IMAGE OPTIMISATION GUIDE

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Images are essential for engaging website visitors, but they often account for the majority of a page's weight. Properly optimised images can dramatically improve your website's loading speed, user experience, and even search engine rankings. This guide will walk you through everything you need to know about optimising images for the web.

Why Image Optimisation Matters

Page Speed:
Faster-loading pages improve user experience and conversion rates

Bandwidth Savings:
Reduced data usage benefits both your hosting costs and mobile users

SEO Advantages:
Faster sites receive preferential treatment in search rankings

Better User Experience:
No one likes waiting for images to load

FILE FORMAT
SELECTION

JPEG

Best for:	Photographs and images with many colors and gradients
Pros:	Small file size with acceptable quality
Cons:	Lossy compression (some data is permanently lost)
Typical compression:	60-85% quality for web use

PNG

Best for:	Graphics with transparency, screenshots, and images with text
Pros:	Lossless compression, supports transparency
Cons:	Larger file sizes than JPEG for photographic content
Types:	PNG-8 (256 colors) and PNG-24 (16.7 million colors)

WebP

Best for:	Almost any web image - an excellent modern alternative
Pros:	25-35% smaller files than JPEG/PNG with similar quality
Cons:	Not supported by older browsers
Support:	95%+ of current browsers support WebP

AVIF

Best for:	Next-generation format for maximum compression
Pros:	50%+ smaller than JPEG with better quality
Cons:	Limited browser support, encoding can be slow
Status:	Growing adoption, consider for progressive enhancement

SVG

Best for:	Logos, icons, and simple illustrations
Pros:	Infinitely scalable, tiny file size for simple graphics
Cons:	Not suitable for photographs
Bonus:	Can be styled with CSS and animated

IMAGE RESIZING BEST PRACTICES

Dimension Guidelines

Never display images at a smaller size than their actual dimensions

Resize images to the largest size they'll be displayed at

Consider creating multiple sizes for responsive designs

Common breakpoints: 320px, 768px, 1024px, 1440px

Resolution Considerations

Standard screens: 72-96 PPI (pixels per inch)

Retina/high-DPI: Consider 2x images (served conditionally)

Balance quality vs. file size based on context

COMPRESSION TECHNIQUES

Lossy Compression

Permanently removes data to reduce file size

Best for photographs where minor detail loss isn't noticeable

Tools: TinyJPG, ImageOptim, Squoosh

Lossless Compression

Reduces file size without quality loss

Best for graphics, logos, and images with text

Tools: OptiPNG, TinyPNG, ImageOptim

Compression Guidelines

JPEG: 60-85% quality for web (70-75% often ideal)

PNG: Use color reduction when possible

WebP: 75-85% quality generally provides excellent results

SVG: Use an optimizer to remove unnecessary code

IMAGE SEO BEST PRACTICES

File Naming

Use descriptive, keyword-rich filenames

Separate words with hyphens: blue-denim-jacket.jpg **NOT** bluedenim_jacket.jpg

Alt Text

Always include descriptive alt text

Format: alt="Brief description of image with key information"

Keep under 125 characters for screen reader compatibility

Captions & Context

Add captions where appropriate

Ensure images are contextually relevant to surrounding content

Structured Data

Use **schema.org** markup for product images

Consider image sitemaps for large sites

TYPICAL IMAGE SPECIFICATIONS

Hero Images & Banners

Desktop dimensions: 1920px × 1080px (or 1440px × 810px)

Mobile dimensions: 750px × 1200px

Format: JPEG/WebP (80-85% quality)

Typical file size target: <200KB for desktop, <100KB for mobile

Notes: Consider art direction for mobile (center focus point)

Product Photography

Product listings: 800px × 800px square

Product detail main image: 1200px × 1200px

Product galleries/thumbnails: 400px × 400px

Format: JPEG/WebP (85% quality) or PNG if transparency needed

Typical file size target: <100KB for main images, <30KB for thumbnails

Notes: Consistent aspect ratios improve grid layouts

Blog Featured Images

Desktop dimensions: 1200px × 630px (2:1 ratio matches social sharing)

In-content images: 800px width (flexible height)

Format: JPEG/WebP (80% quality)

Typical file size target: <120KB for featured, <80KB for in-content

Notes: Optimise for both website and social media sharing

Team/Staff Photography

Main team page: 600px × 600px or 800px × 800px (square)

Leadership/executive: 1000px × 1000px

Small bio/sidebar photos: 300px × 300px

Format: JPEG/WebP (85% quality)

Typical file size target: <100KB

Notes: Consistent cropping (head and shoulders vs. full body)

TYPICAL IMAGE SPECIFICATIONS

Background Images

Full-page backgrounds:	1920px × 1080px
Section backgrounds:	1440px width (flexible height)
Format:	JPEG/WebP (75-80% quality)
Typical file size target:	<200KB
Notes:	Consider overlay text readability; use higher compression for backgrounds

Logos & Icons

Header logo:	SVG preferred, or PNG 300px width with 2x version
Footer logo:	PNG/SVG 200px width
Favicon:	32px × 32px, 16px × 16px (multi-size ICO or individual PNG)
Social icons:	SVG preferred, or PNG 32px × 32px
Format:	SVG (preferred), PNG (for complex logos or if SVG unavailable)
Notes:	SVG allows for perfect scaling across all devices

Gallery & Portfolio Images

Thumbnails:	400px × 300px (or appropriate thumbnail size)
Lightbox/enlarged view:	1500px × 1125px (maintain aspect ratio)
Format:	JPEG/WebP (80-85% quality)
Typical file size target:	<50KB for thumbnails, <250KB for enlarged views
Notes:	Implement proper lazy loading for gallery grids

Document/Resources Images

PDF thumbnails:	400px × 520px (mimicking document proportions)
Resource icons:	64px × 64px
Format:	PNG (with transparency) for icons, JPEG for thumbnails
Notes:	Consistent styling improves recognition

CHECKLIST FOR PERFECT IMAGE OPTIMISATION

Choose the appropriate file format

Resize to appropriate display dimensions

Apply proper compression

Implement responsive images where needed

Enable lazy loading on your website

Optimise alt text and filenames

Test performance impact

COMMON MISTAKES TO AVOID

Uploading images directly from cameras or stock sites

Using PNG for photographs

Relying on HTML/CSS scaling instead of proper resizing

Implementing too many large hero images

Forgetting to optimise favicon and touch icons

Image optimisation is not a one-time task but an ongoing process. By implementing the strategies in this guide, you'll create a faster, more user-friendly website that performs better in search rankings and provides a superior experience for your visitors.

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