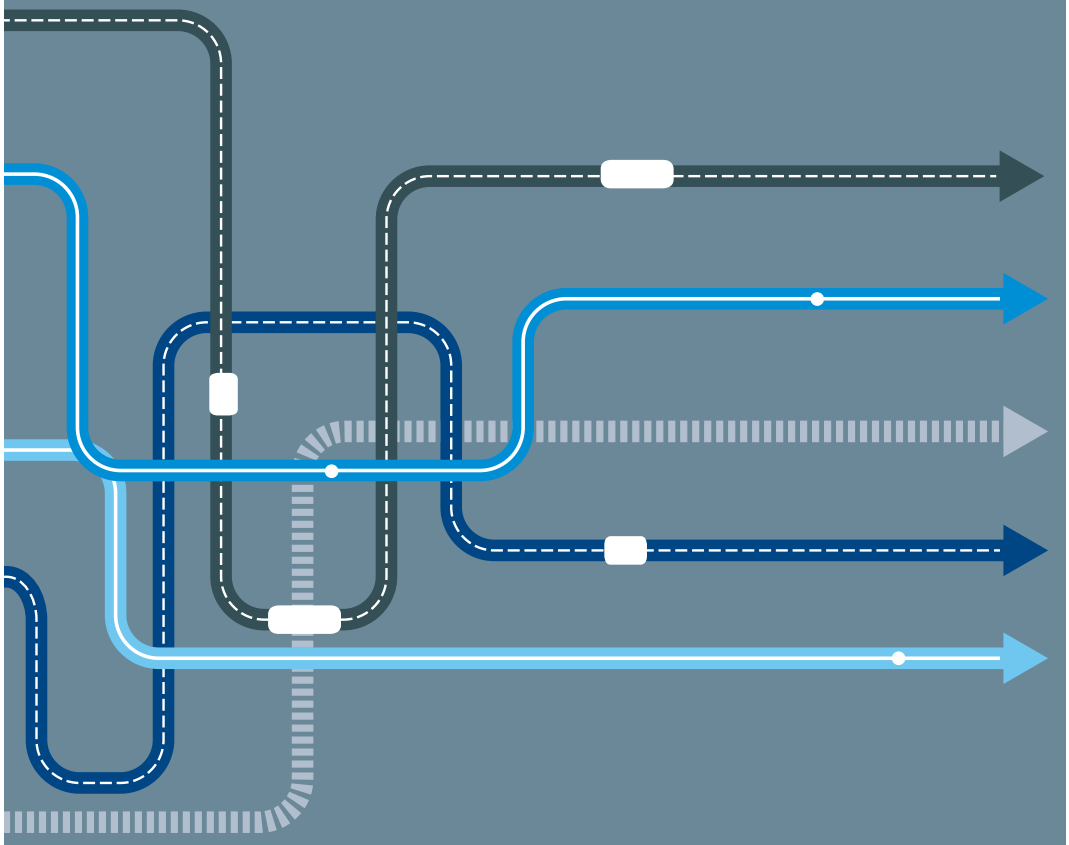
Transit Modernization



CMAP

Contents

Transit modernization and innovation strategy paper **1**
Research process **1**
Defining modernization 2
Experience since GO TO 2040 ..... **3**
Transit rider perspectives 4
Transit agency perspectives 5
ON TO 2050 framework and strategies **10**
Increase funding for mass transit 11
Focus on transit's strengths 11
Ensure equitable access 13
Create smart partnerships 16
Integrate land use planning 18
Coordinate across transit agencies 23
Next Steps **24**
Appendix: Resource group **25**

Transit modernization and innovation strategy paper

The Chicago Metropolitan Agency for Planning (CMAP) is currently developing its next comprehensive regional plan, ON TO 2050, which will be the successor of GO TO 2040. As part of the development of ON TO 2050, CMAP staff is in the process of drafting a series of strategy papers — reviewing current policies, emerging issues, and potential future directions — on various issues. This strategy paper explores policies and priorities related to transit modernization and innovation.

ON TO 2050 will build upon the policies established in GO TO 2040, among them the goal to create a "world-class" transit experience by modernizing the system. While GO TO 2040 strongly urges investment in modernization, it does not delve deeply into what types of initiatives the region should pursue.[1] This strategy paper fills that gap, laying out a framework for how ON TO 2050 can make recommendations to support transit system modernization.

This paper is related to two ON TO 2050 strategy papers — Highway Operations and Emerging Transportation Technology. The Emerging Transportation Technology paper focuses on technologies that are likely to have a significant impact on the region by 2050, but also have substantial uncertainties over when or if they will reach mass adoption. Additionally, the Emerging Transportation Technology paper has some overlap in discussion of private mobility services. The Highway Operations paper addresses some roadway investments that could provide substantial benefits to transit as well as passenger vehicles, including transit signal priority and traffic management centers. Note that this strategy paper does not discuss individual capital investments for inclusion in the plan. That task will be handled separately as part of the plan's evaluation of regionally significant projects and development of the financial plan for transportation. Furthermore, while the transit agencies are all faced with investments needed to meet regulatory requirements, such as compliance with the Americans with Disabilities Act (ADA) and Positive Train Control (PTC), such mandates are not the focus of this paper as they are compulsory rather than discretionary improvements to the system.

Research process

In developing this strategy paper, CMAP staff conducted extensive research into the academic literature, case studies of peer transit agencies and regions, and interviews with transit stakeholders from across the region. In addition, one major channel of stakeholder engagement was conducted through the establishment of a project-specific resource group, composed of topic area experts and key stakeholders. The transit modernization resource group met three times between February 2016 and August 2016 to discuss potential policy directions. The

[1] Chicago Metropolitan Agency for Planning, "GO TO 2040, Increase Commitment to Public Transit," 2010, http://www.cmap.illinois.gov/about/2040/regional-mobility/public-transit.

Appendix lists the membership of the resource group, as well as the list of meetings and topics covered.

Defining modernization

GO TO 2040 broadly supports modernization of the transit system, but is not specific in its definition. Rather, the plan's discussion of transit modernization is limited to a handful of recommendations to adopt best practices in new technologies, implement traveler information systems, establish better coordination between modes, and consider user perception in vehicle purchases and station design. One goal of this strategy paper was to arrive at a more precise definition of modernization. CMAP developed the following definitions of modernization and innovation in close coordination with the project's resource group. These terms are used throughout this paper.

"Modernization" refers to discretionary enhancements to the transit system that go beyond state of good repair.[2] While achieving a state of good repair (SOGR) is crucial in improving transit in the Chicago region — failing to maintain a state of good repair can result in higher operating costs, reduced reliability, and increased safety risks — these investments alone are not sufficient to create a modern system. A system in a state of good repair functions as originally intended, while a modernized system meets modern needs and expectations. This strategy paper considers a state of good repair as the baseline from which modernization efforts can occur and primarily discusses SOGR investments in the context of modernization implementation strategies. In practice, projects often include elements of SOGR and modernization. The ON TO 2050 Financial Plan will provide separate allocations for SOGR, modernization, and meeting performance targets, while recognizing that many projects address each of these goals. SOGR initiatives in particular can provide a platform for modernization and enhancement efforts.

Lastly, innovation is an aspect of transit modernization. Just as modernization goes beyond state of good repair, innovation goes beyond widely adopted best practices and into the state of the art. Innovative projects meet or exceed modern needs and expectations in new ways. For example, low-emission hybrid vehicles are becoming more common in bus fleets across the nation, but zero-emission vehicles exceed expectations. These vehicles are not widely used and careful monitoring of performance is needed, but they show promise as a potential new future

[2] The RTA defines state of good repair as when assets are replaced once they reach the end of their useful lives, all rehabilitations are performed, and capital maintenance is up to date. Regional Transportation Authority, "Capital Asset Condition Assessment Report" (p. 40), December 2014, https://www.rtachicago.org/files/documents/businessandfinance/capitalassetconditionassessment/2014%20Capital%20Asset%20Condition%20Assessment%20Report.pdf.

benchmark. Likewise, multi-door boarding of buses in San Francisco has sped up boarding by 38 percent[3] but is not widely deployed in other cities.

