

TCAT STRATEGIC PLAN

2018 - 2030



ACKNOWLEDGEMENTS

Tompkins Consolidated Area Transit, Inc. Project Team

Scot Vanderpool, General Manager
Matthew Yarrow, Service Development Manager
Raymond Lalley, Purchasing + Project Manager
Patty Poist, Communications + Marketing Manager
Jenn Jennings, ADA Paratransit Coordinator
Mike Smith, Manager of Operations
Tom Clavel, Service Analyst

Tompkins Consolidated Area Transit, Inc. Board of Directors

Frank Proto, Board Chair 2018
Bridgette Brady
Jennifer Dotson
William Gray
John Gutenberger
Daniel Klein
Ducson Nguyen
Peter Stein
Denise Thompson

Tompkins Consolidated Area Transit, Inc. Underwriters

City of Ithaca
Cornell University
Tompkins County

Consulting Team

Sam Schwartz City Strategies

Michael Flynn, AICP, Project Director
Ben Rosenblatt, AICP, Project Manager
Elad Mokady, Transit Planner
Po Sun, AICP, Project Planner / Document Design

Jean McPheeters Consulting, LLC

Jean McPheeters, Organizational Consultant

Project Stakeholders

Cayuga Medical Center
City of Ithaca
Cornell University
Downtown Ithaca Alliance
Ithaca Carshare
Ithaca College
Ithaca-Tompkins County Transportation Council
Tompkins County
Tompkins Consolidated Area Transit, Inc.
Town of Dryden
Town of Ithaca
Way2GO

Photo Credits

All other photos courtesy of
TCAT except:

ABC15, page: 78
Agency Landscape + Planning, page: 80
Angela Chen, page: cover
Bird, page: 76
Casey Martin, page: 51
Dwight Mengel, page: 77
FlyIthaca, pages: 27, 34
Ildar Sagdejev, page: 55
Ithaca Carshare, page: 50
Ithaca Downtown Partnership, page: 63
John Simpson, pages: 18, 82
Julie Cherruault, page: 73
Kelsey O'Connor, pages: 25, 31, 39, 44
Mike Dotta, page: 76
Morgan True, page: 72
NTU Singapore, page: 78
University Photography, pages: 61, 83
Zack Heistand, page: 71



CONTENTS

INTRODUCTION	03
Messages from Our Leadership	03
Plan Summary	05
Setting the Stage	08
Engagement Summary	15
How to Read This Plan	17
Role of our Board of Directors	17
1. UPHOLDING ORGANIZATIONAL EXCELLENCE	19
2. PROMOTING QUALITY OF SERVICE + SETTING SERVICE PRIORITIES	29
3. SENSIBLE + SUSTAINABLE CAPITAL INVESTMENT	39
4. SECURING STABLE + CONSISTENT FUNDING	51
5. EXCELLING IN COMMUNICATIONS + OUTREACH	57
6. ADAPTING TO THE CHANGING LANDSCAPE	67
TCAT'S STRATEGIC PLANNING ACTIONS + INITIATIVES	83

▶ LETTER FROM THE CHAIRMAN OF THE BOARD OF DIRECTORS

Dear TCAT Community Supporters,

Change is constant, and in Tompkins County, it is inevitable! So, are we to be active or reactive? For Tompkins Consolidated Area Transit (TCAT) we may need to be both!

Recognizing the importance of assessing where transportation stands in our community, and where it is going, the TCAT Board of Directors, with staff support, committed to a long range strategic planning process to examine what local influences have had, and perhaps will have, on public transportation needs, and what part TCAT will play in addressing those needs for our current and potential service areas.

As new mobility options have emerged in our county, TCAT realizes that it needs to understand how it fits into this context. Development, whether housing, business, education, or municipal, may involve changes in demography and population density, bringing about many associated impacts that challenge TCAT to further define and refine its public role.

With that in mind, the Board committed funding for a forward-looking strategic plan. After an extensive search, Sam Schwartz Engineering and its City Strategies team was selected to draw on its expertise in strategic planning and to act as our consultant for this task.

As you review the following pages, you will develop a sense of the challenges and opportunities that TCAT faces locally today, and read about both short- and long-term priorities in various key areas, and the need for TCAT staff to deliver on those items while continuing to provide quality service countywide.

Participation and feedback from current customers, community members, stakeholders, and staff has helped to identify, develop, and refine current needs and future objectives based on what we know today but can only guess at what may coming down the road. For that reason, this plan will be dynamic, and not static, requiring periodic review, evaluation, and adaptation. This product provides us with a necessary and valuable tool which will help TCAT achieve and continue to deliver a successful, integrated transportation system for our community.

On behalf of the TCAT Board of Directors, I'd like to express my deep appreciation to each and every one of you in the community that participated in and contributed to this year-long effort, to the TCAT Staff, and particularly to the Sam Schwartz City Strategies team for guiding us down this road with its many checkpoints. A special 'thank you' goes out to local consultant Jean McPheeters, of Jean McPheeters Consulting, who made sure we all stayed on task, and reminded us that this is only the beginning!

Cordially,



Frank P. Proto

Chairman, TCAT Board of Directors

▶ LETTER FROM THE GENERAL MANAGER

Dear TCAT Community Supporters,

TCAT is much more than a transit system. We are a backbone that supports connectivity among our community's evolving transportation modes. We serve as the foundation of a mobility strategy that charts a course, not only for our continued success and survival, but one that will enable Tompkins County to achieve an array of important and mutually agreed-upon objectives. This Strategic Plan is our roadmap to these objectives, which include:

Prosperity – A solid network of world-class and reliable mobility options will enrich our community by providing affordable, reliable and convenient access to jobs, schools, nutritional food sources, medical appointments, entertainment and green spaces, thus making Tompkins County a more attractive place to live, grow, work and play.

Equity – Access to quality transportation should be available to all and never be based on one's income, ability, or the neighborhood in which he or she lives. We need to tear down transportation barriers so that opportunities to flourish are within everyone's reach.

Health and Safety – Alternative transportation networks that promote walking, biking or any physical activity have been proven to improve a community's overall health by encouraging active lifestyles over sedentary behaviors. Reducing the number of single-occupancy vehicles will decrease harmful carbon emissions that pollute the air we breathe. Thoughtful and well-planned connectivity will improve safety by decreasing vehicular traffic and the crashes that come with it.

Environment – The transformation from a vehicle-centric to a balanced and efficient transportation culture will help our community fulfill its deep-seated commitment to lessen our reliance on fossil fuels and shrink our carbon footprint.

Most assuredly, TCAT staff is dedicated to protecting and improving transportation infrastructure in Tompkins County by working with stakeholders in our service area, and potentially beyond through partnerships with our neighboring counties. By joining forces, we can create an affordable, accessible and sustainable way of life so that everyone can prosper and enjoy the many offerings of a vibrant, diverse and culturally rich region.

Sincerely,



Scot Vanderpool

TCAT General Manager

▶ WHAT IS THE TCAT STRATEGIC PLAN?

As we move into the 2020's, Tompkins Consolidated Area Transit, Inc. ("TCAT"), aims to be a best-in-class transit organization: internally and externally. The **TCAT Strategic Plan 2018 – 2030** strives to translate our mission, vision, and core values into a set of short- and long-term actionable steps in service of these goals. Our leadership and stakeholders have used this planning effort to take stock of the organization's current strengths and weaknesses, and uncover where changing trends will provide us with opportunities. We are working hard for our constituents in Tompkins County so that we can learn from both the promises and pitfalls of the evolving mobility ecosystem.

The landscape around mobility, including traditional transit service, is changing dramatically. Looking at peer transit systems near and far, this Plan first sets the stage for where TCAT falls across a range of categories. Like our peers, we are engaged in a review of opportunities that help us move forward while still providing the core services that communities in Tompkins County depend on. The Plan also describes the outreach processes we engaged in while developing this roadmap forward. Through stakeholder and community engagement, we made sure that the actions in this Plan reflect the diverse array of needs of our customers and constituents.

Ultimately, engaging in a process with our management team, our Board of Directors, key regional stakeholders, and the Tompkins County community, we created a list of over 100 actions across six topic areas. These actions will be a roadmap for TCAT, forming the strategic backbone of our organization's evolution into the 2020s and through to the year 2030.

The TCAT Strategic Plan 2018 – 2030 includes short-term strategic actions and long-term strategic initiatives in the following categories:

1. Upholding TCAT's Organizational Excellence

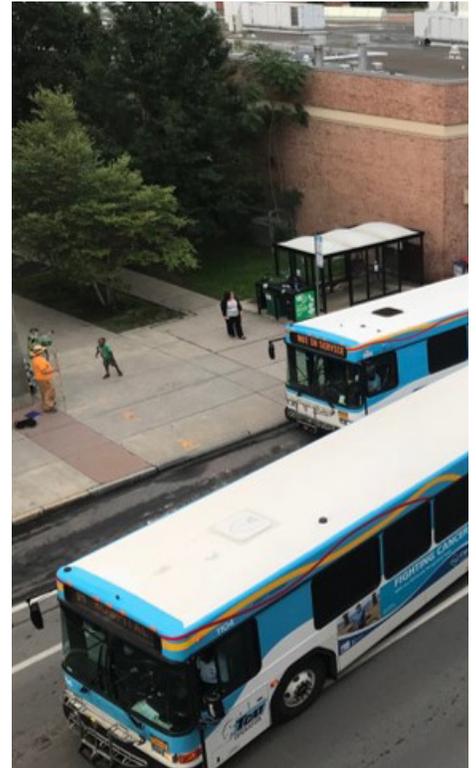
2. Promoting Quality of Service + Setting Service Priorities

3. Sensible + Sustainable Capital Investment

4. Securing Stable + Consistent Funding

5. Excelling in Communications + Outreach

6. Adapting to the Changing Landscape



OUR MISSION IS...

To contribute to the overall social, environmental, and economic health in our service area by delivering safe, reliable and affordable transportation and, at the same time, being a responsive, responsible employer.

OUR VISION IS...

To become a model community transportation system committed to quality service, employee-management collaboration, and innovation.

OUR CORE VALUES ARE...



Accessible, Inclusive and Responsive



Committed to Our Customers



Dedicated to Safety



Accountable for Performance



Supportive of Each Other



Striving for Sustainability



Embracing Innovation



► SWOT ANALYSIS

A solid foundation is necessary for an effective strategic planning process, informed by a thorough understanding of TCAT's existing strengths, weaknesses, opportunities, and threats (SWOT). The SWOT analysis identified key internal and external factors that are important to achieving TCAT's mission and core values. This foundation was used to structure and provide initial framing for the contents in this Strategic Plan.

STRENGTHS

- Comparatively efficient operations considering large service area
- Mix of funding from local underwriters, State, and Federal sources
- Investments in customer outreach and real-time bus locator technology
- Strong customer base from Cornell University

WEAKNESSES

- Significant capital investment needs include future bus procurement (some electric), farebox system update, and new operations and maintenance facility
- Lack of bus stop amenities and central enclosed waiting facilities

OPPORTUNITIES

- New mobility models can complement and enhance TCAT's existing services, potentially through formal partnerships and/or changing TCAT's own service types (e.g. toward on-demand "microtransit")
- Local and regional goals relating to sustainability and improving multimodal travel choices can justify growth in service
- Changing demographics such as the growth of student-age population and shifting societal preferences away from driving present potential ridership gains

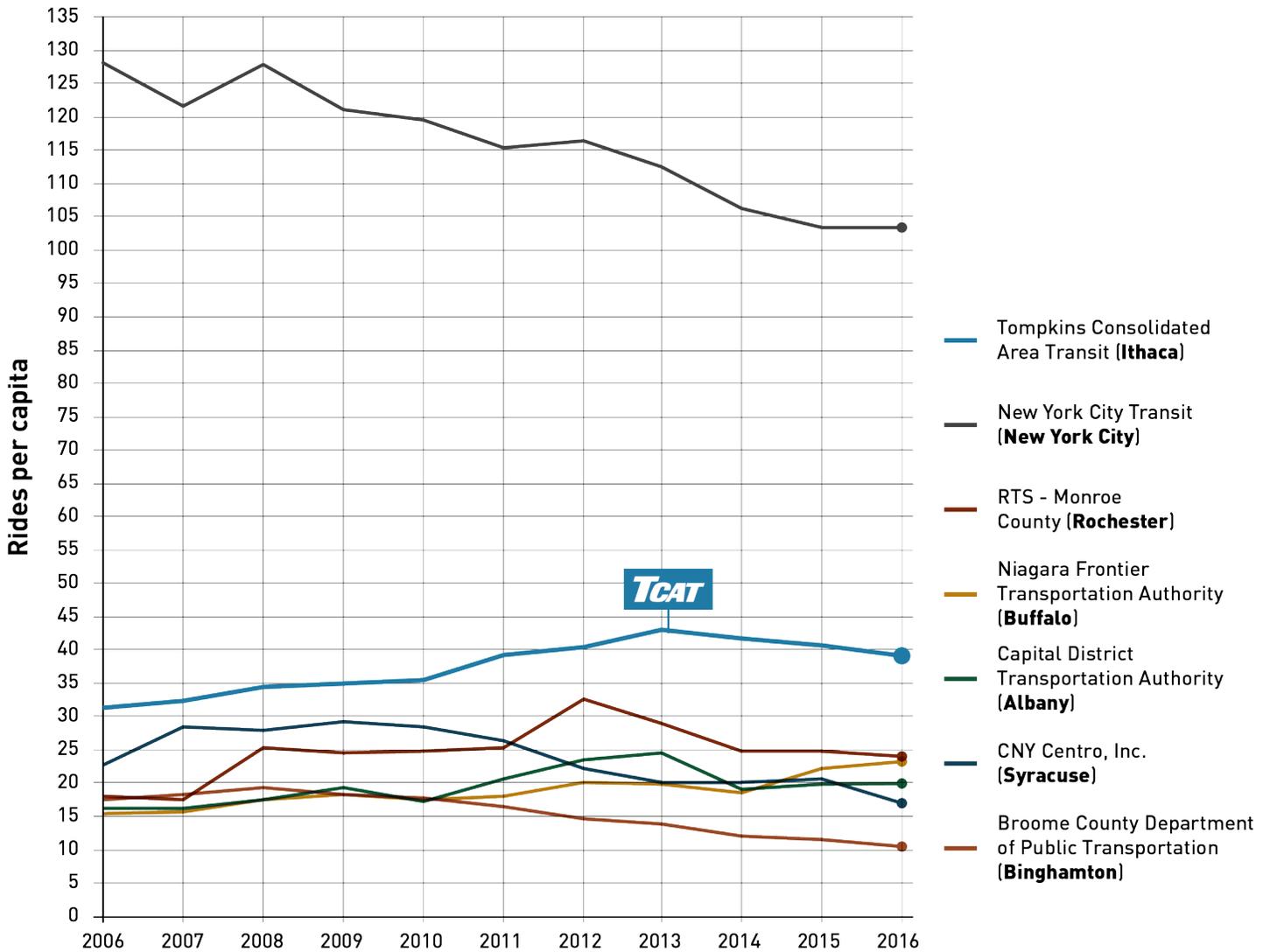
THREATS

- Private shared mobility services have and may continue to draw demand away from traditional transit service
- The eventual proliferation of autonomous vehicles (AVs) may leave traditional transit operators out as AVs grow through a mobility-as-a-service, non-ownership model
- Local growth may provide new pools of customers, but comes with traffic congestion and potential inability to serve major new developments
- Funding for fixed-route public transportation continues to be uncertain, especially at the Federal level

▶ PEER TRANSIT SYSTEM COMPARISONS

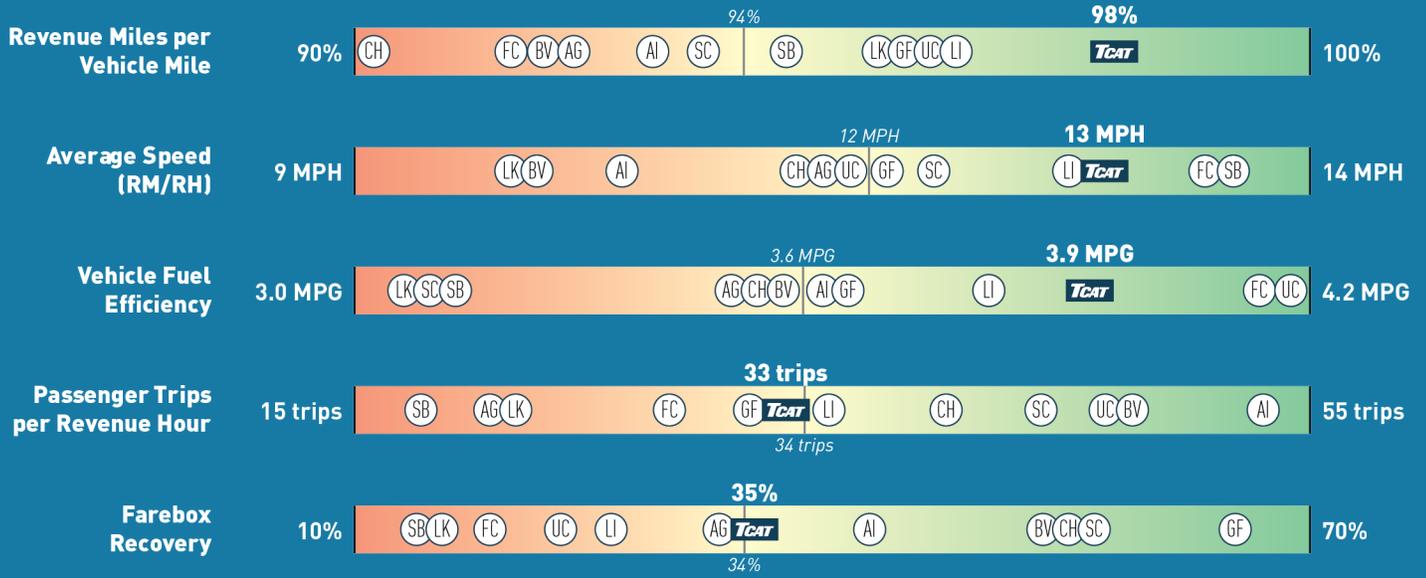
TCAT is always looking for ways improve and provide the highest quality of service for its customers. To that end, TCAT regularly reviews emerging best practices from other US peer transit systems and conducts high-level comparisons to benchmark its performance measures. The following peer transit system comparisons highlight select performance indicators where TCAT is performing well, and areas where TCAT can improve.

Rides per Service Area Population:TCAT vs Other New York Systems

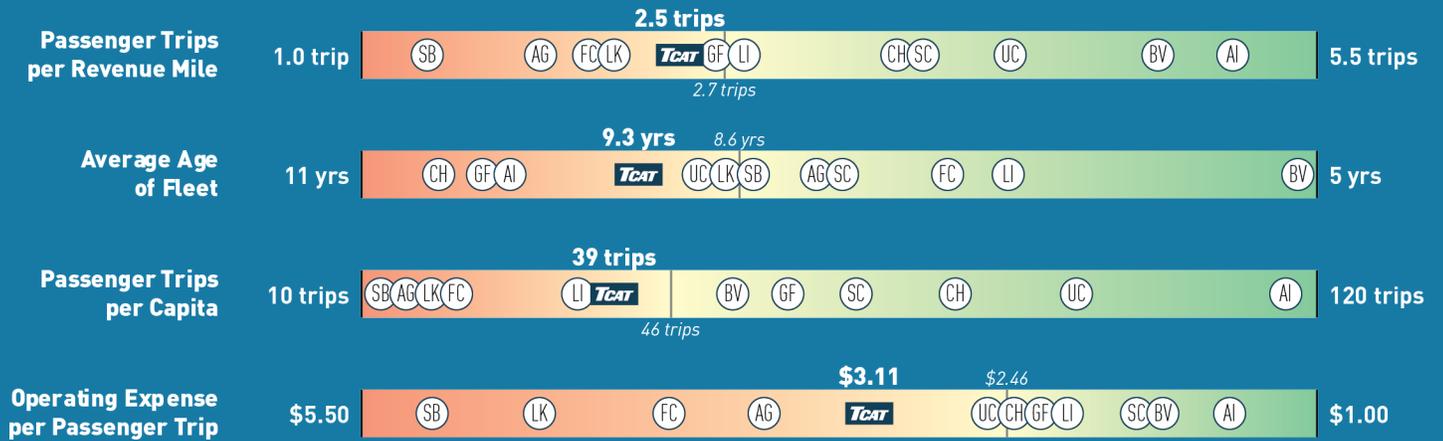


TCAT serves far more riders per capita than many of our comparable New York systems.

TCAT vs US Peer Systems: Metrics where TCAT performs well



TCAT vs US Peer Systems: Metrics where TCAT can improve



- AG Athens, GA FC Fort Collins, CO SB South Bend, IN
- AI Ames, IA GF Gainesville, FL SC State College, PA
- BV Blacksburg, VA LI Lafayette, IN **TCAT** TCAT, Tompkins County, NY
- CH Chapel Hill, NC LK Lexington, KY UC Urbana-Champaign, IL



Sources: Urban Integrated National Transit Database (iNTD)

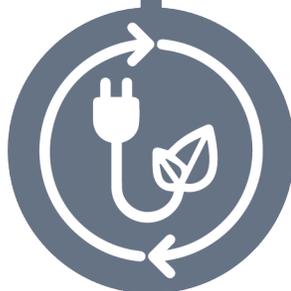
► TRANSIT IN THE FUTURE

Public transit is facing a growing number of challenges and opportunities that have resulted from changes occurring within the sector itself, as well as from external trends affecting the wider socio-economic environment. Changing rider expectations, growing desire for new mobility options, along with unstable public funding necessitate the need for transit operators to adopt informed policy, long-term planning, and a stable vision for the future. As the backbone of traditional mobility systems, transit operators are at a turning point within a transitioning mobility market. In this context, transit should take the leading role to remain relevant.



