

Whitepaper

Location Platform for Developers - A Comparative Evaluation & Analysis of Pricing vs Offering

August 28, 2018

Neil Shah

Research Director

neil@counterpointresearch.com

Other Analyst Contacts:

Pavel Naiya

Senior Analyst

pavel@counterpointresearch.com

Peter Richardson

Research Director

peter@counterpointresearch.com

Tom Kang

Research Director

tom@counterpointresearch.com

For more insights follow our [Insights Section](#)

Executive Summary

The mapping and location ecosystem has evolved significantly as top map data providers have adopted a cloud-based platform model. This has catalyzed the adoption of location-as-a-context in different applications within the consumer, enterprise, and public sectors as well as across mobility and IoT use-cases.

However, it has become difficult to identify which platform is leading, not only in terms of richness, customization, and depth of data, but also in terms of quality of service, API attributes (SLA, openness, etc.), toolset, and above all a value-driven pricing model.

This whitepaper will highlight which are the top mapping and location platforms in the industry and why. Furthermore, it will discuss the different pricing models being adopted by these top platform vendors and lastly, evaluate which platform offers the best value proposition for developers.

Introduction

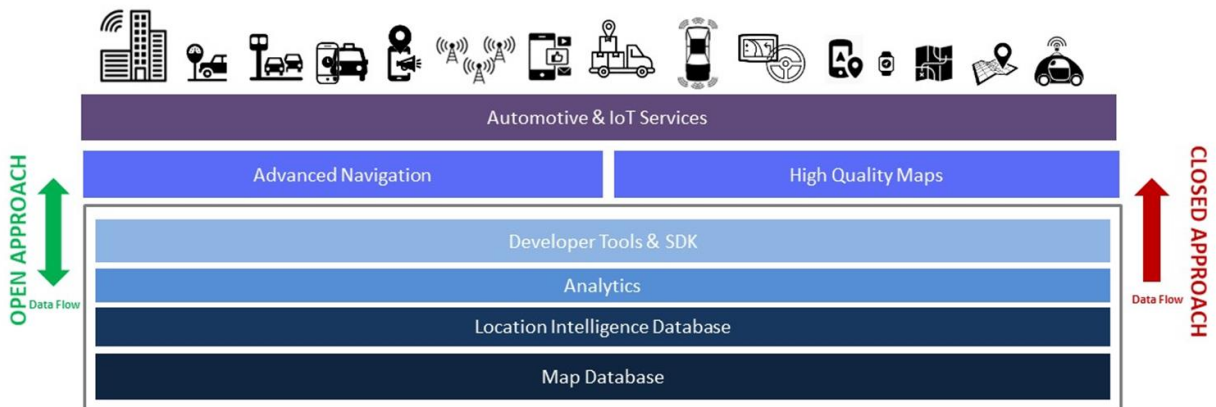
With the proliferation of the internet, growth in mobile devices and applications, increasing urbanization, and the rise of e-commerce and on-demand services, the power of location has become the key enabling factor for growth. Location-centric applications depend on maps data to help route (from point A to B) or geocode (integrate key points of interests, places) enabling key use-cases such as search, discovery and mobility. This integration is currently done by embedding different location APIs into millions of apps to build new and enhanced experiences, driving monetization opportunities for developers.

Shift from Mapping Platforms to Location Intelligence Platforms

New services and experiences are enabled by combining location-centric intelligence to the existing map data and leveraging analytics engines to process streams of real-time location intelligence. The new generation of location platforms are formed by grouping modules of rich maps data, location intelligence, analytics and services. Location platforms have evolved to become highly modular. They leverage cloud infrastructure, advanced development tools and open partnership models. This enables them to easily drive multiple applications and solutions that require location intelligence.

These new services will not only power mobility experiences now but as the data gets richer, will also drive future autonomous transport systems along with a plethora of connected things to ensure higher productivity, greater safety, and better experiences.

Exhibit 1: Anatomy of Location Intelligence Platforms



Maps and Location Intelligence Platforms Strategies

Players such as HERE have been leading this trend, with an “Open Location Platform” approach making the location platform richer with data flowing from partners and customers back into the platform and enabling the conversion of these data into actionable information and services. This approach has helped HERE position its location platform as super-rich and always up-to-date. But it’s also a neutral offering. It has attracted several investors, partners, and customers over the last two years. Among other things they are contributing their data. They are also integrating several services and solutions built using this data and associated intelligence.

Google also has a rich map data platform thanks to its strong position with billions of Android-powered smartphones. It also has inherent data analytics capabilities and supporting cloud infrastructure. However, Google has been more focused on leveraging this huge consumer smartphone base by integrating its own maps and navigation services across

millions of Android apps as part of its Google Mobile Services stack (GMS). This has helped Google to build personalized location experiences and to drive search graph-based advertising revenues. Though Google has not been able to replicate the same success across enterprise or automotive verticals directly, due to its incompatible and less neutral business model.







Further, with recent pricing changes for developers using the Google Maps platform APIs, Google is showing intent that it wants to monetize its maps platform in a similar way to HERE and TomTom but with less prudent pricing. It is attempting to court more high-profile developers and applications across different verticals.

TomTom has seen its core map licensing business stagnate. It has therefore also been looking to build a competitive location platform. TomTom is seeing the potential to power autonomous driving experiences. It has been partnering with industry stakeholders to build the same. The booming telematics and connected car services business will contribute towards this goal.

Apple has failed to build high quality maps over the years and hence has been unable to monetize location capabilities. It has instead focused on generating revenues and profits just from tighter hardware experiences. However, Apple has latterly realized the importance of a high-quality location platform. Apple is now looking to build the entire location platform from the ground up in-house; a huge undertaking. Once it does that, we will have to see how MapKit grows. It remains to be seen if Apple will open to non-iOS developers to maximize the number of data probes feeding its platform.

Other players, for example Mapbox, are positioning themselves with a horizontal modular platform. In the case of Mapbox, it is offering location-based services and innovative developer tools to build customizable map-based solutions. As a result, Mapbox has been able to attract multiple application developers seeking to differentiate their offerings.

