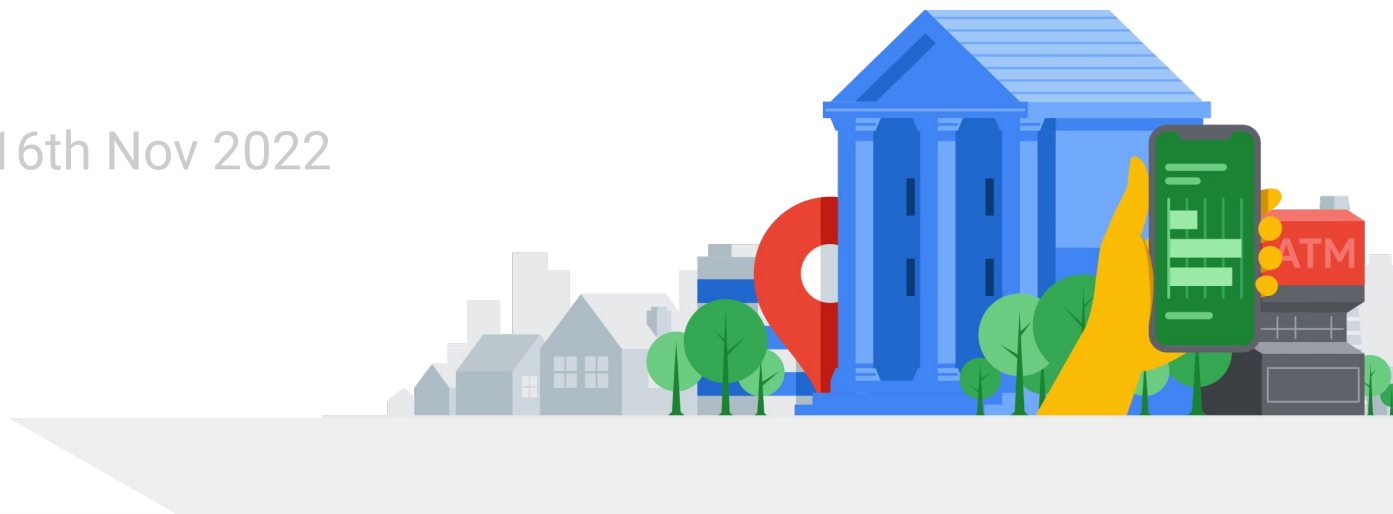


Elevating Financial Services with Google Maps Platform

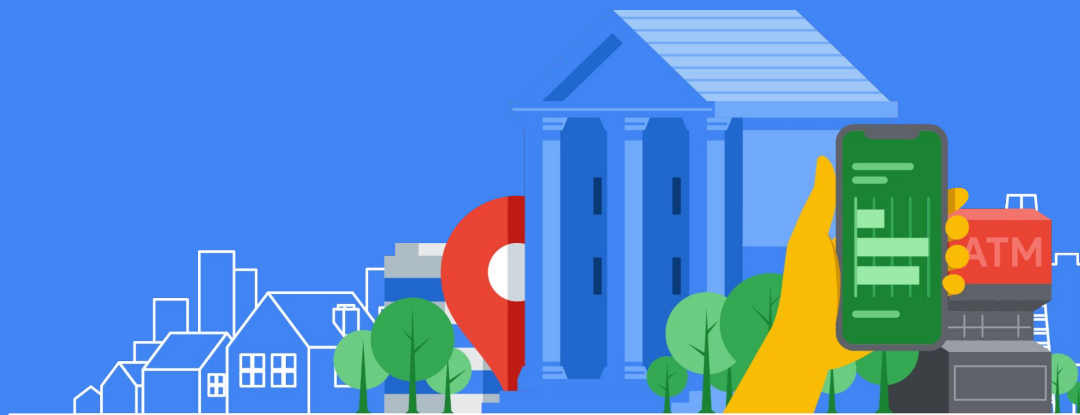
Ravi Bhaskaran

Title

GeoSpatial World, 16th Nov 2022



The new financial services landscape





Generational shifts, the rise of the underbanked, fintech startups, and COVID-19. Finance is changing fast.



The popularity of fintech startups is skyrocketing.

20M

Customers now bank with neobanks and challenger banks.¹

150%

YoY growth rate, compared to the 1% YoY rate of incumbent banks.¹



1. <https://newsroom.accenture.com/news/uk-neobanks-near-20-million-customers-in-2019-but-customer-and-deposit-growth-rates-slow-according-to-research-from-accenture.htm>

Unbanked and underbanked customers are coming online.

63M

Underbanked adults in
the US alone.

1B+

Underbanked adults
across the world.



1. <https://www.forbes.com/advisor/banking/costs-of-being-unbanked-or-underbanked>

2. <https://www.mastercard.com/news/europe/en-uk/newsroom/press-releases/en-gb/2019/march/new-mobile-money-propositions-have-the-potential-to-reduce-the-world-s-unbanked-population-by-more-than-a-third/>

In the wake of COVID-19, streamlining operations is vital.

\$4.7T

Estimated lost revenue
between 2020 and
2024.¹

14%

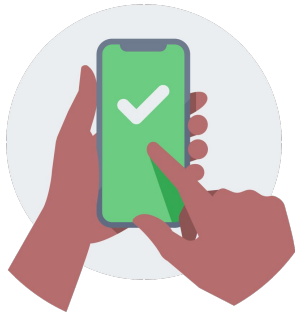
Of all online adults
tried online banking
during the pandemic.²



1. <https://www.mckinsey.com/industries/financial-services/our-insights/global-banking-annual-review>

2. <https://www.forbes.com/sites/forrester/2020/10/22/in-2021-banks-will-need-to-get-to-know-their-customers-again/?sh=20bcfaf842e5a>

The new Financial Services landscape



Rich, tailored, frictionless experiences are table stakes, not perks.



Every step of the journey must be optimized for mobile and highly secure.



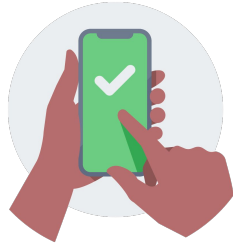
Operational efficiency and measurable ROI have never been more important.



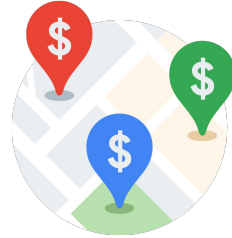
**From upstarts to institutions, how
can financial services adapt?**



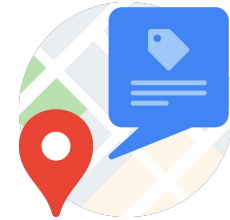
The Financial Services customer journey



Simplify and verify customer sign-up



Help customers understand their transactions



Provide personalized local offers and experiences



Drive customers to your branch & ATM locations



Detect unusual transactions in real-time

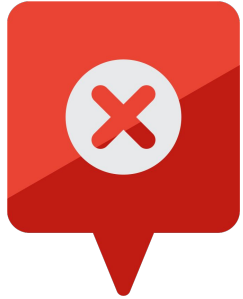


Improve your risk assessment models

Challenge:
**Make your sign-up
process faster and
increase security**



Verifying identities for new accounts, loans, and payment cards is a challenge—but essential.



