Introduction
Forth is a nonprofit trade association and advocate for electric, shared, and smart mobility. Forth is a national partner assisting cities with electric mobility projects on behalf of the Bloomberg American Cities Climate Challenge. COVID-19 has had unprecedented impacts on communities and the cities that serve them. In attempts to limit contact and prioritize health and safety, cities have adapted to using virtual platforms to stay engaged with their communities. The purpose of this document was to collect and share the impacts of COVID-19 to our partners’ transportation electrification (TE) efforts and highlight some of the creative responses that they are taking to adapt their work plans and consumer engagement efforts. Forth received input from over 20 partner organizations and cities across the nation.

Immediate Effects On Transportation Electrification Programs

Work On Pause
Of those interviewed, most transportation electrification programs are still intact, but public engagement events have been canceled or postponed and travel for staff is constrained. Most organizations reported their offices being closed and staff working from home until near the end of May or later¹.

Some cities affected by COVID-19 have had to furlough some of their staff working on transportation electrification. Ride and drive events, conferences, and other public events are all on hold until further notice. In some cases, governments and other organizations have redeployed transportation electrification staff to help provide COVID-19 relief. The City of Denver and the City of Los Angeles, for example, reprioritized staff to immediately set up COVID-19 assistance websites. Many transportation electrification programs have had budget cuts and are expecting further cuts this year and into the next budget period.

¹Recorded in early May
Virtual Engagement

Many EV programs across the country are continuing to move forward and have pivoted to virtual engagement through web traffic, social media, or email. Cities, however, are proceeding with an awareness of the digital divide. Previous digital outreach has proven that underserved communities are far less likely to respond compared to more affluent communities. While digital engagement is fast, convenient, and yields a larger audience, the consequences are losing the input of those who aren’t online or may be more receptive to in-person engagement. The digital divide can be addressed by working with local community based organizations to create collaborative promotional strategies that are more likely to engage the local community.

Interactive Virtual Consumer Engagement Solutions and EV Ambassadors

In Cincinnati, EV Cincy, an educational initiative created by the city has launched a virtual engagement campaign aimed to increase EV demand and is leveraging Zoom to create a more group-centric dialog about all things transportation electrification. They are calling them E-Vroom Zoom, the first virtual event will discuss the background of EV Cincy, Cincinnati’s EV goal and the EV market amidst the COVID-19 pandemic.

The team is also recruiting local EV Ambassadors to share the City’s electrification mission and make themselves available for car buyers with questions. They also started a webinar series where ambassadors can share their stories and why they made the switch to electric.

Virtual Test Drives

Southern Alliance for Clean Energy (SACE) pivoted from in-person Ride and Drives to a virtual consumer engagement by filming a test drive in a Tesla Model 3. SACE paused the pre-recorded test drive throughout the webinar to give attendees a chance to ask their questions. The virtual test drives were advertised through Facebook and was the leading story in the Tampa Bay Times “Things To Do This Weekend”.

The Southern Alliance for Clean Energy (SACE)

promotes responsible energy choices to ensure clean, safe, and healthy communities throughout the Southeast United States.

Interested in taking an electric vehicle for a virtual ride?

Lunchtime Ride and Drive
Thursday, April 23, 2020
12 - 1 PM ET
Register: bit.ly/DGSVirtualLunch

After Hours Ride and Drive
Wednesday, April 29, 2020
5 - 6 PM ET
Register: bit.ly/DGSVirtualAfterHours

Weekend Ride and Drive
Saturday, May 9, 2020
12 - 1 PM ET
Register: bit.ly/DGSVirtualWeekend
Ask an EV Owner

Green Energy Consumer Alliance, a nonprofit based in Boston and Providence, is hosting webinars that allow consumers to talk to an EV owner without sales pressure. In this interactive webinar series, EV and PHEV owners discuss their real-life experiences and answer prospective buyers’ questions. Each webinar features owners of different models of electric and plug-in hybrid electric vehicles.

Virtual Focus Groups

A few ongoing programs included focus groups with the objective of learning about shared mobility drivers, their driving habits, and designing programs around those learnings. In Los Angeles and San Jose, Forth shifted planned in-person focus groups to virtual focus groups. Driver recruitment was completed through a layered social media campaign. There was also careful consideration around virtual platforms for the focus groups. The team ultimately opted to use Google Hangouts to reduce technical barriers and provided high-touch coaching and hardware to the participants who needed support. Additional information and recordings of the focus groups are available upon request.