Exhibit 2: Portfolio of Customers & Focus by Segment

Company	Mobility	Consumer	Enterprise	Search, Ads, Social, Commerce
	●	●	●	●
	●	●	●	●
	●	●	●	●
	●	●	●	●
	●	●	●	●
	●	●	●	●

Very Low	Low	Medium	High	Very High
●	●	●	●	●

From a business model perspective, players such as HERE, TomTom, Mapbox, Microsoft (Azure Maps for Azure customers) follow a licensing model. Google’s advertising-driven model is a bit conflicting as it is heavily based on customers’ data to drive more advertising revenues, which could affect some developer customers. Many developers or enterprises do

not want to share their data with Google which drives them to other competing location platforms. As a result, the licensing model-driven players such as HERE or TomTom have a more balanced portfolio of customers across different segments such as mobility, consumer-facing apps, enterprises, and other players with applications, and services in search, ads, social or e-commerce areas.

Key Maps & Location Intelligence Platforms Evaluation

We have evaluated the [top 16 location platform players](#) on a range of different parameters. Firstly, from a location platform perspective, which includes maps data richness, freshness, completeness to the extent of location intelligence to layer of advanced analytics, and developer offerings. Secondly, the number of services and solutions built on top of the platform, leveraging this underlying map and location capabilities. Thirdly, the extent of partnerships and customer numbers across mobility and IoT segments, which encompass most of the companies leveraging location or maps into their applications or businesses from these location platform providers.

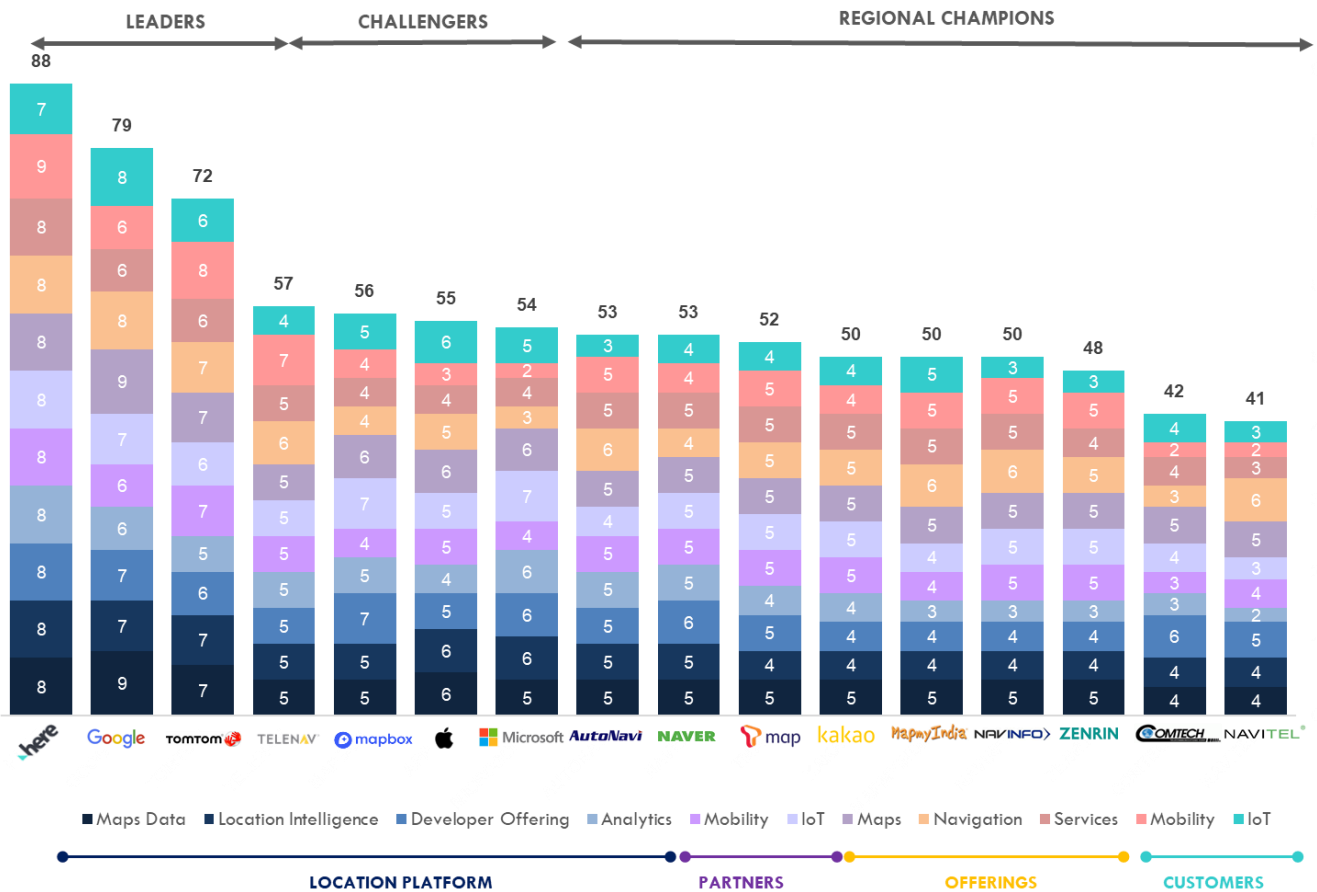
From this analysis, it's clear that HERE, Google and TomTom are the undisputed location platform provider leaders, with global, high-quality offerings.

HERE's mapping platform is the best in the industry, benefitting from years of experience in mapping and navigation. Its intelligence and analytics prowess also helps drive newer solutions and services. Significant work has been done by HERE on building a digital "Reality Index" which has made its mapping database more intelligent. Open Location Platform (OLP) contributions from its partners and customers to enhance the maps is also quite unique compared to rivals, giving it an edge over other platforms. This OLP approach has catalyzed customer, partnership, and investment growth for HERE, which has the largest customer-partner roster in the industry. With further partnerships/investments from Tencent, Navinfo, Baidu, Bosch, Intel, and Continental, HERE has expanded its reach to key markets, like China, where Google and TomTom are almost non-existent. The recent revamp of developer offerings puts it ahead of Mapbox.

Google is the second-best location platform provider and has begun to utilize and monetize its rich set of maps as a platform, though also continues to incorporate it heavily in its ad-driven business model. It falls behind HERE on key parameters, such as providing lucrative developer offerings in terms of API pricing and support, as well as a lack of embedding deeper data analytics to build newer services across different segments. Instead, Google focuses mostly on AI-driven personalization maps for its Android users. Furthermore, it also lacks key partnerships and has a weaker enterprise and mobility customer roster beyond smartphones.

