eyeo
Ad-Filtering
Report

This report explores the current trends in the **evolving ad-filtering industry**, including research on users and their attitudes toward online advertising, expert insights and a **look into the future of ad filtering**.

(Previously known as the PageFair Adblock Report)

Foreword

Jan Wittek

CRO at eyeo

At eyeo, we find ourselves at the intersection of user-centricity and innovation. In our unique position as an agent for the user, we launched this report to delve into the world of ad filtering – including the elements that contribute to its thriving ecosystem, such as machine learning, privacy, sustainability and ad blocking.

At the heart of this report lies a commitment to understanding and serving online users better and how that can benefit all stakeholders in the online ecosystem. The data reveals compelling trends that can truly transform the internet into a trusted, sustainable and accessible place; for instance, at the end of Q2 2023, we saw that 912 million devices were actively filtering or blocking ads, marking an 11% increase from Q2 2022.

But the report goes beyond mere statistics. With over 60 ad-blocking solutions available on the market, it's clear that user preferences are diverse and dynamic. It shows that users are annoyed with clutter and intrusive online ads and are reclaiming control of their online experience. The growth of Acceptable Ads users is a testament to the fact that users are open to nonintrusive ads, thereby supporting publishers and creators for their efforts. However, they also want to be in control of their data, as seen from the research presented as you read on. It's a mistake to assume that they do not respect the value exchange with publishers – if their legitimate need for a better experience is considered.

It's time the entire industry recognizes that **user-centricity doesn't just benefit users, but publishers and advertisers as well.** I encourage you to consider the importance of user preferences and join us in shaping an Internet that is fair and prosperous for everyone.

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Key insights

- By Q2 2023, there were 912M active ad-blocking users worldwide, up 11% from Q4 2021

- Acceptable Ads (ad-filtering) users crossed the 300M mark in 2023, up 42% from 216M in Q4 2021

- Users have increasing choice when it comes to ad blocking, with 60+ available tools/solutions

- Ad-filtering users are generally open to nonintrusive ads and willing to exchange their information for premium content—but nevertheless prefer being in control of their data

- In 2024, ad blocking is expected to cost publishers $54bn in lost advertising revenue, which is ~8% of the total projected global digital ad spend of $695bn *(eMarketer)*

- AI/ML models are revolutionizing ad-filtering, making it more robust, sustainable and scalable

- 77% of surveyed mobile ad-filtering users view companies that take action on sustainability in a positive light, further, 42% view filtering ads as an action that reduces their online carbon footprint

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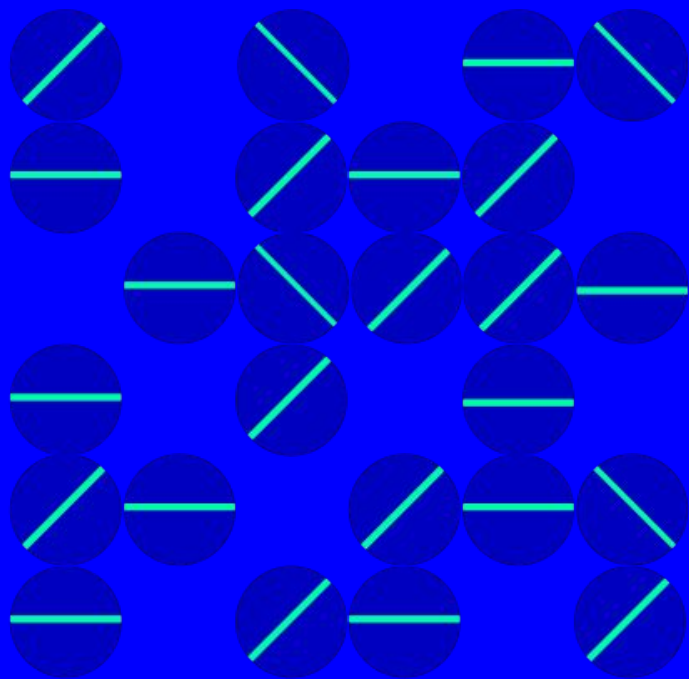
State of the industry

Types of ad blockers

Ad-blocking tools and technologies can be broadly bucketed into eight major groups based on how they function, behave and their intended goal.

Browser (ad blocking by default)

These browsers come bundled with always-on ad blocking capabilities. Upon identifying patterns during rendering, the browser prevents resources related to ad serving requests from being fetched and loaded, disabling the display of ads for users.

Browser (opt-in ad blocking)

In opt-in ad blocking, the browser checks web content against a database of ad signatures. Once the user activates this feature, the browser initiates this checking process. If a match is found, the associated resources are prevented from loading.

Browser (ad blocking extensions)

Browser extensions operate by using a set of filter lists. They intercept network requests and check each request against these rules. If a match is found, the extension prevents the request from completing, ensuring the ad content isn't loaded and displayed.

Content Blocking for Safari

For Safari's content blocking, the system employs a list of rules defined in the content blocker's configuration. As Safari processes web content, it cross-references these rules. Matching elements, based on these rules, are not rendered or executed.

Cross-platform ad blockers

Cross-platform ad blockers may use a variety of means to achieve ad blocking, or block ads across multiple platforms and devices, or both. If detected patterns match those of known ads or trackers, the software prevents the content from being loaded.

DNS-based ad blockers / "sinkhole"

DNS-based ad blocking uses a modified DNS resolver. When a device makes a request to a known ad-serving domain, the DNS resolver returns an invalid or null IP address, preventing the device from establishing a connection to the ad server, thus blocking ad content.

VPN-based ad blockers

VPN-based ad blockers funnel traffic through a VPN server. The server inspects each data packet and checks against known ad servers or patterns. When a match is identified, the server blocks the data packet to ensure the ad content isn't delivered.
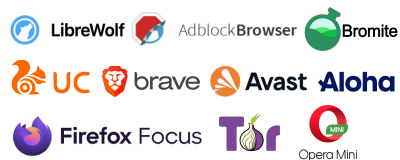
Others

These might include firewalls, tools for a specific platform, router firmware, or broad script blockers. These types of ad blockers may be specifically designed to block ads or may do it as a consequence of meeting another user goal.

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The ad blocking landscape

The ad blocking landscape has accelerated in recent years to include different types of platforms, operating systems and newer delivery methods.

