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CHANGING THE IMAGE OF ENGINEERS AND ENGINEERING: SEO GUIDANCE



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CHANGING THE IMAGE OF ENGINEERS ONLINE

On *This is Engineering Day*, 6 November, to help the public better understand engineers and engineering, the Royal Academy of Engineering will unveil the *This is Engineering Flickr Library*, a public online photo library of more representative images of engineers, and issue a challenge to individuals and organisations to use the library to change the mix of results that appear when the word ‘engineer’ is searched for online.

We’re asking organisations who share our ambition to sign a pledge to join us in this challenge, and from *This is Engineering Day*, 6 November, increase the visibility of images of engineers and engineering that are properly representative of its breadth and diversity .

The pledge will help us track our progress and recognise all those organisations who are supporting us. You can see the pledge and details on how to sign on page 3.

To help fulfil that pledge, this document then provides guidance on how you can:

1. replace existing images that present a narrow view of the profession
2. use images from our *This Is Engineering Flickr library* for pages that currently don’t have an image
3. help better images, currently not showing in online search results, to appear in search results.

OUR IMAGE CHANGE PLEDGE

We are asking as many organisations as possible to sign the following pledge:

This organisation pledges to use and promote imagery of engineers and engineering that properly reflect the breadth and diversity of the profession.

This commitment includes at least one of the following:

- Replacing existing images that present a narrower view of engineering.
- Making more use of images that paint a representative picture of engineering in public facing channels.
- Helping better images, currently not showing in online search results, to appear in search results using search engine optimisation techniques.
- Creating and promoting more representative images of the profession.

If your organisation would like to sign this pledge, please do so by completing [this form](#) by **22 October**. Your organisation will then be recognised as a *This is Engineering Day* supporter and pledge signatory in publicity materials associated with the Day.

Good luck and thanks for your support!



A guide to changing the image of 'engineers' online

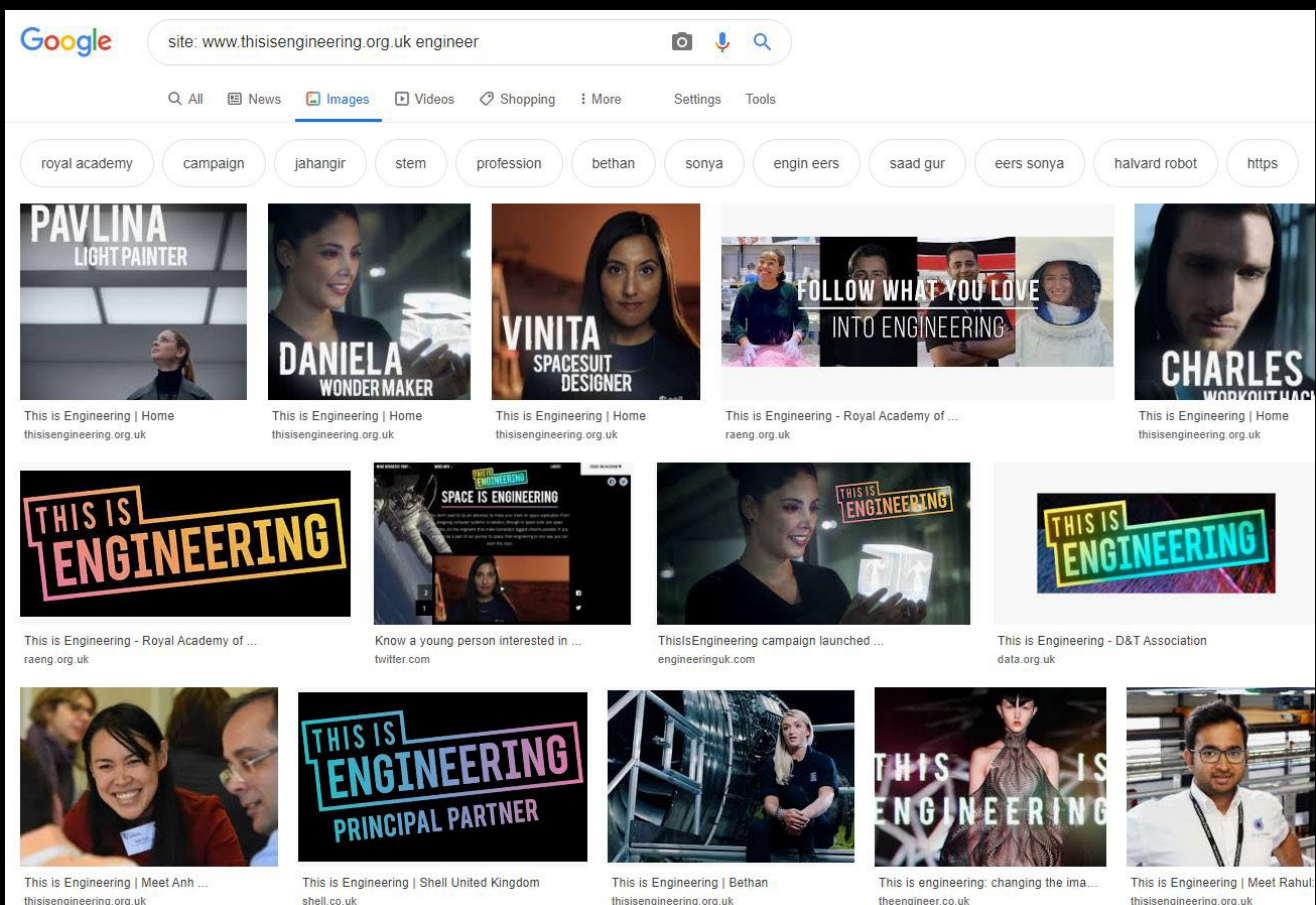
We have prepared the following guidelines, designed for your webmaster or web editor to implement.