One particularly disruptive development in recent years is the set of emerging "mobility-as-a-service" transportation options, which may represent a shift away from individually owned vehicles to various shared options that can be used on-demand and in combination. For example, transportation network companies (TNCs) like Uber and Lyft allow users to hail rides in vehicles that are privately owned and driven by other individuals through a smartphone app. Other services allow subscribers to use shared cars (e.g., Zipcar) or bikes (e.g., Divvy) for short periods of time. These new options have expanded the urban transportation ecosystem, and may provide new opportunities for car-free or car-lite lifestyles. These modes of transportation are still evolving but they have brought new challenges and opportunities for public transit. While this strategy paper does discuss these emerging forms of transportation, it focuses on near-term actions that public transit agencies and other public sector implementers can take to improve public transit service. For a discussion of the long term strategies, see CMAP's "Emerging Transportation Technology Strategy Paper."[4]

Experience since GO TO 2040

In the years since GO TO 2040 was adopted, the region's transit agencies have made progress in documenting and addressing repair backlogs, meeting new regulatory standards, and enhancing the system's performance. Nevertheless, they must continue to invest substantial time and resources into maintenance activities in the years ahead. At the same time, the universe of potential new technologies and operating procedures has expanded, providing new opportunities for the Service Boards (CTA, Metra, and Pace) to meet the changing needs of users and provide high-quality, more efficient service.

Transit modernization strategies can be examined from two primary angles, the customer point of view and the transit agency perspective. Some investments may benefit transit agencies but be relatively invisible to riders (e.g., improvements to bus garage facilities), while other investments may improve comfort and convenience for riders but provide little operational benefit to transit agencies (e.g., enhanced waiting areas at transit stations). On the other hand, some improvements may benefit both transit riders and transit agencies simultaneously. For example, the widespread use of smartphones and other devices has led to expectations of wireless connectivity for riders across the system, but this connectivity can also improve transit agency information on system status. Similarly, global positioning systems (GPS) have made it

[3] San Francisco Municipal Transportation Agency, "All-Door Boarding Evaluation Final Report," December 2014, https://www.sfmta.com/sites/default/files/agendaitems/2014/12-2-14%20Item%2014%20All%20Door%20Boarding%20Report.pdf.

[4] Chicago Metropolitan Agency for Planning, Emerging Transportation Technology Strategy Paper, November 2017, http://www.cmap.illinois.gov/documents/10180/798751/Transportation+Tech+Strategy+Paper_FINAL_11.13.17.pdf/e2e04dc7-25cb-b4c7-3ab1-ba2969ee2d25.

possible for transit agencies to provide real-time arrival information for customers as well as institute more efficient scheduling.

Transit rider perspectives

The transit literature shows that the elements of the transit system most important to users, and thus most likely to leave them satisfied or dissatisfied, are the fundamentals: the speed of the service, its frequency, its connectivity, and its reliability. Fulfilling these basics make transit an attractive travel option. Note that connectivity is broadly defined to include the ease of transferring from one route or mode to another, the ability of people to travel between different parts of the region using transit, and the ease of traveling to and from transit (i.e., "first and last mile" issues).

This finding suggests that operating strategies addressing transit level and quality of service should be a major focus for ON TO 2050's plan recommendations. Amenities such as Wi-Fi and power outlets play only a small part in overall satisfaction. Nevertheless, other customer-facing factors are important, including the comfort and safety experienced by transit riders, access to information — for wayfinding, service updates, and emergency communications — and affordability.

The choice to use transit is influenced by a number of demographic factors, including age, household income, and vehicle availability. As described in a recent CMAP snapshot report,[5] the region is expected to see substantial demographic changes through 2050. Primarily, population growth is slowing, the region is aging, and the population is becoming increasingly diverse. In recent years, household incomes have declined and populations within the region have continued to decentralize to the collar counties.

To some extent, these trends compound to increase the demand for transit service within and between suburban parts of the region. The portions of the region with a high concentration of aging populations — suburbs and rural areas — are also places that are difficult to serve with high capacity forms of public transit. Populations that may be more likely to use transit — i.e., lower-income households and people of color — are increasingly located in suburban areas, as are many of their places of employment.[6] For example, many manufacturing and freight jobs have recently located in low-density locations far from fixed-route transit, such as northern and western Will County.

[5] Chicago Metropolitan Agency for Planning, "Demographic Shifts: Planning for a diverse region," February 2017, http://www.cmap.illinois.gov/documents/10180/476927/FY17-0054%20Demographics%20Snapshot/8a9caead-a16a-4cba-a57d-7ffcbf33a1c0.

[6] Chicago Metropolitan Agency for Planning, "Travel Trends: Understanding how our region moves," September 2016, http://www.cmap.illinois.gov/documents/10180/517201/FY18-0043+Transit+Trends+Snapshot_pages.pdf/0b6b9aca-f1ef-eb98-dbf1-f21901fe3a1d.

On the other hand, downtown employment has been strong in recent years and is expected to continue to grow, providing demand for peak-period, peak-direction service on Metra, CTA rail, CTA express bus, and Pace Pulse and expressway-based rapid transit services. These services represent a core component of the Service Boards' portfolio and set baseline levels of equipment and labor necessary for transit operations to function properly, often at significant cost. As described in more detail in the following section, transit agencies, while focused on the customer experience, face many challenges in meeting these diverse customer needs.

Transit agency perspectives

To gain a better understanding of the impetus and opportunities for modernization and innovation from the agency perspective, CMAP staff interviewed personnel from the transit Service Boards — CTA, Metra, and Pace — in summer 2016. The agencies' modernization goals closely align with overall system goals as outlined in the RTA's Regional Transit Strategic Plan, which emphasizes improving the customer experience through technology, such as the deployment of real-time travel information and open fare payment systems.[7]

Additional topics were identified through this process, underscoring structural challenges to making significant improvements to transit services, the competition posed by emerging mobility services, the promise and shortcomings of technology-based solutions, and the barriers to further modernization of the regional transit system.

Over the course of the interviews, Service Board staff identified structural challenges that make it difficult to modernize transit service, that is, to make discretionary improvements beyond basic state of good repair. These challenges are shared by transit agencies across the country, which balance competing goals for the quality (i.e., speed, reliability, and frequency) and extent (i.e., geographic, time of day, and day of week) of services within limited resources.[8] These structural challenges can be broadly summarized in three categories: asset condition, competition for space, and unsupportive land use, each of which is described in more detail below.

Asset condition and financial constraints

Interviewees reported that modernization often takes a back seat to state of good repair needs and legislative mandates. Because SOGR needs are very large relative to potential modernization investments, constrained financial resources often dictate these priorities.

[7] Regional Transportation Authority, "Regional Transit Strategic Plan 2013-2018," August 2013, http://rtachicago.org/files/documents/strategicprograms/strategicplan/Regional_Transit_Strategic_Plan.pdf.

[8] Walker, Jarrett "'Abundant Access': a map of a community's transit choices, and a possible goal of transit" *Human Transit Blog,* March 2013, http://humantransit.org/2013/03/abundant-access-a-map-of-the-key-transit-choices.html.

Modernization projects on rolling stock also compete for limited space and time in maintenance facilities. Upgrading a vehicle means it is not available for service, impacting operations, since spare vehicles are often in short supply. Maintenance yards and garages themselves are in need of modernization, as outdated equipment and yard layouts limit capacity to modernize vehicles. Vehicle constraints are most critical during peak hours, meaning increasing service may be most viable during off peak and weekend periods.

To overcome financial and time constraints, modernization projects frequently piggyback on larger projects, as assets are replaced or overhauled, or as regulations require. For example, a midlife overhaul of a bus or railcar is an opportunity to install new equipment such as power outlets or other customer amenities. It also affords improvements of interest to transit agencies, such as new GPS systems or automatic passenger counting systems, with indirect benefit to customers. For Metra, the federally required implementation of Positive Train Control means some lines will have new signals and centralized traffic control, allowing for the possibility of increased speeds.

However, other constraints affect agencies' ability to innovate. For instance, rapidly changing technology raises concerns that near-term investments will quickly become obsolete or that will later cause system compatibility issues. Due to limited funding, transit agencies may not replace a software system until it is no longer supported by the vendor. Waiting for systems to reach the end of their functional lifespans can allow agencies to "leapfrog" intervening dead-end technologies, but agencies also forfeit savings on operational efficiency and maintenance in the interim.

