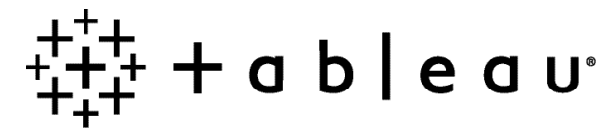


Building Useful and Beautiful Maps

# 4 Requirements for Spatial Analysis





When you're exploring data, you want to ask meaningful questions and get answers that are easily understood. And because geographic data is now more prevalent than ever, visualizations plotted on a map are even more integral to effectively communicating data discoveries. Armed with a strong, self-service mapping solution, the question "Where?" becomes a valuable tool that provides insight and helps you make an impact in your organization.



# Why use maps?

Mapping is the best way to see, understand, and act on your geographic data. Since maps are familiar, using them as visualizations immediately orients your audience to the data and its impact.

Does one product category outshine another in a specific territory? What about inventory levels in the North versus the South? Is California experiencing higher levels of the flu virus than Massachusetts, and are vaccines being distributed appropriately? Are student test scores varying significantly between districts or by city?





Answering questions like these becomes fundamentally easier when you can see your data in context, on a map.

Incorporating maps into dashboards is where value skyrockets. One of the most powerful visual analysis techniques is to relate several views of information to one another. So, display your maps alongside a timeline (or other chart types) in a dashboard, and you can get a much richer understanding of your data. And to go that extra mile, add interactivity to show relationships in your data.

To incorporate maps into your dashboards and reports, use a self-service mapping tool that enables you to:

- Create maps fast
- Visualize multiple types of data
- Add interactivity to find answers
- Customize regions, backgrounds, and more



