

Aspect Ratio

Understanding the different resolution, aspect ratios, and formats for efficient content planning and preparation.



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What is Aspect Ratio?

An aspect ratio describes the ratio of an image or videos height in relation to its width. This ratio gives you a clearer understanding of the shape you'll have to operate in when creating content as aspect ratios frequently change depending on where the content is delivered.

Aspect ratios are written as a width to height formula. For example, a mobile phone when horizontal (also known as Landscape) is an aspect ratio of 16:9 - this means that for every 16 pixels wide it's 9 pixels in height. Turn the phone vertical (also known as Portrait) and it becomes 9:16 - 9 pixels wide for every 16 pixels of height.

So how does aspect ratio change your approach to content?

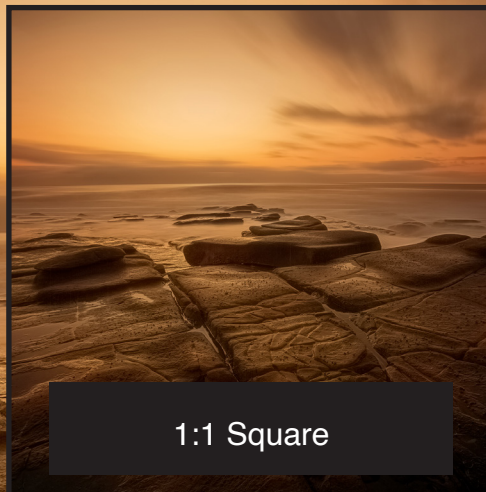
As you can see in the set of images below, aspect ratio greatly alters what you're able to see when you take a standard image and try to reframe it into a different aspect ratio. A nice horizontal image will be heavily cropped on the sides when turned to vertical. A square and circle aspect ratio will cut off from both width and height.

Safe to say, photo and video is not one size fits all. Your delivery platform whether it be social media, TV, printed, cinema etc has to be considered first before creating content. You really do need to consider the last thing first, not only to ensure your content is the appropriate size for your delivery platform, but also so you can get the most use and value out of your content.

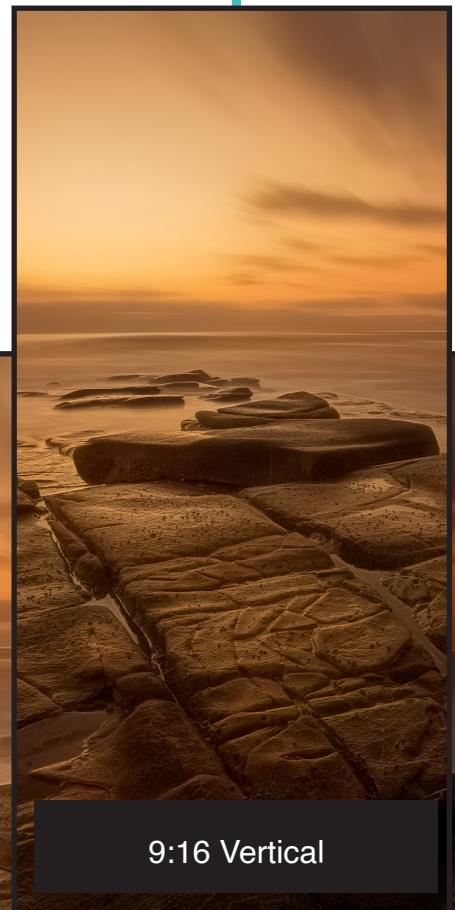
1:1 Circle



16:9 Horizontal



1:1 Square



9:16 Vertical

Aspect Ratio and Resolution

Full HD 16:9

Full HD (1080p) has 1920 x 1080 pixels

Full HD width divided by height = 1.778

$1920 / 1080 = 1.778$

$1.778 = 16:9$

4k UHD 16:9

4k UHD (4k) has 3840 x 2160 pixels

4k UHD width divided by height = 1.778

$3840 / 2160 = 1.778$

$1.778 = 16:9$

What the above shows is the key difference between aspect ratio and resolution. 1920 Full HD and 4K UHD are generally considered two different things by most people and while that's true in a lot of ways, they both have an aspect ratio of 16:9.

An aspect ratio has no predefined pixel numbers, it's only the ratio of the width to height relationship that defines the aspect ratio. 1280x720 (720 HD), 1920x1080 (Full HD), 3840x2160 (4k UHD), 7680x4320 (8k UHD) are all examples of common resolutions that all have the same 16:9 aspect ratio.

