

## 1. Recap

Yesterday we looked at SEO Content, today we are going to look at SEO Performance and tools.

How did you find your session yesterday?

Give me one thing you took from yesterday's session.

## 2. Today's to-do list

**We will look at how our website performance can impact our results.** We have done our keyword research, set out our content strategy, and optimised the text on our pages. Now we need to look at the overall performance of our site. **Plus, we are going to look at some tools and resources to help you get the most out of your SEO.**

## 3. Learning objectives:

**By the end of this session, you will**

**Understand more about caching and performance tools.**

**Understand more about accessibility and its importance.**

**Know what you need to include in an accessible web page.**

**Identify resources to help you.**

## 4. Whip Round

Show of hands who uses any caching or performance tools?

## 5. PageSpeed Devs

Google takes a lot of elements into account when it looks at your website and how high it should rank. **A fast-loading site will enhance the overall user experience, people like sites that load quickly and Google rewards fast-loading sites over slow ones.**

There are a lot of metrics that go into website performance. Yes, we want a page that loads quickly but it's also about how well the pages work together, how we link our content, how we build our site, and how our server is set up.

We are also going to look at some of the tools that you can use to help you with your SEO, they include testers and data gatherers. All useful sites that can help you audit, create and test.

**We are going to focus on the performance section first.**

The performance section of PageSpeed Insights has six metrics that are tested.

### First Contentful Paint

**The First Contentful Paint is the time at which the first text or image is 'painted' or appears on screen to view.** It's how long it takes the browser to render the first piece of visible content.

### Largest Contentful Paint

**The largest Contentful Paint shows the time at which the largest text or image is painted.** This is when the main content of the page is visible to users.

### Total Blocking Time

**This is the total amount of time between our First Contentful Paint and our Time to Interactive.**

This is how long it takes from the first element being rendered to the point where we can interact with the screen and do something. It's the total amount of time the page 'blocks' a user from being able to click a button or tap on an image.

### **Cumulative Layout Shift**

**Cumulative Layout Shift measures the movement of visible elements within the screen view.** It's about visual stability on the page and how users experience unexpected changes in layout. A *layout shift* occurs any time a visible element changes its position from one rendered frame to the next. We want to avoid layout shifts as much as possible as they can be frustrating and create a poor user experience. So, we are talking about text boxes jumping or images moving around in boxes.

### **Speed Index**

**The speed index shows how quickly the contents of a page are visibly populated.** It measures how quickly the content is visually displayed during our page load.

Various factors go into all these metrics results, so we don't want to focus too heavily on one metric but look to improve the overall performance. The beauty of PageSpeed Insights is the opportunities and diagnostics sections that give us suggestions to improve our performance or list elements that we can fix. We want to get the best results for both desktop and mobile on each of the main site pages.

When we look at the opportunities section, we see things like "Eliminate render-blocking resources" and "combine CSS" This is where our caching plugins and apps come in.

### **Caching**

Caching is a word that is bounced around a lot in web development. **It's the process of storing copies of files in a 'cache', or temporary storage, so they can be accessed more quickly.**

When a visitor lands on your page their browser requests the data from your web server. We then wait for that server to send the required information. What we want to do is speed up that process.

A web cache is website data a computer has stored temporarily for fast and easy future access. Without web caching in place, browsers must send new requests every time visitors arrive on your site. If your content has been cached, your server or visitors' browser can send a 'static' or saved copy of your content instead, meaning it already has the information and can send it immediately.

Think of it as a fridge, you go out and stock up with bread, milk, butter, and cheese. You store it all in the fridge and then it's there when you need it, and you don't have to go out to the shop every time you want a brew or a butty.

**There are several types of web cache, each of which is useful in different circumstances. It's important to understand the kinds of data they store and what sites they are suitable for.**

### **Site Cache**

**A site cache or page cache stores website data the first time a webpage is loaded. Each time a user returns to your website, saved elements are quickly accessed and displayed to visitors.**

Site caching is ideal for websites with a lot of static content. Since your site rarely changes, users will be able to continue loading your pages quickly while still seeing the latest version of your site.