Mobility as a Service (MaaS)

- New transport data and technological advances have provided insights into travel behavior and enabled the rise of a platform-based approach to manage and provide mobility services.
- Riders are increasingly expecting tailor-made mobility solutions based on their individual needs and connected with multiple modes of transportation options as simply as possible.
- Transit operators are uniquely positioned to encourage and facilitate multi-modal travel options that can complement traditional fixed-route services.



Sustainability + Energy

- The public transportation industry continues to shift away from fossil fuels while electric and hybrid bus technologies with more sustainable propulsion systems are maturing.
- A sustainable transit system can take the lead to preserve environmental quality, adopt cleaner energy sources, and increase public transit ridership to combat against continued environmental deterioration at local and global levels.
- As transit operators transition to more sustainable fleets and operational practices, new challenges will need to be addressed such as the costs and deployment of electric charging infrastructure, and future fleet upgrade and procurement schedules.

New Mobility Services



- Alongside car-, bike-, and ride-sharing, on-demand shuttles and dockless scooter share have emerged to address the needs of a wider audience. Meanwhile, autonomous vehicles (AV) remain on the horizon and will likely have sector-wide impacts as they enter the mobility market.
- Largely driven by the private sector, new mobility services can potentially attract riders away from traditional transit services, and reflect the changing preferences of the 21st century traveler.
- Transit operators will need to explore new forms of public-private partnerships and explore opportunities to integrate new mobility options and expand their services.

Demographic Trends



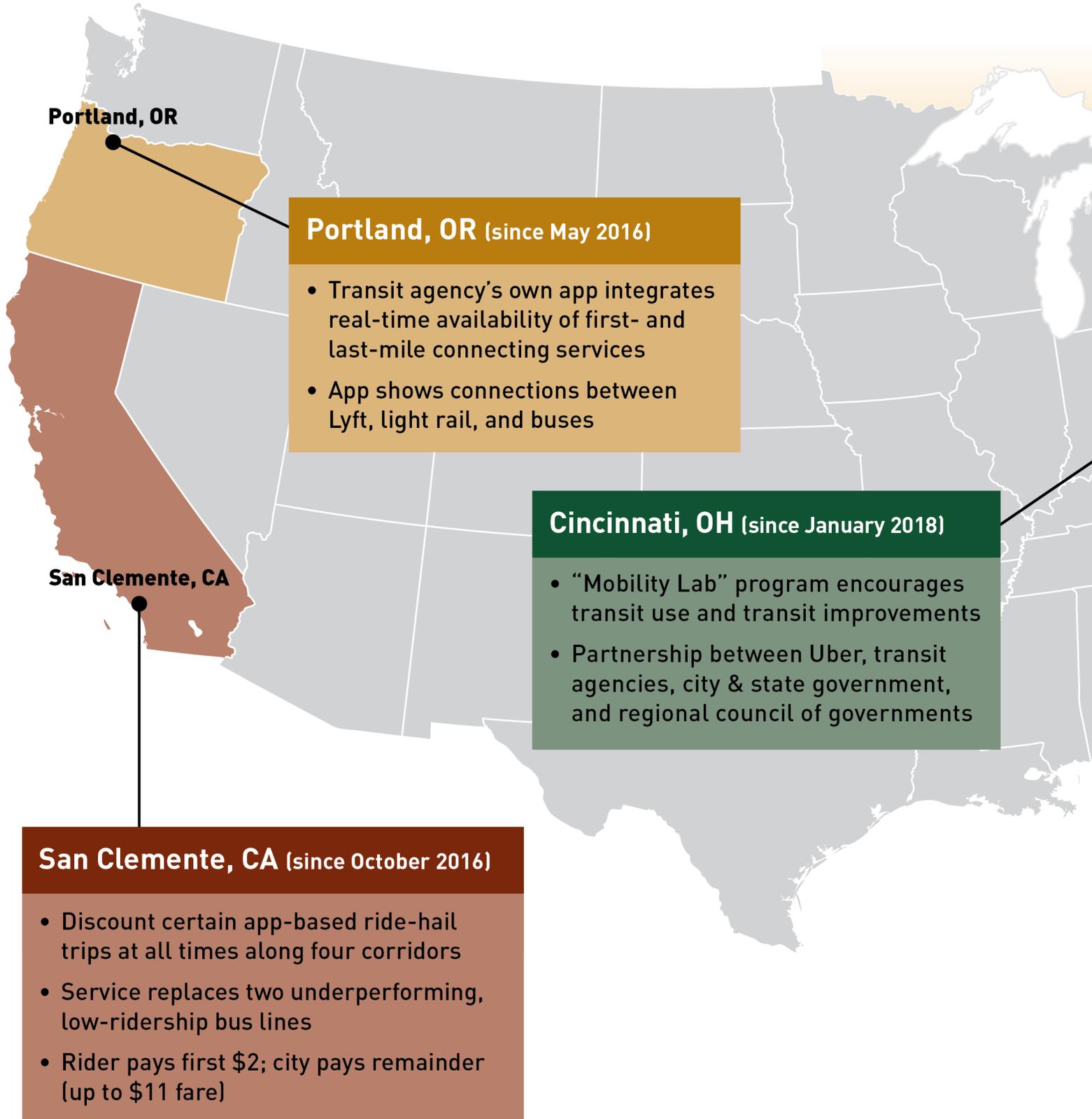
- Recent demographic trends show a continuing rate of urbanization, declining car ownership among young people, and increasing proportion of telecommuting workers.
- These and similar demographic trends can affect and influence where people want to go and how they want to get there.
- Transit operators will need to plan ahead in order to accommodate the evolving travel preferences of existing and new potential riders.

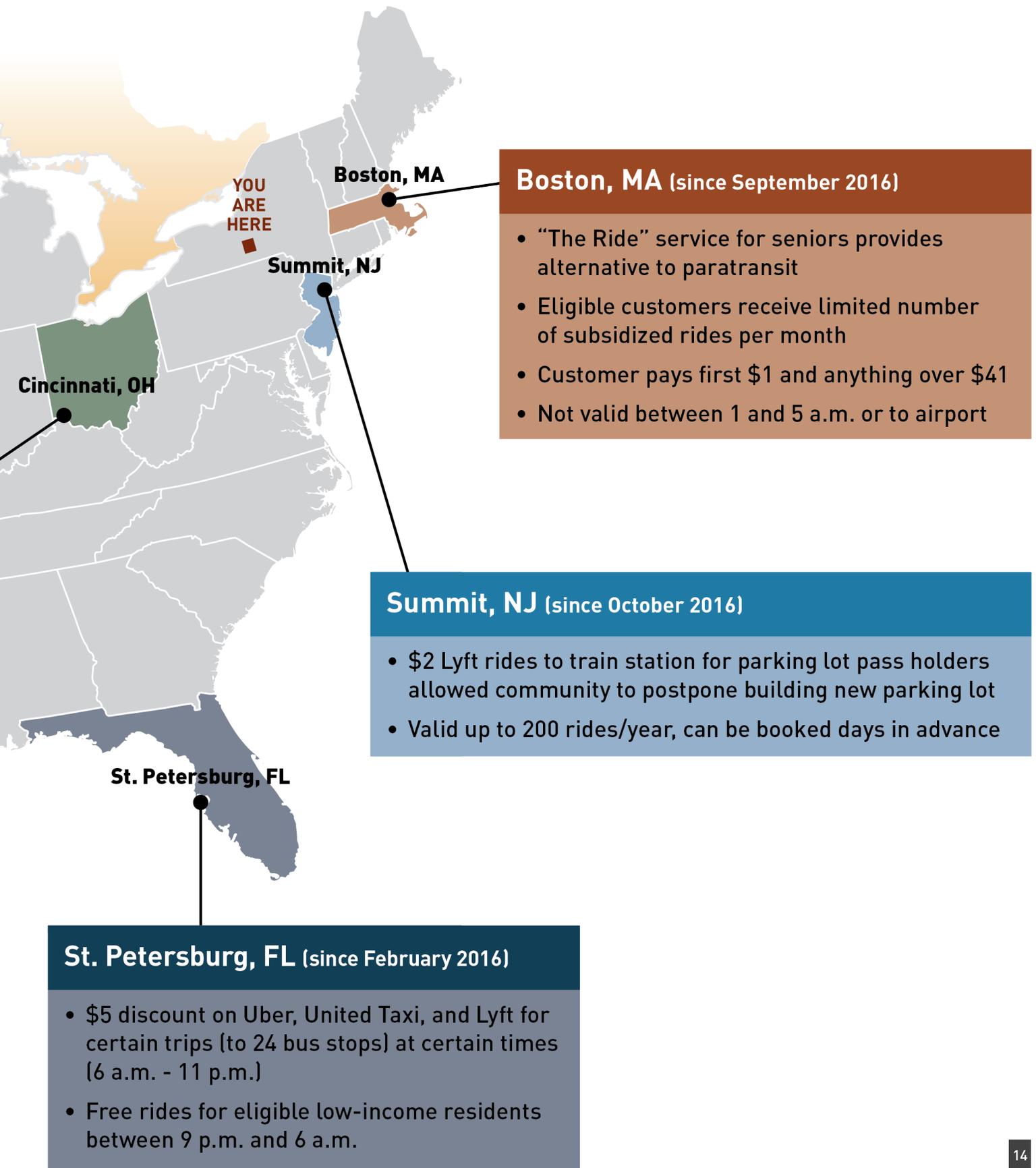
Technology + Big Data



- Technological advances and connectivity improvements have created a growing volume of available and reliable complex data (or 'big data') on a county-wide and regional level.
- Big data can help transit operators provide operational and maintenance improvements, new integrated mobility services, and a better understanding of their riders.
- Transit operators can leverage large city-wide data sets to make informed, long-term strategic planning.

EXAMPLE TRANSIT AGENCY PARTNERSHIPS FOR SERVICE INNOVATION





► PUBLIC + STAKEHOLDER ENGAGEMENT

TCAT values its relationship with the Tompkins County community we serve. Throughout the development of this Strategic Plan, TCAT has worked collaboratively with a diverse Stakeholder Committee and has engaged directly with the public. We hosted two in-person public + stakeholder workshops (in May and August 2018), which provided us with valuable feedback and guidance. Supplemented with additional meetings with the Stakeholder Committee, the valuable comments we received ultimately helped guide the development of the final TCAT Strategic Plan.

Public Engagement

TCAT hosted two public workshops as we developed this Strategic Plan. The first meeting utilized an “open house” format to facilitate discussions with a large group of diverse stakeholders, allowing County residents, business owners, and students the opportunity to engage directly with us as we embarked on the visioning process for the Plan. Four interactive activity boards, each with their own unique theme, were set up to gather feedback from the public regarding transit priorities, preferences, and commuting behavior. In addition, attendees were greeted with a rotating slideshow that provided background on the project,

and relevant facts and trends related to TCAT. The feedback from the first public workshop informed the Plan’s structure and many of the high-level goals that we’ve included.

The second public workshop introduced the public to the various topics included in the Strategic Plan, as well as key initiatives that TCAT is or will be pursuing to achieve success and meet these goals. We displayed a series of large poster boards and supplemented them with case studies highlighting innovative initiatives from other peer transit agencies. We hope to pursue some of these ideas too,

and we used this opportunity to hear what our constituents thought about their desirability and feasibility here in Tompkins County. We also provided an informational board at this meeting to highlight the different ways that the public can engage with TCAT. We look forward to continuing our conversations with the public at future meetings and interactive open house events.



Stakeholder Engagement

TCAT hosted in-person stakeholder workshops during the development of the Strategic Plan and supplemented these with phone conferences to gather additional feedback. This targeted engagement allowed us to hear directly from key parties in a Stakeholder Committee of over 30 members that all have a stake in TCAT's success. With many actions in this Plan contingent on cooperation with and support from our partners, it was important to ensure collective buy-in at multiple stages throughout Plan development.

At our initial Stakeholder Committee workshop, we reviewed an initial 'SWOT' analysis of our current Strengths, Weaknesses, Opportunities, and Threats (the analysis is included in this Plan) to identify gaps and flesh out additional ideas to inform the Plan's visions and themes. The subsequent meetings and workshops allowed the Stakeholder Committee to provide feedback during each critical stage in Plan Development, from the initial outline of high-level goals down to the detailed list of short-term actions and longer-term initiatives that represent the heart of our strategic direction over the coming years.



▶ HOW TO READ THIS PLAN

This document sets the stage and clarifies our vision so we can deliver the best possible transit service for the people of Tompkins County. Each chapter of our Strategic Plan contains a handful of key themes that all work together toward building this future for TCAT. Within each key theme, you'll find our understanding of the issue, a few short-term action steps that we will embark on by 2022, and additional longer-term initiatives that will form the backbone of our organization's strategy through 2030.

▶ PERSONNEL + HUMAN RESOURCES

Theme

The last decade has been challenging for TCAT staff in its attempt to keep pace with community expectations for more service, better amenities and modernized technology. This raises the question whether staff's busy workload is just temporary or represents "the new normal." TCAT must define and utilize the "new normal" regarding expectations of staff performance and work product, with a strong emphasis on clarifying and improving organizational culture. Continuous training will be necessary to support these expectations.

What is it and why does it matter?

The critical functions of TCAT are clear, and the current organizational chart supports these functions. To achieve ongoing excellence our entire team needs well-defined goals and measurements for job performance. Budgeting for the organization must reflect the importance of training for all staff positions, including in data systems and analysis for many employees. Increased Human Resources [HR] support for employees will benefit the organization since it will help define a culture that supports staff growth and empowerment.

Regular staff evaluation is important to ensure performance keeps projects moving forward, and rewarding or correcting job performance on a continual basis yields results. Organizations that do this effectively are more cohesive and execute far better than those that do not focus on evaluation. Strong support from talented HR staff or consultants is necessary.

Explanation

Short-Term Strategic Actions

- Increase HR staffing through hiring or increasing contract hours
- Choose at least three benchmark systems or agencies and review their personnel evaluation procedures
- Perform an evaluation of management staffing levels
- Ensure adequate supervisor training and support through performance evaluation process
- Develop a staff satisfaction survey framework

Short-Term Strategic Actions

Long-Term Strategic Initiatives

- Ensure that staff evaluations align with and support organizational cultural goals as they are developed
- Monitor staff evaluations and provide HR training and support to supervisors
- Research, choose and utilize an employee satisfaction tool at least every two years, which will gauge employee understanding and commitment to the organization, as well as satisfaction with scheduling, training opportunities, and staff-management relationships
- Create succession plans for all positions using partnerships [HS, BOCES, tech schools, local colleges and universities] to provide talented candidates
- Consider initiating a staff wellness program

Long-Term Strategic Initiatives

▶ TCAT'S BOARD OF DIRECTORS

TCAT's Board of Directors is committed to creating policies to support the mission and vision of the organization, and ensuring TCAT adheres to its core values. We are here to promote organizational excellence and to provide support to our management and staff. To accomplish this, members of the Board must be knowledgeable about transit operations and the evolving needs of our customers, and be proactive in working with partners to find solutions to issues that arise.

Therefore, the Board of Directors will commit to the following short-term and long-term strategic actions and initiatives as part of this Strategic Plan:

Short-Term Strategic Actions



- Continue to lead TCAT's Planning Committee team on site expansion, involving key community stakeholders as necessary, and ensure the team makes a unified recommendation by Summer 2019
- Create a "Transit 101" orientation for new Board members
- Ensure that there is a formal, annual performance review provided to TCAT's General Manager by the Board
- Create a Board self-evaluation program to be conducted every 2 years

Long-Term Strategic Initiatives



- Formalize Board of Directors policies and procedures manual
- Review and refresh TCAT's Strategic Plan at least every 5 years
- Review TCAT's legal structure to determine options for more flexibility in funding and operations



1 UPHOLDING ORGANIZATIONAL EXCELLENCE

Our transit system is far more than just buses. It relies on a network of relationships with businesses, partner agencies at the local, regional, State and Federal level, the people of Tompkins County, regular and infrequent riders alike, and of course our staff and board members who work to make TCAT better every day. These relationships are built and maintained through responsiveness and excellent service, which creates trust and increases the connection between and among those whom our system serves and who operate it.

The following strategies aim to promote productive partnerships at every level within TCAT. This means recruiting and retaining talented employees throughout the hiring process, and supporting our staff with training programs, skill development, and strong personnel policies and procedures. It requires fair and equitable measurement of employee job performance and satisfaction, as well as continuous evaluation of internal systems and increasing our organization's adeptness with technology and data. Ultimately our organizational excellence will continue to grow through proactive leadership from our Board of Directors and management team to maintain a cohesive, flexible, and modern transit organization.

- **Organizational Culture + Structure**
- **Personnel + Human Resources**
- **Internal Processes + Policies**
- **Adeptness in Technology + Data**



► ORGANIZATIONAL CULTURE + STRUCTURE

TCAT's organization must support its mission and operations, and provide the resources needed for effective administration and planning. TCAT will continually evaluate and build the team and its organizational culture through a focus on responsibility and accountability.

"Culture beats strategy" is a maxim in business, and it applies to transit systems too. Upholding TCAT's organizational culture continues to be a major focus for our leadership. This requires defining the culture we want to build, and focusing on staff interactions that are purposeful and powerful. These interactions can be in structured, regular, and timely staff meetings, or within interdisciplinary teams on larger projects. We will emphasize building tiger (Totally Integrated Groups of Expert Resources) teams for some of the strategic initiatives outlined in this plan. TCAT's culture should be one that recognizes the process of becoming aware of issues, mobilizing resources, building capacity, implementing action, and evaluating results. It is critical that all of us commit to "completing the loop," and providing information freely to others within the organization.

To support our initiatives, we require an organizational structure that provides both responsibility and accountability to all staff. This requires that job descriptions be evaluated – and rewritten if necessary – to understand relationships and duties, and that evaluation of staff becomes a regular and foundational part of the structure of the organization. Coaching of both new and long-term employees in supervision, management and evaluation will lead to a TCAT team with better understanding of everyone's roles and relationships. Reviewing the organizational structure every three to five years is critical as new staff come on board and the business of transit continues to evolve.

Short-Term Strategic Actions



- Create an initial plan to formalize cultural goals, including measurements to achieve and a review of TCAT's Vision and Mission Statements and Core Values
- Choose at least three benchmark systems or agencies
- Train and support supervisors in coaching and evaluation
- Form a tiger team and apply to one strategic project
- Develop a "Transit 101" orientation program for new Board members

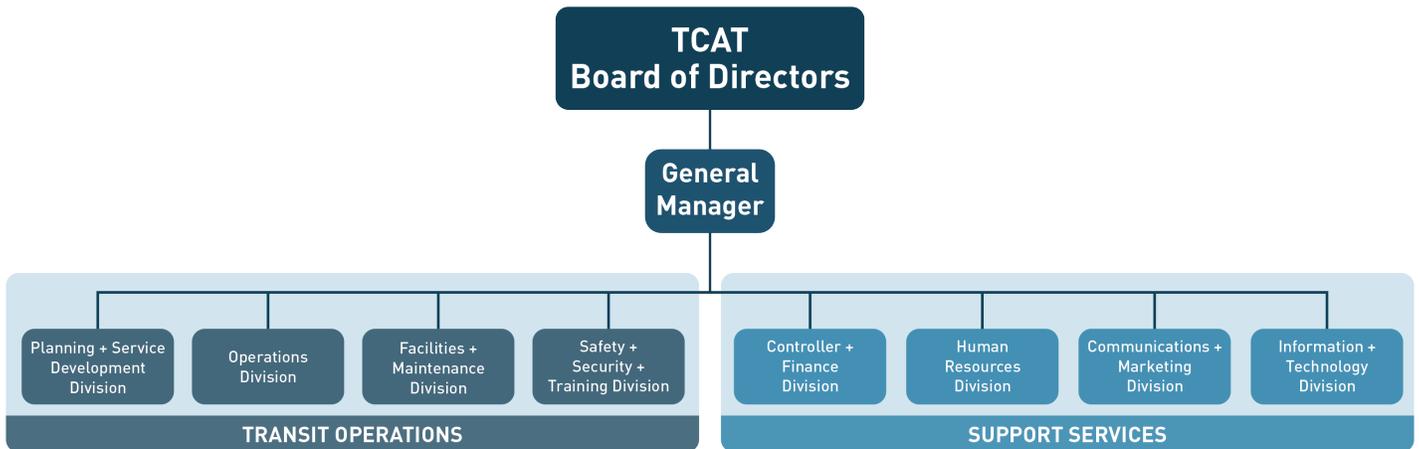


Long-Term Strategic Initiatives



- Create a “next steps” plan to continue to build management and staff teams through recruitment, internship opportunities, and streamlining of processes to increase speed and efficiency
- Implement systems that use data resources for decision making on process improvements, and document this usage
- Evaluate performance against benchmarked systems or agencies
- Continue to reward cultural and team success

TCAT’s Organizational Structure



TCAT’s Funding Underwriters



▶ PERSONNEL + HUMAN RESOURCES

The last decade has been challenging for TCAT staff in its attempt to keep pace with community expectations for more service, better amenities and modernized technology. This raises the question whether staff's busy workload is just temporary or represents "the new normal." TCAT must define and utilize the "new normal" regarding expectations of staff performance and work product, with a strong emphasis on clarifying and improving organizational culture. Continuous training will be necessary to support these expectations.

