

Excel Tip: Creating maps in Excel

Previously to create maps, specialist GIS (Geographical Information System) software was required. OPA has also used Tableau to map data but this software is only available free for a short trial period.

The latest version of Excel now contains a mapping feature but it is hidden away in the Insert menu.

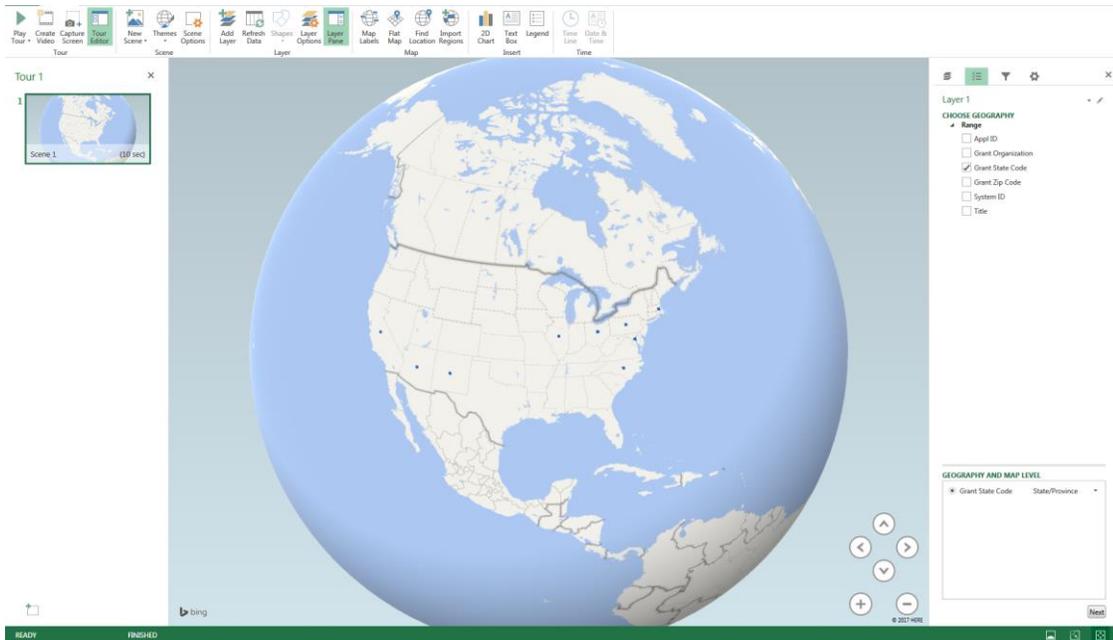


This will allow you to map data in a spreadsheet as long as you have a geographical reference in the dataset. From *iSearch* it is possible to download Grant State and Grant Zip Code from the Organization group of fields. It is also possible to download Institution Latitude and Longitude from QVR.

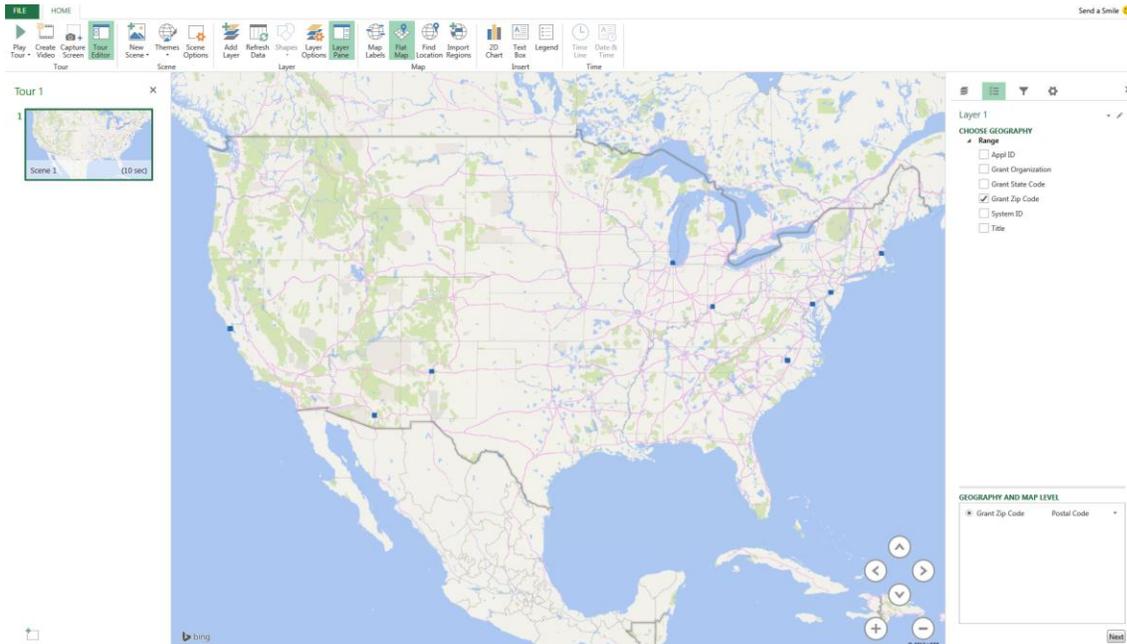
Below is a download from *iSearch*. Note the missing information in IMPACII. Several Institutions have the state and or zip code missing, so the first step is to manually check your data and fill in missing values.

