



The Big Book of Point-of-Interest Data Use Cases



OVERVIEW

A Point-of-Interest (POI) is a digital representation of points in the physical space that are of particular interest to individuals, businesses, or governments. Phrased differently, a POI is anything someone might be interested in finding on a map: houses, offices, schools, hospitals, bus stops, malls, restaurants, and so forth.

POI is often combined with other type of information like mobile location data, purchase data, demographics, environmental, or meteorological data, uncovering insightful patterns on people's movement patterns, socio-economic attributes of different neighbourhoods, or even natural disaster risks. These insights allow businesses and governments to improve their services.

POI data proves incredibly useful across numerous industries, and in the case of some services, their whole business model depends on it. For example: Companies in the ride-sharing space (Uber, Grab, Gojek etc) operate through POI- dependent apps that allow drivers to locate customers, pick them up, and take them where they need to be. Companies that must transport goods directly to a customer's doorstep (last-mile delivery) rely on POI data to pick-up and drop-off packages.

Where POI data is not strictly a necessity, it still grants enormous competitive advantages. Retail outlets use POI data alongside mobility data to execute competitive analyses and identify suitable sites for expansion. Out-of-Home advertising agencies can calculate precise ROI by measuring footfall in the viewing cone of a billboard.

In this eBook we will elaborate on all these various use cases and applications of POI data and demonstrate how it can help enhance operational efficiency and improve profitability for businesses across a variety of industries.

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POI ATTRIBUTES

A POI is typically defined by its geographical coordinates (latitude and longitude) along with standard attributes like name, category, and address. However, most businesses benefit from more customised data depending on the industry that they belong to.

Photos and opening hours often add to the value of a POI. For a ridesharing company, accurate pick-up and drop-off locations at commercial and residential complexes can make the difference between profit and loss. For a logistics company, exact locations of the loading areas would be similarly helpful. For retail banks, the locations of ATMs around an area can inform expansion plans. The list goes on.

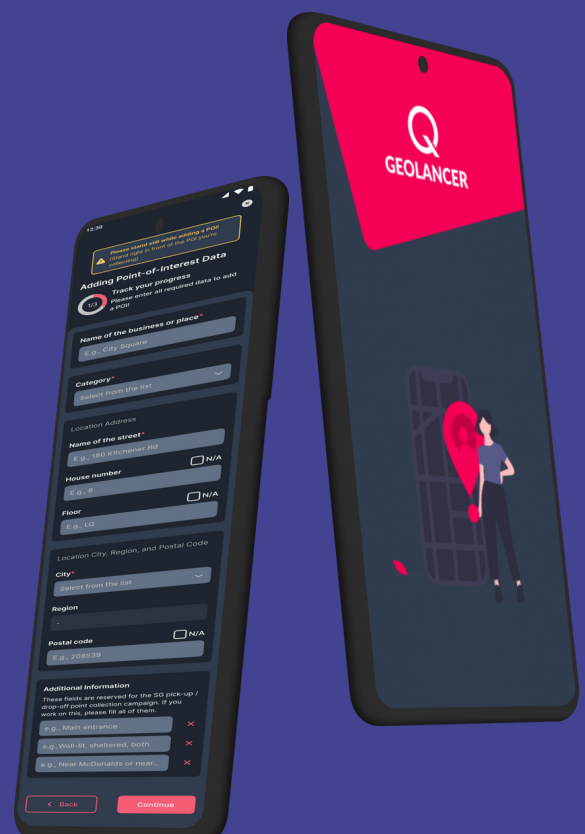
These custom metadata are not available in any commercial off-the-shelf data sets. The only way to acquire these attributes is through Geolancer, our proprietary, manual POI data collection and verification platform, especially designed to help clients with POI data that is tailored to their requirements.

About Geolancer

Quadrant is on a mission to remap the world so that it reflects recent and ongoing changes associated with physical locations.

