STEP-BY-STEP GUIDE

Foot Traffic Attribution Guide

Orange 142®

A Direct Digital Holdings Company

Forward

Foot Traffic Attribution
For many brands, a successful digital performance campaign is one that drives people through the doors of a retail outlet, destination, or event. For these types of campaigns, foot traffic attribution helps us understand which digital impressions—creative, message, channel, day part—drive real-world results.

Foot traffic attribution combines location data, device signals, and campaign exposure to provide the insights that you, as a marketer, need to understand the real-life impact of your advertising campaigns and to drive efficiency in your ad spend.

The Orange 142 Emerging Channels Council created this Best Practices Guide to support marketers in planning and optimizing foot traffic campaigns. It's designed to offer practical insights, foundational knowledge, and clear guidance on how to make attribution work so that you can connect your digital spend to measurable, offline success.

About the Orange 142 Emerging Channels Council
The Emerging Channels Council is a thought leadership body within Orange 142 that focuses on educating, guiding, and encouraging independent brands and agencies to experiment and excel in underutilized and innovative channels. Through collaboration, data-driven insights, and practical resources, the council will help Orange 142 clients obtain strategic growth through sustainable digital advertising practices.

To access all of the Emerging Channels Council resources, please visit:
https://orange142.com/emerging-channels-hub

Foot Traffic Attribution

1. What is Foot Traffic Attribution?

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Foot traffic attribution in digital advertising refers to measuring how digital ads influence real-world behavior -- visits to a physical store, event, or tourism destination. It matches digital ad impressions, delivered via display, video, digital audio, or CTV, with mobile device location data. This connection provides a range of insights, including:

- The impact of ads on real-world behavior
- Which geographic markets drive the most visits
- Which channels deliver the strongest return on ad spend (ROAS)
- The best customer journey to support with your media budget going forward.

How Does Foot Traffic Attribution Work?

Foot traffic attribution works by monitoring when mobile devices enter specific physical locations. The process begins with apps that collect location data (with user consent) from smartphones through GPS, Wi-Fi, or Bluetooth signals.

Attribution vendors then use anonymous device identifiers to connect the dots between digital advertising and in-person visits. When someone sees your ad on their phone and later walks into your store, the system recognizes this connection, which in turn provides clear evidence of which digital campaigns drive actual visits.

Here's how it works:

1. A digital ad is served to a user through a programmatic channel such as display, mobile, audio, or CTV.

2. Through the use of cookie technology, the user devices are mapped to a household ID in the vendor's database, also known as a device graph.

3. The user later visits a real-world location associated with the campaign. The user's mobile device is detected at that location via location signals from apps on the device.

4. The visit is attributed to the campaign, helping marketers measure the offline impact of their media efforts.

Because device tracking doesn't require a website visit or user click, the tactic is ideal for upper-funnel campaigns, where engagement may be passive but still leads to measurable outcomes.

