

Micro-module E: Data-visualisation

E3- Interactive Online Data-maps

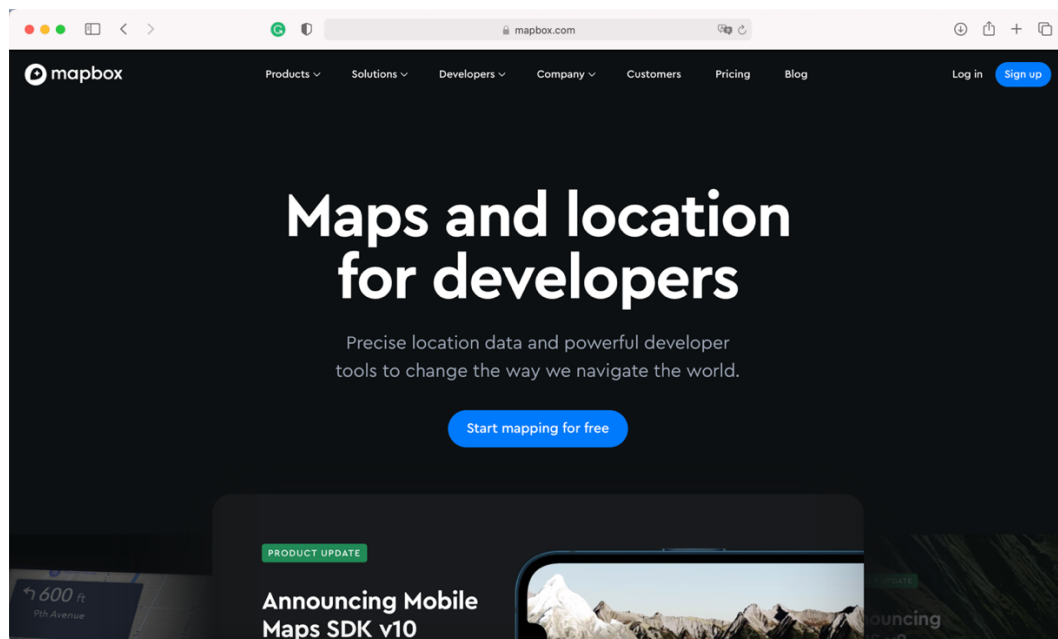
This guide will show you how to create an interactive map in Mapbox and add the interactive map to your site using Wordpress, and how to change the size of the interactive map block.

There are two main parts in this guide. The first part includes uploading map data through Mapbox and creating interactive map, changing map attributes of the interactive map, and exporting map. The second part covers the steps to create a new website page in Wordpress, how to insert the map block into the new page, and how to change the attributes of the map block in Wordpress.

By the end of this guide, you will have learned how to add an interactive map to your website page. This will give you a more direct and efficient way to express map data on your website, which will increase the amount of information displayed.

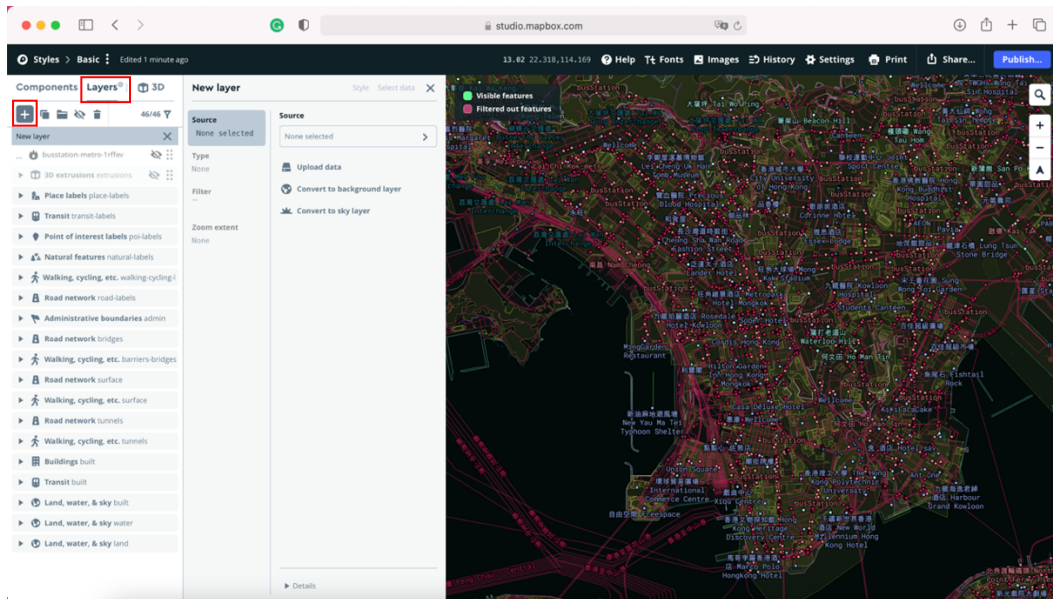
1. Create interactive map through Mapbox

To get started, you need to sign up for a new Mapbox account for free. In the first part of this E-E2 micro-module, we cover how to get started as a user who has never used Mapbox before, including signing up for an account, creating new styles and uploading data. In this micro-module, we will start with only those steps related to creating an interactive map.

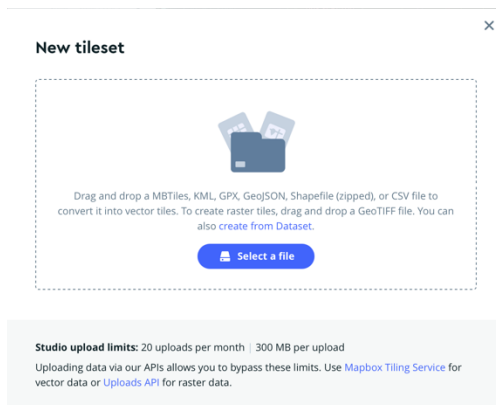


1.1 Upload data

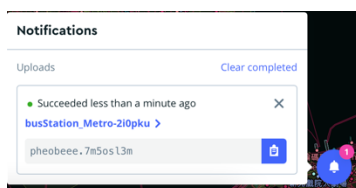
Log in to your Mapbox account and create a new style.



- Choose 'Layers'.
- Click 'Add New Layer' button below 'Layers'.
- Click 'Upload data' at right, and the following dialog box below will appear.
 "The types of data that can be uploaded, vector tiles including MBTiles, KML, GPX, GeoJSON, zipped shapefile, CSV, raster tiles including GeoTIFF, and it should be noted that you can only upload data through this way 20 times a month with a file size limit of 300M."
 It hints at the types of data that can be uploaded and the number of times it can be uploaded.



