



2018 eCOMMERCE 3RD PARTY TECHNOLOGY INDEX

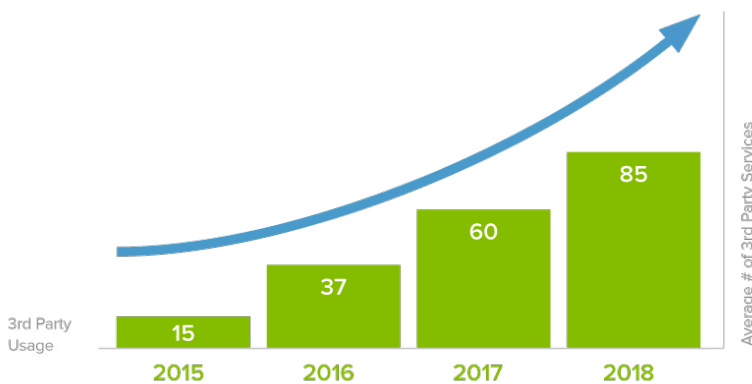


3rd Party Impact on Performance

Welcome to the 3rd Party Index

The rapid adoption of 3rd party technologies in eCommerce has accelerated innovation in the shopping experience. According to Retail Systems Research (RSR), a leading eCommerce industry research group the average retail website now uses between 40-60 3rd party technologies to create their online experiences. In order to provide rich, engaging online experiences for their shoppers, retailers are adding more and more 3rd parties to their sites, even if it means they lose some control over the speed and performance of their website pages.

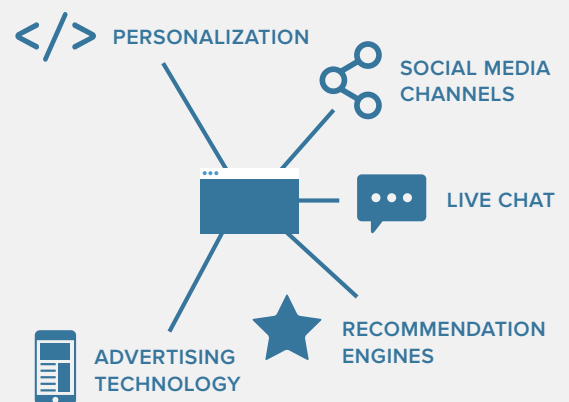
This index is designed to help you start understanding the impact 3rd parties can have on performance. It also provides a starting point for researching individual 3rd parties for adding new capabilities to your website.



3rd Parties caused delays of **4.2 seconds per page** during the 2017 Cyber 5 Holiday¹

What Are 3rd Parties?

“3rd Parties” are cloud-based technologies deployed on eCommerce websites to provide better shopper experiences to online consumers. They are typically inserted as lines of JavaScript that transfer data and content between the 3rd party vendor’s servers and the shopper’s browser. Customer reviews, advertisements, and recommendations are all common examples of content delivered by a 3rd party JavaScript.



How Do 3rd Parties Cause Problems?

Despite their many benefits, 3rd party technologies almost always slow down a site. When a shopper visits a page and their browser begins reading and executing the HTML, it will pause once it encounters a 3rd party JavaScript. At this point, the 3rd party conducts multiple database queries on 3rd, 4th and 5th party servers, downloads configurations, modifies the content in the browser, and sends shopper data back to the 3rd party server for analytics. This process will delay the page from loading and gets worse when an error occurs.

When you consider that the average eCommerce website uses 40 - 60 different 3rd parties, a single page will require almost 300 calls to over 100 servers to completely load. And all 3rd party calls must be completed and all rich images loaded in under 3 seconds, or else shoppers will start leaving the site.



The 3 Second Rule

After waiting 3 seconds for a page to load, 66% of shoppers will leave the site.

