

Storymapping with Pavee Roads - A Toolkit

Dr Sasha Brown

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Introduction - What is Storymapping?

Stories can be told in many different ways, and having the ability to show where our stories take place can add an important and powerful dimension to stories. While all stories indicate some kind of place and location, storymaps allow for explicit spatial narratives - travelling through places through time.

In other words, storymaps allow us to focus on the ‘where’ of our stories.

The term ‘storymap,’ sometimes written as StoryMap, as a term has recently become a shorthand description for online, interactive, spatial storytelling built around a map or multiple maps. The maps change as you read them, and often scrolling through the map progresses the story and changes where the map focuses, what is on the map, or introduces other different types of media, including pictures, videos, audio-recordings and more.

In this storymapping toolkit, you will find steps to create and design a storymap. This toolkit includes a guide to the technical steps to locating the places; adding descriptions, text and images; and creating a fully designed spatial narrative. In addition, this toolkit includes a guide and discussion of how to use storymaps to uniquely tell spatial stories, and how you can design your storymap with the unique usefulness of the storymap format.

The guide requires only that you have access to a web-browser - Chrome, Firefox, Edge or others - and a Google account. Some familiarity with Google Sheets or spreadsheets will be helpful, but the guide also includes instructions on how to use spreadsheets for the storymapping process.

Also accompanied with this written guide are videos of each step of the storymapping process. These can be a helpful addendum or primary resource for carrying out the steps. In addition, the guide includes a discussion of the advantages and disadvantage of the template used in this example, and how other types of storymaps work differently.

To proceed, click on the arrow to the right to go to the next chapter, or select the chapters on the left menu.

Getting Started

The first step in designing and creating our storymap is to become familiar with the format, style and design abilities of the storymapping tool that we are going to be using.

In this toolkit guide, you will be using a storymapping tool and templates adapted from Jack Dougherty and Ilay Ilyankou work textbook Hands-On Data Visualisation. Their storymapping approach is a good balance of advantages for storymapping.

Dougherty and Ilyankou set out ten aspects to take into account in choosing the tool:

- Easy to learn
- Free or affordable
- Powerful
- Supported
- Portable
- Secure and Private
- Collaborative
- Cross-Platform
- Open-Source
- Accessible for Visually-Impaired Readers (2022)

These are all important to consider not only in choosing the tool, but also in how the tool is used. The storymaps in this toolkit have a good balance of these considerations, and are importantly relatively easy to learn and free.

Explore below the storymap made by Michael Collins, in collaboration between the Pavee Roads Home project at Pavee Point and the Maynooth University Geography Department. The link to the storymap in the context of the project can be found [here](#).

What can you observe from the map? The main narrative occurs in the text and images that you can scroll through. Each narrative is separated into ‘chapters.’ And each chapter is linked to a specific ‘view’ of the map. This view centres

on a specific point on the map, and also has a set ‘zoom,’ so the author has control not only over where the map is showing but also the context in the map. Does a map chapter show landmarks and distances over one kilometre? Over one hundred kilometres? These are decisions you will be able to make as the storyteller and mapmaker.

Exploring your first storymap - the template

For your first storymap in this toolkit, you will be building off of a template provided to you.

You can see what the storymap template looks like here.

All of the information of the storymap can be changed by you, the storymap author. This includes changing the title, the description, the points on the map, the zoom on the map for each chapter, and the descriptions, images, and more that you can show in the text on the left side of the storymap window.

All of the data in a storymap can be added and edited in a Google Sheet. This is a spreadsheet, similar to Microsoft Excel, that can be viewed and edited in the browser and is hosted online by Google. For our storymapping approach, all of the data for each storymap comes directly from a corresponding Google Sheet. Everytime you change something in the sheet, that change will be reflected in the map.

Editing with the two tabs - Storymap and Sheet

To edit the storymap, it is best to have two tabs open in a browser window. One tab will be the storymap page, where you will be able to quickly see all the changes you make, and the other tab will be the Google Sheet

Once you have a numbered storymap assigned, click on the two corresponding links below to open up the storymap you will be working on, and the Sheet where you will edit data. (For example, if you have been assigned number 3, click on the Storymap 3 and Storymap Sheet 3 links).

