

GIS in Archaeology

03 - Making Maps

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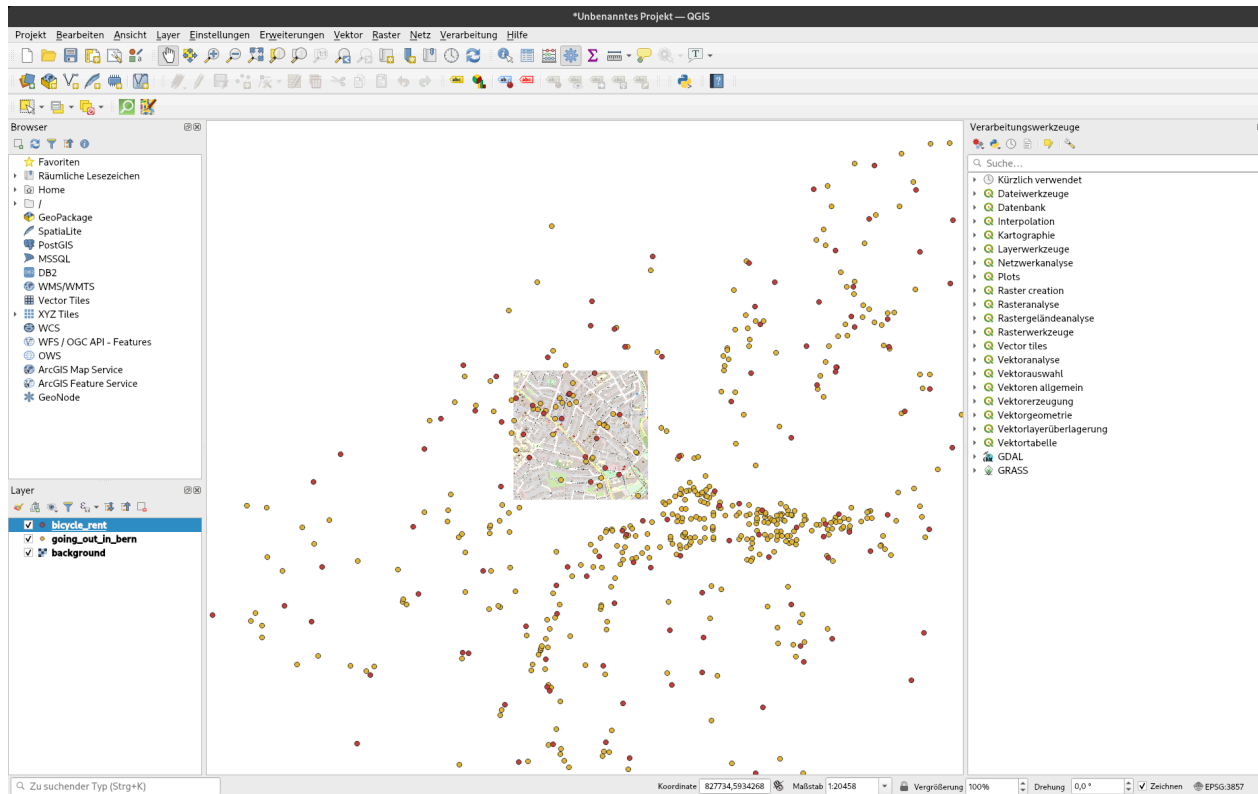
based on [Datapolitan-Training/qgis-training](#)

You can download a [pdf of this presentation](#).

Let's Get Started

1. [Click this link](#) and download the 'going_out_in_bern' data to your desktop
2. [Click this link](#) and download the csv data to your desktop
3. [Click this link](#) and download the background map also to your desktop
4. Open QGIS
5. Start a new project and Add all layers





Selecting Points

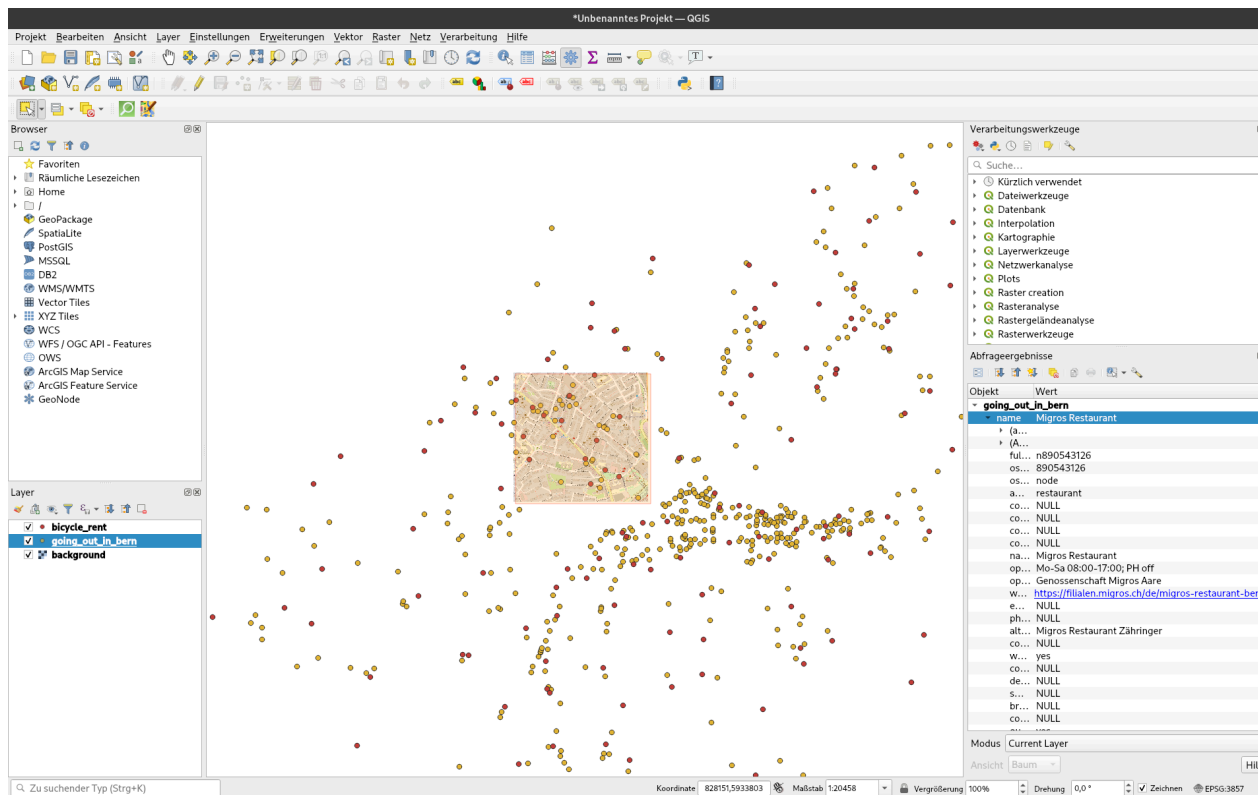


Selecting Points



Selecting Points

-  Objekte über Rechteck oder Einzelklick wählen
-  Objekte über Polygon wählen
-  Objekte freihändig oder über Einzelklick wählen
-  Objekte über Radius oder Einzelklick wählen



Selecting Points - Attribute Table

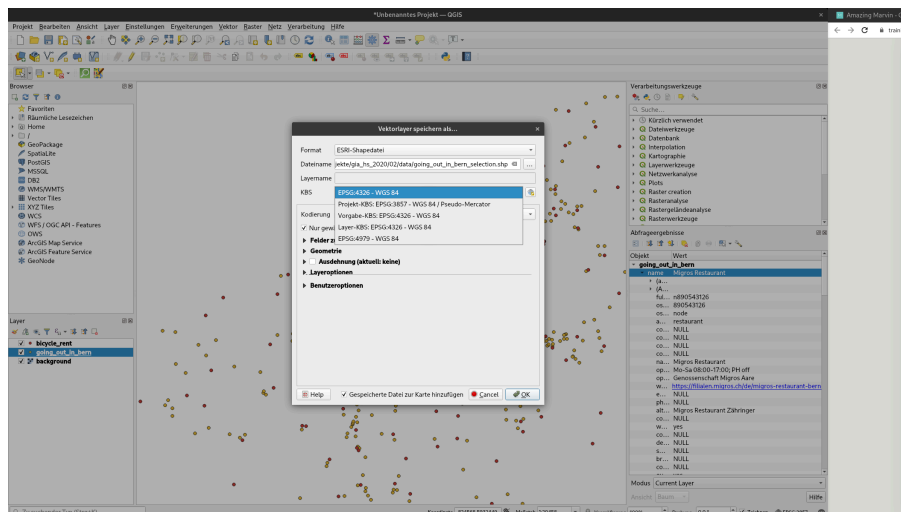
The image displays two side-by-side screenshots of the QGIS interface, showing the attribute table for a layer named 'going_out_in_bern'. The left screenshot shows 28 selected features, while the right screenshot shows 522 filtered features. Both tables have columns for full_id, osm_id, osm_type, amenity, contact_ad, contact_em, contact_fa, contact_ph, name, opening_ho, operator, website, and email. The maps below the tables show the spatial distribution of these points in Bern.

