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Background

Project introduction and goals
This “blueprint” for dockless mobility in Youngstown is intended to provide guidance to the city of Youngstown, Eastgate Regional Council of Governments, and other relevant stakeholders regarding particular elements of the procurement, funding, and operation and management of a future mobility sharing system. It is reflective of Youngstown’s demographics, assets, and current conditions, but the research can be applied to other municipalities in the Eastgate service area.

This project was initially conceived in spring 2018, with the intent of determining whether Youngstown, Youngstown State University, Eastgate, or another entity should follow the traditional procedure of implementing a bikeshare system (developing and issuing an RFP for an operator and equipment, then acquiring funds to purchase equipment that would then be operated publicly or privately), or if—given the proliferation of dockless bikeshare schemes, which are differently structured in that operators tend to own the equipment—it should pursue a different model. At the time, the major elements of a bikeshare program to research, resolve, and propose were how the permitting of a dockless model could work, whether it could be justified over a traditional model, and what dockless vendors existed, what they were providing, what it cost, and how other places regulated it.

Overview of personal mobility industry
The dockless industry has been volatile. Early players like Ofo and Mobike have withdrawn operations in the United States, or shuttered entirely. Others, like Spin, deployed scooters, which have greater mass appeal (many people don’t feel comfortable riding bikes). Lime has successfully operated non-electric pedal dockless bikeshare, then scooters, then electric bicycles. Motivate, a longtime operator of traditional docked systems (including New York’s Citibike, D.C.’s Capital Bikeshare, and Columbus, OH’s system), was purchased by Lyft, which has rolled out scooters. Jump, formerly Social Bicycles, was purchased by Uber. New players continue to enter the space, and existing operators and equipment providers continue to alter what they are offering.

As a result, municipal regulations for dockless bikes and scooters have been reactive and ad hoc. NACTO, ITDP, and Remix1 have summarized the numerous approaches that cities have taken. This helpful chart from Chicago’s dockless planning proposal, prepared by Two Tone Consulting, breaks down how St. Louis, Portland, D.C., Seattle, Charlotte, San Francisco, Dallas, Houston, Los Angeles, and New York have distributed responsibilities operations and maintenance, ethical standards and data laws; fleet size, rebalancing, and parking, and safety.

It does not appear that the dockless industry will smooth itself out anytime soon, but it’s doubtful that bikeshare industry will return to a uniform “1.0” model of a public entity purchasing a equipment and contracting out its operations to a for-profit or non-profit group (Cuyahoga County’s UHBikes is the example of the former; Denver’s
B-Cycle is an example of the latter). Should a municipality wish to buy bikeshare equipment, it’s likely that it would be paying a dockless operator, like Lime, for the privilege—when that operator would otherwise deploy equipment at no cost to the municipality.

There are some advantages to this epistemological break. Municipalities and/or regions no longer need to figure out funding schemes to bring bikeshare online, and scooters—though not without their safety issues—have proven to be a popular option, with a lower threshold for use, for getting around places. Additionally, responsibility for equipment maintenance and sustainability is incumbent upon the operator, because the municipality does not own the equipment. This gives cities the opportunity to regulate a functionally free network of mobility devices in a way that could encourage people to ride them for transportation.

As the dockless industry experienced these spikes, Youngstown was awarded $10.8 million $10.85 million through USDOT’s BUILD Transportation Discretionary Grant program in December of 2018. Smart2 “will connect Strategic & Sustainable, Medical & Manufacturing, Academic & Arts, Residential & Recreational, and Technology & Training centers in the heart of Eastern Ohio Appalachia’s largest metropolitan area - the City of Youngstown. The project will provide autonomous transit shuttles, transit waiting environments, pedestrian and bicycle facilities, green infrastructure, streetscaping, and wayfinding linking major regional anchor institutions impacting economic resurgence across the Mahoning Valley, including Youngstown State University, Mercy Health, Youngstown Business Incubator, and Eastern Gateway Community College.”

As a result, the context of this project shifted informally. The initially proposed components of the scope for this deliverable—background, equipment and operational assessment, implementation needs, and final recommendations—still apply, though they are no longer characterized by a need to compare dockless with a conventional bikeshare model.

Rather, given that the Smart2 project is designed to meaningfully connect Youngstown’s assets and build out features for new mobility devices, including autonomous vehicle shuttles, the more pressing need is to effectively integrate personal mobility devices, like bikes and scooters, into that project—without necessarily knowing precisely what kind of products will be available in the next year to five years. Further, more so than a permitting timeline or blueprint, the client is more greatly in need of ideas for outreach and marketing to engage current and future stakeholders so that they actually use, and understand, the dockless network.

