



# Media Optimization and E-Commerce

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How to accelerate my product images and videos for better conversion?

## Highlights



**2.14 billion**

global digital buyers in 2021



**22%**

of worldwide retail sales will be attributed to E-commerce businesses by 2023.

## Introduction

The E-commerce industry is growing at the speed of light with no signs of slowing down. In order to gain significant market share in the competitive industry, **website speed** and **digital asset management** are becoming topics of the highest relevance.

Now more than ever, the **need for speed** is becoming a necessity in the online E-commerce business. Faster loading websites rank better on SERP, and increase the chances of website visits by users with the specific search intent. Optimizing speed is thus a way to reach more people on your website and gain higher conversion rates.

On the other hand, online conversion is also directly linked to the **user experience**, and as people say, a picture is worth a thousand words. When it comes to online stores, **quality product visuals** are key to keeping visitors entertained and improving return rates.

So should businesses focus on having a fast website with poor images or create fancy animations that take minutes to load?

While that seems like an impossible choice, what if we tell you that it is possible to have **balance both aspects of the customer experience that seem to be mutually exclusive: speed and visual appeal**.

This white paper explores current challenges facing web developers and E-commerce managers to speed page loading time through image optimization while keeping branding and design at 100%.

# Agenda

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## 1. What is the future of content in E-commerce?

In life as on the web, you only get **one shot** to make a good first impression. The first impression you make on the newcomer can turn them into lifelong customers or make them leave your page immediately.



**63%**

of your online visitors think that **product images** are more important than their descriptions.



**85%**

of your E-commerce website visitors are more likely to buy a product after watching a **video**.

The E-commerce industry is continuously evolving. As much as photographs are the most important element in the industry, consumers now want **an immersive online shopping experience** that is similar to shopping in a brick-and-mortar store. The following are some trends that will shape the future of content in E-commerce.

### 1. Professional Photography

Consumers today shop with their eyes: this implies that **high-quality professional photographs** are more important than ever in today's digital world. According to an eBay study, to online shoppers, the quality of the product images directly correlates to the quality of the products they are buying.

Every product page should have visuals or model shots to invoke emotion and help show potential buyers the information they need to move from exploring to purchasing.



### 2. Secondary Images

Secondary images appear after the primary image that shows the product from different angles. When it comes to buying online, **73% of internet shoppers** say they expect **3 or more photographs**.

The E-commerce challenge regarding product images is thus to show more and better.

## 3. Interactive 360° views

Different angles of a product provide **close-to-reality visualizations** and a trustworthy perspective of how the product looks. 360° images that allow users to rotate the product with a cursor, add an **interactive layer** to your website, improve engagement, and generate a positive impact on Google's SEO. Beyond assisting with purchasing the product, it also reduces shopping cart abandonment and returns.

Studies have shown that online shoppers **trust** sellers who grant them the ability to interact with products online, similar to a shopping experience in physical stores.



## 4. Close-up Product Shots

According to Statista, **64% of online shoppers** report returning items when it does not match the description or expectations, suggesting that lack of details may be a culprit. Close-up product shots grant customers a better view of the intricate design elements and the overall aesthetics.

The more you show the finer details, the more you can **increase sales** and **reduce returns**. High resolution images are required so that online shoppers can zoom into a product image without compromising on the quality.



## 5. Videos

For decades, videos have been an engaging medium because our eyes are naturally attracted to moving light and pictures. Product videos, in particular, have been shown to captivate the attention of E-commerce shoppers and convey much more information than any other type of media.

In a study by Animoto, Online buyers are **73% more likely to purchase products** after watching a high-quality product video. Videos make customers believe they have all the **necessary information** to make the right purchase.



## 6. Live Streaming, Live Selling

In May 2016, Alibaba's Taobao Live launched, signalling the start of a new era in E-commerce. Live selling provides **an online shopping experience that entertains and engages while selling**. Since then, Western brands, retailers and marketplaces have adopted live selling to attract Generation Z and millennial buyers.

