

Chapter 1 So, what exactly is a GIS?

To most people, what they see as a GIS is in fact just the front-end output layer, such as the maps produced in Google Maps, or the screen on a TomTom navigation device. The reality of it all extends far beyond that; the output layer is very often the end result of many interconnecting programs along with massive amounts of data.

A typical GIS will include desktop applications used to visualize, edit, and manage the data, several different types of backend databases to store the data, and in many cases a huge amount of custom written software tools. In fact, GIS is one of the top industries where a programmer can expect to write a very large amount of custom tooling not available from other companies.

We'll explore some of the applications in detail soon, but for now we'll continue with the 100-foot view. A typical GIS processing setup will look something like the following:

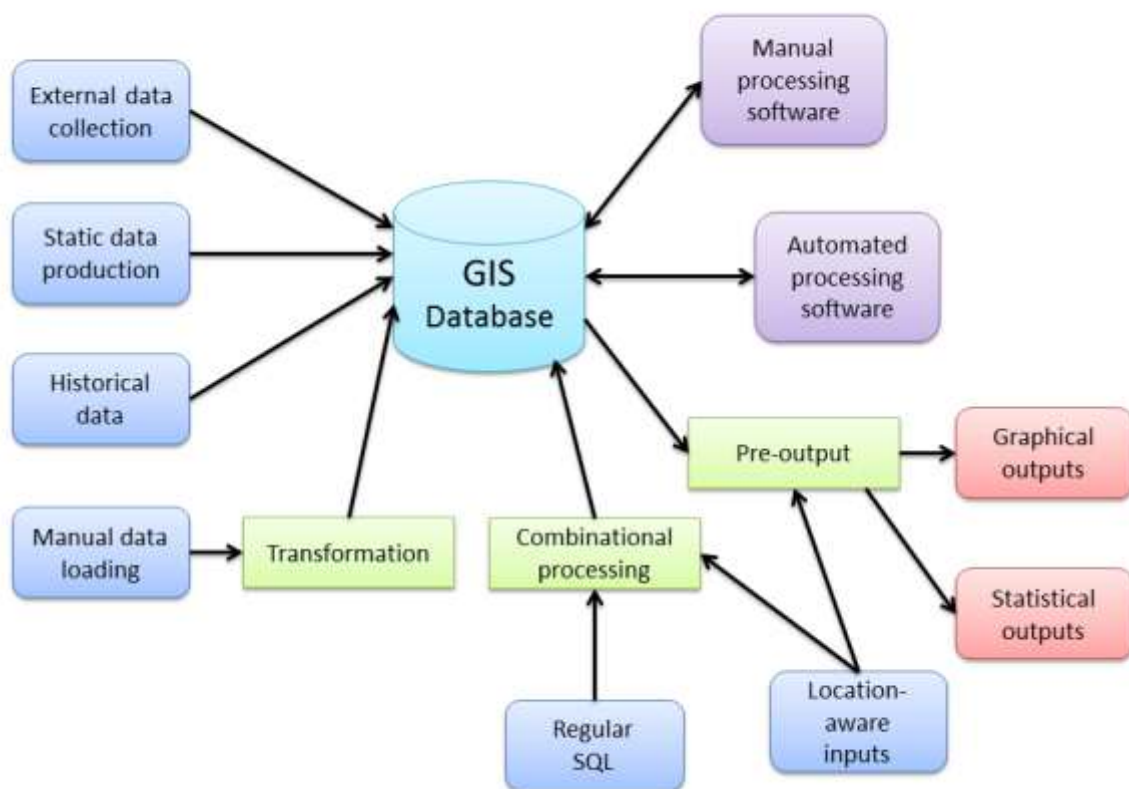


Figure 1: Typical GIS processing setup

As you can see in the diagram, the central part is very often the database itself with a huge number of inputs and processing steps. Finally, the output layers (shown in red) are what people usually associate with being a GIS.

Based on this, we can see that the database is the center of the universe when it comes to GIS.