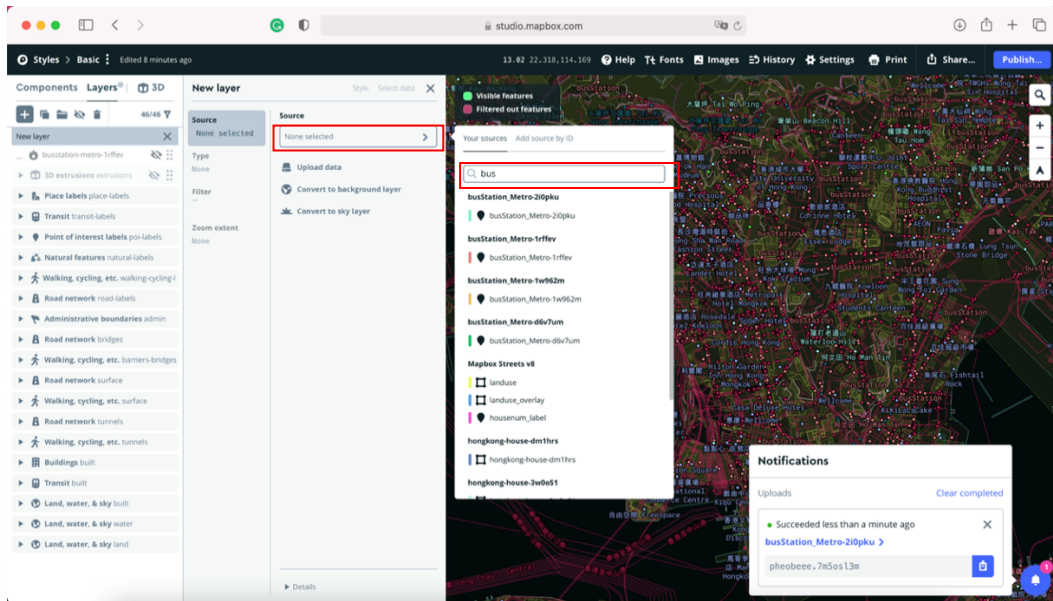
Select or drag the desired file. In this guide, we use the distribution data of bus stops in Hong Kong as an example. After selecting the file, you will need to wait a few seconds to upload the data. When the upload is complete, you will be prompted in the lower right corner of the screen.



- Click the select menu under 'Source'.

Enter the keywords of the data you just uploaded into the search box, and in this guide we search for 'bus'.

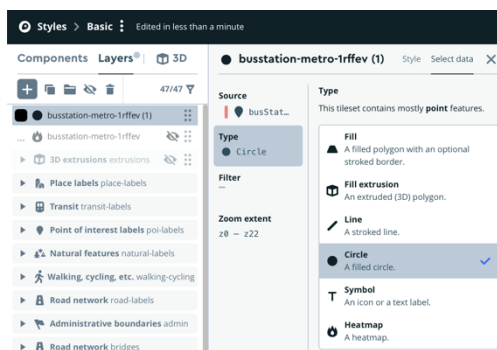
- Select the dataset you want to present, in this guide we chose 'busStation_Metro_2i0pku'.



At this point, the dataset has been prepared. It should be noted that Mapbox will save the uploaded dataset automatically. If the same dataset needs to be called later, if the dataset has been uploaded, it can be directly searched at 'Source', without repeated uploading.

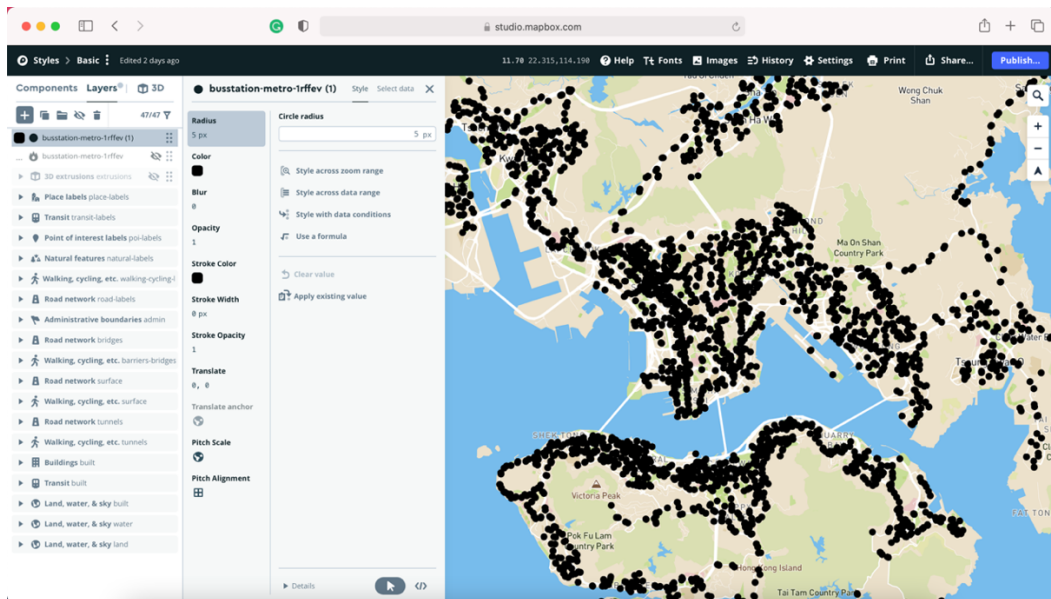
1.2 Select the data visualization type

After selecting the data source for the new layer, under the 'Type' you can select the visualization type according to your own requirements.



In this guide, we select 'Circle' under type, then you can see the data visualized in the Mapbox website.

At this point you have successfully uploaded your data and visualized your data in MapBox.

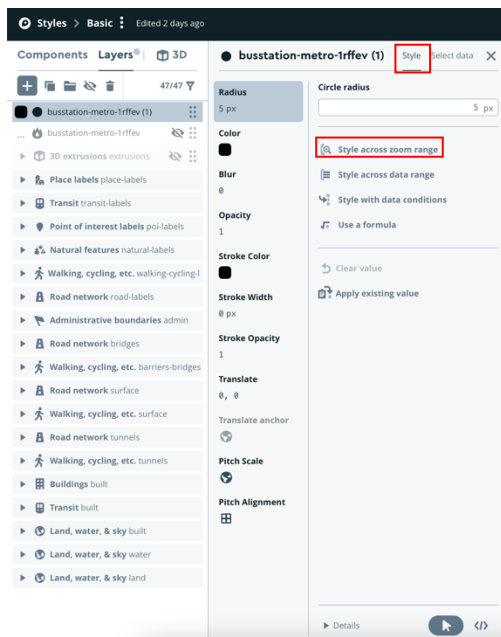


1.3 Change the properties

The main feature of interactive maps is that people can interact with the map while using it, zoom in and out or change their perspective. Therefore, when creating interactive maps, we should pay attention to the change of map attributes with zoom level, focusing on whether the change of map attributes is appropriate when zoom level changes and whether the change process is smooth.

This guide uses radius as an example to explain how to change attributes. Other attributes has similar principles, you can modify the attributes as required.

- Click 'Style' to change the display properties.

