

Informatics

An e-GOVERNANCE PUBLICATION FROM NATIONAL INFORMATICS CENTRE



| Haryana State
| Uttarakhand State

| Digital Village Harisal
| District Tirunelveli

| Digidhan Dashboard
| e-Labharthi

Infocus

e-Counselling Services

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of Technology

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Editorial

Civilizations have thrived by adopting and preserving a tradition wherein experts advise to choose appropriately from available paths for growth and progress. This tradition called Counseling serves useful purposes in many areas, such as medicine, legal, parenting, sports etc and has found an especially useful application in academics to help students in choosing the courses where they may stand better chances at faring well.

E-Counseling is NIC's effort to ensure that the time tested tradition of Counseling is sustained with the help of technology to overcome challenges posed by unexpected situations such as natural disasters and pandemics. Technology enabled E-Counseling allows Counselors and students to connect virtually so that appropriate choices can be made and the right courses can be assigned to aspiring students.

This issue of **Informatics** presents an array of interesting articles. Haryana and Uttarakhand are the State in focus this time. The two districts; Digital Village Harisal and Tirunelveli are featured in the **District Informatics**. Overcoming Cyber Security challenges during COVID-19 Pandemic is the articles in the Technology Update section this time. e-Labharthi, Sampada Suite and Ojas articles presented in the **e-Gov Products & Services** section. Besides the brief information on the prominent mobile applications recently launched by NIC at various States, the **Appscape** this time carries an exclusive write up on Cloud-based Mobile Application development. Corona Reporting Mobile app - GIS Mapping of Positive Cases, AIMS, Covid19Jagratha, NICEscan, CSC Tenkasi District and Tamil Nadu are showcased in this section. The regular sections such as **Accolades**, **International e-Gov Update** and **In The News** section bring you some interesting reads.

We do enhance the publication's contents, look and feel on a constant basis to improve your reading experience. The reader's suggestions are most valuable to us to help us improve the quality of the magazine. It would be great if you could take out some time to write to us. Suggestions and feedback may be sent to the email editor.info@nic.in.

Wish you a happy reading. Please take care, stay healthy and safe.

Editor



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Haryana State

Bringing transparency & accountability in delivery of Citizen Services

NIC Haryana with innovative and out-of-the-box thinking converted the state into a digitally empowered and knowledge economy. Integrated solutions for cashless, paperless and faceless ensured the wide range of quality services delivery on fast-track, hassle-free and time-bound manner, but also beat the twin menace of nepotism and graft. The Haryana government's flagship programs launched by the chief minister – such as Antyodaya SARAL, Parivar Pehchan Patra and Integrated Web-HALRIS - with comprehensive dashboards offer more than 600+ services and schemes to its citizens.



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Being the land of KARMA, Haryana, though a geographically small State, is the most happening state of India. NIC Haryana was established in 1988 at Haryana Civil Secretariat with its offices in every District of the state to percolate the ICT in the state. Since then NIC Haryana has taken long leaps to support state. Today, NIC Haryana with its offices at Haryana Civil Secretariat, Haryana New Secretariat, CM office, State Finance Department, Punjab and Haryana High court, Software development lab at Panchkula, FCR Software Development Lab, Excise and Taxation, Directorate of Enforcement and 22 Districts, plays pivotal role for spearheading e-Governance initiatives in the State. NIC Haryana State unit earned distinguished place by receiving 96 awards.

Core Infrastructure Services

Apart from providing the support for design, development, implementation integrated software solutions, state unit is also providing following key infrastructural support to the state government:

NIC Haryana State Data Centre

State of the art Cloud infrastructure at NIC Haryana State Data centre with 1056 cores 421 TB of storage has been put in place for hosting key initiatives of the state.

NICNET /NKN Connectivity

Redundant 10 Gbps connectivity at NIC Haryana INoC for providing Internet connectivity to 3500 Haryana Government offices in the State. SWAN has been integrated with NKN at district level. All the 22 Districts of State and the State Data Centre established by state have been connected with 1 Gbps/ 34 Mbps fibre with state HQ. 37 Institutes of Higher learning (NIT, IIM, State Universities, Central Universities, and Research Institutes) connected to high bandwidth network with network speeds of 100 Mbps to 1 Gbps. Separate Inter-District links have been established to provide network redundancy at District level

E-Mail

Support for more than 30,398 e-Mail addresses for Haryana government is being provided on NIC e-Mail

Video Conferencing Facilities

Total 56 VC studios have been set up in Haryana under NICNET, at Haryana Civil Secretariat (5 studios), Haryana New Secretariat (2 studios), All District HQs (42 studios, Two each at every DHQ), Various Government Buildings, Bhawans (7 studios). Support for "Anywhere- Anytime basis VC" during COVID through desktop / laptop / mobile / tablet was provided State Government Ministers/Officers. Total 5020 VC sessions have been held (During March 2018 to September 2020) in which 5371 sites participated.

Meghraj Cloud

Providing support hosting website on Meghraj Cloud.



Digital technology has become the backbone of governance and administration enabling services and schemes to be directly delivered to the citizens. Govt. of Haryana has begun innumerable ICT initiatives that bring services closer to the citizens and enable citizens to reach out to Government with ease. NIC Haryana has provided the technology backbone and development support for these innumerable ICT initiatives. There comes a time when the penetration of ICT in governance has become deeper and stronger in the covid and the emerging post-covid era. Carrying forward the vision of Digital India, NIC Haryana State Centre is the leading solution provider of ICT services in the State.

I thank NIC Haryana for their premier applications such as SARAL portal, a one-stop point for citizens to access over 600+ services and schemes, WebHALRIS, which enables the registration of property and providing land records, eOffice, for a paperless solution to Government functioning and IFMS and HRMS the efficient systems for payroll and human resources management. Haryana has also had the distinction of presenting a fully digital budget this year.

During Covid, NIC stepped to the forefront developing at a rapid pace applications to support the State Government in providing succour to the people distressed during the lockdown and also to reach Government support to citizens in need.



V. UMASHANKAR

Additional Principal Secretary to Chief Minister and Principal Secretary
Electronics and Information Technology
Department, Haryana



▲ **Shri Deepak Bansal, SIO, NIC Haryana & team receiving Gold award for “Antyodaya Saral Haryana” Project in the category of “Excellence in providing Citizen Centric Delivery” presented by Shri Jitendra Singh, Union Minister.**



▲ Web-HALRIS Dashboard

ICT Initiatives in the State during current year

SARAL(Simple, All Inclusive, Real Time, Action Oriented, Long lasting portal)

<http://saralharyana.gov.in>

SARAL facilitates aligning with Digital India's vision of faceless, paperless and cashless service delivery model. SARAL has been developed on Service Plus Framework and aims to transform citizen service delivery in Haryana through complete digitization of over 600+ services of more than 38 departments. At present 542 Schemes and services cutting across 39 departments/ boards/ corporations have been brought online on Antyodaya SARAL portal with SMS/ email based Antyodaya SARAL Alert and Feedback System implemented. A comprehensive dashboard allows department officials as well as public to view compliance with Right to Service (RTS) timelines at state and district level. SARAL Tracking System has been established for helpline operators who respond to the queries raised by citizens regarding the status of applications. More than 25,000 are being processed through 154 SARAL Kendra and 6000+ CSCs in the state. Being the configurable framework this has played important role in service delivery during Covid-19 peak period when the development of service at the in 6-8 hours was need of the hour.

Web-HALRIS (Haryana Land Records Information System)

Web-HALRIS is a complete integrated workflow based system of Land record component implemented in all the 143 tehsil/subtehsils. Major modules included in WEB-HALRIS are Deed Registration,

Jamabandi, Mutation, Khasra Gridawari and Reports etc. This system provide facility for Appointment for Deed Registration, Integration of Deed Registration and land Records, Online Mutations and preparation of New Jamabandi. Registration system integration with e-GRAS for E-Stamping facilitate citizen to generate stamp paper online and online verification/defacement of stamps during registration process. To eradicate the fraudulent registration and registration in unauthorised colonies, this system has been integrated with Town and Country Planning, HUDA, HSIIDC, Urban Local Bodies and forest department. A tablet based app e-Girdawari has also been implemented for online Khasra Gridawari. For public <https://jamabandi.nic.in> portal has been launched to get the copy of land records and other information related to land records and Deed Registration. Scanned copies of Mutations and registered deeds are also available on the portal. The system supports 3000+ registration, 10,000+ Nakals and 2000 mutation per day.

GIS based Grievances Management System along with SWACHH HARYANA mobile App for Citizens for grievances in Urban Areas

This is a workflow based system for lodging of grievances under 11 categories by citizens and their redressal in a time bound manner. Leveraging the Bhartmap GIS framework of NIC and using GIS layers of Municipality, Municipality Zone, Municipality Wards, this system automatically forwards the grievance category-wise to concerned Vendor / Municipal Nodal officers and also navigates them to the location of grievance. SWACHH HARYANA mobile App for

Citizens to lodge grievances and track status. Mobile App has been provided for Grievance Resolvers, the Municipality / Vendor Officials responsible for actual resolution of the grievance in the field and a comprehensive Grievances Management System for the backend operations for Municipality / Vendor Nodal Persons was put in place.

Social Security Pension Schemes through DBT

NIC Haryana has been providing core IT software support to the department of Social Justice and Empowerment for maintaining a centralized database of more than 28 lacs beneficiaries. These beneficiaries are scattered under 10 social security pension schemes namely Old Age Samman Allowance, Widow Pension, Disability Pension etc. Online rights for Up-keeping of beneficiaries data, addition of new beneficiaries, flagging of in-eligible and dead beneficiaries are with respective DSWOs in all 21 districts. It has been integrated with RGI death data to flag dead beneficiaries, with UIDAI for demo auth at the time of enrolment and name correction, with SARAL and eDisha portal for new applications, verification and approvals. From September 2020 it has been integrated with PFMS and account based payment.

Haryana Rozgar portal

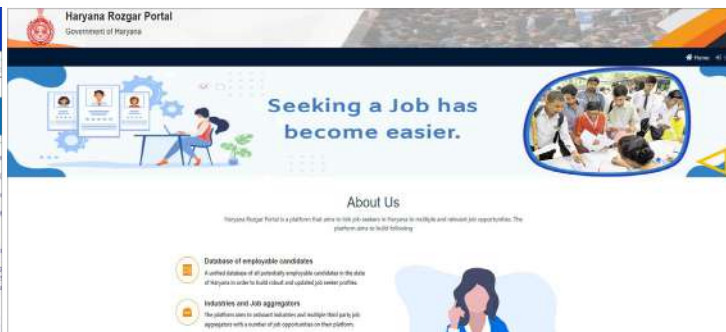
(<http://rozgar.hrex.gov.in>)

This platform aims to link job seekers in Haryana to multiple and relevant job opportunities. Last five years data of 37,94,930 job seekers, Student, ITI pass out, Candidates appeared in HSSC etc. from 15 various Government Department, Colleges, Training Institutes ported into the system. 17955 Establishments and 13 Aggregators are also registered in the portal

▼ Social Security Pension Schemes through DBT Portal



▼ Haryana Rozgar portal





▲ Meri Fasal Mera Bayora Portal

who can search and download candidate's details as per various criteria like Qualification, experience, age, geographical location etc. A call centre has also been established to provides career guidance and counselling to the students. Approximately 25,00,000 calls have been made through IVRS and Call Centre to enrich the database with employment status, relocation preference, expected salary etc.

Online Admission Platform for admission in undergraduate Course

<https://dheadmissions.nic.in>

In view of the on-going COVID-19 Pandemic and ensuring the safety of the students, online admission platform for admission in Undergraduate Courses in Government, Government Aided and Self-finance colleges for the new academic session has been launched collaboration with the Higher Education Department so as to facilitate students to get admission while staying at their homes. With this platform, now the students will be able to complete their entire admission process while sitting at home. Integrated with CBSE, Haryana Board of school education, Aadhaar and SARAL, this system for online verification has reduced the efforts of state government to a large extent. Integration with bank has been done for making payment for admission online. For admission in more than 330 colleges, 166277 students registered themselves for 74 courses and 154805 applications were processed in current session.



▲ Shri Manohar Lal, Hon'ble chief minister, Haryana distributing Parivar Pehchan Patra

Parivar Pehchan Patra

<https://meraparivar.haryana.gov.in>

One of the first of its kind initiative, this system aims to create family database of whole state of Haryana. Citizens can visit nearest Atal Sewa or SARAL Kendra to get details of their families updated. Once Golden record is created, all schemes and services which are intended for a family will be delivered through this database. Family ID for 59 lakh families was collated from various source and verification of more than 24 lakh families has been verified through school camps and booth level committees. This database will be used for proactive delivery of the services based upon socioeconomic and demographic parameters of the family. This database will provide the live population of the state at any given point of time and will trigger changes to various state application when every there is a change in family structure based upon birth, death and marriage registration.

Meri Fasal Mera Bayora

<https://fasal.haryana.gov.in>

This portal enables for farmers to self-report crop information along with land and bank account details. Apart from this, farmer can visit nearest CSC (Common Service Centre) with his details and get punched absolutely free. The system is integrated with Parivar Pehachan Patra, land records to verify the ownership and with bank to ensure the bank

details. After initial information by Farmers, the information is matched the data with Girdawari, Satellite Image and survey conducted by Agriculture Department. The mismatch of details are detected on three mismatched records. Mismatched villages are physically verified by DC, ADC, SDM and Tehsildars and Naib- Tehsildars. On the portal, farmer can schedule the time when he wants to bring the crop for procurement based upon which automatic gate-pass is generated. e-Kharid system of Mandi Board for procurement has been integrated with MFMB via APIs to fetch real time information of registered farmers along with crop and Bank account details. Total 7,72,643 farmers registered themselves with crop area 4456070.19 Acre.

Litigation Management System

<http://lmsry.gov.in>

Litigation Management System provides a robust mechanism for efficiently monitoring the more 4,23,891 court cases in which state government is party. Being the only state in India who have integrated with High Court and subordinate courts for fetching the data for newly instituted cases, court proceeding, online availability of paper books and vetting of cases reply to be filed in court helped state government to reduce COCP cases and monitor the performance of lawyers hired by the state government for pleading. Dashboard Reports for each individual Department Administrator/Branches, SMS and

NIC VC Solution

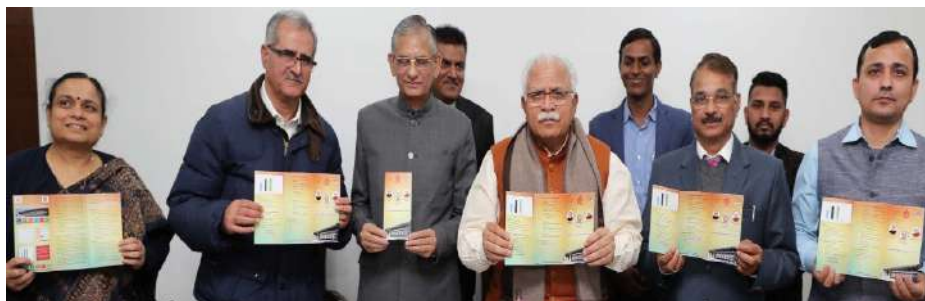
<https://nicmeet.nic.in>



In view of Covid-19, maintaining social distance guidelines and to stay connected during COVID-19 pandemic, the demand for Video based meetings has been raised exponentially. NIC Haryana has developed open source based comprehensive VC Solution for NIC so that dependencies on commercial VC application can be minimized. An in-house product hosted in NIC Domain, nullifies the security and data leakage threats unlike other proprietary VC Solutions. It is completely secure, scalable and easy to use solution. the security and data leakage threats unlike other proprietary VC Solutions. It is completely secure, scalable and easy to use solution.

- Good quality video/audio streaming.
- Require Small infrastructure

- Accommodate up to 100 participants in a single VC
- Registration based user access.
- Personalized Web room for registered users.
- Facility to join Registered Users Web Room.
- Facility to create public/private groups.
- Generation of Guest Link with Secure PIN for Unregistered Users with/without Presentation Rights.
- VC Recording and download.
- SMS and Email Alerts.
- Progressive Web Application (PWA).
- Shared Document Editing through Ether pad.
- Third Party Application Integration facility.
- Live streaming on YouTube.



▲ Hon'ble Chief Minister Sh. Manohar Lal Khattar launching Litigation Management System (LMS) along with Advocate General Haryana Sh. Baldev Raj Mahajan and Chief Secretary, Haryana

email alerts are used for timely filing of reply.

Paperless submission of bills through Integrated Financial Management System (IFM & HRMS)

Haryana government discontinued the submission of Physical Vouchers for salary bills. The DDOs no longer have to visit the treasuries for submission of physical vouchers, receiving EPS Pay orders, going to banks for submission of Pay orders for getting payments. Bills are digitally signed and submitted online to treasuries by the DDOs. Pay orders are also signed digitally and sent to bank online only. The paperless system launched by the state government has ushered a new era in the field of disbursement of salaries through the treasuries. Soon other bills are also expected to do away with Physical Voucher paving way for Paperless Treasuries. 78347 paperless bills of salary were passed from treasuries in month of September

End-to-End Computerization of Targeted Public Distribution System in Haryana

ePDS has been implemented across the State covering for Online Ration Cards Management, Allocation, Supply Chain Management, Ration distribution through PoS devices at FPS using Aadhaar based authentication using both Cash and Cashless (successfully carried out in Ambala and Panchkula on pilot basis) modes. This system caters to more than 1,24,00,000 beneficiaries. Due to digitization of beneficiaries, Haryana was the first state to become Kerosene Free and implement portability of ration card. The computerization of ePDS has resulted in transparency in the System and saving to the state exchequer by carrying out de-duplication of beneficiaries.

Online Medico-Legal Reporting with integration with Forensic/Food/Drug labs and Police (<http://medleaprhry.gov.in>)

The MedLEaPR is a workflow based system, web based centralized system for preparation of MLR/PMR, as per legally approved forms related to MLRs and PMRs, which provides requisite access security based on roles & responsibilities of concerned Doctors, health institutes etc. The software is generic in nature and has been implemented in Haryana, Punjab, Chandigarh(UT), Himachal Pradesh, Rajasthan and Madhya Pradesh. Software also integrate the Forensic laboratories and other laboratories i.e. implemented at FSL, CFSL, Food Lab, Drug Lab, Chemical Lab, Excise Lab etc. to examine the samples pertaining court cases/Police cases. Intimation to all

stakeholders by SMS/Email pertaining to the status of sample is an added feature of this software. It is also integrated with CCTNS and e-Detailed Accident Report (e-DAR) for Motor Accidents Claims Tribunal, New Delhi.

Online Drug Inventory and Supply Chain Management System

<http://dpmuhry.gov.in>

Online Drug Inventory and Supply Chain Management System (ODISCM) is a workflow based system developed to improve efficiency and effectiveness of Procurement system and Distribution System, this system facilitates Centralized order placing, dashboard based online monitoring of all activities at each level, tracking of vendor activities like preparation of Supply Order, Shipment and Monitoring of Drug consumption pattern. This system ensures streamlining the distribution of drugs to institutions and ensures availability of drugs at all times, strengthening the system of Quality Controls, over drugs procurement and distribution according to the new drug policy of Government of Haryana. Dashboard for all concern to monitor and evaluate purpose.

Implementation of the e-Office

State launched e-office system for the electronic movement of files related to 58 government departments major departments / corporations besides the offices of Chief Minister and Chief Secretary. State is now in process of complete rollout in all state government offices by December 25, 2020 which is also celebrated as Good Governance Day.

Accolades

- "Antyodaya Saral Haryana" Project bagged the GOLD Award in the category of 'Excellence in providing Citizen Centric Delivery' in 23rd National Conference on e-Governance organized by the Department of Administrative Reforms and Public Grievances, Government of India (DAR&PG) in Mumbai on February 8, 2020
- The National Award was conferred to District Hisar by the Hon'ble President of India Sh. Ram Nath Kovind at the 10th National Voters' Day celebrations on Saturday, January 25, for IT Initiatives on Best Electoral Reforms during Lok Sabha -2019
- District Hisar was conferred State Award by His Excellency, the Governor of Haryana, Sh Satyadev Narayan Arya, on National Voters' Day celebrations on Saturday, January 25, 2020, in Chandigarh
- NIC-Haryana State Centre received CSI Award of

Appreciation for Progressive State in eGovernance (Haryana State), on 17th January 2020 as part of the 53rd CSI Annual Convention at KiT University, Bhubaneswar, Odisha.

- NIC-Haryana State Centre received CSI Award of Excellence for Litigation Management System, on 17th January 2020 as part of the 53rd CSI Annual Convention at KIIT University, Bhubaneswar, Odisha.
- NIC-Haryana State Centre received CSI Award of Recognition for PMKISAN State Portal, on 17th January 2020 as part of the 53rd CSI Annual Convention at KiT University, Bhubaneswar, Odisha.
- NIC-Haryana State Centre received CSI Award of Appreciation for Component Based Web-HALRIS, on 17th January 2020 as part of the 53rd CSI Annual Convention at KiT University, Bhubaneswar, Odisha.
- NIC-Haryana State Centre received CSI Award of Excellence for Meri Fasal Mera Byora, on 17th January 2020 as part of the 53rd CSI Annual Convention at KiT University, Bhubaneswar, Odisha.
- Business World Digital India Award 2019 for Component based Web-HALRIS in 2019.
- Gem of Digital India Award for e-panchayat in year 2019.
- CSI- NIHILENT e-Governance Award of Excellence for SARAL Haryana in 2019.
- Platinum Award under Web Ratna to District official website of District Kurukshetra- District Category in 2019.
- Awarded Gold Award under CollabDEV Category to NIC District Jind for 'Discussion Board' module for Enhancement of Digital NIC Platform in TechGov Awards 2019.
- Awarded Gold Award under CollabDEV Category to NIC District Hisar for 'Web Service Portal' module for Enhancement of Digital NIC Platform in TechGov Awards 2019.
- Awarded Silver Award under CollabDEV Category to NIC District Kaithal for PAC Process' under 'Project Repository Information System Management (PRISM)' subtrack in TechGov Awards 2019.

Way Forward

Well-tuned with the national vision of Digital India, NIC Haryana State Centre is playing a pivotal role in the making Haryana State impact at the national level. Many path break projects developed in collaboration with state has been adopted at national level and other states. By signing MOU for S3WAAS by the state government with NIC, all the static portals departments/board cooperation will be developed on GIGW 3.0 guidelines. With the establishment of Parivar Pehchan Patra (PPP) platform all the services of the state government will be reconfigured to be delivered through based upon PPP.