Storymap Link	Google Sheet
Storymap 1	Storymap 1 Sheet
Storymap 2	Storymap 2 Sheet
Storymap 3	Storymap 3 Sheet
Storymap 4	Storymap 4 Sheet
Storymap 5	Storymap 5 Sheet
Storymap 6	Storymap 6 Sheet
Storymap 7	Storymap 7 Sheet

Storymap Link	Google Sheet
Storymap 8	Storymap 8 Sheet
Storymap 9	Storymap 9 Sheet
Storymap 10	Storymap 10 Sheet

The Google Sheet contains all of the data for the storymap, and currently contains all the data to make the map template. When you first open the Google Sheet link, you will see the list of “chapters” in the map.

If you are unfamiliar with Google Sheets or other spreadsheets, this may be confusing at first. With some explanation, we can simplify what we are looking at, how to interpret the Sheet and how to edit it.

Begin by observing the tabs at the bottom of the screen. One of these tabs is labelled ‘Options,’ and by clicking here we can get a sheet where we can change many of the extra settings for the storymap and add the title, subtitle, author and other details.

Spreadsheet explainer: Spreadsheets like those in Google Sheets are made up of “cells,” where information can be inputted. It is important to be able to find where a cell is, so that it can be referenced to and from, and so each cell can be identified by what COLUMN (vertical lines) it is in with a letter starting from the left, and what ROW (horizontal lines) it is in with a number starting from the top. So cell B1 is in the second column ‘B,’ and is in the first row ‘1,’ so it is the cell at the top, one cell from the left.

In the options tab, the cells are laid out as follows: - Cells in column A are labels for the setting of the map - Cells in column B are where the setting can be changed. These cells are where you can change the title of the storymap, and all other options. - Cells in column C have further descriptions of the setting.

The title of the storymap is written in cell B3 (as the label sets out in cell A3). **Select cell B3** by clicking on the cell, and the cell will have a blue outline. Then, **type directly into the cell** now, or click on the text bar at the top of the window (between the menus and cells).

Enter a title of your storymap, perhaps including your name and what you want to focus on today.

You have now changed the title and subtitle of your storymap. In this menu you can also change the author to your name. When you have completed this, **go back to your storymap and refresh the page**. The changes should be reflected in your storymap.

Video - adding a title and subtitle to your storymap

	A	B	C
1			
2	Setting	Customize	Hints
3	Storymap Info		
4	Storymap Title	Storymapping with Pavée Roads	For help, see tutorial in HandsOnDataViz.org
5	Storymap Subtitle	Add subtitle here <small>Scroll down <i class="fa fa-chevron-down"></i></small>	Add your subtitle, or delete that portion
6	Storymap Logo		Path to a logo image
7	Google Analytics Tracking ID		Sample format: UA-5488840-29
8	Map Settings		
9	Basemap Tiles	CartoDB Positron	For help, see tutorial in HandsOnDataViz.org
10	Zoom Controls	bottomright	Drop-down menu for background.basemap.tiles
11	Narrative Background Color		
12	Narrative Text Color		
13	Narrative Link Color		
14	Active Chapter Background Color		
15	Media Container Height	300	Maximum height of the image, in pixels. 200 is default. The image will be fit into the container with its proportions kept (it won't be skewed).
16	Enable Lightbox for Images	yes	In pixels. At least 100
17	Credits		
18	Author Name	Pavee Roads Home	yes or no
19	Author Email or Website		For help, see tutorial in HandsOnDataViz.org
20	Author GitHub Repo Link	https://github.com/StorymapSpecial/M4hPaveeRoads-iStorymap1	Appears in map credits as "View data by..." (or leave blank)

Figure 1: Screenshot of the storymap Google Sheet Options tab with cell B3 highlighted to change the title

Adding data to the storymap

When designing a storymap, it is very useful to differentiate between the design steps and the technical building steps. In the design stage, you will be brainstorming ideas for the places and narratives that your storymap will explore and present, and thinking about how to present your stories. In the technical building steps, you will be working on the technical steps of adding points, details and media to the storymap. These two modes of working on a storymap can sometimes be difficult to do at the same time, especially when learning the tools and approaches in a storymapping toolkit.

For this reason, it is useful to take some time away from the computer, on a piece of paper or in a text document if that is best for you, to write down ideas and notes for the places and stories you will be telling in the storymap. Sometimes this can be a quick process of jotting down some ideas and then trying them out, and sometimes this part of the process can take a very long time to collect data, organise data and write before even starting to put points on a map.