The critical functions of TCAT are clear, and the current organizational chart supports these functions. To achieve ongoing excellence our entire team needs well-defined goals and measurements for job performance. Budgeting for the organization must reflect the importance of training for all staff positions, including in data systems and analysis for many employees. Increased Human Resources (HR) support for employees will benefit the organization since it will help define a culture that supports staff growth and empowerment.

Regular staff evaluation is important to ensure performance keeps projects moving forward, and rewarding or correcting job performance on a continual basis yields results. Organizations that do this effectively are more cohesive and execute far better than those that do not focus on evaluation. Strong support from talented HR staff or consultants is necessary.

Short-Term Strategic Actions



- Increase HR staffing through hiring or increasing contract hours
- Choose at least three benchmark systems or agencies and review their personnel evaluation procedures
- Perform an evaluation of management staffing levels
- Ensure adequate supervisor training and support through performance evaluation process
- Develop a staff satisfaction survey framework

Long-Term Strategic Initiatives



- Ensure that staff evaluations align with and support organizational cultural goals as they are developed
- Monitor staff evaluations and provide HR training and support to supervisors
- Research, choose and utilize an employee satisfaction tool at least every two years, which will gauge employee understanding and commitment to the organization, as well as satisfaction with scheduling, training opportunities, and staff-management relationships
- Create succession plans for all positions using partnerships (HS, BOCES, tech schools, local colleges and universities) to provide talented candidates
- Consider initiating a staff wellness program

TCAT Goes Where You Go!

Meet David Wiles

A TCAT Human Resources Generalist

“I like working at TCAT because it is an exciting time to be here. Ithaca is growing and so is TCAT. I really enjoy working with so many great people and getting the opportunity to bring new faces through the door.”



► INTERNAL PROCESSES + POLICIES

Recruiting and retention is an issue for TCAT, and training requirements can slow down the hiring process. For TCAT to remain an excellent place to work, our Board and senior management must partner to establish policies to support the culture and structure of the organization.

Our organization can utilize its cultural and organizational strengths as ways to attract, retain and promote a diverse and talented pool of employees. TCAT's generous benefits and leave policies, including excellent training opportunities, as well as tuition reimbursement and flex-time opportunities for administrative staff, demonstrate a culture of caring for employees.

To become a best-in-class organization, we must document career ladders and training opportunities for both recruitment and retention, and assure that training monies are defined in the budget and that training funds are sought through grant applications at the local, State and Federal levels.

Short-Term Strategic Actions



- Build on internship and recruiting efforts to attract top talent from local colleges and universities, including for positions in our operations and maintenance functions
- Streamline hiring processes for clarity, transparency and speed
- Develop framework for a "career ladders" program to improve retention
- Evaluate most critical needs and necessary budget for training, and identify potential grant funding and/or staffing to support

Long-Term Strategic Initiatives



- Focus on career ladders for internal staff, in addition to recruitment
- Expand skills and capacities throughout the organization that will support career ladders and succession planning
- Budget for and provide critical training functions on a regular basis, ideally through grant funding
- Continue to enhance overall HR support to employees, and monitor outcomes of regular FTA triennial reviews

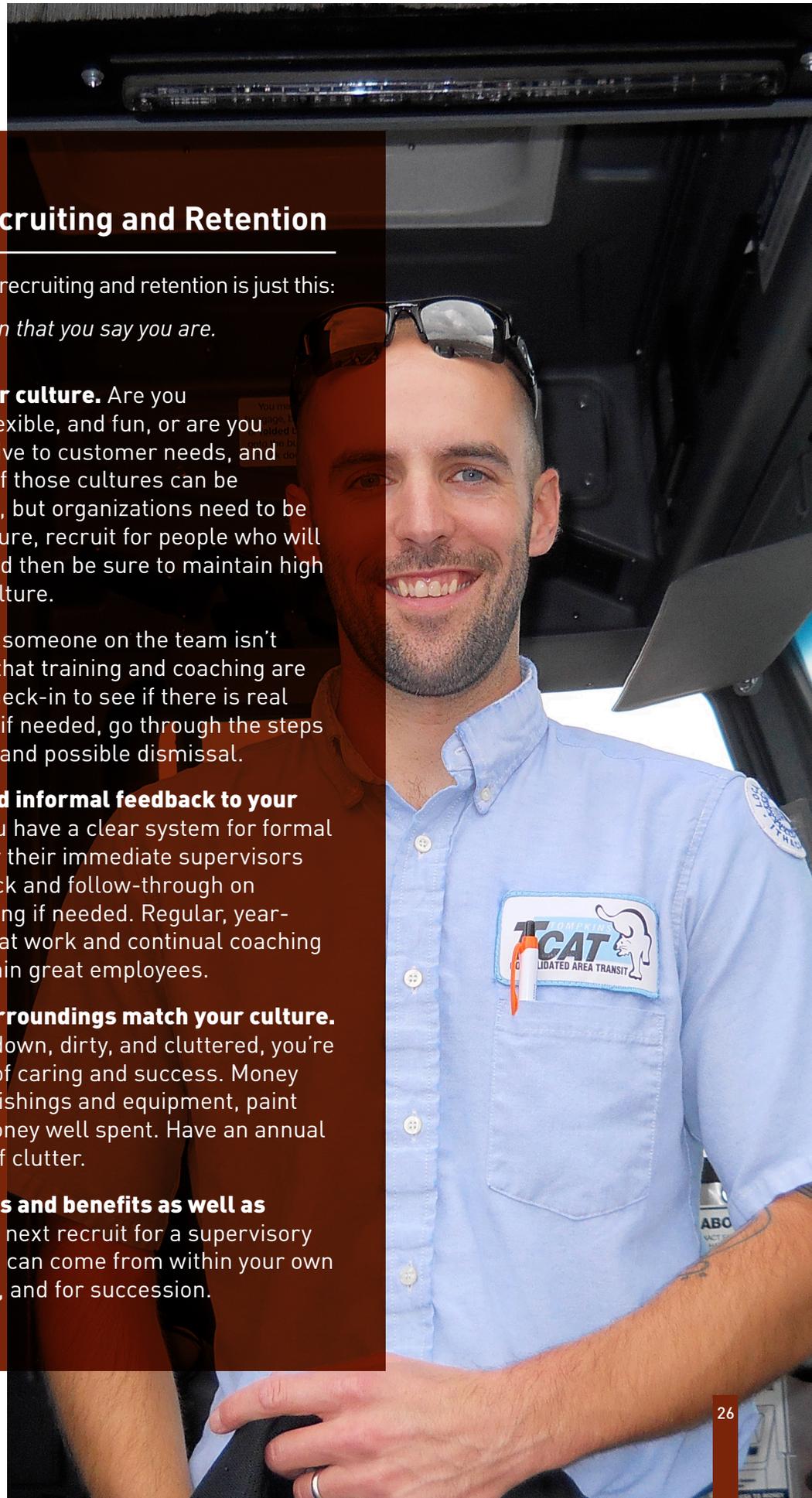


Best Practices in Recruiting and Retention

The essential element of great recruiting and retention is just this:

Be the organization that you say you are.

- **Be able to describe your culture.** Are you technologically savvy, flexible, and fun, or are you mission driven, responsive to customer needs, and training focused? Both of those cultures can be excellent places to work, but organizations need to be able to describe the culture, recruit for people who will enjoy that workplace, and then be sure to maintain high standards within that culture.
- **Don't let things slide.** If someone on the team isn't performing, make sure that training and coaching are offered and available, check-in to see if there is real improvement, and then, if needed, go through the steps of discussion, discipline and possible dismissal.
- **Provide both formal and informal feedback to your staff.** Make sure that you have a clear system for formal evaluation of workers by their immediate supervisors and that there is feedback and follow-through on corrections, and retraining if needed. Regular, year-round recognition of great work and continual coaching for success helps to retain great employees.
- **Make sure that your surroundings match your culture.** If the workplace is run-down, dirty, and cluttered, you're not exhibiting a culture of caring and success. Money spent on upgrading furnishings and equipment, paint and carpeting can be money well spent. Have an annual clean-up day to get rid of clutter.
- **Offer competitive wages and benefits as well as excellent training.** Your next recruit for a supervisory or management position can come from within your own ranks. Train for success, and for succession.



► TECHNOLOGY + DATA FOR INTERNAL OPERATIONS

TCAT staff has expressed the need for updated internal systems and equipment, and the desire to be proactive rather than reactive on issues related to technology and data systems. However, funding for these projects is not always easy to secure. We must evaluate how technology can play a role in the evolution of TCAT, and how data can be better understood and applied in our decision making.

TCAT will continue to maintain and expand the utilization of data and technology to enhance work flow and improve the customer experience. We will ensure that current and new systems are accessible and understood by our staff and customers. We must also certify that network mapping and security are robust and that there is sufficient staffing and cross-training to cover normal operational difficulties and emergencies.

Staffing in our IT division needs to be increased in order to ensure adequate coverage as well as necessary documentation. While TCAT's board and management already use data analysis for decision making and information, our staff need capabilities in this area. Training on Avail has not been adequate, and needs to be repeated and upgraded to be used effectively.

Short-Term Strategic Actions



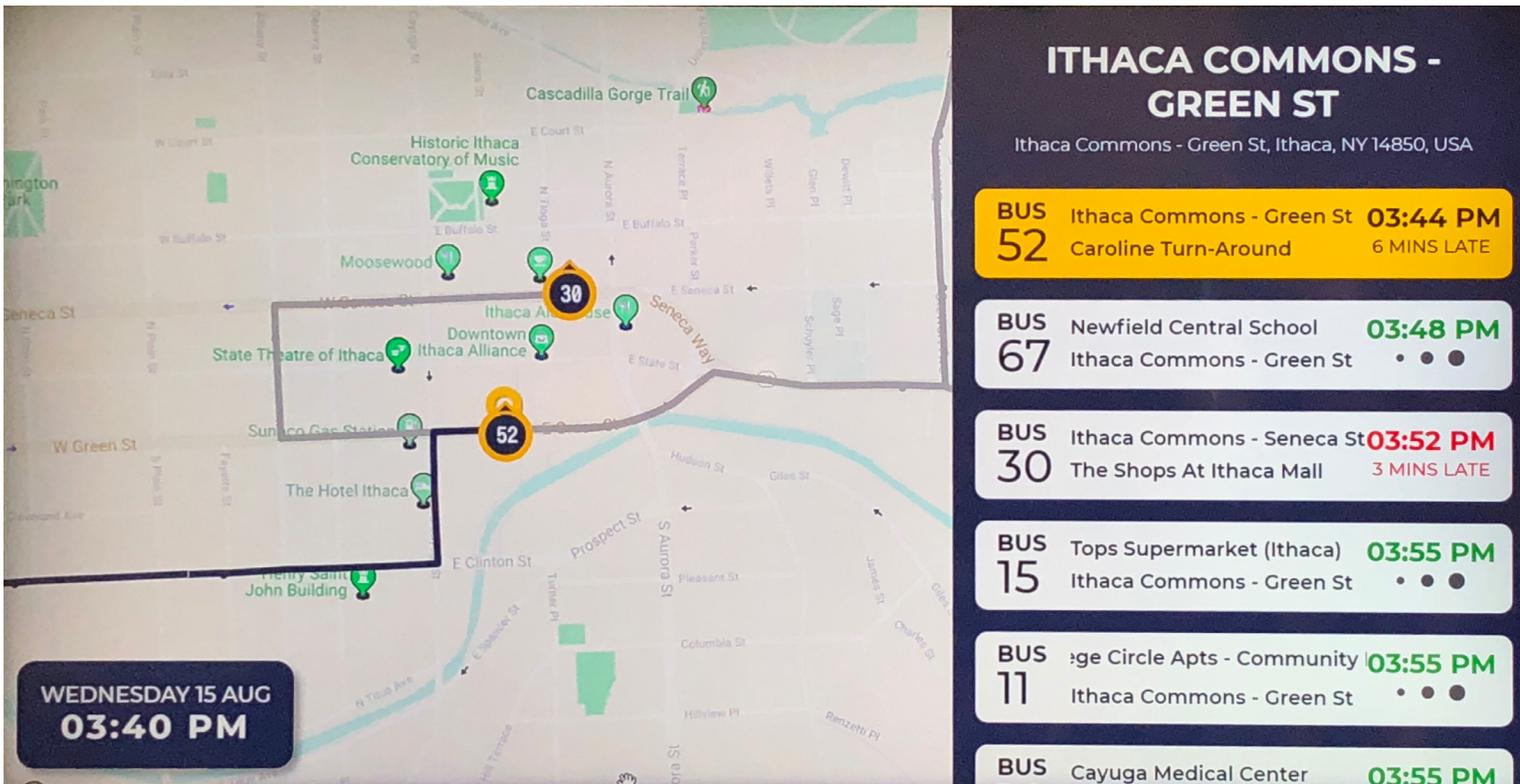
- Increase IT staff by more than one position to facilitate proactive responses to outstanding issues, and allow for the planned replacement of all existing technology and equipment
- Create data tiger teams for in-house training on Avail and Excel, in order to use both effectively
- Ensure that *Maximo* training is robust and thorough so that this Enterprise Asset Management system is used to its greatest capability
- Engage in pilot testing of one or more project management system(s)

Long-Term Strategic Initiatives



- Identify and invest further in data analysis and utilization initiatives to improve real-time decision-making
- Adopt a single project management system for all projects so that managers can easily assist with other projects if needed
- Regularly evaluate internal IT operations and functions to improve efficiency and minimize cost







2 PROMOTING QUALITY OF SERVICE + SETTING SERVICE PRIORITIES

TCAT is a transit provider that aims to provide quality service at fair prices to the most people possible. However, it is impossible to be everything to everyone – we only have so many buses and drivers, not to mention the funding that goes to pay for them. Making the most of finite resources is critical, and we understand that tradeoffs are required to deliver the right balance of transit service to those who need it.

The strategies in this chapter reflect the many tradeoffs that we must make as an organization as we evolve and modernize our operations. In particular, we must set our service development priorities as the County grows and demands for our service increase. We must do this in context of the development processes in the County’s municipalities, and determine the best ways to be proactive and recognize how TCAT can play a part in moving people efficiently and cost-effectively. That service must also continue to be delivered with high quality, as our customers have come to expect.



- **Setting Priorities + Goals**
- **Creating the Best Rider Experience**
- **Transit Integration with New Development**

▶ SETTING PRIORITIES + GOALS

In a world of limited budgets, TCAT must set its priorities by balancing different service qualities that drive its expenses: geographic coverage, service frequencies and span, peak-period vs. all-day service, bus stop spacing, choice of key corridors, and how to most efficiently serve transit dependent populations, for example.

The TCAT transit network is designed primarily to provide affordable and beneficial mobility solutions to the non-driving population, in addition to suitable alternatives to driving for those who choose to leave their vehicles at home. Ideally, all individuals in Tompkins County should have equal access to such services. In reality, factors such as budget limitations, the road network, topography, and others restrict the ability of TCAT (and transit providers in general) to provide service ubiquitously.

TCAT must account for costs and benefits, tradeoffs and opportunities. Typically, service expansion at one side of the system requires service cuts at the other side. For example, increasing peak service frequency may mean trimming a route's alignment so that it can be run in less time, and a longer span of service on one route may require a weekend service cut on another. TCAT has choices to make and priorities to set, balancing different service qualities that drive service development.

This section provides a glimpse of the priorities that will guide TCAT service development in years to come. These include general guidelines for TCAT in its system development and strategic network planning processes. Furthermore, they may serve as the foundations for a more comprehensive and extensive network study.

However, it is important to note that the guidelines are not "right-and-wrong, black-or-white" rules; rather, they are strategies that represent values based on transit planning practice and theory, as well as the community's preferences as reflected at public and stakeholder visioning workshops, conducted as part of this Plan in May 2018.

Short-Term Strategic Actions



- Evaluate existing and any planned routes for adherence to TCAT's Service Development Priorities and service standards, and flag routes that might require changes
- Identify candidates for high-frequency service on routes with highest ridership and/or in areas with latent demand
- Consider routes for piloting high-frequency service, including via elements such as unique bus stop signage, bus branding, and electronic messaging on buses
- Initiate and execute a Transit Development Plan (TDP), which considers our Service Development Priorities and route redesigns



Long-Term Strategic Initiatives



- Following up on the initial service review and TDP, consider route redesigns in the context of TCAT's Service Development Priorities and FTA service standards
- Continue to expand pilot program that differentiates certain high-frequency service offerings, if successful
- Evaluate how any changes in routing impact ridership and accessibility, and make adjustments as required

Our Service Development Priorities

- **Streamline routes** and avoid deviations onto side streets, which increase travel time, and reduce transit's competitiveness and desirability for through riders.
- Ensure any new routes are simple and operate along relatively direct paths to serve both well-defined and growing markets.
- Tailor bus service frequency to demand: increase frequency along high-demand and growing corridors while maintaining a minimum level at lower-demand areas.
- Provide all-day, high frequency service along the 3 to 5 highest-demand corridors in the system; focus on peak-hour service at other areas where ridership is lower, noting that some locations don't exhibit traditional "peak" hours during morning and evening weekday rush hours.
- Continue to evaluate bus stop spacing systemwide. The baseline spacing is $\frac{1}{4}$ mile in the urban environment and longer distances in rural areas, depending on land uses, topography, and the road network.
- Continue to focus on serving transit dependent populations as effectively as possible, recognizing that feeder service, demand-responsive or other non-fixed route options may be preferable in certain cases.

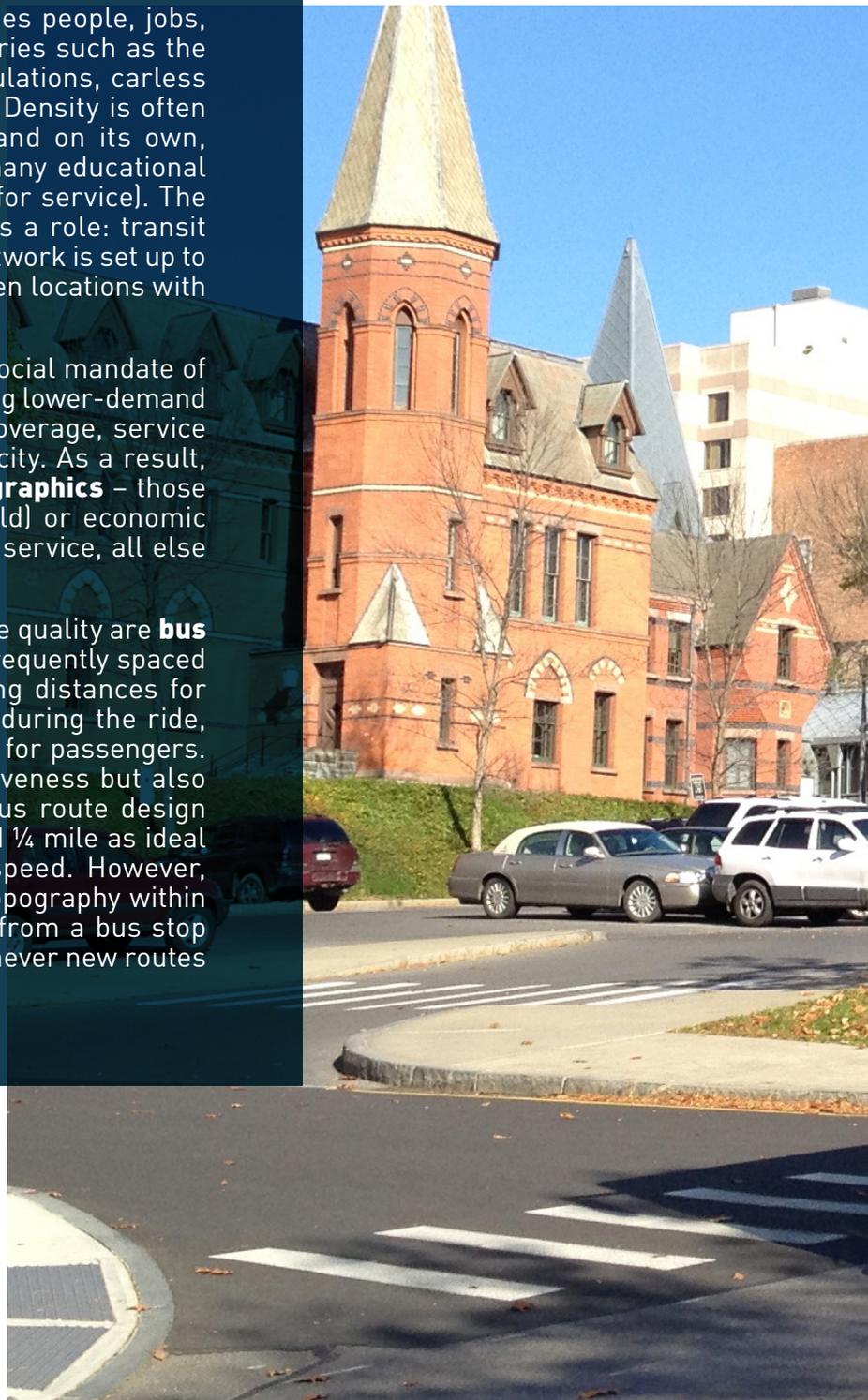


Service Priorities and Tradeoffs for Transit Providers

Factors that drive demand for transit services are numerous. First and foremost is **density**, which includes people, jobs, shops, and services, as well as sub-categories such as the density of student populations, elderly populations, carless households, and low-income communities. Density is often governed by **land use**, which drives demand on its own, independent of density (e.g. the County's many educational institutions result in concentrated demand for service). The existing **transportation network** also plays a role: transit demand is often higher when the roadway network is set up to support it through direct connections between locations with high trip generation factors.