Competition for space

In the more developed parts of the Chicago region, land is often at a premium, and transit competes for space with many other uses. Transit agencies often share right of way, which makes for a complex and congested operating environment and constrains their ability to optimize services. CTA and Pace buses share roadways with passenger vehicles, trucks, bicyclists, and pedestrians. In dense urban areas, buses are one of many competing uses for curb space, along with on-street parking, taxi stands, loading zones, bicycle parking, and, increasingly, TNCs. Metra shares tracks with freight railroads and Amtrak. Space for capacity expansion is often a constraint in built-up rail corridors, limiting the Service Boards' ability to expand platforms, stations, tracks, and yards.

Cities locally and around the country are changing policies and making capital investments to providing transit with higher priority These advantages in the competition for space, improve critical customer satisfaction components such as speed, frequency, and reliability. For example, the Chicago Department of Transportation's Complete Streets Design Guidelines establish a "modal hierarchy" through which pedestrians receive design priority, followed sequentially by

transit riders, bicyclists, and automobiles.[9] Various capital investments have been proposed or are underway to help to improve the efficiency of transit services, including rail flyovers, new track, and crossovers to separate passenger and freight traffic; bus-on-shoulder programs on expressways; dedicated bus lanes on arterial streets, such as CTA's Loop Link and Pace's bus-on-shoulder programs on expressways such as Pace's I-55 Express Service; and transit signal priority. Supporting the expansion of transit's priority over passenger cars will be necessary to meet key customer needs and regional goals on congestion, modernization, and transit ridership.

However, in some cases the policies or interests of other stakeholders may impede modernization initiatives or innovative practices. For instance, agencies responsible for roadways are sometimes cautious to adopt transit-oriented roadway improvements such as queue jumps and transit signal priority (TSP), even though these strategies have proven successful in other regions. Pilots and demonstration projects are critical for the region to educate roadway agencies about the opportunities for improving transit. One area where transit agencies and highway agencies have been working closely together is in providing expressway bus-on-shoulder service. An initial pilot for Pace bus-on-shoulder on I-55 has been such a success that it is spurring the region to offer additional routes.

Unsupportive land use patterns

Density, land use mix, and urban design decisions are all controlled or influenced by local governments. It is difficult for transit to serve low-density, single-use developments, particularly when buildings are separated from the street by large parking lots and sidewalks are unavailable. However, different types or modes of transit services may be appropriate in some of these contexts. Pace, for instance, has a "family of services" to meet different transit markets across the region. High performing areas are being primed to become Pace Pulse routes, while lower demand areas are served by vanpool programs, community dial-a-ride service, and Pace's Call-n-Ride service areas. Targeted commute trips are served using Pace Express bus-on-shoulder services and commuter Shuttle Bugs. Municipalities, counties, and developers must have a reasonable expectation of the level of transit service that can be supported in their communities and have an important role to play through establishing land use polices that enable higher capacity transit service.

Technological constraints

Technology is now more critical to transit operations than ever before. It facilitates analysis of system performance — allowing closer tracking of vehicle maintenance, more efficient scheduling and payment systems — and also enables quicker detection, communication, and

[9] Chicago Department of Transportation, "Complete Streets Chicago: Design Guidelines," 2013, https://www.cityofchicago.org/content/dam/city/depts/cdot/Complete%20Streets/CompleteStreetsGuidelines.pdf.

response to problems. A strong focus on the customer experience drives many technology investments, particularly investments in communications technology.

This increase in information and communication channels is changing how transit agencies communicate with customers. The CTA was an early adopter of real-time bus and train information, and real-time information is now available for all three Service Boards. The publication of standardized, real-time data has already resulted in the information reaching a much broader audience via third-party developers, at little cost to transit agencies. As private transportation operators, such as Uber and Lyft, become more prevalent, transit will increasingly compete on these digital platforms. Mobile apps now enable travelers to easily compare the time and cost of several travel options and select the one that best meets their needs.

In addition to travel information, technology is also enabling the first unified platform, Ventra, for transit fare payment in the Chicago region. Many transit agency staff and resource group members spoke of the potential to continue to build on the Ventra account system and the Ventra app. Already, it allows Metra to track the ridership impact of schedule changes much more quickly than in the past, and also provides better data about how riders transfer between their services and CTA and Pace. This data may eventually help the agencies develop a financially-viable integrated fare structure.

Even without a fully integrated fare system, a unified transit account of the kind facilitated by Ventra could allow riders to pay for a wider range of transit services. Projects to integrate paratransit and Divvy bike sharing into Ventra are already in the works. CTA received a Federal Transit Administration (FTA) Mobility On-Demand grant in 2016 to implement a Ventra-Divvy integration.[10] Work has begun on this and will likely be complete in 2018. Further, future generations of the Ventra app could include near-field communication technology that will allow CTA and Pace riders to use their smart phones[11] as virtual Ventra cards.

Keeping up with technology is not a simple task. The latest software often requires the latest hardware. This may require updating the infrastructure and communications connections at hundreds of stations or on thousands of vehicles. In addition, increasing the number of electronics on a transit vehicle can strain the battery. Better planning for systems to share common components (such as routers and GPS systems) could reduce cost and power demands. Aging infrastructure can result in unique challenges — simply running new wiring in hundreds of old buildings can be a difficult task. It may not be feasible to use the latest technologies at new or updated stations because of the need to maintain compatibility with the rest of the network. However, the desire to maintain compatibility can become a major barrier

[10] Federal Transit Administration, "Fiscal Year 2016 Mobility on Demand (MOD) Sandbox Program Projects" https://www.transit.dot.gov/sites/fta.dot.gov/files/FTA%20MOD%20Project%20Description%20-%20Chicago.pdf.

[11] Smart phones can already be used to pay fares via Apple Pay, Android Pay, and Samsung Pay; however some passes are not available.

to modernizing. For example, Metra railcars range from a few years to 60 years old. While the consistent design allows for efficient operations and maintenance, newer railcar designs could bring improved amenities and allow for easier boarding in line with emerging best practices.[12]

A similar challenge applies to anticipating technological advances in on-board technologies. For example, rail vehicles are designed up to ten years before they are delivered, thus brand new cars may rely on technology that is a generation or two behind the cutting edge. Designing a procurement process that prioritizes open standards and preserves flexibility about precise technological and software systems can help agencies adapt to constantly evolving technologies.

The region's transit agencies are acutely aware that, in a more digital world, technological failure has significant consequences. Ensuring that the transit system can function in the event of power outages or other technological failures is a key component of creating a resilient, reliable transit system. The transit system needs both strong backup systems and planning for potential failure situations. While the system may work most efficiently when coordinated with real-time information, it must still be able to function without.

Emerging mobility services

Partnering with third party or private companies can facilitate modernization, but must be done carefully in order to ensure that public services are improved equitably and that the partnership is a good deal for taxpayers and transit riders. In order to maintain, modernize, and expand the region's transportation system, GO TO 2040 recommends pursuing innovative finance mechanisms such as public-private partnerships, which seek to provide a greater role for the private sector in the design, construction, and management of transportation facilities. Since GO TO 2040's adoption, there has been significant innovation in private transportation services. Partnerships with emerging transportation network companies (TNCs) such as Uber or Lyft, along with other private mobility providers, could both contribute to and complicate transit agencies' core objectives.

Interviewees had different perspectives about how public transit and private providers may interact in the future. Some thought that TNCs could provide higher quality and more cost-effective service to markets that currently have service gaps, including late night service, dial-a-ride, and last mile connections in suburban areas. However, the private sector's profit motivation may conflict with this vision of complementarity. TNCs may see limited profitability in such markets where they could best complement fixed route transit and instead continue to compete for customers in high-density transit-rich corridors. This could result in increased congestion and loss of transit revenue in corridors where transit is most successful today. Limited service for passengers with disabilities has been rolled out in response to legislation

[12] U.S. Access Board Rail Vehicles Access Advisory Committee Final Report Chapter 3, 2015, https://www.access-board.gov/guidelines-and-standards/transportation/vehicles/rail-vehicles-access-advisory-committee/final-report.

and lawsuits, however it is not yet clear companies will provide substantial coverage on their own.

