



UNIVERSITY OF
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COVID-19 — IMPACTS ON CITIES AND SUBURBS

KEY TAKEAWAYS ACROSS
MULTIPLE SECTORS

URBANISM NEXT CENTER



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This report was written by:

Grace Kaplowitz	Urbanism Next/VO
Nico Larco, AIA	Urbanism Next/VO
Amanda Howell	Urbanism Next/VO
Tiffany Swift	Urbanism Next/VO

Graphic design by:

Matthew Stoll	Urbanism Next/VO
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URBANISM NEXT CENTER

The Urbanism Next Center at the University of Oregon focuses on understanding the impacts that new mobility, autonomous vehicles, e-commerce, and urban delivery are having and will continue to have on city form, design, and development. The Center does not focus on the emerging technologies themselves, but instead on the multi-level impacts — how these innovations are affecting things like land use, urban design, building design, transportation, and real estate and the implications these impacts have on equity, health and safety, the economy, and the environment. We work directly with public and private sector leaders to devise strategies to take advantage of the opportunities and mitigate the challenges of emerging technologies. Urbanism Next brings together experts from a wide range of disciplines including planning, design, development, business, and law and works with the public, private, and academic sectors to help create positive outcomes from the impending changes and challenges confronting our cities. Learn more at www.urbanismnext.org.

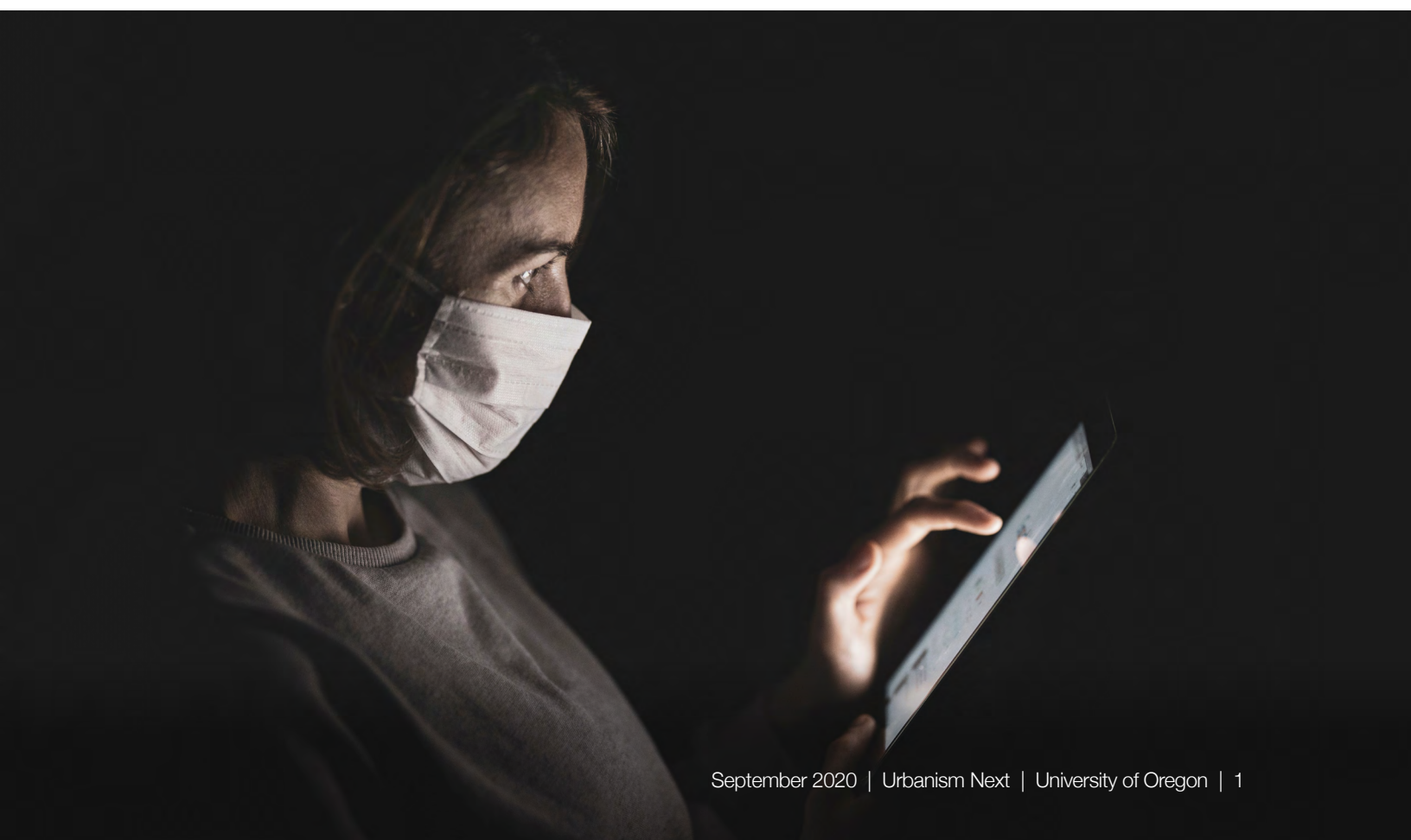
INTRO

In early 2020 Urbanism Next turned its attention towards the COVID-19 pandemic and the major, long-term disruptions it would likely cause to the way we live. We were particularly interested in the changes COVID-19 might have on the development of new mobility, urban delivery, and autonomous vehicles, and how this could impact the built environment. We began tracking the real-time disruptions COVID-19 was causing and projecting potential longer-term issues and questions. This paper is the first in a series of papers Urbanism Next will be releasing focused on the COVID-19 pandemic and its impact on cities. It will be followed by a paper that examines how COVID-19 has disrupted the [Urbanism Next Framework](#)* as well as a paper on our thinking about the timelines, scenarios, and levers that will shape the remainder of the crisis and recovery period.

