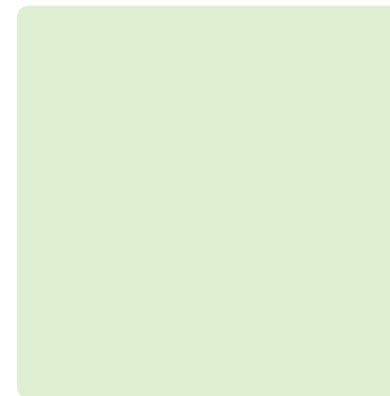
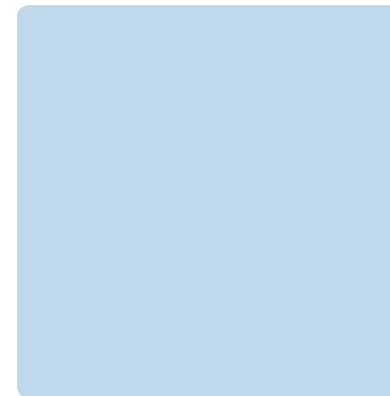




Mobility Corridors Initiative

# Framework Strategy

June 2020

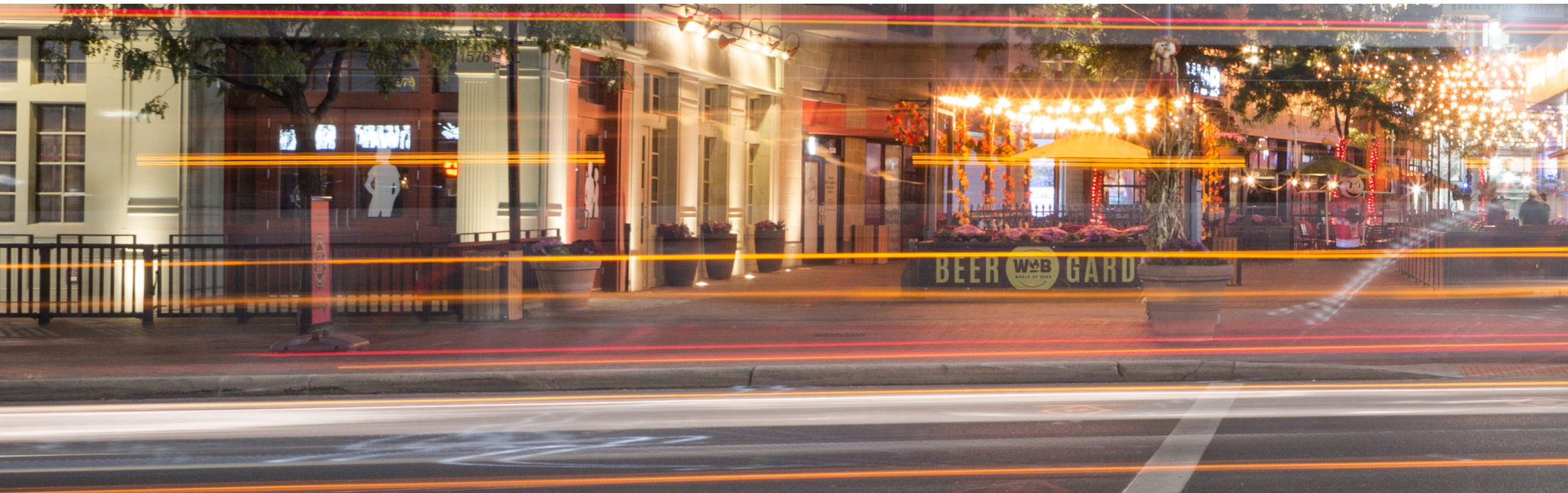


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## LinkUS is the mobility corridors initiative for Central Ohio.

LinkUS seeks to provide a complete mobility system along key regional corridors, including high capacity and advanced rapid transit, new transportation technology solutions, bicycle and pedestrian improvements, and new housing and job opportunities.

The initiative is a response to the challenges facing a growing region, including managing traffic congestion, ensuring equitable access to jobs and housing, promoting economic vitality, and improved sustainability. It builds on numerous previous regional planning efforts, including COTA's NextGen plan and the MORPC Insight 2050 Corridor Concepts study.





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## FOREWORD

The LinkUS initiative is the result of many years of foundational work, community conversations, and strategic planning by regional partners to envision a bright and prosperous future for all of Central Ohio. The strategies outlined in this document are now being advanced in the midst of significant national and global events which underscore the critical goals of social equity that are a central feature of this work.

The public health and economic impacts of the COVID-19 pandemic have affected everyone – lives lost, businesses closed, jobs furloughed or eliminated, government budgets cut, and widespread uncertainty about the future. However, this crisis has been especially devastating to working class residents and people of color, many of whom rely on transit to get to work and do not have the option of working remotely. As with most transit agencies across the country, the Central Ohio Transit Authority and their customers have experienced significant challenges, yet the organizational vision To Move Every Life Forward has more meaning today than ever before. Among the many lessons learned from this pandemic, is that safe and reliable mobility solutions are essential to the future of our community.

In the midst of this public health crisis, the recent murder of George Floyd and countless other black men and women have galvanized a national and international movement, shining a bright light on institutional racism and the disparities racism has created within the Black community. This inequality is the accumulation of decades of institutional policies, practices and decisions that have put people of color at greater risk of experiencing the negative impacts of public health and economic crises. Equitable access to quality housing, economic opportunities, and safe travel through our communities has been out of reach for too many and for too long.

As we envision the future of our region, the decisions we make about transportation infrastructure, land use, housing, and economic development must address these issues. Through our work together, Columbus and Central Ohio will continue to grow. As we do so, we must confront the challenges created by both the current pandemic and ongoing systemic inequality. It is clear that the many issues we face around growth and mobility must include intentionality to address the needs of the most vulnerable in our community.

The goals and strategies outlined in the following pages are made even more important by the current events of 2020. They will be a critical part of our economic recovery, and path toward a more resilient, inclusive, and equitable region. At its core, the LinkUS initiative is a strategy to invest in our community – to create a future for Columbus and Central Ohio that will move our region forward, together.



Mayor Andrew J. Ginther

City of Columbus



Shannon G. Hardin

Columbus City Council,  
President



Joanna M. Pinkerton

Central Ohio Transit Authority,  
President/CEO



William Murdock

Mid-Ohio Regional Planning  
Commission, Executive Director



An aerial night view of a city skyline, likely Columbus, Ohio, with a blue overlay. The image shows a mix of modern high-rise buildings and older, lower-rise structures. In the foreground, there's a street with cars and some greenery. The sky is dark with some light clouds.

## Together we can create great places, reinvent our region, and shape an ambitious plan for the future.

LinkUS is an initiative created to address the future of critical regional corridors and the communities they serve. It is centered around the following:

- **Creating Great Places.** The quality of our communities has never been more important in the decisions people make about where to live, work and invest. Generating economic opportunity, competing for talent and fostering local pride will require walkable, accessible, attractive and safe places.
- **Reinventing the Region.** The significant anticipated population growth in the region makes it possible to re-imagine what central Ohio will look like and how it can become more equitable. This is a holistic idea about well-being that includes health and essential services.
- **Shaping the Future.** A bold approach that attracts resources, identifies anticipated returns on investments, and ensures accountability will create the conditions for shared prosperity. Competition is as strong as ever, but compelling ideas and a committed leadership coalition can shape the future that is needed and deserved.
- **Providing Equitable Opportunity.** Supporting people in the region in their desire for good jobs, high-quality affordable housing, transportation choice and strong neighborhoods is a priority. A key goal is to improve neighborhoods and expand opportunities for the people who live in them.