Little data is publicly available on TNC operations, finances, and ridership in the metropolitan area, making it very difficult to assess the potential opportunities and challenges posed by emerging mobility services. Gaining a better understanding of these services through data-sharing agreements and regional travel surveys is essential for transportation planning activities.

Transit agencies, cities, and regions are taking a variety of approaches in integrating shared modes into the transportation system. One option is to pursue limited partnerships with TNCs or other Mobility-as-a-Service options, restricted to market segments that are difficult for transit agencies to serve. For example, the city of Boston is piloting a paratransit partnership that offers subsidized rides in Uber and Lyft vehicles for people who do not need assistance getting into and out of a vehicle. Another option is to substitute some low-ridership transit routes or services outright, perhaps subsidized by the public sector. One of the most established of these projects is in Pinellas County, Florida, where the Pinellas Suncoast Transit Authority's Direct Connect and TD Late Night programs subsidize Uber and taxi rides to designated bus stops from surrounding areas without public transit service.[13] Public transit agencies are also developing their own ridesourcing services using similar mobile ride requesting technologies. For example, the Alameda-Contra Costa Transit District is operating Flex, a shuttle service between bus stops within specified service zones that can be booked as little as 30 minutes in advance. In northeastern Illinois, only one transit agency currently has a relationship with a TNC: Metra selected Uber as its "Official Rideshare Partner" in December 2016 to market last mile services to customers while also generating non-fare revenue for the agency.[14] McHenry County is also exploring the use of TNCs as part of MCRide Dial-a-Ride.[15]

ON TO 2050 framework and strategies

Building off staff research on transit rider preferences, the needs of transit agencies, and the potential of new and emerging technologies, this strategy paper develops a framework of potential strategies for inclusion in ON TO 2050. The new plan should promote the modernization of the region's transit network by recommending increased funding for mass transit, which in turn would provide adequate resources to allow the transit agencies to focus on core strengths, ensure equitable access to all users, enter into smart partnerships with public

[13] Pinellas Suncoast Transit Authority Direct Connection Web Information, accessed July 2017, https://www.psta.net/riding-psta/direct-connect/.

[14] Metra, "Uber names Metra's official rideshare partner," December 14, 2016, https://metrarail.com/about-metra/newsroom/uber-named-metra%E2%80%99s-official-rideshare-partner.

[15] McRide Application for 5310 project funding to RTA, April 18, 2017, https://www.rtachicago.org/files/documents/plansandprograms/section5310/McHenry-County_McRide_TNC-Pilot.pdf.

and private entities, integrate land use planning, and coordinate across agencies. Together, these recommendations will help foster a culture of innovation among the region's Service Boards and public transportation stakeholders.

Increase funding for mass transit

The ON TO 2050 Financial Plan for Transportation identifies a substantial shortfall between the expenditures necessary to maintain the current state of good repair of the transportation system and the core revenues anticipated to be available throughout the planning period. As a result, the region will be unable to invest in additional enhancements to the system, for both the highway and transit networks. The initial policy recommendation in the ON TO 2050 financial plan includes new or expanded revenue sources that could be reasonably expected to be implemented over the planning horizon. Two of them, expanding the sales tax base and expanding priced parking, could allow the region to increase investment in transit modernization and innovation. Currently, revenue from a six-county sales tax is the primary source of local support for transit operations in the RTA service area. If current rates remained the same, expanding the sales tax base would generate more revenue for transit operations in northeastern Illinois. The recommendation to expand priced parking could also affect transit modernization and innovation. A growing body of research illustrates how free parking obscures the true cost of driving and thereby discourages transit, bike, or walking trips. Pricing more publicly owned parking spaces on streets and in municipally-owned lots and garages could provide revenue for local transportation improvements, such as innovative transit improvements, and also promote increased transit ridership.

Focus on transit's strengths

The region's transit agencies face a massive SOGR backlog and limited resources are expected to be available over the ON TO 2050 plan horizon. At the same time, they face numerous tradeoffs in providing service across broad geographic areas, times of day, and diverse travel markets while at the same time increasing ridership. To provide guidance on how to move forward, the new plan should recommend that the region's transit agencies focus limited funding on enhancements on mass transit's strengths: serving high-ridership bus and train routes and dense land uses. In these markets, high-capacity public transit can remain a competitive option compared to emerging forms of transportation, and policies to improve the frequency, reliability, speed, and connectivity of those transit services will likely have the greatest impact on mode share and land use through 2050.

It is important to note that some of these transit markets may not exist today but could exist in the future with appropriate coordination of land use polices and transportation investments. For example, developing Pace Pulse routes in suburban corridors with zoning for compact, mixed-use development may build a stronger ridership base and denser land uses over time, creating a positive feedback loop between denser development patterns and increased transit ridership.

Target investments to expand frequency, speed, and reliability

There are several mechanisms to promote this recommendation in ON TO 2050. At the policy level, the plan could recommend that major operational improvements, which in turn require significant upfront capital expenditures, be implemented only on high-ridership or congested routes. Building on past work by the region's Service Boards, ON TO 2050 should identify key arterial corridors which would be best suited for strategies like dedicated bus lanes, transit signal prioritization, or improved boarding (e.g., prepaid, level platform, or all-door boarding); it should also identify key congested intersections eligible for improvements like queue jump lanes. These improvements will dramatically improve customer experience and transit operations, and in order to maximize these benefits and allow transit agencies to provide more rides, additional improvements/projects supporting -SOGR-repair and capacity improvements to various support infrastructure such as bus garages, maintenance facilities, and electrical substations will be needed. This recommendation should be further incorporated into the program development process for suballocated federal funds like Congestion Mitigation and Air Quality Program (CMAQ), local Surface Transportation Program (STP), or CMAP's ongoing management of the Transportation Improvement Program (TIP).

Reevaluate existing services

At the policy level, ON TO 2050 could take a further step and recommend that transit agencies continue to reevaluate their services, perhaps with Unified Work Program (UWP) or State Planning and Research funding. In a future with new transportation options and constrained public resources, low ridership and infrequent routes may be easier to serve with alternative models such as demand response or flexible route transit, or even private Mobility-as-a-Service options. There are pros and cons to these approaches; it may reduce service accessibility or frequency for some riders while improving options for others. However, if these options reduced operating costs, transit agencies could instead redeploy those resources to bolster higher-ridership routes and create new high-frequency services. Reallocating scarce resources is often a difficult decision to make — and it is critical that the region ensure equitable access to transit services — but examples from across the country suggest that such an effort is possible. For example, the Houston region reimagined its longstanding bus route network in 2015, eliminating duplicative and circuitous routes to focus on more direct routes, faster services, and more frequent services.[16] In the Chicago region, the Pace/CTA North Shore Transit Coordination Plan [17] is an excellent example of a joint-agency reevaluation of existing routes to improve and coordinate bus service in a part of the region where Pace and CTA service areas overlap.

[16] METRO, System Reimagining Website Archived, accessed September 2017, http://www.ridemetro.org/Pages/Reimagining.aspx.

[17] Pace, North Shore Coordination Plan, accessed September 2017, http://pacebus.com/sub/initiatives/north_shore_2016.asp.

Even in the highest ridership corridors, transit only captures a fraction of the potential travel market. These corridors have grown around transit and may be due for an upgrade of service, which would allow transit to accommodate more trips. Reevaluating these corridors may reveal opportunities to create new express routes or improve nearby services. Some routes may be due for a major upgrade, as is being done with Caltrain in the San Francisco Bay area and Bus Rapid Transit in Cleveland. Caltrain is transforming its commuter rail line into a high-capacity, electrified transit system that integrates planned high-speed rail improvements.[18] Cleveland dedicated a full traffic land to create the HealthLine BRT, resulting in a 48 percent increase in ridership.[19] These projects build on successful corridors, and take transit to the next level resulting in changes to regional travel and land use. Significant capital investments like those in San Francisco and Cleveland are needed to reach regional transit goals.

Ensure equitable access

Public transportation plays an important role in providing access and mobility to populations that are not well served by the automobile, due to various factors including income and physical or mental ability. While new transportation technologies promise numerous benefits, they could have unintended consequences that place certain users or communities at a disadvantage.

