January 28, 2019

Senator Scott Newman
Senate District 18
Chair, Transportation Committee
3105 Minnesota Senate Building
95 University Ave. W.
St. Paul, MN 55155-1606

Dear Senator Newman,

Thank you for your letter requesting more information on the Jan. 4 network outage that affected the Metropolitan Council computer system, and most importantly your constituent and other Metro Mobility customers. We know that each person's experience who used Metro Mobility that day is important and it is the Metropolitan Council's responsibility to address and remedy those events.

I want to start by giving you an overview of the situation, what we know about where the system failed, and how the disruption affected our customers. Our staff, in partnership with Minnesota IT Services, is conducting a full discovery of the technical failures, operational response, and internal and external communication procedures. Once that investigation is complete, we will be able to provide a more detailed report and timeline of events.

On Jan. 4 at about 10:30 a.m., the Metropolitan Council began experiencing intermittent outages impacting several Council services and causing our Metro Mobility contractors to lose connectivity to our customer-based scheduling software. We use that software to manage customer information, make reservations, schedule rides, relay ride information to the vehicles, and manage service on the street. Between 10:30 a.m. and about 4 p.m., contractors were not able to place future trip requests through the reservation software, while dispatch staff was unable to view real-time trip information relying on paper manifests printed the night before.

The network service disruption resulted from a failed switch at the EDCI data center co-located, owned and managed by MN.IT. This switch failure was ultimately catastrophic but initially only caused gaps in network services. Because it was an intermittent failure, the redundant system switch wasn't automatically triggered. At least one of the switches needs to be functioning to connect the organization to the internet. The switch failure ultimately cut the Council and Contractors off from the system and the public.

We were, however, fortunate that this happened during the business day when both the Council and MN.IT had staff on site. After the first notice of outage, MN.IT started analyzing and troubleshooting the problem. The outage was very fluid and the Council was operating with a partial system for about two hours. When there was no resolution found for the failed switch, Council and MN.IT staff called in the manufacturer of the hardware to help restore functional capacity of the system.

Up until 12 p.m., Metro Mobility contractors were still receiving some customer calls and recording ride requests on paper. They were also able to call customers who were waiting for rides to tell them about delays and ask if they would like any changes to their scheduled trips.

At this time, Council communications staff sent the first email notice to our opt-in customer list – just over 3,000 recipients – announcing the service disruption. Unfortunately, this happened just before the entire Council phone and web services going down, and Metro Mobility customers had no way of communicating with the Council or contract providers.

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Initially, we were able to work around the problems delivering rides, which allowed drivers to continue with the correct trip plans and routing. We depended on paper back-ups of trip manifests, radio communications with drivers, and the three-hours of locally-stored trip data on the onboard mobile computers. However, the driver's inability to get driving directions and automatic updates through their onboard computer resulted in a few missed trips and a number of delayed pick-ups.

By about 1:30 p.m., Metro Mobility buses' three-hours of electronically stored trip data ran out. Contractors resorted to communicating trip information by radio, or drivers used the paper manifest information printed the night before. These work-arounds further complicated the driver's ability to find addresses and stay on time. In the meantime, Council staff, MN.IT and the hardware manufacturer were working to repair the failed switch and restore the system.

Things began to come back online just before 4 p.m. and customers were able to reach the reservationists and dispatch staff. The Council issued a statement to primary media outlets and sent a follow-up email informing our customers that we were back online, had authorized reimbursement for cab, Uber or Lyft rides, and apologized for their inconveniences. We also arranged for Taxi, Inc. to provide free rides for those customers who couldn't pay an upfront fare.

The website remained offline until about 5:30 p.m. and once up, communications staff quickly placed a notice on the pages about the service disruption and resolution.

To serve our customers, reservation lines were held open an additional two hours, taking calls until 7 p.m. Full system functionality was restored about 6 p.m. and the Council immediately began to make system improvements, including extending onboard data storage to 10 hours and emailing manifest updates every 30 minutes.

Here's an overview of some of the customer impact related to the outage:

- On-time performance fell to 82%, system average on-time performance for the previous three Fridays ranged from 93% to 95%
- Customer comments received the following Monday by the Metro Mobility Service Center were up 30 to 35 percent
- Customers made 21 official complaints and staff fielded hundreds of questions
- Nineteen customers to date have received reimbursements, totaling $555.96

Our staff are aware of two incidents of note. One customer needed the fire department to help him into his friend's vehicle, and he was featured on a Channel 5 news story. And, one woman voluntarily stayed overnight at Mystic Lake.

Our staff have built in many system redundancies to manage unplanned technology issues. However, this event demonstrates that the Council needs additional investment in technology and improvement to operating procedures. We continue to refine our Continuity of Operations, and resiliency planning for our customer-based software. The Metro Mobility system is critical to our customers lives and is at the top of our priorities. The lessons learned from this outage will inform how we build infrastructure to support resiliency and adapt our applications to leverage that resiliency.

Like you, we don't want our customers to experience future disruptions at this scale.

Sincerely,

Nora Slawik
Metropolitan Council Chair