full_id	osm_id	osm_type	amenity	contact_ad	contact_em	contact_fa	contact_ph	name	opening_ho	operator	website	email
1	n70737630	node	restaurant	NULL	NULL	NULL	NULL	Cha Cha Thai	Mo-Sa 10:00...	Genossm...	https://www...	NULL
2	n162923752	node	restaurant	Hallerstr...	genuss@h...	https://we...	+41 31 378...	halles Bra...	Mo-Fr 11:3...	NULL	https://www...	NULL
3	n7457090...	node	restaurant	Eigerplatz 1...	info@darin...	NULL	+41 31 372...	Da Rina	Mo-Fr 10:00...	Dufina AG	https://www...	NULL
4	n75720682	node	restaurant	NULL	NULL	NULL	NULL	Migros Res...	Mo-Th 08:00...	Genossm...	https://fil...	NULL
5	n751620548	node	restaurant	NULL	NULL	NULL	NULL	nom nom	NULL	NULL	NULL	NULL
6	n7274483007	node	restaurant	Gesellschaft...	info@ingers...	NULL	+41 31 3013...	ingers	Mo-Fr 11:3...	Awaris Gr...	https://www...	NULL
7	n7241894045	node	restaurant	Gurtengass...	bern@willi...	NULL	+41 31 320...	Williams B...	Mo-Sa 11:3...	NULL	https://www...	NULL
8	n723913864	node	restaurant	NULL	NULL	NULL	NULL	Missione C...	Mo-Fr 09:00...	NULL	NULL	NULL
9	n7839674857	node	restaurant	Schärenstra...	illadss@b...	https://ww...	+41 31 348...	Lila Radish	Mo off Tu 1...	Outwaz F...	https://wa...	NULL
10	n7746699781	node	restaurant	NULL	NULL	NULL	NULL	Migros Res...	Mo-Sa 08:00...	Genossm...	https://fil...	NULL
11	n685527735	node	restaurant	NULL	NULL	NULL	NULL	Tibits	Mo-Wv 06:00...	Tibits	https://www...	+41
12	n676382785	node	restaurant	NULL	NULL	NULL	NULL	Kornhaus R...	NULL	NULL	NULL	NULL
13	n664589102	node	restaurant	Monbijoust...	NULL	NULL	+41 31 556...	City Pizzeria	Mo-Sa 10:30...	NULL	https://city...	NULL
14	n6860355018	node	restaurant	NULL	NULL	NULL	NULL	Lily Jo	NULL	ZFV	https://fil...	NULL
15	n654189504	node	restaurant	NULL	NULL	NULL	NULL	Migros Res...	Mo-Sa 07:30...	Genossm...	https://fil...	NULL
16	n654183626	node	restaurant	NULL	NULL	NULL	NULL	kaFe	Mo-Fr 08:00...	NULL	https://res...	NULL
17	n653706361	node	restaurant	NULL	NULL	NULL	NULL	Gurtenblick	Mo-Su 08:00...	NULL	https://www...	+41
18	n691310131	node	restaurant	Winkelried...	NULL	NULL	+41 31 332...	Norwning	NULL	NULL	NULL	NULL
19	n720303166	node	restaurant	NULL	NULL	NULL	NULL	Bruno-Medl	Mo-Th 07:30...	SV Service	NULL	NULL
20	n767676742	node	restaurant	Bölenenstr...	obatang@n...	NULL	+41 31 994...	Snow Lion	Mo-Fu 11:3...	NULL	http://snow...	NULL

Selecting Points - Saving Selection

Selecting Points - Saving Selection

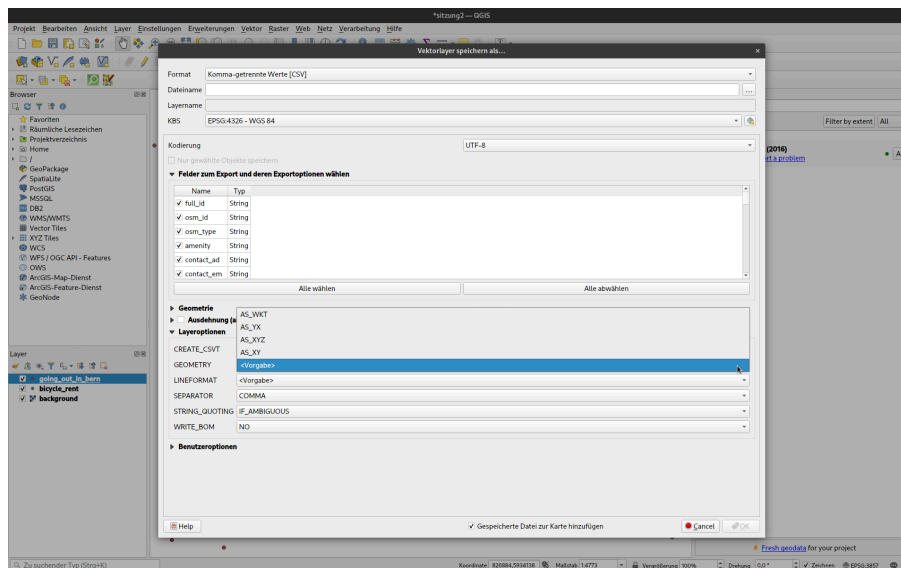
- If we wanted to reproject the data into a different CRS, we could do that here



- Pick the new projection in the CRS field (like when we imported the CSV)
- You can also export your CSV file as shape file - making further adding to the map easier

Selecting Points - Saving Selection as CSV

- If we wanted analyse our data using eg. statistical software, we also can export as csv.

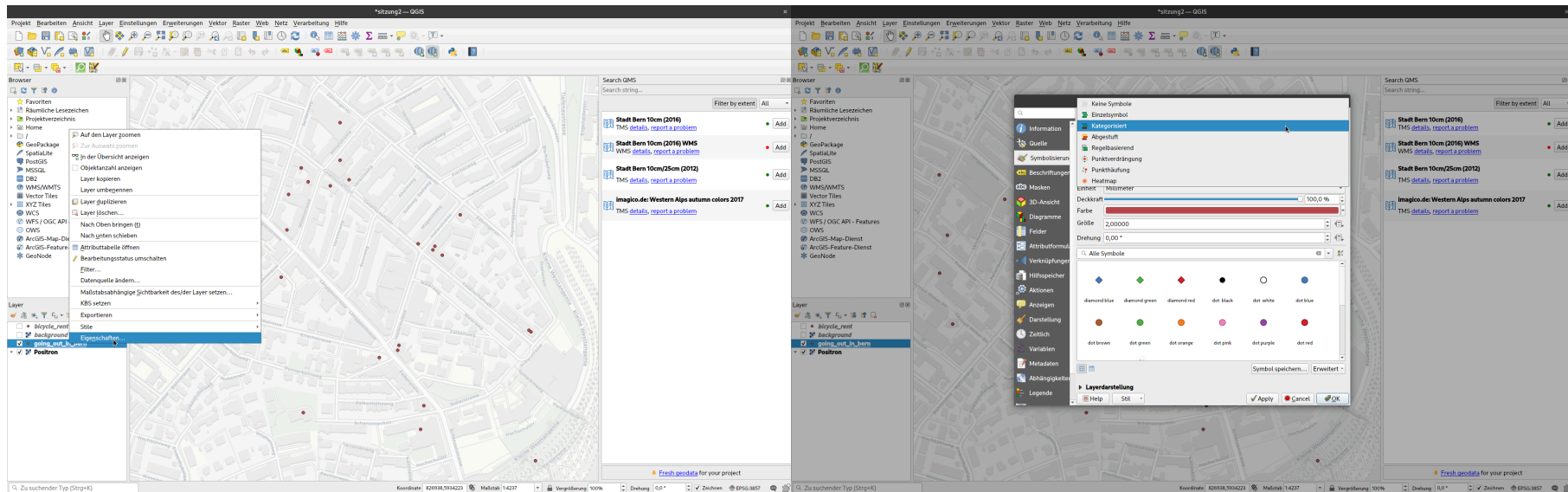


- If you like to export the coordinates, you can select that at 'Layer options'