### **Browser Cache**

**Browser caching is a type of site caching built into the end user's web browser.** A browser cache can contain HTML pages, CSS stylesheets, images, and other multimedia content. Website elements are stored by the browser on your visitor's computer and grouped with other files associated with your content. If we have lots of static content on our pages that don't update frequently, then browser caching can be a good solution to increase speed.

### Server Cache

Server caching is one of the best methods for reducing server loads. When a request is made, **the server checks its temporary storage to see if it has the required files before processing the request in full. If the requested content is available in the server's little storage area, it will be returned to the browser right away.** This enables your server to handle more traffic and return your web pages faster.

Using caching plugins or apps will depend on the type of site you have so might not always be an option. You do need to be careful and not just click every single link, but most plugins have set-up screens that can walk you through the process and hosting companies like SiteGround have their own versions that are set up perfectly for their servers.

There are other things we can do to help speed our site up that we have more control over no matter what type of site we have.

### Content Optimisation

**We need to make sure our images and videos are well-optimised to help them load quickly.** There are plugins to help you do it, but ideally, we want to ensure that the images we upload are correctly saved. Most websites use jpegs, png, svg and the latest type webp. These image formats offer us different features, so we need to know what they do and what format is best for what use.

**JPEG - Joint Photographic Expert Group**, probably the most well-used of the image formats on the web. It offers multiple compression levels from super low quality and size to high quality and larger file size. Jpeg is a very stable image format, perfect for photographs and flat graphics on white backgrounds.

**PNG - Portable Network Graphics**, PNG tend to be larger in size but give you the ability to have a transparent background making them perfect for logos and graphics that are going to be shown over different coloured backgrounds.

**SVG - Scalable Vector Graphics**, used for icons and graphics that need to be scaled to different sizes without any loss of quality. Jpegs will go blurry if they are rendered up to too big a size. SVG keep their crispness no matter what size they are shown at.

**WEBP - Web Picture format**, WebP offer much better compression than the other formats and is referred to as a next-generation image format. Higher compression without loss of quality makes them perfect for web images and photos.

**GIF - Graphics Interchange Format**, a good choice for simple images and animations.

Like the caching plugins, your ability to use image compression apps will depend on the website platform you use, like Smush, which is designed for WordPress. These plugins automatically compress your images as you upload them, giving you smaller file sizes and faster loading speeds. If you can't use a compression plugin, then make sure you format your images correctly before you add them to your website. The latest versions of Photoshop and Canva let you save your files as WebP before you upload them rather than convert them afterwards.

## 6. Activity one

### Let's Smush

We are going to look at optimising our images with the plugin Smush. Let's run through it together and then you can go off and finish your activity.

Firstly we are going to install the Smush plugin and then walk through the basic set-up wizard.

Let's take a look at what some of these things mean on our way through the wizard.

### **Automatic Compression**

When you upload images to your site, Smush can automatically optimise and compress them for you saving you from having to do this manually. Perfect if multiple people are going to be working on the site or you are going to be uploading lots of images each time you work on it.

### **Super Smush**

Optimise images up to 2x more than regular smush with multi-pass lossy compression. What? Multi-pass lossy compression reduces the file size significantly. It strips out as much data as possible without reducing image quality. It will help with page load time, however, make sure you check your images, in some cases the quality can change and your image can be pixelated and fuzzy.

### **EXIF Metadata**

Photos often store camera settings in the file, i.e., focal length, date, time and location. Removing EXIF data reduces the file size. Note: it does not strip SEO metadata. Especially if your images have been supplied by a photographer, the images might have their copyright in them, camera details etc and it can all add to the data in the file, therefore making the image file larger.

### **Lazy Load**

This feature stops offscreen images from loading until a visitor scrolls to them. Make your page load faster, use less bandwidth and fix the "defer offscreen images" recommendation from a Google PageSpeed test. If you think of a web page you have visited and the images appear as you move further down the page, that's Lazy Loading. The page is only showing you the bits you are actually looking at, rather than loading everything all at once. Especially if it's a single page scrolling page like a lot of sites are these days then loading all that data upfront can take ages when it might not be needed.

When we finish the installation wizard, Smush will scan your site and show you your dashboard with the elements it recommends you look at.

