# GeoEnabling the businesses of government

What is GeoEnabling?

Geo-enabling is to take loosely geo referenced information typically in a database with a column that contains a street address, a zip code, a county name, a permit number, a watershed code, or route number and automatically join it up with the representation of that geography to make a map-able dataset (make a map) and to support visual and GIS analysis against other data. The value is not in making the map, but in potential juxtaposition with other geodata that may support or enhance an existing or desired business process or decision support scenario.
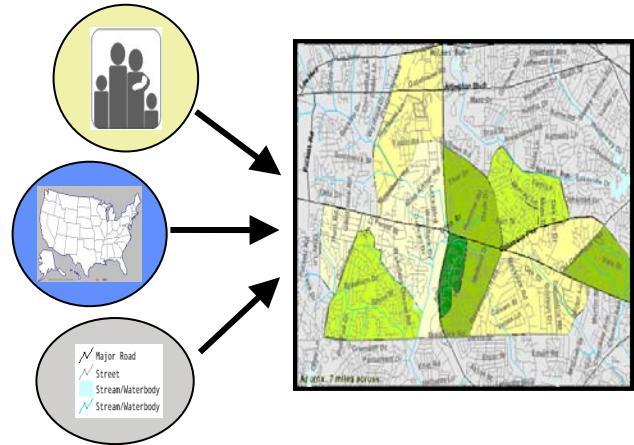
Value of GeoEnabling

Geo-enabling only has value when some added benefit comes from it -to do something *faster*, *more accurately*, or something that was *not previously possible* -- as opposed to meeting mission needs with just a tabular database and graph-generator, the status quo. If the mantra is true that most data have a geospatial component, then the realization of this point to let data's inner geospatial capabilities grow and flourish, as opposed to ignoring it, would be the principal value to all of us who create and use data.

Let us examine how geospatial enabling adds value.

Utilities- A utility maintains and operates the networks that deliver power, water, and communications. Utilities can operate what is called an "intelligent grid" where those networks can predict and adjust to network changes and effectively communicate potential problems and correct those problems. By blending data sets regarding the site and the site's infrastructure, which include geospatial features, the network problem could be assessed prior to the nearest crew's dispatch to the site. Spatial information with the infrastructure information would provide extensive information to the crew. Enabling an intelligent grid with communication networks, sensors, and analytics together with a geospatial capability could prove to be a valued asset.

Health Resources- Health Resources and Services Administration, U.S. Department of Health and Human Services currently operates a system whereby HRSA databases may be used in conjunction with each other and generate a geospatial rendering of the results. HRSA focuses on uninsured, underserved, and special needs populations. In the effort to better utilize the data HRSA reports the administration's data warehouse provides a single point access to programmatic information related to health resources and demographic data.

HR Data Warehouse provides quick access to reports on a wide range of HRSA programmatic areas for example, HRSA awarded grants, health professional shortages area, medically underserved area and population group. These data are assessable through the "Make a Map" tool which provides users a way to visibly explore the date in spatial relation. Users are able to select data from various

categories and view the resulting map. Additional information on specifications is available through a simple click on the map.

Crop Explorer – US Department of Agriculture, Foreign Agriculture Service. Crop Explorer automates processing and extracting information on specific crop indicators for maps and charts and compiles the data with soil, climatic data, and satellite imagery. Maps and charts include temperature, precipitation, crop modeling, soil moisture, snow cover, and vegetation indices. Near-real time estimates of indicators, precipitation, and soil moisture are displayed on maps and charts to forecast crop production. Federal, State, and Local governments as well as farmer's commodity traders, and researchers find invaluable information to make forecasts for product, supply, and demand.

STEWARD- **S**patio-**T**extual **E**xtraction on the **W**eb **A**iding **R**etrieval of **D**ocuments- The University of Maryland, supported in part by the National Science Foundation Digital Government Program, is working with HUD/PD&R to geoenable unstructured documents on the HUD server using STEWARD. STEWARD could be useful for any agency interested in document retrieval, data exploration and knowledge discovery.   STEWARD is a document search engine similar to Google that retrieves data based on spatial proximity – using a keyword and location specifier. A document tagger identifies proximity – it

identifies geographical locations in English in a variety of document types: text, . doc, . pdf, and .html. STEWARD uses data mining and document modeling techniques to differentiate between place names and person names and between place names, and to determine the relevance of a document to the search parameters. The goal is to use textual cues to find locations, not just street addresses.
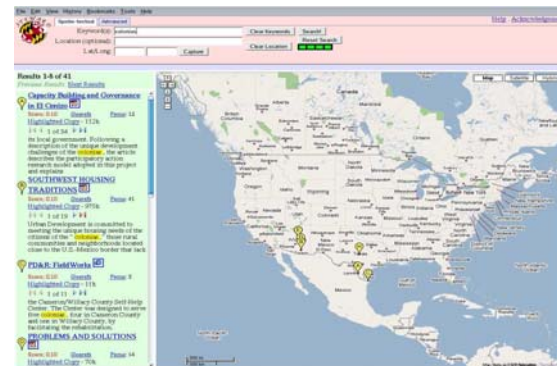
These are just examples of how geo-enabling becomes an asset to the business of government to make business faster, more accurate, or to accomplish the not previously possible.