Styling points according to data

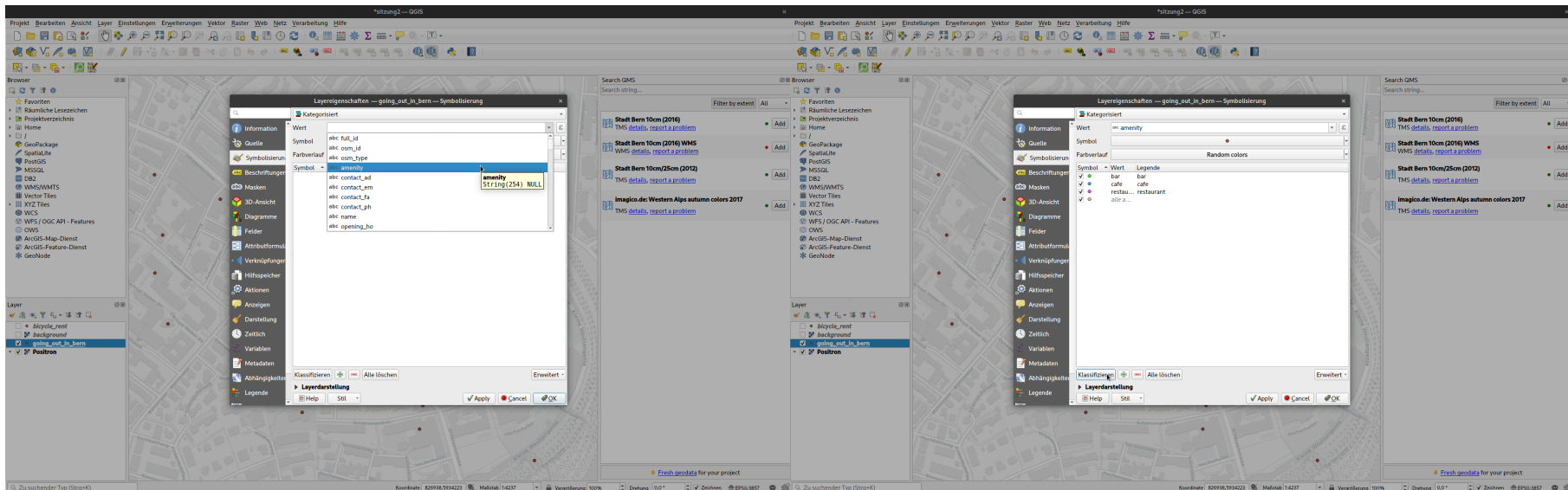
- can be used to map different categories within a vector dataset
- is available for all kinds of vector data

Styling points according to data



- Select Properties
- Go to Symbology and change 'Single Symbol' to 'Categorised'

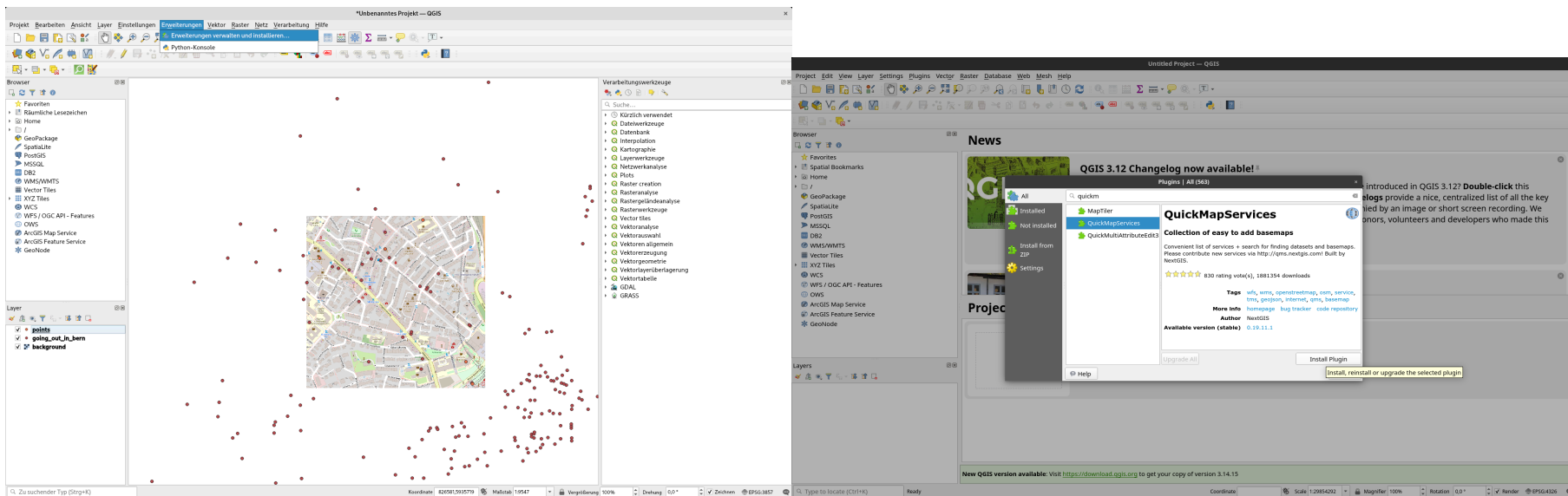
Styling points according to data



- Select the data (column) that represents your categories
- Select 'Classify'
- Enjoy the result
- You can the colors according to your needs

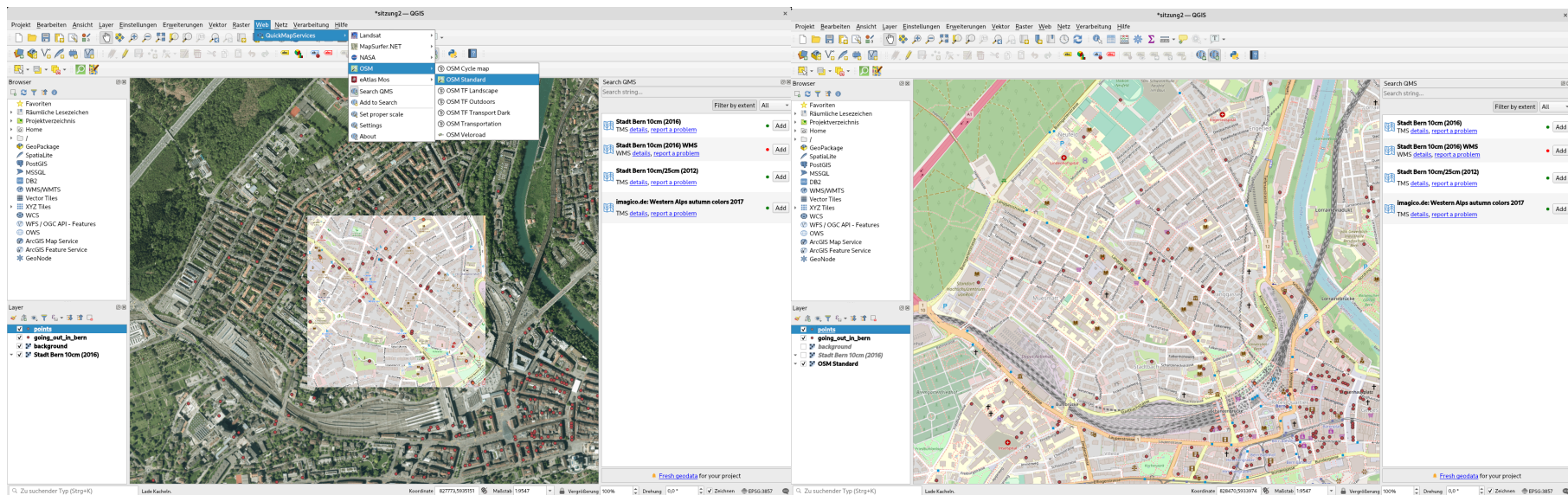
Installing Plugins

- QGIS has many third party functionality available
- We will use some of them in the course
- let's get some Background with QuickMapServices

