



# Annual Impact Report 2022

### Table of Contents



Transportation Today	07
Traffic Violence	09
Transportation Emissions	11
Disability and Transportation	12
Inequitable Access	14

# 

Our Progress	16
A More Trusted Future for Mobility	18
Cleaner, More Sustainable Miles	25
Inclusive, Accessible Design	28
Connected Communities	32



# At Cruise, we are committed to a transportation future that is safer, cleaner, more accessible, and more equitable.



Transportation today is broken — traffic fatalities are near an all-time high, vehicles contribute far too much to air pollution and emissions, and transportation systems are rooted in exclusionary design. We believe that Cruise's all-electric, self-driving, and shared fleet can begin to address some of these persistent challenges and truly deliver on the transportation future we envision for our cities.

Even in the years before widespread deployment of shared autonomous and electric fleets, Cruise is proud of our work to make the cities we serve cleaner, more livable, and more vibrant: in terms of increasing access to safer and more trusted travel, improving air quality, redefining accessible mobility, connecting communities, and more.



But there is still work to do. Cruise's service today offers an exciting glimpse of what the benefits of shared, electric, selfdriving mobility could be for our cities at scale. As Cruise expands its driverless service in San Francisco, Austin, Phoenix, and beyond, we are excited to build <u>trust</u> with the communities we serve and deliver on the promise of shared electric autonomy.

As the first of its kind for the industry, this Impact Report catalogs today's transportation landscape, benchmarks the measurable progress Cruise made across four key mobility areas in 2022, and outlines our vision for the benefits of our ridehailing and delivery services at scale.

# Transportation Today

Poppy

To best understand Cruise's impact, we must ground that conversation in where transportation stands today in the United States.

Across our cities, our transportation networks are plagued with traffic fatalities, harmful emissions, and inequitable access.

Cruise's vision aims to tackle these endemic issues of safety, sustainability, accessibility, and inclusivity through our commercial deployment.



#### cruise

#### **Traffic Violence**

U.S. road fatalities are a silent epidemic - one of the top causes of death in Americans under 55 - and worsening precipitously since the COVID-19 pandemic.<sup>1,2</sup> In 2021 alone, over 117 people died on average every day on U.S. roads.<sup>3</sup> As USDOT Secretary Buttigieg recently stated, "We live in an era when it is safer to fly in an airplane 30,000 feet above the ground than it is to walk down the street."



In 2021 alone, over 117 people died on average every day on U.S. roads.<sup>3</sup> 55%

of U.S. Road Fatalities Occur in Cities<sup>4</sup>

77%

of U.S. Cyclist Deaths Occur in Cities<sup>5</sup> "We live in an era when it is safer to fly in an airplane 30,000 feet above the ground than it is to walk down the street."

- Secretary Pete Buttigieg, U.S. Department of Transportation



#### US Traffic Fatalities, 2015–2022

Total US road deaths in 2021

42,915

#### **Air Pollution**

Transportation is the largest source of U.S. CO2 emissions, and is a leading contributor to climate change.<sup>6</sup> Of these emissions, light duty cars and trucks predominantly personal vehicles - are the largest source.<sup>7</sup> Exposure to tailpipe emissions is also associated with negative health conditions like pulmonary disease and childhood asthma. <sup>8</sup>

#### **US Greenhouse Gas Emissions**

By Source, 2020



Cruise can help make a difference.

#### **Disability and Transportation**

Transportation today is exclusionary and limited, with lack of reliable access for people with disabilities often compounding existing barriers to education, employment opportunities, and healthcare.



#### Americans

live with a disability, with transportation often cited as a leading barrier to accessing healthcare, employment, and community for people with disabilities.<sup>9</sup>



Percent of people with disabilities who report transportation as a barrier to employment:<sup>10</sup>





adults with disabilities have an unmet healthcare need due to transportation costs in the past year<sup>11</sup>



adults with disabilities did not have a routine checkup in the past year due to transportation barriers<sup>12</sup>

#### **Inequitable Access**

Transportation access is <u>inequitable</u> for millions of Americans, and is often a social determinant of <u>economic mobility</u> – with lower income households often spending a disproportionately higher share of earnings on transportation.

Transportation barriers keep vulnerable populations from accessing employment opportunities that lead to meaningful, living-wage jobs and that foster stronger communities.