Any pixel equation where the width divided by height results in 1.778 is 16:9 which is why you'll sometimes see 16:9 aspect ratios also referred to as 1.78:1 although this is less common. An aspect ratio doesn't change based on the pixels unless the height or width are adjusted independently and all it does is switch it to a different aspect ratio.

Common Aspect Ratios

Horizontal

- 16:9 - Standard ratio for Full HD as seen on modern TV's
- 1.85:1 - 2.40:1 - Widescreen format used traditionally in cinema but becoming more mainstream across other mediums.

Vertical

- 9:16 - Vertical or Portrait mode when holding a phone or turning the camera vertically.
- 4:5 - Traditionally known as an 8x10 if you're printing out a photo. 4:5 is the vertical option for posting on Instagram feeds.

In the Middle

- 1:1 Square - Neither Horizontal or Vertical as all sides are equal. Not really suitable for landscapes or portraits. Best used when the subject can be centre focused.

Since the rise of mobile phones and social media, vertical photo and video have become increasingly common, which inevitably leads to the question of 'which one is best for content creation?'

The answer is a frustratingly vague - depends. A mechanic will have several different wrenches, a chef several different knives. In content creation, like any other industry, it's a case of the right tool for the job. There is no one size fits all to make it easier.

You wouldn't create a vertical video to be shown on TV or in cinemas, and a wide landscape photo would lose all of its charm and effectiveness if it was squashed and cropped into a 9:16 instagram story. This is why your delivery platform will dictate not only the type of content you create, but how you go about creating it.

Horizontal Best Uses

Television
Cinema
Narrative Video
Youtube
Drone
Social Media Banners
Landscape Photography

Vertical Best Uses

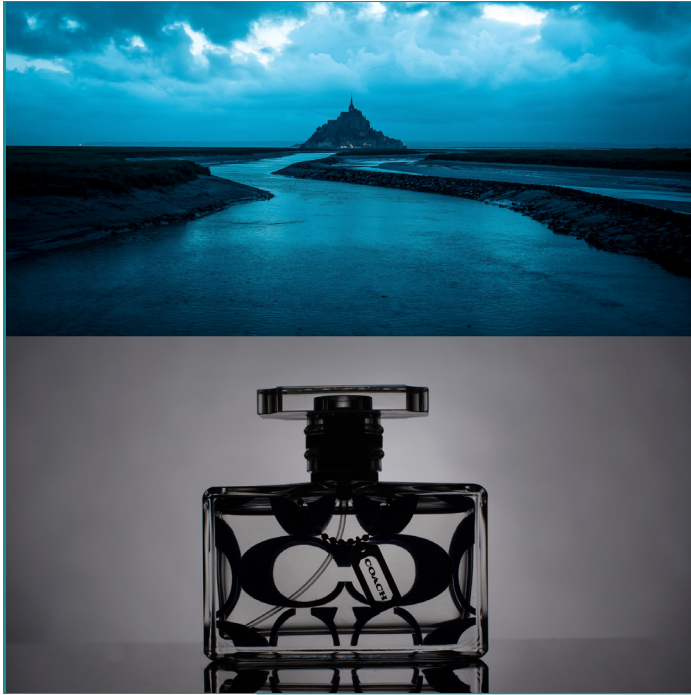
Instagram
Facebook
Tik Tok
Single subject video
Printed Posters/Flyers
Social Media Avatars
Portrait Photography

While both horizontal and vertical have their own pros and cons, there's a very large grey area where either format can still be used effectively. An example of this is Instagram's default aspect ratio - 1:1 Square.

In this aspect ratio it makes no difference whether you're shooting horizontal or vertical, you're going to be heavily cropping one way or the other.

This is why it's so important to consider your aspect ratio and final delivery platform in the pre-planning stages of content creation. No matter if it's a horizontal, vertical or even-sided aspect ratio, knowing the outcome will allow you to frame and compose your subject in camera with this goal in mind.

Horizontal (Landscape)



Horizontal imagery has evolved greatly over the years. Cameras were originally designed to take photographs one type of way - horizontal.

