

Attachment A: Detailed Observations and Lessons Learned by Focus Area

Operations

Observation	Lessons Learned
<p>Paris relied on thousands of temporary workers to fulfill their workforce needs for staff at stations, bus operators, etc.</p> <p>One transportation provider re-deployed their non-frontline staff and their families to fulfill their temporary workforce needs for staff at stations, and any other in the field information support.</p>	<p>Metro has over 2,000 non-frontline staff that already have a baseline level of familiarity with the transit network and the region. These staff could be temporarily assigned to public-facing roles during the Games.</p> <p>If temporary workers are hired, Metro needs to be prepared to train these staff as they will have no experience with the local context or Games-specific rules and regulations.</p>
<p>Paris was able to accommodate surges in ridership during the Games easily due to their robust network and high capacity, with trains running every two to five minutes all day. This was helped by the high amount of redundant infrastructure present on the network which helped to mitigate the impacts of disruptions and keep service operating. Excess capacity was available because the Games took place during the summer vacation period in France.</p>	<p>Metro should prioritize projects that improve the frequency and reliability of our bus and rail network for the Games and beyond in order to improve the customer experience. In addition, Metro should engage in contingency planning to maximize preparedness in the event of service breakdown.</p>
<p>Security perimeters and personnel impacted transit operations. Some stations were closed, buses were unexpectedly detoured, and police vehicles frequently blocked bike and bus lanes. This led to confusion and required agency staff to adjust their plans repeatedly. In addition, the closure of a series of three stations through the heart of Paris, along with associated security perimeters required bus routes to be truncated and maintenance of way personnel to be stationed remotely to ensure quick response to infrastructure issues.</p>	<p>Coordination, relationship-building, and clear governance between transport and security teams is important to ensure a seamless experience for 2028.</p>

<p>Supplemental bus service provided additional transit capacity but was clearly less central to the mobility strategy in Paris than it will be in LA. Since a rail option was almost always available, most chose to use the train to reach key destinations.</p>	<p>Since supplemental bus service will be a centerpiece of our mobility planning for 2028, Metro will need to make the bus experience as easy, safe, and smooth as possible in order to move people efficiently. Ensuring adequate capacity and throughput, especially through the provision of well-designed and enforced dedicated bus lanes (both temporary and permanent) will be critical both for Games transport and for other key transit lines.</p>
<p>The organizing committee asked RATP (the largest Paris transit operator) to provide additional buses and operators in order to support Paris 2024’s bus network for athletes. RATP had to work to extend service because events ended later than originally planned.</p>	<p>Metro needs to be prepared to pivot quickly based on evolving conditions. Expectations and conditions related to these possible scenarios should be negotiated and documented with LA28 before the Games.</p>
<p>Paris set up a unified transport command center for the Games, and work was done ahead of time to familiarize the different partner agencies in Paris so that they could work together more seamlessly.</p>	<p>Members of the GME and other regional transit agencies should plan to engage in similar levels of collaboration leading up to the 2028 Games.</p>
<p>Several key light rail lines in Paris operate with full signal preemption in order to maintain reliability while running at street level.</p>	<p>Metro should continue to pursue the implementation of speed and reliability improvements to the A and E lines (identified in the MCP) in coordination with local municipalities ahead of the 2028 Games. This will speed up service, facilitate higher train frequencies, increase capacity, and reduce travel time variability for riders.</p>
<p>The Olympic Route Network of dedicated lanes in Paris was generally managed effectively, with high levels of adherence by motorists. Paris plans to keep some of the signs and technology installed for lane management after the Games to convert some road segments to carpool lanes.</p>	<p>Metro should coordinate with Caltrans and other GME partners to ensure that implementation of the Games Route Network in Southern California is successful and advocate for its use by spectator and workforce transit as well as regular public transit operating during the Games.</p>
<p>The regional transport agency constructed temporary bus depots six months before the Games and are</p>	<p>Metro should identify necessary operational plans and required property for enhanced transit service by the end of 2025.</p>