Browser (ad blocking by default)

LibreWolf · AdblockBrowser · Bromite · UC · brave · Avast · Aloha · Firefox Focus · Tor · Opera Mini

Browser (opt-in ad blocking)

cốc cốc · Kiwi · Samsung Internet · Firefox · Microsoft Edge · Opera · Yandex · VIVALDI

Browser (ad blocking extensions)

TOTAL Adblock · Malwarebytes · AdblockPlus · uBlock Origin · Stands · AdBlock · uBlock · Privacy Badger · AdBlocker · Avira · Poper Blocker

Content Blocking for iOS

BlockBear · Wipr · 1BLOCKER · Purify · norton

Cross-platform ad blockers

SEVEN AdClear · AdFender · AdBlocker ULTIMATE · BLOKADA · AdLock · ADGUARD · GHOSTERY

DNS-based ad blockers / "sinkhole"

CleanBrowsing · LibreDNS · AhaDNS.com EST. 2019 · Safing.io · NextDNS · Alternate DNS · CONTROL D · KeexyBox PROJECT · Pi-hole · QuidsUp - NoTrack · Blah DNS

VPN-based ad blockers

NordVPN · Surfshark · CyberGhost · atlasVPN · Proton VPN · windscribe

Others


NoScript · NetGuard · AdAway · Diversion

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Total ad blocking

This graph shows a global estimate of active ad-blocking users across desktop and mobile.
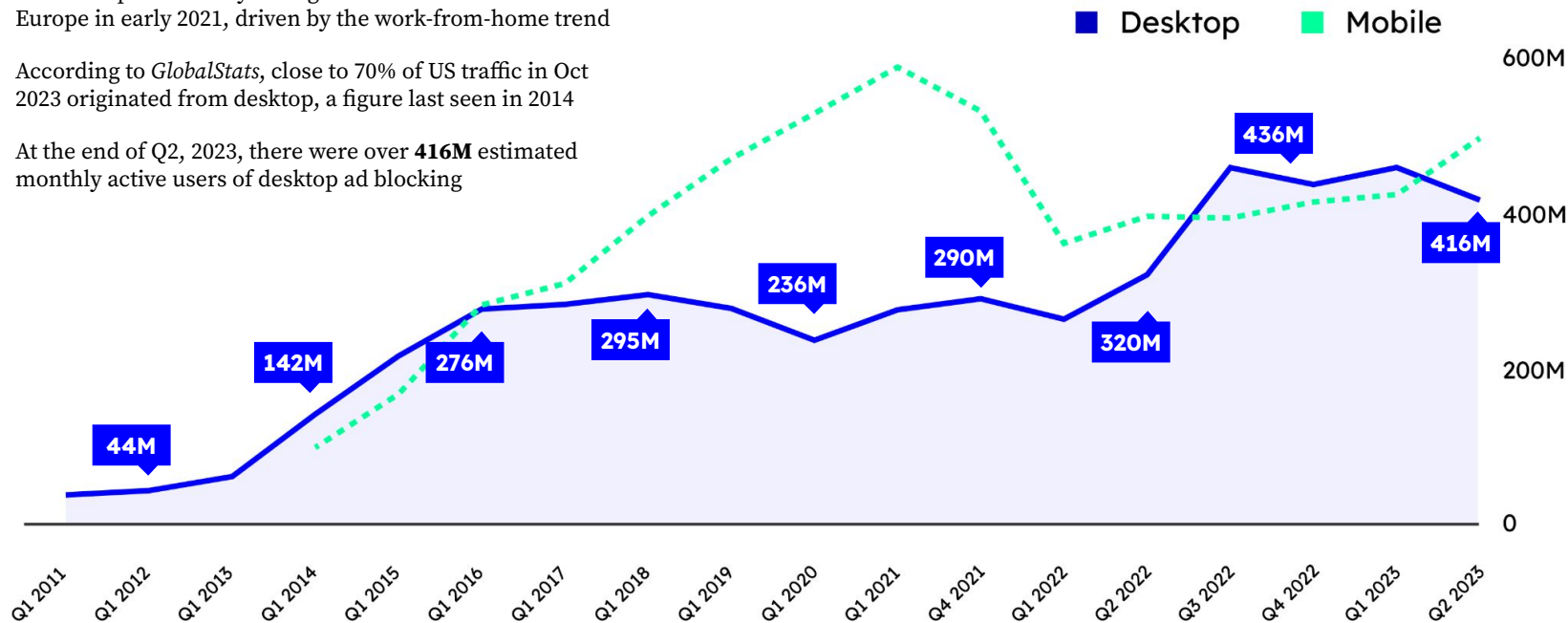
- User adoption of ad blocking grew 11% between Q4 2021 and Q2 2023, to reach a total of 912M users

- The avg. YoY growth of ad blocking since 2011 has been ~30% (At this rate, the 1bn mark will be hit in 2024)

- Additional graphs on the following slides provide breakouts for ad-blocking users by desktop and mobile
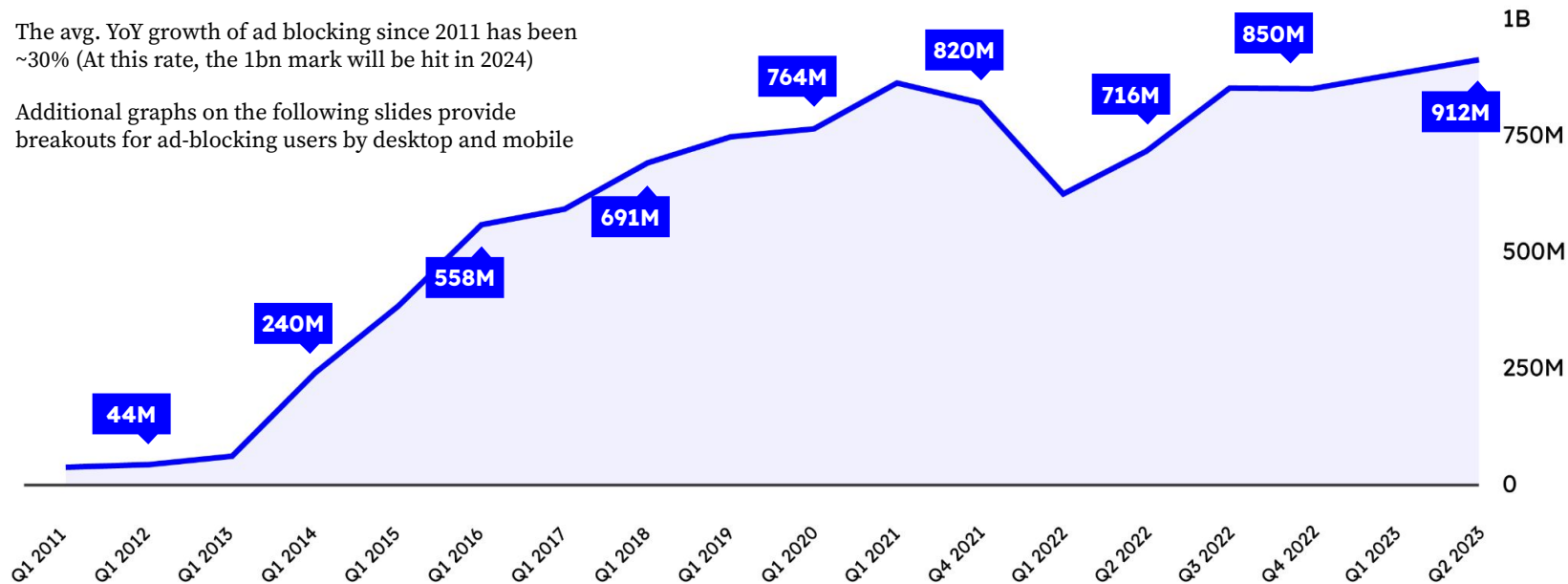
Desktop ad blocking

