



Introduction

Increasingly in the digital age, user experience matters as it becomes easier to both create and analyze feedback loops between service providers and customers. More Angelenos than ever before have access to new transportation modes and on-demand options enabled through better connectivity, smartphones, and real-time data. This creates competition between modes for some customers while leaving others behind. Meanwhile, not all Angelenos are seeing the benefits of an improved mobility experience or more choice in their daily lives.

The City of Los Angeles Department of Transportation (LADOT) has already started to embrace new ways to collect input on the conditions of infrastructure and quality of service. However, there is still more to be done to ensure that future decisions on services and infrastructure investments reflect quantifiable need as resources are limited. It is important to bring the voice of the customer into all areas of department as a way to track and respond to the expectations, perceptions, and aversions of Angelenos traveling throughout the city.

Transportation Happiness is the idea that the experience of travel is a critical element to the success of a mode — public or private, motorized or nonmotorized — in an increasingly competitive mobility market and that all Angelenos should have a good user experience, regardless of how they travel. A recommendation of LADOT's transportation technology strategy, *Urban Mobility in a Digital Age* (adopted 2016), Transportation Happiness requires the collection of customer feedback

as key indicator in understanding how a travel mode is meeting basic needs while also providing a common level of care.¹ Guided by the core values outlined in the Mobility Bill of Rights, Transportation Happiness is both a quantitative and qualitative means of understanding what it is like to move around Los Angeles, regardless of mode.

This is a guide to the first draft of the Mobility Bill of Rights and Transportation Happiness Metric. It is intended as a starting point to enable LADOT to establish a baseline understanding of the user experience to be evaluated regularly and incorporated into the regular operations of the department. Outlined herein is a preliminary approach to test this framework for further improvement and expansion across all modes citywide.

The Process

The Mobility Bill of Rights and Transportation Happiness Metric are a culmination of a broad literature review and two targeted workshops convened in Fall 2017. The first workshop invited representatives of diverse interest groups in the mobility space (such as bicycle advocates, taxi interests, and bus operators) to talk through the fundamental needs of the various customers who use the public right-of-way to move around Los Angeles. This conversation informed the development of the five cross-cutting core principles; universal ideas that apply to all system users regardless of mode.

¹ While not all modes require a transaction or payment, in the context of this document, we are referring to all system users as customers.

DIAGRAM 1: THE PROCESS AT-A-GLANCE



The second workshop invited LADOT and other department staff who use data in their daily work functions to select the Key Performance Indicators (KPIs) — a quantifiable measure to evaluate the success in meeting the objectives of the Mobility Bill of Rights. Staff identified existing data sources that could be used to measure those KPIs and outlined future data needs where there were gaps. This conversation informed the development of the high level KPIs outlined herein as a starting point in measuring mobility experience in LA. Diagram 1 outlines the process and schedule.

This guide has been developed as a starting point to test the Mobility of Rights and Transportation Happiness Metric as defined herein for further development.

Mobility Bill of Rights

The Mobility Bill of Rights outlines the key values of the user experience and aspirations by LADOT to support a safe, equitable, and flexible mobility system across Los Angeles: Accessibility, Reliability, Safety & Comfort, Culture & Community, and Equity & Transparency. These five fundamental values start from the perspective of the system user or customer. They are high-level and are intended to resonate with all people traveling within the public right-of-way regardless of mode (walking, biking, traveling by car or transit), age, ability, wealth, race, gender, or any other personal circumstance or sense of identity.

The Mobility Bill of Rights aligns to the guiding priorities of the LADOT Strategic Plan (safety; livability and sustainability; a responsive, customer-service oriented, and effective department) and the Mobility Plan 2035 (safety first; improved access for all; world-class infrastructure; collaboration and communication; and clean environments and healthy communities). In fact, The Bill of Rights is intended to translate these priorities into a customer-centric perspective, a critical component of understanding as LADOT works to create and support a better mobility experience for all.

The Mobility Bill of Rights is a draft to be tested through application and ongoing evaluation. There is value in validating these ideas with a broader audience and applying them to mobility user groups. This is the initial

vision for the desired future state of transportation and mobility in Los Angeles, from the perspective of the system users and customers. From here, LADOT can begin benchmarking today’s experience for comparison in the future.

