> "Our average page weight went from 4MB to 400kb after implementing ImageEngine by ScientiaMobile. We realized that if our site loaded slowly for mobile users, then we were losing half of our potential customers. By implementing ImageEngine, we slashed loading time, generated a huge uptick in mobile visitors, and now have 50% of our visitors coming from mobile. Best of all, we have seen a 100% increase in conversions and a 20% decrease in bounces since we deployed ImageEngine."

PRAVEEN KUMAR,
Chief Technology Officer, Furnspace
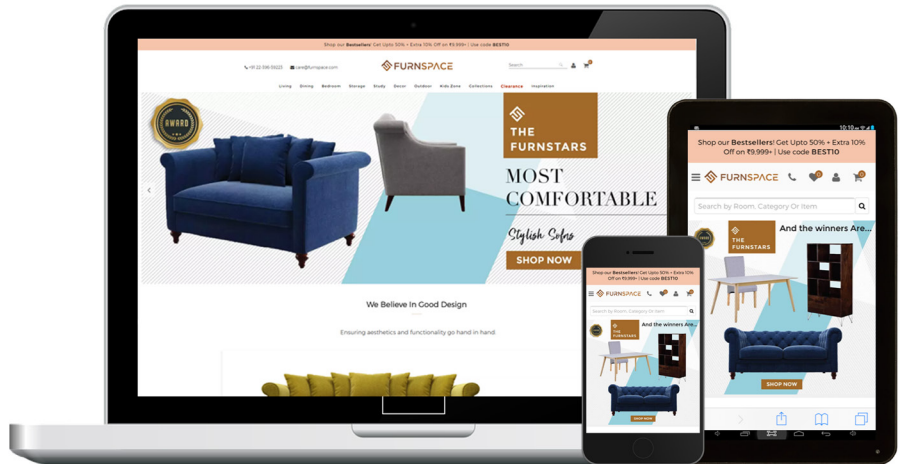
FURNSPACE

Accelerating Images for Improved Mobile eCommerce

Furnspace is an exclusive online destination for furniture and home decor accessories. Furnspace strives to bring its customer the best quality, hand-picked products from across the globe and translate this quality through the images on their website. Their robust eCommerce platform provides a wide selection of furniture and accessories categorized by room type.

The wide product selection and high-quality images on their site posed a problem for Furnspace, especially on mobile. How can an image-intensive eCommerce platform speed up its user experience (UX) for mobile customers? The solution that Furnspace evaluated and chose was ImageEngine by ScientiaMobile. Furnspace extensively tested ImageEngine to ensure that it tailored images to each mobile device and delivered them quickly through its content delivery network (CDN).
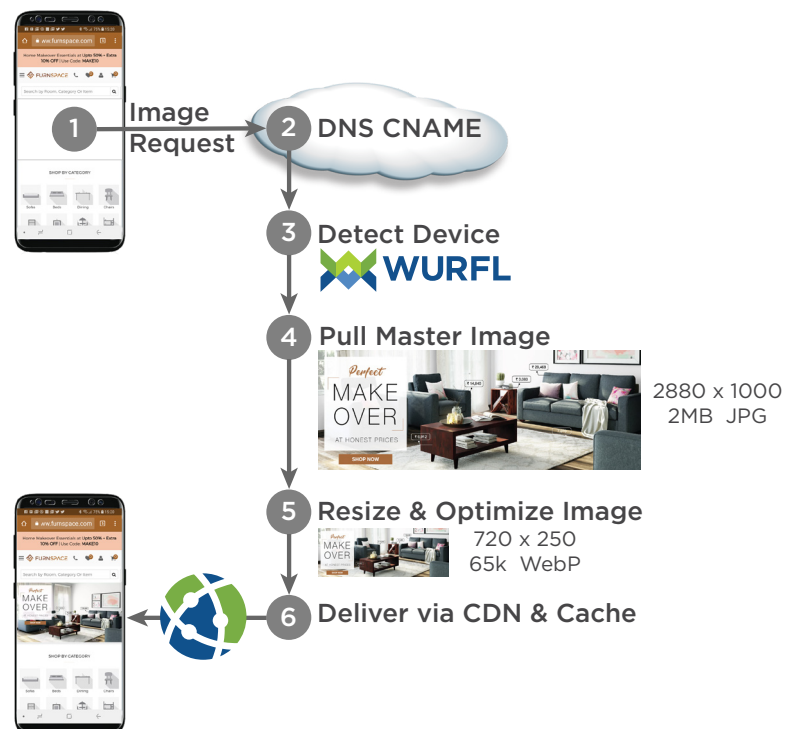
Here's what they found...

The Problem

Initially, Furnspace had a high bounce rate and a predominantly desktop purchasing audience. As an Indian eCommerce company, Furnspace knew that many Indian customers use their mobile phone for making purchases. Mobile UX was therefore crucial to attract and convert mobile visitors. Furnspace knew they needed to accelerate their site's loading speed. Furnspace had already implemented a traditional CDN with Amazon Cloudfront, but it only slightly improved performance. Furnspace needed a solution to accelerate their website, improve conversions, and control future CDN operating costs.