[Demo the set-up and the dashboard, explain any other settings]

So off you go, install your Smush plugin and optimise your images. Screenshot the dashboard with the initial scan and then again when you have run the plugin so we can see the size savings you have made.

Time for this activity: 20mins

## 7. Quick Fire Quiz

Using the quiz pop up answer the question on the screen

Question: What does PNG stand for?

- A Properly Negotiated Graphic
- B Portable Network Graphic
- C Proportioned Navigation Graphic

Well done everyone, the correct answer is: B Portable Network Graphic

## 8. Accessibility and SEO

*“Web accessibility is the practice of designing and developing websites that are usable by everyone, regardless of their abilities, disabilities, or preferences.”*

There is a certain amount of social responsibility and legal compliance, but it also offers a way to improve your SEO and user engagement. Google scores the accessibility of your site in its ranking metrics so it is important to apply as much best practice as possible.

**Web accessibility is about making sure your website can be accessed and understood by all your potential visitors including those with any visual disabilities.** It means making sure your site is set up to be used by assistive technologies, like screen readers, keyboards, or voice commands. It also means that your website adapts to different devices, browsers, and network conditions. **The Web Content Accessibility Guidelines (WCAG) are the international standards for web accessibility and were created to ensure that you do not exclude or discriminate any segment of your audience.**

### How does web accessibility affect SEO?

**Web accessibility and SEO share a common goal of making websites more understandable and user-friendly for everyone. By following the WCAG you can improve your accessibility, SEO and overall user experience.** Using semantic HTML, clear headings, descriptive links, and alt text for images will make your site easier to crawl and index. If you include more engaging content and information that is well structured with lists and headings it can enhance your relevance and authority and reduce your bounce rate. Viewers will stay longer on your pages and travel further through your content. All good for those all-important analytics. By making our website more accessible we can improve our user engagement and overall satisfaction in the experience of visiting our site. Think of it as removing barriers and frustrating elements that might stop our visitors from getting to their destination, finding the information they need or blocking their ability to perform an action like completing a form or sign-up.

Making your website more accessible should be part of your plan if you are starting a fresh and ongoing process if you have an existing site. It will take time and testing but there are tools available to help you. **The PageSpeed Insights Accessibility tab will score you out of 100 and tell you about any changes you should make like colours, font sizes and image sizes.**

**The four principles of web accessibility are: perceivable, operable, understandable, and robust.**

The WCAG explain them as:

1. Perceivable - Information and user interface components must be presentable to users in ways they can perceive. This means that users must be able to perceive the information being presented (it can't be invisible to all their senses)

2. Operable - User interface components and navigation must be operable. This means that users must be able to operate the interface (the interface cannot require interaction that a user cannot perform)
3. Understandable - Information and the operation of the user interface must be understandable. This means that users must be able to understand the information as well as the operation of the user interface (the content or operation cannot be beyond their understanding)
4. Robust - Content must be robust enough that it can be interpreted reliably by a wide variety of user agents, including assistive technologies. This means that users must be able to access the content as technologies advance (as technologies and user agents evolve, the content should remain accessible)

When we are looking to make our site accessible there are fundamental design elements that we need to apply such as:

**Colour contrast** - we don't want to be using white text on a pale grey background or hot pink on bright orange. It's hard to read for our viewers. We need to think of black text on a white background. **If it is coloured, then it needs to have enough contrast to be legible.** Particularly important where you are using coloured buttons to direct the viewer through your site.

**Don't use colour alone to convey information - if the viewer is using a screen reader, then it will not be able to differentiate between the colours,** make sure there is some other feature like letters or numbers.

**Clickable elements should be easy to identify - provide distinct styles for links and buttons to make them easy to identify.** For example, change the appearance of links on mouse hover, keyboard focus, and touch-screen activation.

**Navigation - make the site easy to navigate. Provide more than one method of navigation, such as a site search or a site map.** Help users understand where they are on the site or page with breadcrumbs and clear headings.

Going back to our PageSpeed Insights we can check our pages for opportunities to improve their accessibility. These checks will list where tags are missing, and the use of ARIA - Accessible Rich Internet Applications. These are a set of roles and attributes that define how we can make our web content more accessible, a set of instructions for assistive technology.