Ensure access for all in implementing new transit technology

Policies that promote innovative, modern transit systems could affect equitable access to transit, due to personal technological sophistication or financial means. Technology-related recommendations in ON TO 2050 should ensure broad access of communities to innovative mobility services, for example through phased implementation of new technologies, interoperability with existing systems, and consideration of the unbanked. Policies such as fare capping, where transit is free once daily maximums are reached, can benefit low income groups that make more transfers and have difficulty affording bulk passes.[20]

Further, if technology-enabled private mobility providers begin to play a greater role in the region's transportation system, either as a complement or substitute to traditional transit services, it is imperative to ensure that all communities are able to participate in these new services. ON TO 2050 should recommend studying various strategies, such as incentives or requirements to provide services in low-income areas and to the disabled.

[18] Caltrain, "Caltrain Modernization Program," accessed September 2017, http://www.caltrain.com/projectsplans/CaltrainModernization/Modernization.html.

[19] Greater Cleveland Regional Transit Authority, "RTA's HealthLine — the world-class standard for BRT service," accessed September 2017, http://www.riderta.com/healthline/about.

[20] TransitCenter, "The Connection: Cap & Ride," August 2017, http://transitcenter.org/2017/08/15/capandride/.

Leverage innovations in bus service

ON TO 2050 should also focus on improving the bus system, whose riders have a lower than average income, as part of the overall effort to improve transportation equity. The bus routes of the region have great opportunity for improvement, and routes can be altered quickly and relatively inexpensively, in ways that are difficult or impossible for rail. Innovations in GPS, street design, traffic signals, automation, and power systems could have larger impacts on buses than rail. Dedicated bus lanes, while not a new technology, are being applied in new ways that bring rail levels of speed and service to many more people.

Promote housing affordability in transit-rich areas

Parts of the region with very strong bus and rail access — particularly rail transit lines — offer excellent service, but housing within walking distance of a rail station can be prohibitively expensive for many of the region's residents. The Travel Trends Snapshot identifies that low-income earners and people of color have longer-than-average commutes, reemphasizing the interplay between housing, jobs, and transportation access.[21]

CMAP can affect the transportation (inclusive of public transit) portion of this relationship in some ways. The agency conducts policy research, programming, and planning activities related to transportation, including the administration of the (CMAQ program, local STP (in conjunction with the City of Chicago and Councils of Mayors), Transportation Alternatives Program (TAP), and prioritization of major capital projects. [22] [23] [24] CMAP should research best practices on funding and project selection criteria so that transportation investment decisions take into consideration housing choice. Those practices could be used both in CMAP's programming and in project selection by other transportation agencies. Other housing funders, such as Illinois Housing Development Authority, counties, municipalities, non-profits, and philanthropic organizations, should be involved in creating such criteria, as they too could use them to direct funding programs. Research should consider the value of methods that reward jurisdictions that have reached numerical benchmarks (i.e. share of housing stock affordable to low- and moderate-income households), adopted preferred housing policies, or conducted housing planning. A potential model may be the Metropolitan Council in the Twin Cities, which uses a Housing Performance Score in its regional project solicitation (a blend of CMAQ, STP, and TAP funds).[25]

---

[21] Chicago Metropolitan Agency for Planning, "Travel Trends Snapshot," September 2016, http://www.cmap.illinois.gov/documents/10180/475314/FY17-0012%20Travel%20Trends%20Snapshot/340ac516-6fc7-4f0e-964e-40d84161c034.

[22] Chicago Metropolitan Agency for Planning, "Congestion Mitigation and Air Quality Improvement program," accessed September 2017, http://www.cmap.illinois.gov/mobility/strategic-investment/cmaq.

[23] Chicago Metropolitan Agency for Planning, "Surface Transportation Program," accessed September 2017, http://www.cmap.illinois.gov/about/involvement/committees/advisory-committees/council-of-mayors/surface-transportation-program.

[24] Chicago Metropolitan Agency for Planning, "Transportation Alternatives Program," accessed September 2017, http://www.cmap.illinois.gov/mobility/strategic-investment/transportation-alternatives.

[25] Metropolitan Council, Housing Performance Scores.

Balance tradeoffs between service efficiency and social equity

It is important to recognize that the potential recommendation to focus on transit's core markets could also have equity implications. For example, such a policy could reduce service during off-peak periods and for reverse commutes, which could disproportionately affect lower-income riders. Further, strategies such as the optimization of bus routes and stop spacing patterns for operational efficiencies could reduce geographic coverage of transit services, particularly in lower-density, suburban environments, which could have equity implications. ON TO 2050 should frankly acknowledge the tradeoffs that the Service Boards face in providing efficient, reliable products while serving a diverse set of transit markets, and call for all stakeholders to develop solutions to ensuring equitable access to transit services.

Serving low income and economically disconnected populations has historically been part of public transit's mandate, and should continue to be so going forward. The economically disconnected areas identified in the Inclusive Growth strategy paper[26] presently have better transit availability than other areas. Outside the City of Chicago, 81 percent of the population in economically disconnected areas have at least moderate transit availability compared to 50 percent outside economically disconnected areas.[27] Key recommendations in ON TO 2050 should be to prioritize an increase in transit availability for the highest-density portions of economically disconnected areas, particularly focusing on investments that improve access to jobs by providing faster and higher frequency service to job-rich areas.

Given that modernization requires money, increasing fares is a likely piece of upgrading service. At the same time, fare hikes fall most heavily on lower-income riders. Thus, another recommendation that could be considered is implementation of reduced fares for low-income individuals. The service boards currently have fare discounts or ride-free permits based on age, disability, and veteran status, with some income-based segmentation. Instead, a program could be designed to specifically help low-income individuals, such as the reduced fares or "lifeline" programs offered by TriMet in Portland, the San Francisco Municipal Transportation Agency, and others. Fares increases alone would be insufficient to fund future needs. Changes in fare structures could occur along with other funding changes such as sales tax or other revenue increases.

Equity will be a cross-cutting issue in ON TO 2050, and the plan's broader recommendations for transportation, land use, and economic development will help to promote inclusive growth across the region. Policies to support equitable access in the context of transit modernization will be complemented by strategies to promote jobs-housing balance, coordination across public agencies, reinvestment in existing communities, and affordable housing.

---

[26] Chicago Metropolitan Agency for Planning, "Inclusive Growth Strategy Paper," 2017, http://www.cmap.illinois.gov/onto2050/strategy-papers/inclusive-growth.

[27] Across the region this figure is 73 percent; within the City of Chicago, almost all residents have at least moderate transit availability, regardless of where they live.

Create smart partnerships

Many of the most important factors for transit success lie outside the direct control of transit agencies. Policies governing funding, land use, and roadways are all in the hands of other government bodies. While some improvements and new ideas will emerge from within transit agencies, many others will come through partnerships. Getting the most out of these partnerships will be critical to successful implementation and future innovation.

Develop new partnerships with the private sector

There are several opportunities to partner with the private sector, some of which are longstanding. For example, there is an extensive literature on contracting out transit services to private providers. In northeastern Illinois, many subcontractors are used to operate paratransit services and vehicle repairs. Also, employer-based incentives are often used to promote transit ridership. Recently, Seattle has seen significant increases in transit usage in part due to employer incentives such as transit pass subsidies, emergency rides home, flexible scheduling, and pre-tax spending.[28]

With emerging technologies such as TNCs or other Mobility-as-a-Service options, there are new opportunities to partner with the private sector. As public agencies, the Service Boards are accountable to the public and elected officials through board oversight, transparency measures, and other mechanisms — and corresponding accountability must also be defined for these new private options. More specifically, ON TO 2050 should recommend that the RTA establish a set of principles to guide future partnerships between public transportation agencies and new private services. These principles should outline key considerations such as operational performance standards, accountability procedures, equitable coverage and access to services, and transparency measures.

On the latter topic, transparency principles should exceed traditional public comment and meeting provisions to require TNCs to share some level of data as a condition of being allowed to operate. TNCs compile detailed information on travel behavior that could prove invaluable to transportation planning efforts. Public-sector data on transit arrival times, schedules, and fare structure could be invaluable to ensuring that private mobility services are seamlessly coordinated with traditional transit services.