For further information, please contact:

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Uttarakhand State

Taking giant strides in e-Governance and delivery of e-services

Edited by **MOHAN DAS VISWAM**

Keeping its pace with the global IT world, NIC Uttarakhand is continuously instrumental in steering ICT in the state, which has left a profound impact in improving lives of people. All such endeavours made achieving significant innovative breakthroughs including the one of fusions of Drona Technology, NKN, and VC, thus making an onsite look and feel interactive virtual review possible of Kedarnath renovation by Sri Narendra Modi, Hon'ble Prime Minister of India and accolades from him.



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Uttarakhand, the land of origin of Ganga and Yamuna, Badrinath and Kedarnath, occupies a special place in the hearts of many people in this country & summons tourists worldwide to its alluring grandeur of natural beauty. Also known as Adobe of Gods, the 'Devbhoomi', Uttarakhand with its majestic, snow clad mountains, lakes and rich plethora of flora and fauna, not only enables one to constantly think about the Himalayas but to behold their pristine magnificence time and again.

- Uttarakhand is 27th state of the Republic of India
- Foundation day 9th Nov 2000
- Capital - Dehradun.
- Population - 101 lakhs (2011 Census)
- Literates - 68.81 lakhs (> 7 years age)
- Boundaries - North - China (Tibet), East - Nepal, North-West - Himachal Pradesh, South - Uttar Pradesh
- Area - 53,483 sq km
- Total Districts - 13
- Distinct geographical regions - High mountain region, Mid-mountain and Terai regions.
- NIC UK - Formal inauguration on 10th Nov 2001 by the then Chief Minister Sri Bhagat Singh Koshyari

ICT Initiatives in the State

e-Mantrimandal - A Green Initiative

<http://emantrimandal.uk.gov.in/>

Paradigm transformation of business in Cabinet meetings of Government of Uttarakhand through a complete workflow based e-Cabinet solution. The system was inaugurated by Sri Trivendra Singh Rawat honourable chief minister of Uttarakhand in Jan 2020.

e-Mantrimandal is part of commitment of my Government of penetrating e-Governance in every sphere of life from apex to grass root levels - Sri Trivendra Singh Rawat, Honourable Chief Minister of Uttarakhand. Officers of NIC and Gopan Department deserve accolades for this creditable job - Sri Om Prakash, IAS, Chief Secretary, Government of Uttarakhand.

- Entirely paper free system
- From setting agenda for meeting to outcomes, MoM, Action Points, Press releases
- ATR by Departments
- Digital Institutional Memory and quick retrieval of cabinet references
- Remote meeting
- e-Mantrimandal meetings Jan-Sep 2020 - 26

Uttarakhand Health Services Dashboard

<http://healthdashboard.uk.gov.in/>

A alert generating tool for disease outbreak and monitoring health of Health Services, this dashboard



I am happy that NIC, Uttarakhand has been the preferred choice of Government in e-Governance projects and appreciate that NIC works in close coordination with the Government. I congratulate NIC in bringing out the highlights of the achievements of my Government. The Government of Uttarakhand is determined to carry forward the Digital India movement of our honourable Prime Minister with full vigour and support in Uttarakhand in the coming years, so that all sections of population are benefitted and Uttarakhand becomes one of the best e-Governed States in the Country.



TRIVENDRA SINGH RAWAT

Hon'ble Chief Minister
Uttarakhand

is the convergence of vital information at a single platform of all those parameters which are significant for maintaining quality health services. Launched by Sri Trivendra Singh Rawat, Honourable Chief Minister of Uttarakhand in March 2018.

- Functional at 200 hospitals
- Daily OPD
- Trend analysis on diseases, geographical entities, age, genders, health institutions
- Patient footfall / Doctors Ratio
- Drugs demand and status
- Blood typewise availability across the state and transaction trends.
- 108 Ambulance Services trend analysis
- No of patients records on portal 58 Lacs

Vehicles Location Tracking Portal

The portal is developed to track movement of



▲ An Uttarakhand Government E-Mantrimala meeting going on - Hon'ble Chief Minister and Ministers



▲ Uttarakhand Health Services Dashboard

public transport vehicles such as bus, taxi etc carrying passenger on Road (Bus, Taxi etc) through VLT devices installed in the Vehicles. Launched by Secretary Transport in Jan 2019.

- Prime objective – Monitoring safety of women
- Emergency alert when passenger presses the button
- Monitoring at Command and Control Centre
- Monitored through a GIS platform.
- Integrated with NERS of GoI.
- Total No of VLTS devices installed in Vehicles 5,000
- Total records received 3 Crores with 2 minutes frequency
- Total No of Alerts received 300

Starbus

Before it became a configurable product, NIC's Starbus software had started its journey long back in 2013 with an advance booking of seats in six long distance Volvo buses of Uttarakhand Transport Corporation – UTC. Already operational in Uttarakhand and Arunachal Pradesh, being replicated in Chandigarh, J & K, Sikkim, Meghalaya & Andaman and Nicobar targeting to replicate in NE states by Jan 2020.

- Online and Counter Booking of Seats both Advance and Current
- Passes Management - School children, Freedom Fighters, Journalists etc
- Fleet and crew management
- Route optimization, Data Analytics of occupancy in bus services in lean period.
- Tracking of Bus
- Customer feedback analysis

▼ Starbus of NIC Uttarakhand



- DBT for concessional travel
- Mobile Apps for Traveller, Conductor, Checking / Travelling Inspector.
- No of Tickets Booked Online 4.0 Lakhs
- Revenue earned Rs 34.60 Crores
- No of Passes Issued 15,000

e-Office

Implemented at Sachivalaya, Urban Development Directorate, Dehraun and US Nagar district, e-Office is a Generic office automation suite which can completely replace the manual systems in Govt offices at all levels and locations. The salient feature of the suite is the e-File component, by which Physical files are replaced with Electronic files which are then transmitted electronically from one Section to Another, with work flow process. The MIS component enables monitoring of file movement and pendency at different levels and officers in integrated mode.

- Total No of Offices covered 26
- Launched by Chief Minister In the months of Jan 2020

Uttarakhand Chardam Devasthanam Board Chardham Yatra Portal

Integrated Portal and Automation for better management and bringing transparency for Kedarnath, Badrinath and other pilgrimage & religious places.

- Online Puja Booking, Online Donation
- Online Accommodation booking
- Money Counting Modules

▼ Sri Trivendra Singh Rawat Honourable Chief Minister inaugurating e-Office in Secretariat Uttarakhand



- Total No of Bookings 3020 Nos
- Total Revenue Earned Rs 96 Lakhs
- Total Yatra e-Pass issued from Jul'20 20,000 Nos
- Launched by Chief Minister in Feb 2020

Helicopter Services Portal Kedarnath

<https://heliservices.uk.gov.in/>

The portal facilitates pilgrims to book Online Seats, with Payment Gateway Interface from any of the three Base Stations of Phata, GuptaKashi or Sirsi to Kedarnath and return. Downloadable e-Ticket are produced at base stations on the date of visit. Pilgrims can choose return date on same day of travel or on next day, as per Business rules of Civil Aviation authorities.

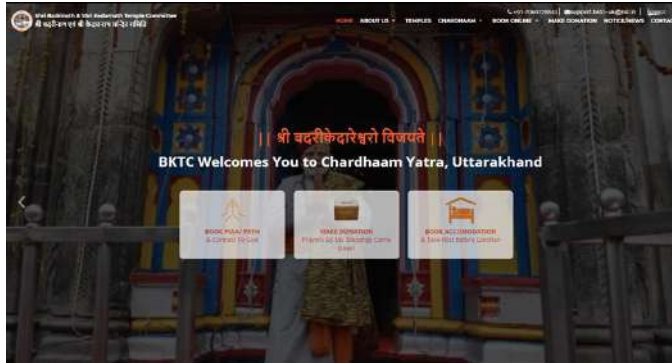
- Sold Tickets 15,500
- Revenue earned Rs. 26 Crores (May-Oct '19)

School Education Portal

<https://schooleducation.uk.gov.in/>

The portal is designed to bring all stakeholders of School education in a single platform viz Teachers, Students, Administrators and citizens. The portal has modules for Categorization of Schools, Service profile of teachers & their extension, Teacher Transfers, Student enrolment, School Inspections, Rupantran etc. It has GIS features and Analytical reports of students like enrolment, marks obtained etc which are linked to Teachers performance.

- Coverage No of Govt Schools Around 22,000
- No of Teachers Around 70,000



▲ Uttarakhand Chardham Devasthanam Board Chardham Yatra Portal



▲ Helicopter Services Portal

- Launched by Minister for School Education in the month of Nov 2017

Integrated Ecotourism Portal

<https://www.corbettonline.uk.gov.in/>

Corbett Tiger Reserve is a popular Wild life sanctuary, visited by thousands of tourists every year. The portal provides tourists online bookings for roaming Jungle Safari, Night Stay, etc.

- Advance bookings for Jungle safari, Night Stay, Zoo Entry
- Payment Gateway
- The portal is being replicated in Rajaji Tiger Reserve.
- Bookings - 48, 405 and Revenue earned Rs 9.43 Crores (May'19 - Mar'20)
- Apr 2019 Ver 2.0 launched by PCCF and HoFF Uttarakhand

e-Granthalaya <https://eg4.nic.in/ukhd/>

Implemented in all 109 degree colleges in the state, automating Government Libraries, portal facilitates storing and disseminating digital library like e-Books, e-Journals and e-Publications. Book-Titles - 12,000, Books- 50,000. Launched by Chief Minister in the month of Jul 2020

Drinking Water & Sanitation

World Bank funded Drinking Water Project is being implemented in 30 Peri-Urban areas. The MIS portal enables Government and World Bank to monitor status of progress made with KPIs identified by World Bank. It has 10 Modules to monitor progress all

integrated under in portal. Launched by Chief Minister Mar 2020

Pragati Portal – Survey of India

An integrated portal to monitor the performance of all the projects of Survey of India across all the locations. Progress through this system can be monitored in terms of physical and financial aspects.

Other Key Initiatives in the State COVID19

- Integrated COVID19 health and medical care portal launched by honourable Chief Minister in Apr 2020
- Home isolation mobile app and module for keeping track of health of covid19 patients through online entries by caretakers
- Fever Clinics Computerisation – Analytics of all kind of fevers from 900 hospitals across the state and keeping track of patients
- Surveillance module for ASHA door to door proactive health survey at village land ward level
- Daily state health bulletin and dashboard
- COVID19 Test results mobile app and module
- Tele-Medicine interaction between doctors and home isolation patients
- IPD Patients movement to Private Hospitals
- Realtime Covid hospitals bed-occupancy and availability module
- Realtime Covid hospitals oxygen availability module
- GIS Portal Disaster Management Authority for monitoring movement of migrants to Uttarakhand. <http://covid19usdma.uk.gov.in/>

Portal for Online registration of Citizen Volun-

teer Force in fight against Covid <https://covid19cso.uk.gov.in/>

HOPE (Helping Out People Everywhere) - <https://hope.uk.gov.in/> - launched by honourable Chief Minister a platform for COVID19 migrants job seekers to register online according to skill sets acquired by them. Employers also register themselves for skilled manpower.

Portal for Chief Minister Relief Fund <https://cmrf.uk.gov.in>

E-Learning Portal to simulate class room experience for Govt School students - Teachers uploaded Videos & hand written text for study by students 1500 contents uploaded 32000 downloads in portal <https://www.educationportal.uk.gov.in>

PMKAY - Pradhan Mantri Garib Kalyan Yojana - Online alerts and distribution of food grains during COVID19 lockdown and after

Aarogya Setu Mobile for Covid 19 Contact Tracing Health, RAT and RTPCR tests

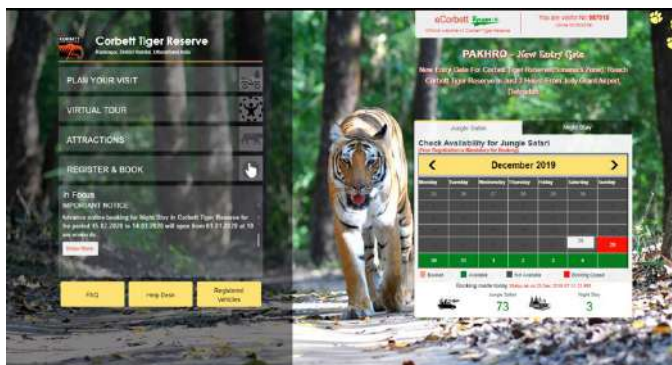
E-Mulakat - Electronic interaction between Jail Inmates and their relatives

E-Vidhan Sabha for conducting virtual Assembly Session in Sep 2020

Mini Cloud for GoUK

<https://ukstatecloud.nic.in/>

Launched by Sri Ravi Shankar Prasad, Honourable Union minister for Electronics and Information Technology GoI in the month of Sep 2018. Mini Cloud is extending Cloud Services to government offices Total - vCPU 192, VMs used 160, Disk Space - 20 TB.



▲ Integrated Ecotourism Portal



▲ Uttarakhand Covid 19 Portal



▲ Sri Ravi Shankar Prasad, Honourable Minister Electronics & IT being received by Sri K Narayanan SIO & DDG

English), built in Cyber security audit clearance Launched by honourable Chief Minister in May 2018

Uttarakhand MyGov

In order to have citizens, participation, interaction and collaboration Mygov was rolled out for Uttarakhand. Interested Citizens can provide their suggestions and scope for working together with Government. No of Registered Members 5,740 Launched by Chief Minister in the month of Feb 2020

National Projects

Various national projects and services have also successfully been implemented which include Public Distribution System, Transport –Vahan and Sarathi, e-Hospital, e-Courts in Districts and High Court, ICJS-Integrated Crime Judicial System, e-Procurement, e-Office, National Seed Certification, Jeevan Praman, Electronic Soil Health Card, e-Prisons, e-Gram Swaraj, Panchayat Enterprise Suite, SPARROW, NKN, VC etc.

Accolades

- Chief Minister Good Governance and Excellence in Public Services Award conferred during Republic Day Parade 2019 by HE the Governor to Sh A K Dadhichi and Sh Arun Sharma for contribution in Health Services.
- National e-Governance Gold Award – Conferred to Sh Manoj Joshi by Honourable Minister of State, Administrative Reforms, GoI during National Conference on e-Governance 2019-20 for Drone based monitoring of Redevelopment works at Kedarnath.
- Election Commission of India Best Electoral Practices Award conferred by HE the Governor on National Voters Day 2020 to Sh A K Dadhichi, Sh A K Arya, Sh Manish Jugran for real time tracking of poll personnel using GIS
- Award for building Badrinath-Kedarnath Portal conferred by honourable CM in 2019 to Sh K Narayanan, Sh Arun Sharma and Ms Rachna Shah.
- Digital Transformation Award to Ms Shivani Gothi conferred by "Governance Now" for building a preference based Online System to automate Transfer process in 2019

Way Forward

Road to Reforms – NIC in Uttarakhand has touched every significant sphere of life. In days to come the least plan is to extend coverage of e-Office vertically and horizontally as part of administrative reforms, Unified e-Meeting portal for all offices of Government to make meetings paper-less at all offices of Government of Uttarakhand, Intranet of government offices with MIS systems and much more in times to come.

For further information, please contact:

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e-Khareed

<https://ekhareedfcs.uk.gov.in>

A system to monitor and manage online wheat and paddy procurement from local farmers at MSP to store and distribute them to beneficiaries under various welfare schemes. The portal has MIS to monitor activities at various levels. No of Farmers Registered 4,635 Quantity of Wheat Procured 388078 Quintal

Online Audit Management System

<http://eaudit.uk.gov.in>

Enables online monitoring and management of audit reports and activities undertaken by departments to comply with objections raised in audit reports real time. Total Audit Memos Created 5269, Audit Paras Created 3778, Draft Report created 847 Launched by Finance Minister in the month of Mar 2019

Lok Sabha-Election-2019 Poll Parties and EVM Tracking

Movement monitoring of poll officials and EVMs before, during and after the poll process, this system is based on Mobile GPS Technology. An App installed in Mobile phones transmits location parameters (Lat & Long) periodically to Central portal. Which monitored Tables and Pictorial GIS at State and District Control Rooms. No of Polling Personnel and EVM tracked 11,000

CM Vivekadhin Kosh

<http://cmvivekadhin.uk.gov.in/>

The portal is developed to receive applications, process and transfer money to needy citizens who approach office of CM seeking assistance for Health, Education etc. Number of Applications 1.6 Lakhs, sanctioned 1.45 Lakhs with amount Rs. 148 Crores.

Social Welfare Project

Direct Benefit Transfer under National Scholarship Portal (NSP) other Social Welfare Schemes under Minority Welfare have been implemented and running in the state.

GIS based Property Circle Rates

<http://eregistration.uk.gov.in/GIS/MapClient.aspx>

The portal integrates textual data of circle rates of properties in entire Uttarakhand with GIS through Bharat Map services of NIC. It enables citizens to view rates of properties on maps and facilitates search for rate on Map of Uttarakhand, by drilling down to a section of a road. Total road segments mapped 1.45 Lakhs Launched by Finance Minister in Jan 2019

SWaaS

<https://uttarakhand.s3waas.gov.in/>

All 13 District websites are now on SWaaS CMS framework which is Secure, Standard and Scalable. Updations by users themselves is GIGW compliant with Contemporary look & feel, responsive interface with search, bilingual support (Local language,



▲ ECI Best Electoral Practices Award Winners with Smt Baby Rani Maurya HE the Governor

Digidhan Dashboard

Dashboard for monitoring Digital Payments

Edited by **MOHAN DAS VISWAM**

Digidhan Dashboard enables accurate reporting, monitoring and analysis of various modes of digital payments and transactions across the country. It provides a consolidated view of 16 digital payment modes such as Unified Payment Interface (UPI), Immediate Payment Service (IMPS), Debit Card, Credit Card etc. from RBI, National Payment Corporation of India (NPCI) and 110 banks, 100 Smart Cities, States and Ministries.

The Digidhan Dashboard is launched to help government in monitoring the total digital transactions across various modes on a single platform and to promote digital payments and digital infrastructure for development of a cashless economy. The Digidhan Dashboard is the only dashboard which provides a consolidated view of 16 digital payment modes such as Unified Payment Interface (UPI), Immediate Payment Service (IMPS), Debit Card, Credit Card etc. from RBI, National Payment Corporation of India (NPCI) and 110 banks, 100 Smart Cities, State and Ministries.

Digidhan Dashboard serves many government organizations including

- Prime Minister's Office (PMO)
- MeitY
- Reserve Bank of India (RBI)
- National Payments Corporation of India (NPCI)
- 110 banks (public sector banks, private sector banks, payments banks, regional rural banks and foreign banks)
- Ministries such as Ministry of Railways, Ministry of Civil Aviation, Ministry of Road and Transport, Ministry of Petroleum and Natural Gas, Ministry of Power, Ministry of Housing and Urban Affairs (MoHUA)
- Departments such as Department of Posts, Department of Telecom, Department of Power, Department of Financial Services
- Smart City Corporations

Features of the Product

The Digidhan Dashboard has following key features:

- Monitors digital payment transactions across 16 payment modes
- Evaluates performance of banks based on KPIs and identify the performance of top and bottom performing banks
- Provides State-wise distribution of digital payments transactions on per capita basis
- Generates Business Intelligence driven data analysis such as:
 - Digital Payment Transactions Analysis for different Banks
 - Digital Payment Transactions Analysis for different Ministries
 - Transaction and Decline Analysis for BHIM
 - Aadhaar and Mobile Seeding Analysis
 - Bharat Bill Payment System (BBPS) Transaction Analysis



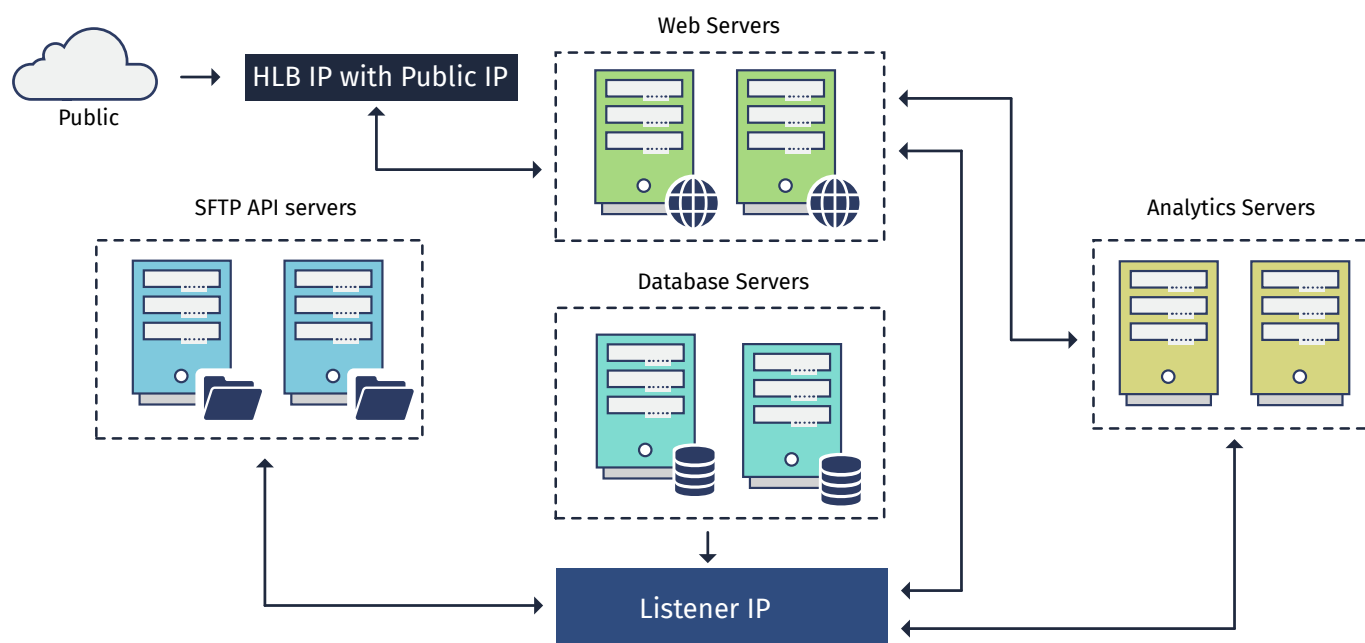
- Closed loop Transaction Analysis
- POS Deployment Analysis and POS Correlation Analysis
- Evaluate performance of banks through Composite Scorecard
- Track POS & BHIM Aadhaar deployed
- Track Mobile/Aadhaar seedings to bank account
- Generates bank specific reports corresponding to other payment modes specific to bank
- Consolidates Digital Payment transactions data from city corporations/ ministries of 100 Smart-Cities and generate performance comparison reports
- Separate associated Dashboards for Smart City, State and Ministry



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▲ Architecture Diagram

Digidhan Mitra Chatbot



Chatbot is launched to proactively handle user queries in real-time and help in faster processing of user queries, leading to saving of the resource time. The Chatbot supports multiple language such as English, and Hindi and can respond to user queries through text, bar graphs and charts and can perform voice recognition in English and Hindi.

