

Bihar State's ICT Initiatives

Soaring High With Excellence In m-Governance

NIC Bihar has been identified as a Mobile Competency Centre and has been involved with the design and development of several key Apps for various departments at a variety of levels of administration.

Edited by
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National Informatics Centre (NIC) in Bihar has been actively involved in designing and developing software for improving the delivery of services offered by Government Departments and District Administrations by leveraging the ICT infrastructure of NIC (NICNET, NKN, LAN, Mini Data Centre, Videoconfernce studios, messaging service, Webcast facilities etc).

Not only several Mission Mode Projects (MMP) and Central Projects have been implemented successfully in Bihar like Digital Land Records Modernization Programme (DILRMP), Transport MMP, ePDS MMP, ePanchayat MMP, IVFRT MMP, eOffice MMP, eProcurement MMP, PRAGATI Platform, eSamiksha/Bihar eSamiksha, ePMS, CPGRAM, NDAL-ALIS, SPARROW, PRISM, Track Child etc. but Mobile Governance has also been catching up very fast and various mobile-based channels are being leveraged to deliver the services to the citizens through mobile devices.

NIC Bihar has been identified as a

Mobile Competency Centre. Key Mobile Apps developed for various departments of Bihar are Electrical Assets Imposition System for North and South Power Distribution Company, Gramin Tola Sampark Nischay Yojana (GTSNY) for Rural Works Department, Spot Energy Billing System for Power Distribution Companies, eLabharthi App for Social Welfare department etc.

A number of digital ecosystems have been created in various socio-economic sectors like Agriculture, Co-operative, District Administration, Education, Energy, Forest, Food & Consumer Protection, Home Affairs, IT & Digital India Programme, Judiciary, Land & Revenue Reforms, Rural Development, Rural Works, Social Welfare, Transport and various other departments for digitization and improving delivery of online services.

In this brief article, we will take a look at some of the prominent initiatives of NIC Bihar and the various digital eco-systems and digital interventions created here.

I-BHUGOAL (Bihar Infrastructure Mapping GIS Project)

The main aim of this project is to establish "Bihar GIS" as a tool to represent



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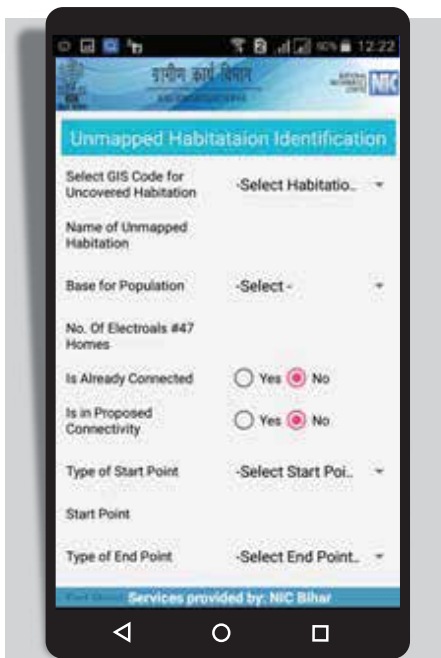
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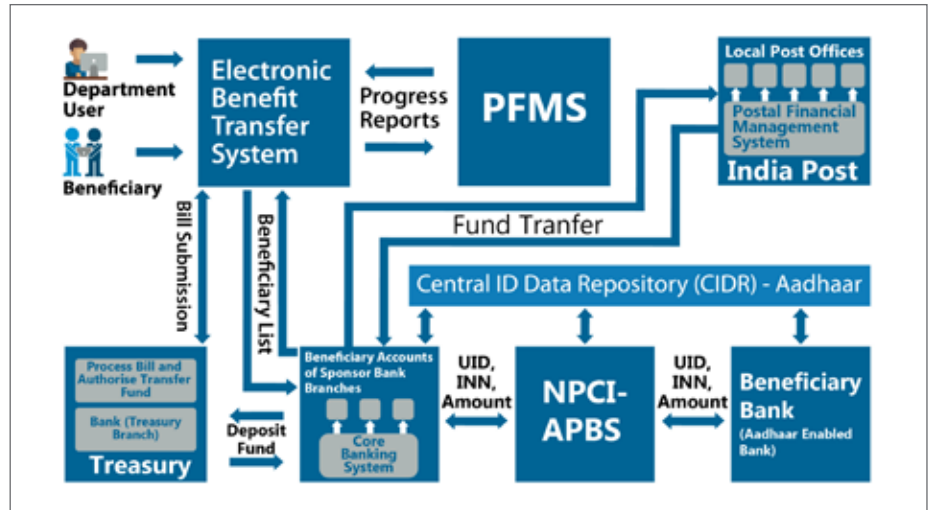
resources (natural as well as man-made) for location specific planning, decision-making and monitoring. The project has as its objective, the establishment of Bihar State Spatial Data Infrastructure for Multi-Layer GIS for planning and eGovernance by taking advantage of existing & available data. This is a joint initiative of the IT Department, Government of Bihar and National Informatics Centre, Bihar. This project integrates GIS, GPS, and Satellite Imagery to capture location specific information. GIS project now integrates "Mobile based eGovernance Services" to access and update eGovernance applications through Mobiles/ Tablets. Mobile technology is being introduced to bring about easy access to applications and increase the reach of applications to remote locations. The Mobile-based framework established integrates MIS, GIS and Mobile Technology. This project has won the "GOLD Medal" in National eGovernance Awards in the "Innovative use of Technology" category.