The rise of live selling means that online buyers no longer have to sift through product descriptions or search the internet for reviews. Through this **interactive form of sales**, consumers get instant feedback, ask questions, and overcome traditional barriers to E-commerce sales such as brand trust or product quality.

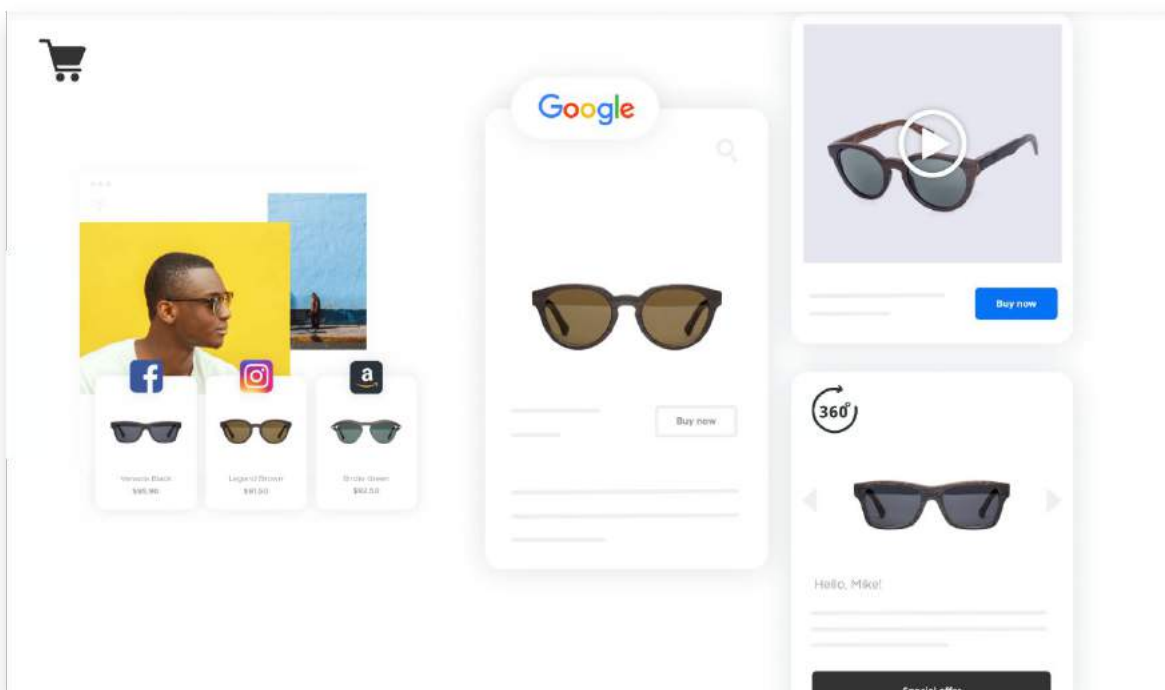
## 7. Mobile-Responsive Websites and Images

Websites that aren't mobile-friendly often fail to provide a pleasant client experience. With increasing mobile internet usage, mobile visitors accounted for **51% of all internet traffic**, and responsive website designs optimized for various device sizes are essential!

Websites that are inadequately optimized have **poor load times**. No one likes to wait, and this can contribute to site abandonment. Even with aesthetically pleasing images, close-up shots, and 360° experiences, all these go to naught if people don't see them!



Today, E-commerce websites need to offer a **media-first strategy** - to recognize that rich media such as **360° product images**, **interactive visuals** and **videos** will drive traffic and demand to your website, and why optimizing images and site speed will help to improve your overall revenue.



**The Future is VISUAL!**

## 2. Why is Speed an essential factor for E-commerce business growth on SERP Rankings?

In 2020, Google announced the **Core Web Vitals** update where page speed would become an even more important ranking factor in both desktop and mobile searches.