69%

of all identity fraud is due to the creation and takeover of customer accounts at large and mid-size US financial services firms.¹

5%

of all deliveries are misrouted due to bad addresses.²

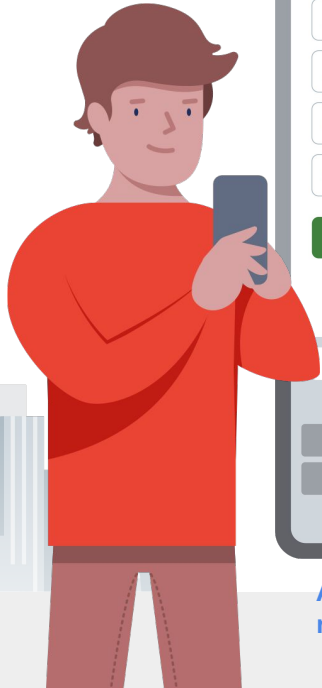
1. <https://risk.lexisnexis.com/insights-resources/research/true-cost-of-fraud-study-financial-services-and-lending-edition>
2. <https://tamebay.com/2019/04/failed-deliveries-cost-industry-1-6bn-year-can-done.html>



Solution:
**Quick & Verified
Sign-up**

Make sign-up easier and faster while providing an additional level of address verification that reduces the risk of fraudulent account set-ups

The experience of a faster sign-up



AltoBank

Loan application

Address

Apt., suite, etc. (optional)

City

State Zip

Submit

An application form requires an address

AltoBank

Loan application

129

- 12902 Connect Foothill Boule... Sylmar, WA, USA
- 129 Foothill Blvd Parking Sylmar, WA, USA
- 129 Montauk Street Kirkland, WA, USA
- 1299 Ocean Avenue Seattle, WA, USA

Powered by Google

Autocomplete options appear automatically

AltoBank

Loan application

129 Montauk Street

Kirkland

WA 98033

Submit

The address is selected with visual confirmation

AltoBank

Loan application

129 Montauk Street

Verify your address

Verify I'm there now
Allow device location access

Remind me later
Get notified later and continue

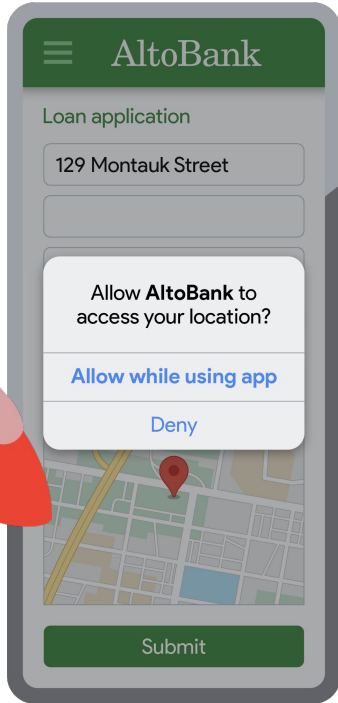
Verify via postal mail
Get a special code in 1-3 days

Cancel

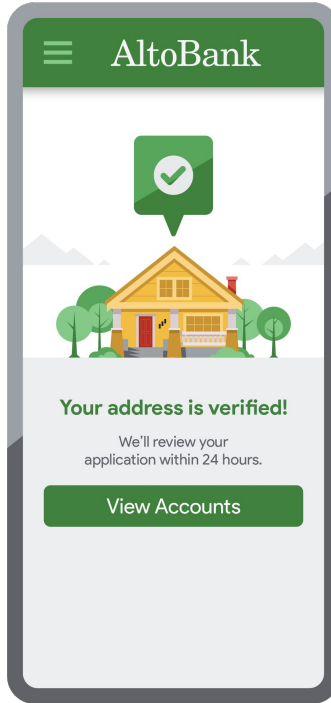
Submit

Address verification options are presented

The experience of address verification



Location permission is granted by the user



The verified address is confirmed

One caveat to address verification

Because a user's location can be spoofed, or a bad actor could put themselves near a physical address in an attempt to sign up with the identity of someone else, comparing a user's device location with an entered address should be one of multiple data points in confirming an address.



Quick & Verified Sign-up saves sign-up time and increases click-through rate and conversion



64%

Time savings across the sign-up process.¹

15%

Increased conversion rates.¹

80%

Increase in overall click-through rate.²



tokopedia



[Full Case Study](#)

“Successfully completed addresses have gone up by 10% since integrating address validation on Google Maps in our Tokopedia app, which is a great improvement.”




Edwin Hartanto Mailoa
AVP of Logistics, Tokopedia

Challenge

Because Indonesia is a geographically dispersed country covering more than 17,000 islands and spanning 3,200 miles, logistics outside of major urban areas can be a challenge. In order to send the right logistics partner that can deliver on time and on cost, Tokopedia developed its own address validation platform, based on Google Maps Platform technology.

Results

Tokopedia improves delivery accuracy and checkout experience by using Google Maps Platform to validate seller's pick-up address and customer's delivery address.

-  Captures buyer and seller location data to improve exchange and company operations across logistics
-  Simplifies checkout process with autocomplete prompts in search bar.
-  Improves delivery accuracy with precise location data on Google Maps.

Challenge:
**Make marketing more
effective with individually
tailored offers and
experiences**

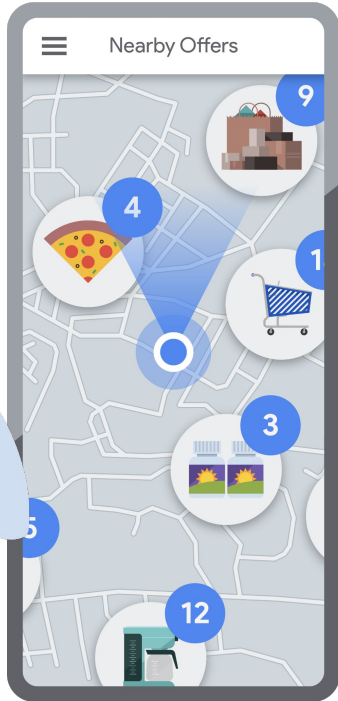




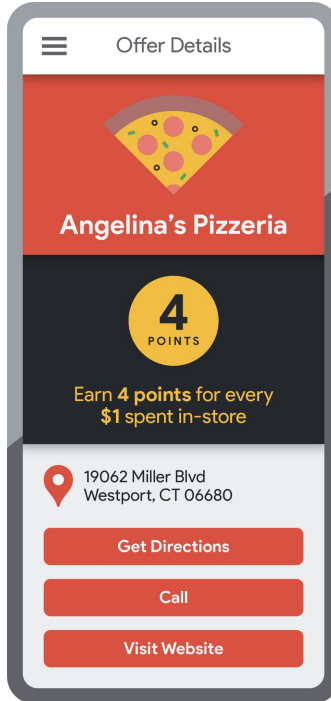
Use Case:
**Contextual
Experiences**

Provide tailored,
location-intelligent offers and
rewards while driving traffic to
nearby merchants.

Contextual Experiences help deliver geo-targeted offers



Present nearby offers



Connect the customer to the offer they want

Deliver geo-targeted offers that connect customers with their surroundings—their favorite shops, restaurants, hotels, and more—all visualized with rich Google Maps.

Geomarketing can increase NPS, foot traffic and time spent in-app



8%+

Or more increase in
Net Promoter Score.¹

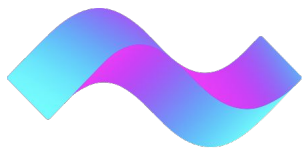
8%+

Or more increased
time spent in-app.¹

3%+

Or more increase in
on-premise foot
traffic.¹





Current



[Full Case Study](#)

“Accurate geospatial information is essential for any bank looking to provide customers with enhanced services and insights into their spending and saving patterns. Our integration with Google Maps Platform is a major differentiator for us and offers our banking customers and partner merchants tremendous value.”

