

Informatics

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Happy New Year 2024

Spotlight

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Editorial

In the realm of technology, a fascinating tapestry emerges—one woven with both promise and caution. As new technologies emerge, their undeniable potential to revolutionize digital governance and amplify citizen engagement stands juxtaposed with the lurking shadows of unforeseen threats.

The emergence of groundbreaking technologies—be it artificial intelligence, machine learning, or blockchain—offers a tantalizing prospect for redefining the landscape of digital governance. These innovations, brimming with transformative capabilities, hold the key to unlocking a future where governance transcends boundaries and empowers citizens on unprecedented levels. However, amidst this unfolding panorama, there exists a parallel narrative—the proliferation of sophisticated cyber threats, data breaches, and privacy concerns cast a cautious shadow. As we delve deeper into the digital realm, the complexities of safeguarding information and ensuring citizen privacy become increasingly daunting.

The convergence of these forces—the promise of innovative technologies and the lurking threats—unveils a pressing need for agile, nuanced solutions. It beckons us to forge a path that navigates the intricate balance between embracing technological advancements and fortifying the digital domain against potential vulnerabilities.

In this dynamic scenario, the imperative to develop cutting-edge software solutions for enhanced digital governance and enriched citizen outreach becomes paramount. The challenge lies not merely in developing software but in crafting intricate digital architectures that embody resilience, security, and accessibility.

These solutions must be a testament to innovation, marrying the brilliance of technological advancements with the solemn commitment to safeguarding citizen data and upholding their rights. They must transcend mere functionality to embrace user-centric design, fostering intuitive interfaces that bridge the gap between governance bodies and the citizens they serve.

Amidst the complex symphony, the call for collaboration and collective wisdom reverberates profoundly. Collaboration across disciplines, amalgamating diverse expertise, will be instrumental in sculpting software solutions that stand resilient against the tide of evolving threats. Furthermore, ethical considerations must weave seamlessly into the fabric of these solutions—serving as the moral compass guiding the trajectory of innovation.

In conclusion, as we stand at the precipice of a digital renaissance, the emergence of new technology intertwines with the shadows of potential threats. However, within this interplay lies an opportunity—an opportunity to craft software solutions that transcend boundaries, bolster digital governance, and foster profound citizen outreach. It beckons us to embrace innovation while treading with caution, forging a future where technological brilliance harmonizes with ethical fortitude.

Happy New Year! As we step into a new year filled with aspirations and possibilities, may the spirit of innovation and collaboration guide us towards a brighter, technologically enriched tomorrow.

Editor-In-Chief





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GPAI 2023

Advancing Ethical AI Innovations and Global Collaboration for a Secure Technological Future

India's remarkable achievements in AI innovation took the spotlight from the 12th to the 14th of December, 2023, at Bharat Mandapam, New Delhi. This pivotal event, the Global Partnership on Artificial Intelligence (GPAI) New Delhi Summit, served as a focal point where major global initiatives in the field of AI, including the UN Advisory Group on AI and the UK AI Safety Summit, converged under a single umbrella, showcasing India's crucial role as a global hub for AI advancement.

Inaugurated by the Hon'ble Prime Minister Shri Narendra Modi, the event highlighted the dynamic spirit of youth in exploring AI's frontiers for societal change. Accompanied by the Hon'ble Union Minister for Electronics & IT, Shri Ashwini Vaishnaw, Hon'ble MoS for Electronics & IT, Shri Rajeev Chandrasekhar, Hon'ble Vice-Minister for Policy Coordination, Shri Hiroshi Yoshida and Secretary, MeitY, Shri S. Krishnan, the Hon'ble PM underscored India's commitment to ensure AI development aligns with ethical and secure frameworks.



The summit witnessed an impressive assembly of delegates from 29 GPAI countries, along with over 150 global AI experts. An astounding 22,000 individuals attended the summit, with more than 15,000 AI enthusiasts actively engaging in virtual sessions, highlighting the widespread interest and global reach of the event.

A key highlight of the summit was the Global AI Expo, where 150 startups and major tech companies showcased their cutting-edge AI applications and products, further solidifying India's position as a pioneering force in the AI domain.

Notably, NIC made a remarkable display of its AI offerings - AI Panini, AI Saransh, AI Matra, AI Shruti, AI VANI, and AI Satyapikaanan-at the summit. Shri Amit Agrawal, Director General, NIC, emphasized the pivotal role of India's population-scale Digital Public Infrastructure approach in revolutionizing the digital space. He stressed that leveraging this approach holds the key to



unlocking the potential of data for AI, asserting that the future of AI is not a distant concept but an immediate reality that demands acceptance and adaptation. His insights resonated with the summit's discourse, focusing on responsible data utilization, legal compliance, and the presence of diverse consent management frameworks crucial for AI development.





Amit Agrawal IAS
Director General



सत्यमेव जयते

Government of India
Ministry of Electronics
& Information Technology

National Informatics Centre

Dear reader,

As we stand at the threshold of a brand new year, I hope this message finds you and your beloved ones in good health and high spirits. The commencement of a new year heralds the promise of fresh beginnings and the chance to instil positive transformations in our lives.