For the next part of the session, we will look at some of the tools available to help you create content, test, audit and fix performance and SEO errors.

## 9. Topic Demo – Answer the Public

15-20 minute demonstration

**AnswerThePublic uses autocomplete data from search engines like Google and provides every useful phrase and question people are asking connected to your keyword.**

You can use it to help you create fresh content for your website or blogs using the questions and searches people are making. It allows you to create relevant content for your audience, monitor trends and behaviour and uncover hidden gems that can help you boost your organic results.

Put in any search term and the site will build you a set of diagrams showing every question or phrase connected to it. How, What, Why, V's etc. It is a fantastic tool to see just how people search and what they really want to know about.

### 10. Activity two

Using Answer the Public. Try some of the keywords you created yesterday and see what information and ideas the site gives you. Screenshot or download some of the diagrams and email them to us using the uploader then tell us how you would use that information on the site. Would you use it as bullet points in a blog or headers on your web copy? Could you create a series of articles or posts?

The free version allows you three searches per day.  
Time for this activity: 20mins

### 11. Quick Fire Quiz

Using the quiz pop up answer the question on the screen  
Question: What are the Web Content Accessibility Guidelines?  
A the international standards for web accessibility  
B the international standards for web design  
C the international standards for SEO

Well done everyone, the correct answer is: A the international standards for web accessibility

### 12. Tools & Resources

#### Broken links Checkers

Sites like <http://brokenlinkcheck.com> and <https://www.drlinkcheck.com> are great free sites that let you scan your website for broken links. Broken links are bad, they are frustrating for viewers and dead ends for crawlers, but we don't always know they are there. Especially if you have a large site or a big online shop, testing manually for broken links can be time-consuming and tedious. Using these sites, you can sit back and let them do all the work. When they have finished scanning your site, they will give you a list of any issues whether that's faulty page links or missing images and even show you where in the content the broken link is so you can go off and fix it and get all that lovely link juice flowing again.

#### Backlink checker

We looked yesterday at backlinks and how important they are to our SEO, but how do we check for them? You aren't always in control of them and if they are wrong or going to delete pages then they are doing more harm than good. Using tools like **SEO Review Tool backlink checker** or **The Hof backlink checker** we can see what backlinks are going to our site or to a specific page. We can review them all, check out who is linking to us and even view the traffic that comes from that link.

#### Moz, Ahrefs, SEMRush, SERank

These sites are all-in-one SEO software suites that help you improve your SEO with insights and performance tools. They include dozens of SEO tools to help improve search rankings, drive traffic, and get customers. They all have great learning centres to help you find out more about SEO and a great archive of blogs and articles. You analyse pages for faults and problems, analyse your competitors, audit and optimise your site, track your performance, and explore new keywords and content ideas.



### **Ubersuggest**

**Ubersuggest is a free SEO tool that specialises in generating new keyword ideas. Put in your basic keyword and it will help you find long tail suggestions, it will also show you monthly search volume, average CPC, PPC completion and SEO competition.**

Demo any of the above if you have time to spare.

### **13. Show and tell / group feedback**

Does anyone have an activity to share?

(Encourage at least one learner to share their activity answers/content and get the group to comment, critique or share ideas)

### **14. Any Questions?**

### **15. Coming up soon to extend these skills**

**Next week we are going to test and improve your websites with PageSpeed Insights.**

### **16. Quiz**

10 minutes to go off and do today's quiz, once it's submitted you will get a copy and the correct answers. Feel free to share your score in the chat.

### **17. Final thoughts**

Quick whiz around the room, any comments on today, what do you feel you have learnt today?

### **18. Don't forget**

Make sure you complete and submit your workbooks. Once you do you will get a copy of your completed workbook and links to download a copy of today's notes and slides.

Today's session page in your learner dashboard has a useful links document that will cover all the tools, resources, and articles we have discussed in the session and some useful guides and articles to take you further.

Make sure you revisit your FABs and set yourself some goals specific to today's session.

### **19. Extra help**

If you need any help with anything from today's session feel free to message in the WhatsApp group. If you have any other issues or problems related to the course or the tools speak to Andrew and Irfana, they are here to help you.

### **20. Up next**

See you tomorrow for ChatGPT and AI.