Trevor Marshall
Chief Technology Officer, Current

Objective

Current offers a unique, debit card rewards program leveraging their relationship with tens of thousands of merchants to surface geo-targeted offers through in-app notifications to nearby users. This allows their customers, many of whom don't qualify for rewards programs typically associated with credit cards, to get more out of their buying dollar and enjoy opportunities otherwise beyond their reach.

Results

Current's program delivers an average of 10% cashback—higher than even most traditional rewards programs. And it's great for merchants, who benefit from increased foot traffic driven by Current's intelligently targeted offers.



Provides a rewards program for debit-card users



10% cashback—higher than most traditional programs



Drives foot traffic to tens of thousands of merchants

Challenge:
**Help customers
understand their
transactions and visualize
their spending patterns**

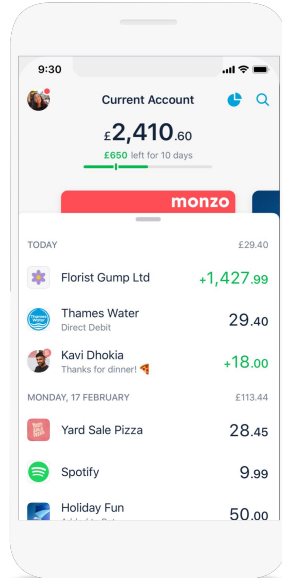




Solution:
**Enriched
Transactions**

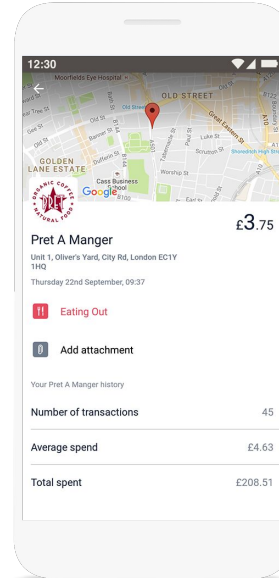
Make confusing transaction records understandable and visualize spending patterns in new ways.

Enriched statements help customers easily verify unfamiliar transactions



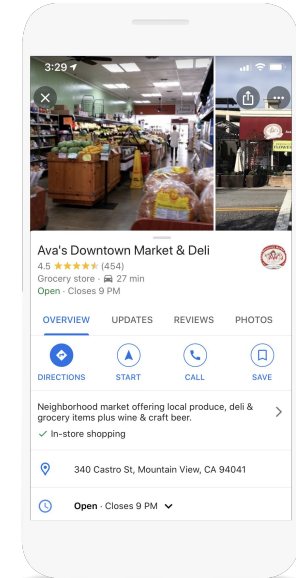
Show Merchant

Merchant logo, cleared names and place category are provided by customer or a GMP Partner



Locate Merchant

Show where the merchant is located on a map, with name, logo and place category



Merchant Details

Provide merchant details (opening hours, ratings, reviews, photos), plus content overlays from customer

Clean and simplify raw transaction data

Raw transaction data

Acme Mart Super C~~MTNVIEW~95-0000CA512



Merchant name

Acme Supercenter

Coordinates

22.162, -76.897

MAINSTBAKE 1171~~CUPERTI~75070-0000CA512



Main Street Bakery

43.255, -46.639

ACM-MART #0529~~FSTRCITY~77568-0000CA512



Acme Supercenter

99.402, -25.036

SLVRCRKBK_#1878~~MTNVIEW~275020000 CA512

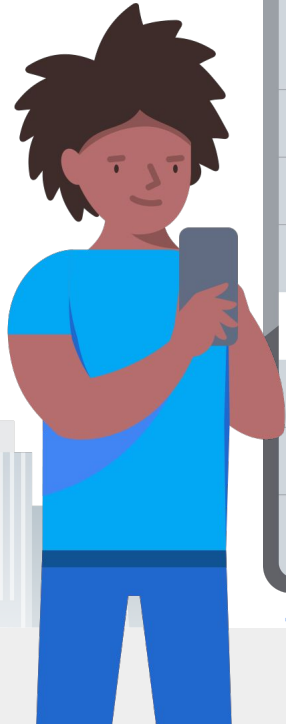


Silver Creek Bank

21.745, -81.882

Even before reaching the customer, **enriched transactions** can provide human-friendly clarity for transaction data.

The Enriched Transactions experience



Jane's Mastercard

Pending Transactions

UBER Travel Today	\$10.99
LEE'S PIZZA Dining Today	\$30.22
FOOD INC. Grocery Today	\$50.68
ACME Retail Today	\$200.90
XNC123WINDHOUS... Dining Jan 27	\$88.75
BUDGET FLIGHT Travel Today	\$145.34
FOOD INC. Grocery Today	\$44.71
UBER Travel Today	\$14.99

Traditional transaction summary

Transaction Review

WINDHOUSE EXPRESS
Wednesday, Jan 27, 1:36pm \$88.75

WINDHOUSE EXPRESS PUB
★★★★☆
Restaurant / Bar
123 Acaia Street, New York, NY
www.windhousepub.com
(222) 222-2222
Open Now

Enriched Transactions view

Name

Location / map

Rating

Establishment type

Address / vicinity

Website

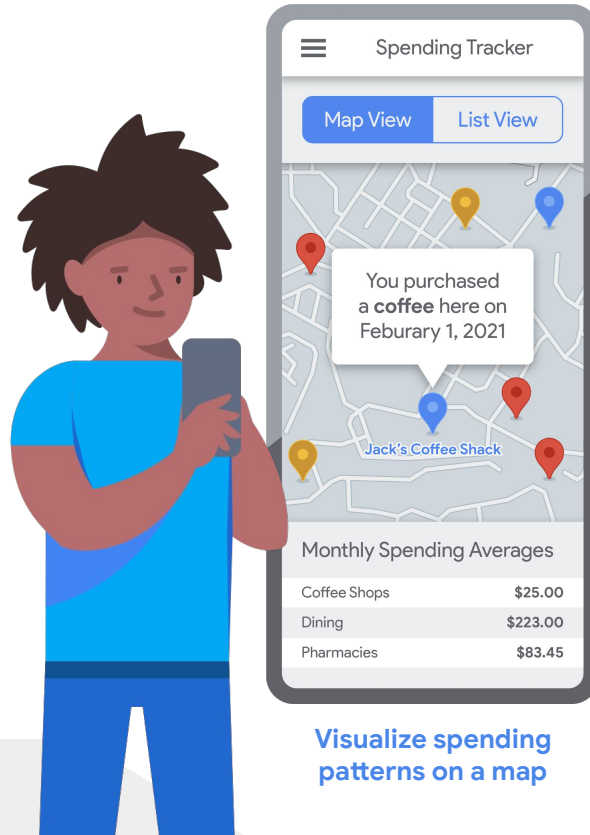
Phone

Status

Photos

Others: Place icon, Opening Hours, Price level, Reviews

Give customers insights about how and where they spend money by visualizing their transactions on a map



Visualize spending patterns on a map

Help customers easily understand their recent transactions by adding the merchant name to the transaction amount and date, and show their spending on a Google map. This enables you to give customers insights about where and how they spend money.

