

HOW GIS WORKS

THE SCIENCE OF GEOGRAPHY

GIS is both a technology and a science. It relies on a simple notion of organizing data into discrete layers that are aligned (georeferenced) in relation to one another in geographic space. Applying these sorting principles of shape and theme, you can come up with collections of things you would recognize on a map: schools represented as points, roads represented as lines, parks represented as polygons, and so on.

Map Layers:

The secret advantage

Geographic datasets are presented in GIS as a series of dynamic, stacking map layers that cover a given extent (area). These layers can depict virtually any object (fixed or moving), boundary, event, or spatial phenomenon.

Things that map layers can represent

Buildings

Roads

Parks

Trees

Vegetation Health

Utility Networks

Demographic Data

Satellite Imagery

Layers line up on Earth

Georeferenced layers of information are the key characteristic of GIS that enable disparate types of data to be displayed, combined, and analyzed in common geographic space.