Reflecting on our journey, the NIC team may look back with pride in the remarkable strides it has taken in recent years. Collaborating tirelessly with various State Governments and Central Ministries, NIC has spearheaded numerous initiatives in the realm of e-governance. NIC's steadfast commitment has enhanced public service delivery and simplified access to vital services.

The evolution of e-governance in India mirrors a remarkable progression from mere computerisation to embodying the quintessence of governance citizen-centricity, service orientation and transparency. Learning from past endeavours has been instrumental in sculpting a progressive e-governance strategy. Recognising the imperative need for a unified vision and strategy, NIC has adopted a programmatic approach across national, state, and local government bodies. This has fostered not only substantial cost savings through infrastructure sharing but also ensured interoperability and presented a unified government interface for citizens.

NIC's holistic perspective towards e-governance initiatives has been pivotal in uniting these efforts under a common vision. Its concerted efforts have led to the expansion of a nation-wide infrastructure, extending to the remotest villages. Wide-scale digitisation of records has revolutionised accessibility, making government services easily and reliably accessible over the Internet. NIC has remained committed to realising its aim of bringing public services even closer to every citizen.

I have unwavering confidence in our collective capability to seize the opportunities that lie ahead and further elevate our organisation's stature. As a cohesive team, I extend my heartfelt wishes for a fulfilling 2024 and beyond.

Warm wishes,

Amit Agrawal

West Bengal State

ICT towards good governance, reaching the unreached

Edited by KAVITA BARKAKOTY

Since its establishment in 1978, NIC West Bengal has played a pivotal role in advancing Information and Communication Technology for the state and district administrations e-Governance initiatives. With a comprehensive presence across Kolkata and in all 23 districts, the State Centre has played a vital role in transforming various government sectors. From the Chief Ministers Office (CMO) to Education, Finance, Industry & Commerce, Social Welfare, Land Reforms, Labour, and more, NIC West Bengal has been at the forefront of developing and implementing crucial ICT initiatives. The legacy of NIC West Bengal continues to thrive as it remains deeply committed to promoting technological innovation and enhancing administrative



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NIC West Bengal stands as a cornerstone in technological innovation and digital transformation, driving impactful initiatives to empower government departments and citizens alike. It serves as a catalyst for modernizing governance by providing robust IT infrastructure, innovative solutions, and technical expertise. Through its array of services and applications, NIC West Bengal facilitates seamless communication, efficient data management, and the delivery of e-Governance services across the state. From comprehensive networks like NICnet to specialized platforms such as eBhuchitra and Banglarbhumi, NIC West Bengal fosters connectivity, accessibility, and transparency in administrative processes.



efficiency. Through its extensive contributions and innovative ICT solutions, NIC has significantly influenced and elevated the governance landscape of West Bengal.

ICT Initiatives in the State

Following is the snapshot of major ICT projects that are implemented in the State:

eRegistration & eNathikaran

<https://wbregistration.gov.in>

eRegistration & eNathikaran, part of the Digital India Land Records Modernization Program (DILRMP) in West Bengal, revolutionized the Directorate of Registration & Stamp Duty's processes. The online document registration system replaced the previous standalone Computerisation of Registration of Documents (CORD) system. Over time, the platform has evolved, integrating value-added services like NeSI, eRegistration, eNathikaran, and GRIPS interfaces.

Key enhancements include automation of the Mutation Process, incorporation of non-geo referenced Maps (Land Reforms) into the registration process, pinpointing Registration Offices via Google Maps, and integrating backlog and legacy deeds into the online system. Additionally, it introduced the linkage of EoDB Dashboard with MSME and Grievance Redressal Systems

On average, the monthly e-Services for e-Nathikaran encompass:

- Deeds Registered: 125,136
- Number of e-Assessments: 3,702,239

eBhuchitra and Banglarbhumi

<https://banglarbhumi.gov.in>

eBhuchitra and Banglarbhumi are pivotal applications of the Land & Land Reforms Department, GoWB, operating across the entire state.

eBhuchitra manages data for 15 crores of landowners and plots, accumulating a significant 44 crores of transactional records. While Banglarbhumi operates on 9 crores of transactional records, allowing citizens to access live land records and map information.

Offering over 176 functionalities and 65 exposed web services for internal and external communication, Banglarbhumi provides essential

e-services, such as digitally signed ROR (Khatian), Plot Index, and Plot Map delivery to citizens.

Through server-to-server data exchange between land offices and Registration Offices, contactless mutation has been successfully implemented. Additionally, Jomir Tathya, a trilingual mobile app developed by NIC, facilitates mServices, further enhancing accessibility and convenience for users.

SilpaSathi

<https://silpasathi.wb.gov.in>

SilpaSathi serves as a comprehensive solution catering to entrepreneurs, MSMEs, and artisans in West Bengal. This portal offers a single-window system where applicants receive a unique Common Application Form (CAF) ID, facilitating seamless access to a range of services. It allows document uploads, online payments, and verification of details, enabling the acquisition of Final Certificates or Licenses through the pull API from the Legacy system.