	A	B	C	D	E	F	G
D14				UNIVERSITY OF CALIFORNIA, SAN FRANCISCO			
1	System ID	Appl ID	Title	Grant Organization	Grant State	Grant Zip Code	
2	1103726	1103726	MECHANISM OF OXIDANT II	NORTH CAROLINA STATE UNIVERSITY RALEIGH	NC	27695	
3	2022111	2022111	ROLE OF ION CHANNELS IN	UNIVERSITY OF CHICAGO	IL	60637	
4	2028065	2028065	MYOCARDIAL ISCHEMIA	UNIVERSITY OF CALIFORNIA, SAN FRANCISCO			
5	2028647	2028647	PSEUDOMONAS AERUGINO:	UNIVERSITY OF MARYLAND BALTIMORE		21201	
6	2061874	2061874	POLYSACCHARIDE VACCINE	BRIGHAM AND WOMEN'S HOSPITAL			
7	2061875	2061875	A POLYSACCHARIDE VACCIN	BRIGHAM AND WOMEN'S HOSPITAL			
8	2061876	2061876	POLYSACCHARIDE VACCINE	BRIGHAM AND WOMEN'S HOSPITAL		02115	
9	2061877	2061877	A POLYSACCHARIDE VACCIN	BRIGHAM AND WOMEN'S HOSPITAL		02115	
10	2061878	2061878	POLYSACCHARIDE VACCINE	BRIGHAM AND WOMEN'S HOSPITAL		02115	
11	2178547	2178547	ION CHANNELS AND MONO	UNIVERSITY OF CHICAGO			
12	2178548	2178548	ION CHANNELS AND MONO	UNIVERSITY OF CHICAGO	IL	60637	
13	2178549	2178549	ROLE OF ION CHANNELS IN	UNIVERSITY OF CHICAGO	IL	60637	
14	2215719	2215719	CELLULAR AND MOLECULAR	UNIVERSITY OF CALIFORNIA, SAN FRANCISCO			
15	2215720	2215720	CELLULAR AND MOLECULAR	UNIVERSITY OF CALIFORNIA, SAN FRANCISCO		941430962	
16	2215721	2215721	CELLULAR AND MOLECULAR	UNIVERSITY OF CALIFORNIA, SAN FRANCISCO	CA	941430962	
17	2215907	2215907	MYOCARDIAL ISCHEMIA	UNIVERSITY OF CALIFORNIA, SAN FRANCISCO			
18	2215908	2215908	MYOCARDIAL ISCHEMIA	UNIVERSITY OF CALIFORNIA, SAN FRANCISCO			
19	2215909	2215909	MYOCARDIAL ISCHEMIA	UNIVERSITY OF CALIFORNIA, SAN FRANCISCO			
20	2218333	2218333	MECHANISM OF OXIDANT-II	NORTH CAROLINA STATE UNIVERSITY RALEIGH			
21	2218334	2218334	MECHANISM OF OXIDANT-II	NORTH CAROLINA STATE UNIVERSITY RALEIGH	NC	27606	
22	2218335	2218335	MECHANISM OF OXIDANT-II	NORTH CAROLINA STATE UNIVERSITY RALEIGH	NC	27695	
23	2221166	2221166	REGULATION OF MUCIN GEN	UNIVERSITY OF CALIFORNIA, SAN FRANCISCO			
24	2221167	2221167	MUC 2 GENE ACTIVATION IN	UNIVERSITY OF CALIFORNIA, SAN FRANCISCO			
25	2221168	2221168	MUC 2 GENE ACTIVATION IN	UNIVERSITY OF CALIFORNIA, SAN FRANCISCO			
26	2221169	2221169	MUC 2 GENE ACTIVATION IN	UNIVERSITY OF CALIFORNIA, SAN FRANCISCO			