**Websites that show up on the first page of Google search results typically have an average loading time of less than 2.3 seconds and claim up to 95% of all click-through traffic.**

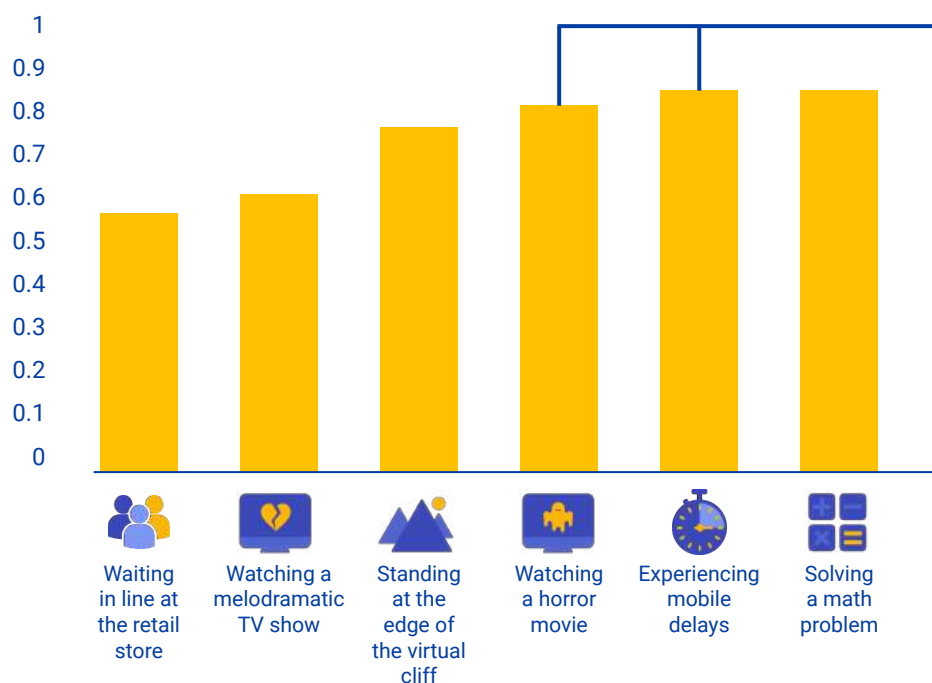
Even within the top ten results, there is a direct correlation between **page speed** and **search ranking**. In turn, pages with higher click-through rates are identified as valuable and are pushed further towards the top, thus reinforcing the importance of optimization.

### Facts:

- Fast sites are easier to crawl
- Fast loading sites have higher conversion rates
- 40% of consumers wait no more than three seconds before abandoning a site
- It improves general user experience (less stress!)

### Cognitive load associated with stressful situations

Source: Ericsson ConsumerLab, Neurons Inc.



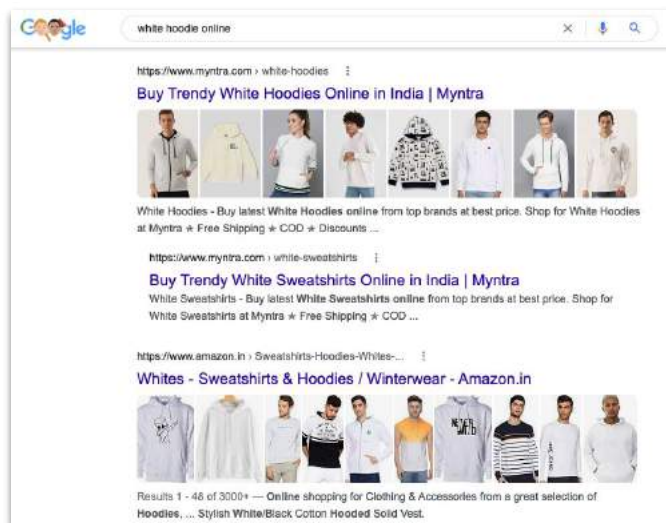


## Higher Revenue

The above benefits translate directly into a greater revenue: according to an often-quoted statistic, **every 100ms improvement in loading time results in a 1% improvement in revenue.**

This means that if an E-commerce site was making \$100,000 a day, **a one-second page delay would result in \$2.5M of lost sales per year.**

While this figure might not hold across the board for websites experiencing different volumes of traffic, page speed still correlates strongly with revenue across various case studies.



