



DFS strives for larger coverage of financial services using Esri ArcGIS

Client

National Informatics Centre,
Government of India

Website

<http://www.nic.in/>

Location

New Delhi

Industry

Government

Organization Profile

National Informatics Centre (NIC) was established in 1976, and has since emerged as a “prime builder” of e-Government / e-Governance applications up to the grassroots level as well as a promoter of digital opportunities for sustainable development.

Solution

ArcGIS

Project Summary

Using spatial analytics to understand human needs and providing public services accordingly is not a new practice. In developed countries, the government agencies have been using it from quite some time. With an intention to provide better customer service and garner new business, Indian businesses have also started integrating the GIS aspect in their services.

Spatial analytics is enabling businesses to resolve their problems faster and take concrete actions sooner. A sector which is increasingly adopting location analytics is the insurance and banking sector.

The Department of Financial Services (DFS), Ministry of Finance, Government of India The mandate of the Department of Financial Services covers the functioning of Banks, Financial Institutions, Insurance Companies and the National Pension System.

Financial inclusion is an important priority of the government. The objective of financial inclusion is to extend financial services to the large hitherto un-served population of the country to unlock its growth potential. In addition, it strives towards a more inclusive growth by making financing available to the poor in particular. The rollout of Direct Benefit transfer scheme also highlights the need for increasing the spread of Financial Institutions across India especially rural areas.

As an important step towards achieving the financial inclusion goals of the government, moving on from an excel-based system of recording data on financial institutions and assessing coverage, DFS considered implementing a GIS based solution that could enable it to identify potential areas more efficiently.

Challenges

DFS started working on collecting location data for various institutions giving financial services, but they were facing challenges in validating the data with respect to their location and accuracy as the platform they were using did not have a robust base map framework for the same. After weighing different options, they chose NIC’s Multi-layer GIS framework which has robust base data up to village level.

DFS wanted to foster a well-regulated and orderly growth of the banking and insurance sector to serve all sections of society. It wanted to serve the citizens in a much more efficient way and thus wanted to identify the potential areas which lack financial inclusion facilities. This would help it drive a focused coverage.

Solution

With the aim of extending the banking network in unbanked areas, DFS decided to implement a GIS based solution on NIC's Multi-layer GIS framework Bharatmaps. The National Informatics Centre (NIC) was assigned the task of developing the location-based application.

NIC provides a nationwide common ICT infra-structure to support e-Governance services to the citizen, products and solutions designed to address e-Governance initiatives, state/UT informatics support and district level services rendered. Some of the major projects recently undertaken and executed by NIC include:

- GIS for Financial Inclusion (DBT-GIS Portal)
- BBNL GIS Portal (Bharat Broadband Network Limited)
- School Location Mapping (School GIS)
- Slum Rehabilitation Authority (SRA GIS Portal)

To develop a robust application, NIC collaborated with Esri. Esri provided the technical resources. It provided the ArcGIS platform for the application. The application uses NIC's Bharat-maps framework which has various Esri Basemaps. Under the guidance of NIC, Esri has developed a framework for data collection, update and validation. The Esri ArcGIS Server provides web-based geo analytics which enables NIC to provide on the fly statistics regarding coverage of banking facilities and list the uncovered areas. This has enabled users to easily map uncovered areas and identify potential locations for setting up of a banking account or finding banking services in a nearby location.

The application has mobile as well web interface. Financial institutions collect data at state level and upload on the platform. They can update data easily and analysis becomes more effective with the updated data. The coverage efforts become more directed and useful.

Launched in April 2016, the solution has helped DFS to easily locate the financial services like ATM's, Bank Mitra, Bank branches and Post Offices, which are the key touch points for financial inclusion. With data of financial services, demographic and population spread, DFS has been able to identify the list of covered and uncovered areas for them to prioritise the coverage initiatives.

The GIS system is well-equipped to enable DFS identify uncovered areas in their services and help them understand where they may have gaps or excess redundancy. The system seems promising in terms of fostering a well-regulated and orderly growth of not only the banking and insurance sector, but also related industries.

Impact

The GIS system developed with the support of Esri has enabled DFS to take more concrete steps towards financial inclusion. The solution provides the banks and other financial institutions at local/state level to record and update data on real-time. Analytics of the spatial and non-spatial data provided by the system allows DFS to identify areas to be covered for financial inclusion more easily.

The GIS system has helped DFS to develop a deeper understanding of where things are and how information is connected, allowing them to take effective decisions. With multiple stakeholders involved, GIS has provided a common platform for delivering value-added analytical services to facilitate planning and decision support tools. The various functions of Financial Inclusion application include Role based Access, Area of Interest Navigation & Statistical Reports, Search, Proximity Buffer Analysis, etc.

The authoritative GIS data is also providing a framework for DFS to deliver additional spatial data services to other departments. The solution is a part of the larger program to drive financial inclusion across India. In the near future, NIC with support extended by Esri, plans to extend the GIS system to make it citizen centric as well. The data on financial institutions will be extended to the citizens as well via a citizen interface (web and mobile) via which they could find out financial services (Bank, ATM, BankMitra & Post Office) in their neighbourhood. The benefits extended by the Esri supported GIS system is unmatched. With this robust system in place, DFS will surely be able to achieve many milestones towards the fulfillment of the Government's financial inclusion goals.



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