Our **proprietary POI data collection and verification platform**, Geolancer, is a smartphone app used by freelancers – Geolancers – who add POIs manually, on the ground, while walking around in their neighbourhood. Properties include latitude, longitude, address, category, and opening hours, among other custom metadata attributes most off-the-shelf databases don't even collect. These POIs are then frequently verified by other Geolancers to keep them up-to-date. Geolancers are rewarded with cryptocurrency for the data that they collect or verify.

Geolancer is currently live in several countries in Southeast Asia, and we are rolling it out globally in 2022.



MAPPING AND NAVIGATION

Before the rise of digitised location data, people used to navigate by means of paper maps – certainly, a time-consuming process. Today, individuals and businesses rely on digital maps and navigation systems to locate and travel to all kinds of locations. These maps and routing applications function based on comprehensive POI datasets.

Whether you work for a business that provides navigation devices and apps for cars and trucks (helping transport people and goods from one point to another), or a business that offers Location Based Services (LBS), you need accurate digital representations of locations in the real world.

However, navigation apps and devices sometimes lead people to a business that is closed or might take them there via a suboptimal route. Besides being a massive inconvenience to individual users, such instances can significantly raise operational costs for businesses.

To avoid such problems and offer much needed context to support real world application, mapping companies must harness accurate, verified, and recent POI data.



How can mapping and navigation benefit from good quality POI?

By collecting and displaying custom attributes like **photos**, **opening hours**, and **postal codes**, you can simplify navigation and enhance user experience.

By adding even more customised metadata like **parking spaces** at each POI (e.g., an office building or a supermarket) to your maps, you can give users the information they need to choose a suitable mode of transport.

Another example would be collecting the **type of plug** on each EV (Electrical Vehicle) charger so your map can plan a route for electric cars with a specific plug type. Custom attributes can help create contextual maps that facilitate easier and faster navigation.

SUPPLY CHAIN MANAGEMENT

Businesses need accurate POI data to plan logistics, ensure adequate resource allocation, understand their supplier and consumer relationships, monitor disruptions due to changes in the physical world, assess competition, and more.

POI data powers navigation, tracking, and procurement systems for supply chain operations. Analysis of POI data can also help supply chain and logistics managers gain visibility into the performance of their operations and inform measures that maximise efficiency and reduce costs.

Businesses can use POI data and the historical mobility data of customers and suppliers to evaluate the efficiency of their existing supply chain networks. Such analyses can generate insights that enable businesses to relocate or expand distribution centres and other supply chain nodes closer to areas with high demand and shorter routes - thereby reducing transportation costs.

Companies can combine demographic data with POI data to improve their understanding of their workforce which can help with recruitment and retention efforts. Additionally, POI data can be combined with inventory information (emanating from distribution centres like warehouses) to assess and improve upon space utilisation and demand fulfilment.

How can supply chain management benefit from good quality POI?

By collecting custom POI attributes, logistics businesses can better plan and speed up their deliveries. For instance, finding the right **loading areas** can be challenging and **vehicle entry restrictions** can cause unnecessary delays. These all can be mapped accurately with in-field POI collection.

Additionally, distinct attributes such as **opening hours** and a **phone number** for the POI allows for better coordination between retailers and suppliers. Naturally, this enhances the efficiency of operations.

SEARCH ENGINES

Despite the dominance of Google, search engines dedicated to specific interests, products, and services are thriving.

The best way for home-seekers to evaluate a property is to be able to understand its surroundings. Digital real estate platforms – like PropertyGuru or 8Prop in APAC – rely on maps that contain a plethora of relevant POI data, like nearby bus stops, train stations, schools, grocery stores, malls, restaurants, parks, and so forth. These engines allow users to explore distances and travel times between properties and the most frequented POIs (for example offices, schools, and favourite restaurants and malls) so that they can make informed decisions.

POI data also powers travel and tourism platforms that enable users to find restaurants, hotels, and attractions. Such platforms, like Yelp, also provide key information such as photos, opening hours, prices, and ratings.

For specialized search engines, location-related searches need to result in accurate, specific, and granular information – every single time. If the POI datasets that feed these platforms are outdated, searches will return results that do not correspond to the realities on the ground. Therefore, these platforms must acquire up-to-date and manually verified POI data to improve location intent search results, achieve higher CTR and CPM rates, and maximize the ROI of their marketing efforts.



