MuniMap

Geographic Information Systems (GIS) made easy and inexpensive, providing ready access to spatial information for municipal officials to support daily planning and decision-making in South Africa

Why MuniMap?

Ready access to local, regional and national spatial information is an absolute necessity for decision-making in municipalities.

While many of the larger Local and District Municipalities in South Africa have fully operational Geographic Information Systems (GIS) and spatial information departments with dedicated trained staff, it is in the smaller local municipalities where there is often no capacity, no funding and no GIS unit. Municipal officials are often left having to pay an expensive service provider to answer their spatial queries, or place requests for information from district, provincial or national government GIS departments and simply wait for an answer.

The statutory requirements for many of the decisions being made by local governments requires them to take into account a number of local, regional and national spatial data sets.

Providing these small municipalities with the ability to query the spatial data themselves will go a long way to increasing the effectiveness and efficiency of their decision making processes, and reducing their ongoing costs and frustrations.

FutureWorks, a South African consultancy specialising in decision-support and capacity building in the natural and built environment, has spent many years dealing with this problem with its government clients. In order to help empower local government in South Africa, FutureWorks has formulated a simple, inexpensive, and yet highly effective solution to enable small municipalities to have direct (and free) access to local, regional and national spatial data, on as many computers as they like.

We have developed a package of regional and national spatial data, which can be accessed by municipal officials using ArcGIS Explorer - a free software package that can be loaded on as many computers as needed, and for which there are no licensing fees.
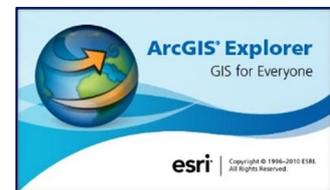
What does MuniMap include?

In a nutshell, MuniMap includes a package of all available spatial information (national, regional and local) and a GIS software programme needed to view and analyse this information (ArcGIS Explorer) in order to support local level planning and decision-making. The MuniMap package includes:

Tell me more about ArcGIS Explorer?
Most geographic information systems (GIS) are expensive, take years of experience to master and are aimed at GIS professionals. ArcGIS Explorer is a light weight, free GIS application that can be
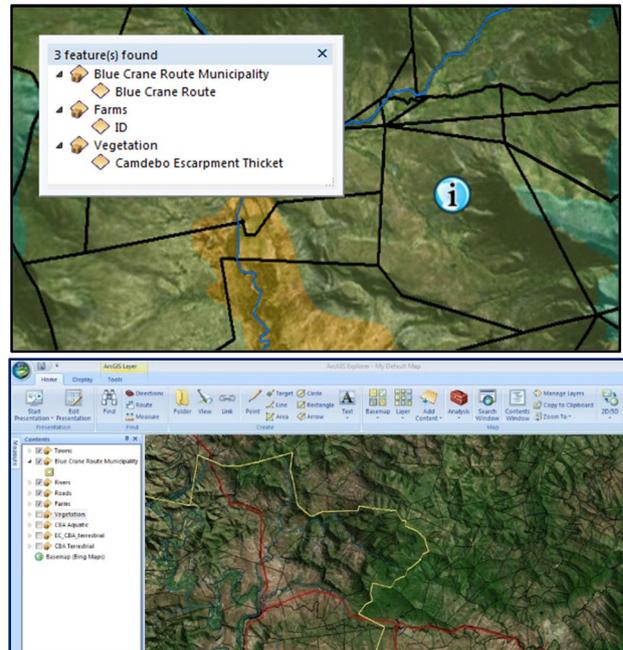
- ☑ National, regional and local spatial datasets.
- ☑ Installation of ArcGIS Explorer on as many municipal computers as required.
- ☑ Training on the use of the MuniMap package.

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MuniMap

installed locally on any computer using a Microsoft Windows operating system. This easy to use GIS viewer enables users to create professional looking maps, perform spatial analysis and create presentations for sharing information.

The software provides an easy way to explore, visualise, and share GIS information, enabling anyone with reasonable computer skills to:

- ✓ *Access ArcGIS Explorer basemaps and layers.*
- ✓ *View local/land parcel data together with regional and national data*
- ✓ *Create custom maps, export or import information from Google Earth*
- ✓ *Connect to the Internet and view their data over aerial photography*
- ✓ *Perform simple spatial analysis (e.g., visibility, modelling, proximity search)*

Tell me more about the spatial data that comes with MuniMap?

We have developed a system whereby we will assist municipalities in implementing a simple but effective GIS system based on ArcGIS Explorer:

- ☑ We will source all the data available for a particular municipality
- ☑ Integrate national, regional and local data

- ☑ Incorporate municipality specific data where these data are available in GIS format
- ☑ Set up the system on the local computers and a provide training to key staff
- ☑ Provide a tutorial document

Examples of the data that will be provided (and clipped to the appropriate size of a municipality):

National Datasets

- o Political Boundaries (Metro, District, Municipal etc.)
- o Cadastral data: Farm portions & Erf boundaries
- o Roads 1:50,000
- o Railroads 1:50,000
- o Rivers 1:50,000
- o River Catchments
- o Towns
- o ESKOM Lines
- o Vegetation Map of South Africa, Lesotho and Swaziland (2006)
- o Indigenous Forest Areas

- o General Soils and Soil Classes
- o Basic Geology
- o ESKOM settlement data
- o Statistics SA data
- o National list of threatened terrestrial ecosystems National Landcover
- o National Freshwater Ecosystem Priority Areas (NFEPA)
- o National Biodiversity Assessment 2011 (NBA) Terrestrial & Marine
- o National Invasive Alien Plant Survey
- o Protected Areas

Provincial Datasets

- o Conservation Assessment and Biodiversity Plans
- o Provincial management plans

Local Datasets

- o Aerial photography
- o Contour data
- o Digital Elevation Model (DEM)

- o Slope
- o SDF, SDP, LUMS, EMP etc

What does it Cost?

FutureWorks aims to offer the MuniMap package to municipalities at less than R30,000 per installation. But the cost is dependent on where the municipality is located, how many installations of the ArcGIS Explorer software are needed, the amount of work to integrate local spatial data into the package, and how many people need to be trained on MuniMap use. We are endeavouring to find financial support for the project so as to reduce the cost to resource-strapped municipalities. So please give us a call to discuss.

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