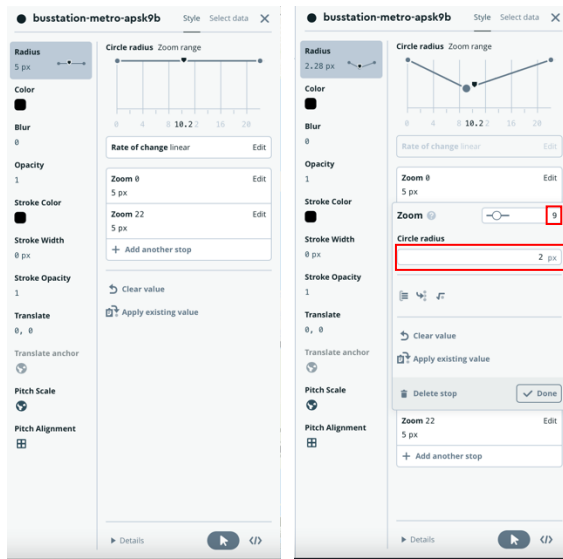


Mapbox has automatically set the Radius of the data circle to 5px and does not change with zoom level.

To make the interactive map look smooth when change level, it is better to set the radius

range of the circle to increase with the zoom level.

- Click 'Style across Zoom Range' to change it.

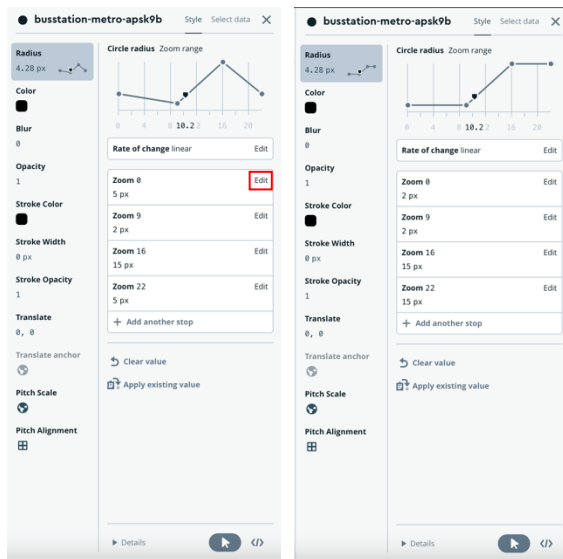


- Click 'Add another stop'.

Enter the zoom level you want to change in the number next to zoom, and enter the radius value at 'Circle Radius'.

- Click Done when finished.

In this guide we add two new stops, which are zoom 9-radius 2 and zoom 16-radius 15.



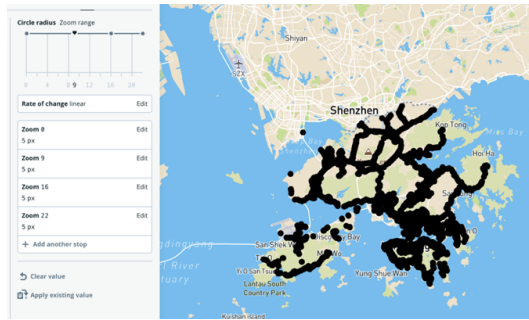
To make the changes smoother, we changed the original two points to zoom0-Radius2 and zoom22-Radius15.

- Click Edit to edit an existing point.

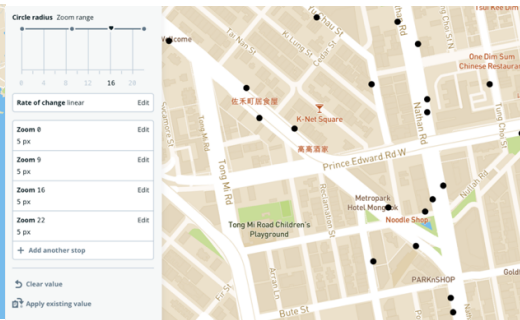
The following will explain the meaning of the modification more directly by comparing the changes before and after the modification.

Before

Zoom level-9

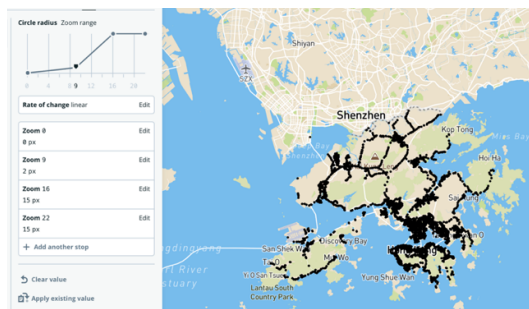


Zoom level-16

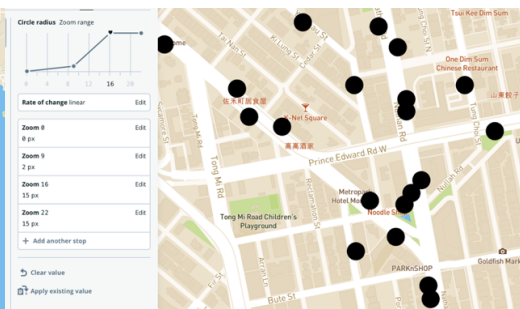


After

Zoom level-9



Zoom level-16



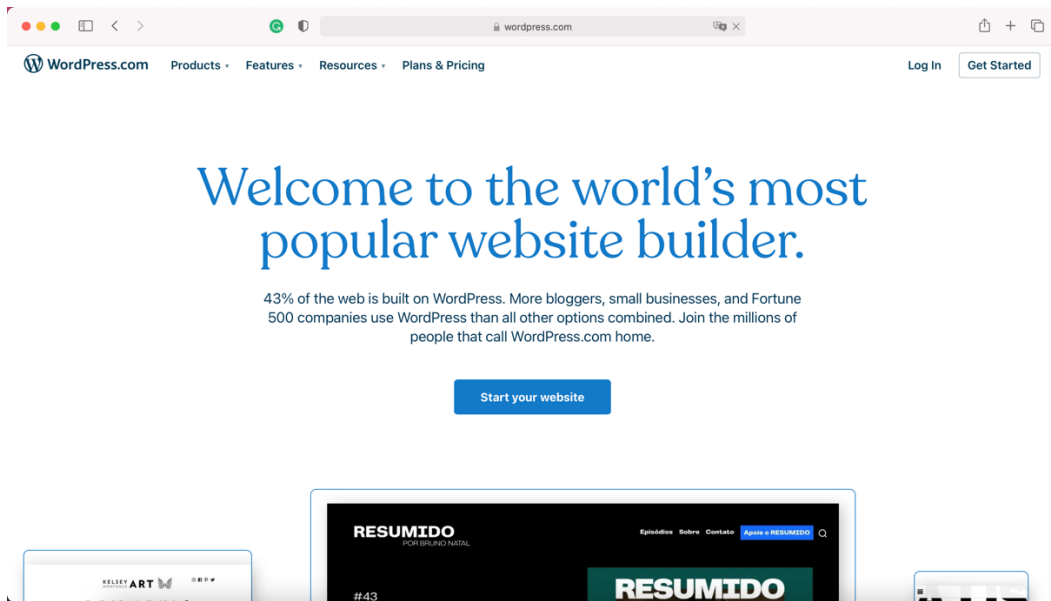
It can be seen that with the increase of zoom level, it is not beneficial for data display to keep the same size of the data circle. When the modified map is used, the size of the data circle will change with the zoom level.