How can search engines benefit from good quality POI?

Custom attributes – especially **photos** – let users determine if a location matches their expectations (whether they are looking for a home, restaurant, or hotel room). Information on **dietary restrictions** that are catered to by restaurants and cafes can be immensely useful for businesses that want to develop a broad client base. Moreover, information on **opening hours**, **capacity**, and **outdoor dining options** allows customers to make more informed decisions.

Beyond custom attributes, by simply using a large volume of POIs in relevant categories, entertainment platforms can build informative maps of neighbourhoods that help their users.



LAST MILE & FOOD DELIVERY

Food and parcel delivery businesses use navigation and mapping apps to deliver goods directly to a customer's doorstep. As such, these companies are dependent on POI data for executing their operations and processes.

POI data helps food delivery businesses such as Deliveroo and Grubhub provide apps that allows users to order based on their cuisine or/ restaurant preference, and proximity to their current locations. It also enables these businesses to develop navigation systems that ensure their drivers are taking the most efficient routes so that they can consistently achieve their expected delivery times. Combining POI data with mobility data allows these companies to accurately predict rush hours and build surge pricing models.

Like food delivery businesses, companies that specialise in parcel delivery also rely on accurate residential and commercial POI data for route optimization, calculating ETAs, and automated tracking. These organizations use such data as a basis for calculating delivery fees and establishing convenient pick-up locations that offer users greater flexibility. Couriers also use POI data to implement batch deliveries – a measure that results in reduced transportation costs and higher productivity.

How can last-mile and food delivery businesses benefit from good quality POI?

For delivery personnel, determining the right drop-off location is not always straightforward. Off-the-shelf data sets don't accurately mark loading areas and service entrances, which is a serious issue with large complexes. Custom POI attributes including **drop-off points**, **opening hours**, and **photos** can enable delivery personnel to do their jobs swiftly and accurately.

Depending on the type of customer and the package to be delivered, knowing about the relevant **parking options** and **entry restrictions** can be vital for couriers doing their jobs. This information can also be collected as custom metadata.