[*www.urbanismnext.org/resources/urbanism-next-framework](http://www.urbanismnext.org/resources/urbanism-next-framework)

This paper summarizes the landscape of COVID-19 disruptions to date on Urbanism Next topics and highlights the longer-term questions and potential impacts COVID-19 might have on the built environment. Loosely reflecting the Urbanism Next Framework, it is organized into sections based on the following categories:

- **LAND USE & REAL ESTATE**
- **URBAN DESIGN**
- **BUILDING DESIGN**
- **TRANSPORTATION**
- **E-COMMERCE & RETAIL**
- **GOODS DELIVERY**



LAND USE & REAL ESTATE

HOUSING: The disruptions to real estate markets caused by COVID-19 have, thus far, been highly regional and sector-specific and have only begun to form trends. Real estate markets tend to experience delayed impacts to economic changes and are dependent upon localized economic factors.¹ The housing market slowed at the onset of the pandemic, but select markets were quick to rebound by Summer 2020.² For example, some higher-end housing markets have been flourishing as affluent residents leave their cramped city rentals in search of larger spaces. This is leaving luxury rental markets in big cities such as New York facing declining demand.³ At the same time many renters, especially low-income residents and people of color, may face an unprecedented eviction crisis if the short-term eviction bans and additional unemployment benefits cities, states, and federal agencies have enacted are not extended.⁴ Some cities have acted quickly to provide creative temporary housing options for people experiencing homelessness who are uniquely vulnerable to the pandemic and closures of public and quasi-public spaces.

RENTERS, ESPECIALLY LOW-INCOME RESIDENTS AND PEOPLE OF COLOR, MAY FACE AN UNPRECEDENTED EVICTION CRISIS⁴

OFFICE: Working from home has changed the way many companies do business and, at least temporarily, drastically lowered demand for office space. However, working from home is a privilege strongly correlated with income, education, and race⁵ and it is uncertain to what degree this trend will continue post-crisis if and when people are comfortable returning to crowded offices. Coworking spaces may be able to help employers recover from COVID-19 by offering more flexible and easily adaptable office spaces,⁶ but only if they can survive the in-crisis levels of reduced demand caused by the pandemic and the increased shift to work from home.

COMMERCIAL: Businesses of all shapes and sizes are in danger of permanent closure and small businesses, especially minority-owned small businesses, are particularly vulnerable.⁷ Some big-name department stores have already filed for bankruptcy or shuttered their doors both in and outside of malls. Meanwhile, increased demand for warehousing⁸ is buoying the industrial real estate market but some companies have been criticized for their poor handling of employee health and safety during the pandemic.⁹ COVID-19 outbreaks in warehouses and processing facilities have disproportionately impacted lower-income, immigrant, and BIPOC communities.¹⁰

1 Isabella Simonetti, "Will the Coronavirus Drive down Housing Prices? This Real Estate Broker Says No.," Vox, June 29, 2020, <https://www.vox.com/the-goods/21300939/coronavirus-real-estate-housing-sales>.

2 Jessica Menton, "Home Prices: Good Luck Finding an Affordable House during COVID," July 1, 2020, <https://www.usatoday.com/story/money/2020/07/01/home-prices-good-luck-finding-affordable-house-during-covid/3267097001/>.

3 Katy McLaughlin and Candace Taylor, "Coronavirus Is Sending Luxury Rental Markets on a Rollercoaster Ride," Wall Street Journal, June 4, 2020, sec. Real Estate, <https://www.wsj.com/articles/coronavirus-is-sending-luxury-rental-markets-on-a-rollercoaster-ride-11591287680>.

QUESTIONS AND KEY CONSIDERATIONS REGARDING THE FUTURE OF LAND USE & REAL ESTATE:

- **Will central cities become less attractive to live in and how will this impact residential real estate markets?** More people will likely be able to work remotely more of the time, which could impact demand for different types of real estate (office and retail) and where it is located (in surrounding neighborhoods as opposed to inner urban cores).
- **There may be increased demand for commercial real estate in neighborhoods and suburbs** if businesses shift from being concentrated in Central Business Districts to accommodate people spending more time working from home and looking for amenities, shops and cafes near that location.
- **Historic levels of housing instability, unemployment, and economic disruption could severely exacerbate the homelessness crisis and racial housing inequities** the U.S. already faced due to racist housing policies. How can cities continue to leverage creative pandemic responses to create longer-term solutions to the existing housing crisis?
- **Long-term demand for warehousing space is expected to increase** as e-commerce continues to expand and companies opt to keep more “safety stock”, or larger supplies of extra goods, on hand. At the same time, chain retailers have not paid rent for months, which could have long-term impacts across the commercial real estate market, affecting property owners, lenders and investors.

4 Kriston Capps, “The Coming Wave of Coronavirus Evictions Will Wipe Out Black Renters,” Bloomberg.com, July 1, 2020, <https://www.bloomberg.com/news/articles/2020-07-01/black-renters-in-boston-face-highest- eviction-risk>.

5 Elise Gould and Heidi Shierholz, “Not Everybody Can Work from Home: Black and Hispanic Workers Are Much Less Likely to Be Able to Telework,” Economic Policy Institute (blog), March 19, 2020, <https://www.epi.org/blog/black-and-hispanic-workers-are-much-less-likely-to-be-able-to-work-from-home/>.

6 Jack Anstine, “Created for Collisions, Coworking Spaces Adapt to a Socially Distant Return to the Office,” Startland News (blog), June 18, 2020, <https://www.startlandnews.com/2020/06/coworking-covid-19/>.

7 Andre Dua, Deepa Mahajan, and Shelley Stewart, “COVID-19’s Effect on Minority-Owned Small Businesses | McKinsey,” May 27, 2020, <https://www.mckinsey.com/industries/public-and-social-sector/our-insights/covid-19s-effect-on-minority-owned-small-businesses-in-the-united-states>.

8 Jennifer Smith, “Warehouse Demand Surges as Retailers Reset Supply Chains,” Wall Street Journal, June 21, 2020, sec. C Suite, <https://www.wsj.com/articles/warehouse-demand-surges-as-retailers-reset-supply-chains-11592740800>.

9 Sam Bloch, “In Arkansas, Increasing Pressure on Tyson Foods and Governor Hutchinson to Protect Workers’ Lives,” The Counter, July 7, 2020, <https://thecounter.org/arkansas-pressure-tyson-foods-governor-hutchinson-protect-workers-covid-19/>.