TOLA CONNECTIVITY IDENTIFICATION APP (Rural Works Department)

In order to provide connectivity to all the



UnMapped Habitation Identification App



Architecture of electronic fund transfer using PFMS

remaining 31,000 habitations which have not been connected through Pucca roads, a survey has been undertaken. This mobile and GIS based application allows the identification of missing tolas, capturing the length of the roads to be constructed, availability of land, cost of land in case of private land and current status of road. The survey will help in preparation of DPR and monitoring of roads.

E-LABHARTHI [Digital Ecosystem for Social Pension Schemes]

Digital ecosystem in social security pensions for direct benefit transfer comes out as one of the excellent examples of eGovernance which can obviate many problems like wastage of public funds, corruption and the role of middlemen who restrict the beneficiaries from getting their benefits in time.

The e-Labharthi System has been envisaged as a major transformation in electronic service delivery and financial inclusion which bypasses the pain points of the existing service delivery mechanisms. Funds can be transferred by the banks directly to the bank accounts of identified beneficiaries. The Electronic Benefit Transfer system will be transformed to accommodate newer technologies and shall be further customized in accordance with the feedback provided by the customers in a later stage. NPCI has introduced advanced

payment service such as Interbank Mobile Payment Service (IMPS) which uses mobile devices to transfer fund to other bank accounts in real time. 67.44 Lakh beneficiaries under six schemes have benefitted from the scheme with an estimated Fund Transfer of 1700 Crores (in seven months) in 38 districts. Jehanabad was the pilot district where the scheme was launched. It is estimated that the State Government may save more than Rs. 1000 crore per annum towards payments of pensions in different schemes with e-Labharthi.

SEITRA [Smart Energy Infrastructure and Revenue Administration System]

Smart Energy Infrastructure and Revenue Administration System (SEITRA) is an integrated framework of web, mobile and GIS technologies to manage electrical infrastructure and produce energy bills for the consumers. ICT based solutions have been implemented for Mobile and GIS based modeling of electrical infrastructure mapping and planning, survey of connected and unconnected households for electricity infrastructure planning, project monitoring, handling grievances, and monitoring & execution of projects, tracking the habituated defaulters in bill payment thus enhancing the revenue collection, spot electricity billing through Mobile App, building up appropriate Management Information System (MIS) for monitoring revenue

collection in its totality, thus helping decision making and establishing modern web-based interface for greater transparency between the Electricity Board & its consumers.