TomTom, the third-best location provider vendor, has seen some progress over the last twelve months especially with its telematics business and striking key partnerships with players such as Microsoft (for Azure Maps), auto manufacturers, Zenrin (Japan entry) and others such as Baidu and Cisco to build a robust pipeline of location probes as well as HD maps for future autonomous mobility systems. However, in terms of breadth and depth of map platform capabilities and robust developer offerings, it still lags behind HERE and Google.

Exhibit 3: Global Location Platforms Scorecard & Ranking

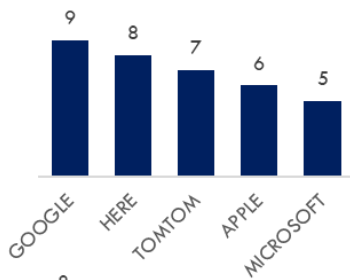


Location providers such as **Mapbox** have decent offerings but lack the richness, freshness and extent of proprietary maps data, location intelligence, analytics capabilities and services like HERE, Google or TomTom. To improve its position, Mapbox will need to strike many new partnerships and customer deals to add more detail to its maps. For Apple, building maps from the ground-up will be an advantage for its future userbase, as the company is affluent enough to achieve this. However, it's a huge undertaking from a cost, resource, and time perspective to match the decades of investments from rivals such as HERE, Google, and TomTom.

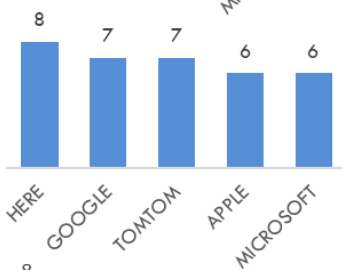
The other global platforms such as **Apple, Microsoft** are less mature when it comes to their own mapping solutions as a location platform. This is mainly due to their maps not completely built ground-up but a mix of different maps suppliers and sources having relatively weaker integration of map data and location intelligence. Further, these companies core business is not maps but just an additional application or service to maintain some level of stickiness or value add within their ecosystem.

Then we have a long tail of **regional champions** across **China, Korea, Japan and India** which have great mapping and location data in their domestic market but heavily rely on companies such as HERE and TomTom for offering location data, intelligence and services for their customers outside their home markets.

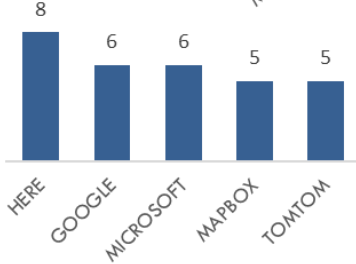
HERE edges past Google on the **location platform** scorecard. TomTom comes in third due to the relatively smaller scale of maps data, location intelligence, and less aggressive developer offering and analytics capabilities.



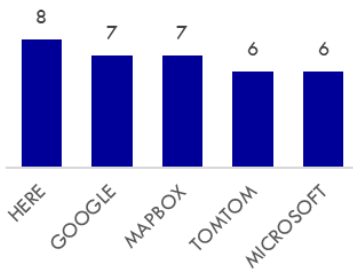
MAP DATA



LOCATION INTELLIGENCE



ANALYTICS



DEVELOPER OFFERINGS

- Map Data:** Google benefits from the billions of data probes from more than a billion active Google Maps users enriching its platform. Here is slightly behind when comes to maps data but has several key partnerships with players such as Facebook, auto manufacturers, and Online-to-Offline (O2O) players that provide enough data probes and location intelligence to maintain its maps with high quality, rich data. TomTom with its partnership with auto OEMs, Cisco, Apple and other sources has beefed up its location intelligence layer.
- Location Intelligence:** Here with its Reality Index leads the category by having intelligence from different sources such as app developers, device manufacturers, and automobile sensor data. Google follows closely as it can leverage its consumer Android platform to enable rich POI intelligence. However, TomTom with its partnership with Cisco, device manufacturers (e.g. Apple), auto OEMs also has a great repository of location intelligence for its platform.
- Analytics:** Here has integrated analytics ([see here](#)) across its portfolio and is launching more services utilizing the data to power different mobility and IoT applications. Google has yet to build services to power multiple applications beyond the analytics powered “personalized maps”.
- Developer Offering:** Here has been aggressive with its Open Location Platform (OLP) play and commitment to developers ahead of Google and TomTom, thus recording 50Bn API requests per month. Attractive pricing models and developer toolset help Here score higher on developer offerings. Further, the recent pricing changes by Google for the Google Maps platform has not helped the company, which has been losing developer traction. Mapbox sits in third place due to its strong focus on developer growth over other location platform services with greater options around customizations and developer toolsets.

This evaluation highlights the leading mapping and location platforms which developers can now choose from for all their location and mapping needs. The detailed finding on the evaluation, customer partnerships, individual platform traction, offerings, and roadmap can be accessed in the latest Location Platform Evaluation & Analysis Report.

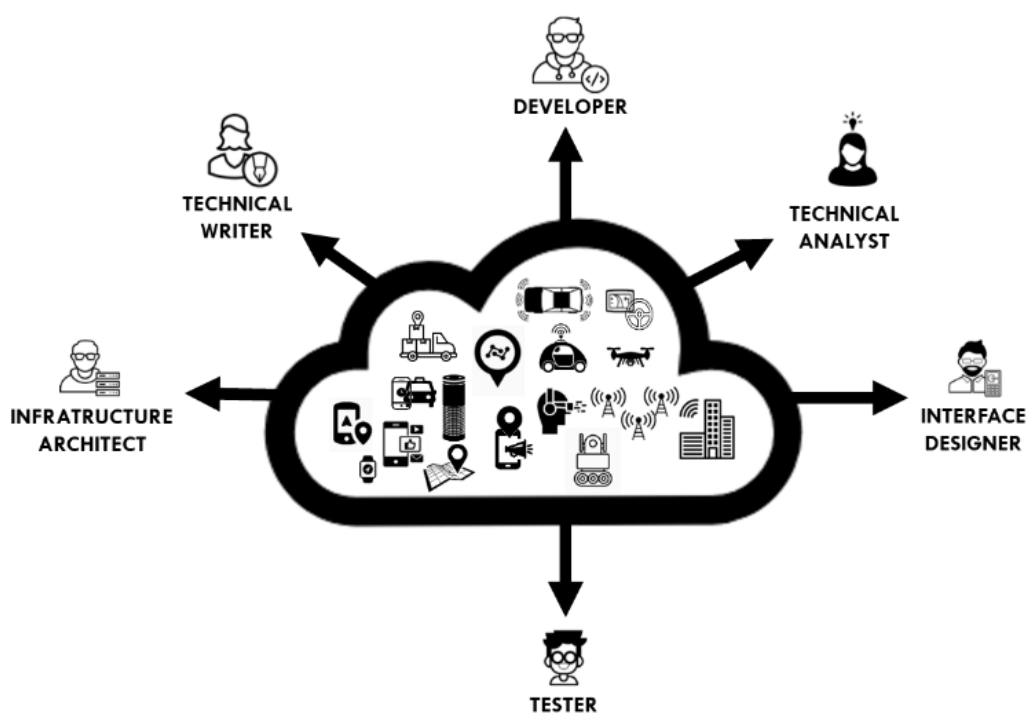
As location data is key from context and search and routing purposes, developers are looking to integrate this rich location data and intelligence into their applications to build newer location-centric experiences. As mapping platforms are transforming into location data and intelligence cloud-based platforms, the process of accessing data via an Application Programmable Interface (API) is more robust, easy and core to the developers.