Mobility Bill of Rights

ACCESSIBILITY

[Freedom to Get Around] I have the flexibility to select among safe, easy-to-understand, and universally-designed options to help me get to where I need to be in a timely manner.

RELIABILITY

[Freedom from Disruptions] I can get where I need to go, when I need to go, with seamless infrastructure and responsive services, whether on my daily commute or on a spontaneous trip.

SAFETY & COMFORT

[Freedom from Harm] I can enjoy my trip free from harassment and harm, using a safe, comfortable, and intuitive system.

CULTURE & COMMUNITY

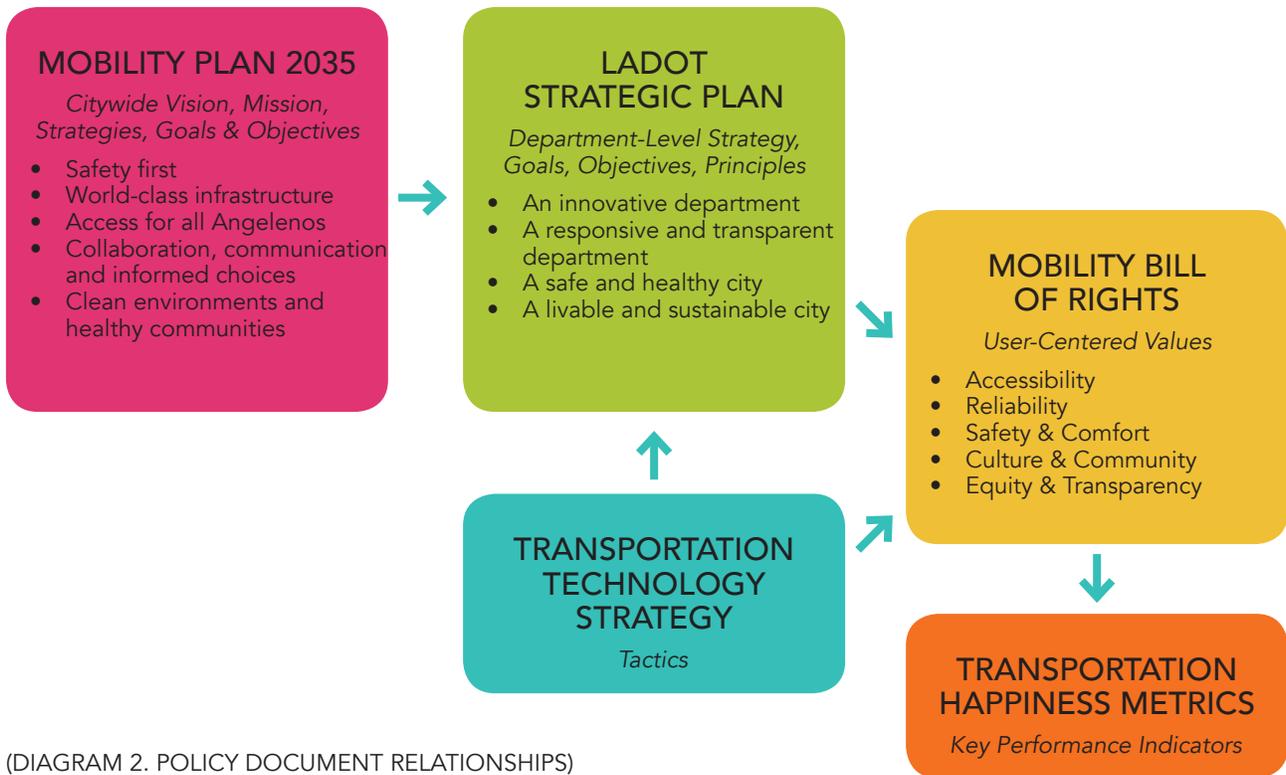
[Freedom to Connect] I feel connected to my neighborhood and can celebrate our city’s cultural diversity and unique places.

EQUITY & TRANSPARENCY

[Freedom from Exclusion] I can rely on LADOT to respect and empower communities through transparent decision-making and clear operations, to invest equitably, and to avoid disproportionate impact.