In addition to the radiation range, there are many other attributes that can be adjusted to suit your needs.

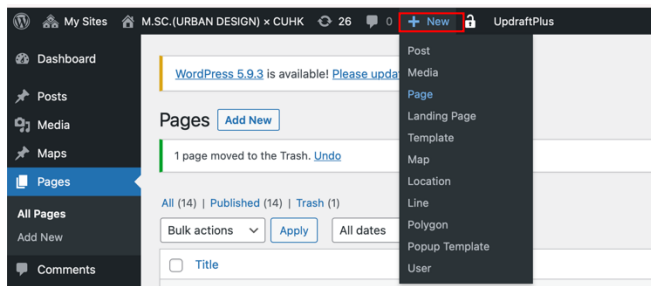
This guide uses the circle data as an example to show how to create an interactive map that is easy to use. You can adjust the size of the radiation range according to your own needs, or you can choose other data display methods. The adjustment principle is similar to the circle.

2 Import the Interactive Map into the website page you created

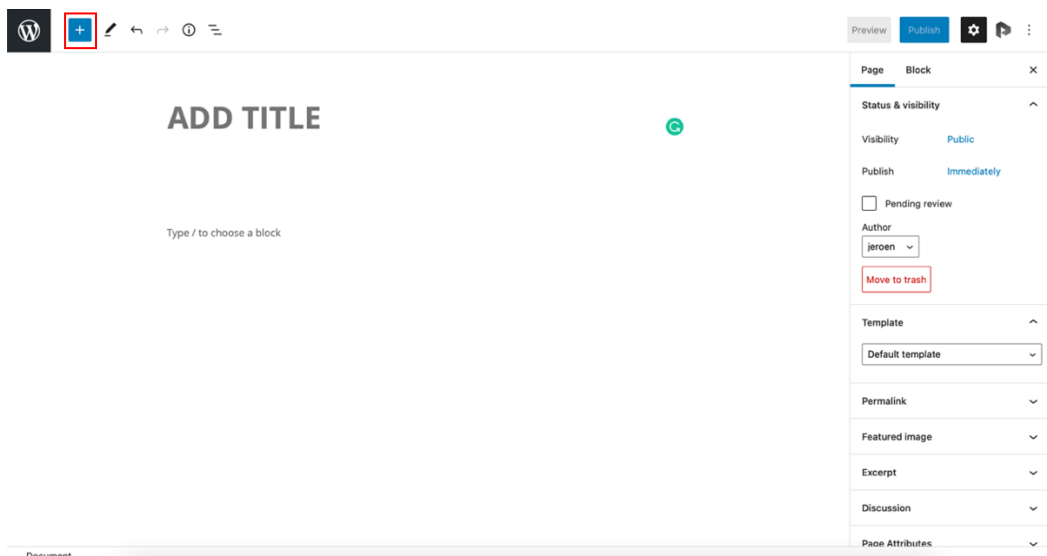
Usually, the research results of a scientific research project need to be displayed on the website of the laboratory or research group. Adding interactive map in the webpage can directly and vividly display the data. This guide will take Wordpress platform as an example. Show how to import interactive map from Mapbox into your website page. The map in Mapbox takes the map of bus station distribution in Hong Kong as an example.



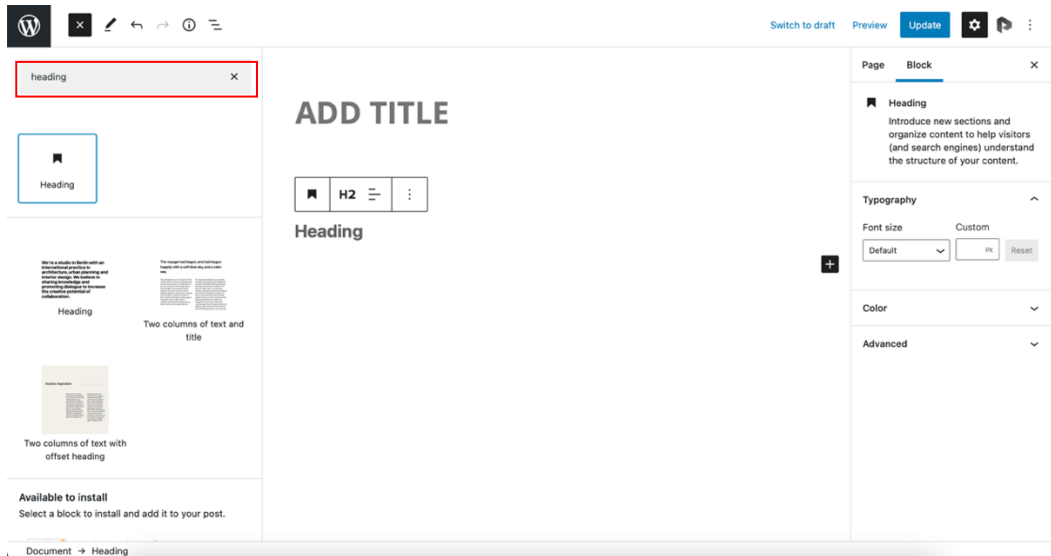
2.1 Create a new page in Wordpress



After having a domain and creating a website.
Open the Dashboard for your own website in Wordpress.
Chose **+ New**, then chose page.



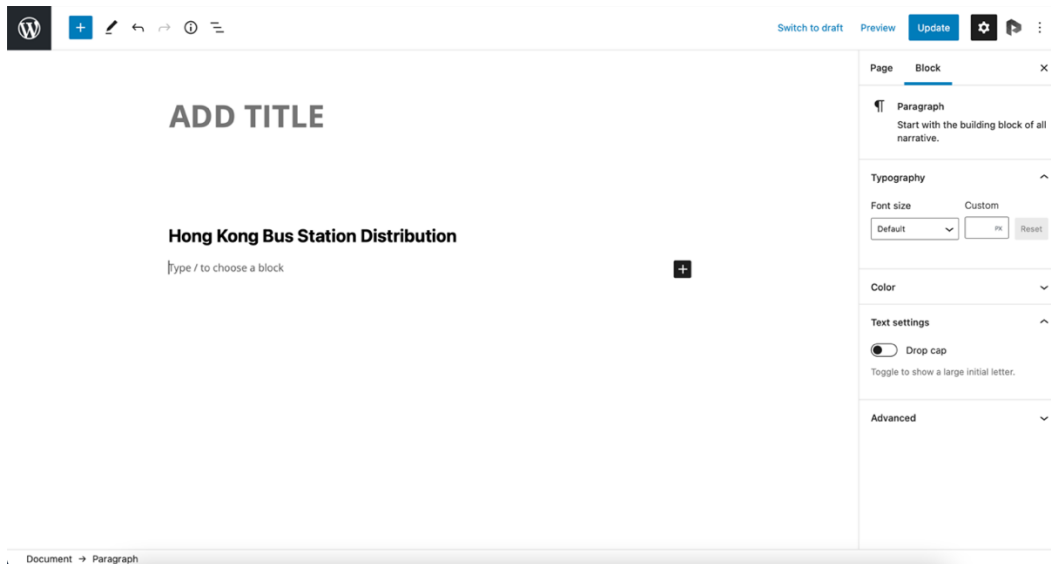
You'll see a new page appear.
Click the plus button in the upper left corner.