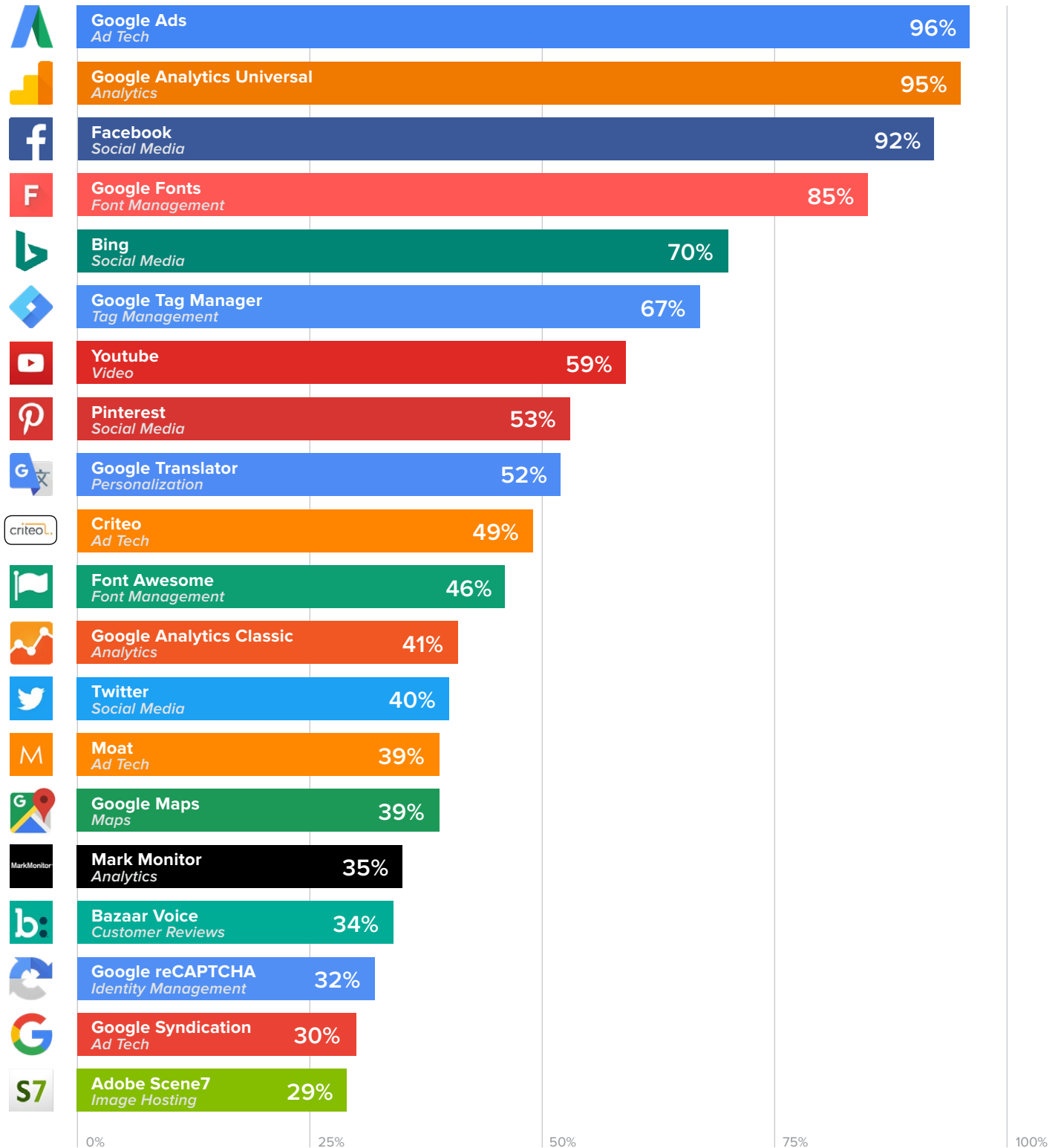
According to Walmart and Amazon, every second after the 3 second mark costs retailers up to 7% in conversion.

How Did We Collect This Data?

The data in this report was collected over the course of a month (August 2018) from over 1,000 eCommerce websites using Yottaa's eCommerce Acceleration Platform. Yottaa optimizes the speed and performance of eCommerce website pages, including 3rd party technologies, rich images, and other page elements. As a result, Yottaa has visibility into detailed performance data from over 700 3rd parties used by our customers. This index focuses on the performance of the top 200 most widely adopted 3rd parties.