Ad blocking on desktop surges after a long plateau, buoyed by the work-from-home trend and linked shift in user behavior.

- *Gartner* reported a 10-year high in PC sales in U.S. and Europe in early 2021, driven by the work-from-home trend

- According to *GlobalStats*, close to 70% of US traffic in Oct 2023 originated from desktop, a figure last seen in 2014

- At the end of Q2, 2023, there were over **416M** estimated monthly active users of desktop ad blocking

■ Desktop   ■ Mobile

44M 142M 276M 295M 236M 290M 320M 436M 416M

600M
400M
200M
0

Q1 2011 Q1 2012 Q1 2013 Q1 2014 Q1 2015 Q1 2016 Q1 2017 Q1 2018 Q1 2019 Q1 2020 Q1 2021 Q4 2021 Q1 2022 Q2 2022 Q3 2022 Q4 2022 Q1 2023 Q2 2023
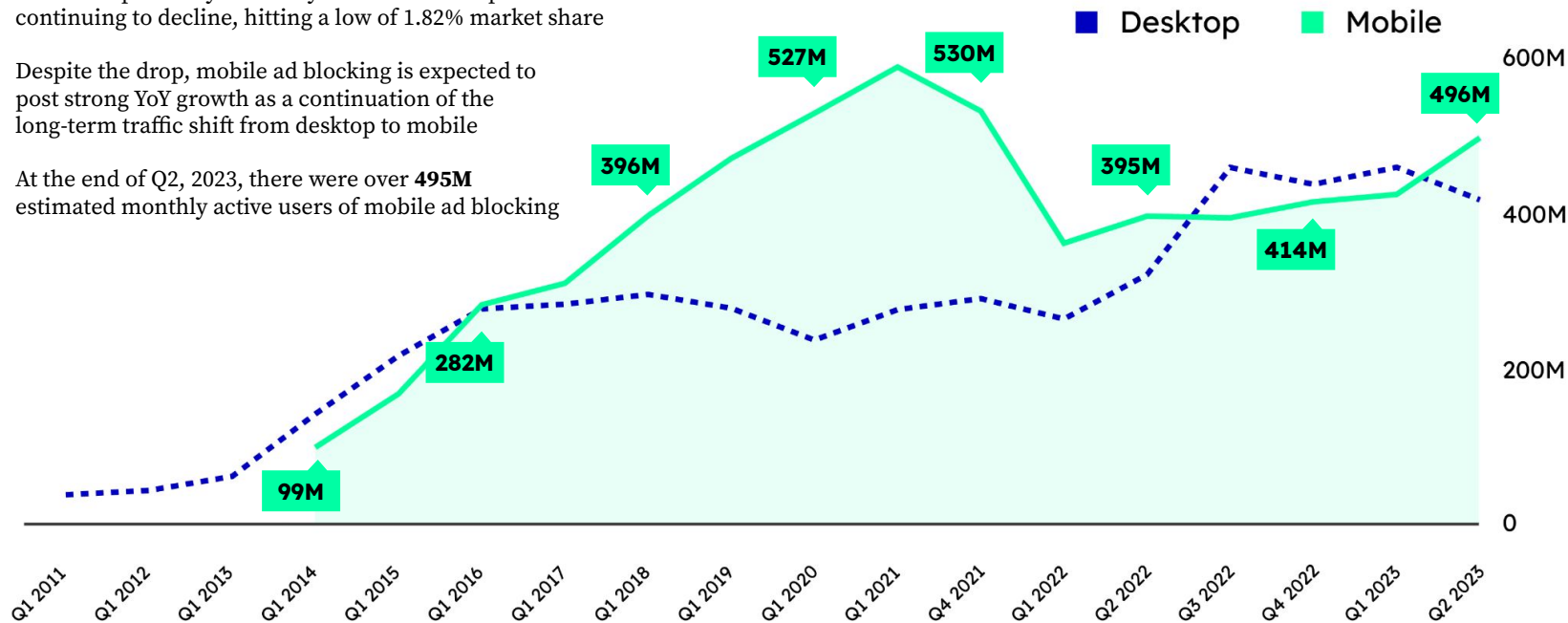
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Mobile ad blocking

Ad blocking on mobile hits a speed bump, but shows resilience and exceeds desktop numbers by mid-2023.

- Decline is primarily driven by UC Browser adoption continuing to decline, hitting a low of 1.82% market share

- Despite the drop, mobile ad blocking is expected to post strong YoY growth as a continuation of the long-term traffic shift from desktop to mobile

- At the end of Q2, 2023, there were over **495M** estimated monthly active users of mobile ad blocking

Legend: ■ Desktop ■ Mobile

Mobile data labels: 99M, 282M, 396M, 527M, 530M, 395M, 414M, 496M

Y-axis: 0, 200M, 400M, 600M

X-axis: Q1 2011, Q1 2012, Q1 2013, Q1 2014, Q1 2015, Q1 2016, Q1 2017, Q1 2018, Q1 2019, Q1 2020, Q1 2021, Q4 2021, Q1 2022, Q2 2022, Q3 2022, Q4 2022, Q1 2023, Q2 2023

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Ad block rate reference table

Ad block rates by device type, country and major content categories.