First of all, you need to know which of your 'engineer' images a search engine is favouring the most by performing an image search for your main page heading (this example below uses Google Images).

You do this by searching for the word 'engineer', restricting the search to your own site.

Use the search term 'site: website address engineer' e.g. 'site: www.thisisengineering.org.uk engineer'. This will reveal which images on your site (those that appear first on the top two rows) are ranking better than others for 'engineer'.

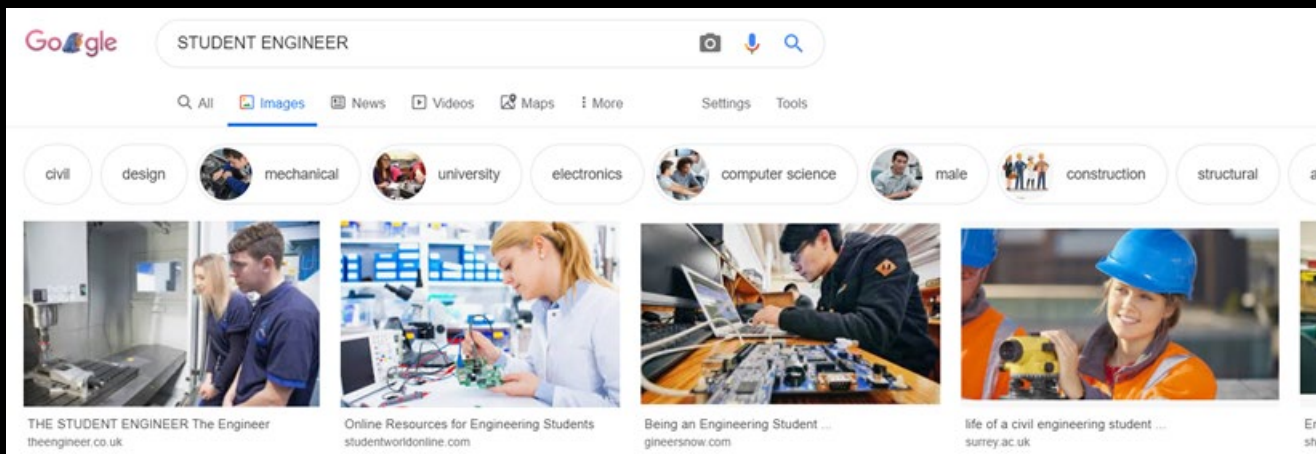
What do the results show? Do the images represent those images that track favourably with young people (as detailed in our image brief)? Or do they need replacing?