Beyond location platform, in terms of **partners, offerings** and **customers** traction, **HERE** leads ahead of **Google, TomTom** and others by a wider margin.

Developer API Consumption Attributes, Key to Developers!

APIs are critical to harmoniously communicate with the data provider’s servers to request data that needs to be embedded into software applications. Developers, big or small, individual or enterprise, are looking to integrate these location or maps data into their applications via APIs to create more value for their customers and in the process realize their business models and generate revenue. API usage has already revolutionized many developer applications and helped them scale fast. However, these APIs should follow a simpler, transparent monetization or pricing model to encourage developers to use them more and create greater value while managing their costs along with ease of access, integration, and support from the provider.

Exhibit 4: Different Location API User Personas



Every stakeholder in the development process integrating maps and location data can have a different set of requirements from the type of data, toolset and API to usage of that data, and features at different stages of development. Understanding the pain points, use-case scenarios, feature and toolset required across these different development personas for the right API integration is very important for the location platform vendors. However, there are some key API consumption criteria which are quite common across these developer personas:

- **Volume:** The quantity of API calls a developer makes in a specific time-period. This volume can vary across developers, type of applications, and can be bursty in nature.
- **Quality:** The quality of data procured via the API needs to be the highest possible for creating better and richer user experiences without any gaps. The API features offered such as integration quality, API tech support along with quality of service or performance (speed) are key for developers.
- **Stability:** The overall stability of the APIs is paramount for developers to have some level of guarantee and transparency (advanced warnings) in the form of API up-time

(instability), backward or forward compatibility i.e. any API modifications that might break the connections. API Security is another facet that can impact stability and is important to developers. API versioning is another valuable tool for developers.

- **Discoverability:** A portfolio of APIs, standardization, cataloging, lifecycle information, legal, pricing and training resources for different APIs and outlined benefits and use-cases is key to making developer acquisition easier. A robust API portal where developers can discover, collaborate, and consume APIs is important.
- **Openness:** Since there are different types of APIs based on how they are implemented – internal use within an organization support for SOAP/HTTP or .Net is important vs. external use which is available to public might need REST/JSON support.
- **Pricing:** Developers seek attractive pricing but also expect the pricing models to be transparent in terms of usage, cohesion and not overly complex. If the platform is offering a portfolio of different APIs at different prices, a test pricing calculation period to estimate the cost of running is essential.

Developer API Pricing Models Overview, Types & Comparison

These consumption attributes are key to developers selecting a platform partner, especially for maps and location data that require a high-quality stream of data, toolsets, API stability, and support. These attributes also drive different API pricing models. There are multiple ways APIs are being priced and some of the most popular pricing models adopted in the industry can be classified as follows:

Free:

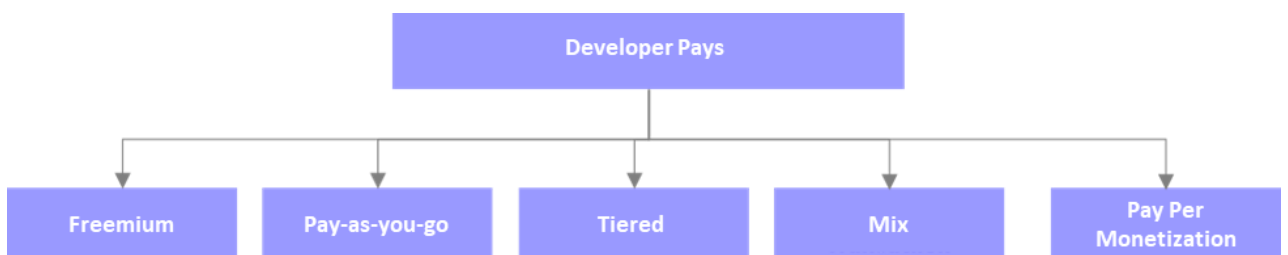
APIs are available to use free of cost to increase usability and for creating ecosystem reach via developers. Free is also used as a tool to create virality for the main platforms to collect data and increase the use cases of the main ecosystem. An example of a free business API is Facebook API, where the API is given for free to collect data to improve the overall usability of the platform.

Example: Facebook, Twitter,

Developer Pays:

We will focus on this model as this will be closer to the topic we are covering for this whitepaper. The model, where developers pay can be divided into five major categories:

Exhibit 5: Paid API Pricing Models for Developers



- Freemium:**
 This is one of the most popular models to attract new developers to try out APIs. The Freemium model typically gives API(s) for free with a limit on the total volume of transactions for a period with limited functionality. As the transaction volume increases and the need for new functionality arises, the developer can opt for paid options.

Pros:	Cons:
Low risk for the new developer to enter the API ecosystem	Business opportunity lost for the API providers in case of low volume customers
Easier to convert developer from free to paid option once the developer is familiar with the API use cases with multiple touch points	Support for freemium users can potentially be a large expense
	Often lower value yield as many freemium customers are not financially invested or motivated to try harder to use APIs

Examples: DocuSign, Compete

- Pay-As-You-Go:**
 This is the model when the developer pays based on usage of the API. This is typically based on paying per the request/call made to the API in monetary or credit units purchased. This is suitable for the developer with low, but fluctuating volume of periodic calls.

Pros:	Cons:
Easy to start for low volumes of API calls	Usually higher cost for the developer with large volume usage compared to other models
No downtime	Charges fluctuate with usage thus difficult for budgeting
	Chances of miscommunication regarding the charges calculated

Example: AWS, Azure

- Tiered:**
 In this popular model, the price of the API is based on different tiers/quotas with the limitation of functionality/support and transaction volumes.

