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History of Location Tracking & Location-Based Marketing

Foundational Developments

Location tracking found its origin in the 1960s with the development of GPS by the U.S. Department of Defense. By the 1980s, GPS technology was extended for civilian and commercial use, marking the inception of location-based applications and services. The advancements in technology during the 1990s led to the miniaturization of GPS receivers, enabling integration into mobile phones and broadening the applicability of location-based services.

5	1990s	Tech Innovation	Gov	1995: The first rev of the GPS system finally completed when the last of a full "constellation" of 27 fully operational GPS satellites is launched into space.	GPS Fully Operational	research
6	1990s	Tech Innovation	Gov	1996: The U.S. government makes the Global Positioning System (GPS) accessible for civilian use, marking the beginning of widespread GPS adoption.	GPS Available to Public	research
7	1990s	Tech Innovation	Garmin	1999: Garmin releases the first GPS navigation device for consumer use, popularizing the use of GPS technology for personal navigation.	1st Consumer Nav Device	research
7.5	1990s	Tech Innovation	Gov	2000: The Defense Department ended the purposeful degradation of GPS, which it implemented before the first Gulf War. GPS became ten times more accurate.	GPS 10x More Accurate	research

Emergence and Integration

The early 2000s saw the burgeoning of location-based services and Location-Based Marketing (LBM), with businesses exploring SMS marketing and leveraging location data for personalized content. The integration of location tagging in social media platforms like Facebook and Instagram facilitated user location sharing, while the advent of smartphones and app ecosystems paved the way for more sophisticated location-based applications and marketing strategies. Google Maps provided users with real-time navigation and location-sharing capabilities, significantly impacting both location tracking and location-based marketing ecosystems.

15	2000s	Marketing Innovation		2001: The first location-based mobile marketing campaigns emerge, often involving SMS (Short Message Service) messages to users in specific geographic areas.	location-based mobile marketing	research
19	2000s	Tech Innovation	Skyhook	2003: Skyhook Wireless is founded to provide location-based services using Wi-Fi hotspots and cell towers.	location-based services using Wi-Fi	research
20	2000s	Tech Innovation	Google	2004: Google introduces Google Maps, which eventually becomes a fundamental tool for location-based marketing.	Google Maps	research
24	2000s	Tech Innovation	Apple	2007: Apple launches the iPhone with built-in GPS, accelerating the development of location-based apps and services.	iPhone with built-in GPS	research

Refinement, Personalization, and Expansion

The late 2000s to early 2010s witnessed the refinement and expansion of LBM with the introduction of technologies like geo-fencing and check-in services, which allowed businesses to offer tailored promotions and rewards. The introduction of Beacon technology and advanced data analytics enabled more precise location detection and personalized marketing messages, with retailers extensively adopting these technologies to enhance in-store experiences. Simultaneously, location intelligence platforms emerged to analyze location data, improving decision-making processes for businesses.