To enhance citizen engagement and communication, SilpaSathi also includes a mobile app. Some key milestones achieved include:

- Over 2.5 Lac enterprises benefitted in the past 12 months through simplified clearance processes, including real-time, auto-renewal, and deemed approval of applications.
- Rationalization of 800+ burdensome compliances for businesses within the last 12 months.

Lakshmir Bhandar

<https://socialsecurity.wb.gov.in>

Lakshmir Bhandar is a flagship scheme by the State governments Department of Women & Child Development and Social Welfare. Aimed at enhancing the financial status of women, this initiative utilizes the Lakshmir Bhandar portal, developed and hosted by NIC.

The portal facilitates beneficiary registration and monthly financial assistance disbursement to unemployed women aged 25 to 60. Amounts are credited directly to their Aadhaar-linked bank accounts. API-based integration with various platforms like SMS, JanmaMrityu portal, PDS, Caste Certificate, and CS Dashboard ensures efficient monitoring and MIS generation.

Presently, the application caters to over 2.04 crore beneficiaries, facilitating seamless Direct Benefit Transfer (DBT) of more than ₹ 18,000 crores annually.

Jaibangla

<https://jaibangla.wb.gov.in>

Jaibangla serves as a unified pension portal for multiple social pension schemes in West Bengal. This ICT-based platform offers an end-to-end solution for application, approval, and monthly pension payment across seven government departments and 17 schemes. Currently, Jaibangla accommodates approximately 63 lakh approved beneficiaries.

Bina Mulya Samajik Suraksha Yojana

<https://bmssy.wblabour.gov.in>

Bina Mulya Samajik Suraksha Yojana (BMSSY)

is a flagship initiative by the Labour Welfare Board under the Department of Labour, GoWB. It ensures social security for unorganized sector workers without any contribution required from the beneficiary. Both the beneficiary's and the government's contributions are covered by the government itself.

The BMSSY web application functions as a workflow-based system to gather information on unorganized workers through SLO/Collecting Agents in rural and urban areas. It issues a unique Social Security Identification Number (SSIN) and a Samajik Mukti Card to approved beneficiaries. The application also includes modules for Death or Disability claims, Provident Fund calculations on maturity or partial withdrawal, and SLO commission.

Karmasathi Parijayee Shramik

<https://karmasathips.wblabour.gov.in>

The Karmasathi Parijayee Shramik scheme is a comprehensive initiative established to support migrant workers who departed the state during the COVID-19 period. Its primary objective is to ensure the security, safety, and assistance of these workers, including compensation in the unfortunate event of death, repatriation of deceased bodies, and facilitating cremation through their family members or nominees. This initiative operates as a workflow-based system, capturing diverse information about migrant workers either directly through a mobile application or via special drives such as 'Duare Sarkar,' house-to-house surveys, and 'Bangla Sahayata Kendra' (BSK). It aims to create a database encompassing various categories of migrant workers, enabling the provision of necessary aid and support while enhancing their overall well-being.

Kanyashree

<https://wbkanyashree.gov.in>

Kanyashree, a flagship programme of GoWB, being implemented by the department of Women



▲ Fig 2.1: JomirTothya Mobile App

As a key technology partner to the Government of West Bengal, NIC West Bengal has facilitated many eGovernance initiatives of the State Government to make West Bengal a digitally enabled State. Some of the landmark projects that immaculately executed in partnership with NIC in West Bengal are Duare Sarkar, Paray Samadhan, eAbgari, eNathikaran, eBhuchitra, eWBMTCL, Bina Mulya Samajik Suraksha Yojana, eVahan & Sarathi, eOffice, SilpaSathi, Backward Class Certificate Generation, Karmasathi, West Bengal Health Scheme for employees, various social security & DBT schemes such as Jaibangla, Lakshmir Bhandar, Kanyashree, Rupashree, Student Credit Card, Swami Vivekananda Merit-cum-Means Scholarship etc. Many of our eGovernance initiatives have received prestigious international and national accolades.

Apart from the existing projects, the NIC West Bengal is enthusiastically and proactively taking up new challenges in emerging technologies such as AI, Blockchain, Machine Learning, etc. Recently, we have conceptualized and deployed an end-to-end Beneficiary Management and comprehensive Social Registry Ecosystem as inclusion system to ensure universal coverage and monitoring.

I congratulate and wish the entire NIC team success in their new initiatives and urge them to explore hitherto untouched areas where eGovernance can improve service delivery to the people.



H. K. Dwivedi IAS
Chief Secretary
Government of West Bengal

and Child Development & Social Welfare, is a conditional cash transfer scheme which aims at improving the lives of millions of adolescent girls having poor socio-economic background through educational, social, financial and digital empowerment.

The project has received multiple e-Governance awards including UNPSA Award, Skoch Award, UN WSIS Award, GEM-TECH Award, National e-Governance Award.