Pros:	Cons:
Predictive pricing for the developer and easy to budget periodic costs	High per-call cost for the developer in case of lower volume usage
Easy resource allocation based on maximum limit of calls	Difficult to expand in case of exceeding periodic call limit. Shut down of app/services after reaching capacity

Example: Mailchimp, Constant Contact

- Mix:**
 This is a combination of multiple models to create a mixed model. It is best suited for the business use cases for the developer and service provider. For example, Overage Model = **Tiered + Pay-As-You-Go**

This model starts with a fixed quota for the total calls and fixes the price for a period. Pay-

as-you-go will be charged in case total call exceeds the quota volume. This mixed method takes the best of multiple API models to provide flexibility to the developer.

Pros:	Cons:
Predictable cost for normal usage of API calls	Chances of miscommunication regarding the charges for extra usage
No downtime in case total call exceeds the limit	

Example: Salesforce (Block Price tiers + unit based for Overage), Google Maps

- **Pay Per Transaction Fee:**

This model is mostly used when an API is facilitating a marketplace model with a backend payment infrastructure with multiple sellers involved in generating frequent transactions by selling products or services. In other examples, it works as an affiliated partnership between the API provider and developers.

Pros:	Cons:
Easy to start without much budget on API and only pay when revenue is generated or monetization kicks-in.	Limited options to customize for a particular developer
Often the non-core business activities are taken care of by the API platform provider	Overall cost is high in long-term or large volume of transactions
In most cases, easy to start and implement a basic API model without much technical knowledge	Chances of miscommunication regarding the charges for extra usage

Example: Concur, PayPal, Stripe

Developer Earns:

In this model, developers get paid as a part of an affiliate program or revenue sharing model. The revenue earned by developers can be broadly defined in two forms: an affiliate or a partner.

So, a developer that is a partner can extend the provider platform’s reach by integrating its API into the application and earn a commission to drive traffic. As an affiliate, one can cross-sell a product or service by integrating the API from the product or service provider’s marketplace and earn a commission on the revenue generated through the API.

Further there are also barter models, where developers can share data with the API provider to improve its platform and in return receive free or discounted data via the provider’s API. However, while promising, this model is still in nascent stages and being developed especially from location platform perspective. This could be a good differentiator for some location platforms moving forward if implemented well.

Gamification (credits or points), data sharing, revenue-share, affiliate model such as earning through referrals, clicks can also help developers earn the more they integrate and use additional APIs.

Example: Amazon Associates, Expedia Affiliates, Google AdSense

Developer API Pricing Models Comparison by Location Platforms:

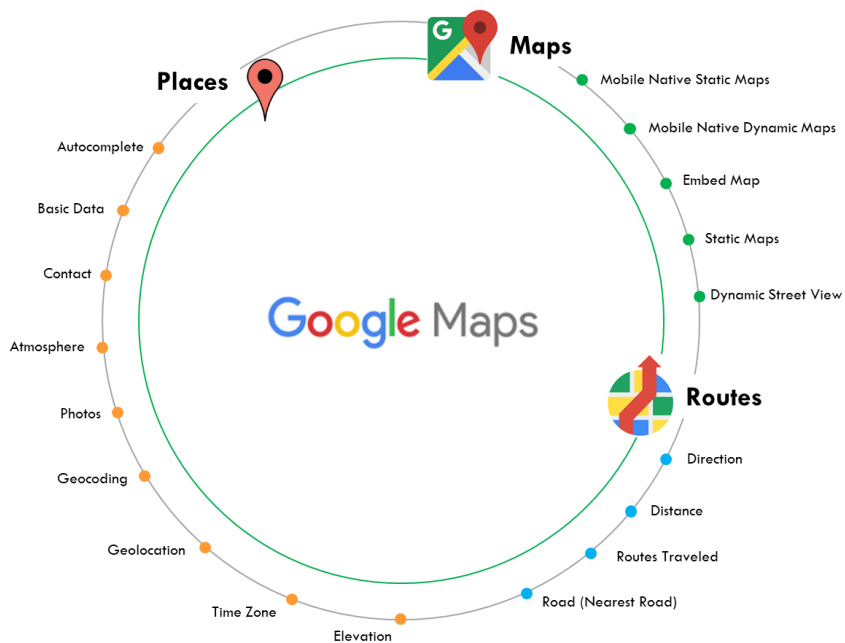
Having outlined these popular pricing models, there is no best model which will satisfy the entire developer community. However, a combination of best consumption attributes and an attractive pricing models that can create more value while alleviating cost concerns is likely the winner.

In the location platform landscape, we have analyzed and compared the different pricing models adopted and value propositions offered by the top four mapping platforms. This will help developer stakeholders understand which platform offers the best value from cost as well as quality of attributes perspective.

Google

Google recently changed its pricing strategy. The new pricing model, though transparent, is less friendly and more confusing for individuals, small businesses and start-ups, and small to mid-sized developers. It may work well for bigger enterprises. Only a few basic features like Mobile Native Static and Dynamic Maps for mobile SDK for Android and Basic Embed Map are free with unlimited usage. Any advanced usage, i.e. directions mode, street view mode, search mode, or any user interaction involving zooming, or switching map layers, will be charged incrementally based on the tiered volume it falls into. And it can become quite expensive.

Exhibit 6: Google Location Platform Portfolio



- ✓ There are no maximum daily limits on the number of requests you can make to Google Maps Platform products, and the only usage limits are related to the maximum number of "Queries Per Second" (QPS). If a developer exceeds the QPS limits of a given Google Maps Platform product, the API will return an error message. Frequent QPS can lead to temporarily blocking of that App SKU.

