships should be clearly negotiated as delineated by limited time (both time of day and length of partnership) as well as by geography and scope in order to fill gaps in the RTA network rather than creating negative impacts.

Both inside and outside RTA, staff and public input stated that a new emphasis on data and the changing nature of transportation were needed. Communication, automation and data are transforming the way transit vehicles interact with infrastructure, employees, and customers. These connections can improve traffic flow, optimize transit, create safer streets and will pave the way for automated vehicles. RTA can build on collaboration with the private sector, community groups, nonprofit organizations, and business leaders to approach a range of effective solutions to the challenges and opportunities presented by emerging mobility technologies. By emphasizing engagement with changing technologies, RTA can improve mobility to enhance quality of life and increase economic vitality across the region.

IMPLEMENTATION

RTA can approach transit through a new lens in which technology is a foremost topic of concern to be harnessed to improve the customer experience. *Considerations include:*

Connected Vehicles

- Implement new radio technology acquired by RTA in 2019 and installed in 2020.
- Coordinate with ODOT and partners to accelerate vehicle to infrastructure connectivity.
- Communications and power should be planned for new roadway infrastructure. Key elements include fiber-optic network conduit for dedicated power and backhaul communications.
- Consider Dual-Chipped C-V2X/DSRC for roadside units to operate as either DSRC or as C-V2X equipment.
- Emphasize benefits of early deployments on safety and communicate widely with public regarding new technology efforts.
- Prepare for technology upgrades and interoperability in project development of transportation projects. Develop and recommend standards and best practices for new infrastructure installations of digital or electronic equipment along the roadside to be interoperable and capable of supporting future technologies.

Data Security and Sharing

- Create a commonly shared regional mobility data platform that houses transportation-related data that consolidates archived and real-time data from multiple agencies and private providers into a single data repository.
- Improve performance by developing open data. Promote development of open, well-documented Application Program Interfaces (API).
- Protect privacy by establishing security standards for maintaining privacy and data anonymity and emphasizing that shared data is secure and used for specific, defined purposes.
- Create policies that will ensure the interoperability of infrastructure, software, and data among regional stakeholders.

Mobility Management

- Adopt policies, standards, and partnership guidelines for new mobility business models.
- With public partners, implement standards for curbside passenger loading and freight delivery and utilize technologies to monitor, enforce, and monetize curbside operations.
- Adopt common standards and guidelines in collaboration with partner agencies for micromobility services that address issues such as ensuring equitable access, data sharing requirements, protection of personal information, and use of the public right-of-way.
- Establish data sharing requirements for private sector roadway users in collaboration with public partners. Establish standard data sharing agreements that address travel use, privacy, and data security with private sector mobility providers.

Driverless Vehicle Preparation

- Transit should remain the backbone of transportation as autonomous vehicles are integrated into the transportation system.
- Pilot driverless microtransit to increase public exposure to automated vehicle technology. RTA should conduct additional demonstrations of automated microtransit to increase first and last mile connections to Rapid stations and create more opportunities for the general public to experience driverless vehicle technology firsthand.
- Workforce development and training will be necessary to allow employees to evolve into new roles as transportation technologies change.

SUMMARY

- Refocus using technology as way to improve the customer experience & equity
- Experiment with connected vehicles
- Improve infrastructure
- Enhance real-time info
- Invest in data security
- Adopt guidelines for partnerships with new mobility providers

TIMEFRAME

Short (2020-2022)

- Implement sharing of open information pertinent to customers on public-facing online dashboard
- Establish policies with regional partners for data management and common standards for mobility providers on public right-of-way
- Conduct a six-month pilot of an autonomous microshuttle and obtain ongoing community feedback

Medium (2023-2026)

- Incorporate dedicated power and dedicated communications into new infrastructure projects in association with partners
- Integrate mobility-as-a-service in order to deliver optimal travel solution to customers among all available modes
- Collaborate with employees on workforce development and training for new technologies such as V2X
- Vision Zero Implementation

