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Digital India
Power To Empower

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EDITORIAL

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Efforts and results go hand in hand. Goals cannot be accomplished unless contemplated and strategised well. As it continues rendering several ICT driven services to the nation by gracefully embracing the evolving technological environment, NIC has accomplished many citizen-centric projects in the year gone by. This issue of INFORMATICS brings to the fore a Cover Story on the implementation of a robust e-Governance framework, eTransport, to automate the operations of Regional Transport Offices (RTOs) in various states across the country.

eTransport Mission Mode Project, operational under the Ministry of Road Transport and Highways, aims at enabling convenience to citizens and stakeholders, and bringing an effective monitoring approach to the authorities. The system is constituted by four components, Vahan, Sarathi, eChallan and mParivahan, operational through web portals and Mobile Apps.

The ***Spotlight*** section of this issue features the signing of an agreement between NIC and the Ministry of Justice of the Kingdom of Morocco in the field of Modernization & use of IT in judicial system. It also covers a National Awards Ceremony held for the felicitation of **#OpenGovData-Hack** winners. NIC e-Governance projects in the state of Uttar Pradesh and Karnataka have been focused in ***From the States*** section. District Hooghly of West Bengal has been featured in the ***District Informatics*** section. Articles covered in the ***e-Gov Products & Services*** are Arunachal Suraksha Suite and Swachh Bharat Mission-Gramin. ***Appscape*** details seven Apps introduced for citizens and the smooth functioning of specific authorities. ***Accolades***, ***International e-Gov Update*** and ***In The News*** sections are here for you as always.

Here is wishing you all a very Happy New Year. Let's aspire high towards success and happiness in our lives.

Editor

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#OpenGovDataHack NATIONAL AWARDS

Inaugurating the Awards ceremony, Hon'ble Union Minister, Shri Ravi Shankar Prasad felicitates winners

The Digital India initiative of the Government of India is progressively underway to make the country a digitally empowered society and a knowledge economy. Realising such a widespread aim of the Government, the Open Government Data (OGD) Team of the National Informatics Centre (NIC), collaborated with Internet & Mobile Association of India (IAMAI) and StartUp India, as part of the Startup Ecosystem Development Programme, and organised a Hackathon, "#OpenGovDataHack" National Challenge across the country.

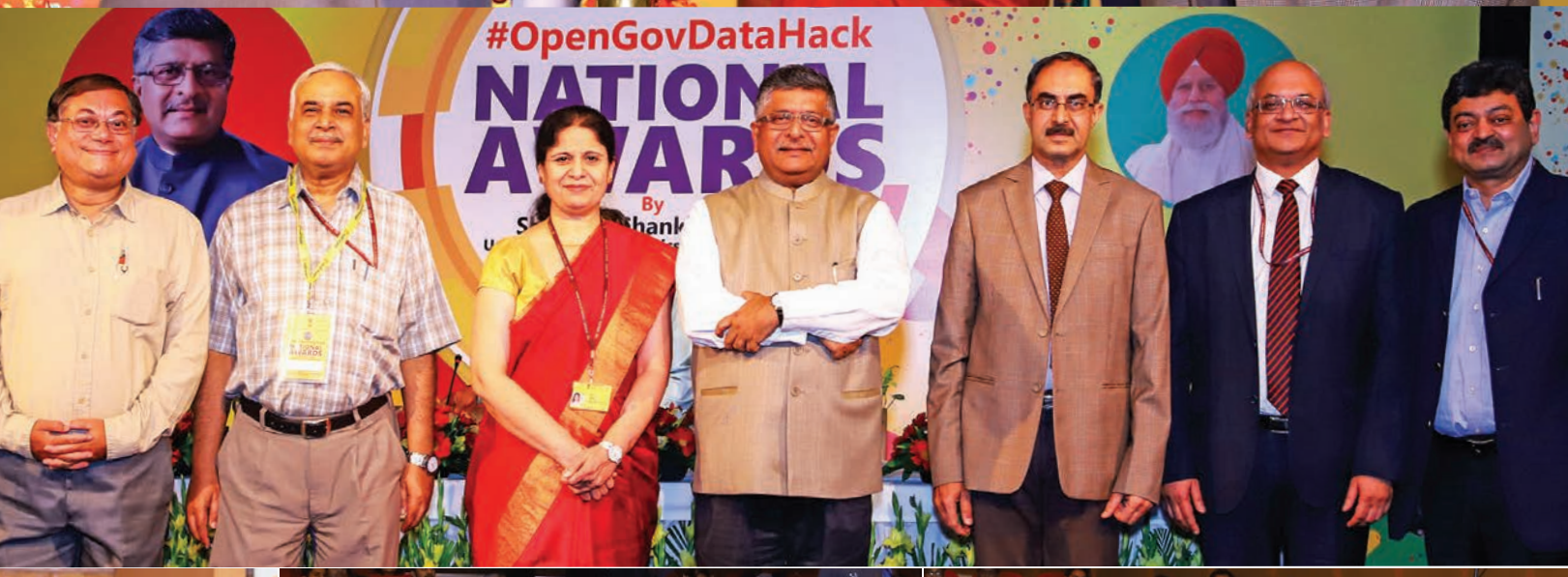
A National Awards Ceremony to honour the winners of the Hackathon was held at Stein Auditorium, India Habitat Centre, New Delhi on 1st November 2018. The awardees were felicitated by Shri Ravi Shankar Prasad, Hon'ble Minister of Law & Justice and Electronics & Information Technology, in the august presence of Shri S.S. Ahluwalia, Union Minister of State, Electronics & IT, Shri Ajay Sawhney, Secretary, Shri Pankaj Kumar, Additional Secretary, Ministry of Electronics & IT and Dr. Neeta Verma, Director General, NIC.

Congratulating the winners in his address, Shri Ravi Shankar Prasad said, "IT professionals should join hands with the government to make India a digital society." He urged the IT community to reach out to the deserving and underprivileged sections and make them digitally literate. The Minister added that the government has provided two lakh datasets on open data platform to create an opportunity for innovation. He also said that the government supports the independence of social media but utmost care should be taken to ensure that it does not affect the national fabric.

The Hackathon was conducted in two phases and organised for Students, Entrepreneurs, Innovators, Start-ups, Developers and Community to create innovative service delivery Applications & Info-Graphics, thereby nurturing innovation. It was held in seven cities i.e., Surat, Bhubaneswar, Patna, Jaipur, Delhi, Chennai, Hyderabad as well as online, and was run through the OGD event portal, ***https://event.data.gov.in.*** Water & Sanitation, Transport, Education, Crime and Health were chosen themes for the event.

The first phase was launched by Shri Ravi Shankar Prasad on 12th September 2017. It comprised of a 24-hour event during which, all the teams built Apps and Info-graphics using the Open Government Data. 43 best App Prototypes were selected by respective juries from each city and were rewarded. In the second phase, the selected App Prototypes were taken forward for App Development. Each team was given three months of mentorship/ incubation to develop the App before submission. 36 Apps were submitted for evaluation and 20 Apps were selected for final Jury presentation by a National Screening Committee.


Digital India
Power To Empower


#OpenGovDataHack
NATIONAL

The esteemed Jury, under the Chairmanship of Shri Ajay Sawhney, Secretary, MeitY, evaluated the shortlisted Apps and selected winner, first runner-up, two second runner-ups and eight consolation awards, for which the National Awards Ceremony was held. The event witnessed a huge participation of around 400 people, including officers from the Government and Academia, Students, Entrepreneurs, Innovators, Start-ups, Developers, Community, Media, awardees and finalists for the #OpenGovData-Hack National Awards Ceremony.

The Open Government Data Platform ***(https://data.gov.in)*** India, an Open Data initiative of the Government of India, is at the forefront of promoting innovation in Open Data ecosystem in the country. It has been set up by NIC, in compliance with the Open Data Policy– National Data Sharing and Accessibility Policy (NDSAP) whose objective is to provide a platform for proactive access to Government-owned shareable data. These data sets are directly published on the platform by the Government Departments.

Such initiatives by the government provide an opportunity to young talents of the country to showcase their skills and introduce innovative ideas. The Awards Ceremony concluded on a successful note and it was followed by an insightful panel discussion on "AI for futuristic use of OpenGovData". The session was attended by Shri Desi S Valli, Founder & CEO, FOOP - from Netree, Shri Jatin Kataria, Founder & MD, WE Group - Volcano of GloCal Solutions, Shri Sandeep Amar, Digital Leader and Founder, Inaaj, Shri Saurabh Moody, Chief Data Scientist & CEO, RealBox.ai and Shri Subrat Kar, Co-founder & CEO, Vidooly.

With active deliberations from the industry experts, the session provided thought-provoking ideas and broad perspective on the emerging trends in Artificial Intelligence and the role of Open Government Data challenges. Such a discussion brought forward experiential and rational viewpoints, which, if actualised, could prove to be instrumental in mutual growth and development. ■

With inputs from **OGD TEAM, NIC HQ**

India and Morocco join hands to modernize Judicial System using IT

NIC and Ministry of Justice, Morocco sign a Joint Declaration of Intent

Dr. Neeta Verma, DG, NIC and Mr. Erouihane Abderrafi, Director of the Studies, Cooperation and Modernization Directorate, Morocco signing the JDI Agreement in the august presence of dignitaries

During the visit of delegation from Morocco at NIC HQ

India has a long history of having International ties with various nations for strengthening bilateral relationship and cooperation. On 12th November 2018, a Joint Declaration of Intent (JDI) was signed between National Informatics Centre (NIC) and the Ministry of Justice of the Kingdom of Morocco in the field of Modernization and use of Information Technology in the judicial system. Dr. Neeta Verma, Director General, NIC and Mr. Erouihane Abderrafi, Director of the Studies, Cooperation and Modernization Directorate, Morocco signed the agreement in the august presence of Shri Ravi Shankar Prasad, Hon'ble Union Minister of Law & Justice and Electronics & IT and Shri P.P. Choudhary, Hon'ble Minister of State of Law & Justice, Government of India.

NIC, under the Ministry of Electronics and Information Technology, Government of India, and the Ministry of Justice of the Kingdom of Morocco agreed on the importance of strengthening bilateral cooperation between two countries in the field of modernization and use of Information Technology, especially in the judicial system. Morocco has recognised the experience of NIC in computing and automation for the improvement and development of public services in sectors such as legal and judicial. Both the organisations have decided to cooperate in this field in accordance with the applicable domestic laws and regulations.

The guest delegation from Morocco also visited NIC Headquarters on 13th November 2018 and participated in a detailed discussion chaired by DG, NIC. The eCourts team, headed by Shri S.B. Singh, DDG, gave a presentation on eCourts and other judicial applications implemented by NIC.

With inputs from **IPS SETHI, NEW DELHI**

UTTAR PRADESH

Striding to transform into "Uttam" Pradesh of good governance

Edited by
ARVIND KUMAR DADHICHI

The NIC Uttar Pradesh State Centre has been instrumental in providing ICT-based efficient and assessable e-Governance services to citizens by implementing projects and providing able technical support to various initiatives of the State Government. The e-Governance projects are not only making lives of citizens easier by taking services to their doorsteps, but have also made the administration quick, responsive, transparent, hassle-free and easily accessible.

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Uttar Pradesh is the most populous state in India with over 200 million people. Beautiful attractions such as Taj Mahal, one of the seven wonders of the world, located in Agra city, and religious places such as Mathura, Ayodhya, Vrindavan, Gokul and Varanasi make the state a favourite tourist destination. Besides, UP is also the largest producer of food grains in the country, and accounts to have a share of 17.83% of its total produce of food grains.

Although UP enjoys a prestigious status in all the verticals, it is worth highlighting that the Government of UP has also made notable accomplishments in ICT, which have enabled the authorities to connect better with citizens. Implementing advanced e-Governance projects in the State, NIC has been channelising all such technological endeavours with great enthusiasm.

The NIC State Centre in Uttar Pradesh was incepted in 1988 after which, NIC District Centres were established in all the 75 Districts to mark the organisation's prominent presence in the state. NIC-UP has its State Centre at Yojna Bhavan, located in the premises of State Secretariat. NIC also has its Centres at High Court, Lucknow & Allahabad, Governor's House, Chief Minister's Office, Board of Revenue, APC Office, Rural Development Department, Finance Department, Vidhan Sabha Library, Secretariat Buildings, IVFRT Varanasi, Chaudhary Charan Singh Airport and Kendriya Bhavan, CGO Complex.

Having leveraged IT for transparency and enhanced governance, NIC-UP has been instrumental in architecting and implementing numerous e-Governance projects in the State. In joint collaboration with the State Government, the organisation has efficiently led the automated operation of various governmental processes by employing latest of technologies.

NIC core services towards a Digital Uttar Pradesh

Integrated Network Operations – Information Highway to the entire Government of Uttar Pradesh through NICNET/NKN and UPNICNET

• Internet connectivity provided to around 500+ State/ Central Government Departments • Over 20000+ LAN Nodes in the State. • National Knowledge Network (NKN) - Connecting knowledge institution with Multi-Gigabit PAN India Network • 88 links to institutions under NKN have been commissioned and made operational in the state of Uttar Pradesh, which include 22 institutions that migrated from NMEICT. NKN Links have also been extended to 75 NIC District Centres of UP.

Videoconferencing

• Studio-based videoconferencing services in all 75 districts, 18 Commissionaires, 37 District Court & District Jails, High Court, BoR, CM Office, DGP Office, Commercial Tax, State Election Commission etc.

"NIC has always played a pivotal role in channelising the powers of e-Governance to the masses of Uttar Pradesh. Initiatives in e-Governance have enhanced the transparency in citizen-centric services and facilitated in decision-making.

I sincerely appreciate the efforts put in by the officials of NIC, Uttar Pradesh.

ANUP CHANDRA PANDEY, IAS
Chief Secretary
Government of Uttar Pradesh"

• Desktop-based videoconferencing provided to all District Magistrates and CDOs • More than 300 videoconferencing sessions per month resulting in the saving of 36 crore per annum • Webcast – On-demand webcast services for important state events

Domain Registration - gov.in: Digital identity of UP Government

Meghraj GoI Cloud - Optimum utilisation of infrastructure, on-demand computing services

NIC State Data Centre - Core of e-Governance infrastructure for Uttar Pradesh

Cybersecurity - Safe and secure cyberspace for the entire NICNET community

Email - Manages more than 30000+ email accounts of UP Government

Training - Technical and project-based trainings conducted for Central/ State Government employees

PROJECTS EXECUTED BY NIC-UP

e-Hospital

e-Hospital (Hospital Management System) is a workflow-based ICT solution for hospitals in the government sector. This generic software covers major functional areas such as patient care, laboratory services, workflow-based document information exchange, human resource and medical records management of hospitals. It is a patient-centric system, capturing details of patients right from registration to pathology, admittance in wards, treatment etc. This system allows citizens to book online appointments in hospitals, thereby reducing time and efforts in taking appointments with doctors in distant hospitals.

The e-Hospital application has been implemented in 38 Hospitals, 2 Institutes, 8 Medical Colleges, total 48 hospitals in Uttar Pradesh and has catered to 1.47+ crore patients till December 2018.

e-Office

e-Office is an initiative taken to infuse office automation in the governmental office processes. It aims to improve productivity, quality, transparency, resource, time management etc., by replacing the old manual process with an electronic File Management System.

Following is the status of e-Office in UP:

Implemented in 94 departments of State Government including CM Office, Chief Secretary Office and Districts Offices More than 3,000 government employees trained to shift from manual file system to the electronic version Digital Ids/ Emails created for employees and digital signatures have been provided to sign the files electronically Inaugurated by Shri Yogi Adityanath, Hon'ble Chief Minister, Uttar Pradesh.

eHRMS (Manav Sampada)

eHRMS Application was developed as a product model for providing a generalised human resource management solution to Government Departments to help them take right decisions at right time with proper monitoring, manpower planning, employee recruitment, postings, promotion and transfer based on their skill sets. It caters to online appointment orders, joining, relieving, vacancy/ recruitment, leave management etc.

Following is the current status of eHRMS implementation in UP:

116 registered departments
2.03 lakh registered offices
805801 employee details entries
6.90 lakh service book details entries

DARPAN

An initiative of NIC-UP to efficiently display department information, DARPAN (Dashboard for Analytical Review of Projects Across Nation) is a comprehensive, generic and configurable multilingual dashboard product for the Members of Parliament, Chief Ministers, Governors, Chief Secretaries, Divisional Commissioners and DMs/DCs across Districts and States. It facilitates the presentation of real-time data on Key Performance Indicators (KPIs) of selected schemes/ projects to senior functionaries of the State Government as well as District Administration, which can be used for planning, evaluation and monitoring. It enhances analysis through data collection by consolidating multiple data sources into one centralised and easy-to-access platform. Identifying trends in data to gain enhanced perspectives of projects, the dashboard allows users to personalise their view to prioritise the information they require.

Objectives:

- To achieve consolidated and arranged information in a single frame so that it can be monitored effectively by the Hon'ble Chief Minister.
- To support dynamic real time monitoring of projects, web services are consumed at regular interval to display state specific data at various micro and macro levels. Regular data updation is done at predefined frequency through APIs.
- DARPAN also addresses a wide range of other objectives and monitors the strategy of the Government of UP, which can check department activities in order to achieve service level targets.
- DARPAN is fully configurable for each and every state.

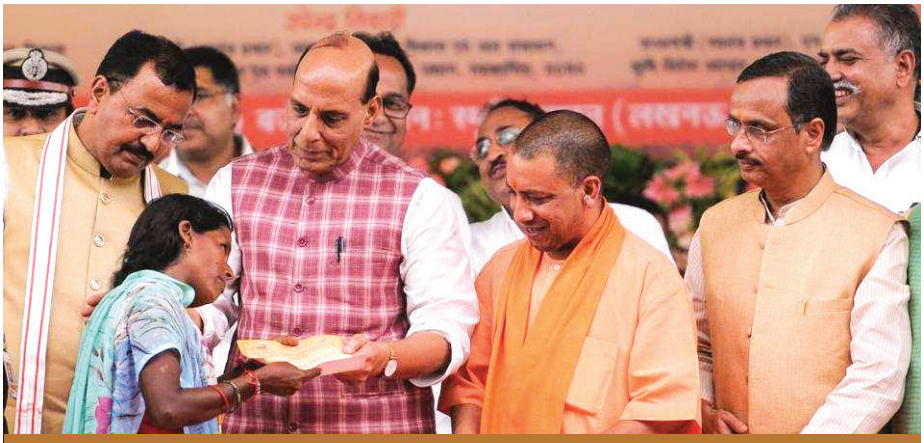
CM Helpline & IGRS

The CM Helpline Project is an extension to already running Integrated Grievances Redressal System in the state. It facilitates citizens to lodge their grievances/ complaints directly to the CM Office through a helpline number. The State Government is in the process of setting up a mega call centre with 500 call centre agents (CCAs) for registering the complaints.