Key Features

- Image Processing Techniques, like Human Face Detection, OCR, QR Code used
- Integration with Banglar Shiksha Portal, Swami

Vivekananda Merit Cum Means (SVMCM) Scholarship Portal, Utkarsh Bangla Portal

- Integrated with IFMS & RBI IFSC DB
- A virtual workspace for Kanyashree Girls
- Strong duplicacy checking mechanism to ensure zero leakage

eAbgari

<https://excise.wb.gov.in>

The eAbgari project, led by the NIC within West Bengal's State Excise sector, employs cutting-edge technology to combat the production and distribution of counterfeit intoxicants. This initiative serves multiple purposes, including safeguarding public health, tackling revenue leakages, and enhancing regulatory capabilities. It utilizes advanced ICT tools such as QR codes, Digital Signatures, AI-driven Supply Chain Management, and GPS tracking. By leveraging these tools, eAbgari portal has significantly reduced service times, offering more than 69 online services, thereby empowering the government to better regulate the sector.

Despite a yearly increase in intoxicant consumption by 5-6 percent since 2014-15, West Bengal's Excise revenue witnessed an impressive surge from ₹ 3,581 Crores to ₹ 16,272.06 Crores in 2022-23, achieving a remarkable CAGR of over 25 percent. Over the span of four years, the West Bengal State Beverages Corporation Ltd. (WBSBCL) utilizing eBevco under eAbgari conducted business transactions amounting to over ₹ 64,000 Crores, yielding a wholesale margin exceeding ₹ 1,350 Crores.

Originally implemented in West Bengal, eAbgari project has been adopted by 11 other states, turning it into a nationwide initiative. Its success has been widely acknowledged, receiving 11 prestigious awards, including the Digital India Award and the National e-Governance Award. Particularly noteworthy is its recognition as a significant project during India's 75th Year of Independence celebrations.

OSCAR

<https://castcertificatewb.gov.in>

The OSCAR project, managed by the Department of Backward Classes Welfare, GoWB, in collaboration with NIC, facilitates caste certificate generation. Launched as a citizen-centric application, it's been widely implemented statewide. During Duare Sarkar program in 2020, it processed 64.5 lakh applications and issued 26 lakh certificates in just 2 months, handling a peak of 2 lakh applications in a day.

Currently, it has issued 1.76 crore certificates, including legacy data, and received 2.31 crore applications. To enhance efficiency, it underwent re-invention, introducing services like sub-division level certificate entry, Aadhaar verification via KhadyaSathi server, Digilocker integration, and personalized user dashboards.

Banglar Shiksha

<https://banglarshiksha.gov.in/>

Banglar Shiksha is a comprehensive solution for School Education in West Bengal, covering 95,316 schools, 4 Lakh employees, and 1.75 Crore students. It offers streamlined tracking and monitoring of student admission, progress, incentives, and manages supply chains for school uniforms. The Banglar Shiksha Mobile App aids teachers and students in daily learning activities and evaluation. Additionally, the m-Priyadarshan Mobile App assists Inspecting Officers in school inspection, monitoring, and supervision.

UDISE

<https://schoolinfo.banglarshiksha.gov.in/>

UDISE serves as a robust and sustainable Educational Management Information System designed to gather precise and timely data. Its primary goal is to facilitate effective planning and decision-making within the education department. The system collects comprehensive information from all formal education institutions, spanning from pre-primary to class XII.

Through UDISE+, it gathers data on school profiles, infrastructure, teacher details, enrolments (including Children with Special Needs), dropout rates, board and higher secondary exam results, Mid-Day Meal (MDM) specifics, vocational studies, and more. This online data collection initiative covers over 98,000 schools, 5.8 lakh teachers, and 48.76 lakh non-teaching staff members.

Scholarship Portal for NTSE

The School Education Department of West Bengal, in collaboration with NIC West Bengal, has introduced a Scholarship Portal, which facilitates students to apply online for National Talent Search Examination (NTSE). Through this portal, applications are reviewed, approved, and admit cards for the examinations are processed.