This project’s goals are to:
- Match the current state of dockless mobility to Youngstown’s current conditions
- Illustrate where and how dockless could be deployed
- Provide an outline of implementation, including outreach, education, marketing, and permitting/vendor management
- Integrate all recommendations with Youngstown’s Smart2 network planning
Asset and demographics of Youngstown
A chapter from Eastgate’s Areawide Water Quality Management Plan provides a thorough overview of Mahoning County’s relevant demographics:

Population in Mahoning County peaked in 1970 with a population count of 303,424 and Trumbull County hit its peak in 1980 with a population count of 241,863. Since 1970, Mahoning County lost 27% of its residents, with a population of 238,823 in 2010 while Trumbull County, from 1980-2010, saw a 13% reduction in population to a count of 210,312. Overall, the Eastgate planning area experienced a net loss of 86,868 residents from 1970 to 2010.

The state of this region’s economy is rooted in the loss of the steel industry and overall erosion of manufacturing in the nation. After the steel mills closed in the Youngstown-Warren area the employment in the region change from manufacturing to service based. In Mahoning County, from 2008 to 2013, only three industries increased in average employment: Professional and Business Services (+22.5%), Leisure and Hospitality (+10.5%), and Education and Health Services (+1.9%). The data also shows that while total wages increased in six industries and decreased in five, the average weekly wage increased in every category. Both goods producing and service producing industries saw an overall increase in both total wages and average weekly wage.

From 2010 to 2020, the economy is projected to create approximately 18,000 new jobs. The service sector industries are projected to account for a large portion of the new jobs.

Construction and transportation are expected to add a significant number of jobs to in the goods producing industries.

What Eastgate’s region offers to prospective employers is abundant, low-cost land in the

Why People Ride

<table>
<thead>
<tr>
<th>Reason</th>
<th>Bike</th>
<th>Scooters</th>
</tr>
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<tbody>
<tr>
<td>To/From Work</td>
<td>30%</td>
<td>70%</td>
</tr>
<tr>
<td>Connection to Transit</td>
<td>35%</td>
<td>65%</td>
</tr>
<tr>
<td>Social</td>
<td>30%</td>
<td>70%</td>
</tr>
<tr>
<td>Recreation/Exercise</td>
<td>25%</td>
<td>75%</td>
</tr>
</tbody>
</table>

* See methodology for cities used for analysis

Source: NACTO
cities that is ripe for redevelopment as well as an underutilized workforce. While the service sector jobs follow the population out of the cities, vacant land is plentiful and available for competitive industrial districts in the urban areas. The population of Youngstown and surrounding municipalities as described above has been hungry for new jobs. There are hurdles remaining in the cities, most common of which is clean-up of the contaminated brownfields. With help from the state, these issues are being dealt with. With the land, infrastructure, and workforce in place the attractiveness of the cities to businesses leave little reason to develop rural green spaces.

A regional commitment to not sprawling further is essential and must undergird any mobility program in the city’s core. The average Capital Bikeshare trip in the D.C. region is 1.5 miles, over the near-decade since the system’s beginning, and the average scooter trip in Portland, Oregon, as of 2018 was 19 minutes. Survey data from NACTO suggests that people use bikeshare first to connect to transit (this is likely skewed in favor of systems in large metros, like D.C. and New York City), then to get to work and to socialize, then for recreation. Scooters are used primarily to get to work, then to connect to transit and for exercise, and then for recreation.

A successful micromobility system is dependent on density, both of population and of destinations. If people don’t need to get between points of interest in Youngstown, or prefer to do so by car because they are trip-chaining to their job or home outside of the city, there is little to attract them to riding a scooter or a bike (especially if driving is perceived to be easier or cheaper).

Fortunately, the Smart2 project seems to implicitly acknowledge this by connecting major employers like Mercy Health, Youngstown State University, and Chill-Can with nodes of economic activity, like downtown Youngstown and the Covelli Centre.