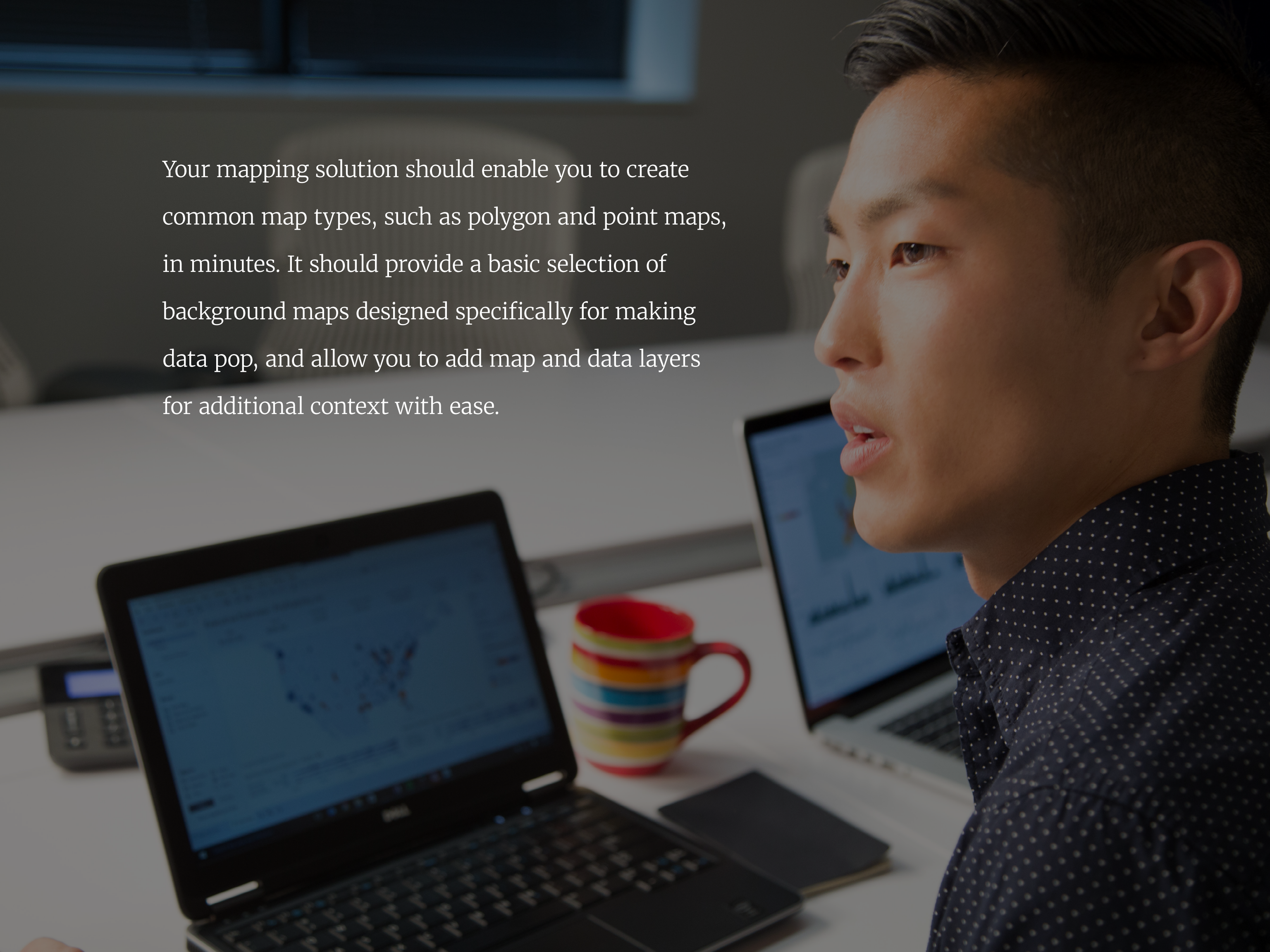
# Create maps fast

Plotting your data on a map should be as simple as creating any other type of visualization.

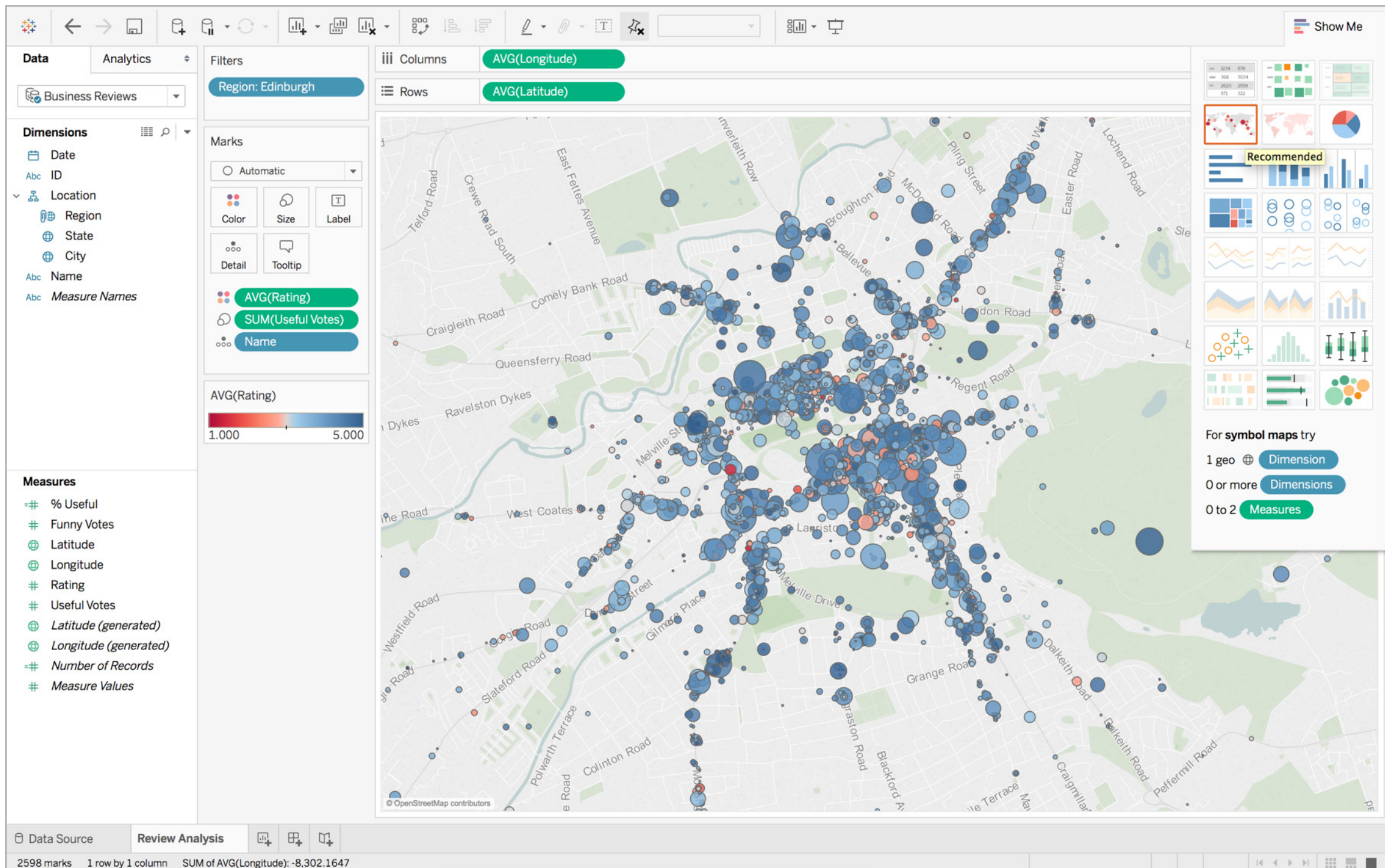
Whether you're analyzing disease outbreaks across the world, tracking bird migrations within a country, reviewing sales territories in your region, or following public transportation use in your city, plotting your data on a map shouldn't take up your time.