PHOTO COURTESY OF INFINITE IMPACT



# Background

## By 2050, Central Ohio will be a region of three million people.

The region's growth rate of 28% by 2050 outpaces the state as a whole, highlighting the region's continued draw as a vibrant economy. Current projections show that the region will add 300,000 jobs between 2010 and 2050. Forbes identified Columbus as a rising city and the number one place for start-ups in 2016 and found that Columbus does a better job of retaining students post-graduation than any city in the country, likely due to the relatively low cost of living and presence of major corporations providing many opportunities.

However, an increasing population and growing economy bring new challenges to the region. According to the 2019 Urban Mobility Report, residents in the Columbus area already spend an extra 50 hours per year commuting due to congestion, at a cost of over \$1,000 per person annually. Rising housing costs threaten to displace lower- and middle-income workers, pushing them further from jobs and opportunities. There is a clear need to improve the reliability and competitiveness of transit as a mode of choice, and the safety and connectivity of infrastructure for those who walk and bike. All of these factors limit our ability to ensure an equitable, safe, sustainable, and economically vibrant future for all Central Ohio residents.

The LinkUS Mobility Corridor Initiative is a coordinated response to these emerging challenges. LinkUS builds on COTA's NextGen plan and the Insight 2050 Corridor Concepts plan to tie together land use and transportation through a series of integrated corridor efforts. Each corridor development process will identify a major mobility investment to improve movement along the corridor, and identify a strategy to direct compact and connected development where it makes sense. Together, the mobility corridors create a complete system of high-performing corridors that connect residents all over the region to opportunity. Insight2050 defined five model corridors to be part of the initiative, but future corridor opportunities are being explored as well.

This document outlines an implementation framework for the LinkUS initiative, to ensure a consistent and replicable approach for each corridor. This includes a guiding mission statement and organizational framework that ties all corridor plans together, along with a recommended project development process and steps for implementation. While each corridor will be completed separately, a coordinated strategy will help ensure that future transportation investments and land use decisions align to work toward the region's long-term goals.



**Mobility Investments**

+



**New Housing & Jobs Centers**

=



**Opportunity**



# FOUNDATIONAL EFFORTS

Central Ohio has engaged in a number of regional studies and initiatives to identify strategies to manage anticipated growth. All contemplate the advancement of high-capacity transit. These efforts have been building towards the creation of a regional advanced rapid transit system, with the Insight 2050 Corridor Concepts Study being the prime catalyst. **The LinkUS initiative is the next step in advancing these efforts through a coordinated implementation program.**



## INSIGHT2050 (2014)

Led by the Mid-Ohio Regional Planning Commission (MORPC) and in partnership with member communities and other agencies, this effort considered various alternative growth patterns for the region. The outcome was a focused growth strategy that aimed to balance and accommodate growth in a cost-effective, efficient, and sustainable manner.



## NEXTGEN (2017)

The Central Ohio Transit Authority (COTA) undertook the NextGen planning process to consider and evaluate 26 potential transit corridors. These were narrowed down to 14 corridors, which were studied more closely using themes of connectivity, equity, building on current successes, and sustainability.



## INSIGHT2050 CORRIDOR CONCEPTS STUDY (2019)

Insight2050 Corridor Concepts built on the NextGen work by taking a more detailed look at five representative corridors. The goal was to provide a demonstration of how more transportation choice and strategic development along each corridor could create more efficient and affordable options for working, commuting and living in the region.

The Corridor Concepts Study Report builds from findings in Insight2050 by focusing on new tools and modeling capacity for decisions about where and how to grow, where to invest transit resources and how to balance community goals. The report measures the impact of varying approaches of planning with the expected growth. Additionally, the report provides an implementation toolkit and identifies strategies on how the region can advance transit development to best serve the community.

# The Columbus Way

While the region faces many difficult challenges, Columbus is well-poised for future success.

**Our region has a solid history of steady growth and strong regional collaboration.** In recent years, Central Ohio has become one of the fastest growing regions in the US, with 159,000 jobs added over the past decade. This growth has proven our ability as a region to work together on shared priorities and projects. Our strongest regional assets, such as Metro Parks, nationally acclaimed healthcare system, and world-class universities are evidence of this ability, and the region's great places like the Scioto Mile, Columbus Zoo, and Arena District are all results of effective public-private partnerships. Initiatives like Smart Columbus offer further evidence of how public, private, and non-profit interests can work together to advance regional mobility strategies.

**Insight 2050 highlighted the relationship between our growth patterns and our economic prosperity.** That process, led by MORPC, the City of Columbus, and ULI Columbus in partnership with numerous public and private partners, laid the foundation for leveraging and directing growth to respond to regional priorities. Corridor Concepts further honed that response by identifying a series of representative corridors that can harness strategic investments to guide growth and development. Through such corridor initiatives, we can align public policies and resources with private investments to create regional assets that work toward shared goals for the future.

**LinkUS intends to learn from peer communities to create a successful coordinated implementation strategy.** Our capacity and appetite for collaboration is a cornerstone of the Columbus Way. LinkUS, a new regional initiative, represents a collaborative effort that includes COTA, MORPC, and the City of Columbus. LinkUS advances a mobility corridor initiative that connects the development of high capacity transit with land use and development patterns to advance regional goals quickly and efficiently. The remainder of this document provides a strategy framework for how and what needs to be done in order for these mobility corridors to be successful.





# LinkUS GOALS

Mobility is the link between the goals and priorities for the region.

Improving mobility in the region is critical to achieving regional goals for smart and efficient future growth. A set of regional goals have been identified through past efforts and through collaboration with regional partners. LinkUS will use these goals to guide the identification of mobility investments and development opportunities. Each alternative will be evaluated based on how it contributes to the region's overall wellness, rather than simply how well it moves people through the corridor.

LinkUS commits that future corridors will be developed in a way that supports affordability, innovation, economic development opportunities, equity and sustainability.



## EQUITY

Enhanced mobility options will allow for increased access and opportunity for all members of the community. Mobility is critical to improving equity in the region.



## ECONOMIC DEVELOPMENT

Enhanced mobility encourages public and private investment in transportation and development. This promotes local and regional economic vibrancy.



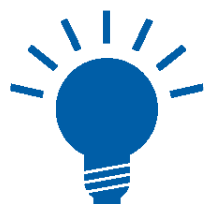
## WORKFORCE ADVANCEMENT

Increased travel choice and connectivity better links jobs with workforce, promoting economic vibrancy and equity.



## AFFORDABILITY

More travel options will reduce costs for our community. Reduction of combined housing and transportation costs also creates a more equitable region.



## INNOVATION

Mobility fosters innovation between our people and places, creating shared prosperity. Technological innovations in transportation make a more efficient system, promoting the region's economy and sustainability.



## SUSTAINABILITY

Increased mobility options lowers automobile dependence to reduce carbon emissions. Coupled with compact, walkable development patterns, growth can occur in the region while also preserving farmland and the natural environment.

# LEARNING FROM OTHERS

Many regions around the country have led the way by developing systematic mobility plans to respond to 21st century challenges. While no place is ever a perfect analogy, several peer regions share enough similarities to be valuable case studies when studying the implementation of high capacity transit. By studying the success (and challenges) these regions faced, the Columbus region intends to build the LinkUS initiative on the lessons learned and best practices established by these national partners. The section below identifies some of the key characteristics of three high-profile regional planning efforts that have successfully moved toward implementation. These characteristics informed the LinkUS “Ingredients for Success,” explored in more depth on the following page.



## DENVER

The City of Denver has coordinated land use, parks and recreation, and mobility decisions under a single planning initiative: Denverright. Under the Denverright umbrella, a series of transportation planning efforts (Denver Moves) have identified specific strategies for transit, pedestrian infrastructure, and trails that coordinate with the overall citywide strategy toward a shared set of goals. Additionally, a voter-approved initiative has identified several Denver Regional Transportation District (RTD) corridor projects as FasTracks. Dedicated funding has allowed the RTD to build 58.5 miles of light rail since 2004, with a plan for up to 120 miles.



