

F R O S T & S U L L I V A N

BEST PRACTICES

AWARDS

F R O S T & S U L L I V A N

2020 BEST
PRACTICES
AWARD



**2020 GLOBAL
ADVERTISING INTEGRITY AND VERIFICATION
CUSTOMER VALUE LEADERSHIP AWARD**

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Background and Company Performance

Industry Challenges

As consumer behavior changes, advertising does along with it. The ongoing surge in online shopping compels advertisers to embrace integrated marketing campaigns, i.e., engaging with consumers at countless digital touchpoints. To align with the rise in digital ad spending, ad tech companies rapidly transitioned from direct advertising to programmatic trading, an automated process driven by artificial intelligence to perform real-time bidding for ad space. Digital advertising, programmatically negotiated between advertisers/agencies with publishers, targets consumers with contextual ads, yet the space between advertisers and users opens numerous points of vulnerabilities. While the digital advertising ecosystem is wide, few if any stakeholders take responsibility to prevent malicious advertising; at the same time, preventing legitimate ads from running subtracts transactions from each stakeholder.

Frost & Sullivan's independent research estimates that global digital ad spend will increase at an annual compound growth rate of 12.3% to reach \$350 billion by 2022. By this time, digital will most likely account for over 50% of total advertising spend. Frost & Sullivan further expects the programmatic ad tech segment to account for 62% of the total ad tech market by 2022.¹ However, the recent COVID-19 pandemic caused advertising spending to plummet in key markets and across most channels. Europe reported a 9% decrease (with Germany and France falling by 7% and 12% respectively), along with a 15% drop in China. Although digital consumption spiked (due to the fast uptake of social platforms, streaming services, and gaming when confinement measures were introduced worldwide), the reduced spending by advertisers affected prices. For instance, the *New York Times* reported a fall of 15% in ad revenue during the first quarter. Brands withdrew spends and blocked keywords across programmatic channels in an attempt to avoid associations with coronavirus-related content. Despite attracting new readers and surpassing six million digital and print subscriptions during this time, the *New York Times's* digital ad revenue declined by 7.9%.²

Along with the "publisher's paradox" (i.e., traffic increases but not revenue), research shows that half the money brands spend with online publishers is lost in the programmatic advertising supply chain; 15% is unattributed. Therefore, greater transparency in the value chain is vital as advertisers are currently refocusing their spending and rethinking their campaigns to survive in a highly competitive and fragmented market.³

Also, the abundance of data in the ad tech business allows ad tech vendors to apply machine learning algorithms to consumer data and behavior to deliver targeted ads. However, the ad ecosystem evolved to satisfy the business side, not to reinforce security. As such, the network serves as an attractive distribution channel (involving thousands of companies delivering billions of ads to websites) for cybercriminals. The network is highly

¹ *Digital Transformation Beats*. The Ad Tech Market: Redrawing Advertiser-Publisher Relationships (Frost & Sullivan, 2018)

² <https://www.nytimes.com/2020/05/06/business/media/new-york-times-earnings-subscriptions-coronavirus.html>

³ <https://www.weforum.org/agenda/2020/06/coronavirus-advertising-marketing-covid19-pandemic-business/>

penetrable and easy to infiltrate by, for example, impersonating renowned enterprises and brands or creating fake ad companies to do last-minute substitutions of ads with malicious code that sends consumers to a malicious landing page.

In a landscape where malicious advertising and security threats are skyrocketing, businesses have to protect consumer information. Additionally, the programmatic ad tech landscape has to steer away from intrusive advertising and introduce strict ad fraud measures, thereby eradicating all actions that drive away good traffic from a site. Examples include deceiving an advertiser into paying for fake ad traffic, fake leads, fake app installs, ad stacking, botnets, ghost sites, click injection, compliance fraud, and domain spoofing. As ad fraud reduces the return of investment of advertising campaigns, it severely damages the ad tech ecosystem. Other challenges and complexities among ad suppliers (implicitly disregarding advertisers' and publishers' interests), include the lack of understanding of how to share data legitimately, what permissions are needed legally, and the absence of data storage and formatting compliance. Analytics and ad auction technology vendors who develop solutions that detect fraudulent cases to prevent bad traffic and combat cybercriminal activities will most likely gain a distinct competitive edge going forward.

