

Google's Maps looks to solidify its navigation dominance with AI-powered tools

Article

Google **unveiled** several new features for its Maps app that utilize AI to improve and expand the user experience. The new features include an updated **Live View** that gives AR walking

directions in large indoor spaces, eco-friendly map routes meant to reduce carbon emissions, in-app weather forecasts, and curbside delivery integration. Overall, Google says it aims to roll out more than 100 AI-based updates to Maps by the end of 2021. Here's how a few of these new features work.

The updated Live View provides users with AR navigation in large indoor spaces like malls or airports.

- The feature, first **launched** in 2019 on city streets via Street View, now offers users indoor AR directions by using AI to measure a user's altitude and placement within a building.
- Live View relies on "**global localization**"—a combination of **Visual Positioning Service** (VPS), Google Street View, and machine learning—which uses a phone's camera to scan environmental images to determine a user's precise position and orientation more accurately than GPS.
- Indoor Live View is currently supported at some malls in several major US cities, and is expected to roll out in airports and train stations across Tokyo and Zurich in the coming months.

New "eco-friendly" options use AI to suggest less carbon-intensive routes.

- Google says its new routing model automatically optimizes for lower fuel consumption based on metrics like road incline and traffic congestion.
- That means users searching for a destination will receive by default the route with the lowest carbon footprint that is most comparable in time to the fastest route.
- Maps will also use machine learning to determine a user's preferred means of transportation—be that by car, bike, or public transit.

Google Maps' dominance among navigation apps and high user base makes it a consequential test bed for new artificial intelligence-backed features. In August 2019, Google led all major navigation apps across iOS and Android in monthly unique visitors (126.2 million), **according to** Verto Analytics data on US smartphone users. By comparison, Apple Maps, which comes pre-installed on Apple devices, had just 29.3 million monthly unique visitors in the same period. While all **major** navigation app usage **dipped** during the pandemic, these new features could further entrench Google's dominance in the space as use returns to pre-pandemic levels.

Google’s use of Big Data and AI to power its navigation features aligns with the overall strategy that has proved successful for the tech giant, but may leave it increasingly vulnerable to users’ evolving privacy preferences. For years, Google Maps has had the upper hand in terms of user adoption over its longtime competitor Apple Maps. During that time, Google has repeatedly focused on seamless integration with other Google products, data accumulation, and the introduction of new features, in contrast to Apple’s model which tends to favor privacy often at the expense of immediate innovation. So far, users have largely chosen the former, but evolving attitudes towards data privacy and skepticism of Big Tech may make data-intensive new features less attractive than before.

Leading US Map and Navigation Smartphone Apps, Ranked by Monthly Unique Users, Aug 2019

	1	2	3	4	5	6
1 Monthly unique users (millions)						
2 Monthly reach						
3 Stickiness*						
4 Average monthly time spent per user (minutes)						
5 Average sessions per user						
6 Average session duration (minutes)						
Google Maps	126.2	70%	30%	152	50	3.0
Waze	31.0	17%	26%	269	58	4.6
Apple Maps**	29.3	16%	11%	12	5	2.3
Google Earth	3.1	2%	5%	7	3	2.4
MapQuest	2.0	1%	48%	150	68	2.2
Google Street View	0.6	0%	3%	6	2	3.6
Total	151.1	84%	32%	187	56	3.3

Note: ages 18+; includes Android and iOS; *average daily users divided by monthly users; **iOS only
Source: Verto Analytics, March 2020