Traditional bikeshare planning would dictate station locations based on attractive sites or population density. A micromobility system for Youngstown—regardless of whether it is bike- or scooter-share, and regardless of its ownership and operation structure—should prioritize a meaningful integration with the Smart2 network by working with BUILD project stakeholders to understand where access points to bikes or scooters could be most useful to Smart2 users.
**Equipment and Operational Assessment**

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Product</th>
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<tbody>
<tr>
<td>Lime</td>
<td>Scooters and bikes</td>
</tr>
<tr>
<td>Spin</td>
<td>Scooters</td>
</tr>
<tr>
<td>Lyft</td>
<td>Scooters</td>
</tr>
<tr>
<td>Ridecell</td>
<td>Scooters and bikes</td>
</tr>
<tr>
<td>HOPR/Cyclehop</td>
<td>Scooters and bikes</td>
</tr>
<tr>
<td>Jump</td>
<td>Scooters and bikes</td>
</tr>
<tr>
<td>Skip</td>
<td>Scooters</td>
</tr>
<tr>
<td>Wind</td>
<td>Scooters</td>
</tr>
<tr>
<td>VeoRide</td>
<td>Scooters</td>
</tr>
<tr>
<td>Razor</td>
<td>Scooters</td>
</tr>
<tr>
<td>Bird</td>
<td>Scooters</td>
</tr>
<tr>
<td>Riide</td>
<td>Bikes</td>
</tr>
</tbody>
</table>

This is a list of vendors that have applied for permits to operate bikeshare bikes or scooters in Washington, D.C. D.C. has a cap on how many vehicles each vendor can operate, but not on applications for permits, and as a result has been a popular market for companies to deploy their latest dockless devices. This is, therefore, likely the most comprehensive and current list of potential vendors.
<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Pro</th>
<th>Con</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pedal bikeshare</td>
<td>N/A</td>
<td>Not readily available either for deployment by private companies or purchase by municipalities</td>
<td>Low</td>
</tr>
<tr>
<td>E-bikeshare</td>
<td>Lower threshold to use (bikes are heavy, but with a pedal boost)</td>
<td>Limited deployment; Lime and Jump, Motivate (in existing Motivate systems)</td>
<td>Medium</td>
</tr>
<tr>
<td>E-scooter</td>
<td>Lower threshold to use</td>
<td>Safety, most municipalities have crafted separate regulations for scooters specifically</td>
<td>High</td>
</tr>
</tbody>
</table>

84 MILLION TRIPS ON SHARED MICROMOBILITY IN 2018

Public Perception of E-scooters by U.S. City

<table>
<thead>
<tr>
<th>City</th>
<th>Positive View</th>
<th>Negative View</th>
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<tbody>
<tr>
<td>Atlanta</td>
<td>79%</td>
<td>21%</td>
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<tr>
<td>Austin</td>
<td>76%</td>
<td>24%</td>
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<tr>
<td>Denver</td>
<td>76%</td>
<td>24%</td>
</tr>
<tr>
<td>Chicago</td>
<td>75%</td>
<td>25%</td>
</tr>
<tr>
<td>Washington, DC</td>
<td>72%</td>
<td>28%</td>
</tr>
<tr>
<td>Los Angeles</td>
<td>71%</td>
<td>29%</td>
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<tr>
<td>San Jose</td>
<td>69%</td>
<td>31%</td>
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<tr>
<td>Seattle</td>
<td>68%</td>
<td>32%</td>
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<tr>
<td>New York City</td>
<td>67%</td>
<td>33%</td>
</tr>
<tr>
<td>San Francisco</td>
<td>52%</td>
<td>48%</td>
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Source: POPULUS 2018 GROUNDTRUTH

A Comparison of Mobility Service Adoption Curves in the U.S.

Source: POPULUS GROUNDTRUTH

<table>
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<th>Regulations &amp; Requirements</th>
<th>St. Louis, MO (Pilot)</th>
<th>Portland, OR (new contract)</th>
<th>Washington DC (Pilot)</th>
<th>Seattle, WA (Pilot)</th>
<th>Charlotte, NC (Pilot)</th>
<th>San Francisco, CA (Pilot)</th>
<th>Dallas, TX (Pilot)</th>
<th>Houston, TX (Pilot)</th>
<th>Los Angeles, CA (Pilot)</th>
<th>New York City, NY (Pilot)</th>
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<td>City Has Rights of Removal /</td>
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<td>Dockless Vendors Incur All Liability &amp; Fees</td>
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<td>Accessible Contact Info on Bikes &amp; City Website</td>
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<td>ETHICAL STANDARDS &amp; DATA LAWS</td>
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<td>Must Provide Non-Smart Phone Option</td>
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<td>Real-time Data Sharing</td>
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<td>FLEET SIZE, REBALANCING, &amp; PARKING</td>
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<td>Allowed Initial Fleet of 500 Bikes or More</td>
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<td>Bikes Must Be Packed Upright</td>
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<td>Suggestions for “Corral” Installation or a “Hub Centric Model”</td>
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<td>Dockless Vendors Required to Educate Users</td>
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<td>Gamification Requirement to Give Riders Incentive for Good Behavior</td>
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</tr>
</tbody>
</table>

Micromobility Parking

Traditional docked bikeshare required users to start and end trips at designated docks, and is far less prevalent given the advent of dockless bikes.