10 Gosia Wozniacka, “Why Farmworkers Are Especially at Risk for COVID-19,” Eater, May 14, 2020, <https://www.eater.com/2020/5/14/21257505/farmworkers-covid-19-coronavirus-cases-risks>.

URBAN DESIGN

Cities were quick to adopt tactical urbanism approaches to rapidly convert public streets, parking spaces, and sidewalks into spaces for walking and biking, restaurant diners, and retail.¹¹ These quick changes have shown that the right-of-way can be more flexible and adaptable, and have highlighted the importance of streets as public space. This shift in the use of public space has been critical in the survival of numerous small businesses and can be seen throughout the globe (see [NACTO](#) and [COVIDMobilityWorks.org](#) for listings of these modifications).

Tactical urbanism implementation has not necessarily been equitable. The rapid reallocations of urban space to include room for walking, biking, and commerce have been met with both praise and criticism. Street and public space modifications have often been implemented without meaningful community engagement, are concentrated in higher income areas, and/or have failed to adequately address the most pressing needs of the community members. The COVID-19 pandemic has clearly illustrated the importance of public space as well as the inequities built into its design and

enforcement. This is especially true for, low-income residents, and Black, Indigenous, and People of Color (BIPOC)¹². These communities have historically lacked public representation and investment and been frequently displaced as a result of government policies.

The increased use and demand for parks and open space during the COVID-19 crisis has also drawn attention to some of the longstanding inequities in the quantity, quality, and location of open spaces.¹³

Inequities caused by discriminatory policies as well as the over-policing of people of color¹⁴ and people experiencing homelessness in these spaces are gaining attention as parks and open spaces have been highlighted for their health and safety benefits. In addition, there is a newfound use and appreciation of balconies,¹⁵ porches, stoops,¹⁶ and driveways as people are activating the semi-private space of the frontage zone. This has drawn attention to the need for high quality affordable housing with outdoor space and the environmental justice issues faced by residents and neighborhoods burdened with air pollution, urban heat islands, and noise pollution.

11 NACTO, “Streets for Pandemic Response & Recovery” (National Association of City Transportation Officials, May 21, 2020), <https://nacto.org/wp-content/uploads/2020/05/NACTO-Streets-for-Pandemic-Response-and-Recovery-2020-05-21.pdf>.

12 Destiny Thomas, “‘Safe Streets’ Are Not Safe for Black Lives,” Bloomberg.com, June 8, 2020, <https://www.bloomberg.com/news/articles/2020-06-08/-safe-streets-are-not-safe-for-black-lives>.

13 John Surico, “The Power of Parks in a Pandemic,” Bloomberg.Com, April 9, 2020, <https://www.bloomberg.com/news/articles/2020-04-09/in-a-pandemic-the-parks-are-keeping-us-alive>.

14 Justin Jouvenal and Michael Brice-Saddler, “Social Distancing Enforcement Is Ramping up. So Is Concern That Black and Latino Residents May Face Harsher Treatment.,” Washington Post, accessed August 3, 2020, https://www.washingtonpost.com/local/public-safety/social-distancing-enforcement-is-ramping-up-so-is-concern-that-black-and-latino-residents-may-face-harsher-treatment/2020/05/10/b1bcf490-8fbd-11ea-9e23-6914ee410a5f_story.html.

15 Linda Poon, “A Lesson from Social Distancing: Build Better Balconies,” Bloomberg.com, April 20, 2020, <https://www.bloomberg.com/news/articles/2020-04-20/lesson-from-coronavirus-build-better-balconies>.

16 The New York Times, “How the Stoop and the Sidewalk Helped New Yorkers Stay Sane - The New York Times,” June 14, 2020, <https://www.nytimes.com/2020/06/14/nyregion/coronavirus-nyc-stoop-neighbors.html>.

QUESTIONS AND KEY CONSIDERATIONS REGARDING THE FUTURE OF URBAN DESIGN:

- **The wide variety of uses currently being tested (playstreets, stateries, retail, markets, protesting, art) is showcasing the possibilities of reallocating car space to serve other community needs.** How can we leverage the rediscovery of streets as public space throughout the COVID-19 crisis and in the longer-term post-crisis period? How can this be done in a way that is equitable throughout cities and regions?
- **How will COVID-19 impact our perception of density and our decisions of where to live?**
- **How can we design for social cohesion while maintaining physical distance** in a variety of public spaces, and how long will the desire for physical distance remain post-crisis? What can be done in the public realm to help people feel comfortable using transit, shopping, socializing, exercising?
- **How can we leverage this renewed appreciation for parks and open space** to address long standing systemic issues of inequitable park distribution and inadequate funding?



BUILDING DESIGN

The COVID-19 pandemic quickly and drastically reduced the use of indoor public and private spaces. There have been very few coherent guidelines for how businesses can safely provide services while maintaining social distance and limiting COVID-19 transmission.¹⁷ This is impacting small businesses - which normally operate at low margins, have less access to capital and loans, and are unable to capitalize on economies of scale - the most. At the same time there has been a renewed appreciation for homes and home offices among people who are fortunate enough to have a home and/or job that allow them to stay there.

School buildings could have a particularly hard time adapting to social distancing protocols, especially in lower income areas with larger class sizes and lower budgets.

As the pandemic has continued, more and more schools (at all levels of education) have shifted to remote education only or hybrid remote and in-person classes. Many of the schools that have begun to reopen have already reported positive cases and are needing to modify or roll back their plans and policies.¹⁸

QUESTIONS AND KEY CONSIDERATIONS REGARDING THE FUTURE OF BUILDING DESIGN:

- **Will we return to using indoor spaces the way we did before the pandemic post-crisis?** If not, to what degree will designers and code officials need to rethink the design of small/shared spaces like bathrooms, locker rooms and elevators?
- **The pandemic has required interdisciplinary collaboration** as architects and planners work with healthcare and government officials to aid in the response. Will this type of holistic planning continue post-crisis, and will public health remain an increased priority for the design of buildings?
- **COVID-19 has exposed the weaknesses in our built environment and inspired a range of responses** for temporary structures, adaptive reuse, social distancing, and equipment fabrication. How might these responses change the industry?