CM Helpline and IGRS Dashboard

Citizens can file grievances anytime, referring to the concerned department and can also keep the track of grievances lodged till their final redressal. The system highlights are:

It is a single on-call platform for all types of grievance, demand and suggestion. Registration of complaints by dialing a toll-free number 1076 Grievances can also be registered through Jansunwai web



Shri Rajnath Singh and Shri Yogi Adityanath, along with beneficiaries and other officials

portal (***http://www.jansunwai.up.nic.in***), Mobile App and Janta Darbar of CM and other Officers at Departments/ Zones/ Divisions/ Districts, Tehsil Diwas/ Thana Divas/ CSC etc. Feedback of a complainant is the criteria of final closure of a grievance. Citizens' satisfaction level is checked by the Hon'ble CM and other Ministers by calling citizens on regular basis. Received references: 1.05 crore, disposed references: 99 lakh, disposal rate: 94%

Kissan Rinn Mocha Yojna (Farmer Loan Redemption Scheme)

The Government of Uttar Pradesh took a decision to waive off the crop loan of small and marginal farmers across the State up to the limit of Rs. 1 lakh per farmer, arising from loans disbursed during 2008-2016. Launched by Shri Rajnath Singh, Hon'ble Home Minister, GoI, in the presence of Hon'ble Chief Minister, UP, the scheme seeks to waive off loans of 86 lakh farmers (totaling to Rs. 30,729 crore), besides writing off Rs. 5,630 crore in non-performing assets (NPAs) of 7 lakh farmers. It was a huge task with multiple stakeholders. So, in order to infuse transparency in the system, NIC has developed a complete IT-based solution, integrating 56 Banks, District Revenue Officials, District Agriculture Officials, Aadhaar and mobile details of the farmers so that the benefit reaches the right and deserving farmers.

- IT intervention resulted in saving of nearly Rs. 11,000 crore for the state government.

Current Status

4403939 farmers benefitted (NPA + NON NPA) 24663.62 crore loan amount redeemed

UP e-District: Service delivery to doorstep of citizens

The UP e-District project provides 26 e-District Services and 229 Integrated Services, under the Janhit Guarantee Act, to citizens from the eDistrict Centres and Common Service Centres (CSCs) established in districts and villages respectively. The complete process right from the application to final delivery of certificates has been automated. The web-based application ensures 100% round-the-clock electronic workflow and application tracking. Dashboard based MIS and escalation matrix ensure adherence to the service levels defined for each service and technology such as digital signatures has been used for digitally approving the application and issuing the certificates.

Implementation Status

More than 13 crore certificates issued to people and integrated with DigiLocker 51,800+ CSCs extending e-District Services in rural and urban areas

Nivesh Mitra

It is a Digital Clearance System for all approvals from the Government of Uttar Pradesh for setting up the industry.

The partnership between the GoUP and investors is to be strengthened by providing relevant information and supporting entrepreneurs in obtaining all the required clearances and approvals, and also redressing concerns and grievances with the support of all Departments, District Officials and Industrial Associations, thus resulting in transformation of the state into a most sought after industrial hub across the globe.

"Nivesh Mitra was launched by **Shri Narendra Modi, Hon'ble Prime Minister, Government of India** on 21st Feb 2018."

Salient features

Two-way interaction on digital platform between entrepreneurs and departments Online access, submission and processing of application forms for setting up of industries/ enterprises Saves time, money and energy as repeated visits to different departments are not required Automatic SMS and e-mail response to entrepreneur generated at each stage Online tracking at all levels and entrepreneur can respond to objections/ observations online

Till date, 9753 entrepreneurs have been registered and 8547 have got their approvals or NOCs.

Ganga Haritima Abhiyan – One Person One Tree

The Forest Department has launched an online portal for "Ganga Haritima Abhiyan – One Person One Tree" and it was inaugurated by the Hon'ble Chief Minister in Allahabad. The objective of this initiative is afforestation, public awareness, water conservation and to check pollution on both sides of the river Ganga. Saplings will be planted through government departments on both sides of the river. Farmers will be encouraged to plant saplings. Approximately 9 crore plants will be planted in a year. The entire scheme related information would be made available to citizens on the web portal in order to infuse an effective monitoring and implementation of the initiative.

Hon'ble Chief Minister, Uttar Pradesh launching the portal

The portal facilitates:

Plantation of 9 crore saplings with collaboration and participation of people Login for 86 Forest Divisions, 39 State level Officers Plantation Monitoring System at Forest Division Level and State Level Sapling allotment from nursery to

people ➪Provision for uploading audio and video of events on the portal

PARIKSHA

PARIKSHA (Paperless Recruitment for Intelligent Knowledgeable, Skilled and Highly Able Candidate) is an IT-driven product for recruitments against vacant posts in the Government Departments/ Commissions/ Other Organisations/ PSUs etc., under direct or examination mode. Complete process right from the application submission to final selection has been automated. It has resulted in attracting more applications from other states and also streamlined the entire system, thereby making it more transparent and easier for the candidates. It has been developed under "Implementation of National e-Gov App Store" and implemented in 15 recruitment bodies with more than 3.89 crore registrations.

Nearly 1.20 cr online applications of UPSSSC, 1.02 cr of UPPSC, 81 lakhs of UPPRPB and more than 12 lakhs of UPSESSB Allahabad under various advertisements have been processed through PARIKSHA portal.

AAPURTI- End to end computerisation of TPDS operations

AAPURTI - The web portal of Food & Civil Supplies Department, UP ***(http://fcs.up.gov.in)*** has been designed as per Guidelines for Indian Government Websites (GIGW). The web portal is bilingual (Hindi & English) and responsive for compatibility with smartphones and tablets.

Current statistics

➪3,28,31,181 ration cards with 13,10,54,073 beneficiaries (units) have been digitised using online Ration Card Management System. ➪Option for bulk Aadhaar Feeding has been provided. Aadhaar of Head of Family has been feeded in 3,20,20,467 (97.53%) ration cards. ➪There are 10,91,31,160 (83.27 %) beneficiaries (units) for which Aadhaars have been feeded. ➪Bulk verification of Aadhaar numbers through UIDAI server is in progress. Aadhaar verification has been done for 9,38,81,040 units out of which 3,26,90,021 units have been seeded with Aadhaar.

Digital initiatives for Land Management (BhuLekh)

To provide transparency and reliability in managing land spaces of the State, the Uttar Pradesh State Government has adopted technology for smooth processing of matters related to land records with full transparency. The Digital Land Management System deployed using technology and workflow comprises several digital initiatives that include:

➪Computerisation of Land Records/ RoR (Bhulekh) ➪Computerisation of Revenue Court Cases (RCCMS) ➪Unique identity/ number for each Revenue Plot ➪Aadhaar seeding and shareholding in RoR ➪Online applications for mutation and other permissions

e-NagarSewa

Comprising 75 Districts with 18 Divisional Headquarters, Uttar Pradesh has an urban population of 4.44 crore. It has 653 Urban Local Bodies.

This Central Application is named as e-NagarSewa and has been conceived and launched in order to provide services to the citizens of Uttar Pradesh and employees of Urban Local Bodies. Latest trends and technologies like SMS Integration, Payment Gateways, USSD, Android Apps, CSC Integration, IVR Call etc., have been used to address citizens. e-NagarSewa is a stable, reliable and scalable application, which can cater to such a high population. To provide seamless e-governance services to citizens, it is essential to have a better delivery mechanism and information management, and ensure citizen participation in governance. The Central Application has been developed for all Urban Local Bodies of the State.

- Implemented in 60 AMRUT Towns (including 16 Nagar Nigams and 44 Nagar Palika Parishads)
- Total 16 modules including Birth & Death Registration, Payment of Property Tax & Water Tax, Licences, Public Grievances System, Monitoring of Projects, Stores Management & eProcurement System etc.
- Integration with Payment Gateway & SMS Gateway

PRERNA (PRoperty Evaluation & RegistratioN Application)

PRERNA is a web-based application, designed to reorient the Stamps and Registration Department towards 100% automation, which will automate the complete property registration process in the state and also ensure the electronic delivery of registration documents and other related services to citizens. The application aims to eliminate the drawbacks affecting the conventional registration system. PRERNA has been implemented in 362 SROs of 350 Tehsils and is capable of recording 60 different types of deed.

Mahila Samman Kosh Portal (MSK)

An online portal, designed and developed for Mahila Samman Kosh (U.P. Rani Lakshmi Bai Mahila Samman Kosh), is a priority project of the Government of UP. It was conceptualised to provide medical and monetary relief to women who are victims of violence and also for maintenance, education and reconstructive surgery of such victims and their minor children. MSK also provides assistance to women/ girl children who may not be the direct victim of violence but require critical social and economic empowerment. Its features are:

- Linked with Rajkosh for e-Payment/e-Receipt through Treasury
- Integration of various Stakeholders (Police, Medical, Legal, Probation, Treasury, District Administration and Public)
- Transfer of monetary relief to banks through PFMS

Till date, Approx Rs. 102.94 Cr. has been disbursed to Acid Attacks, POCSO Cases, Sexual Violence, Dowry Death Victims

e-Parinayapatra (Aadhaar-based Hindu Marriage Registrations System)

e-Parinayapatra is a simple, unique and first of its kind registration system in the country through which registrants can get their Marriage Certificates online without approaching the Marriage Registrar Office. They are required to authenticate their details using Aadhaar and apply online through the departmental website. In this process, the details of husband and wife are

captured from Aadhaar. Marriage Registration Certificates in Hindi and English are instantly mailed to the registrants' e-mail accounts.

e-TULA (e-Transformation of UP Legal Metrology Administration)

e-TULA ***(http://legalmetrology-up.gov.in)*** is a web portal used by the Department of Legal Metrology (Weights & Measures), Uttar Pradesh. This online system provides various automated services to dealers, manufacturers, repairers and traders of the State who deal with weights and measures in one form or other, director nominations, registration for packaged commodities, petrol pumps, CNG, auto taxi, flow meter and storage tanks.

Online Transit Pass for Minerals

The Department of Geology and Mining, Government of Uttar Pradesh deals with the allotment of leases for the purpose of mining of minerals on leased areas. Through this process, the government earns revenue of more than Rs. 1500 crore every year. NIC-UP has developed an online system for the allotment of licences (lease) and issuance of eTransit Pass to the leaseholders (lessee), transforming the entire manual lease system to an electronic form. Launched by the Hon'ble Chief Minister in June 2017, the portal also facilitates the department to maintain the details of leaseholders, allotment of mineral wise/ plot number wise leases, accounting of royalty and MIS for providing monitoring reports. The online e-Transit Pass having QR code etc., eliminates chances of issuance of invalid pass.

Current statistics

All 1890 lease holders functioning through the portal Management of 3778 mines across the state Tracking of transportation of 22 minerals of these mines State Government earned 2170.00 crore as royalty More than 63 lakh eMM11 (eTransit Pass) generated

Home Guard Deployment System (UPHAAR)

UPHAAR – UP Home Guard Automation and Rotation System is a web-based deployment system whose objective is to radically improve fair deployment of home guards and automate the complete workflow and internal processes with minimum manual intervention.

- Around 1.0 lakh home guards are deployed monthly. So far, 31 lakh deployed across 9600 duty places in 75 districts through UPHAAR.

Shasanadesh – Government Order Portal of the State

The Government Order (GO) Portal of the State has been implemented to ensure the availability of all the orders released by the government in public domain. The portal provides a user-friendly interface to citizens and officials to facilitate easy and quick searching and downloading of GOs on various parameters. The Hon'ble Chief Minister inaugurated the Online Shasanadesh Summary Service facility wherein GOs would be available on emails once a person registers himself/ herself on the website.

Implementation Status

- Coverage: 445 sections of 95 Departments of the State
- So far, total 47,369 GOs have been uploaded and 49, 63,514 GOs have been downloaded/ viewed by the citizens.

Apart from the above, NIC-UP has also successfully implemented Major Central Projects like e-Procurements (GEPNIC), e-Courts, SPARROW, VAHAN, SARATHI, TPDS, Jeevan Pramaan, AEBAS, e-TAAL, DigiLocker, e-Prison, PRAGATI, MIS for Rural Development & Panchayati Raj, National Scholarship Portal (NSP), IVFRT etc.

Other projects commenced by the State Government are e-Treasuries, e-Kuber, SAKSHAM (e-Scholarship), Sarkari Awas Abantan Pranali (Directorate of Estate), Vidhan Sabha & Vidhan Parishad Online Prasnottar Pranali, State Archives, UP State Cooperative Election Commission, ICDS, e-Counselling, e-Mandi, BhuNakha, SPRINT (Department of Sports & Youth Welfare), Education Recruitment System, Online Registration System of Pre IAS/PCS coaching for SC/ST/OBCs, Integrated Social Pension System, Anti Bhu-Mafia Portal, Madrasa Portal, Excise Lottery System, Online Teachers Transfer System, Sanskrit Secondary Education Board and many more.

Accolades and Awards

Received Rani Laxmi Bai Veerta Puraskar from the Hon'ble Chief Minister for ICT innovations and developing interoperable systems of Police, Health, Finance and Women Welfare for women empowerment Received appreciation from the Hon'ble Chief Minister for innovations in improving taxes through Vanijyakar Automation System (VYAS) Received the Highest Digital India Platinum Award for Exemplary Services for VYAS from the Hon'ble Minister of Electronics and IT, Govt. of India Presented with Special Jury Digital India Award for e-NagarSewa UP - Electronic workflow-based reforms for ULBs in Uttar Pradesh by the Hon'ble Minister of Electronics and IT Conferred with The Award of Excellence from the Computer Society of India for VYAS in CSI-Nihilent eGovernance Awards 2015-16 Conferred with The Award of Excellence from the Computer Society of India for AAPURTI - Uttar Pradesh Public Distribution in CSI Nihilent e-Governance Awards 2015-16 Conferred with The Award of Appreciation from the Computer Society of India for Rani Laxmi Bai Mahila Samman Kosh Portal in CSI Nihilent e-Governance Awards 2015-16 Conferred with The Award of Appreciation from the Computer Society of India for SAKSHAM- The Scholarship Project in CSI-Nihilent eGovernance Awards 2015-16 Conferred with The Award of Recognition from the Computer Society of India for Vidhan Sabha Prashnottar Pranali in CSI-Nihilent eGovernance Awards 2015-16

Conclusion

NIC has achieved notable successes in UP by successful implementation of various kinds of ICT Applications to serve the government and citizens. But, there is a need to enhance the effectiveness and speed of implementation of ICT projects to make the governance more outcome-oriented. Interventions are focused on BPR, adoption of innovative technologies such as Cloud Computing, Block Chain, Data Analytics, AI, Digital Empowerment of Stakeholders and Redefining the Service Delivery Mechanism to serve the people and stakeholders through e-Governance and m-Governance and realise the vision of DIGITAL INDIA more effectively. ■

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KARNATAKA

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

Edited by
REUBAN K

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 157government 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.

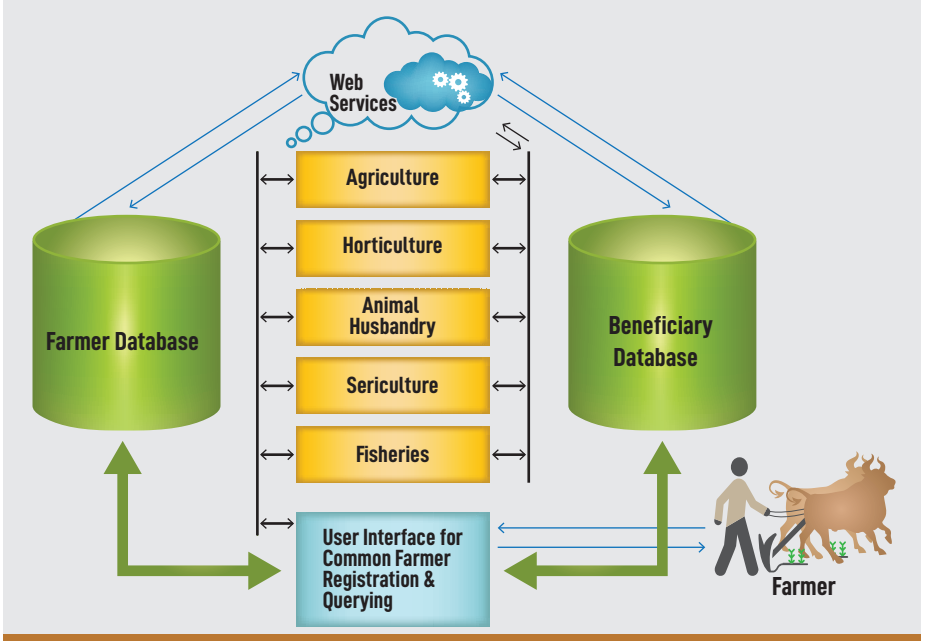
Regional Workshop on NeVA (National e-Vidhan Application)

The National Mission Mode project, 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.