Customer Impact and Business Impact of GeoEdge

Founded in 2010, Israel-based GeoEdge started as a premium virtual private network provider. However, customers soon started requesting a tool that allowed them to review all adds, geolocations, and devices on one dashboard linked to a single platform. Then, GeoEdge introduced middleware, helping customers define and find fraudulent ads trying to trick users into clicking on it. Through its commitment to serve customers' ever-evolving needs (e.g., when video advertising became mainstream), GeoEdge moved into the programmatic space. Today, the company delivers automated ad security and verification solutions for the online and mobile advertising ecosystem (i.e., publishers, ad platforms, exchanges, and networks) to preserve its integrity. By verifying that sites and apps offer a clean and safe environment, GeoEdge guards against non-compliance, malware, inappropriate content, data leakage, while also handling operational and performance issues and monitoring ad inventory to facilitate a quality user experience. As the company shields users from ads and landing pages that may contain malware, it engenders a safe environment without sacrificing ad revenue. In particular, for publishers, poor-quality ads can risk an increase in user bounce rates and churn, while trustworthy in-app settings increase user lifetime value.

By providing a service across the ecosystem that checks all advertisers continuously, GeoEdge's solution speaks to the supply-side, such as *The New York Times'* concern that its users only get exposure to high-quality ads. On the other hand, GeoEdge also serves the demand-side by helping clients, such as MediaMath, OpenX, and Inmobi understand a specific quality-standard, thereby, for example, preventing cybercriminals from putting malicious payloads on the landing page.

GeoEdge Safeguards the Critical Space between Ads and Users

GeoEdge's holistic approach addresses the space between ad content and users, which

creates vulnerability in the ecosystem and allows cybercriminals to launch vicious attacks. GeoEdge's dedicated team of security researchers, data scientists, and software engineers combine the skill sets of both experienced technology veterans and young cutting-edge professionals. Leveraging this exceptional combination, GeoEdge provides customers with more than just a security solution. For publishers, the company offers real-time monitoring of ad inventory 24/7, protecting users from exposure to any security or ad quality threats. On the demand-side, GeoEdge's comprehensive automated quality assurance process eliminates delays caused by troubleshooting compliance issues of direct campaigns.

According to GeoEdge, publishers lost an estimated \$325 million in revenue in 2019, specifically through Web Real-Time Communications (WebRTC) malvertising. As WebRTC relies on legit third-party servers to power peer-to-peer communication, it opens the network for malicious activities through benign entities (like Google and Microsoft). Fraudsters insert malicious code into a piece of ad creative (i.e., misusing the protocol of an authorized scenario), and serve it through a legitimate ad exchange, thereby redirecting users to phishing sites.

GeoEdge uses a proprietary technique of behavioral analytics to identify specific exploits, or mechanisms of an attack, to create a signature (or fingerprint) to block the particular programmatic tag, long before any damage can occur. As such, GeoEdge's commitment is to reduce malware and other ad-related complaints by over 99%. The security vendor obstructs campaigns with malicious ads without removing the entire creative.

GeoEdge's holistic approach identifies ad content as a core component of ad quality. The company's ad content management tools eliminate the risk of ad misalignment and ensure publishers content policies remain consistent across their consumers entire ad experience.

These ad alignment tools enable publishers to remain the single authority when defining, managing and modifying their sites ad content parameters. Powered by over a decade of data, GeoEdge's unique engine comprised of OCR and image processing machine learning tools identifies offensive and sexually explicit content in both the creative, as well as the landing page in real-time. Thus, consumers do not find themselves exposed to security or quality threats because GeoEdge replaces it with an alternative clean ad, allowing publishers to protect end-consumers (and reputation) without losing revenue. Moreover, GeoEdge empowers ad operations teams by optimizing operational efficiency (with a 70% reduction in trafficking workload) through automation. As a result, customers enhance their offering to the supply partner, leading to increased satisfaction.