Country	■	■
Albania	26%	13%
Algeria	33%	13%
Argentina	39%	18%
Armenia	26%	14%
Australia	31%	16%
Austria	22%	15%
Azerbaijan	31%	12%
Bahrain	24%	11%
Bangladesh	29%	13%
Barbados	20%	10%
Belarus	41%	18%
Belgium	36%	17%
Bolivia	22%	10%
Bosnia	33%	14%
Brazil	32%	16%
Bulgaria	38%	17%
Cambodia	19%	9%
Canada	32%	17%
Chile	38%	16%
China	21%	11%
Colombia	32%	14%
Costa Rica	26%	12%
Croatia	39%	16%
Czechia	36%	17%
Denmark	33%	17%
Dominican	25%	11%
Ecuador	27%	13%

Country	■	■
Egypt	27%	13%
El Salvador	25%	11%
Estonia	39%	19%
Finland	31%	14%
France	37%	19%
Georgia	31%	15%
Germany	32%	17%
Ghana	16%	10%
Greece	39%	17%
Guatemala	23%	9%
Honduras	26%	13%
Hong Kong	30%	15%
Hungary	36%	17%
Iceland	29%	15%
India	23%	12%
Indonesia	21%	15%
Iraq	24%	11%
Ireland	29%	18%
Israel	35%	18%
Italy	28%	13%
Jamaica	23%	11%
Japan	26%	15%
Jordan	30%	11%
Kazakhstan	34%	17%
Kenya	26%	15%
Kuwait	28%	12%
Latvia	40%	18%

Country	■	■
Lebanon	20%	8%
Lithuania	38%	18%
Luxembourg	25%	11%
Malaysia	27%	13%
Malta	27%	12%
Mexico	28%	14%
Moldova	37%	15%
Morocco	38%	16%
Myanmar	15%	9%
Nepal	29%	14%
Netherlands	34%	18%
New Zealand	32%	17%
Nicaragua	23%	10%
Nigeria	17%	13%
Norway	27%	15%
Oman	22%	11%
Pakistan	26%	15%
Palestine	22%	10%
Panama	26%	11%
Paraguay	30%	12%
Peru	29%	14%
Philippines	24%	13%
Poland	35%	17%
Portugal	33%	15%
Puerto Rico	22%	10%
Qatar	23%	10%
Réunion	31%	13%

Country	■	■
Romania	40%	18%
Russia	42%	22%
Saudi Arabia	32%	14%
Serbia	38%	17%
Singapore	29%	29%
Slovakia	37%	16%
Slovenia	33%	15%
South Africa	25%	12%
South Korea	28%	16%
Spain	33%	16%
Sri Lanka	25%	11%
Sweden	32%	17%
Switzerland	29%	16%
Taiwan	31%	17%
Thailand	26%	13%
The Bahamas	20%	8%
Trinidad & Tobago	24%	11%
Tunisia	38%	15%
Turkey	30%	15%
UAE	25%	13%
UK	29%	15%
Ukraine	42%	20%
Uruguay	32%	14%
USA	27%	22%
Uzbekistan	24%	13%
Venezuela	28%	13%
Vietnam	16%	16%

Content categories	■	■
Arts & Entertainment	25%	9%
Automotive	26%	10%
Business and Finance	29%	15%
Careers	32%	23%
Community and Society	24%	15%
Food & Drink	28%	12%
Hobbies & Interests/Pets	28%	13%
Home & Garden	24%	10%
Medical Health	24%	12%
News and Politics	21%	9%
Personal Finance	25%	11%
Reference Materials	39%	22%
Science/Education	24%	13%
Shopping	22%	9%
Sports	24%	10%
Style & Fashion	23%	11%
Technology and Computing	25%	13%
Travel	25%	15%
Video Games	32%	16%

■ Desktop

■ All other devices (mobile, tablet, CTV)

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Global cost of ad blocking

Ad blocking will cost publishers $54bn in lost revenue in FY 2024, lower than $116bn potential loss if no mitigation solutions existed.

North America

Desktop:	**11bn**
Mobile:	**13bn**
Total:	**24bn**

Europe

Desktop:	**6bn**
Mobile:	**4bn**
Total:	**10bn**

Asia Pacific

Desktop:	**8bn**
Mobile:	**10bn**
Total:	**18bn**

Africa & Middle East

Desktop:	**0.3bn**
Mobile:	**0.3bn**
Total:	**0.6bn**

Latin America

Desktop:	**0.8bn**
Mobile:	**1bn**
Total:	**1.8bn**

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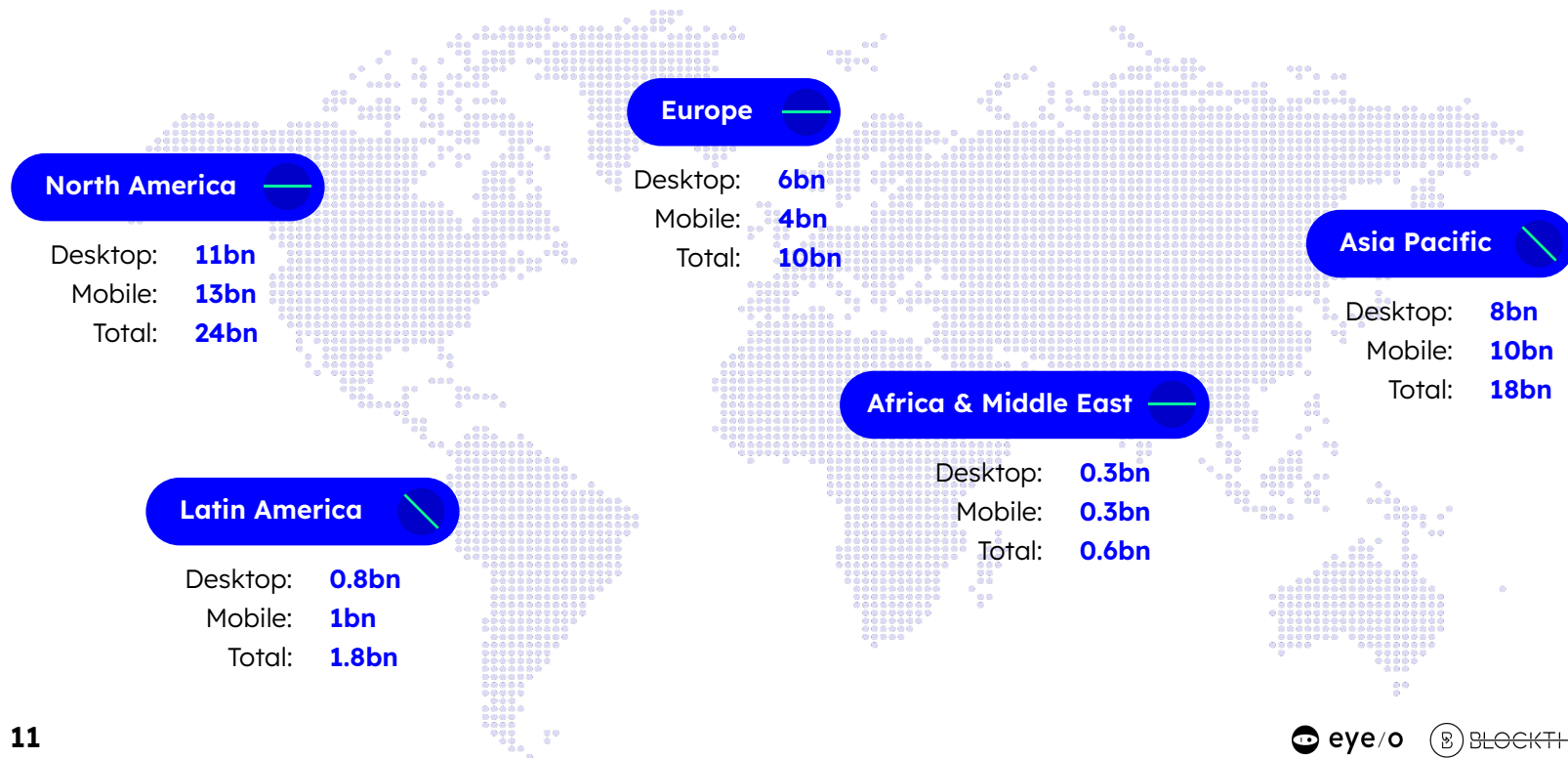
Ad filtering