You can add a page title, a map title, and a description based on your needs. In this guide, we add a map title as an example.

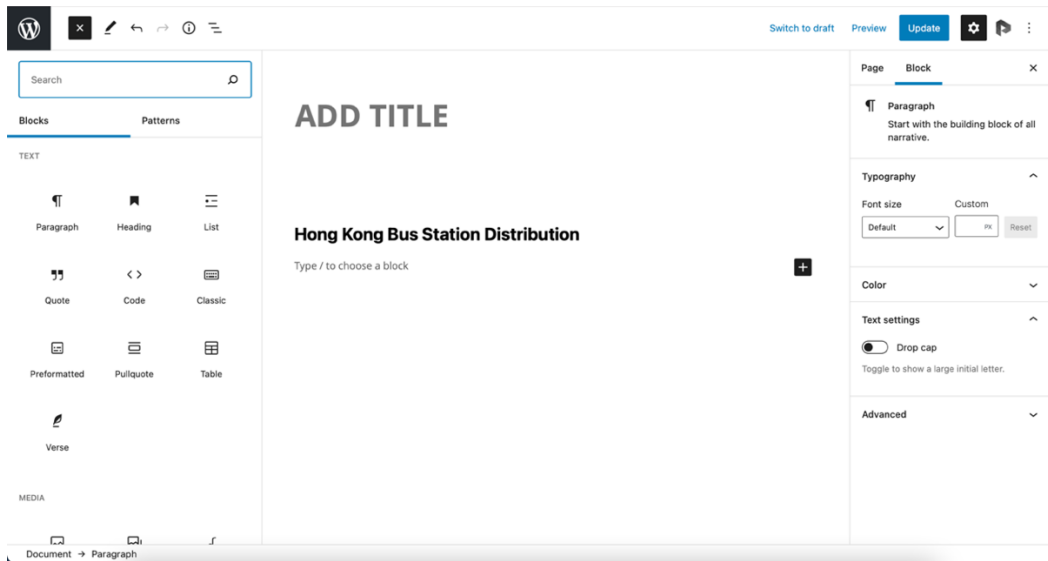
- Type heading in the search box.
- Click heading block on the left to add the heading to your new page, you can see a new heading block appear on the right side of the page.
- Click the 'Heading' on the right to enter the heading content, which in this guide is 'Hong Kong Bus Station Distribution'.

See the figure after adding.

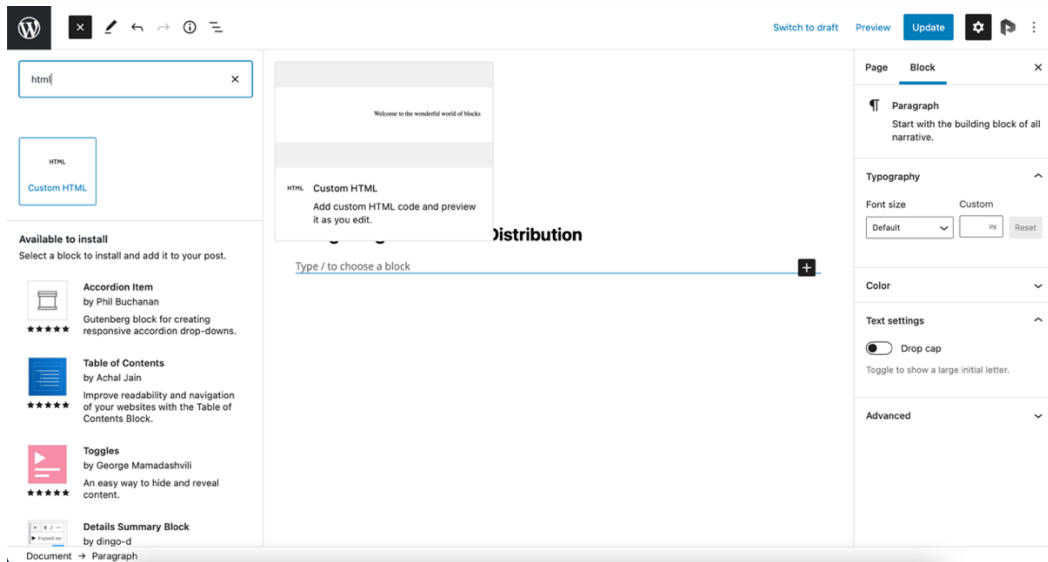


2.2 Add the HTML block

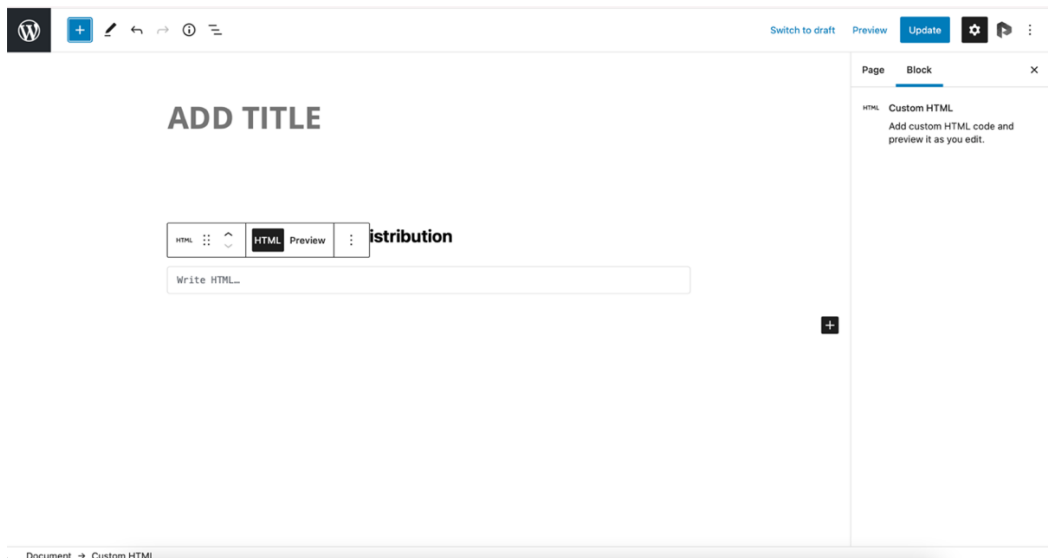
Map block can be added after the new page is added.



- Click the plus button in the upper left corner.
- Enter html in the search box to add an html block.