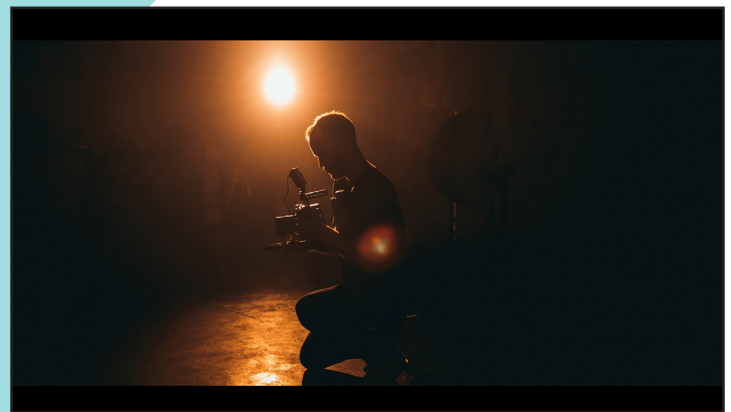
Our eyes are set horizontally, our natural view is wider than it is taller. This was reflected in the early designs of cameras and despite the rise of vertical imagery.

Our brains are also wired to visually scan from left to right, much like when we read. A horizontal image gives us more width room to scan naturally from left to right.

Cameras were originally designed with horizontal imagery in mind. It's no surprise that the rise of video initially followed that trend before mobile phones and social media became widespread.

Landscape photography, narrative storytelling, TV and Cinema will likely always remain the domain of horizontal. To effectively tell a visual story requires a mixture of wide, close up and moving/tracking shots to give the audience an accurate representation of space and distance between objects and characters.

Vertical video will always struggle to achieve this due to how heavily cropped the sides of the aspect ratio are. Could you imagine watching something like Lord of The Rings with its sweeping sky shots of open countryside if it were a vertical video?



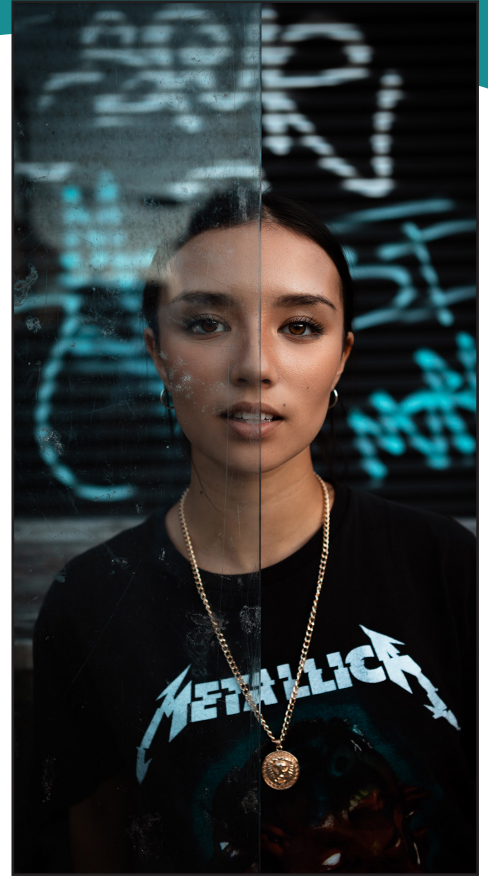
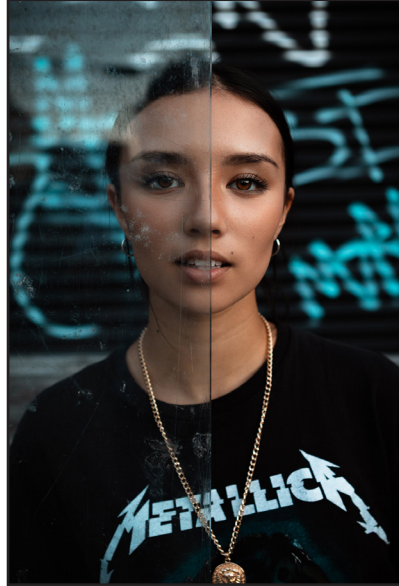
- 4:3 - Box TV Screens
- 16:9 - Standard FullHD format
- 1.85:1 - Widescreen cinema
- 2.39:1 - Anamorphic widescreen

Motion Advantage

If you're shooting video and intend to incorporate a lot of movement, especially left to right or right to left action, then horizontal has significant advantages over vertical.

Not only is it more practical in keeping the subject in frame while the camera is moving, but it provides a significantly more pleasing viewing experience when audiences have a wider view of where they were and where they're heading.

Vertical (Portrait)



There was a time when vertical imagery was almost exclusively the domain of portrait photography. After all, humans are taller than they are wide so it makes sense that taking advantage of the extra height leads to more pleasing photos.

Mobile phones changed everything, and with almost 95% of users preferring to hold their phones vertically when viewing content it's no surprise that the need to understand and utilise vertical content has become a must understand skill in today's world.

