

KARNATAKA

The “Silicon Valley of India” pioneers in e-Governance with ICT excellence

Playing a catalytic role in the promotion of IT amongst Government Departments, including the 30 District Offices, since 1987, NIC Karnataka has heralded many state-of-the-art solutions to the information management and decision support requirements of the State and Central Government Departments.



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Karnataka is the eighth largest state of India and is located in the country's south western region. Formed on 1st November 1956, the state was earlier known as the State of Mysore, and was renamed Karnataka in 1973. Being a home to sculptured temples, hill ranges, beaches and other beautiful attractions, Karnataka is among the most desired tourist destinations, thronged by numerous travellers every year.

Be it literature, music, or culture, the State has gained recognition in various fields. The State capital Bengaluru is popularly known as an IT Hub, and the role of technology continues in the State with persistent efforts being made by the Government to make the lives of citizens easier by providing them with digitally empowered services. NIC has been zealously spearheading ICT initiatives in the State, which have helped the authorities speed up e-Governance projects and enabled them to maintain constant connection with citizens.

The Karnataka State Centre of NIC has successfully completed three decades of Information & Communication Technology (ICT) support services to the Government of Karnataka since its inception in Bangalore in 1987. Many workflow-based, web technology driven e-Governance applications have been taken up by NIC-Karnataka.

NICNET and Network Services in Karnataka

NIC Centres in 30 Districts of Karnataka are connected with 1Gbps/ 100 Mbps/ 34 Mbps links extended from Network Operations Centre (NOC), located at NIC-Koramangala. The departments and projects like PAO, CGHS etc., are connected with

minimum 2 Mbps links or higher capacity based on the usage and requirement. Network connectivity is extended to Vidhana Soudha, Secretariat, Educational Institutions, High Court of Karnataka, Agriculture Department, Commercial Taxes Department and various departments in the districts. About 157 government offices are connected through NICNET in Karnataka.

Videoconference setup and services

Studio-based multi-site videoconferencing systems constitute the communication



NIC Karnataka has been a pioneer in architecting, designing, developing and implementing many flagship programmes in e-Governance arena in the State. Seva Sindhu, Samrakshane, e-Office Suite, e-Hospital, FRUITS, DBT, Nada Kacheri, RCCMS are a few among many. NIC has been instrumental in rolling out e-Governance Projects to achieve transparent, effective and efficient citizen-centric service delivery, and thus bringing governance to doorstep of common man.

I wish NIC many more success stories in its endeavours to reach and exceed the expectations of people of Karnataka and the State Government in delivering good governance to people.

T. M. VIJAY BHASKAR, IAS
Chief Secretary
Government of Karnataka

infrastructure. Executive Video Conferencing Systems (EVCSs) supplement the main videoconferencing studio. Desktop videoconferencing on Vidyo Portal is also in operation for individuals. There are 6 videoconferencing studios in Bangalore and 30 Studios at NIC District Centres. The videoconferencing studios of Zilla Panchayats utilise NIC network. The Multipoint Control Unit (MCU), Radvision SCOPIA100 MCU-24 and Polycom MCU (40 PortVidyo Router for Desktop VC) constitute Videoconference Studios Infrastructure.

NOC Services

All the NICNET links are being monitored 24x7 from the NOC located at NIC Koramangala.

Email Services

NIC Karnataka extends NIC email services to the Government Organisations, as per the NIC Email Policy.

Web Services and Security Audit Services

Designing, development, deployment and hosting of many websites for Government Organisations are being taken up from time to time. Online Recruitment Applications for various posts in different departments are hosted. Development and hosting of results for SSLC Board, PUC Board and CET, KSEEB Board, Railway Recruitment Board, Employment and Training are also hosted as and when required. The web applications are security audited mandatorily before hosting.

National Knowledge Network (NKN)

NKN provides high-speed, low-latency fiberlinks of 100 Mbps/1 Gbps or higher to the Research/ Educational Institutions. It aims to interconnect all knowledge institutions across the country to foster research and resource sharing through online collaboration. About 147 institutes are connected over NKN in Karnataka.

Mini Data Centre

More than 400 government websites and G2G, G2C & G2B applications are hosted in the Data Centre, and 24x7 services are provided. The facilities include 1250 sq. ft. Server Farm Area, state-of-the-art internet security and physical security with Access Control & CCTV Surveillance, 2 X 100 KVA UPS along with Diesel Generator (DG)

backup, Precision Air Conditioning System, Secure Firewall and Intrusion Protection Systems (IPSs), 104 numbers of Rack Mount and Blade Servers, Server Virtualisation, SAN storage with 250 TB raw capacity, Automated Tape Library (ATL) for Data Backup, LAN Switches and Fiber Switches for connectivity and Application Load Balancer.