Top 20 3rd Parties Deployed by Retailers

Yottaa measures the saturation and usage of individual 3rd parties across our entire client base. Below are the top 20 3rd parties used during our evaluation period:



Top 5 Offending 3rd Party Categories

In addition to measuring usage and saturation, the Yottaa platform also detects performance violations of individual 3rd parties. The five categories below represent the top violating 3rd parties that impact web performance. Although they slow down page speeds, retailers should not remove them. But they should understand the performance impact of these technologies and apply optimizations that will speed up overall load times.

Performance Impact Rating



Performance Impact Rating (PIR) is a rating that indicates how an individual 3rd party affects page load times. The PIR is calculated by adding the 3rd party's **performance violations** and the **delay page load violations** together and then dividing by the number of page views of the site. This performance indicator demonstrates the impact that each third party has on the shopper experience and online conversions.

Performance Violations are individual errors that occur when a single 3rd party takes longer than 1 second to load.

Delay Page Load Violations are individual errors that occur when a single 3rd party extends the time until a shopper can interact with the site.



1. Personalization



2. Tag Management



3. Ad Tech



4. Social Media



5. Customer Reviews



#1 Personalization



PIR's for the top personalization 3rd party technologies evaluated through the Yottaa platform

Little or no performance impact	3rd Party	% of Sites
Inconsistent negative performance impact	Blue Core	5%
	Certona	19%
	Findify	3%
	HiConversion	2%
	Monetate	22%
	Oracle BlueKai	7%
	Qubit	3%
	Reflektion	8%
	Sidecar	13%
Consistent negative performance impact	Dynamic Yield	17%
	Evergage	6%
	Fullstory	5%
	Google Translator	52%
	Jivox	3%
	Moveable Ink	8%
	MyBuys (Magne+IC)	9%
	Rich Relevance	5%
	Salesforce CQuotient	21%

(Note: This not a force-ranked list based on PIR. It is an alphabetical listing within red, yellow, green PIR.)

Shoppers demand personalized experiences. If they aren't presented with an experience that reflects their history and interests, they will go to a competing eCommerce website that does.

Personalization technologies specialize in turning customer intelligence data into an actionable personalized experience.

Recommendation technologies use machine learning to propose alternative or complementary products based on a shopper's behavior and expressed interests.

Personalization and recommendation technologies make shopper-specific experiences easy by doing the heavy lifting on their servers. They return personalized content that inspires shoppers to purchase, and even add new products or higher margin items to their shopping cart. The larger order size, gross margin, and revenue driven by these technologies can be significant.









#2 Tag Manager



Tag Management is designed to help deploy and manage tags (sometimes referred to as pixels, beacons, or apps), which are used to integrate third-party technologies onto eCommerce sites. By enabling both line of business and IT to easily add tags to a site, tag management technologies allow online retailers to quickly enhance their sites with features that will further engage shoppers.

Tag managers add a double performance problem to eCommerce sites. On their own, they are one of the top five offenders in terms of third party performance. Additionally, because they are the mechanism to add more third parties to a site, they tend to negatively influence overall site performance.

PIR's for the top Tag Management 3rd party technologies evaluated through the Yottaa platform

	3rd Party	% of Sites
Little or no performance impact	 Ensign	5%
Inconsistent negative performance impact	 Brighttag - Signal	4%
	 Google Tag Manager	67%
	 UTag - Tealium	23%
Consistent negative performance impact	 Adobe Tag Manager	19%
	 Ghostery	3%

(Note: This not a force-ranked list based on PIR. It is an alphabetical listing within red, yellow, green PIR.)

The average eCommerce site has 40 - 60 3rd parties²



#3 Ad Tech



PIR's for the top Ad Tech 3rd party technologies evaluated through the Yottaa platform

Little or no performance impact	3rd Party	% of Sites
	Adform	3%
	Amazon Ad System	12%
	BrTrk	10%
	Rapsio	6%
	Sellpoints	2%
	SpringServe	26%

Inconsistent negative performance impact	Ad Advisor - NeuStar	5%
	AOL Advertising	7%
	Criteo	49%
	Nielsen	6%
	Flash Talking	5%
	GumGum	3%
	Listrakbi	5%
	Media	7%
	MediaMath	13%
	Optimatic	2%
	OwnerIQ	8%
	PubMatic	6%
	Scorecard Research	11%
	SiteScout	2%
	Taboola	8%
	Tubemogul	3%
	VideoAmp	5%
	Yahoo Analytics	22%

Introducing ad tech into an eCommerce site to track and re-target visitors can maximize investments that drive traffic to a site. Leading providers like Criteo, Google Ads, Amazon Ad, AppNexus, and many others can help retailers manage and optimize advertising quickly with minor additions to the site that don't impact the experience, but greatly enhance the effectiveness of advertising efforts.