Managing Polarities: Malware Detection vs. Increased Revenue

Through its patented ad quality and malvertising detection technology (e.g., zero-day security detection and ad content management tools), GeoEdge balances the complexities of continuous protection to increase users' lifetime value and helping customers to grow revenue. The implication of a false positive and a false negative are not always visible to end customers. A false positive prevents a legit advertiser from running a campaign and from making money. In the fragile cybersecurity ecosystem, there is a direct correlation between malware detection and revenue growth. A security vendor can perform at 99.9%; however, one false positive may turn down a substantial revenue stream (around \$10,000

and more). It is not an easy discussion with a customer and requires a clear prism on the quality of detection needed, negotiating it, and managing expectations.

GeoEdge equips and protects the programmatic ecosystem with multiple detection engines that examine the underlying code of the ad. Their unique machine learning algorithm is comprised of a dozen mechanisms including de-obfuscation, and anti-cloaking capabilities which analyzes code through both the cyber and social engineering perspective. Additionally, the company's post-click malware protection guards users against all compromised URLs along the delivery path. Overlaying multiple layers of precision detection, GeoEdge identifies the techniques and identity of attackers (across attack vectors ranging from malware, clickbait, and other threats to user experience) to block the attacks.

Working consultatively as a partner with customers, GeoEdge can design tailored solutions to meet the unique needs and priorities of individual customers (e.g., content, region, regulations, standards, and target audience).

Gaining a Competitive Edge through Partnering with Its Customers

Obsessed with customers, GeoEdge continues to talk with customers, discovering how it can help them to increase their revenue. Through a collaborative approach, engaging with customers as partners, GeoEdge developed unique stacks of content management tools that enable publishers to extend their content policies across their entire ad experience, which now provides a competitive edge.

Today, security vendors can address any need with a customized solution. Furthermore, GeoEdge enables partnerships, making sure that clients can work with many parties to grow and scale their business. GeoEdge's ad quality assurance and automation tools support businesses not only to increase efficiencies but also to stay a step ahead of cybercriminals. GeoEdge's robust and reliable multi-layer detection engine gives any team confidence by automating the process of testing the quality and content of advertisements and their accompanying landing pages, while continually checking for any indication that an ad is negatively impacting engagement between a user and a website. Across channels, (web, mobile, video, or native advertising), GeoEdge works to help a customer optimize ad security and efficacy.

Conclusion

The recent COVID-19 pandemic caused digital advertising spending to plummet in key markets and across most channels. The cost per customer acquisition decreased, leading to an 85% rise in security risk spotted through health-related ad scams, such as fake masks. Along with the “publisher’s paradox” (i.e., traffic increases but not revenue), market participants call for greater value chain transparency as advertisers are refocusing their spending and rethinking their campaigns in this highly competitive and fragmented market. The disruptions only serve to reveal the cracks and vulnerabilities in the programmatic system.

GeoEdge addresses the negative impacts that malicious ads have on publishers’ websites by providing a robust and reliable detection engine which analyzes advertisements and landing pages in real-time through both the cyber and social engineering perspective.

The company’s innovative detection provides protection against malware injected post-click which may compromise any of the landing pages along the advertisement’s delivery path. By continually checking for malicious activity with a holistic multi-layer detection approach, GeoEdge protects publishers’ reputation and extends the lifetime value that users generate. Additionally, automation tools allow businesses to increase operational efficiencies by eliminating delays caused by troubleshooting compliance issues of direct campaigns. The security vendor’s highly-skilled team partnered with customers, and the exceptional quality of these relationships allowed GeoEdge to develop cutting-edge ad content management tools and patent-pending ad quality and malvertising detection algorithms. The company’s ad quality and ad content management tools eliminate the risk of ad misalignment and ensure publishers content policies remain consistent. By strategically balancing malware detection and revenue growth, GeoEdge delivers exceptional value and protection.