To add to that, unlike horizontal visuals, vertical is much easier to repurpose into other aspect ratios than its horizontal counterpart. Looking at the three images above, the common theme is that all of them maintain the same width.

While horizontal always maintains the same height, horizontal is generally used because there's a need to capture everything within the width of the frame. This makes it a little more problematic to crop without losing the feel and charm of the original visuals intent.

Illusion of Space

Needless to say, vertical video heavily crops the side of the frame, but that doesn't mean that you can't make use of horizontal space in your vertical videos to give an illusion of space to your audience.

From selfie sticks to tripods there's dozens of accessories on the market that allow a user to control their phone without being close to it. This can help create a wider field of view of space that gives the audience a more pleasing viewing experience with room to scan left to right.

Other Aspect Ratio



As mentioned previously, the 1:1 Square aspect ratio became popular as Instagram's default aspect ratio, but rather than being limited to Instagram it's evolved to be utilised across many different social media platforms.

Facebook for example now recommends the 1080x1080 1:1 aspect ratio for things like in feed video ads as to make it compatible with Instagram as an ad campaign can be run for both Facebook and Instagram simultaneously.

The 1:1 aspect ratio is also used when dealing with creating avatars for profile pictures. In the image to the left you can see what you lose from the corners so adjusting your composition when creating an avatar is a must.

1.85:1 - 2.40:1

These aspect ratios are worth mentioning. If 1.778 is the standard 16:9 aspect ratio then anything in the range of 1.85:1 - 2.40:1 would be even wider proportionally relative to the height. These aspect ratios are most commonly seen in the world of film. Movies often have black bars on the top and bottom to fill out space either on TV or in cinemas.

While these aspect ratios are largely recognised as a film trait, they are becoming more utilised in TV, advertising, social media, and anywhere where the end goal is to create a more cinematic feeling.

Banners

Different social media platforms employ banners at varying aspect ratios and recommended pixel dimensions. To get around this, create a template with both the widest and shortest dimensions marked out. Use the shortest dimensions as a content safety zone for important information.

Important information to be kept inside the 'safe zone'.



Tips and Tricks

Plan Ahead

The whole point of understanding aspect ratio is to be able to incorporate it into your content creation strategy from the start. Too often it's one of the last things people consider and get stuck trying to literally fit a square peg into a round hole - or a horizontal peg into a vertical hole.

A wrong aspect ratio, or not considering it beforehand, can turn a great image or video into a poor piece of content if the important visuals or information are cropped out by a different aspect ratio.

Plan for what comes last by thinking about it first.



Know What You're Losing

Horizontal and vertical content have their place and each come with their own pros, cons, and ideal delivery platforms. However, that doesn't mean a horizontal image or video can't be used for a predominantly vertical platform and vice versa.

But you do need to understand what you're losing to make that aspect ratio compromise.

For example, on Instagram you can still post a horizontal video into a 1:1 square post, but are you going to crop the video or downsize the video to fit into a 1:1 Square post? This will retain the original video, but leave you with noticeable black bars on the top and bottom of the post.



Multiple Use

The sheer amount of options when it comes to aspect ratios, platforms and devices that content is created for and viewed upon can be overwhelming at times. It can also create an opportunity to repurpose one piece of content designed for one platform and use it for another.

For example, a horizontal video might not suit Instagram, but a couple of still frames from the video would stack nicely inside a 1:1 Square Instagram post. Add a link to the full video and use it as a teaser for the full video.

Don't be afraid to experiment with aspect ratios.

Summary



The single biggest takeaway with aspect ratios is that it's essential to plan in advance. Knowing where your content is going will dictate how you create it and how you potentially could re-use it on other platforms and in other aspect ratios.

Even if the resolution changes, the aspect ratio may remain provided it maintains the relationship between the width and height. The aspect ratio only changes when the relationship between the pixels is altered.

For example a 1920 x 1080 pixel composition (16:9) changes when the width is changed to 1080 (becoming 1:1 Square). Alternatively if the height is changed to 1920 pixels to match the width then it's still a 1:1 Square ratio, but instead both width and height are 1920 pixels instead of 1080.

Summary Takeaway

- Plan in advance - Know where and when your content is going to be used.
- Aspect Ratio is the relationship between the width and height of an image/video.
- Use different tools for different jobs - Horizontal and Vertical both have their place.
- Content can be repurposed - get more value out of a single piece of content.
- Experiment with Aspect Ratios - unique results can come from unexpected places.

