United States: Equitable smart city design in San Francisco

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Since the late 1800s, California's northern coast has established itself as a hub of technological innovation, from the early days of aerospace to the present-day computer industry. From Apple and Google in the 1980s and 1990s, followed by Facebook and Uber since the turn of the millennium, many computer and tech industry leaders founded their businesses and maintain their headquarters in the area.

The clustering of these companies has had a significant impact on the Bay Area, which includes the urban centres of San José and San Francisco to the south and north, along with Berkeley and Oakland in the east.

San Francisco, in proximity to Silicon Valley and the tech-related funding that comes with it, has been a focal point for testing new technologies at the cutting edge of smart city design. As part of this effort, the city has implemented a wide range of projects to address issues such as waste management, established various 'green policies', including bans on plastic bags and the first solar rebate programme in the region, and increased reliance on public transportation along with a transition to autonomous vehicles. The city and wider region have become known for concentrating on innovation and technology to problem solve. In many ways, San Francisco has taken to heart the common tech industry refrain, 'Move fast and break things', originally popularized by Facebook founder, Mark Zuckerberg.

Yet while San Francisco has been lauded as a pioneer in the move towards smart city development, the limitations of this approach to resolve deep-seated social problems

Louis, a 51-year-old resident of a single-room-occupancy apartment, sits by a street amid an outbreak of Covid-19 in the Tenderloin district of San Francisco.

REUTERS/Shannon Stapleton

are increasingly coming into focus. Indeed, the drive for greater liveability, efficiency and convenience has left many of the city's most marginalized residents far behind. One of the starkest examples of this is the ever-widening wealth gap in the city, most visible in the growing number of individuals living on the streets. For years, human rights groups have sounded the alarm at the deplorable conditions in which unhoused individuals have been forced to live.

In 2017, the UN Special Rapporteur on extreme poverty and human rights, Philip Alston, toured the United States (US), including San Francisco,

meeting people who are unhoused and the civil society groups working alongside them. Alston witnessed how cities like San Francisco are pioneering a technology called Coordinated Entry System (CES), which uses surveys conducted by caseworkers or volunteers to collect data and then computer algorithms to match unhoused people with available services. Following his visit, the Special Rapporteur noted that in San Francisco, 'many homeless individuals feel deeply ambivalent about the millions of dollars that are being spent on new technology to funnel them to housing that does not exist'. Innovations such as CES do

not get to the heart of the problem, namely the chronic shortage of affordable housing. A further issue with CES surveys is that they typically ask very intimate questions. In Los Angeles, for instance, the surveys ask whether the person being interviewed has engaged in sex work, forcing unhoused people to feel as if they must abandon their right to privacy in order to gain their right to housing.

An issue specific to the San Francisco CES is that families living in overcrowded accommodation in so-called Single Room Occupancy hotels (SROs) are downgraded to low priority by the system's algorithms, despite the fact that families with children are crammed into typically 2.5 m × 2.5 m rooms originally built for single adult residents. Forty per cent of the rooms in San Francisco's SROs house four or more people. According to US federal government guidelines, families living with children in SROs are still considered homeless and in

need of permanent housing, because the accommodation is not intended for them. This is not the case with San Francisco's CES, thereby excluding the majority of homeless families. There is a stark ethnic dimension to this too: 62 per cent of the city's SRO families are immigrants. Not surprisingly then, in 2018 the Special Rapporteur released a report that called the conditions in which unhoused individuals in the Bay Area live 'cruel and inhuman', with many denied basic needs such as water, sanitation and health care.

For Carla Mays, an analyst and planner in smart infrastructure and hazard mitigation as well as co-founder of #SmartCohort, a global 'do-tank' helping to design and build smart and resilient cities for all, the current 'dystopia' being realized in San Francisco is not just a consequence of moving too quickly into the future. It is also the result of an approach that leaves the injustices and systemic racism of the past and present unaddressed. Born in California, Mays grew up near Los Angeles, but has called the Bay Area, and frequently San Francisco, home for the past two decades. During this period, she has witnessed first-hand the transformation of the region and in recent years has been advising on ways to promote more sustainable, equitable smart city design.

As part of this work, Mays has travelled throughout the US and the world, learning from other communities and cultures about how smart cities and the technologies they engage can be implemented thoughtfully to limit, instead of exacerbate, inequity. For instance, she looks to Singapore as a guide to being a multicultural

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society where the government has integrated smart city design in a way that engages residents' differing needs, from its housing schemes to public transportation. Mays notes how, in big and small ways, Singapore finds tech-based solutions that are yet to be seen in San Francisco. For example, within the Chinese communities of both cities, it is common for older residents to travel almost daily to the city's respective Chinatowns; Mays explains that 'in Singapore they had designed the transit system so that these seniors could get around', while in San Francisco this community-responsive transit infrastructure is lacking.