MOBILE BASED SPOT BILLING OF ELECTRICITY BILLS (Bihar Power Holding Corporation)

Developed for Spot Billing of Electricity Bills, this Mobile App comes with a Bluetooth printer provided with the device so that the electricity bill/ receipt of payment can be given to the consumer on the spot. This has been developed for the Bihar Power Holding Corporation.

SURVEY OF MUKHYA-MANTRI GRAMIN VIDHYUTIKARAN NISCHAY YOJNA APP (Bihar Power Holding Corporation)

One of the seven Nischay projects undertaken by the current government is to ensure that electricity reaches to each and every household. The Mobile App is being developed for capturing information of access to electricity of 2.8 Crore households of Bihar.

ELECTRICITY INFRASTRUCTURE MAPPING OF BIHAR APP (Bihar Power Holding Corporation)

Aimed at helping in GIS mapping of electrical infrastructure such as GSS, PSS, Poles, Transmission Lines etc. the App is a very important tool for the Electricity Department. Armed with the digital data of the Electricity Infrastructure in the state, the Department can take necessary steps for the development, maintenance and expansion of the infrastructure.

BIHAR PANCHAYAT ELECTION 2016

NIC has extended total ICT support in recently concluded Panchayat Elections including preparation of Voter List, Deployment of Polling Personnel for Voting, Counting. A centralized database of all candidates winning or losing along with their contact details has been created. Online counting from the Block level and uploading of the details of the result was made available in real-time.

Real time uploading of counting data has made the counting process transparent and resulted in minimizing court cases due to conflicts arising from the counting procedure.

Availability of the information related to 7.5 lakh contesting candidates and 1.59 lakh winning candidates is very useful for analysis and monitoring by the State and District Administration.

DIGITAL ECO-SYSTEM FOR FARMERS

Agriculture Department, Government of Bihar has initiated subsidy distribution through a common platform called Online Farm Mechanization Application Software (OFMAS). OFMAS allows farmers, dealers and manufacturers to sell and purchase farm implements in a transparent and cost effective manner. OFMAS is a role-based and workflow based online web application (<http://krishi.bih.nic.in>). The application offers various G2G, G2B and G2C services. Government officials can use the application for monitoring the entire process at various levels. Dealers can use the system to easily approach the farmers for selling their products while farmers can apply online for availing subsidy on farm machinery. Built-in SMS feature provides timely alerts at various stages of processing of application.

E-PACS (Co-operative Department)

e-PACS is a mobile and web-based



eLabharthi App



Mobile Based Spot Billing App



Mukhyamantri Gramin Vidhyutikaran Nischay Yojana App



ePACS App

solution designed and implemented to facilitate paddy procurement through PACS (Primary Agriculture Credit Society) and Vyapaar Mandals across Bihar. The payments made to PACS and farmers are also monitored using the application. This is a G2G initiative by the Co-operative Department, Government of Bihar, to track paddy procurement, its milling & delivery of rice by millers through a Mobile App. This application solves the problem of information gap observed in paddy procurement, conversion to rice and delivery & subsequent management of rice at the Depots. The application now has been integrated with Farmer database. Farmers need to register on the portal with land details, rent receipt, Personal ID and first page of Bank Passbook. Due verification by Block office is completed and a registration ID is provided to the farmer. Provision has also been made for those farmers also who cultivate on others land. They have to submit a self certified form duly verified by Kisan Salahkar. The mobile App is preloaded with the list of registered farmers so that procurement can be done only from those farmers. This is being considered as landmark step by State Government to cover large number of small and marginal farmers. The resultant output is to have real time data on procurement process. The data



ePlantation App

so generated is also being shared with State Food Corporation. So, Agriculture, Cooperative and State Food Corporation department sharing data among them.

CHANAKYA [ICT based solution for Registration and Examination System]

This is a web enabled, role based & work flow based software solution for the Universities/ Educational institutions to accomplish enrolment, registration and examinations task which offers a better solution to improve the productivity and efficiencies of the manpower and for the entire system covering Registration & Examination Branch of the University/ Educational Institute. The entire system covers Registration & Examination Branch of the University/ Educational Institute. All modules of the system sit on the same database, meaning no messy, troublesome interfaces and real-time integration with error free results. In the process of transforming the University into the 'Centre of Excellence' Chanakya has potentially powerful enabling tools for registration and examination system.