Public transit providers must consider the social mandate of serving the community at large and connecting lower-demand areas as well. This applies to geographic coverage, service frequency and span, and overall route capacity. As a result, demand for transit is often driven by **demographics** – those who cannot drive due to age (young and old) or economic hardship will have a higher need for quality service, all else equal.

Two additional operational features of service quality are **bus stop spacing** and **bus travel speed**. While frequently spaced bus stops generally require shorter walking distances for passengers, they also require more stops during the ride, which increases the overall transit trip time for passengers. This challenges not only transit's competitiveness but also its reliability and operational efficiency. Bus route design guidelines often specify stop spacing around $\frac{1}{4}$ mile as ideal to balance passenger access and travel speed. However, due to variations in density, land use, and topography within its service area, any agency would benefit from a bus stop spacing review at regular intervals and whenever new routes are planned.





► CREATING THE BEST RIDER EXPERIENCE

To grow ridership and tap into new markets, TCAT must continue developing its service, while aiming to improve quality service and the best possible rider experience. This relates to both perceptions of and actual safety, cleanliness, and comfort. It also means providing a desirable alternative to driving in congested streets.

The prior section of the Plan discussed how various aspects of transit significantly impact service quality and its availability to passengers in different markets. However, there are other aspects that have a critical impact on how passengers experience their ride, and this may be equally if not more important in making sure a first-time bus rider becomes a regular (and happy!) bus rider. Factors include personal safety, accessibility, cleanliness, and comfort, both at bus stops and on board.

Personal safety, both perceived and actual, is perhaps the most fundamental aspect of the rider experience. At bus stops, the most basic safety elements include adequate waiting space, lighting, and shelter. On the bus, passenger safety is most heavily ensured by the bus operator, but also by the behavior of fellow passengers. TCAT and our operators

are firmly committed to the safety of our passengers through the entire duration of their journeys.

Accessibility, cleanliness, and a “smooth ride” are all tied together. For instance, a clean bus and accessible bus stops contribute to a pleasant riding experience; a trip that is perceived as safe is more likely a pleasant trip. It is TCAT’s intention to promote all of the above, always aiming to continue improving the passenger experience.

While all transit systems are designed to serve riders and bring them to where they need to go, great transit systems are those who manage to make riders happy, so they choose transit over other available alternatives. At TCAT, we aspire to be a best-in-class transit organization, and this means bettering the great rides we are already well-known for.

Short-Term Strategic Actions



- Examine opportunities for strategic partnerships (with County municipalities, institutions, or others) to develop a formalized Bus Stop Improvement Program
- Build on recent bus stop inventories to develop a bus stop amenity database designed to evaluate amenity levels and identify gaps
- Develop a TCAT bus rider “Bill of Rights” to formalize what should be expected on any TCAT ride



Long-Term Strategic Initiatives



- Initiate and lead a Bus Stop Improvement Program, which could involve ADA-accessibility improvements, lighting improvements, and shelter and/or bench amenity investments
- Enhance and formalize a regular bus stop cleaning and maintenance program to ensure that all street amenities (benches, shelters, etc.) are clean and in a state of good repair

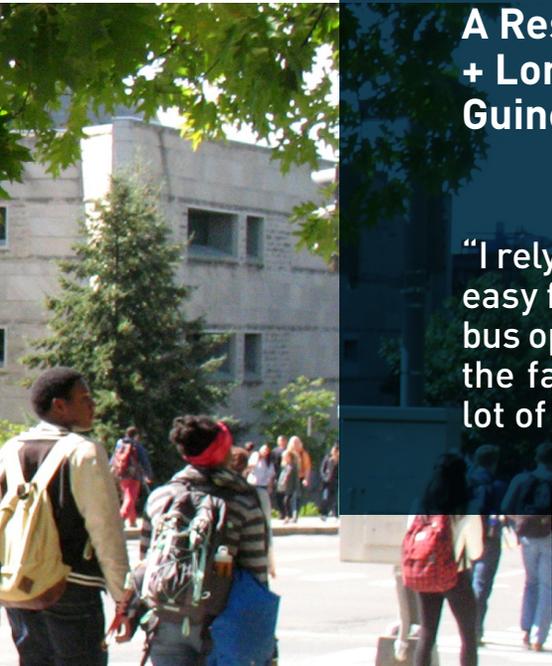


Meet Pat Taylor

A Resident at McGraw House
+ Long-Time Rider with her
Guinea Pig “Marley”

(who rides the bus
in her pet carrier
as required.)

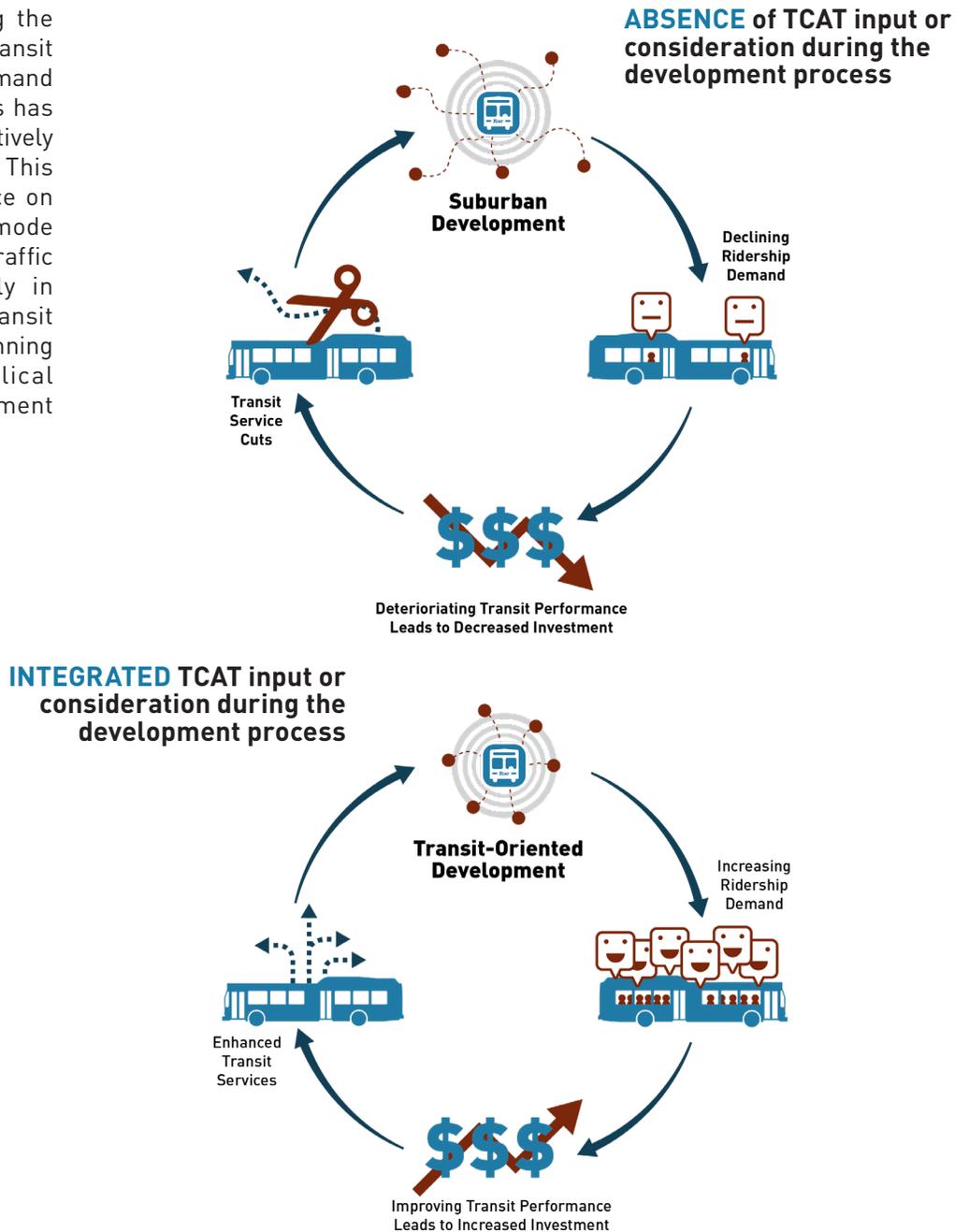
“I rely on taking the bus because it’s easy for me, the buses are on time, bus operators know my stop. I know the faces and make friends with a lot of people on the bus.”



▶ TRANSIT INTEGRATION WITH NEW DEVELOPMENT

Tompkins County and the City of Ithaca have experienced accelerated development in recent years, including new residential subdivisions in rural areas and commercial and mixed-use buildings in Downtown Ithaca. However, some new developments do not facilitate transit service, which limits TCAT's ability to effectively serve them.

The lack of coordination during the development process to ensure transit can play a role in drawing new demand for trips from new developments has constrained TCAT's ability to effectively serve the expanding population. This may lead to a continuing reliance on private vehicles as the primary mode of travel, which can also impact traffic congestion and parking supply in the downtown area. A lack of transit consideration in development planning further exacerbates the cyclical relationship of transit disinvestment and decreasing ridership.



TCAT will look for opportunities to become a proactive partner and bridge the gap between land use development and transit services in Tompkins County. These are likely to include advocating to be part of the development review/approval process in County municipalities, lobbying for changes in municipal zoning regulations, or providing guidance and input on broader regional planning efforts. The overarching goal is to gain a 'seat at the table,' to better facilitate sensible linkages between land use and transportation in Tompkins County.



Short-Term Strategic Actions

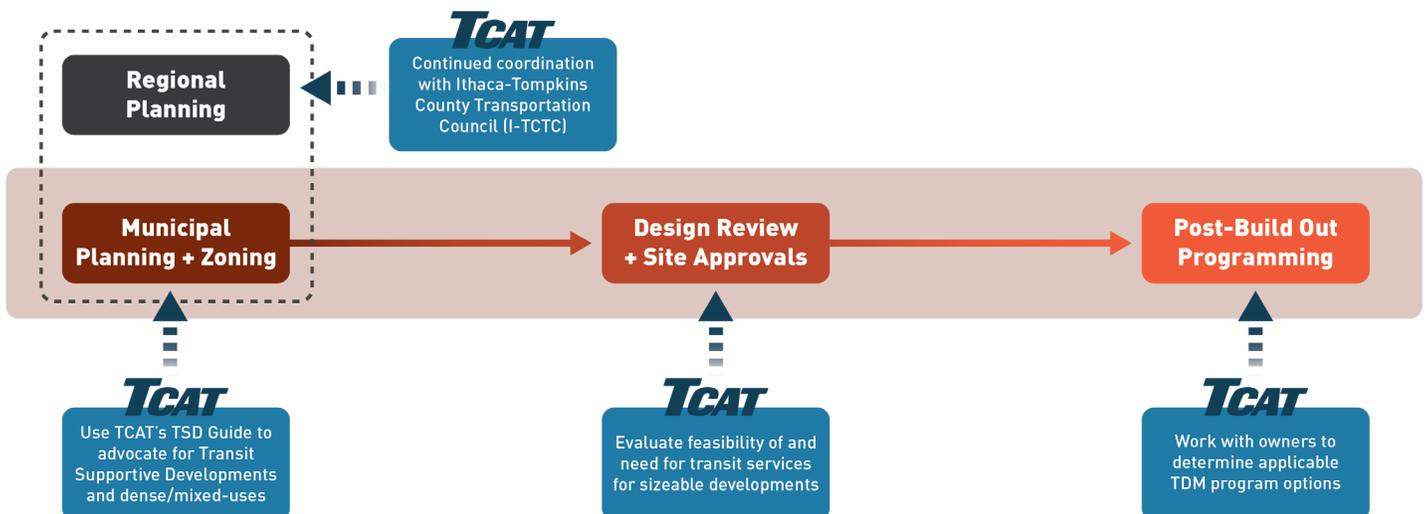


- Continue to promote and educate the public on the benefits of coordinating development with transit service
- Work with individual municipalities and, where applicable, the Tompkins County Council of Governments (TCCOG) to formalize roles in becoming an active participant during development review and permitting processes
- Publish a Transit Supportive Development (TSD) guide to show how smart development strategies can promote transit service and benefit County goals for dense, multi-nodal development, and share with relevant municipal planners and other key stakeholders

Long-Term Strategic Initiatives



- For larger-scale development projects, work with developers to explore Transportation Demand Management (TDM) strategies that effectively promote and complement transit service
- Support amendments to include transit service planning as part of municipal zoning regulations, and encourage developer support for transit operations and/or amenities, where practical
- Formalize protocols with municipal planners so information and updates on major developments are provided on a regular basis to TCAT, and ensure TCAT involvement occurs when development exceeds a certain threshold





3 SENSIBLE + SUSTAINABLE CAPITAL INVESTMENT

At TCAT, we face choices on where and how to direct our next wave of significant capital investment. As a transit provider, our most valuable physical assets are our buses, and this will continue to be the case. As we move forward, we must determine the best way to direct our purchasing power in a way that provides a movement toward greening our fleet but in a cost-effective manner.

We must also determine ways to direct other capital funding toward necessary investment, including the need to modernize and expand our facility, which is difficult to envision in our current site. Other investments are also on the table, and new ones will present themselves often due to changing technology and demands for a 21st-century transit system. These strategies related to sensible and sustainable capital investment look holistically at TCAT's options, and provide guideposts toward future capital planning and associated budgeting.



- Procurement of a Sustainable Fleet
- Operations + Administration Facility Expansion / Relocation
- Investments in Technology Innovations
- Facilitating Multimodal Connections

► PROCUREMENT OF A SUSTAINABLE FLEET

TCAT is committed to doing its part in furthering sustainable outcomes in Tompkins County (see Chapter 6 for additional information). As TCAT considers changes that will make it a more sustainable transit system, we can transition our fleet to buses that have less of an environmental impact than the current diesel-dependent fleet.

Electric buses are becoming a popular option for many transit agencies around the country, although they are not the only option. Furthermore, there is a need to replace a large portion of our fleet at once due to past purchasing patterns. While this need for replacement presents a near-term financial challenge, it is also a significant long-term opportunity since it can generate economies of scale if TCAT adopts new bus technology. For instance, purchasing buses in bulk could lower the individual price per vehicle, and if TCAT elects to pursue an electric fleet the marginal cost of installing EV charging infrastructure could be lower.

A wide variety of fleet powertrain technologies are available, and each comes with certain benefits and constraints, which include fixed investment costs, variable and ongoing fuel costs, emissions levels, commercial availability, vehicle range, and others. The Federal Transit Administration (FTA) recommends a 12-year useful life for buses, so we may have the opportunity to achieve a fully sustainable fleet by the year 2035.

Lower-emissions powertrain options create significant upsides and align with TCAT's, the City's, and the County's sustainability goals. These include reduced emissions, improved air quality, and lower marginal operational costs due to savings on fuel and maintenance costs. Meanwhile, the downsides associated

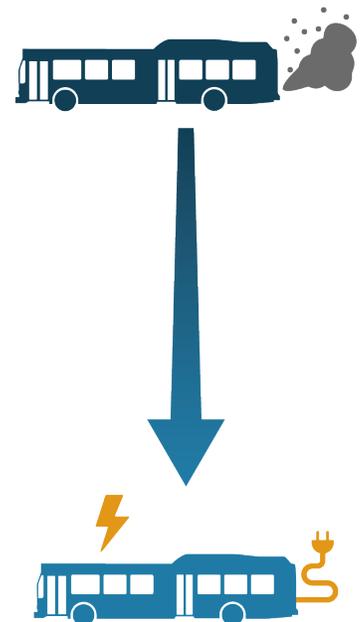
with transitioning to a lower-emissions fleet must be recognized. These include high up-front costs to pay for the fleet transition, planning for resilient operations in the event of power failures, and accommodating certain types of electric buses, which will require new charging infrastructure.

TCAT has the opportunity to pursue numerous funding streams to assist with this major capital investment, and is already in the process of doing so. In coordination with Tompkins County and as the direct recipient of Federal transit funds, TCAT will continue to monitor Federal funding streams, which change regularly. Some of these currently available funding opportunities include:

- The Federal Transit Administration's (FTA) Buses and Bus Facilities Infrastructure Investment Program, which provides 80% of the necessary funding for capital projects that include replacing, rehabilitating, purchasing, or leasing buses and bus facilities. The budget for FY 2018 is approximately \$366.3 million.
- The FTA's Low or No Emission Grants Program, a sub-program of the above, supports transit agencies who want to transition their fleet to zero- or low-emission buses including purchase, construction, and leasing of supporting facilities. For FY 2018, the program's budget was over \$80 million,

of which TCAT was one of the awarded recipients.

- At the State level, and through the New York State Energy Research and Development Authority (NYSERDA), the Public Transit Technology and Innovation Program is a funding opportunity, calling for proposals for projects related to public transportation technologies and strategies which may reduce greenhouse gas emissions and energy consumption from the existing transit system. Service adjustments could be used to meet this program's objectives. TCAT applied for funding for first- and last-mile service through this program in 2018, and is awaiting a response.



Short-Term Strategic Actions



- Continue to develop a scheduled and balanced bus transition plan to address future needs, including consideration for growing the aggregate size of the fleet based on increased demand for service, and potential changes in useful lives of future vehicles
- Continue to monitor grant opportunities and stay abreast of changes in powertrain options

Long-Term Strategic Initiatives



- Execute some portion of the bus transition plan, and adjust priorities as necessary based on available market options, costs, and other factors
- Commit to and develop a plan for achieving an emissions-free fleet by the year 2035

Fleet Powertrain Technology Options

Numerous options exist for bus fleet powertrain options, and technology is consistently evolving. As of 2018, electric buses (some which charge rapidly, others more slowly) and diesel hybrid-electric buses typically have lower life cycle costs for agencies than conventional diesel buses. Diesel hybrid-electric buses typically have the greatest range, followed by conventional diesel, fully biodiesel, and partial biodiesel buses which have the same typical range. While battery electric buses typically have lower ranges, battery technology continues to evolve to reduce costs and increase mileage efficiency. The social cost due to air pollution and climate change is lower for both types of biodiesel buses, diesel hybrid-electric buses, and rapid charging battery electric buses, than it is for conventional diesel.

Conventional Diesel

- Produced from crude oil

Diesel Hybrid-Electric Bus

- Similar to conventional diesel but has a smaller diesel tank and uses electricity via regenerative braking as the secondary fuel pathway

Battery Electric Bus (Rapid-Charging)

- Relies on electric motors and batteries that charge en route as the primary fuel option, with electricity via regenerative braking as the secondary fuel pathway

Battery Electric Bus (Slow-Charging)

- Relies on electric motors and batteries that charge overnight

Liquefied Natural Gas (LNG)

- Requires processing and special onboard tanks

Compressed Natural Gas (CNG)

- Requires processing and special onboard tanks

B20 Biodiesel (20% biodiesel, 80% diesel)

- Part "bio" makeup with sources that can include vegetable oils, animal fats or recycled restaurant grease, blended with conventional diesel

B100 Biodiesel (100% biodiesel)

- Full "bio" makeup with sources that can include vegetable oils, animal fats or recycled restaurant grease

► OPERATIONS + ADMINISTRATION FACILITY EXPANSION / RELOCATION

TCAT has outgrown the capacity of its current facility. Planning and a needs assessment for a new and/ or renovated facility are underway. However, financing for such a large-scale project has not yet been identified. The alternatives are improving the current facility, expanding the current facility (if an adjacent parcel becomes available), establishing a satellite facility, and building a completely new facility at another location.

TCAT's current facility, located at 737 Willow Ave in Ithaca, serves as the operations, maintenance and administration center for both TCAT and Gadabout, our subcontracted paratransit service provider. The 52,500 square foot facility opened in 1992. Our organization has grown significantly in the last 25 years, requiring more storage space, maintenance facilities and office space. In recent years, our operations have outgrown the physical capacity of the facility; the space is not large enough to accommodate our bus fleet, our maintenance needs in the most efficient way, employee parking, and necessary office space required for administrative support. Moreover, these limitations restrict our ability to expand transit service.

A study of these particular shortcomings along with potential options for renovation/expansion or relocation was completed in 2016. It found that numerous functional

requirements were not being met, and that each of TCAT's programmatic areas is spatially constrained by at least 25%. Therefore, we are continuing with planning efforts to determine the best course of action.