Geofencing & Retrofencing: Taking Things to the Next Level

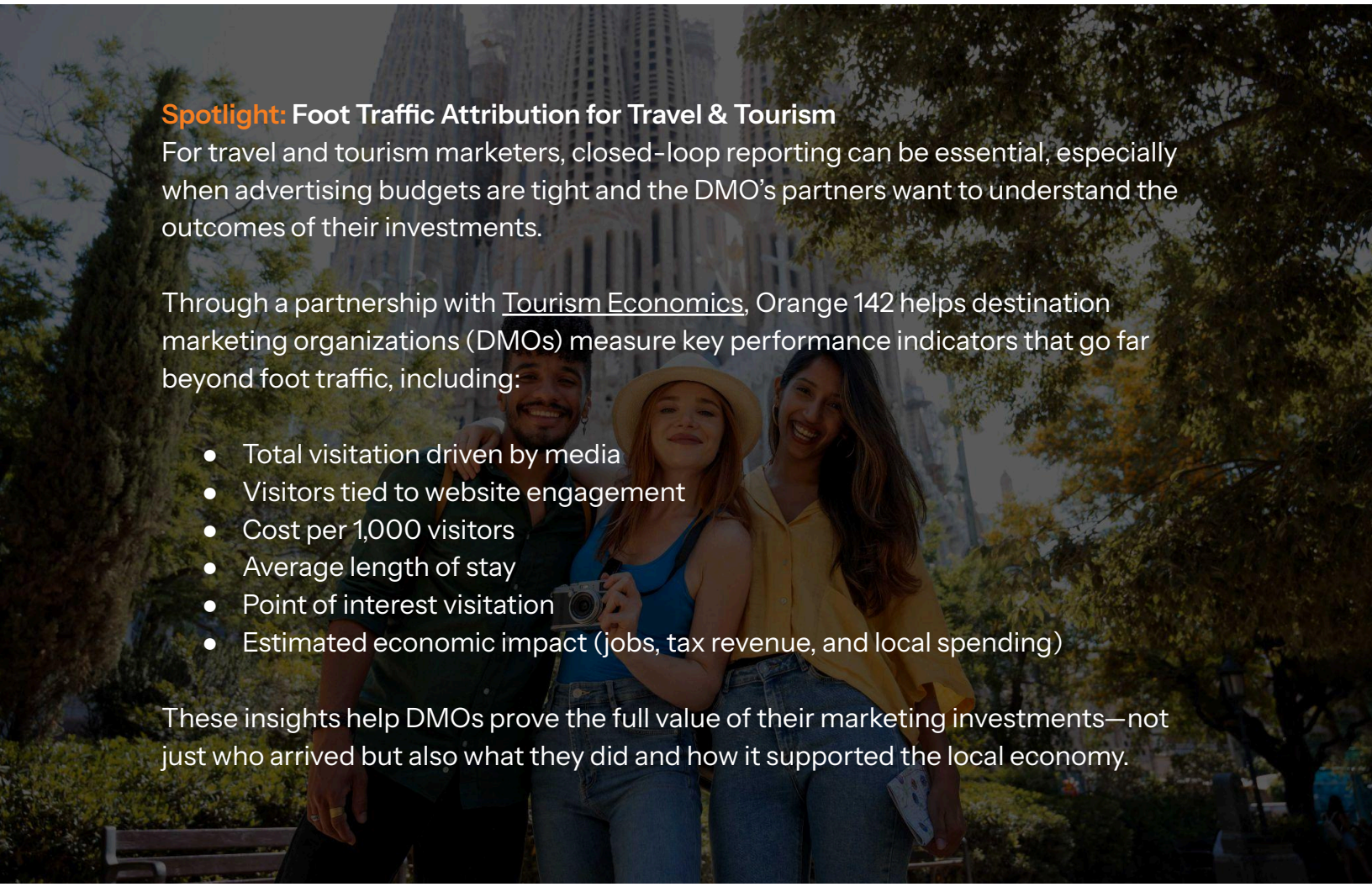
Geofencing and retrofencing are two programmatic tactics that naturally align with foot traffic attribution, as at the end of the day, it's all about location. Let's look at each.

Geofencing helps advertisers reach users in real time when they're physically present at a relevant location, such as a sporting event, capturing an audience that is likely to share a specific intent or behavior based on where they are.

As an example, let's say an advertiser wants to drive attendance to the NBA Draft by targeting passionate fans at playoff games, and, like all marketers, they want to understand how well their media spend delivered real-world results. To meet this goal, they can set up a geofencing campaign to serve mobile ads at various NBA playoff venues. Fans attending those games are highly engaged and more likely to respond to messaging about other marquee events, such as the Draft. By combining geofencing with foot traffic attribution, the advertiser can then measure how many people who saw the ad at a playoff game later attended the Draft itself. They can also see which locations drove the highest attendance.

But what if the ideal event for your campaign has already occurred? That's where retrofencing comes in. Like geofencing, retrofencing uses mobile ID technology, but instead of targeting people during an event, it targets those who were there in the past.

A common use case is targeting people who attended last year's event with ads promoting the upcoming one. While demographic and geographic targeting can help drive attendance, layering in behavioral signals like past visitation often has a far greater impact on campaign performance.



Spotlight: Foot Traffic Attribution for Travel & Tourism

For travel and tourism marketers, closed-loop reporting can be essential, especially when advertising budgets are tight and the DMO's partners want to understand the outcomes of their investments.