Technologies Used

The Technology Stack used for Digidhan Dashboard is as follows:

- Power BI

- C# programming language
- Microsoft .NET Framework 4.5
- SQL Server 2012
- 8 no. of Virtual Machines (VMs):
 - **Processor:** AMD Opteron (TM) Processor 6272 with 2.10 GHz (8 processor)
 - **RAM:** 32.0 GB
 - **System Type:** 64-bit OS

Benefits

- Digidhan Dashboard consolidates the data for 16 digital payment modes from 110 banks (public sector banks, private sector banks, payments banks, regional rural banks and foreign banks), RBI, NPCI,

City Corporations of 100 Smart Cities, States and Ministries.

- Digidhan Dashboard reports POS Deployment Statistics as well as Aadhaar & Mobile Seeding Accounts Statistics
- The Dashboard displays BI Analysis Reports to the various stakeholders for analysis of Digital Payment Transactions for various modes

Way Forward

In future, Digidhan & associated Dashboards will keep evolving through the incorporation of latest technologies and features such as:

- **Predictive Analytics:** Predict payment modes through which maximum transactions will be generated next year
- **Machine Learning:** Improve Chatbot for enhancing user support, refine search results and transaction file processing
- **Integration with NIC Bharat Maps Application:** Enable further drill down into district and smaller level regions with data visualization

▼ Bank Performance Score Card (Illustrative Reference)

Admin							
Date: 28/02/2018		View					
Sl #	Bank Name	% Digital Transactions Achievement	% of DDM Aadhaar PoS Deployed	Missing Instance of Data	% of Technical Declines	Overall Score	Bank's Performance Categorisation
1	ALLAHABAD BANK	33.52%	0.00%	1	3.69%	43.00	Unsatisfactory
2	ANDHRA BANK	42.22%	0.00%	9	2.80%	48.00	Average
3	AXIS BANK	72.60%	0.00%	9	0.02%	70.00	Good
4	BANDHAN BANK	276.68%	0.00%	1	0.00%	72.00	Good
5	BANK OF BARODA	22.07%	0.00%	62	4.27%	40.00	Unsatisfactory
6	BANK OF INDIA	43.78%	0.00%	54	1.41%	34.00	Unsatisfactory
7	BANK OF MAHARASHTRA	14.34%	0.00%	11	2.16%	19.00	Unsatisfactory
8	CENTRAL BANK OF INDIA	23.60%	0.00%	9	1.22%	39.00	Unsatisfactory
9	CANARA BANK	36.55%	0.00%	0	0.56%	56.00	Average
10	CORPORATION BANK	27.52%	0.00%	9	5.50%	29.00	Unsatisfactory
11	CITY UNION BANK	28.58%	0.00%	11	1.34%	29.00	Unsatisfactory
12	DENA BANK	7.77%	0.00%	18	2.13%	29.00	Unsatisfactory

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Ease of Doing Business in Assam

Making life easier for the citizen

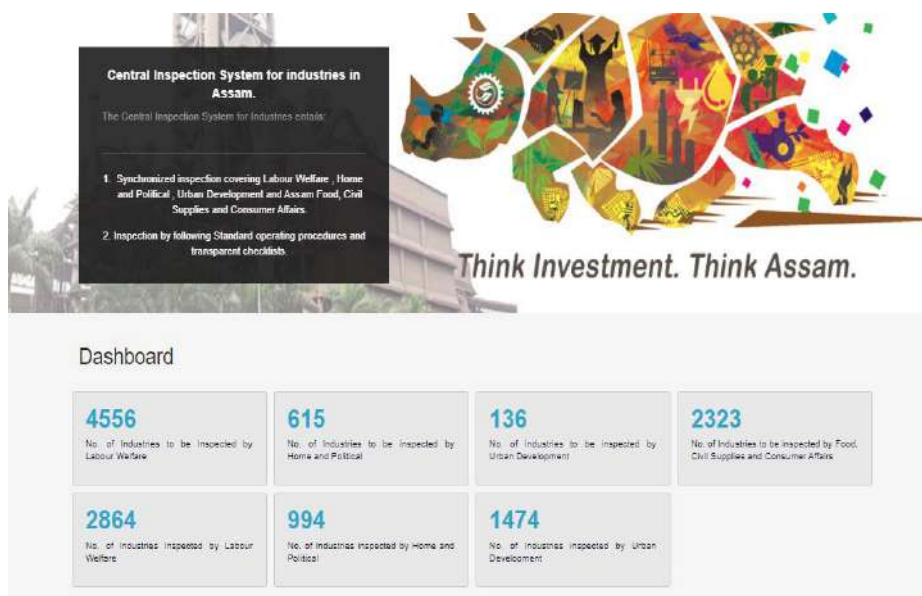
The EODB platform <https://eodb.assam.gov.in> was developed using the Open, Secure and Scalable Framework – ServicePlus, to facilitate for filing, management and tracking of all necessary clearances, approvals, registrations and renewals under various State enactments. The Single Window Interface for EoDB reduced the interface with Governmental agencies and the cost of doing business. It was launched on 17th June 2019. 19 departments with 37 sub-departments have gone live with 275 plus services.

Assam Ease of Doing Business Act 2016 was passed by the Government under which a Single Window Agency has been established for e-filing, management and tracking of all necessary clearances, approvals, registrations and renewals under various State enactments. A portal <https://easeofdoingbusinessinassam.in> was developed by a third-party which had many challenges. Department of Industries and Commerce had discussions with NIC in December 2018 for NIC to take over the 'Ease of Doing Business (EoDB) portal' for the Govt. of Assam.

Migration of EoDB services to the new EoDB portal began in June 2019 and 19 departments with 37 sub-departments have gone live with 275 plus services. During this process several interactions with departments, user acceptance and testing and trainings were imparted to the departments and their subordinate organisations.

Salient features

- **Portal for EoDB created:** The portal created for Ease of Doing Business is <https://eodb.assam.gov.in>
- **UBIN Number:** With a view to facilitate the businessmen in obtaining various approvals/Registrations/Licences etc from the department to set up business in the state, Government of Assam has authorised Single Window Agency to introduce a Unique Business Identification Number (UBIN). This UBIN is obtained by registering in the portal <https://eodb.assam.gov.in> through one common application form (CAF) available in the portal.
- **Reform Agenda of DIPP** has been followed
- **Service design:** All the services have been designed and developed by Service Plus, a meta-data-based, single, unified configurable service delivery framework. It enables a single delivery portal for the citizen to access information about any service provided by the government.
- **Integration with Payments, Digital Signature:** To facilitate secure digital payments while availing services eGRAS (Online Government Receipts Accounting System) has been integrated for online service delivery.
- **SMS gateway and email integration:** SMS gateway and email have been integrated for delivering alerts and acknowledgements.
- **Skill and Capacity building:** Capacity building and skill development are of utmost importance, since this would make Government officials better equipped for service delivery.
- **Application Tracking feature available:** Users can track their application without logging into the portal
- **Processing History:** Officials can view the processing history of an application once it has been processed by them
- **Services are listed for easy access**
- **Requirements for each service is clearly listed** so citizen can have everything ready before applying
- **User Manual on how to apply for the services** are available for citizens
- **Downloadable forms** are available for ease of citizens and entrepreneurs.
- **Acts, Rules, OMs, Notifications** available for view



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▲ EoDB Dashboard



▲ EoDB Portal

and download

- A Dashboard for department heads is under development
- MIS for taking decisive actions is also under development.
- **Central Inspection System Module:** A centralized inspection module currently also under development for carrying out common inspections by inspectors of a few departments

Technologies Used

The EODB platform <https://eodb.assam.gov.in> was developed using

- ServicePlus framework, which is on open source stack (Java, PostgreSQL, Linux)
- Codeigniter, MongoDB (dashboard, MIS, Central Inspection Module)
- HTML/ JQuery/ JavaScript, Bootstrap used for front-end

Strategic areas in the service life cycle of EoDB

The important areas under each stage of the service journey are highlighted in above Figure 1.

Pre-Phase service identification: For better identification of the needs of the citizen the services are first identified.

tification of the needs of the citizen the services are first identified.

Service Development: The services are configured and designed by NIC

Service Implementation UAT/ Demo of service is done by NIC.

UAT Department representatives participate. Feedback communicated by the concerned department to NIC. NIC incorporates changes as per feedback. Service is tested once again by Department. Training for department officials (Master Trainers) is conducted by NIC.

Service Support: For fruitful monitoring of the services of EoDB a Dashboard for departments has been under development where alerts for the Heads of Departments are generated. Reports are available to see the pendency status of the services. A Help

Desk is also in place and training has been imparted to help desk manpower by NIC. Skill and capability building: Strengthening the skills of the people behind service delivery will help them to perform better. This in turn will translate to better efficiency in service delivery mechanism. Continuous capability building is therefore a must.

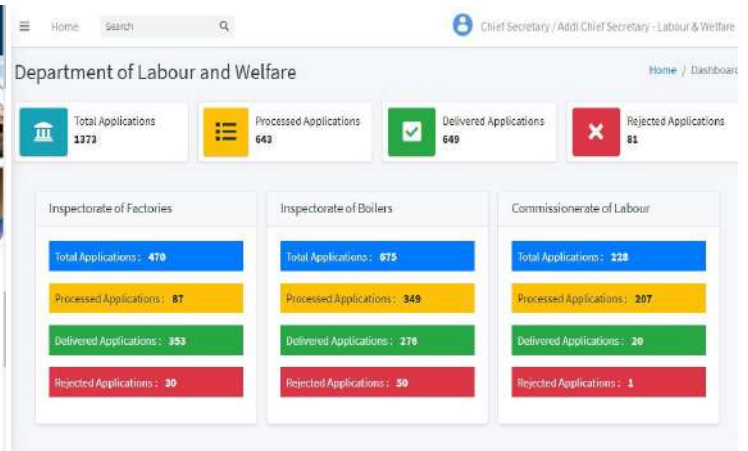
Conclusion

The thrust by the Government of Assam for a Single Service Delivery Platform to implement Ease of Doing Business is an important step that will support to facilitate for filing, management and tracking of all necessary clearances, approvals, registrations and renewals under various State enactments.

This will also bring in effective program monitoring, management and supervision with the readily available information for Government decision makers at one point. The measures taken at the State level will prove to be more effective when combined with the strategic initiatives taken at the National level viz. Digital Service Standards (DSS), NeSDA, UMANG (Unified Mobile Application for New-Age Governance), DigiLocker. Improved access to information and services will provide economic and social development opportunities.

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▲ EoDB CIS Module (1)

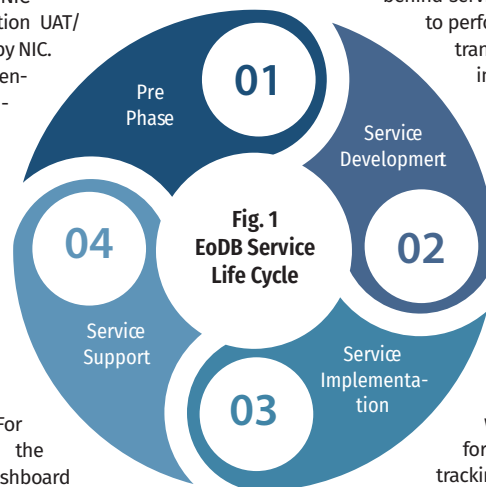


Fig. 1
EoDB Service
Life Cycle

▼ EoDB CIS Module (2)

Appel Ref No	USIN No	Enterprise Name	Submission Date	Approval Date	Task	Action
DF-AFL/2019/00602	DF-AFL/2019/00602		Nov 20th, 2019	May 27th, 2020	Approving Authority - CFI(A003054)	
DF-AFL/2019/00023	A45114/AARF02019/00023		Nov 28th, 2019	Nov 28th, 2019	Approving Authority - CFI(A003054)	
DFPRL/2019/00182	A430902/AARF0218M/02/2019	ECOSOLD PIPE INDUSTRIES LLP	Sep 10th, 2019	Sep 12th, 2019	Approving Authority - CFI(A003054)	
AR02/2020/00004	LR02/P1/B5/00005/02/2019	THERMAX LTD	Jul 14th, 2020	Jul 23rd, 2020	CIS Task(A003086)	
DFPRL/2019/00305	A432743/AARF02019/00305	LUKMAN TEA ESTATE	Oct 4th, 2019	Mar 3rd, 2020	Approving Authority - CFI(A003054)	

Tirunelveli District

Where district administration reinforced by ICT

Tirunelveli District is one of the oldest districts in Tamil Nadu which is always prominent for its richness in Administration. It is also named as "Oxford of South India" due its large number of educational institutions. Though the District Administration is always succeeding in traditional way of administration but never hesitate to embrace ICT technologies which benefit the common people ultimately.

NIC Tirunelveli District Unit was established in August 1988. From then, with the active support of District Administration, this office is always able to come out with many innovative e-Governance projects, products and services which are first of its kind in the entire State.

ICT Initiatives in the District

CSC-Nellai - G2C Mobile App

Common Service Centres are the gate way to avail ONLINE Services from Government Departments. Public are not aware the availability of CSCs in their locality. To avoid this, a mobile application was developed, which is christened as "CSC Nellai", where 'Nellai' is the pet name of the District. This Mobile App was launched on 17th September 2018.

It has the following features:

- Spatial and non-spatial parameters of all 383 CSCs are embedded in the App itself in SQL-Lite mobile database
- Interactive Open Street Map was used as base layer
- Geographical aerial distances can be calculated
- User may make a direct 2G based voice call to the centre
- Locations of all CSCs can be viewed for a given radial distances and selected service category

GIS based Polling Stations Monitoring System

During the general election in 2019, to monitor all 2,979 polling stations, an innovative and first of its kind GIS based Software "General Election – 2019: Tirunelveli", was developed. Project was a joint venture by NIC and Tirunelveli District Administration.



It gives me great pleasure to inform that NIC, Tirunelveli District Unit plays a vital role for spreading IT culture in the District. "CSC-Nellai", 'Election-2019 : TIRUNELVELI' and "Video Conference based Public Grievances weekly meeting" are some of the innovative products and services of NIC which are first of its kind in the State. Further I wish to share that GIS based polling stations monitoring system has brought '3rd Digital Transformation National Award' and "Best Practice - IT initiatives Award" to this District. I appreciate the active technical support of NIC and wish for the continuous and innovative performances in future too



SHILPA PRABHAKAR SATISH IAS
District Collector / Magistrate
Tirunelveli District

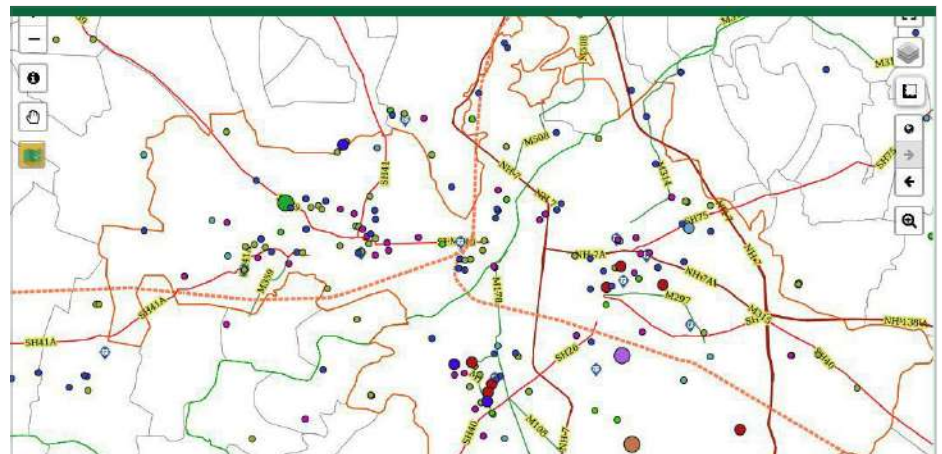


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▼ Locations of Polling stations with village boundaries





▲ Smt. Shilpa Prabhakar Satish I.A.S., District Collector has conducted public grievances meeting through NIC supported Video Conference facility

- Following initial steps have been taken:
- “Open-Street Maps” was kept as base layer
 - All 616 Village polygons are mapped in to its corresponding Assembly Segment.
 - Spatial data like Latitude and Longitude values and non-spatial data like voter's detail, vulnerability status, availability amenities etc., were fed
 - Map layers like Fire Stations, Railway Lines, Road Transport, Police Stations was integrated
 - The users can view any PS by zooming up to a hamlet level

Using this GIS Application the following maps are generated:

- Parliamentary maps and Assembly maps of all 2,979 Polling Stations
- It is also supported to generate the dynamic map outputs based on various spatial and non-spatial queries

- For example, dynamic maps can be generated based on the number of PS located in a single location, with location of PS based on their vulnerable or sensitive status, based on number of voters etc.,

COVID-19 : Weekly Public Grievances Meeting through Video Conference

District Administration was not able to conduct weekly Public Grievances meeting due to COVID-19. But with the technical support extended by NIC Tirunelveli, weekly GDP meeting is being conducted through Video Conference from 03-08-2020 onward. NIC extended its support for initiation of the web meeting, managing the virtual queue on every week. This idea was attracted the attention of local media and accepted well by all.

▼ District Collector, DIO and ADIO of Tirunelveli receiving the 3rd Digital Transformation National Award



Other Key Initiatives

Pensioners Legacy Data capturing

In order to capture pensioner data and legacy data for Tamil Nadu State Government Pensioners ONLINE database, software was designed and implemented in all Districts of the State. By using this, nearly 4 lakh plus numbers of pensioner legacy data was successfully migrated.

Heat Map / Thermal Map for COVID-19

COVID-19 Thermal Map was generated based on corona patient's residential geo-location details. The map was generated using data visualisation technique of GIS and the same is published in District Web site periodically.

Other Major Projects Accomplishment

- Support for PM-KISAN Scheme through which District Administration is able to send Rs. 66.41 Crore to 3.16 lakh of farmers
- Support for Tamil-NILAM Rural and Urban Modules
- Support for OAP Back Office Applications for the benefits of 77,000 plus beneficiaries
- Support for CMUPT Back Office Applications for 51,000 plus number of Farmers
- 250 plus High Definition Video Conference services annually

Video Conferences of Hon'ble Prime Minister of India

Multipoint web based HD VC session was held for the interaction of Hon'ble Prime Minister of India from New Delhi, the President of Russian Federation from Russia, Hon'ble Chief Minister of Tamil Nadu from Chennai with Kudam Kulam Nuclear Power Polan (KKNPP) for

- dedication of Unit – I to the nation on 10/08/2016
- dedication of Unit – II to the nation and inauguration of the foundation work of Unit-III and Unit-IV on 15/10/2016

Awards

Tirunelveli District Administration has received “3rd Digital Transformation National Award” on 6th November, 2019 during a function held at New Delhi for the innovative use of GIS for General Election.

Way Forward

All these are possible because of mutual support and coordination extended by District Administration. DIO, ADIO and FMS engineers have received “Commendation Certificates” from District Collector for the technical support extended and these Awards boost us further to achieve more.

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Digital Village Harisal

Digital way of Tribal Development

Technology enablement activities took a big leap at Harisal village from March 2016. Since then, several organizations have partnered in the initiatives to address gaps in the progressive path. Many more joined the path of transformation from mere digital technologies to smart technologies. Technology clubbed with modern infrastructural establishment augmented the transformation of Harisal into an ideal village. This strengthened the capacity building of the community to initiate other projects facilitating self-employment.

Harisal village is a part of Melghat region of Satpuda Mountain range, remotely located, forest area and inhabited by Korku tribal community. This region is also infamous for higher prevalence of malnutrition, infant and maternal mortality rates. The region is administratively difficult due to lack of road, power, mobile connectivity and meagre public infrastructure. Digital Village Harisal Programme is an initiative of Chief Minister Office for Development of Melghat region and providing online services to the citizens of Harisal. Programme being implemented by Government of Maharashtra in collaboration with Microsoft, HP, NIC, TCS, BSNL and other Organizations to provide Health, Education, Agriculture and other services.

Under Digital Village Harisal Programme following services are being provided:

- Health care- Telemedicine, Eye Care
- Education- Digital Classroom, e-Learning
- Citizen Centric Services- ASSK
- Agriculture Services- Training, Weather, Market related advice
- Mobile and Internet Connectivity- Wi-Fi
- Public Distribution System- ePDS and Smart card
- Banking Services- Mobile Banking, Digital Payment
- Skill Development- Dress Designing, ICT
- Access to various Government Programmes

Implementation of Projects

Technology enablement activities took a big leap at Harisal village from March 2016. Since then, several organizations have partnered in the initiatives to address gaps in the progressive path. Many more joined the path of transformation from mere digital technologies to smart technologies. Technology clubbed with modern infrastructural establishment augmented the transformation of Harisal into an ideal village. This strengthened the capacity building of the community to initiate other projects facilitating self-employment. Many ICT intensive projects are being implemented by various departments and agencies with an active support of NIC. Following are some of them:

Health care: Telemedicine

Telemedicine is to delivery of Hospitals where distance is a critical factor by all healthcare professionals, using information and communication technologies for the exchange of valid information for diagnosis, treatment and prevention of disease and injuries. HP Enterprise India Ltd. deployed eHealth

Centre (eHC) at PHC, Harisal for telemedicine with other Health services equipped with all necessary medical instruments.