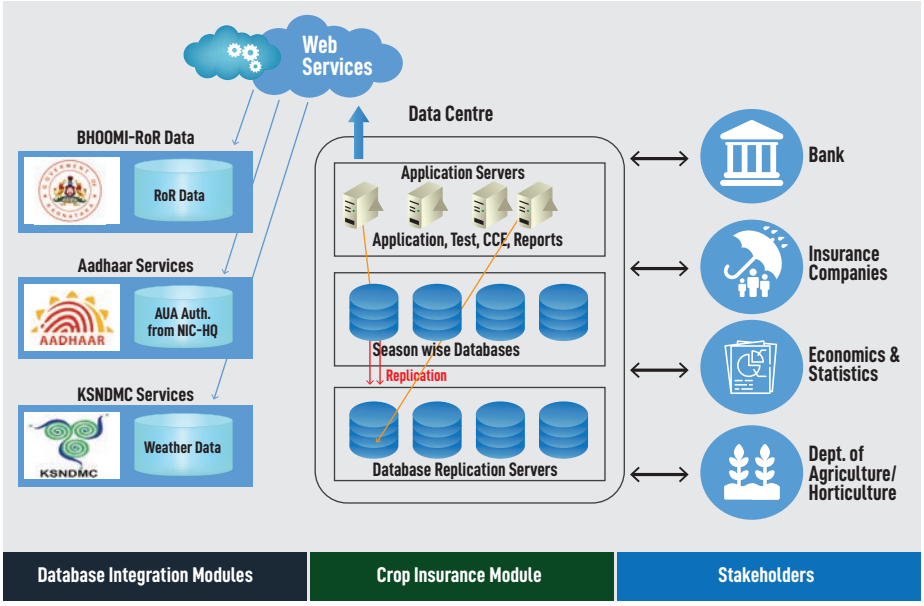
Shri T.M. Vijay Bhaskar, IAS, Chief Secretary inaugurating the NeVA workshop, along with dignitaries

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/ institutions/ 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-**



FRUITS Architecture



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 Khariff 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-Governance 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)

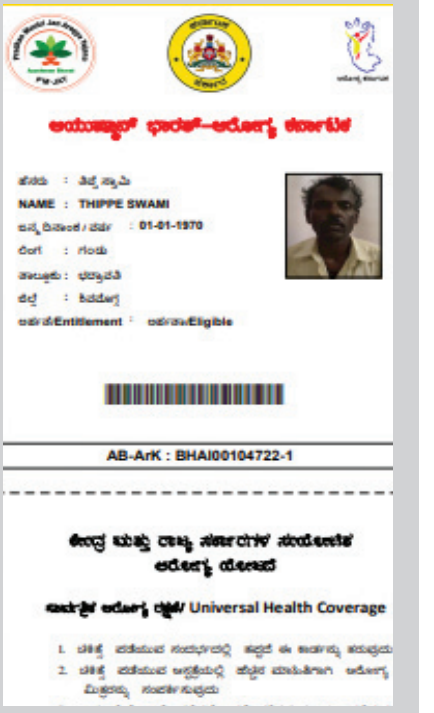
K-Kisan ***(http://kkisan.karnataka.gov.in/)*** is an end to end software suite developed to provide automation of workflows, data level integration and user interface at Raitha Samparka Kendra at Hobli, Taluk and District levels. This project has been awarded with 'Gems of Digital India Award-2018'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

Sample AB-Arkid Card



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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District HOOGHLY, West Bengal

Channelising e-Governance through advanced ICT techniques

Edited by
Dr. DIBAKAR RAY

NIC Hooghly District Centre is providing ICT support and services to various departments of the District Administration as well as to the Central Government Departments. This endeavour has made Hooghly one of the leading districts in the state in terms of IT enabled service delivery to its citizens. NIC-Hooghly has developed and successfully implemented many ICT projects and initiatives for the benefit of citizens.

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Hooghly, with its headquarters located at Chinsurah town, lies within the Burdwan division of the state of West Bengal. History suggests the name Hooghly is derived probably from the word 'Hogla', a tall tree, which grows in abundance on the river banks and in the marshy low lands below them.

Unity among diversity is the spirit of India since time immemorial. There are so many religions, languages and cultures among its habitants. Hooghly in West Bengal is like miniature India. This is the district where the Father of Renaissance of modern India, Raja Ram Mohan Roy was born. This is the district where the modern prophet, Sri Ram Krishna, the great novelist, Sarat Chandra Chattopadhyay, the great poet, Mohitlal Mazumdar were born. This is the district where the great writer Bankim Chandra Chattopadhyay wrote and proclaimed the pledge of the freedom movement of India "VandeMataram".

NIC District Centre, Hooghly

While the District has a glorious history and is considered among popular destinations in West Bengal, it has also witnessed great strides in the field of technology. Established at the Treasury Building under District Administration in the year 1988, the NIC Hooghly District Centre has been serving as a platform for promoting ICT initiatives in the District, thereby fostering the facilitation of technology-driven solutions to citizens. Presently, the NIC District Centre is newly constructed in the new Administrative Building of District Magistrate Office.

Key ICT Initiatives

e-WBPPMS (www.wbppms.gov.in)

Elections in Indian democracy have their own uniqueness. The most crucial part of their entire mechanism is probably the human mobilisation exercise. The magnitude of the exercise is best felt at the Electoral Districts from where the polling officers are trained and their duties are allotted. In this process, NIC plays an extremely important role through its District Officers. They are the ones who make this process digitally viable and coordinate with Election Officers and observers to get the best view of the vast data generated from various events involved.

In the polling personnel management as it is officially named during the elections, DIOs

"With an active support of NIC Hooghly, District Administration has taken up many ICT challenges and come up with improved solutions in daily governance. Hooghly Collectorate is now fully networked through CAMPUS LAN project and actively uses ICT services. Presently, WBPPMS is another ambitious project taken up by NIC Hooghly, which aims to solve grass root level issues regarding the collection of polling personnel data from respective offices. For improvement in the functioning of the administration, I believe that NIC Hooghly will continue to support us with their technical expertise and innovations for effective and efficient implementation of ICT projects.

JAGDISH PRASAD MEENA, IAS
District Magistrate & Collector
Hooghly, West Bengal"

Homepage of WBPPMS portal

Website of Miscellaneous Application Monitoring System

are engaged in preparing this database of personnel working within their districts. The database is collected from the respective office master in physical forms or digital forms. The criteria for categorising the personnel are determined on the basis of availability and requirement and then the data gets processed for training appointments. The completion of training calls for grouping of data to be sent to polling station to conduct the actual polling.

A need was felt for a long time to centralise the data management operations under a single web application to harmonise the efforts put in by different districts, which are most of the times repeated and redundant from the organisation's viewpoint. NIC Hooghly District Centre has come up with a complete Polling Personnel Management System (PPMS) to solve some of these issues.

To reduce cost involvement in connection with smooth and speedy collection of polling personnel data, NIC Hooghly District had started the journey of capturing data from root/ office level directly since Assembly Election 2016 through the development of an online web application. Later, this was also successfully used in the Panchayat Election 2018. Presently, as desired by the Chief Electoral Officer (CEO), West Bengal, this web-based online application will be used throughout Bengal of twenty four districts for the ensuing General Parliament Election 2019 through the portal, ***wbppms.gov.in.*** NIC Hooghly District Centre was entrusted to design, develop, perform security audit and also to host the web application to the NIC Cloud.

Campus LAN & VOIP

With continuous ICT support and supervision of District NIC Centre, the District Administration has implemented the Campus LAN among 13 buildings through the laying of OFC. More than 500 nodes are working within this LAN in the first phase. The entire LAN has been integrated with NICNET through WBSWAN. Installation of BSNL PRI circuit at the NIC District Network-Server room has enabled setting up of about100 Cisco VOIP with LAN Node at different sections of the District Administration. All BSNL landline phones at different sections of the District Magistrate Office have now been replaced byVOIP phones. They are also being used as intercom within the sections.

L-MAMS

Miscellaneous Application Monitoring System for District Land and Reform Office is an online web-based application, designed and developed by the NIC Hooghly District Centre. Its objective is to monitor, track all types of miscellaneous applications, which are submitted every day at Block Land and Land Reforms Office (BLLRO), Sub-divisional Land and Land Reforms Office (SDLLRO) and District Land and Land Reforms Office (DLLRO) levels and for speedy disposal of applications. The online system is capable of uploading the original application, permission seeking order, enquiry report and final order sheet of the case.

Various types of report on the submitted applications are generated including a search option for tracking a particular application through generated application ID as well by name. Duplicate applications are checked using Khatian Number and Dag Number of the land.

Other ICT Initiatives

e-DEOEMS

District Election Officer Expenditure Monitoring System is an online SOR (Shadow Observation Register) monitoring system for the Assembly and Parliament Elections. The system was first developed by NIC Hooghly District Centre for Assembly Election 2016 through the web portal wbems.gov.in. Now, as desired by the CEO, WB, it will also be implemented for the ensuing General Parliament Election 2019. The necessary upgradations and customisations have been started as per the guidelines

e-DEMS Login interface

of CEO, WB. The system is capable to generate PC-wise, AC-wise, Item wise SOR reports instantly with Annexure-21 report generation after one month from the date of result declaration. A statistical report of maximum or minimum expenditure items during the election period can also be generated from the system.

Central Government e-Governance Projects in the District

Vahan-Sarathi

Through continuous support of NIC, District Centre, Vahan-4 has already been implemented and online Sarathi has also been implemented in the district including subdivisional ARTO offices since July 2018. Online permit for goods and contract carriage with temporary registration have already been implemented. Initially,the online learner test is conducted through the NIC, IT training hub.

NDAL-ALIS

Through proper training at NIC District Centre, NDAL-ALIS has been implemented at the District Magistrate Office as well as at the newly created Chandannagar Police Commissionerate Office.

E-Tendering and e-Auctioning

E-Tendering and e-Auctioning system are being implemented in the District for which technical support and training are being provided by the NIC District Centre. After intensive ICT training programmes for DLLRO/ Additional District Magistrate (Land Reforms) (ADM (LR)) office, e-auction has been implemented at DLLRO office.

eCourt

It has been implemented at the district and subdivisional court with NICNET connectivity through NIC District Centre.

DBT

Through continuous training on POS, Direct Benefit Transfer (DBT)forfertiliser, has been implemented at the District.

IVFRT

Immigration, Visa and Foreigner's Registration and Tracking(IVFRT) has been implemented at the District Police Commissionerate Office and Hooghly Rural Superintendent of Police Office after thorough technical training to the staff.

Videoconferencing

The installation of videoconferencing system at the NIC District Centre has facilitated remote meetings of Central, State Government Departments and CIC hearings.

e-Sparrow

Technical support is being provided to the Divisional Commissioner and District level Administrator on online sparrow.

NICNET

NICNET connectivity has been established at different Central and State Government Offices.

In addition, technical support is provided by NIC Hooghly District Centre for other Central Government e-Governance projects like Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), National Animal Disease Reporting System (NADRS), Agricultural Marketing Information Network (AGMARKNET), Computerisation and Computer Networking of Consumer Fora in Country (Confonet).

State Level Projects

Important state level projects have been initiated at Hooghly district for which the NIC District Centre has played a leading role in terms of organising training and providing technical support to resolve local issues.

E-District Services under MMP

Through successful e-Governance initiatives, more than 68 e-district services are running in the district for citizens. Regular District e-governance Societies (DeGS) meetings are being conducted at the District for smooth running of the E-District Services.

Kanyashree Project

This flagship project has been implemented inthe District for which training programme for the staff of DI school and District Social Welfare Officer (DSWO)are conducted by the NIC District Centre.

LAND Record

Banglarbhumi and e-Bhuchitra have been implemented at18 BLLRO offices under the District Land and Land Reform Office.

CORD

Computerisation of Registration of Documents (CORD) under National e-Governance Plan (NeGP) has been implemented at all the property registration offices of the district through district level monitoring team and with an active involvement of the NIC District Centre.

OSCAR – OBC & SC-ST Application Review

It is a web-based application for the online application of SC, ST, OBC caste certificates. The online system has been implemented in the district with IT and training support to officials of the user department by the NIC District Centre.

District level projects

Online Recruitment

District NIC is providing technical support to the District Administration in organisingonline recruitment against vacancies at different departments. Besides, the system enables generation of online admit cards for written or computer tests.

District Website

The official website of Hooghly District ***(http//hooghly.gov.in)*** is developed for providing information like profile of the district, key contacts of administration, circulars, recruitment notifications, news, events etc. The website is updated regularly.

Panchayat Election

Exhaustive technical supports have been provided to the District Administration for Panchayat Election 2018 with respect to online polling personnel data collection, three phase randomisation and appointment letter generation with training schedules.

HHIMS

An online Hooghly Health Information Management System for online monitoring of different health parameters has been designed and developed for Chief Medical Officer of Health (CMOH) Office of the District.

District NIC IT Training Hub

To implement online projects at the district level, an ICT-based training centre with20 thin clients with smart TV has been prepared with full cooperation of the District Administration. All the devices are connected through campus LAN. This IT Training Centre has been inaugurated by the Hon'ble District Magistrate, Hooghly. It has been used for online training programme as well as for computer proficiency test for various recruitments.

Summary

Being instrumental in developing various innovative applications for the District Administration, NIC District Centre has enabled the successful implementation of State and Central e-Governance projects at the District. The centre has taken several important initiatives in developing applications related to various aspects of Election Management Process, which are successfully implemented. Effectiveness of these applications are widely appreciated and they are now being used across the state.

For further information, please contact:

DISTRICT INFORMATICS OFFICER
NIC District Centre
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WEST BENGAL - 712101

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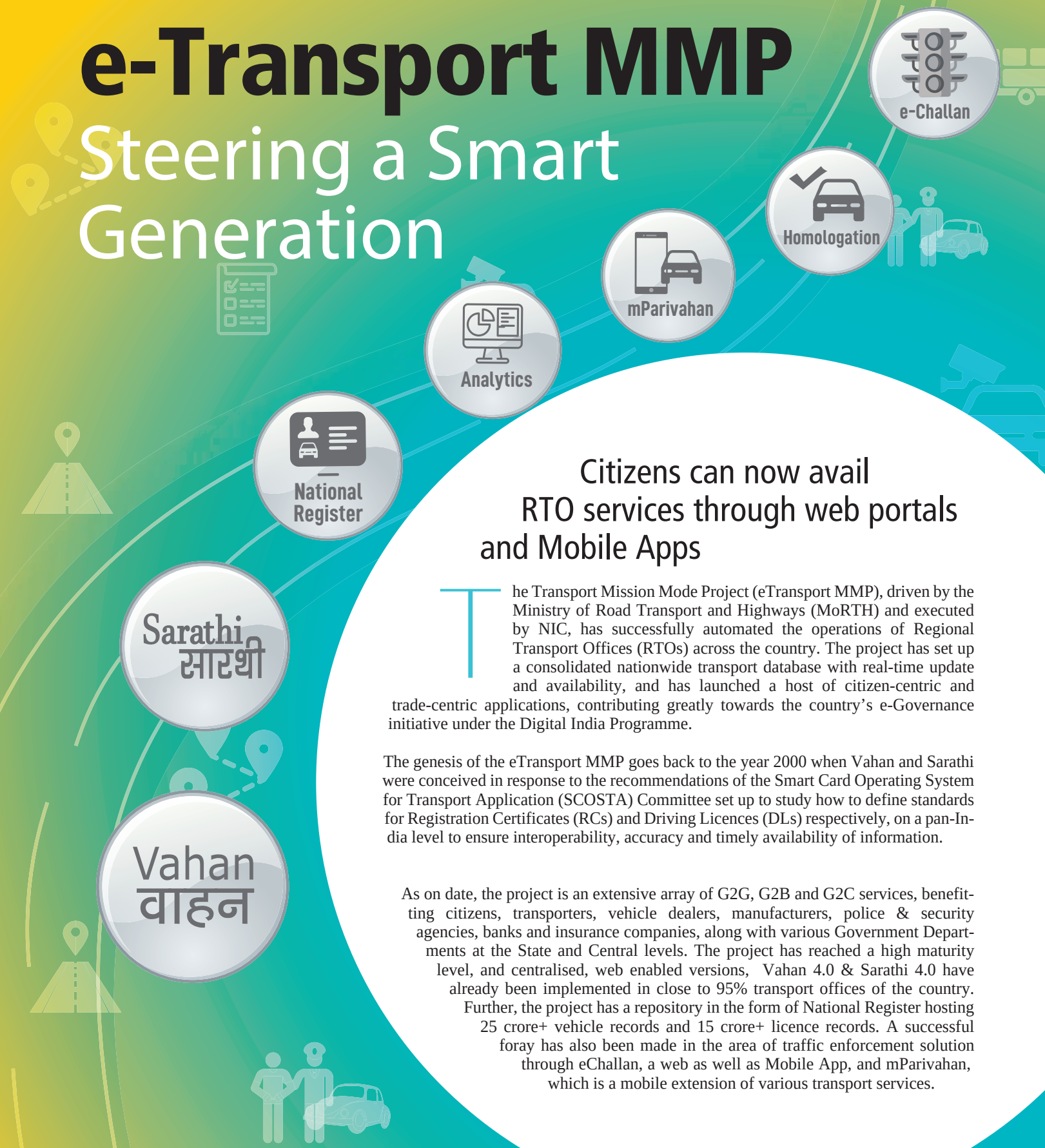
e-Transport MMP

Steering a Smart Generation



Citizens can now avail RTO services through web portals and Mobile Apps

The Transport Mission Mode Project (eTransport MMP), driven by the Ministry of Road Transport and Highways (MoRTH) and executed by NIC, has successfully automated the operations of Regional Transport Offices (RTOs) across the country. The project has set up a consolidated nationwide transport database with real-time update and availability, and has launched a host of citizen-centric and trade-centric applications, contributing greatly towards the country's e-Governance initiative under the Digital India Programme.

The genesis of the eTransport MMP goes back to the year 2000 when Vahan and Sarathi were conceived in response to the recommendations of the Smart Card Operating System for Transport Application (SCOSTA) Committee set up to study how to define standards for Registration Certificates (RCs) and Driving Licences (DLs) respectively, on a pan-India level to ensure interoperability, accuracy and timely availability of information.

As on date, the project is an extensive array of G2G, G2B and G2C services, benefitting citizens, transporters, vehicle dealers, manufacturers, police & security agencies, banks and insurance companies, along with various Government Departments at the State and Central levels. The project has reached a high maturity level, and centralised, web enabled versions, Vahan 4.0 & Sarathi 4.0 have already been implemented in close to 95% transport offices of the country. Further, the project has a repository in the form of National Register hosting 25 crore+ vehicle records and 15 crore+ licence records. A successful foray has also been made in the area of traffic enforcement solution through eChallan, a web as well as Mobile App, and mParivahan, which is a mobile extension of various transport services.

Objectives

Primary objectives of the project are to:

- Modernise the IT infrastructure and service delivery model in the entire sector
- Bring in efficiency, transparency, accountability and reliability in services
- Minimise RTO footfall by maximising online service facilitation to citizens
- Extend range and quality of G-C, G-B and G-G services
- Promote better synergy through integration with stakeholders
- Facilitate secure data sharing with approved users as per policy
- Bring in transformative change in the entire ecosystem

Picturesque Shillong (East Khasi Hills District) in the north-eastern state of Meghalaya was the first District Transport Office (DTO) to operate Vahan on 15th April 2002. Sarathi was first commissioned in Kaithal district of Haryana in the same year.