Electric Transportation Websites

Many cities and organizations are taking this opportunity to update their electric transportation webpage. Forth has developed a virtual showcase that people can explore. EV Cincy launched their website, which aims to educate consumers about the benefits of going electric and includes ways to get involved. Snohomish PUD has also launched a new electric vehicle website for their residents showcasing a new savings calculator.
Webinars

Due to the cancellation of the 33rd World Electric Symposium and Exposition (EVS33), Forth has pivoted the format of our Roadmap Conference. Forth is now hosting the five Roadmap panel sessions that were to be held in conjunction with the EVS33 program as webinars. Forth has also dramatically expanded its regular webinar program and added a variety of topics specific to the pandemic, with free recordings of all webinars posted online.

The Shared-Use Mobility Center held their annual conference virtually May 5th and 6th. A two-day virtual summit was no small feat with hundreds of attendees at each session. They created opportunities to connect with themed Zoom “cocktail hours” to end each day, as well as a dedicated Slack channel that enhanced networking possibilities and helped everyone work through the technology to fully participate.

The California Air Resources Board held a webinar on the Clean Miles Standard on May 15th and is ramping up for additional webinars soon.

On May 18th, UC Davis hosted “Equity, Community, and the 3 Revolutions in Transportation” to discuss how to meaningfully incorporate equity into private and public sector transportation innovations and address what can be done to narrow the mobility gap.

Denver Metro Clean Cities Coalition is also kicking off a new happy hour webinar series that reoccurs every Monday and will focus on topics and discussions such as utility EV infrastructure programs.

The Forth team conducted its first "virtual pop up" event via Zoom with a local community college as part of the Oregon Clean Vehicle Rebate promotion work. Forth is also developing a “happy hour” consumer-focused interactive webinar series designed for environmentalists and folks with a general interest in cleantech; these webinars will be co-branded with community-based organizations to help expand our reach to new audiences. Forth’s consumer engagement team is also developing a "lunch and learn" webinar series aimed to engage employers concerning the environmental and economic benefits of driving electric. Email stevena@forthmobility.org for more information on...
how to duplicate these efforts in your city or organization. Below are summaries of the two virtual webinar campaigns:

**The EV Cafeteria**
Launching in late May, [Forth’s EV Cafeteria series](#) is designed to present itself similarly to a Lunch and Learn. Workplaces, employers, and other entities can tune in to learn about the basics of Electric Vehicles, incentives and rebates, and other types of electric transportation methods that are beneficial to the audience.

**The EVening Commute**
Launching in June, [Forth’s EVening Commute Series](#) is similar to a happy hour networking event. It targets a broad audience with a myriad of content including heavy-duty electric vehicles, electric motorcycles, and other trending and innovative topics in the industry.

**Program Adaptations**

**Free Charging**
In Los Angeles, the City has updated the pricing of their 340+ curbside chargers. Those chargers are currently free to help residents during the crisis. The City is pursuing other cost-free electric efforts moving forward including curbside allocation specifically for fleets. Another example of programs offering affordable ways to charge is EVGo, a company that owns and operates fast charging stations is offering up to 40% off on charging for essential workers.

**EV Fleets for Food Delivery**
[Forth](#) has teamed up with a local restaurant in Portland, Botanist House, to deliver free meals to restaurant and service workers who have lost their jobs. Forth’s EV fleet has been repurposed to serve as cost-effective delivery vehicles; the project [delivers](#) over 2,000 meals a week. The operating cost of an electric vehicle is lower than an internal combustion vehicle. Botanist House stated that every day a volunteer drives an electric car, it saves them $20 a day in personal vehicle use reimbursements.
Forth AmeriCorps intern, Sean Bosnihan, has volunteered to be a driver himself and created a short checklist for sanitizing the vehicles before switching out drivers. Sean recommends being diligent about cleanings and focusing on high touch points of the vehicle should be a priority. Examples include:

- All 5 outside handles
- All 4 inside handles
- Steering wheel
- Middle console
- Mirrors
- Vents
- Shifter
- Every button, especially the radio dials

Even with regular car cleanings, it is important to wear gloves and a mask at all times while using a shared vehicle. Keeping records of when the vehicles were last cleaned and who most recently used the vehicles is also good practice that can reassure the next driver that the vehicle is safe to use.

**Program Launch Adaptation**

Forth’s CRuSE Project, which seeks to demonstrate a financially sustainable model for electric carsharing in the rural community of Hood River, Oregon, was set to launch to the public in June 2020. Some elements of the program, such as charging station installation and installing the required hardware in the vehicles, are moving forward as scheduled. All outreach activities planned to survey the community and promote the program are on hold indefinitely. Additionally, conversations with some local partners have been put on hold as those partners respond to the needs of their community during this time.
Online EV Sales
Virtual sales platforms limit the interaction with a dealership, and reduce the possibility to have a salesperson encourage them to purchase a comparable gasoline vehicle, and can increase the electric vehicle (EV) inventory available to the consumer. Electric vehicle focused platforms such as EV Life include local electric vehicle incentives and identify dealers who deliver electric cars safely to the consumer.