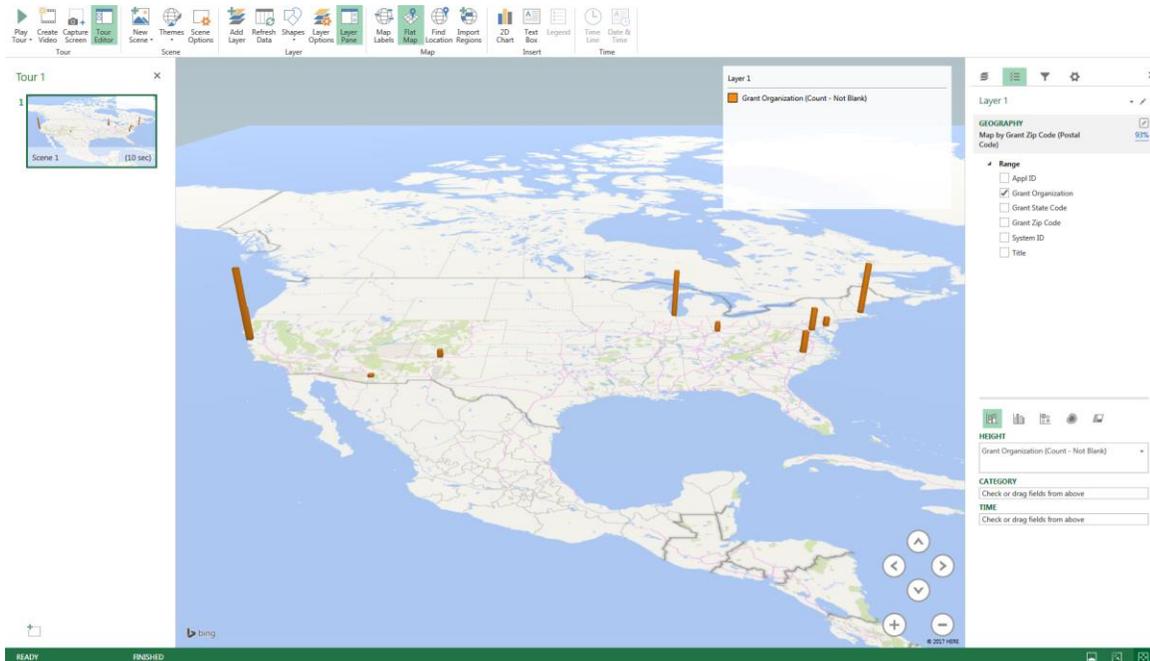
Clicking on the Map button using this dataset, defaults to the following. Excel has automatically identified the State code as a geographical field and shows point data at the center point of each state in the list.



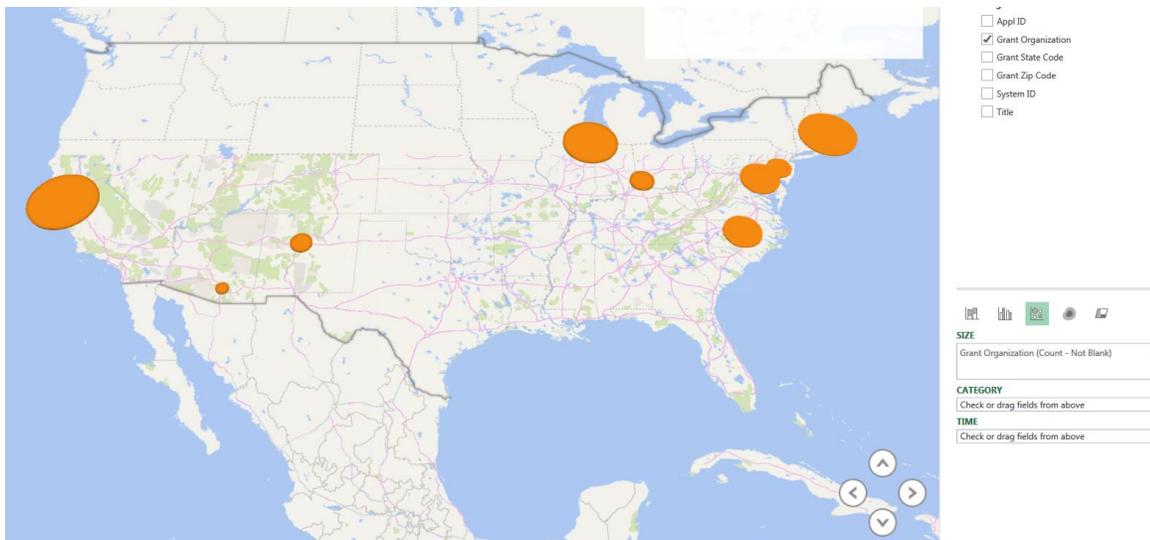
With a few clicks it is possible to change to a flat map using the icon in the menu bar, and to change the geographical field used, to show Zip code instead i.e. the location within the State. The change is done by checking Zip code on the right hand side menu, then selecting post code in the drop down list at bottom right.