Throughout the US, and particularly in major cities such as San Francisco, Seattle, New York and Washington DC, Mays has witnessed a tendency to rely on neoliberal policies that focus on the cost-saving possibilities of tech innovation over their effects on society. She emphasizes how such policies at best ignore and at worst exploit the foundational racism and sexism in the US. She points to how smart city design in San Francisco has not successfully addressed the ongoing social and economic impacts of its history of exclusion and discrimination: the impact of slavery on the African-American community, the genocide and displacement of indigenous communities, specifically the Ohlone tribe native to the land the city occupies, as well as the undervaluing and exploitation of Asian immigrants like the Chinese who worked on the railways and in agriculture during the gold rush, later targeted under the Chinese Exclusion Act. By bringing up these issues, Mays seeks to shine a light on

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the human rights concerns that must be considered if smart city design is to be genuinely inclusive and equitable.

Mays also observes that in highlighting the successes of multicultural smart city design in Singapore, she cannot ignore that country's own human rights issues, including infringements of freedom of expression and the press, as well as legally codified discrimination against LGBTQ+ individuals. But, she clarifies, 'In the US we have a real finger-pointing problem', wherein the country looks to patrol the human rights record of other countries while simultaneously committing violations both domestically and abroad. As Mays describes, 'We are not with clean hands and we like to look around and look at [what] other people [are doing wrong], but our country is built on slave labour and we're not exactly doing a lot of good things right now in tech'.

At present, access is not provided equally to the benefits brought by the tech industry to the Bay Area. Mays specifically points to online platforming for San Francisco's affordable housing

Carla Mays, co-founder of #SmartCohort, a global 'do-tank' helping to build smart and resilient cities for all.

Credit: JD Lasica

services and the emphasis on credit card use over cash to pay public transportation fares. She notes that, increasingly, people need access to capital and the internet to benefit from smart city innovations. Yet more than 100,000 San Francisco residents do not subscribe to home internet and almost half of adult housing shelters in the city do not have wireless internet. As a result, many of the individuals the online affordable housing portal is supposed to benefit do not have a regular or consistent means to access it. Mays also notes limited efforts to educate residents on how to use the portal: while some community organizations (particularly Russian, Chinese and Jewish ones) have undertaken outreach and training to make up for what the city has not provided, fewer African-American and Hispanic community-based organizations have had the resources to provide this specific support.

There is a broader context of profound social inequality. Within the US as a whole, the lifetime wealth accumulation of white households is seven times higher than for African-American households and five times higher than for Hispanic households. These economic disparities are even sharper for women from these communities: as of 2018, the median weekly earnings of African-American and Hispanic women were only 65.3 per cent and 61.6 per cent of white men's median weekly earnings, respectively. In San Francisco, this inequitable distribution of wealth is one factor creating the staggering over-representation of African-American residents among the homeless population: despite making up less than six per cent of the city's population overall, African Americans make up 37 per cent of the city's homeless population. Mays also traces a line back to historical factors that purposefully restricted or barred ethnic minority groups from certain labour markets and formal banking systems.

In part, her solution is to meaningfully rectify the wrongs of the past that continue to harm people today. She advocates for reparations to address the legacy of economic disenfranchisement created within African-American communities as a result of slavery and generations of repression, from over-policing to mass incarceration. 'You have to level the playing field,' she says, 'and the only way to level the playing field is if you give capital and access to capital so people can start a business, they can start a non-profit, they can buy a house.'

Mays also calls out what she sees as an ineffectual focus on implicit bias within self-described progressive and politically liberal (and usually majority white) circles. She provides

the examples of tech companies mandating training on implicit bias that does little more than put white experience at its core without changing the extreme under-representation of women and people of colour in their workforces. 'Every liberal', she says wryly, 'will start a meeting talking about [being on] Ohlone land but they will not give them any capital or land back.' These examples made her recognize how racism has manifested itself differently within San Francisco and other liberal US cities compared to the overt forms she has experienced in the more rural south-eastern part of the country, a region often identified as the epicentre of the country's racial inequity and tensions. 'The new Jim Crow is actually much uglier because it feels friendly,' she says. 'It's the Brooklyn, it's the Oakland, it's the San Francisco, it's the Portland type of racism and sexism, and the things that happen are more dangerous in that context because there is a lot of masking [of the racism and sexism] and then it goes into systems which disenfranchise and cause people not to be employed, not to get housing, not to be able to take transit.'

To effectively upend this new form of systemic racism, Mays pushes for greater diversity of representation within corporations, tech companies, universities, non-profits and the government. According to her, there can no longer just be 'a lot of nice talk' about equity and inclusion. To ensure that technology, as it continues to enmesh itself in everyday life, does not further entrench systems of racism, sexism and exclusion, all members of society should be present in positions of power.

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