The Telemedicine facility installed in the village is operational three days a week. Patients can avail of advanced healthcare from specialists in urology, pediatrics, gynecology, plastic surgery, psychiatry etc. Backend operation has also been ensured by connecting with doctors across three district hospitals in Amravati.

About 438 sessions of Telemedicine have been conducted so far reaching over 1205 patients in Harisal and surrounding villages.

Health: Eye care

To address the high rates of eye problems in the region, L.V. Prasad Eye Hospital has set up a facility and has trained technicians. A new building is built as an exclusive eye centre with advanced Eye care equipments.

An ophthalmologist conducts outpatient eye-care every wednesday at the PHC which, being bazaar day, is attended by a number of people. In addition, five eye camps, which have reached over 990 people, were conducted in the facility. Special camps were conducted for students of 29 schools and 3115 students were examined for eye problems.

Education: Digital Classroom

HP Enterprise Limited provided Digital classroom solutions that support learner centric pedagogies, integrated curriculum and multiple assessment approach. It allows for an interactive and stimulating learning experience through collaborative and personal learning settings in virtual and physical learning spaces. HPE installed Container with 16 Desktops and all ICT equipments at ZP school Harisal to provide ICT training to youth and Students of Harisal village.

Dayalbagh Educational Institute, a vocational training partner has initiated an IT education course in the Digital classroom. The classes are conducted three days a week in the mornings from 8 to 10 am and are currently attended by 20 students. Currently Tally Course of 15 students is being conducted.

Education: e-learning

Technology is changing the face of education in Harisal. Anganwadis and schools alike are enabled with Computers that allow for computer-aided classes with content provided by Chaitanya Technologies. In two Anganwadis, pre-primary educational material such as nursery rhymes and times tables are delivered to children through video content in both English and Marathi. Anganwadi workers say that the video content is attractive to the children and has helped with attendance and retention.

In one ZP school and two ashram schools, prima-



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▲ Digital Village Harisal Logo



▲ Tele-Medicine Session with Super Speciality Hospital

ry and secondary instruction is aided through video content that has both instruction and practice exercises. Children were seen engaging with the content by reading sentences aloud and solving math problems. Chaitanya Technologies has also provided each school with five tablets each to promote e-Learning. 54 Aganwadi students and 665 ZP school students are benefited from e-Learning.

Connectivity: Internet and Mobile

Internet Connectivity is provided by BSNL and Air Jaldi. Connectivity is now being provided to entire village through Wi-Fi by means of four hotspot devices located at strategic points. Internet usage has been steadily increasing as the purchase of smart phones and the use of internet services. Examples include people submitting online job applications and using internet banking, particularly during the peak of demonetization.

The Indus tower provides connectivity to the Idea network. This is the first reliable telecom provision in the village since the previous Reliance tower was often shut down. The tower is since benefiting Harisal as well as surrounding villages which fall within its range.

Agriculture Service

In Agriculture two Technical partners namely m-Krishi by Tata Consultancy Services and Virtual Agri Services are working in the village.

TCS Trained 39 farmers for sericulture produc-

tion. VAS has also conducted multiple visits and has conducted needs assessments with farmers. They trained the farmers in partnership with KVIC. 50 Women's have been trained for Self help group procedure and methodologies.

Kisan Suvidha mobile App having unique features like extreme weather alerts and market prices of commodity have been added to empower farmers in the best possible manner. Farmers and youth of Harisal village are trained for the Kisan Suvidha and AgriMarket. Installed the apps and being used by Farmers.

Efforts are being made to initiate poultry farming with the tribal department and beekeeping. Infrastructural improvements are also being pursued in partnership with the Project Office, Dharni for better fencing against wild animals etc.

e-Governance: Common Citizen Services Centre

The launch of Internet has enabled the creation of a Common Citizen Services Centre in the village which can cater 5-10 villages in the surrounding vicinity. About 40 common citizen services are including RoR, Age and Nationality, Caste, land permits, birth and death certificates, ration cards etc. are now enabled through the centre in the village itself, saving on a travel of 30-50 km to the district office in Amravati. Aadhar enrolment is also available at the centre now which has reached a lot of people. About 9865 documents are delivered through Common Citizen

Services Centre Harisal. Citizen centric services are being provided through ASSK centers under e-District Project using Digital Signature Certificate and Gram Panchayat through Service Plus system.

Skill Development

Skill development is being done under Maha-Kausalya Project of Maharashtra Government for the local females for Dress Designing and other course. Various initiatives have been undertaken in skilling such as cutting and sewing program for women in a skills centre. After completing training, women can stitch clothes for their families and other villagers. About 90 women and girls have been trained for dress designing. They are also being encouraged to open their own shop in the village. Dayal Bag Institute, Agra providing vocational training for ICT and other course. Honey and Bamboo processing courses are likely to be started.

Banking Services

Bank of Maharashtra opened Account for all 1350 citizens of Harisal village and Debit card distributed to account holders, Banking Services includes Mobile Banking, SMS Banking, POS, etc. The Bank of Maharashtra has set up an ATM facility in the village. Training of BHIM app imparted to youth and Citizens for promotion of Digital payment in the village. Separate counter setup for MGNREGA and other Social scheme Payments in Bank. Cashless transitions are being carried out in shop and hotels by means of

▼ Eye care- Examination



▼ ICT Training in Digital class for youth





▲ Farmers and youth are trained for the Kisan Suvidha and AgriMarket

Bhim app and PayTM.

Public Distribution System: ePDS and Smart Card RC

Under PDS Scheme digitization and distribution of Ration Card is already done for the citizens. ePDS being effectively implemented for Distribution of grains and pulses to the ration card holders. Smart card RC allows, ration to be purchased using biometric verification as well as through Smart cards. Smart cards in the name of the woman have been created for every household and about 350 of the 450 households have been registered.

Solar Power Plants

Solar power Plant has been provided to Digital Village Office, 2 Aangnwadi, Aashram School and other offices of Harisal as a Power backup for the installed facilities such as hardware, internet, e-learning and other devices.

ing and other devices.

In addition to above other projects are VC studio setup for organizing monthly VC sessions with Citizens, Library for youth for preparing Competitive Exams, Gym for youth, Harisal Tourism, Poultry farm, Bio-Gas, etc.

Role of NIC Amravati: NIC Amravati playing vital role for Digital village Harisal programme, beginning from setup to the operationalization. Act as a Nodal agency for Technical Co-ordination with different departments/agencies and provides Administrative and ICT support to District Administration. NIC also support for implementation of Digital Locker, VC studio setup, Kisan Suvidha and other National and State level Projects in the village.

Citizen centric services are being provided through ASSK under e-District Project using DSC and from Gram Panchayat through Service Plus. All schools in the village use Technology to impart Education to students and Teaching happen with the help of audio-visual content as per their curriculum. Villagers have access to quality medical advice in PHC through e-HC centre by means of Telemedicine with other hospitals. In this programme Digital Technology acts as a catalyst for development, enabling local business opportunities, education, improving health and welfare of Tribal as well as other citizens of Harisal.

▼ Kids using Tablet for learning



For further information, please contact:

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Highlight of next issue

**DIGITAL
INDIA
AWARDS
2020**

Technological
Universities

Indian Institute
of Technology

e-Counselling Services

Medical
Colleges

National
Institutes
of Technology

ITIs



e-Counselling services offered by National Informatics Centre is a one stop online solution for all examinations, results publication, counselling and admission needs right from application form, fee payment, e-Admit card, answer key display, e-Score card, selection of courses/institutes, seat allocation, document verification, admission, seat withdrawal and MIS & exception reports. Entire lifecycle for admissions has been captured on a single platform providing a streamlined stepwise process for application filing.

National Informatics Centre has been instrumental in partnering with 35+ examination and counselling bodies/agencies like NTA, CBSE, AICTE, UGC, AKTU, OJEE, WBJEEB etc. in facilitating central and state level examinations such as JEE, UGC/CSIR-NET, CTET, NEET, CMAT/GPAT, IIFT etc. Counselling services are provided to national/state boards like JoSAA, CSAB, CCMT, BCECEB, MCC, UPSEE, WBJEE GG-SIPU etc. for admission to 3000+ academic institutions including IITs, NITs, MAMC, AFMC and Central/State funded universities/institutions in various domains like engineering, medical, architecture, pharmacy, agriculture, management, etc. catering to over 89 lakh candidates from 8th/10th pass to Post Graduates.

Counselling and admission services have transformed manifolds since its inception in the form of manual OCR forms. Services have brought significant changes to the counselling process which involved manual processing of forms along with offline mode of payment. Entire process needed significant time efforts and manpower requirement for postal work, application scrutiny and document submission. Candidate was also required to report at counselling centres for different stages.

Currently, the process has been digitized using emerging technologies providing the feasibility to apply from anywhere anytime. Academic parameters are evaluated for assessment of candidate application and custom business rules are developed to align the eligibility test with institutional goals. In order to conduct a holistic review of applications, stringent regulatory checks and exception handling algorithms have been introduced. System has been designed to handle parallel execution of multiple

counselling.

Objectives

- Standardize & streamline admission process.
- Provide Digital Infrastructure to educational institutions for smooth conduct of admission counselling.
- Build holistic capabilities across examination and counselling services leading to transparent procedure for seat allocations in educational institutions.
- To allocate seats as per rank, merit, policies and preferences exercised by the candidates
- Reduce physical, mental stresses & financial burden on candidates appearing for admissions at various institutions
- Reduces seat vacancy upto zero level.

Counselling and admission Services

Entire counselling process has been designed as a responsive web application made available to the user as a service suite. Automated and streamlined counselling process ensured 100% compliance with state/centre policies. All the steps involved in the process are rolled out in the form of sub-modules. Personalized institute master as per eligibility for choice filling is provided to the candidate through configurable and customizable solution. External payment gateway integration for leading banking services enable instant payment and confirmation for form submission. MIS reports empower daily monitoring of seat occupancy. Seat matrix for current academic year and policy guidelines are updated by participating institutes.

Process starts with the candidate registration and online fee payment. Candidate has to select institute/course from a master list created as per his/her eligibility criteria. Mock counselling round is carried out to provide the probable institute and course to the candidate as per last year opening and closing rank. Seat allotment is done in multiple rounds with provisions for seat upgradation and seat locking. Introduction of Spot round ensured



“e-Counselling services developed by NIC are the result of a focussed effort to put the best use of technology for bringing transparency in the admission process of the educational institutions in our country. This has also led to the implementation of common selection process across universities. The stakeholders can now conveniently participate in the admission process for higher education”

Dr. Neeta Verma
Director General, NIC

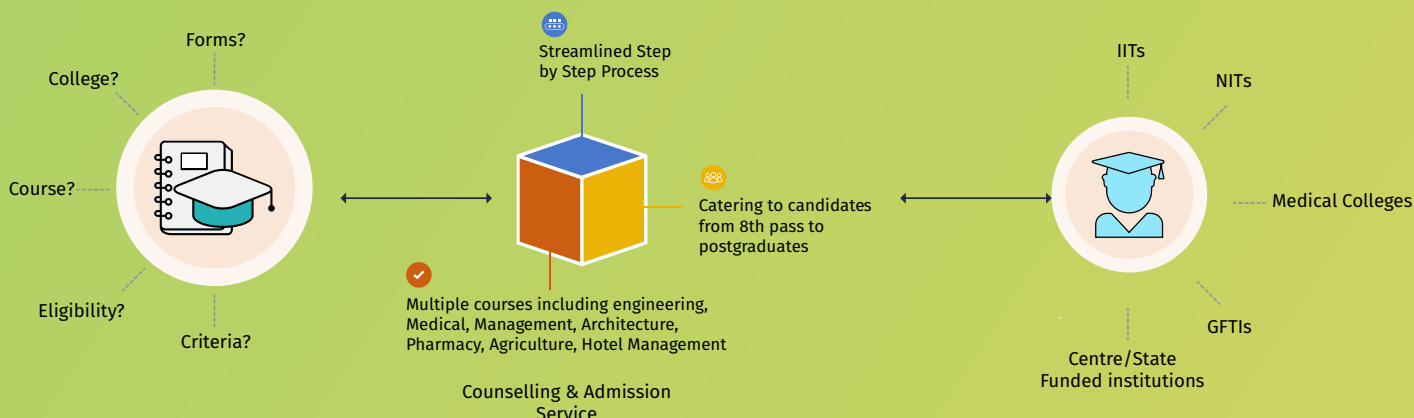
100% seat occupancy. Documents are uploaded by the candidates for online verification by the officials and reporting.

e-Counselling Process

Onboarding Process

• Rules Configuration

Business rules defined by user are configured in the system to define project lifecycle. At this stage, candidate parameters having direct implications on



Key implementation statistics (2019)

35+
Counselling
Boards

3000+
Institutions

7+ Lakh
Seats

37+
Examination

89 Lakh+
Applications
Processed

the counselling process and eligibility criteria are identified to fine tune seat allotment algorithms.

- **Seat matrix and institute profile**

Participating institutes need to update the seat matrix at the start of counselling process laying out details for number of institutes, courses and streams.

- **Customization**

Given process flow is a standard set of services designed for admission process. Based on the user requirement, any level of complexity for regional variations in eligibility criteria and seat allotment algorithm can be integrated through configuration or development of new modules.

Registration

Simplicity is the key success factor as the web forms are used by candidates from 8th/10th standards students to postgraduates.

- **Form Filling**

Essential details for a candidate profile are captured having direct implication on the seat allotment process and required for necessary communications. Design thinking standpoints are followed to develop a simplified user experience with process

committal in a three-step approach.

- **Fee payment**

Services are supported by external payment gateways of leading banks and Digi wallets in the country. Payment status is updated instantly upon getting a confirmation from core banking system. Other means of payment that require physical visits to banks have also been retained including demand draft and bank challans. A wide array payment options are available including bank challan, demand draft, internet banking, credit/debit cards, digital wallets etc.

- **Choice filling**

Custom institute master is created for every candidate as per their profile. Candidate has to Essential details for a candidate profile are captured having direct implication on the seat allotment process and required for necessary communications. Design thinking principles are followed to develop a simplified user experience.

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- **Choice filling**

Custom institute master is created for every candidate as per their profile. Candidate has to lock choice of preference for institute and courses. Choice selection at this stage is used for seat allotment while conducting one to one mapping between candidate roll and seat matrix as per merit.

Seat Allocation

- **Mock seat allocation**

Mock seat allocation round is conducted to provide a tentative idea about a probable seat allotment. A single flat listing previous year opening/closing rank is made available to assist students in



Technical consultancy provided by NIC from conceptualization to final admissions proved essential in implementation of critical Business Rules. The solution provides an ease of use to aspirants and participating institutions including reporting centers for seamless admission process covering registration, digital fee payment, choice filling, seat allocation etc. Continuous process improvement techniques used by NIC scientists for the JoSAA-2020 counselling helped in improving execution time and system reliability. This was really important in the current year when candidates could not travel physically due to COVID-19.

Prof. Parag Singla

Organizing Vice-chairman

JEE(Advanced) 2020

JoSAA-2020 Co-Coordinator



▲ Stakeholders



Dr. APJ Abdul Kalam Technical University Lucknow was the organizing University for the Conduct of Uttar Pradesh State Entrance Examination 2019 for Admissions to various Institutions and Universities in Uttar Pradesh for the Academic Session 2019-20. Being Chairman CAB, I am pleased to let you know that the Entire UPSEE 2019 Counseling & Seat Allotment has been an enormous success specially due to NIC's Experience and dedication in conducting e-counseling. The Solution provided by NIC including Registration, Verification Process & Seat Allotment was error free and as per our requirements.

Dr. Vinay Kumar Pathak

Vice Chancellor

Dr. APJ Abdul Kalam Technical University Lucknow

choice filling as part of e-Counseling.

• Multiple round seat allotment

Seat allotment is done using Deferred Acceptance (DA) algorithm in multiple rounds to ensure the optimal and truthful allocation of best possible seat as per candidate preference. It ensures maximum occupancy of available seats by covering cancelled/ vacant seats in subsequent rounds of allotment.

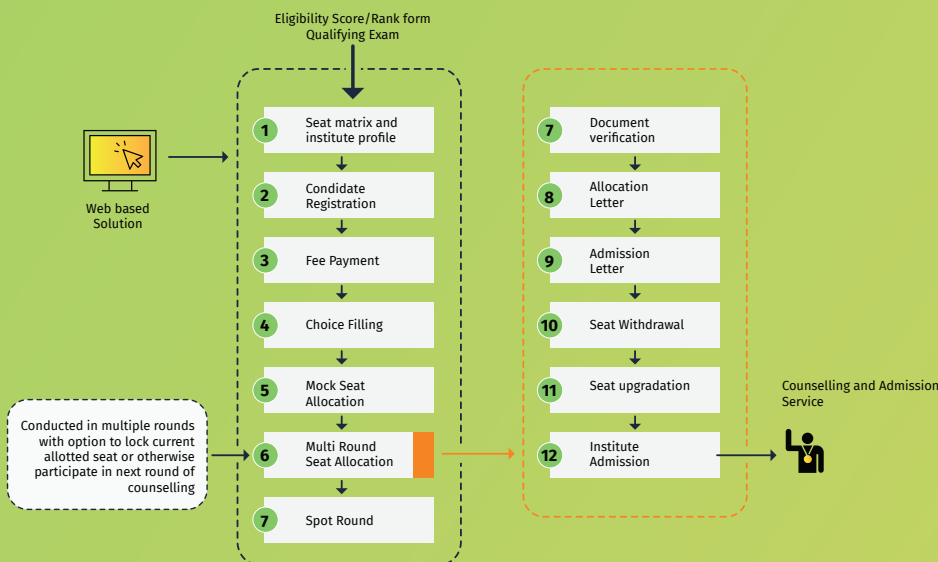
Admissions

Number of rounds and the process varies for each counselling. Necessary configurations/ customizations can be done to provide a custom build solutions tailor made to cover user needs.

• Document verification & Online reporting

Academic, domicile and special category records

e-Counseling Process Flow Diagram



are uploaded by the candidate for document verification and online reporting.

• Allotment letter

Allotment letter is generated for each candidate at the end of seat allotment round. This letter is used for acting reporting at reporting cum document verification centres.

• Admission letter

Admission letter is generated upon payment of fees. This acts as final confirmation of allotted seat and can be used to join classes at the start of session in respective institutes.

• Seat withdrawal

Candidates can cancel the allotted seat in subsequent rounds of counselling, this seat is considered for re-allotment for other eligible candidates in next round.

• Seat upgradation

Any confirmed seat allotment is automatically considered for upgradation as per the preferences set by candidate. However, candidate can also freeze

the current seat and opt out of upgradation process.

• Institute admission

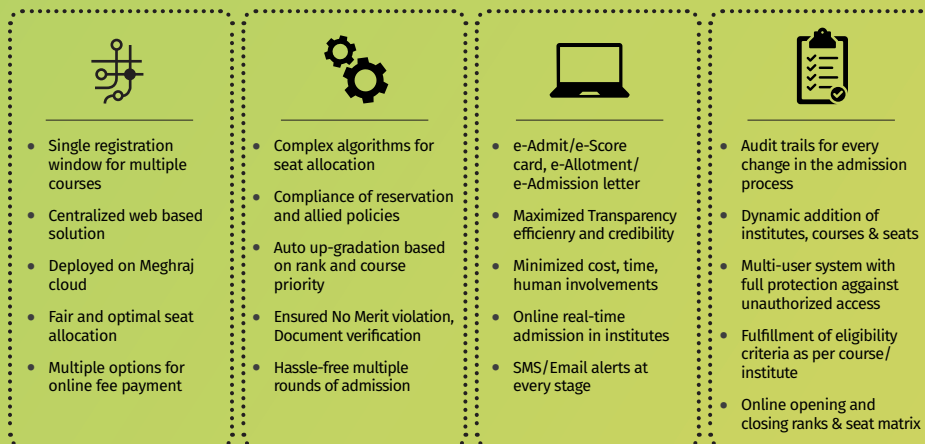
Process ends with a confirmed seat for each candidate. There are provisions for an optional spot round wherein all the remaining seats are allotted to candidates on a first come first serve basis.

Business Rule Configuration

Solution has been designed as a generic platform deployable for admission processes in institutions across the country. Counselling and admission services are administrated by complex business rules that vary from board to board, institute to institute and course to course. Services integrate wide variations in business rules.

Rank Generation Rules

- Rank is either determined by examination body such as JEE(Main)
- Rank is also generated for registered candidates as per rules defined by the board taking weight-



▲ Figure 4: Key Features

■ Examination ■ Eligibility Test ■ Counselling ■ Results

JEE Main/Advanced				JOSAA	JAC Delhi	ACPDCC			
NEET UG	IGNOU			CSAB NIT, IIIT	DELHI IIT	OJEE	WBJEEB		
CMAT GPAT	IIFT	CET DELHI		CCMT	IOT Delhi	IKGPTU	UPSEE		
NCHM JEE	ICAR	IPU DELHI	UGCNET	NCHM CT	JEE Chandigarh	DTU	UKTU	NTA Results	
ARPIT	UPSEE	PSBTE	CSIRNET	Assam IIT	GGSIU	IGDTUW	PSBTE	results.gov.in	
JNUEE	WBJEEB	OJEE	CTET	BCECEB	SCERT	ACPC Gujarat	MCC Tripura	CBSE Results	

▲ Major Counselling Projects

ed contribution of qualifying score, board exams, achievements in predefined activities such as sports, cultural achievements etc.

Candidate Registration Rules

Only the eligible candidates are permitted to register. Eligible candidate data is provided by the counselling board in the form of rank or qualifying score. In few cases, eligibility is generated online as per candidate claim

- In single round registration, registration is only permitted only in the beginning of counselling
- Some of the boards allow registration in every round of counselling for filling vacant seats

Restriction on Institute-Course Rules

Restrictions are implemented for institute and course selection based on percentage in qualifying exam, subjects, age, gender etc.

Choice Filling Rules

- **Custom Institute and Course Master:** Registration process takes critical inputs from the candidate regarding their eligibility for courses. The eligibility of courses depends on many of these inputs such as subjects & percentage of marks in the qualifying examination, age, gender, single girl child, type of entrance examination, rank, board of qualifying examination, income of parent, reservation categories, State of domicile or State of eligibility, nationality etc. Only valid choices from the seat matrix are shown to the candidate at any point of time.
- **One Time Choice Filling:** Candidates are given the chance to provide willingness to participate in the subsequent round for upgrading to better seat.
 - **Float:** All better choices than the one allotted are considered
 - **Slide:** All better choices within the already allotted institute are considered
 - **Freeze:** Candidate does not want further allotment and happy with the current allot-

ment. In such case the candidate is considered to have frozen the seat and goes out of the counselling.