NIC Swachhta Rankings

NIC Karnataka State Unit stood first in the Ranking List awarded by NIC Headquarters for Swachhta related activities among the NIC State Units on 1st October 2018.

Mobile Applications of NIC Karnataka

Case Management - Karnataka High Court

Operating System: Android, Minimum 2.2
Released by: Ministry of Law and Justice

The objective of the App is to disseminate information related to cases and certified copy applications filed in all the benches of High Court of Karnataka. Users can view or download judgments based on case number.

Supreme Court Case Management

Operating System: Android, Minimum 2.2

Released by: Ministry of Law and Justice

The objective of the App is to disseminate information related to cases filed in the Supreme Court of India. Using the App, users can manage the portfolio of desired cases. Statuses of these cases can be checked in bulk.

Marketapp

Operating System: Android
Released by: Agricultural Marketing

Daily market rates from 156 Agriculture Produce Market Committee (APMC)/ Mandis in Karnataka are available for registered users. At present, we have 2,18,000 farmers registered for this purpose. Unregistered farmers can access mobile-friendly Krishi Maratavahini Portal from the App for getting information related to daily market arrivals, minimum, maximum and modal rates.

College Timetable

Operating System: Android
Released by: Department of Higher Education

Students studying in Government First Grade Colleges in Karnataka can view daily college timetable. They can also find which teacher takes the class and lecture hall details. In case, a teacher is absent or On Office Duty (OOD), the same will be available.

My-Suru

Operating System: Android Kitkat
Released by: Ministry of Panchayat Raj

Developed for Zilla Panchayat, Rural Development and Panchayat Raj (RDPR), it enables mobile governance to capture grievances of citizens in rural areas.

PDO Module

Operating System: Android 2.33 and above
Released by: Rural Development and Panchayat Raj Department

This module is used as a bridge module to Panchatantra, a web-based panchayat automation module for Gram Panchayats in Karnataka.

Worksoft

Operating System: Android 2.33 and above
Released by: Rural Development and Panchayat Raj Department

The work soft system facilitates RDPR department in following the procedure of works execution and monitoring the effective implementation of the same under different schemes. The purpose of the Mobile Application is to update the status of work by capturing its photo and geo locations at initial, intermediary and final stages.

Swachh Bharat Mission Public module

Operating System: Android 2.33 and above
Released by: Rural Development and Panchayat Raj Department

The purpose of the Mobile Application is to update the status and verification of work by capturing its photo and geo location by the beneficiary.

Shop owner module

Operating System: Android 4.0 and above
Released by: Department of Food, Civil Supplies and Consumer Affairs

This App allows shop owners to issue as well as to update ration transactions at

their shops. Transactions happen through biometric authentication or by showing food coupons downloaded at any of the Photo Bio Centres (PBCs) if biometric authentication fails.

Key Projects of NIC Karnataka

e-Way Bill System

The e-Way Bill System (<https://ewaybillgst.gov.in>), as a part of Goods & Services Tax (GST), was implemented in Karnataka in September 2017, and was launched for interstate movement of goods throughout the country on 1st April 2018. The intrastate e-Way bill generation has been enabled for all the states and UTs in a phased manner. More than 20 lakh e-Way bills are generated every day, and as per records, nearly 5 cr. e-Way bills were generated in December 2018. 2.10 cr of these bills are interstate while 2.90 cr are intrastate. It is noteworthy that more than 24 lakh e-Waybills have been verified by officers in a month. Besides, over 27 lakh tax payers are registered and over 38000 transporters have enrolled on the system.

GSTPro-2 (GST Processing and Analytics System)

GSTPro system acts as an interface between GST Common Portal System and Karnataka State Commercial Taxes Department (CTD), and provides back-end solutions to the State to perform various GST related activities electronically and helps in carrying out procedure based back-end activities. This system also has a number of GST analytic reports to help the officers analyse and detect tax evasion.

CEO (Chief Election Office, Karnataka)

The Assembly Election was held in May 2018 to constitute the 15th Assembly Electing Members for all 224 Assembly Constituencies of Karnataka. District Information System for Election (DISE) was implemented all over Karnataka to randomise polling personnel, Electronic Voting Machines and Micro-observers. NIC teams across the State also provided technical support for counting of votes and web dissemination of results in almost real time.