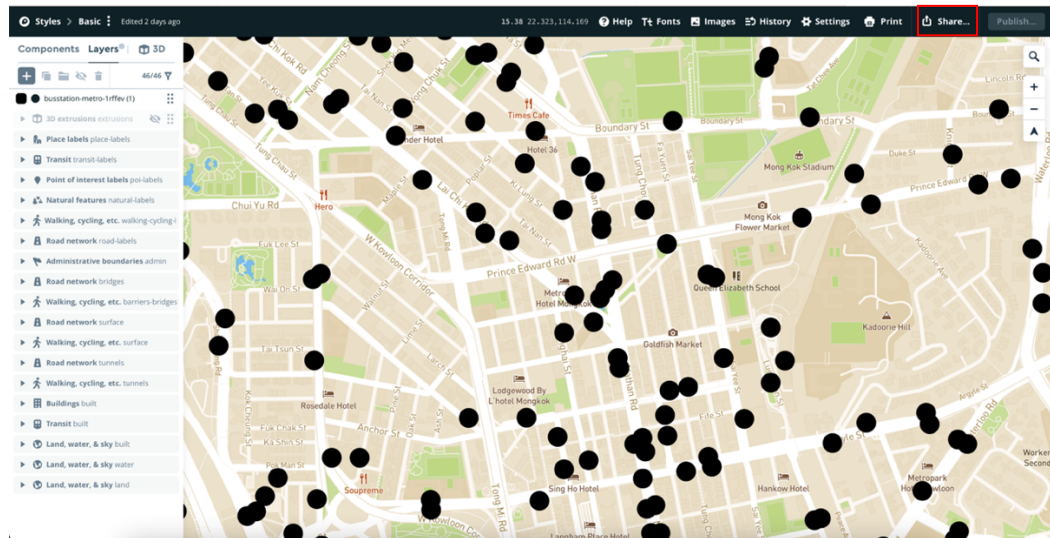
- Click the button on the left to add the HTML box to the page.



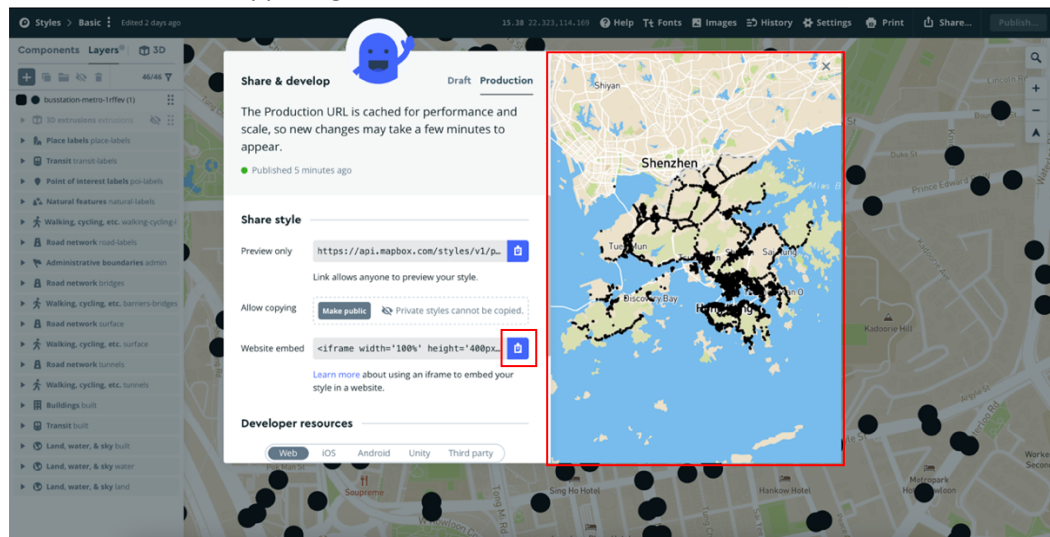
And then we need to go to the Mapbox and get the embed link and enter it here.

2.3 Adding a map embed link

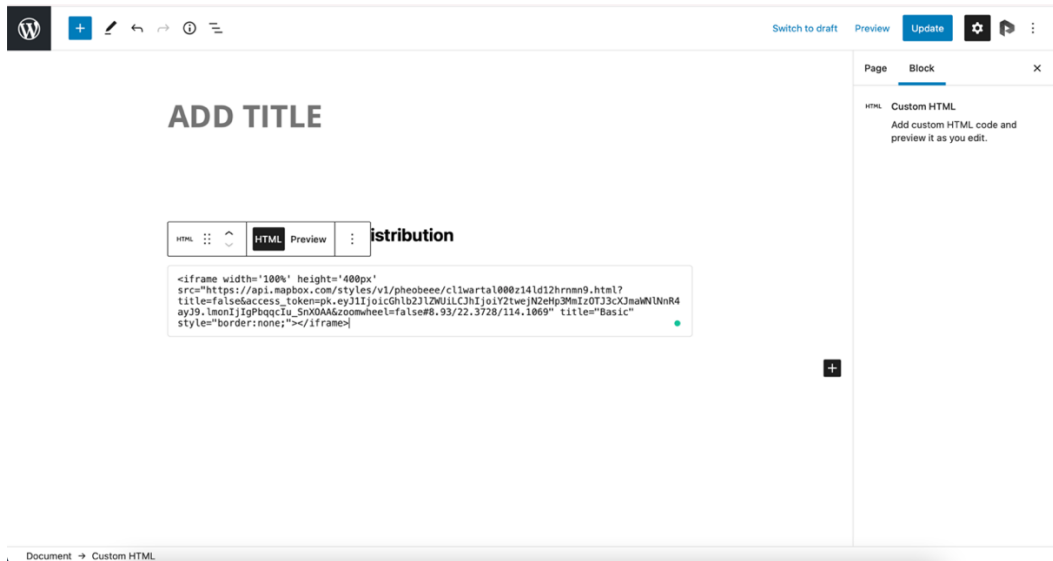
After finishing a map style edit in MapBox.



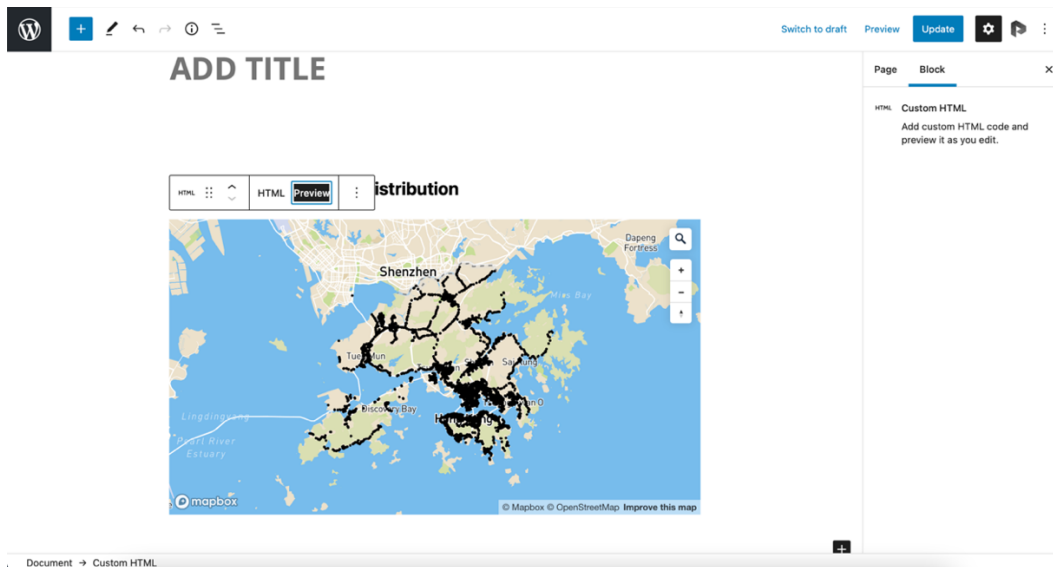
Click 'Share' in the upper right corner.