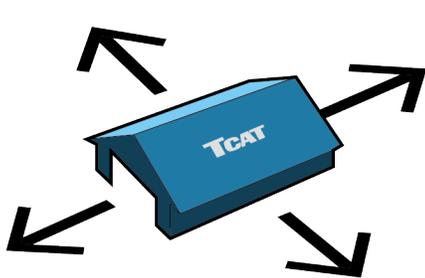
In the short-term, it will likely be necessary to take steps that allow us to increase our fleet size, but this move must not be incompatible with an eventual expansion or relocation. Meanwhile, we are currently making necessary improvements to our existing facility, such as sealing the garage floor and replacing the roof.

Further analysis is necessary to determine the costs and benefits of any major decision. It is also critical that we communicate our options and their pros/cons to our local and regional stakeholders. As they understand TCAT's needs, they can remain engaged in looking for suitable ways to address issues of capacity.

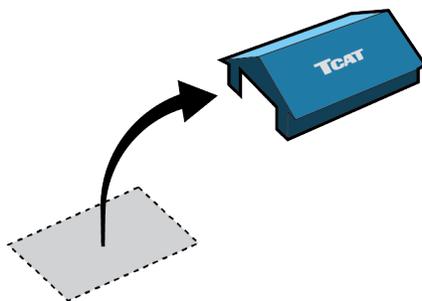
TCAT's current location, adjacent to its high-demand transit areas, is a great asset that should not be overlooked. Due to our location approximately 1 mile from Downtown Ithaca and 1.6 miles from Cornell University, our bus pull-out and pull-in segments (deadheads) are relatively short, keeping the utilization of drivers' time and bus mileage at high efficiency levels. Considering current development patterns and available land in the region, a new TCAT facility would likely have to be farther away from Downtown Ithaca, making operations less efficient. Unfortunately, there are issues with the current location because the facility is constrained by only one accessway (over active rail tracks) and is located in a flood plain.

Establishing a second, satellite facility in the short-term (by 2022) will likely be required as we determine our long-term plans. A satellite facility would provide TCAT critical space for

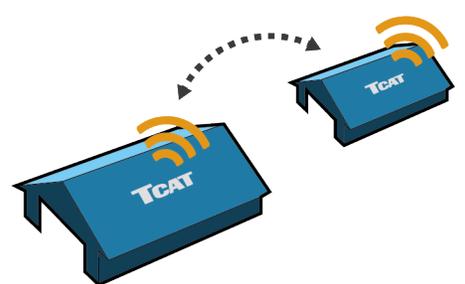
Renovating and expanding our existing facility



Relocating our entire facility to another location, most likely farther away from Downtown Ithaca



Establishing an additional (and potentially interim) satellite facility



expansion by moving some number of buses and personnel to another location. This could free up space at the current site, and potentially allow for an expansion of our current facility through creation of additional maintenance bays or office space.

While the need for additional space is clear, funding sources for this large-scale project have not yet been identified. In addition to Federal and NY State grants, TCAT will continue to explore local funding opportunities such as the Appalachian Regional Commission's grants, and partnerships with transportation players in the county such as NYSDOT, Tompkins County, and private For-Hire Vehicle (FHV) operators.

Whichever alternative will be selected, it is important to recognize the evolving technologies in transportation and the potential infrastructure changes they will require. Building a new facility or expanding the current one will open many opportunities to integrate evolving infrastructure such as electric vehicle charging, intelligent CAD/AVL systems, and smart farebox systems. TCAT must account for future changes, both locally and globally, to ensure its facility is sustainable for the long term.

Short-Term Strategic Actions



- Monitor for funding opportunities at the Federal level (FTA Bus Facilities grants), State level (NY Transit State Dedicated Fund Program) and local opportunities
- Stay abreast of evolving technologies in transportation, including powertrain options in conjunction with fleet evolution and replacement, to select a site that meets future infrastructure needs
- Continue facility planning process to determine appropriate next steps, through a tiger team summary of potential options and short-term agenda developed by summer 2019

Long-Term Strategic Initiatives



- Secure necessary funding and seek strategic partnerships where applicable, to minimize TCAT's aggregate financial commitment and to leverage the evolving mobility landscape
- Execute a move to a new facility or complete an upgrade and/or expansion of existing facility

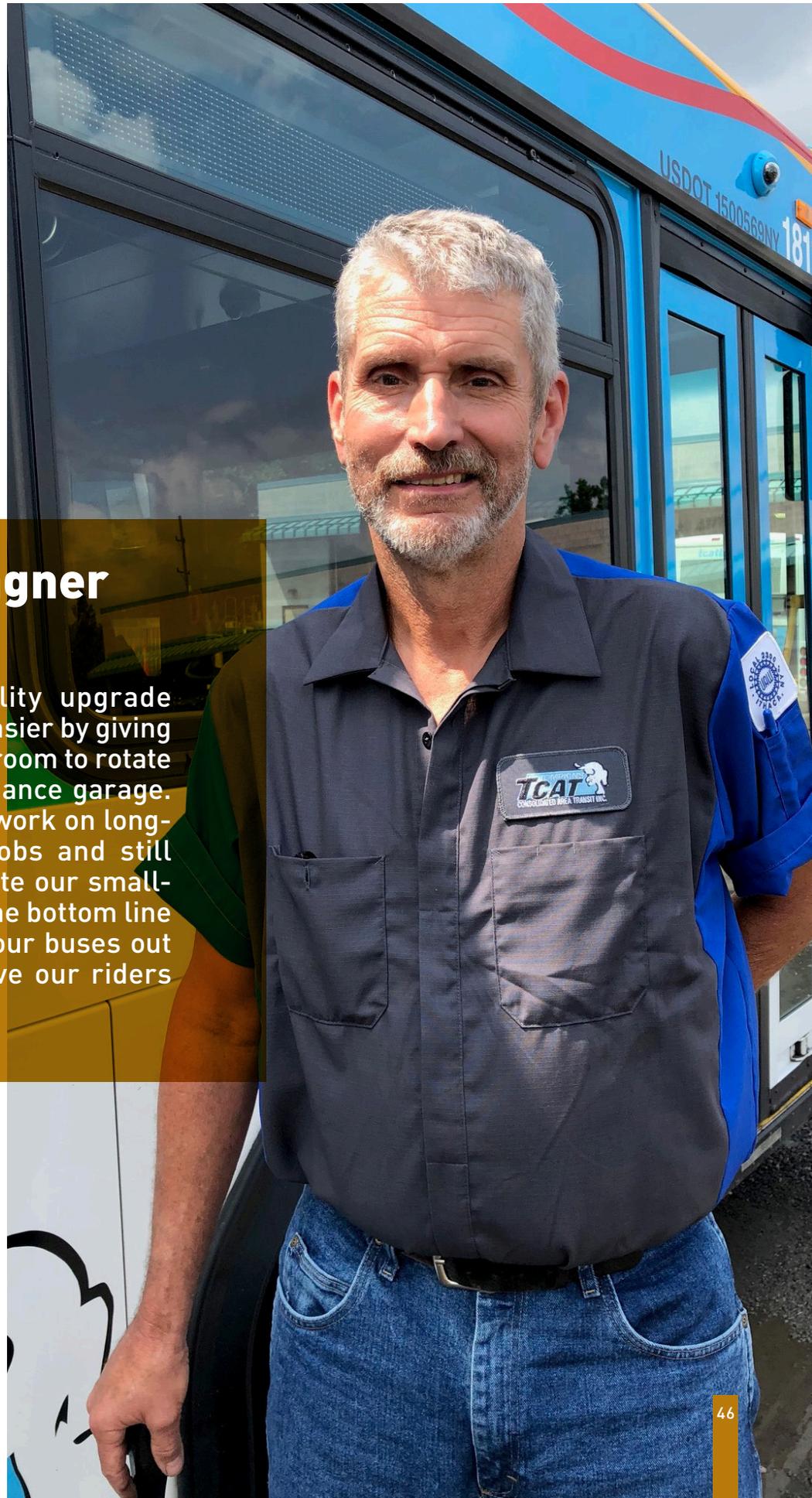




Meet Eric Fagner

A TCAT Mechanic

“A modernized facility upgrade would make my job easier by giving our mechanics more room to rotate buses in the maintenance garage. We would be able to work on long-term maintenance jobs and still have room to complete our small-term assignments. The bottom line is that we could get our buses out on the street to serve our riders much faster.”



► INVESTMENTS IN TECHNOLOGY INNOVATIONS

TCAT can take advantage of recent technological advancements to improve its operational efficiency and to make its service more effective and user-friendly. These include a new farebox system, signs with real-time bus arrival information at more bus stations, and automated on-board announcements. While the benefit of these improvements is clear, prioritization of limited funding is a key obstacle in their implementation.

TCAT continuously conducts due diligence in its technology investments. In 2012, we created a Technology Roadmap, which assessed our needs, shaped a vision, and suggested certain future projects. As technology advances, TCAT will continue to employ technological solutions that can help in increasing operational efficiency, attracting more ridership, and enhancing the customer experience.

While this Plan does not determine specific projects for TCAT to undertake, it recommends four broad areas in which we will focus on moving forward from 2018. Underpinning all of these categories, especially those that involve engagement with our customers, must also be a focus on how these investments can still provide benefits to our disadvantaged and/or less tech-savvy riders.

Customer Experience:

Many technological investments can enhance the rider experience, both before and during their rides. They include modern contactless fare payment, Automatic Vehicle Announcement (AVA) systems, electronic bus arrival signs at stations, and real-time bus information that can be accessed online anytime and anywhere. Making the TCAT system easy to understand, navigate, and access is an essential goal, not only to retain current ridership but also to tap into new markets and appeal to new passengers. Our schedule and real-time bus information are already accessible online and via third-party mobile apps. However, our fare media system is dated and will eventually require replacement for ease of access.

Daily System Operations:

This category consists of bus communication systems, Computer-Aided Dispatch / Automatic Vehicle Location (CAD/AVL) systems, and farebox and scheduling systems. They are all elements that are necessary for streamlining day-to-day operations. We currently utilize such systems but could upgrade them to increase efficiency, saving time and resources. However, the deployment and integration of these new tools entail equipment procurement and employee training, which translates to significant financial commitments and long-term planning.

Decision Support Tools:

This area covers tools for planning, system development, and strategic investments, including computer-based transit asset management platforms, Automatic Passenger Counting (APC) systems, and Geographic Information Systems (GIS). The ability to place key information into databases for analysis makes these tools powerful and beneficial. Employing these tools would help our administration make and implement better strategic decisions, saving capital resources and improving the system's performance.

Social Media:

Lastly, social media is becoming ever more present in our customers' day-to-day lives, and TCAT should be able to communicate in a responsive and effective manner. Using social media communication channels appropriately is essential for 2-way interaction with our customers, (e.g. to provide service alerts), and is especially important given the high percentage ridership drawn from tech-savvy university populations (71% of TCAT's annual ridership is associated with Cornell University). However, we must implement these investments keeping in mind populations that are lacking in smart phone and/or internet access. Any future plan involving social media will strive to maintain transparency and accountability for all types of bus riders.

Short-Term Strategic Actions



- Continue to expand the installation of real-time bus arrival signs at relevant stations, and troubleshoot any existing issues
- Explore opportunities for a farebox system replacement that will allow easy fare payment options through chip card or smartphone technology, with alternative non-tech payment options for riders who require them
- Begin an update to 2012's Technology Roadmap by evaluating status of projects recommended, along with an evaluation of all existing TCAT systems related to customer experience, operations, and decision support tools
- Ensure that our data is in a universally usable format so it can be integrated with Tompkins County Mobility as a Service (MaaS) pilot projects

Long-Term Strategic Initiatives



- Develop a comprehensive 2020 Technology Roadmap for future technology investment and deployment
- Establish metrics to evaluate success of technology investments
- Secure necessary funding to action high-priority projects in the first half of the 2020s, and continuously evaluate grant and partnership opportunities associated with them



► FACILITATING MULTIMODAL CONNECTIONS

As shared-mobility services become more popular and part of regular travel habits, TCAT and its local partners will need to invest in physical infrastructure that facilitates these connections. Making connections easy for our riders will help keep fixed-route, high-frequency bus service a useful option for many in the County.

Investments to meet the need for multimodal trips (like parking at a rural bus stop, or hopping on a bicycle at a destination) are important in growing our ridership and meeting the demands of our customers, who appreciate flexibility in their travel options. In the densest parts of TCAT's service area, these investments could involve one or more central passenger hubs in Downtown Ithaca, and/or the campuses of Cornell University, Ithaca College, and Tompkins Cortland Community College. In other less-dense locations, connections that could be facilitated by park and ride or "kiss and ride" facilities could be prioritized in order to encourage multi-modal connections.

TCAT does not currently have a dedicated budget for hub-like amenities beyond basic shelters and signs. While this area does not rise to the level of urgent capital investment related to our fleet, facility, or

supporting technological systems, it will nonetheless be a focus for TCAT as we move forward. Opportunities for partnerships with large institutions can be explored, to find creative means to fund such investments.

We can also explore how creating hubs or formalized park and ride locations will link up with changes in transportation technology. Vehicle automation, shared mobility, electrification, and changing uses of the curb in urban settings will all contribute to evolving needs, and we will monitor industry trends for opportunities, especially as it relates to turning over our bus fleet to lower-emission models. TCAT will continue to engage in conversations with partners such as Ithaca College on how new transit hubs could be integrated with sustainability initiatives and workforce development opportunities.

Short-Term Strategic Actions



- Work with the City of Ithaca and Tompkins County to explore potential sustainable + multimodal hub locations in conjunction with bus replacement planning and charging needs
- Work with the City of Ithaca to improve infrastructure for passenger and operational needs at the downtown intermodal hub on Green St.
- Evaluate best practices in transit hubs in terms of integration with shared mobility / Mobility as a Service trends
- Formalize and enhance amenities (e.g. bus shelters, bike racks, real-time signage, etc) at certain existing rural park and ride facilities to make them a formal part of the TCAT network
- Work with the City of Ithaca and local institutions to explore park and ride locations outside the Downtown core to alleviate parking and congestion issues within Downtown, and improve transit access for new suburban developments



Long-Term Strategic Initiatives



- Stay abreast of development trends and model multimodal strategies in other communities to identify potential appropriate solutions for local contexts
- Partner with one or more Tompkins County institutional players (education, large employers, etc) to develop a prototype sustainable multimodal hub



4 SECURING STABLE + CONSISTENT FUNDING

Underlying TCAT's ability to deliver the service our riders have come to expect is a stable source of consistent funding. Our larger investments and our day-to-day operational expenses depend on this. Like many transit systems, TCAT relies on more than farebox revenue to fund service. We must be cognizant about what we can realistically commit to funding while maintaining regular service quality. This chapter reviews existing funding sources and suggests new ways for TCAT to explore a diversified range of options.

In 2017, our three funding local underwriters – Tompkins County, the City of Ithaca, and Cornell University – contributed around 18% of our total operating revenues. A much larger share actually came from State and Federal Operating Assistance (35% and 11%, respectively). Cornell also supplements our revenue significantly through fare reimbursement of around 20% of revenue, bringing its overall contribution to around 26% of annual revenue in 2017. Farebox revenue from our passengers, not including Cornell's contribution, was about 11% of total operating funds that we collected. Capital funding, meanwhile, primarily comes from Federal and State sources, and is supplemented with grant opportunities and mortgage recording taxes.

- 
- Diversifying Our Funding Sources

701

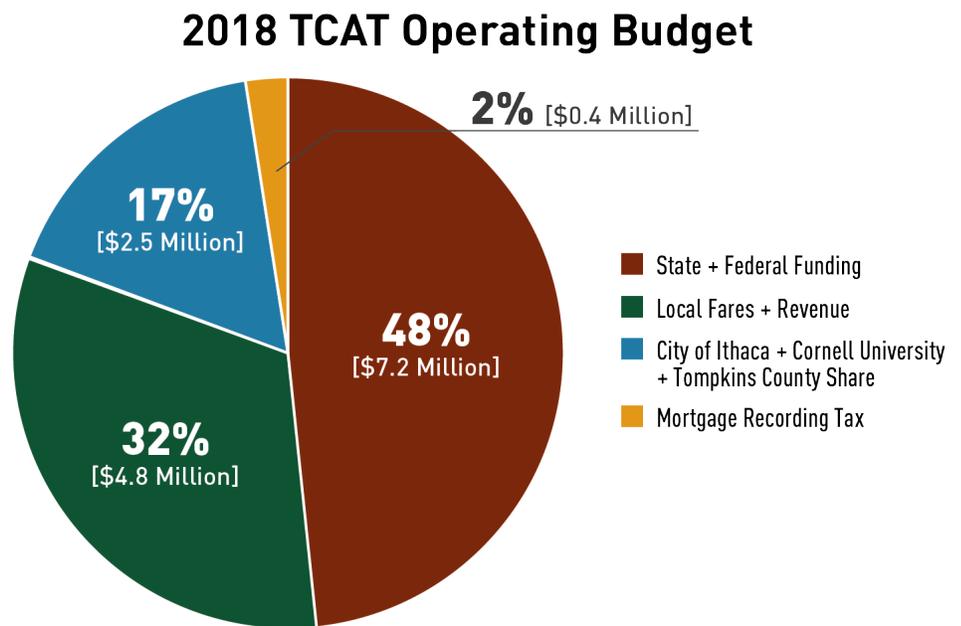
► DIVERSIFYING OUR FUNDING SOURCES

TCAT is looking to increase and diversify its funding sources. Uncertainty in Federal programming and funding for public transportation, along with any eventual periods of economic stagnation or decline, may present funding challenges to TCAT. Exploring a wide variety of funding channels will be especially important as we engage in major capital investment envisioned in this Plan.

Diversifying risk is important for any business, and an organization like TCAT is no exception. We are already focusing on grant opportunities that might assist us in moving forward with a sustainable fleet and providing new services, but the more options we give ourselves, the better. Any decision to pay for a new asset, however, is a tradeoff. We can't necessarily have everything at once, and the smart capturing and use of funding also relates on what we elect not to spend our scarce dollars on. Our Board of Directors and management team is well aware of this, and is always looking to make the best use of the money that is available.

TCAT's funding sources are already fairly diverse: we collect operating revenue and fund our organization for capital expenditures from a mix of sources including Tompkins County, the City of Ithaca, Cornell University, and State and Federal Operating Assistance and grant opportunities. In a world where funding is uncertain, especially from the current Federal Transit Administration (FTA), there are other sources to explore.

We will examine a wider variety of funding sources, which may include other local entities (educational institutions, large businesses, organizations), new types of grant funding sources, and other creative funding schemes:



New Local Underwriters:

Through the Transportation Agreement, our relationships with Tompkins County, the City of Ithaca, and Cornell University are very strong, and we depend heavily on contractual payments from these entities for critical funding, year in and year out. We also enjoy close relationships with other local municipalities such as the Town of Ithaca, Cayuga Heights, the Town and Village of Lansing, and the Town and Village of Dryden. As our service grows and we look to tap into new markets, it is only natural that we should consider how other entities might provide similar payments for contracted services, even if the magnitude is lower. In engaging in future service planning, we believe

there is untapped ridership potential in educational institutions beyond Cornell University, such as Ithaca College and Tompkins Cortland Community College. We will look to engage in conversations with these institutions, along with other appropriate large employers, to see how all parties can benefit. Meanwhile, good communication with other agencies at the local and State levels is essential for funding development, new alliances and implementation of new service, including new service models that link to Mobility as a Service (MaaS).

New Sources of Grant Funding:

Traditional grant opportunities for transit providers, especially at the Federal level, are uncertain to continue

into the future. We have identified other granting agencies, such as the Appalachian Regional Commission, which can help us diversify the agencies that we monitor for grants. As we look to adapt to the changing mobility landscape (described further in Chapter 6), we will track related funding sources.

Through this Strategic Plan, TCAT aims to make clear its desire to be a proactive participant and player in the evolution of transportation in Tompkins County. In order to do so, we will actively engage our underwriters, government partners, local stakeholders, and industry groups in order to stay on top of the trends and be well prepared to pursue innovative programming and associated funding.