2010s	Marketing Innovation	Foursquare	2009: FourSquare is founded and becomes the first location-based social network to achieve widespread adoption.	location-based social network	research	
30	2000s	Tech Innovation	Google	2009: Google introduces Google Places API, which makes it easy for developers to add location-based features to their apps.	Google Places API	research
2010s	Marketing Innovation	Apple	2010: Apple launches iAd, which allows businesses to target their ads to users based on their location and other factors.	Apple iAd	research	
37	2010s	Tech Innovation	Factual	2010: Factual is founded to provide a global database of location data. Introduces Geopulse API, which provides real-time loc data for mobile devices.	Global Database of Location Data	research
2010s	Marketing Innovation	Google	2010: Google announces its Place Search: a group of 7 local search listings within Google's traditional organic search listings.	Google Place Search	research	
2010s	Marketing Innovation	Yelp	2010: Yelp launches its Monocle location intelligence platform, which provides businesses with insights into their customers' location data.	Yelp Monocle	research	
39	2010s	Tech Innovation	Apple	2011: Apple introduces iBeacon, a Bluetooth low energy (BLE) technology that can be used to track the location of devices in close proximity.	Apple iBeacon	research
2010s	Marketing Innovation	Google	2011: Google launches Location Extensions for AdWords, which allows businesses to display their location and address in their search ads.	Location Extensions for AdWords	research	
43	2010s	Tech Innovation	Blueconic	2012: Blueconic is founded to provide a cross-channel marketing platform that leverages location data.	Cross-Channel Marketing + Location	research
44	2010s	Marketing Innovation	Facebook	2012: Facebook introduces "Promoted Posts" and "Sponsored Stories," allowing businesses to target their advertisements to specific geographic locations and demographics based on user data, including location data.	Promoted Posts, Sponsored Stories	research
2010s	Marketing Innovation	Facebook	2012: Facebook introduces its Nearby Friends feature, which allows users to see where their friends are located in real time.	Facebook Nearby Friends	research	
45	2010s	Marketing Innovation	Facebook	2012: Facebook launches "Nearby," a feature that allows users to discover nearby businesses, locs based on their current location, check-ins by friends.	Facebook Nearby Friends	research
47	2010s	Marketing Innovation	Apple	2013: Apple introduces the "iAd" platform, which includes location-based targeting for mobile app advertisements, allowing advertisers to reach users based on their current location or interests.	Apple iAd	research
2010s	Marketing Innovation	Google	2014: Google Pigeon SERP Change. SEO update dramatically altered some local results and modified how they handle and interpret location cues.	Google Pidgeon	research	
52	2010s	Tech Innovation	Apple	2014: Apple launches CarPlay, which allows users to control their iPhone apps using their car's infotainment system.	Apple CarPlay	research
55	2010s	Marketing Innovation	PlacIQ	2014: The concept of "Location Intelligence" gains prominence as companies like Foursquare and PlacIQ offer data analytics and insights based on location data, helping businesses make data-driven decisions.	Location Intelligence	research
56	2010s	Legal	NSA	2014: The Electronic Privacy Information Center (EPIC) sued the National Security Agency (NSA) for its collection of mass phone location data. The lawsuit was based on the Snowden revelations. A settlement was reached in 2015, with the NSA agreeing to reform its practices.	NSA Collects Mass Cellphone Loc Data	research
57	2010s	Tech Innovation	Uber	2014: Uber integrates real-time location tracking into its ride-sharing platform, enabling users to track exact location of their Uber driver.	Uber real-time tracking	research
49	2010s	Tech Innovation	Google	2015: Google introduces Beacon Eddystone, a BLE technology that is similar to iBeacon.	Google Eddystone	research

Maturation and Diversification

The late 2010s saw the maturation and diversification of location-based marketing (LBM), with advances in augmented reality (AR), data analytics, and multichannel marketing. AR technologies created immersive marketing experiences, while more sophisticated data analysis provided deeper insights into consumer behavior. Businesses adopted a multichannel approach to LBM, integrating online and offline channels. Location tracking and LBM became intertwined with AR games like Pokémon Go, blending the virtual world with the real world and offering unique user experiences and marketing opportunities.