- ✓ Google's new requirement is for developers to register on the platform with a credit card even for freemium usage, which has caused consternation in the developer community. Google is looking to offset this by offering a US\$200 free monthly credit for developers to use the Map platform, with any usage exceeding the monthly credit charged separately.
- ✓ However, the new pricing model is significantly higher compared to the previous model. This change in the pricing created a lot of resentment among SME developers as the monthly cost for using Google data jumped multi-fold. Further, this resulted in considerable uncertainties around Google's next moves regarding Android or Google Cloud and even Mapping Platform pricing and usage models.
- ✓ Further, Google has adopted a pure "Pas As You Go" pricing model beyond the freemium tier. Google has a large portfolio of Google Maps Platform API SKUs within Maps, Routing, Places, each with different prices. These can be broken down further by different metrics of usage by calls, sessions, characters and so forth. Applying this model to the current offerings makes it very complicated for any developer to estimate the best and worst-case monthly usage charges.
- ✓ For smaller developers who develop for multiple small to medium clients or start-ups with volatile bursty usage, there's a possibility of exceeding credit card limits, which could lead to service disruption.
- ✓ Though Google, like other platforms, offers custom pricing for enterprise users with greater volume needs or complex location API requirements.
- ✓ With this pricing model, Google risks alienating its own pool of developers that are now flocking to competing platforms, and further— with complex and more expensive pricing — bigger developers may think twice before continuing with the Google Maps Platforms.

HERE

HERE has significantly revamped and moved from a multi-tiered pricing to a robust and simpler combination of Freemium and Mix- type pricing models. The new freemium offering is the best among all platforms and covers the overage well with a mix-type model to alleviate any concerns around over-usage in 1000 transaction increments. However, if the developer exceeds 700K transactions then it makes sense to switch to Pro model. Further, the Pro model at \$449 is nicely priced and significantly cheaper and less complicated than the same volume offering from Google. Further, unlike Google, HERE is including most of its API SKUs across its portfolio in all the plans from a usage perspective, instead of pricing each SKU individually and differently according to different consumption types.

Freemium – Free access for public, private, paid, and free applications and websites with a limit of 250,000 platform transactions, 5,000 SDK active users and 250 managed assets per month. Pay-as-you-grow: \$1 per additional 1,000 transactions over 250,000 transactions.

Pro – \$449/month for public, private, paid, and free applications and websites with a limit of 1 million platform transactions, 5,000 SDK active users and 250 managed assets per month. This includes a monthly SLA of 99.9% and technical support via email.

Exhibit 7: HERE Location Platform Portfolio



From launching an on-demand business to supporting new forms of mobility, academic research, and not-for-profit organizations, the new HERE plan makes getting started with location easy. Pricing of HERE is transparent compared to any other providers and almost free for low and mid-level developers.

- ✓ HERE’s self-serve offering allows developers with a wider range of needs to get started for free and stay on self-service plans longer, providing less friction to developers who are growing. Specifically, HERE allows more use cases for free than Mapbox, including paid and private apps, and HERE allows up to 1M transactions via a self-service plan, while Google only allows 500k.
- ✓ Further, HERE is offering most of its API SKUs for developers to try or use, which is powerful from the developer’s perspective to integrate and develop newer features with full confidence. At the same time, it increases consumption of different APIs across HERE’s portfolio.
- ✓ Another big advantage HERE brings to its offering compared to Google is its strong presence in China via its partners such as Baidu, Tencent, and others, enabling developers to access this important market.
- ✓ In addition, HERE leads the industry with its Open Location Platform (OLP) model where qualified developers can contribute to the OLP with their data and help HERE build new services in exchange for revenue share or barter model and become partners.
- ✓ HERE also offers custom plans for enterprises which have higher volume, SLA or other specific API attribute requirements as part of licensing the data.

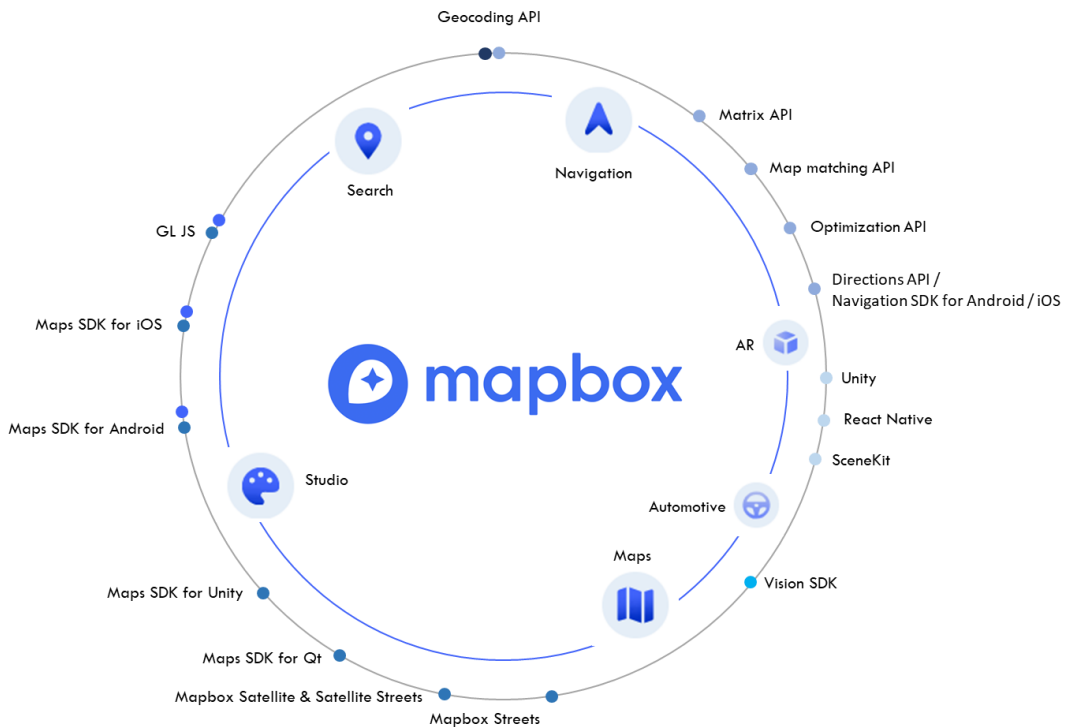
Mapbox

Freemium + Pay-As-You-Go: Mapbox has a freemium model where the initial 50,000 calls are free for the web app and mobile SDKs. Developers need to pay \$0.5 per transaction under the Pay-As-You-Go plan including features like:

- ✓ Satellite & street maps.
- ✓ Mapbox Studio with unlimited studio style.
- ✓ 50 GB map tile set storage & 5 GB dataset storage.
- ✓ Public/free web & mobile apps.
- ✓ Apps built with the Mapbox SDKs for Android, iOS, or React Native Track or Unity are charged based on Monthly Active Users (MAU), though all apps are also metered for different API usage depending upon plan.