On-street bike corrals can be used by private and public mobility devices.
Painted corrals in clearly-designated areas can stand in for hard, physical corrals.
Micromobility Signage
Implementation Needs

Funding
Eastgate, the city of Youngstown, Youngstown State University, or any other stake-holder should resist the temptation to purchase and own any micromobility equipment.

Given the volatility of the industry as described in this report, and the fact that most operators are preferring to own and operate their equipment either in contract with a municipality or when permitted by a municipality, funding should instead be allocated toward a full- or part-time employee.

Further, funding should support the implementation of physical infrastructure—see below for a discussion of the usefulness of bike corrals—that can be used to benefit users, expand available parking for publicly and privately owned bikes and scooters, and keep operators committed to a certain level of performance.

Permitting, zoning, and physical placement
The most useful feature for dockless management is by giving bikes and/or scooters a designated physical space.9

While many cities have been exploring painted “corrals” for dockless bikes and scooters, the next step, and likely the most practical way to keep micromobility equipment neatly arranged, is to install as many on-street bike corrals as is fiscally reasonable. They’re a longtime feature in a number of cities, and are a beefed-up version of painted corrals.

Bike corrals have the benefit of not being tied to a particular vendor or product, and increasing the availability of bike parking for private bikes, too.

For example, Saris sells five-hoop bike corrals, which can be anchored into pavement in under three hours, for ~$1,000.10

This is, in some ways, a return to form: The corrals function somewhat like docks in that they are a clearly established place to put a bike or a scooter. It is the single strongest way to alleviate the complaints associated with scooters and bikes in inappropriate or obstructionist places on sidewalks.

This is helpful for measuring the key performance indices of operators, and gives perators clearer direction about the standard to which they should be rebalancing. But users, and municipalities, still reap the benefits of the flexibility of dockless.
It is reasonable to expect that micromobility equipment providers will begin to suggest the installation of docks—quite possibly charging docks—to their clients.\textsuperscript{11}

Should the project manager or supervising body of Youngstown’s micromobility system wish to measure key performance indicies, to either ensure operators are working in good standing or meeting the terms of their permits, some potential KPIs might include:\textsuperscript{12}

- Total number of vehicles in fleet
- Total number of operational vehicles in field
- Average duration of time offline
- As long as Youngstown is using corrals (whether hard-infrastructure bike corrals or painted corrals): How frequently were bikes or scooters balanced to corral locations? How frequently were they left there?

These metrics can be measured weekly, monthly, and/or yearly. For planning purposes, stakeholders should also request frequent and robust data reports, with appropriately anonymized data, showing trip start and end points, point-to-point trip data, daily, weekly, and monthly ridership for eventual year-over-year comparisons. This should be broken down by type of vehicle if there is a mixed scooter-and-bike system.\textsuperscript{13}

Economic Action Group has prepared a suitable RFP to solicit responses from micromobility operators for their services. The responses to this RFP will give the most complete picture of the existing micromobility landscape. Regardless of whether Youngstown ends up with a scooter fleet, a bike fleet, or a mixed fleet, any permitting requirements should reflect stakeholders’ desires, particulary with regard to integration with the Smart2 network.

### Staffing assessment
Regardless of what organization (EAG or Eastgate) is employing someone to oversee the micromobility program, that staffer’s duties will be primarily to oversee the management of the system and serve as a liaison between the disparate parties that will take interest in micromobility—everyone from stakeholders to business owners to students to visitors to the broader public.

Possible qualities and relevant duties sought and explicated through an application and hiring process could include:\textsuperscript{14}

- Ensure that all aspects of a privately operated system, including the management of an operations team, are meeting key performance indices
- Constantly assess and improve how to run a top-quality micromobility operation
- Oversee the delivery and growth of new bike-share product offerings, such as pedal assist and dockless bikes
- Measure and manage the delivery of data and KPIs
- Establish a positive two-way communication between vendors, stakeholders, and the public, sourcing feedback and fresh ideas from staff and sharing initiative plans and objectives with all involved actors
- Seek best practices from other jurisdictions to consistently improve upon system functionality and accountability in Youngstown
- Conduct regular analyses of data, performance, and stakeholder relations and make operational recommendations
- Pilot marketing and outreach initiatives and report and assess the effectiveness
- Effectively communicate standard processes and procedures to vendors, stakeholders, and the public
Appropriate qualifications for this person could include:

- An undergraduate or graduate degree in business, operations, engineering, or related field
- Five or more years of customer-focused work or public-facing communications and project-management expertise
- An entrepreneurial spirit and a knack for bringing the best out of people
- Data-driven, with experience turning analysis into action by designing solutions based on best practices, adapted for specific environments and markets
- An excellent communicator, both written and verbal, who can handle contending priorities and not let things fall through the cracks.
- Excellent interpersonal skills, including oral communication and visual presentation creation
- An organized thinker, with the ability to self-direct and to adapt to changing deadlines
- Personal experience and affinity for Youngstown and the Mahoning Valley, and the patience to manage the shifting needs and desires inherent in a volatile, but fun, field

Marketing and outreach for planning and project

See the charts on the following pages for suggested outreach techniques and plausible audiences.

In Cleveland, we saw that UHBikes’ highest usage rates were in areas, or due to circumstances (like sports games) in which it was preferable to ride a bike instead of drive, walk, or take transit. Outreach was necessary to build goodwill and familiarity, but it didn’t boost ridership. Additionally, the best outreach for UHBikes wasn’t conducted by the general manager, or any other UHBikes staffers. It was when other parties, typically our stakeholders (Bike Cleveland, Cuyahoga County, University Hospitals, University Circle, Inc.) either promoted the system as organically as possible through their own efforts, or organized their own occasions to use the bikes. Youngstown has a great resource in the Smart2 network and BUILD partners, and hopefully they can take on some of this work.
<table>
<thead>
<tr>
<th>Outreach Method</th>
<th>Youngstown/ Stakeholders</th>
<th>Operator(s)</th>
<th>Both</th>
</tr>
</thead>
<tbody>
<tr>
<td>Printed collateral</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>• Quarter sheets</td>
<td></td>
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<tr>
<td>• Discount codes</td>
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<td></td>
<td></td>
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<tr>
<td>Digital collateral</td>
<td></td>
<td>X</td>
<td></td>
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<tr>
<td>• In-app promotions</td>
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<td></td>
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<tr>
<td>• Facebook ads</td>
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<tr>
<td>• Social media</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>• Website</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Events</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>• Bike rides</td>
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<td></td>
</tr>
<tr>
<td>• Lunch-and-learns</td>
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<tr>
<td>• Pop-up outreach at corrals/stations</td>
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<tr>
<td>• Tabling</td>
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<tr>
<td>• Existing events (ex. Open Streets)</td>
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<tr>
<td>Employer outreach</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>• Lunch-and-learns</td>
<td></td>
<td></td>
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<tr>
<td>• Quarter sheet dropoffs</td>
<td></td>
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</tr>
<tr>
<td>• In-app promotions</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>• Employer memberships</td>
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<td></td>
<td></td>
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<tr>
<td>Student outreach</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>• Lunch-and-learns</td>
<td></td>
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<tr>
<td>• Quarter sheet dropoffs</td>
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<tr>
<td>• In-app promotions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Student memberships</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Property owner outreach</td>
<td>X</td>
<td></td>
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<tr>
<td>• ID property owners that might be interested in <code>hosting</code> a corral and invite them to do so, with some incentive (partially subsidized rack and install?)</td>
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<tr>
<td>• Ensure all public-facing, public departments know that there will be a micromobility program rollout</td>
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<tr>
<td>Political engagement</td>
<td>X</td>
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<td></td>
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<tr>
<td>• Candidate surveys</td>
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<td></td>
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<tr>
<td>• Invite candidates and electeds to rides and demo events</td>
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<td></td>
</tr>
<tr>
<td>Photos</td>
<td>X</td>
<td></td>
<td></td>
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<tr>
<td>• Have as many photos on-hand as possible (Cuyahoga County’s A/V department shot tons and tons for UHBikes)</td>
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</tr>
<tr>
<td>• Get stakeholders, electeds, students—whoever—on bikes and scooters as often as possible</td>
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<td></td>
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<tr>
<td>Swag</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>• T-shirts</td>
<td></td>
<td></td>
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<tr>
<td>• Pens, water bottles, stickers, tote bags, sunglasses, etc.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>• Tabling supplies: tablecloth, pop-up tent</td>
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</tbody>
</table>
## Outreach Targets