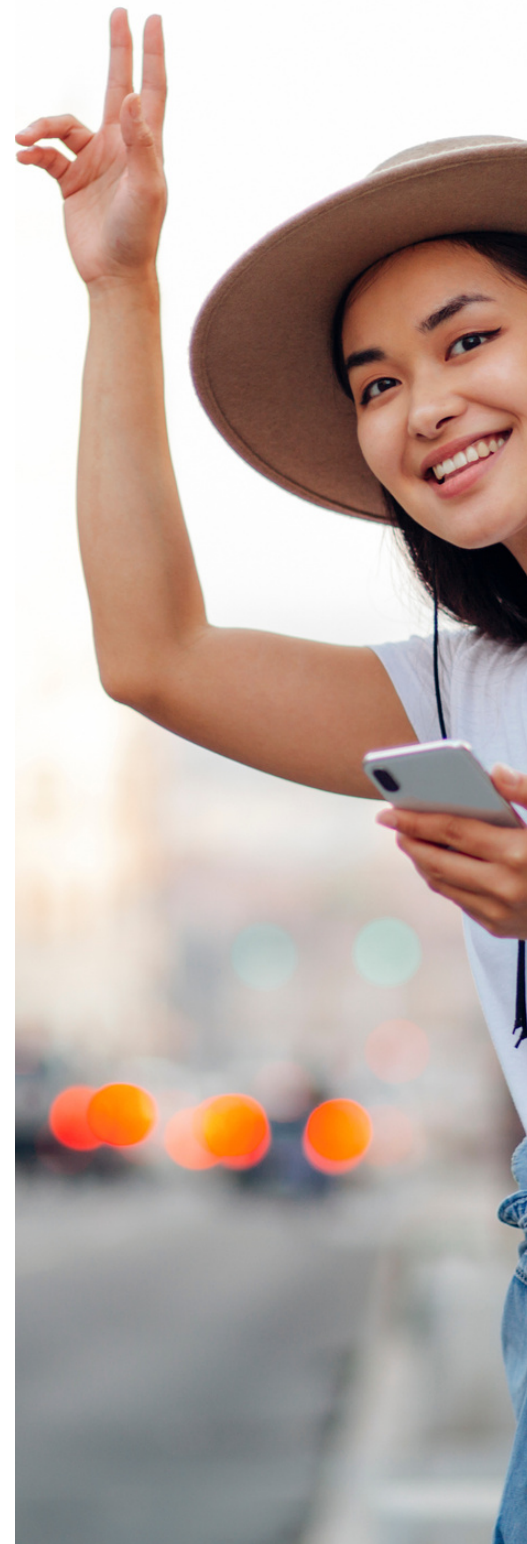
RIDESHARING

Challenges of rapid urbanization, especially the lack of parking infrastructure and public transportation, made many city-dwellers turn to ridesharing apps like Uber or Gojek. Without an accurate reference of POIs, delivering on-demand transport - at scale - is simply impossible.

With increasing competition in the sector, ride sharing companies need to continually optimise their services and deliver peak performance every single time. They must operate efficient routing and navigation systems to get to their pick-ups faster, manage availability during peak hours, and work hard to retain customers while maintaining profitability.

POI data tells drivers where to pick up and drop off passengers – and anyone who ever used any of these apps is painfully aware of the inaccuracies in these off-the-shelf POI data sets. These apps also use POI data, alongside mobile location data, to determine pricing for rides, calculate travel times, identify the most efficient routes, and match customers who would like to share a ride using a feature like Uber Pool.

For a ridesharing business, the quality of their POI data makes the difference between profit and loss. Without high quality data, it takes precious minutes to find the passenger, resulting in cancelled rides, reputational damage, and lost revenue. Therefore, rideshare companies must procure frequently refreshed POI datasets to enhance route optimization, provide accurate ETAs, and increase the number of rides per driver.



How can ridesharing apps benefit from good quality POI?

Pick-up and **drop-off** points (together with **photos**) are of enormous value for ridesharing companies, and commercial data sets often don't mark these accurately (they typically mark the center of a POI, which is problematic in case of a shopping mall etc). Custom attributes describing **nearby landmarks** can make navigation easier or reassure drivers that they are in the right location. Information on **parking restrictions** and **waiting areas** can also help drivers avoid unnecessary fines.

FINANCIAL SERVICES

At first, it might seem that POI data is not essential for financial services. However, retail banks, insurance, and other financial service providers can indeed utilize this data to build custom analyses that – by helping companies better understand the areas they are operating in – can have a material impact on business performance.

Firms that offer insurance for commercial and residential properties use POI data – together with climatic data and crime statistics – to develop a holistic overview of areas. The resulting insights are used by analysts and insurance providers to conduct risk assessments that help adequately determine policies and premiums.

Investment firms evaluate human mobility data together with POI data to predict revenues for retail outlets or to analyse supply chains. These predictions allow managers to identify which businesses will have the greatest ROI – knowledge that they use to invest the capital at their disposal.

Retail banks can use POI data to map their existing network of retail branches and ATMs (as well as those of their competitors) to identify redundancies and underserved locations. Afterwards, they can geofence commercial areas and conduct foot-traffic analysis to underscore ideal sites for network expansion.

How can businesses that offer financial services benefit from good quality POI?

Financial analysts can track mobility data around POIs representing parts of the supply chain to **forecast business performance** and **predict disruptions** before they are in the media. This has been especially powerful during the Covid lockdowns in countries where the news doesn't always report the full picture.

By collecting custom attributes like the **available payment options** at retail stores around a particular area, a bank can make better decisions if they need to add a new ATM to serve cash-only businesses.

RETAIL

POI data is valuable for retail companies to perform competitive analysis, expand their presence to new areas, and enable eCommerce operations.

