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Repurposing Obsolete Infrastructure

Due to factors like COVID-19, online retail, increasing technology, and a shift in working culture, certain infrastructure across the world is becoming obsolete. This phenomenon has not gone unnoticed. In 2014, former Uber CEO Travis Kalanick invested \$150 million in a startup called “Recode” that takes distressed real estate assets like abandoned strip malls and turns them into spaces suited for new industries such as food delivery or online retail.¹ When asked what prompted this investment, Kalanick reasoned that “there are over \$10 trillion in these real estate assets that will need to be repurposed for the digital era in the coming years.”² It is clear that a significant amount of money is being invested privately into this area. Since most of this infrastructure was designed to provide resources and enjoyment to the community—think gas stations, shopping malls, and downtown offices—it is imperative that the redevelopment of these areas continue to serve the community. This calls for increased government intervention and oversight to make sure that social and environmental elements, along with community interest, is being taken into account. With these factors in mind, sustainable redevelopment of obsolete infrastructure has the potential to reduce the heat island effect, improve mental health, and create social impact opportunities.

¹ Cook, James. “Uber Founder Travis Kalanick's New Company Turns Parking Lots and Abandoned Shopping Malls into Space for Businesses.” *Business Insider*, Business Insider, 21 Mar. 2018.

² JMBooyah. “Travis Kalanick Is Joining the Real Estate Startup City Storage Systems as CEO.” *CNBC*, CNBC, 21 Mar. 2018.

Gas stations are one such category whose infrastructure is expected to become obsolete in the coming decades due to the development and popularization of electric vehicles (EVs). 50% of new vehicles sold in the United States will be electric by 2030, along with similar commitments from auto-giants like Volvo and General Motors to go 100% electric.³ By 2050, the White House plans to spend \$5 billion to build more than 500,000 public EV chargers.⁴ However, the obvious step of swapping gas pumps with EV charging is not as simple as it seems. EV is being installed anywhere and everywhere—from home and office garages to Marriott hotels to Starbucks parking lots. Soon, charging an EV will be as simple as parking it. This eliminates the need for frequent refueling trips, and limits gas station/EV charging station customers to long-distance travelers. Taking this into account, Boston Consulting Group estimated that if EVs do take off, up to 80% of the fuel retail market will be unprofitable by 2035.⁵ And although the bipartisan infrastructure bill is funneling \$7.5 billion to pay for electric chargers to replace gas pumps, sky-high fees have deterred station operators from building out their infrastructure with electric pumps.⁶

In order to ensure the livelihood of gas station operators, unique measures will have to be taken besides replacing gas pumps with charging stations. Due to their central locations downtown and in suburban neighborhoods, these areas would be prime real estate to turn into community green spaces. Gas station operators make the majority of their profit from convenience store sales, and placing a green space beside their store would increase foot traffic and maintain sales. Additionally, part of sustainable development is finding value in existing infrastructure—and restoring the gas station area to a park while keeping the retail infrastructure

³ “Fact Sheet: President Biden Announces Steps to Drive American Leadership Forward on Clean Cars and Trucks.” *The White House*, The United States Government, 5 Aug. 2021.

⁴ Smosaka. “Biden's 500,000 EV Charging Stations Get a \$5 Billion Start.” *Grist*, 11 Feb. 2022.

⁵ Heilweil, Rebecca. “The Death of the Gas Station.” *Vox*, Vox, 13 Apr. 2022.

⁶ McFarland, Matt. “Here's Why Convenience Stores Aren't Rushing to Replace Gas Pumps with EV Chargers | CNN Business.” *CNN*, Cable News Network, 18 Oct. 2022.

as a convenience store, cafe, or shop would follow this path.⁷ To illustrate, a Denver gas station operator has partnered with Denver Beer Co. to convert their real estate into a Beer Garden. This community-forward urban retreat features a cozy beer bar inside the former convenience store, seating underneath the former gas station canopy, and a community park with benches to the side.⁸

Another area of infrastructure that is hurtling towards obsolescence are abandoned shopping malls and department stores. Nostalgic TV shows and movies depict shopping malls as the “economic engine of the city”—however, this is no longer the case.⁹ Mall-culture peaked in 1992 with the 5.6 million square foot Mall of America—comprising one of twenty supermalls in North America. Now, Coresight Research estimates that 25% of America’s 1,000 malls will close by 2025, down from 30,000 malls in 1975. This has been prompted by the rise in online retail, and spurred on by the COVID-19 pandemic along with the last two recessions. Real estate experts have estimated that these spaces will likely turn into logistics and distribution centers, apartment complexes, and off-price retail stores. However, many communities rely on the property and sales tax of their malls to fund basic services, and it makes sense that the next evolution of shopping malls should continue to support the community.¹⁰

With these social factors in mind, abandoned mall real estate could be put towards public housing and homeless shelters. Washington Post Reporter Terrence McCoy commented that this evolution brings “together three economic phenomena: the collapse of the brick-and-mortar retail industry, the disappearance of affordable housing in America's boom towns, and the struggle to reduce homelessness.” This transition is already happening in some places. One of these sites is

⁷ Heilweil, Rebecca. “The Death of the Gas Station.” *Vox*, Vox, 13 Apr. 2022.