scheduled for decommissioning by the end of 2024	
There were more than 150 daily transit service disruptions. Three times a day there were daily report outs by all transit agency departments to capture needed changes in messaging, service, and troubleshooting.	Real-time customer updates are critical for success as well as having personnel in the field that can quickly make decisions.
All bus lanes are shared bus/bike lanes. There was a significant amount of temporary bike parking for private bikes and bikeshare.	Curb-protected bus/bike lanes can be effective, particularly where street widths are limited. The GME should work closely together to ensure integrated planning for all modes.

Safety and Security

Observation	Lessons Learned
Scenario-based contingency planning for security incidents was vital. When the sabotage attack on the French high speed rail network occurred, the pre-planning work and exercises helped to reduce confusion. Other scenarios were mapped out for incidents ranging from a medical emergency to a major attack.	Metro should engage in contingency planning exercises with all partners ahead of 2028, including tabletop rehearsals and drills.
Law enforcement and security duties were shared among different agencies, and they did not directly interact with one another. Some resources were brought in from different areas of France that had limited knowledge of Paris or languages other than French. Their deployment would vary each day, resulting in a lack of consistency and a missed opportunity to improve through increased familiarity with a given location.	As Metro prepares to increase security staffing for the Games, consideration should be given to how to ensure adequate training on key information such as the transit operations plan and using tools to interact with riders that do not speak English.
Law enforcement and volunteers were rarely seen onboard trains but were frequently deployed in stations and around venues. The lack of staffing in some areas meant that spectators could not ask for help as easily if needed.	Metro should consider how to distribute security and customer service resources (i.e, ambassadors) in order to maximize coverage and minimize response times. Visible and consistent deployment will improve outcomes.

<p>Metro staff frequently remarked that they felt safe on the rail system in Paris at all hours of the day and night, with only a few exceptions. There were relatively few visible instances of crime and people generally were respectful of others.</p>	<p>Continued priority of safety for existing riders will benefit Games attendees. Specifically, lighting was a significant factor in the perception of safety. Lighting projects are under development for both inside the rail and bus system as well as inside the stations.</p>
<p>The experience on the bus was not always the same as on the rail system. One staffer felt less safe on the bus when the operator made repeated service disruption related announcements in French and there was no mechanism onboard for translation.</p>	<p>Multilingual translation for service disruptions is important on the bus and rail system.</p>
<p>The transit agency posted signage of AI video surveillance at stations.</p>	<p>Metro should continue to pilot technology enhancements to safety and security.</p>

Customer Experience

Observation	Lessons Learned
<p>The data and technology footprint of the Games was fragmented. There were multiple official apps with transportation information, and the user experience was suboptimal. Most opted to use third party apps like Google Maps instead, but they did not always display up to date information about security perimeters and road closures.</p>	<p>Metro should include:</p> <ul style="list-style-type: none"> • Data standards for GME agencies providing open data to third party apps such as GTFS, including more robust real-time data that can show bus detours. • A single source of truth for transportation data such as schedules, GIS files, etc. • Business logic for how users should be routed in trip planners for efficiency and safety • Geofences to manage congestion, pick up and drop off locations, and micromobility parking near venues and security perimeters • Early and frequent engagement with third party app developers. • Working towards app consolidation wherever possible to avoid a fragmented user experience.