U.S. households in the lowest income quintile spend over 30% of income on transportation, compared to just 12% for those in the top quintile.<sup>13</sup>



#### U.S. Households Without Access to a Personal Vehicle



**Using Transit** 

19% of Black households and 11% of Hispanic households do not have access to a personal vehicle, in contrast to just 6% of White, non-Hispanic households.<sup>14</sup>

Commute times are twice as long for 790,000 U.S. late-shift workers using transit compared to a personally-owned vehicle.<sup>15</sup>

# ess cruise

Рорру

cruise

#### Our mission at Cruise is to <u>safely</u> <u>connect</u> people to the places, things, and experiences that they care about.

2022 was a momentous year in driving this mission forward, and our impact can be seen in every market we operate — through providing a more trusted mobility solution, offering environmentally cleaner, more sustainable travel, redefining accessible design, and connecting with the communities we serve.

#### **Our Progress**

- A More Trusted Future for Mobility
- Cleaner, More Sustainable Miles
- Inclusive, Accessible Design
- Connected Communities

#### A More Trusted Future for Mobility

We recognize that impact is not only defined by the safety of our technology, but also measured by the trust we earn from our riders and the communities in which we operate.

#### In 2022, we made tremendous impact in providing the public with a service they can trust and rely on.

We safely and rapidly launched driverless commercial service in San Francisco, Phoenix, and Austin, released the industry's most comprehensive and transparent Safety Report, and made historic progress in seeking federal approval to commercially operate the Cruise Origin. We also introduced a team of Trust and Safety professionals to enhance the safety of our users and the communities we serve through education and policy development.

Whether at the state or federal level, key community groups also recognized the value that Cruise can deliver through our service. In 2022, Cruise received 78 letters of support from community organizations and policy advocates supporting the expansion of our commercial service in California, as well as our federal efforts to deploy the Origin. cruise

#### Top Line Metrics - 2022

Cruise's commitment to build public trust and confidence can be seen across almost every aspect of our driverless operations in 2022 — a commitment we will maintain to our customers, regulators, and the public as we expand commercially in 2023.





#### Understanding Cruise's Impact

Cruise knows that our riders care most about getting where they want to go safely, conveniently, and affordably.



#### passengers

Throughout 2022, our driverless fleet carried nearly 26,000 passengers across almost every inch of San Francisco - traveling, commuting, and exploring.<sup>18</sup>

Since offering our fared driverless commercial service in our approved Operational Design Domain in June 2022:<sup>19,20</sup>



**53**%

of trips in census tracts with above average zero vehicle households. of trips in census



of trips in census tracts with above average households overburdened by rent. of trips in census tracts with an above average number of low-income households.

#### By the Numbers - Surveyed Public Rider Feedback

In 2022, Cruise riders reported feelings of trust and safety in our service, even after only one ride.

94%	89%	84%	82%
trust Cruise after taking their first ride.	said the Cruise AV is a good driver after taking their first ride.	said Cruise makes them feel safe when traveling at night in San Francisco.	said Cruise rides are more enjoyable than Uber and Lyft.

Female riders report feeling safer in a Cruise AV compared to an Uber or Lyft.

"I would far prefer to get into a driverless car than an Uber or Lyft. As a woman, the fact that there is no strange driver that you have to be concerned about is a huge benefit."

"As a young Asian woman who sometimes needs to take a ride at night time, I had quite a few unpleasant, even scary experiences with Uber/Lyft drivers. I feel very safe in the Cruise car."

#### The Cruise Origin

In partnership with General Motors, Cruise submitted a petition to the National Highway Traffic Safety Administration in February 2022 seeking approval to build and deploy the Origin. The Origin is a first-of-its-kind shared, electric, and autonomous vehicle built exclusively around the rider, with safety as our guiding principle. In the summer 2022 public comment process, the petition received an unprecedented 71 substantive public comments, of which 75% encouraged federal approval of the Origin.





#### **Buckle to Ride Policy**

The Origin is equipped with a buckle-to-ride feature that ensures that passengers' seat belts are buckled prior to starting the ride.

#### Subway-Style Doors

Unique sliding door design allows more seamless entry and exit, and can reduce risk to other road users - including cyclists and scooter riders.

#### **Unique Sensor Placement**

The Origin is designed with four main sensor pods positioned at the top corners of the vehicle, optimizing lines of sight and field of view, maximizing performance, and minimizing interference from road debris and other potential obstacles. Drawing on the deep automotive engineering expertise of our partner General Motors, the Origin will be manufactured with unique features that will enhance roadway safety as it enters commercial service in 2023.