Through a partnership with Tourism Economics, Orange 142 helps destination marketing organizations (DMOs) measure key performance indicators that go far beyond foot traffic, including:

- Total visitation driven by media
- Visitors tied to website engagement
- Cost per 1,000 visitors
- Average length of stay
- Point of interest visitation
- Estimated economic impact (jobs, tax revenue, and local spending)

These insights help DMOs prove the full value of their marketing investments—not just who arrived but also what they did and how it supported the local economy.

Actionable Results: How to Improve Future Campaigns

Foot traffic attribution isn't just a retrospective tool, it's also a feedback loop. By analyzing which tactics, audiences, creatives, and placements drove real-world visits, advertisers can refine their media mix, reallocate budgets toward high-performing channels, and sharpen their targeting strategies. Over time, this insight helps inform smarter planning and stronger performance across future campaigns.

2. Data & Privacy Concerns

Foot traffic attribution relies on data collected from various digital touchpoints, including mobile devices, computers and smart TVs. However, the quality and relevance of this data can vary significantly depending on its source and accuracy. For instance, data from mobile phones might be more precise than data from smart devices due to differences in tracking capabilities. Ensuring that all data is handled responsibly and complies with privacy regulations is critical to building consumer trust.

Mobile Device and Location Data

Most foot traffic attribution methods, particularly device tracking and geofencing, use anonymized mobile data to detect visits to physical locations. Here's how privacy is maintained:

- No personally identifiable information (PII) is collected.
- Device identifiers are anonymized or pseudonymized.
- User consent is required through apps that request permission to access location services.
- Data is aggregated, meaning results are reported in groups, not tied to individuals.
- Compliance with privacy laws, including GDPR, CCPA, and other applicable regulations, is a foundational requirement for all attribution vendors.

It is important to work with trusted location data partners, such as Azira or Foursquare, to ensure that all data used for foot traffic attribution meets rigorous privacy and security standards.

Pixel Tracking and Website Behavior

No personal data, such as names or email addresses, is collected using pixel tracking. Pixels track anonymous behaviors such as ad impression, page views or button clicks, generally through the use of cookies, and are only deployed on platforms that allow third-party monitoring.

- Pixels are used only in permitted programmatic environments.
- Pixel data is often combined with location data to connect digital engagement with offline visits without exposing personal information.

Because privacy compliance matters to both brands and consumers, Orange 142 works with accredited partners that hold recognized security certifications.

3. Challenges to Foot Traffic Attribution

While foot traffic attribution is a powerful tool, it comes with challenges that advertisers should be aware of when planning and evaluating campaigns.

Privacy & Consent
Attribution relies on location and device data, which must be collected with clear user consent in line with consumer data privacy protection regulations, such as GDPR and CCPA.

In some jurisdictions, such as California, precise location data is considered sensitive and subject to stricter controls.

Data must be anonymized and aggregated to protect user identities while still delivering actionable insights—a balance that requires internal data governance and ongoing vigilance.

How to Solve: Work exclusively with partners that are accredited and hold security certifications. Ensure that all data is anonymized, aggregated, and obtained with user consent.

Data Fragmentation
Consumers interact with ads across phones, tablets, smart speakers, and other devices, creating unique data sets.

Unifying these touchpoints into a cohesive view of the customer journey can be technically complex and may lead to attribution gaps.

How to Solve: Work with partners that have access to robust identity graphs and cross-device tracking to connect engagement across mobile, desktop, and connected devices.

Accuracy Limitations
Location data isn't perfect. GPS, Wi-Fi, and cell tower signals can be imprecise, especially in dense urban areas or shared spaces, such as malls.

Shared devices, such as smart speakers or CTVs, can make it harder to isolate which household member took action.

How to Solve: Work with a mobile data provider that can combine multiple data signals (e.g., GPS, Wi-Fi, Bluetooth) to improve accuracy.

Premium Investment

Foot traffic attribution is a premium investment, one that is most effective when paired with broad-reach campaigns and supported by partners who can interpret the results and optimize accordingly.

How to Solve: Work with partners with extensive experience with foot traffic attribution campaigns, and can help you set realistic expectations.