Transportation Happiness Metric

Delving deeper into the core values outlined above, the Transportation Happiness Metric includes a series of KPIs to quantify the user experience. These KPIs are not intended to supersede or replace existing performance metrics for service, many of which are well-established, regulated, and routinely captured by LADOT. Rather,



(DIAGRAM 2. POLICY DOCUMENT RELATIONSHIPS)

this is intended to be a complementary as a tool that captures the voice of the customer and evaluates the perspective of a traveler across all mode options in Los Angeles. Each core value has several high-level KPIs outlined for the Transportation Happiness Metric. The appendix includes a preliminary breakdown of specific KPIs by each mode as there are different attributes to be understood across mode.

1. ACCESSIBILITY

Accessibility is a fundamental attribute to transportation experience; if something is not available to use, then there is simply no opportunity to experience it. In this case, accessibility is more broadly defined, going beyond just availability, to include factors relating to the ease of use, universal design, and safety. It is important for Angelenos to have the flexibility to move around the city when they need to in a timely fashion. Accessibility is less subjective than some of the other principles and can be measured in terms of counts of services and other system attributes. The following KPIs are proposed for accessibility:

- 1.1 Infrastructure/service is contiguous and regularly available.
- 1.2 Infrastructure/service can be accessed quickly.
- 1.3 Infrastructure/service is ADA-compliant or follows

principles of universal design.

- 1.4 Real-time information about the service or status of the infrastructure is available.
- 1.5 Services/modes span a range of costs, with viable, high-quality options at all price points citywide.

2. RELIABILITY

Reliability is another critical attribute; if a mode is not dependable, it will not offer a positive user experience. If people have the option to choose something more reliable, they may choose that mode over another, and not all Angelenos have the privilege of that choice. As a principle, reliability is about knowing you can travel to where you need to go, when you need to go — it ensures that Angelenos can make it to work on time and plan their lives without the hassle of disruption during their trip. As a result, infrastructure and services need to be seamless and convenient. Reliability should apply not only to one's daily commute, which most likely follows a regular schedule or routine, but should also support spontaneous trips. The following KPIs are proposed for reliability:

- 2.1 Infrastructure/service performance is consistent.
- 2.2 Travel time is consistent.
- 2.3 Mode options and flexibility exist where I am and where I need to go.

3. SAFETY & COMFORT

Safety & Comfort are important to transportation happiness because they are fundamental to our overall well-being. Some aspects of this principle are subjective and about perception: a mode may be safe, but if you do not feel safe you will not enjoy your travel experience. Therefore, it is important to understand directly quantifiable attributes of Safety & Comfort such as the conditions of the infrastructure and ongoing maintenance of a service, as well as more qualitative data captured in customer feedback. This may require additional data gathering as the City of Los Angeles may not have any existing mechanisms in place to capture this data (see the Further Considerations section later in this guide). The following KPIs are proposed for Safety & Comfort:

- 3.1 Infrastructure/service provides protections for my physical safety and freedom from harassment.
- 3.2 Infrastructure/service provides protections that ensure my personal and digital security.
- 3.3 Infrastructure/service is in good condition and well-maintained.
- 3.4 Infrastructure/service is clean.
- 3.5 Infrastructure/service does not detract from quality of life (noise, temperature, smell).

4. CULTURE & COMMUNITY

Culture & Community is a more qualitative expression of the user experience as the feedback may be more subjective and specific to the different modes available. However, at its foundation is an expectation that transportation happiness must account for a degree of civility and inclusion in our transportation system, where every member of our community is treated respectfully and would consequently recommend the mode to others. These KPIs are intended to understand how people interact with each other through various modes and perceive their city as a result of their experience. The following KPIs are proposed for Culture & Community:

- 4.1 People using the transportation system are treated with respect and inclusiveness.
- 4.2 Customer service is consistently high quality.
- 4.3 System/service achieves a high overall “net promoter” score (i.e., “I would recommend this to others”).
- 4.4 Infrastructure/service is regularly assessed and improved.

- 4.5 Public spaces encountered while using infrastructure/services are high quality.