Using POI data, retailers can study the distribution of outlets that offer similar services in a region. In doing so, they can identify commercially viable locations for expansion. By analysing mobility around competing POIs and commercial hotspots, retailers can accurately predict potential sales and consumer footfall in an area and develop strategies to overtake their competitors.

Businesses can also leverage POI data to identify potential partners, distributors, and resellers that can play a significant role in expanding their reach without having to incur the costs associated with setting up new retail outlets.

Online retail has gained enormous popularity over the past decade, consistently increasing profit share yearly. The COVID-19 crisis further amplified the need for online retail as consumers incessantly chose screens over stores.

Among the innumerable choices, brands offering the best deals, competitive prices, shorter wait times, efficient delivery, and hassle-free returns are most likely to win a customer's business. To remain profitable in this intensely competitive space, retail companies must harness POI data to create cost-efficient fulfilment, logistics and delivery systems.



How can retail businesses benefit from good quality POI?

Besides site selection, retail can also benefit from additional POI attributes such as **parking availability** and the nearest **public transport stations**, as this information will help them determine the best means of transport to the outlet. If stores only accept cash payments, information about **payment options** along with nearby **ATM locations** can also be helpful.

Online retailers can save delivery costs by driving customers to an **in-store pick-up point** while still browsing and choosing products online. By powering eCommerce apps with accurate, up-to-date POI data, retailers can offer delivery systems that are reliable, financially smart and meets user expectations.

MARKETING AND ADVERTISING

Whether you are an ad tech company, an agency, or a business with an in-house marketing team, the goal is the same: maximum ROI on your marketing spending, be it through exposure, interactions, or visits to a physical store.

Point-of-Interest (POI) data enables businesses to map specific areas and achieve actionable intelligence to launch new marketing and advertisement campaigns or assess the performance of existing ones. It also helps power ad-tech and data platforms that help derive actionable insights for marketing campaigns, audiences, prospects and more.

Unlike digital marketing campaigns, measuring the performance of OOH campaigns is not straightforward. However, using footfall data for various POIs (such as outlets and geofences at OOH sites), businesses can assess the influence and effectiveness of OOH ads.

POI data can also help evaluate competition in an area of interest so that you can make well-informed expansion and marketing plans. By combining POI data with mobile location data, you can know exactly where your customers are and develop campaigns that drive them to your business. Using POI data, retailers, FMCG companies, automotive stores, etc., can conduct performance and comparative analyses for marketing campaigns across a region.

How can marketing and advertising benefit from good quality POI?

By introducing Point-of-Interest (POI) data into their strategy, marketers can build robust audience intelligence systems that help deliver the right message to the right people at the right time.

Businesses can analyse the locations of their competitor's advertising assets to gather actionable insights. Has a competitor been consistently deploying ads at a particular location? That is probably because the location has good exposure and has improved brand awareness – creating a viable reason for the business to situate its own marketing collateral there.

Collecting data on and evaluating the performance of its own **OOH assets** allows a business to optimise marketing spend to generate greater ROI.

REAL ESTATE

People who are in the market to buy or rent a home want to have detailed information on the facilities and attractions present in an area. Customers also want to know about the distances and travel times between different properties and the POIs they visit on a regular basis.

Enriching online property directories with relevant POI data enables digital real-estate platforms to provide prospects with information that is crucial for decision-making. The comprehensive overview that is facilitated by POI data on such platforms results in a greater number of sales.

Real-estate developers leverage POI data (which includes the locations of nearby malls, restaurants, parks, hospitals, schools, public transit stations, and so forth) to determine pricing for properties and projects. Developers also use this information to identify what an area or neighbourhood lacks so that they can invest in projects that address local needs. Another useful application is to combine POI and mobility data to identify areas suitable for new residential projects.

POI datasets can be extended to include photos and videos that can be used by property apps and websites to create accurate and informative remote viewing experiences. This is ideal for busy customers who are interested in properties in cities far away from where they are currently based.



How can real estate benefit from good quality POI?

