



The Apps That Brought China Back to Life



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The nation where COVID-19 began is carefully returning to normal, thanks to controversial technologies that may put safety before privacy.

At midnight on 7 April 2020, a kaleidoscope of lights from Wuhan dazzled across the Yangtze River as buildings, boats and bridges lit up to celebrate the end of 76 days of lockdown. For the first time since 23 January, restrictions put in place to stem the COVID-19 outbreak were eased, and, while checkpoints remained in place, residents were able to move more freely around their neighbourhoods.

COVID-19 had hit at a very awkward moment. When the Chinese government announced the lockdown of Wuhan, the epicentre of the country's pandemic, many people were stepping out for their annual "Spring Festival Journey" for the Lunar New Year. Most of the city's 82 universities

were already closed and 1.3 million students had returned to their hometowns across China, presumably taking the virus with them. It could have been the prelude to an even greater tragedy of deaths and economic devastation.

While many external observers may question the accuracy of official figures, the significant decrease in new infections suggests China's unprecedented public health efforts to contain human-to-human transmission of COVID-19 have been successful. And its focus now is on preventing inbound international travellers from bringing back the virus from abroad. In a matter of just three months, the country has gone from massive outbreak to containment and is now heading towards economic recovery. How was this managed? What was sacrificed? And what insights can other governments struggling to contain the virus take from China's experience?

A fast lockdown

Freezing the movement of up to 1.4 billion people simultaneously for a few weeks to stop the infection chain required a massive concerted effort. In this regard, the Spring Festival holidays turned out to be a blessing in disguise. Traditionally, most factories and businesses close for a week or two, so asking people to extend this period was not inconvenient.

Another factor that worked in China's favour was its urban planning policy. The majority of residential properties developed since the late 1990s are in gated compounds with dedicated property management teams. During the pandemic, these property managers became indispensable in helping control the flow of people, supervising home quarantine and managing deliveries to households.

The country had also seen a huge growth in its online shopping and delivery industries, which allowed people to stay at home for long periods without worrying about the disruption of daily supplies. E-business giants like Alibaba and JD.com, backed by a vibrant and quasi-ubiquitous logistic and delivery industry, ensured that every day millions of parcels could be delivered to the homes of online shoppers. When people started to miss the dishes served in their favourite restaurants, they could order them on the apps of local service providers like Meituan or ELEME. These networks helped to keep many service businesses and restaurants afloat, reducing the unemployment rate and the need for a state subsidy.

Leveraging technology

China's advanced and entrenched online shopping and delivery industries rely on the high penetration of mobile phones and internet across China. According to the Ministry of Industry and Information, there are around 1.57 billion mobile phone accounts across the country – an average of 112 accounts per 100 people. WeChat, the most popular app in China, **claims** a user base of 1.1 billion. Broadband fibre connection is also widespread with more 355 million mostly urban users. The rapid emergence of a range of mobile applications helped the Chinese government accurately assess the COVID-19 situation, pinpoint the areas most at risk and carry out relief efforts accordingly.

Chinese tech, Tencent's Mini Programs – “sub-applications” within the WeChat ecosystem – have provided the means for new apps to be quickly and easily set up to reach a wide audience. These have been broadly used: by local governments to control borders; by property managers to manage the flow of people in and out of residence compounds; and to track passengers on public transport, including buses, trains and airplanes.

In Shanghai and adjacent provinces, the government introduced an app called *Shuishenma*, (“Go Together”) with a QR code that acts as an electronic passport. Drawing from data supplied by the Chinese Centre for Disease Control and Prevention and state telecommunication and transportation departments, the app identifies the health risk posed by a user based on their state-issued ID number, address, travel history and self-reported health status.

Each individual's QR is colour-coded. Red signifies high risk and a need to be quarantined. Yellow means the individual needs to be observed while green shows the individual is safe and allowed to move freely in the territory.

The municipality of Beijing has a similar app called *Jingxin Xiangzhu* (“To Help with Care”). People from outside the city are asked to apply in advance via the app for permission to cross borders. Like the *Shuishenma*, Beijing's app uses information from government agencies to ascertain at-risk or infected individuals and to track and control the flow of people.



京心相助

团结一致 抗击疫情



社区居民

返京人员信息登记



教职工及大学生

教职工（含外教）和高校学生（含留学生）信息填报



健康打卡

每日上报本人身体状况

Image 1: Shanghai app; Image 2: Beijing app

Each residence or office building also has their own mini app requiring residents to input their ID and travel information which are used by property management teams.



Image 3: Property app

Since public transportation is a major source of contagion, railways and airlines have released an app which uses real-time data to check the health condition of people around the user and alert them if they have been in close contact with a person confirmed or suspected to have been infected with the coronavirus.

Elsewhere, apps are used to improve the country's efficiency in monitoring and treating the virus, by providing advice to people who believe they have COVID symptoms. Numerous online portals provide real-time infection statistics for each province, city and district. These are also used to address rumours and alleviate panic or concern sparked by misinformation and misrepresentation on social media.

Privacy trade-offs

These mobile applications are not without controversy. Many people are worried that the apps might be maintained and used by government as additional surveillance tools after the epidemic, building an overarching digital leviathan from which no one can escape.

While these concerns are very real, the contributions these apps have made in China's battle with the coronavirus are tangible and substantial. Extraordinary times call for extraordinary measures. And the trade-offs between privacy concerns and stopping the spread of the virus, saving lives and resuming life as normal is something other countries will have to reflect on as they grapple with the looming peaks of the pandemic.

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