Consistent negative performance impact	Adroll	6%
	AdSafe	21%
	App Nexus	20%
	Casale Media	7%
	Google Ads	96%
	Google Syndication	30%
	Krux	16%
	Moat	39%
	OpenX	6%
	Rubicon Project	7%
	Shoprunner	5%
	Smarter Remarketer	8%
	spotxchange.com	3%
	Steelhouse	9%
	WebCollage	3%

(Note: This not a force-ranked list based on PIR. It is an alphabetical listing within red, yellow, green PIR.)



PIR's for the top Social Media 3rd party technologies evaluated through the Yottaa platform

	3rd Party	% of Sites
Little or no performance impact	AddToAny	2%
	Google+	13%
	LinkedIn	5%
Inconsistent negative performance impact	AddThis	23%
	Bing	70%
	Facebook	92%
	Pinterest	53%
	Rapleaf - Towerdata	10%
	Sharethis	7%
	Snapchat	2%
	Twitter	40%
Consistent negative performance impact	Instagram	25%
	Photorank	3%

(Note: This not a force-ranked list based on PIR. It is an alphabetical listing within red, yellow, green PIR.)

Retailers have quickly learned that connecting with shoppers through social media channels such as Facebook, Pinterest, and Instagram helps loyal customers share their purchases and good experiences, which in turn brings traffic back to the site. It's another step in building a stronger, more personal relationship with shoppers. As a result, social media tags are now a standard feature on retail websites.

50% growth in the number of 3rd party calls per page from 2017 to 2018²



#5 Customer Reviews



Customer reviews go hand in hand with social media – shoppers want to understand the opinion and experience of others before making a purchase. This increases customer satisfaction and conversion rates because positive reviews make customers feel more confident about making an online purchase. Technologies like PowerReviews, Bazaarvoice, and Yotpo help retailers collect, manage, and publish reviews quickly.

PIR's for the top Customer Review 3rd party technologies evaluated through the Yottaa platform

	3rd Party	% of Sites
Little or no performance impact	TrustPilot	4%
Inconsistent negative performance impact	Yotpo	8%
Consistent negative performance impact	Bazaar Voice	34%
	Power Reviews	16%
	Turnto	5%

(Note: This not a force-ranked list based on PIR. It is an alphabetical listing within red, yellow, green PIR.)

★★★★★ Satisfied customer!

By **Samantha Crawford** (2017-02-22, 06:05)

I love this product! It arrived 2 days earlier than expected and when I opened the box, the seller had included a freebie. This is one of my favorite buys of the season & will definitely be coming back for more purchases.

★★★★★

Good quality product, fast shipment and accommodating seller

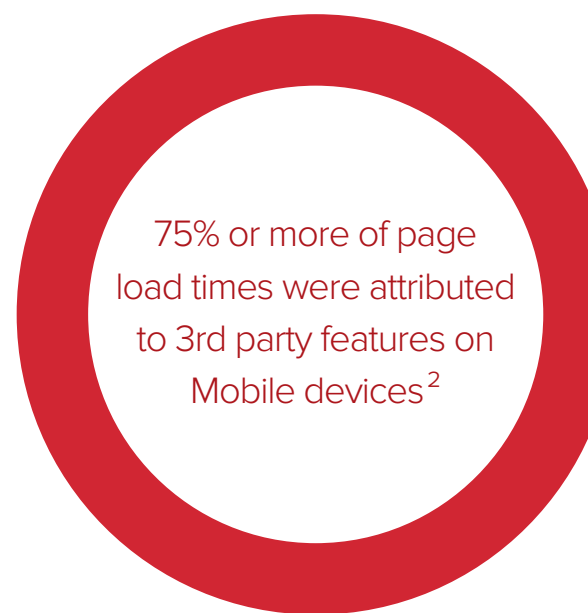
By **Matthew Jones** (2017-02-22, 06:10)

I am impressed by the quality service the seller extends to meet his customer's requests and making each transaction a breeze for hesitant buyers. The product was shipped and arrived on time, and did not disappoint in terms of quality. Highly recommended!