FOREST MANAGEMENT INFORMATION SYSTEM [FMIS]

The forest area of Bihar covers 6,473 sq



eChapakal App

km and constitutes 6.87 % of the total geographical area of the state. Hence to increase the forest/ tree coverage, substantially through time bound programme of afforestation, plantation of trees, promotion of agro-forestry among farmers etc., proper management of forest and wild life activities, an ICT enabled e-Governance system became the need of the department. To fulfill these objectives an integrated Forest MIS integrating MIS, GIS and Android based e-Governance System has been designed, developed and implemented by the department in association with NIC.

e-PLANTATION (Environment and Forest Department)

This App has been developed for online registration of plantations across the state and for capturing the plantation details such as scheme name, plantation area, type of species, sanction details, ten geographic co-ordinates of the plantation boundary and time-stamped geo-tagged photographs. After generation of plantation ID the App further facilitates division and range wise progress monitoring by respective field level officers. The App is integrated with Web and GIS based backend support for real time monitoring of schemes on Google/ Bing maps for e-Governance at grass root level.

PHED MANAGEMENT INFORMATION SYSTEM [PhedMIS]

PhedMIS is an integrated portal supporting web, GIS and mobile applications for better management of various schemes run by PHED department, and has created real-time database of all ongoing schemes, and tracking the presence of field officers along with location details through Mobile App, by capturing and monitoring the depth and other details of Hand Pumps through Mobile App, and monitoring & tracking of contractor's physical achievement of schemes, development of department's own recruitment portal, online test module, submission & monitoring of DMA Monthly Performance Report, monitoring and rehabilitation of hand pumps (Chapakal) and Pipe water Supply of entire state under Saat Nischay Programme of Hon'ble Chief Minister, Bihar.

e-CHAPAKAL (Public Health Engineering Department)

eChapakal captures and monitors the status of Chapakals installed by the department along with the beneficiary details and water quality test report. The beneficiaries' details and water quality test reports are displayed on geospatial maps of integrated web and GIS portal. The portal facilitates in redressal of incorrect information through Grievance redressal system of the portal. The App also provides role based monitoring and verification of uploaded data.

e-PEYJAL (Public Health Engineering Department)

Used to capture & monitor the household connections under various water supply schemes (Mini pipe water supply,

Pipe Water Supply and Multi Village Schemes) of "Har Ghar Nal Ka Jal" Yojna of Saat Nischay Programme of Hon'ble CM of Bihar, the ePeyjal App has been developed by the NIC, Bihar. Till date, household connections of 8954 beneficiaries have been captured and displayed on GIS framework for citizens to view the actual status.

NIC District Centres are playing diverse roles right from executing various projects under eGovernance and Digital India initiatives to the day-to-day ICT-driven technical support & consultancy to various departments in the district. The design & development of new ICT initiatives at the behest of District Magistrates are also undertaken under the guidance and technical support of District Informatics Officer (DIO) and Addl. District Informatics Officer (ADIO). District Administration with support from NIC is executing and implementing eGovernance and Digital India initiatives at the grass root level in achieving transparent, efficient and responsive governance by leveraging the NIC Service and Infrastructure profile such as:

- NICNET and NKN Connectivity
- Video Conferencing
- Capacity building
- eMail and SMS services
- ICT implementation in districts including Software Development, Technical Support for VVIP Events and DeitY Programmes e.g. Digital India, CSCs, DISHA, eGovernance Society etc.

ACCOLADES

The efforts of NIC Bihar have been acknowledged with following awards this year:

CSI Award of Excellence for Project "Smart Energy Infrastructure & Revenue Administration System" executed for Energy Department, Govt. of Bihar.

CSI Award of Appreciation for "iBhuGoal-Roads" executed for Rural Works Department, Govt. of Bihar.

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Hon'ble Chief Minister of Bihar, Shri Nitish Kumar launching the ePeyjal App



Webcasting Services of NIC in Bihar