Regional Workshop on NeVA (National e-Vidhan Application)

The National Mission Mode project,



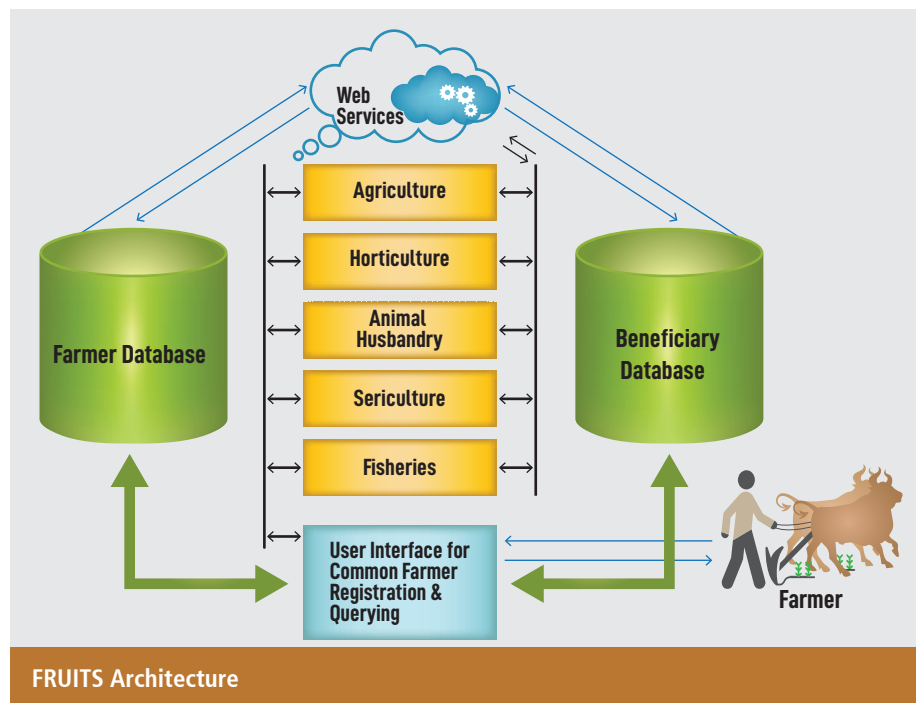
Shri T.M. Vijay Bhaskar, IAS, Chief Secretary inaugurating the NeVA workshop, along with dignitaries

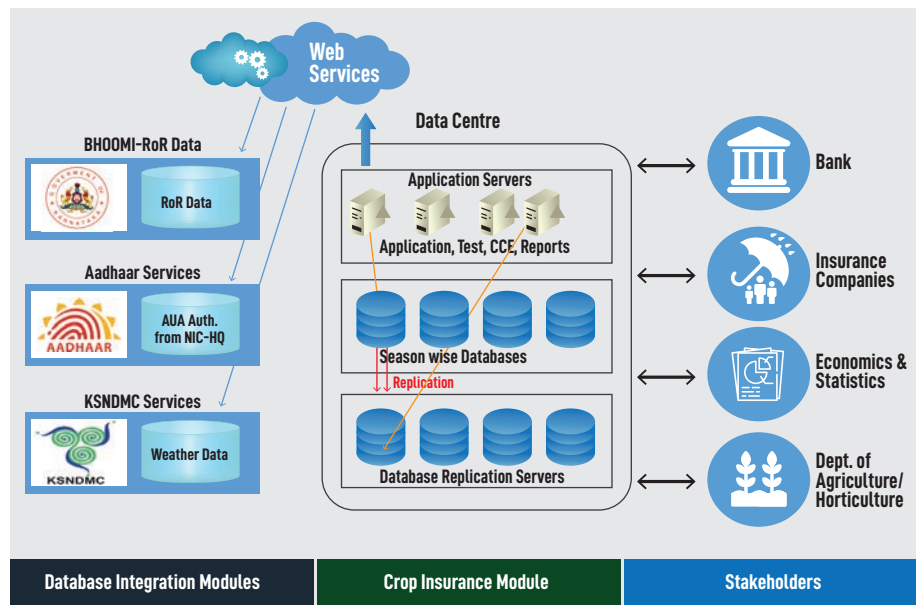
jointly sponsored by Central Government and State Government, is built with a vision to help legislatures to go digital and conduct business without paper. It also aims to ensure the smooth flow of information between executive and legislature and disseminate the legislature proceedings on the public domain on a real time basis. NeVA Regional Workshop was held for Karnataka Legislature from 2nd to 3rd November 2018.