Long (2027-2030)

- Refine policies and practices as driverless technology advances, such as minimizing zero occupancy vehicles on transit corridors
- Continue to lead and leverage technological innovation in service of community goals

RESPONSIBILITIES

Champion: RTA

Supporting partners:

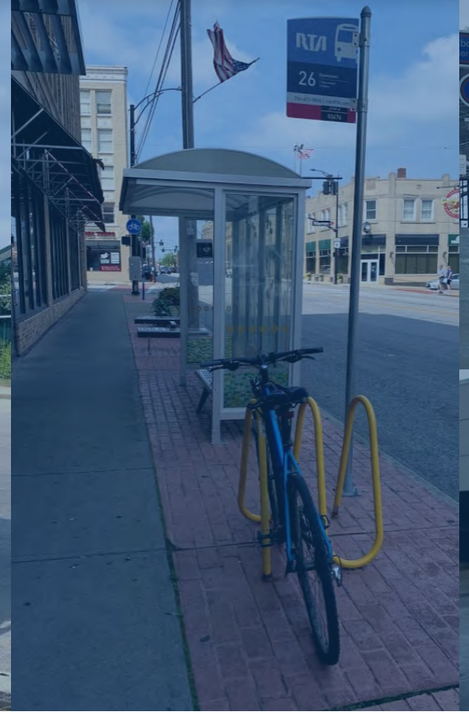
- NOACA
- City of Cleveland
- Cuyahoga County
- Utility providers
- Municipalities
- Private and nonprofit partners
- Neighborhood groups

OUTCOMES

Outcomes include:

- Transit remains the backbone of transportation as new modes, technologies, providers, and business models continue to integrate into the transportation system
- Seamless customer experience
- Coordinated system of standards, infrastructure, and data that creates efficient public systems and supports an inviting private sector business environment
- Emerging technologies that aim to improve air quality, lower mobility costs, and reduce travel times
- Equitable distribution of technological benefits
- Workforce development that prioritizes expertise of existing RTA employees and expands knowledge in new technologies

ADDRESS FUNDING CHALLENGES



GOALS

- ✓ **Collaboration**
- ✓ **Customer Experience**
- ✓ **Economic Prosperity**
- ✓ **Equity**
- ✓ **Financial Stability**
- ✓ **State of Good Repair**
- ✓ **Transparency**

BACKGROUND

The top issue during public input for the Strategic Plan concerned the necessity for additional funding to meet existing and future transit needs. RTA's current funding is not enough to meet the agency's needs, as highlighted by the Financial Analysis and Economic Forecast Pillar Study. According to the Ohio Public Transit Association, Ohio ranks 38th in the nation in per capita funding for transit and the State funds only three percent of public transit expenditures. RTA is a vital backbone for the region that serves more than a transportation purpose – the Economic Impact Pillar Study highlights the deep integration of RTA into the shared success of Cleveland, Cuyahoga County, Northeast Ohio, and the entire state.

RTA has opportunities to reduce some costs, as described by the Financial Analysis and Economic Forecast Pillar Study. RTA's administrative costs appear to be higher than at agencies in similar cities, so eliminating positions and reorganizing job responsibilities could save up to $13 million per year. The study finds that RTA's paratransit costs are higher than in comparable cities, so opportunities to streamline paratransit costs could potentially save approximately $7 million a year. RTA's aging fare equipment is becoming increasingly expensive to maintain and doesn't meet the future needs of RTA. The high cost of maintaining rail infrastructure could potentially be assisted with sources of new funding including a sales tax increase, a new property tax, or a commercial-only property tax.

RTA's efforts to redesign its bus routes and bring ridership in line with peer cities could increase revenue. The System Redesign pillar study's Current Funding Concept will expand frequent service to over 150,000 more people including on key corridors such as Detroit, Lorain, Kinsman, and E. 105th. Fare revenues provided approximately $42.8 million in 2019, down from $46.6 million in 2018. By redesigning bus service to meet the needs of customers and increasing ridership, it is possible that a corresponding increase can occur in revenue.