Your mapping solution should enable you to create common map types, such as polygon and point maps, in minutes. It should provide a basic selection of background maps designed specifically for making data pop, and allow you to add map and data layers for additional context with ease.







Adding additional layers, detail, and information to your maps helps you quickly spot trends or outliers in your data, and helps orient your audience. This map of Edinburgh, Scotland, for example, uses color to show the average Yelp rating for businesses in the capital, and size to show the number of ratings the businesses received. Street and highway names help orient the audience to the location of the businesses.




# Visualize multiple types of data



Don't settle for single dimension maps. Layer other data with your maps to help you quickly answer spatial questions. Use size, for example, to reflect volume of sales. Or use color spectrums to reflect strong and weak profitability like a heat map. Add place names and street names to your background map to orient your data.

Augmenting your own data with demographic information—like U.S. population and income levels—adds another level to your maps that can reveal surprising relationships or trends.



You might find, for example, that you have densely populated, higher income neighborhoods. While that might not surprise you, the combination of your sales and demographic data might reveal unexpected pockets of sparsely populated, mid-income households where sales are growing exponentially. How can you tap in to these opportunities?

From GIS data to per-county demographics, adding relevant information to your map helps you orient your audience and gain meaningful insights about your data.



## Bicycle Collisions in Seattle

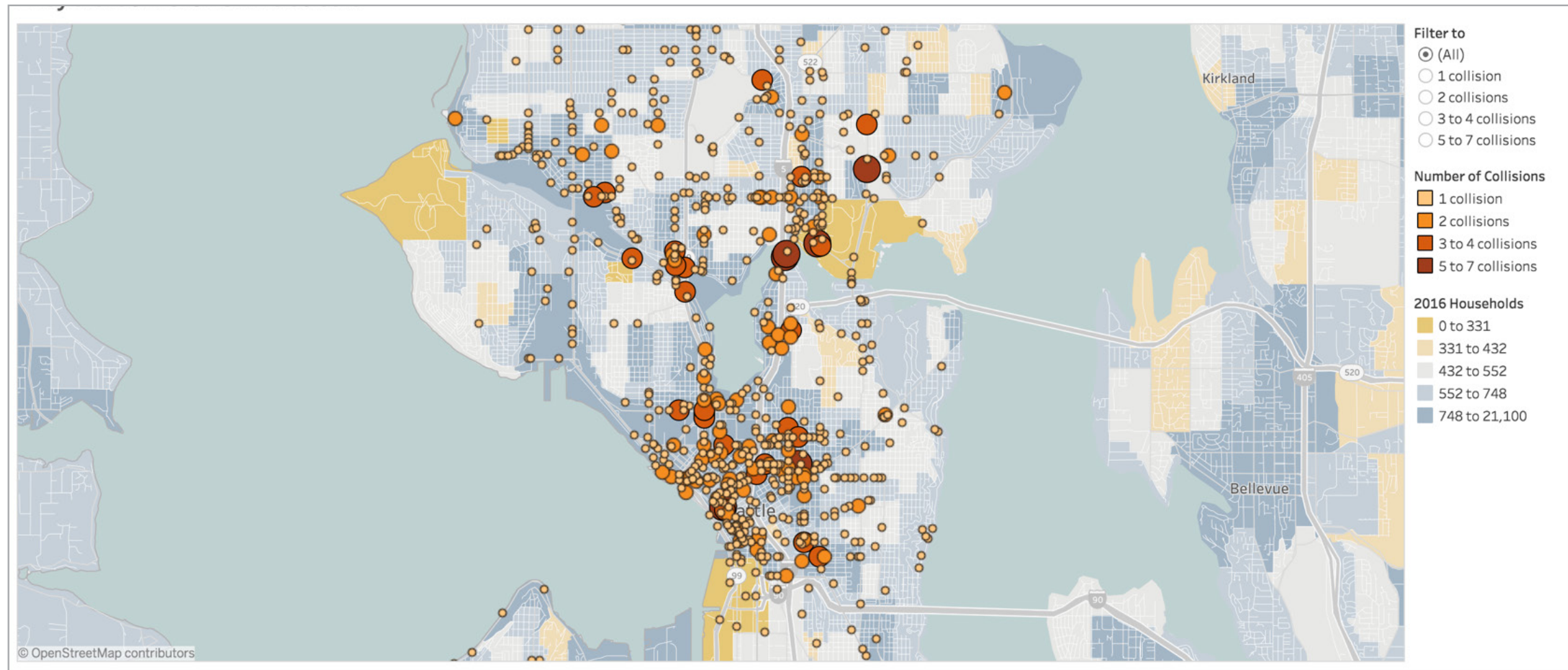


Figure 2: Bike Collisions in Seattle, Washington

Mapping your data provides dramatic insight into patterns you might not be able to see in spreadsheets or bar charts. [This map](#), for example, gives you the power to filter information quickly by number of collisions so you can quickly spot visual clusters. Color and size is used to indicate number of collisions. It also shows household data for added context.

# Add interactivity to find answers

Drill into the data on your map to investigate areas of interest. Zoom in to look at the nuances of a city neighborhood. Spot regional trends or data clusters.

Seeing your data up close on a map might just help you make a difference.