Farmer Registration & Unified Beneficiary Information System – FRUITS

FRUITS (<http://www.fruits.karnataka.gov.in>) is an e-Governance application for managing farmers database and benefits provided to individuals/ institu-

tions/ farmers producing organisations covering the schemes executed by the Department of Agriculture and allied departments. All these departments deal with farmers when it comes to providing benefits from the government in the form of subsidy/ financial assistance. **A well organised and scrutinised farmer database will avoid farmers from running pillar to post for availing benefits and resubmission of same set of documents repeatedly.** For departments, it helps in bringing transparency in the selection of beneficiaries, avoiding chances of same beneficiary(ies) availing multiple schemes, avoiding chances of same beneficiary(ies) availing benefits for existing units, and also help in enabling departments in achiev-





ing comprehensive and inclusive development by prioritising the farmers, based on previous benefits provided.

Approximately five lakh farmer registrations have been completed since April 2018 in an incremental approach. Farmers can raise requests online for registration, modification of existing details etc. Electronic integration has been achieved with Aadhaar, BHOOMI (land Records System), Nada-Kacheri (Revenue departments certificates issue system), Public Distribution System (PDS) and Electors Photo Identity Card (EPIC) system. The system also facilitates updation of details on benefits passed on to farmers by stake-holding departments based on registration id. Web APIs are available for stake-holding departments' applications to interact and exchange data.

Samrakshane

Samrakshane (meaning protection in English) (<https://www.samrakshane.karnataka.gov.in>) is an end to end, state-of-the-art e-Governance solution and farmer-friendly system for crop insurance enrolment, registering claims, compensation calculation and payment of compensation to farmers under the Crop Insurance Schemes, Pradhan Mantri Fasal Bima Yojana(PMFBY) and Modified Weather Based Crop Insurance Scheme (MWBCIS).

The whole process of crop cutting experiments has been computerised. Web

module helps create and randomise the crop cutting experiments and Mobile Application is used to capture data during the experiment. Photos, video and GPS co-ordinates captured during the process help avoid future disputes.

Project Highlights

- 60 lakh enrolments since Kharif 2016
- Non loanee enrolments increased to almost 88% of total enrolment in Rabi 2018, compared to mere 20% in Kharif 2016.
- Process cycle time for compensation payment reduced almost by 10 months. Integrated with Aadhaar for facilitating Direct Benefit Transfer.
- De-duplication of land achieved with electronic data exchange with BHOOMI (RoR database)
- Crop cutting experiments conducted using 14,000 mobile devices and facilitated District Magistrates with an alert system in case of exorbitant yield figures.
- User base of 9000+ bank branches, 1000 Raitha Samkaraka Kendras (RSKs), insurance companies, 8000 CSCs and departmental users

Awards: National e-Governance award - 2018, SKOCH Order of Merit - 2017, Gems of Digital India Award - 2018

e-AASTHI & e-SWATHU

e-AASTHI (<http://eaasthi.mrc.gov.in>) and e-SWATHU (<http://e-swathu.kar.nic.in>) projects are citizen-centric e-Gov-

ernance applications to handle highly sensitive property documents. These workflow-based applications are meant for Property Records Management in Urban Local Bodies and Rural Villages in Karnataka, respectively. Both projects avoid legacy data entry, which is laborious in nature and also exempt survey activities before implementation. All the property records are digitally signed by the competent authority. e-AASTHI and e-SWATHU are best examples of incremental model implementation of e-Governance project. Most significant achievement of these projects has been the collection of attributes, which help in creating authenticated property document by implementing good amount of government process re-engineering. Both applications have an online mutation module to update the property records based on registered and unregistered transactions and also facilitate handling of apartments, which is the need of the hour. A facility to create charges on the properties has enabled banks and financial institutions to have more rights on the properties for which they have advanced loans.

Awards for e-AASTHI: SKOCH Order of Merit – 2017 & **e-SWATHU-** SKOCH Order of Merit – 2017 and CSI-Nihilent award for the year 2014-15.

