Chapter XXXIII
GIS:
Changing the Economic Development World

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ABSTRACT

Geographical Information System (GIS) technology applications for use in the field of economic development are relatively new. Local economic development (LED) agencies utilizing GIS programs have noted very favorable results. The realities of a global economy and heightened expectations in the information age have motivated LED agencies to provide a wide range of spatial economic data on the Internet. This chapter reviews emerging GIS economic development applications, and encourages the adaptation of the North American Industry Classification System (NAICS) by local governments to further enhance the value of such programs.

INTRODUCTION

Local economic development (LED) agencies utilizing Geographical Information System (GIS) programs are capable of providing vital information to business interests locally and around the globe. Up to date GIS programs displaying economic, demographic and location attribute content lend credence to the crafted marketing and promotion material distributed by LED agencies to prospective businesses (Black, Sena, Powers, Garry, Roche, Martin, 1994). Providing

a transparent view of the relevant economic data and assets of a community on an open website allows site selection specialists from around the globe to make informed decisions about the advantages and disadvantages of locating in a particular community.

Local governments, for a variety of reasons and purposes, develop and maintain databases of information about the commercial enterprises operating within their jurisdiction. Applying this government information to an economic development GIS website provides the business world

with an e-government service of immense value. As will be explained, it is possible to package existing local government databases of economic information in a spatial format for consideration by private sector interests, government planners, and academics. The growth and prosperity of a region can be better understood and advanced by developing this e-government service.

This chapter explores the efforts of LED agencies to use GIS programs for the specific purpose of providing greater access to spatial-related economic information. The preliminary findings indicate that state and local governments, in cooperation with LED agencies, have introduced well designed GIS programs that allow business interests to conduct preliminary location research on-line. As these web-enabled GIS economic development programs become more sophisticated and available, the demand by prospective companies for easy on-line access to comprehensive economic data continues to grow.

With the advent of these powerful economic development GIS programs, global business interests are able to conduct significant location-based economic research and evaluation without ever visiting the community. As web-based economic development GIS programs become more common, providing this e-government service may be a threshold qualifier for a community to compete with other, comparable locations that offer interactive website services. Whether or not a community is considered as a potential business location may someday depend on the quantity and quality of the spatial economic data that is provided on a website. The competition for the best economic development GIS websites has only just begun.

BACKGROUND

Utility companies were the early pioneers of automated mapping and the organizing of facilities management data and graphics into computer databases (Robison, 1988). Merging this information, combining computer-aided graphic mapping and the storage capacity of a database, produces a GIS. Once these two systems are merged, the GIS user is then able to ask questions of a map (Denning, 1993). The ability to query maps for information is a powerful tool. According to Robison (1988), a survey of utilities and local governments in the late 1980s indicated that 33% had a GIS program, and of the 67% that did not, 78% had plans to acquire a system within three (3) years.

GIS programs are invariably described as computer systems used for compiling, managing, integrating, manipulating, analyzing, and displaying spatially referenced data.

Though GIS technology was developed in just the last 30 years, it has grown into a billion dollar industry worldwide with over a million daily users in more than 100 countries around the globe (Bernhardsen, 2002). Because GIS programs provide a graphic depiction of the real world by displaying spatial relationships of digital data, any information that can be stored on a computer (digital data) with a geographic nexus, can be modeled and depicted by a GIS program (Ibid).

GIS programs are able to convert digital data about crop failures, flood levels, crimes, mineral deposits, major employers, workforce education, unemployment rates, income levels, traffic accidents or house fires into visual maps. By doing so, it is possible to visualize the concentration or scarcity of relevant data across an entire jurisdiction. More importantly, it is possible to layer the data sets and determine locations where the data sets intersect. In this way, GIS is able to provide a full picture of the attributes present at particular sites of interest.

GIS technology has advanced well past the experimental stage for local officials. It has been reported that over 80,000 local governments are using some version of GIS technology (Masser, 1998). According to a recent survey, 73.3% of

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