RTA's real estate assets include hundreds of parcels across the region. RTA owns its headquarters, rail stations, rail yards, vehicle storage and maintenance facilities, transit centers, and additional infrastructure and facilities. Many of these assets are vital to the current and future operations of core RTA services. As highlighted in the Financial Analysis and Economic Forecast study, however, there are opportunities to evaluate whether some real estate assets could be sold or leveraged in innovative ways. These real estate assets could be opportunities of untapped revenue. In partnership with public partners and regional leaders, RTA can shift gears from a past of persistent unmet needs to a future of confidence in the funding picture for an agency that drives the economy forward.

IMPLEMENTATION

Past funding sources are not adequate to maintain, operate, and improve the existing transit system, let alone make investments for the future. Pillar studies reveal that RTA's current funding is not enough to meet the agency's needs. *Considerations include:*

Collaborate with partners to consider sources of new funding including a sales tax increase, a new property tax, or a commercial-only property tax

- Public support was strong for the Expanded Funding concept in the System Redesign pillar study, which would require additional operating expenses.
- Funding increases are needed to maintain rail infrastructure and replace rail fleet, as highlighted in the Financial Analysis and Economic Forecast Pillar Study.
- RTA has the ability to levy sales-and-use and property taxes at the county level.

Advocate with public partners to prioritize transit funding and de-emphasize longstanding automobile-focused funding model

- Incrementally transition the priorities for funding traditional roadway capacity projects to prioritizing funding for transit and technology projects so that they receive an increased share of programmed funds.
- Collaborate with partners to think creatively to establish new sources of funds to address the gap between needs and available funds.
- Continue to advocate for adequate dedicated transit funding from State of Ohio.

Assess internal agency costs

- Evaluate administrative staffing per unit costs of service provided.
- Evaluate paratransit costs as highlighted in Financial Analysis and Economic Forecast Pillar Study and RTA's Fare Equity Analysis pillar study.

Evaluate transportation funding as emerging technological changes alter traditional funding mechanisms

- Collaborate with public partners to identify modified and new sources of funding that are tied to deployment of mobility systems in ways that promote equity, maximize public resources, and engage private sector partners.
- Support legislative efforts on potential new user fees, registration fees, or other appropriate revenue streams to prepare the region for the anticipated future expansion of private mobility businesses.

Continue to maximize use of federal grant funding programs. In 2019 alone, RTA successfully competed for and won approximately $40 million in competitive grants. Potential funding examples include:

- **FTA Mobility Sandbox Program** - funding to innovate, explore partnerships, develop new business models, integrate transit solutions, and investigate new technical capabilities.
- **FTA Low and No Emission Vehicle Program** - Provides funding to purchase or lease low- or no-emission transit buses and related equipment, or to lease, construct, or rehabilitate facilities to support low or no emission transit buses.
- **FTA Pilot Program for Transit** - Oriented Development Planning - Provides funding to integrate land use and transportation planning.
- **FTA Zero Emission Research Opportunity** - Nonprofit organizations can apply for funding to conduct research, demonstrations, testing, and evaluation of zero emission and related technology for public transportation applications.
- **FHWA and FTA Broad Agency Announcements** - Applied research funds focused on technology research and development.
- **Safety Research and Demonstration Program** – Provides technical and financial support for transit agencies to pursue innovative approaches to eliminate or mitigate safety hazards with a focus on demonstration of technologies.