## INDIANAPOLIS

IndyConnect is Indianapolis' regional transit initiative aimed at developing a series of high-capacity corridors throughout the region. The plan built on previous regional planning work to identify desired improvements, including three initial bus rapid transit lines. The region secured dedicated funding through a sales tax (explored further on the next page) and the first new transit line opened in 2019 after 15 months of construction.



## TWIN CITIES

The seven counties in the greater Minneapolis-Saint Paul metropolitan area successfully lobbied the Legislature in 2008 to authorize their authority to levy a ¼-cent sales tax dedicated to transportation. Central Ohio can learn from the funding, governance, and high-capacity program development and delivery practices the region has utilized to quickly and efficiently develop a system of arterial bus rapid transit lines to augment the region's light rail system.



# CASE STUDY: INDYGO REDLINE

Indy Connect is the Indianapolis region's bus rapid transit system that is currently under development. The initial corridor, the Red Line, is comprised of three phases creating a 31-mile corridor with 28 stations. Phase 1, which includes 13 miles, started service in September 2019. The system will be the nation's first all-electric BRT system, and 59% of the project will operate in dedicated transit lanes. Service will run every 10 minutes during the day, with longer headways early mornings and late evenings beginning at 5 a.m. and ending at 1 a.m. The route comes within a quarter-mile of more than 50,000 residents and nearly 150,000 jobs

## FUNDING STRATEGY

The total estimated cost for the Red Line is estimated at about \$95 million. While the majority of the capital costs were funded through Federal funding (\$2 million TIGER Grant and \$75 million in FTA Small Starts Funding), the local match and continued operating costs are funded through dedicated local funding streams. The \$18 million local match for the capital costs came from the Downtown Tax Increment Financing (TIF) district and the City's Department of Public Works. Marion County also successfully lobbied the state legislature for the ability to assess a dedicated income tax (0.25%) to fund \$56 million per year in operations. The tax was approved by voters in a 2016 referendum.

Phases 2 and 3 of the Red Line will be dependent upon local referenda, to be passed in each of the three counties making up the transit district. The next corridor to be constructed is expected to be paid for entirely with local sources.

Many regions follow similar funding models and rely on a partnership with federal agencies for portions of their funding. The Indy Connect Red Line was awarded a Small Starts grant from the Federal Transit Administration. Even with the FTA grant, Indy Connect required additional funding to cover their grant matching requirements as well as funding to cover operational cost. For these reasons, many regions seek creative methods to fully or partially fund their new systems including: Transportation Bonds, Tax Increment Financing, Sales Tax and Income Tax programs.

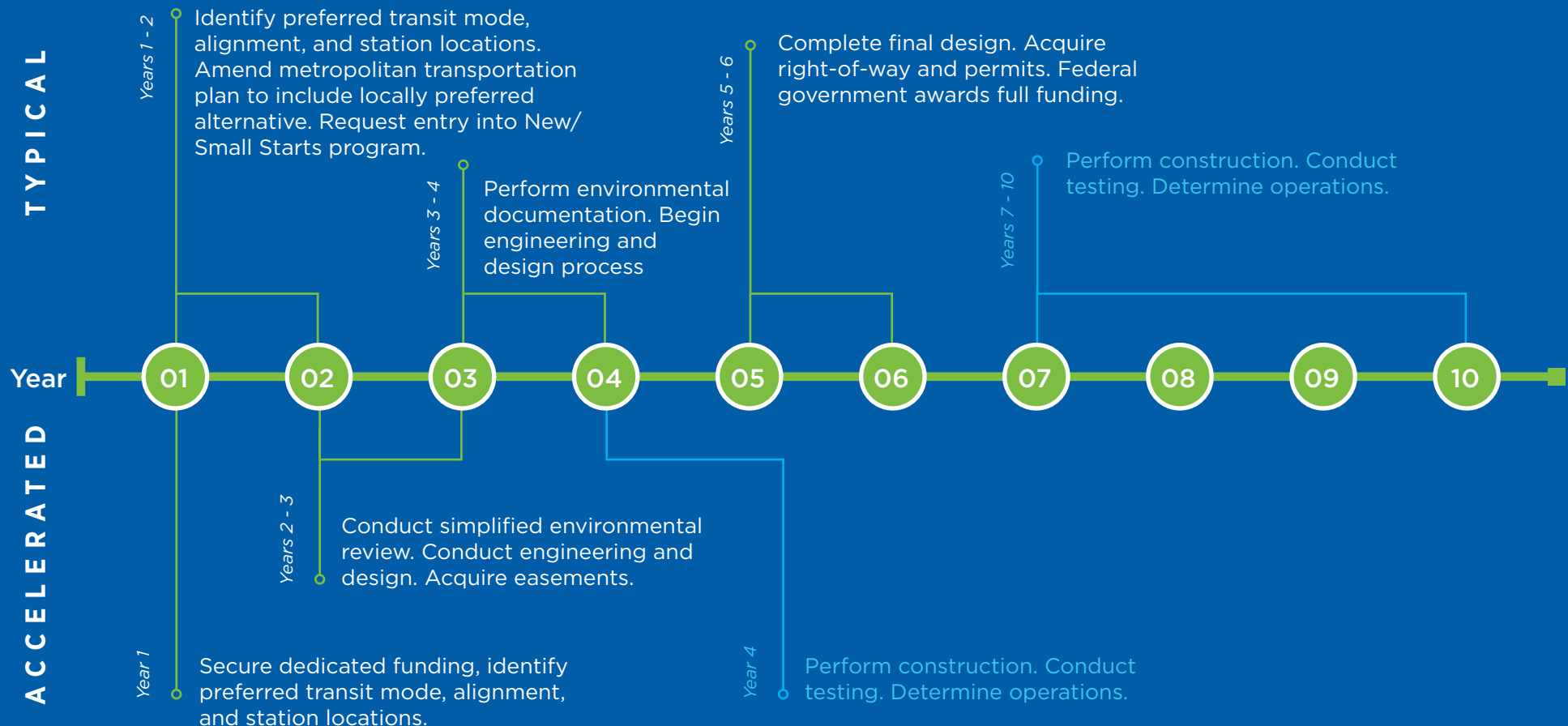


INDYGO REDLINE

# CASE STUDY: SPEED TO IMPLEMENTATION

Planning, constructing, and implementing new infrastructure investments is often a prolonged process, particularly when projects involve the purchase of new right-of-way. Projects may be accelerated if several key factors align, however. Metro Transit in the Twin Cities identified an approach that allowed their first arterial BRT corridor to move from securing financing to operations in just four years. The A-Line opened in June 2016 after being identified as a priority corridor in a 2012 study.

In 2012, the Arterial Transitway Corridors Study identified several major corridors to be constructed as rapid bus lines. The A-Line was prioritized as the first to be implemented based on a technical and readiness evaluation. The project was constructed within the existing right-of-way, minimizing the required federal environmental review and simplifying the required design, thereby accelerating the typical construction schedule. Additionally, the project was largely funded through state and local sources. The Twin Cities is just one example of national best practices that have proven to be successful in accelerating transit projects, including **dedicated funding, working with existing right-of-way, and a standardized project development process**. The illustrative schedule below includes a typical transit line construction timeline, along with an option for accelerated project implementation.







TWIN CITIES ARTERIAL TRANSITWAYS



# Ingredients for Success

In Central Ohio our efforts have centered around the idea that we all share the responsibility of addressing our regional challenges. This includes working together to implement an enhanced mobility strategy for the region through the implementation of an integrated, high-capacity transit system. Achieving this will require a focused process dedicated to achieving regional goals through best practices.

By studying the successes and challenges of other regions who have undertaken similar processes, LinkUS has identified six key ingredients for success. These evidence-based elements are common elements among successful regional mobility programs and form the core of the LinkUS framework. By focusing LinkUS efforts on these elements, the corridor project development process to follow will enjoy a great level of regional support, have a clearly identified place in a comprehensive strategy, and have access to the financial resources needed for implementation.