¹⁷ Christele Harrouk, "MASS Releases Spatial Strategies for Restaurants in Response to COVID-19," ArchDaily, May 13, 2020, <https://www.archdaily.com/939519/mass-releases-spatial-strategies-for-restaurants-in-response-to-covid-19>.

¹⁸ New York Times, "As Some Students and Teachers Go Back to School in the U.S., They're Bringing the Virus with Them.," The New York Times, August 3, 2020, sec. World, <https://www.nytimes.com/2020/08/03/world/coronavirus-covid-19.html>.



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Travelworld

 **Reisebüro im Flughafen**

TRANSPORTATION

COVID-19 has caused disruptions in the transportation sector across modes as travel has been curtailed in response to stay at home orders, closed borders, and business closures. Transit ridership fell dramatically across the U.S. in the first few months of the pandemic and many transit operators have been forced to reduce service levels or temporarily eliminate lines.¹⁹ Transit budgets are being severely impacted by decreased ridership and increased cleaning costs,²⁰ and the future of federal transit funding remains uncertain.²¹ In addition, the safety of transit workers and passengers remains a paramount concern²² as many essential workers are transit-reliant.²³ A few months into the pandemic, car travel had returned in many cities to 90% of pre-pandemic levels²⁴ and threatens to surpass those levels if the economy continues to reopen while transit remains seen as a less safe option than driving alone.

Transportation network company (TNC) ridership has decreased dramatically as a result of the COVID-19 crisis. In April/ May, Uber and Lyft reported between 75-80% decreases in ride volumes compared to 2019²⁵ leading to significant layoffs in both companies and calling into question their long-term viability.²⁶ At the same time, they have seen a substantial increased demand for meal and grocery delivery services after expanding their service offerings.²⁷ They have also donated some free and reduced cost rides and delivery trips to essential workers and marginalized groups during the pandemic.²⁸

**A FEW MONTHS INTO THE PANDEMIC,
CAR TRAVEL HAD RETURNED
IN MANY CITIES TO
90% OF PRE-PANDEMIC LEVELS²⁴**

19 Luz Lazo and Justin George, "In a Week, the Coronavirus Razed U.S. Transit and Rail Systems," Washington Post, March 22, 2020, https://www.washingtonpost.com/local/trafficandcommuting/in-a-week-the-coronavirus-razed-us-transit-and-rail-systems/2020/03/22/ca58a88a-6a21-11ea-9923-57073adce27c_story.html.

20 TransitCenter, "Estimated Financial Impact of COVID-19 on U.S. Transit Agencies: \$26-\$40 Billion Annually," March 20, 2020, <https://transitcenter.org/estimated-financial-impact-of-covid-19-on-u-s-transit-agencies-26-38-billion-annually/>.

21 Jenna Fortunati, "The CARES Act Isn't Enough to Save Public Transportation," Transportation For America (blog), April 20, 2020, <http://t4america.org/2020/04/20/the-cares-act-isnt-enough-to-save-public-transportation/>.

22 Paul Berger, "Transit Workers Hard Hit by Coronavirus Head Back to Work Still Fearing Exposure," Wall Street Journal, May 13, 2020, sec. US, <https://www.wsj.com/articles/transit-workers-hard-hit-by-coronavirus-head-back-to-work-still-fearing-exposure-11589367632>.

23 "Transit Is Essential: 2.8 Million U.S. Essential Workers Ride Transit to Their Jobs," March 24, 2020, <https://transitcenter.org/2-8-million-u-s-essential-workers-ride-transit-to-their-jobs/>.

24 Katherine Shaver, "U.S. Traffic Has Rebounded to about 90 Percent of Pre-Pandemic Levels, Analysts Say," Washington Post, June 19, 2020, https://www.washingtonpost.com/local/trafficandcommuting/us-traffic-has-rebounded-to-about-90-percent-of-pre-pandemic-levels-analysts-say/2020/06/19/5f498cce-b190-11ea-8758-bfd1d045525a_story.html.

25 Shannon Bond, "How Uber And Its Riders Are Adapting To The New 'Social,'" NPR.org, June 10, 2020, <https://www.npr.org/2020/06/10/873499410/how-uber-and-its-riders-are-adapting-to-the-new-social>.

26 Preetika Rana, "Uber Cuts 3,000 More Jobs, Shuts 45 Offices in Coronavirus Crunch," Wall Street Journal, May 19, 2020, sec. Tech, <https://www.wsj.com/articles/uber-cuts-3-000-more-jobs-shuts-45-offices-in-coronavirus-crunch-11589814608>.

In terms of micromobility, bicycle ridership and sales are soaring²⁹ while e-scooter companies have been experiencing fits and starts in demand. Some shared micromobility companies removed their vehicles from city streets as a response to COVID-19³⁰ and have drastically reduced their staff.³¹ Others have offered free or reduced cost rides to some users and are hoping to make a case that micromobility can help fill in essential transportation system gaps if transit service cuts are made or if people prefer modes that enable social distancing.

75-80%
DECREASE IN RIDE VOLUMES
FOR UBER AND LYFT
IN APRIL/MAY²⁵

COVID-19 has also impacted the development of autonomous vehicles (AV) with many projects stalling³² and companies pivoting towards deliveries and away from passenger vehicles.³³ At the same time, the increased demand for physical distance has also put a spotlight on the potential for AVs to reduce human contact in transportation systems and delivery services.³⁴

Equity issues across all modes of transportation have been magnified due to the pandemic and expansion of the Black Lives Matter Movement in response to police brutality.³⁵ Increased focus and engagement are needed to break down barriers and make transportation systems usable, accessible, affordable, and available for everyone, but especially those who have been previously excluded due to systemic racism, ableism, and sexism.

27 Marco Chiappetta, "Uber Eats Demand Soars Due To COVID-19 Crisis," March 25, 2020,

<https://www.forbes.com/sites/marcochiappetta/2020/03/25/uber-eats-demand-soars-due-to-covid-19-crisis/#5aeb4421580c>.

