

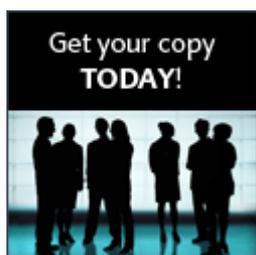


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As the world's data volumes enter the zettabyte level (1,000,000,000,000,000,000 bytes) and soon to the yottabyte (1,000,000,000,000,000,000,000,000 bytes), will the amount of geospatial data become too much to possibly use, or will storage and, more important, analysis technology be able to keep up with the data deluge?

The developed world and emerging economies are at distant extremes in terms of the quantity and quality of data that have been collected. Although data volumes in the developed economies might enter the zettabyte level in the near future, data volumes in developing markets still are low and are far from entering the zettabyte or yottabyte level.

In emerging markets, the real challenge actually lies in generating adequate amounts of data. This also is where the real business potential and opportunities lie.

The focus first has to be on building the foundation layers, ensuring that the data are up to date, detailed, and are industry specific and contextual. After all, large volumes of data don't necessarily imply a lot of intelligent usage. Usage necessarily depends on the quality of data and their analysis.

What are some applications/markets where geotechnology should be used, but currently isn't (or is at least highly underutilized)?

Geotechnology has slowly but surely moved away from experts and become user friendly. Today, it's no more a niche sector and has become mainstream. This has propelled the use of technology across all major sectors.

However, the real challenges still are the following: how is the technology being used, what's the level of penetration, and is the end user harnessing the real value out of this technology?

There still exists a large gap in the penetration of GIS between developed and emerging markets, across industries. To illustrate, most city and county governments in the United States use GIS for land-parcel and property-tax management; in emerging markets, the penetration is much lower, and only a few municipal corporations are using GIS for such uses.

If you compare the utilities sector, in the United States, GIS is used for all asset- and outage-management solutions; outside the United States, barring a few private-sector organizations, others still don't have a full-fledged GIS in place. It's only now that government-owned utilities are implementing GIS.