Route4Me: Easy-to-use driving route optimization for businesses

Route4Me combines the Google high accuracy geocoder with its easy-to-use and patented Dynamic Route Optimization™ algorithms to improve multi-stop, multi-driver routes for businesses.

About Route4Me

Route4Me™ provides dynamic route optimization™ software that has helped more than 1.9 million users efficiently plan and optimize multiple-stop driving routes. Founded in 2009, Route4Me has served tens of thousands of businesses and is among the top five highest-grossing navigation apps worldwide.

Industries: Technology

Location: United States

Google Cloud Results

- Enables customers to improve customer satisfaction
- Plans all routes for all employees and subcontractors in just a few seconds
- Helps customers make better business decisions about who to visit and when

Optimizes routes for 1.9M+ users in thousands of businesses

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Globally, many businesses have mobile employees or subcontractors who need to drive to multiple places throughout the workday or workweek. Employee types include field sales representatives, field service teams, field marketing and field merchandising teams, delivery drivers, among dozens of other types.

At each of these organizations, there's a need to optimize the routes employees take to improve customer service, while meeting tight deadlines or SLAs. For example, every year on Valentine's Day and Mother's Day, florists often have to scramble to deliver beautiful bouquets to multiple customers on time. But the logistics of efficiently mapping all those deliveries can be challenging for organizations to work out on their own and in a timely fashion.

Google Maps Platform
(https://cloud.google.com/maps-platform/)

Google Places API
(https://developers.google.com/places/)

Cloud APIs (https://cloud.google.com/apis/)

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—Dan Khasis, Founder and CEO, Route4Me

Route4Me (https://route4me.com/), founded in 2009, has helped tens of thousands of businesses plan and optimize complex routes for hundreds of drivers within seconds. The company leverages Google Cloud Platform (https://cloud.google.com/) to run its infrastructure to build its advanced route sequencing and

dynamic route optimization platform. Address geocoding and mapping is done by Google Maps Platform
 (https://developers.google.com/maps/documentation/).

"Google Maps Platform geocoding and mapping accuracy is undefeated," says Dan Khasis, Founder and CEO
of Route4Me. "It all starts with a geocode. Without an accurate address to geocode lookup, the best route
optimization algorithms in the world will just bring you to the middle of nowhere. Our experience shows us
that Google invests the most resources into making its mapping data highly accurate and refreshed in real
time. We were able to easily integrate with Google Maps Platform, and the accuracy of its data helps us
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Complementary solutions

Google offers Google Maps Platform with a variety of APIs designed for developers like Route4Me to build
their own software solutions that leverage Google Maps mapping, routing, and rich location data.

"Google Maps does a great job of meeting the consumer market's needs, as well as the needs of some developers in the business market," says Dan. "We offer customers a solution that requires zero programming to get started, and we primarily target organizations that cannot function as a business without route optimization. Many businesses don't have the time, skillset, or budget to spend millions of man hours on a routing solution like ours. We offer our customers a valuable solution that delivers the best of both worlds — ease of use for complex route planning and precise location data powered by Google Maps Platform routing and location data. Our joint solutions are complementary and help our customers make more money."

Route4Me's platform incorporates data from Google Maps to accurately pinpoint customer locations so that customers with dozens, hundreds, or tens of thousands of drivers can optimize each person's route. "We take many complex variables into account, such as how many hours a day a person can work, how many items or pounds might fit in the vehicle, and what the time windows are for a customer to accept a delivery or meet an employee," explains Dan. "Our software can use those variables and dozens of others to optimize and plan routes across hundreds of thousands of stops."

In addition to dynamic route optimization, after routes are planned and distributed to drivers, Route4Me sends routes and route data to Google Maps navigation. "Google Maps on mobile devices is the gold standard that everyone already knows how to use as a consumer," says Dan. "We are able to send route data directly into Google Maps to help ensure voice-guided navigation takes traffic into consideration en route to a customer."