★★★★☆ Can do better

By **Edon McCoy** (2017-02-22, 06:15)

I purchased this item (in spite of its glaringly expensive price tag) in hopes that I would never have to replace it in the future. The day it arrived, I could not figure out how to use it. It did not come with a user manual and I thought this was odd considering since it has earned such good reviews. How could one obviously amazing product overlook providing their users a user manual? I ended up buying a different product from a local store because I could not find any documentation on the internet to help me figure out how to use this thing.

























































75% or more of page load times were attributed to 3rd party features on Mobile devices²
























































3rd Party Performance Indicator Rating Index

























































The preceding PIR index listings highlighted the top performing 3rd parties, the top offenders, as well as breakouts for a few 3rd party categories. Below is a listing of the top 200 3rd party technologies (listed in alphabetical order) used in the Yottaa platform in August of 2018.


















Third Party	Category	PIR	% of Sites
4Cite	Marketing Tech		7%
Ad Advisor - NeuStar	Ad Tech		5%
AdaptTV	Malware		23%
Addshoppers	Marketing Tech		6%
AddThis	Social Media		23%
AddToAny	Social Media		2%
Adform	Ad Tech		3%
Adobe Marketing Cloud	Marketing Tech		15%
Adobe Omniture	Analytics		22%
Adobe Scene7	Image Hosting		29%
Adobe Tag Manager	Tag Management		19%
Adobe Test and Target	A/B Testing		3%
Adroll	Ad Tech		6%
AdSafe	Ad Tech		21%
Affirm	EComm Tech		2%
AgileOne	Identity Management		2%
Amazon Ad System	Ad Tech		12%
Amazon Login	Identity Management		9%




















































Third Party	Category	PIR	% of Sites
 Amazon Payments	Payment Processing		9%
 Amplience	Content Management System		2%
 Answers	EComm Tech		2%
Aol. AOL Advertising	Ad Tech		7%
 App Nexus	Ad Tech		20%
 AppDynamics	Rum Analytics		3%
 Baynote	EComm Tech		2%
 Bazaar Voice	Customer Reviews		34%
 Better Business Bureau	Security Certificate		2%
 Bing	Social Media		70%
 Biz Rate	Security Badge		12%
 Blue Triangle Tech	Rum Analytics		10%
 Bluecore	Personalization		5%
 Bold Chat	Chat		4%
 Borderfree	EComm Tech		9%
 Bounce Exchange	Marketing Tech		9%
 Branding Brand	Marketing Tech		3%
 Brightcove	Video		6%
 Brighttag - Signal	Tag Management		4%
 Bronto	Marketing Automation		11%
BrTrk	Ad Tech		10%
 Casale Media	Ad Tech		7%
 Certona	Personalization		19%
 ChannelAdvisor	EComm Tech		7%
 Chase Payment Tech	Payment Processing		3%
 Clickstream	Analytics		5%
 Comodo	Security Badge		2%
 Connexity	Marketing Tech		6%





























Third Party	Category	PIR	% of Sites
 Convert	A/B Testing		3%
 Core Metrics - IBM	Analytics		7%
 Coupon Follow	EComm Tech		17%
 Crazyegg	Analytics		11%
 Criteo	Ad Tech		49%
 Curalate	Marketing Tech		10%
 Disqus	Customer Service		2%
 Dotomi Conversant	Marketing Tech		18%
 Distillery	Marketing Tech		2%
 Dynamic Concepts	Marketing Tech		2%
 Dynamic Yield	Personalization		17%
 eGain	Customer Service		8%
 Ensignten	Tag Management		5%
 Evergage	Personalization		6%
 Nielsen	Ad Tech		6%
 Extole	Marketing Tech		3%
 Facebook	Social Media		92%
 Findify	Personalization		3%
 Flash Talking	Ad Tech		5%
 Font Awesome	Font Management		46%
 Fonts.com	Font Management		23%
 Foresee	Analytics		4%
 FormStack	Marketing Tech		2%
 Freegeoip	Client-side Security		5%
 Fresh Desk	Chat		2%
 Fullstory	Personalization		5%
 Get Clicky	Analytics		2%
 Ghostery	Tag Management		3%

