

GIS and Transportation Planning in Utah

Transportation planning is the process of analyzing future transportation needs to provide accurate information to decision makers to improve the transportation system. The idea is simple enough, but it involves detailed modeling, in depth analysis, community involvement, and political approval. InterPlan Co. is a private consulting firm specializing in transportation planning in The Mountain West.

At InterPlan we use travel modeling and GIS with the majority of our projects. Travel modeling is a process using population and employment projections to forecast future traffic growth and problems. GIS ties in very well with travel modeling to display areas of future congestion, proposed road improvements, and other spatial phenomenon.

The ability to display spatial data in a format that our clients can understand is of great value to us and them. GIS gives us that ability. For example, if we tell our client that their city population is going to grow from 20,000 people today to 50,000 people in the future, they might not realize the significance of the growth. On the other hand, if we have a map showing current populations and densities and future population and densities, they will be able to see the expansion of the city boundaries and the higher densities in the city and realize that all these new people are going to affect them. A growth in population that significant will affect the city zoning, roads, parks, water, and all of the services. There needs to be a city plan in place to accommodate that growth and that's where we come in.

Using GIS gives us the power to really drive home some of these planning issues. During most planning processes there is at least one public meeting. We use these forums to communicate needs and recommendations to the citizens of the community. We have found that displaying a series of map boards is the best way to help the public visualize future growth and recommended roadway improvements. We use GIS with aerial photographs to display new road alignments and alternatives. The public responds better to maps, rather than tables or text.

GIS is a large part of our business and we use GIS to create boards for public meetings but we also use it to add graphics to our reports. We create several GIS maps that we include in most of our transportation plans. Some of these maps include: existing and future population maps, existing and future employment growth maps, zoning maps, land use maps, transit route maps, trail maps, functional classification maps, level of service maps, access management, and planned road improvements.

GIS serves transportation planning in many ways. It helps create more useful city master plans. GIS enhances our ability to communicate with clients and to display spatial data for public forums. Finally, GIS improves the quality of transportation reports, by transforming a data-intense, technical report into a colorful, easy-to-read report with meaningful maps.