## Top Players

We tested the previous statement, and went with the intent of finding a pair of red boots to buy online.

The Top 3 Organic Results showed the following mobile loading speed (mobile is selected as most of the E-commerce purchases take place through these devices):

Website	LCP	FID	CLS	Speed Index
amazon.com	1.3s	26ms	0.01s	8.3s
Myntra.com	2.1s	46ms	0.04s	10.4s
nordstrom.com	2.4s	58ms	0.98s	15.3s

**LCP** stands for Largest Contentful Paint, which measures the loading performance of a webpage.

**FID** represents First Input Delay that measures the interactivity of a webpage

**CLS** refers to Cumulative Layout Shift, which measures the visual stability

*amazon.com*, which ranks first on Google for this search intent, has close to 2 times better LCP, FID, CLS from the second placed *myntra.com*.

**Speed Matters!**

## 3. How to speed up by optimizing visual assets?

In order to succeed in E-commerce, one has to balance two aspects of the customer experience that seem to be mutually exclusive: **speed** and **visual appeal**.

Studies show that “people remember only 20% of what they read, but 80% of what they see - and that is because the human brain processes visual cues better than the written language.”

Unsurprisingly, the average image weight per web page has **more than tripled** between 2011 and 2022, increasing from approximately 260KB to 960KB, making up **more than half of the average web page’s total size**.

However, big visuals also mean heavy image and video files that slow down the page loading time. Design components will become meaningless if customers leave the page before it fully loads.

Here are 6 suggestions to help you overcome this challenge.

### 1. Generate all images server-side and deliver the right image size at the right moment of customers’ journey

There is no point in serving a large original image on the client’s web browser or mobile application to create a small thumbnail. Instead, all image sizes (thumbnail, preview, and full size) should be generated server-side and then delivered to the client-side accordingly.

For the average broadband connection, server-side image handling accelerates **up to 1200% of the loading time**.

### 2. Leverage JPEG compression to reduce image size

The JPEG image file is the most commonly used format for images on the Web and can be compressed without visible quality loss. While JPEG does downgrade the quality of images in the interest of file weight (in MB), it can often reduce the image weight by three or four times without a visible reduction in image quality.



300 x 555 px

q100 ⇒ 41.3 KB



300 x 555 px

vq70 ⇒ 12.5 KB

### 3. Deliver modern image formats like WebP/AVIF to compatible browsers, and JPG/PNG to non-compatible browsers

Developed by Google in 2010, WebP is a modern image format that delivers superior lossless and lossy compression for images on the Web. Compared to PNGs of similar SSIM index quality, WebP lossless images are 26% smaller in size. WebP lossy images are 25 – 34% smaller than JPEGs of equivalent quality. Moreover, according to [CanIuse](#), WebP format is now supported by more than 90% browsers.

In 2019, non-profit Alliance for Open Media, developed an open-source AVIF, which supports both lossy and lossless compression. Offering a more efficient compression than WebP, video-on-demand and cloud providers use high-quality AVIF compression to reduce their data streams. The only downside? AVIF is supported with fewer browsers as compared to WebP. AVIF works with most versions of Chrome, Firefox, and Opera (but not Safari, IE, or Edge).

The example on the right shows an image that has been reduced without any visible loss in quality to WebP and AVIF.