Develop new partnerships with public agencies

Finally, mutually beneficial partnerships also extend to the relationship between transit agencies and other public agencies. ON TO 2050 should recommend greater coordination of transit services with highway agencies, as well as a greater priority given to transit in the development and implementation of highway projects. Relatively modest investments in strategies such as transit signal priority and queue jump lanes can result in substantial operational benefits for transit services. The region has recently seen successful examples of

[28] Commute Seattle, "Center City Commute Mode Split," accessed September 2017, https://commuteseattle.com/modesplit/.

closer integration of transit needs into a major highway project. For example, the Illinois Tollway is playing an instrumental part in transforming transit in the northwest suburbs by incorporating flex lanes for Pace buses, including park-n-ride lots and direct access ramps at some locations, into the reconstruction of I-90/Jane Addams Memorial Tollway. It is critical for roadway agencies to see these investments as a key part of improving mobility and to revise their permitting and design processes to expedite implementation of transit priority treatments.

ON TO 2050 should recommend the consolidation of non-fixed route transit services within and between counties. For example, McHenry County Department of Transportation has taken a leadership role in recent years by leading the consolidation of various dial-a-ride services into a single service, called MCRide, which not only serves persons with limited mobility but also provides on-demand transportation in an area with limited fixed route transit services. MCRide is operated by a private contractor in partnership with Pace, funded in part by federal Section 5310 funding. Initially the combination of three municipal services and one county service, MCRide now reaches eight municipalities, seven townships, transfer locations to Metra or Pace services, and one nursing home.

Finally, ON TO 2050 should recommend new approaches to local cost-sharing of bus services. Currently, some local governments and major private employers or other institutions subsidize the cost of bus routes in their areas. While this approach may be a fair allocation of operational costs, the transit agency still bears the capital costs of providing this service. Further, it is possible that the availability of local subsidies may distort the provision of local services away from transit markets and towards the availability of matching funds, potentially raising equity concerns in some areas. More research is needed to fully understand the public policy implications of local cost-sharing of bus routes.

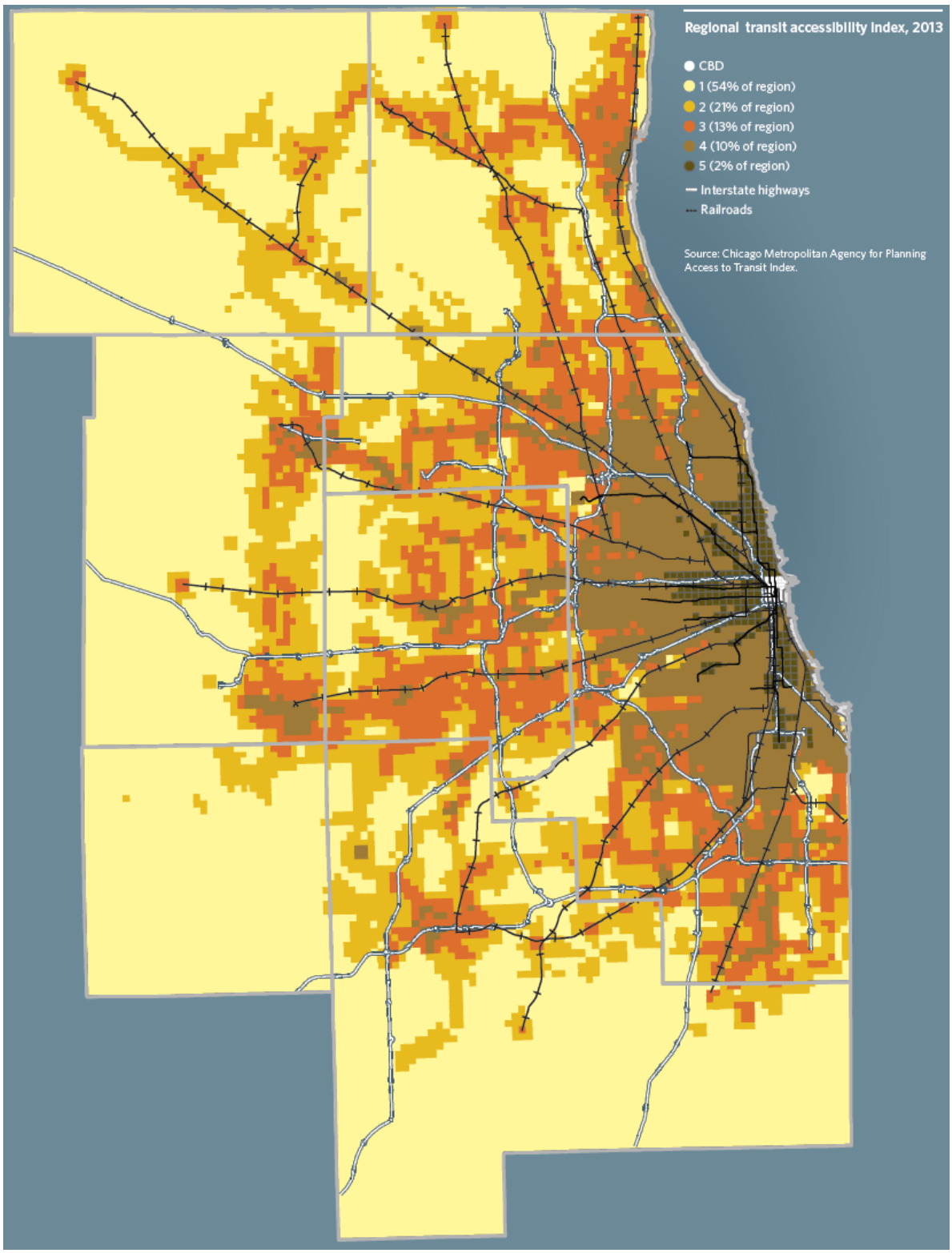
As described in more detail in the next section, transit services rely on a supportive land use context, which in turn is regulated by local governments. Therefore, municipalities or counties interested in higher-quality transit service should partner with transit agencies to enact land-use policies that enable transit services. These partnerships will help local governments set reasonable expectations for the level of transit service their communities can support.