SUMMARY

- Top issue during public input for the Strategic Plan concerned the necessity for additional funding to meet existing and future transit needs
- Backlog of state of good repair needs

TIMEFRAME

Short (2020-2022)

- Evaluate internal agency costs and assess local tax support
- Continue to apply aggressively for federal grant funds
- Continue to advocate for funding needs and solutions among local, statewide, and federal partners
- Decide if a tax levy will assist with funding challenges

Medium (2023-2026)

- Implement Expanded Funding Concept with more frequent corridors and seven day a week consistency
- Delivery of heavy rail vehicles and placement into revenue service
- Implementation of regional transit improvements in collaboration with community feedback

Long (2027-2030)

- Delivery of light rail vehicles and placement into revenue service
- Continued implementation of regional transit improvements in collaboration with community feedback
- Continued evaluation of transportation funding as emerging technological changes alter traditional funding mechanisms

RESPONSIBILITIES

Champion: RTA

Supporting partners:

- FTA
- State of Ohio
- NOACA
- City of Cleveland
- Cuyahoga County
- Municipalities
- Chambers of commerce and associated business groups
- Private and nonprofit partners

OUTCOMES

Outcomes include:

- RTA's capital and operating needs are met through the year 2030
- Bus service can be appropriately deployed to serve the region's needs through implementation of the System Redesign's Expanded Funding Concept with more frequent corridors and seven day a week consistency
- Rail vehicles and infrastructure needs can be met to deliver consistent, fast, and safe service
- Increased attraction and retention of workers in regional job centers
- Transit remains the backbone of transportation that delivers access to opportunity for individuals and the region

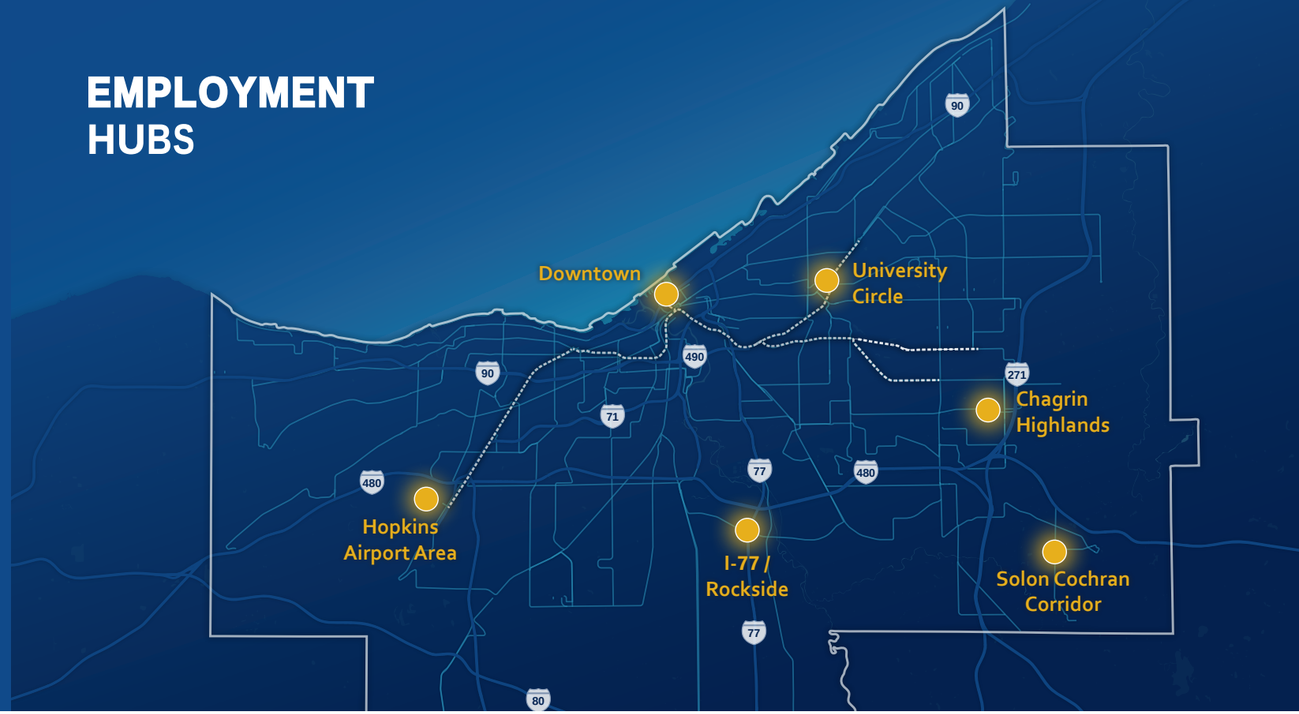
PARTNER TO SUPPORT VIBRANT COMMUNITIES AND ACCESS TO JOB CENTERS

GOALS

- ✓ **Access**
- ✓ **Collaboration**
- ✓ **Customer Experience**
- ✓ **Economic Prosperity**
- ✓ **Equity**
- ✓ **Technological Innovation**