Enriched Transactions can decrease customer support calls, increase NPS and drive more time spent in app

67%

Customer support calls decreased by **~67%** by using geospatial data to enrich customers' transaction data.¹

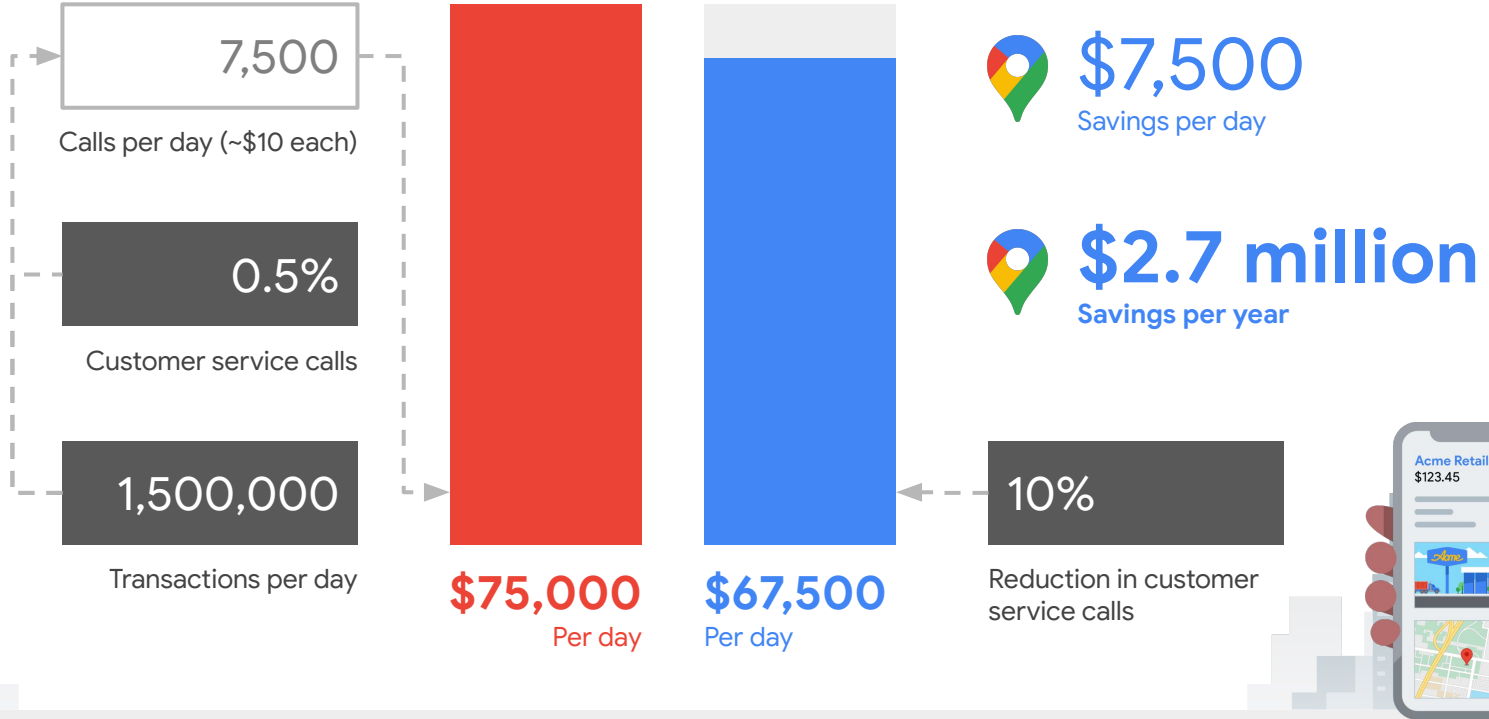
15%

NPS increased by **15%** or more by using geospatial data to provide additional info on merchant services like business hours and on-site services.¹

8%

Customer time spent in apps increased by **8%** or more by using geospatial data to tailor products and services.¹

How much enriched transactions can save





[Full Case Study](#)

“As a startup, we tend to view Google as one of the big corporates. There’s always the assumption that we can only get off-the-shelf solutions. But in reality, what we’ve found with Google Maps Platform is a huge amount of room for working together to create something new.”

Eleanor Hasler




Vice President, Product Strategy and
External Relations, Dozens

Challenge

The real innovation lies in the business model that monetizes solely on customer savings and investments, rather than on lending. This means that Dozens can promise customers that budgeting and saving are truly the shared goal. It also means that the company is offering customers a fundamentally different value proposition.

Results

Dozens uses Google Maps Platform and Snowdrop’s Merchant Reconciliation System (MRS) in its financial app to enable visual spending insights, fewer customer support calls, and better fraud detection.

-  Supports mission to extend fintech beyond urban millennials, with **65%** now outside London and **35%** over age 35.
-  Enables growth of user base to 15,000, with 100% growth over two months.
-  Allows Dozens cardholders to visualize spending all over the world

Dozens' Journey with Google Maps Platform



Google Maps Platform



[Full Case Study](#)

“The latest Google Maps Platform upgrade brought down response times by a few milliseconds. That may sound small, but we’re processing hundreds of thousands of events, and load is very high. Every millisecond matters.”




Hari Sivan
CEO, SoCash

Challenge

SoCash is helping to shape the region’s powerful internet banking wave by connecting consumer, shop, and bank on a single smartphone-based platform. SoCash needed the most powerful mapping solution available to drive its mission of enabling cash connections.

Results

SoCash developed an innovative cash distribution app, achieved double-digit monthly growth rates, enabled regional financial inclusion, and built a massive shop network using Google Maps Platform.

-  Enables rapid financial inclusion for millions of previously unbanked customers throughout Singapore, Indonesia, and Malaysia.
-  Reduces SoCash platform response times to enable the processing of **hundreds of thousands** of events.
-  Delivers key shop information via powerful Maps, Routes, and Places APIs.

Challenge:
**Detect fraud with greater
speed and accuracy**



“Fraudsters are increasingly using pilfered credit-card numbers and phishing attacks to prey on overwhelmed consumers and banks during the coronavirus pandemic.”

Wall Street Journal

“Borrower, Beware: Credit-Card Fraud Attempts Rise During the Coronavirus Crisis”, 2020