If you haven't already, take some time now to write down ideas:

- Where will the storymap start? Will it begin by showing the entire area the narrative will cover, or will it start in one specific spot?
- How detailed will the storymap be in the first few 'chapters?' Will it begin with a detailed, zoomed-in description of a place or will it give context over a larger area?
- How will movement from place to place drive the narrative? Is it best to portray movement of people, objects, nature, or will a transition show a divide, or some other relation between two or more places?

These are a good place to start in thinking about the narratives you want to present.

Once you have a good idea of some places you want to add to the storymap, you can come back to the computer and begin the process of entering your data

into the map. And for this process, you can use a data entry tool included here to enter the place locations, zoom levels and descriptions into the Google Sheet.

The data entry tool

For entering the data of places on the map, including its location using latitude and longitude, the zoom level, and your text to accompany this chapter, we can use **the data entry tool** below. You can also use the full-page version of the data entry tool [here](#). See below for instructions on how to use the tool.

In this tool, clicking on a place will record the latitude and longitude of that point, indicated on the map and in the top-right corner of the window. Latitude is the distance North or South of the equator - positive numbers mean North - and Longitude is the distance East or West of the prime meridian - the zero line passes through Greenwich, England and negative numbers mean East of this line. This is why points in Ireland have a positive Latitude and negative Longitude.

To use the tool, navigate to the point you want your map to visit for the first chapter and zoom in or out to your desired zoom level using the scroll-wheel on your mouse or the plus and minus buttons on the map. Then, **click on the point**. When you have completed this step, **add the Place name** in the labelled text box in the top-right, and **click ‘Add to list’**. Clicking this button adds the data about the point to the box below.

Continue on to the point you want your map to visit for the second chapter and repeat this process until you have added as many points as you would like. You can do this process in stages, adding some and not all chapters to your map at first if you like, and adding more later. For now, try with three chapters, each at different points. Try experimenting as well with different zoom levels.

Once you have completed this process, **click ‘Copy to clipboard’**. All of the data you have entered is now stored in the clipboard in a format that we can paste into your Google Sheet.

Go to your Google Sheet tab and **click on cell A1**. Pasting your data here will delete the three chapters in the template and replace them with your data. **In the edit menu, select ‘Paste’**.

Hit the return key on your keyboard.

This should now have completed the process of adding these points to your map. Go to your storymap page, refresh the page, and see if your points have been added.

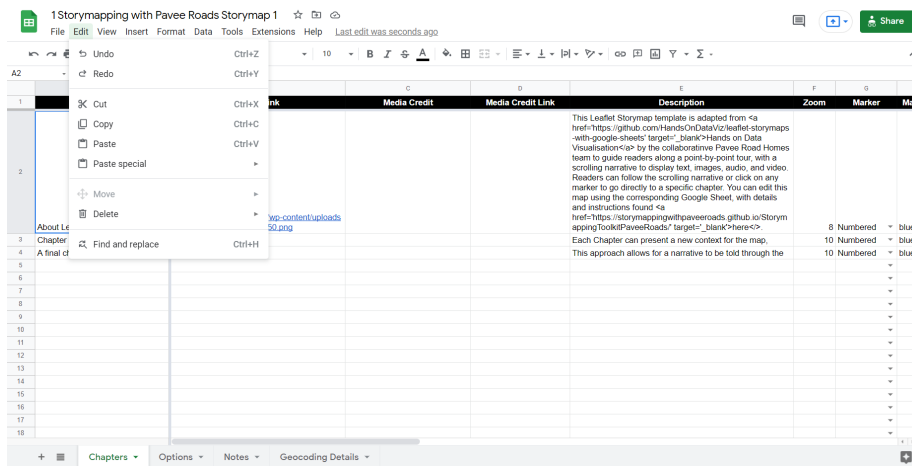


Figure 2: The edit menu is open in order to use the paste button, while cell A2 is highlighted in order to paste data from the data entry tool.

Adding descriptions

Now that you have chapters with places, zoom levels and names, you can add descriptions to each chapter, which will be text displayed on the left side of the storymap. The text is entered into the Google Sheet in the “Chapters” tab, in the cells in column E.

In the Chapters tab, each chapter is represented by one row. Row 2 is the first chapter of the storymap, and all of the cells in row 2 contain information about the chapter. Cell A2 contains the name of the chapter, to be displayed in bold text on the scrolling part of the storymap. In the next step, we will be focusing on the cells in **column E**, the descriptions column.