COLLABORATION FOR INNOVATIVE SOLUTIONS

EMPLOYMENT HUBS



BACKGROUND

Community leaders, stakeholders, and the general public agree that one of RTA's most vital roles is to connect people to jobs. Findings from the Strategic Plan engagement process revealed that many people understand that forces outside of RTA's control can negatively impact the agency, such as development patterns that are not supportive of transit. Therefore, partnership and collaboration were repeatedly emphasized as important to carve a successful path forward for the greater community.

The importance of transit has become clearer to many people during the COVID-19 pandemic. Ohio has received more than 1.2 million unemployment claims during the coronavirus crisis in early 2020. In less than three months in Cuyahoga County, thousands of coronavirus cases have been confirmed and the virus has killed hundreds of county residents. Stay-at-home orders to stem the disease have drastically impacted travel from airports to automobile traffic to transit. As spring turns to summer in 2020, economists worry it will take many years to recover the millions of jobs lost in recent months. Historical data reveals that past recessions have had long-lasting negative impacts on northeast Ohio and RTA that have been difficult to reverse.

The pandemic has launched the term "essential worker" into mainstream discussion about people who work in medical facilities, grocery stores, food production, cleaning services, and other jobs necessary for meeting the needs of society. Nationwide, the most likely person to hold a designated essential job is a person of color who is female. In many ways, essential workers are similar to many RTA customers.

RTA has always been vital in helping individuals achieve their goals and subsequently driving economic success for the region. RTA data reveals that most RTA customers ride transit to get to jobs, and traditionally a significant portion of riders are unemployed and looking for work. The role in supporting jobs and communities will become even more vital in the years to come as the region emerges out of the current recession. Partnership will be key.

RTA's existing service provides access to over 230,000 jobs, or about a quarter of total regional jobs. RTA provides access to many jobs by concentrating services in areas of high job density in traditional urban areas. RTA also serves four job hubs outside of dense urban areas. There are six main hubs of employment in the five-county region, with all six located within Cuyahoga County. The six hubs are:

- Downtown
- University Circle
- Solon Cochran Corridor
- Chagrin Highlands
- I-77-Rockside
- Hopkins Airport Area

The largest job hub is Downtown Cleveland and University Circle is the second largest. Both areas are urban environments that are served well with rail and fixed route transit and will see improved service through implementation of the System Redesign pillar study.

For regional job hubs that are not in walkable environments, the potential for transit-oriented development is limited. Economic factors, business decisions, and local policies have driven land use that is not dense or walkable, thereby creating a very challenging transit environment. New partnerships and mobility models will be needed to deliver people to jobs. In places like Solon, an abundance of available jobs in low density areas and a lack of adequate public transportation options to get to them is a problem that needs to be solved with multiple players finding creative solutions. Current transit riders working in outlying job hubs experience very long commute times, followed by considerable walking distances between the bus stop and their place of employment.