Current count and growth trajectory of Acceptable Ads users.

- Acceptable Ads have an average **opt-in of 94%** based on new data analyzed between Q1 22 - Q2 23

- By Q2, 2023, **307M** ad-filtering users allowed Acceptable Ads on desktop and mobile combined, up 42% from Q4 2021

- Desktop opt-ins for the Acceptable Ads Standard have **grown 46%** since their lowest point in 2019 (115M)

- The high YoY opt-in rate is an indicator of the success of the Acceptable Ads Standard, as well as its ability to deliver the user-centric experience it promises

- The growth in FY 22-23 comes from a corresponding growth in ad blocking, as well as browsers and mobile device manufacturers joining the Standard

■ Desktop   ■ Mobile

139M

168M

300M

200M

100M

2019   2020   2021   2022   2023

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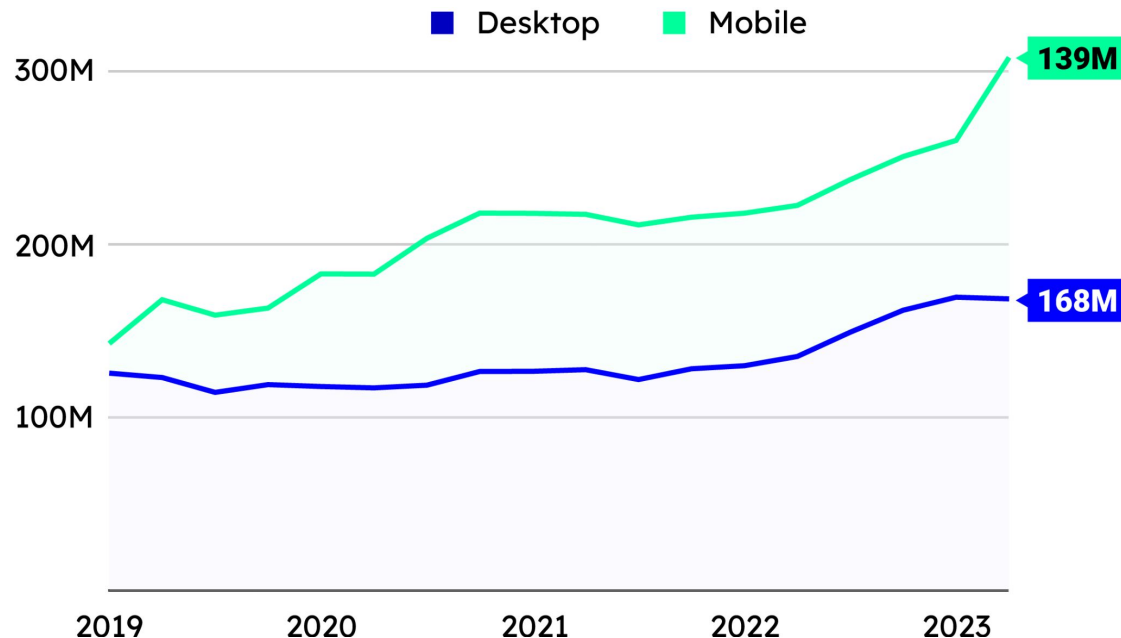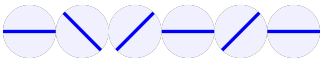
Ad filtering – user sentiment

We commissioned GWI (Global Web Index), to conduct a custom survey of 1,000 desktop ad-blocking users based in the US and Germany — 491 of whom were ad-filtering users, to understand their attitudes towards ads and nonintrusive ads, as well as their understanding and awareness of privacy, data sharing and the impact of ad blocking. The study was concluded in August 2023.

The findings:

Not all ad-filtering users are averse to advertising

58%

of ad-filtering users (n=251) are **open or neutral to seeing nonintrusive ads**

But only 20%

express a **strong dislike** for all ads

Of those who are open or neutral to seeing some nonintrusive ads (58%; n= 251), a majority were open to seeing ads if...