2010s	Marketing Innovation		2015: Contextual marketing: Contextual marketing becomes more common, as businesses use data about a customer's current environment to deliver more relevant marketing messages.	Contextual marketing		
2010s	Marketing Innovation		2015: Geofencing becomes more sophisticated, allowing businesses to target customers with even greater precision.	Sophisticated Geofencing	research	
60	2010s	Marketing Innovation	Gravy Analytics	2015: Gravy Analytics is founded to provide location-based analytics and marketing services for brick-and-mortar businesses.	Location-Based Analytics	research
2010s	Marketing Innovation		2015: Hyperlocal targeting becomes more popular, as businesses recognize the value of reaching customers at a very granular level.	Hyperlocal Targeting	research	
2010s	Marketing Innovation		2016: Indoor mapping tech becomes more accurate, widespread, enabling businesses to deliver location-based msgs to customers inside buildings.	Indoor Mapping	research	
2010s	Marketing Innovation		2016: Location analytics - Businesses begin to collect and analyze more location data to better understand customers, improve marketing campaigns.	Location Analytics	research	
2010s	Marketing Innovation		2016: Proximity marketing, which uses Bluetooth, other wireless tech to target customers based on proximity to a physical loc, becomes more popular.	Proximity marketing	research	
63	2010s	Marketing Innovation	Safegraph	2016: Safegraph begins selling bulk access to raw geolocation data through its "Movement Panel" product.	Raw Geolocation Data Sales	research
65	2010s	Tech Innovation	Snap	2016: Snapchat introduces "Geofilters," letting users to overlay location-specific graphics, filters on their photos, videos. Sets stage for loc-based AR.	SnapChat Geofilters	research
66	2010s	Legal	Gov	2016: The Center for Digital Democracy (CDD) sued the FBI for its collection of cell phone location data without a warrant.	FBI Collecting Cell Phone Locs w/o Warrant	research
69	2010s	Tech Innovation	Google	2017: Google introduces Geofence API, which allows developers to create geofences and trigger actions when users enter or exit them.	Google Geofence API	research
2010s	Tech Innovation		2018: 5G: The rollout of 5G networks begins, which will enable even faster and more reliable location-based marketing services.	5G Rollout	research	
78	2010s	Tech Innovation	Apple	2018: Apple launches ARKit 2.0, which includes new features for augmented reality (AR) development, including location-based AR experiences.	Apple ARKit 2.0	research
79	2010s	Legal		2018: EU's General Data Protection Regulation (GDPR) goes into effect, giving consumers more control over their personal data, including location data.	GDPR	research
2010s	Tech Innovation		2018: IoT devices, such as smart speakers and wearables, are used to collect and analyze location data, which can then be used for more targeted and effective location-based marketing campaigns.	Internet of Things (IoT)	research	
76	2010s	Legal	Facebook	2018: It was revealed that Cambridge Analytica, a political consulting firm, had harvested the personal data of millions of Facebook users without their consent. This data was then used to target users with political ads during the 2016 US presidential election. Facebook faces scrutiny over its handling of user location data and its role in the Cambridge Analytica scandal, leading to increased awareness and debate around privacy and data security.	Cambridge Analytica	research
82	2010s	Legal	Uber	2018: The FTC fined Uber \$148 million for violating its consent decree by failing to protect user privacy. Failed to monitor employee access to consumers' personal information. Security practices contributed to two data breaches.	Uber Fined by FTC	research
85	2010s	Legal	Google	2019: Google had been tracking users' locations even after they had turned off location tracking services on their devices. This scandal led to a public outcry and calls for stricter privacy regulations.	Google Collecting Loc After Off	research
86	2010s	Legal	InMobi	2019: Mobile advertising company InMobi had been collecting and selling user location data without their consent. InMobi claimed that it had been collecting this data for the purpose of improving its advertising targeting, but many users were outraged that their data had been collected without their knowledge or consent.	InMobi Collecting Loc w/o Consent	research
2010s	Marketing Innovation	Instagram	2019: Location-based social media: Social media platforms, such as Facebook and Instagram, begin to offer more location-based features, which businesses can use to reach their customers.	Location-based social media	research	
89	2010s	Legal	Grindr	2019: The FTC fined Grindr \$5.3 million for violating its consent decree by failing to protect user privacy. The FTC found that Grindr had been sharing user location data with third-party advertisers without their consent.	Grindr Sharing Loc w/o Consent	research

Privacy, Ethical Concerns, and Regulations

The early 2020s saw a surge in public awareness and concern over data privacy, leading to the introduction of regulations like GDPR and CCPA, which imposed restrictions on the collection and use of location data for marketing. Businesses were forced to rethink their location-based marketing strategies, focusing more on online channels and ethical and transparent practices. Meanwhile, advancements in IoT and smart cities integrated location tracking for optimizing urban planning and services, while users gained more control over location data sharing. In 2023, LLMs came to the forefront and are poised to impact location-based marketing as much as any sector, including making personalized recommendation based on prediction for where a consumer is going to be.