28 Andrew J. Hawkins, "Uber Pledges 10 Million Free Rides and Deliveries for Workers Affected by COVID-19," The Verge, March 31, 2020, <https://www.theverge.com/2020/3/31/21201805/uber-free-rides-deliveries-workers-coronavirus-pledge>.

29 Christina Goldbaum, "Thinking of Buying a Bike? Get Ready for a Very Long Wait - The New York Times," May 18, 2020, <https://www.nytimes.com/2020/05/18/nyregion/bike-shortage-coronavirus.html>.

30 Sasha Lekach, "E-Scooters Just Started to Return, but Lime, Bird Pull Them amid Protests," June 1, 2020, <https://mashable.com/article/electric-scooters-pulled-protests/>.

31 Ben Bergman, "'It Felt Like a Black Mirror Episode' The Inside Account of How Bird Laid off 406 People in Two Minutes via a Zoom Webinar," dot.LA, April 2, 2020, <https://dot.la/bird-layoffs-meeting-story-2645612465.html>.

32 Cade Metz and Erin Griffith, "This Was Supposed to Be the Year Driverless Cars Went Mainstream," The New York Times, May 12, 2020, sec. Technology, <https://www.nytimes.com/2020/05/12/technology/self-driving-cars-coronavirus.html>.

33 Alan Ohnsman, "Coronavirus Scrambles Self-Driving Race, Pushing Nuro's Delivery Bots To Front Of The Pack," Forbes, accessed July 16, 2020, <https://www.forbes.com/sites/alanohnsman/2020/07/09/coronavirus-scrambles-self-driving-race-pushing-nuros-delivery-bots-to-front-of-the-pack/>.

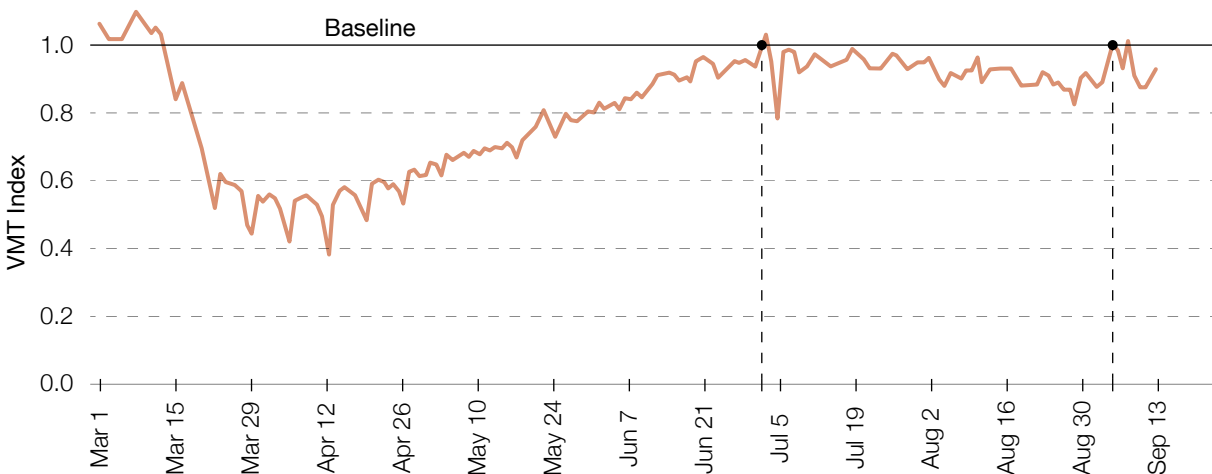
34 Baidu, "How Coronavirus Is Accelerating a Future with Autonomous Vehicles," MIT Technology Review, May 18, 2020, <https://www.technologyreview.com/2020/05/18/1001760/how-coronavirus-is-accelerating-autonomous-vehicles/>.

35 Streetsblog, "PoC Leaders Demand Anti-Racism from Transportation Community," Streetsblog USA (blog), June 3, 2020, <https://usa.streetsblog.org/2020/06/03/poc-transportation-leaders-call-for-antiracist-action-from-their-community/>.

QUESTIONS AND KEY CONSIDERATIONS REGARDING THE FUTURE OF TRANSPORTATION:

- **What will the long-term changes in travel behaviors be?** Will a longer (12+ month) span of COVID-19 impacts force individuals to make transportation decisions (where they live, buying a first or second car, etc.), that will have ramifications post-crisis? How can cities create short-term solutions that keep people from making these longer-term shifts that could have a lasting negative impact on equity and the environment?
- **Even with funding for transit in the CARES Act, it is projected that many transit operators will face significant budget shortfalls** and may have to make difficult decisions about whether to permanently cut some lines or continue to operate at reduced service levels given budget constraints. Both options could further exacerbate existing racial inequities.
- **Will drivers continue to drive for TNCs under the existing employment model** knowing the risk and uncertainty they faced during the COVID-19 pandemic? Will people be able to afford TNCs if the economy continues to degrade? Will TNCs be able to weather reduced demand for rides if travel continues to be curtailed and nightlife destinations remain closed?
- Micromobility companies are laying off staff and consolidating amidst the COVID-19 pandemic. **Can a sustainable business model emerge out of the chaos caused by COVID-19?** Could micromobility help fill transit gaps? Private transportation providers may require public partnerships to survive, while public transit may need on-demand services to serve low-volume routes. Will public agencies be open to beginning new pilots or partnerships with new mobility companies' post-crisis?