• Multiple Choice Filling

- **Float/Upgrade:** In case of Float candidate can participate in the next round and resubmit choices all over again.
- **Freeze:** Candidate does not want further allotment and happy with the current allotment. In such case the candidate is considered to have frozen the seat and goes out of the counselling

Profile Update Rules

- **Rank Revision:** Rank is revised when a candidate reports revision in marks due to re-verification. There is possibility of creation of supernumerary seats due to upward revision of rank
- **Birth Category:** In case Candidate Profile data is obtained from the entrance examination candidate's category can be changed only from a beneficial category to non-beneficial category. This change is permissible while candidate is doing registration, or a document verification officer correcting the error as per candidate claim.

Reservation Criteria Rules

- **Reservation category:** Candidate can claim single or multiple reservation categories as per rules defined by the counselling board. Some of them are SC, ST, PH, FF, Defence, Sports, Cancer Patient, and Border Areas etc. Reservation of seats in mainly done based on various reservation categories which vary from State to State.
- Various categories include birth category, economic status, defense, special category such as single girl child and board topper, geographical location such as border areas, medical ailments, minority, Kashmiri migrants, North-East states etc.
- **Seat Type:** Different seat types are defined including home state, Home State Quota Shared Among States, Other State, All India, Tuition Fee Waiver (TFW), Language Based, Entrance Examination etc.



As the system administrator from client's end I would like to specifically mention the excellent points e.g. 24x7 response and service, continuous improvement, 100% correctness and 100% adherence to schedule. It's due to the flawless service provided by NIC during last so many years with their huge experience and knowledge in conceptualization to seat allocation that WBJEEB has earned a place honour and reputation.



Prof. D K Mitra
Vice Chairman
West Bengal Joint Entrance
Examinations Board

Seat Allotment

- **Seat Conversion:** It applies to conversion of seats from one category to other and vice-versa as per rules defined by board and regulatory body. Conversion of seats takes place during the various iteration of allotment program in every round of counselling.
- **Sequence of Allotment:** Sequence of Allotment changes from State to State and Board to Board. Sequence of allotment also deals with logical sequence to be followed for allocation of seats under various categories and seat types. Different seat types are defined including home state, Home State Quota Shared Among States, Other State, All India, Tuition Fee Waiver (TFW), Language Based, Entrance Examination etc.
- **Seat Allotment:** The withdrawal request is made online through OTP authentication process or at Reporting Centre. Candidates who withdraws once are not eligible to take part in subsequent round of counselling except SPOT ROUND.



Admission processes are becoming increasingly complex due to greater number of candidates and complex business rules to incorporate eligibility criteria and government regulation. NIC e-counselling and admission services provide end to end technology consultancy including software setup, capacity building, infrastructure readiness and traffic monitoring for successful completion of mission critical admission processes for institute as well as candidates.

Rajender Sethi
Dy. Director General & HoG
National Informatics Centre



Admission Rules

- **Physical Reporting:** At the end of counselling rounds candidates need to joint by reporting physically at the institute in which their final admission (latest confirmation letter) is granted and start attending the classes.
- **Document Verification:** Document verification is carried out before or after the seat allotment. Candidate need to appear in person at the Reporting Centre and produce all required documents in original to the official(s)
- **Fee Payment:** Payment of Admission Fee as defined by Counselling Board need to be paid after allotment of seat. This is to be paid only once during the counselling
- **Seat Cancellation:** During the Document Verification if any of the document found be incorrect the seat allotted to the candidate gets cancelled as per business rules. The relaxation on the list can be given by the counselling board in advance and should be dynamically configured in the software

Administrative

Impact

01	ICT enabled solution with streamlined workflows have resulted in smooth and robust counselling and admission processes
02	Every user activity is compiled in a log for all the roles to maintain an audit trail
03	Number of instances of physical reporting have been reduced significantly resulting in saving in time and money
04	Customized institute master is only made available to each candidate as per his/her eligibility criteria
05	MIS reporting and daily monitoring of counselling process has resulted in 100% occupancy of seats.
06	Full automated process ensures transparent seat allotment as per merit

Centralized Admission System

Unified admission platform helps counselling boards to monitor admissions across all participating institute while delivering a simplified candidate experience. Entire admission process is streamlined with provisions of software extensibility for integrating use specific requirements and workflows.

Content Management System

Content management system has been designed to manage web content allowing contributors to create, edit and publish content as per templates approved by the user department. Approved users can easily publish web pages with minimal software programming. Any update of data element in the database is reflected throughout the website.

Automated system

Various processes like form assessment, discrepancy check and mail to functionalities have been automated to promote cost optimization and higher efficiency.

Verifiable

Validation criteria is implemented at the source code level to ensure that it meets the specifications defined by counselling boards and achieves the intended purpose

Scalable

- **Application Scalability:** Process flow for the admission process has been designed based on decade long expertise acquired by delivering successful counselling projects. Custom requirements can be accommodated as additional services of the e-Counselling suite working in tandem with existing algorithms.
- **Resource Scalability:** e-counselling services are hosted at NIC Meghraj Cloud environment. The Meghraj cloud environment provides scaling out or horizontal expansion of resources i.e. adding more number of nodes (VMs) at the time when high volume of traffic to the system and also enable scaling up or vertical expansion of resources for a single node(VM).

Secured

Services run on HTTPS encryption. Sequential hierarchy is maintained for list of services in the application and role-based access is provided to all users. Network Firewalls are installed to examine incoming traffic for potential security threats.

Auditable

Activity log is recorded and stored for all user actions

Customizable Real Time Reports

Institutes can monitor the ongoing process with a detailed summary of daily progress. Custom KPI reports can be generated by applying pivots on the existing data set.

End User

Dynamic and User Friendly

Any change in counselling process is reflected in real time and is communicated instantly to all the candidates. Lean UI interface has been developed for easy adoption and easy navigation.

Communication and dissemination strategy and approach

All relevant information related to admission process is made available online for public view. Automated notifications are sent to all registered candidates through SMS and emails.

24 x 7 Availability

Application is hosted on NIC cloud Meghraj delivering the speed and scalability required for admissions software. It ensures business process continuity with reduced downtime and low operational risk.

Entry level eligibility test

Preliminary eligibility criteria is tested by implementing front end input field validations. Candidate can proceed to complete the application form only after filling all mandatory details in the expected format.



No Geographical Boundary

Paperless Transactions

Applicants Convenience

Logistics

all. The system offers applicants a uniform platform for filling in their applications. The acknowledgment is immediate and the system is user-friendly.

Examination board/Universities are also at a major advantage when it comes to an online admission process. Quick access to student records and databases, efficient systems for filtering out candidates and processing of applications is possible through the online application process. The costs of processing applications and employing additional manpower during admissions are slashed with the implementation of this system.

Increases Accuracy and Efficiency

New initiatives

Multi-tenant cloud-based solution

Counselling and admission services are being extended to be rolled out to users in the form of services. The process of consolidation has been initiated to run multiple counselling projects as independent tenants from a unified source code with provisions of configurability and extensibility rendered to the user itself for building custom solutions as per business rules.

Institute directory as a service

Institute master directory is being created as a single source of truth for all education sector projects facilitating API based data exchange and uniformity in unique identifier associated with each institute in isolated IT systems.

Adopting digital technologies & measures for enhanced services during pandemic

- **Online Reporting & Online Document Verification:** In response to the pandemic, counselling & admission services have been equipped with technological advancements like online reporting & document verification module to replace the physical reporting needs for seat confirmation and maintain social distancing norms for the students.
- **Online Admission:** Complete admission process has been offered in online mode covering various activities including institutional fee, document discrepancy removal, submission of willingness for seat cancellation/upgradation/upgradation, query redressal etc.
- **e-Counselling division** has been using online video conferencing platforms for training of user department officials

Impact Delivered

One integrated configurable solution has been developed for Countrywide adoption to achieve 100 percent compliance with state/centre guidelines. Cost and time involved in manual paperwork and conventional postal system have been significantly reduced. Seats are allocated as per merit and preferences of institutions and branches exercised by the candidates.

Dashboards

KPI dashboard was created for the division to capture essential parameters for counselling projects providing a visual display of key insights for decision makers. Role based login has been provided to counselling board officials to identify performance indicators for every sub activity associated with the process flow.

Effective usage of technology

Introduction of digital solutions by e-Counselling division for admissions in institutes have brought significant impact on counselling and admission processes for all stakeholders. Examination and counselling services are empowered with various technical perspectives like multi-tenant cloud based configurable solution, Auditable and data traceability, payment gateway integration etc. Seat allotment algorithms have been successful in garnering trust amongst counselling bodies for merit-based admission confirmation to candidates. Services have revamped the traditional admission systems that were marred with long queues, higher time and manpower requirement and manual processes and brought the entire admission process at the behest of a candidate's desktop.

Deployment architecture has been designed to facilitate easy and swift communication between the middleware systems and the database while handling service requests from multiple applications. Network traffic is routed through firewall, load balancer on a common public IP for multiple e-Counselling projects. Relative arrangement of FTP and DFS serves is done to service enhanced reliability requirements. Application is integrated with external systems through NIC SMS and e-mail servers.

Functional Architecture

Application enterprise structure has been structured in different layers including data access layer, business logic layer and presentation layer. System has been decomposed into various logical components like external systems, security services and application management services that interact with different layers to satisfy the system requirements.

Integration with other system

Counselling and admission services are integrated with various external systems like SMS, Email and payment gateway to implement the digital communication and information broadcasting strategy and improving the ease of application filing index for the candidates. Every student is kept informed about various milestones and process involved for participating in counselling process to bring all of them to equal foothold irrespective of prior knowledge about available choices and counselling process.

Awards

- SKOCH award for technology in education 2012
- Gems of Digital India award (Jury Choice), 2019
- Excellence Award(Enterprise Applications), Digital technology Sabha, 2020

Way forward /conclusion

e-Counselling division is progressing towards consolidation of various Digital services in education sector into a single "Platform for Education". Coun-

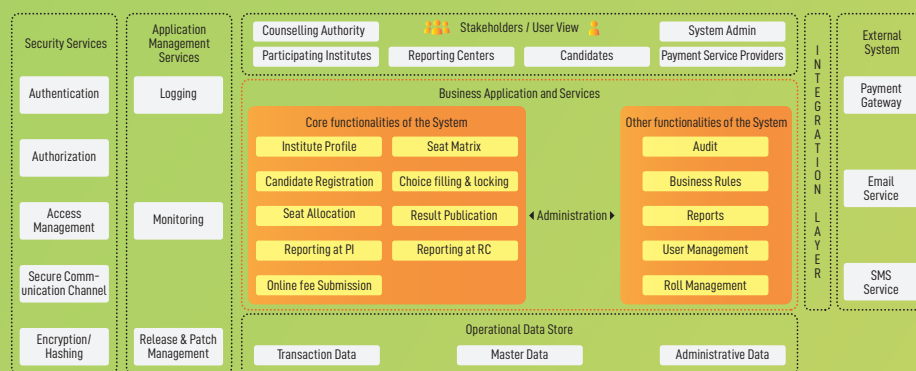


Figure 9 : Functional Architecture

selling and admission services are being remodeled into generic solution for a nationwide implementation under the one nation one system approach. Introduction of institute directory as a service is a marquee attempt for standardization of education sector IT systems. Centrally managed directories can act as single source of truth for authentic and reliable data leading to integration of multiple standards with multilingual support. Unique identifiers for institutes and other master data entities can usher in the creation of monetized digital ecosystem on the lines of Aadhaar. Effective disaster recovery strategy needs to be drafted for counselling and admission services which are extremely data sensitive, time bounds and user centric. Principles of network monitoring data backup and cyber resilience can be incorporated to design a robust DR/DC strategy. For simplification of the technology environment, IT Consolidation can help organize the delivery of IT services – taking existing organizations, services or applications and combining them into a single operation.

A simplified on boarding process needs to be developed through multi-tenant cloud-based application with capabilities to incorporate any combination of business rules and eligibility criteria for user departments across the country. Registration process can be strengthened by the implementation of facial recognition technology for unique identification of candidates. Single sign-on feature can be provided to candidates based on department ownership for reusability of essential details across all forms and single window progress tracking for all filled forms.

In order to provide effective guidance during counselling phase, digital counsellor can be developed and rolled out to users in form of a mobile application. It would take relevant inputs from the user, couple them with essential details mapped to student profile and assimilate a probable seat matrix providing a list of insitutes/courses befitting the

profile as per performance in qualifying examination and previous year opening and closing rank. Digital counsellor would run on learning algorithms executing test runs on our existing database and identifying patterns between test data and target attributes. Upon achieving formidable accuracy levels, It would be able to predict target attributes for an unknown data set. Data analytics on the information obtained over the years can be used to identify the trends in preference choices of candidates and provide recommendation to various concerned organizations like UGC, AICTE, NMC/MCC etc. upon introduction of courses/seats. Key insights derived using predictive analytics can be used to match the demand for courses in higher education sector and work on the employability of students.

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e-Labharthi

Heralding A New Approach towards Electronic Service Delivery

A Common Social Registry of Beneficiaries for DBT

Students, farmers, pensioners, disabled, poor and vulnerable sections of the society- comprising the bulk beneficiaries of the various schemes of the government of Bihar had a pleasant surprise when they swiftly and securely received their share of fund benefit directly into their bank accounts. Happened after an initiative to build a centralized repository of beneficiaries of various central and state government-operated social security subsidy schemes using technology, architecture, business intelligence reports factoring availability, accessibility and ease of use, which resulted in the development of e-Labharthi

Over the last decade various state government departments followed isolated approaches to deliver benefits with different payment procedures leading to overlap, delay and untargeted disbursement of benefit. e-Labharthi – is an integrated platform for handling transactions related to various social sector schemes supporting workflow based system includes the creation of a centralized beneficiary / transaction database and a reporting system integrated with other external systems like bio-metric enabled identification mechanisms – Aadhaar, PFMS etc. The database augments various business rules and processes for management and generation of MIS reports.

Features of the Product

- Centralized beneficiary database of Social Sector Schemes
- Integration with Aadhaar Platform
- Payment Bridge with PFMS and Banking Networks
- Automated reporting and Alert Systems
- Integrated with Common Service Centre.
- End to end System for Beneficiary management and Payment

Technical Specifications

- Three tier architecture for data, application and middleware management.
- Data Analytics to identify ghost beneficiary
- Developed on .net framework and PgSql Database
- Fuzzy logic for matching names of Beneficiary and name received from Banks
- Aadhaar and PFMS Integration for payment bridge and MSDG for SMS
- Digital Signature for Data Transfer and Signing fund transfer

Application Architecture

Presentation Layer : The website, accessible over the URL <http://elabharthi.bih.nic.in> has been developed using Microsoft's .NET technologies with PostgreSQL. It provides various user level accesses (role based) which allow different categories of users to view and edit information related to beneficiaries and their payments.

Application Layer : The application layer consists of business rules to validate beneficiary, payments, posting of payments files to PFMS, etc. The application layer provides a database abstraction layer which is leveraged for making enquiries to the database and generate various reports using open APIs.

Database Layer : The database layer is an instance of PostgreSQL which houses the data in RDBMS model.

Reports and Views : Analytical, periodic and ex-



e-Labharthi Portal is a step towards creating centralized Social registry of State Beneficiaries for various social protection schemes. This promotes an integrated delivery approach and expands social care services for the poor and vulnerable households, persons with disabilities, older persons & widows, students and farmers etc. It can serve as a model and provide evidence of good governance practice which could be replicated in other states. The joint effort of Govt. of Bihar and NIC is a path breaking initiative which has resulted in streamlining beneficiary payment process and bringing transparency in social delivery systems.



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ception related MIS reports provide a detailed view of beneficiary registration, enrolment and payments processes.

Mobile Apps : e-Labharthi Mobile app provides real-time updates to beneficiaries registered, status of pension registration and payout. Jeevan Pramaan for life certificate has also been implemented for pensioners.

Beneficiary Phonetic Matching procedure : The system uses phonetic matching process of identifying a set of strings that are most likely to be similar in sound to a given keyword using FuzzyWuzzy - a package in python.

Software Architecture

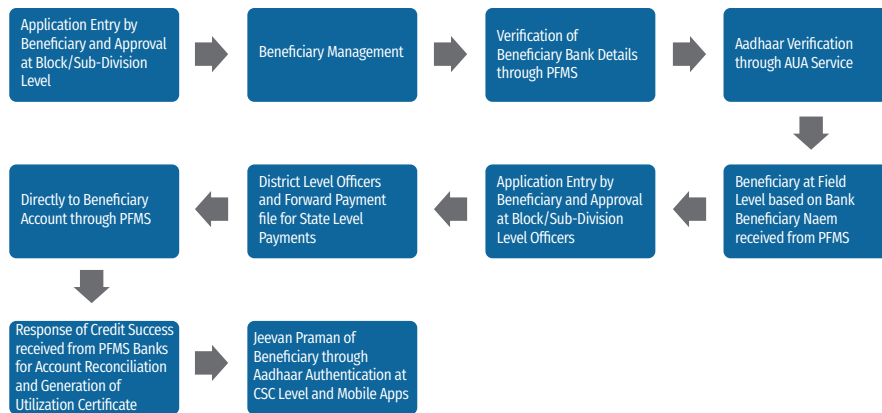
e-Labharthi framework creates beneficiaries data and payments file for various schemes with real-time



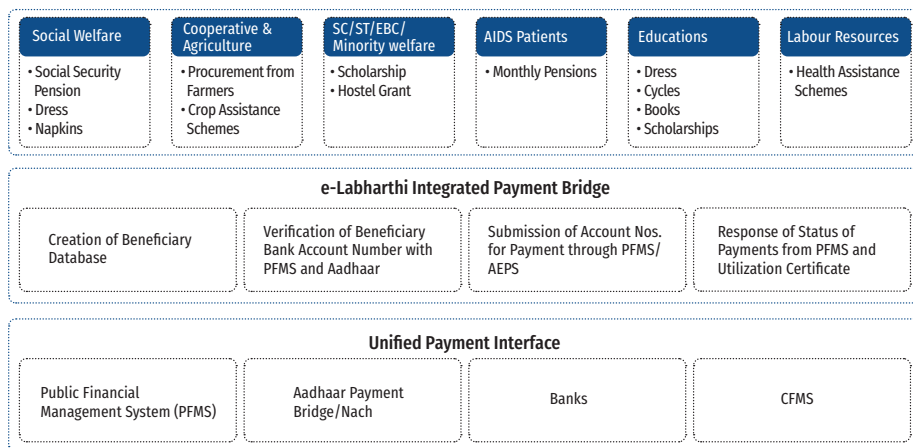
▲ Shri Nitish Kumar, Hon'ble CM, Bihar, releasing Tatkal Sahayata through e-Labharthi Portal



▲ CSI SIG e-Governance Award 2019 for DBT for Girl Child under Kanya Utthan Yojana



▲ e-Labharthi Process Framework



▲ e-Labharthi Payment Framework

integration with PFMS and UIDAI to enable direct payments into the bank account of the beneficiaries. Field formations prepare beneficiary data and payments file after thorough verification before sending it to e-Labharthi for aggregation, verification, and final approval. As a safety measure, scheme owner at district/block level, 'locks' the beneficiaries data by enabling write-protection on e-Labharthi to avoid any modification at a later stage. An aggregated payment file containing payment information such as name, bank account no., IFSC, scheme code, amount due, etc. of all beneficiaries is posted to PFMS for

actual remittance to the bank account of the beneficiaries. Subsequently reconciliation process which is also called reverse MIS, PFMS receives the status of payments, either successful or failed from the banks which are then returned to e-Labharthi for record purposes and further action, if any, to be initiated by the concerned departments.

Impact Highlights

Students : A Centralised database of approx 2.7 Crore students have been created to deliver services under 28 schemes of education department such as

Dress, Textbook, Cycle, napkins, scholarships etc.

Girl Child Assistance : Mukhyamantri Kanya Utthan Yojana, Rs 54100 as financial help right from their birth till they graduate.

Old Age Persons : Under Mukhyamantri Virudhjan Yojana persons with age more than 60 years and more than 80 years are paid Rs.400 and Rs. 500 per month respectively.

ICDS : 1.92 Lakhs ICDS Workers (Sevika and Sahayika) are paid monthly honorarium and 86 lakhs Anganwadi beneficiary Poshahar amount as DBT.

Flood and Drought Beneficiary : 26 lakhs flood victims of 18 flood affected districts are paid GR amount Rs. 6000 with additional amount for house damage. A sum of Rs. 3000 as tatkal sahayata are paid to drought victims.

Farmers : twenty-three lakhs farmers are provided crop assistance based on scientifically calculated loss through crop cutting experiment under Fasal Sahayata Yojana.

Aids Patients : ART centre Registered Aids patients around 26,000 are paid Rs. 1500 per month .

Laborer: 3.06 Lakh Labourers are being paid Medical Assistance of Rs. 3000 per year through Labour Resources Department.

Way Forward

e-Labharthi platform is essentially a repository of all verified and approved beneficiaries who are eligible to receive benefits through direct transfer. As more schemes are boarded on e-Labharthi, enhances it as complete information system. Use of the right technology to implement the various components of a social registry has transformed e-Labharthi into a high performance platform that offers an enhanced user-experience while safeguarding the extensive use of information and personal data within the platform. The expansion of e-Labharthi into a comprehensive social registry will allow it to emerge as a game changer in electronic service delivery in the country.

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SAMPADA Suite

Enabling the Food Processing Sector in India

Edited by **MOHAN DAS VISWAM**

NIC has developed a web based application suite named "Sampada Portal" (<https://sampada-mofpi.gov.in>) for various schemes under which the Ministry provides grants to various promoters desirous of setting up of Food Processing Facilities.



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Ministry of Food Processing Industries (www.mofpi.nic.in) was set up in 1988, with a view to develop a strong food processing sector in India, enabling our farmers get a better return on their produce, helping the rural economy grow faster and increase export of processed food products.