<table>
<thead>
<tr>
<th>Who?</th>
<th>How?</th>
</tr>
</thead>
<tbody>
<tr>
<td>General public, including visitors (counting people who don’t live or work downtown)</td>
<td>Users need the system to be as intuitive as possible; they are likely to walk up and go, not deliberately seek out information. Corrals with signage and in-app guidance can ensure a positive user experience, and will induce more predictable user behavior.</td>
</tr>
<tr>
<td>Downtown businesses, students and employers, and residents</td>
<td>A dedicated staffer will be most critical in facilitating relationships with downtown businesses, students and employers, and residents, whose myriad concerns may not be immediately addressed by online resources. Having someone available to handle customer-service issues as well as inquiries into the system’s functionality is essential to ensuring that disparate parties have the information they need, and that the program is approachable.</td>
</tr>
<tr>
<td>Property owners</td>
<td>Property owners are virtually the same as downtown businesses, students and employers, and residents, but they or their tenants (who may overlap with the above group) may be receptive to either advertising with the system, installing a bike corral on their property, or hosting and participating in outreach events.</td>
</tr>
<tr>
<td>WRTA</td>
<td>Corrals should align with as many transit stops as possible (if criteria needed, use most heavily used routes). Payment should be integrated, if possible, through apps like Transitapp or Scootemap.</td>
</tr>
<tr>
<td>AV operators</td>
<td>Smart2 stakeholders should ensure that any AV deployment is compatible with micromobility vehicles, and that a focus on AVs’ functionality does not overwhelm planning for bikes and scooters, which require their own type of dedicated infrastructure.</td>
</tr>
<tr>
<td>Healthy Communities Partnership and other community groups or institutions</td>
<td>Community groups should be tapped for educational partnerships and resources. Ideally, reference to micromobility will be fully integrated into their criteria for healthy, safe neighborhoods and associated outreach.</td>
</tr>
</tbody>
</table>

Slots into Step 3, “Increase Awareness and Support for Bikeshare,” of NACTO’s “Strategies for Engaging Community: Developing Better Relationships Through Bikeshare,” which includes “build partnerships with local organizations” and “create multifaceted marketing campaigns.”
Goals

1. Increase Access to Mobility
   - Reduce Financial Barriers to Use
   - Reduce Physical Barriers to Use

2. Get More People Biking
   - Create Opportunities for In-Person Interaction
   - Teach and Empower New & Existing Riders

3. Increase Awareness and Support for Bike Share
   - Build Partnerships with Local Organizations
   - Create Multifaceted Marketing Campaigns
Examples & Actions

- Discounted Membership Options
- Cash Access
- Combined Bike Share and Transit Passes
- Flexible Payment Options
- Walkable Distances Between Stations and Drop-Off Points
- Community Planning Processes
- More and Better Bike Lanes
- Bring Bike Share to Community Events
- On-The-Ground Engagement Teams
- Learn-To-Ride Classes
- Community Rides
- Adaptive Bike Programming
- Mutually Beneficial Programming
- Jobs & Job Pipelines
- Inclusive, Multilingual Ads & Outlets
- Incentives To Ride

Key decisions
The key decisions for stakeholders to resolve before deploying a micromobility system are:

Who will "own" this system?
- Confirm that the city of Youngstown is able to permit or procure micromobility services
- Resolve whether Economic Action Group or Eastgate will dedicate staff time to overseeing the program’s deployment, implementation, and management (highly recommended)
- Convene a small group of micromobility program stakeholders—functionally, a board. The most likely parties for this will be the city of Youngstown, Eastgate, Economic Action Group, and possibly Youngstown State University and other Smart2 stakeholders.

Will this system allow for one operator, or multiple operators?
- Given Youngstown’s size, it is likely most reasonable to select one operator to start. Should microbility prove to be a success in Youngstown, the contract holder should consider opening up permitting or procurement after a trial period to increase the number of vendors.

Are stakeholders willing to install corrals before or immediately after a micromobility system launching?
- If not, are stakeholders prepared to re-examine curbside management and parking space to formulate an alternative strategy?

Implementation schedule
June 2019
- Conclusion of micromobility consulting grant

July-August 2019
- Address "key decisions" above with Smart2 stakeholders, the city of Youngstown, Eastgate, and Economic Action Group
- Release RFP for micromobility vendors/operators with intention to deploy a system by spring 2020

October 2019
- Evaluate RFP responses and select vendor/operator
- Hire a micromobility program manager who can begin to work directly with the vendor to prepare for a spring 2020 deployment

Winter 2019–spring 2020
- Confirm system deployment date
- Research and establish key performance indices for the forthcoming vendor/operator
- Prepare marketing materials for deployment date
- Prepare a public education campaign, including demonstrations and press mentions
- Conduct stakeholder and interested-party outreach, and plan for continued integration with Smart2 network

Spring 2020 and beyond
- Deploy system
- Assemble quarterly reports on system health
- Consider evaluation of increasing or shrinking system size and operational mix
Equipment and operator
A city the size of Youngstown (64,604 residents in a county of 229,786 people) could reasonably begin with a system of 250 vehicles, so about one vehicle per every 250 people. This was the size of the initial UHBikes fleet in Cleveland, which was too small for that city.