Passenger Vehicle Miles Traveled (VMT) in Context (seasonally adjusted)



Source: Bureau of Transportation Statistics, <https://www.bts.gov/covid-19/week-in-transportation>

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E-COMMERCE & RETAIL

Brick-and-mortar businesses of all sizes have been forced to shut down due to the economic consequences of the pandemic.³⁶ Many department stores in indoor malls have shuttered permanently, but small businesses have been hit the hardest overall. Between February 2020 and April 2020, the number of operating small businesses fell by 22%. Minority and women-owned businesses have faced the greatest challenges and the number of operating Black-owned businesses plummeted by a staggering 41% in the same period.³⁷ Some restaurant and retail business owners have said that their businesses could hold out with the reduced business levels (e.g. takeout only for many restaurants) for a few months, but if restrictions remain into the winter, they will need to re-assess and may be unable to stay afloat.³⁸ In terms of retail, apparel showed the largest decline in store traffic across sectors and was down 23.2% YOY in June 2020, after dipping as low as 87.3% YOY in April.³⁹ Brick-and-mortar stores have widely adopted e-commerce as a replacement or supplement to their physical locations. Mom-and-pop retailers

began using services like Shopify and big box stores have reallocated space in their physical locations to fulfill click-and-collect orders.

E-commerce sales increased substantially in response to COVID-19, accelerating existing trends. Online sales in the U.S. were up 76.2% YOY in June and remained up 55.0% YOY in July even as more brick-and-mortar stores began reopening.⁴⁰ Overall, the increased demand has allowed companies to learn how to quickly adapt their business models for e-commerce and delivery sales. There has been especially high growth in e-commerce business in the grocery and food sector⁴¹ which has helped some immune-compromised people stay socially distant by having groceries delivered to their homes. However, many people do not have this option to shop online and the rapid deployment of e-commerce services raises accessibility issues.⁴² Barriers related to technology (internet access, mobile data), finances (unbanked, lack of credit cards), language and visual impairment limits/undermine the accessibility of e-commerce. As it stands, many e-commerce websites do not meet ADA standards.⁴³

³⁶ Sapna Maheshwari and Vanessa Friedman, "The Death of the Department Store: 'Very Few Are Likely to Survive,'" The New York Times, April 21, 2020, sec. Business, <https://www.nytimes.com/2020/04/21/business/coronavirus-department-stores-neiman-marcus.html>.

³⁷ Aaron Ross Coleman, "Study: Covid-19 Lockdowns Hit Black-Owned Small Businesses the Hardest," Vox, June 10, 2020, <https://www.vox.com/2020/6/10/21286759/study-covid-19-lockdowns-black-owned-businesses-hardest-recession>.

³⁸ Garrick Brown and Sucharita Kodali, "E-Commerce & Retail Trends" (Urbanism Next Virtual Forum, May 14, 2020), <https://www.urbanismnext.org/conference-events/e-commerce-retail-trends>.

³⁹ "Coronavirus: Year over Year Monthly Retail Sales Comparison by Sector U.S. 2020," Statista, accessed August 8, 2020, <https://www.statista.com/statistics/1104339/coronavirus-year-over-year-monthly-retail-sales-comparison-by-sector-us/>.

⁴⁰ Stephanie Crets, "Online Sales Taper off in July as Retail Stores Reopen," Digital Commerce 360, August 11, 2020, <https://www.digitalcommerce360.com/article/coronavirus-impact-online-retail/>.

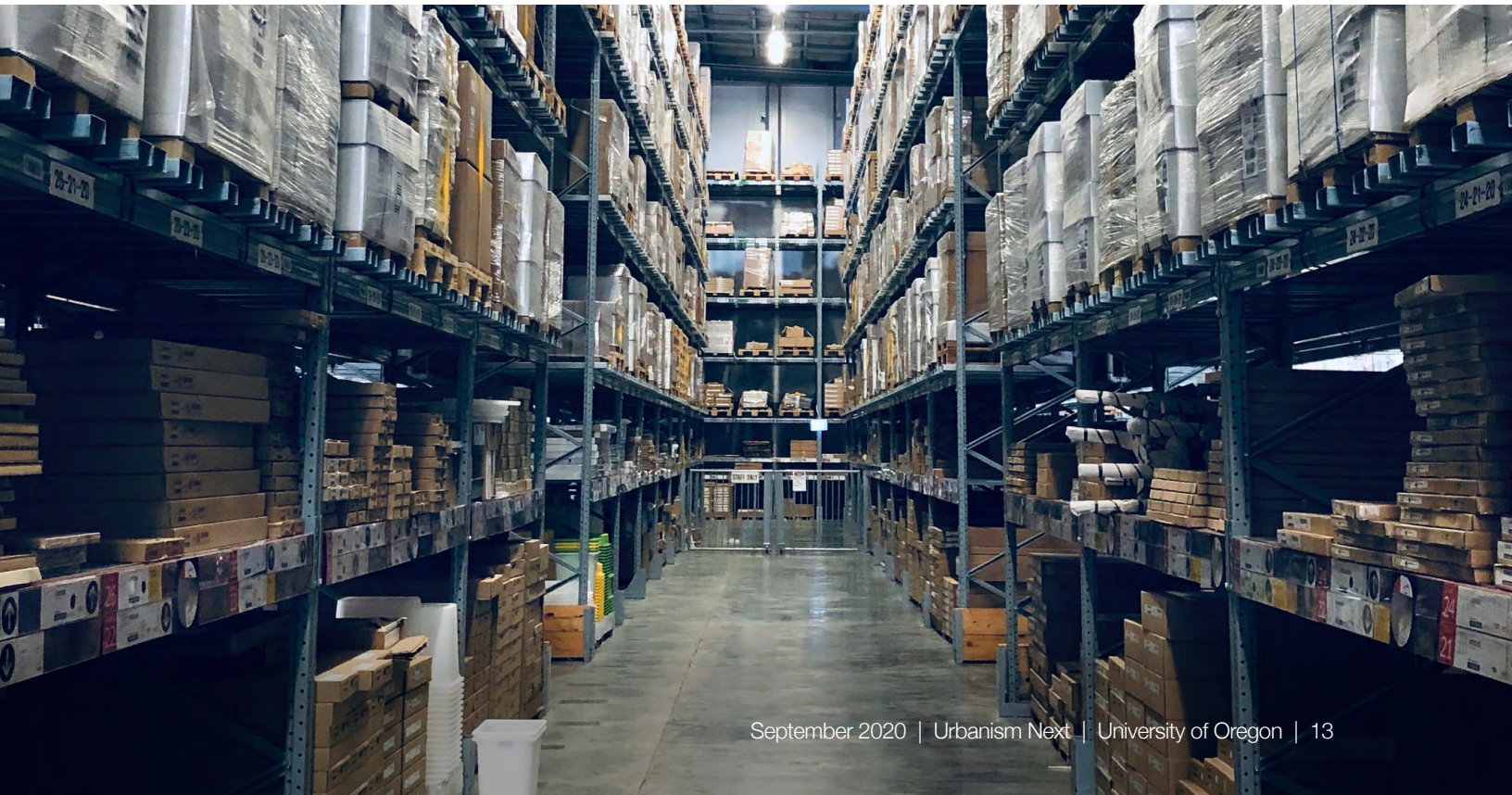
⁴¹ Jaewon Kang, "Grocers Embrace Food Delivery, but They Still Don't Love It," Wall Street Journal, June 13, 2020, sec. Business, <https://www.wsj.com/articles/grocers-embrace-food-delivery-but-they-still-dont-love-it-11592056800>.