Use Case:
Fraud Detection

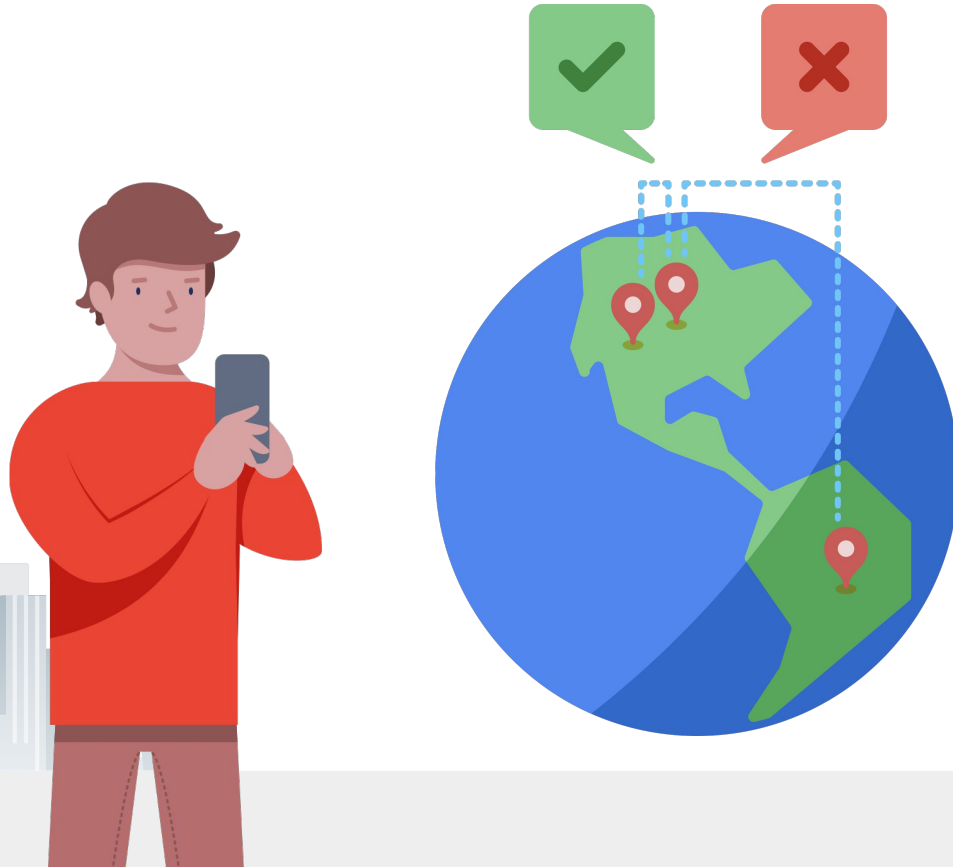
Location intelligence can help detect fraud faster and more effectively, all while improving user experiences.

The Fraud Detection Experience



Suspicious activity like large ATM withdrawals can be detected as they happen by requesting secondary confirmation via the customer's phone and ensuring their location matches that of the ATM. This helps detect fraudulent transactions before money is released.

The Fraud Detection Experience



Distance Matrix can help recognize suspicious patterns by revealing where a series of transactions occurs in relation to one another. Fraud is likely when a single customer makes consecutive credit card purchases across a distance that doesn't seem to match the time between them—say, transactions in London and Paris, 10 minutes apart.

Location intelligence can reduce fraudulent transactions and false positives



70%

Reduction in fraudulent transactions, on average.¹

45%

Reduction in fraud detection false positives, on average.¹





STARLING BANK



[Full Case Study](#)

“Google Maps enables us to show our customers the geographical location of where they have been spending their money, with two million retailers currently recorded. This allows our customers to keep better track of their finances, or even spot fraudulent transactions.”

Harriet Rees




Director of Data Science, Starling Bank

Challenge

Starling Bank was one of the first UK banks to launch mobile-only personal, joint, and business accounts, and built a bank from scratch with the aim of helping people manage their money from a single app. Since launching in May 2017, they've introduced trailblazing money management tools such as automatic categorization of spending, a goals tool to transfer money into savings, and in-app overdraft controls.

Results

Starling Bank gives customers the ability to manage their money from a single app, while also providing access to a marketplace of complementary financial products and services.

-  Analyzes many terabytes of data at speed and scale with a serverless data warehousing infrastructure.
-  Enables real-time notification of transactions and their locations with Google Maps APIs.
-  Helps customers keep track of what they spend and where.

Challenge:
**Assess risk with greater
insight and reliability**





Use Case:
Risk Assessment

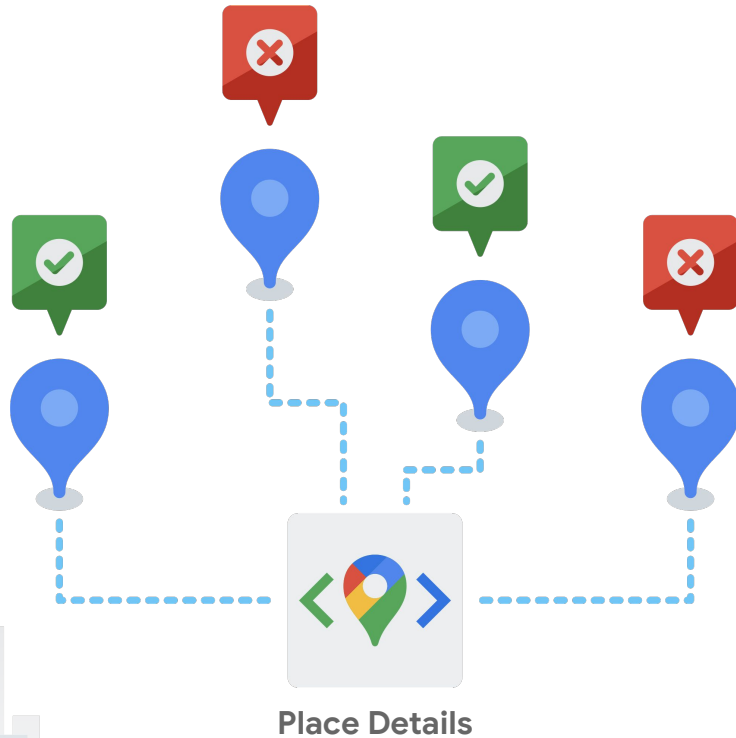
Location intelligence can serve as a powerful signal to assess and manage risk more effectively

Assessing Risk with Location Intelligence



Geolocation can identify and verify the location of customers who have applied for loans, while **Nearby Search** can be used to detect specific points of interest that could have a positive or negative correlation with the area in which a customer lives, serving as data points in risk assessment and classification.

Assessing Risk with Location Intelligence



Place Details can help assess solvency across a portfolio of investments by separating businesses listed as “open” from those listed as “temporarily closed” or “permanently closed”, making it easy to determine the ratio of assets to liabilities.



[Full Case Study](#)

“Experian is committed to creating opportunities for businesses to succeed and non-traditional data plays a critical role. The ability to incorporate the accuracy of business matching within the Google Maps Platform has been important in helping lenders extend credit while mitigating risk..”

Hiq Lee




President of Business Information Services,
Experian

Objective

Experian gives institutions the insights necessary to make smart decisions faster. During the pandemic Experian wanted to combine its traditional business credit data with expanded data sets to provide a fuller picture of businesses during this period of economic uncertainty.

Results

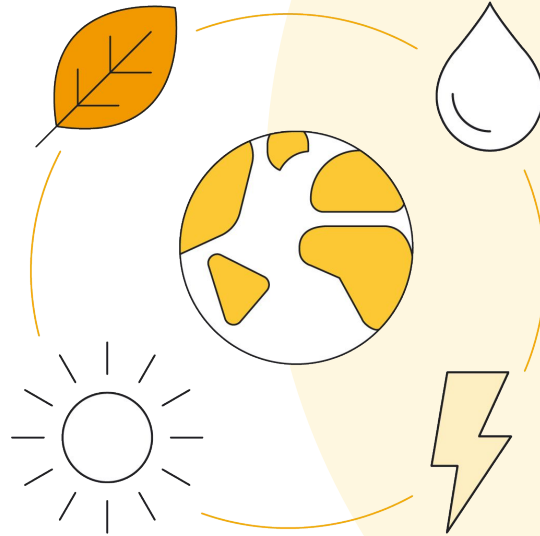
Working with Google Maps Platform, Experian can instantly provide detailed information about millions of small businesses to financial institutions. This includes the exact location, hours, and whether the business is temporarily or permanently closed — all critical details during the pandemic.