The value offered is better than Google, though inferior to HERE’s freemium offerings. However, it is not very transparent in terms of the calculation of map tile per map view (4-15 tiles upon Studio vs Editors) as it is often rounded-up based on the type of map request. This may create confusion and inconsistency in billing patterns for developers and customers

Exhibit 8: Mapbox Location Platform Portfolio



Commercial: For \$499 per month, application developers can license a commercial plan. This plan is for private or paid apps (up to 250 seats), asset tracking apps (up to 1000 assets) and turn-by-turn navigation (up to 50 seats). This shows that Mapbox’s platform is targeted only for a specific size of developer and in that case HERE or Google would be a better offering for some. However, Mapbox does have an enterprise offering for assets with special pricing available for asset numbers above the Commercial license rates, but these are not advertised.

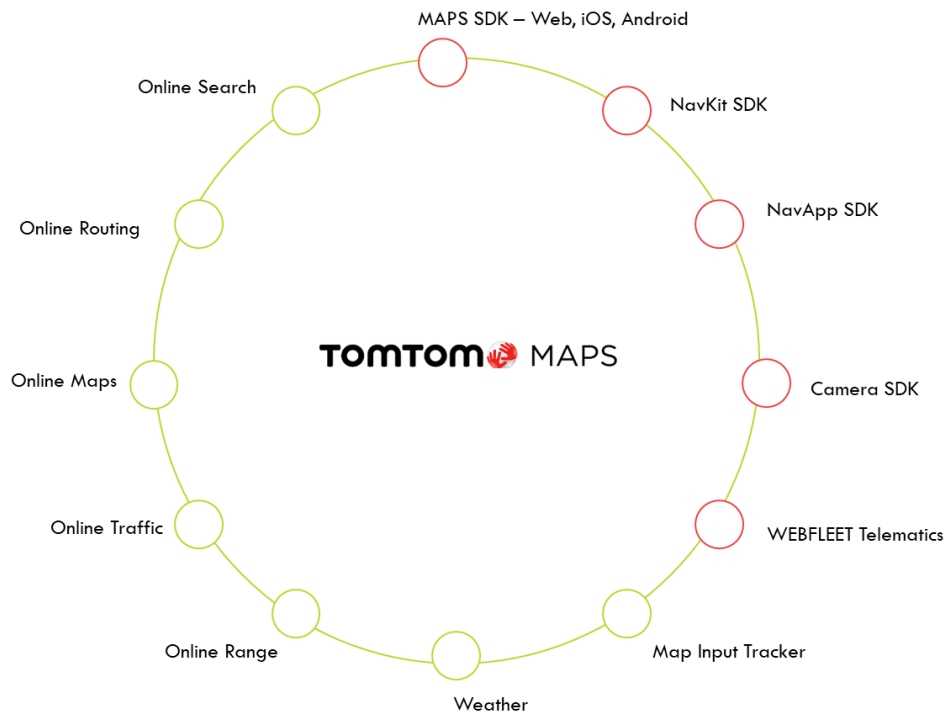
- ✓ Mapbox is a good alternative for developers looking to quickly and easily create bespoke and beautiful maps using the different toolsets such as Mapbox Studio.

- ✓ However, the pricing model could easily become too expensive for developers and does not lend itself well to scaling.
- ✓ Though Mapbox has landed some marquee app developers, the quality of maps data, routing and places across geographies with respect to HERE, Google, or TomTom is less good in our view.

TomTom

Tiered model: TomTom has adopted a Pay-as-you-go model with nested, tiered pricing and public vs private use options. The free tier includes a daily transaction limit of just 2,500, targeted for new developer or hobbyists to try out its platform. However, serious developers will need to pay the fees based on the transaction volume buckets. The company offers customization in rates for developer/enterprises with large usage volume (5,000,000 map views/month). There are different basic units to calculate the transaction volumes for different APIs.

Exhibit 9: TomTom Location Platform Portfolio



- ✓ Like Google, there is a limit of 5 calls/queries per second for non-tile-based APIs and 1,000 for tile-based APIs.
- ✓ After the daily limit (paid or free) is exceeded, it will return HTTP 403 – over the limit errors, which can create inconvenience to developers as it would be difficult for some to predict for irregular traffic spikes.
- ✓ Map view—each map view for TomTom is equal to 15 map tiles.
- ✓ Geocode—charges based on a per-transaction request.

- ✓ Unlike Google and similar to HERE, TomTom is allowing access to all Maps APIs and not segmenting the API pricing by SKUs making it easier for developers.

TomTom is a great alternative to HERE, ahead of Google in terms of simplicity of API SKU pricing, and per API pricing is quite attractive. However, the API and location products roster is limited compared to HERE and Google.

Developer API Cost Comparison & Evaluation by Location Platforms:

To summarize the above pricing from the key location platform providers, the following table breaks out the basic average geocoding and routing API costs to a developer across platforms per 1,000 transactions. As developers buy advanced APIs on some platforms such as Google the prices change/increase multi-fold but some platforms such as HERE or TomTom include most of the key mapping or location API SKUs at the same price.