- ① UNIFY THE EFFORT
- ② BUILD A SYSTEM
- ③ IDENTIFY DEDICATED FUNDING
- ④ DEVELOP EFFECTIVE PARTNERSHIPS
- ⑤ BUILD REGIONAL SUPPORT
- ⑥ ENGAGE THE COMMUNITY



# 1: UNIFY THE EFFORT

The LinkUS corridors initiative will link mobility implementation efforts throughout the region under an umbrella program. While individual corridor analysis will define the mobility modes and design details, aligning these efforts under the LinkUS name offers several key benefits:

## SHARED BRANDING

By linking individual corridor efforts under a shared program branding, it emphasizes the interconnected nature of the region's corridors and the need for a coordinated effort. The branding makes clear that while individual corridor initiatives may stand on their own, they rely on key principles and shared goals that apply to the region as a whole. Shared branding is also indicative of the regional partnership.

## ROBUST AND EQUITABLE ENGAGEMENT

The LinkUS process will include a public engagement plan, which will guide the engagement efforts of each individual corridor process. This plan will establish a common set of objectives and principles, while maintaining flexibility to tailor individual corridor processes to their specific context.

## CONSISTENT MESSAGE

Utilizing the LinkUS branding, colors, and logo on all communication materials creates consistency in a way that will build awareness of the overall effort. Notably, the branding conveys the concept of connecting people to places, emphasizing the importance of this goal. The brand is also linked to the City of Columbus' ongoing branding efforts, creating a sense of familiarity among residents.

## ALIGN PRIORITIES

Aligning individual corridor initiatives under one implementation program ensures that all efforts share a consistent set of regional priorities, with the overall goal to create a complete regional mobility system and growth strategy. The identified goals will be woven throughout all LinkUS efforts to create familiarity and consistency as the program builds.





## 2: BUILD A SYSTEM

Within the past few years, a wide variety of corridors have been studied for growth potential and transit investment within Central Ohio. Five initial corridors were studied as part of Insight 2050 Corridor Concepts – all have merits as transit-oriented growth corridors, but also varying degrees of challenges.

Corridor Concepts has generated a great deal of excitement amongst a variety of partners and stakeholders interested in implementation of the recommendations. Following the roll-out of the report in April 2019, the three primary implementing agencies – COTA, MORPC and the City of Columbus – initiated discussions regarding how best to proceed. A partnership quickly emerged to initiate a more detailed study of the corridor facing the most immediate pressures of regional growth and traffic congestion – **the Northwest Corridor.**

Recognizing that the five corridors in Corridor Concepts were intended as models, and other efforts such as COTA's NextGen have identified other potential transit corridors, the agencies began discussions on how best to prioritize corridors moving forward and to work with other regional partners to advance the corridors through implementation. LinkUS is the result of this new partnership effort.

Through a series of strategy sessions, a composite set of corridors emerged, combining the five modeled in Corridor Concepts, with additional selected corridors from COTA's NextGen plan (see next page). This represents a vision of a comprehensive integrated system of regional corridors, but does not necessarily represent the full range of possible corridors that could be advanced in the future. Each will require its own more focused implementation effort.

With the identification of these initial corridors, and potential additional corridors to follow in the future, **Central Ohio has laid the foundation for an interconnected regional mobility system that offers enhanced transit and mobility opportunities.**

This is truly an instance where the whole is greater than the sum of its parts. If corridors are developed individually, the result will be a few separate transit projects that may aid movement on certain roadways and impact a limited portion of the population. But when these corridors are viewed as part of a long-term regional strategy, a much more impactful picture emerges. The LinkUS initiative seeks to marry a series of transit-oriented land use changes with mobility enhancements that over time will improve mobility in all corners of the region and include improvements for all modes of travel: transit, bicycles, pedestrians, automobiles and freight. They may not be accomplished all at the same time, and each may look a bit different, but partners in Central Ohio have recognized the importance of long-term thinking to impact the region's economic vitality and livability.



## ADVANCING REGIONAL CORRIDORS

Initial corridors were analyzed through a set of prioritization criteria and metrics from both Insight 2050 Corridor Concepts and COTA's NextGen process. This analysis resulted in the identification of the next corridor initiative to be advanced – a regional **East-West Corridor**, comprised of two primary elements:

- **West Broad Street**, which ranks highly among multiple evaluation criteria
- An **East Corridor alternatives analysis** to determine a preferred alignment between East Main Street and East Broad Street, both of which also rank highly among evaluation criteria

Combined with the Northwest Corridor, which is now underway through the first phase of implementation analysis, as well as COTA's first BRT line, the CMAX, this series of projects will form the backbone of the region's emerging system of advanced rapid transit corridors. Moving forward, other corridor initiatives will continue to enhance service and lay the ground work for future system expansion.

Through previous initiatives, the following criteria were developed to assess regional corridors for future project development.

Evaluation Objective	Criteria
<b>Maximize Ridership</b>	<i>Population Density</i>
	<i>Job Density</i>
	<i>Current Ridership</i>
	<i>Access to Corridor</i>
	<i>Activity Center Connections</i>
<b>Equity</b>	<i>Rental Households</i>
	<i>Zero-Car Households</i>
	<i>Minority Households</i>
	<i>Low-Income Households</i>
	<i>Home Value</i>
	<i>Rental Value</i>
<b>Economic Growth and Development</b>	<i>Projected Population &amp; Employment</i>
	<i>Redevelopment Potential</i>
	<i>Need for Congestion Management (near term)</i>
<b>Implementation Feasibility</b>	<i>Complexity of Implementation</i>
	<i>Impacting Capital Projects</i>
	<i>Compatibility with NextGen Study</i>
	<i>Potential Costs</i>

## NORTH CORRIDOR

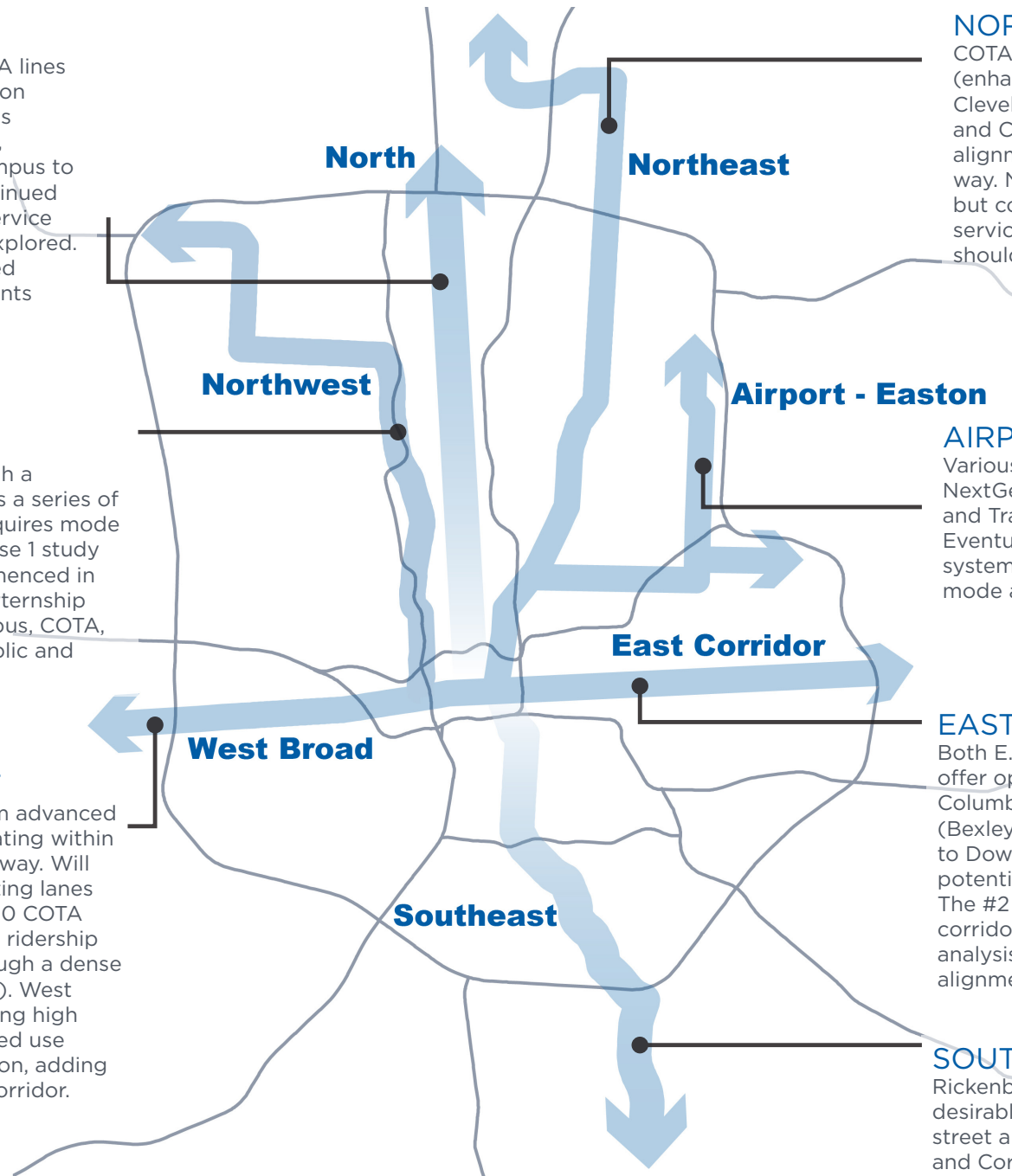
High Street (#2 & 102) COTA lines are highest ridership in region and run through the region's densest residential corridor, connecting OSU's Main Campus to Downtown Columbus. Continued transit infrastructure and service enhancements should be explored. Past studies have considered various modes and alignments options.