Mission of Ministry of Food Processing Industries (MOFPI)

- Mission of MOFPI is to develop the food processing sector in such a way that will help reduce wastage and decay of agricultural and other farm produce, adding value to farmers' produce, thus helping people engaged in the agricultural and other farm sector earn more from their farm produce.
- Provide financial and technical help for setting up food processing industries and associated infrastructures and provide seamless backward and forward linkages with farm land and markets for the farm produce.
- Provide research and development support to the agricultural sector and create facilities for food testing laboratories.
- Increase export of processed food items in international markets.

The Sampada suite

Government of India (GOI) has approved a new Central Sector Scheme – Pradhan Mantri Kisan SAMPADA Yojana with an allocation of ₹ 6,000 crore for the period 2016-20. The scheme is to be implemented by the Ministry.

NIC has developed a web based application suite named "Sampada Portal" (<https://sampada-mofpi.gov.in>) for various schemes under which the Ministry provides grants to the promoters to set up Food Processing Facilities. The different modules of the suite,

based on different schemes of the Ministry provide an online system for submitting application, evaluation of the same by the Ministry and its authorized Project Management Agencies, approval / rejection of applications, monitoring of grant release instalments and final closure of a project. The detail workflow of the Ministry for these activities has been automated in the Sampada suite. It has helped the Ministry to simplify the process of grant allocation and manage the schemes more efficiently helping timely completion of projects.

The Modules

Nine different modules have been developed so far in the suite.

APC : Agro Processing Cluster

In this scheme, Food Processing Units are set up using a cluster approach, where at least 5 units are set up with a minimum investment of ₹ 25/- crore on a land area of at least 10 acres for a group of promoters. Basic facilities like water, power, drainage etc. and core facilities like cold storages, warehouses, packaging etc. are provided as common facilities.

CBFL : Creation of Backward Forward Linkage

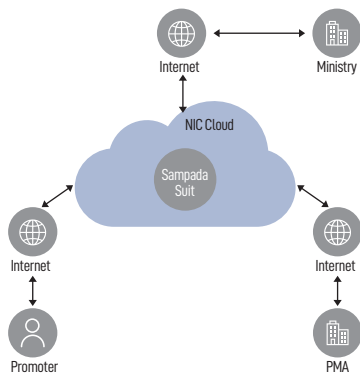
Under the scheme, financial assistance is provided for setting up primary processing/ collection centers at farm gate and modern retail outlets at the front end along with connectivity through refrigerated transport with an aim to creating a seamless backward and forward integration of processed food industry in terms of availability of raw material and linkages with the market with a special thrust on preservation of perishable items.

CEFPCC : Creation/Expansion of Food Preservation/ Processing Capacity

In this Scheme creation of processing and preservation capacities, modernization / expansion and value addition of existing processing units and reduc-

▼ Figure 1: Sampada Home Page





▲ Figure 2: System Architecture

tion of wastage is ensured.

Cold Chain Facility

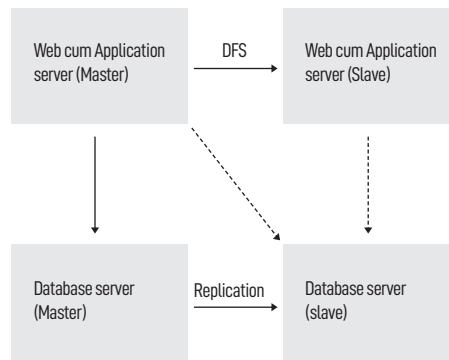
It is the creation of infrastructure (multi temperature multi product storage units, mobile storage units, CA storage, blast freezing, packing and distribution etc.) for preservation of farm produce / dairy products / meat / fish items etc. from the farm gate till its delivery to consumers.

Mega Food Park

It is a large scale Food Processing facility established at an industrial plot in an agri / horticulture zone as part of a cluster with a steady supply of raw materials. It typically consists of supply chain infrastructure (collection centres, primary processing centres, central processing units, cold chain and about 25-30 fully developed plots) for entrepreneurs to set up food processing units.

Food Safety & Quality Assurance Infrastructure (FTL) : Food Testing Laboratory

Financial assistance under this scheme is granted for setting up Food Testing Laboratory (FTL) to ensure the quality of processed food products sold in the market meet the stringent parameters prescribed by the food safety regulator in compliance with the various aspects of Total Quality Management (TQM).



▲ Figure 3: Current Hosting Architecture

Operation Greens

In 2018-19, a new Scheme "Operation Greens" was announced on the line of "Operation Flood", with an outlay of ₹ 500 crore for professional management of agri-logistics, processing facilities and to promote Farmer Producers' Organizations (FPOs). Accordingly, the Ministry has formulated a scheme for integrated development of Tomato, Onion and Potato (TOP) value chain.

Objectives of the scheme

- Enhancing value realisation of TOP farmers by targeted interventions to strengthen TOP production.
- Price stabilisation for producers and consumers by proper production planning.
- Reduction in post-harvest losses by creation of farm gate infrastructure, and creation of appropriate storage capacity.
- Setting up a market intelligence network to collect and collate real time data on demand and supply and price of TOP crops.

Skill

The aim of the scheme is to provide sector specific skilled workforce from floor level workers, operators, packaging and assembly line workers to quality control supervisor etc. in various segments of food pro-

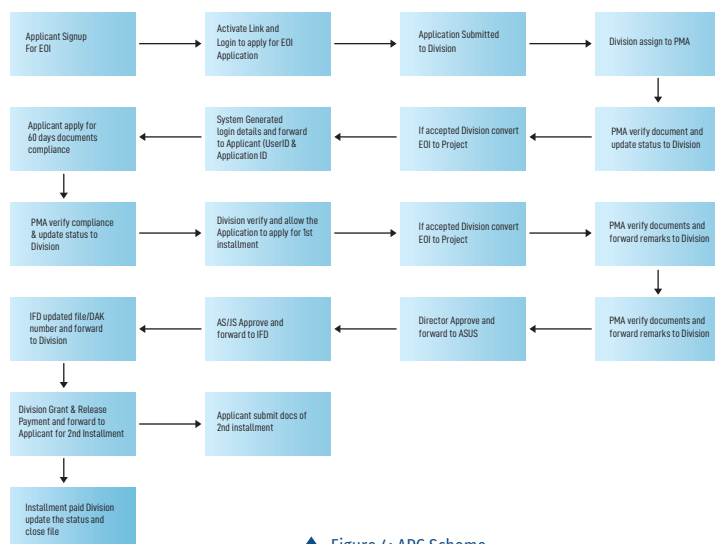


The SAMPADA Portal and the Dashboard, developed by the NIC team in the Ministry, has proved to be a transformational tool in the ways of working within the Ministry and its interface with entrepreneurs seeking financial assistance under its flagship scheme, Pradhan Mantri Kisan Sampada Yojana (PMKSY). It has directly enhanced transparency, accountability, efficiency and responsiveness amongst all stakeholders, particularly of the officials in the Ministry. I congratulate each member of the NIC team and the team leaders for their sustained efforts in developing the portal in close coordination with the various divisions in the Ministry. I look forward to their continued support in upgrading the IT infrastructure and IT solutions for a more transparent and accountable government.

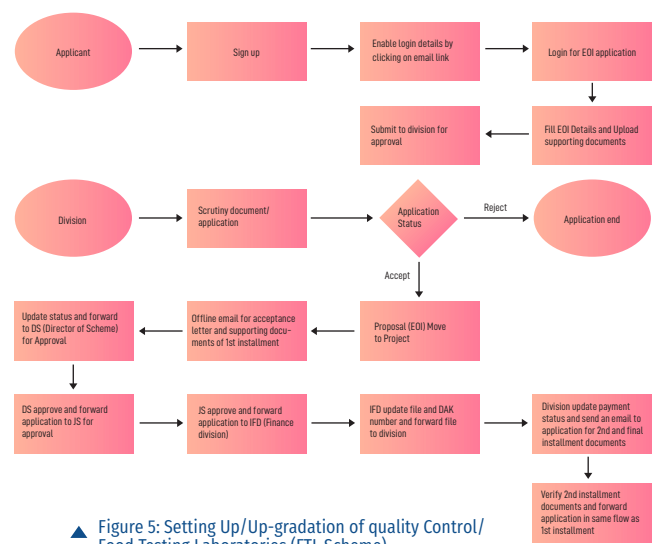
PUSHPA SUBRAHMANYAM

Secretary
MOFPI

Process Flow Diagrams of some schemes are as follows



▲ Figure 4: APC Scheme



▲ Figure 5: Setting Up/Up-gradation of quality Control/ Food Testing Laboratories (FTL Scheme)



HACCP : Hazard analysis and critical control points

Salient Features

- Facility for auto generated email to the applicant's (promoter) registered email-id regarding system generated user-id and password for accessing the EOI module.
- One portal multiple schemes.
- Single login for all the schemes.
- Feedback submission facility regarding experience in using the software.

- Three types of users – i) Promoter ii) PMA (project management agency), iii) Ministry.
- For each user type there are different modules –
 - Promoter : i) EOI (Expression of Interest) and ii) Project.
 - Ministry : i) EOI, ii) Project, iii) Report and iv) Dashboard.
 - PMA : i) EOI ii) Project, iii) My applications, iv) Report and v) Movement (movement of Promoter's application/data).
- Online release of grants.
- Graphical representation of important statistics.
- Audit trail of sensitive fields (password change, financial information etc.).
- Integration of Operation Greens Dashboard with DARPAN portal of Niti Aayog.

- Front End : ASP.NET and C# with framework 4.0.
- Backend : MS-SQL server 2014.
- Web Server : IIS.

The obvious benefits of the suite are



Total number of projects and grants sanctioned under different schemes so far are

Scheme Name	Total no. of Grants Sanctioned	Grant sanctioned in crores (₹)	Grant released in crores (₹)
Cold Chain	283	2208/-	1634/-
Mega Food Park	37	1790/-	1338/-
CEFPPC	273	1197/-	336/-
Agro Processing Cluster	55	453/-	75/-
CBFL	58	167/-	66/-
Operations Green	5	124/-	2.37/-
FTL	60	129/-	71/-

- Automation of work flow
- Less paper work
- Greater transparency and higher efficiency with regard to approval of projects and grants.
- Ease of applying for grant and setting up food processing units.
- Release of grant through the portal.
- Easy tracking of status of grant application and project completion.

Beneficiaries of the schemes are citizens of India in general and in particular the promoters of Food Processing Units, the farmers, the poultry owners, the dairy owners etc. who are immensely benefitted due to creation facilities like food preservation, food quality testing, packaging, processing etc. leading to minimal wastage and a higher price for the produce.

In future, with as the growing number of users it may be necessary to add more webserver behind a load balancer to make the deployment more robust and scalable. The release of grant depends on the status of work completed. At present, the inspectors need to travel to each project site to check the physical progress of work and based on their reports grants are released.

In order to remove the mandatory human interventions in this process, the project owners may be asked to send geo-tagged photographs of each project site. The photographs may be further analysed using machine learning tools for their genuineness if needed.

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OJAS (Online Job Application System)

A complete solution for speedy and transparent recruitment process of Government

Since inception in 2009, more than 100 departments have been using OJAS platform for their recruitments of various class I, II & III posts. Over 2000 exams have already been conducted using the portal. In 2014, the system was made compulsory by the Government of Gujarat for any type of recruitment. The System was also replicated in High Court of Gujarat and Daman & Diu administration.



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OJAS is a comprehensive web solution for the departments of Govt. of Gujarat which minimizes the manual work at the office and provides user friendly environment to the applicants to apply online 24x7 for the various vacancies.

OJAS portal comprises Online Application

A web-based platform with mobile responsive design to apply online for the various advertisements including their personal, education, experience, training, photo/signature, preferences and other details. Integration with multiple payment gateways for application fees, cash deposit of fees at major post offices across the state, incorporation of SMS and email communication at different stages of recruitment. Other salient features make their first hand experience with govt. more promising and thus enrich their trust in e-governance.

Back-office Planning & Vetting

A back office software for the officials of departments named OJASADMIN provides all the functionalities related to recruitment processes. Primary scrutiny of applications, caste/category/gender wise application reports, duplicate applications management, rejection etc. are part of application management module. Initialization of exam, Roll number generation, exam school / college entry, exam center allocation, Interview / Mains exam planning, various exam related reports like attendance sheet, packing memo etc. are part of exam management module. Bulk SMS / Email, uploading alerts on notice board, data download, publish advertisements / call letter, roles and rights management etc. are part of administration module.

Document Submission & Scrutiny

A web-based solution named iASS (Integrated Application Scrutiny System) for the applicants of GPSC to submit their scrutiny documents online once they are shortlisted by GPSC for document verification process. iASS is integrated with DigiLocker, hence providing the facility to submit documents digitally. System also minimizes the manual and time consuming work of GPSC officials by providing computer based application scrutiny of documents at each level of hierarchy starting from Dy.SO to Secretary. System has drastically reduced candidate's visits to GPSC as all communications are through SMS and emails.

Information Dissemination

Android Apps available on Google Play Store and NIC e-Gov Appstore to provide broad access to the information and to facilitate the applicants with application forms, hall tickets and other historical recruitment related information.



Public Service Commission holds special importance in the process of recruitment in government and therefore, speed and transparency in the system are at the top most priority. OJAS and iASS by NIC Gujarat paved the way for GPSC to move for faceless administration effectively. By the inclusion of the e-Gov systems in decision making, legal disputes at GPSC reduced drastically and footfall to the commission office is almost nil. OJAS and iASS are digital steps towards facilitating candidate's right from the initial stage of applying online upto their appointment to the various cadres on a single platform. NIC Gujarat provided exceptionally good software solution to GPSC for its back-office operations. With the dedicated support from NIC, GPSC has digitized almost all selection processes and is now using integrated environment for DigiLocker, Payment gateways, SMS gateway, Email, Mobile application etc.



DINESH DASA

Chairman
Gujarat Public Service Commission

Features of the Product

- One Time Registration (Applicant Profile)
- Online Application with Photo/Sign and all Validations (Age, Education, Experience etc.)
- SMS (PUSH/PULL) , EMAIL, Payment Gateways & DIGILOCKER Integration
- Back-office system having management modules for advertisements, applications, exams, interviews and document scrutiny
- Android Mobile Apps

Key Statistics

100+
Department

Including GPSC, GaunSeva,
Police, Panchayat, Health etc.

2890
Advertisements

Various class I, II, and III posts

3.89
Crore

Confirmed Applications
received via OJAS

1.04
Crore

Applications fees Transactions

2.75
Crore

Call Letters Downloads from
OJAS

1900+
Exams

Preliminary Test, CBR, Mains
Exam, Physical Test

1.93+
Lacs

Applicant Profile (One Time
Registration)

1.74+
Lacs

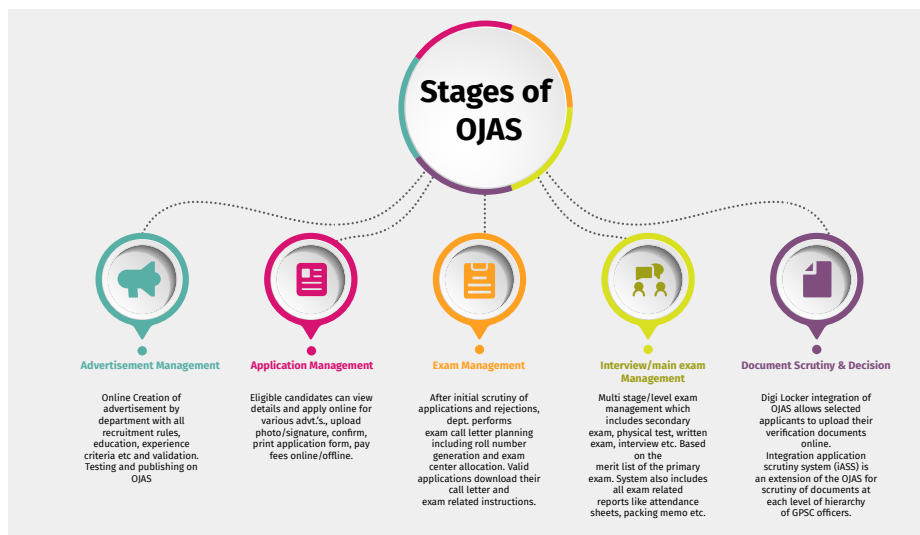
Documents Uploaded

6.5
Lacs

Total Downloads of Android
Mobile Applications

Technical Specifications

- ASP.Net Framework 4.5 including HTML/CSS, JS-JQuery, Bootstrap
- Microsoft SQL Server 2012 (DB), Windows OS (IIS)
- CouchDB for document storage and retrieval



▲ Functional flow of OJAS

- WCF REST Services and Smart Client Application
- Crystal Reports 10.0 and SQL Reporting Service 2012
- Ionic Framework 2.0 for Android Mobile Apps
- 100% paper less system providing end to end solution
- Elimination of physical application forms, call letters, selling of blank forms etc.

Innovations Applied

- Application Fees (Offline) Collection via Computerized Post Offices across the state
- Auto SMS alerts/notifications at each stage of recruitment
- Application form PDF as an attachment of Confirmation EMAIL
- Inbuilt Validation Mechanism for Age, Caste, Divyang, Ex-serviceman etc.
- Receiving Exam Center Attendance, Question Paper language preference, Fee Refund requests etc. using PULL SMS facility
- Digi-Locker Integration for Document submission to GPSC
- Barcoded Attendance Sheets for automated Digital Scanning
- Based on the feedback of department and data analysis of OJAS, Govt. of Gujarat made revolutionary amendment in the recruitment rules of class 3 cadre posts by eliminating personal interview. Also unnecessary stages / preferences were removed from the recruitment rules of class 1-2 cadre.
- Integration of VANI chatbot to deliver a personalized experience to the applicants to help them with their queries and to offer relevant information or services in a friendly manner.
- Modules like validations at initial stage of application, one time registration, duplicate application rejection etc. for elimination of dummy/invalid/duplicate applications resulting in savings of govt. revenue like cost of exam per candidate, stationary etc.
- Drastically Minimizing legal issues, court cases and grievances of applicants
- Mobile application allowed departments to reach a wider array of potential candidates
- By inviting scrutiny documents digitally via iASS portal and Email/SMS notifications for re-submission of missing/invalid documents at the time of final scrutiny proved to be hugely benefitted both to applicants and GPSC.

Way Forward

For providing 360 degree vision of indent - filled vacancies to the govt. and for policy decision making, all efforts are being made to achieve below identified scope of work.

- Online submission of vacancies to GPSC and other recruiting agencies from department
- Integration with State eHRMS portal
- Integration with available API's for Verifications of certificates / institutional degrees etc.
- Integration of Module for Departmental Promotion Process as per recruitment rules

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Benefits / Impact

- Elimination of existing tedious manual recruitment processes and also leads to govt. business process reengineering. Simplified and standardized recruitment process across all departments and committees.

Overcoming Cyber Security challenges during COVID-19 Pandemic

Cyber Security issues during the pandemic and their solutions

Edited by **MOHAN DAS VISWAM**

Remedies for cyber security challenges cannot be uncertain as they pose a serious threat in all sectors such as governance, health care, finance, and transport. Just as the corona virus can be kept away by simple steps like social distancing and the use of masks and sanitizers, cyber threats amid the pandemic can be overcome by keeping cyber hygiene and following the best practices.



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The year 2020 started with a lot of cheer and fanfare, reminiscent of the year 2000 that had ushered in this century and the millennium. But the euphoria was cut short with the news about a deadly virus spreading fast in China and other parts of the World. Sooner than later the first case in India was reported on 30 January and since then cases have been soaring. Governments at various levels took precautionary measures and initiated awareness programmes to contain the pandemic. Jantha curfew was observed across the Nation on 22 March followed by the country-wide lock-down. Migrant workers and expatriates returned home in large numbers due to loss of livelihood. With the scientists still clueless on a possible solution, the end is nowhere in sight.

Turning Crisis to Opportunity

Corona Virus Disease (COVID-19) has thrown the world as a whole and Nations in particular to an unprecedented crisis. The situation was really challenging to the governments, corporates as well as the individuals in terms of economy, social life and even the very survival of human beings. Converting the crisis to an opportunity, governments across the country have opened new spheres in eGovernance. As a result digital transformation that could not be achieved in the last six years was achieved in the last six months. What was hitherto considered to be The Normal was replaced by a New Normal. But this digital revolution was not without challenges - it has

increased the scope for cyber-attacks. The increased use of cyber platform during the pandemic has obviously widened the attack surface.

Cyber Security Challenges During Pandemic

Security challenges are always a fellow traveller of any crisis situation. Security takes a back seat during shortage of key resources such as time, manpower and money. The pandemic called for the rolling out of voluminous hardware and software in a very short span of time. Often there was little time to harden the hardware and secure the software. More work needed to be carried out by the same or even less manpower. Delays in approval and transfer of funds created financial constraints in various spheres.

The pandemic confined a large number of people in their homes with their social life almost completely crippled. With the television initially telecasting only the repeat entertainment programmes, apart from the virus news of course, the internet was the only source of entertainment for most people. Fear of salary cuts and layoffs due to the worsening economic conditions was looming large. As a result the human mind started wandering - or remained idle - and negative emotions often influenced their behaviour. Causal browsing increased and attackers started exploiting this curiosity, confusion, fear and the boredom of the victims leading to large scale phishing attacks.



Phishing in troubled Pandemic

Phishing is a fraudulent attempt to obtain sensitive information by disguising as a trustworthy entity in an electronic communication. More than 90% of data breaches start with spear-phishing attacks. In the current scenario where real-time information about the disease is highly sought after, cyber criminals have been found to leverage online search terms by placing links to web sites distributing malware in results of web search and social media. According to the report of a leading security OEM over one lac new domains containing words like 'covid', 'virus', and 'corona' have been registered in the early weeks of the pandemic. Needless to say a vast majority of these sites may be malicious and users need to be extra cautious while accessing them.

There are no fool-proof ways to avoid phishing attacks. Awareness need to be created among users to stick to trusted sites for any information and apply due diligence before clicking any link. Keeping the browsers up-to-date with anti-phishing features, using antivirus software with web-site filtering, better password habits combined with multi-factor authentication are the other best practices against phishing attacks.