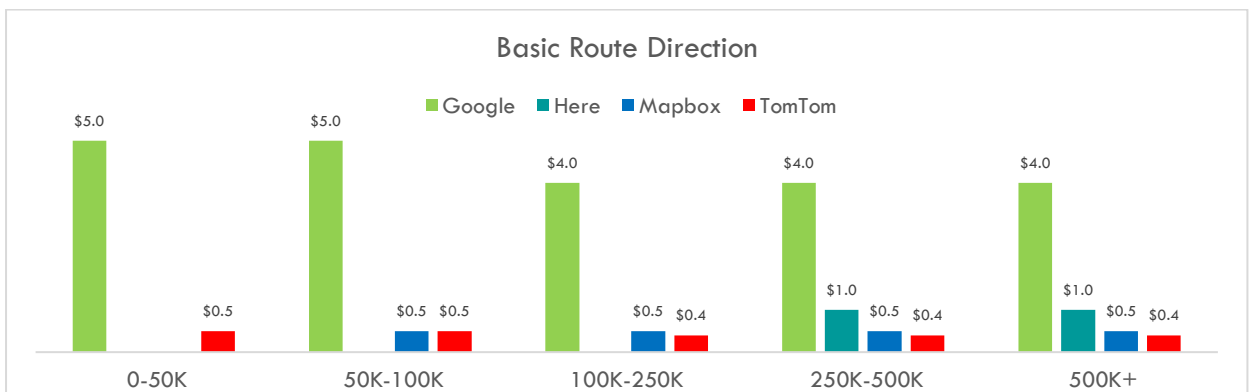
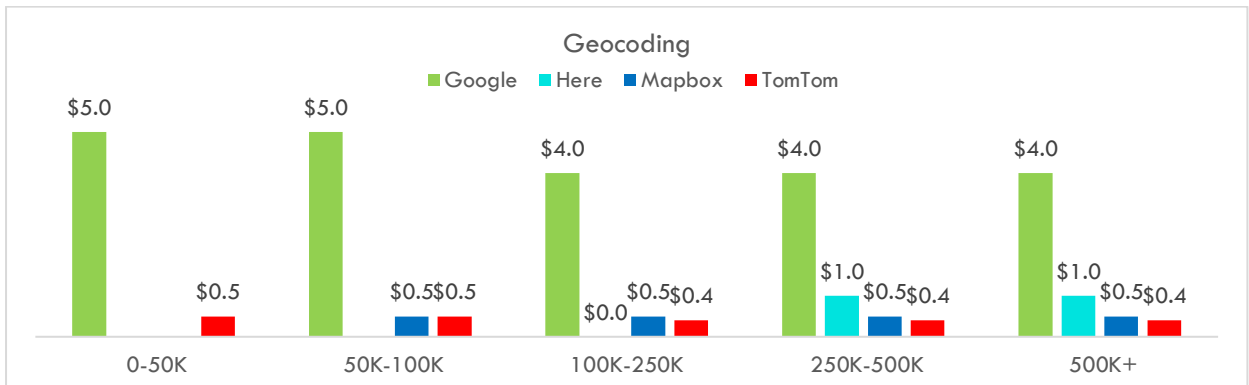
Exhibit 10: Location Platform API Pricing Comparison for Geocoding & Routes

Average Charges per 1,000 Transaction

Geocoding	0-50K	50K-100K	100K-250K	250K-500K	500K+
Google	\$5.0	\$5.0	\$4.0	\$4.0	\$4.0
Here	\$0.0	\$0.0	\$0.0	\$1.0	\$1.0
Mapbox	\$0.0	\$0.5	\$0.5	\$0.5	\$0.5
TomTom	\$0.5	\$0.5	\$0.4	\$0.4	\$0.4

Routes (Basic)	0-50K	50K-100K	100K-250K	250K-500K	500K+
Google	\$5.0	\$5.0	\$4.0	\$4.0	\$4.0
Here	\$0.0	\$0.0	\$0.0	\$1.0	\$1.0
Mapbox		\$0.5	\$0.5	\$0.5	\$0.5
TomTom	\$0.5	\$0.5	\$0.4	\$0.4	\$0.4

Among the top two mapping and location platforms, HERE with its new pricing plan is the best value for developers compared to Google and likely across all the other platforms. For higher volumes, over 500K, HERE offers even more value with its plan considering the number of advanced APIs included into the mix for developers to offer better experience at lower and simpler price points.



Further, developer tools, documentation, and API support across the developer portal is also key to ensure developers are happy and comfortable to consume the APIs. Google, HERE and Mapbox have excellent documentation and are competing closely on providing support. Obviously, Google and HERE have their work cut out with a bigger client roster to serve and have more opportunities to learn and improve.

Based on the analysis so far, we have summarized how these platforms compete on their pricing models and which provides a better value proposition.

Exhibit 11: Location Platform API Pricing Model Comparison

Map Providers	Freemium	Pay-as-yo-go*	Tiered	Mix	Transparency
Google	Monthly \$200 free credit but includes very basic maps but credit card required	No Daily Limit Price does not vary by map tile load but very costly & confusing	Two-Tiered Value based Pricing	Overage is less transparent and costlier due to complex value-based pricing	Mid
HERE	Free Monthly 250K transaction, 5K SDK, 250 assets without credit card Includes most APIs Turn-By-Turn (TBT), asset tracking, paid, free, public, private	Over 250K transactions, Pay-as-you-go kicks in at the rate of \$1/1€ per 1,000 transactions which can be upgraded to better value \$449 Pro plan for up to 1M transactions			High
Mapbox	Free 50K transactions	Over 50K transactions, Pay-as-you-go kicks in at the rate of \$0.5per 1,000 transactions		Pas as you go + Tiered (Public vs Private), Limited Commercial \$499 plan	Low
TomTom	Daily 2.5K transaction	Discount on map views for volume. >5mn/month	Separate tiers for public vs private use		Mid

**auto-upgrades if credit card is on file for HERE, credit-card anyways mandatory for Google for Freemium*

The following chart depicts suitability of the pricing models from different platforms to different developer sizes. With clever freemium + mixed + custom pricing and balancing with the consumption attributes such as volume, stability, depth of portfolio, HERE has got it right with its new pricing model, catering well to all the types of developers and offering significant value in terms of volume, variety and quality. Mapbox comes second when comes to pricing but is most attractive from its toolset and modular map customization features, but less so for breadth, depth and quality of maps. TomTom comes is third and Google is the least attractive of the top four with its recent pricing changes, which are mostly optimal for bigger, cash-rich, enterprises.

Exhibit 12: Location Platform API Pricing Model & Value Suitability by Developer Type

Map Providers	Individual	Start-up	SME	Enterprise
Google	Least	Average	Least	Most
HERE	Most	Most	Most	Most
Mapbox	Average	Average	Average	Average
TomTom	Least	Average	Average	Average

Conclusion

Location is a powerful enabler of current and future services in an environment dominated by web-connected devices, applications, e-commerce, and on-demand services. These location-centric solutions depend on maps data to help route (from point A to B) or geocode (integrate key points of interests, places) enabling key use-cases such as search, discovery, and mobility. This integration is currently done by embedding different location APIs into millions of apps to build new and enhanced experiences as well as monetization opportunities for developers. Map providers have therefore been transformed into location platforms, adding layers of intelligence and analytics to capture and analyze new contexts. Location data is now being transformed into actionable information and new services.

HERE, Google and TomTom are the top three location platforms globally. HERE leads ahead of Google and TomTom not only due to richer maps data, but also through better location intelligence, analytics, partnerships, and products and services, in addition to its attractive developer offerings.

HERE is also ahead with its new pricing model for its advanced suite of location APIs, which offer superior value in terms of price across key API consumption attributes. At the same time, HERE performs well compared to Google and other players by catering to all types of developers with a superior value proposition to build advanced and differentiated location-centric offerings.

Contact Us

Neil Shah

Research Director

neil@counterpointresearch.com

@neiltwitz