Key features & functionalities

- Vahan and Sarathi applications provide complete functionalities of RTOs, viz. Vehicle Registration, Taxation, Permit, Fitness, Enforcement, DL/LL/CL Licensing and allied services with state customisation.
- Centralised hosting is done at National Data Centre in Delhi and DR Site in Bhubaneswar. No need to maintain servers, storage etc., at state level.
- Integration is done with state-specific payment gateway (Bank/ Cyber-treasury), smart card vendor, HSRP vendor, Postal Dispatch system and so on.
- Close to 100 online citizen-centric and trade-centric services with facilities like e-payment, online appointment, document uploads etc., are provided.
- Integrated Dealer Point Application with configurable work-flow for vehicle registration, tax/ fee collection, number generation etc., is provided.
- Vahan Homologation Application allows integration with automobile manufacturers' inventory, facilitating automatic data-capture of technical parameters and sale price during registration process.
- Vahan CNG/ SLD/ VLT Homologation Applications also provide similar end-to-end integration, covering Type Approval, Inventory Upload, Retro-fitment and RTO approval process for relevant automobile components.
- Vahan Fancy Number Auction Application allows citizens to choose, bid and pay online for fancy/ choice registration numbers as per state policy.
- Vahan Border Check Post Application allows online tax collection from other state vehicles entering state border.
- Vahan National Permit System is integrated with RTO authorisation.
- New online application for Pollution

Key Statistics

Vahan

(Jan-Dec 2018)

Revenue:
₹ 48,800 Cr.

Vehicles Registered:
2 Crore

Transactions:
6.8 Crore

Permits:
22 lakh

National Permits:
12 lakh

Sarathi

(Jan-Dec 2018)

Revenue:
₹ 1610 Cr.

Learners' Licences Issued:
1.17 Crore

Driving Licences Issued:
1.75 Crore

Applications:
3.2 Crore

Appointments:
1.27 Crore

eCHALLAN

(Till Date)

Revenue:
₹ 1100 Crore

Challans:
52+ Lakh

Cases to Court:
3.2 Lakh

Notices Through CCTVs:
3.9 Lakh

Notices Through Citizens:
3.5 Lakh

mPARIVAHAN

(Till Date)

4.5 Million + Downloads

15 Lakh SMS alerts/ OTPs generated per day, 4.5 Crore per month on average

Note: The figures are approximate.

Under Control Centres with real-time data integration is provided.

- Sarathi Driving School Application automates complete operation and monitoring of processes in driving schools with Aadhaar based biometric attendance option.
- Sarathi online learner licence knowledge test module allows configurable, randomised and multichoice knowledge test for applicants.
- Integration with third-party Fitness Test Centres, Driving Test Tracks etc., is done.
- Upstream integration with IRDA/IIB (for insurance data), NCRB (for stolen vehicle data) and Aadhaar (for authentication) is done.
- Downstream integration and data sharing with Govt. Agencies/ Police, NCRB/ CCTNS, Banks/ Insurers, Transporters, UMANG, DigiLocker, eDistrict, CSC, CM Dashboard etc., for data sharing are done.
- eChallan Mobile App and web portal provide a sophisticated, holistic traffic enforcement solution for Transport Enforcement Wing and Traffic Police Departments with a nationwide common database of offences and challans. These are also integrated with courts.
- mParivahan Mobile App for citizens, with 4.5 million downloads, features virtual DL/ RC with encrypted, enforceable QR Code and other services/ tools, option for road accident and traffic violation reporting by citizens.
- Comprehensive dashboard, analytics and advanced search options are provided.

New initiatives

In the last three-four years, a series of new initiatives has been launched under this project, keeping in view its given objectives in mind. These include:

- Shifting the delivery platform to a centralised, web-enabled infrastructure. The flagship applications Vahan and Sarathi, which were already running in distributed mode across the country, have been redesigned into web-enabled versions and relaunched through a centralised portal (***https://parivahan.gov.in)*** to enable a full set of G-G, G-B and G-C services.
- More than 1,100 RTOs have already shifted to the new Vahan 4.0 and Sarathi 4.0 versions, along with complete migration of legacy data.
- A comprehensive set of configurable options have been incorporated in the centralised applications to cater to state-specific needs and variations.
- Almost 100 online citizen-centric and trade-centric services have been launched with facilities like e-payment, online appointment, document upload etc.
- A comprehensive Traffic Enforcement Solution – eChallan – has been developed with mobile and web components, which has been adopted by both Transport and Traffic Police across 14 states.
- The mParivahan Mobile App for on-the-go services and information for citizens has received wide popularity with 4 million downloads till the end of 2018. It features virtual Driving Licence and Virtual Vehicle Registration Certificates, which are now legally valid electronic documents.
- Homologation Application integrates the complete life cycle processes of an automobile – starting with Type Approval of new models, inventory upload by manufacturers, registration by dealer and integration with the Vahan database. Similar life cycle integration applications have also been developed for CNG Kit, Speed Limiting Devices and Vehicle Tracking Devices as per the mandate of MoRTH.
- Online Fancy Number Auction and Allocation System has been implemented in most of the states to bring in transparency and citizen facilitation.
- Online National Permit Application has facilitated ease-of-business to transporters and also stemmed leakage of government revenue.
- Countrywide data comprising 25 crore Vehicle Registration records, 15 crore Driving Licence records and all other relevant information have been consolidated in a central database, which is shared with thousands of authorised stakeholders such as the Police, government agencies, banks, insurers and transporters through various mechanisms such as API and portal access.
- A centralised application for use of thousands of Pollution Check Points across the country has been developed to

Transport sector is the prime mover of the country's economy and it is our endeavour to transform this sector into a modern, efficient and transparent system. Comprehensive adoption of IT-based solutions and processes is required to achieve this objective. In this context, the new, centralised applications like Vahan, Sarathi, eChallan and other applications have made a tremendous contribution in completely automating the RTO processes, facilitating a wide range of citizen-centric and trade-centric services, widening ePayment facility for all taxes and fees, developing a comprehensive traffic enforcement solution, and making real-time availability of data for monitoring and decision-making.

I am glad that the complete ecosystem of the transport sector, covering Transport Departments, RTOs, Citizens, Transporters, Dealers, Automobile and Component Manufacturers, PUC Centres, Banks and Insurance Companies, Driving Schools, NCRB, and Traffic Police, is connected with the common platform facilitated through the portal *parivahan.gov.in.*

I compliment NIC for this commendable work. Ministry of Road Transport & Highways is committed towards ensuring a robust and citizen-friendly system for the entire country and I am sure the joint cooperation between MoRTH and NIC will ensure this.

NITIN GADKARI
Minister of Road Transport, Highways & Shipping, Water Resources, River Development, Ganga Rejuvenation Government of India

"The Ministry of Transport & Highways has been at the forefront of adopting digital technologies in providing better services to citizens and bringing in efficiency and transparency in the Transport Sector. With consistent support of the National Informatics Centre, we have successfully modernised the operations across the country and facilitated an array of G2G, G2B & G2C services. Almost 100 online, citizen-centric and trade-centric services are running on the Parivahan portal, with facilities like e-payment, online appointment, document upload etc. The flagship applications – VAHAN and SARATHI are integral part of the transport operations across 33 states and UTs, covering 1100 RTOs and 20,000 automobile dealers. It has an end-to-end integration with vehicle manufacturers, CNG/ SLD/ VLT manufacturers, banks and insurance companies, NCRB, police, fitness centres, motor driving schools and a host of other stakeholders.

Equally commendable are the new initiatives like mobile-based traffic enforcement solution through eChallan, adopted by both Transport and Traffic Police Departments across 14 states, citizen-centric mobile extension for services in the form of mParivahan app, with 4 million downloads, comprehensive Analytics Portal, API-based data integration facility and so on.

With the technical expertise, experience and innovative approach of NIC, I am confident that the project will be able to bring in a transformative change in the entire transport ecosystem in the country."

Y.S. MALIK, IAS
Secretary, Ministry of Road Transport & Highways
Government of India

enable real-time update of vehicular pollution control status and allow its enforcement.

- A number of other applications like Border Check Post, Online Letter of Intent, Backlog Module, Driving School Module etc., have been developed as per the requirements of various states.
- API-based data integration with Insurance/ IRDA, NCRB, State Police, CSC, eDistrict, SARAL, UMANG, DigiLocker, Banks, FASTag etc., has been implemented to facilitate a connected ecosystem.
- Elaborate dashboards, analytics, MIS Reports, fast search options have been implemented.

Major impacts

Eliminating/ Minimising RTO visits

Like all government endeavours, target beneficiaries are only the citizens, and the driving principle is to facilitate better, efficient and timely services to them. With the implementation of a large number of citizen-centric services, adoption of e-payment and online appointment facility, citizens have the option to carry out a major part of the transactions involved in all processes from the comfort of their homes, and need to visit RTOs only for essential functionalities such as appearing in learner or driving tests, authenticating documents, or getting physical fitness of vehicles done etc., and that too, as per pre-scheduled appointments. Some services such as tax payment, getting specific certificates etc., require no RTO visit at all. Many State Governments are further aligning their business processes with the new technological options to further reduce/ eliminate RTO footfall and relieve the citizens. Although it requires a systemic change, starting with enabling legislation down to the implementation details, the Transport Application is equipped to play a significant role in enhancing the quality of services rendered to common citizens through the intervention of appropriate technology and processes.

Making payments online

Most of the states have adopted e-payment facility and some have totally abolished cash payment. About half of the total receipts made through eTransport applications are through e-payment, giving a big boost to the government's stated objective to move to a digital payment platform. Another major upshot of this whole initiative is a sharp rise in the transparency and accountability in the system. Although there is a lot of ground yet to be covered, in most cases, citizens

"eTransport Mission Mode Project aims to bring convenience and transparency in the entire Transport domain fulfilling the needs of citizens, government and businesses. The technical expertise, rich domain knowledge and sustained efforts of the NIC team, our technical partner, have led to the wide-spread acceptance of various applications developed under the project.

Vahan and Sarathi, with their centralised, web-enabled versions continue to keep the flag high and have penetrated most of the states/ UTs, covering their diverse systems and processes under a unified, common system for various vehicle and license related services. New initiatives like mobile-based eChallan Traffic Enforcement Solution and citizen-centric App mParivahan have further spread a range of services.

The project is continuously evolving with the introduction of new and emerging technologies to further enhance the quality and scope of services, making a huge impact in the transport ecosystem.

I believe that with the continuous support from NIC team, we continue to succeed in our endeavour to make the life of citizens, government and allied businesses easier."

PRIYANK BHARTI, IAS
Joint Secretary (MVL)
MoRTH

Launch of Integration of DigiLocker with Driving Licence and Vehicle Registration Certificate

are facing less hassle in getting their services. Leakages in government revenues have substantially reduced and overall environment in most of the RTOs has become more transparent and citizen-friendly.

Enhanced monitoring through dashboards

The ***parivahan.gov.in*** portal incorporates dashboards, providing a variety of Key Performance Indicators (KPIs) depicted in the form of tables, graphs and charts. These live dashboards pull data from the Vahan and Sarathi databases to provide live up-to-date, easy-to-comprehend status of the projects to the entire hierarchy of decision makers, planners and administrators, enabling them to trouble shoot, course correct, plan and take decisions on the fly. This access to relevant information at a glance garners easy involvement of all stakeholders of the eTransport MMP.

Brief overview of major new initiatives

Vahan 4.0 & Sarathi 4.0

The centralised Vahan 4.0 ***(https://vahan.parivahan.gov.in/)*** is a highly flexible and comprehensive application, which aims to automate the RTO operations and citizen-centric services related to Vehicle Registration, Permit, Taxation, Fitness, and allied activities. Similarly, Sarathi 4.0 ***(https://parivahan.gov.in/sarathiservice)*** deals with citizen-centric services and back-end RTO operations related to driving licence, learner licence, motor driving schools and allied processes.

These two applications have been implemented in ~1100 RTOs across 31 States/ UTs – with state-specific rules, tax structures etc. They are endowed with sophisticated features and a huge array of functionalities. They are architected on a centralised, multi-tenanted, web-enabled platform and deployed on NIC cloud infrastructure, which provides high security, availability and data integrity. It comprises a single database and single-core application having an intelligent configuration option to address inter-state variations in the processes, tax structures, formats, payment modes and so on. The system is integrated with multiple Payment Gateways, IRDA, NCRB, CSC, Aadhaar, DigiLocker etc.

Analytics Portal

Considering the volume and complexity of data generated through various transport services, a progressive Analytics Portal has been implemented in the project.

NIC has adopted open source BI tools such as Javascript Libraries, Elastic Search and Text Search. An open source database Postgres is used for all the required data repositories.

To establish the efficacy of solutions for complex Parivahan environment, NIC has experimented with multiple prototypes, viz. Alert Dashboards using Tableau and also Analytics use cases, using 'R'.

The portal, provisioned with an aim to enable efficient decision-making and forecasting, serves the following key purposes:

- Business Intelligence (BI) Portal to fulfill the analytics and reporting needs related to Vahan, Sarathi and other transport related data. Comprehensive dashboards for Vahan and Sarathi to analyse and monitor the important analytics KPIs.
- Advanced, fast and comprehensive search utility to quickly access details of Vahan RC and Sarathi DL
- Leveraging Advanced Analytics to forecast the occurrence of events in future, based upon the historical data

eChallan

This integrated Traffic Enforcement Solution has been designed primarily for the Transport Enforcement Wing & Traffic Police.

- Android-based Mobile App and back-end web application
- Online payment of challans by citizens, "anytime and anywhere"

First Zonal Level Workshop held on 12th September 2018

- Management of traffic violations through multiple devices such as Smart PoS, CCTV, GPS and Speed Guns
- Seamless integration with National Databases like Vahan 4.0 and Sarathi 4.0 to book online and offline challans
- Central monitoring of Road Safety Policy implementation
- No duplicate or fake challans (comprehensive monitoring, audit option for each individual challan or concerned official by department remotely)
- Completely customisable as per state/ department requirements
- Blockage of transactions on concerned vehicle/ licence, in case of pending challan

mParivahan

- A mobile-based application meant primarily for citizens and transport operators for accessing various transport-related services such as payment of road tax, application related/ informational services, and other citizen-centric functionalities
- Android-based App: Easy to download from Google Play Store
- Access to all-India RTO vehicle RC number search, and vehicle information like Owner Name, Registration Date, Make, Model, Fuel Type etc.
- Most downloaded App of NIC: 4.5 million+ downloads
- Virtual Driving Licence and Virtual Vehicle Registration Certificate through back-end connectivity to the Transport National Register, encrypted in QR code to replace existing physical documents/ cards with the secured, enforceable, digital identities
- Virtual DL, RC now notified as valid documents by MoRTH, GoI

Homologation of vehicles

This application ***(https://parivahan.gov.in/makermodel/)*** allows vehicle manufacturers to get their models registered and type approved online through authorised Type Approval Agencies (ARAI, ICAT etc.), upload inventory (with chassis number, engine number, colour, date of manufacture, ex-showroom price etc.), which is later linked to the Vahan and Online Dealer Point Applications during the registration process.

Fancy Number Auction

- e-Bidding facility for online booking of premium registration numbers by new vehicle owners
- Allows citizens to choose, bid and pay online for fancy/ choice registration numbers as per the state policy
- Introduced under the NIC flagship application, VAHAN, with a view to bringing transparency into the system of allocation of registration numbers
- Aims to avoid unwarranted pressure on officers for these numbers and contributes to revenue for the exchequer
- Minimal auction registration fee, as decided by the state transport policy

CheckPost

It is an online solution for tax collection of vehicles coming from other states, facilitating cashless and seamless collection of taxes.

- A portal has been developed to serve as a common platform for various states/ UTs through which one can deposit state entry taxes through e-payment facility rather than physically visiting the RTO.
- SMS based receipt is generated as a proof of payment.
- Authenticity of payment is ensured by providing login facility to transport officials to use the portal.

Applications for CNG Kit, SLD and VLT Devices

The users are CNG Kit Component Manufacturers, Dealers, Retro-fitment Agencies, Vehicle Owners and RTOs. This application allows CNG KIT component manufacturers to register, upload their models, get type approval

https://parivahan.gov.in/cngmaker

https://vahan.parivahan.gov.in/vahanservice

"The successful implementation of Vahan 4.0 and Sarathi 4.0 in all our Transport Offices of the Union Territory of Puducherry have empowered the citizens to avail the online services on any time anywhere basis and the workflow based application has improved and enhanced the way in which the services are delivered in an accountable and transparent manner. The ongoing support that is being provided by the State and Central team of NIC in pre-implementation and post-implementation is laudable."

DR. A.S. SIVAKUMAR
Transport Commissioner
Puducherry

and upload inventory. This is further utilised by other stakeholders for different stages/ points.

Similar applications are also available for Speed Limiting Devices (SLDs) and Vehicle Location Tracking Devices (VLTDs) ***(https://parivahan.gov.in/ cngmaker/, https://parivahan.gov.in/sldmaker/)***

Vahan 4.0 (RTO Application) Online Services

(https://vahan.parivahan.gov.in/vahanservice)

Online citizen-centric and trade-centric services related to Vehicle Registration, Permit, Fitness, Tax Payment etc., are accessible through this website. Option for e-payment of fees/ taxes and Appointment/ slot booking is available.

