

Geospatial technology

Geospatial technology is a set of tools that allows us to work with spatial data. Some of this spatial data is geographic data providing information about objects and phenomena on and around the earth, but this same technology can be used to collect and work with other types of data such as images of the human body or images of industrial machinery. Whatever the type of spatial data, geospatial technology allows us to create, store, access, manage and analyse it.

About 80% of data has a spatial component – most things occur somewhere! When we link data to its location and then visualise it on maps using GIS we can see what the data means more easily. For example, if we want to know where households that own more than one car are located we can show this on a map, rather than as a list of addresses and this makes it easier for us to see where those households are.

Geospatial technologies are the tools that allow us to combine different types of data. We might combine maps showing towns and villages with aerial or satellite images, and to this we might add other data such as environmental data. When we combine different types of data we can produce very informative maps.

A major feature of a GIS is that it uses a database of spatial data and allows us to map that data. The database may be very small and simple such as a record of all of the facilities within your school, or it may be large and complex such as the databases that large cities create which include many types of features such as roads, utilities, services, populations, housing, industrial properties, retail facilities and so on

Old maps – new maps

What's the difference between paper maps and the new geospatial technologies? Paper maps are very useful to all sorts of people for all sorts of reasons but each type of map is really only useful for a specific purpose. The most important difference is that when you use a paper map you are only able to view it, whereas with GIS you can interact with the data, and the user can choose only the data they need from a large database. You can 'ask geographic questions', for example, you can point at a city on a map and you can find out about its population and about its schools and hospitals. You can ask questions such as, where am I? How far away is something? What would something look like from here?

Find out more

Follow the link

http://www.esriuk.com/industries/casestudies_detail.asp?pid=98&indid=7&subid=132 to see a local government case study of Tower Hamlets or click the following link

http://www.surreycc.gov.uk/sccwebsite/sccwspages.nsf/LookupWebPagesByTITLE_RTF/Surrey+Interactive+Map# to see an interactive map of Surrey.

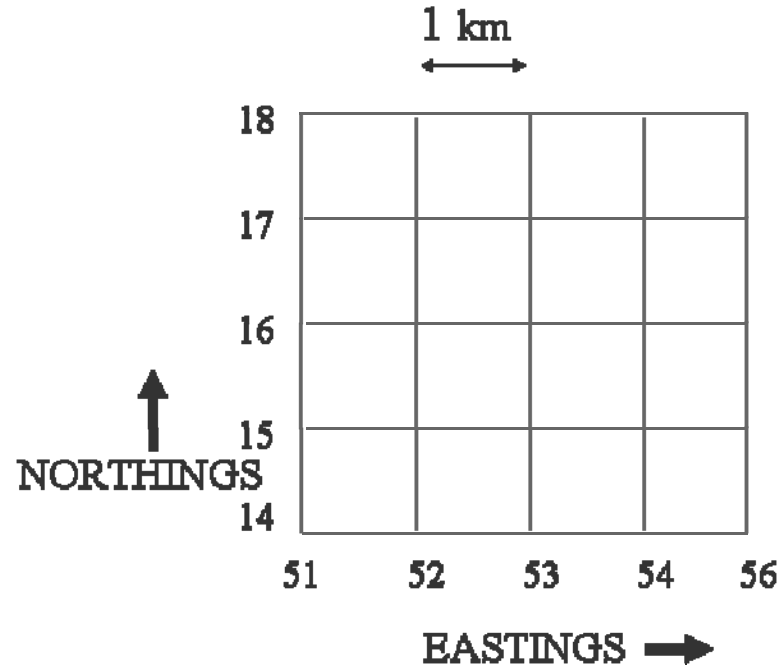
Where am I?

Whatever type of map we use we need to be able to locate objects on the map and to do this we use a reference system, often a grid system, but sometimes we use longitude and latitude. The grid system is very useful as it allows us to locate places accurately with a grid reference.

On the map grid below, each grid line is associated with a number and the numbers increase in two directions:

from left to right – these are the eastings

from bottom to top – these are the northings

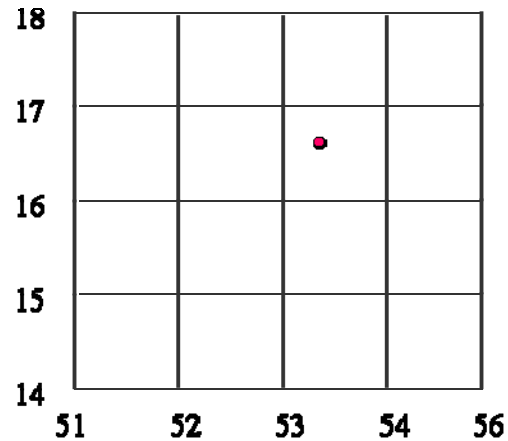


When we give a grid reference we first read off the eastings and then we read the northings. We always use this convention so that we can communicate position without confusion.

Giving a Grid Reference

Give the Easting by reading along the (bottom) x-axis

Give the Northing by reading up the (side) y-axis



A 4-figure reference locates a particular grid square so for the point marked in the grid the reference is 5316

A 6-figure reference locates the point more accurately and the point is referenced at 533166

Find out more

For further information on grid referencing using the Ordnance Survey grid click on the link <http://www.ordnancesurvey.co.uk/oswebsite/education/pdf/Mapreadingmadeeasy.pdf> or visit <http://www.map-reading.com/intro.php> for a free online book - Reading Topographic Maps