Third Party	Category	PIR	% of Sites
 Gigya	Identity Management		9%
 Globalsign	Security Badge		3%
 Google Ads	Ad Tech		96%
 Google Analytics Classic	Analytics		41%
 Google Analytics Universal	Analytics		95%
 Google Commerce	Security Badge		11%
 Google Fonts	Font Management		85%
 Google Maps	Maps		39%
 Google reCAPTCHA	Identity Management		32%
 Google Syndication	Ad Tech		30%
 Google Tag Manager	Tag Management		67%
 Google Translator	Personalization		52%
 Google Webfonts	Font Management		9%
 Google+	Social Media		13%
 GumGum	Ad Tech		3%
 HiConversion	Personalization		2%
 Hotjar	Analytics		20%
 IBM WCS	Ecommerce Platform		6%
 Ignition One	Marketing Tech		3%
 Innovid	Video		2%
 Instagram	Social Media		25%
 Intercom.io	Chat		3%
 iovation	Identity Management		26%
 Jivox	Personalization		3%
 JustUno	Marketing Tech		2%
 JW Player	Video		2%
 Karte Plaid	Analytics		2%
 Kenshoo	Marketing Tech		12%

Third Party	Category	PIR	% of Sites
 KruX	Ad Tech		16%
 Linc	Marketing Tech		3%
 LinkedIn	Social Media		5%
 Listrakbi	Ad Tech		5%
 Live Chat, Inc.	Chat		5%
 Live Person	Chat		6%
 LiveClicker	Marketing Tech		3%
 Loggly	Log Management		5%
 Lucky Orange - Pubsub	Marketing Tech		5%
 Magic Zoom Plus	EComm Tech		3%
 Mark Monitor	Analytics		35%
 Material Design Icons	Image Hosting		2%
 Maxymiser - Oracle Marketing Cloud	A/B Testing		5%
 Media	Ad Tech		7%
 MediaMath	Ad Tech		13%
 MixPanel	Analytics		5%
 Moat	Ad Tech		39%
 Mobify	Mobification		9%
 Monetate	Personalization		22%
 Mookie1	Malware		3%
 Mouseflow	Analytics		4%
 Moveable Ink	Personalization		8%
 MyBuys (Magne+IC)	Personalization		9%
 NaviStone	Marketing Automation		4%
 New Relic	Application Performance Management		19%
 Next Action	Marketing Tech		10%
 Nextopia	Commerce Search		2%
 Norton	Security Certificate		2%

Third Party	Category	PIR	% of Sites
 OpenX	Ad Tech		6%
 Optimatic	Ad Tech		2%
 Optimizely	A/B Testing		10%
 Oracle BlueKai	Personalization		7%
 Oracle RightNow	Customer Service		3%
 OwnerIQ	Ad Tech		8%
 Paypal	Payment Processing		24%
 PCA Predict	Client-side Security		2%
 PerimeterX	Client-side Security		4%
 Photorank	Social Media		3%
 Pingdom	Application Performance Management		3%
 Pinterest	Social Media		53%
 Power Reviews	Customer Reviews		16%
 Privy	EComm Tech		3%
 PubMatic	Ad Tech		6%
 Pulse Point	EComm Tech		7%
 Qubit	Personalization		3%
 RapLeaf - Towerdata	Social Media		10%
 Rapsio	Ad Tech		6%
 Reflektion	Personalization		8%
 Rich Relevance	Personalization		5%
 Rubicon Project	Ad Tech		7%
 Salesforce CQuotient	Personalization		21%
 Salesforce IGoDigital	Marketing Tech		8%
 Salesforce Live Agent	Chat		3%
 SAP SeeWhy	Marketing Tech		5%
 Scorecard Research	Ad Tech		11%
 SearchSpring	EComm Tech		4%