Sample list of available online services:

- Pay online Road Tax
- Hypothecation Endorsement, Termination
- NoC to Other State
- Transfer of Ownership
- Change of Address
- Renewal of Registration Certificate
- Duplicate Registration Certificate
- Particulars of Registration Certificate
- Application for Fitness Certificate
- Request for Mobile No. Update
- Temporary Permit
- Pay Online Border Entry Tax
- Conversion of Vehicles
- Alteration of Vehicles
- Re-assignment of RC Number
- RC Cancellation, Surrender, release
- Duplicate Fitness Certificate
- Online Trade Certificate
- Renewal of NP, AITP Authorization
- Fresh Permit, Special Permit

Sarathi 4.0 (RTO Application) Online Services

(https://parivahan.gov.in/sarathiservice)

- New Learner Licence (LL)
- New Driving Licence (DL)
- New Conductor Licence (CL)
- Learner's Licence for Expired CoV
- Services on LL/ DL/ CL
- Search/ Cancel/ Modify/ Track Application
- Camp Registration
- Upload Documents/ Photographs
- Slot Booking for LL Test/ DL Skill Test
- Add Class of Vehicle to Existing DL
- Print Learner Licence, DL Extract Online

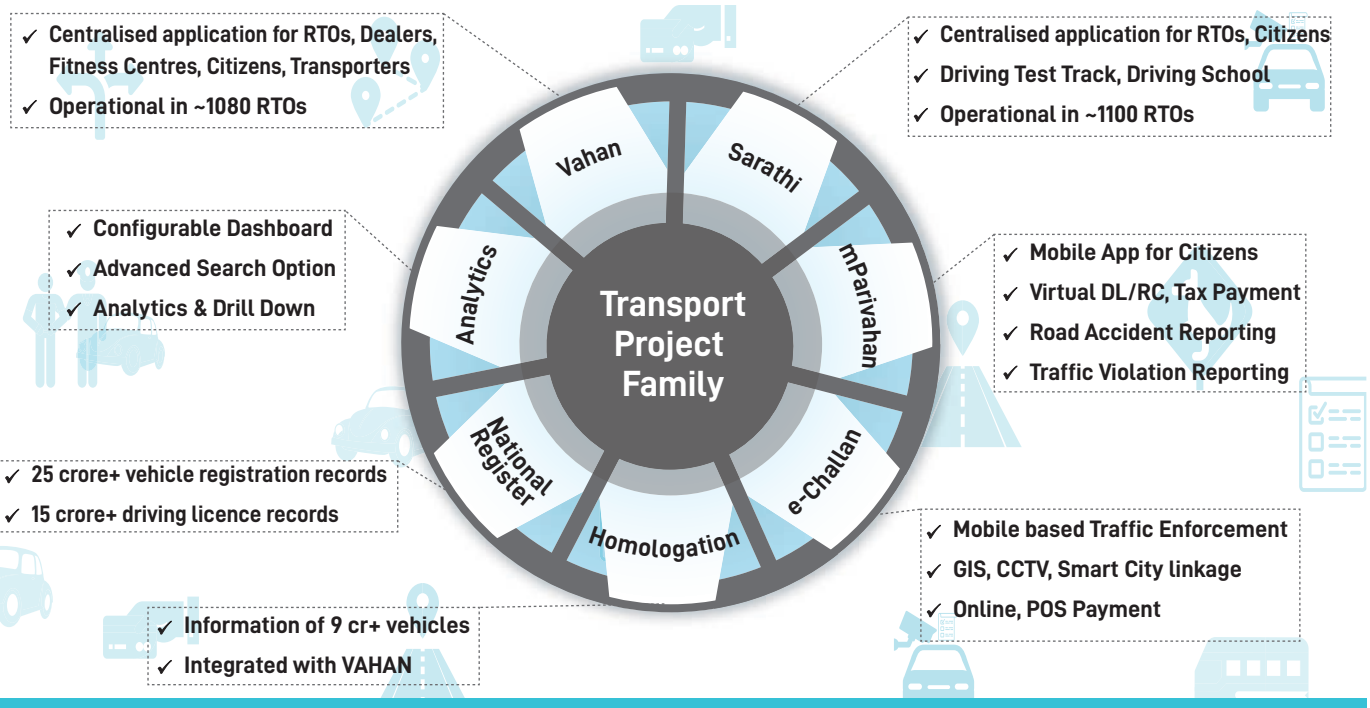
"I have been associated with eTransport MMP almost from its inception, and I take great pride in the progress and impact this project has shown over the years. The implementation of this project has been both intellectually and emotionally stimulating, which has ensured my growth as well, all along.

It is one of the leading e-Governance projects implemented by NIC, recognised at various forums and levels, and continues to scale even greater heights. Notable is the expansion in the scope from creation of National & State Register to centralised, web-enabled RC & DL services through Vahan 4.0 and Sarathi 4.0 applications, implemented across the country. The team at NIC has been innovative and sincere enough to introduce new solutions, viz. eChallan for an effective traffic enforcement, mParivahan Mobile App for on-the-go service availability. The initiatives have been hugely popular and made great inroads in the transport ecosystem in a very short span of time.

GAUTAM GHOSH
DDG & HoG
eTransport Project, NIC

Technology Landscape

Application	Java 8, struts 2.x, JavaScript, Jquery 1.11, HTML 5, CSS 3, BOOTSTRAP 3.3.0, Hibernate 3.x, Ajax,JSF, PHP Zend, Angular JS
Web Servers	SOAP, RESTFUL
Web Servers	Web Servers: Tomcat 7.x
Database	PostgreSQL 9.6/ 10
Database Tools	Pgbouncer 1.7, Pgbadger 7.x, EFM
Monitoring Tools	Zavix, Nagios, PEM
Operating System	Windows, Linux, Android



Transport Project: Key Applications/ Systems

- Download/ Print Application Form
- Mock LL Test

Key Aspects

- The Transport Project Applications (Vahan, Sarathi, eChallan etc.) are hosted on a centralised platform in multi-tenanted deployment architecture with all RTOs, citizens and other stakeholders connecting over the Internet.
- Data Centre is at NDC, Delhi and DR site and NDC, Bhubaneswar.
- The state-wise variations are addressed through an elaborate set of configuration options.
- Legacy data is migrated with an appropriate mapping and transformation.
- The Applications are primarily based on open source technologies/ platforms, making it replicable and interoperable.
- Vahan 4.0 is currently running on 24 application servers and Sarathi 4.0 on 32 application servers. As the load increases, more application servers are added to facilitate horizontal scalability.
- High-end physical servers (4 CPU, 72 core, 512 GB RAM) have been utilised with additional features like separation of the read and write requests. Functionalities like MIS Reports, Analytics, API, Data Sharing etc., are addressed through separate DB servers, which are kept in sync through streaming replications.

Way forward

The vision of the eTransport Project is to:

- Bring in transformational changes in the processes, technology and mindset behind the system
- Focus on the citizen-first approach, simplified and easily accessible services, and interoperable systems
- Make the best use of emerging technologies and redefine the focus of government services

The changes brought about in the system are already touching the lives of citizens, Trade, Departmental officials and other stakeholders in the Transport ecosystem in a very positive way and going forward, these changes have the potential to make it a true success story of Digital India. ■

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Suraksha Suite of Arunachal

Enabling Arunachal Pradesh Police to spot and reach out to distressed citizens & tourists

Edited by
KAVITA BARKAKOTY

Tourism is one of the prominent sectors of focus of the Government of Arunachal Pradesh. Safety of the tourists has thus been an important matter of concern of the State Police. Suraksha Suite, developed by NIC, is an outcome of the intense effort of the Police to ensure better safety and security of the citizens, especially the tourists. The Suite has a feature to geo tag and quickly identify and provide location details of persons in distress.

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Today, as ICT advances, it intervenes in almost all walks of life. Increasing acceptance levels and value-addition quotient have led the ICT to be an integral part of e-Governance. NIC Arunachal Pradesh has always been supporting the government by successfully developing and implementing various ICT-based solutions for better governance in the state.

Ensuring safety of its citizens is one of the prime responsibilities of any government. The Arunachal Pradesh State Police is the arm of the government to take timely measures to ensure adequacy of security and safety of the public. It is with such an intent, the Arunachal Pradesh Police has entrusted NIC, Arunachal Pradesh State Centre, to develop the Suite, which consists of Arunachal Suraksha Mobile App, Arunachal Suraksha Web Portal and M-Sewa App Store.

Arunachal Suraksha Mobile App

Assuming a crucial job, the Arunachal Pradesh Police have developed this Android App to secure the safety and well-being of the citizens and tourists in the state. Using this App, the Police can easily determine the geo-location of people in distress and take immediate actions to provide help.

The App features one-touch 'Save Me' button, using which a user can send an SOS alert to the nearest police station, in case of any crisis, thereby informing them about their location. They can also save contact numbers of their family members and friends in the App to deal with emergency situations. Another great feature lets them record the video of current happenings automatically after the SOS alert is sent. The SMS content includes their GPS information, which is in the form of latitude and longitude, along with a Google Map link that helps an SMS receiver trace their location. Users can also find distance and navigation to any police station in the state from their current GPS location. An instant connection can also be established with police officials through direct calls and SMSes.

The App is available on:

- Google Play Store ***(https://play.google.com/store/apps/details?id=in.nic.arunsuraksha)***
- M-Sewa App Portal ***(https://msewa.arunpol.gov.in)***
- NIC eGov Mobile App Store ***(https://egovmobileapps.nic.in)***

Arunachal Suraksha Web Portal

This web interface (***https://msewa.arunpol.gov.in/Suraksha?q=Login)*** is meant

> **"It is an effort under Prime Minister's Digital India initiative to make the state police more efficient in its functioning. The App will drastically decrease the crime rate in the state and the tourists visiting the state will feel secured with the Tourist police. The state government is taking all-out measures to woo tourists to the state through several initiatives.**
>
> **PEMA KHANDU**
> **Chief Minister**
> **Arunachal Pradesh"**

Shri Pema Khandu, Hon'ble Chief Minister of Arunachal Pradesh, launching the App

Arunachal Suraksha Mobile App

M-Sewa App (https://msewa.arunpol.gov.in)

Login interface of web API to manage police stations for the App

for the police department to monitor and review the received SOS alerts. Featuring settings to be managed at the back-end, it enables the department to add new police stations, update existing police stations, maintain the GPS coordinates of police stations etc. It also lets an admin user manage users for the application.

M-Sewa App Portal

M-Sewa App Portal is a common platform to store and share all the Apps, being developed by Arunachal Pradesh Police Department. It is a static web portal to share links to navigate various App interfaces as well as for Apps deployed on Google Play Store and other web platforms.

Launch of Arunachal Suraksha Mobile App

The Arunachal Suraksha Suite was launched by Shri Pema Khandu, Hon'ble Chief Minister of Arunachal Pradesh, during an event held at Dorjee Khandu State Convention Centre, Itanagar.

Technologies used in Arunachal Suraksha

The App has been developed using Java Technologies as the frontend and MySQL as the backend. Android Studio IDE has been used to develop the App while Servlet and JSP technologies have been used for its web API part.

Google APIs for location services have been integrated in the Mobile App for navigation and location specific features. The Mobile App with its web API has fortified its Security Audit Clearance Certificate.

Impact

The success of any tourist destination largely depends on security measures undertaken for the safety of its visitors. The objective behind launching the Suite is all about making Arunachal Pradesh a tourist-friendly state. Introducing the Mobile App is a crucial step towards developing a sense of security among tourists and making their stay a pleasurable one. Ultimately, this endeavour will also curb the crime rate and promote tourism in Arunachal Pradesh.

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Swachh Bharat Mission - Gramin

Ensuring High Availability, Disaster Recovery and Design Implementation

Edited by
MOHAN DAS VISWAM

The eGovernance Solutions including Mobile Apps, developed by NIC, for Swachh Bharat Mission-Gramin (SBM-G) help the Ministry of Drinking Water & Sanitation track the progress of cleanliness campaigns in different states. SBM-G is built upon hybrid deployment, made with the combination of High Availability Solution and Disaster Recovery Solution for SQL Server at a database level.

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The Swachh Bharat Mission - Gramin (SBM-G) programme, under the Ministry of Drinking Water and Sanitation, is a flagship programme of the Government of India. The e-Governance application used for its monitoring has been developed in-house by NIC under the guidance of the SBM-G programme division. It is an integrated portal having various web-based modules, Mobile Apps and multiple GIS-based dashboards for close and effective monitoring of the progress of implementation at various levels, viz. the PMO, all states and districts across the country and at the Ministry itself. The software deployment has been done on Microsoft Virtual Machines (VMs) on MeghRaj Cloud Infrastructure with SQL Server 2016 as the backend database with a High Availability (HA) and Disaster Recovery (DR) solution. This article describes various steps required to set up an HADR solution, using SQL Server 2016.

Need of HADR Solution

HA and DR strategies strive to address non-functional requirements such as performance, system availability, fault tolerance, data retention, business continuity and user experience. It is imperative that selection of an appropriate HA and DR strategy is driven by business requirements. For HA, all service level agreements expected of the system have to be considered. For defining DR requirements, measurable characteristics such as Recovery Time Objective (RTO) and Recovery Point Objective (RPO) have to be considered.

SQL Server offers solutions for various HADR scenarios and it comes with a set of features and capabilities that can help organisations achieve a wide range of availability/ SLA goals. Typical high availability solutions involve the deployment of costly, redundant and passive servers. However, the aim should be to eliminate idle hardware while improving cost efficiency and performance. The AlwaysOn Availability Groups, a feature of SQL Server, enables the utilisation of secondary database replicas on otherwise passive or idle servers for read-only workloads. The ability to simultaneously utilise both the primary and secondary database replicas, helps improve the performance of all workloads due to better resource balancing across the server hardware investments.

Features such as the Configuration Wizard, support for the Windows PowerShell command-line interface, dashboards, Dynamic Management Views (DMVs), policy-based management and System Centre integration help simplify deployment and management of availability groups. The business goals for Recovery Point Objective (RPO) and Recovery Time Objective (RTO) should be key drivers in selecting a SQL Server technology for High Availability and Disaster Recovery (HADR) solution. The following table indicates the potential data loss and recovery time applicable for SBM-G programme for resuming the services if any disaster occurs. Almost zero data loss is being ensured by using the SQL Server HADR solution.

HADR Deployment Architecture

Hybrid deployment by combining the High Availability Solution with Disaster Recovery Solution for SQL Server at a database level with AlwaysOn Availability Groups has been used as HADR Solution for Swachh Bharat Mission-Gramin.

High Availability Solution

AlwaysOn Availability Groups helps ensure the availability of application databases, and they enable zero data loss through log-based data movement for data protection without shared disks.

Availability Groups provide an integrated set of options including automatic and manual failover of a logical group of databases, support for up to eight secondary replicas, fast application failover and

High Availability and Disaster Recovery SQL Server Solution	Potential Data Loss (RPO)	Potential Recovery Time (RTO)	Automatic Failover	Readable Secondaries
AlwaysOn Availability Group - Synchro-nous-Commit	Zero	Seconds	Yes	1 - 8
AlwaysOn Availability Group - Asynchro-nous-Commit	Seconds	Minutes	No	1 - 8
AlwaysOn Failover -Cluster Instance	NA	Seconds -to- minutes	Yes	NA
Backup, Copy, Restore	Hours	Hours -to- days	No	Not during a restore

Table 1: RTO/RPO for SBM-G HADR solution

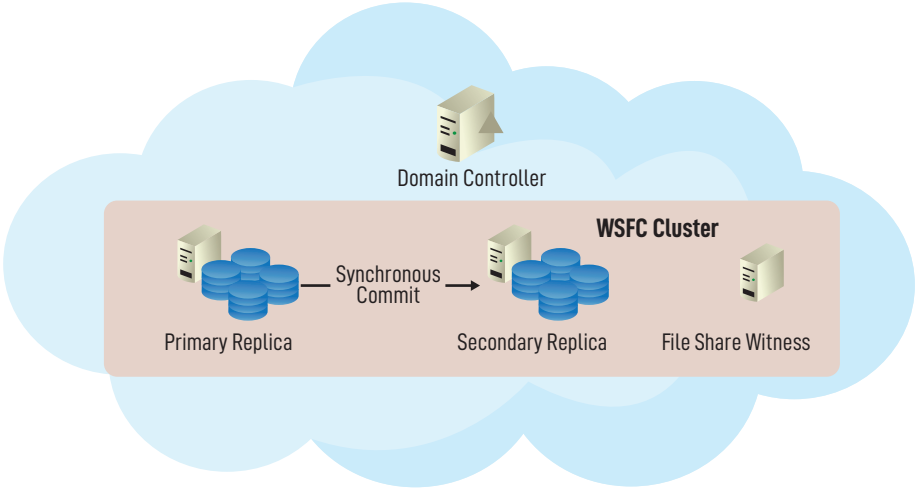

Fig. 1: Primary Domain Controller setup for HADR solution of SBM-G

automatic page repair. Availability replicas running in MeghRaj VMs in the same region (NDCSP-Delhi) provide high availability. Domain Controller and Alternative Domain Controller VMs were created and configured as Forest (Domain). Here it is to be noted that Windows failover clustering requires an Active Directory domain.

Domain Controller: A domain controller is a server that is running a version of the Windows Server® operating system and has Active Directory® Domain Services installed.

Windows Server Failover Clustering (WSFC): A Windows Server Failover Cluster (WSFC) is a group of independent servers that work together to increase the availability of applications and services. SQL Server takes the advantage of WSFC services and capabilities to support AlwaysOn Availability Groups.

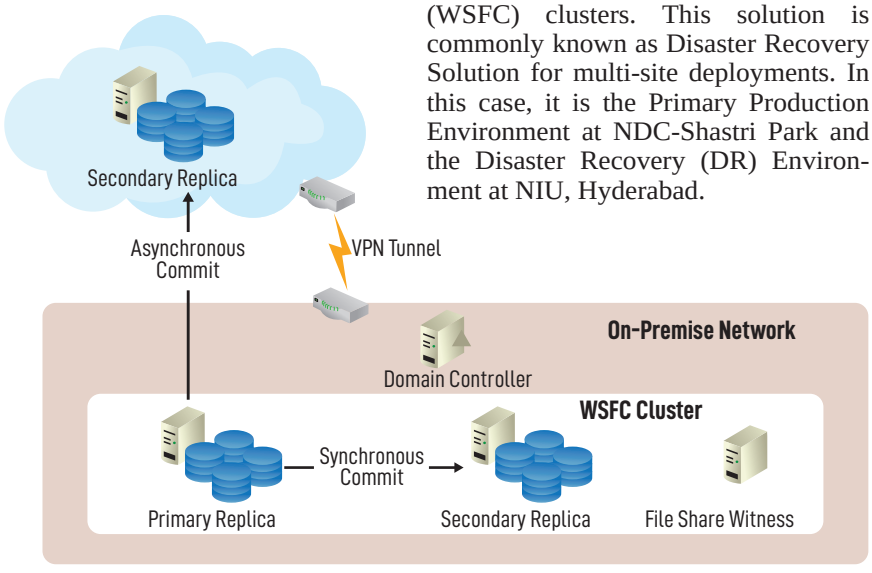

Fig. 2: Async Commit on Secondary Site/Nodes and Sync Commit on Primary Site/ Nodes using AlwaysOn Feature

Deploying a Cloud Witness for a Failover Cluster: SQL Server, AlwaysOn Availability Groups takes the advantage of WSFC as a platform technology. WSFC uses a quorum-based approach to monitor overall cluster health and maximises node-level fault tolerance. A fundamental understanding of WSFC quorum modes and node voting configuration is very important in designing, operating and troubleshooting AlwaysOn Availability Groups solution.