With its innovative detection technology, customer-centric commitment, and its capacity to embrace change through innovation, GeoEdge earns Frost & Sullivan’s 2020 Global Customer Value Leadership Award in the advertising integrity and verification space.

Significance of Customer Value Leadership

Ultimately, growth in any organization depends on customers purchasing from a company and then making the decision to return time and again. Satisfying customers is the cornerstone of any successful growth strategy. To achieve this, an organization must be best in class in 3 key areas: understanding demand, nurturing the brand, and differentiating from the competition.



Understanding Customer Value Leadership

Customer Value Leadership is defined and measured by 2 macro-level categories: Customer Impact and Business Impact. These two sides work together to make customers feel valued and confident in their products' quality and performance. This dual satisfaction translates into repeat purchases and a lifetime of customer value.

Key Benchmarking Criteria

For the Customer Value Leadership Award, Frost & Sullivan analysts independently evaluated Customer Impact and Business Impact according to the criteria identified below.

Customer Impact

Criterion 1: Price/Performance Value

Requirement: Products or services offer the best value for the price, compared to similar offerings in the market.

Criterion 2: Customer Purchase Experience

Requirement: Customers feel they are buying the most optimal solution that addresses both their unique needs and their unique constraints.

Criterion 3: Customer Ownership Experience

Requirement: Customers are proud to own the company's product or service and have a positive experience throughout the life of the product or service.

Criterion 4: Customer Service Experience

Requirement: Customer service is accessible, fast, stress-free, and of high quality.

Criterion 5: Brand Equity

Requirement: Customers have a positive view of the brand and exhibit high brand loyalty.

Business Impact

Criterion 1: Financial Performance

Requirement: Overall financial performance is strong in terms of revenues, revenue growth, operating margin, and other key financial metrics.

Criterion 2: Customer Acquisition

Requirement: Customer-facing processes support the efficient and consistent acquisition of new customers, even as it enhances retention of current customers.

Criterion 3: Operational Efficiency

Requirement: Staff is able to perform assigned tasks productively, quickly, and to a high quality standard.

Criterion 4: Growth Potential

Requirements: Customer focus strengthens brand, reinforces customer loyalty, and enhances growth potential.

Criterion 5: Human Capital

Requirement: Company culture is characterized by a strong commitment to quality and customers, which in turn enhances employee morale and retention.

Best Practices Recognition: 10 Steps to Researching, Identifying, and Recognizing Best Practices

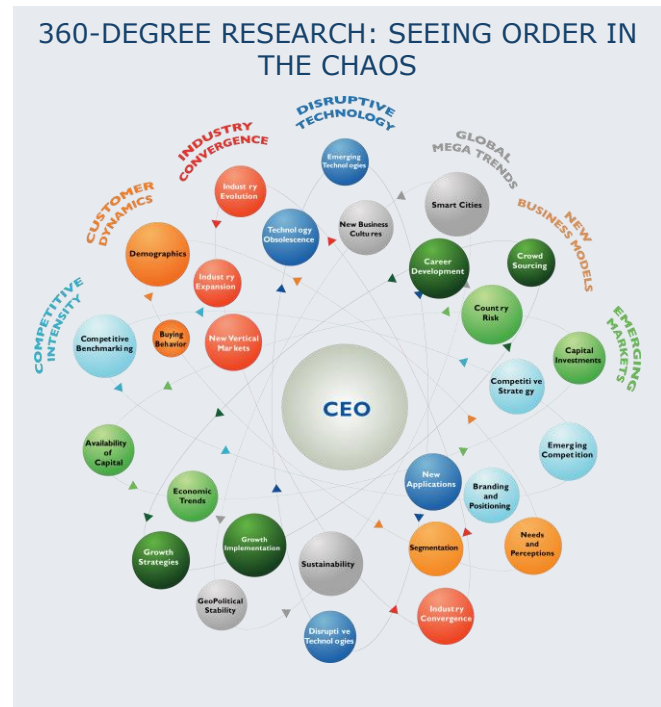
Frost & Sullivan analysts follow a 10-step process to evaluate Award candidates and assess their fit with select best practice criteria. The reputation and integrity of the Awards are based on close adherence to this process.