#### Walmart Delivery Partnership

Cruise is also extremely proud of the progress we made in 2022 in expanding our partnership with Walmart. Over the course of the year, Cruise expanded to provide autonomous delivery on behalf of 8 Walmart stores across the greater Phoenix region, with Cruise AVs making 19,373 autonomous deliveries across the greater Phoenix metro in 2022.





across the greater Phoenix metro in 2022.



#### Cleaner, More Sustainable Miles

Cruise has always been committed to providing the public with greater access to sustainable transportation, and we are proud to have continued that focus through 2022.

Cruise is the only major AV company to operate a fully-electric fleet today, and continues to innovate and challenge the industry to follow our lead through programs like our Farm to Fleet initiative, which powers our California fleet with renewable solar from Central Valley farms.

As an all-electric, renewable-powered AV fleet, a trip with Cruise offers our customers a chance to travel emissions-free, regardless of their ability to purchase an electric vehicle.



#### Environmental Sustainability Impact - 2022

As the Cruise fleet scales in San Francisco, Phoenix, Austin, and other markets, so will our impact on total share of electric miles, renewable electricity procured, and associated avoided carbon emissions.

2.7M

Electric Miles Driven across 3 Markets

3.1

Gigawatt Hours of Renewable Solar Power Used 1,116.1

Metric Tons of Tailpipe Carbon Emissions Avoided from Using Electric Vehicles<sup>21</sup>

# 785.6

Metric Tons of Upstream Carbon Emissions Avoided from Farm to Fleet<sup>22</sup>

#### Reported share of electric trip miles for passenger service in 2022.



#### Farm to Fleet

In summer 2021, Cruise launched a first-in-industry initiative called Farm to Fleet.

Through this program, Cruise purchases renewable energy credits directly from two family-owned farms in California's Central Valley - Moonlight Companies and Sundale Vineyards - to charge our self-driving electric vehicles, creating a pathway for farms generating on-site renewable power to participate in and financially benefit from transportation electrification.

Every mile that Cruise drives in California is paired with renewable energy generated by these two farms, directly generating economic opportunity and supplemental income for these farms.

In May 2022, Cruise was proud to share that Farm to Fleet was awarded by Fast Company as a World Changing Idea for transportation.



#### Inclusive, Accessible Design

# Cruise recognizes that in order to achieve inclusive mobility, we must design our products with all riders in mind.

Cruise is committed to providing our riders with an accessible app and in-ride experience, and has made tremendous progress in 2022 developing new features, iterating on new vehicle design such as the wheelchairaccessible Origin Mobility, and creating real dialogue with a range of accessibility advocates and community members that will drive meaningful impact as we expand commercialization in 2023. In order to drive more inclusive engagement with the ally community, Cruise also hired a Senior Manager of Public Affairs to focus solely on our accessibility efforts.

#### Impact Metrics 2022







New Accessibility Features Developed User Experience Accessibility Focused Studies Completed

#### **Origin Mobility**

In late 2021, Cruise announced a wheelchairaccessible Origin, called the Origin Mobility — a first-of-its-kind design for the autonomous vehicle industry. Over the course of 2022, Cruise worked diligently internally, with our partner General Motors, as well as with external stakeholders to develop, test, and iterate on this vehicle platform.



#### **Origin Mobility**

Our 2022 efforts culminated with a survey of over 550 wheelchair users to understand their transportation habits, distributions of wheelchair types and models, as well as support needs.

Then, we conducted multiple rounds of user testing with the Origin Mobility in early March and December, inviting a mix of manual and motorized wheelchair users to conduct usability tests to validate the latest configurations of the interior cabin. Finally, the team closed out the year by hosting a dialogue between Cruise hardware engineers and the We Will Ride Coalition to discuss our latest accessibility features as well as the development status of the Origin Mobility. We Will Ride is a group of leaders in the disability rights movement with the goal of ensuring that emerging AV mobility solutions reach their potential to serve all Americans.



#### Blind Driver Challenge

In Spring 2022, Cruise was proud to support our partners at the National Federation of the Blind (NFB) for the Blind Driver Challenge in New Mexico.