JPEG weight: **21.9 MB**



WebP weight: **5.8 MB**



AVIF weight: **3.2 MB**

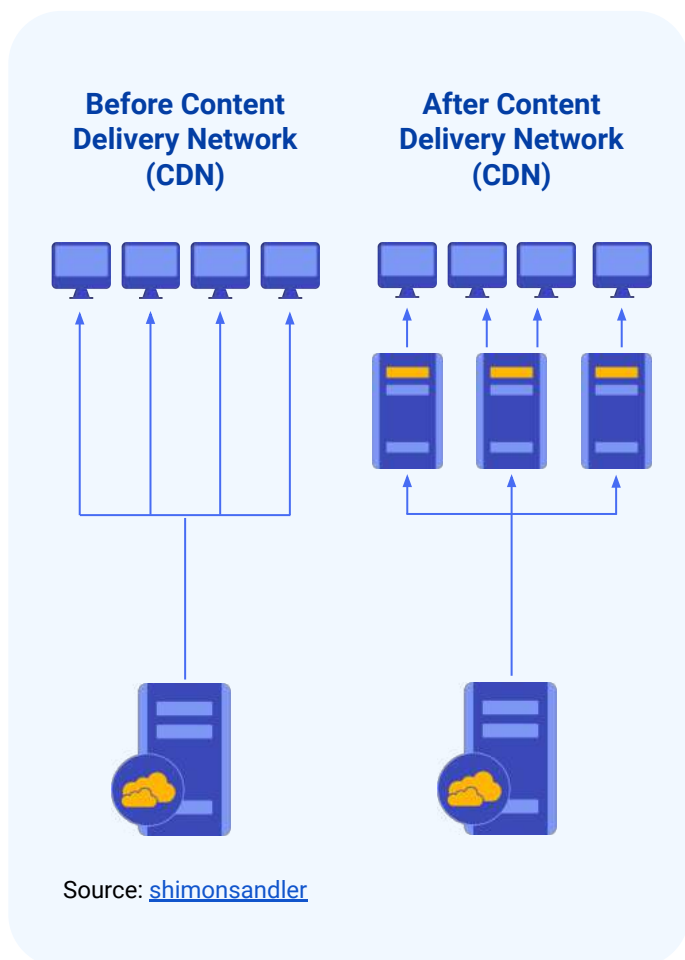
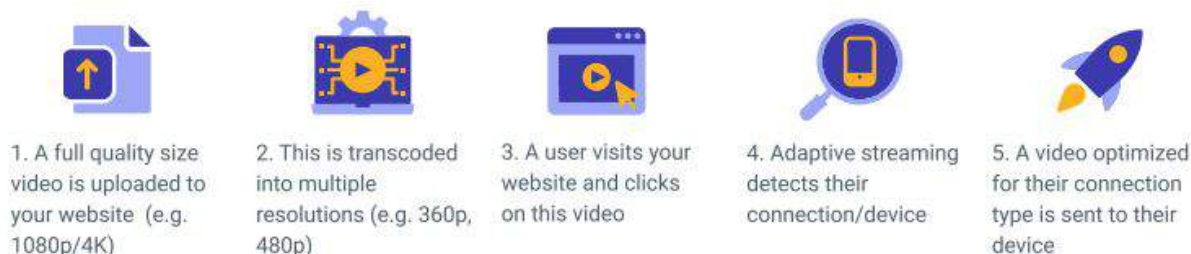
### 4. Leverage the HTML5 <picture> element to make images responsive to different screen sizes

Responsive images allow for an optimal user's device type, window size, orientation, or resolution. A responsively designed image does not rely on the default browser resizing to display images on various devices: it would be a huge waste of bandwidth to deliver an image prepared for a 15-inch laptop screen on a low-resolution four-inch smartphone screen. Instead, responsive images are prepared in various resolutions to serve all form factors optimally.

## 5. Video Transcoding & Adaptive Streaming

Similar to how images should be responsive to fit different screens and to load fast, Video Transcoding enables the generation of multiple video resolutions from an original high-resolution video file (HD or 4K).

Adaptive Streaming then ensures that end-users don't have to wait for your videos to load. The technology analyzes and determines your visitor's device and internet connection, and serves a video optimized for their device and connection speed.