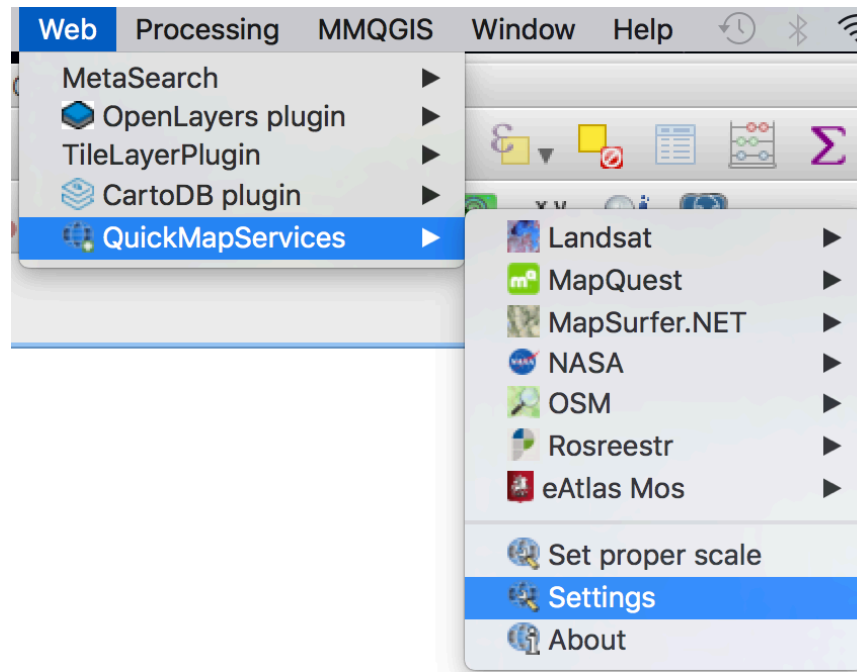


Basemaps (QuickMapServices)

- Satellite imagery
- Map services
- ...
- Fast and easy way to get background maps



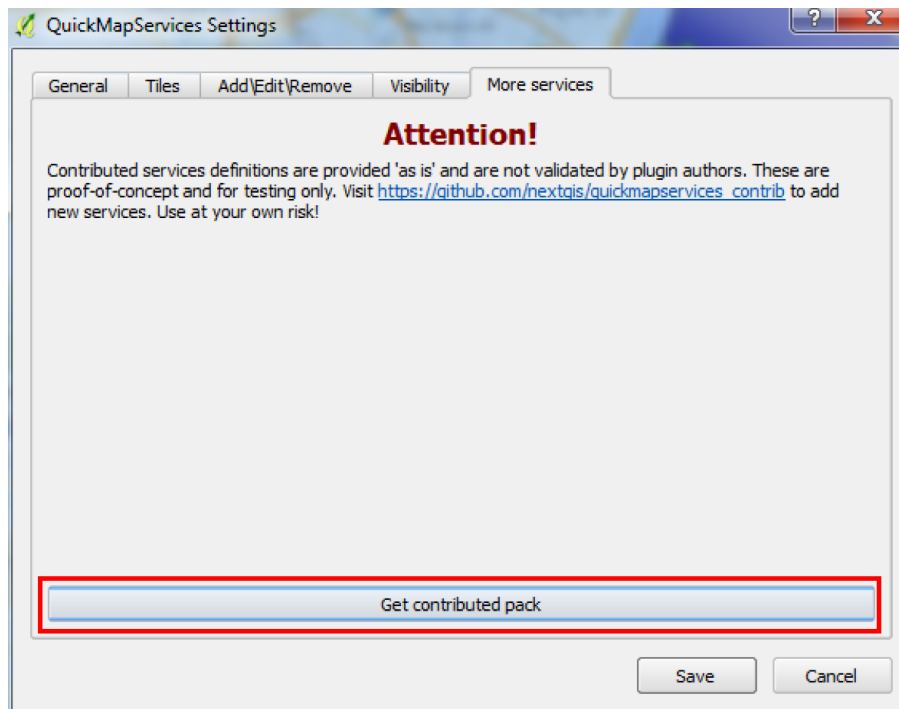
Setting Up QuickMapServices Plugin



- Go to the Settings Menu

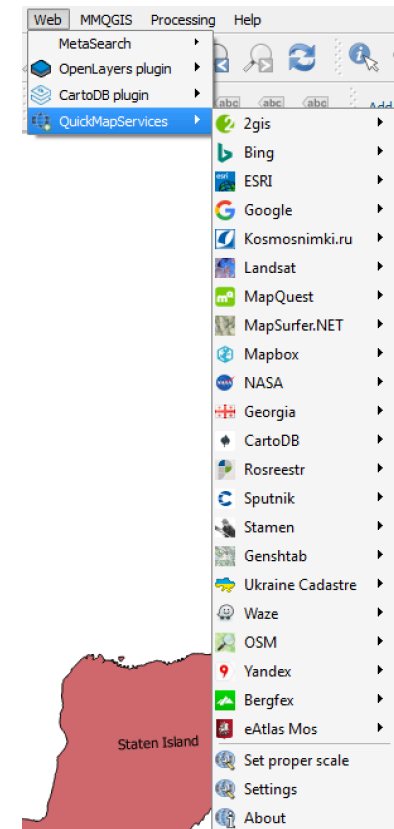
Setting Up QuickMapServices Plugin

- Get the contributed packs



Setting Up QuickMapServices Plugin

- Revel in all the beautiful base maps



Choosing a Base Map

- Think about what someone reading your map needs to see for context
- Think about how the base map interacts with the data on your map

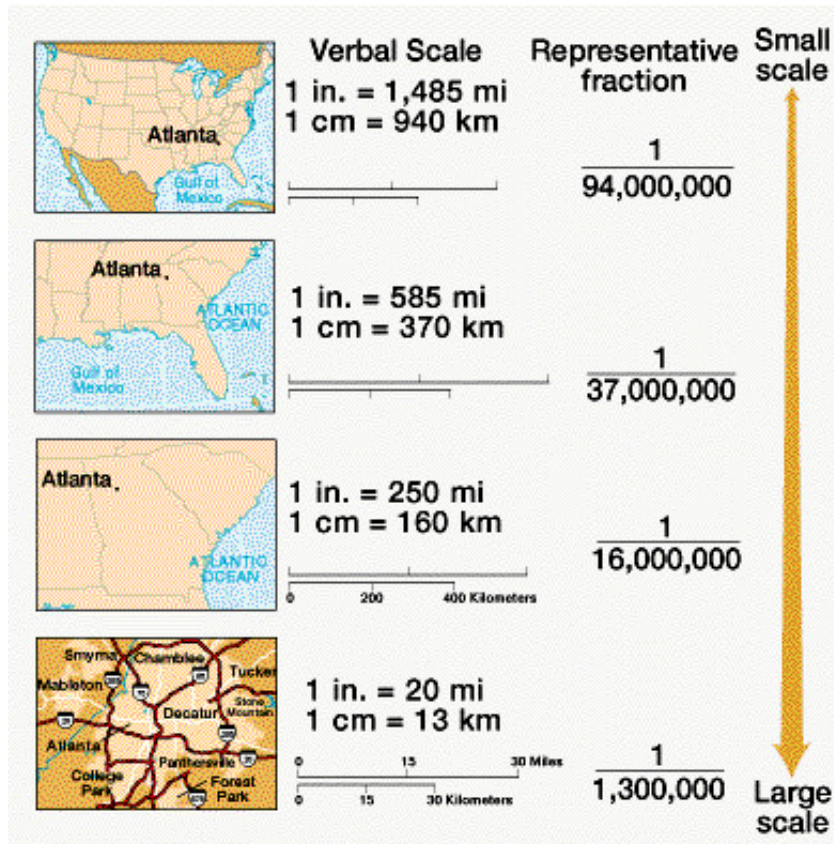
Base Maps - Hierarchy

- If your data is the most important part of the map, make sure it looks more important than the base map
- Avoid base maps that strongly emphasize features that aren't relevant on your map

Base Maps - Colors

- Choose base maps with colors that complement the colors on your map
- The contrast between the color on your map and the color on the base map should be enough to make your layers clearly visible