-  Correctly identifies small businesses with an accuracy rate of 97%
-  Increases Experian client hit rate to 99% through blended data insights on commercial entities
-  Reduces the time it takes to bring new insights into small and micro-businesses to market to 2 months

04

Climate Risk & Resilience

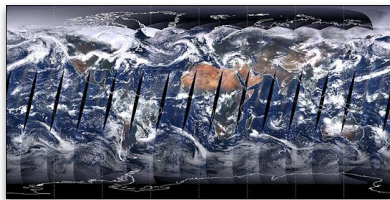
Understand and act on
climate risk exposure



Google Earth Engine is a differentiated Earth observation data and analytics platform

Data Catalog

The world's largest archive of open Earth data at your fingertips.

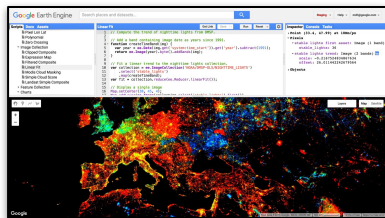


Google Earth Engine has 700+ curated geospatial datasets, including near-real-time satellite imagery



Computation Platform

A powerful tool to analyze and visualize Earth data at scale.

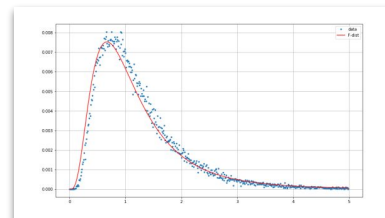


Parallel processing for speed and scale, with machine learning built in.



Collaborative Ecosystem

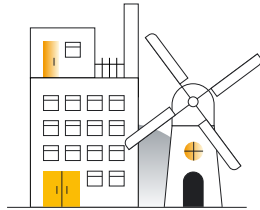
A long history engaging with the scientific and research community



A user community focused on sustainability, social, and environmental impact

Earth observation data and analysis is critical for making sustainability decisions with accuracy, speed and scale

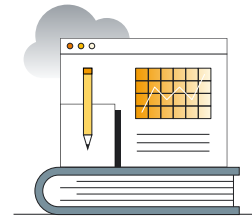
Collate business' **physical locations** prone to sustainability risk (mills, farms, factories, transport etc)



Link them to **observable data** about the Earth's surface globally and in near real-time

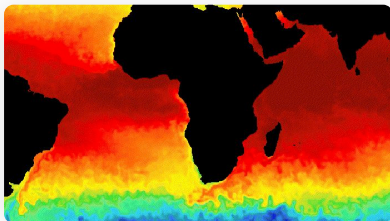


Analyze and evaluate how to **reduce impact** and improve business operations

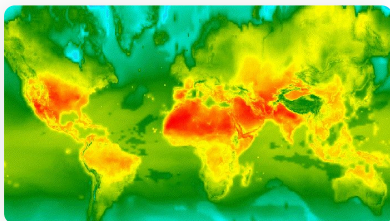


Google Earth Engine provides more than 40 years of historical imagery and scientific datasets, updated and expanded daily