## NORTHWEST

Links major institutions and employment centers through a congested corridor. Includes a series of engineering challenges. Requires mode and alignment analysis. Phase 1 study (Broad to Bethel) has commenced in 2020 through a funding partnership between the City of Columbus, COTA, MORPC, OSU and other public and private funders.

## W. BROAD STREET

Highly feasible as near-term advanced rapid transit corridor, operating within the existing street right-of-way. Will require reallocation of existing lanes to dedicated transit. The #10 COTA line has the second highest ridership in the region and runs through a dense residential corridor (Hilltop). West Broad is already experiencing high density residential and mixed use redevelopment in Franklinton, adding potential ridership to the corridor.



## NORTHEAST

COTA implemented the CMAX (enhanced service/Arterial BRT) along Cleveland Avenue in 2018. NextGen and Corridor Concepts assumed partial alignment on abandoned rail right-of-way. Near-term relocation is unlikely, but continued transit infrastructure and service enhancement of existing route should be explored.

## AIRPORT-EASTON

Various configurations studied via NextGen and JET (Jobs, Expansion and Transportation) Task Force (2014). Eventual integration into rapid transit system is desirable. Requires future mode and alignment analysis.

## EAST CORRIDOR

Both E. Main Street and E. Broad Street offer opportunities to connect east Columbus and the east-side jurisdictions (Bexley, Whitehall, Reynoldsburg) to Downtown. Both corridors offer potential for high-capacity transit. The #2 and #10 COTA lines serve each corridor respectively. Alternatives analysis required to determine preferred alignment.

## SOUTHEAST

Rickenbacker connection is highly desirable to link workers to jobs. Some street alignments studied in NextGen and Corridor Concepts are physically constrained. Requires future mode and alignment analysis.










RICHMOND PULSE BRT LINE

## MODE CONSIDERATIONS

One of the key recommendations of the Insight 2050 Corridor Concepts Study is that advanced rapid transit, to be truly effective as an alternative to single occupant vehicle travel, must operate within its own dedicated runningway. The report did not specify exactly what high capacity transit should look like in Central Ohio or in any of the potential corridors. The specific mode (i.e. type of vehicle and associated infrastructure) and the right-of-way design might look different in different corridors depending on development context, available space or physical constraints, costs and available technologies, and timeframe to implementation. The table below illustrates comparative cost ranges and design considerations among various high capacity transit modes.

The focus of LinkUS is to quickly implement an interconnected system of high quality mobility corridors linking communities together and advancing regional goals (see page 9). Service and design objectives for individual corridors should be considered in the context of the larger system. For example, at the typical cost and timeframe required to build a single light rail line, multiple Bus Rapid Transit (BRT) lines could be implemented – providing broader, more equitable service coverage to the region. Regardless of the specific mode, it is critical that key elements of transit service, technology integration, vehicle types, and infrastructure design be prioritized in each corridor. The next page illustrates the types of features that should be expected, using Bus Rapid Transit as an example. Each of these comes with a cost but also a higher return on investment.

	Mode	Construction Cost ** (per mile)	Station Spacing	Runningway	Land Value Impact
	Light Rail	\$60-120M	½ to 1 mile	Mostly dedicated, minimal shared with traffic	High
	Streetcar	\$35-50M	¼ mile or more	Mixed flow and dedicated lane	High
	Bus Rapid** Transit	\$10-35M	¼ mile or more	Primarily dedicated	Medium- High
	Express Bus	\$1-2M	Limited stops	Mostly mixed flow, may benefit from HOV or other dedicated lanes	Low
	Local Bus	<\$1M	1-2 blocks to ¼ mile	Mixed flow	Low

\*Cost estimates vary widely. Typical costs are based on case studies of recent projects in the United States.

\*\*Assumes Bus Rapid Transit operating in dedicated runningway and other premium transit features (see next page).



## KEY ELEMENTS OF PREMIUM TRANSIT

Advanced Rapid Transit implemented as part of the LinkUS initiative should include a suite of features that provide a premium level of service and quality of experience to riders. These examples illustrate how Bus Rapid Transit can offer almost identical service features and characteristics as light rail, but with a significantly lower implementation cost. With this combination of service and design features, BRT can essentially operate as “light rail on rubber tires.” As specific modes and designs are determined, these types of features should be prioritized.



### Level Boarding & Multi-Door Boarding

Elevated platforms and multi-door boarding simulate a train station experience and speeds the boarding process.



### Off-Board Fare Collection

Fare collection is conducted through off-board and/or digital payment eliminating the lag time associated with on-board fares.



### Dedicated Right-of-Way

Right-of-way may be designated with pavement color, pavement markings and signage, or physical separation.



### Signal Priority & Intersection Control

Connected signalization and priority movement through intersections enhances on-time performance.



### Modern Vehicle Designs

Vehicles can be designed to simulate modern rail, through external appearance, interior comfort, and ease of ride.



### Frequency & Capacity

Vehicles are typically larger and arrive with frequent, predictable headways, moving more people faster. Lines could also accommodate smaller more agile vehicles where needed.



### Enhanced Stations

Stations are amenitized, conveniently accessible, and more widely spaced from one another to minimize stops and decrease travel time.



### Adaptability

Emerging technologies will allow for continued performance improvements, with continued commitment to the critical role of the transit workforce.



### 3: IDENTIFY DEDICATED FUNDING

Developing a complete regional mobility system, including advanced rapid transit service, comes with a hefty price tag. To attract additional ridership and provide mobility benefits to the region as a whole, any new transit service must provide:

- *An exceptional travel experience,*
- *Well-designed and properly located stations,*
- *Seamless connectivity to walkable and bikeable environments,*
- *Integration with other transit service and supporting services like Uber and Lyft, and*
- *Competitive and predictable travel times.*

These significant capital investments will require us to rethink how we fund major projects. Each of the peer communities highlighted in this document, as well as nearly all North America's high capacity transit systems required new revenues to build and operate their systems. Funding for major transit corridor projects typically require funding from a variety of sources:

#### Federal Funding and Local Match

Significant funding resources are available through competitive grant processes. Federal funds typically require a local match of 20% or more of total capital costs. Sources for the local match vary by project and agency throughout the country. Projects often are developed within Federal Transit Administration, US Department of Transportation and US Department of Energy grant requirements.