Dan Parker, a professional drag racer who was blinded in a 2012 racing accident, set the World Record for fastest blind driver driving a Cruise-emblazoned Chevy Corvette, achieving more than 211 MPH. Cruise is honored to have partnered with NFB and Dan Parker in this incredible achievement, and looks forward to continuing our partnership and collaboration with NFB in the years ahead to improve transportation access for blind and low-vision communities.



#### **Connected Communities**

## Fundamental to our vision for a <u>safer</u>, <u>cleaner</u>, and <u>more inclusive</u> transportation future is connecting with and serving our communities.



#### **Connected Communities**

It is a defining feature of how Cruise enters and operates in our markets. Throughout 2022, Cruise remained steadfast in our efforts to engage with the communities we serve, and driving impact through our initiatives like Cruise for Good — our dedicated social impact program to support the local communities we serve, wherever we go.

Cruise is also the first and only AV company to join Pledge 1% — pledging to dedicate at least 1% of our fleet to serving community needs — not just in San Francisco, but everywhere Cruise goes. By joining the Pledge 1% movement, our commitment to our communities grows and scales with us.

# PLEDGE

#### cruise

#### **Connected Communities**

As Cruise launched our public driverless commercial service in 2022, we began to provide San Francisco communities with a safer, cleaner mobility option through our fleet of all-electric, autonomous vehicles.



community-based organizations engaged across SF, Arizona, Austin, and Washington, D.C.

Our initial fared service area included the Fillmore District and Western Addition neighborhoods, both historically excluded communities, and we have since expanded unfared service into several of the city's southern neighborhoods, traditionally lowerincome communities — Bayview-Hunters Point, Potrero Hill, and the Excelsior. Cruise will continue to emphasize outreach to communities of color, non-English-speaking groups, low-income, and under-resourced neighborhoods as we expand and scale operating area and hours.



Impact Metrics 2022

# Cruise for Good 350K 24

meals delivered through Cruise for Good in 2022, 2.3M since April 2020 24K

deliveries on behalf of Cruise for Good partners in 2022



**34**K

million meals funded through Cruise Giving Tuesday Campaign miles driven on behalf of Cruise for Good in 2022, avoiding 13.3 tons of CO2 emissions<sup>26</sup>



## Cruise for Good in 2022

In 2022, Cruise for Good continued its long-standing partnerships with the San Francisco-Marin Food Bank and SF New Deal to deliver meals to individuals and families experiencing food insecurity in San Francisco.

We've surpassed over 2 million meals delivered to date, with more happening everyday.

This program initially started as a crisis response to the COVID-19 pandemic in 2020 and has now become a long-term initiative aimed at strengthening our local community. Cruise for Good represents the best of what our AV service is capable of — improving the quality of life in our cities, especially for people underserved by the limitations of transportation today. In recognition of our delivery milestone, Cruise was honored with the San Francisco Business Times 2022 'Beyond the Check' Award for Community Impact.

In continuation of our commitment to serve our local communities, Cruise also helped raise funds for local food banks in San Francisco, Austin and Phoenix for Giving Tuesday. In the year ahead, Cruise for Good aims to further utilize our fleet to drive positive impact in every city where we operate.