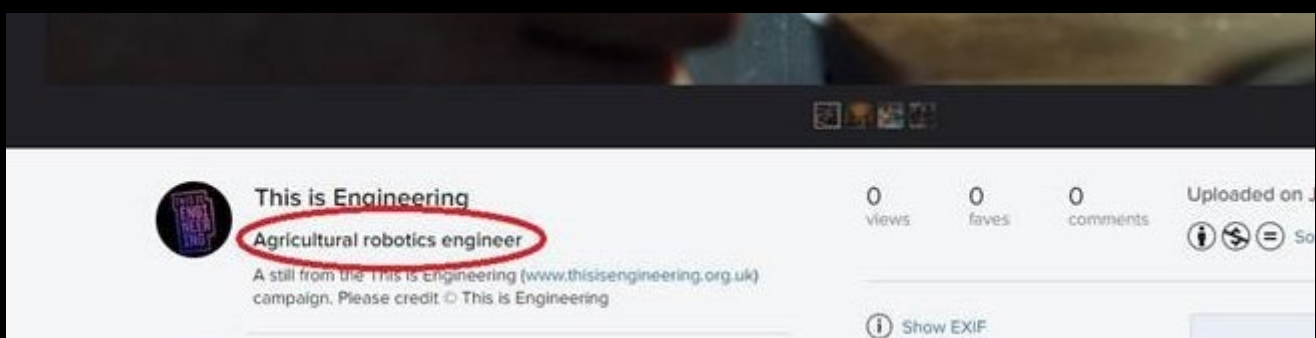
REPLACE EXISTING IMAGES THAT PRESENT A NARROWER VIEW OF THE PROFESSION

Help us by replacing those images that present a narrower view of engineering by choosing an image from the *This Is Engineering* [Flickr library](#) that would work in its place.

1. Select the image that needs replacing on your site.
2. From the *This Is Engineering* [Flickr library](#), choose an image that could work in its place. For example, if your page heading is 'The Student Engineer', enter 'student engineer' in [Google Images](#) to get an idea of what kind of image your page needs and then find an alternative from the Flickr library.



3. Download the image to your computer.
4. After downloading the image, you will also need to rename the file as per the original image filename in Flickr, which is revealed when you click on the image. Simply highlight the title text (see the example below), then copy and paste as the new filename when saving the file.



5. You will also need to credit the owner of the image by using the copyright (©) symbol. In the example above, it is © *This Is Engineering*.
6. In your CMS replace the old image with the new one that you downloaded.
7. Once this has been done then you just need to optimise the new image by including Alt text, as explained in '[Image Optimisation - A Detailed Guide](#)'
8. Repeat the process for all the other images from your initial search that could do with replacing.

If you can't find a suitable replacement image in our library, then use the [photographic brief](#) to select an appropriate replacement from your usual image bank resource and carry out steps 7 and 8 above.

When you're next photographing your engineers and engineering functions, consider using these guidelines and our Flickr Library examples for inspiration. If you do this, please send us a selection for the image library to ensure content remains fresh and relevant.



USE IMAGES FROM OUR *THIS IS ENGINEERING* FLICKR LIBRARY FOR PAGES THAT DON'T CURRENTLY HAVE AN IMAGE

You can also help us by using images from our *This Is Engineering* [Flickr Library](#) for pages that currently don't have an image.

Refer to the [section above](#) when choosing and then including an image on the page. Don't forget to carry out the file naming, image crediting and SEO optimising steps.

Whenever possible, place images near relevant text that uses the words 'engineer' and/or 'engineering'. When it makes sense, consider placing the most important image near the top of the page.

This will help boost your content's visibility in online search results as well, which in turn will help us achieve our goal of altering the search engine image results for 'engineer'.