#### REGIONAL RESOURCES

The latest Metropolitan Transportation Plan developed by MORPC includes over \$13 billion in transit investments between 2020 and 2050, including an **estimated local cost of between \$3 to \$4 billion to develop up to five high-capacity transit corridors over the next 30 years.** This is in addition to an assumed \$750 million the region may receive in federal grant funding.

COTA operates the current transit system on sales tax revenues (88% of annual budget) and fare revenues (12% of annual budget). The current budget does not include additional funding for the type of significant transit capital investments illustrated on the previous page. Therefore, all corridor development funding is assumed to come from new funding sources. A wide variety of options are available, including public-private partnerships, new taxes, and bonding measures. Innovative funding measures will require regional collaboration, community and business buy-in, and political will.

LinkUS partners must work together to identify feasible funding sources for construction, operations and maintenance, or risk being \$4 billion dollars short of achieving the region's 2050 transit vision.

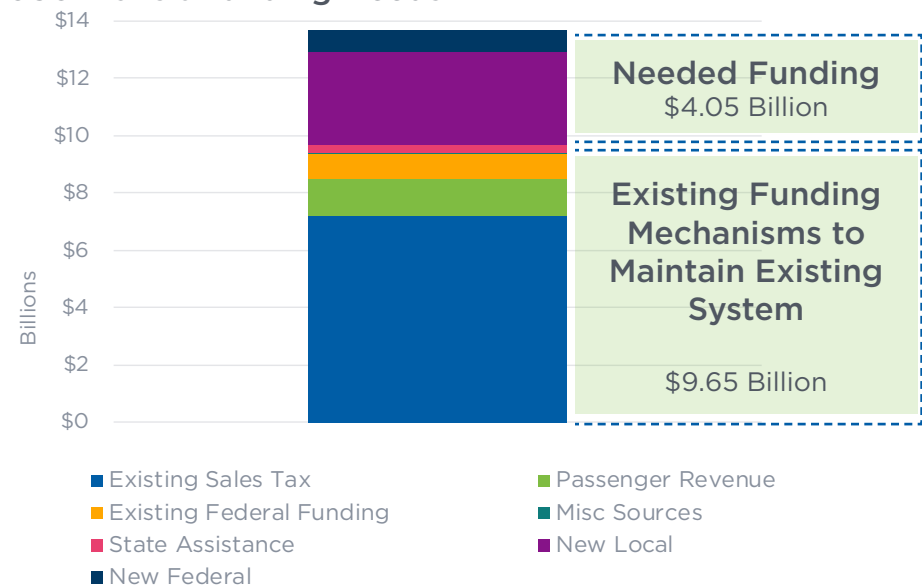
#### Operating Expenses

Post-construction, most regions have required significant additions to their traditional funding sources to continue operations.

#### A NOTE ON COST ESTIMATING

It should be noted that future funding needs are based on preliminary estimates. Each corridor initiative will confirm project-specific costs through the project development process.

#### 2050 Transit Funding Needs



Source: MORPC 2050 Metropolitan Transportation Plan

## 4: DEVELOP EFFECTIVE PARTNERSHIPS

In a region such as Central Ohio, it is not unusual for many agencies to have a hand in transportation planning and implementation. This can result in redundancies and inefficiencies, or it can result in accelerated project implementation through effective project management.

The key to sustained success is clearly identified roles and responsibilities, as well as a shared agreement on priorities, timelines, and goals. While the necessary roles and projects will vary by corridor, it is imperative that agencies share responsibility for program implementation in order to move projects from plan to construction quickly, efficiently, and cost-effectively. Assignments should be based on which partner or agency has a history of success in that role.

### ASSIGNING ROLES

As identified in Insight 2050 Corridor Concepts, the region should collaborate to assign roles and responsibilities to regional partners, including:

- *Establish an inclusive membership structure that allows for all impacted political subdivisions to participate;*
- *Acquire dedicated right-of-way and/or redesign existing rights-of-way to prioritize transit and other mobility improvements*
- *Create, facilitate and manage standards for smart mobility investments;*
- *Create or update zoning policies;*
- *Prepare and implement corridor development guidelines;*
- *Acquire property;*
- *Enter into contracts;*
- *Capture or generate revenue and facilitate tools to finance projects;*
- *Establish mechanisms to fund or facilitate the funding of projects along the corridors;*
- *Acquire federal, state, and other funds; and*
- *Issue tax-exempt debt*

### TIERS OF PARTNERSHIP

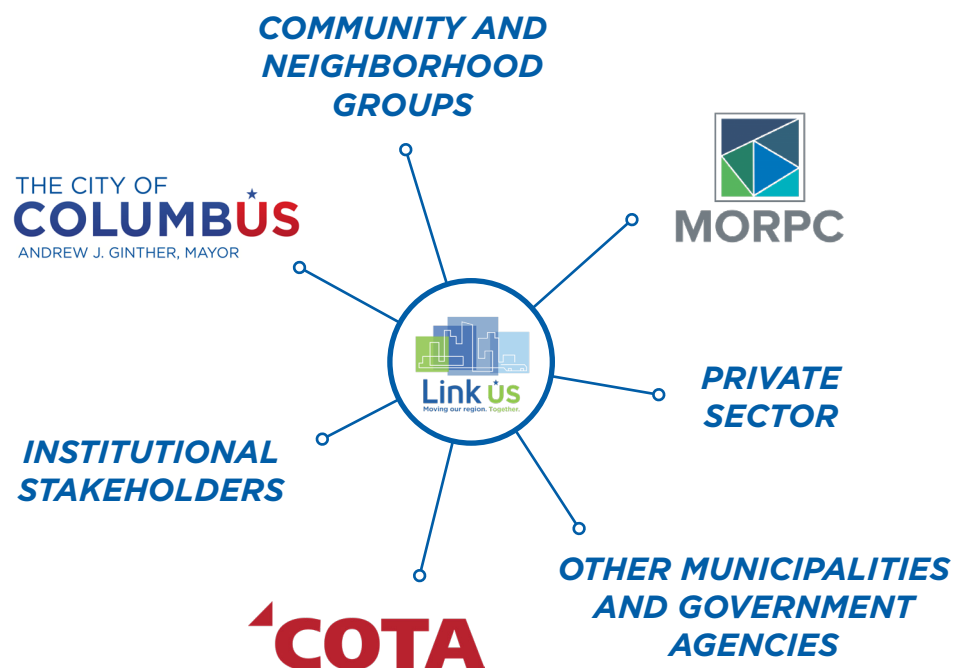
Successful outcomes will require partnerships to be formed at multiple levels, including:

#### FUNDING & COALITION BUILDING

This will require sustained collaboration of regional leadership in both the public and private sectors. Implementing agencies will need to work closely with a wide variety of stakeholders. Civic leadership, regional employers, major institutions and universities, philanthropic and social service organizations, and diverse community representatives will all have a critical role to play.

#### TECHNICAL IMPLEMENTATION

This includes the primary implementing government agencies (COTA, MORPC, City of Columbus), as well as other local jurisdictions and regulatory agencies for project development, implementation, and oversight.



## 5: BUILD REGIONAL SUPPORT

A broad coalition of support will be crucial to ensure future plans are adopted, funded, and successfully implemented. A look at peer communities (Denver, Indianapolis, and Twin Cities) revealed two major lessons that influence the success of a planning initiative.

### Communicate the Benefits

Showing people how these efforts will positively impact them and the issues they are passionate about is key to building regional support. Regions that build a campaign through targeted communications that highlight the relevant benefits of improved mobility are often more successful.