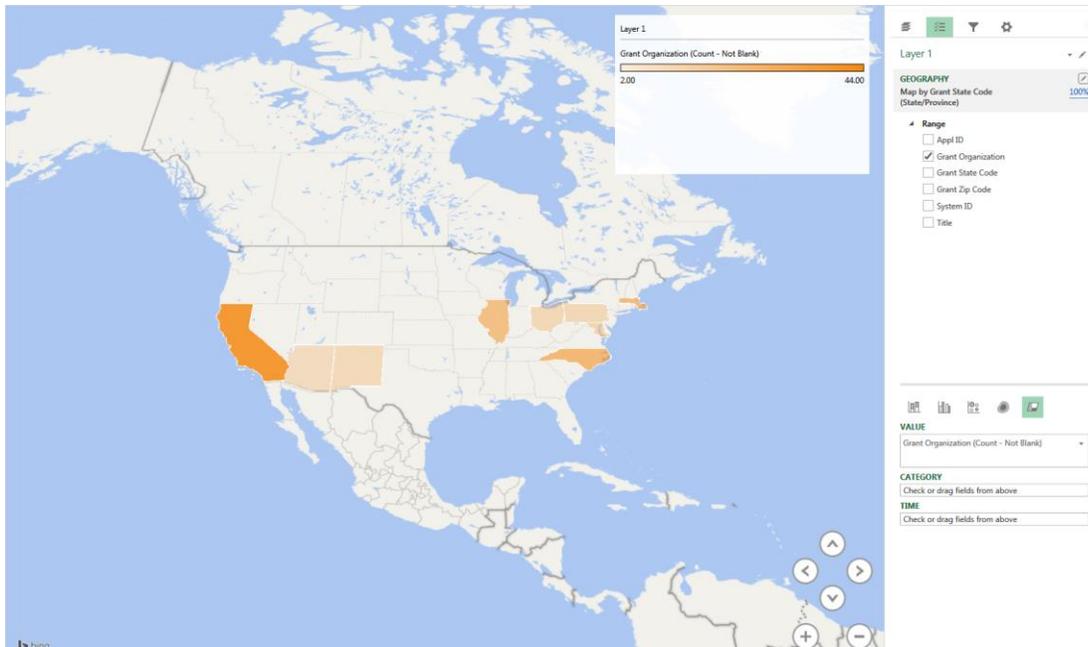
Clicking the Next button allows the selection of the data field you wish to show. For example, selecting 'Grant Organization' will count the number of times each grant organization appears and represent this as bar height.



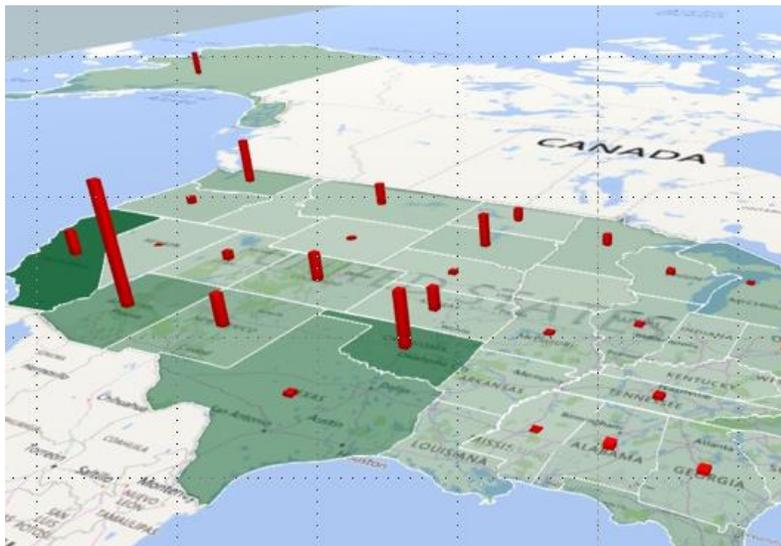
Or you can select bubbles which work better on a flat map.



For defined areas such as States, it is also possible to show heat map coloring. In the example below, number of awards are mapped by state (by counting Grant Organization as above). It would also be possible to map other numeric fields, e.g. award \$s.



As with charts in Excel, multiple fields can be mapped at the same time, as in the example below which used a different dataset and shows awarded dollars as a bar and population data as a heat map.



For more help on Excel Power Map, use the '?' icon at top right. This will bring up the online help with more details about the functionality.

Note: To go back to your original spreadsheet, click the 'X' button at top right.

If you are having problems, contact OPA training: OPA-Training@mail.nih.gov