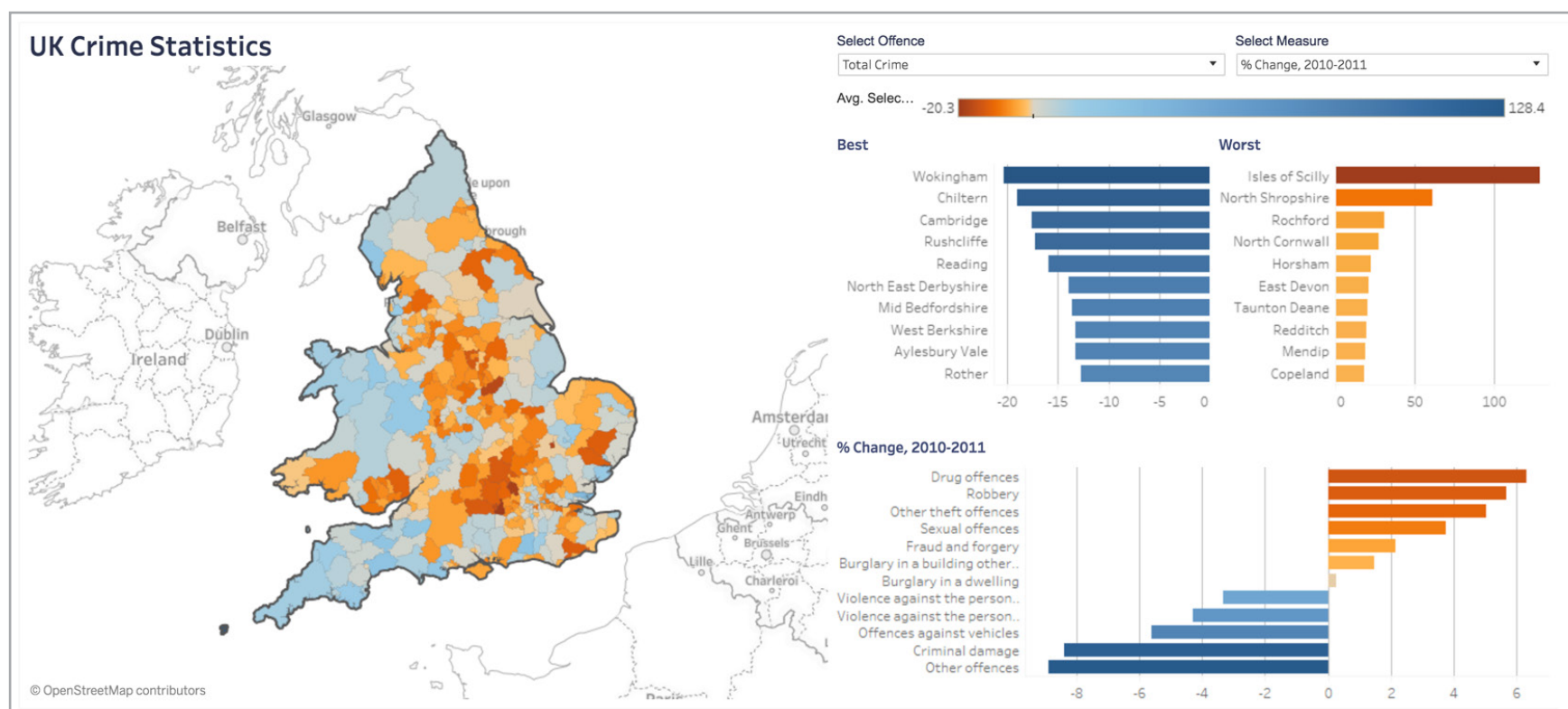
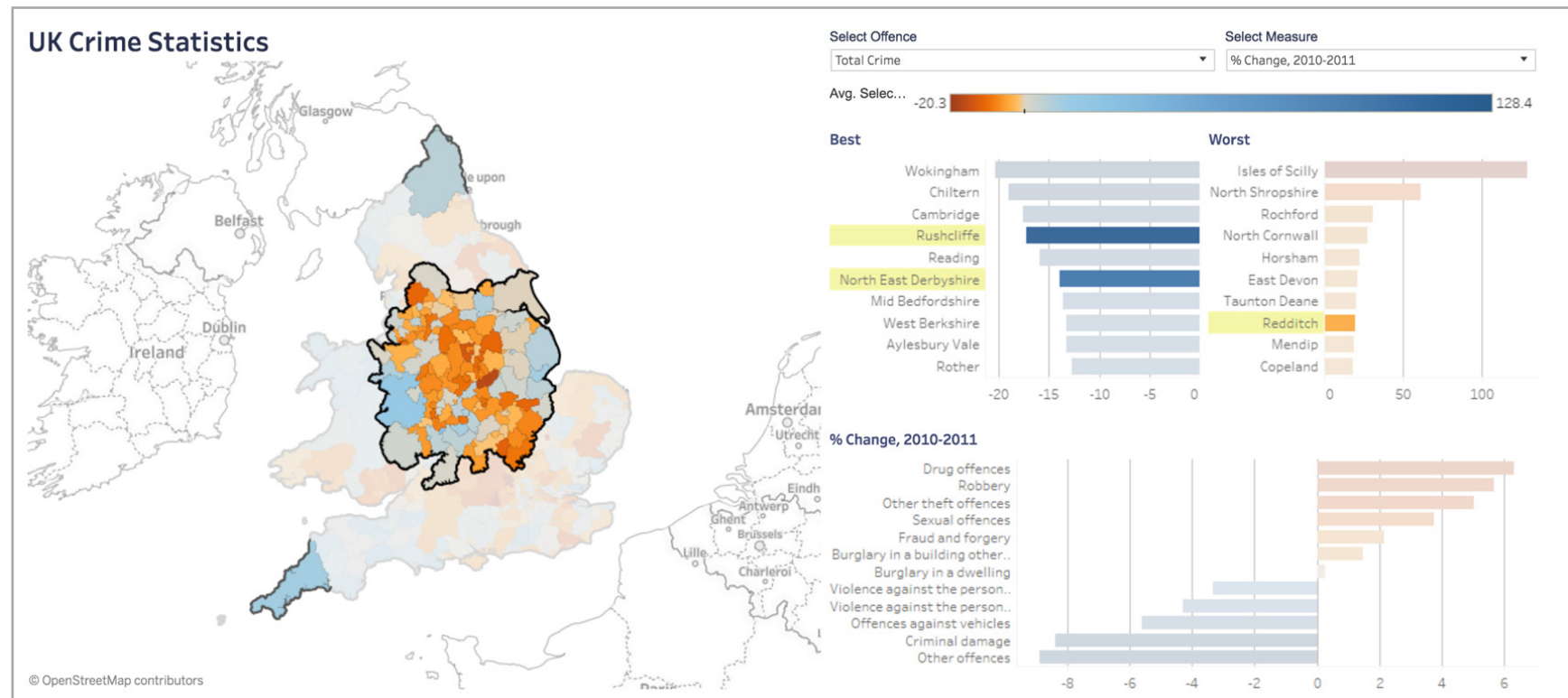



Figure 3: Crime in the UK

See your data up close by highlighting areas of interest. This map, for example, focuses on the percent change of crime from 2010-2011 in the center of the UK.