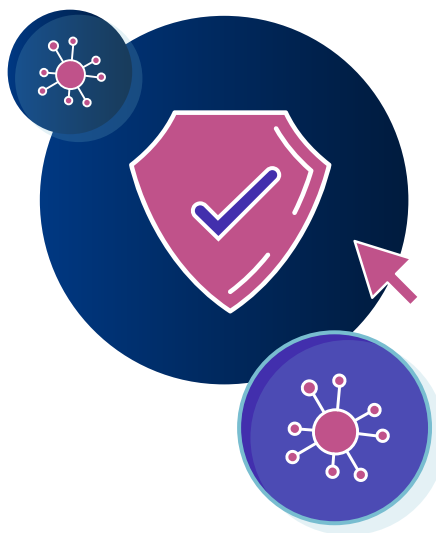
Work from Home

The culture of Work from Home (WFH) coupled with online meetings is going to be the long lasting relic of the COVID-19. WFH has become a blessing in

disguise for the employees and the employers alike. It provided the employees a safe work place without any fear of infection at the comfort of their homes. The saving in time and expenses for travel enabled them to spend quality time with their families. The employers benefited by the continued availability of manpower often with extended working hours and saved the costs of power, rent, security and the like. Ironically, the cyber criminals also benefitted, thanks to the security implications related to WFH culture!

All the major players in the Work from Home paradigm such as People, Process and Platform have security vulnerabilities associated with it. Utmost care must be taken to overcome these vulnerabilities for reaping the real benefits of the WFH system in the new normal. Organisations which suddenly shifted to WFH have become vulnerable in all these fronts and cyber attackers know this fact very well. The casual environment at home in contrast to the formal office atmosphere causes distractions and low alertness in employees, which are the key ingredients in the recipe for cyber-attacks. Psychological factors depending on family relations and vulnerabilities due to working at odd and extended hours also may cause security challenges.

During the time of crisis there is an inherent tendency to bypass established processes and procedures. Policies and guidelines are often set aside for want of time, manpower and money. Other common security challenges in the process include granting temporary access and escalation of privilege to users and systems for the sake of convenience and sharing



of user credentials with those in office and contract workforce for executing urgent tasks. Remote Desktop facility can be easily misused unless proper protocols and precautions are not followed.

Serious vulnerabilities exist at every point of the platform the employees use to Work from Home. The employees are primarily outside the protection of the secured perimeter of their organisations and the corporate data is being exchanged through unsecured channels, even without a Virtual Private Network (VPN). Employees use their personal devices such as desktops and laptops with outdated /

pirated operating system and application software to perform office tasks. These devices are often without basic antivirus solution and are shared with other family members for online classes and gaming activities. The default names and easy to guess passwords of the home WiFi Networks is another matter of serious concern which can be addressed easily by following the best practices.

Online Meetings

Online meetings have saved the day in ensuring business continuity during the pandemic in all spheres of life like governance, academia, and healthcare. Daily routine of the employees are now governed by their professional (and personal) virtual meetings and the people have got accustomed to it. Shortage of time, know-how and finances have forced organisations to choose the platform for virtual meetings without considering the security aspects. While the 'Free Tools' has made the choice easy, large scale usage, especially during the early days of lockdown, have made the matters worse.

Simple precautions can overcome the security challenges with online meetings to a large extent. Always ensure that important meetings are password protected to safeguard their privacy and confidentiality. Otherwise malicious users may join these meetings and overhear the conversations by keeping the camera off and mike muted. Use of host controls like Lobby and Room Locking to moderate meetings can keep the malicious elements at bay. Disable file transfer by default and beware of threat actors using the chat portion to spread malicious links. Always use latest version of the software as the OEMs are releasing security fixes on a regular basis. While the notice to the meeting can be circulated well in advance, sensitive information like meeting ID and password may be shared privately under short notice.

Conclusion

Research for vaccine to counter the corona virus is progressing in various countries across the globe. While researchers are hopeful of an immediate remedy, the possibility of an affordable vaccine for large scale roll-out across the world in near future is still uncertain. Remedies for cyber security challenges cannot be uncertain as they pose a serious threat in all sectors such as governance, health care, finance, and transport. Just as the corona virus can be kept away by simple steps like social distancing and the use of masks and sanitizers, cyber threats amid the pandemic can be overcome by keeping cyber hygiene and following the best practices. As citizens across the globe are getting accustomed to living with the corona virus, netizens should learn to live amidst cyber criminals by devising appropriate mechanisms to overcome attacks during and after the pandemic.

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Corona Reporting Mobile app - GIS Mapping of Positive Cases

The Corona reporting mobile app is an Android based G2G App developed for the Ariyalur District (TN) Administration to monitor the Corona affected citizens in the District.

The app captures the Patient details such as address, source of infection, contracted from which person, date of confirmation, Nationality, Patient Status etc. along with Geo-coordinates. The details through captured by the Health Department & Revenue Department staff at source itself. Only authentic users are allowed to use the app. OTP based authentication. The Admin portal was developed to enable or disable the mobile app users. Various reports were developed to monitor the corona infected patients

- Features incorporated in the map interface include
- Mapping of positive cases using TNGIS base map along with other layers like Hamlets etc.
- Thematic mapping based on infected categories,
- Selection of cases based on the Administrative unit as well as different categories
- Heat map for mapping the positive cases concentration areas
- Cluster mapping has been implemented which represent the data distributed across the District as cluster areas. Since the location information (lat/long) of the covid-19 cases captured for a family/small clusters remain the same, cluster functionality helps to get the details of the all the cases
- Filtered based on buffer radius, (500m to 8km radius)

The GIS Mapping of Positive Cases is helpful to take administrative decision based on GIS Location of affected patients.

 Srinivasa Raghavan K, DDG(sio.tn@nic.in)

AIMS (Agricultural Information Management System)

The Department of Agriculture Development & Farmers' Welfare (AD & FW) is one of the premier departments of Government of Kerala working closely with citizens, especially the farmers. The department is mainly committed to the development of schemes & programs to increase the production of food crops & cash crops in the state, and to facilitate the effective implementation of these schemes. The department emphasizes the three components of agricultural research, agro-education and agrarian expansion.

Besides developing & implementing several ICT based eGovernance solutions for the State Government, National Informatics Centre (NIC) Kerala is also working with the Department (AD & FW) to provide various ICT solutions for the benefit of farmers. NIC is also developing an interoperable framework to provide an integrated solution by adopting the emerging technologies for digital transformation conforming to the National and State e-Governance Standards. As part of this, an Android mobile application "AIMS" was designed, developed, and deployed in Google Play Store. The app was officially released by Shri Pinarayi Vijayan, Hon'ble Chief Minister for Kerala, on 17th August 2020.

AIMS mobile App facilitates the farmers to submit application for different schemes implemented by the Agriculture Department and to avail the benefits without visiting the office. Facility has also been provided to the agriculture field offices to do the field inspections and recording through the Mobile application. Role based access is provided in the mobile for the citizens and Agriculture officers. Farmers have the option for self-registration for availing benefits under various schemes.

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Visit the Mobile App Store at

<https://govmobileapps.nic.in>



<https://play.google.com/store/apps/details?id=in.nic.aims>



<https://play.google.com/store/apps/details?id=in.nic.aims>

Covid19Jagratha

The Covid19Jagratha mobile app is an initiative of NIC to support the Government of Kerala in the Covid19 Pandemic control activities. The primary advisors for the user requirements were the District Collectors of Kannur, Wayanad and Kozhikode districts. Designed and developed by the Mobile Application Development Competence Centre, Kannur, Kerala, the app has been implemented across the state for the quarantine monitoring, inter district/interstate vehicle transit monitoring and ambulance management.

The App has the following features:

- **Surveillance:** Monitoring of persons under quarantine. The quarantined persons are geotagged and geo-fencing. The 50 Meter radius geo-fencing is implemented, and any violation sends alerts to Police, health, and Local body officials
- Online Counselling for the quarantined persons in distress by psychologists. Chat requests and call requests can be handled through the app
- Vehicle Transit Monitoring at state and district check posts by RTO, Police, Local body and Health. The entry and exit of each vehicle to and from a district is registered using the app. The travel termination of any vehicle inside the district will be alerted to the concerned Medical Officer, Police Circle Office, and Local Body secretary
- Online Ambulance request by patients and accepting by Ambulance Driver
- Local body initiated Home Delivery service by phone call
- Density map of quarantined people / patients.
- Role based access is provided for the patients/ Quarantined persons, District Officers, Police Officers, Check-post charge officers, Ambulance Drivers, Administrators, etc.

The app communicates through APIs with the Covid19Jagratha database.

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<https://play.google.com/store/apps/details?id=org.nic.covidcarekannur>

NICeScan

A barcode is a method of representing data in a visual, machine-readable form. Initially, bar-codes represented data by varying the widths and spacings of parallel lines. These barcodes, now commonly referred to as linear or one-dimensional (1D), can be scanned by special optical scanners, called barcode readers. Later, two-dimensional (2D) variants were developed, using rectangles, dots, hexagons and other geometric patterns, called matrix codes or 2D bar-codes. QR code (abbreviated from Quick Response code) is a specific type of 2D barcode. A QR code uses four standardized encoding modes (numeric, alphanumeric, byte/binary, and kanji) to store data efficiently; extensions may also be used. PDF417 is a stacked linear bar-code format used in a variety of applications such as transport, identification cards, and inventory management.

QR code or Barcode is an important part of our electronic documents. Many documents come with QR/ Barcode either as part of e-Gov applications or other documents and records public deal with.

During lockdown period in the country, the government agencies provide different types of passes, certificates and permits with QR/Barcode for quick verification and scanning. National Informatics Centre, Kerala State has developed NICeScan, a generic QR code scanner for government agencies as well as enforcement agencies for a contactless verification of such documents, passes and records produced by the public. NICeScan can be useful for any QR/ Barcode based verification and is primarily designed for e-Governance applications using open source components.

NICeScan is capable of reading the 2D/1D barcode data from the images stored with in the phone storage or gallery also.

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<https://play.google.com/store/apps/details?id=in.nic.kerala.nicescanner>

CSC TENKASI District, Tamil Nadu

"CSC-Tenkasi" is a location-based Android Mobile App for the citizens of the Tenkasi District in Tamil Nadu, to get the immediate list of e-service delivery channels on their location for a given radius. This App gives an edge to the citizens of the Tenkasi District for enabling them to reach out to the Common Service Centres in close proximity easily.

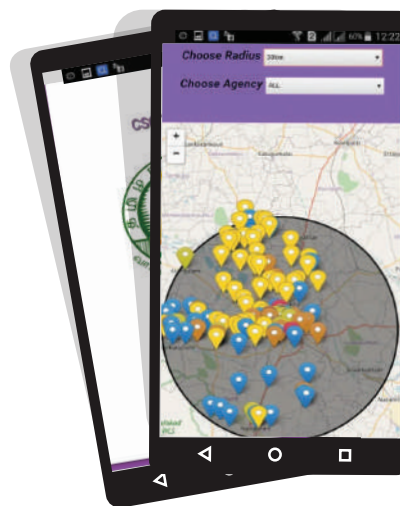
The PPP model is implemented through various agencies namely M/s TACTV Ltd., Primary Agriculture Cooperative Credit Society (PACCS), Pudhu Vaazhvu Project (VPRCs) aided by Village Poverty Reduction Committees of the World Bank, Village Level Entrepreneurs (VLEs) who shall establish and operate Common Service Centres (CSCs) which are to be the front end e-service delivery points of various schemes of Tamil Nadu Government. The e-services of Revenue Administration for 17 different services and Social Welfare Department for 7 services are taken care by the 383 Common Service Centres.

The "CSC-Tenkasi, mobile app has

- Option to view the Distance from selected CSC Centre and the current location
- Dial the CSC directly from the map
- Different colour and location markers used to distinguish agencies
- Option to view the nearby CSC centres at a location

This App offers a better navigation through Open Street Map. It also very efficiently displays the current location of mobile and the locations of all common service centres filtered through the given radius parameters. By superimposing virtual elements on real-world objects, App can give more interactive and life like experience through Open Street Map.

Srinivasa Raghavan K, DDG (sio.tn@nic.in)



https://play.google.com/store/apps/details?id=com.phonegap.CSC_Tenkasi

USA tops AI readiness index

The USA has been named as the country best prepared to realise the benefits of artificial intelligence (AI) technologies in public service delivery, topping the 2020 Government AI Readiness Index. Meanwhile Singapore, which led the 2019 list, has fallen to sixth place.

The index – compiled by UK-based consultants Oxford Insights and Canada's International Development Research Centre (IDRC) – examines how well-placed nations are to take advantage of the benefits of AI in their internal operations and the delivery of public services. This year, 172 countries were reviewed.

The ranking measures AI readiness across three criteria: government willingness to adopt AI, and the ability to adapt and innovate to do so; availability of AI expertise and tools from the technology sector; and capabilities in building AI tools, providing them with high-quality data, and building them into public services.

The leading nations – the top five performers are the USA, the UK, Finland, Germany and Sweden – scored highly in all categories. However, the report found that some of the world's most AI-ready countries, including the USA, UK, Singapore and Russia, perform badly when prioritising and practising the responsible use of AI.

The 'Responsible Use Sub-Index' measures nine indicators across four criteria drawn from the OECD's Principles on Artificial Intelligence: inclusivity, accountability, transparency and privacy. On this measure, the top five nations when it comes to responsible AI use are Estonia, Norway, Luxembourg, Finland and Sweden. The USA, meanwhile, is in 24th place and the UK in 22nd.

"Taking a lead from countries in the Baltic-Nordic region such as Finland and Estonia, there must be a greater focus on data representativeness and protection, privacy legislation and national ethics frameworks to protect citizen's rights and prevent unfair and discriminatory outcomes for certain groups in society," said Oxford Insights CEO Richard Stirling.

"AI is transforming the way in which countries are governed so it will become increasingly important that governments, while capitalising on AI's potential, also have protocols and regulations in place to ensure implemen-

tation is ethical, transparent and inclusive," he added.

Tackling technological inequality

The index draws attention to variations between higher-income countries and lower- or middle-income ones, with the former consistently achieving higher AI readiness scores. No countries in Africa, Latin America, South Asia or Central Asia are listed in the top 20, for example.

"AI has real potential to transform governance and public services throughout the world, from healthcare and education to security. However, there is also a danger that nations and regions, particularly in Africa, Latin America and parts of Asia, will be left behind," said IDRC president, Jean Lebel.

He added: "This year's index and report highlights the current strengths, weaknesses and barriers to governments' AI readiness and responsibilities, which we hope will stimulate further sharing of expertise, opportunities, tools and policies among governments and stakeholders and across borders, as well as encourage new collaborations and investment. We believe that this, in part, will help those currently lagging behind in our index to improve their AI readiness so that existing economic and technology inequality doesn't become further entrenched and leave billions of citizens with worse quality public services."

National AI strategies

The report also shows that there is a growing commitment to AI across the world, with a proliferation of new national and international AI strategies published in the last year: 50% more have been published relative to the previous year. "This illustrates an intent across countries as diverse as Egypt, Serbia and Colombia to exploit AI's potential to enhance and improve governance and society," the report says.

For example, Singapore launched its AI strategy in November 2019; the European Commission and member states published their plan to foster the development and use of AI in December last year; and Indonesia announced its national AI strategy in August.

There are also a number of new cross-border regional initiatives aimed at encouraging governments to share good practice and take a more proactive approach, such as IDRC's AI for Development (AI4D) project, which supports regional initiatives across Sub-Saharan Africa and Latin America.

Source: <https://www.globalgovernmentforum.com>

AI is helping mobile operators to cope with pandemic demand

Artificial intelligence is helping telecoms operators to boost the RAN capacity of their 4G networks by 15 percent. More people than ever are relying on telecoms networks to work, play, and stay connected during the pandemic. Operators are doing all they can to ensure their existing networks have enough capacity to cope with demand.

Gorkem Yigit, Principal Analyst at Analysys Mason, said:

"Video streaming continues to experience high year on year growth and that has been exacerbated by the pandemic and resulting lock-downs,

Yes, 5G grabs the spotlight, but 4G is carrying the brunt of this traffic. So, while investment in 5G infrastructure continues, operators need intelligent ways to maximize and extend existing 4G network capabilities in the short to medium term – keeping their CAPEX to a minimum."

8 out of 10 of the world's largest operator groups have deployed traffic management technology from the Openwave subsidiary of Swedish firm Enea. Many of these have since upgraded to include machine learning capabilities.

Openwave claims that, based on its figures, some operators faced a 90 percent surge in peak throughput during lockdowns.

Machine learning is helping to predict and identify congestion in the RAN (Radio Access Network) which resides between user equipment such as wireless devices and an operator's core network.

John Giere, President of Enea Openwave, commented:

"Conventional mobile data management requires manual configuration and network investment – it is no longer fit for purpose.



Machine Learning has given existing 4G networks the shot in the arm they needed. It can work dynamically without external probes or changes to the RAN, delivering additional capacity at a time that operators most need it."

The use of machine learning has increased operators' 4G RAN capacity by 15 percent in congested locations—providing further evidence of how AI technology can be used to quickly tackle real-world problems.

Source: <https://artificialintelligence-news.com>

Japan wants to establish global standards for human-assisting robots

Japan has opened a consultation with the International Standards Organisation (ISO) in a bid to establish standards for human-assisting robots. Part of the reason for Japan's huge investments into robotics is the country's ageing population. Robots designed to help the elderly are becoming increasingly commonplace.

Japan has already created a national standard for robot-to-human interactions across a large number of settings including medical, commercial, and transport.

In a press release announcing Japan's own JIS Y1001 standard last year, the National Institute of Advanced Industrial Science and Technology wrote:

"Current labor shortages brought about by an advancing aging society with fewer children have been causing significant challenges for all industries in Japan. As one of the solutions to overcoming this situation, industries place expectations on the introduction of robot services into society.

A variety of service robots, e.g., guide robots, delivery robots, nursing-care robots and assisting robots, are expected to play significant roles in specific places where ordinary people and such robots are able to coexist, such as airports, commercial facilities and nursing-care facilities. In such situations, the safety of robots should be secured to prevent any harm to people."

Japan now wants to export its standard to the rest of the world.

The move is partly spurred by the coronavirus pandemic and how useful remote medical robots could be to help maintain social distancing and prevent the further spread of such viruses.

In the UK alone, there have been at least 200 deaths of people working on the frontline in medical settings such as hospitals, surgeries, and care homes. Robots could help to reduce the risk to other frontline workers in the future, in addition to freeing up time for the many areas where humans are still needed.

Of course, Japan's move isn't entirely selfless. Japan, as a world leader in



robotics, expects it will be able to export more robot helpers.

Because any future ISO standard will likely be based on Japan's existing JIS Y1001, Japanese companies will enjoy a headstart over global competitors.

ISO's existing TC 299 for "standardization in the field of robotics, excluding toys and military applications" does not consider the best practices for various settings which Japan's standard does.

TC 299's new working group is being headed by Japan to help ensure that the global standard is at least as robust as the country's national version.

Source: <https://iottechnews.com>

Americas: Intertek Alchemy releases free online course on safety amidst COVID-19

Intertek Alchemy has released a complimentary training course that trains food industry workers how to recognize symptoms, prevent transmission, and effective measures to mitigate the spread of COVID-19 disease.

This online course is available to every company, not just its client. Nearly 15,000 food production facilities use Intertek Alchemy for training frontline workers who come into contact with food products (and one another).

As such, Intertek Alchemy recognizes its responsibility to make best practices on this new infectious virus available immediately.

As with all its training courses, Intertek Alchemy worked closely with its Industry Advisory Board to ensure the most practical and applicable training is provided. Alchemy has delivered the new course, COVID-19: Overview, to its 15,000 client facilities. Non-clients are able to download the course for free at <https://www.alchemysystems.com/content/covid19-training-course/>.

"We realized that no other company could effectively reach as many frontline food manufacturing workers as we could," said Laura Dunn Nelson, VP of food safety and global alliances.

"And we felt a responsibility to do this as quickly as possible, giving our clients the ability to engage with their workforces to understand their role in the continued production of our food supply during the COVID-19 outbreak."

While the food supply does not appear to be at risk, Intertek Alchemy proceeded to help keep it that way while alleviating fears among food workers and average Americans.



Since these workers cannot work from home, the course places emphasis on not spreading COVID-19 among one another to ensure food production companies can continue producing the products that supply grocery stores and restaurants.

While this course is new, the company's standard course library includes others that help food companies keep their food products safe and employees healthy, including "Effective Hand Washing Techniques," "Promoting Personal Hygiene," "Visitor Procedures," as well as courses specific to Listeria, Salmonella, and other microorganisms.

Source: <https://foodnewsinternational.com/>

Hon'ble PM inaugurated the 'Patrika Gate' in Jaipur, and released the "Samvad"

Prime Minister Shri Narendra Modi inaugurated 'Patrika Gate' during a virtual ceremony at 11 am on September 8. The 'Patrika Gate' is situated at Jaipur's Jawaharlal Nehru Marg. The inaugural was also marked as the beginning of a new tourist destination in the form of the Patrika gate.

On this occasion, the Prime Minister also launched two books - Samvad Upanishad and Akshar Yatra - authored by Editor-in-Chief of Rajasthan Patrika Group Gulab Kothari. Rajasthan Chief Minister Shri Ashok Gehlot was the special guest of this ceremony.

Patrika Gate has been built as a unique memorial projecting the architectural and cultural heritage of all the regions of Rajasthan. The gate is built on the busiest Jawaharlal Nehru Marg of Jaipur and it is an attempt to bring together the art, craft, and cultural heritage of the state at one place. Patrika Group has constructed 'Patrika Gate' as part of Mission Anupam



Hon'ble PM releasing the Samvad Upanishad & Akshar Yatra books, via NIC's Video Conferencing Service

Yojana of Jaipur Development Authority.

Patrika Gate as a monument adds to the legacy of Patrika being embedded and unified with the cultural values of Rajasthan.

- Informatics, News Desk

DG, NIC delivered the keynote address at Glocal India Healthcare Virtual Conclave

A keynote address on "Aarogya Setu App and Healthcare Technology by NIC" was delivered by Dr. Neeta Verma, Director General, NIC at the Glocal India Healthcare Virtual Conclave held on 27th August 2020 organized by APAC Digital News Network.

In the keynote address, Dr. Verma recalled the MEDLARS services provided by NIC in the 1980s that facilitated access to scientific journals, information, and much more to the doctors and healthcare researchers at that time.