Short-Term Strategic Actions



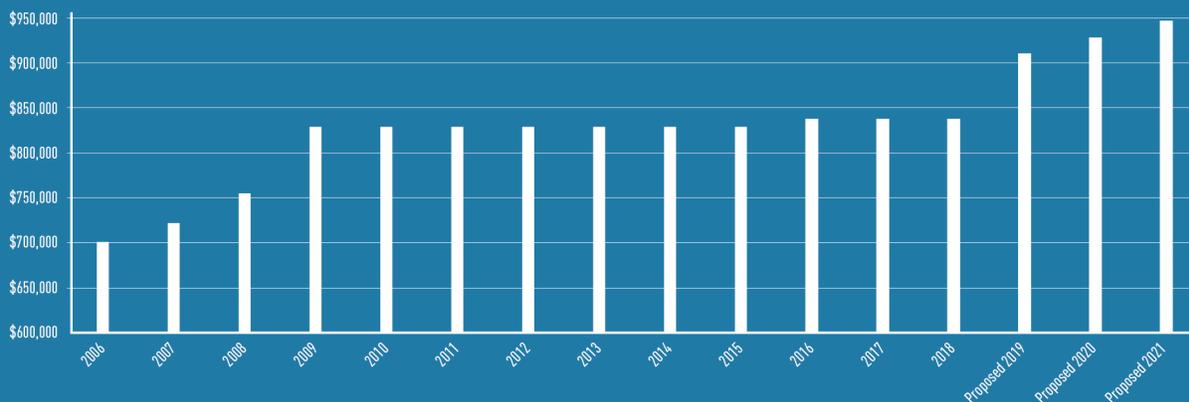
- Identify potential underwriters in the form of educational institutions and large employers to explore funding partnerships
- Develop template agreement(s) to facilitate bringing on new underwriter(s)
- Monitor and explore new methods for grant funding
- Inventory our current contracts and relationships with external parties to identify missing connections that could result in future funding and/or partnership opportunities

Long-Term Strategic Initiatives



- Engage in sensible and mutually beneficial partnerships with key institutions, potentially as part of service expansion and/or sustainability investment initiatives
- Continue to monitor, apply for, and secure a diverse range of grant funding
- Remain engaged with external partners and granting agencies to ensure readiness to react to funding and programming opportunities

Local Underwriters Funding History





1407

RU SHUTTLE

Chapel Hill
transit

KNEELING

RAMP

Fare-Free Transit in Chapel Hill, NC

Chapel Hill Transit (CHT), the second largest transit system in North Carolina, serves the communities of Chapel Hill, Carrboro, and the University of North Carolina at Chapel Hill (UNC), and provides over seven million rides per year. Currently, CHT offers fixed-route bus services on 31 weekday and weekend routes, as well as an “EZ Rider” demand response (ADA) service. In 2001, CHT initiated fare-free services after recognizing that its farebox recovery rate (approximately 10%) was relatively low and did not contribute significantly to the agency’s revenue. Upon gaining commitments for increased funding from Chapel Hill, Carrboro, and UNC, CHT was able to eliminate the fare box entirely. Since the implementation of fare-free services, CHT has seen a significant ridership increase from approximately 3 million passengers a year to almost 7 million, reflecting the importance for many riders in being able to secure a free ride.

Going fare-free required backing from CHT’s three primary funders, who recognized the benefits that mass transit could provide in terms of greater access, lower emissions, and better efficiency for the road network in the context of a growing region. Similar to TCAT, a portion of annual operating and capital costs associated with CHT are shared between the two towns and the university on a contractual basis. However, CHT’s three funders’ support combines to represent the majority of CHT’s fiscal year budget. Only 25% of CHT’s annual budget is dependent upon Federal and State Operating Assistance.



5 EXCELLING IN COMMUNICATIONS + OUTREACH

TCAT is well-known among many in Tompkins County, but we can always do a better job in engaging with all communities to reach new riders and grow our customer base. With so much of our current ridership associated with Cornell University, we recognize that there are many other avenues that we can pursue to diversify our ridership and serve a greater cross-section of the County. We must also consider how we are seen by our customers, in terms of our ability to be a responsive and trusted transit organization. This means adopting outreach methods that reach everyone, and creating mechanisms for feedback that meet the demands of our growing and diverse population.

This chapter examines ways that TCAT can improve its communications and outreach strategies, including the way we brand and market our services to the public. As the transportation landscape evolves, we must do the same to serve Tompkins County comprehensively and equitably.



- 
- A young child with light brown hair, wearing a bright yellow t-shirt and red shoes, is sitting in the driver's seat of a vehicle. The child is holding the black steering wheel with both hands and looking out the window with a focused expression. The interior of the vehicle is visible, including the dashboard, a side mirror, and a control panel. Outside the window, there are green trees and a white vehicle parked nearby. The scene is brightly lit, suggesting it is daytime.
- Marketing + Branding
 - Attracting New Riders
 - Customer Service

▶ MARKETING + BRANDING

TCAT has devoted resources, time and labor to improve customer perceptions and its branding among the communities of Ithaca and Tompkins County. We have received awards from the American Public Transit Association (APTA) recognizing our excellence compared to peer agencies. As our organization evolves, especially in light of a new sustainable fleet and the changing mobility landscape, the opportunity comes up to re-evaluate our marketing strategies and public-facing branding.

Coordinated and effective marketing campaigns can increase awareness, create interest, generate demand, and result in brand loyalty. TCAT's marketing and communications strategies have included consistent branding on various elements of our transit system, including bus stop signage, bus route system maps, and our buses themselves. We remain supportive of a rollout of a countywide wayfinding system. We also have experience in organizing community outreach events and we maintain an active internet presence with a centralized webpage and social media accounts such as Facebook and Twitter.

The release of this Strategic Plan presents an opportunity for our organization to leverage its marketing and communication strategies to generate excitement and interest for the future of TCAT. Transparent and meaningful dialogue with the communities of Ithaca and Tompkins County can build trust among existing and potential riders, while a consistent branding scheme can create positive exposure and strengthen brand

identification and loyalty. In addition, TCAT can take advantage of its webpage and social media accounts to continue disseminating important service updates and information, especially as it relates to the recommendations outlined in the Strategic Plan. TCAT can also take a proactive role in community outreach where community members are invited to learn about the benefits and advantages of riding TCAT, further expanding our customer base and brand presence.

The Plan also provides an opportunity to "take stock" and this includes all elements of our external brand. Although we already see generally positive customer satisfaction, we can nonetheless evaluate the need to refresh our brand for the 2020s, as it has not been updated in many years. We will link any branding update with other elements of TCAT's customer engagement strategy, to make the most of our future interactions with the riding public.

Short-Term Strategic Actions

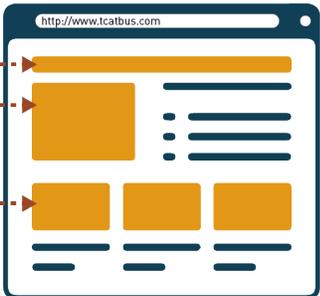
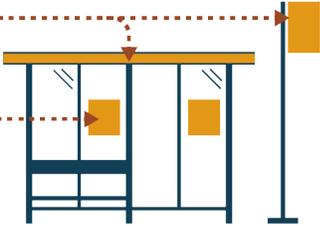


- Continue to maintain consistent branding in our external communication and marketing materials
- Develop timelines and action steps to initiate branding refresh, potentially in conjunction with our next Transit Development Plan (TDP), and conduct initial public outreach to inform key choices
- Support any future rollout of a countywide wayfinding system, with TCAT bus stops included

Long-Term Strategic Initiatives



- Complete a branding refresh including strategies to attract new ridership segments
- Measure impacts of marketing efforts, public outreach and engagement, and branding refresh



► ATTRACTING NEW RIDERS

TCAT has seen a slowdown in ridership growth over the last few years. As Tompkins County's demographics and development patterns change, we must focus on keeping up and to effectively serve residents, employees, students and visitors. Keeping the customer base strong is important so that the organization can avoid a negative cycle of ridership declines and service cuts in response to them, which makes transit a less attractive option.

TCAT is currently significantly dependent on Cornell students, faculty, and staff: over 70% of our ridership is associated with the university. While this is not a problem on its own, we believe that a diverse ridership base throughout the County will allow us to continue to justify service expansion and the promotion of sustainable and efficient transportation methods. As a result, we must focus on engaging with markets that may be currently underserved or underinformed about TCAT service. The "gamification" of transit can be an effective strategy to improve rider engagement and education while also potentially offering incentives or rewards to attract new riders.

We must evaluate our existing programs to capture riders and how to increase the use of the system by those who currently do not. It is especially important that we focus particularly on underserved markets such as senior citizens and other carless households, commuters of large employers, non-English speakers, healthcare institutions and their users, transit-dependent and lower-income populations, and the transportation needs of other educational institutions' students, faculty and staff (Ithaca College, Tompkins Cortland Community College, and others).

These types of populations would generally be interested in transit service for a host of reasons: some of them are reliant on transit because they have limited access to personal vehicles, while others could stand to benefit because their destinations are dense, crowded places. Our service works best when we can bring a large number of people to common locations like universities or hospitals, because it allows us to achieve operational efficiencies necessary for high-capacity transit service.

Finally, we can grow our ridership through more active partnerships with key institutions. Transportation Demand Management (TDM) involves providing the traveling public incentives that encourage the use of transit, often to replace single occupancy vehicle (SOV) trips. We have already begun to partner with the Downtown Ithaca Alliance (DIA) on a TDM program, and believe we have the opportunity to collaborate with other large county employers and institutions outside of Downtown Ithaca as well.





Short-Term Strategic Actions



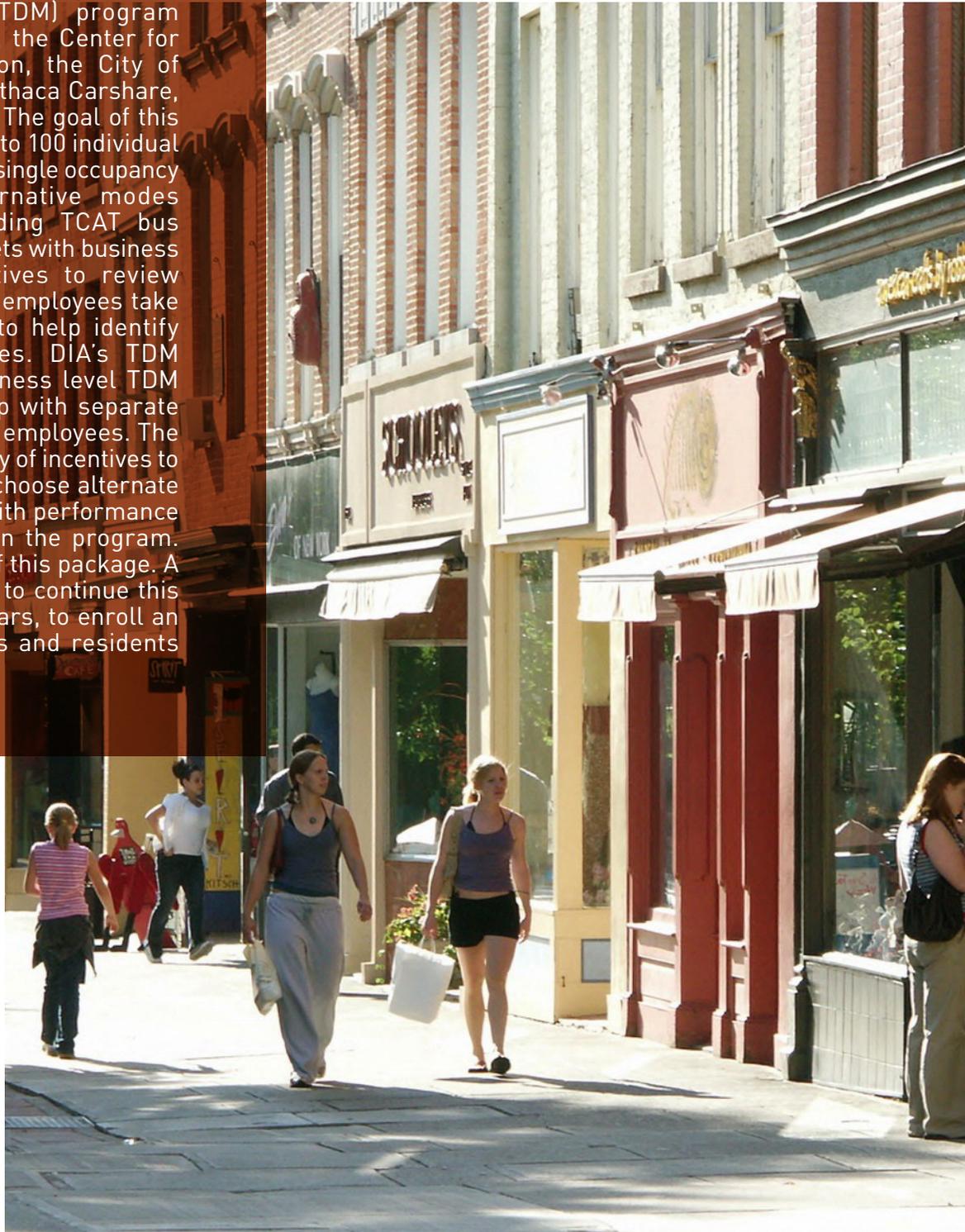
- Undertake a review of existing efforts to capture new riders and identify those that could be expanded, and others that can be reduced or eliminated
- Explore different outreach and communication strategies through new and emerging technological mediums such as social media platforms
- Collaborate with local community groups and organizers to expand TCAT's customer base and promote the benefits of riding transit, particularly those with access to senior citizens, lower-income populations, and other carless households
- Set up and hold regular meetings at different locations Countywide to obtain general input and feedback from the public

Long-Term Strategic Initiatives

- Develop TDM partnerships with key institutions, especially those that can help TCAT reach riders outside the sphere of Cornell University and Downtown Ithaca
- Measure the impacts of these strategies to illustrate an increase in the percentage of TCAT riders not associated with Cornell University

Downtown Ithaca's TDM Pilot Program

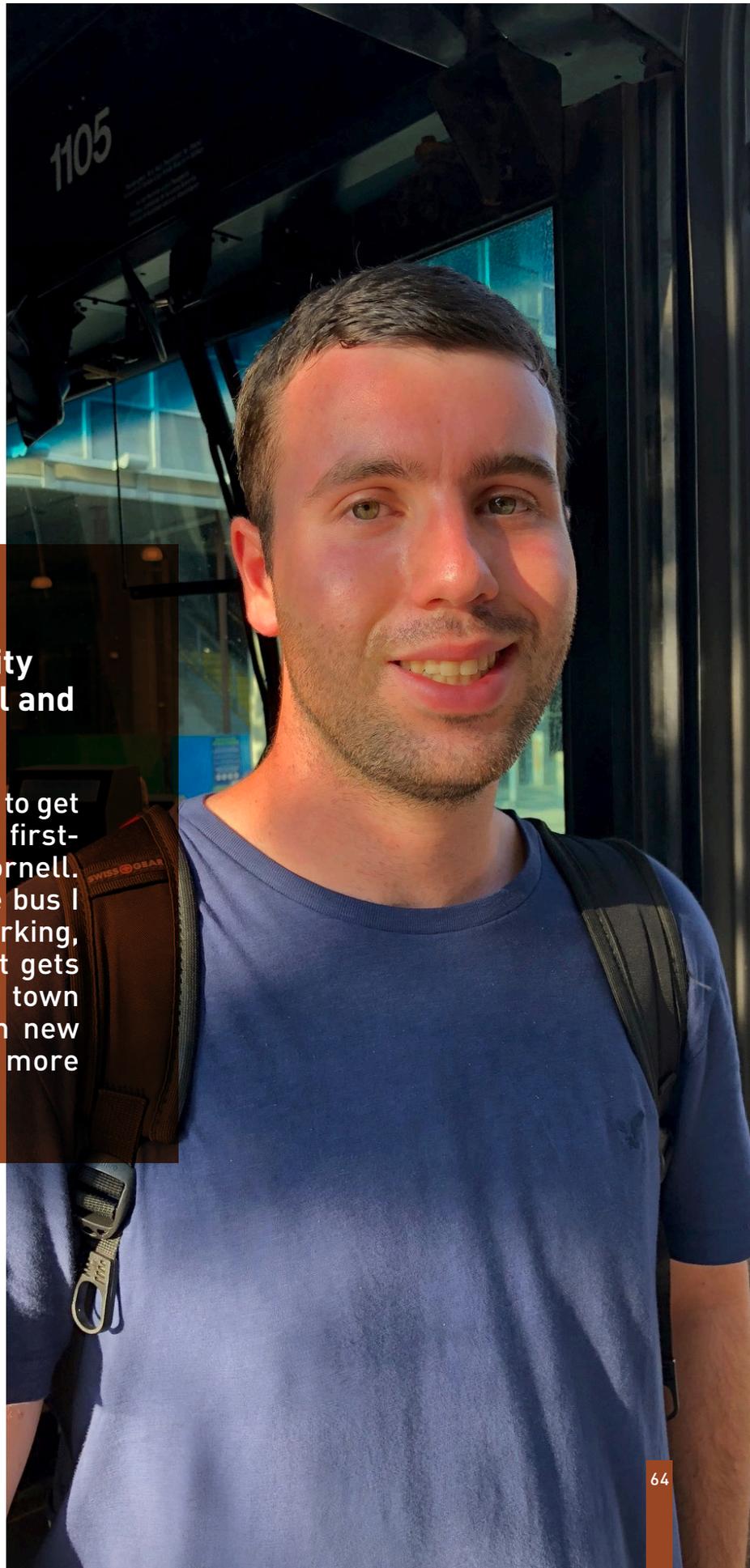
The Downtown Ithaca Alliance (DIA) is currently operating a pilot Transportation Demand Management (TDM) program in cooperation with TCAT, the Center for Community Transportation, the City of Ithaca, Tompkins County, Ithaca Carshare, Lime, and other partners. The goal of this pilot project is to enroll up to 100 individual commuters to switch from single occupancy vehicles (SOVs) to alternative modes of transportation, including TCAT bus service. Program staff meets with business owners and representatives to review potential incentives, while employees take a transportation survey to help identify options and opportunities. DIA's TDM staff then prepare a business level TDM plan, which is followed up with separate meetings with prospective employees. The DIA has assembled an array of incentives to encourage commuters to choose alternate modes to the SOV, along with performance incentives to keep them in the program. TCAT incentives are part of this package. A grant has been submitted to continue this pilot for an additional 3 years, to enroll an additional 200 commuters and residents annually.



Meet Zach Falk

A senior Cornell University student studying regional and city planning

“I initially started using TCAT to get around when I received my first-year free pass benefit at Cornell. Now that I regularly ride the bus I don’t have to worry about parking, my pass is reloadable and it gets me to all different parts of town and campus. And now, with new technology, TCAT is much more user friendly.”



▶ CUSTOMER SERVICE

TCAT’s operators and staff, along with its website, call center and Ride Guide, are all significant parts of the service that greatly impact the bus riding experience. Rider engagement with our operators is generally already very positive. We must look for methods to translate this success onboard the bus to other elements of our organization’s engagement and communication with the public.

The way a rider interacts with aspects of TCAT’s service, including our operators and staff as well as our website, call center, and Ride Guide, greatly impacts the quality of the rider’s experience. Our riders also benefit from offerings such as Way2Go and the Backup Ride Home program.

We can build on the goodwill we have onboard the bus to some of our other customer-facing services. These include tracking customer service requests in a more formalized manner, providing customer service over the phone during the hours that matter to our riders, and communicating key information on how to ride the bus in a simple and straightforward fashion.

Short-Term Strategic Actions



- Review and streamline customer-facing communication methods so they are convenient for the wide variety of riders and clearly communicated.
- Produce a simplified and streamlined version of the TCAT “Ride Guide” to attract all types of riders, including those with limited English proficiency
- Maintain a customer call-to number with designated staff during all key hours of TCAT operation, including during weekday evenings and on weekends
- Market a universal customer service email address to clarify when a response can be expected, including an autoreply that refers customers to a website with comprehensive schedule and service information
- Review customer service activities to address issues for riders with disabilities, including making TCATs website ADA compliant

Long-Term Strategic Initiatives



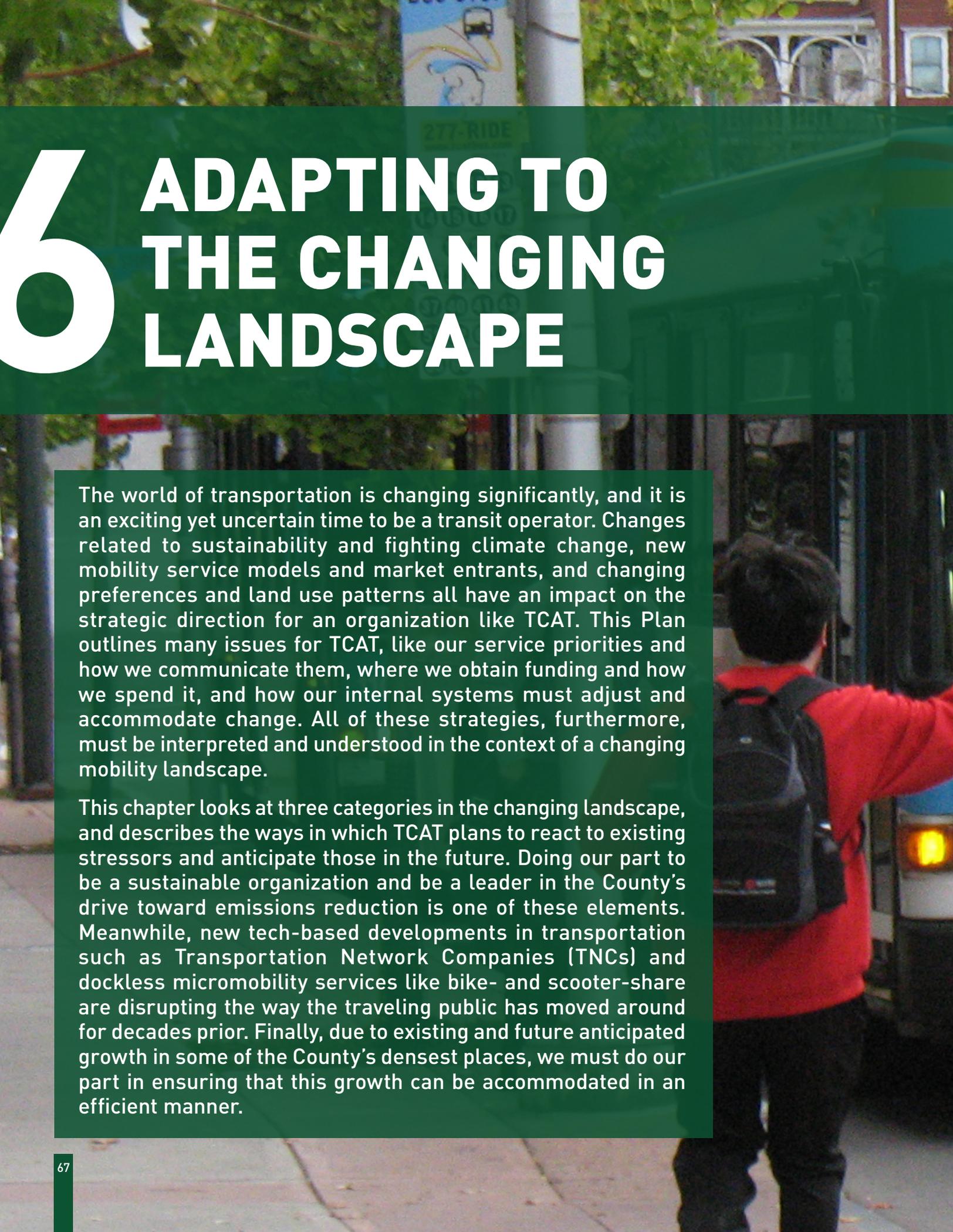
- Create and manage a database that records customer service requests and has the capability to categorize and monitor trends for customer issues
- Craft and follow formalized procedures to process service requests such as bus stops, route deviations, and higher frequencies, including standardizing communication for replies to such inquiries
- Leverage technology to expand customer services such as an automated text/chat helpline or upgraded mobile app presence



Meet Desiree Johnson

A TCAT Bus Operator

“I have been a part of this community all of my life, which is almost 30 years. There are so many people I have known throughout the years who are now my passengers; it is always wonderful to receive hugs and catch up with old friends. For all of my riders, my goal throughout my work day is to create a tranquil space on my bus so they can enjoy their travels without stress or worry. I want them to feel safe while I am driving and to know that their well-being is as just important to me as if they were my loved ones.”