5. EQUITY & TRANSPARENCY

Equity & Transparency relates directly to the user experience with LADOT specifically as a public agency. It is important to understand perceptions of how LADOT is managing its operations and evaluate feedback so it can ensure that the public feels that services or improvements to infrastructure are equitable. LADOT has also focused on enhancing its efforts to bring community members to the table as part of decision-making processes and it is important to measure how this is operationalized throughout the city. This is a cornerstone principle to define how LADOT services the city, and perhaps the hardest to measure. Issues like social inclusion, community empowerment, and local capacity-building are critical components, and qualitative research will likely be necessary to fully evaluate whether this is improving over time. To start, the following KPIs are proposed for Equity & Transparency:

- 5.1 LADOT regularly shares with the public, in plain terms and multiple languages, its goals, progress, and status of investments in infrastructure and services.
- 5.2 LADOT engages with all communities to build local capacity to articulate and advocate for social inclusion, transportation needs, and long-term community goals.
- 5.3 Infrastructure/service investments are prioritized for areas with vulnerable populations, defined by the City of Los Angeles Health Atlas.

The Mobility Bill of Rights defines a human-centered commitment by LADOT to provide quality infrastructure and services to all Angelenos and the Transportation Happiness Metric provide a framework to measure progress. There are a variety of existing data resources already available through LADOT, the City of Los Angeles Open Data Portal, and other departmental data resources. For instance, the CleanStat program already provides a routinely updated evaluation of street cleanliness by block segment for all of Los Angeles. Wherever possible, LADOT should leverage existing resources to quantify and evaluate Transportation Happiness. More recommendations for how to put these ideas into action follow in the next sections of this guide.

Transportation Happiness Metrics At-A-Glance

ACCESSIBILITY	RELIABILITY	SAFETY & COMFORT	CULTURE & COMMUNITY	EQUITY & TRANSPARENCY
1.1 Infrastructure/service is contiguous and regularly available.	2.1 Infrastructure/service performance is consistent.	3.1 Infrastructure/service provides protections for my physical safety and freedom from harassment.	4.1 People using the transportation system are treated with respect and inclusiveness.	5.1 LADOT regularly shares with the public, in plain terms and multiple languages, its goals, progress, and status of investments in infrastructure and services.
1.2 Infrastructure/service can be accessed quickly.	2.2 Travel time is consistent.	3.2 Infrastructure/service provides protections that ensure my personal and digital security.	4.2 Customer service is consistently high quality.	5.2 LADOT engages with all communities to build local capacity to articulate and advocate for social inclusion, transportation needs, and long-term community goals.
1.3 Infrastructure/service is ADA-compliant or follows principles of universal design.	2.3 Modal redundancy and flexibility exist.	3.3 Infrastructure/service is in good condition and well-maintained.	4.3 System/service achieves a high overall "net promoter" score (i.e., "I would recommend this to others").	5.3 Infrastructure/service investments are prioritized for areas with have vulnerable populations, defined by the City of LA Health Atlas.
1.4 Real-time information about the service or status of the infrastructure is available.		3.4 Infrastructure/service is clean.	4.4 Infrastructure/service is regularly assessed and improved.	
1.5 Services/modes span a range of costs, with viable, high-quality options at all price points citywide.		3.5 Infrastructure/service does not detract from quality of life (noise, temperature, smell).	4.5 Public spaces encountered while using infrastructure/services are high quality.	