99	2020s	Legal		2020: California Consumer Privacy Act (CCPA) went into effect, giving consumers in CA more control over their personal data, including location data.	CCPA	research
2020s	Pivotal			2020: COVID-19 pandemic: The COVID-19 pandemic leads to a surge in online shopping and a decline in foot traffic to physical stores. This forces businesses to rethink their location-based marketing strategies and focus more on online channels.	COVID-19	research
2020s	Legal	Google		2020: French Data Protection Authority (CNIL) fined Google €50 million for violating the GDPR transparency requirements.	CNII Fines Google for Transparency	research
100	2020s	Tech Innovation	Google	2020: Google introduces the "Nearby Share" feature on Android devices, facilitating file sharing, comms between nearby devices based on proximity.	Google Nearby Share	research
101	2020s	Legal	Pokémon Go	2020: Popular video game Pokémon Go had been collecting and selling user location data to third-party advertisers without their consent. This scandal led to a public outcry and calls for stricter privacy regulations.	Pokemon Selling Loc w/o Consent	research
102	2020s	Legal	Gov	2020: US Gov was collecting the location data of millions of Americans without their consent. This data was then used to track the movement of people during the COVID-19 pandemic.	Covid-19 Loc Tracking by Gov	research
104	2020s	Tech Innovation	Apple	2021: Apple enhances its Find My app to include "Find My Items," allowing users to track and locate physical objects using Apple's network of devices, further expanding location tracking capabilities.	Apple Find My Items	research
2020s	Tech Innovation			2021: Contactless payments become more popular, which leads to a decline in the use of cash and credit cards. This makes it more difficult for businesses to collect location data from their customers.	Contactless Payments	research
105	2020s	Tech Innovation	Google	2021: Google continues to develop and expand its "Live View" feature within Google Maps, providing augmented reality walking directions to help users navigate their surroundings more effectively.	Google Live View	research
2020s	Legal	Amazon		2021: Luxembourg National Commission for Data Protection (CNDP) fined Amazon €746 million for violating the GDPR's consent requirements related to the processing of location data.	CNDP Fined Amazon for Consent	research
2020s	Legal	Twitter		2022: FTC and DOJ order Twitter to pay \$150 million penalty for violating 2011 FTC order and cease profiting from deceptively collected data	FTC Fines Twitter for Misleading re: Loc	research
106	2020s	Legal	Google	2022: 40 States Settle Google Location-Tracking Charges for \$392M	Google Location-Tracking Settlement	research
2020s	Legal	Facebook		2022: Irish Data Protection Commission (DPC) fines Meta €405 million for violating GDPR's transparency requirements.	DPC Fines Meta re: Transparency	research
2020s	Legal	OpenX		2022: The FTC ordered OpenX to pay \$2 million for collecting the location data of children without parental consent.	FTC fines OpenX for Children's Loc	research
2020s	Legal	AT&T		2022: The FTC settled with AT&T for \$57 million for allegedly selling its customers' location data to third-party data brokers without their consent.	FTC fines AT&T for Selling Loc	research
2020s	Legal	Drizly		2022: The FTC settled with Drizly for \$2 million for misleading consumers about how it used their location data.	FTC fines Drizly for Misleading re: Loc	research
109	2020s	Legal	Foursquare	2023: Class action complaint claims that Foursquare secretly gathered precise geolocation data from cell phones and sole it to other companies	Class Action Against Foursquare	research
110	2020s	Legal	Google	2023: Google settled with the State of California for \$93 million. California DOJ found that, after a multi-year investigation, the tech giant was "deceiving users by collecting, storing, and using their location data for consumer profiling and advertising purposes without informed consent."	Google Settles Location Tracking with Cal	research
107	2020s	Legal	Life360	2023: Life360 Sued for Selling Location Data	Class Action Against Life360	research
108	2020s	Legal	Facebook	2023: Lundy, et al. v. Meta Platforms, Inc: Meta Platforms location data privacy \$37.5M class action settlement	Class Action Against Meta	research
2020s	Legal	X-Mode	Outlogic	2024: FTC prohibits X-Mode Social, Inc., and Outlogic from selling sensitive location data. This ban is part of a broader regulatory focus on protecting consumer privacy from invasive data practices	Ban on Sale of Sensitive Location Data	research
2020s	Legal	InMarket		2024: FTC restricts InMarket Media from using or selling location data without explicit consumer consent.	Sale of Sensitive Loc Data Requires Consent	research
2020s	Legal	Kochava		2024: An FTC lawsuit against Kochava for selling precise geolocation proceeds. The suit seeks to halt the sale of such data and require its deletion to protect consumer privacy. An FTC victory against Kochava would establish a stronger legal precedent and likely result in more significant penalties and stricter long-term restrictions compared to the settlements with X-Mode and InMarket.	Kochava Legal Battle	research
2020s	Marketing Innovation			202X: GenAI models can be trained on historical data to identify patterns and trends in customer behavior. This information can then be used to predict where customers are likely to be and what they are likely to be interested in.	GenAI can predict where you will be	research
2020s	Tech Innovation			202X: Metaverse: A new virtual realm still under development. Has the potential to revolutionize location-based marketing. Businesses will be able to use the metaverse to create immersive and engaging marketing experiences for their customers.	Metaverse makes location even more important	research