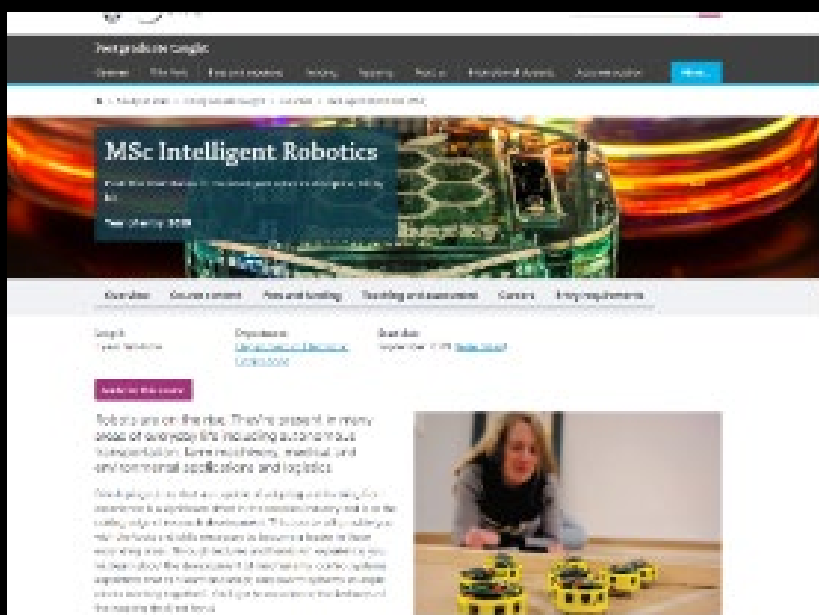


IMPROVE THE VISIBILITY OF BETTER IMAGES CURRENTLY NOT SHOWING IN ONLINE SEARCH RESULTS

Our analysis has shown that there are plenty of images on engineering-related websites that could help young people to reconsider what engineering really looks like. However, these images have not been optimised for search engines and therefore do not appear for engineering related terms.

If your images are not currently showing in search engine results you can:

1. Identify images (maximum two) placed near the top of your most important pages. In the example below you will select the banner image and the image next to the text copy. If your image is not near the top, identify the best visual you have on the page and assign it an [Alt text](#).



Priority image 1



Priority image 2

2. Make sure they meet the criteria (as outlined in our *This Is Engineering Flickr Library Brief*) or choose an image from the *This Is Engineering Flickr Library* that would work in its place.
3. Follow image optimisation guidelines (See '[Image Optimisation – A Detailed Guide](#)' section).
4. And ensure the file is renamed as per the original Flickr image filename if taken from the *This is Engineering* image library, and the owner of the image is credited.

IMAGE OPTIMISATION - A DETAILED GUIDE

OPTIMISING THE IMAGE FILENAME

When you save your images, you should use a name that succinctly describes the contents of the image. Simple but essential to remember.

If the contents of the image are relevant to the topic of the page where the image will live, then you've just improved your page's keyword optimisation. Most of the images in our analysis did not have optimised image names, as shown in the example below:



Under optimised image naming:

Wind_turbine_
Systems_98c72c5b.fill-900x900.
format-jpeg.jpg

Good image naming:

engineer-wind-turbine-systems-
900x900.jpeg

Image file naming best practices:

- Use words that describe the image simply.
- Don't use underscores or complex characters. Stick to letters and hyphens and use hyphens instead of spaces.
- Keep them short. The length of your image file name will determine the length of the image URL. Generally, the shorter the URL, the better.
- Avoid keyword stuffing. Don't just use keywords for the sake of using keywords - describe the image instead.
- Please ensure that the word 'engineer' and/or 'engineering' has been included in the title. As best practice, you could also include the type of engineering. Eg "sound engineer at work".

ADDING IMAGE ALT TEXT

Alt text is an alternate display of text in place of the image and is used with HTML code to describe that image. It is used in place of the image when it doesn't render or isn't displayed. For example, the text would be read aloud by a screen reader for people with visual impairments or displayed onscreen when images are disabled in a browser, or when the image can't be decoded.

In general, most of the engineering-related images have Alt text included, containing relevant keywords. However, in some instances some fine-tuning is required to make the Alt text more relevant and both user and Google friendly.



Alt text:

Thumbnail

Issue: the alt text does not describe the image

Better alt text:

Young female design engineer using a virtual reality headset



Alt text:

Students talking on a sofa - additional opportunities for our undergraduates

Issue: the Alt text could include words such as young, male and female. The alt text contains additional information not relevant to the image.

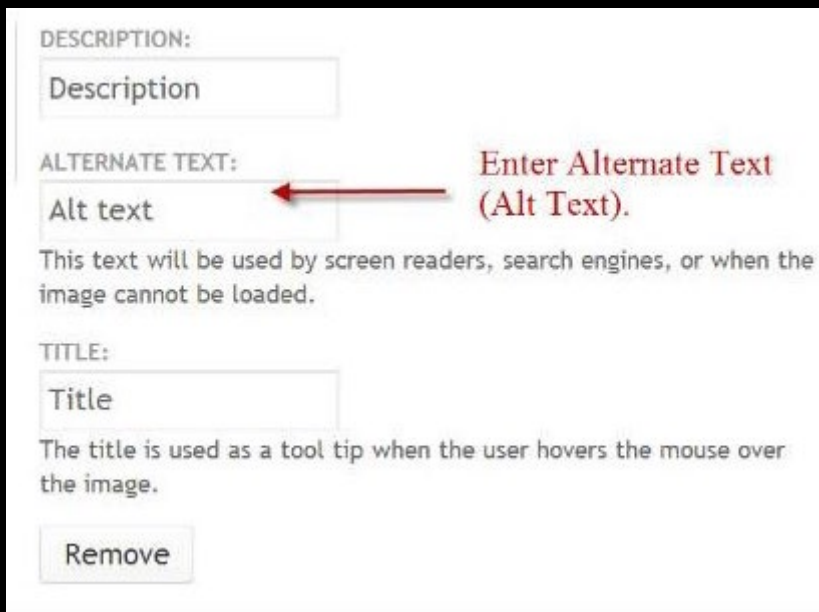
Better alt text:

Young male and female engineering students talking on a sofa.

ADDING ALT TEXT IN YOUR CMS

Most CMSs support alt text. When you upload an image on a page, usually three boxes will appear next to or below the image, as shown in the example below.

- 1) Description
- 2) Alt text
- 3) Title



The screenshot shows a form with three input fields. The first field is labeled 'DESCRIPTION:' and contains the text 'Description'. The second field is labeled 'ALTERNATE TEXT:' and contains the text 'Alt text'. A red arrow points from the text 'Enter Alternate Text (Alt Text).' to the 'ALTERNATE TEXT:' field. Below the 'ALTERNATE TEXT:' field, there is a note: 'This text will be used by screen readers, search engines, or when the image cannot be loaded.' The third field is labeled 'TITLE:' and contains the text 'Title'. Below the 'TITLE:' field, there is a note: 'The title is used as a tool tip when the user hovers the mouse over the image.' At the bottom of the form, there is a 'Remove' button.

These articles provide more information.

Drupal:

<https://www.inmotionhosting.com/support/edu/drupal-7/working-with-content/enable-image-alt-text>

WordPress (using YOAST plugin):

<https://yoast.com/image-seo-alt-tag-and-title-tag-optimization/>

HubSpot:

https://knowledge.hubspot.com/articles/kcs_article/cos-pages-editor/how-do-i-add-alt-text-to-my-image

OPTIMISING IMAGE FILE SIZE

There are two aspects to an image file size. The first is the dimensions of the image, and the second is how much storage space the image requires.

- When optimising an image, you want the dimensions to be as big as possible, yet you want the storage space to remain small.
- For most 'full page' web images, you want the image to be 80Kb-100Kb at most. If the image is only part of a page (e.g. half the width of a blog post), then 20Kb-30Kb will work well.
- Dropping image quality to 30-50% of the original typically doesn't make any marked difference to the naked eye.
- You can drop 2-3Mb images to 80kb-120kb and not really be able to see any change in visible quality.
- You can reduce image file size considerably by 'post-processing' the images after saving. There are multiple tools available for image compression - lossy and lossless, online, GUI, and command line. One of the easiest ways to do this is by using an image plugin like Optimole, which can compress existing images (so they take up less space) as well as automate the process for new uploads.
- Several tools are available that perform further, lossless compression on JPG and PNG files with no effect on image quality. For JPG, try [jpegtran](#) or [jpegtoptim](#) (available on Linux only; run with the --strip-all option). For PNG, try [OptiPNG](#) or [PNGOUT](#).



CREATING IMAGE SITEMAPS - OPTIONAL

Google encourages you to use image sitemaps to give their search engine more information about the images available on your website. This allows them to find even those images that are loaded by a JavaScript code, which is often the case with product images and slider galleries.

Creating the sitemap is not very complicated. Basically, for each URL you list in your sitemap, you can add additional information about images on that page. Google gives us an example for the URL: <http://example.co.uk/sample.html>:

```
<?xml version="1.0" encoding="UTF-8"?>
  <urlset xmlns="http://www.sitemaps.org/schemas/
sitemap/0.9"
  xmlns:image="http://www.google.com/schemas/sitemap-
image/1.1">
  <url>
    <loc>http://example.co.uk/sample.html</loc>
    <image:image>
      <image:loc>http://example.co.uk/image.jpg</image:loc>
    </image:image>
    <image:image>
      <image:loc>http://example.co.uk/photo.jpg</image:loc>
    </image:image>
  </url>
</urlset>
```

On WordPress websites, you can also take advantage of available plugins. For instance, Google XML Sitemap for Images and Udinra All Image Sitemap both automatically create Google XML sitemaps for images.