- Scale the map on the right to adjust the initial appearance when loading the interactive map in your website.
- Click the button on the left to copy website Embed Link.
- Copy the link in the map platform and open the Wordpress platform.
- Click on the write HTML, just copy the link in there.



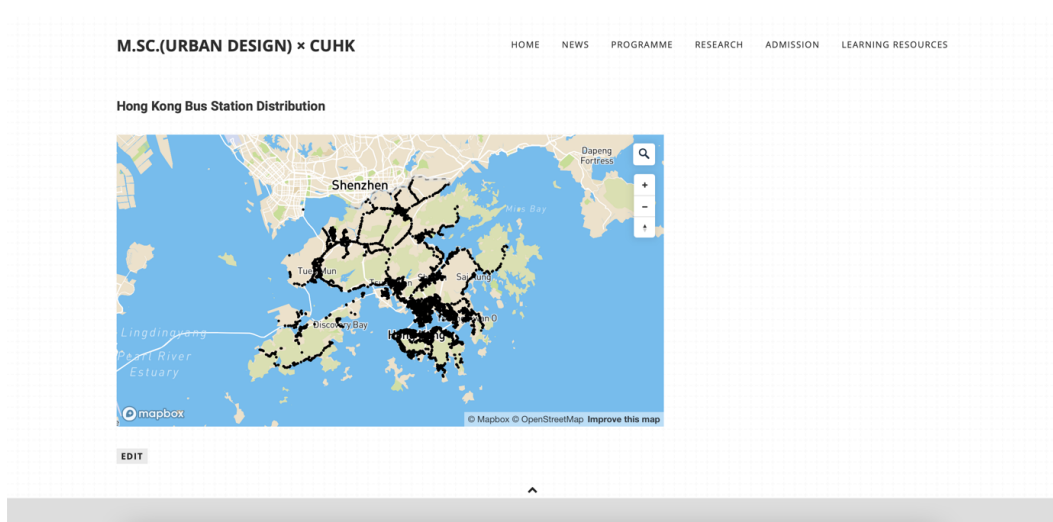
- Click Preview to see the map.



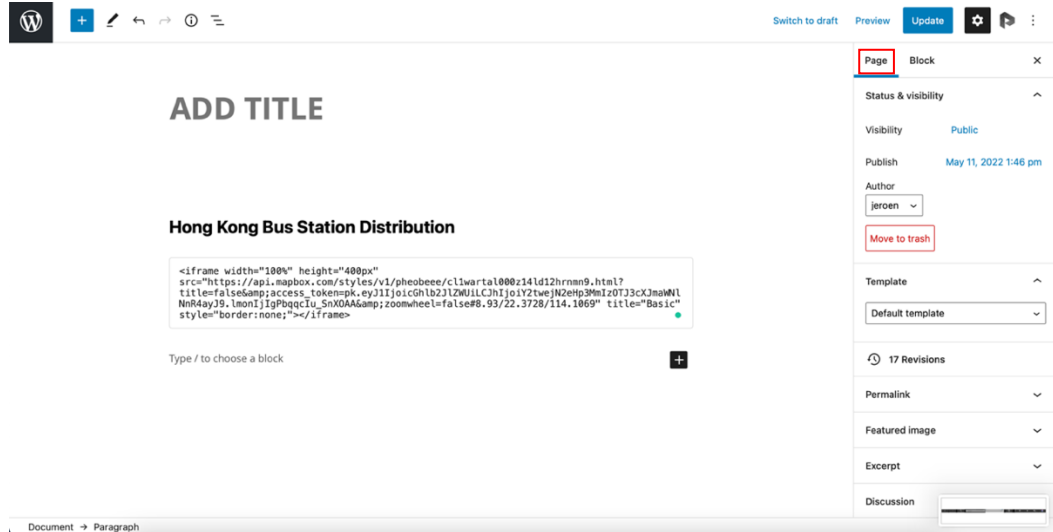
- Click Update when you're done to save the page.

2.4 Resize the map

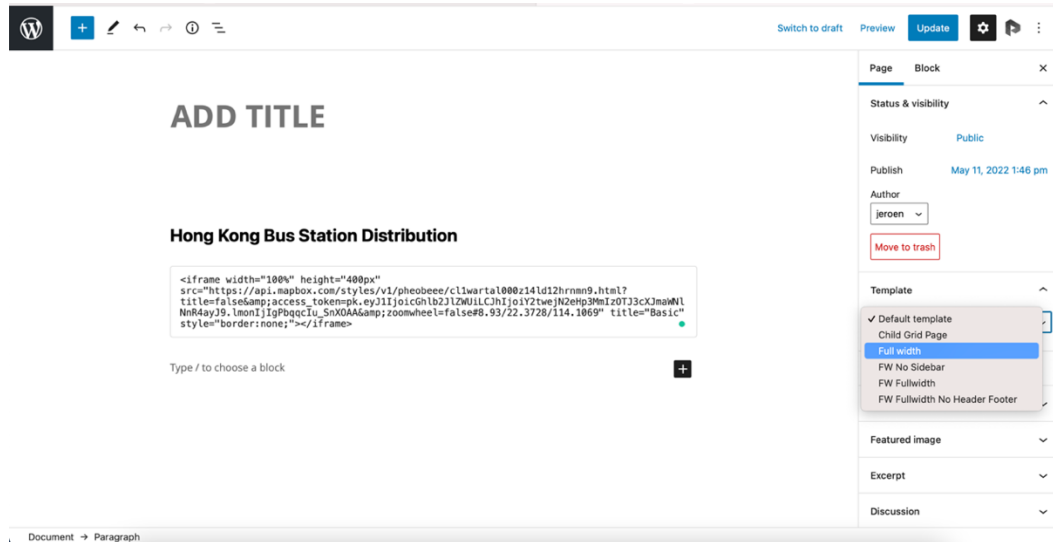
Insert the map as above and we can preview the page as shown below.



After inserting the map, we can change the size of the block as required.
Enter the website editing page.