Home-seekers typically want to move into an area that has a certain ambiance. Some might want to move into a dynamic tourist hotspot. Others may prefer the simplicity and slow pace of suburbs. Collecting and displaying **street views** and other **photos** allows real-estate companies to help prospective buyers get a sense of the neighbourhood without visiting the area.

Other custom metadata, like **attractions**, essential and non-essential **services**, and **schools** nearby enables prospects to choose homes that facilitate their daily routines (whether it is parents prioritising schools and day-cares near their home or a single professional seeking proximity to a gym or park).

GOVERNMENT & PUBLIC SECTOR

Governments and local authorities as well as emergency and public service agencies can leverage POI data multiple ways. They can use POI data to map regions accurately and optimise services like public transit, emergency healthcare, law enforcement, and more. Combined with mobility data, POI can help fast-track activities like contact tracing, crime alerts, etc.

Most government bodies require businesses to provide their commercial location as part of their business registration process. These postal addresses form an exhaustive POI dataset. However, businesses close, grow, and move offices or operate at a different location than their officially registered address. Since they may not proactively update this information with the government body, commercial POI data can become outdated and inaccurate over time.

POI data on vital facilities (such as schools and hospitals) enable governments to identify underserved areas that require attention and new investments. Public health officials can use POI data to map the spread of infectious diseases and develop response infrastructure where it is needed most.

Governments can also combine POI data with climatic information to identify areas that are most prone or vulnerable to natural disasters like floods, wildfires, and earthquakes and can utilise this information to establish emergency supply centers and evacuation facilities in high-risk areas.

How can the public sector benefit from good quality POI?

Governments can collect POI data that corresponds to **public transit stations** and conduct human mobility analysis to identify areas that require public transport infrastructure.

Many cities across the globe do not provide their residents with clean, drinkable tap water. In such urban settlements, some public authorities establish filtration plants that allow citizens to collect water that is safe to drink. These government agencies can collect and evaluate POI data for filtration plants along with census data to identify suitable sites for establishing new facilities to satisfy existing and future demand.

AUGMENTED AND VIRTUAL REALITY

POI data is already widely utilized by the first batch of popular Augmented Reality (AR) games, like Pokemon Go. It enables players to achieve goals and progress in the game by travelling to different locations across towns and cities.

As AR technology becomes cheaper and more popular, its applications can leverage POI data in other ways. POI data can feed AR-based navigation systems so that users can view directions that are superimposed on the physical world. Additionally, such applications can also allow users to look at a commercial location through AR glasses and see key information. Imagine looking at a commercial area and seeing all the restaurants with labels specifying cuisine type, operating hours, and popular dishes!

POI datasets can be extended to include data such as videos, panoramic photos, and sound – information that is critical for making digital replicas of real-world places and objects. Such data can allow Virtual Reality (VR) developers to create apps for various use cases.

For instance, a tourism app that lets users experience popular destinations (virtually) before they decide where to go on their next vacation. Another example is that of VR-based real estate platforms that allows home-seekers to explore and assess suitable properties without having to go to the physical locations. This can prove especially useful if people are looking to move to another city or country.



How can AR & VR apps benefit from good quality POI?

Augmented Reality is the use case that can benefit the most from custom POI attributes. The more information can be displayed about a place superimposed on the actual reality, the more useful an AR application is. The possibilities are endless, from displaying the **opening hours** or the interior of a restaurant without even approaching the entrance to showing the directions to all **nearby ATMs** with arrows hovering in the sky.