Mid Day Meal Information System

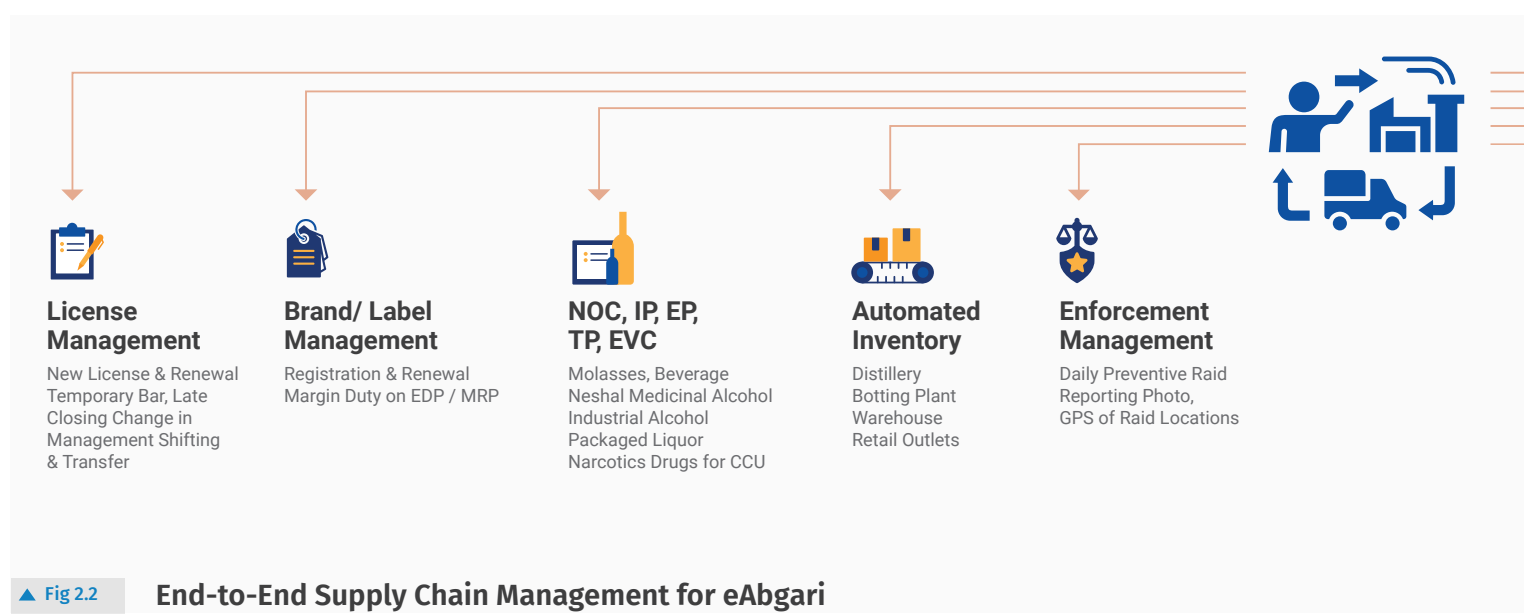
<https://mdm.wbsed.gov.in/>

Under the PM POSHAN Scheme, the Mid-Day Meal program ensures daily meal counts for around 82,510 schools, catering to 80 lakh beneficiaries daily, accumulating an annual financial transaction of 2004 Crores. Real-time reporting mechanisms are enabled through dedicated apps like the Mid Day Meal Inspection and Coverage Apps. These apps empower schools to report on meal servings, kitchen hygiene, and daily meal coverage, facilitating seamless and efficient monitoring. They streamline reporting processes, ensuring accurate and timely data transmission to the central monitoring system for comprehensive oversight and management of the program.

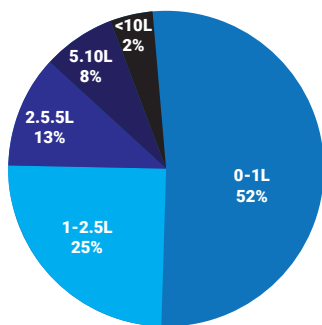
WBBSE Portal

<https://wbbse.wb.gov.in/>

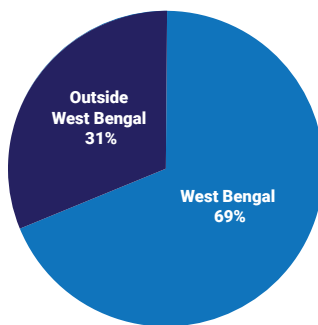
The WBBSE Portal, overseen by the West Bengal Board of Secondary Education, provides a dynamic interface and web applications to view board's related activities. This portal has seamlessly integrated with DigiLocker, ensuring safe storage, sharing, and validation of academic certificates and mark sheets for Secondary and



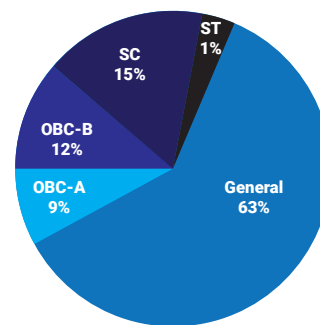
INCOME BAND ANALYSIS



INSTITUTIONAL PROFILE



SOCIAL CATEGORY WISE DISTRIBUTION



▲ Fig 2.3 Student profiles based on income, institution, and social categories for Student Credit Card scheme

Higher Secondary examinations conducted between 2015 and 2022.

Banglar Uchchashiksha

<https://banglaruchchashiksha.wb.gov.in/>

Banglar Uchchashiksha offers a centralized platform for higher education in West Bengal. It provides student profiles, course details, admission analysis, faculty information, pension processing, court case monitoring, official notifications, and manages the West Bengal Free-ship Scheme benefiting 22.3 lakh students, 14,060 teachers, and 508 colleges in self-financing private engineering colleges.

Student Credit Card

<https://wbacc.wb.gov.in>

The Student Credit Card program facilitates a paperless, digital process from registration to loan sanction and disbursement by banks. It offers collateral-free loans up to ₹10 Lakhs at 4 percent simple annual interest to aid higher studies. Within a year, it received 1,75,593 applicants, sanctioning 60,594 applications, totaling ₹ 1,970.56 Crores in disbursements.