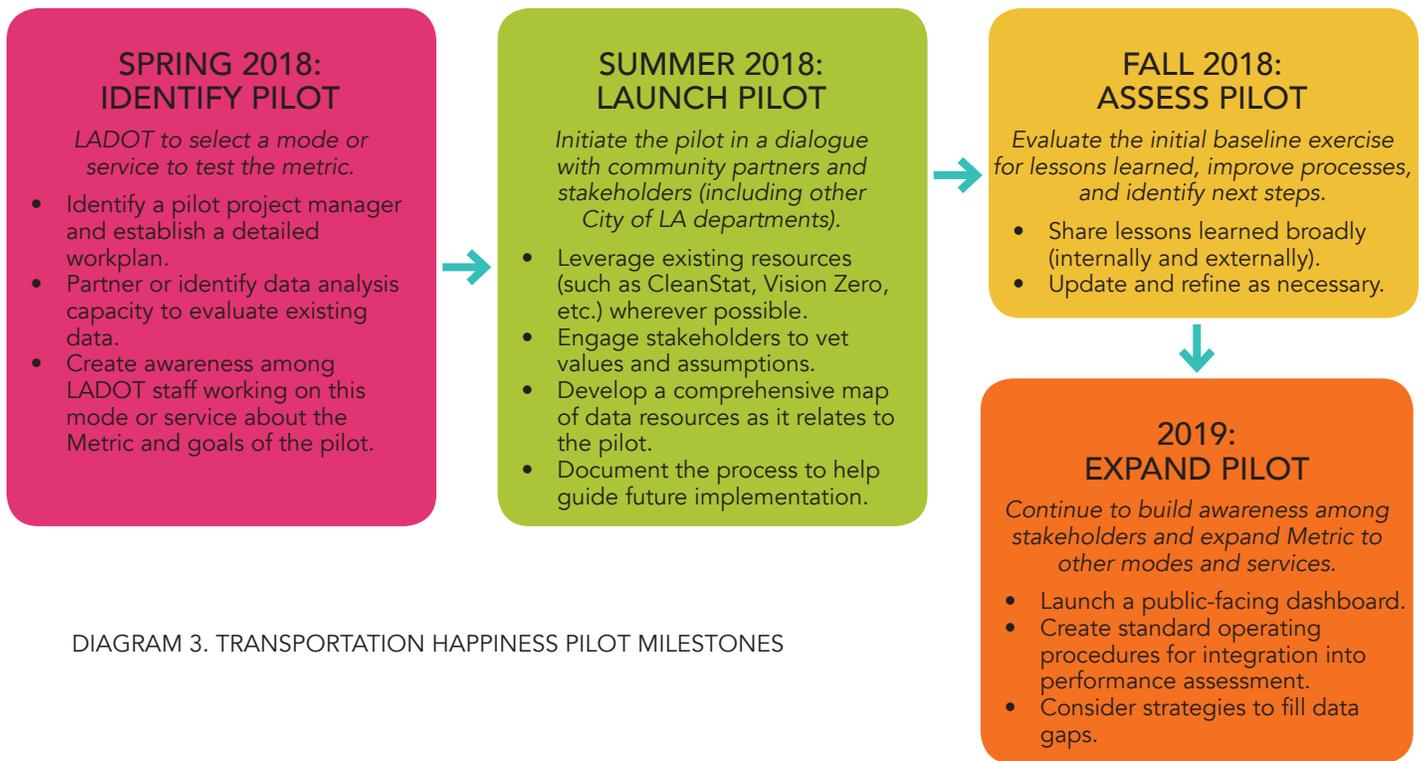


DIAGRAM 3. TRANSPORTATION HAPPINESS PILOT MILESTONES

Piloting Transportation Happiness

A pilot is an opportunity to explore how understanding customer experience can help LADOT identify ways to improve service delivery by providing critical feedback to the department. As mentioned above, there are some universal or all-mode KPIs for Transportation Happiness while there are others that must be specifically tailored to each mode. Sidewalk conditions, for example, may be important to pedestrians and transit users, but less relevant to cyclists and drivers. Outlined in the Appendix is a more detailed matrix of the different mode KPIs as a proposed starting point. In addition, workshop participants and staff that have highlighted the existing data gaps that may impede the full-scale deployment of this metric citywide. For instance, among some datasets there is inconsistent geographic coverage, varying depth and breadth of information, as well as mixed levels of confidence in data quality and accuracy. In some cases, third party data could fill these gaps, if available. When rolling out the Transportation Happiness Metric, it is important to consider where those data gaps might exist as it may present some initial challenges to establishing a reliable baseline for Los Angeles. Nevertheless, it is important to start somewhere and piloting the metric is a great way to capture some early lessons learned while defining opportunities for improvement in other data efforts underway by LADOT.