Climate and Weather

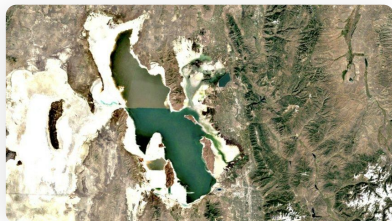


Surface Temperature



Climate

Imagery



Landsat

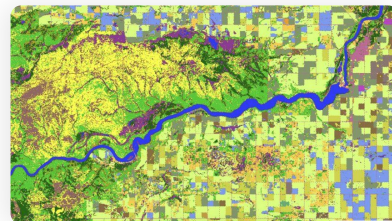


Sentinel

Geophysical

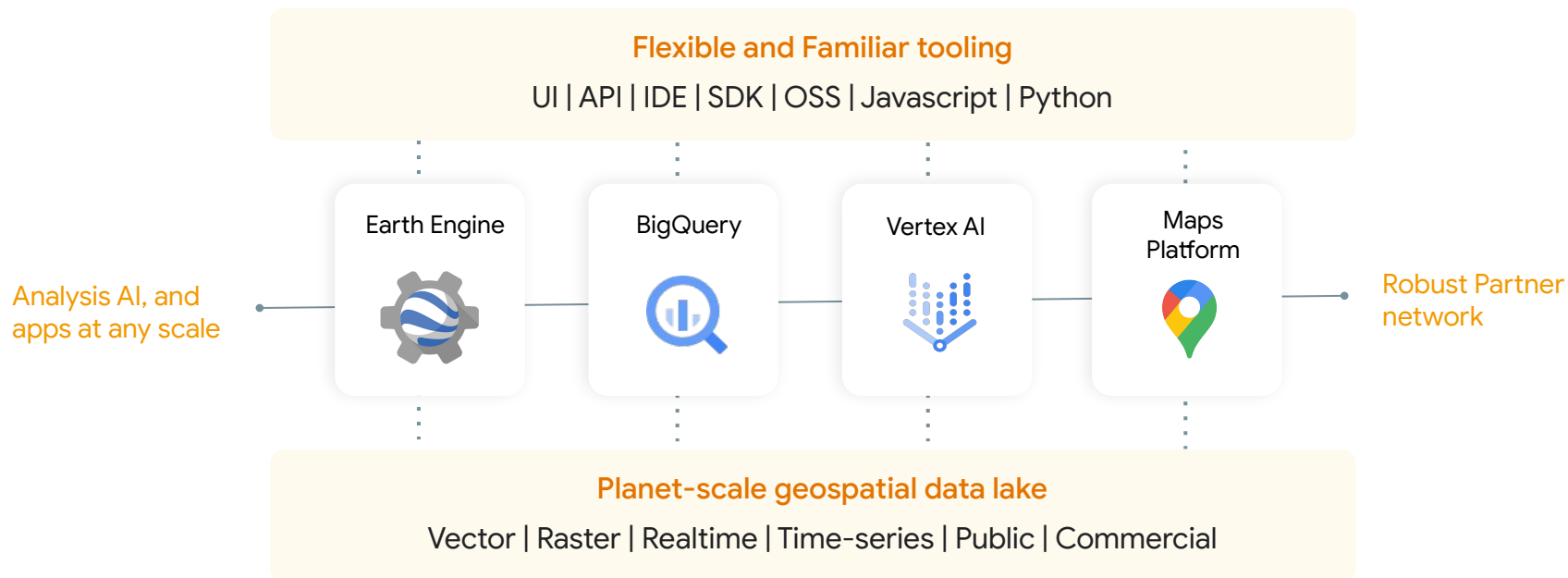


Crop land

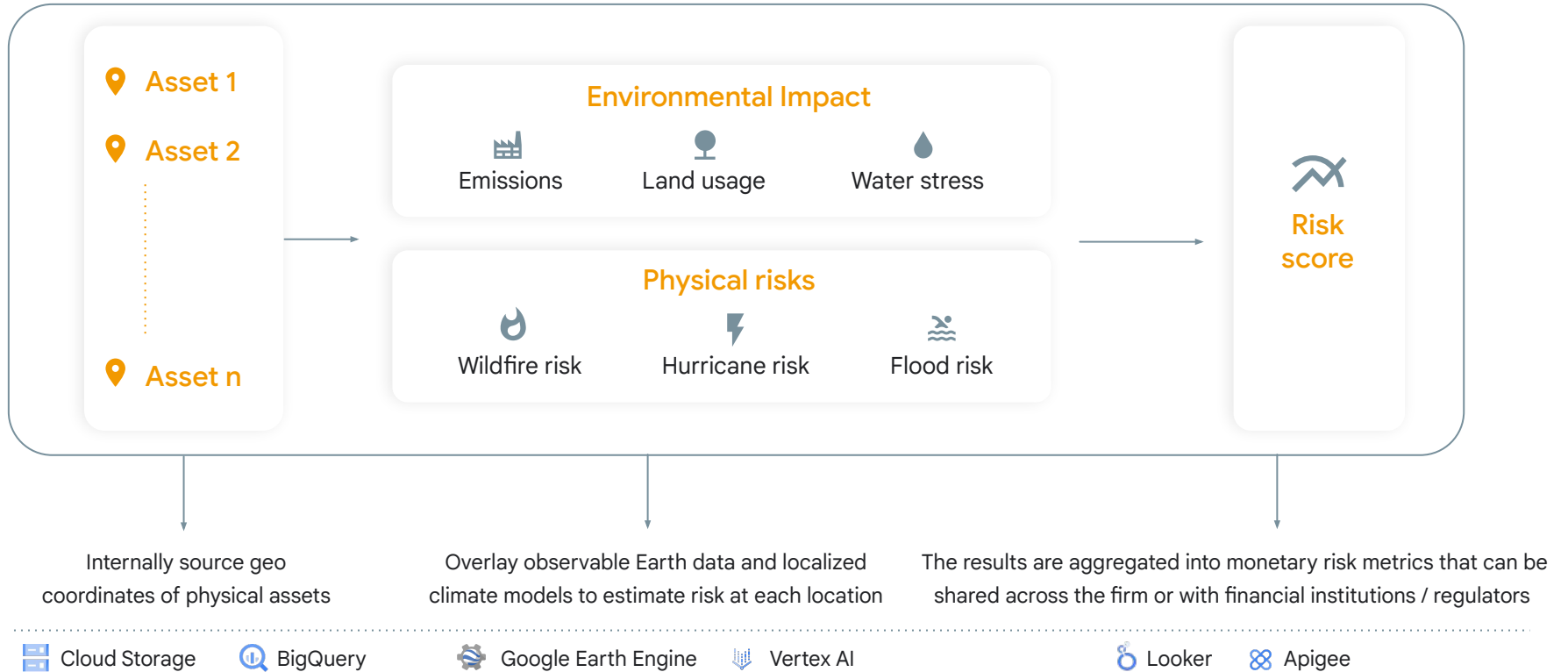


Land cover

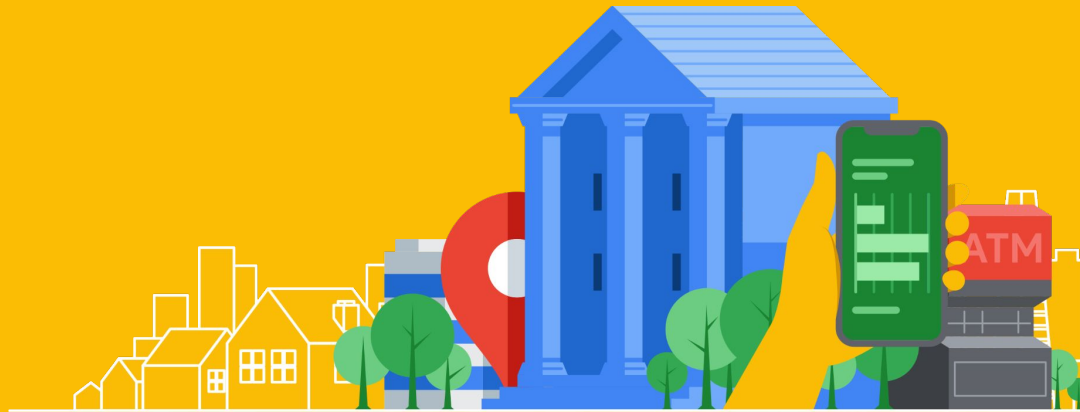
Google Cloud's comprehensive platform helps you solve for common geospatial use cases at scale



Example of how climate risk modeling works



Why Google Maps Platform?

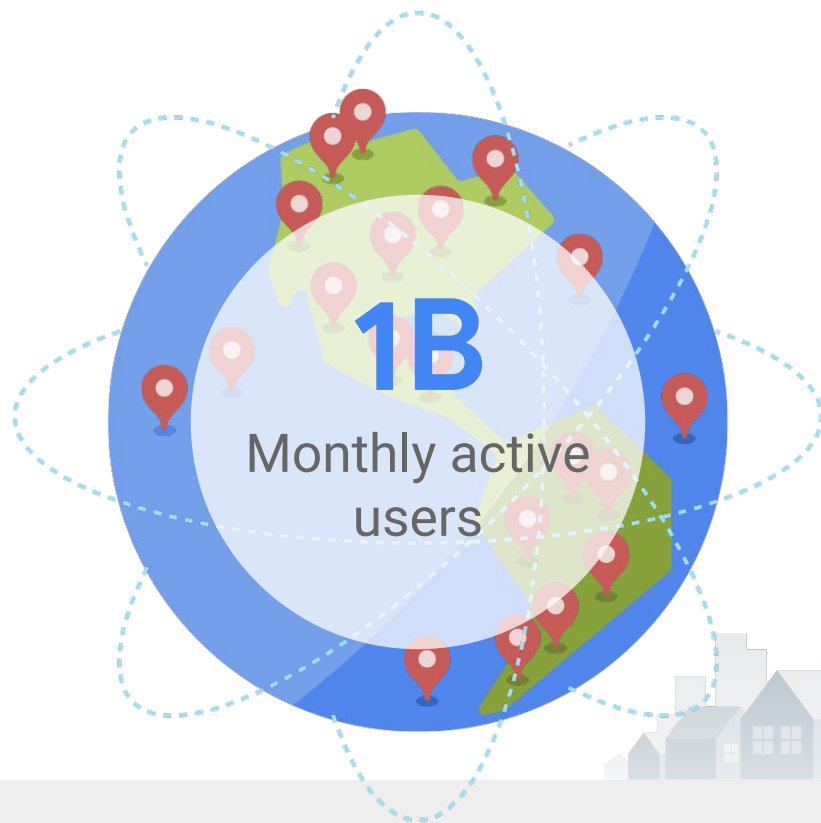




Google Maps Platform

99%

Global coverage



1B

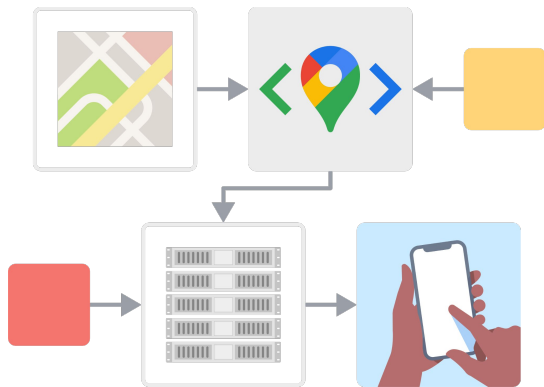
Monthly active
users

25M

Daily updates

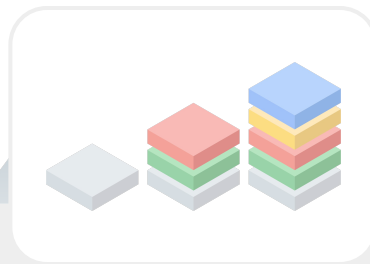
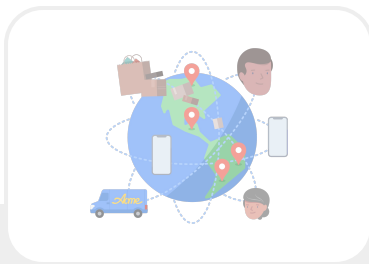
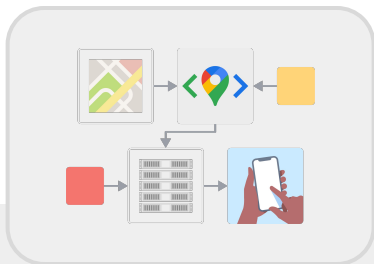