IMPLEMENTATION

Partnerships with business and community leaders across the region will be necessary to find creative solutions that have buy-in from multiple parties. RTA and employers would benefit from new collaboration to deliver new services to suburban and outlying job centers. Since transit service to sprawling job sites is challenging financially and operationally, partnership is vital. *Considerations include:*

Suburban Job Centers

- **Solon Cochran Corridor:** Solon is the third largest regional job hub in northeast Ohio. It is home to 900 businesses including large corporations, several of which are industrial and manufacturing companies that together employ thousands of people across multiple shifts of production. According to city data, there are over 20,000 daily commuters traveling to Solon from the surrounding region.
- **Chagrin Highlands:** The Chagrin Highlands job hub includes the area of I-271 around Chagrin Boulevard and Harvard Rd interchanges in City of Beachwood and surrounding villages. Over 20,000 daily commuters commute to Chagrin Highlands from the surrounding region. A majority of workers in Chagrin Highlands make less than $40,000 annually and one-quarter make under $15,000 annually.
- **I-77-Rockside:** The I-77 & Rockside area encompasses the area south of I-480 surrounding the interchange of I-77 and Rockside Road located in the City of Independence. Roughly 20,000 workers commute to the area from across the region. Approximately one-third of employees make approximately $15,000 annually and a majority make less than $40,000 annually.
- **Hopkins Airport Area:** The area around Hopkins Airport includes many jobs for the federal government and the NASA Glenn Research Center. Ford Motor plant has over 1,500 employees over 1.6 million square feet that manufacture engines. Almost 20,000 commuters travel to the area daily for work. The airport is the largest and busiest airport in Ohio and is a hub for regional economic development.
- Each job center has fixed route transit service, yet stakeholders and the public have shown concern that more needs to be done to deliver workers to these job hubs.

Microtransit

- While demand-responsive shuttle services have existed for decades, new innovations are blossoming due to widespread mobile Global Positioning System (GPS) access, internet connectivity, and automated trip-making algorithms.
- Microtransit in modern transit planning refers to adapting the real-time customer innovations from transportation network companies to provide shared rides to the general public. A spectrum of service models, vehicle types, dispatching processes, and other variations exist to suit the needs of a particular geography.

Partnership to deliver success

- Microtransit and associated flexible transit services are inherently expensive. Successful models pool funding from businesses, municipalities, and other sources pertinent to a particular geography.
- RTA should conduct feasible studies with local chambers of commerce and other local leaders in order to identify need, collaborate with human resource departments, survey employees, identify funding match from employers, create 6-month to 12-month pilot projects, and facilitate promotion of services with area stakeholders.
- Success should be redefined from typical transit measures and instead be focused on employers' before-and-after ability to attract and retain employees.
- Beginning with Solon and incorporating leaders from other job hubs over time, the microtransit service can begin as a one-off geographic pilot and expand to a region-wide program.
- Several private companies exist that provide advanced technology solutions to power microtransit. Partnerships with these companies on background technology can be combined with RTA-branded vehicles and RTA operators in order to create an innovative and reliable customer experience.

SUMMARY

Urban job hubs

- Downtown and University Circle will experience improved job access through implementation of system redesign improvements and transit-oriented development partnerships.

Suburban job hubs

- Solon Cochran Corridor, Chagrin Highlands, I-77-Rockside, and Hopkins Airport area will experience improved job access through microtransit solutions in partnership with local business leaders and stakeholders.

Transit-Oriented Communities

- Walkable neighborhoods will be supported through partnership along Priority Corridors.

TIMEFRAME

Short (2020-2022)

- Establish stakeholder group around Solon job center to assess needs and feasibility of solutions
- Conduct pilot program centered around Solon job center
- Evaluate before-and-after metrics of employee attraction and retention as well as community perception
- Assess needs and establish stakeholder group around Chagrin Highlands job center

Medium (2023-2026)

- Conduct pilot program centered around Chagrin Highlands job center and other regional job centers as needed
- Conduct feasible studies of transit service for other regional job centers
- Evaluate before-and-after metrics of employee attraction and retention as well as community perception
- If successful, launch regional long-term microtransit program

Long (2027-2030)

- Evaluate ongoing success and community perception
- Transition to widespread autonomous microtransit solutions as technology advances

RESPONSIBILITIES

Champions:

- RTA
- Business leaders representing job hubs

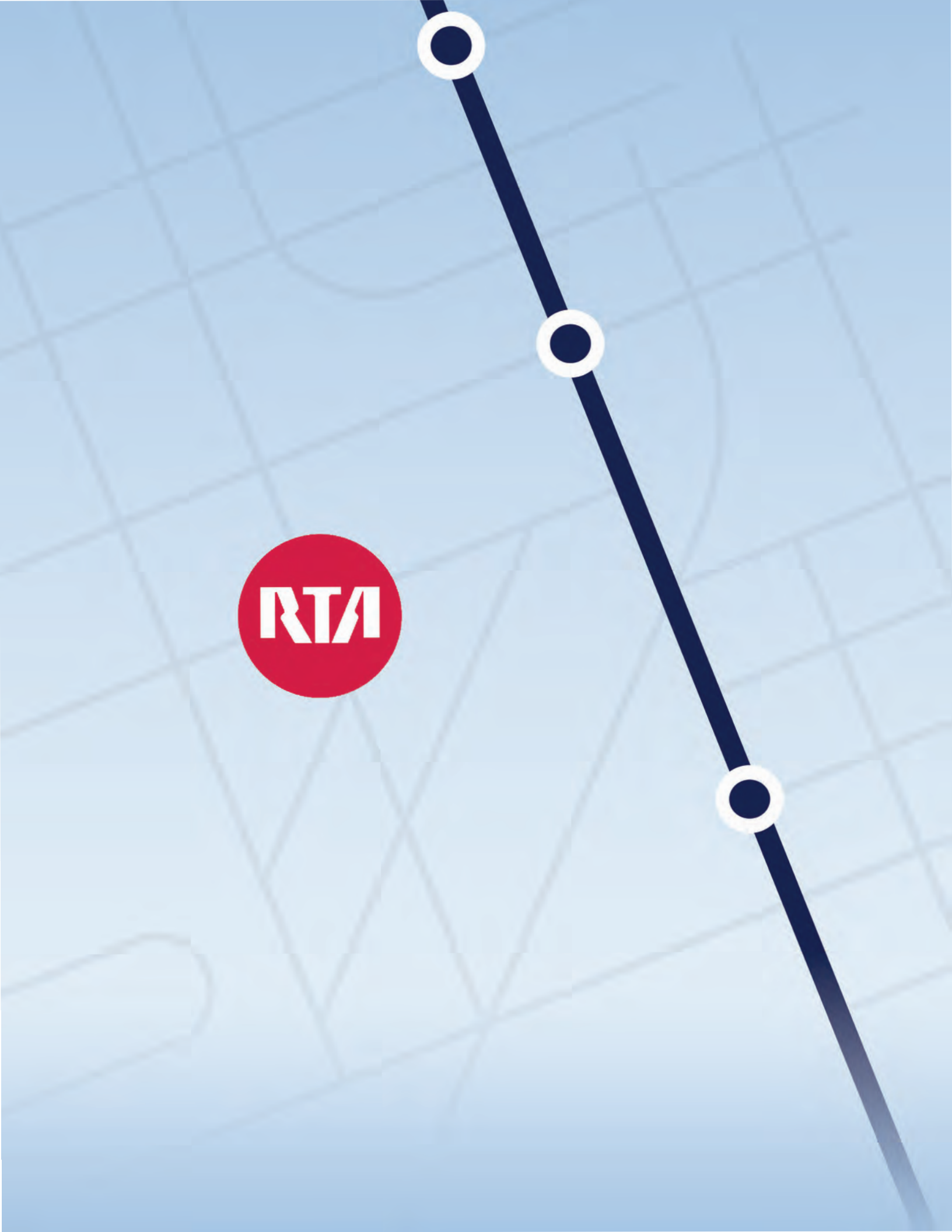
Supporting partners:

- Chambers of Commerce
- Workforce development partners
- NOACA
- Cuyahoga County
- Human resources departments
- Municipalities

OUTCOMES

Outcomes include:

- Reduction of social inequities
- Reduced travel time for workers
- Improved environmental quality and preservation of natural areas
- Increased attraction and retention of workers in regional job centers
- Increased economic output for northeast Ohio


RTA