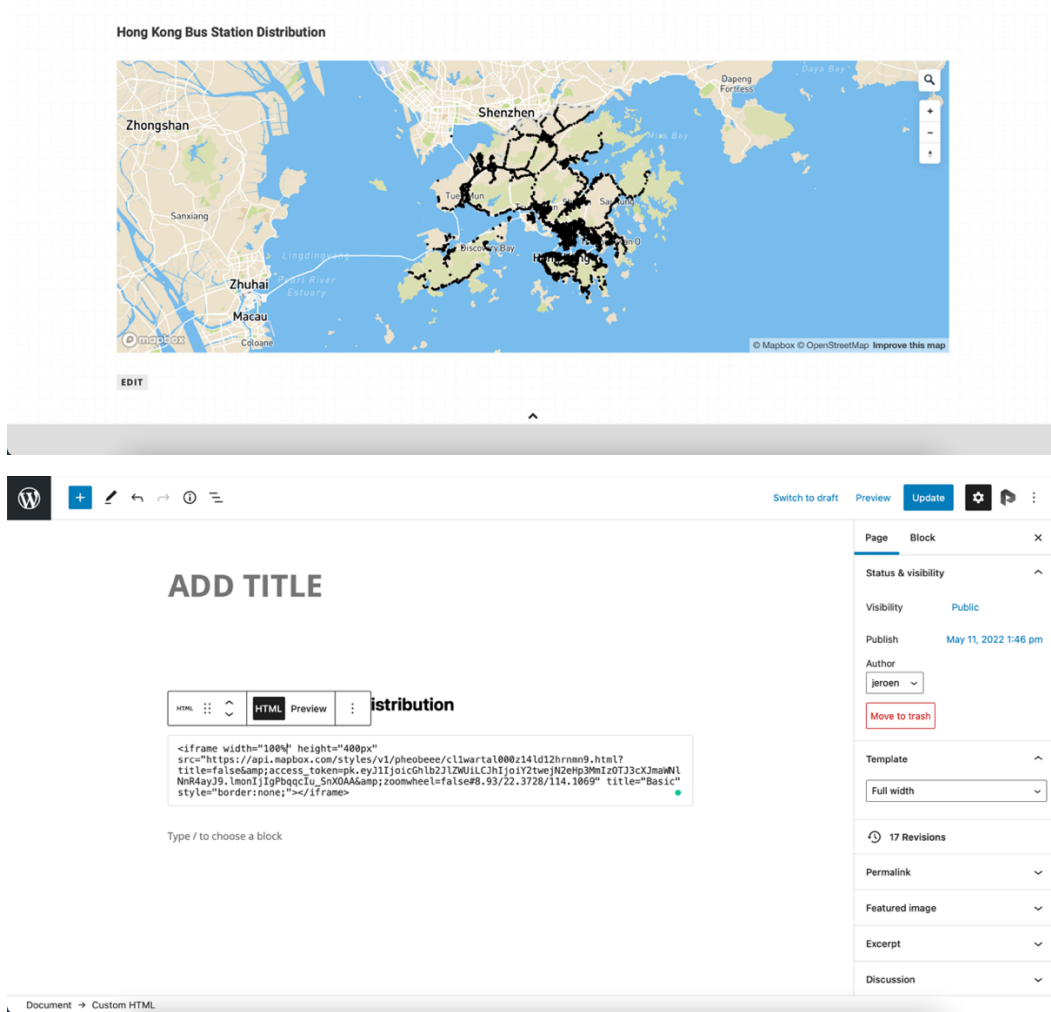


- Click 'Page'.

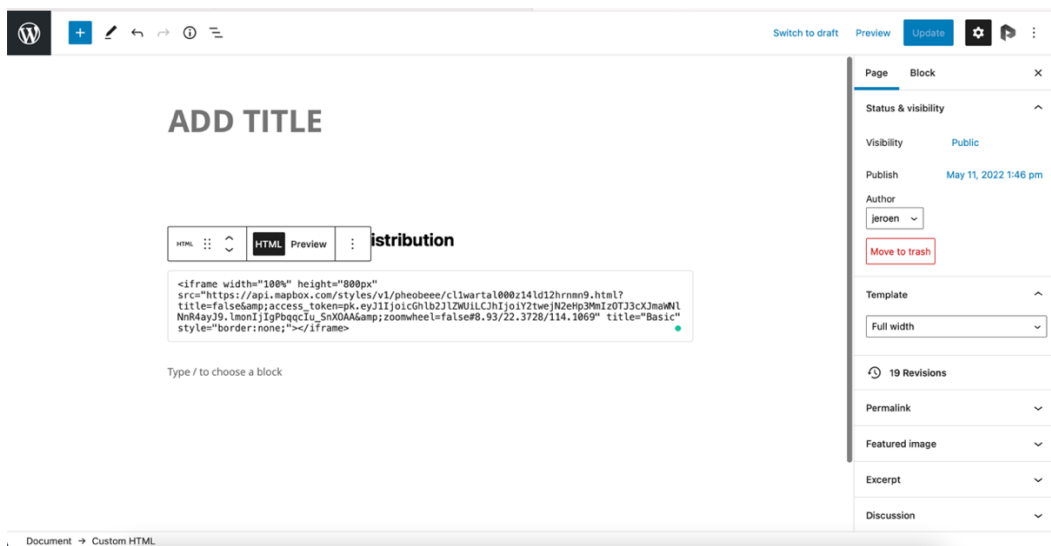


- Click 'Template'.
- Select 'Full width'.
- Click on the update.

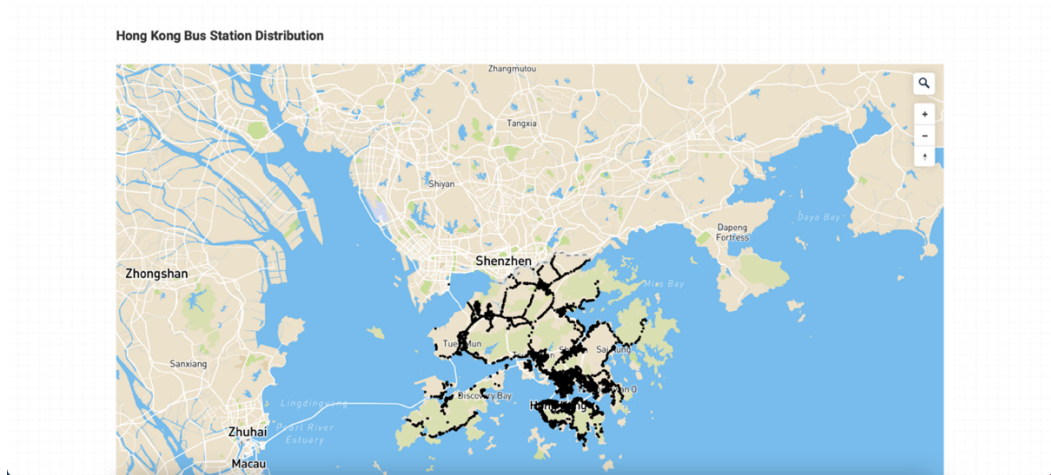
You can see in the preview page that the map has become the entire width of the screen.



Then, in HTML block editing mode, modify the 'iframe width' and 'height' parameters to change the size of the map control. It can be modified as required. In this guide we will change the height to 800px. As shown in the figure below.



Results the following.



So far you have a way to create an interactive map in MapBox and import the map to your website.