

ML Infomap leverages ArcGIS to create Immunization Dynamics Application

ML Infomap - the first GIS company in India - began its geo-analytics journey in 1993 by offering off-the-shelf digital maps of India. Since then, under the able guidance of Dr. Manosi Lahiri, the company has evolved into an end-to-end full stack IT/GIS solutions provider on the Esri platform. It is an active pioneer in the fields of transportation and logistics, defense, health, retail and other verticals for the government and corporate sectors. Among other health software solutions, ML Infomap prides in its Immunization Dynamics Application, which was developed in response to a call for 'Immunization Data: Innovating for Action' funded by the Bill and

Melinda Gates Foundation and monitored by BIRAC, GOI.

Immunization data: innovating for action

The Sustainable Development Goals (SDG-3 in particular) recognise that prevention of disease by effective immunisation programs can immensely reduce health care expenses. India has steadily adopted many electronic devices - with different levels of sophistication - for health monitoring and immunisation across the country. Therefore, the success of these country-wide health programs depends on access to data and apps, availability of local skill, and the communication

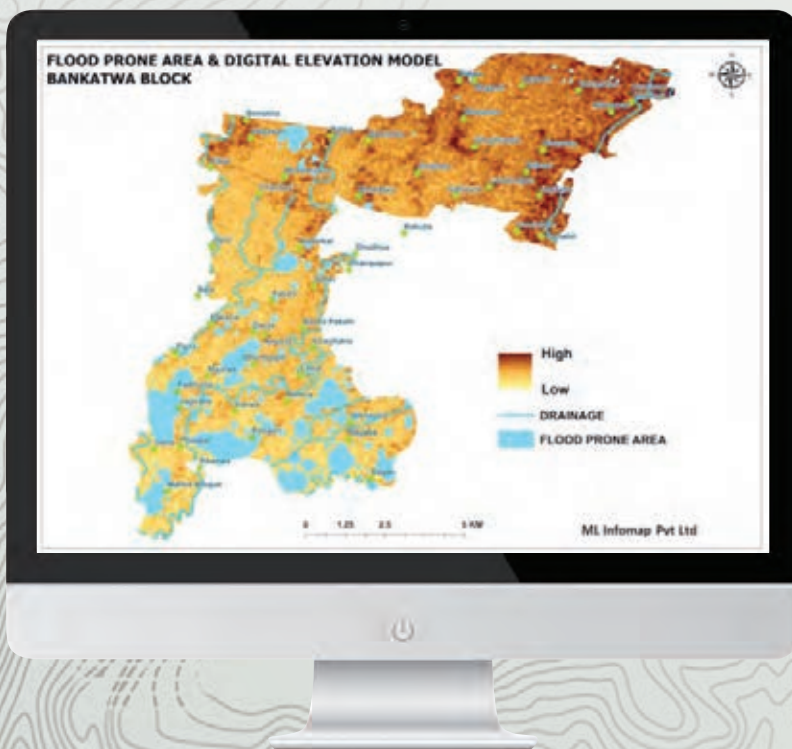
network in the area. Immunization Dynamics works around limitations in datasets, skills, networks, and equipment, to provide much-needed technological support and uniformity at the operational level.

Immunization Dynamics innovatively validates and strengthens immunisation delivery, and micro-planning and mapping efforts using, but not restricted to, GIS. The solution accesses and integrates population coverage (HMIS) data and vaccination consumption (eVIN) data on a GIS server platform. By enabling quantitative analysis of these data sets, this app helps visualise the relevant key performance indicators through dynamic dashboards and active maps.

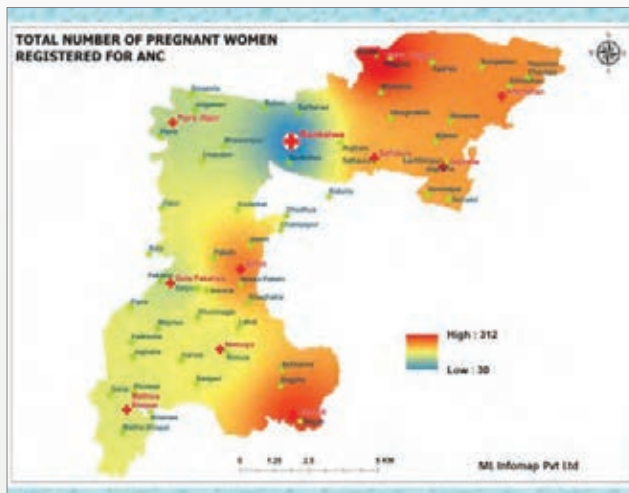
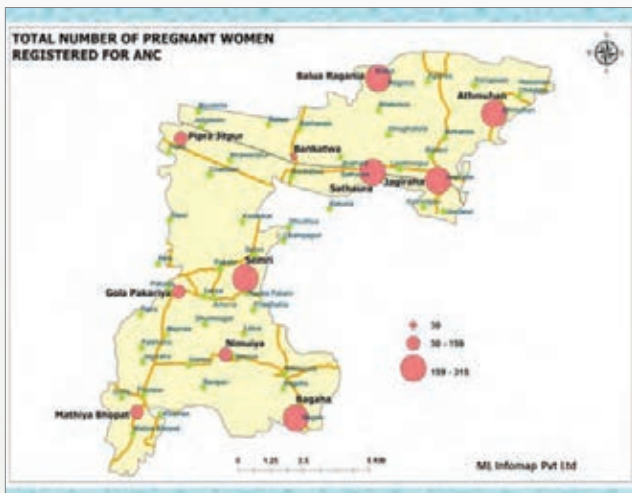
Immunization Dynamic's prime utility in data analytics and visualisation for health was recognized through the Grand Challenges India 2018 Award. Dr. Lahiri has credited the "integrative role of the ArcGIS platform [as crucial to] understanding data organized in different layers and different units of measure".

Key features

1. Efficient tracking and triangulation: The coverage of beneficiaries (HMIS) and vaccine consumption information (eVIN) is compiled in easy-to-understand reports, and conveniently generated graphics and maps.



Map showing flood prone areas in Bankatwa block, Champaran, Bihar



Map showing immunization data of pregnant women in Bankatwa block, Champaran, Bihar

“ We cannot create vaccines or medicines, but clearly, as GIS professionals, we can offer technology solutions for the purpose of delivering health services. We, in the GIS community, can provide data, tools and methods to support policymakers for continuous data monitoring and to local health officials for data collection and aggregation for the purpose of planning and operationalizing field events. ”

Dr. Manosi Lahiri, Founder, ML Infomap

2. Rich data analytics and visualisation: Routine reports are created digitally, and illustrated with relevant tables, graphs, maps that can be emailed to the district and state officials.
3. Custom dashboard view: Data analytics tools build complex background algorithms that are then accessed through simple dashboards. The users can visually understand physical and geographical relationships, while custom dashboards have been created for health administrators.
4. Versatility: Digital mobile data-entry tools can be used by field

workers, with minimal training.

Benefits

1. It integrates data from multiple silos and provides a platform for advanced analytics within reach of health officials and other stakeholders. This can help identify under-served areas and ensure evidence-based action
2. It supports policymakers through continuous data monitoring and local health officials by aggregating data for planning and operationalising field events
3. It significantly increases the situational awareness

of managers who routinely monitor vaccine supply chains and plan immunisation sessions

4. With the triangulation of population coverage and vaccine consumption data now possible in Immunization Dynamics app, vaccine delivery can be targeted to designated places more accurately
5. Automated processes reduce the workload of the district and block health officials tasked with executing immunization programs while helping to manage the operational aspects of running them.