Integrate land use planning

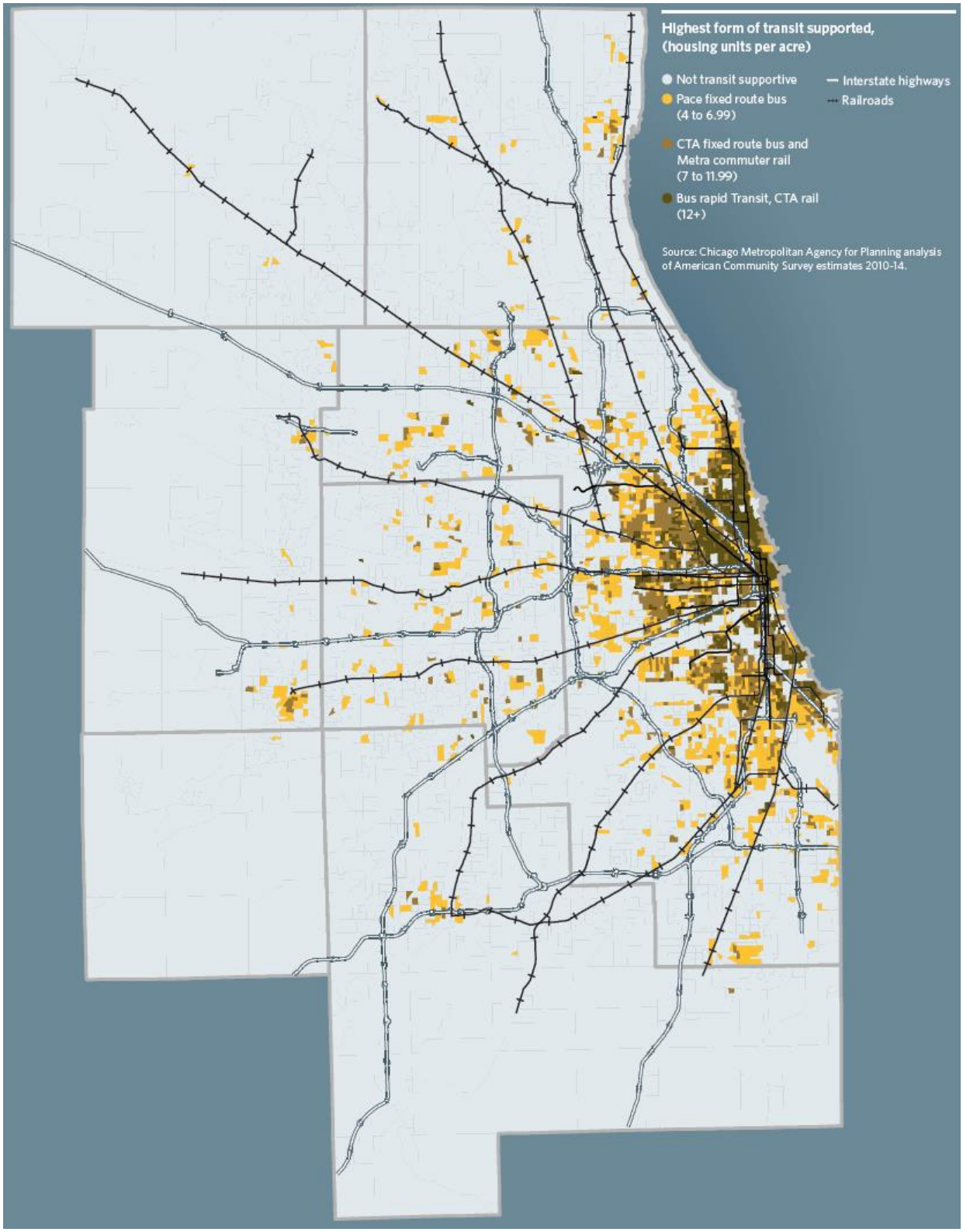
Planning and development decisions made by communities, developers, and individuals at the local level affect the region's overall mobility. Local land use decisions should focus on the interrelationship of transportation and land use, with an emphasis on development patterns that support the use of public transit. There are many opportunities for jurisdictions to collaboratively plan for land use integration to maximize the effectiveness of transit improvements and modernization.

Transit functions best when it serves dense, mixed-use locations that facilitate pedestrian access. Increasing density, in concert with urban design strategies to facilitate walking and biking, in prioritized areas near transit stations can create nodes that are more easily served by transit. The following maps show transit availability in the region and the transit supported by local housing density in the region. Current development patterns do not always match the transit being provided or the transit services desired by communities. More density makes for robust, attractive destinations — particularly for locations generating high levels of employment — and means more people can choose transit. Supporting transit investments in lower density areas can be difficult, because ridership is lower and resulting revenues to support service are low, as well. CMAP and partners should implement local and regional strategies to foster transit-supportive densities in areas where strong transit service is desired.

Regional transit accessibility index, 2013



Highest form of transit supported



Support transit-oriented land uses

There are several strategies to support transit-oriented developments. Zoning codes could be revised to permit higher densities, mixed uses on a single site, and designs that orient buildings to the street. They could also be revised to reduce or eliminate minimum parking requirements, which often act as a costly barrier to development or redevelopment, particularly in locations with less need for automobile travel. In fact, the City of Chicago revised its transit-oriented development ordinance in 2015 to relax off-street parking requirements and increase permitted densities in areas near rail stations.[29] Local governments can provide financial or tax incentives to developers who invest in supportive physical infrastructure like utilities or complete streets, perform environmental remediation, or help assemble parcels for redevelopment. From a design perspective, the growth of Mobility-as-a-Service options and other technological innovations over time may require better management of drop-off areas near transit stations. Through their control of rights-of-way on local streets, local governments can implement policies such as reserving prime drop-off areas for public transit connecting services, the expansion of "kiss-and-ride" drop-off areas, active management of on-street curb spaces and sidewalks, provision of bike lanes, and high-quality bike parking, and installing wayfinding and appropriate pavement markings to alleviate congestion near station entrances.

Identify opportunities for flexible design and adaptive reuse as part of local planning

Given the potential for shared mobility to substantially alter demand for retail and parking spaces, municipalities should encourage new development that can be used for multiple purposes or repurposed as space needs change. For example, the City of Denver requires the ground floor of standalone parking garages to be suitable for conversion to active non-parking use.[30] Local plans should identify opportunities to meet both short-term needs as well as long-term shifts and goals. The Route 59 Metra Station in Naperville offers one example of this approach, where parking lots were designed to facilitate phased-in, denser development over the long term. ON TO 2050 should recommend that CMAP, RTA, and other partners help identify best practices and provide technical assistance to communities seeking to plan for future increases in density, flexibility in uses, and other goals that can support transit and walkability over the long term.

Strengthen linkages between local governments and transit agencies

Proactive alignment of the region's municipalities and Service Boards increases opportunities for transit to succeed both now and in the future. This has been widely recognized for many

[29] Metropolitan Planning Council, "Chicago's 2015 TOD Ordinance," accessed September 2017, http://www.metroplanning.org/work/project/30/subpage/4?utm_source=%2ftod-ordinance&utm_medium=web&utm_campaign=redirect.

[30] Rusch, Emilie, "Denver developers have seen the future of parking, and it is no parking as all," Denver Post, October 2016, http://www.denverpost.com/2016/10/15/denver-developers-future-parking-self-driving-cars/.

years, but aligning land use and transit service decisions faces institutional challenges that require specific mechanisms for the overall strategy to succeed. ON TO 2050 should not only recommend that local governments coordinate with Service Boards in the early stages of planning and development processes, but also recommend processes, incentives, and disincentives to strengthen that cooperation.

Create incentives

Incentives could include greater consideration for funding opportunities, or enhanced transit services, in locations that have implemented transit-supportive land use policies. For example, recent rounds of the CMAQ program include considerations of transit-supportive land use — specifically permitted densities and implementation of innovative parking requirements — in the scoring process for applications for transit projects. CMAP and partners should strongly consider broadening this approach so that all sponsors applying for locally programmed funds, such as STP or CMAQ, are scored for transit-supportive land use. In other words, if a community is seeking funding for any type of project, for example, a bicycle trail or road reconstruction, the community would have higher priority for funding if it has appropriate comprehensive, transportation, or strategic plans along with supportive zoning or parking regulations.

Strengthen program management

Building a transit-supportive landscape happens one development at a time. In recognition of this fact, Pace offers to review site plans for large developments, but the service is underutilized. To strengthen this best practice, ON TO 2050 should recommend that communities, through their Council of Mayors, should engage Pace on development review for projects beyond a certain size threshold. The Planning Liaisons with each Council would be responsible for coordinating this review for their member communities.

ON TO 2050 should further recommend disincentives, such as discouraging expansion of fixed-route transit services into locations with inappropriate land use plans, zoning, and development regulations. Enacting a regional strategy including both incentives and disincentives, as described previously, would encourage local governments to plan for transit-supportive land uses in a more proactive manner, helping to create an environment in which transit can succeed.

Focus on employment locations

While transit-oriented development has been implemented in many places in the region, it has tended to focus on residential uses. By contrast, modeling by CMAP, as well as other research, suggests that employment near transit stations has a much stronger effect on ridership than locating households near transit stations. As a result, it is critical that local planning and zoning take this into account by encouraging more jobs to locate in transit-supportive areas. ON TO 2050 should recommend that municipalities as well as CMAP's Local Technical Assistance program emphasize land uses that provide employment opportunities near transit as part of planning and development code update projects. CMAP should also further explore the connection between employment access and transit supportiveness, providing ongoing

guidance to transportation implementers, municipalities, and other implementers to improve planning, investment, and development practices.

Coordinate across transit agencies

The region currently has three transit operating agencies connecting largely distinct markets. The result has been few and difficult connections across agencies — for example, there are only a handful of locations in the region that offer direct connections between CTA rail and Metra. The Service Boards have been successful in coordination of schedules and routes. For example, many Pace bus routes are designed for easy transfer to Metra and CTA rail lines. However, more progress is needed to maximize create a seamless travel experience.

