Wayfinding in India

You are... somewhere

MUMBAI

The price of a poor address system

Achiatrist. "He's repeated our address so often he's lost his mind," she tells the doctor, as the man mumbles "A-42 Bhanushali Apartments..." So starts an advertisement for an app that promises to turn a "long, complex address" into something usable. Four years and millions of YouTube views later the problem persists. The huge growth of online shopping means that many urban Indians are repeating directions several times a day, often twice or three times per delivery.

Addresses in the West tend to follow a simple, hierarchical system: street name and number, district, city and post code. Indian addresses have those features and more: "next to SBI ATM"; "behind Ganesh Temple"; "near Minerva cinema". According to Santanu Bhattacharya, a former head of technology for Delhivery, a logistics firm, the median distance of "next to" in India is 80 metres. Around 30% of post-codes are incorrectly written.

The Department of Posts estimates that there are 750m households, businesses and other such discrete locations in India. A paper published by the department in 2021 admitted that "reaching the addressee by means of conventional addresses and landmarks is arduous". Apps such as Google Maps are useful, but only if addresses are accurate. Relying on someone

to send a pin of where they are is not scalable. And landmarks can disappear.

Indians resort to directions because street names are next to useless. In smaller towns they frequently do not exist. (Estimates of roads without names nationwide range from 60% to 90%.) When they do, signage does not. Even if both are present, official names often differ from those in common use. Moreover, politicians frequently change the names of streets and even cities to reflect their preferences.

The problem is an old one. In colonial Bombay and Calcutta, as they were then known, "only the better houses had numbers...probably because only they were taxed", according to a study of directories and census records from 1900 and 1901. But India has had 78 years of independence in which to solve the problem.

Consumer sanity is not the only thing that suffers. Businesses such as logistics, deliveries and e-commerce face higher costs and lower productivity. Uber drivers squander fuel and time looking for the right place. The rural economy takes a hit from the chaos in a different way. Indian states use a mishmash of colonial and precolonial revenue systems. Officers called collectors, tehsildars, patwaris or mamlatdars assign khasra numbers, khatauni numbers and, in one state, something called a "7/12" to plots of land. The sub-division of plots over the decades complicates matters by adding an ever-expanding series of numbers at the start. The result is that different documents

have different, if similar, addresses. If a landowner wishes to mortgage a property, banks are confronted with two problems. The first is that verifying that the piece of land exists takes a lot longer and becomes more expensive, often involving sending someone to look at it. The second is a higher risk of fraud, since a landholder could take different papers to different banks for loans. That drives up the cost of capital and "creates inefficiency and delay in both the property decision and the recovery process", says Joseph Sebastian, a venture capitalist. Dr Bhattacharya, now at MIT Media Lab in Massachusetts, estimates that the combined hit of inefficiencies created by poor addresses adds up to about 0.5% of GDP. Private companies have attempted to

Private companies have attempted to solve the problem. The government, too, recognises the issue. Its solution is digital. A "Unique Land Parcel Identification Number" being rolled out is a 14-digit alphanumeric identifier. Some cities have a "Unique Property Identification Code". The postal department is working on a 10-character "DIGIPIN". These systems have their merits. But a good system should be memorable and intuitive. The cost of being lost all the time adds up. It is a problem In-

dia urgently needs to address.