<p>Customer information was frequently updated and available through a variety of channels and in multiple languages. Agencies closely monitored the time between when an incident occurred and when customers at different levels were notified (those directly impacted, others riding the system, etc.).</p>	<p>Metro should prepare to augment its staffing for dissemination of service alerts and other critical information. Staff should be on-duty throughout the service day.</p>
<p>Wayfinding signage is critical to the customer experience. Paris used temporary materials with a consistent look and feel to provide guidance to spectators. For example, line diagrams on trains had special markings for stations that were close to venues using a consistent shade of pink. People became accustomed to looking for pink signs when traveling to Games sites.</p> <p>Transit stations near large venues where long queues were expected had overhead signage giving estimated wait times from pre-determined locations along the queue.</p>	<p>As venue information is finalized, Metro should work with LA28 to understand the plans for a consistent visual identity and begin identifying locations where supplemental signage is needed. Metro will also need to coordinate closely with all transit partners on signage at intermodal facilities like mobility hubs.</p> <p>Many wayfinding lessons can be implemented now (i.e. floor decals with walking directions to venue exits, QR codes on signage for detailed public info, ADA accommodations with duplicated signage on pillars).</p>
<p>Thousands of volunteers were used to bolster staffing at venues and festivity sites. The ubiquitous presence of staff helped create a perception of safety and added to the upbeat atmosphere in Paris.</p>	<p>Metro should evaluate how to incorporate volunteers into its staffing strategy, potentially in collaboration with the City of Los Angeles and LA28. This work needs to start as early as possible.</p>
<p>Restroom access was provided through a combination of permanent and temporary infrastructure. Many rail stations in Paris had self-cleaning public restrooms (sometimes requiring a fee of one euro or the user to tap a valid fare card), but the cleaning cycles were slow and not always fully effective. Temporary restrooms were set up outdoors at key locations to provide additional capacity.</p>	<p>In addition to the recently approved expansion of station restrooms, Metro should evaluate opportunities to partner with local cities on temporary restroom infrastructure for the Games to accommodate large crowds.</p>
<p>Stations and vehicles were clean and inviting, despite their age. Anecdotally, some local residents remarked that they had never seen such a high level of cleanliness on the system. This markedly</p>	<p>High standards of cleanliness should remain a focus, testing different strategies for other major events leading up to the Games.</p>

improved the feeling of safety and the customer experience.	Metro is sourcing the cleaning products used in the Paris Metro system to pilot on the Metro system before the end of this year.
Paris has a strong culture of transit usage for both locals and visitors. Visitors were willing to rely on transit even if they do not frequently ride in their everyday lives.	Building LA's transit culture through customer experience improvements and marketing is important if we are to challenge the prevailing car-centric mindset in the region and achieve the desired mode shift during the Games and beyond.
The transit agencies metered entries at busy venues and stations using a combination of access control strategies (such as using one-way entry and one-way exit at many event stations) and staff from both law enforcement and transit police. Purple and green shirt volunteers used foam fingers and "i" information mounted above their stations to assist with crowd flows.	Crowd management should be a key area of focus of planning as well as operation.
Stations used overhead projector floor decals for wayfinding and prominent real time arrival displays on the platforms. Transit app supported reporting of crowding on rail lines, stations, and buses. The region had a unified ticketing platform for all local and regional transport.	Leverage technology in creative ways to enhance the customer experience.

Planning

Observation	Lessons Learned
Paris intended for bicycling to form a small but notable portion of its transportation strategy for the Games. Based on the observations of Metro staff, the bicycle infrastructure was impressive, but most people opted to walk or take transit to venues. This could have been due to a combination of a difficult to use bikeshare app, extreme heat, and limited wayfinding guiding cyclists to venues.	Cycling can be a key strategy for venue access in 2028 if there is high quality infrastructure and a seamless experience for those using bikeshare. Additionally, closing streets to cars can offer broad benefits to people biking and walking to and from venues, while intentionally connecting visitors and locals to commercial neighborhoods.