Continue fare coordination

There has been progress on fare coordination in recent years through the Ventra system, which provides a platform for additional collaboration. By moving to a virtual account, payment is no longer tied to a physical transit card or cash. Riders benefit from the convenience of accessing all their transit accounts from a single location — often via smartphone — and Ventra's kiosks, phone app and website are all important locations for customers to manage their accounts. With the ongoing expansion to Divvy and ADA Paratransit, Ventra is taking an important step beyond core transit services. ON TO 2050 should recommend that more work be done to further technological and fare integration across agencies, while remaining accessible to the unbanked and limited means.

Rethink the ICE program

In addition to fare integration, ON TO 2050 should call for greater coordination of operations across agencies. The RTA's Innovation, Coordination, and Enhancement (ICE) program has provided more than $75 million since its establishment in 2008 to support various transit enhancements, including bus and train tracker services, real time signage, and the deployment of Ventra. Originally managed by the RTA as a competitive program, in recent years ICE funding has been apportioned to the Service Boards by formula. ON TO 2050 should recommend that the RTA return to a competitive regional process for the ICE program, thereby maximizing the use of these limited funds to projects that best coordinate transit services across agencies.

Next Steps

The policy framework and strategies presented in this report set the direction for transit modernization and innovation in CMAP's future work, including ON TO 2050. Along with the RTA's Strategic Plan, these recommendations will help insure that transit remains a critical part of the region's transportation system. CMAP expects to closely align work associated with this strategy paper with other relevant plan development tasks to create a cohesive approach to these issues in ON TO 2050. CMAP expects these recommendations to inform future strategy papers, snapshots, technical assistance projects, policy updates, research products, and data sharing.

CMAP will work with regional partners including transit agencies, Departments of Transportation, and elected officials that are critical to the success of maintaining and modernizing the transit system. Further discussions on the most effective way to continue regional collaboration will be essential as the agency continues to develop ON TO 2050.

Appendix: Resource group

In addition to literature research, a group of 18 transit industry professionals advised CMAP on this paper. This resource group was composed of academics, transit agencies, advocates, and consultants. In addition, CMAP discussed modernization with groups of experts from CTA, Metra, and Pace individually.

Category	Representative	Organization
Service Board + RTA staff	Peter Fahrenwald	RTA
	Gerry Tumbali	RTA
	Jennifer Henry	CTA
	Dave Kralik	Metra
	Dave Tomzik	Pace
Academic	Dr. P. S. Siraj	UIC UTC
	Dr. Joe Schwietermann	DePaul
Other	Jacky Grimshaw	CNT
	Colin Murphy	Shared Use Mobility Center
	Tim Frisbie	Shared Use Mobility Center
	Mike Healy	IDOT Office of Intermodal Project Implementation
	Yonah Freemark	MPC
	Tony Greep	FTA
	Kyle Whitehead	Active Transportation Alliance
Consultant	Joe Iacobucci	Sam Schwartz
	Erik Cempel	Cambridge Systematics
	Chris Kopp	HNTB

- Meeting #1 Kickoff – April 2016
    - Introduction to the project and the resource group, GO TO 2040 recap
    - Presentation of key terms and ideas
    - Outcome: Feedback/concurrence with direction

- Meeting #2 Customer and system needs – July 2016
    - Presentation from RTA on transit rider profile and needs analyses
    - Memo from CMAP staff summarizing interviews with Service Boards and literature review of transit rider needs
    - Outcome: Definition of the major factors impacting demand for transit

- Agency interviews – August/ September 2016
    - Schedule interviews with transit agency personnel to discuss factors affecting agency decision-making on transit technology, operational strategies, and customer amenities. This will cover current initiatives as well as the merits and drawbacks of potential initiatives.

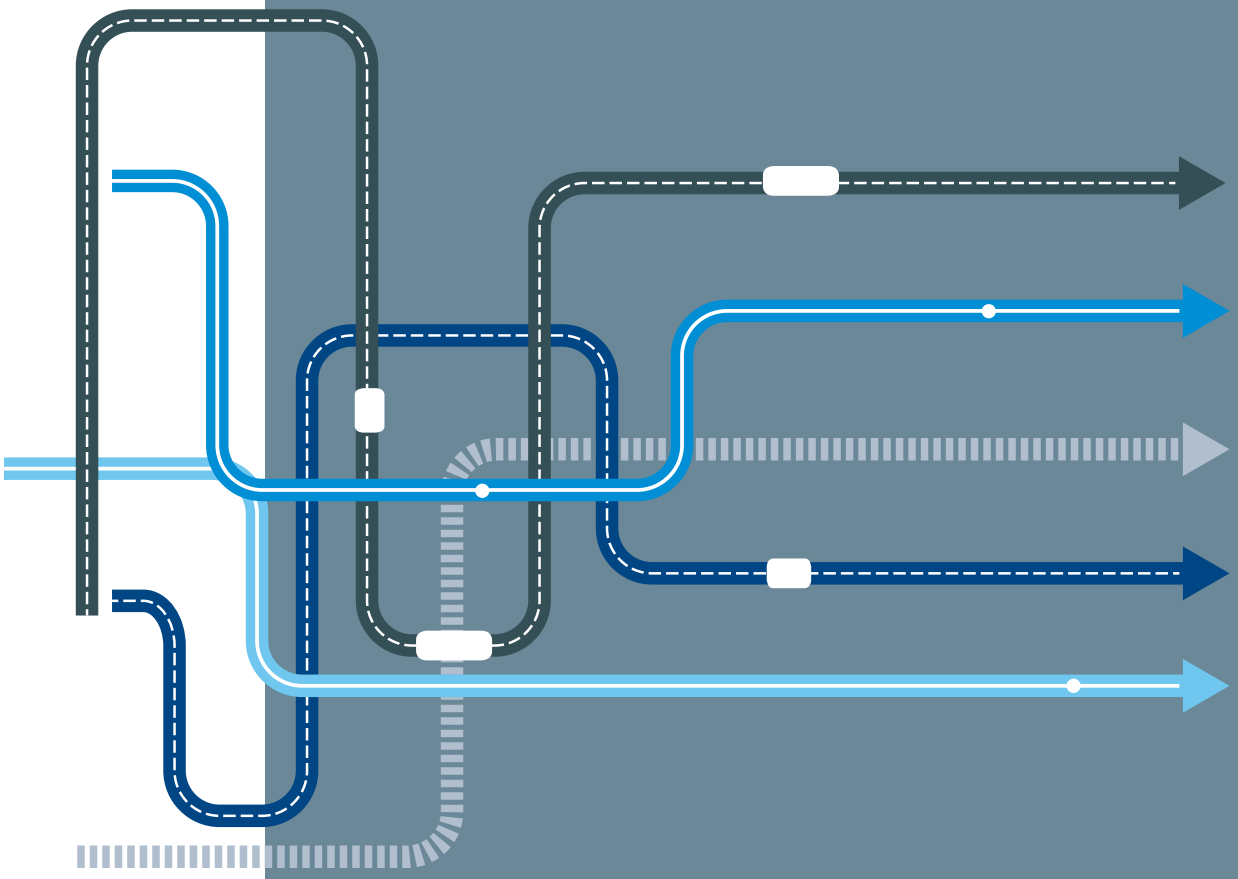
- Meeting #3 Operational strategies – November 2016
    - Discussed common themes in conversations with Service Boards
    - Presentations from Service Boards about challenges and opportunities to modernize.
    - Summarize strategies in a short document including initial identification of barriers to implementing strategies.
    - Outcome: List of operational strategies to be assessed in the strategy paper

233 South Wacker Drive, Suite 800
Chicago, Illinois 60606
312-454-0400
ONTO2050@cmap.illinois.gov

www.cmap.illinois.gov

The Chicago Metropolitan Agency for Planning (CMAP) is our region's comprehensive planning organization. The agency and its partners are developing ON TO 2050, a new comprehensive regional plan to help the seven counties and 284 communities of northeastern Illinois implement strategies that address transportation, housing, economic development, open space, the environment, and other quality-of-life issues. See **www.cmap.illinois.gov** for more information.

ON TO 2050 strategy papers will explore potential new topics or refinements to existing GO TO 2040 recommendations. These documents and data-driven snapshot reports will define further research needs as the plan is being developed prior to adoption in October 2018.



FY18-0050 | 2017