Base Maps - Scale

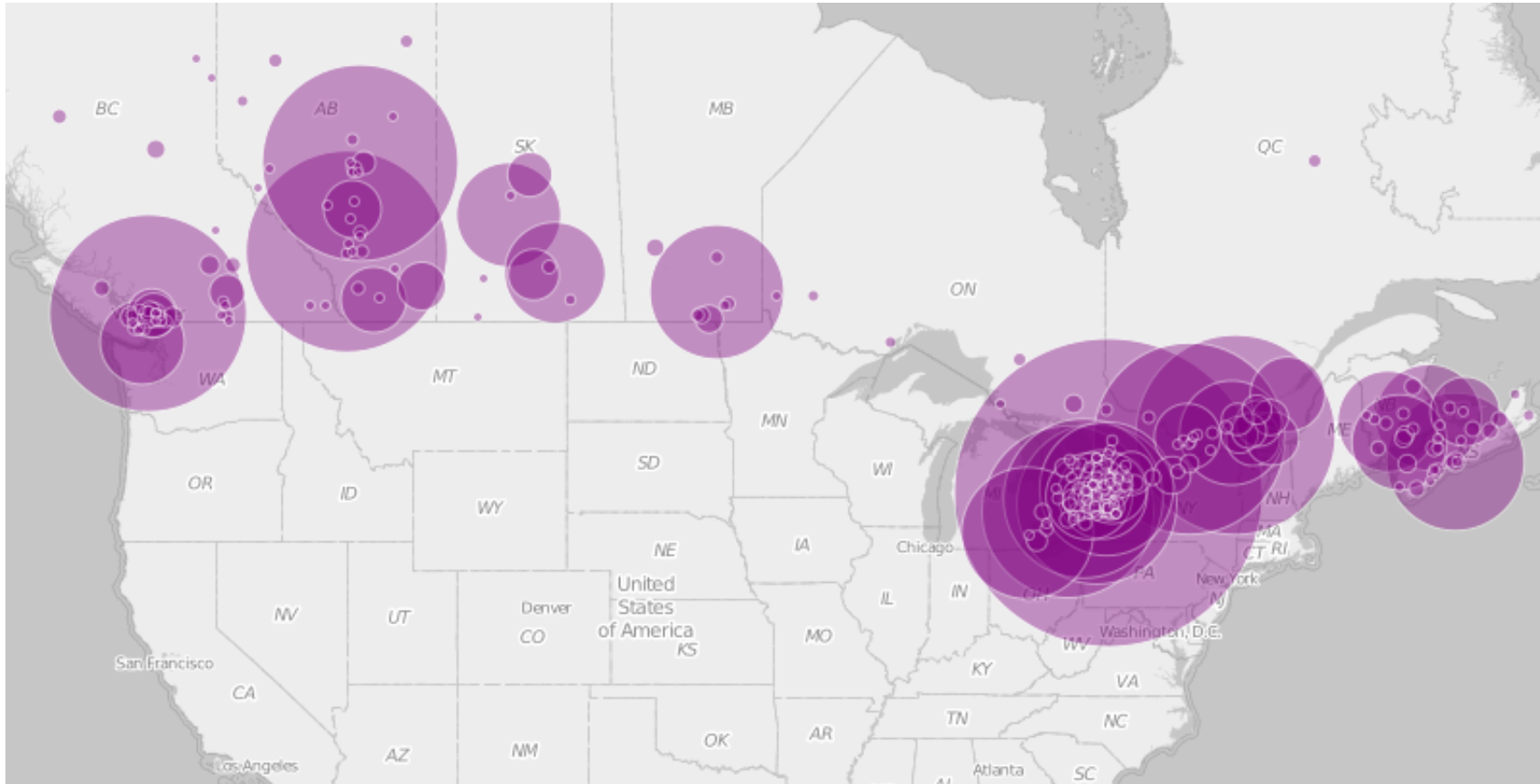


Source: http://go.owu.edu/~jbkrygie/krygier_html/geog_222/geog_222_lo/geog_222_lo04.html

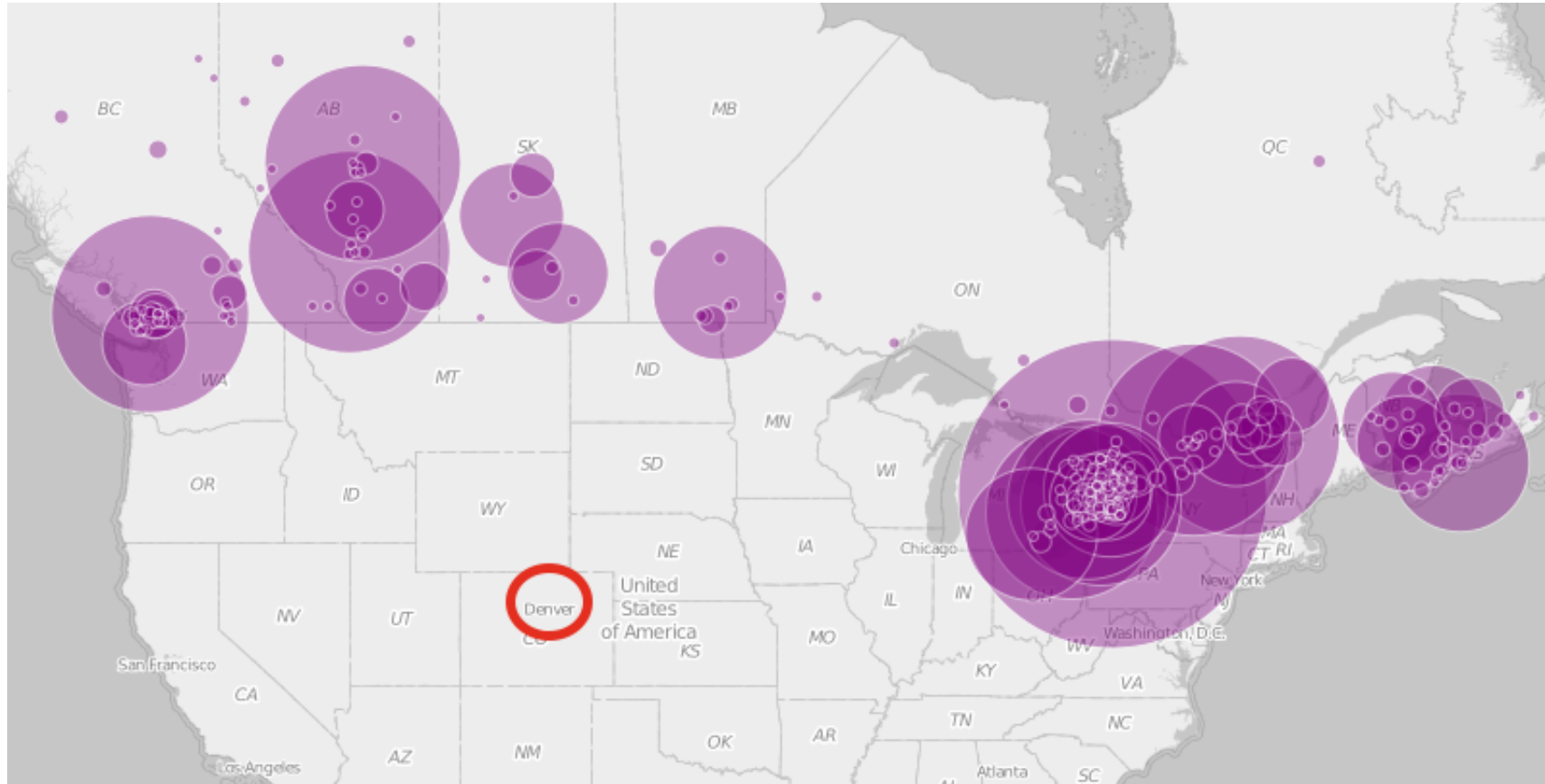
Base Maps - Scale

- Base maps show different levels of detail at different scales
- Make sure the level of detail is appropriate to your map

Scale



Scale



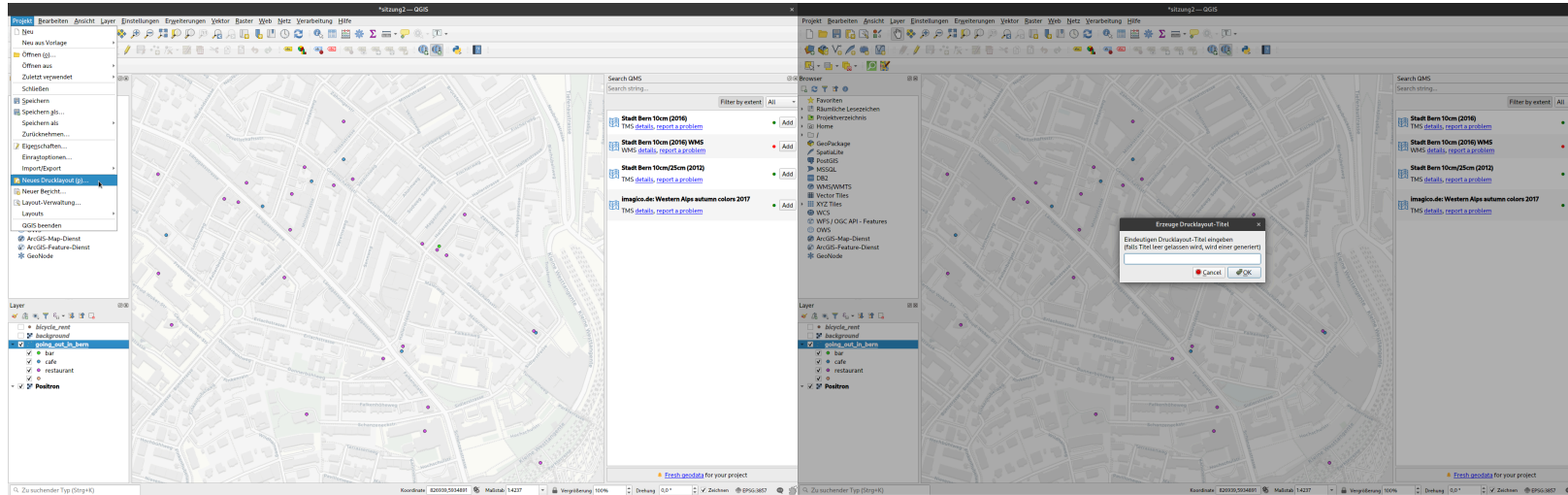
Your Turn

- Find a good base map for your data
- Think about hierarchy, color, and scale
- Don't be afraid to play around