A major opportunity for improving website speed was to reduce Furnspace's image payload without sacrificing image quality. A mobile shopper buying Furnspace's products typically downloaded a 4MB page, the majority of which were images. On mobile devices, these images were heavier than they needed to be. Higher resolution and file size did not yield perceptible differences in UX. If Furnspace could reduce their image payload, then mobile pages would load faster.

The ImageEngine Solution

Furnspace tested ImageEngine's resizing CDN service to address their image acceleration challenges. ImageEngine is unique in the way it seamlessly combines three services.

First, ImageEngine leverages ScientiaMobile's WURFL device detection to identify the devices coming to Furnspace's website. Once identified, ImageEngine uses intelligence about the device to drive image resizing and compression. For example, ImageEngine provides

1. Image Request
2. DNS CNAME
3. Detect Device — WURFL
4. Pull Master Image — 2880 x 1000 2MB JPG
5. Resize & Optimize Image — 720 x 250 65k WebP
6. Deliver via CDN & Cache

screen and viewport dimensions, screen resolution (PPI ratio), operating system, and image file types supported. It proactively detects device information without using slow, cumbersome javascript.

Next, ImageEngine leverages this device information to automatically resize, convert, and compress images in real time. It resizes only when images are requested. ImageEngine also caches images, so there is no need to resize them for subsequent requests from identical devices.

Finally, ImageEngine uses its global CDN with device-aware edge servers. This means that ImageEngine's logic is pushed to the edge of its global network with more than 40 PoPs. Images are cached as close to customers as possible, resulting in a 65% faster webpage download time.

The Deployment

Furnspace started their rollout of ImageEngine by performing A/B tests on specific mobile devices. They tested on many smartphones, from Samsung Galaxy to OnePlus. Across all the devices they tested, ImageEngine produced a very fast UX.

For deployment, Furnspace used CNAME DNS records to direct traffic through ImageEngine. Immediately, it began to yield speed improvements compared to Furnspace's legacy CDN approach. ImageEngine's simplicity and ScientiaMobile's 24/7 support made this rollout quick and painless.

The Results

In terms of speed, ImageEngine helped Furnspace reduce the load time from 17 seconds down to 6 seconds. Additionally, ImageEngine generated numerous business improvements that far outweighed ImageEngine's cost. Faster load times helped improve Furnspace's rankings on search engines. This search engine optimization improvement on Furnspace's 40 most important keyword searches yielded a 230% increase in queries.

UX Impovement: Load Time Acceleration

65%
or
11 seconds

Previous CDN .... 17 sec

ImageEngine ...... 6 sec

BENEFITS

- **Faster Page Loading:** Accelerate your website and decrease image payload by more than 60%

- **Generate Higher Conversions:** Lower bounce rate for more revenue

- **Streamline Image Management:** Simplify process by 90%

- **Smart Bytes = CDN Savings:** Pay only for optimized image bandwidth and reduce operating costs

- **Adaptive Image CDN:** Automatically detect mobile devices, adapt images, and cache them for faster performance

- **Simple Deployment:** Easy integration with eCommerce platforms

FURNSPACE RESULTS

- 2X purchase conversions

- 7% increase in share of revenue from mobile visitors, growing from 38% to 45%

- 20% bounce rate reduction

- 2X time on page

- 230% increase in the number of queries from top 40 keyword search results

- 65% faster web page download time, saving 11 seconds

- 86% reduction in image payload

Once visitors reached Furnspace's site, its faster UX dramatically lowered the bounce rate by 20%, and visitors doubled the time spent on pages. Furnspace's Chief Technology Officer, Praveen Kumar, saw "a phenomenal improvement from a marketing perspective. We diagnosed the before and after and found a considerable improvement in the user experience. Bounce rates fell from 80% to 60%. And users were engaging longer with our website before dropping off, which is excellent. Before, website session duration was less than a minute, and now it is around a minute and 40 seconds. Customers are learning more about Furnspace."

Revenue Growth: Purchase Conversions

2X growth in purchase conversions

Previous CDN

ImageEngine

Purchases doubled after deploying ImageEngine. More visitors were staying on their site and converting to paid customers. Much of this improvement came from mobile customers. The percent of revenue coming from mobile purchases increased from 38% to 45%.

Operationally, Furnspace reduced the costs of their image management process and CDN. They had previously custom-developed a system to render different image sizes based on device type. But the result was nowhere close to what ImageEngine provided, so they removed the custom code after onboarding ImageEngine.

Cost Savings: Image Payload Reduction

86% or 2,580 GB per month

Previous CDN — 3,000 GB

ImageEngine — 420 GB

In terms of CDN expenses, ImageEngine generates a smaller payload compared to Amazon Cloudfront. Originally, usage was 3TB monthly on Furnspace's site, but afterwards, Furnspace now had only 420GBs, which is a huge 86% reduction in usage. As traffic scales on their site, Furnspace expects the ongoing CDN savings to widen.