<p>Cycling competitions were a notable exception.</p>	
<p>Attendees dealt with extreme heat and occasional rain in Paris. Paris has a robust tree canopy and added significant temporary infrastructure (water stations, restrooms, additional shade), but many areas remained unshaded. In addition, some sites required walking through a dirt queuing area which became muddy quickly after heavy rain.</p>	<p>Many areas around Metro stations in LA County require significant upgrades in order to provide enough shade and improve walking conditions. Ensuring that a strategy is in place to mitigate exposure to extreme heat and inclement weather is essential to ensure rider safety and comfort.</p>
<p>Stations felt well integrated into their surrounding neighborhoods helped by programming near many stations that created an engaging environment.</p>	<p>Transit-oriented development around Metro stations is crucial, but programming at stations can help make the environment more inviting and improve the perception of safety.</p>
<p>Dozens of fan zones were the epicenters of the Olympic festivities, accessible free of charge to all Parisians and tourists. These venues were not limited to broadcasting sporting events. They were transformed into real meeting points for all, offering a variety of activities, from live music to catering, all in the spirit of conviviality and sharing culture.</p>	<p>Union Station could be a similar fan zone to provide sport access to all. This could help in long-term activation of Union Station. Local agencies should incorporate consideration of transit access into the selection and planning of live sites, if they elect to do so.</p>
<p>The City of Paris created an initiative to transform 15 main arteries to promote pedestrian traffic, adding more water fountains and misters which they refer to as refreshing oasis spots for those frequent hot days. Paris has many low-cost innovative solutions for first-last mile connectivity and traffic calming, especially around schools including barricades, planting beds, fruit trees, and benches.</p>	<p>Metro, in collaboration with other GME partners, should consider strategies for addressing climate change as part of the legacy projects related to mobility hubs, first-last mile improvements, and key station improvements. Open streets could also be a portion of this strategy. For example, retractable bollards could be installed to create temporary car-free zones for events like CicLAvia and festivals.</p>

Accessibility

Observation	Lessons Learned
<p>The Paris transit system was challenging to use for those with limited mobility, families with strollers, or people carrying luggage. Many rail stations required navigating large numbers of stairs and elevators were not usually available.</p>	<p>Metro's system is ADA compliant and more universally accessible as a baseline. However, ADA is a minimum, and the provision of accessible amenities is not enough to provide dignified transportation for everyone. For example, elevators must be well-lit, safe, functional, and easy to find. Accessible routes should be clearly marked. Fonts and sign placement must be legible. Metro should consider how to establish a higher bar and implement processes to incorporate it into project planning and operations.</p>
<p>Long walks from the nearest rail station were often required to access venues. A reservation-only accessible shuttle system was available, but many people that did not reserve ahead had to endure long walks in the heat or rain.</p>	<p>Metro, in collaboration with LA28 and local municipalities, must work to ensure that walk distances to venues are manageable and/or provide readily available alternatives for those unable to walk very far (i.e. bike taxis).</p>
<p>Paris had a clear handoff structure in place between jurisdictional zones (transit agency, city, venue) for staff that were assisting people with disabilities.</p>	<p>Metro must be prepared to work with staff from a variety of jurisdictions in order to ensure a seamless experience for those with disabilities that require additional assistance.</p>
<p>Paris24 utilized local transit agencies to assist with Paralympic athlete transportation. Paralympic athletes traveled on older buses retrofitted to accommodate multiple wheelchairs. Plastic mobile ramps were used to load and unload the athletes. These buses sometimes lacked adequate air conditioning which led to discomfort.</p>	<p>If LA28 uses a similar model, the condition of the transit buses should be high quality.</p>
<p>Ile de France Mobility raised transit fares during and between the Olympics and Paralympics to help finance the Games. While locals were given ample notice prior to the increase, it represented an equity issue that disproportionately impacted lower-income residents and visitors during a period of extreme heat,</p>	<p>To encourage transit ridership and support improved services before, during, and after Games, Metro will continue to pursue the incorporation of transit passes in venue tickets.</p>

<p>which made walking long distances more difficult.</p>	
<p>The Paris buses have designated areas for older adults, people with disabilities, pregnant folks, and people with strollers.</p>	<p>Metro could incorporate people with strollers and pregnant women into the priority seating messaging now, both on the buses and trains. This type of improvement is supported by Metro's How Women and Girls Travel Study.</p>