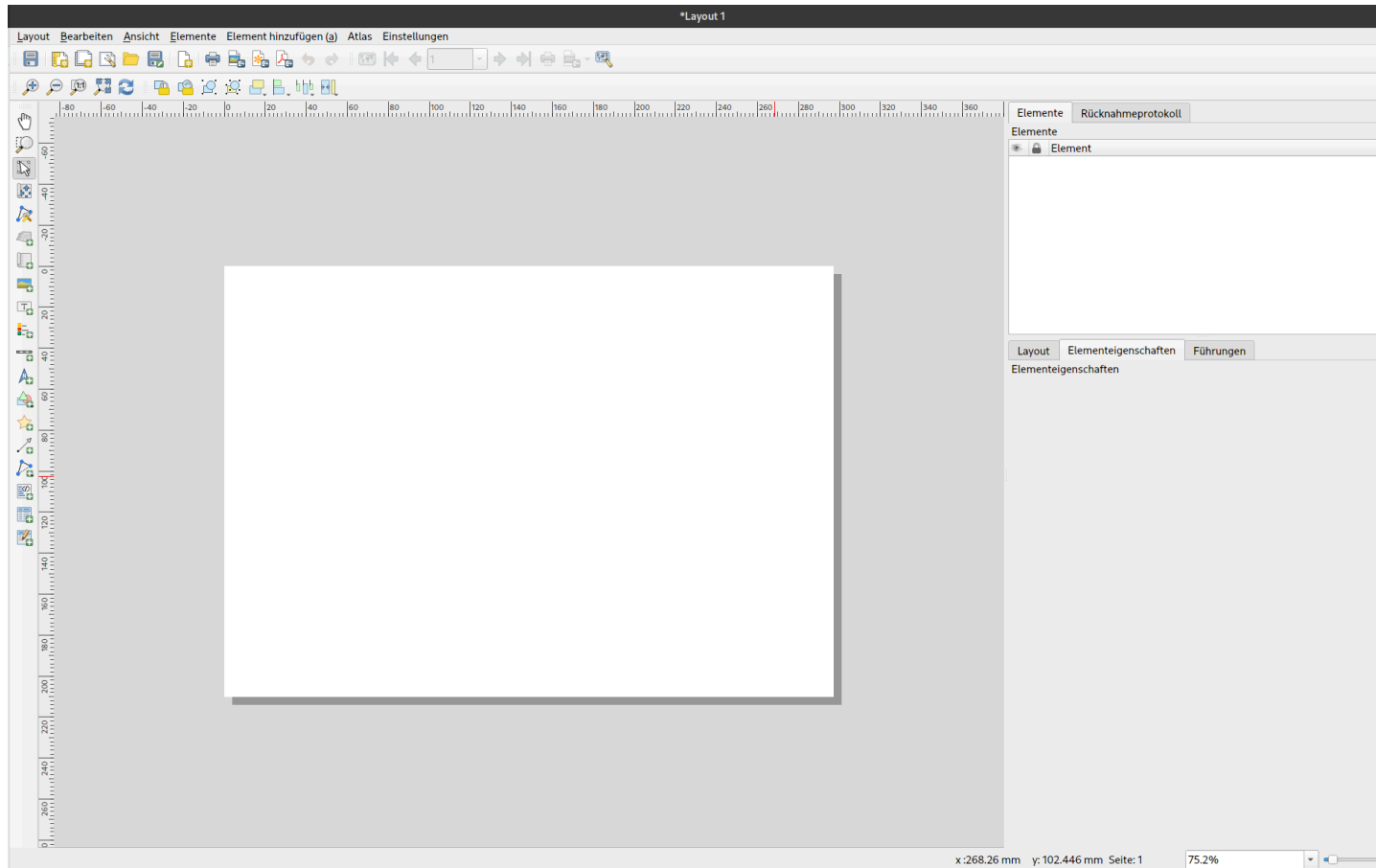
Print Composer

- How you make exportable and printable maps in QGIS
- Able to add map elements (legends, scales, text, etc)