### Engage a broad range of partners

Implementing a plan requires the backing of a wide regional coalition, including public agencies, private partnerships, neighborhood organizations, and citizens from a wide variety of backgrounds. LinkUS will engage a wide variety of partners early, often, and in substantive ways that add to the effort's strength and regional appeal.

The table below showcases relevant themes and benefits that may be considered when producing communications to highlight the appeal of improved mobility and coordinated growth strategies.

Perspective	Relevant Benefits
<b>Region-wide</b>	<i>Economic competitiveness, air quality, congestion management, social equity</i>
<b>Corridor specific</b>	<i>Travel choice, travel time, place-making, safety, access to opportunity, affordability</i>
<b>Suburban Commuter</b>	<i>Reduced competition for highway capacity, new travel options with predictable travel time to employment hubs</i>
<b>Urban Residents</b>	<i>Car-free travel, workforce connectivity, revitalization, reverse (city to suburb) commute opportunities</i>
<b>Rural Residents</b>	<i>Reduces the pace or rural encroachment by new development, preserves the environment</i>
<b>Transit Riders</b>	<i>Competitive travel times, improved accessibility, enhanced travel experience, access to jobs and housing options</i>
<b>Workforce</b>	<i>Access to education and employment, affordability, travel and housing choice</i>
<b>Development</b>	<i>Emerging markets, streamlined process</i>
<b>Neighborhoods</b>	<i>Walk-bike accommodations, safety, connectivity, quality destinations, travel options, housing</i>
<b>Youth</b>	<i>Opportunities for car-free lifestyles, improved connectivity to destinations, safety</i>
<b>Seniors</b>	<i>Opportunities for car-free lifestyles, improved connectivity to destinations, safety</i>
<b>Business</b>	<i>Workforce connectivity, recruitment and retention, customer accessibility, parking</i>

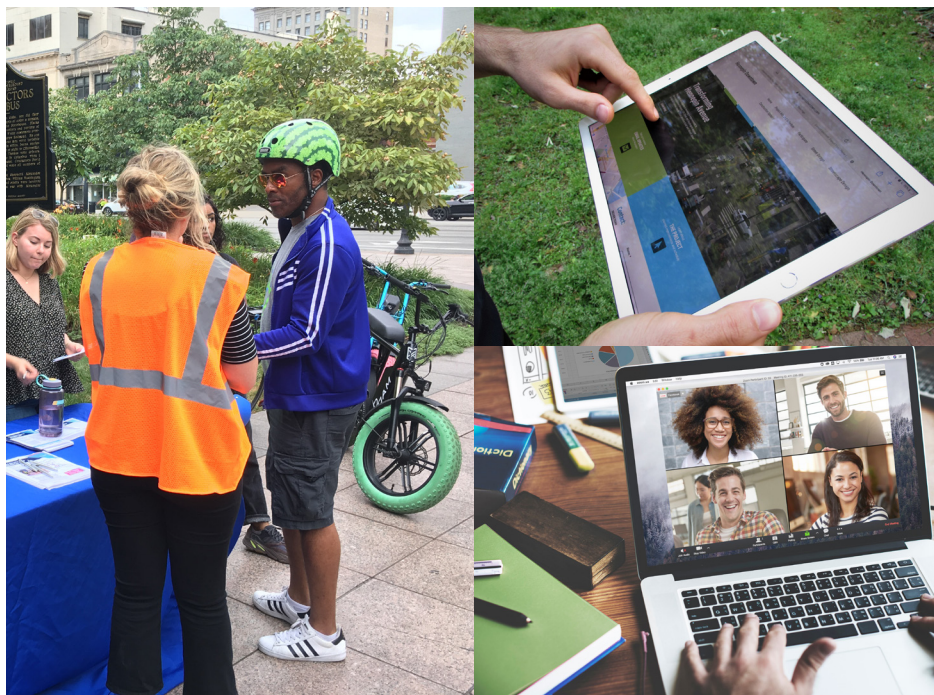


## 6: ENGAGE THE COMMUNITY

Public engagement will be an essential part of corridor implementation. The input of community members at key moments will help to inform the direction of the effort, and ultimately the recommendations for each corridor.

The engagement effort will include the following critical components:

- *Involving stakeholders (targeted groups representing key interests) and members of the public (anyone who cares about the community);*
- *Soliciting meaningful information and ideas from a variety of perspectives to inform direction of the work through an iterative process (multiple rounds of engagement for each corridor); and*
- *Building a constituency that feels a strong commitment to the process and its outcomes.*



### ENGAGEMENT TOOLS

Using a range of tools and techniques—including in-person, virtual and other alternative formats—will be essential to the success of the work. This will be especially important in light of the COVID-19 crisis as traditional, large-scale workshop style meetings have been postponed indefinitely. Outreach and publicity efforts will give special emphasis to reaching populations that are normally underrepresented. Some of the methods anticipated to be used in combination include the following, although adaptations will be made to accommodate target populations and respond to needs and preferences as they evolve.

#### Web Presence

A project website ([linkUScolumbus.com](http://linkUScolumbus.com)) has been developed that will serve as a “hub” of information, a repository for news and draft materials, and a vehicle for interactive, online tools.

#### Digital Interaction

A series of online activities, including map-based exercises, will be developed to allow members of the public to share topical and geographically-focused comments to help guide analysis and recommendations.

#### Virtual Workshops

Virtual workshops will be arranged to bring key stakeholders and the public together, utilizing online webinar and conferencing functions. Phone, text, hard copy mail and/or door-to-door surveys may be conducted, especially to target populations that are unable or unlikely to participate in online engagement.

#### In-Person Workshops

In-person workshops may be used and can be adapted using a variety of techniques, including map-based exercises, small group discussion and other methods of collecting input (size and formats can be adapted to meet social distancing requirements).

#### Public Displays and “Meeting People Where They Are”

Visual display boards may be developed and used in open house-style public events and/or circulated to public venues (libraries, schools, municipal buildings). “Pop-up” engagement options may be conducted at neighborhood events, “on the street” or “on the bus” surveys, business locations, and other popular venues.

# Corridor Development Process

## LinkUS DEVELOPMENT PROCESS

**LinkUS establishes a consistent approach to corridor planning, design, and implementation.** The following corridor development process includes elements beyond transportation designed to reflect regional priorities, identify development opportunities that integrate with the mobility strategy, and identify a path forward toward implementation.

### SELECT CORRIDOR

Select from agreed-upon corridor prioritization



**ESTABLISH LinkUS GOALS AND PRIORITIES FOR THE CORRIDOR**

### ANALYSIS

What are the needs in the corridor?



### DEFINE OPPORTUNITIES

Including Land Use, Transit, Multimodal, Technology and Innovation



### DEVELOP ALTERNATIVES

Define potential future options for consideration



### FIND LOCALLY PREFERRED ALTERNATIVE

Cost and Funding, Technical Feasibility, Public Support, Advancement of LinkUS Goals

### IMPLEMENTATION

Design, Construction, Operations



# PROJECT DEVELOPMENT

What sets LinkUS apart from other initiatives is the desire for an integrated and comprehensive strategy. At its core, LinkUS is a forum where we will collaborate on the planning, design, funding, and implementation of identified mobility corridors. For this to be most effective a consistent set of criteria are needed to select Mobility Corridors and employ a consistent approach to project development. While the advancement of enhanced transit is a primary objective, without a complete strategy the region is likely to lose out on opportunities to make positive contributions toward the regional goals. To take full advantage of this opportunity, the project development process will include additional elements designed to reflect regional priorities.