Google Maps Platform



Configurable and easy to integrate APIs and solutions

Turnkey solutions available now to meet your business needs and give you control of the end to end experience



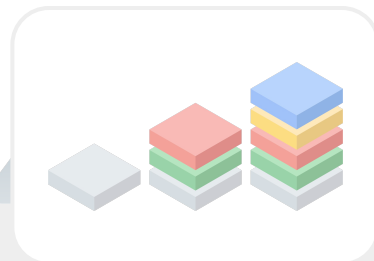
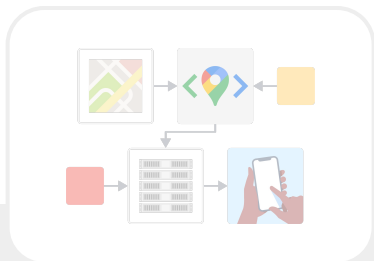


Google Maps Platform



Built on Google Maps' rich global dataset

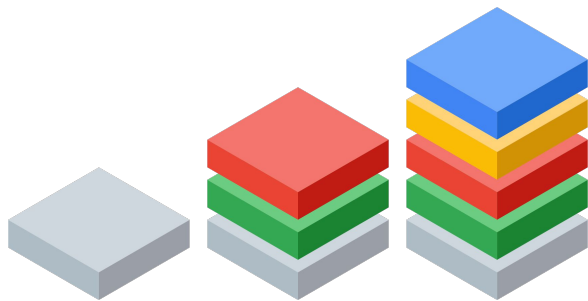
- ETAs accurate for over **97%** of trips
- **50 million** daily updates
- **99%** global coverage



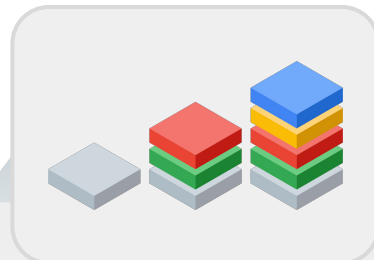
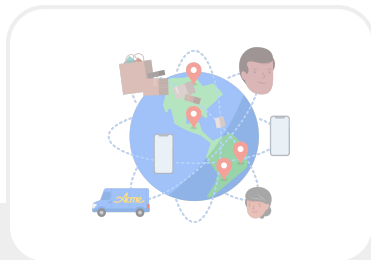
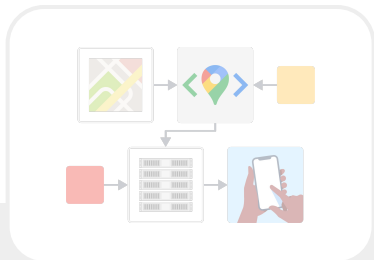


Google Maps Platform

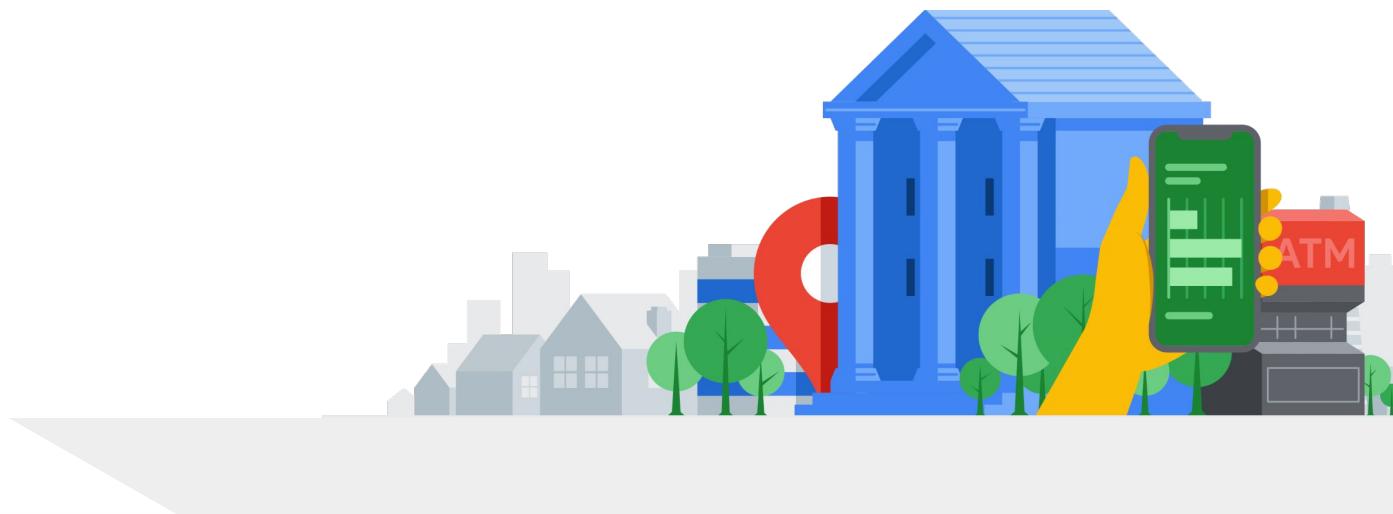
Google scale that grows with your business



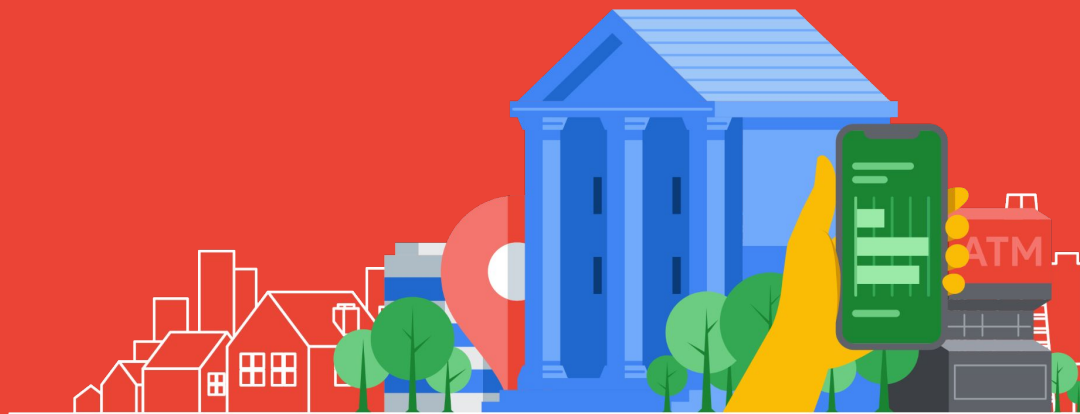
Reliable infrastructure means efficient operations, the ability to scale on demand, and peace of mind that you're delivering the best customer experience.



Thank you.



Appendix



Slide templates





[Full Case Study](#)

“Lorem ipsum dolor sit amet.”

Speaker Name

Title, Company

Objective

Lorem ipsum dolor sit amet.

Results

Lorem ipsum dolor sit amet.



Outcome #1



Outcome #2



Outcome #3