- 1. Centers for Disease Control and Prevention. "Leading Cause of Death Visualization Tool 2020". Web-based Injury Statistics Query and Reporting System. https://wisqars.cdc.gov/data/lcd/home.
- U.S. Department of Transportation. "Motor Vehicle Traffic Fatalities and Fatality Rates, 1899-2020". National Highway Traffic Safety Administration - Fatality Analysis Reporting System (FARS). June 2022. https://cdan.dot. gov/tsftables/Fatalities%20and%20Fatality%20Rates.pdf.
- U.S. Department of Transportation. "Early Estimate of Motor Vehicle Traffic Fatalities in 2021". National Highway Traffic Safety Administration. April 2022. https://crashstats.nhtsa.dot.gov/Api/Public/ ViewPublication/813283.
- 4. National Highway Traffic Safety Administration. "Urban Share of Motor Vehicle Fatalities: 2016-2020". Fatality Analysis Reporting System. https://www-fars.nhtsa.dot.gov/Main/index.aspx. Accessed December 2022.
- National Highway Traffic Safety Administration. "Urban Share of Cyclist Fatalities: 2016-2020". Fatality Analysis Reporting System. https://www-fars.nhtsa.dot.gov/Main/index.aspx. Accessed December 2022.
- 6. U.S. Environmental Protection Agency. "Fast Facts on Transportation Greenhouse Gas Emissions". July 2022. https://www.epa.gov/greenvehicles/fast-facts-transportation-greenhouse-gas-emissions.
- 7. Ibid.
- 8. Health Effects Institute. Traffic-Related Air Pollution: A Critical Review of the Literature on Emissions, Exposure, and Health Effects. January 17, 2010. http://pubs.healtheffects.org/view.php?id=334.
- 9. Centers for Disease Control and Prevention. "Disability Impacts All of Us". October 28, 2022, https://www.cdc. gov/ncbddd/disabilityandhealth/infographic-disability-impacts-all.html.
- National Disability Institute. Economic Impacts of Removing Transportation Barriers to Employment for Disabled Individuals Through Autonomous Vehicle Adoption. January 2023.
- 11. Ibid.
- 12. Ibid.
- Securing America's Future Energy. "Fostering Economic Opportunity through Autonomous Vehicle Technology". July 2020. https://secureenergy.org/wp-content/uploads/2020/07/Fostering-Economic-Opportunity-through-Autonomous-Vehicle-Technology.pdf.
- 14. National Equity Atlas. "Indicators Car Access". 2019. https://nationalequityatlas.org/indicators/Car\_access#/.
- 15. APTA. "Supporting Late-Shift Workers: Their Transportation Needs and the Economy". September 2019. https:// www.apta.com/wp-content/uploads/APTA\_Late-Shift\_Report.pdf.
- 16. Across San Francisco, Phoenix, and Austin.
- 17. California Public Utilities Commission. Cruise Quarterly Deployment Program and Pilot Program Quarterly Reports, 2022. AV Program Quarterly Reporting. Accessed February 2023. https://www.cpuc.ca.gov/ regulatory-services/licensing/transportation-licensing-and-analysis-branch/autonomous-vehicle-programs/ quarterly-reporting.
- 18. Offered across both fared and unfared service in San Francisco under the CPUC Driverless Deployment Permit and CPUC Driverless Pilot Permit, respectively, as well as Phoenix and Austin.
- 19. Cruise received its Driverless Deployment Permit from the CPUC in June 2022, with approval to operate in a limited geography within San Francisco during overnight hours.

- 20. 13% of San Francisco's 199 census tracts are designated as Equity Priority Communities, per the Metropolitan Transportation Commission's (MTC's) Plan Bay Area 2050. In the Operational Design Domain that Cruise is initially offering driverless commercial service, approved by the CPUC for a Driverless Deployment Permit in June 2022, Cruise serves 31% of those Equity Priority Communities today. Each of the characteristics cited above are defined as key contributors when the MTC measures Equity Priority Communities. For more information, see: Metropolitan Transportation Commission. "Equity Priority Communities". Plan Bay Area 2050. 2023. https://mtc.ca.gov/planning/transportation/access-equity-mobility/equity-priority-communities.
- Calculated based on total estimated CO2e emissions for equivalent fleet mileage driving in an internal combustion engine (ICE) vehicle and the same relative tailpipe emissions in a 2021 Chevrolet Bolt (zero). The EPA's Greenhouse Gas Equivalency Calculator provided assumptions for ICE emissions comparisons.
- 22. Calculated based on total estimated CO2e emissions for Renewable Energy Credit (REC) use, compared against average grid carbon intensity for charging activities. Grid carbon intensity for charging activities in different jurisdictions were drawn from the EPA's eGRID Emissions Factors for 2020, the latest available data. EPA's eGRID Emissions Factors is used as a standard reference in the GHG Protocol Standard.
- 23. Uber. "Share of trip miles completed in ZEVs on Uber in the US and Canada Q3, 2022". Uber's Climate Assessment and Performance Report. December 2022. https://www.uber.com/us/en/about/reports/ sustainability-report/.
- 24. Equivalent number of trip miles completed in ZEVs not available from Lyft. Uber's total for Q3, 2022 was 4.1% this report uses this data point as a whole-of-industry comparison.
- 25. Calculated from submitted CPUC Quarterly AV Pilot and Deployment Program Reports for Q1-Q4 2022, using available data from operators on total VMT involved in passenger carry per quarter, and share of reported passenger miles driven in electric vehicles under both permits.
- 26. Cruise's fleet is fully-electric and 100% renewable-powered. Had these deliveries been done in gas-powered vehicles, over 13.3 metric tons of CO2 would have been released in tailpipe emissions.