Rapidly innovating

The two companies are also aligned in terms of support for open-source software. "Google is a big supporter of open-source software and constantly contributes to the community, and we're big believers in using open-source software as well," Dan says.

For example, Route4Me's proprietary routing engine powered by its **Hyper**Matrix™ technology utilizes open-source OpenStreetMap data and enhances it with the more data-rich Google Maps Platform. "We use OpenStreetMap data to solve computationally intense optimizations and then verify and enhance those calculations with high-quality Google Maps data, so one picks up where the other leaves off," says Dan.

Route4Me and Google are aligned in other ways too. Both companies are focused on rapidly innovating and iterating, with ongoing continuous releases of new features and capabilities instead of quarterly releases, a path that is consistent with modern continuous software development methodologies. "Making new features continually available that leverage our own development capabilities as well as Google Maps enhancements is a big differentiator that helps us leapfrog many of our competitors," Dan adds.

Extremely accurate geocoding

"We use the Geocoding API (https://developers.google.com/maps/documentation/geocoding/start) for all premium route planning and optimization because it's extremely accurate," says Dan. The Geocoding API converts addresses, such as street numbers, into geographic coordinates that make it easier to precisely place markers on a map, and then shares those coordinates with the Route4Me software via API calls.

"There's no point in routing if you don't have accurate geocodes, because you're essentially sending people to the wrong place," Dan explains. "Our customers love Google Maps geocoding because it is so accurate. Google Maps is so intuitive, it helps customers visualize routes using mapping data they trust. Is there really anyone else offering mapping and navigation that customers and businesses trust as much as Google? For us, Google Maps geocoding combined with our complex combinatorial optimization for route planning gives our customers a uniquely powerful routing solution."

Route4Me is also planning on integrating with Places (https://cloud.google.com/maps-platform/places/), to leverage a database of more than 150 million points of interest, with 25 million updates daily in real time. The integration helps Google Maps geocode to a contextual search relevant to coordinates and addresses, which further adds value for Route4Me customers.

For premium international customers, the Route4Me platform also uses the Distance Matrix API (https://developers.google.com/maps/documentation/distance-matrix/intro), which returns travel distance and time data based on recommended routes with multiple stops. For customers with complex routing optimization needs involving tens of thousands of stops, Route4Me relies upon its own mathematical algorithms designed specifically for those intensive route calculations.

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pursue an international customer base, while many
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—Dan Khasis, Founder and CEO, Route4Me

Earning customers more money

"The combination of the Route4Me software platform with Google Maps Platform geocoding and Places
data in particular helps Route4Me customers across multiple industries save money and earn more money
by getting more work done in less time," Dan says.

One Route4Me customer, for example, employed 50,000 part-time "gig"/mystery shoppers who would visit
1,000 different stores. Route4Me developed a solution that enabled the field merchandising company to
efficiently route mystery shoppers to specific stores based on criteria such as how close the stores were to a
shopper's home, the hours the shopper was available, and the hours the stores were open. The solution used
Google Maps Platform geocoding, for precisely locating the shopper's home address, the store's specific
geocode. The solution also used the Places API, for incorporating information such as store hours into the
routing; and Route4Me's own advanced software algorithms to calculate the most optimized routes.

"Our solution combined with Google Maps Platform helped the customer optimize complicated routes
quickly and easily," Dan says. "As a result, they reduced the number of mystery shoppers to evaluate services
in stores by about 2,000 people — and that was only in the first iteration of the solution, giving them a huge
ROI."

"Google Maps Platform global presence permits us to pursue an international customer base, while many
competitors who use inferior solutions can only accommodate North America and parts Europe," adds Dan.

Learn More

For more on how Route4Me uses Google Cloud Platform, see Route4Me: Increasing customer success with fast, reliable vehicle routing.

Reach out to our team to see how Google Cloud can help your business.

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