# Spatial data, custom regions, background maps, and more

Connecting directly to common spatial file types like Esri Shapefiles, KML, GeoJSON and MapInfo files is a must for any mapping solution. It's even better when working with spatial data is as easy as working with Excel. For example, ask yourself if you can simply drag and drop to create a map with spatial data.

Ensure you can create custom territories or add custom geocoding with your own latitude and longitude data with the same ease as creating a standard map. For instance, ask yourself if you can plot your company's unique sales territories using your mapping tool.



Your data should stand out. Custom maps or other specialized maps on a Web Map Service (WMS) server or Mapbox Map are sometimes exactly what you need to make your data pop. Integrating these background maps with your data should be a simple, easy process.

Creating interactive maps of information that matters to your business or department will equip you to discover opportunities in ways you won't be able to with static spreadsheets, bar charts, or other traditional graphs.



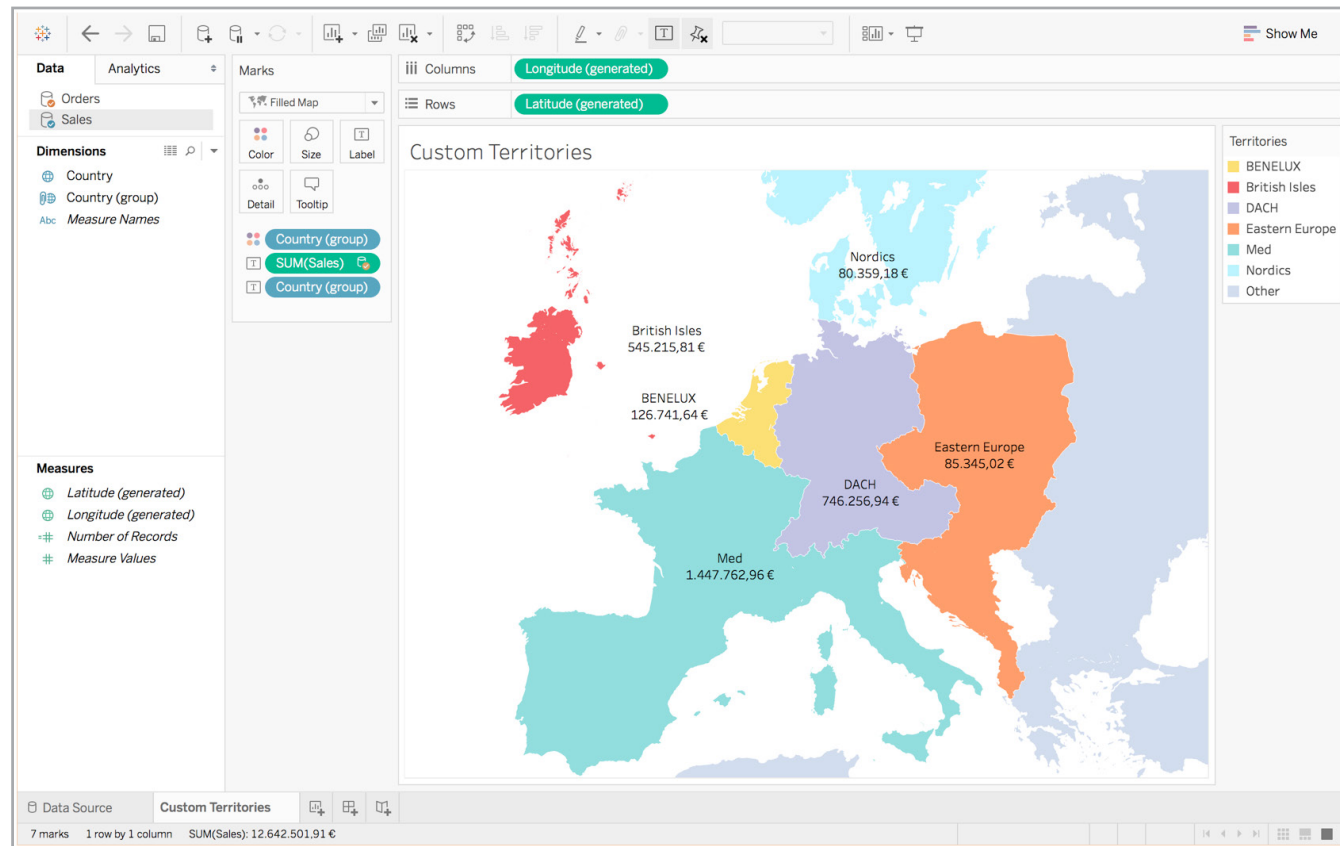


Figure 4: Review sales territories

Create custom territories to quickly analyze sales and profit in those regions. This map, for example, shows the total sales for each territory across Europe.