Swami Vivekananda Merit Cum Means

<https://svmcm.wbhed.gov.in/>

The scheme aims to support academically excellent students from economically disadvantaged families in West Bengal, enabling them to pursue higher education from Class XI to undergraduate and postgraduate levels, encompassing technical and professional courses at educational institutions within the state.

PBSSD

<https://pbssd.gov.in>

PBSSD, by the Paschim Banga Society for Skill Development, is a comprehensive solution featuring a Training Centre Management System (TCMS) Mobile App, Employment Portal, LOI Based Training System, RTD (Recruit, Train, Deploy) System, and Demand Aggregation System. It incorporates Face Recognition Based Attendance for daily learning activities and utilizes Tech9 and Due-Diligence Mobile Apps for inspection and supervision of Training Centers, ensuring efficient tracking and monitoring for trainees and departments.

Directorate of Technical Education & Training (Polytechnic)

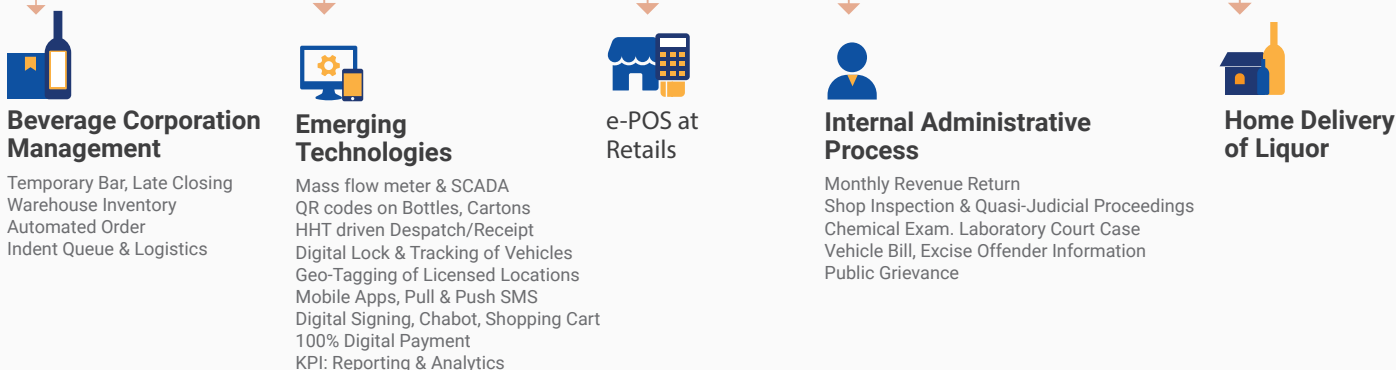
<https://polytechnic.wbtetsd.gov.in>

This comprehensive portal provides an extensive range of services tailored for administrative requirements within the 77 government polytechnics across the state. Its offerings include Employee Management, Transfer Management, Routine Management, Inventory Management, Service Confirmation, Detention Leave, and more. Designed to cater to various administrative needs, these services collectively form a centralized platform facilitating effective management and coordination for the government polytechnics in the state.

West Bengal Health Scheme

<https://wbhealthscheme.gov.in>

The West Bengal Health Scheme aims to offer affordable healthcare to current and retired state government employees, along with All India service employees deputed to West Bengal. It alleviates the financial burden of medical treatments. The application facilitates communication between 9.6 lakh beneficiaries



and 164 hospitals along with 26 diagnostics centers.

West Bengal Election Manpower Management System

<https://wbemms.nic.in>

The West Bengal Election Manpower Management System (WBEMMS) stands as a versatile and role-specific solution designed for efficient online management and deployment of election manpower. It effectively caters to the needs of single or multiple elections, covering duties for polling, counting, and sector-specific roles. This system streamlines the collection of employee data online, categorizes personnel effectively, and deploys them to designated polling destinations with precision. It also handles the management of training schedules, tracks absenteeism, generates various communication forms (such as letters, SMS, emails), integrates a secure payment gateway, and boasts robust data analytics capabilities for comprehensive insights and decision-making processes.

Commercial Tax and Profession Tax

<https://wbcomtax.gov.in> & <https://wbprofessiontax.gov.in>

The State's Commercial Tax and Profession Tax systems are comprehensive ICT-based solutions covering taxation functionalities, including West Bengal State Tax, VAT, CST, Profession Tax, and GST (backend for Model-2 State). They cater to 16.9 Lakh Professional Tax Payers, around 7.5 Lakh GST Payers, and around 2.5 Lakh State Tax and VAT (legacy) Payers. Data from GST systems are integrated for revenue monitoring, administration enhancement, and fraud detection. Notably, in 2021-22, 3,707 fraud cases were detected, realizing ₹ 238.04 crore, while in 2022-23, 33,730 cases were detected, realizing ₹ 696.89 crore in revenue (refer fig 2.4).

