

Tracking a product or an individual in transit on a real-time basis is possible through technology today. This technology offers businesses numerous benefits, but can be especially beneficial in creating a great customer experience. With so many enterprises innovating to find newer ways to improve customer relations, location-based tracking offers a means to meet expectations with ease. However, the smart-device led technology of today has not been around for a long time, and presents its own fair share of challenges.

Where did it begin?

Maps have been around for millennia, and have evolved over time to be increasingly accurate. Enterprises used these maps to chart out routes for the delivery vehicles and personnel to ensure that they could minimise the time spent in transit. The mobile phone changed this dynamic, with enterprises able to map out locations using these devices. The first smartphones and early location-based mobile applications and services were very challenging to develop and multiple issues were faced by early adopters. To develop these applications, specialists in the fields of geocoding, routing algorithms, cartography and search needed to pool their skills along with developers to create a functional offering. The tools and services for building location-based apps were available, but the costs and means to bring them to the masses was beyond reach at the time. The initial adopters of these services were enterprises that could benefit from navigation and fleet management.

How was it done?

To create location-based tracking solutions, developers needed to work across multiple processes. Current location had to be determined through longitude and latitude based on GPS chips and operator- based location services. Finding a destination address required execution of a local search and mapping the coordinates of a point of interest to determine the route for the journey. The servers required for this kind of service also needed to be able to support millions of concurrent users. Additional features such as zooming into locations, panning the map and layer-switching needed to be built in addition to addressing the basic requirements.

The technology that exists today took years of effort and investment from multiple enterprises. Interactive location-based tracking can today provide real-time updates and device position in relation to destination to provide speed, distance and time-related information. This technology powers various businesses across industries today that are creating customised and positive experiences for their entire customer base.