The ads are relevant

- **78%** "the ads are relevant to me" OR "relevant to the content I am viewing"
- **64%** "the ads are specifically targeted to my interests"

The ads don't interfere

- **79%** "the ads do not interfere with the content I am viewing" OR "do not interfere with my task"

They can control what information is shared

- **70%** - "I can control which personal information is shared with advertisers"
- **65%** - "I can control whether the ads are relevant to me"

Source: GWI Core Q3_22 - Q2_23 / GWI Custom Recontact for EYEO Q2_23

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Ad filtering – user sentiment

Comparing US and Germany

🇺🇸 **61%** vs 🇩🇪 **49%**

US ad-filtering users are more likely to be open or neutral to seeing nonintrusive ads (61%) compared to German ad-filtering users (49%), and were generally more open to seeing ads:

- **that are relevant** (84% vs. 58%)
- **that don't interfere** (84% vs. 62%)
- **if they could control the information that's shared** (75% vs. 53%, respectively)

Of those ad-filtering users who are comfortable sharing at least one type of information anonymously (i.e. hobbies, 44%; n= 166), a majority were willing to see ads for something in return:

- **71%** for **access to premium content**
- **61%** for **better content suggestions**
- **58%** to **avoid seeing ads for products they've already purchased**

**For the majority of ad-filtering users (n=491), online privacy means being in control of what data is collected and shared.
This includes:**

- **66%** - Consent for data collection or sharing
- **77%** - Location data or browsing history is not shared or saved
- **63%** - Control over which data gets collected

Source: GWI Core Q3_22 - Q2_23 / GWI Custom Recontact for EYEO Q2_23

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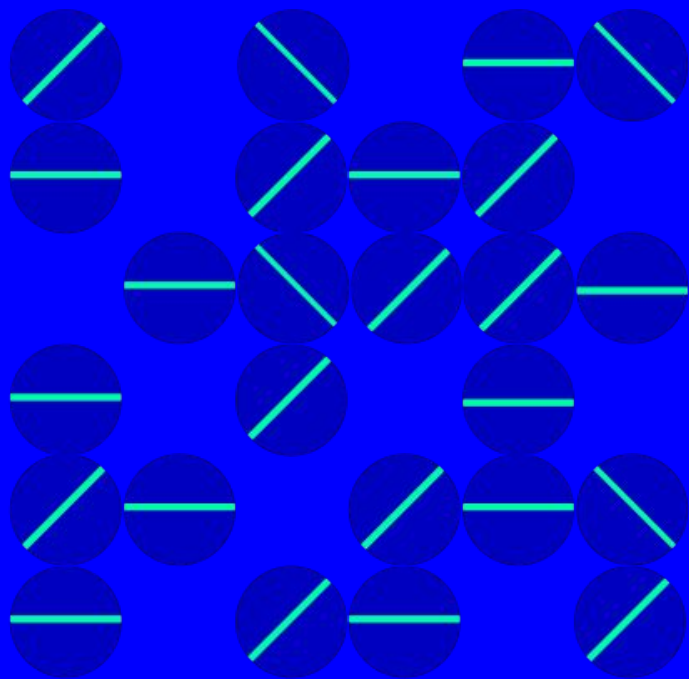
Expert insights

Machine learning

Artificial intelligence and machine-learning-based models are revolutionizing industries across the board, including ad filtering. AI-enabled automation not only increases efficacy of ad filtering but it also makes it more robust, sustainable and scalable. Artificial intelligence is potentially the future of ad filtering and reshaping the future of the ad tech industry.

Peter Lowe
DNS Abuse Ambassador for FIRST (first.org)

"The AI industry is evolving so fast. The interest in security and AI is booming, and it is constantly evolving because it's revolutionary. We're watching this unfold in front of our eyes. It will affect tracking, ad blocking and ad filtering (more ad blocking than trackers, to be honest) it will focus on the noticeable aspect of things. The jump in effectiveness is a key thing."

Andrey Meshkov
CTO & Co-Founder of AdGuard

"ChatGPT and LLMs may seriously disrupt ad tech (as well as other industries). I think in the coming years we'll see more applications of different AI models to ad filtering. Before that, it was more about experiments that were rarely used by ad blockers, but now the situation will improve."

Leigh Freund
CEO and President at NAI

"We're already seeing significant advances in the use of generative AI and machine learning for campaign and creative optimization and to better structure and analyze post-campaign data, and we should expect additional insights and efficiencies as the technology learns and improves. Of course, it's important that the industry honors its commitments to privacy and data protection as it integrates new technologies that rely on data; not just because they are required by law, but also because those protections are vital for building consumer trust."

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Privacy

Privacy concerns and regulations, while not new, are still in a constant state of recalibration to answer for advances in technology and implementation on new policy. But more than staying compliant, companies must continue to make user privacy and transparent data collection a top priority to build user trust and create opportunities from first-party consented data.

Lisette Meij
Data Protection Officer at Piwik PRO

"Tomorrow, we can have different technology than cookies, which doesn't mean it will be less intrusive. The shift has to be in an approach to user tracking and use of these data. Going with first-party data and permission-based marketing will help them retake control over what and how much data they collect and what they do with it. At the same time they'll be able to earn customers' trust, create business advantages around privacy, and benefit from the data that comes directly from their clients."

Peter Lowe
DNS Abuse Ambassador for FIRST (first.org)

"I'm extremely cynical about a post-cookie world. I don't think that ultimately that this world will be very much different, unfortunately as what is going to happen is that people will go to different tech that finds a loophole (e.g. cookie consent forms) or services/tech or something else that will be introduced that will have the same effect as first cookies."

Leigh Freund
CEO and President at NAI

"The ad tech industry's main challenge with respect to data privacy and transparency over the next year or two will be managing compliance with a rapidly evolving legal and regulatory landscape. Additionally, the ad tech industry will be challenged to create and embrace transparent new technologies that can help advertisers find the relevant audiences they are seeking, and the effective post-campaign analysis and measurement they demand, without the collection and processing of unconsented personal data. "

See full responses here

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Sustainability – user sentiment

We recently conducted a survey as part of a product discovery and gathered 2500 responses from a global base of mobile ad-filtering users, delving into their perspectives on online advertising and sustainability. This study examined their views on the importance of environmental sustainability, their attitudes towards eco-conscious actions, their awareness of sustainable online practices, their adoption of such actions and the relationship between ad blocking and online sustainability. Here's what we found:

Users care about environmental sustainability a lot but are unaware of the actions to take to become more sustainable online:

- 49% say environmental sustainability is extremely important to them
- 63% agree that they do not have enough information on what actions they could take to become more environmentally friendly

Here are the most impactful online sustainability actions according to users:

- decreasing one's energy consumption (52%)
- purchasing from brands that care about sustainability (42%)
- using eco-friendly search engines (36%)

77% of users view companies who take sustainability actions positively, however some are wary of greenwashing.