A person with a backpack is waiting for a bus. The background shows a city street with trees and buildings. The person is wearing a red jacket and a black backpack. The bus is partially visible on the right side of the frame.

6 ADAPTING TO THE CHANGING LANDSCAPE

The world of transportation is changing significantly, and it is an exciting yet uncertain time to be a transit operator. Changes related to sustainability and fighting climate change, new mobility service models and market entrants, and changing preferences and land use patterns all have an impact on the strategic direction for an organization like TCAT. This Plan outlines many issues for TCAT, like our service priorities and how we communicate them, where we obtain funding and how we spend it, and how our internal systems must adjust and accommodate change. All of these strategies, furthermore, must be interpreted and understood in the context of a changing mobility landscape.

This chapter looks at three categories in the changing landscape, and describes the ways in which TCAT plans to react to existing stressors and anticipate those in the future. Doing our part to be a sustainable organization and be a leader in the County's drive toward emissions reduction is one of these elements. Meanwhile, new tech-based developments in transportation such as Transportation Network Companies (TNCs) and dockless micromobility services like bike- and scooter-share are disrupting the way the traveling public has moved around for decades prior. Finally, due to existing and future anticipated growth in some of the County's densest places, we must do our part in ensuring that this growth can be accommodated in an efficient manner.



- Sustainability + Leading by Example
- The Evolving Transportation Market
- Density, Congestion, and Transit Prioritization

► SUSTAINABILITY + LEADING BY EXAMPLE

Tompkins County has adopted a formal pledge to reduce greenhouse gas emissions by 80% by 2050, with respect to 2008 levels. The transportation sector will play a crucial role given its large contributions to energy use and greenhouse gas emissions. Therefore, at TCAT we have an opportunity to be a public-facing leader in achieving this ambitious goal.

Low-emissions buses, new green building facilities, and other technological advancements can make TCAT's operations more environmentally-friendly. Moreover, investments in electric buses, for example, would reduce fuel consumption and operational costs. These types of sustainability initiatives would be consistent with public sentiment: in visioning sessions related to development of this Plan, sustainability measures and a cleaner bus fleet were among the most universally favored strategic directions for TCAT by both the general public and key stakeholders.

In addition to working to lower our contributions to emissions, TCAT can also strive to become a more sustainable organization. We must examine and make changes to internal procedures, our facilities, and our maintenance equipment to minimize resource consumption and waste. It will be important to show sustainable progress on these internal elements of our operations to set an example and do our part.

All the strategies in this Plan, which at their heart aim to make TCAT a more attractive option for the traveling public, naturally relate to sustainability. The more that we can offer useful service through great customer service and smart operations, the more the public will find it easier to choose public transit instead of single occupancy vehicles. As we work in the coming years to upgrade our fleet and grow our ridership, sustainability and environmental stewardship will be a core principle of our operations and mission.

A primary challenge to expanding TCAT's sustainability, however, is cost. Transitioning to an electric fleet would result in expensive up-front costs even though there are possible future savings due to low-cost electricity and reduced vehicle wear and tear. Adjusting other internal operations and processes in TCAT facilities will require time for education and training.

Short-Term Strategic Actions



- Explore procurement and funding options to begin transitioning our fleet from diesel to cleaner technology (see Chapter 3 for specific information)
- Solicit recommendations from employees, riders, and key stakeholders as to how TCAT can become more sustainable, to inform long-term sustainability planning
- Educate employees to consider their energy and resource use on a daily basis, emphasizing actions such as conserving light use and reporting observed water leaks

Long-Term Strategic Initiatives



- Develop an organization-wide sustainability action plan, to cover all elements of operations including the significant investments that lie ahead in terms of new fleet procurement and facility upgrades
- Ensure that all messaging, branding, public outreach, and stakeholder engagement is rooted in sustainability, making the concept a core principle of the TCAT organization
- Incorporate green building elements into any facility renovation and/or relocation, such as net-zero/passive HVAC systems, low-flow toilets, and solar panels

Below are some SPECIFIC DRIVER FEEDBACK + IMMEDIATE SERVICE QUESTIONS

TCAT's Operations Department and Transit Service Supervisors deal with immediate, day-to-day complaints, concerns and feedback.

- specific drivers
- incidents on buses
- detours and service adjustments
- missed trips or late service

Email: tcat@tcatmail.com, Phone: 607-

SCHEDULE + TRANSIT S

We take your suggestions about our service to be made immediately but we do keep a list to implement them when possible.

Email: tcat@tcatmail.com, Phone: 607-277-

- Ask for Matt Yarr

TCAT RIDERS' ADVISORY + ACC

For those of you who would like to provide regular feedback about our projects, the Riders' Advisory and Committee is a great place to get involved!

Email: tcat@tcatmail.com, Phone:

ITTEE

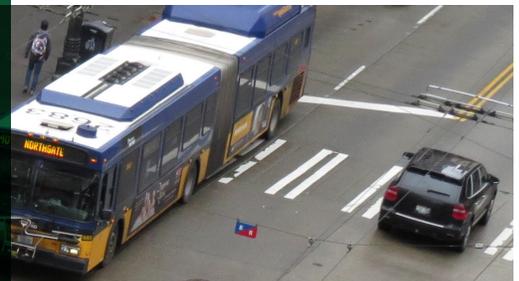
Meet Kim Falstick A Long-Time TCAT Rider

“It is important for TCAT to lead by example on sustainability issues, because riding the bus helps save our planet. When you have one less car with just one person in it, well, it became clear to me that I made a good decision for me, for the environment and to reduce traffic in this town.”

King County Metro Transit's Sustainability Plan

King County Metro Transit, which includes the city of Seattle, prepared an ambitious Sustainability Plan in April 2014. The Plan sets out five goals: reduce the consumption of energy, significantly reduce greenhouse gas emissions, reduce water consumption, reduce and reuse material waste, and expand transit ridership and reduce vehicle miles traveled. Examples of specific actions that King Country Metro Transit plans to take to achieve these goals are:

- Implement energy-efficient lighting and equipment and activate anti-idling policies to reduce energy use
- Expand the use of electric vehicles, trolleys and rideshare program partnerships with community groups, employers, and businesses to decrease greenhouse gas emissions
- Set up mechanisms for greater water reclamation and rainwater harvesting and switch to low-flow fixtures in Metro facilities to manage water use
- Activate a paper reduction campaign and update purchasing and project bid specifications and practices to reduce waste
- Seek out potential partnerships with transit-oriented developments and employers to expand ridership





Green Mountain Transit's Electric Bus Program

Green Mountain Transit, which serves Chittenden County in Vermont, including Burlington, recently launched a partnership with the Burlington Electric Department and Vermont Energy Investment Corp to expand the number of electric buses operating in the fleet. Burlington is the first city in the country to commit to sourcing energy only from renewables. And, like other transportation systems, Green Mountain Transit consumes a significant amount of fossil fuels resulting in greenhouse gas emissions. Some of the features which contribute to the success of the use of electric vehicles are:

- The vehicles charge overnight and thus can run continuously during the day
- The Burlington Electric Department has been accessing State funding to achieve renewable energy goals
- Although the electric buses are more expensive than fossil fuel buses at time of purchase, electric bus procurement eventually results in cost savings due to lower electricity and maintenance costs

► THE EVOLVING TRANSPORTATION MARKET

The demand for services provided by Transportation Network Companies (TNC's) – including e-ridehailing (e.g. Uber and Lyft), shared rides, and microtransit – has rapidly increased in recent years in areas across the US. In 2017, the New York State legislature permitted the operation of such services statewide. The entrance of TNC's and, more recently, dockless bike-share services into the County's transportation landscape can provide great opportunities, but also substantial challenges for TCAT and its operations.

What does this changing mobility landscape mean for traditional transit service like TCAT? As demand for these new modes rapidly increases, passenger mode choices are shifting; most transit agencies across the US report continuing declines in ridership in the last 3 to 4 years, which is generally associated with the boom in TNC and other new mobility services.

In this environment, traditional transit service faces harsher competition with these new modes that offer more convenient (and still relatively affordable) services. Moreover, this increasing competition and any associated transit farebox revenue declines will limit the ability of transit agencies to further develop their service, and may even force some agencies to make considerable service cuts. Transit operators worldwide are reacting differently: some partner with the new services (while continuing to remain a fixed-route transit provider), others have considered a full conversion to a demand-responsive fleet (e.g. microtransit), while still others have

tried a balanced approach where some trips remain as "traditional" transit and others become demand-responsive.

TCAT must remain in-step with this evolution, and use it to introduce opportunities to evolve its own transit service. This means more effective and efficient routing through planning and implementation of high-frequency, high-capacity routes to remain competitive in this new marketplace. We intend to continue to be a reliable operator of fixed-route transit in Tompkins County.

At the same time, we must remain engaged in these changes, and not ignore them. Through investigation of new technology adaptation for our own services and potential public-private partnerships, we will explore new "first- and last-mile" solutions in locations and times when fixed route service is not viable or practical. Throughout 2018, we have been planning and applying for grant funding to initiate a pilot first- and last-mile service in Dryden. We may also consider the costs and benefits

of operating an on-demand late-night service for our student riders.

Finally, it is also important for TCAT to account for Mobility as a Service (MaaS), a concept related to bringing travelers' choices for transportation into one platform to provide the most options. This includes providing a single source for mobility information, individual mobility programs, trip reservations, and integrated travel through mobility hubs across the county. With Tompkins County receiving a grant to study and pilot such concepts, TCAT will remain engaged as a critical player in the MaaS arena.

Enhancing the connections between TCAT and other modes of transportation is essential today and will become increasingly important in the future, given trends in transportation technology and mobility choices. In the next few years, TCAT will play a key role in enhancing multimodal connections across our service area through discussion and collaboration with our regional partners in both the public and private sectors.



Short-Term Strategic Actions



- Develop a New Mobility Adaptation Plan to detail strategic actions TCAT will take in response to the evolving marketplace, and revisit annually
- Explore first /last mile partnership opportunities to attract riders to core TCAT service and increase the utility of public transit in lower-density areas
- Explore further partnerships with public and private partners (including volunteer drivers) to provide alternatives to low-ridership routes or provide additional demand-responsive, semi-fixed route service at off peak times
- Consider how service priorities (defined in Chapter 2) and the identification of high-frequency service offerings can support TCAT's reaction to the evolving mobility marketplace
- Work with Gadabout to leverage new technologies to allow additional business models (via e-hailing and ridesharing) for Federally-mandated paratransit service, including through first- and last-mile pilots
- Remain engaged with the County's exploration of Mobility as a Service (MaaS) pilot projects

Long-Term Strategic Initiatives



- Implement, evaluate, and adjust actions taken in a New Mobility Adaptation Plan
- Consider the partial conversion of TCAT's lowest ridership fixed routes to demand responsive or flexible routes that utilize new technology, potentially in coordination with Gadabout
- Work with Gadabout to pilot and evaluate additional business models for paratransit service





How is Transportation Changing?

Transportation systems across the US and the developed world have undergone significant changes in recent years. New technologies such as location-based tracking (GPS), reliable cellular networks, and secured online payment systems allow new players to enter the transportation marketplace, offering new mobility services that were not available even 5 to 10 years ago.

TNC's such as Uber and Lyft provide on-demand mobility services, ranging from single-passenger e-hailing, shared (or "pooled") rides, and microtransit routes that operate along semi-fixed routes. In major cities, TNC's more than doubled the overall size of the for-hire ride services sector between 2012 and 2018, establishing on-demand transit as a legitimate option for many who choose not to drive their personal vehicle. TNC market proliferation is not as strong yet in rural and suburban areas, where traditional taxi ridership is still slightly higher, but it is poised to disrupt this market segment too.

Meanwhile, micromobility services, both dock-based and smart dockless systems (including bike / e-bike and scooter-share), are rapidly growing and diversifying, reaching both major, densely-populated cities and smaller, less dense towns. Compared with traditional transit service, bike- and scooter-share use can be an affordable, on-demand alternative for short-distance trips. However, these services are not a feasible means of transportation for everyone, and become more challenging to use based on weather conditions.





Paratransit Service Requirements

TCAT currently provides Federally mandated paratransit service for persons with disabilities through a contract with Gadabout. The changes to the transportation landscape resulting from on-demand ride hailing present an opportunity to potentially reduce the high costs per ride associated with this service. By utilizing e-hailing and ridesharing technologies, and even contracting the service out to TNC's similar to MBTA's pilot in the Boston area, TCAT could significantly reduce the cost of paratransit, while increasing service quality and passenger convenience. Paratransit costs are typically far higher on a per-passenger basis than traditional high-capacity, fixed-route bus service.

Notwithstanding, Gadabout does provide demand-responsive paratransit at lower costs than the national average. TCAT pays around \$22 to Gadabout per trip, compared with an average cost nationwide of \$33 in 2012. Furthermore, TCAT has engaged in conversations with Gadabout to pilot new methods of "feeder" service in Dryden as a supplement to existing fixed route service on Route 43, and will continue to explore these service models. As TCAT brings technology to the fore throughout its operations, there will be many new opportunities to enhance services provided to the mobility impaired community.



Preparing for Autonomous Vehicles

The forthcoming proliferation of autonomous vehicles (AVs) is a critical part of the evolving mobility landscape. A future of AVs might provide significant benefits to personal mobility and lower cost of operating on-demand and even fixed-route transit service. It also could result in crippling traffic congestion and a more sprawling development landscape. The truth is, at this stage, there is great uncertainty as to how this transportation revolution will actually play out.

TCAT's leadership and key stakeholders, in preparing this Strategic Plan, believe that it would be too early to make specific commitments as to how TCAT will pursue – or avoid – autonomous bus technology in the future. The potential impacts on transit systems like TCAT from AVs are still uncertain, so the organization will take a “wait and see” approach and no explicit strategies or actions are included. However, in preparing a New Mobility Adaptation Plan in the coming years, TCAT will engage in further research on AVs and evaluate the direction of the industry at the appropriate time to determine specific strategic actions.



► DENSITY, CONGESTION, AND TRANSIT PRIORITIZATION

The changing landscape in transportation is also reflected by changing preferences for living, working, and recreation. A move toward more mixed-use development and demand for options in dense, walkable locations increases strain on the existing road network and can be a disadvantage for traditional transit services if no interventions are made.

Ithaca and Tompkins County in general are seeing the changes in preferences that are occurring nationwide, via urbanization and the desire for mixed-use and walkable communities. These changes in the built environment will require a sustained adaptation of our roadways, sidewalks and other public spaces to accommodate increased density along with new modes of mobility. As the transit provider for Tompkins County, TCAT's operations are impacted by changing land uses and settlement patterns. Traffic congestion harms our on-time performance, and can create geometric challenges for our buses making turns in a dense urban environment.

Communities typically look at a toolbox of solutions to prioritize transit when development puts strain on local road networks. These include bus-dedicated

and/or high-occupancy vehicle (HOV) lanes, transit signal prioritization, multi-modal transportation hubs, dynamic curbside management, and more. Even as the mobility landscape changes and some abandon traditional transit for TNC trips, there is still a key role for high-capacity, fixed-route bus lines. A bus can move more people more efficiently than most of these new modes, and TCAT recognizes the importance of this in the context of a growing Tompkins County.

TCAT can collaborate with local municipalities, Tompkins County, the business community, and major property owners to play a part in this evolution. We must ensure that any municipal or county-level planning for roadway capacity includes a look at the potential benefits of prioritization of TCAT's transit service.

Short-Term Strategic Actions



- Review existing routing and identify corridors that could be candidates for transit-only and/or transit-priority treatments such as transit signal priority, queue jumps, and bus-only lanes
- Coordinate with any curbside management or Downtown traffic planning and parking studies performed by the City of Ithaca (and other local communities)
- Work with City of Ithaca to help identify appropriate position(s) that can act as point person(s) to work with TCAT on promoting transit use

Long-Term Strategic Initiatives



- Evaluate feasibility and potentially implement elements of bus rapid transit (BRT) lines, which could include time-saving features like all-door boarding, pre-boarding ticket validation, dedicated lanes, and transit boarding islands
- Continue to monitor growth patterns and coordinate with municipalities on routing decisions and transit prioritization accordingly



Tompkins County's Mobility-as-a-Service Pilot

Tompkins County, through the transportation planning unit in the Department of Social Services (DSS), was selected in June 2018 as one of six successful applicants to a competitive program offered by the Federal Transit Administration (FTA) through the Shared-Use Mobility Center (SUMC). The Mobility on Demand On-Ramp Program will provide the County with technical assistance to create a business model for a Mobility-as-a-Service (MaaS) pilot.

MaaS will integrate many mobility options – public, private and non-profit – to develop a platform for County residents and visitors to select and use mobility services customized to their needs. The principal goal is to provide affordable and equitable access to mobility services for travelers. TCAT, as the public transit provider for Tompkins County, will play a key role in providing such options. TCAT will work with DSS and other local partners to develop a plan for the MaaS pilot and be a part of the holistic evolution of the County's transportation system in years to come.





TCAT'S STRATEGIC PLANNING ACTIONS + INITIATIVES





- Upholding TCAT's Organizational Excellence
- Promoting Quality of Service + Setting Service Priorities
- Sensible + Sustainable Capital Investment
- Securing Stable + Consistent Funding
- Excelling in Communications + Outreach
- Adapting to the Changing Landscape

BOARD OF DIRECTORS' ACTIONS + RESPONSIBILITIES

TCAT's Board of Directors is committed to creating policies to support the mission and vision of the organization, and ensuring TCAT adheres to its core values. We are here to promote organizational excellence and to provide support to our management and staff. To accomplish this, members of the Board must be knowledgeable about transit operations and the evolving needs of our customers, and be proactive in working with partners to find solutions to issues that arise.