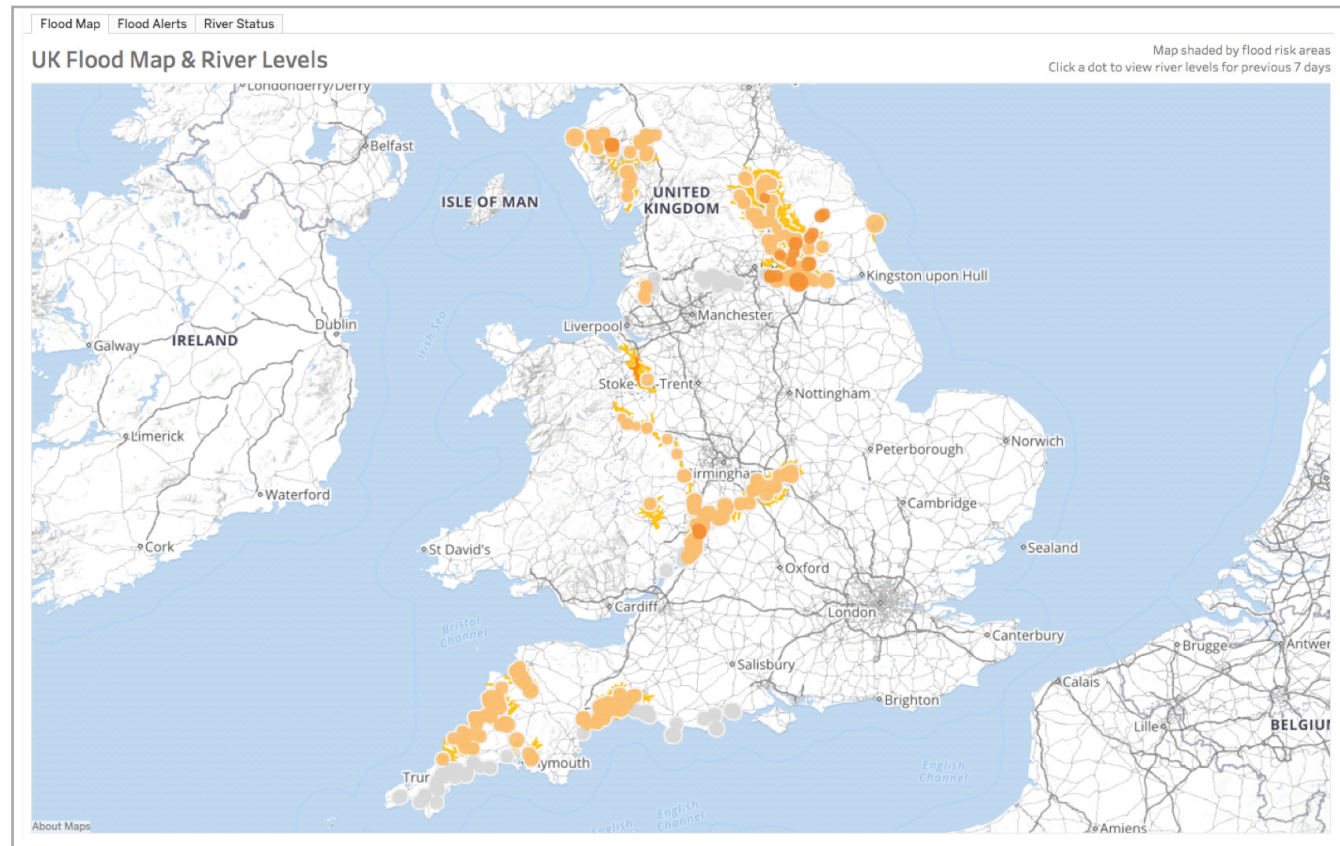
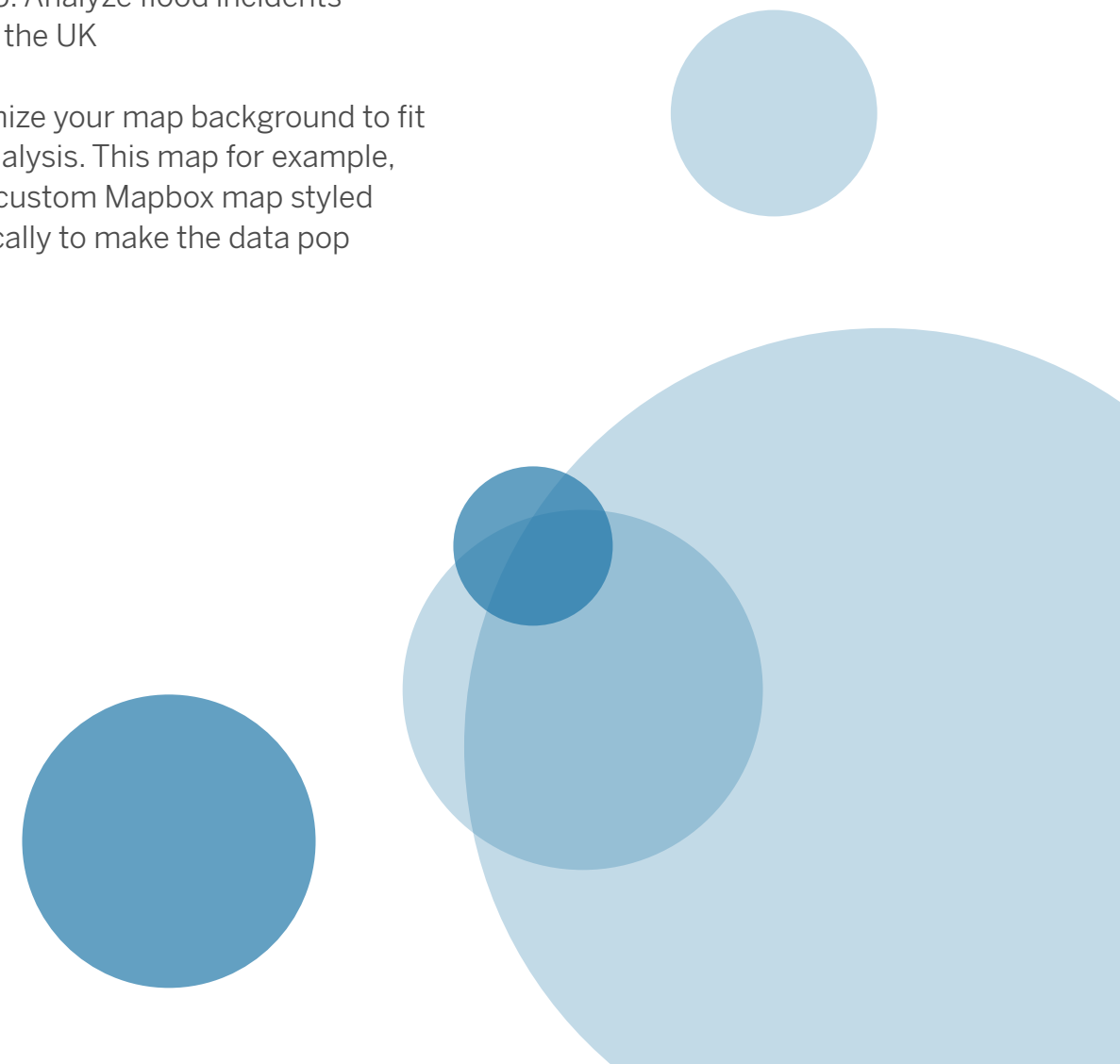


Figure 5: Analyze flood incidents around the UK

Customize your map background to fit your analysis. This map for example, uses a custom Mapbox map styled specifically to make the data pop







# Tableau puts your data on the map

Mapping is one of the many ways Tableau helps people see and understand their data in relevant, insightful ways. Tableau provides several built-in background maps for your analysis, and supports connecting directly to spatial data, as well as custom geocoding. Connect to your own WMS server or Mapbox map when they offer a better solution for you. In addition to dozens of built-in mapping features, Tableau lets you quickly build interactive point, polygon, and flow maps, create custom territories with just a few clicks, and measure distances between data points and locations of interest.

If you're interested in the types of maps Tableau can create, interact with live visualizations, dashboards, and more at <http://www.tableau.com/stories/gallery>. Plus, check out Tableau's extensive library of free training videos, Help topics, Knowledge Base articles, and Community posts to help you make incredible maps with your own data.

Start unlocking the potential of mapping your data. Download the full-featured trial of Tableau Desktop, connect to one of your favorite data sets (or use a sample that's provided), and start experiencing the impact of mapping in Tableau.