STEP	OBJECTIVE	KEY ACTIVITIES	OUTPUT
1 Monitor, target, and screen	Identify Award recipient candidates from around the globe	<ul style="list-style-type: none"> Conduct in-depth industry research Identify emerging sectors Scan multiple geographies 	Pipeline of candidates who potentially meet all best-practice criteria
2 Perform 360-degree research	Perform comprehensive, 360-degree research on all candidates in the pipeline	<ul style="list-style-type: none"> Interview thought leaders and industry practitioners Assess candidates' fit with best-practice criteria Rank all candidates 	Matrix positioning of all candidates' performance relative to one another
3 Invite thought leadership in best practices	Perform in-depth examination of all candidates	<ul style="list-style-type: none"> Confirm best-practice criteria Examine eligibility of all candidates Identify any information gaps 	Detailed profiles of all ranked candidates
4 Initiate research director review	Conduct an unbiased evaluation of all candidate profiles	<ul style="list-style-type: none"> Brainstorm ranking options Invite multiple perspectives on candidates' performance Update candidate profiles 	Final prioritization of all eligible candidates and companion best-practice positioning paper
5 Assemble panel of industry experts	Present findings to an expert panel of industry thought leaders	<ul style="list-style-type: none"> Share findings Strengthen cases for candidate eligibility Prioritize candidates 	Refined list of prioritized Award candidates
6 Conduct global industry review	Build consensus on Award candidates' eligibility	<ul style="list-style-type: none"> Hold global team meeting to review all candidates Pressure-test fit with criteria Confirm inclusion of all eligible candidates 	Final list of eligible Award candidates, representing success stories worldwide
7 Perform quality check	Develop official Award consideration materials	<ul style="list-style-type: none"> Perform final performance benchmarking activities Write nominations Perform quality review 	High-quality, accurate, and creative presentation of nominees' successes
8 Reconnect with panel of industry experts	Finalize the selection of the best-practice Award recipient	<ul style="list-style-type: none"> Review analysis with panel Build consensus Select recipient 	Decision on which company performs best against all best-practice criteria
9 Communicate recognition	Inform Award recipient of Award recognition	<ul style="list-style-type: none"> Announce Award to the CEO Inspire the organization for continued success Celebrate the recipient's performance 	Announcement of Award and plan for how recipient can use the Award to enhance the brand
10 Take strategic action	Upon licensing, company is able to share Award news with stakeholders and customers	<ul style="list-style-type: none"> Coordinate media outreach Design a marketing plan Assess Award's role in future strategic planning 	Widespread awareness of recipient's Award status among investors, media personnel, and employees

The Intersection between 360-Degree Research and Best Practices Awards

Research Methodology

Frost & Sullivan's 360-degree research methodology represents the analytical rigor of our research process. It offers a 360-degree-view of industry challenges, trends, and issues by integrating all 7 of Frost & Sullivan's research methodologies. Too often companies make important growth decisions based on a narrow understanding of their environment, leading to errors of both omission and commission. Successful growth strategies are founded on a thorough understanding of market, technical, economic, financial, customer, best practices, and demographic analyses. The integration of these research disciplines into the 360-degree research methodology provides an evaluation platform for benchmarking industry participants and for identifying those performing at best-in-class levels.



About Frost & Sullivan

Frost & Sullivan, the Growth Partnership Company, enables clients to accelerate growth and achieve best-in-class positions in growth, innovation and leadership. The company's Growth Partnership Service provides the CEO and the CEO's Growth Team with disciplined research and best practice models to drive the generation, evaluation and implementation of powerful growth strategies. Frost & Sullivan leverages more than 50 years of experience in partnering with Global 1000 companies, emerging businesses, and the investment community from 45 offices on six continents. To join our Growth Partnership, please visit <http://www.frost.com>.