While some mobile ad-filtering users (42%) believe that blocking or filtering ads can help reduce Internet users' carbon footprint, there is still a lot of skepticism and lack of awareness about the environmental impact of ad blocking:

- 37% of mobile ad-filtering users admit they will need more information on the topic to answer

- From the same survey presented earlier in this report *(pg. 13/14)*, 44% (n=229) of desktop ad-filtering users did not know about this topic**
  - Furthermore, 37% (n=189) do not believe that using an ad blocker can reduce the carbon emissions of a web page, highlighting even higher skepticism in this regard**

Source: GWI Custom Recontact for EYEO Q2_23

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Sustainability

Today, sustainability is a top priority in the industry, but where we are today and our view of the current state and our understanding of emissions will change significantly. To move forward, transparency, standards and measurable actions are essential. In this sustainability section, we've compiled insights from various sources to help navigate this important journey.

Amanda Forrester
VP of Marketing at OpenX

"Sustainability in adtech is in its infantile phase and there's a lot of opportunity for education in the sustainability space. And we as an industry need to push for independent third-party testing, verification, and disclosure. To achieve our sustainability goals as an industry, we should focus on holistic measurement. "

Leigh Freund
CEO and President at NAI

The concept of sustainability in ad tech is similar to the concept of privacy in ad tech prior to the onset of significant legal and regulatory requirements; it's a nascent concept that has not yet seen widespread adoption.

Ryan Cochrane
COO at Good-Loop

"Something that's became increasingly clear over the last year especially, is that the level of interest and responsibility felt on climate and sustainability varies significantly on a market by market basis. The key therefore is to demonstrate that, even if you don't care about saving the planet, you probably do care about running better ad campaigns — and that's what's great about this space, because everything you do to reduce carbon, typically also improves your ad performance. "

Andrey Meshkov
CTO & Co-Founder of AdGuard

"The problem is that there are no clear metrics that can measure sustainability in advertising. Every ad tech company may come up with its own measurement and claim that they improved the situation, but is that really so? I think in regards to digital advertising the overall transparency and ethics mean much more than the raw energy consumption. Putting it short, what and how you advertise is what really matters."

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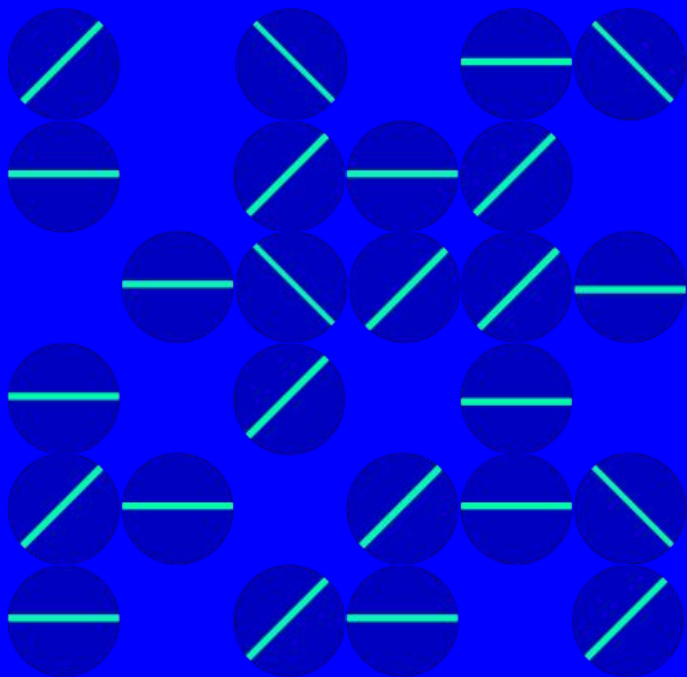
Future insights

These predictions are derived from insights and contributions by experts actively engaging in the fields of ad filtering and ad tech and are bolstered by the data presented within this report.

Predictions for the state of ad filtering

The data presented earlier in this report (*pg. 13/14*) shows user-centricity at the crux of how the industry moves forward. Ad-filtering users exhibit a range of preferences when it comes to advertising; they tend to favor ads that are nonintrusive, personalized to their tastes and deliver tangible value. This reinforces prioritizing unobtrusive and user-friendly ad experiences and standards for long-term success. Furthermore, user privacy and data control hold significant sway over ad-filtering users' views about online advertising and ad-filtering practices. Ensuring user privacy and offering straightforward options for managing data collection and sharing should remain a top priority for all industry stakeholders.

As AI and ML continue to advance, driven by its revolutionary potential, the landscape of ad filtering is undergoing a noticeable transformation. The focus is shifting towards improving effectiveness, and it will undergo significant improvements in the coming years. And in this evolving environment, it becomes clear that the influence of AI will be felt widely — especially in regards to ad filtering.

When it comes to sustainability in ad filtering, there's both a significant opportunity and challenge. Educating users about the environmental advantages of ad filtering and raising their awareness is a critical consideration for the industry — especially as sustainability continue to rise in importance in 2024 and beyond.

"Ad filtering will stay alive regardless of what happens in the future. As long as there are ads there will be ways to filter them and quality wise, it will not degrade. Traditional browser ad blocker growth has stabilized…until MV3 comes out. Network-level filters' -like AdGuard DNS, NextDNS, ControlD, etc- growth rate is much higher as they provide a way to cover platforms not covered by traditional ad blockers."

Andrey Meshkov
CTO & Co-Founder of AdGuard

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Predictions for the future

Machine learning

AI, including generative AI, will continue to transform AdTech and MarTech by enhancing personalization, predicting user behavior and improving decision-making.

Responsible and ethical AI use is crucial.

- The focus will be on securing user consent, data security, minimizing data collection and mitigating biases
- Beyond compliance, responsible AI use will help to gain valuable insights, optimize user experiences and build customer trust while respecting privacy

Legal considerations around data scraping and model training are still evolving – the industry will need to safeguard privacy and data protection especially as it integrates new data-dependent technologies.

Sustainability

The adoption of sustainability goals will increase in the coming year, driven by advertiser and user demands and the climate crisis.

Sustainability is emerging as a pillar of agency requests for proposals (RFPs) and will impact budgets and campaigns.

Global standards are increasingly the norm in Europe, and we expect that sustainability will play out similarly to privacy, where all companies will be subject to standardized regulations.

Companies and organizations in ad tech should focus on **operational changes that address both sustainability and privacy** challenges.

Collaboration and partnerships within the ad tech ecosystem are emerging to facilitate sustainability initiatives and make them more accessible.

Privacy

The shift from third-party cookies is happening, and we have seen mechanisms introduced in the last years (e.g. ITP and IDFA by Apple) indicating the industry's seriousness about this transition.