Disaster Recovery Solutions

The Disaster Recovery Solutions for SQL Server using Availability Groups was set up using database mirroring and log shipping, with 'backup-restore' using SAN storage, under MeghRaj Cloud Environment, in NIU-Hyderabad. Distributed Availability Group technology is being used for the DR Solution.

Distributed AG is used ***'when we want the data to continually replicate to the DR site, but don't want a potential network problem or issue at the DR site to bring down the primary site'.***

Any issues with the failover cluster nodes on the DR data centre do not affect the availability of the SQL Server Availability Group on the production data centre. A Distributed Availability Group is a special type of Availability Group that spans two separate Availability Groups. The underlying Availability Groups are configured on two different Windows Server Failover Clustering (WSFC) clusters. This solution is commonly known as Disaster Recovery Solution for multi-site deployments. In this case, it is the Primary Production Environment at NDC-Shastri Park and the Disaster Recovery (DR) Environment at NIU, Hyderabad.

One of the important steps in deploying this solution was to enable the Domain Controller Replication. For managing Replication between Sites (Production and DR), one has to install a replica Active Directory domain controller in between two data centres (NDCSP-DELHI and NIU-Hyderabad), using NICNET Network to create full trust in all other Database Nodes deployed at DR site.

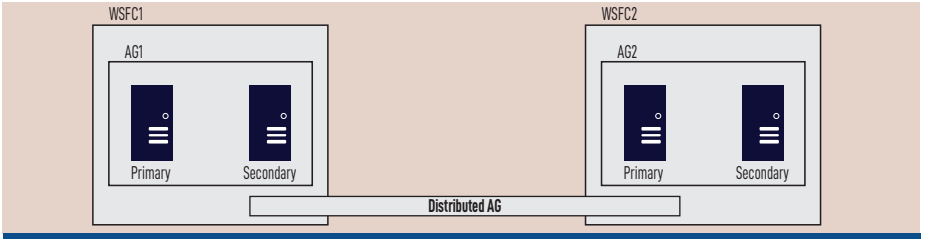

Figure 3: Distributed AlwaysOn Groups (DAG) between Primary (AG 1) and Secondary (AG 2) replicas with different Domain Controllers (WSFC1 and WSFC2)

Another important feature of this solution is that the Distributed Availability Groups allows the creation of an Availability Group even before performing the cutover, thereby ensuring no downtime, in case of hardware malfunction in any of the cluster nodes.

Firewall rules required for Domain Replication

Protocol and Port	AD and AD DS Usage	Type of traffic
TCP and UDP 389	Directory, Replication, User and Computer Authentication, Group Policy, Trusts	LDAP
TCP 636	Directory, Replication, User and Computer Authentication, Group Policy, Trusts	LDAP SSL
TCP 3268	Di rectory, Replication, User and Computer Authentication, Group Policy, Trusts	LDAP GC
TCP 3269	Directory, Replication, User and Computer Authentication, Group Policy, Trusts	LDAP GC SSL
TCP and UDP 88	User and Computer Authentication, Forest Level Trusts	Kerberos
TCP and UDP 53	User and Computer Authentication, Name Resolution, Trusts	DNS
TCP and UDP 445	Replication, User and Computer Authentication, Group Policy, Trusts	SMB,CIFS,SMB2, DFSN, LSARPC, NbtSS, NetLogonR, SamR, SrvSvc
TCP 25	Replication	SMTP
TCP 135	Replication	RPC, EPM
TCP Dynamic 49152 65535	Replication, User and Computer Authentication, Group Policy, Trusts	RPC, DCOM, EPM, DRSUAPI, NetLogonR, SamR, FRS
TCP 5722	File Replication	RPC, DFSR (SYSVOL)
UDP 123	Windows Time, Trusts	Windows Time
TCP and UDP 464	Replication, User and Computer Authentication, Trusts	Kerberos change/set password
UDP Dynamic 49152 65535	Group Policy	DCOM, RPC, EPM
UDP 138	DFS, Group Policy	DFSN, NetLogon, NetBIOS Datagram Service
TCP 9389	AD DS Web Services	SOAP
UDP 137	User and Computer Authentication,	NetLogon, NetBIOS Name Resolution
TCP 139	User and Computer Authentication, Replication	DFSN, NetBIOS Session Service, NetLogon

Summary

HADR solutions are designed and implemented to minimise or mitigate the impact of downtime of any Mission Critical Application like Swachh Bharat Mission – Gramin. High availability is ultimately measured in terms of end user's experience and expectations. The tangible and perceived business impact of downtime may be expressed in terms of information loss, property damage, decreased productivity, opportunity costs, contractual damages, or the loss of goodwill. Data redundancy is a key component of a high availability database solution. Transactional activity on primary SQL Server instance is synchronously or asynchronously applied to one or more secondary instances. When an outage occurs, transactions that were in flight may be rolled back, or they may be lost on the secondary instances due to delays in data propagation. Disaster recovery efforts address what is done to resume the operations. It can provide data and hardware redundancy within and across data centres and improves application failover time to increase the availability of your mission-critical applications. AlwaysOn provides flexibility in configuration and enables reuse of existing hardware investments. ■

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Digital Forensics

Paving the way to preserving evidences critical to decisions in cybercrime investigations

Edited by
MOHAN DAS VISWAM

The role of Digital Forensics and subject expert is very decisive in the investigation of crime and further securing producible evidences before the judiciary without affecting the originality of evidences.

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We live in an era of digital revolution in which Information Technology touches day-to-day activities mankind delve in. The socio- economic fabric has been immensely benefitted by the IT intervention, and the judiciary is no exception to this. The penetration of IT in the legal ecosystem has created an intense impact and has turned to be vital in various facets of the criminal justice system such as enquiry, investigation and prosecution. As per the legislation, these are laid down in the Information Technology Act 2000.

What is Digital Evidence?

Digital evidence or electronic evidence is any probative information stored or transmitted in digital form that a party to a court case may use at trial. The digital evidence or electronic evidence as such can be found in any electronic device such as computer hard drive, a mobile phone, a CD, a Personal Digital Assistant (PDA), as an electronic record.

IT Act 2000 on Digital Evidence

Electronic record is defined under section 2(1)(t) of Information Technology Act 2000 as data, record or data generated, image, or sound stored, received or sent in an electronic form or micro film or computer generated micro fiche. An amendment to the Indian Evidence Act 1872, the Indian Penal Code 1860 and the Banker's Book Evidence Act 1891 provides the legislative framework for transactions in the electronic world.

Before accepting digital evidence in judiciary, it is vital that the determination of its relevance, veracity and authenticity be ascertained and the fact whether it is hearsay or a copy chosen to the original be established.

Digital evidence is not only limited to computers but may also extend to other digital devices such as telecommunication or electronic multimedia devices, e-mails, digital photographs, ATM transaction logs, word processing, documents, instant message histories, files saved from accounting programs, spreadsheets, internet browser histories, databases, contents of computer memory, computer backups, computer printouts, Global Positioning System (GPS) tracks, logs from a hotel's electronic door locks and digital video or audio files.

Role of Digital Forensics

With rapid increase in IT implementations, cybercrime has also spread its wings in diversified fields and related areas as today, physical locations and distances are immaterial in cyberspace. Cybercrimes like hacking, cyber terrorism, cyber stalking, spamming, cyber pornography, phishing, spoofing, worm attacks, code theft, credit card frauds etc., are the nuisances with which human beings are living with.

A digital forensic expert is the key to any cybercrime investigation because cybercrimes may not be proved without them and criminals may get scot free. Thus, the prime role of a digital forensic expert is to acquire, analyse and report the digital evidence, which may help in proving the crime.

These tasks are conducted with the help of various forensics toolkits such as write blockers, forensic media card reader, forensic duplicators, lab forensic imaging/ cloning for data acquisition and software with high-end forensic workstations. Among the forensic software, EnCase, UFED etc., are widely used. CDAC has developed various forensic software tools touching digital forensics aspects. However, the usage of these tools depends on their features, ease of use and the exact requirement in a specific case.

Digital Evidence Life Cycle

As the electronic records can be easily manipulated, steps must be performed in a systematic and timely manner, safeguarding the integrity of the evidence by maintaining the "chain of custody". The admissibility of digital evidences in judiciary is very much dependent on the authenticity of evidences.

In order to ensure that a digital evidence is collected, preserved, examined or presented in a manner safeguarding its accuracy and reliability, law enforcement and forensic organisations must establish and maintain an effective quality system and documentation of each process related to the evidence. The effective quality system can be obtained through documented Standard Operating Procedures (SOPs) for quality-control guidelines that must be supported by proper case recording and use of broadly accepted procedures, equipment and materials.

The chain of custody of digital evidence is a crucial aspect during digital investigating process. It is initiated with acquisition of the evidence collection that should have an appropriate legal sanctity. The process of acquiring digital evidence begins under the well-laid-out legal procedure. This process differs from country to country, in relation to who first comes into contact with digital evidence. In some countries, there are specialised units (first response task forces) that are trained on how to handle such types of evidence, while in some countries such jobs are undertaken by law enforcement personnel (specialised police officers) with the help of digital forensic experts.

The initial phase in the life cycle of digital evidence is Identification and Collection, as the files that may have evidence are already created and present in the computer systems. In this phase, digital forensic investigators have to explore the enormous amount of material to find valuable evidence related to the spurious activity. This phase is very complex and time-consuming and there are more chances that chain of custody of that particular evidence is violated.

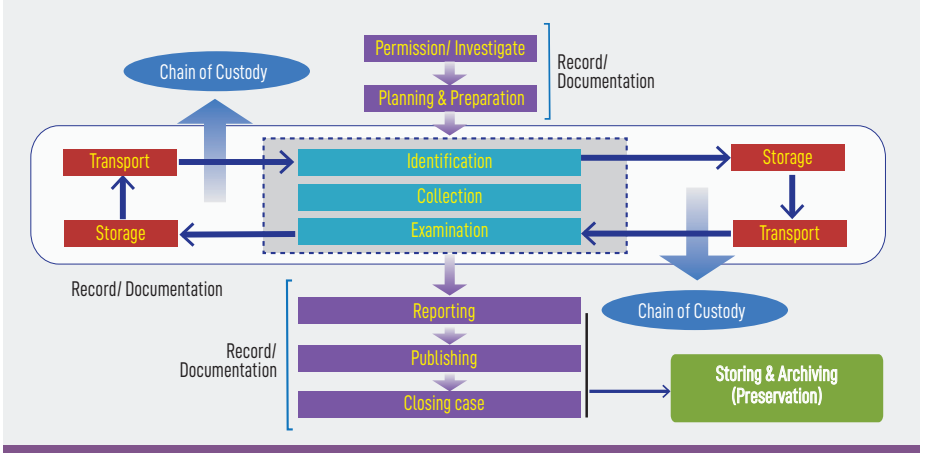
Next stage of the life cycle is Examination wherein the contact with digital evidence can happen by the forensic investigators and an expert witness. Examination phase implies the identification of potential digital evidence and separation of other large amount of digital files.

Next phase in the lifecycle is Reporting/ Publishing. In this phase, digital evidence is presented by the defence/ prosecution side, and contact with digital evidence can take place by the forensic investigators, an expert witness, defence and prosecution. The result of forensic investigations is presented to the court. At the end, digital evidence needs to be stored and archived (i.e., preserved) for almost a perpetual time or till the case is out of its life cycle.

The storage and movement of digital evidence has to be on a secure network and servers with access to the authorised personnel only, so as to maintain its authenticity and sanctity.

Preservation of Digital Evidence

The preservation or storage of digital evidence is an important aspect when deciding its admissibility in a trial in process, or in any future processes of case life cycle. The issues with the digital evidence, when extracted from the storage and played/ displayed as an exhibit in the court, which may be in a large number to handle, may range from the availability of the hardware, system software, application software to the non-operation of the digital evidence. In future, the availability of three infrastructure requirements (hardware, system software, application software of the same make and configurations) is a big challenge. In reference to software purposes, the solution lies in the building of software reference library, which can store all kinds of system software, application software etc. These packages may include multiple versions of various operating systems, database management systems, utilities, graphics images, component libraries etc. This library enables easy access to a collection of software packages required by forensic experts and can serve as a help for the purpose of producing evidence in the court.



Chain of Custody and Life Cycle of Digital Evidence

Tools and Technologies

A digital forensic expert must be equipped with requisite forensic toolkits such as write blocker, forensic media card reader, forensic duplicators and forensic imaging/ cloning software to acquire electronic evidences in order to maintain chain of custody. The digital forensic expert or litigants collecting the electronic record have to use appropriate data extraction tools and data compression or replication tools under defined protocols and generate the HASH value of the removable device and the electronic record. Other than the hardware implements, specialised software tools can also be used by experts as they not only help maintain the chain of custody, but also help the examiner sifting through the digital mesh created in a device.

Summary

Digital evidence, generated in any electronic media, can be of high importance in any criminal investigation, owing to a cybercrime as well as for the purpose of maintenance, debugging, data recovery from the computer systems in any organisation. Further, the setting up of infrastructure and processes involved such as reception, examination and reporting can strengthen the security of the IT infrastructure of an organisation. ■

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Appscape

Tapping the potential of advanced technologies, e-Governance provides services through the use of computerization and replaces traditional way of working with paperless work. Mobile governance (m-Governance) is a subset of e-Governance to deliver services for different government channels, namely G2C, G2B, and G2G. m-Governance uses mobile technologies for providing faster and more accessible public services to citizens and organisations. Although providing services through mobile technology has higher impact, it brings with a host of challenges and complexities like security, availability of multiple mobile platforms and rapidly evolving technologies.

Today, there is no dearth of high-tech products like mobile phones, laptops or tablets, which differ in the form of computation capabilities. However, the need of the hour is to provide services based on end-user characteristics and the availability of infrastructure. A Mobile App written for a high-end device or high network bandwidth may not be suitable where the end-user does not have access to such devices and network. In NIC, Apps are developed in iOS, Android and Hybrid platforms. The number of Apps is continuously growing on Play Store under NIC account.

This issue of Appscape covers some of the popular Mobile Apps launched recently. Belonging to different sectors such as Finance, Home Affairs & Enforcement, Rural Development, Governance & Administration and Agriculture, these Apps aim at easing the efforts of end users and streamlining their work processes.

KrishiGyan UP aims to make farmers aware of the best agricultural practices. Kerala TSB is meant for Treasury Savings Bank Account Holders who can easily view account related information. Instilling safety and security among citizens and tourists, Arunachal Police Finder enables them to connect with the police department in case of crisis. Kerala Pension is developed for Kerala State Pensioners whose pension is disbursed through the Treasury Department of Kerala. Assets & Works helps the Department of Rural Water Supply and Sanitation capture images of completed and ongoing works and analyse progress. Awaas+ is meant for inspectors to conduct survey of people eligible for Pradhan Mantri Awas Yojna scheme. DARPAN provides national configurable multilingual dashboard platform.

- C.J. ANTONY, NIC HQ

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Phone: 011- 2430 5494 (Deepak Mittal)

Visit the Mobile App Store
http://egovmobileapps.nic.in

Krishi Gyan UP

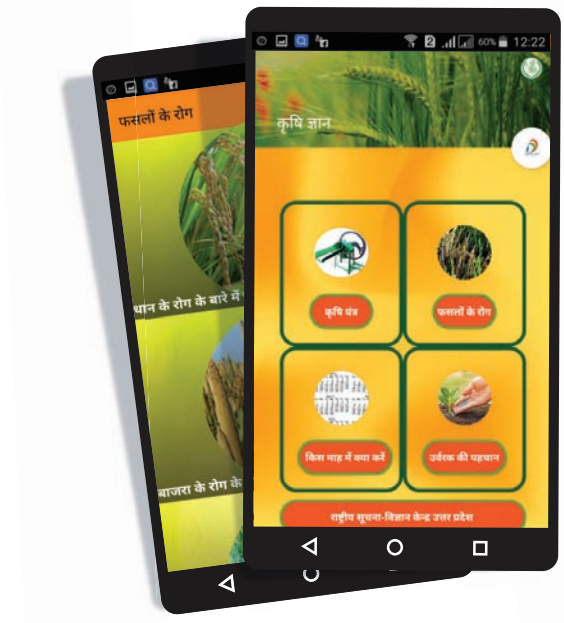
Agriculture is an important occupation of people in Uttar Pradesh. Krishi Gyan UP, an Android-based App is conceptualised to help farmers understand and practise best farming methodologies in the climatic conditions of Uttar Pradesh. Developed by NIC UP, this App delivers a variety of information, alerts, notifications, and is a knowledge base of various farming processes suitable to the state's terrains and environmental conditions. Krishi Gyan UP delivers bilingual content i.e., in English and Hindi (Unicode) and the latter helps, especially the farmers to get familiarised with various agricultural aspects such as land, crops and cultivation.

The App aims to:

- Motivate farmers to use latest agriculture implements and equipment, which can ease their physical and manual efforts.
- Help farmers understand various diseases and find the diseases affecting their crops, remedial treatments etc. The pictures and information of the disease affected crops help farmers to take precautionary measures. It also helps cultivators to take necessary steps to avoid crop damages.
- Provide information about the suitable farming practices to be adopted during various climatic seasons. It promotes diversified cultivation in the land with more than one crop grown during a year.
- Familiarise farmers with knowledge of essential manures and suitable fertilizers. It also provides information materials to identify original fertilizers and avoid adulterated ones.

Another key feature of the App is text-to-speech facility that helps the non-literate users and persons with visual disabilities to listen to the content by clicking on the 'sound' icon.