Source: [shimonsandler](https://www.shimonsandler.com)

## 6. Deliver images via CDNs

After generating server-side images and compressing them using modern image formats, the last piece of the puzzle is to deliver the images to the end users via rocket fast content delivery networks (CDNs). Likewise for videos, after Video Transcoding and Adaptive Streaming, a CDN is crucial to deliver the chunks of video as fast as possible around the world.

A CDN refers to a network of geographically distributed servers which cache a website's static content near the location of visitors.

### CDNs offer three main benefits:

- Users located far from the data center where the E-commerce application is hosted will experience lower latency and faster loading time.
- CDNs absorb high load during traffic peaks and save money on hosting infrastructures.
- CDNs keep websites safe by absorbing Denial-of-Service-like attacks.

## 4. Filerobot and Cloudimage – the easiest way to optimize and accelerate images and videos for E-commerce websites

### Save time and effort

Find the right balance between creative media and fast loading time using a third-party solution. The Scaleflex team helps out hundreds of high traffic E-commerce websites to accelerate their media, no matter how creative they are!


**Filerobot - Digital Asset Management** solution of Scaleflex combines all six recommendations (and more) for faster and better images and videos into a single, easy-to-use Cloud SaaS. The benefits?

- Replaces the need for an in-house image or video management solution
- Includes **Cloudimage - On-the-fly Image Optimization, Acceleration & Delivery** solution of Scaleflex
  - URL-based transformations that require no learning curve. Users can set up and start implementing Cloudimage within an hour.
  - 360° pictures are automatized and optimized with a plugin.
- Comes with in-built automated Video Transcoding & Adaptive Streaming capabilities and a scalable multi-CDN architecture
- Optimize your media assets throughout the content-lifecycle, from upload to publishing



**Easy Media Upload**

Image, video, PDF, JS, and CSS  
Back-office integration  
Scalable technology  
Pre-optimized media



**Intuitive Media Search**

AI auto-tagging  
Validation workflows  
Filter and organise by folders, format, tags  
Avoid Duplicates



**Seamless Image and Videos Updates**

Powerful Image Editor for non-tech users  
360° views creator  
Metadata Edition for SEO  
Video Transcoding & Adaptive Streaming



**Collaboration & Media Control**

Configure Approval Workflows  
Create and assign Teams  
Give Permissions



**Advanced Media Analytics**

Get rich insights into your media-performance  
Understand how you can improve



**cloudimage**

**Acceleration & Delivery**

Advanced WebP / AVIF Conversion  
On-the-fly image resizing  
Responsive Media on any device  
CDN Delivery for a global-outreach



## Reduce costs, Scalable & Flexible

### Cloudimage, Scaleflex's Media Optimization Solution:

- Offers the most competitive pricing in the market, thanks to a traffic-based pricing structure and low internal costs.
- Unlimited origin images' transformations.
- Reduce costs for image storage and image resizing hosting infrastructure.

### Filerobot, Scaleflex's all-in-one Digital Asset Management Solution:

- A flexible and transparent pricing model, with on-demand add-ons and services
- Select from Filerobot's Headless DAM for Developers, or Collaborative DAM for Marketers to meet your E-commerce Digital Asset Management needs

Find out how to maximize your Content Operations and connect with our Digital Asset Management and Image Optimization experts at [sales@scaleflex.com](mailto:sales@scaleflex.com)

[Schedule a Demo](#) to discover Scaleflex's solutions!

## About Scaleflex

Scaleflex is a global leading B2B SaaS company developing the most powerful and scalable Digital Asset Management and Media Acceleration solutions. Our mission is to load, store, organize, optimize, publish and accelerate all media assets (images, videos, static files such as JS and CSS files, etc.) for websites or mobile applications.

With more than 2 billion brand assets per month under management, Scaleflex helps over 1000 organizations, including Michelin, St Gobain, Toom, Printemps, WhiteStuff, SeLoger, Knight Frank, Sotheby's Realty and various SaaS companies to provide more engaging, personalized experiences for their customers around the world.

For more information, visit [scaleflex.com](https://scaleflex.com).