Third Party	Category	PIR	% of Sites
 Segmentio	Marketing Tech		10%
 Sellpoints	Ad Tech		2%
 SessionCam	Analytics		5%
 Sharethis	Social Media		7%
 Shoprunner	Ad Tech		5%
 Sidecar	Personalization		13%
 SiteScout	Ad Tech		2%
 SkimLinks	EComm Tech		3%
 SLI Search	Commerce Search		10%
 Smarter Remarketer	Ad Tech		8%
 Snapchat	Social Media		2%
 Sojern	Marketing Tech		5%
 spotxchange.com	Ad Tech		3%
 SpringServe	Ad Tech		26%
 Steelhouse	Ad Tech		9%
 StreamRail	Video		21%
 Symantec	Security Badge		3%
 Taboola	Ad Tech		8%
 Tapad	Marketing Tech		5%
 TrueFit	EComm Tech		11%
 Trust Wave	Security Badge		2%
 TrustPilot	Customer Reviews		4%
 Tubemogul	Ad Tech		3%
 Turn	Marketing Tech		14%
 Turnto	Customer Reviews		5%
 Twitter	Social Media		40%
 Typekit	Font Management		8%
 UTag - Tealium	Tag Management		23%

Third Party	Category	PIR	% of Sites
 Ve Interactive	EComm Tech		2%
 Verisign	Security Badge		6%
 VideoAmp	Ad Tech		5%
 VigLink	EComm Tech		8%
 Vimeo	Video		13%
 Visual Website Optimizer	A/B Testing		14%
 WebCollage	Ad Tech		3%
 Wistia	Video		4%
 Yahoo Analytics	Ad Tech		22%
 Yotpo	Customer Reviews		8%
 Youtube	Video		59%
 Zendesk	Chat		3%
 ZMags	Content Management System		3%
 Zopim	Chat		13%

Conclusion

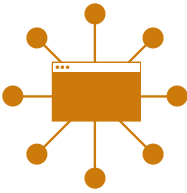
Site performance is a major problem for eCommerce websites. Shoppers demand the features and innovation offered by 3rd party technologies, but also require pages that load in 3 seconds or less. As shoppers continue shifting to mobile devices, their expectation for fast and personalized experiences will only increase. Retailers need to find ways to continue delivering these great 3rd party powered experiences without driving shoppers away with slow loading pages.

What Can You Do?

You don't have to live with the negative performance impact of 3rd party technologies.

Thousands of eCommerce websites today use the Yottaa eCommerce Acceleration Platform to optimize and sequence the loading of their 3rd party technologies (regardless of their index rating), so shoppers experience fast loading website pages on every visit. The result is an eCommerce website with higher conversions and more engaging shopping experiences.

Yottaa's cloud-based platform delivers significant speed and performance improvements by optimizing and sequencing all website assets:



1. 3rd Parties

“Application Sequencing” is the Yottaa capability that empowers sites to optimally manage the order of execution for 1st and 3rd party assets. As a result, even the most engaging (and 3rd party heavy) pages load quickly and are instantly interactive.



2. Mobile

Slow load times on responsive-designed (RWD) mobile sites is a leading cause of low mobile conversions. Yottaa accelerates website content across all devices, taking into account the specific shopper’s context, resulting in significantly faster page load speeds on mobile devices. This ensures that RWD does not have a negative impact on mobile performance.



3. Images

“Content Transformation” is the Yottaa capability that allows eCommerce teams to control how web page content is rendered through lazy loading, compression, and transcoding of images with no code change. As a result, retailers can make their pages load smarter and faster while preserving their high resolution images and content.



4. Static & Dynamic Content

Yottaa’s “InstantOn” enables instant shopper engagement by automatically identifying, optimizing, and caching static content. At the same time, it also decouples dynamic content from the page, which Yottaa then injects into the browser once it’s available. The result is rich, engaging pages that load instantly.

If you have already built a website that includes many of the 3rd party technologies listed in this report, then you are already ahead of the game. But don’t accept 5-10 second page load times as the forced reality of innovation. Contact Yottaa today to conduct a trial of the eCommerce Acceleration Platform, and find out how you can deliver a fast and innovative experience with all the 3rd party technologies you see in this report.

[1. The Cyber 5: What we saw from Thanksgiving to Cyber Monday](#)

[2. Retail Systems Research - 2018 eCommerce Website Performance: Are Retailers Falling Behind?](#)