Looking To The Future
Cities have always been leaders and innovators in environmental protection. Post-COVID cities will remain committed to providing residents with a multitude of clean, affordable, and accessible transportation options. Cities are already transitioning streets into protected bike areas, safe walking areas, and community exercise areas. These steps show a prioritization towards health and promote the use of more sustainable transportation methods in the future.

Messaging
Many reports show an increase in bike use, cleaner air and encouraging news for the future of electric vehicles since the COVID-19 outbreak began. Ultimately these outcomes are positive, but it is important to remember that the effects of COVID-19 go far beyond transportation and that communities are suffering. Communicating to the public in a way that puts the importance of air quality over the impacts of COVID-19 can be construed as valuing the positive environmental impacts over human life. The need for clean, affordable, accessible transportation is just as important as ever, but it is imperative to the mission that communities don’t feel alienated by messaging efforts.

Market Trends
The general consensus is that electric vehicles sales in the United States will decrease in the immediate future due to the economic downturn, low gasoline prices, and dealers prioritizing sales of more profitable vehicles such as ICE trucks and SUVs. However, most analysts predict electric car sales will decline less than gasoline car sales. In the long term, however, electric vehicles are expected to see an increase in production and some analysts believe that original
manufacturers can protect their electrification investments by investing in charging infrastructure or EV production facilities. A shift to prioritize health and clean air among communities might also lead to an increase in electric vehicle adoption.

**Fleets Continuing To Be Electric**

Electric vehicles will continue to offer a reduction in total cost of ownership (TCO). While EVs may have a higher initial purchase price, the cost to operate them per mile makes them a worthwhile investment for long-term cost savings and reduced TCO. This is because EVs require less maintenance over the life of the vehicle when compared to traditional internal combustion engine vehicles. Gas prices are lower than usual now, but electricity as a fuel is still far cheaper, and shows more promise for fleets in the long run since electricity prices are less volatile than gasoline prices. Upfront costs on vehicles and infrastructure may be able to be reduced through federal, state, and local rebates, incentives, and grant programs.

**Anticipated Shifts To Mobility Trends**

Most urban areas have seen a dramatic decrease in transportation use in general during COVID-19 due to social distancing measures; Apple has posted viewable mobility trends showing the decrease in driving, walking and public transit. As time progresses walking and driving are increasing while public transit stays at a low. In Portland, OR, public transit use is down 75%.
Shared Mobility

Public transportation use has fallen sharply, transit agencies across the nation have come together to crowdsource learnings and potential post-COVID solutions. Rideshare companies have modified or suspended operations in certain areas due to safety concerns. A survey done by automotive consumer advice group CarGurus showed that 39% of participants said they will not use rideshare companies post COVID-19. The folks who are using rideshare have tended to be essential workers. Uber has responded by implementing modified operation practices such as requiring drivers to take photos to show they are wearing masks prior to picking up a passenger. Uber has also been contracted to provide rides in places where public transit is down. Companies such as Waymo are looking to self-driving EVs as a potential solution. There has also been a notable shift within shared mobility towards delivery services. These adaptations are temporary, but have the potential to lead to long term changes for the shared transportation industry.

Carshare

Carshare use, in the short term, is expected to decrease due to an overall decrease in transportation demand. Some studies find that carshare and micro-mobility options will provide the variety of solutions needed to adapt to the post COVID-19 environment. It is expected that fewer people will be comfortable using public transit when commutes start again; shared cars or e-scooters will provide a good alternative because the user won't have to share the space.

Micro-Mobility Solutions

Electric Scooter ownership and use is expected to be on the rise post COVID-19. E-Scooter rental companies are embracing the challenge by focusing on implementing improved health and safety measures and many companies are offering free rides for health care workers. German cities are encouraging commuters to choose micro-mobility solutions so that they can avoid gridlock and keep the roads open for emergency response vehicles. London believes that even a slight increase in individual car use will put the roads at a standstill and expects that opening roads to micro-mobility options is the best way to mitigate increased congestion in the near future.
The majority of our utility partners that have committed to transportation electrification plans are continuing to move forward with their efforts. Across the nation, utilities are putting conferences, public events, and travel all on hold; some expect these ramifications to only last six to eight months while the majority anticipate operations being impacted until the summer of 2021.

Nearly all of the utilities’ community engagement efforts have been shifted to social media or virtual platforms. Collaboration via social media is a cost effective way to continue outreach during the pandemic. Cross promotion between governments, utilities, and nonprofits is important to expand the reach of rebates like the City of LA’s free charger program.