

Return on Investment

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Organization	Discipline	Problem	GIS-Based Solution	Return on Investment
Tualatin Valley, Oregon	Fire and Rescue Department	With the population growth in the 10 cities in the region, several fire stations were no longer optimally sited.	The agency switched from traditional modeling that combined drive times and located stations using a two-mile radius scheme to a method that analyzes the timing and locations of the 25,000 calls per year the district receives. The agency compared both nonfire and fire-related calls using ArcView, ArcView Spatial Analyst, and ArcView Network Analyst.	By siting fire stations based on demand analysis, the agency reduced the budget by \$4 million.
City of Sunnyvale, California	Community Development Department	The City wanted to develop an e-government one-stop permitting application to better serve the community.	The City implemented an ArcIMS-based application providing online permitting.	Despite the fact that Sunnyvale construction valuations increased from \$240 million in 1997 to \$320 million in 2000, the Building Safety Department has not had to increase staff. Building Department officials estimate that application time has decreased from approximately two hours (including driving to the City Hall, standing in line, and filling out forms) to just a few minutes when permits are obtained using the online system.
County of Orange, Florida	County Auditor/GIS Division	Comptroller's Office requested an audit of the County's cable TV customers.	The GIS Division did a complete audit of the auditor's database by geocoding and comparing jurisdictional boundaries.	Traditional random or partial audits performed by Comptroller's Office typically resulted in \$2,000 per year in revenues. The GIS audit netted \$63,000 in franchise fees and identified customers that had been assigned to wrong county and/or whose locations were erroneously reported in incorporated or unincorporated areas. Subsequently, a cellular telephone audit netted \$650,000, and a resort tax audit of condominiums collected \$700,000.
City of Richmond, Virginia	Community Development Department/ Division of Land Use Administration	The City needed to automate map and data maintenance. Traditional methods required separate maps with varying scales for property, zoning, and land use. These maps were manually updated.	GIS was used to simultaneously update both maps and data.	Map and database maintenance was coordinated resulting in an optimized work process. Individual map production went from 5 to 7 hours to 30 minutes with an overall productivity increase of 90 percent.
District of North Vancouver, Canada	GIS Department	The District needed to automate routine data maintenance and entry tasks.	The GIS Department decided to design, develop, and implement two new components that would allow them to work more efficiently.	The system has resulted in a 75 percent reduction in staff hours.
District of North Vancouver, Canada	GIS Department	District mandate required improved citizen services.	The District established a Web portal, GeoWeb, that provides access to spatial data. Using ArcIMS, the District has created four applications that supply information to citizens—Property Information Explorer, Parks Online, Air Photos, and North Vancouver Public Art.	Maps are the Department's most popular product. The automated mapping system produces more than 75 percent of the District's cartographic products. GeoWeb, which averages more than 100 visitors each day, improves GIS staff productivity by allowing staff members to work on other projects and administer the system instead of filling counter requests.
Grason County, Texas	Planning Department/ 911 Emergency Center	The County wanted to develop other uses for the GIS database.	The County automated production of emergency center map books using the street and structure information from databases maintained by the Planning Department.	By applying the GIS database to ongoing processes, the County was able to save approximately \$4,000 by producing the map book in-house rather than outsourcing it.
City of Portage, Michigan	Community Development Department	Tasks associated with the notifications process performed by the Department were time intensive.	The City developed an ArcView application that reduced the time clerical staff spent handling the notification process.	The City has realized a staff savings of two man-hours per notification.
City of Rivera Beach, Florida	Community Development Department	City staff wanted to increase productivity and efficiency.	The staff developed a centralized GIS resource center that assists employees in performing routine project research.	The resource center has made staff research more efficient and saves approximately 520 staff hours per year. Now staff members have time to perform additional tasks.
Summit County, Colorado	GIS Department	The County was charged with identifying new methods for increasing staff efficiency and productivity.	GIS was chosen as the technology that would enable County staff members to do more with less.	A cost-benefit analysis estimates that the County realized cost savings of \$2,146,000 during the 10-year period between 1991 and 2001.