# What is GIS?

GIS: The Science of <u>WHERE</u>

Per *ESRI*, the World's Leading GIS Software Company, a geographic information system (GIS) is a framework for gathering, managing, and analyzing data. Rooted in the science of geography, GIS integrates many types of data. It analyzes spatial location and organizes layers of information into visualizations using maps and 3D scenes. With this unique capability, GIS reveals deeper insights into data, such as patterns, relationships, and situations—helping users make smarter decisions.

In the words of Land Info staff, GIS is valuable tool that can be used in any industry. Anything that has a "location" can be mapped. So if you think about it, the clothing you wear and the food you eat comes from "somewhere". If you jump on your phone and use Google maps, you are looking up "somewhere". If you catch a cold or a rare disease, you got it from "somewhere". You own a 200 acre farm. That property is located "somewhere". Virtually anything we do has some sort of "spatial" component and that component can be mapped. Once you have this information mapped, then you can start asking bigger questions.
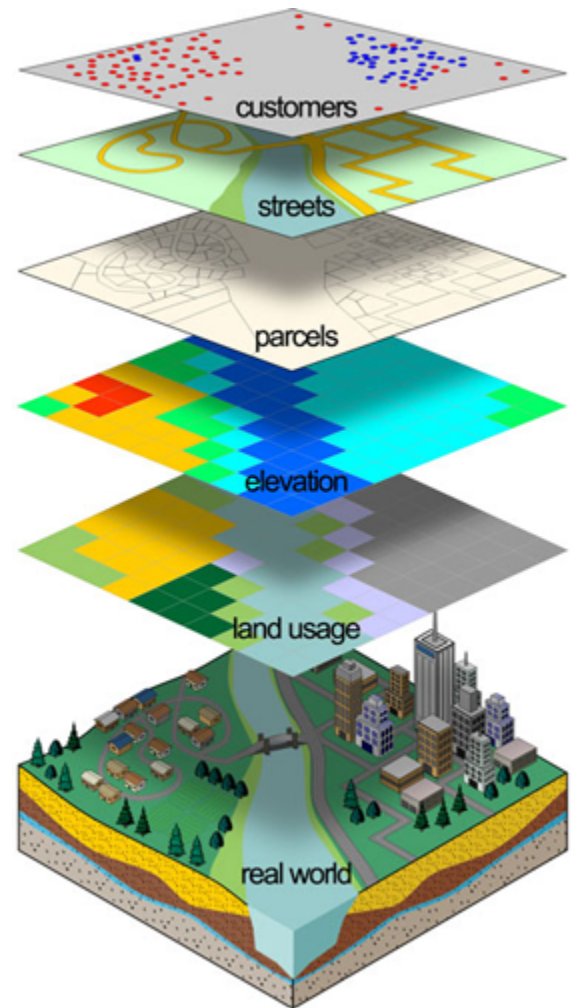
Example 1: You are a high end gourmet chocolate shop owner. Your typical buyer makes an average of $75,000 per year, tends to be married with no children, and drives foreign cars. This demographic information can be mapped. You want to know **WHERE** is the best location to open a new store.   The building itself needs to zoned commercial, have a minimum of 1,500 sq feet, and located along major commuting routes. This information can also be mapped. With GIS, you can perform "spatial analysis" to find the perfect site by stacking all of these mapped "layers" and pulling out the locations that meet both the demographic and building minimums.

Example 2: You are an emergency professional. It has started to rain and isn't stopping. You need to know **WHERE** the areas that are prone to flooding are, **WHERE** any buildings or residences are within that flood area, and **WHERE** you should send those residents if the need to be relocated. If you have this data mapped, you can quickly generate a list of people who should be noticed of a potential flood risk and let them know the resources available to them if they need to be relocated. Later when you have to do reporting for disaster assistance, you will

need to know **_WHERE_** the damaged properties are located as well.

Web Links

- What is GIS?
- Geography.com
- Maps Daily - Fun Maps for Every Day!
- Color Brewer - Color Advice for Maps
- ArcGIS Online