**As corridor initiatives are advanced, the project development process will apply a comprehensive corridor mobility strategy that will include the following elements:**

- 1 PUBLIC ENGAGEMENT**  
 A Public Involvement Plan including opportunities for both study area participation (localized to the corridor) and region-wide input with consistent engagement goals across all corridors is critical.
- 2 TRANSIT**  
 Address COTA's project development criteria. This includes alternatives analysis, environmental screening, and identification of a locally preferred alternative that will align with selected funding criteria.
- 3 MULTIMODAL SYSTEMS**  
 Use a multimodal design framework to enhance the walking and biking experience with and emphasis on safe connections throughout the corridor and to/from destinations including other multimodal networks.
- 4 TECHNOLOGY AND INNOVATION**  
 Leverage the use of technology to promote safety, transit operations, travel time, energy efficiency, and communications.
- 5 LAND USE**  
 Land use characteristics predict likely transit ridership and appropriate development patterns can promote corridor and regional priorities. Because corridors will connect with and pass through multiple jurisdictions an aligned approach for discussing land use is required. For this reason, cross-jurisdictional transit-supportive land use policies and zoning strategies are needed.
- 6 HOUSING**  
 Mobility corridors will provide new housing opportunities. Strategies should be integrated to foster mixed income and affordable housing.
- 7 ECONOMIC DEVELOPMENT**  
 Promote access to key employment centers and showcase the importance of enhancements to corridor vibrancy and the region's economic competitiveness by aligning infrastructure investments and land use policies.
- 8 EQUITY**  
 Each of the items outlined above must be approached through a lens of equity. Strategies should ensure corridor enhancements provide equitable access to housing, jobs, education, and healthcare.



# EVALUATION AND METRICS

LinkUS takes a data-driven approach to project development. As such, each major step of the project development process will be evaluated based on a series of metrics to guide decision-making. This framework establishes the importance of identifying a shared set of priorities and performance measures, and how these can be applied at all levels of the process. Criteria for prioritizing corridors, evaluating alternatives, and monitoring success are explored on the following pages.



## At the regional level, LinkUS will:

- *Ensure LinkUS priorities are aligned with the MTP and other regional state, and national criteria*
- *Communicate with stakeholders on the importance of data-driven performance metrics*



## At the corridor level, LinkUS will:

- *Align corridor-wide goals with regional goals*
- *Align with local plans and policies*
- *Use performance metrics to guide corridor prioritization*



## At the project level, LinkUS will:

- *Align project-specific goals with Corridor goals*
- *Use Performance Metrics to guide alternatives analysis, project priorities and decision-making*
- *Use measures to demonstrate needs/benefits to obtain funding*
- *Continually monitor project performance following implementation*

## ALTERNATIVE EVALUATION CRITERIA

Each corridor initiative will develop a range of project alternatives, including transit, multimodal elements, land use, and technology. These alternatives will be evaluated based on a range of criteria to ensure the ultimate preferred alternative is technically and politically feasible, provides a desired level of service to all travel modes, and that it conforms to the regional goals.

Alternative Evaluation Criteria are currently being finalized, but may include:

- *Benefit-Cost Ratio*
- *Constructability*
- *Multimodal Accommodations*
- *Projected Transit Ridership*
- *Cost Feasibility*
- *Traffic Impacts*
- *Safety*

## ALIGNING WITH LinkUS GOALS

Metrics such as the ones outlined below will provide a consistent method of analyzing corridor needs, informing alternatives, and tracking progress toward the LinkUS goals. This list is not exhaustive but serves to illustrate the types of data and information that will be used. These metrics are informed by Insight 2050 Corridor Concepts, COTA's NextGen plan, and other available data sources.



### EQUITY

- *Average housing and transportation costs*
- *Jobs available within 30-minute transit ride*
- *Commute travel times*
- *Safety*
- *Access to key destinations*
- *Bicycle and Pedestrian crashes*
- *ADA compliant facilities*



### ECONOMIC DEVELOPMENT

- *Travel Time Reliability*
- *Activity Center Connections*
- *Change in tax revenues*



### AFFORDABILITY

- *Housing and Transportation Costs as percentage of household income*
- *Land Use Mix and Housing Options*



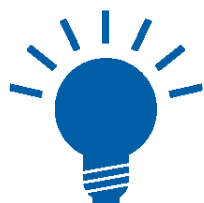
### WORKFORCE ADVANCEMENT

- *Job density within proximity to corridor*
- *Total number of jobs in study area*
- *Commute travel times*



### SUSTAINABILITY

- *Land Consumption*
- *Infrastructure & Operations Maintenance Costs*
- *Non-single-occupancy vehicle mode share*
- *Short trip (less than 3 miles) mode share*
- *Congestion and air emissions*
- *Miles of multimodal facilities*



### INNOVATION

- *Intelligent Transportation System Technology in study area*
- *Pilot programs and outcomes*
- *Micromobility and shared technology availability*

# Moving Forward

The success of the LinkUS initiative relies on a combination of Organization Efforts, Project Development, and Implementation Steps. The Strategy Framework provides an inventory of early steps necessary to advance the initiative towards a programmatic implementation of Central Ohio's identified Mobility Corridors. A summary of strategy framework actions includes:

## 01

### ORGANIZATION EFFORTS

**Catalyze the process by organizing around the critical efforts.**

These actions will engage the community and promote regional partnership around a shared vision. These efforts include:

*Leverage the LinkUS brand identity*

*Align Partner Priorities & Organizational Agreements*

*Establish Key Performance Metrics*

*Build a Coalition of Support*

*Identify Dedicated Funding*

## 02

### PROJECT DEVELOPMENT

**Leverage this comprehensive approach to regional corridor mobility projects.**

Formalizing a set of Project Development Elements brings consistency across each corridor mobility initiative. Each project will focus on the critical elements highlighted previously in this document:

*Public  
Engagement*

*Transit*

*Multimodal  
systems*

*Technology and  
Innovation*

*Land Use*

*Housing*

*Economic  
Development*

*Equity*

## 03

### IMPLEMENTATION

**Quickly advance projects to on-the ground action.**

All work performed to date has been done with the expressed purpose of being responsive to regional challenges by investing in a select group of regional mobility corridors. When considering this effort, implementation includes the successful completion of transformative projects that enhance safety and mobility, accommodate the addition of high capacity transit service, and promote the construction of supportive development along key regional mobility corridors and any future corridors that may be identified.



# CRITICAL TASKS

While much of the framework has been set, there remain some very big questions to consider as the region develops the LinkUS process and works toward project implementation. The following actions represent high priority next steps to begin the process on the right foot. As implementation proceeds, critical elements of this framework strategy will be advanced with further detail.

## UNIFY THE EFFORT

- Launch a LinkUS website that serves as a clearinghouse for all information related to current and future initiatives.
- Develop an overall communications strategy to increase community awareness.

## BUILD REGIONAL SUPPORT

- Identify opportunities to engage key community partners.
- Tailor communications materials to appeal to a broad range of audiences.

## DEVELOP EFFECTIVE PARTNERSHIPS

- Identify all regional agencies who need to be involved in project advancement.
- Develop an agreement that includes a communication plan, set of shared goals, and expectations.
- Clearly define roles and responsibilities as part of each corridor's implementation plan. This should be based on an understanding of which agency is best suited to take on certain responsibilities, as well as which groups are able to advance projects under the desired timeline.
- Establish partnerships with local governments to align local policy with project development goals.

## BUILD A SYSTEM

- Effectively communicate the importance of a complete regional mobility system, rather than individual corridors.
- Identify priority investments and strategies that will advance each corridor toward long term development of a comprehensive system.

## IDENTIFY DEDICATED FUNDING

- Identify a regional transportation finance strategy to determine how corridor projects will be funded.

## DEVELOP PERFORMANCE MANAGEMENT

- Develop LinkUS Engagement goals and process.
- Identify specific measures, data sources, and methods for tracking each corridor's performance.
- Conduct regular meetings to check in on the status of projects and programs, identify barriers to implementation, and re-assign responsibilities if necessary.
- Develop a brief corridor "dashboard" for each planning process to graphically define the base year starting point.
- Update the dashboard each year to track progress against the regional priorities, identify impediments to progress, and identify ways to calibrate the approach



**Link <sup>★</sup>us**  
Moving our region. **Together.**