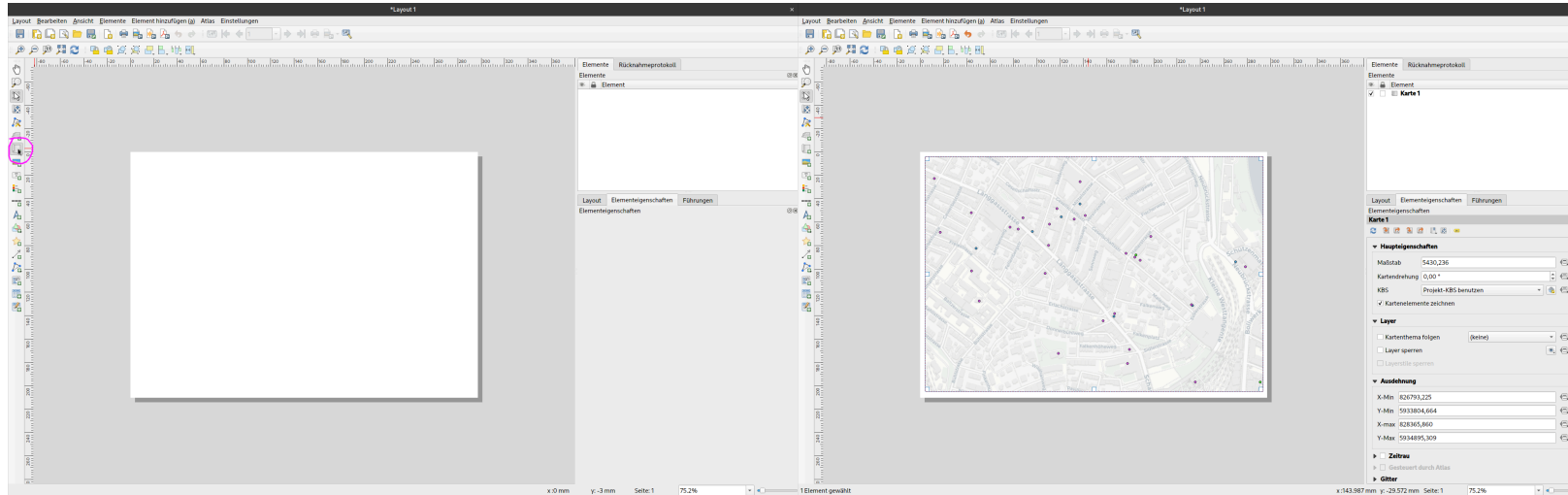
Create a new print composer



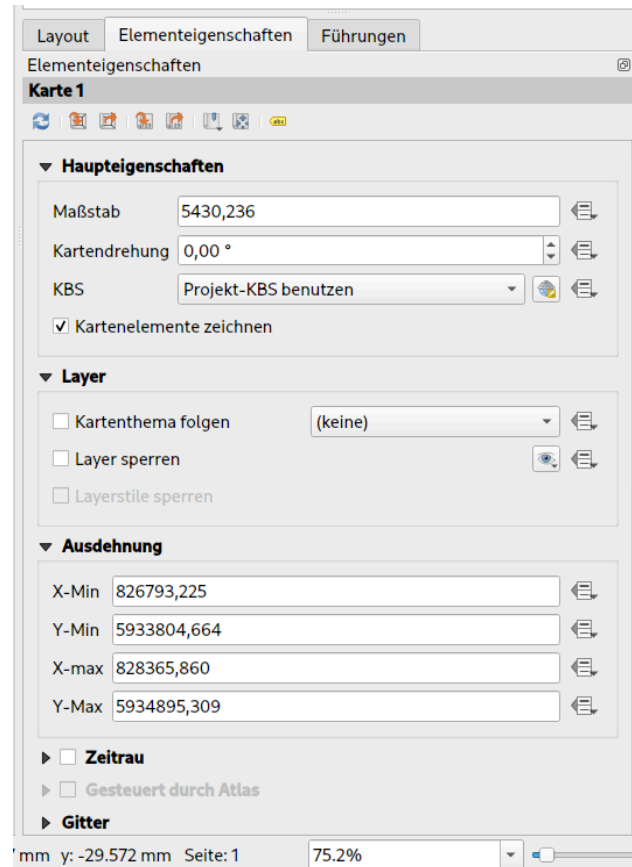
You are greeted with a blank slate



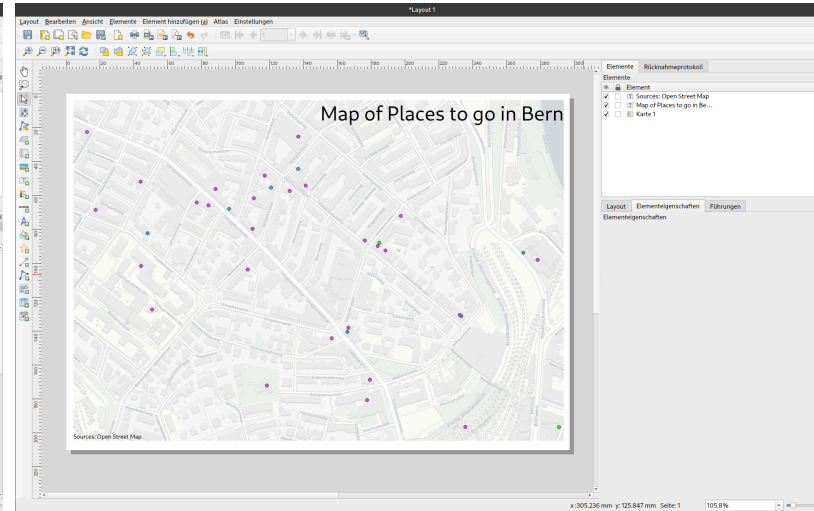
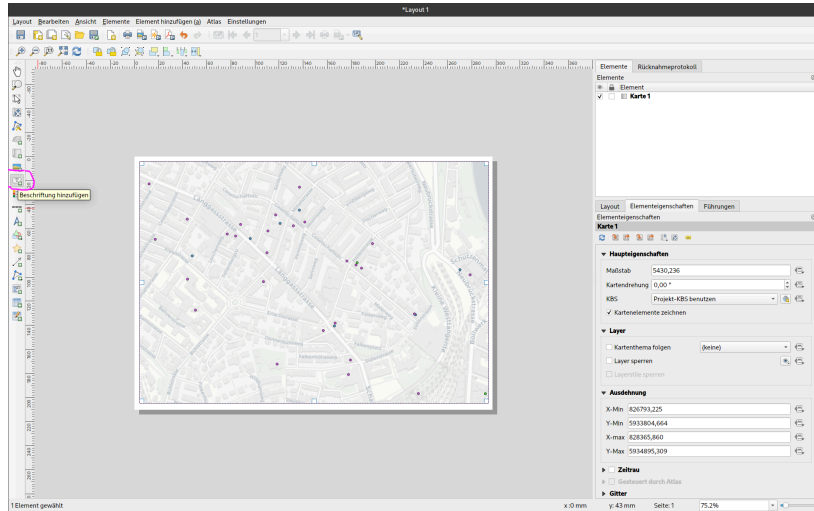
Add New Map tool will add your current map



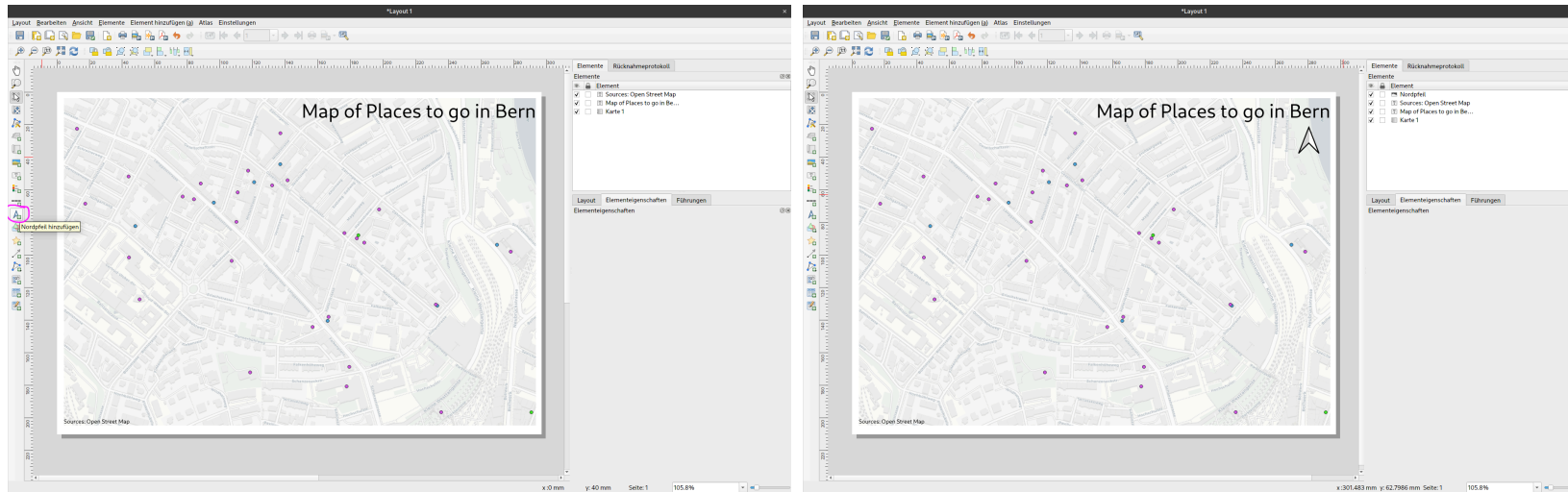
Customize item properties on the right



Don't forget a title and your sources

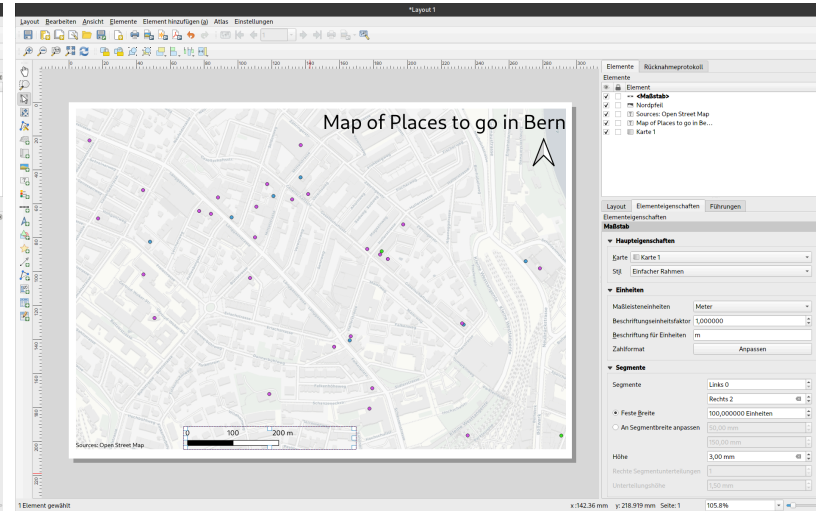
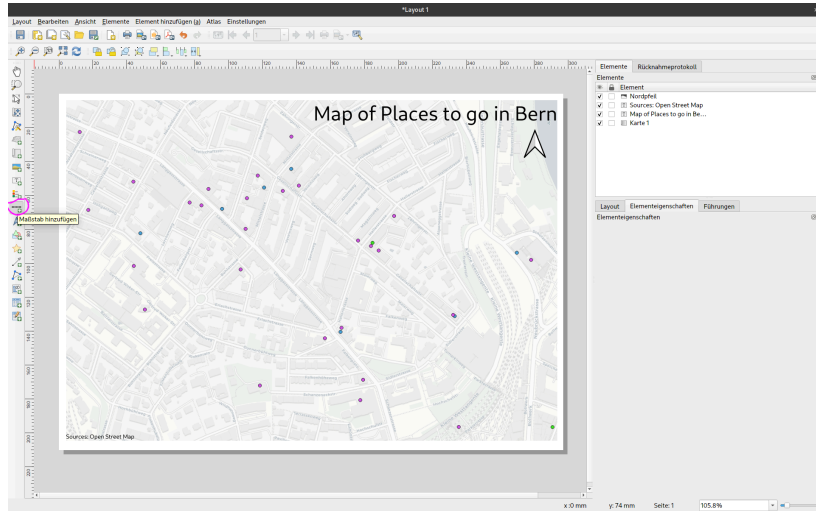