JAAGO

<https://shgsewb.gov.in/shgadmin/home>

The JAAGO portal serves as a centralized repository for Women Self Help Groups (SHGs).

It collects and verifies department-specific SHG data, links with the finance department for Direct Benefit Transfer, and sends SMS notifications to stakeholders regarding payment statuses.

West Bengal Tourism Portal

<https://wbtourism.gov.in>

This web portal is designed for the Department of Tourism in West Bengal and serves as a comprehensive platform addressing all tourist inquiries and providing information in one place at a click of a button.

MARREG

<https://rgmwb.gov.in>

MARREG focuses on computerizing marriage registration processes and digitizing existing records within the government department. The initiative aims to establish an efficient system to gradually replace manual data preservation methods. The software facilitates registration of marriages under following Acts:

- The Hindu Marriage Act, 1955
- The Special Marriage Act, 1954 (Sec 13)
- The Special Marriage Act, 1954 (Sec 16)
- The Indian Christian Marriage Act, 1872
- The Parsi Marriage & Divorce Act, 1936

Up to October 2023, it has issued 7,17,672 certificates and generated revenue amounting to ₹ 1238.28 Lakhs.

Central Projects

eOffice

The GoWB established a centralized eOffice architecture in the State Data Centre, catering to 54 departments, 280 directorates / parastatals, and 22 districts. With around 32,000 daily file transactions, it serves about 50,000 users. Moreover, a Quick Response Team is assigned to handle user queries.

eCounselling

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

ICT-based solutions facilitate online

counselling for admission to Medical, Dental, and AYUSH courses in West Bengal's Government and Private colleges. These solutions address complexity, meeting NMC and court-defined schedules. In 2023-24, 40 medical and dental colleges offered 5144 MBBS & BDS seats. For PG-Medical and Dental, 87 institutions provided 1297 PG seats. Furthermore, 16 AYUSH colleges participated in UG counseling, and 4 in PG courses for the current academic year.

eTransport

<https://parivahan.gov.in/>

In West Bengal, accessible via Vahan and Sarathi, eTransport project facilitates multiple online services like duplicate registration certificate (RC) issuance, address change, ownership transfer, no objection certificate (NOC) issuance, motor vehicle (MV) tax, and nominee addition/alteration. SARATHI application handles various licenses issuance including Learner License (LL), Permanent Driving License (DL), International Driving Permit, Conductor License, and more.

As of October 2023, Vahan recorded 11,77,29,671 transactions and 1,54,43,071 registrations, while Sarathi managed 1,86,32,606 transactions, issuing 88,52,336 DLs and conducting 4,57,781 faceless LL operations. In October 2023 alone, Vahan processed 3,41,409 transactions and Sarathi conducted 5,60,013 transactions, issuing 39,572 DLs and performing 15,905 faceless LL operations. New Initiatives such as Faceless / Contactless Learner License using Artificial Intelligence (AI) and other citizen-friendly services including online LL / DL are on track at all the RTOs of West Bengal using Aadhaar authentication.

eChallan

eChallan, a flagship application of e-Transport MMP, is implemented for West Bengal's Transport Department and Traffic Police. It enables various data entry methods like smart cards, QR codes, data entry, SMS, and devices like CCTV / RLVD / Speed Guns. The app calculates penalties automatically, integrates with Vahan & Sarathi, covers enforcement functionalities, and supports geo-tagging of eChallan spots.

Implemented through Android app and web portal, it facilitates on-spot eChallan generation, online payment via GRIPS, and court case settlement via integration with e-Court and Virtual Court eChallan.

e-Courts

e-Courts project aims to modernize the Indian Judiciary through ICT adoption. Built on open-source technology (FOSS), it follows a Core-Peripheral approach. The Case Information System (CIS) National Core 3.2 is used in District and Subordinate Courts, while CIS National Core 1.0 is deployed at Calcutta High Court (Original Side, Appellate Side), Principal Bench, Jalpaiguri Circuit Bench, and Andaman Circuit Bench. Over 50 periphery applications cater to local needs at these benches.



IVFRT

IVFRT program, a flagship initiative under India's National eGovernance Programme (NeGP), focuses on managing immigration, visas, foreigner registration, and tracking movements within the country. Operational at 16 Immigration Check Posts (ICPs) in West Bengal, the Immigration Control System (ICS) oversees lookout circulars (LOC) for secure passage.

The Centralized Foreigner Registration Office (cFRO) operates across 30 sites, including Foreigners Registration Offices (FROs), Foreigners Regional Registration Offices (FROs), and Intelligence Bureau (IB) facilities. It caters to foreigners' needs and facilitates their stay in India by offering various essential services and assistance. This integration aims to streamline immigration processes and enhance security measures concerning foreigners in India.

Other Key Initiatives

NIC WB Mini Data Centre

<https://wbstatecloud.nic.in>

NIC West Bengal established a Mini Data Centre at Nizam Palace to leverage cloud computing benefits, enhancing e-service delivery and expediting e-Governance application development. It offers services such as Platform as a Service (PaaS), Infrastructure as a Service (IaaS), Server Vulnerability Assessment Service, Load Balancer as a Service, Public IP as a Service, Anti-virus services, and Backup services.