It is recommended that LADOT pilot this metric with one mode of travel as a starting point. Because of existing regulations and data reporting requirements that already exist, taxis or LADOT transit are two prime opportunities for consideration. Additional opportunities could extend to testing the metric with new modes being piloted by LADOT such as microtransit. In this case, LADOT could work with its partners to capture all of the necessary data to support tracking the Transportation Happiness Metric, which could even be incorporated as a performance requirement in the supporting contract(s). The goals of a pilot include:

- Test the assumptions and vet the Mobility Bill of Rights and Transportation Happiness Metric in a real-world application.
- Create awareness among LADOT staff and public stakeholders about the Mobility Bill of Rights and Transportation Happiness Metric.
- Align with TransStat process to avoid duplication and coordinate metrics where possible.
- Identify opportunities for improvement of the Transportation Happiness Metric and the supporting data.

Outlined above (Diagram 3) is a high-level milestone schedule and key considerations as next steps for consideration when testing this initial metric.

Means & Methods for Data Collection

The pilot of the Transportation Happiness Metric is intended to build off of the existing data that LADOT has available. It is also an opportunity to look ahead at what other data needs the department may have to understand user experience. The department has access to some data through the LADOT data inventory, City of Los Angeles Open Data Portal, City of Los Angeles GeoHub and other city department data resources. Listed below are a few of the possible means for additional data collection:

- Customer surveys (in-person, online, paper-based);
- Anonymized smart city sensors (attached to infrastructure or vehicles moving around the city);
- Third-party private sector data resources (other mobility providers, analytics platforms, cellphone location data, taxi data, Google Waze data, etc.);
- Other agency data (other transport service providers, other city departments such as Public Works and City Planning, bikeshare data, etc.);
- Academic research data (inventories of assets, community profiles, etc.).

In some cases there are discrete applications of these methods already available within Los Angeles but they may not be comprehensive in their coverage or regular in terms of frequency of data collection. As LADOT considers piloting the Transportation Happiness Metric, there may be opportunities to engage partners in data sharing to enhance the quality of available data for experimentation.

Conclusion

This guide is the first step to exploring how LADOT will begin measuring user experience across all modes of travel in Los Angeles. Creating a critical feedback loop with that gives voice to the customer or mobility system user that can help inform decision-making about department responsiveness, physical infrastructure, public transit services, or the regulation of transportation services. It is recommended that LADOT test the initial key performance indicators outlined herein and continue to build on the Transportation Happiness Metric as its understanding and data capacity grow. With a commitment to the Mobility Bill of Rights, all Angelenos will benefit from a better experience, regardless of their travel mode, who they are, where they live, what means they have, or when they need to travel.

Additional Indicators for Future Consideration

There are additional indicators that could be part of the Transportation Happiness Metric in the future, as tools to automate data capture and streamline data collection and analysis become viable and available to LADOT. The intent of this first iteration of the Metric is to provide a baseline, identify the gaps in the data, and to test the assumptions of what is measured and how. However, there is a plenitude of potential indicators that could be used to measure transportation happiness across modes or specific to particular modes in the transportation system.

ACCESSIBILITY	RELIABILITY	SAFETY & COMFORT	CULTURE & COMMUNITY	EQUITY & TRANSPARENCY
<ul style="list-style-type: none"> • Vehicle availability • Transit availability • ADA accessibility • Facilities/infrastructure availability • Affordability • Payment technology • Access continuity throughout the trip 	<ul style="list-style-type: none"> • Change in travel time from day-to-day • Accuracy of information used to make travel decisions • Accessibility of information to make travel decisions • Integration - visual clutter and consolidation across modes and operators • Wayfinding • Legibility • On-time arrival versus synchronization • Flexibility and spontaneity 	<ul style="list-style-type: none"> • Safety • Security • Noise • Indoor temperature • Outdoor temperature • Smells • Stress • Cleanliness/litter • Landscaping/greenery • Shade • Amenities such as benches, bus shelters, etc. 	<ul style="list-style-type: none"> • Street as a friendly space • Street as a gathering space • Street as an interactive space • Street as a place that fosters connections • Street as a space to serve communities • Street as a place 	<ul style="list-style-type: none"> • Access to jobs/schools/healthcare by mode • Diversity of ridership across modes (by income, geography, etc.) • Passive and active engagement with LADOT (social media channels, web visits, public comments, survey responses, etc.)

NEXT STEPS:

ADD AN APPENDIX WITH THE MORE
DETAILED BY-MODE BREAKDOWN OF
THE RECOMMENDED KPIs