Talking about several initiatives taken by NIC in the healthcare sector, she explained about the eHospital, a cloud-based hospital management system used by over 400 hospitals across India. During the COVID-19 pandemic telemedicine and teleconsultations has become a necessity. Many hospitals have initiated teleconsultation using the eHospital platform.



DG, NIC with other participants at Glocal India Healthcare Virtual Conclave

With more than 15 crore users, Aarogya Setu has become the largest public contact tracing app across the world. Using Bluetooth and GPS technology, it builds a social graph of people you come in contact

- Shashi Kant Pandey, New Delhi

DG, NIC shared her insights on 'The Role of Women Leading Tech in the Post Pandemic World', at a Virtual Discussion organised by NewsX & ASSOCHAM

Dr. Neeta Verma, Director General, NIC shared her insights on 'The Role of Women Leading Tech in the Post Pandemic World', at a Virtual Discussion organised by NewsX (Direct News Private Limited) & ASSOCHAM (The Associated Chambers of Commerce and Industry of India). She emphasized working towards building women's confidence at workplace. She also highlighted the role of Aarogya Setu, RTPCR and other technical solutions by NIC for Work From Home during COVID19.

- Informatics, News Desk



Dr. Neeta Verma, expressing her views and insights to the viewers

Launching of eChallan, Dealer Point Registration with online payment, ePayment in Sarathi and Local Permit

Hon'ble Chief Minister of Manipur, Shri N Biren Singh launched the eChallan Application, Dealer Point Registration with online payment, ePayment in Sarathi and Local Permit under eTransport Project of Transport Department, Manipur on 18th September 2020 at the CM Secretariat conference hall in the presence of Hon'ble Minister of Transport Shri Vungzagin Valte, Hon'ble Minister of Education Shri S. Rajen Singh, Addl. Chief Secretary Shri MH Khan, Principal Secretary Shri P Vaiphei, SIO Manipur Smt. M. Budhimala Devi and other officials of NIC Manipur, Transport Department, Bank and representatives of various vehicle dealers.

Shri N Biren Singh said that launching of these eChallan and eP-



Hon'ble Chief Minister of Manipur Shri N Biren Singh launching the eChallan Application

ayment system in Transport application would not only bring citizen friendliness and transparency in governance but also would greatly re-

- Chhatrajit Pangambam, Manipur

Implementation of Electronic Human Resource Management System in the Ministry of Electronics & IT

Implementation of NIC developed Electronic Human Resource Management System (EHRMS) in Ministry of Electronics & Information Technology with an aim of better governance, transparency, employee empowerment and effective monitoring, eHRMS solution designed and developed by NIC, is implemented in M/o Electronics & Information Technology, by Secretary (MeitY), Shri Ajay Sawhney, accompanied by Special Secretary & FA. DG (NIC) also graced the event by her presence. Other senior officers of MeitY and NIC also participated in the event.

With an aim of better governance, transparency, employee empowerment and effective monitoring, eHRMS solution designed and developed by NIC, is implemented in M/o Electronics & Information Technology, by Secretary (MeitY), Shri Ajay Sawhney, accompanied by



Secretary (MeitY), Shri Ajay Sawhney and DG (NIC), Dr. Neeta Verma during the launch event

Special Secretary. Other senior officers of MeitY and NIC also participated in the event.

- Nidhi Pahwa, New delhi

Hon'ble Minister for Skill Development and Entrepreneurship (MSDE) launched the NIC developed website of MSDE

The CMF based website was launched in the presence of Hon'ble Minister of State, Secretary MSDE and other senior officers during Kaushalacharya Awards ceremony held on 10th September 2020. <http://msde.gov.in>.

- Neeta Chauhan, New delhi



Launching of CMF based website in the presence of Hon'ble Minister of State, Secretary MSDE and other senior officers

Hon'ble Revenue Minister, Himachal Pradesh Launches Roznamcha Software in District

Shri Mahender Singh Thakur, Hon'ble Revenue Minister, Himachal Pradesh launched the Roznamcha Management System software in District Mandi on 17th August 2020. Roznamcha is a diary of daily incidents maintained by Patwari, who is the grass-root revenue officer in Revenue Administration, under executive instructions issued from time to time. The Patwari makes an entry for each day mentioning briefly about the incidents happened in his area.

Shri Ramswaroop Sharma, Hon'ble Member of Parliament, Mandi and Hon'ble Members of Legislative Assembly from Balh, Nachan, Joginernagar, Karsog and Drang constituencies were present during the inaugural function. The district level officers were also present on the occasion.

Shri Rugved Milind Thakur, IAS, Deputy Commissioner, Mandi highlighted the software features as most of the planning and decisions are taken on the basis of these reports submitted by the Patwaris. Roznamcha is the source document for such reports. The software primarily focuses on capturing the data related to the Roznamcha of Patwari. The



Hon'ble Revenue Minister launching the Roznamcha software in Mandi

application records all major activities or events happened in the Patwar circle area. Once the data is updated in the application the real-time reports will be available to Tehsildars – SDMs – District Authorities and State Level Authorities. This will help the government to take the quick decisions on the basis of real-time reports.

Apart from these daily reports of e-governance activities (like issuance of online certificates, driving licenses, vehicle registration etc.) taken up by the Tehsils and Subdivision will also be entered in the application. Urgent matters sent for report to the subordinate offices will also be monitored through this application.

The Roznamcha software has been developed by NIC Mandi.

- Ajay Singh Chahal, Himachal Pradesh

Launch of “Centralized Farm Machinery Performance Testing Portal” by Shri Narendra Singh Tomar, Hon'ble Union Minister for Agriculture and Farmers Welfare

Testing of farm machines is an important aspect of agricultural mechanization which benefits both buyers i.e. farmers as well as to the manufacturers of agricultural machinery. Recognizing the importance of testing and evaluation of agricultural machinery and to improve services of testing institutions and bringing out transparency in the entire process of testing and evaluation of machines, a “Centralized Farm Machinery Performance Testing Portal” (www.agrimachinery.nic.in) has been developed by the National Informatics Centre (NIC) for the Department of Agriculture, Cooperation and Farmers Welfare, Ministry of Agriculture, GoI.

This portal has been launched by Shri Narendra Singh Tomar, Hon'ble Union Minister for Agriculture and Farmers Welfare on 24.09.2020 in the



Launching of “Centralized Farm Machinery Performance Testing Portal” by Shri Narendra Singh Tomar in the august presence of Hon'ble Ministers of State for Agriculture & Farmers Welfare, Shri Parshottam Rupala and Shri Kailash Choudhary.

august presence of Hon'ble Ministers of State for Agriculture & Farmers Welfare Shri Parshottam Rupala and Shri Kailash Choudhary.

On this occasion, Secretary, Department of Agriculture Cooperation and Farmers Welfare, Shri Sanjay Agarwal and other senior officers of the Department were also present. Dr. Ranjna Nagpal, DDG and HOG (Agriculture Informatics Division, NIC) had explained the workflow process, benefits and features of the Portal to Hon'ble Union Minister. Smt. Mala Mittal, Sr. TD and HOD, Shri Gyan Prakash Singh, Sr. TD and Smt. Himani Sharma, Scientific and Technical Assistant-B were present in the launching ceremony.

- Shailendra Saxena, New Delhi

Launch of NIC's eOffice, a Digital Workplace Solution, by Hon'ble Chief Minister of Manipur

Hon'ble Chief Minister Manipur Shri N. Biren Singh, launched NIC's eOffice 'A digital workplace solution'. It is a step towards a paperless office, bringing ease of Governance with transparency & accountability.

- M. Budhimala, Manipur



Hon'ble Chief Minister of Manipur, Shri N. Biren Singh launching the NIC's eOffice

Hon'ble PM inaugurated "Destination North-East-2020" through NIC VC Services

Hon'ble Prime Minister Shri Narendra Modi inaugurated 'Destination North East 2020' through NIC Video Conferencing Services on the occasion of the first anniversary of the Fit India Movement, via virtual conferencing today. Destination North East 2020 aims to introduce Tourist Destinations & Culture of North East Region to the world and country, so that it emerges as favourite tourism and business destination of India.

Shri Narendra Modi interacted with various sports persons, fitness experts and others during the Fit India Dialogue event organised on the occasion. The virtual dialogue was conducted in a casual and informal manner where the participants shared with the Prime Minister their life



Hon'ble PM interacting with various sports persons, fitness experts and others during the Fit India Dialogue event

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Hon'ble Minister of Law and Justice, Communications and Electronics & Information Technology Shri Ravi Shankar Prasad inaugurated projects

NIC Bihar was entrusted with the responsibility to organize Video Conferencing on 29th August 2020 between Ministry of Electronics & IT and various locations of Patna for inauguration of Bihar Vidhan Mandal Telephone Exchange Patna and Bharat Air Fiber OLT at Danapur Patna by Hon'ble Minister of Law and Justice, Communications and Electronics & Information Technology, Shri Ravi Shankar Prasad.

Video Conferencing was also organized on 31st August 2020 among Ministry of Electronics & IT and various locations of Bihar for inauguration of Postal Department buildings at Patna Sahib Post Office Building at Patna City, New Head Post Office at Lohia Nagar Patna, Begusarai Head Post Office, Muzaffarpur Parcel Hub at Muzaffarpur, laying of foundation stone for Bhagalpur Regional Office at Bhagalpur Head Post Campus and Laying of Foundation Stone for Khusrupur Post Office Patna in Bihar by Hon'ble Minister of Law and Justice, Communications and Electronics & Information Technology, Shri Ravi Shankar Prasad. Both the events



Hon'ble Minister during the inauguration on 29th August 2020

were organized in a very short notice of BSNL and Department of Post. The event was organized under the guidance of Shri Rajesh Kumar Singh, Dy. Director General & SIO Bihar, and was coordinated by Shri Tarkeshwar Prasad, Scientist E and Video Conferencing Coordinator-Bihar involving 11 locations, MeitY, NIC (HQ), BSNL and Postal Department. The event was also webcasted at <https://webcast.gov.in/MeitY>. The webcast was coordinated by Shri Sanjeev, Scientist-F.

- Rajiv Ranjan, Bihar

DG, NIC highlighted NIC's role in supporting Government at all levels with its digital solutions, at a virtual conclave 'Cloud 2020 with NIC'

Dr. Neeta Verma, Director General, NIC highlighted NIC's role in supporting the Government at all levels across India, with its digital solutions like eOffice, Aarogya Setu App, DBT, RT-PCR, Video Conferencing and Cloud Infrastructure, during the COVID19 pandemic. DG NIC, was a keynote speaker at the virtual conclave 'Cloud 2020 with NIC', on 24th September 2020 organised by Governance Now. She also talked about NIC's innovative 'Work From Home' platform.

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DG, NIC with other participants, as a keynote speaker at the virtual conclave 'Cloud 2020 with NIC', organised by Governance



Delhi Chief Minister, Shri Arvind Kejriwal inaugurates e-filing consumer complaint system

Hon'ble Chief Minister, Govt. NCT of Delhi virtually launched NIC developed eFiling software 'eDaakhil' in Delhi State Commission and all District Consumer Commissions across the State. This enables consumers to file their complaints online for Delhi Consumer Commissions. Hon'ble Minister Food, Supplies & Consumer Affairs, Hon'ble President of State Commission, State Govt. Officials and DDG, NIC were also present in the virtual event. (<https://edaakhil.nic.in>) This portal has been launched by Shri Narendra Singh Tomar, Hon'ble Union Minister for Agriculture and Farmers Welfare on 24th September 2020 in the au-

gust presence of Hon'ble Ministers of State for Agriculture & Farmers Welfare, Shri Parshottam Rupala and Shri Kailash Choudhary.

The Hon'ble Chief Minister also said that Delhi is the first of its kind to start such a facility and will be an example for other states to follow as well and added that around 7,000 consumer cases in the state commission and more than 8,000 such cases in the district courts were pending.

The event emphasized the role of eDaakhil in empowering the consumers and enabling them to file online complaints to Consumer Commissions at District, State & National level.

The eDaakhil portal has been launched on 7th September 2020 for National Commission (NCDRC).

- Ravindra Kumar, New Delhi

Virtual Launch of CollabCAD Software by Director General, NIC along with Mission Director, Atal Tinkering Labs, NITI Aayog

National Informatics Centre (NIC)'s CollabCAD Group designed and developed indigenous Computer Aided Designing (CAD) Software 'CollabCAD' (<https://collabcad.gov.in>) and 3D Web Viewer 'e-CollabCAD Viewer' (<https://collabcad.gov.in/eCollabCAD>) services are launched for Atal Tinkering Labs (ATL) under The Atal Innovation Mission (AIM - <https://aim.gov.in>), NITI Aayog. NIC is proud to share this software with Atal Innovation Mission under the aegis of Niti Aayog for the ATL programme. The launch took place during the COVID-19 lockdown period so that thousands of students can be benefited and can tinker at home to explore 3D digital world of product design.

This release of CollabCAD for the ATL community will benefit students of more than 5000 ATL registered schools (classes 6 to 12) across the country. It provides the students with an opportunity to explore design innovation in 3D CAD models to 3D Printing with this "MAKE IN INDIA" software, CollabCAD. Access to this high-end Collaborative 3D CAD software would provide the students with endless opportunities for innovation and smarter solutions.

CollabCAD desktop and network enabled software assists product designers to create 3D parts and engineering drawings with additional web-based 3D viewer to render models for real-time visualization for smart manufacturing. STL and CollabCAD data formats are available through export which could be visualized in a web browser environment.



The CollabCAD - ATL page (<https://collabcad.gov.in/atInfo.html>) has been designed for dissemination of information to students and provides the students with various tutorials to walk through the software, before they start tinkering and learning and delivering innovative models. Various 3D part files and STL files for 3D printing are also provided for quick visualization and creation of 3D print models. e-CollabCAD web application (<https://collabcad.gov.in/eCollabCAD>) enhanced the File upload module for ATL 3D design challenge held in May 2020. The 3D Design Challenge was launched to encourage students to learn about the technologies launched on ATL Community Day. Initially, entries for the Challenge was till 3rd May 2020, but with the extension of Lockdown and huge response from students, the challenge was extended till 17th May 2020 to give a chance for more students to participate. Three challenges were announced as a part of ATL Community Day challenge: AI, Game Development, 3D Design with CollabCAD and results were announced in July 2020.

- Guntuku Prasad, New Delhi

Launch of MSME beneficiary schemes in UP by Hon'ble Chief Minister

To promote national self-reliance and to become vocal about local, Hon'ble Chief Minister Yogi Aditya Nath has launched the online version of 4 more schemes viz. ODOP (Marketing Development Scheme), ODOP (toolkit & training) for SC/ST & OBC persons and Hast-shilpi Skill development scheme for the citizens of the state on 7th August, 2020 at Lucknow. The schemes will be available at the existing online portal of MSME Directorate.

Shri Siddharth Nath Singh, Cabinet Minister MSME & Export Promotion, Government of UP, who was present during the launch, appreciated the efforts of NIC UP to bring revolution and digital transformation in MSME Sector by enhancing the platform with more services in a very short span of time.

Shri Navneet Sahgal, Additional Chief Secretary MSME & Export Promotion, GoUP informed the guests that the department has already provided the benefit of the schemes to 98,473 MSME units by the use of technology in a short span of 3 months. He mentioned that this could be achieved only due to the effective and transparent use of an online eServices portal that was launched by Hon'ble Chief Minister on 14th May 2020. With the addition of these 4 new services now the portal has 8 schemes in its basket of services for the citizens. Few more schemes are in the pipeline and will be launched soon.

This online platform, developed by the NIC UP State Centre team led by Shri Anshu Rohatgi, STD & ASIO under the able direction and guidance of Shri Pratik Kr. Srivastava, DDG & SIO UP has proved a significant



Launch of 4 new schemes under MSME e-Services Portal

step in the direction of Digital India from the perspective of the MSME sector in the state.

Shri Chaudhary Udaybhan Singh, State Minister MSME & Export Promotion, Government of UP with the senior officials of State Government including Chief Secretary, IIDC, APC, Additional Chief Secretary, MSME & Export Promotion, UP and Commissioner, Directorate of Industries graced the occasion. All the District Magistrates & districts level departmental officers also participated in the launch through Video Conferencing.

Shri Shailesh Srivastava, STD & project head and Shri Ashish Rastogi, Scientist – D participated in the launch function held at Chief Minister's residence, Lucknow.

- Anshu Rohatgi, Uttar Pradesh

Online Conference held to commemorate five years of Digital India programme

To commemorate five years of the Digital India Programme, an online conference "Digital Bharat Aatmanirbhar Bharat" has been organised on 1st July 2020 by the Ministry of Electronics & IT. The conference highlighted Digital India's 5 year journey so far and new initiatives and focus areas were discussed by stalwarts of Digital India programme.

Hon'ble Minister of Law & Justice, Communications and Electronics & Information Technology, Shri Ravi Shankar Prasad in his inaugural address emphasized the need for the development of good mobile apps across various sectors making Aatmanirbhar Bharat.

The conference witnessed sessions by stalwarts of Digital India Programme including Shri J Satyanarayana, Former IAS, Chief Advisor, Centre for the Fourth Industrial Revolution in India (WEF), Dr. R S Sharma, Former IAS & Chairman, TRAI, Shri Nandan Nilekani, Non-Executive Chairman, Infosys, Shri Rajeev Chawla, Additional Chief Secretary, e-Governance, Karnataka, Smt. S Radha Chauhan, Additional Chief Secretary, Technical Education, Uttar Pradesh, Shri Prakash Kumar Former IAS & CEO, GSTN, Shri Gulshan Rai, Former National Cyber Security Coordinator, PMO, Shri Santosh Mishra, CEO-TNeGA & Commissioner of e-Governance, Tamil Nadu, Smt. Praveena Rai, COO, NPCI, Smt. Debjani Ghosh, President, NASSCOM, Dr. Rajendra Kumar, Additional Secretary, MeitY, Shri Saurabh Gaur IAS, Joint Secretary, MeitY, Shri Abhishek Singh, President & CEO, NeGD, Dr. Rajeev Sangal, IIIT Hyderabad.

Shri Ajay Sawhney, Secretary, MeitY elaborated on the need to accel-



Hon'ble Union Minister launching the online conference

erate the implementation of National Public Digital Platforms in sectors like Health, Education, Agriculture, Criminal Justice and Logistics.

Dr. Neeta Verma, Director General, NIC explained the importance of Cloud-enabled eGov Applications while speaking at Conference and elaborated the Cloud infrastructure managed by NIC across its Data Centres. Dr. Verma stressed upon the need of enabling more and more applications on Cloud technology. Migration of existing eGov applications to Cloud may require re-development in certain cases to enable them to leverage upon the scaling benefits whenever required.

In the first half of the conference, the Digital platform revolution that has driven the digital transformation across the country under the Digital India Programme was the focus area of the discussion and presentations. The second half of the conference focussed on building Aatmanirbhar Digital Systems and discussed the possible approaches to achieve the objectives of 5 focus areas of Aatmanirbhar Bharat i.e., Businesses, Poverty, Agriculture, New Growth Horizons and Government Reforms and enablers.

- Shashi Kant Pandey, New Delhi

NIC, Andhra Pradesh bags eLets award of Excellence for Drinking Water Transportation & Movement Product

NIC, Andhra Pradesh has bagged the prestigious Award of Excellence for Drinking Water Transportation Product under the category of Efficient Water Transportation & Distribution at elets National Water Innovation Summit 2020. The award has been presented virtually by Shri U.P. Singh, IAS, Secretary, Department of Water Resources, River Development & Ganga Rejuvenation, Ministry of Jal Shakti, Government of India.

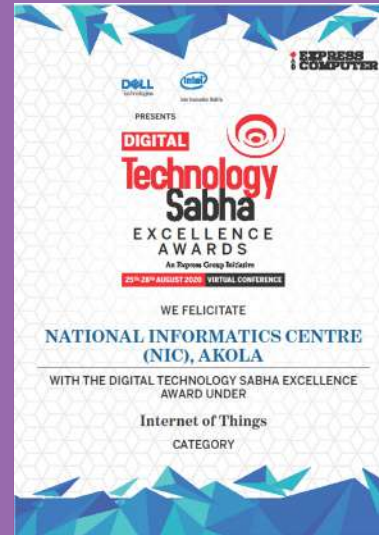
This APP has been designed and developed for Rural Water Supply and Sanitation Department, Government of Andhra Pradesh. It is a fusion of two distinct apps, Water Tanker Movement APP and Monitoring APP, and provides a seamless integration between them in secured and streamlined manner.



NIC, Akola receives Digital Technology Sabha Excellence Award 2020

The Framework developed by NIC, Akola, for the total remote management of water and electricity system with ultimate aim to provide water and electricity bills based on device-wise consumption has won the

Digital Technology Sabha Excellence Award 2020 under Internet of Things(IoT) category. The award was given away during the four day Virtual Conference Digital Technology Sabha (25 to 28 August 2020). Technology Sabha is an eGovernance initiative of the Express Computer Group for leadership dialogues, actionable case studies and best practices, networking opportunities and technology showcases. Due to the present condition of pandemic, the event was virtually hosted.



Shri Sanjay Dhotre, Hon'ble Union Minister of State for Education, Communications and Electronics & Information Technology, Shri Ajay Sawhney, IAS, Secretary, Ministry of Electronics & Information Technology and Dr. Neeta Verma, Director General, NIC were the key speakers in this summit.



NIC outshines at the SKOCH Digital India Award 2020

A SKOCH Gold Award has been awarded to the Ministry of Tribal Affairs (MoTA) for its "Empowerment of Tribals through IT enabled Scholarship Schemes" project. The project was launched to show the Government of India's commitment to realize the dreams of Digital India and bringing transparency as well as ease in the delivery of services. MoTA integrated the 5 Scholarship Schemes with DBT Portal under the guidance of DBT Mission in order to align with the larger vision of 'Digital India'.

B Ministry of Labour and Employment bagged a SKOCH Gold Award 2020 for SAMADHAN Portal under Digital India category.

C Sand Sale Management & Monitoring System, the robust and transparent ICT solution of the Mineral Development Corporation Ltd of Telangana received the SKOCH Gold Award under the Digital India Category.

D The West Bengal CMO's public grievance system for E-Samadhan was awarded the prestigious and highest Digital India Platinum Award by Skoch Foundation at the 66th Skoch Foundation at the 66th Skoch Summit on Thursday in New Delhi.