⁴² User1st, "Online Groceries: A Convenience to an Obstacle," GlobeNewswire News Room, May 4, 2020, 1, <http://www.globenewswire.com/news-release/2020/05/04/2026831/0/en/Online-Groceries-A-Convenience-to-an-Obstacle.html>.

QUESTIONS AND KEY CONSIDERATIONS REGARDING THE FUTURE OF E-COMMERCE & RETAIL:

- As stay-at-home orders lift and supply chains stabilize, **what will businesses adopt from the in-crisis shopping behaviors that emerged during the pandemic?** Will the experimental e-commerce behaviors (for both retailers and customers) stick?
- With COVID-19 intensifying the headwinds for department stores, **how will malls repurpose these massive empty stores and support the remaining businesses?** Will the emerging model of brick-and-mortar retail mixed with fulfillment centers and warehouses be a viable model long-term?
- **How can policies support small, local businesses** that provide much needed jobs and community vitality, especially in low-income, BIPOC, and marginalized neighborhoods?
- **How will local retail and service businesses adjust** to new working habits, modal shifts, and shopping behaviors?
- If small businesses do not survive, **what happens to the unique character of commercial districts and main streets?** How will land use and retail markets shift to fill this void?

43 Nathan Resnick, "Run an Online Store? In the Age of COVID-19, You Can't Skimp on Web Accessibility," Podium | The Next Web, April 24, 2020, <https://thenextweb.com/podium/2020/04/24/run-an-online-store-in-the-age-of-covid-19-you-cant-skimp-on-web-accessibility/>.



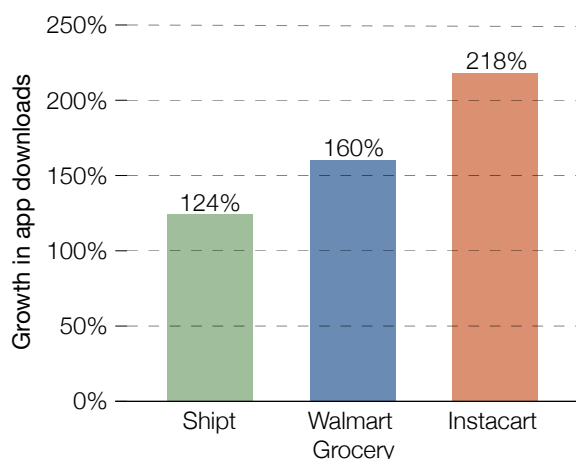
GOODS DELIVERY

Demand for grocery and meal delivery has surged. Instacart saw a 218% increase in app downloads between February and mid-March.⁴⁴ This increase in demand temporarily led to longer than usual wait times for delivery slots, and Amazon (and others) suspended one- and two-day delivery commitments for nonessential orders. Amazon Prime customers experienced delivery delays as long as a month in March/April.⁴⁵ Walmart saw U.S. e-commerce sales grow 97% in the second quarter, ending July 31, 2020.⁴⁶ Emblematic of the increased demand, there have been online auctions of delivery slots to complete grocery orders.⁴⁷ To help meet this increased demand, some ridehail and micromobility companies have pivoted their businesses to focus on fulfilling deliveries or expanded their existing delivery businesses.⁴⁸

218%
INCREASE IN INSTACART APP
DOWNLOADS BETWEEN FEBRUARY
AND MID-MARCH.⁵¹

Workers deemed essential—which includes delivery workers—are at far greater risk for contracting COVID-19 than those who can primarily stay home.⁴⁹ In addition, access to deliveries and online ordering is not equitable. In addition to the barriers listed in the section on retail & e-commerce, most SNAP recipients cannot use their benefits to pay for delivery fees⁵⁰ and less tech-savvy users may struggle to find available delivery windows. This begs the question of who has access to these delivery services and who is working for these services and putting their own health and safety at risk, often for low-pay gig-work.

Increase in grocery delivery app downloads due to coronavirus outbreak U.S. 2020



Source: Statista.com Reformatted by: Urbanism Next

44 Statista, “Grocery Delivery App Growth Due to Coronavirus U.S. 2020,” Statista, March 2020,

<https://www.statista.com/statistics/1104519/grocery-delivery-app-growth-coronavirus-us/>.

45 Jason Del Rey, “Amazon Prime Delivery Delays Are Now as Long as a Month,” Vox, March 22, 2020, <https://www.vox.com/recode/2020/3/22/21190372/amazon-prime-delivery-delays-april-21-coronavirus-covid-19>.

<https://www.vox.com/recode/2020/3/22/21190372/amazon-prime-delivery-delays-april-21-coronavirus-covid-19>.

46 James Melton, “Walmart Online Sales Nearly Double in Q2 as Pandemic Continues,” Digital Commerce 360, August 18, 2020, <https://www.digitalcommerce360.com/2020/08/18/walmarts-online-sales-nearly-double-in-q2-as-pandemic-continues/>.

47 Matthew Boyle, “Amazon Prime, Fresh Direct Delivery Slots: A Reservation Lottery - Bloomberg,” April 9, 2020, <https://www.bloomberg.com/news/articles/2020-04-09/amazon-prime-fresh-direct-delivery-slots-a-reservation-lottery?sref=LOxEm0mA>.