A major challenge will be managing compliance with a rapidly evolving legal and regulatory landscape.

The future post-cookie world is not just about technology; it's **about rethinking user tracking and data use**.

Organizations will need to recalibrate their data collection focus, shift towards first-party data and permission-based marketing, and **prioritize privacy and trust-building**.

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Methodology

A note on older methodology

Up until the 2020 PageFair Adblock Report, the number of devices using ad-blocking software on desktop/laptop computers was calculated by estimating the number of monthly active ad-blocking users ("MAUs") that are required to generate the number of downloads that were recorded for blocklists in each historical month. A blocklist is a frequently-updated, structured text file that contains rules about how to block ads on websites. All major desktop ad-blocking software works by downloading one or more community-maintained blocklists to drive their behavior. Normally they download the "Easylist" blocklist, or download a combolist, which combines both Easylist and a language-specific blocklist. For example, "Liste_FR+Easylist" provides additional rules to block ads on the French web. Each blocklist includes an expiry header, which tells the client software how many days to wait before downloading a newer version. For example, given a web browser configured with an ad-blocking extension which is subscribed to a blocklist with an expiry of 4 days, that computer will download that blocklist once every 4 days so long as the browser remains open. If the web browser is shut down, it will re-download the blocklist at its next available opportunity. Most of the major community blocklists are hosted by eyeo, facilitating 1st-party access to basic web statistics about the traffic received. This formed the basis for MAU counts in older reports.

Desktop/mobile ad blocking

Edition 2021 onwards, due to the increasing complexity involved in aggregating raw data (filterlist downloads) from multiple sources, eyeo instead generated internal estimations for the number of active users for the years following 2020. To cover the broader market, we made over-the-top calculations for the number of desktop users on Brave (https://brave.com/transparency/), AdGuard (source-provided data), and uBlock Origin (capped app store installs) and added that to eyeo's dataset to create the final output of desktop MAUs. Whereas the majority of desktop ad blocking can be measured via blocklist downloads, the same is not true for mobile, where mobile browsers that block ads by default are the main driver. To account for this, mobile MAU estimates for Brave, AdGuard, Opera Mini, Oppo, and UC Web were generated based on publicly available data, source-provided data, and market share estimates. These estimates were then added to eyeo's internal estimates. Reasonable efforts were made to avoid any double-counting between the two data sources. It's important to note that these estimates do not account for content blockers, VPN/DNS-based ad blockers, and network-level ad blockers, some of which do not release MAU numbers and are impossible to detect using any conventional means. A fairly conservative 20% multiplier was applied to the final count of desktop and mobile ad block MAUs to account for this lack of data.

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Ad-blocking rate reference table

To determine ad-blocking rates, this study employed anonymized, aggregate traffic data collected by Blockthrough from domains utilizing its technology. Geographic locations were derived from truncated and anonymized IP addresses, while categorization of website content was obtained via a third-party vendor engaged by Blockthrough for web analytics purposes. The detection of ad block usage by Blockthrough's technology involves initiating network requests to a predefined array of so-called "bait URLs". A user is inferred to be using an ad blocker if the requests to certain bait URLs are interrupted. To mitigate the influence of seasonal fluctuations on ad-blocking rates, data was not drawn from a contiguous time frame; instead, it was compiled on the first day of each month throughout 2022. This approach ensures a more balanced and representative dataset. The ad-blocking rates reported in our findings are segmented into "desktop" and "other," with the latter encompassing mobile, tablet and Connected TV (CTV) devices. The breakouts are provided in the interest of facilitating more granular analysis, however, due to this change, an apples-to-apples comparison of ad blocking cannot be made with the last PageFair report. Blended comparison for key markets reveals that ad-blocking rates grew by 10% in Japan, 5% in the US, 3% in Australia, 3% in Mexico, 2% in Canada, and 2% in UK; fell 2% in Germany, 2% in Poland, 2% in Spain, 2% in Belgium, 1% in France, and 1% in Netherlands; and remained unchanged in Italy.

Global cost of ad blocking

To calculate the potential revenue loss for publishers, this study utilized the projected 2024 ad spend data from Statista, which aggregates insights from various sources, including Cowen and Company, GroupM, Magna, and Statista Market Insights. These projections were filtered for broad economic regions, in addition to specific advertising formats that are susceptible to ad blocking, like banner, video, and search ads on desktop and mobile devices. This spend data was then layered with Blockthrough's proprietary country-level ad-blocking rate measurement to assess the extent of spend that is throttled by ad blocking, segmented by geography and format. Additionally, a 50% reduction was applied to search spend and 25% reduction to banner spend to account for the mitigated loss through platforms and publishers participating in the Acceptable Ads Standard, as well as other revenue mitigation solutions that exist in the market. The analysis then factored in the findings from a 2020 AOP and PwC study, which revealed that only 51% of digital ad spend ultimately contributes to publisher revenue. This ratio was employed to convert the ad spend projections into associated publisher revenue losses resulting from the breakdown in revenue flow. In the final step of the analysis, the loss estimates were weighted against the ad spend projected for each of the economic regions studied in order to stress-test the numbers, and minor adjustments were made to ensure that loss was roughly proportional to spend for the region.

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GWI Methodology for page 13 and 14

From their panel of over 22m consumers, GWI recontacted 1,000 GWI Core respondents from the USA and Germany who use ad blockers on their PC / Laptop. The quantitative research study was fielded as an online survey and took place in August 2023. The recontact methodology enables GWI to synchronize the survey data with their core data of over 57,000 data points. The custom research data is weighted back to GWI Core data by audience definition, market, age and gender to ensure it is representative. Some of the data points are based on response counts smaller than the full sample, but are weighted by GWI to represent the real world population of ad-filtering users. The survey was designed in collaboration with Opera Marketing and Privacy teams.

Ad-filtering user definition

For the purposes of this report, ad-filtering users are defined as people who use a blocking extension that includes a filter for Acceptable Ads. This includes not only Adblock, Adblock Plus and Adblock Browser users, but also third-party platforms that participate in Acceptable Ads. There is, however, a small number of users who opt-out of Acceptable Ads. The current opt-out rate is 6%. For the GWI and sustainability surveys, it was not possible to exclude these users.

The Sustainability survey was fielded using a 'research card' component inside the Adblock Browser mobile interface and thus utilized non-probability sampling. It collected 2,500+ responses over 6 weeks in Q2 2023.

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Acknowledgements

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