4. Emerging Trends

As technology evolves, so will the methods used to measure real-world behavior. The trends below reflect where the market may be headed in the mid- to long-term, offering a look at what could shape the future of foot traffic attribution:

AI and Machine Learning

- Predictive Analytics. AI models are now being used to forecast which audiences are most likely to visit based on past behaviors, allowing advertisers to adjust media strategies proactively.

- Improved Accuracy. Machine learning can help clean and refine geolocation data, reducing false positives, detecting true intent, and improving confidence in attribution.

Wearable Devices

- Expanding Data Sources. Devices, including smartwatches and fitness trackers, offer new location data streams, adding visibility beyond traditional smartphone tracking.

- Real-Time Insights. Because wearables are often worn throughout the day, they provide continuous location signals that help map the full path to visit.

Connected Cars

- On-the-Go Targeting. Vehicles equipped with GPS and voice assistants create opportunities to deliver timely, location-aware messaging while users are in transit.

- Geofencing for Vehicles. Brands can set virtual perimeters around retail locations to understand driver behavior, including stops or pass-throughs.

Advances in Sensor Technology

- In-Store Beacons. Bluetooth beacons placed in stores offer highly accurate data about customer movement and engagement once they walk through the door.

- LiDAR and RFID. These technologies help map physical space in real-time, showing which areas draw the most attention and when foot traffic peaks.

5. Tips and best practices

Foot traffic attribution helps connect the dots between your digital campaigns and real-world outcomes, but getting it right requires thoughtful planning. From campaign setup to data privacy, these best practices will help ensure your efforts are both measurable and effective.

Campaign Planning

1. Run campaigns with sufficient scale. Foot traffic attribution works best when campaigns reach a broad audience. High impression volume helps attribution vendors detect statistically valid visit patterns. Small or niche campaigns may not produce reliable insights.

2. Focus on localized or point-of-interest targeting. Campaigns that drive users to specific locations (e.g., stores, visitor centers, events, or venues) are easier to measure. Use geofencing to connect ads with real-world intent.

3. Time it right. Campaigns with limited-time offers, seasonal relevance, or urgency tend to show more precise attribution signals. Defining an attribution window that reflects your buyer journey, is crucial.

Channel & Creative Strategy

4. Choose measurable media. Programmatic display, mobile, digital audio, and CTV are ideal channels for attribution. Platforms such as Google Ads and Meta have limitations around pixel tracking, so plan accordingly.

5. Align creatives to real-world actions. If you want users to visit a location, the message should reflect that. Include clear calls to action, such as “Visit today,” “Find a showroom near you,” or highlight in-person benefits.

6. Consider audience context. Think about how your audience experiences your ad. Interactive formats, such as location-aware mobile ads or voice prompts, work well for driving physical action, especially when tied to urgency or convenience.

Privacy & Data Responsibility

7. Use privacy-compliant data sources. Work with attribution vendors who source data from users who have opted into location tracking. All device data should be anonymized and aggregated to meet standards such as GDPR and CCPA.

8. Minimize data collection. Only collect what's needed to meet your campaign goals. When precise coordinates aren't required, approximate location data can still provide value without raising privacy flags.

9. Review results by region, time, and behavior. Foot traffic data can reveal patterns by time of day, neighborhood, or device type. Use those insights to refine your campaign strategy, flighting, or creative for the next round.

Foot traffic attribution can reveal powerful insights—but only when campaigns are set up to support it. With the right strategy, data practices, and media execution, you can connect digital spend to real-world results and make every impression count.

6. About Orange 142

Orange 142 is a digital marketing and advertising company with offices across the US. We help marketers of all sizes grow their reach and revenue through data-driven media strategies. We also partner with agencies and execute campaigns on behalf of their clients.

Our team of experts deeply understands the digital landscape and the latest advertising and marketing technologies. We work closely with our clients to develop and execute custom advertising and marketing campaigns that meet specific goals.

We are committed to providing our clients with the highest service and transparency. Open communication and collaboration are essential to the success of every advertising and marketing initiative.

Want to learn how this can work for you? Orange 142 helps businesses of all sizes navigate and maximize emerging advertising channels with strategic guidance and best practices. Let's connect to explore the right approach for your goals. Contact us today!