48 Jon Porter, “Uber Launches New Delivery Services as Demand for Ride-Hailing Plummet,” The Verge, April 20, 2020, <https://www.theverge.com/2020/4/20/21227828/uber-connect-direct-deliveries-medication-pet-supplies>.

49 Arielle Pardes, “Essential Workers Unite for a May Day Strike. Is It Enough?,” May 1, 2020, <https://www.wired.com/story/amazon-instacart-target-coronavirus-may-day-strike/>.

50 Crampton, “Most Americans on Food Stamps Must Shop at Stores, Risking Coronavirus Exposure.”

QUESTIONS AND KEY CONSIDERATIONS REGARDING THE FUTURE OF GOODS DELIVERY:

- Prior to the pandemic, some cities were starting to experiment with curb reservation systems in order to help manage competing demands for the curb. To what extent will this increased demand for delivery be sustained, **how will changes in mode choice shift demand for the curb, and what are the implications for curb management?**
- **What will the long-term consequences of “no contact” delivery be on human behaviors and relationships**, especially for seniors or home-bound individuals who may otherwise have limited opportunities to interact with people?
- **How sustainable are delivery apps in the long-term?** Calls to classify delivery workers as employees and provide benefits are increasing. Will we see increased protections for delivery drivers?
- With increased demand for delivery and an ongoing need to maintain physical distancing measures, the push for driverless delivery is likely to accelerate. Some autonomous vehicle (AV) companies have already pivoted their focus from passenger vehicles to driverless/drone/robot delivery. **Will parcel lockers become increasingly popular with the ongoing need for contactless delivery?**



SUMMARY

COVID-19 has already proven to be much more than just a momentary disruption. The COVID-19 crisis and the cascading impacts and disruptions will cause long-term changes to our lives and the cities we live in. Urbanism Next began tracking the impacts of COVID-19 on the built environment under the assumption that they will continue impacting our work, and that decision-makers need to consider how

short-term behavior changes may transform into long-term impacts. While we cannot predict the future, we believe it is essential to consider as many potential long-term implications as possible. We must act responsibly now in order to achieve the long-term outcomes related to equity, health & safety, the environment, and the economy that we wish to see.

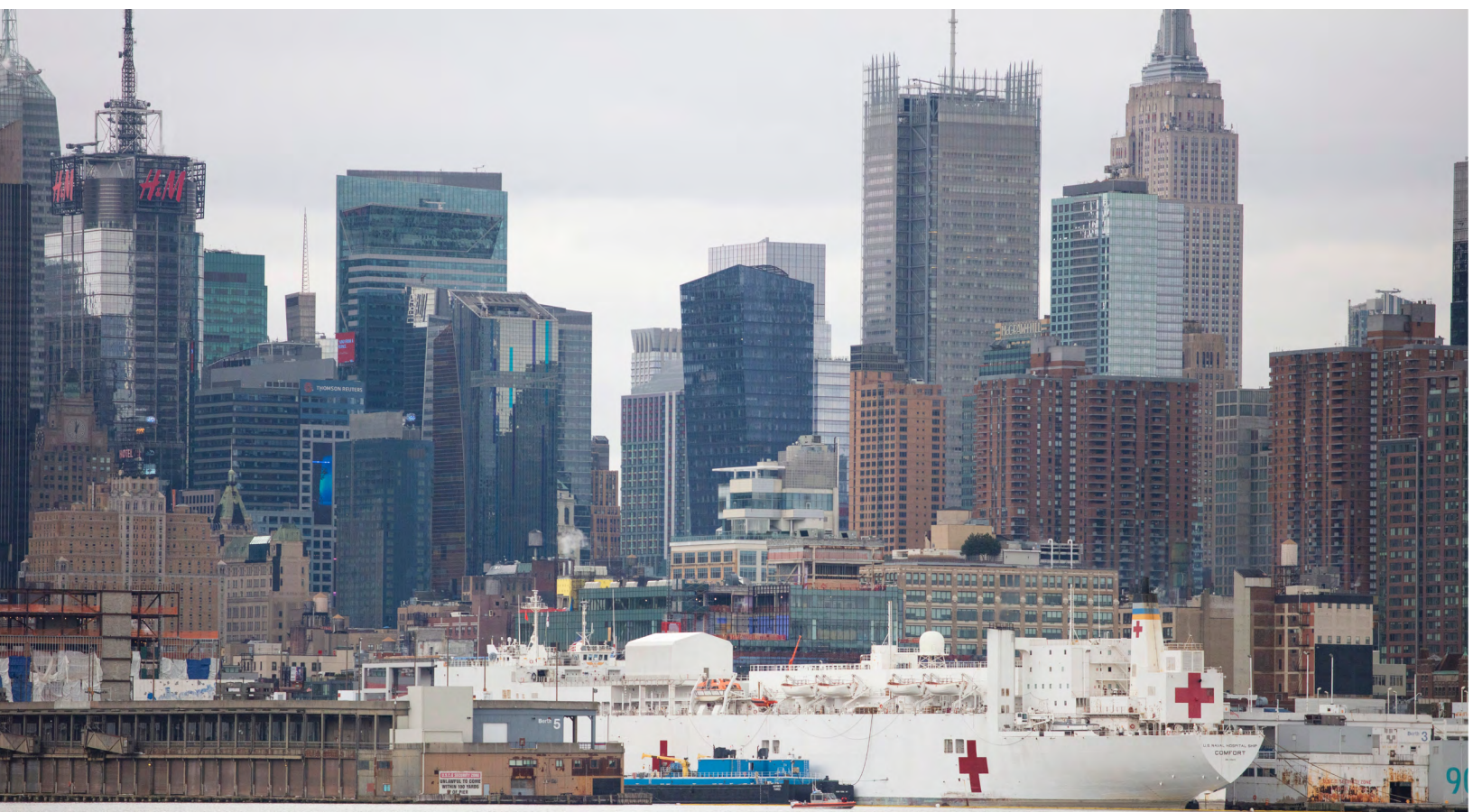




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