Youngstown should aim to permit a system that has no fewer than 250 number of devices, and be flexible in the required breakdown of bikes-versus-scooters. It will be useful to examine an operator’s KPIs after the first six months of operation to determine what is getting the highest ridership, and where, and by whom. Then, the allocation of types of vehicles in the system should be adjusted accordingly.

It is up to the stakeholders and the eventual project owner to determine whether they would like to permit more than one operator. It is probably best, in the short term, to permit a sole operator, and assess whether expansion through number of vehicles or number of operators is necessary after six months to a year.

The project manager should consult with the operator(s) to determine whether it is worthwhile to operate during the winter.

Staffing
The largest outstanding question for this project is who will own, and who will manage, a micro-mobility system. There are numerous possible permutations of ownership and management. It is likely that an operator’s use of public space will be permitted by the city of Youngstown.

But will Youngstown own an operation contract, if there is one, and sponsor the staff to manage the project? At least one employee dedicated to liaising with the operator, any community stakeholders, and the public entity holding the permit, should be accounted for. That employee might be best situated working for a third party like Youngstown State University, or the Economic Action Group.

A staffer dedicated to managing a micromobility system should be responsible for liaising between stakeholders and the selected vendor(s). They should collect data reports and be able to analyze those outputs to tailor vendor behavior to user needs. And they should oversee the installation of corrals, whether painted or hard-infrastructure hoops. A working knowledge of sustainable transportation planning and a desire to get around Youngstown via the mode they’re overseeing should be the primary qualifications for the job, especially if data analysis and mapping assistance can be provided by Youngstown State or Eastgate.

Final Recommendations
**Funding**
As discussed, Youngstown should not spend money on micromobility equipment. Rather, it should install as many bike corrals, preferably in parking spots and not on sidewalks, as is financially feasible.

Physical infrastructure like bike corrals and any attendant signage could be paid for by the city of Youngstown, or through a federal grant via Eaton gate COG—perhaps TLCI. A more complex scheme would induce Smart2 stakeholders, or other private property owners, to pay for bike corrals and signage.

**Mapped locations**
These are suggested points and by no means intended to be anything but guidance for possible final corral locations. Smart2 stakeholders representing groups like Youngstown State students and Mercy Hospital employees should be consulted on their preferences for corral locations, as the student body and hospital workforce are built-in audiences for micromobility-device uses.

There are three layers to the map:

**Layer 1**
The gold stars represent points on the Smart2 network.

**Layer 2**
The blue points are potential locations for a first round of bike-corral installation, and are clustered around the Smart2 nodes.

**Layer 3**
The green points are potential locations that connect the clusters around the Smart2 nodes. These should not be treated as tertiary in priority. It is just as critical to provide station density around desired destinations as it is to ensure that those destinations are meaningfully connected. It would be reasonable to consider points in the second layer as potential locations for corrals, and points in the third layer as potential locations for painted corrals.
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Non-bikeshare determinants of success (including infrastructure and public policy)

The success of most bikeshare systems has been heavily dependent on the readiness of any given municipality to accommodate dedicated space for protected bike infrastructure. Cities that are more comfortable for people to ride bikes—Minneapolis, New York, D.C.—have had more successful bikeshare systems, with higher and more equitable ridership. This is logical: Bikeshare trips have historically replaced walking and transit trips, meaning people who are already primed to get from points A to B without driving take up bikeshare, but these people still may be new to biking in a city overall.

Some emerging research demonstrates that scooter users are in certain circumstances replacing car trips. This is great news for any city with any sort of mode-shift goals, but it presents an even greater demand for protected, safe infrastructure.

Youngstown benefits from a dedicated civic commitment from its private industries and third-sector institutions, like Youngstown State University. But it is still a relatively low-density city with a tenuously stabilized population, situated in a region where the best, and preferred, option for transportation is driving in a single-occupancy vehicle. While Eastgate and other planning bodies in Youngstown-Warren have acknowledged the dire need to curtail suburban sprawl to preserve the region’s core, reversing sprawl will take decades, and personal preferences for driving are likely to hold on stubbornly.