Adding North Arrow



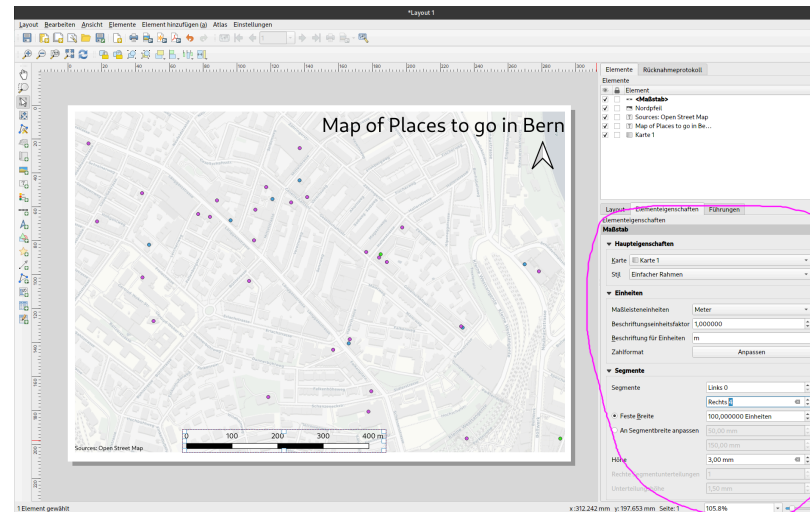
- You can select from multiple arrow types

Adding Scale bar

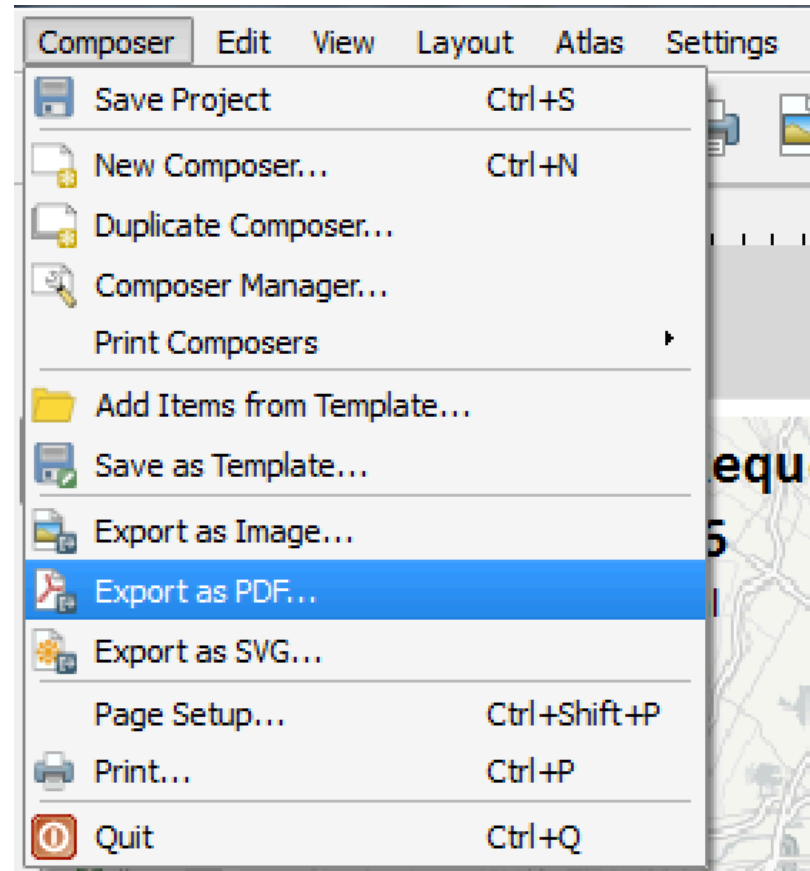


Adding Scale bar

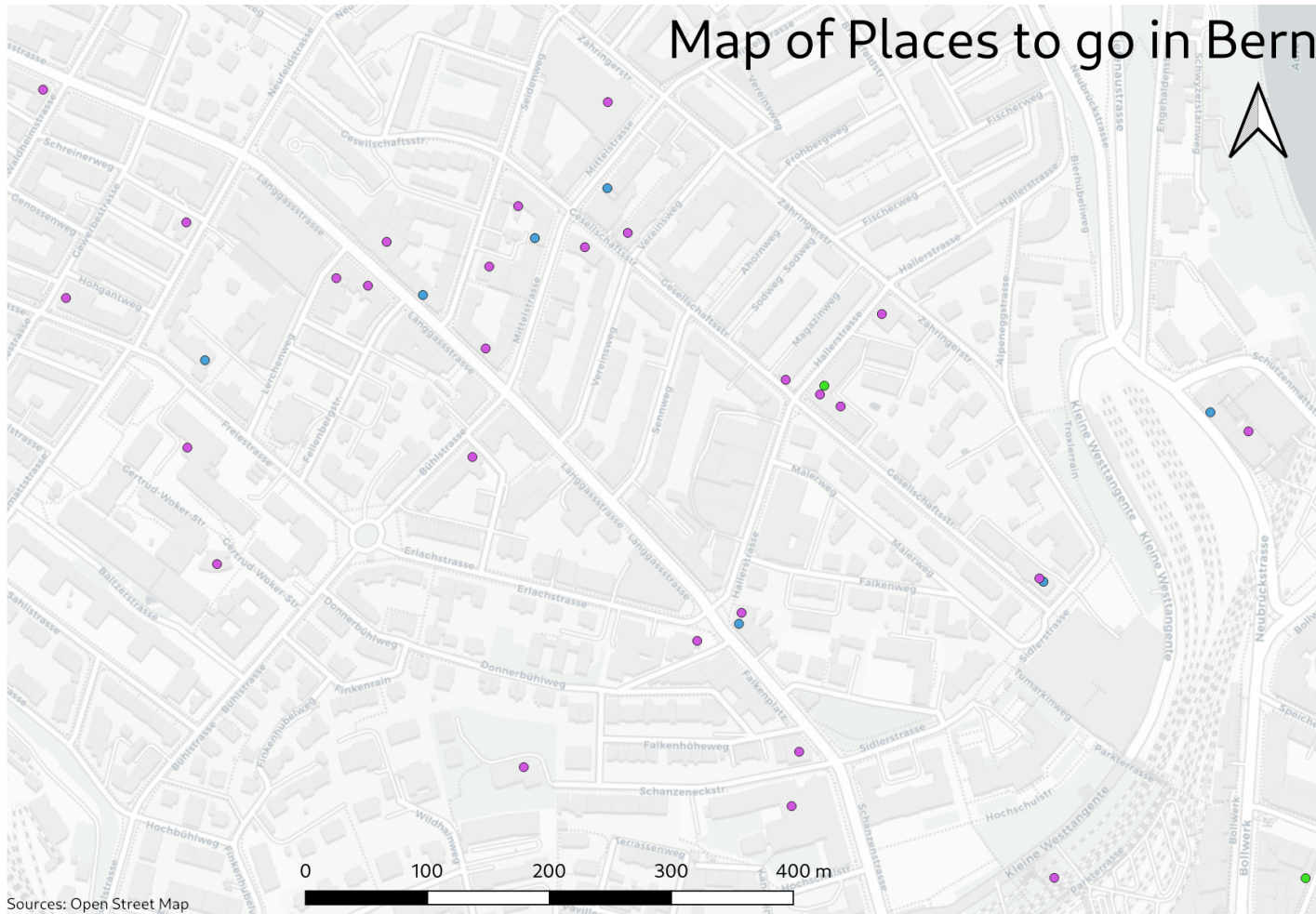
- You can also select and customize different styles of scale bars



There are a few exporting options



Now you can share your map or print it



Print Composer Problems

- Map extent -> "Use current map extent"
- Moving map around -> Adjust with arrows

What We've Covered

- Selecting features
- Exporting data
- Making Maps

Homework

- Filter for service requests in your borough
- Try and find something interesting
- Change the style of the point, either to a different shape, color, or icon
- Export your selection as a new shapefile
- Get a background map
- Make a decent Map
- Send me an exported map (png or pdf)

Any questions?



You might find the course material (including the presentations) at

<https://github.com/BernCoDALab/gia>

You can see the rendered presentations at

<https://berncodalab.github.io/gia>

You can contact me at

martin.hinz@unibe.ch

Source: <https://www.instagram.com/sadtopographies>