In the template, the description cell for row 2 (cell 2E) contains a paragraph of text about the storymapping toolkit and template. You can **delete this text by clicking once on the cell and typing the delete key**. If you double click on the cell, the cell will expand and you can edit the text, instead of just deleting all of the text at once. **Type text in this box as a test to see how it will appear in the storymap**. Once you have typed the text, type the return key. The map will now be changed, and you can go to your storymap page and refresh the page to see the changes. You can do this for each of the chapters you have entered so far.

Be careful: Typing text in a row that does not have enough place data entered, consisting of legible longitude and latitude data, will not be understood by the mapping software and the map will not display. If this happens, the Sheet can be corrected by going to the Edit menu and clicking Undo until the map works again.

Video - adding data to your storymap

Adding images

In addition to mapping a story or narrative, storymaps also often include images and other media to provide a range of material and storytelling devices.

Design: adding images to your storymap

Along with the maps and texts, you may want to add photographs or other images. These images may be on the internet, on your own computer or on your phone. All of these images can be added to a chapter in your storymap.

The first step in this process is choosing the images that you would like to add to your storymap and how these images will fit into your storymap chapters. For now, you will only be able to add one image per chapter.

Take some time to think about what images you would like to use, and identify images that are either on the internet already or that you have saved to your computer or phone. If they are saved to your phone, find a way to save them to your computer by sending them to yourself through email or other services.

Hosting your image on the internet

The storymap in this guide is published as a live website, hosted on the internet and available to anyone with the url link and a web browser. Just as with other websites, this is made possible by the ‘hosting’ of the storymap and all of its content on servers. So far, you have been editing the storymap Google Sheet (hosted by Google), and the behind-the-scenes data that makes and updates the storymap based on the Sheet is hosted by GitHub (you can read more about GitHub in chapter 5 to learn how the storymaps were made).

To add an image that is not on the internet already, we need to host that particular image somewhere. Fortunately, there is a free and simple image-hosting website called imgur that we can use.

How to host your image on imgur

Navigate to www.imgur.com.

At the top-left of the page, click on “New post.”

Drag your image into “Drop images here” or click “Choose Photo/Video” to navigate to your image on your computer.

The image is now hosted on imgur.

Stay on this page for the next step.

Adding a hosted image to the storymap Sheet

Now that your image is hosted publicly on the internet, you can add it to your storymap by referencing it in your storymap Sheet. That means that we can add the image to the storymap by copying the exact web url of the image - and only the image - and pasting that link into the “Media Link” Sheet column in the row corresponding to the chapter you want to place it in. *For example, to copy an image link into the third chapter of the storymap, copy the image url into cell B4.*

To do this, **right-click on your image in imgur and click “copy image address.”**

Then, **in your storymap Sheet, select the cell in column B “Media Link” corresponding to the chapter you want to place it in.**

Right-click on the cell and select “paste”

Type return on the keyboard, and this should complete the operation to add an image to your storymap.

Go to your storymap webpage and refresh the page to see the result.

One image can be added for each chapter of your storymap.

Video - adding images to your storymap

Further Reading

Saving your work

So far you have made your storymap in our template for the workshop. You can save all your work by going to your storymap Sheet, and in File -> Download -> Microsoft Excel to download the Sheet as a Microsoft Excel file.

You now have the data of your storymap saved in this file. You won't be able to view this as a storymap until uploaded back into the same storymap Sheet or another one connected to the same type of template.

Making your storymap a permanent webpage

We use these workshop storymapping templates for further workshops, so you can't permanently have your storymap at this address. However, it is possible to make your own permanent storymap hosted by the same site we use: GitHub.

You can find guides on how to do this that we have made [here](#).

And you can find a guide from the authors of the original template, Jack Dougherty and Ilya Ilyankoy, [here](#).

Administering the storymapping toolkit

This is information for those leading and administering the storymapping toolkit. There is some maintenance necessary in clearing and resetting the storymap Google Sheets in between storymapping workshops.

Resetting the Sheets

For each Sheet:

- Open the Sheet.
- Click on “Last edit was xxx ago.”
- Select “Original Storymapping Template” version.
 - If you can’t find it, tick at the top “only show named versions.”
- Repeat this step for each sheet.

All storymapping instructional videos

Video - adding a title and subtitle to your storymap

Video - adding a data to your storymap

Video - adding images to your storymap