Therefore, the Board of Directors will commit to the following short-term and long-term strategic actions and initiatives as part of this Strategic Plan:

Short-Term Strategic Actions



- Continue to lead TCAT's Planning Committee team on site expansion, involving key community stakeholders as necessary, and ensure the team makes a unified recommendation by Summer 2019
- Create a "Transit 101" orientation for new Board members
- Ensure that there is a formal, annual performance review provided to TCAT's General Manager by the Board
- Create a Board self-evaluation program to be conducted every 2 years

Long-Term Strategic Initiatives



- Formalize Board of Directors policies and procedures manual
- Review and refresh TCAT's Strategic Plan at least every 5 years
- Review TCAT's legal structure to determine options for more flexibility in funding and operations

▶ **The Board of Directors will also be accountable for ensuring that TCAT takes the short-term actions and embarks on the long-term initiatives that are listed in the sections that follow.**

UPHOLDING TCAT'S ORGANIZATIONAL EXCELLENCE

Organizational Culture + Structure

Short-Term	Implementation Type	Long-Term	Implementation Type
<ul style="list-style-type: none"> • Create an initial plan to formalize cultural goals, including measurements to achieve and a review of TCAT's Vision and Mission Statements and Core Values 	E	<ul style="list-style-type: none"> • Create a "next steps" plan to continue to build management and staff teams through recruitment, internship opportunities, and streamlining of processes to increase speed and efficiency 	E
<ul style="list-style-type: none"> • Choose at least three benchmark systems or agencies 	N	<ul style="list-style-type: none"> • Implement systems that use data resources for decision making on process improvements, and document this usage 	E
<ul style="list-style-type: none"> • Train and support supervisors in coaching and evaluation 	E	<ul style="list-style-type: none"> • Evaluate performance against benchmarked systems or agencies 	C
<ul style="list-style-type: none"> • Form a tiger team and apply to one strategic project 	N	<ul style="list-style-type: none"> • Continue to reward cultural and team success 	C
<ul style="list-style-type: none"> • Develop a "Transit 101" orientation program for new Board members 	N		

Personnel + Human Resources

Short-Term	Implementation Type	Long-Term	Implementation Type
<ul style="list-style-type: none"> • Increase HR staffing through hiring or increasing contract hours 	E	<ul style="list-style-type: none"> • Ensure that staff evaluations align with and support organizational cultural goals as they are developed 	E
<ul style="list-style-type: none"> • Choose at least three benchmark systems or agencies and review their personnel evaluation procedures 	E	<ul style="list-style-type: none"> • Monitor staff evaluations and provide HR training and support to supervisors 	E
<ul style="list-style-type: none"> • Perform an evaluation of management staffing levels 	N	<ul style="list-style-type: none"> • Research, choose and utilize an employee satisfaction tool at least every two years, which will gauge employee understanding and commitment to the organization, as well as satisfaction with scheduling, training opportunities, and staff-management relationships 	N
<ul style="list-style-type: none"> • Ensure adequate supervisor training and support through performance evaluation process 	E	<ul style="list-style-type: none"> • Create succession plans for all positions using partnerships (HS, BOCES, tech schools, local colleges and universities) to provide talented candidates 	N
<ul style="list-style-type: none"> • Develop a staff satisfaction survey framework 	N	<ul style="list-style-type: none"> • Consider initiating a staff wellness program 	N

Implementation Type:
[C]ontinuing an existing initiative

[E]xpanding an existing initiative

[N]ew initiative

Internal Processes + Policies

Short-Term	Implementation Type	Long-Term	Implementation Type
<ul style="list-style-type: none"> Build on internship and recruiting efforts to attract top talent from local colleges and universities, including for positions in our operations and maintenance functions 	E	<ul style="list-style-type: none"> Focus on career ladders for internal staff, in addition to recruitment 	E
<ul style="list-style-type: none"> Streamline hiring processes for clarity, transparency and speed 	C	<ul style="list-style-type: none"> Expand skills and capacities throughout the organization that will support career ladders and succession planning 	E
<ul style="list-style-type: none"> Develop framework for a "career ladders" program to improve retention 	E	<ul style="list-style-type: none"> Budget for and provide critical training functions on a regular basis, ideally through grant funding 	E
<ul style="list-style-type: none"> Evaluate most critical needs and necessary budget for training, and identify potential grant funding and/or staffing to support 	E	<ul style="list-style-type: none"> Continue to enhance overall HR support to employees, and monitor outcomes of regular FTA triennial reviews 	C

Technology + Data for Internal Operations

Short-Term	Implementation Type	Long-Term	Implementation Type
<ul style="list-style-type: none"> Increase IT staff by more than one position to facilitate proactive responses to outstanding issues, and allow for the planned replacement of all existing technology and equipment 	E	<ul style="list-style-type: none"> Identify and invest further in data analysis and utilization initiatives to improve real-time decision-making 	E
<ul style="list-style-type: none"> Create data tiger teams for in-house training on Avail and Excel, in order to use both effectively 	N	<ul style="list-style-type: none"> Adopt a single project management system for all projects so that managers can easily assist with other projects if needed 	N
<ul style="list-style-type: none"> Ensure that Maximo training is robust and thorough so that this Enterprise Asset Management system is used to its greatest capability 	E	<ul style="list-style-type: none"> Regularly evaluate internal IT operations and functions to improve efficiency and minimize cost 	E
<ul style="list-style-type: none"> Engage in pilot testing of one or more project management system(s) 	N		

Potential Key Performance Indicators

- Employee turnover rate
- Percent of operating budget dedicated to training
- Outputs on job satisfaction and training needs from regular employee surveys

PROMOTING QUALITY OF SERVICE + SETTING SERVICE PRIORITIES

Setting Priorities + Goals

Short-Term	Implementation Type	Long-Term	Implementation Type
<ul style="list-style-type: none"> Evaluate existing and any planned routes for adherence to TCAT's Service Development Priorities and service standards, and flag routes that might require changes 	E	<ul style="list-style-type: none"> Following up on the initial service review and TDP, consider route redesigns in the context of TCAT's Service Development Priorities and FTA service standards 	E
<ul style="list-style-type: none"> Identify candidates for high-frequency service on routes with highest ridership and/or in areas with latent demand 	E	<ul style="list-style-type: none"> Continue to expand pilot program that differentiates certain high-frequency service offerings, if successful 	E
<ul style="list-style-type: none"> Consider routes for piloting high-frequency service, including via elements such as unique bus stop signage, bus branding, and electronic messaging on buses 	N	<ul style="list-style-type: none"> Evaluate how any changes in routing impact ridership and accessibility, and make adjustments as required 	C
<ul style="list-style-type: none"> Initiate and execute a Transit Development Plan (TDP), which considers our Service Development Priorities and route redesigns 	C		

Creating the Best Rider Experience

Short-Term	Implementation Type	Long-Term	Implementation Type
<ul style="list-style-type: none"> Examine opportunities for strategic partnerships (with County municipalities, institutions, or others) to develop a formalized Bus Stop Improvement Program 	N	<ul style="list-style-type: none"> Initiate and lead a Bus Stop Improvement Program, which could involve ADA-accessibility improvements, lighting improvements, and shelter and/or bench amenity investments 	N
<ul style="list-style-type: none"> Build on recent bus stop inventories to develop a bus stop amenity database designed to evaluate amenity levels and identify gaps 	E	<ul style="list-style-type: none"> Enhance and formalize a regular bus stop cleaning and maintenance program to ensure that all street amenities (benches, shelters, etc.) are clean and in a state of good repair 	C
<ul style="list-style-type: none"> Develop a TCAT bus rider "Bill of Rights" to formalize what should be expected on any TCAT ride 	E		

Implementation Type:
[C]ontinuing an existing initiative

[E]xpanding an existing initiative

[N]ew initiative

Transit Integration with New Development

Short-Term	Implementation Type	Long-Term	Implementation Type
<ul style="list-style-type: none"> Continue to promote and educate the public on the benefits of coordinating development with transit service 	E	<ul style="list-style-type: none"> For larger-scale development projects, work with developers to explore Transportation Demand Management (TDM) strategies that effectively promote and complement transit service 	E
<ul style="list-style-type: none"> Work with individual municipalities and, where applicable, the Tompkins County Council of Governments (TCCOG) to formalize roles in becoming an active participant during development review and permitting processes 	E	<ul style="list-style-type: none"> Support amendments to include transit service planning as part of municipal zoning regulations, and encourage developer support for transit operations and/or amenities, where practical 	E
<ul style="list-style-type: none"> Publish a Transit Supportive Development (TSD) guide to show how smart development strategies can promote transit service and benefit County goals for dense, multi-nodal development, and share with relevant municipal planners and other key stakeholders 	N	<ul style="list-style-type: none"> Formalize protocols with municipal planners so information and updates on major developments are provided on a regular basis to TCAT, and ensure TCAT involvement occurs when development exceeds a certain threshold. 	E

Potential Key Performance Indicators

- Annual or bi-annual review of TCAT adherence to Service Priorities
- Operational indicators such as on-time performance, ridership, passenger-miles travelled, travel speeds, etc.
- Community impact indicators such as service equity, geographic coverage and transit access to jobs
- Efficiency indicators such as costs per revenue mile, passengers per hour, and farebox recovery ratio
- Customer satisfaction metrics through regular ridership surveys
- Percentage of transit stops with amenities and/or amenity upgrades (shelters, benches, etc)
- Percentage of large developments over a certain population served by TCAT or connecting services, as a result of TCAT involvement during development process

SENSIBLE + SUSTAINABLE CAPITAL INVESTMENT

Procurement of a Sustainable Fleet

Short-Term	Implementation Type	Long-Term	Implementation Type
<ul style="list-style-type: none"> Continue to develop a scheduled and balanced bus transition plan to address future needs, including consideration for growing the aggregate size of the fleet based on increased demand for service, and potential changes in useful lives of future vehicles 	C	<ul style="list-style-type: none"> Execute some portion of the bus transition plan, and adjust priorities as necessary based on available market options, costs, and other factors 	C
<ul style="list-style-type: none"> Continue to monitor grant opportunities and stay abreast of changes in powertrain options 	C	<ul style="list-style-type: none"> Commit to achieving an emissions-free fleet by the year 2035 	N

Operations + Administration Facility Expansion / Relocation

Short-Term	Implementation Type	Long-Term	Implementation Type
<ul style="list-style-type: none"> Monitor for funding opportunities at the Federal level (FTA Bus Facilities grants), State level (NY Transit State Dedicated Fund Program) and local opportunities 	C	<ul style="list-style-type: none"> Secure necessary funding and seek strategic partnerships where applicable, to minimize TCAT's aggregate financial commitment and to leverage the evolving mobility landscape 	E
<ul style="list-style-type: none"> Stay abreast of evolving technologies in transportation, including powertrain options in conjunction with fleet evolution and replacement, to select a site that meets future infrastructure needs 	C	<ul style="list-style-type: none"> Execute a move to a new facility or complete an upgrade and/or expansion of existing facility 	E
<ul style="list-style-type: none"> Continue facility planning process to determine appropriate next steps, through a tiger team summary of potential options and short-term agenda developed by summer 2019 	C		

Implementation Type:

[C]ontinuing an existing initiative

[E]xpanding an existing initiative

[N]ew initiative

Investments in Technology Innovations

Short-Term	Implementation Type	Long-Term	Implementation Type
<ul style="list-style-type: none"> Continue to expand the installation of real-time bus arrival signs at relevant stations, and troubleshoot any existing issues 	C	<ul style="list-style-type: none"> Develop a comprehensive 2020 Technology Roadmap for future technology investment and deployment 	N
<ul style="list-style-type: none"> Explore opportunities for a farebox system replacement that will allow easy fare payment options through Smart Card or smartphone technology, with alternative non-tech payment options for riders who require them 	N	<ul style="list-style-type: none"> Establish metrics to evaluate success of technology investments 	N
<ul style="list-style-type: none"> Begin an update to 2012's Technology Roadmap by evaluating status of projects recommended, along with an evaluation of all existing TCAT systems related to customer experience, operations, and decision support tools 	E	<ul style="list-style-type: none"> Secure necessary funding to action high-priority projects in the first half of the 2020s, and continuously evaluate grant and partnership opportunities associated with them 	E
<ul style="list-style-type: none"> Ensure that our data is in a universally usable format so it can be integrated with Tompkins County Mobility as a Service (MaaS) pilot projects 	E		

SENSIBLE + SUSTAINABLE CAPITAL INVESTMENT

Facilitating Multimodal Connections

Short-Term	Implementation Type	Long-Term	Implementation Type
<ul style="list-style-type: none"> Work with the City of Ithaca and Tompkins County to explore potential sustainable + multimodal hub locations in conjunction with bus replacement planning and charging needs 	N	<ul style="list-style-type: none"> Stay abreast of development trends and model multimodal strategies in other communities to identify potential appropriate solutions for local contexts 	C
<ul style="list-style-type: none"> Work with the City of Ithaca to improve infrastructure for passenger and operational needs at the downtown intermodal hub on Green St. 	E	<ul style="list-style-type: none"> Partner with one or more Tompkins County institutional players (education, large employers, etc) to develop a prototype sustainable multimodal hub 	N
<ul style="list-style-type: none"> Evaluate best practices in transit hubs in terms of integration with shared mobility / Mobility as a Service trends 	C		
<ul style="list-style-type: none"> Formalize and enhance amenities (e.g. bus shelters, bike racks, real-time signage, etc) at certain existing rural park and ride facilities to make them a formal part of the TCAT network 	E		
<ul style="list-style-type: none"> Work with the City of Ithaca and local institutions to explore park and ride locations outside the Downtown core to alleviate parking and congestion issues within Downtown, and improve transit access for new suburban developments 	N		

Potential Key Performance Indicators

- Execution of a scheduled and balanced bus transition plan
- Percent of fleet using cleaner energy sources
- Number of real-time arrival signs installed
- Facility selection or expansion, and execution of relevant plan
- Study and installation of new farebox system
- Number of trip transfers at park and ride locations and the transit hub through regular ridership surveys

SECURING STABLE + CONSISTENT FUNDING

Diversifying Our Funding Sources

Short-Term	Implementation Type	Long-Term	Implementation Type
<ul style="list-style-type: none"> Identify potential underwriters in the form of educational institutions and large employers to explore funding partnerships 	E	<ul style="list-style-type: none"> Engage in sensible and mutually beneficial partnerships with key institutions, potentially as part of service expansion and/or sustainability investment initiatives 	E
<ul style="list-style-type: none"> Develop template agreement(s) to facilitate bringing on new underwriter(s) 	N	<ul style="list-style-type: none"> Continue to monitor, apply for, and secure a diverse range of grant funding 	C
<ul style="list-style-type: none"> Monitor and explore new methods for grant funding 	C	<ul style="list-style-type: none"> Remain engaged with external partners and granting agencies to ensure readiness to react to funding and programming opportunities 	C
<ul style="list-style-type: none"> Inventory our current contracts and relationships with external parties to identify missing connections that could result in future funding and/or partnership opportunities 	N		

Implementation Type:

[C]ontinuing an existing initiative

[E]xpanding an existing initiative

[N]ew initiative

Potential Key Performance Indicators

- Number of new, regular underwriters
- Variation in types and sources of funding
- Growth in number and dollar value of successful grant applications

EXCELLING IN COMMUNICATIONS + OUTREACH

Marketing + Branding

Short-Term	Implementation Type	Long-Term	Implementation Type
<ul style="list-style-type: none"> Continue to maintain consistent branding in our external communication and marketing materials 	C	<ul style="list-style-type: none"> Complete a branding refresh including strategies to attract new ridership segments 	N
<ul style="list-style-type: none"> Develop timelines and action steps to initiate branding refresh, potentially in conjunction with our next Transit Development Plan (TDP), and conduct initial public outreach to inform key choices 	N	<ul style="list-style-type: none"> Measure impacts of marketing efforts, public outreach and engagement, and branding refresh 	N
<ul style="list-style-type: none"> Support any future rollout of a countywide wayfinding system, with TCAT bus stops included 	C		

Attracting New Riders

Short-Term	Implementation Type	Long-Term	Implementation Type
<ul style="list-style-type: none"> Undertake a review of existing efforts to capture new riders and identify those that could be expanded, and others that can be reduced or eliminated 	N	<ul style="list-style-type: none"> Develop TDM partnerships with key institutions, especially those that can help TCAT reach riders outside the sphere of Cornell University and Downtown Ithaca 	E
<ul style="list-style-type: none"> Explore different outreach and communication strategies through new and emerging technological mediums such as social media platforms 	E	<ul style="list-style-type: none"> Measure the impacts of these strategies to illustrate an increase in the percentage of TCAT riders not associated with Cornell University 	N
<ul style="list-style-type: none"> Collaborate with local community groups and organizers to expand TCAT's customer base and promote the benefits of riding transit, particularly those with access to senior citizens, lower-income populations, and other carless households 	E		
<ul style="list-style-type: none"> Set up and hold regular meetings at different locations Countywide to obtain general input and feedback from the public 	E		

Implementation Type:

[C]ontinuing an existing initiative

[E]xpanding an existing initiative

[N]ew initiative

Customer Service

Short-Term	Implementation Type	Long-Term	Implementation Type
<ul style="list-style-type: none"> Review and streamline customer-facing communication methods so they are convenient for the wide variety of riders and clearly communicated. 	E	<ul style="list-style-type: none"> Create and manage a database that records customer service requests and has the capability to categorize and monitor trends for customer issues 	N
<ul style="list-style-type: none"> Produce a simplified and streamlined version of the TCAT "Ride Guide" to attract all types of riders, including those with limited English proficiency 	E	<ul style="list-style-type: none"> Craft and follow formalized procedures to process service requests such as bus stops, route deviations, and higher frequencies, including standardizing communication for replies to such inquiries 	N
<ul style="list-style-type: none"> Maintain a customer call-to number with designated staff during all key hours of TCAT operation, including during weekday evenings and on weekends 	C	<ul style="list-style-type: none"> Leverage technology to expand customer services such as an automated text/chat helpline or upgraded mobile app presence 	E
<ul style="list-style-type: none"> Market a universal customer service email address to clarify when a response can be expected, including an autoreply that refers customers to a website with comprehensive schedule and service information 	E		
<ul style="list-style-type: none"> Review customer service activities to address issues for riders with disabilities, including making TCATs website ADA compliant 	E		

Potential Key Performance Indicators

- Customer awareness and satisfaction metrics through regular ridership surveys
- Number of locations with TCAT fare media for sale
- Number of community outreach and engagement events conducted
- Number and magnitude of TDM partnerships with local insitutions

ADAPTING TO THE CHANGING LANDSCAPE

Sustainability + Leading by Example

Short-Term	Implementation Type	Long-Term	Implementation Type
<ul style="list-style-type: none"> Explore procurement and funding options to begin transitioning our fleet from diesel to cleaner technology (see Chapter 3 for specific information) 	E	<ul style="list-style-type: none"> Develop an organization-wide sustainability action plan, to cover all elements of operations including the significant investments that lie ahead in terms of new fleet procurement and facility upgrades 	N
<ul style="list-style-type: none"> Solicit recommendations from employees, riders, and key stakeholders as to how TCAT can become more sustainable, to inform long-term sustainability planning 	E	<ul style="list-style-type: none"> Ensure that all messaging, branding, public outreach, and stakeholder engagement is rooted in sustainability, making the concept a core principle of the TCAT organization 	N
<ul style="list-style-type: none"> Educate employees to consider their energy and resource use on a daily basis, emphasizing actions such as conserving light use and reporting observed water leaks 	N	<ul style="list-style-type: none"> Incorporate green building elements into any facility renovation and/or relocation, such as net-zero/passive HVAC systems, low-flow toilets, and solar panels 	N

Implementation Type:
[C]ontinuing an existing initiative

[E]xpanding an existing initiative

[N]ew initiative

The Evolving Transportation Market

Short-Term	Implementation Type	Long-Term	Implementation Type
<ul style="list-style-type: none"> Develop a New Mobility Adaptation Plan to detail strategic actions TCAT will take in response to the evolving marketplace, and revisit annually 	N	<ul style="list-style-type: none"> Implement, evaluate, and adjust actions taken in a New Mobility Adaptation Plan 	N
<ul style="list-style-type: none"> Explore first /last mile partnership opportunities to attract riders to core TCAT service and increase the utility of public transit in lower-density areas 	N	<ul style="list-style-type: none"> Consider the partial conversion of TCAT's lowest ridership fixed routes to demand responsive or flexible routes that utilize new technology, potentially in coordination with Gadabout 	N
<ul style="list-style-type: none"> Explore further partnerships with public and private partners (including volunteer drivers) to provide alternatives to low-ridership routes or provide additional demand-responsive, semi-fixed route service at off peak times 	E	<ul style="list-style-type: none"> Work with Gadabout to pilot and evaluate additional business models for paratransit service 	E
<ul style="list-style-type: none"> Consider how service priorities (defined in Chapter 2) and the identification of high-frequency service offerings can support TCAT's reaction to the evolving mobility marketplace 	E		
<ul style="list-style-type: none"> Work with Gadabout to leverage new technologies to allow additional business models (via e-hailing and ridesharing) for Federally-mandated paratransit service, including through first- and last-mile pilots 	E		
<ul style="list-style-type: none"> Remain engaged with the County's exploration of Mobility as a Service (MaaS) pilot projects 	C		

ADAPTING TO THE CHANGING LANDSCAPE

Density, Congestion, and Transit Prioritization

Short-Term	Implementation Type	Long-Term	Implementation Type
<ul style="list-style-type: none"> Review existing routing and identify corridors that could be candidates for transit-only and/or transit-priority treatments such as transit signal priority, queue jumps, and bus-only lanes 	N	<ul style="list-style-type: none"> Evaluate feasibility and potentially implement elements of bus rapid transit (BRT) lines, which could include time-saving features like all-door boarding, pre-boarding ticket validation, dedicated lanes, and transit boarding islands 	N
<ul style="list-style-type: none"> Coordinate with any curbside management or Downtown traffic planning and parking studies performed by the City of Ithaca (and other local communities) 	N	<ul style="list-style-type: none"> Continue to monitor growth patterns and coordinate with municipalities on routing decisions and transit prioritization accordingly 	C
<ul style="list-style-type: none"> Work with City of Ithaca to help identify appropriate position(s) that can act as point person(s) to work with TCAT on promoting transit use 	N		

Potential Key Performance Indicators

- Reduction in miles driven by gasoline-powered vehicles
- Percent of fleet using cleaner energy sources
- Achievement of LEED status in any new or upgraded facility
- Growth in ridership for specific population groups (seniors, low-income, residents of transit deserts) through private sector partnerships
- Growth in core TCAT ridership associated with linkages to first- and last-mile solutions
- Decreases in per-ride cost and increases in overall use of paratransit through new technologies and business models



**Sam
Schwartz**

Transportation
Consultants

Jean McPheeters Consulting, LLC