Queries: Sanjay Kumar Srivastava (sanjay.srivastva@nic.in)



https://play.google.com/store/apps/details?id=nic.up.krishi

Kerala TSB

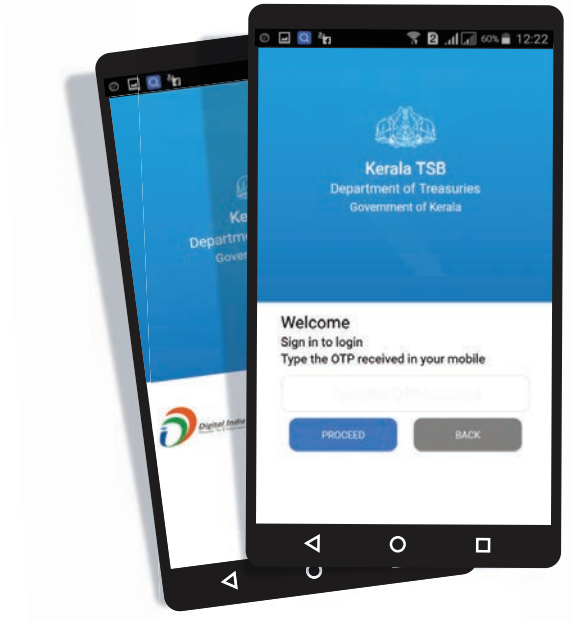
Banking services have eased the lives of people by facilitating a number of financial solutions to them. Be it account related schemes or foreign exchange, individuals or corporates can avail various offers from these institutions. Kerala TSB has been introduced as a citizen-centric measure to enable convenience to Treasury Savings Bank (TSB) Account Holders in the state, whose accounts are maintained by the Treasury Department of Kerala. The Android App, which is an initiative of the Department of Treasuries, Government of Kerala and NIC Kerala, serves as a repository of all the account-related information.

The App aims to:

- Help account holders view passbook details, account details (savings bank and fixed deposits), available balance and account statement, thereby eliminating the need to approach the treasury offices
- Show interest for fixed deposits, credited to TSB
- Show addresses of treasury offices in the state

The App has been introduced under the Integrated Financial Management System (IFMS), one of the prestigious projects of the Government of Kerala, undertaken by Finance Department and Treasury Department. TSB is a unique Savings Bank system of the Government of Kerala and has various types of account such as Savings Bank Account, Pensioner's Savings Account, Treasury Fixed Deposit, Treasury Security Account and Treasury Public Account. Government officials, pensioners, institutions and public can open and operate TSB Accounts. Account holders need to register their mobile number with the treasury to use the App.

Queries: *T Mohana Dhas (sio-ker@nic.in)*



https://play.google.com/store/apps/details?id=in.gov.kerala.treasury.tsbmobile

Arunachal Police Finder

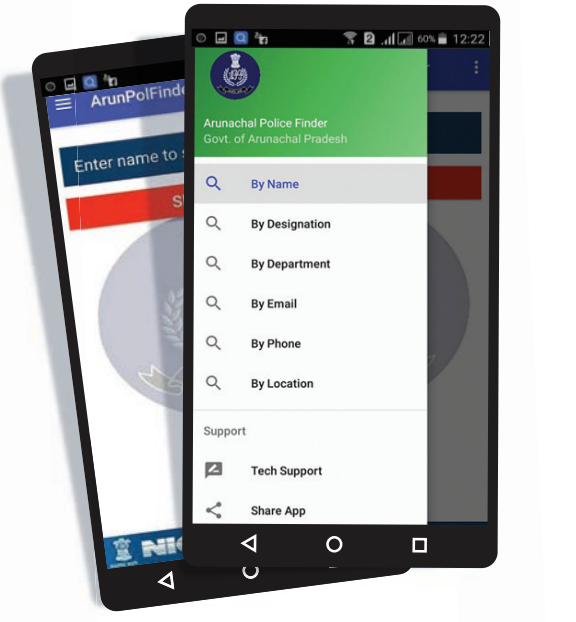
Safety of tourists is always important for the state police. Stepping ahead with its motto, "Satya, Seva, Suraksha", the Arunachal Pradesh Police have launched the Arunachal Police Finder Mobile App to boost security measures in the state. Developed by NIC Arunachal Pradesh State Centre, the Android App serves as an online digital directory service with 24x7 data availability to contact the police department. It is useful to citizens, tourists, businesses, government agencies etc., as they can view the communication details of officers of the Arunachal Pradesh Police.

The App helps:

- Search officers' information using their personal details like name, phone number etc., and official details like rank/ designation, department etc.
- Connect with the nearest police station via direct voice call and SMS.

Web interface is another feature in the App and is operated by the police department. It enables them to easily manage contact details of all the police personnel. They can also manage various settings at the backend such as adding details of new police officials, updating the information of existing police officials, and finding their contact details. An admin user can also manage accounts of other users and generate reports in PDF and excel files. The App has been developed using Java Technology.

Queries: *Saibal Sarkar (sio-arn@nic.in)*



https://play.google.com/store/apps/details?id=in.nic.arunpolfinder

Kerala Pension

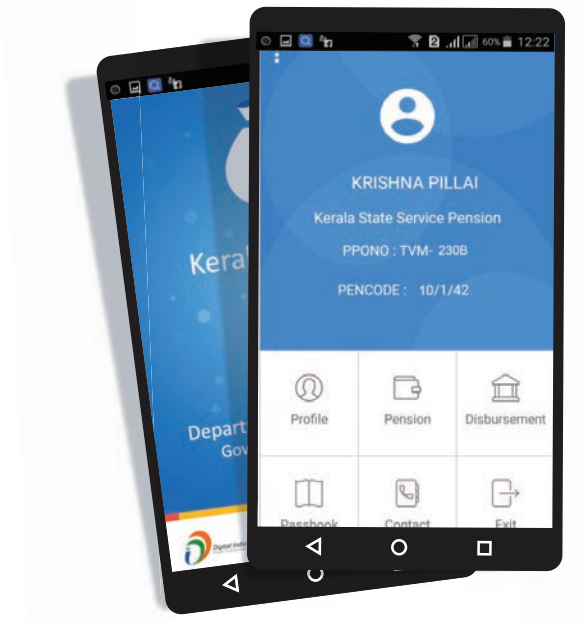
Pensions serve as financial security to the elderly who can meet sudden expenses and live a financially secure life. As more people, including the elderly, are now increasingly turning towards using smartphones, the Department of Treasuries, Government of Kerala and NIC, Kerala have taken a citizen-centric initiative to introduce Kerala Pension App. This Android App enables convenience to more than 5.5 lakh pensioners in Kerala whose pensions are disbursed through the state's Treasury Department.

The App aims to:

- Show pension details such as basic pension, dearness relief, medical allowance, current pay revision and retirement date
- Show personal details such as PPO number, contact address of pensioner available with treasury, family pension authorised details and last mustering date
- Show disbursement details such as disbursement mode, viz. bank or TSB or money order, and account number
- Show monthly credit details such as pensions, arrears, commutation and gratuity for past one year
- Show contact addresses of all treasury offices in the state

The App has been developed under the Integrated Financial Management System (IFMS), one of the prestigious Projects of the Government of Kerala, undertaken by Finance Department and Treasury Department. Users can view bank statements and calculate income tax to be deducted. In the beginning, pensioners need to register their mobile numbers with the Treasuries Department to use the App. The mobile number will then become the User ID. Factors like simple design, clear instructions, smooth navigation etc., have been considered to make it a user-friendly App for the elderly.

Queries: T Mohana Dhas (sio-ker@nic.in)



https://play.google.com/store/apps/details?id=in.kerala.gov.in.keralapension

Assets & Works

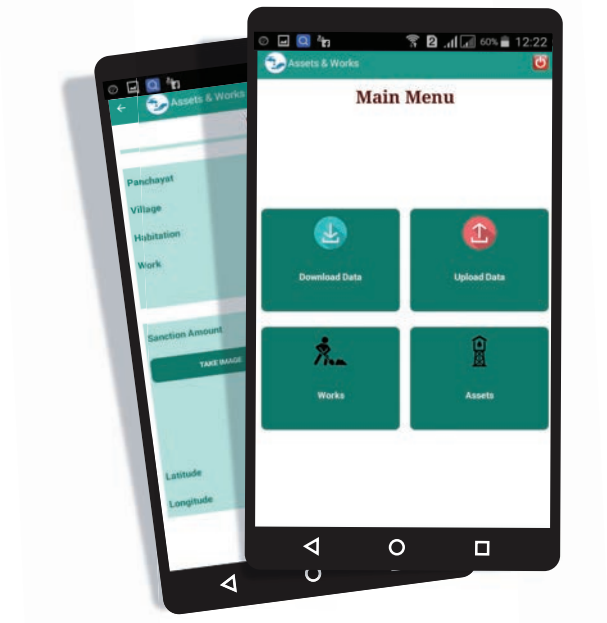
The role of the Department of Rural Water Supply and Sanitation in any state is to provide clean drinking water through various schemes like Hand pumps, Piped Water Supply Scheme, Mini Piped Water Supply Scheme, Comprehensive Piped Water supply Scheme, Direct pumping etc. In order to improve the functioning and efficiency of the Department of Rural Water Supply and Sanitation, Government of Andhra Pradesh, an Android App, Assets & Works has been developed by NIC AP State Centre. This App is being implemented in all the 48,692 habitations of the state for the capturing of images of assets (completed works) and the ongoing works.

The App facilitates:

- Download data feature to enable offline operation of the App. Allows the user to download the master data from the MIS application and use the same during non-availability of the Internet.
- Assets feature to enable the capturing of images of assets or components with geo co-ordinates, along with timestamp
- Works feature to enable the functionary to capture ongoing work images with geo co-ordinates, along with timestamp
- Upload Data feature to enable the uploading of locally saved data to the server as and when there is Internet connectivity. After uploading the data, a number of assets or components and works uploaded get displayed.

Technology used at the client side is Android SDK, SQLite and at the server side is Java, Restful Web services. Introducing the App is a positive step towards tracking the progress of various projects undertaken by the department, taking relevant measures and defining future goals.

Queries: Achuta Venu Nattay (achuta@nic.in)



https://play.google.com/store/apps/details?id=com.nic.rwss

Awaas+

Providing a streamlined system to carry out survey under the Pradhan Mantri Awas Yojna - Grameen (PMAY-G), this Android App has been launched by the Ministry of Rural Development (MoRD). Awaas+ has been designed for inspectors to conduct survey of people who were not covered in the permanent wait list of PMAY-G, which has been based on the Socio Economic Caste Census (SECC) 2011 and due process at Gram Panchayat. It is an initiative to extend the housing benefit of the government to the needy people who have not availed the PMAY-G benefits. It follows a simple paradigm, which drills the state to the panchayat level for a hassle-free administration of the survey.

The App facilitates:

- Survey comprising a set of questions, which are taken as criteria to analyse the stakeholder for the PMAY-G scheme's benefits.
- Photography feature to capture geo-tagged photo of the existing house and proposed site mandatorily
- Feature to mark tick against the predominant material used for roof and wall. The material option is meant only for those identified as kutcha material, as per SECC data.
- Feature to capture 13 automatic exclusion parameters, 5 automatic inclusions or compulsory inclusions criteria and 5 deprivation parameters.

As of 30th November 2018, record set of a total of 2.58 crore beneficiaries have been uploaded using Awaas+ and more than 10 crore geo-tagged photos have been captured. Due to light weightiness, offline mode and user-friendly interface of the App, such large data has been surveyed and uploaded in a span of six months approximately.

Queries: Prashant Kumar Mittal (pk.mittal@nic.in)

https://play.google.com/store/apps/details?id=r.rural.awaasapplite

DARPAN

This App is a national configurable multilingual dashboard platform, meant for Hon'ble Chief Ministers, Hon'ble Governors, Chief Secretaries, Divisional Commissioners and DMs or DCs and related equivalent officers. Developed by NIC, DARPAN is nationwide replicated as Dashboard Services.

The App has the following features:

- Presentation of real-time data on Key Performance Indicators (KPIs) of the selected government schemes or projects to all the levels (State, Division, District) of officers for planning, evaluation and monitoring. Information can be viewed in the form of time-line series, analytics and graphics or in the form of statistical reports.
- The automatic grading system of departments and departmental projects on the Dashboard Analytics to assess the physical and financial progress of projects.
- Department KPIs further zero in leading or lagging district. It helps departmental HOD or officials monitor the system effectively.
- Display of information in an objective and quantifiable manner to get a comprehensive view for Centre, State or District specific projects in a single window.
- Provides customisation capabilities to states to match their requirements.
- Enhances analysis through data collection by consolidating multiple data sources into one centralised, easy-to-access platform.

The Mobile App also provides a facility to generate PIN after the successful authentication of NIC LDAP user id and password.

Queries: Ajai Gopal Bhartariya (ajai.gopal@nic.in)

https://play.google.com/store/apps/details?id=in.nic.dmdashboard.dashboard18012018&hl=en

Oman ranks top in digital accessibility for persons with disabilities

Oman was ranked among the top 10 performers globally and first regionally in Digital Accessibility Rights Evaluation (DARE) index conducted by G3ict, The Global Initiative for Inclusive ICTs, which aims to benchmark digital accessibility for persons with disabilities.

DARE Index score includes points corresponding to the three categories of variables measured: country commitments, capacity to implement and actual outcomes in digital accessibility for persons with disabilities. It indicates the overall progress and momentum of a country in implementing digital accessibility as per the ICT accessibility dispositions of the Convention on the Rights of Persons with Disabilities.

Digital accessibility and inclusion was at the top of ITA's agenda, programs and projects. The work on digital empowerment started back in 2008 when ITA recognized the importance of making the main portal in Oman fully accessible to enable all citizens and residents of different segments to access the available information and use electronic services.

After ITA ensured the accessibility of its website, in 2009, it started to spread awareness among Government entities to enable PWDs access their Websites. It introduced government and private organizations to the international best practices and standards. In addition, in 2009, under the eSociety development, ITA implemented a number of training programs in using ICT and assistive technologies for PWD.In the same context, in 2010, ITA included web accessibility as main criteria in eContent category in His Majesty Sultan Qaboos Award for Excellence in eGovernment.

In 2012, ITA, in cooperation with G3ICT, Formulated the eAccessibility Policy followed by rolling out an awareness campaign on eAccessibility issues for government and private organizations for 10 sectors.

In 2013 onward, the ITA laid emphasis on digital inclusion by the issuance of a Circulation about the inclusion of eAccessibility in the eTransformation Plans of government entities. Furthermore, ITA supported government and private entities in implementing the best practices and guidelines to make websites and services accessible by PWDs along with offering user accessibility testing for websites and applications.

Digital accessibility – is the extent to which an ICT-based product, tool, information or service can be used by persons with disabilities and the elderly people as effectively as it can be used by a person without disability

Source: http://www.omanobserver.com

India and Japan sign MoC to cooperate in AI and IoT

Shri Narendra Modi, the Prime Minister of India and Mr. Shinzo Abe, the Prime Minister of Japan, agreed on a joint effort of India and Japan to work in *AI technologies, startup programmes and robotics.* A Memorandum of Cooperation (MoC) was signed between the two countries to boost initiatives such as Digital India, Smart City, Startup India, Japan's Society 5.0 and promote Artificial Intelligence (AI) and Internet of things (IoT) technologies in the country. The India-Japan digital partnership has been inked between the ministries of information technology, economy and trade and industry. The declaration of this joint association will proved to be advantageous for both nations as their strengths in the digital field will mutually complement each other.

Artificial Intelligence

A statement of intent signed between the National Institute of Transforming India (NITI Aayog) and Japan's Ministry of Economy and the Trade and Industry (METI) proposes to encourage and co-develop AI technologies. IIT-Hyderabad and Japan's National Institute of Advanced Industrial Science and Technology will be working together on AI technology and conduct a joint research on robotics.

Technology hub

The two nations have decided to set up a technology hub in Bengaluru to expand their startup talent. This centre will facilitate business ventures of Japan to foray into India's market by building a connection with companies and required talent. India had earlier signed a pact for robotics and AI in the defence sector with Japan.

Prime Ministers Shri Narendra Modi and Mr. Shinzo Abe

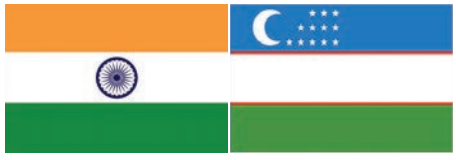
India's Defence Research and Development Organisation (DRDO) and Acquisition, Technology and Logistical Agency (ATLA) of Japan will be working on a slew of joint projects in the areas of Unmanned Ground Vehicle (UGV) and Robotics.

Source: https://www.electronicsb2b.com

NIC, India to support the implementation of e-government projects in Uzbekistan

Cooperation brings nations together and fosters mutual growth. Moving ahead with an objective to promote e-governance, an event was organised at the Electronic Government Development Center (Center), Uzbekistan, to discuss possible avenues of mutual consideration. The event was attended by Smt. Ranjna Nagpal, Shri IPS Sethi and Shri B. Vinaya, Deputy Director Generals from the National Informatics Centre (NIC). Representatives of the Indian Embassy were also invited. From the Center's side, Mr. M. Rasulov, Deputy Director, as well as Department Heads and staff took part in the meeting.

Mr. Rasulov familiarised guests with the e-government architecture in Uzbekistan, and spoke about the interactive public services provided to the population, One ID system and the public services portal birdarcha.uz. A number of projects that are planned to be implemented in cooperation were discussed. One such project is the use of Big Data in the e-government system. This project involves the creation of a software module that will serve to determine dependencies in a stream of fragmented information. Another project is the introduction of IaaS and Saas cloud technologies into e-government infrastructure based on such Indian technology products as S3WaaS (government website management), Manav Saparanda (e-manager), Darpan (dashboard for analytical review of projects).



Indian experts expressed their willingness to assist in the implementation of these technologies based on their experience. The parties agreed on the phased implementation of projects within the framework of the joint "Road Map". At the seminar, guests provided information on NIC's activities, history, structure and the Digital India Project, shared their knowledge and skills to improve the e-government system, using advanced technological solutions, as well as experience in ensuring transparency to improve the efficiency of public administration.

NIC officers, along with other officers

Source: https://egovernment.uz/en/

Hon'ble Chief Minister, Himachal Pradesh, launches HimPragati Portal for Projects Monitoring

The HimPragati portal of the Government of Himachal Pradesh has been launched by Shri Jai Ram Thakur, Hon'ble Chief Minister, Himachal Pradesh in Shimla on 17th October 2018. Shri B.K. Aggarwal, Chief Secretary, Dr. Shrikant Baldi, Additional Chief Secretary to CM, Shri Ram Subhag Singh, ACS, Tourism, Environment, Shri Sanjay Kundu, Additional Principal Secretary to CM, Shri D.C. Rana, Special Secretary to CM, Heads of Departments, Shri Lalit Kapoor, ASIO and Shri Sandeep Sood, Technical Director (NIC), were also present on the occasion. The portal has been developed by NIC Himachal Pradesh.