⁸ December 01, 2022 | By Sarah Buscarello. “Activating a Former Gas Station as a Community-Forward Urban Retreat.” *Gensler*, 1 Dec. 2022.

⁹ Corkery, Michael, and Andrew Mangum. “Macy's Goes from Mall Mainstay to Homeless Shelter.” *The New York Times*, The New York Times, 13 June 2018

¹⁰ Ark, Tom Vander. “Turning Dead Malls into Community Assets.” *Forbes*, Forbes Magazine, 10 Dec. 2021.

the Landmark Mall in Washington, DC, which transformed a defunct Macy's store into a homeless shelter in 2018. The main floor was converted to a shelter—housing 600 homeless people every year—with ninety seven units of affordable housing in the floors above. This setup was projected to run for approximately three years while raising money for redevelopment. Although the homeless shelter and affordable housing is a temporary stopgap, the good news is that the transition did not interfere with redevelopment.¹¹ These examples relay to retailers the benefit of transforming their dying malls with social elements in mind—which has the opportunity to make a big impact in cities like San Francisco with rampant homelessness and high rent prices.

Another, more recent, area of real estate vacancy are office spaces. The post-pandemic office revival has plateaued significantly, which is leaving cities with millions of square feet of unused commercial space. As of 2023, office real estate vacancies lay between 13 to 22.5%, with 70 to 90% of these properties being outdated, meaning the structures were built over thirty years ago. In San Francisco—a tech hotspot whose workers are uniquely disposed to work from home—vacancies stand at 25.1%. This is the highest vacancy rate since the financial crisis of 2008. Another cohort affected by this situation are nearby shops and restaurants that depend on office workers to show up and spend money during the work day.¹² On any given week in San Francisco, office buildings are at approximately 40% of their pre-pandemic occupancy—undoing this “once-symbiotic relationship” with neighboring retailers.¹³ In some cases, maintenance costs

¹¹ Biron, Bethany. “5 New Uses for Empty Malls Decimated by the Retail Apocalypse and COVID-19, from Health Clinics to Homeless Shelters.” *Business Insider*, Business Insider.

¹² “Why There Are so Many Empty Office Buildings in Your City Right Now.” *NBCNews.com*, NBCUniversal News Group, 1 Apr. 2023.

¹³ Dougherty, Conor, et al. “What Comes Next for the Most Empty Downtown in America.” *The New York Times*, The New York Times, 17 Dec. 2022.

do not justify dismantling a facility that may be useful in the future, but increasingly, the municipal revenues of sitting on these vacant buildings are lower than the expense of upkeep.

Replacing these vacant lots with green spaces can lead to a plethora of benefits—including solving for a lack of parks in cities, improving mental health, and increasing foot traffic to the shops and restaurants that relied on office business.¹⁴ In 2021, Shutterfly demolished its western-most building due to office vacancies, reducing campus size from 258,000 to 142,000 square feet. The area will be undeveloped and transformed into a green space for employees to enjoy.¹⁵ Demolition in order to be sustainable is certainly an oxymoron since demolishing a site is a wasteful process in itself. However, some alternatives have been documented. Dutch environmental engineer, Michel Baars, worked to “deconstruct” an old 14-story office building in lieu of demolition, and reuse the waste materials to pave old roads. Half of the Netherlands’ waste is from construction and demolition—and in the case that an office building is set for demolition and cannot be repurposed—transitioning to deconstruction and reuse can help mitigate this issue.¹⁶

These transitions, from green spaces to homeless shelters, cannot happen without outside investment. I believe it is the responsibility of the US Department of Housing and Urban Development (HUD) to re-implement the Sustainable Communities Regional Planning Grants to support these efforts. This grant is meant to “support locally-led collaborative efforts that bring together diverse interests from the many municipalities in a region to determine how best to target...infrastructure investments.”¹⁷ The grant is meant to uphold the Six Livability Principles,

¹⁴ Chatterjee, Rhitu. “Replacing Vacant Lots with Green Spaces Can Ease Depression in Urban Communities.” *NPR*, NPR, 20 July 2018.

¹⁵ Weber, Mark. “Office Building May Be Demolished in Favor of Green Space.” *Eden Prairie Local News*, 9 Nov. 2021.

¹⁶ Aguirre, Jessica Camille. “How to Recycle a 14-Story Office Tower.” *The New York Times*, The New York Times, 6 Oct. 2022.

¹⁷ “Sustainable Communities Regional Planning Grants.” *HUD.gov / U.S. Department of Housing and Urban Development (HUD)*.

including promoting equitable, affordable housing, valuing communities and neighborhoods, and leveraging investment for sustainable growth.¹⁸ In the past, these grants have predominantly included development funds for regional sustainability plans. This program was last renewed in 2011 with 250 million dollars in grant money. However, given the changes in the past few years and the influx of private investment on personal agendas, I urge HUD to reconsider renewing this grant. Urban landscapes are due for a change, and have so much potential to improve quality of life for the neighboring community. This transition to incorporate more social and environmental elements takes a catalytic investment in the form of a grant, or patient, risk-tolerant capital with a nonexistent or reduced return expectation. It is essential that HUD issues these grants to real estate holders that are struggling and ready to transform their property for the benefit of the surrounding community.

¹⁸ “Six Livability Principles.” *HUD.gov / U.S. Department of Housing and Urban Development (HUD)*.