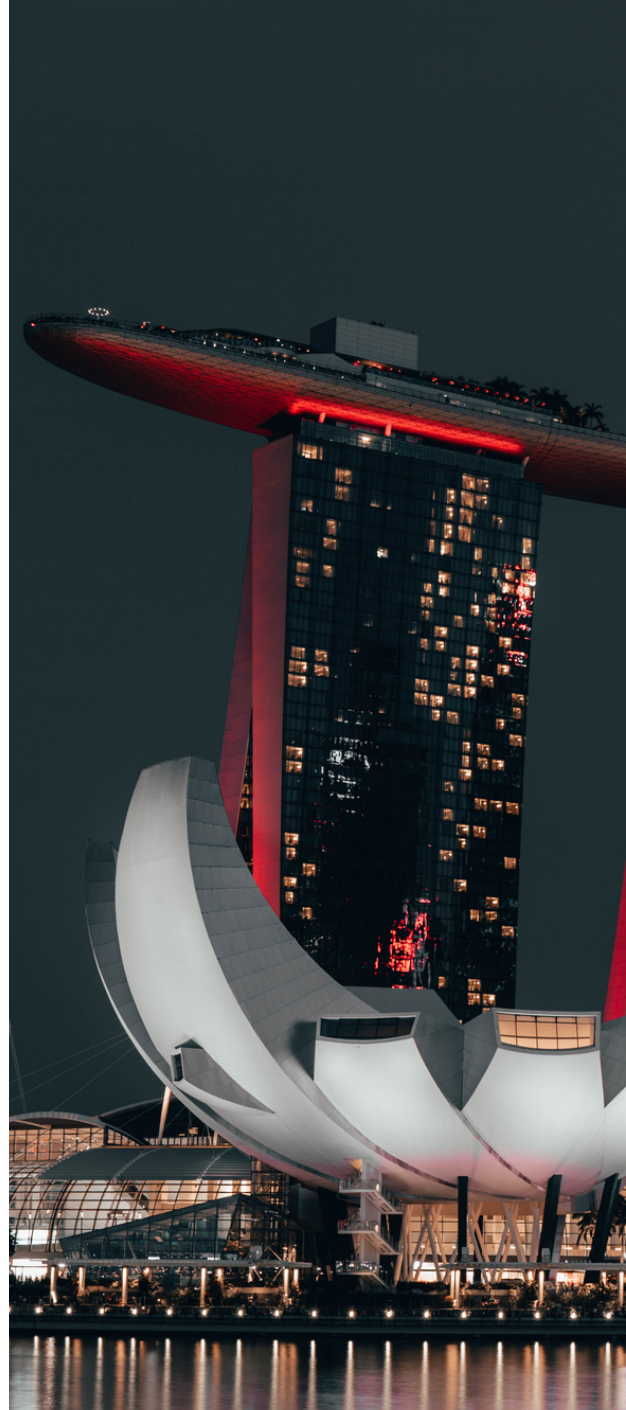
For VR, POIs are raw material for building accurate virtual worlds users feel comfortable visiting.

Get Better POIs, Today

As demonstrated by the various use cases in this eBook, POI data is already a vital form of business intelligence across multiple domains. Some industries, like ridesharing, utilize POI data at the very core of their businesses. However, to serve as useful input for different analyses, POI data needs to be up to date with the changes taking place in the real world. Herein lies the challenge.

Across the world, cities are continuously undergoing socio-economic and environmental changes. Embedded in an increasingly interconnected global economy, cities are vulnerable to financial shocks at multiple levels. This has been made quite clear by COVID-19 induced supply-chain disruptions, travel restrictions, and social-distancing mandates – factors which have collectively resulted in the suspension and termination of millions of businesses across the world. These businesses – along with new businesses established during the recovery period – represent the need to update millions of POIs – certainly, a daunting task.

**LEARN MORE ABOUT
OUR POI DATA OFFERING**



Quadrant (An Appen Company) is a global leader in mobile location data, POI data, and corresponding compliance services. Our data is verified, trustworthy, and ready to use, allowing businesses, organisations, and innovators to build tailored solutions for a myriad of real-world problems. With Geolancer, Quadrant's goal is to create solutions for people and the businesses that serve them. With our POI Data-as-a-Service, our customers will finally be able to apply analytical models against large, accurate POI datasets, deriving meaningful and actionable insights. With the increasing digital transformation of businesses, there is an enormous market need for quality POI data. Learn how you can leverage Quadrant's POI data to make better business decisions and improve the foundation of geospatial applications. Since September 2021, we are part of Appen, the global leader in AI training data that helps build and improve the world's most innovative artificial intelligence systems. To learn more about Quadrant's POI data offering, **talk to a data consultant today!**

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