In a motivational address, Shri Jai Ram Thakur underscored that the portal will help in identifying important projects and fast track them by resolving any issues faced in their execution. The private entrepreneurs can raise concerns on HimPragati portal, which will be monitored closely by the PMU set up in CM Office for the purpose.

The portal has been developed on lines of PRAGATI portal of the Government of India, with the objective of ensuring timely completion of major projects in Tourism, Power and Industry

Shri Jai Ram Thakur, Hon'ble Chief Minister launching the HimPragati Portal

sectors. One of the main features is that the project executing agencies from private sector can also add their projects in the HimPragati portal to address the challenges faced for project execution. These are scrutinised and submitted for approval by the Chief Minister Office so that the entrepreneurs can raise department-wise concerns.

Shri Sandeep Sood gave a presentation, highlighting various features of the software.

- AJAY SINGH CHAHAL, HIMACHAL PRADESH

DG, NIC launches HRCnet portal of NHRC

Dr. Neeta Verma, Director General, NIC launched HRCnet, the Human Rights Commission Network Portal of National Human Rights Commission (NHRC) during the Secretary Level Meeting of NHRC and State Human Rights Commissions (SHRCs) held in New Delhi on 7th December 2018. Developed by NIC, HRCnet is a web and workflow-based portal that integrates the Complaint Redressal applications being used at NHRC and SHRCs.

Shri Ambuj Sharma, Secretary General, Dr. Ranjit Singh, Joint Secretary (P&A), Shri Dilip Kumar, IAS, Joint Secretary (T&R), Shri Surajit Dey, Registrar (Law) and other NHRC officers were also present on the occasion.

In her address, Dr. Neeta Verma spoke about how the concept of digital India has been put into place with the support of Information Technology by developing Common Services Centre portal. She appreciated the NHRC India's initiative to utilise the MyGov and CSC portals for building awareness on human rights and reaching out to people in far-flung areas.

Elaborating on the portal, Shri Sudhir Chandra, Sr. Technical

Shri Ambuj Sharma, Secretary General, NHRC and Dr. Neeta Verma, Director General, NIC, along with other officers

Director, NIC said that this portal is integrated with Common Service Centre's service and now available at districts level.

The portal helps common citizens lodge complaints without hassles and approach NHRC and SHRC for redressal. It also facilitates communication with various stakeholders through email and SMS.

- NEWS MEDIA & WEBSITE
http://nhrc.nic.in

Hon'ble Chief Minister, HP launches HP State Disaster Management Authority Website

The redesigned website of HP State Disaster Management Authority has been launched by Shri Jai Ram Thakur, Hon'ble Chief Minister, Himachal Pradesh at Dharamshala, District Kangra on 15th December 2018. Shri B.K. Aggarwal, Chief Secretary, Smt. Manisha Nanda, Additional Chief Secretary, Revenue, Shri D.C. Rana, Director-cum-Special Secretary, Revenue-Disaster Management, Shri Vinay Singh, PS to HCM, Shri Praveen Kumar Tak, Joint Secretary, Revenue and Shri Bhupinder Pathak, DIO, Kangra were also present on the occasion. The website aims to educate citizens on disaster management activities and safeguards.

Different activities have been undertaken under disaster management in the state since the website's launch in 2011 and many new projects and programmes have been added. Comprising information about all the latest happenings in this field, the updated version describes hazard profile of the state, status of current vulnerability and detailed hazard, risk and vulnerability analysis. It details about the ongoing programmes for capacity building, and new schemes launched by the state have been created and integrated with this website to facilitate their registration and entry. The website also contains safety tips for various hazards and safe construction practices. The resource list contains list of district-wise helipads with geo-coordinates, telephone directory of Government Offices/ Officials etc. For the benefit of general public, the website contains information about relief and relief norms. A lot of technical reports on Hazard Risk and Vulnerability Analysis (HRVA) of the state are available. Related data has been developed in a separate website and integrated with it.

Hon'ble Chief Minister, HP launching the website

- AJAY SINGH CHAHAL, HIMACHAL PRADESH

Hon'ble Chief Minister, Haryana inaugurates Haryana Real Estate Regulatory Authority web portal

The web portal of Haryana Real Estate Regulatory Authority (HRERA) of Panchkula and Gurugram has been inaugurated by Shri Manohar Lal Khattar, Hon'ble Chief Minister of Haryana in Chandigarh on 4th October 2018, in the presence of the Chairmen of both authorities. Regulating the growth of real estate sector, the portal is meant to foster transparent dealings between the promoters of real estate projects and buyers of apartments, and implement the provisions of law and order of the authority.

Other important features of the portal include online complaint filing by citizens or buyers and tracking status of the same, online promoters or developers registration along with online quarterly schedule filling and status tracking, time-bound hearing and disposal of complaint cases (60 days), easy access and tracking of information for general public, end to end workflow based backend automation of office activities, and ease of using online payment system for paying requisite fees.

In his address, Shri Manohar Lal Khattar appreciated the role of NIC-Haryana in designing, developing and implementing the web portal. He said that home being the necessity of almost every family; efforts are being made to ensure that the real estate sector shifts from unplanned to the planned. In view of the complications faced by people in the unplanned real estate sector, the state government set up one HRERA exclusively to deal with cases of Gurugram and another authority in Panchkula to deal with real estate issues of rest of Haryana. The Chief Minister also felicitated NIC-Haryana Officers, Shri Deepak Bansal, State Informatics Officer, Shri Bidyut Ranjan Gohain, Sr. Technical Director, Shri Prakash Kala, System Analyst and two developers.

Hon'ble Chief Minister, along with other officers on the occasion

- DEEPAK SAWANT, HARYANA

Uttarakhand Health Services Dashboard launched by Chief Minister

The Uttarakhand Health Services Dashboard has been launched by Shri Trivendra Singh Rawat, Hon'ble Chief Minister, Uttarakhand at his residence in Dehradun on 22nd September 2018. Developed by NIC Uttarakhand, the portal is a convergence of vital information of all the parameters, at a single point, which are significant for maintaining quality health services. The description coined by the department for this Dashboard is - A Tool to Monitor the Health of Health Services.

Services offered by the Uttarakhand Medical Health and Family Welfare Department include the daily footfall of Out Patient Department (OPD) services providing trend analysis of diseases, doctors' attendance with their engagement in different types of duties, patient-doctor ratio, warehouse-wise status and demand of drugs, status of availability of blood in blood banks, and 108 emergency services like real-time, on road, number of trips performed etc. The information from top can be drilled down further to reach at lowest level through this Dashboard, which can be accessed by public and government functionaries by visiting the website ***http://hrishealth.uk.gov.in/healthdashboard/.***

Shri Trivendra Singh Rawat, Hon'ble Chief Minister launching the Dashboard

The inauguration was held in the presence of Shri Nitesh Jha, Secretary, Medical Health & Family Welfare, Government of Uttarakhand, Shri Y K Pant, Mission Director, National Health Mission, Director General Medical Health and FW, Shri A. K. Dadhichi, Senior Technical Director (NIC) and Shri Arun Sharma, Scientist D (NIC), along with senior officers from the CM Office and Uttarakhand Medical Health Department.

- ARVIND DADHICHI, UTTARAKHAND

Hon'ble CM, HP launches HP Circle Rates Mobile App

Shri Jai Ram Thakur, Hon'ble Chief Minister, Himachal Pradesh, launched the HP Circle Rates Mobile App during Deputy Commissioner-Superintendent of Police (DC-SP) Conference in Shimla on 17th September 2018. Shri Vineet Chawdhry, Chief Secretary, Dr. Shrikant Baldi, ACS to HCM, Smt. Manisha Nanda, Additional Chief Secretary (Revenue), Shri S.R. Mardi, Director General of Police, Shri Deva Singh Negi, Director, Land Records and IGR, all Administrative Secretaries, HoDs, DCs and SPs were present on the occasion. In his address, the Hon'ble Chief Minister expressed hope that the Mobile App will be useful to the buyers and sellers of property in the state and help them in the estimation of stamp duty and registration fee.

The App (Android-based) is linked to the Circle Rates MIS, a web-based application using which, all district collectorates notify the circle rates of all revenue villages, based on different approved criteria at the beginning of every financial year. These rates are applicable for transactions related to sale and purchase of land in the state. The Mobile App provides rates and also includes a calculator to show the stamp duty and registration fee, based on the revenue village, land category/ subcategory and area of land. The integrated BhuNaksha and eHimBhoomi applications for five districts were also launched.

Hon'ble Chief Minister, Himachal Pradesh, along with other officers during the launch of App

HP Circle Rates App has been developed by NIC Competency Centre for Mobile Apps, Shimla. Shri Ajay Singh Chahal, State Informatics Officer, NIC HP, Shri Lalit Kapoor, ASIO, Shri Sandeep Sood, TD & Project Head, Shri Ashish Sharma, Scientist-B, Shri Parveen Sharma, Scientist-B and Shri Prithvi Raj Negi, Scientific Officer were present on the occasion.

- SANDEEP SOOD, HIMACHAL PRADESH

Hon'ble Minister, Law & Justice and E&IT, along with DG, NIC, DG, NSG and other officers

e-Office at NSG inaugurated by Hon'ble Minister, Law & Justice and Electronics & IT

Shri Ravi Shankar Prasad, Hon'ble Minister, Law & Justice and Electronics & Information Technology inaugurated NIC e-Office at National Security Guard (NSG) office in New Delhi on 9th October 2018, in the presence of Dr. Neeta Verma, Director General, NIC, Shri Sudeep Lakhtakia, DG, NSG, Shri Sanjay Goel, Joint Secretary, MeitY and Smt. Rachna Srivastava, Sr. Tech. Director and HoD, NIC.

e-Office is a cloud-enabled integrated file and records management system developed by NIC to enable automation in governmental operations at all levels. Offering a suite of products to go paperless, it helps streamline workflows for both intra- and inter-government processes, thereby enabling time management and enhancing productivity. It helps maintain a repository of important documents such as Policies, Forms, Acts & Regulations, Circulars, Guidelines and Manuals, which can be viewed/ accessed, searched and shared by ministry users and other related departments. Another key feature is to keep record of versions as per modifications made by different users (Tracking history). The application has been implemented in more than 325 departments and is being used by over 2.50 lakh users.

On the occasion, the officers of NSG were also presented with awards by the Hon'ble Minister.

- RACHNA SRIVASTAVA, NEW DELHI

Bengaluru Urban District launches revamped bilingual website with new features

As a part of its commitment to provide effective e-governance facilities to the citizens, the District Administration, Bengaluru Urban District has launched its revamped bilingual website, ***http://bengaluruurban.nic.in*** during a programme held at Court Hall (Revenue), DC Office Building, K.G. Road, Bengaluru on 12th September 2018. Shri B.M. Vijay Shankar, IAS, Deputy Commissioner of Bengaluru Urban District inaugurated the website in the presence of senior level officers and staff of various departments, and staff members of NIC, Bengaluru Urban District.

In his address, the Deputy Commissioner appreciated the efforts of Smt. Padma N Murthy, DIO, NIC-Bengaluru Urban and her team for developing the feature-rich website. He informed that regular updating of the content of website would be ensured to improve the effectiveness of governance and provide citizen services.

The website has been developed on Secure, Scalable and Sugamya (S3WaaS) framework and it provides enhanced, user-friendly functionalities and interfaces, in compliance with GIGW (Guidelines for Indian Government Websites) standard website norms and robust security standards. Special features have been added for colour blind users, using which the contrast of the website can be changed for a better readability. The website can now be accessed by visually challenged people by using the speaking software, which is easily installable on any system. Many new features, including tourism, access to utilities, feedback form and search functionality, have been incorporated in the upgraded version.

Shri B.M. Vijay Shankar, IAS with other officers at the website launch programme

- PADMA N MURTHY, BENGALURU URBAN

Shri Narendra Modi, Hon'ble Prime Minister launching the SAMPANN

Hon'ble Prime Minister launches System for Accounting and Management of Pension

Shri Narendra Modi, Hon'ble Prime Minister launched the System for Accounting and Management of Pension, SAMPANN, for DoT pensioners, in Varanasi on 29th December 2018. SAMPANN is the brand name of Comprehensive Pension Management System (CPMS), designed, developed and hosted by NIC to help pensioners of the Department of Telecommunications including BSNL and MTNL.

SAMPANN aims to establish a seamless pension processing system, which would bring the processing, sanctioning, authorisation and payment under a common platform. The Government of India under the leadership of the Hon'ble Prime Minister has been actively pursuing the objectives of "Minimum Government, Maximum Governance" envisaging Paperless, Cashless and Faceless services across the country, especially in rural and remote parts of India. The pensioners have an online tracking facility and grievance redressal facility. They will get SMS alerts on their registered mobile numbers and the Pension/ DR arrears/ Arrears will be directly credited to the bank account, along with digitally signed E-PPO. The software will help around 3.5 lakh present and around 1.5 lakh future pensioners of the department, thereby helping them to stay updated about their pension details while being at their home.

- VIVEK GUPTA, NEW DELHI

Dr. Neeta Verma, DG, NIC delivering the address and launching the magazine along with other officials

DG, NIC inaugurates 13th eINDIA Digital Transformation Summit

The 13th edition of eINDIA Digital Transformation Summit, organised by Elets Technomedia Pvt. Ltd. at Hotel Royal Plaza, New Delhi on 13th December 2018, has been inaugurated by Dr. Neeta Verma, Director General, NIC, along with Mr. Pedro Ivo Ferraz da Silva, Head – Energy, Environment and Science, Technology & Innovation Section, Embassy of Brazil, New Delhi and Smt. Padma Jaiswal, Secretary, Directorate of Information Technology, Government of Puducherry. eINDIA Digital Transformation Awards were also presented during the Summit.

The Summit was based on innovation for Governance, Infrastructure, Health, Education, BFSI, Energy and Technology. It was also a platform for knowledge sharing by thought leaders from the IT sector including many Chief Information Officers and policymakers.

In her inaugural address, Dr. Neeta Verma highlighted the significant contribution of products and services offered by NIC such as eHospital, VAHAN, Sarathi, Cloud Infrastructure and Soil Health Card, supporting the citizen-centric digital initiatives of the government. Dr. Verma also underscored the significance of rapidly evolving industry best practices across the globe.

A special issue of eGOV magazine was also launched on the occasion.

- ARCHANA SHARMA, NEW DELHI

Gems of Digital North East Awards

Award for Assam

Award for Meghalaya

Award for Nagaland

The Gems of Digital North East Awards by Coeus Age Consulting to discover, document and felicitate innovative digital initiatives undertaken by the governments of the North Eastern States were presented at a function held at Taj Vivanta, Guwahati on 31st October 2018. The Awards were given away to 29 Digital Gems for taking path-breaking eGovernance initiatives.

NIC was instrumental in the development and implementation of many of the awarded initiatives. Assam, Meghalaya and Tripura were adjudged the most promising digital states in the Northeast. Assam has bagged one Gold Award (ePrastuti - Standardised Website Framework) and four Silver Awards (eHealth, eOffice, Manav Sampada and ePass). Meghalaya has won a Gold Gems Award for eHealth and four Silver Gems of Digital India Awards for Treasury Comp/ IFMS, eDistrict, eAgriculture and File Tracking System/ eOffice. Tripura has won two Gold Awards (eHealth and ePDS) and three Silver Awards (eDistrict, Treasury-eGRAS, mGPF and Pension Case Monitoring System). Besides, the Treasury Computerisation Project (TreasuryNet) of the Govt. of Nagaland has also been awarded the Gems of Digital North East Award (Silver Award). Showcased here are receiving of some of the Awards.

Gems of Digital Northeast, the jubilant Northeast team at the Awards presentation ceremony

Award for Tripura

eIndia Digital Transformation Awards 2018

Shri Jyoti Kalash, IAS (R) receiving the award

Shri Nitin V. Choudhari (R) receiving the award

eIndia Digital Transformation Awards recognise organisations taking exemplary ICT initiatives in the fields of Governance, Education, Health and Banking & Finance. eIndia DT Awards 2018 were presented during the eIndia Digital Transformation Summit held at Hotel Royal Plaza in New Delhi on 13th December 2018.

By winning several awards, NIC has again grabbed attention by its active involvement in the development and implementation of various important projects and products to enable digital governance. Nagaland CM Dashboard and the Project, "Framework for e-Governance of fundamental resources Electricity, Water" by NIC Akola were among the awarded products/ initiatives. Shri Jyoti Kalash, IAS, Principal Resident Commissioner of Nagaland House, New Delhi received the award on behalf of the Government of Nagaland. The award for the Framework Project was received by Shri Nitin V. Choudhari, DIO, NIC Akola. It is also worthwhile to mention that NIC, Akola was awarded as the Best Government Organization for the implementation of Cognitive Technologies - Special mention at IT Innovation & Excellence Awards (2018) in Mumbai for the same project.

North East Technology Sabha Awards 2018

NIC Arunachal Pradesh receiving the award for Arunachal Suraksha Mobile App

NIC Arunachal Pradesh receiving the award for e-GPF System

NIC Nagaland receiving the award for CM Dashboard

The Technology Sabha, organised by Business Computer Express Group in collaboration with the Government of Assam, GoI and various ICT Business partners, aims at the adoption of new cutting-edge technology to meet the need of government in collaboration with corporate sector in all the Northeastern States. The North East Technology Sabha Awards recognise outstanding eGovernance initiatives in the Northeastern States.

NIC Arunachal Pradesh has bagged two and NIC Nagaland has bagged three Awards at the Technology Sabha Awards 2018 held in Guwahati, Assam. NIC Arunachal Pradesh received awards for the Mobile App Arunachal Suraksha developed for Arunachal Pradesh Police and e-GPF project (e-General Provident Fund) developed for the Dept. of Accounts & Treasuries, Govt. of Arunachal Pradesh. NIC Nagaland received awards for CM Dashboard, the Online GPF Application and Aadhaar Enabled Biometric Attendance System (AEBAS) under the Enterprise Applications category.