Integration with the Smart2 network gives this network a necessary framework. But the prevalence of Smart2 should not override the need for as much dedicated infrastructure for bike and scooter riders as possible, across the entire city.

Stakeholders should consider practices outlined by NACTO and the Better Bikeshare Project in their 2018 report, “Strategies for Engaging Community: Developing Better Relationships Through Bikeshare,” to increase both the volume and equity of ridership through the installation of protected infrastructure.
Outstanding concerns
Because the scope of this project evolved substantially from its initial conception, some outstanding concerns—including payment, long-term funding, and whether or not the project owner will want to manage multiple operators or just one—will be ongoing.

Further, who owns micromobility systems is both expanding and collapsing into a more monopolistic landscape. Per National League of Cities’ 2019 report, “Micromobility in Cities: A History and Policy Overview”:

Interest in micromobility has increased, and transportation giants have begun focusing on these emerging markets. Recognizing the potential growth and transformation of urban transportation, both Uber and Lyft have sought to add dockless devices to their suites of services. Recently, Uber acquired JUMP, the electric-assist dockless bike company, and added their bikes to the Uber app. Following Lyft’s example of deploying their own e-scooters, JUMP added e-scooters to their portfolio. Uber has already added JUMP’s services to their app and began adding their logo to Lime scooters and bikes as well.

Investors are also showing interest in the individual bike and e-scooter companies. Lime received funding from the technology company Alphabet as well as a recent partnership with Segway. Bird also makes use of Segway’s developed technology by renting scooters designed by the company. Motivate, the bicycle operator for many bikeshare systems such as San Francisco’s Ford GoBike and Washington, D.C.’s Capital Bikeshare, was acquired by Lyft, possibly in response to Uber’s purchase of their competitor, JUMP.

Motivate looked to be the largest in the nation for micromobility services before Chinese dockless bike providers like Ofo and Mobike spread the idea of dockless systems into the U.S. Another provider, Spin, that was founded in 2016 in San Francisco, has gained popularity and ridership through their bikeshare program that they initially launched in Seattle.

Despite their success using bikeshare, they have decided to remove bikes in favor of offering only e-scooters. Skip, formerly known as Waybots, intends to perfect the scooter industry by not only providing a better vehicle but also asking cities for permission to deploy regardless of whether or not competitors are already operating. Their intent is to show riders that the quality of the vehicle matters to the quality of the service.

The same report recommends the following for micromobility management:

1. Get out in front of surprise deployments.
2. Utilize pilot programs to consider right of way policy, cost structure, sustainability and opportunities to work with different companies.
3. Consider safety.
4. Develop a plan and agreement for trip data.
5. Reevaluate bike infrastructure.
6. Focus on equity.
7. Be proactive about learning from other cities.

Similarly, Alta Planning + Design offers this advice in their 2018 report, “Is Dockless Bikeshare Right for Your Community?”:

1. Set program goals
2. Create a policy framework, including permits that cover safety, parking, insurance requirements, operations, and data sharing with the municipality.
3. Establish system boundaries
• Focus on bike parking
• Integrate programs
• Continuously monitor, improve, and innovate

As long as there are stakeholders committed to a healthy, well-managed micromobility program, preferably providing guidance to a dedicated staffer, it will not be difficult to follow the above guidance. An acceptance that this field is volatile, but worth investing in, is the most significant prerequisite for a well-managed micromobility system.

Fortunately, there are plenty of expert institutions releasing research and data on permitting fees, micromobility-related policies, and other attendant issues: NACTO, National League of Cities, Better Bikeshare Project, and Remix. Following their work, and asking for outside help and expertise, should be a critical piece of a micromobility manager’s job.¹⁶

Scooter trips surpassed bikeshare trips in early 2019¹⁷, which would have been unprecedented just a few years ago. What’s next may not be clear, but an open-minded, flexible, and thoughtful approach¹⁸ that focuses on user experience rather than stakeholder convenience will ensure that systems are both robust and well-used.
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they are in full compliance with Title VI and all related regulations and directives in all programs and
activities.

No person shall, on the grounds of race, color, national origin, sex, age, disability, low-income status,
or limited English proficiency be excluded from participation in, be denied the benefits of, or be other-
wise subjected to discrimination under any of Eastgate’s programs, policies, or activities.
Endnotes

1. https://blog.remix.com/tagged/micromobility


3. https://www.eastgatecog.org/transportation/SMART2


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