Seva Sindhu

An initiative of the Government of Karnataka, Seva Sindhu (<http://sevasindhu.karnataka.gov.in>) aims to deliver services to the doorsteps of citizens. The project is getting integrated with various service delivery channels, citizen service centres such as Bangalore One, CSC Centres, Karnataka One, Atalji Jana Snehi Kendra and Bapuji Kendras, and aims to bring all departmental services under one platform. The objective is to provide services in a cashless, faceless and paperless manner. It is a step towards the provision of accessible, cost-effective, accountable and transparent government services to citizens. Seva Sindhu rides on ServicePlus framework, designed and developed by NIC, which is a unified platform based on multi-tenant architecture for delivering electronic services to citizens. As of now, 78 services have been deployed using ServicePlus framework, 22 services are ready for deployment and waiting for clearance from concerned departments.

Direct Benefit Transfer (DBT)

It is a platform for enabling DBT through Aadhaar based and non-Aadhaar based payments. Common tools for de-duplication using Aadhaar number, name comparison tools are facilitated.

Financial address validation in terms of checking for availability of Aadhaar seeded bank account is another facility. This platform will enable DBT for citizens, availing benefits from all departments of the State. Instead of each of the Beneficiary Management Systems in the State separately integrating with UIDAI, NPCI and Treasury, they integrate with the DBT Platform. The DBT platform integrates with Treasury system and also the banks for enabling Aadhaar based payment. The payment response files received are then shared with other beneficiary management systems. Thus, DBT enables the State to monitor the utilisation of funds earmarked for delivery of benefits to citizens from a single platform. The milk subsidy and student scholarship payment were made through this platform this year.

State Scholarship Portal for pre-matric students

A single interface has been provided for all the four departments providing scholarship to students namely Social welfare, Tribal welfare, Minorities and Backward classes. This portal rides on digitised data of students built by the Education Department, which provides a unique ID to every student. These IDs are used by students to register for scholarships. Integration with Revenue Department software for automatic verification of caste, income based on the caste/ income certificate number to access the eligibility and identify the scheme under which the scholarship can be sanctioned is done. Verification of fresh/ renewal category is also automatically done by the software by utilising data of the previous year's beneficiary. Merit list generation and identification of the cut off is done based on the available funds. Thus, the entire process of verification and eligibility check is automated to a large extent by providing inputs to the approving authority. About 55 lakh applications were received this year. The scholarship system integrates with the DBT platform for payment.

"Aushada" - Online Drugs Supply Chain Management system

Aushada is an online software application, which automates the procurement and distribution of free drugs by the Karnataka State Drug Logistics and Warehouse Society (KDLWS). Annual requirement collection, scrutiny and finalisation of drugs requirement, purchase order preparation, quality check, warehouse inward and outward and hospitals inward and outward are its major modules. Email and SMS notifications are sent for every transaction. The Aushada software is also being implemented in two other departments, Directorate of ESIS Medical Services and Veterinary Department.

K-KISAN (Karnataka – Krishi Information Services And Network)

K-Kisan (<http://kkisan.karnataka.gov.in/>) is an end to end software suite developed to provide automation of workflows, data level integration and user interface at Raitha Samparka Kendra at Hobli, Taluk and District levels. This project has been awarded with 'Gems of Digital India Award-2018' (Jury's Choice) for excellence in e-Governance.

Ayushman Bharat – Arogya Karnataka

This application is meant for the enrolment and issue of health card named AB-ArK CARD (Ayushman Bharat–Arogya Karnataka Card), which is integrated with Aadhaar System (Biometric, OTP Auth, QRCode) and Ration Card (BPL/APL) Services. This Card will be used for obtaining the scheme benefits at government/ private empanelled hospitals as per package rates. Approximately 8 lakhs cards are delivered. The services are delivered through 180 hospitals, 54 Bangalore One centres and 44 Karnataka-One centres.

DigiLocker: DigiLocker system has been implemented in the Department of Pre University Education to disseminate II PUC marks cards through Aadhaar authentication mode. The database is stored in the Karnataka State Data Centre (KSDC) servers and a web service has been enabled to access from DigiLocker.



EASE (Electronic Answer Script Evaluation System): The answer booklets of the candidates are evaluated digitally. Answer booklets are scanned in the scanning centres and the PDF documents are saved at KSDC, and are made available for the evaluators.

Revenue Court Case Monitoring System (RCCMS): RCCMS is being implemented by all the Revenue/ Magisterial Courts of Karnataka State. The application enables the government to automate monitoring of court processes.

Way Forward

- ❖ Establishment of Centre of Excellence for Blockchain technology
- ❖ e-Hospital instance for Karnataka State
- ❖ Creation of citizen database on the lines of SAMAGRA
- ❖ Integration of FRUITS with DBT and Crop Survey ■

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