The Mini Data Centre has also implemented the NAPIX, a centralized system fostering software inter-operability for e-Governance applications. This robust framework ensures scalability, security, and real-time monitoring with dedicated Sandbox environments.

Presently, 27 APIs are live, receiving around 7.5 million API calls. Additionally, the GitLab DevOps platform hosted at NIC WB's Mini Data Centre enables Git-based source code management, CI/CD pipelines, and integrates open-source

testing and security tools for efficient software development.

Network & Connectivity

NICNet

NICnet, the National Informatics Centre Network, is a robust and extensive nationwide network infrastructure that interconnects government offices and institutions across India. It facilitates efficient communication, data sharing, and delivery of e-Governance services.

In West Bengal, NICnet provides substantial connectivity and network coverage. The services include 21 Core Links, consisting of 18 links at 10 Gbps speed and 3 at 2.5 Gbps. These core links are strategically placed to cover major and crucial locations in the state, including Raj Bhavan, Secretariat, High Court, Assembly, CEO WB (Chief Electoral Officer West Bengal), Department of Information Technology (DIT), Commercial Tax office, and Board of Investment West Bengal (BOI WB).

Moreover, the network extends its reach to 23 districts in West Bengal, offering varying speeds of connectivity - either at 1 Gbps, 100 Mbps, or 34 Mbps - based on the specific requirements and infrastructure in each district. This comprehensive coverage ensures effective communication, data transfer, and access to e-Governance services throughout the state, enhancing administrative efficiency and service delivery.

NKN

NIC West Bengal extends National Knowledge Network (NKN) services to 91 institutes, comprising 74 under NKN (National Knowledge Network) and 17 under NMEICT (National Mission on Education through Information and Communication Technology). The connectivity includes integration with WB-SWAN (State Wide Area Network) and WB-SDC (State Data Centre) through NKN Kolkata. Additionally, the WB-SWAN is established in districts in conjunction with NIC-NKN District Centre, ensuring widespread access and network-

ing capabilities across various educational and research institutions in West Bengal.

Video Conferencing

NIC West Bengal offers comprehensive video conferencing services across the state. This initiative encompasses a network of 35 Video Conferencing Studios, strategically placed to ensure accessibility and convenience.

Among these, 24 studios are located in District NICs, six are NIC studios situated in Kolkata, and an additional eight non-NIC studios are also available in Kolkata.

This setup facilitates seamless connectivity and communication, enabling efficient virtual meetings, collaborations, and interactions among various government departments, officials, and stakeholders across West Bengal.

E-Mail

- A total of 82,233 email IDs created till November 2023.

Accolades

NIC West Bengal has been honored with multiple prestigious awards, exemplifying its excellence in technological innovations and e-Governance.

- Award of Excellence at 19th CSI SIG eGov Awards 2021 for Duare Sarkar
- Digital India Award 2022 (Platinum) for Duare Sarkar project
- Digital India Award 2020 (Silver) for e-Abgari
- Skoch Award (Gold) 2020 for Jaago
- Skoch Award (Silver) 2020 for eRecording and Service Delivery
- National eGovernance Award 2018 for e-Abgari
- Award of Recognition at CSI Nihilent 2018 for Swami Vivekananda Merit-cum-Means Scholarship Portal
- National e-Governance Award 2017-18 (Silver) for SaboojSathi Online
- Skoch Smart Governance (Silver) Award 2017 for eHRMS for Grant-in-aid Employees of Government of West Bengal

Way Forward

With the incessant emergence of new and advanced technologies, the dedicated teams at NIC West Bengal are in constant thrive to adapt and make the best use of them to provide state of the art, secured and sustainable e-Governance solutions. A CoE-AI Lab has been set-up at NIC State Centre, Kolkata under the umbrella of CoE AI, NIC-HQ and initiatives are taken to incorporate new technologies and application of Artificial Intelligence/ Machine Learning, Blockchain, IoT and analytics in various important e-Governance projects in the State.

Contact for more details

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▼ Fig 2.5 NIC West Bengal State Data Centre



Nagaland State

Moving towards a Digitized Era

Edited by **KAVITA BARKAKOTY**

Nagaland, a land shrouded in enigma, home to a vibrant culture guarded zealously by its people – from dancers to warriors, from head-hunters to serene landscapes of mountains, valleys, and forests. Yet, beyond its mysterious aura, Nagaland has evolved significantly over the years. Since its inception as the sixteenth state of the Indian Union on December 1, 1963,



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Since its inception in the year 1989, NIC Nagaland has been playing a pivotal role in the Government of Nagaland in promoting ICT Infrastructure and e-Governance Applications for providing efficient and transparent government services through e-Governance. Its Computer Communication Network NICNET and NKN (National Knowledge Network) at the State Centre and District Centres have been providing Internet connections to all the Departments of the Government as well as the District Headquarters and many Directorates and other offices throughout the state enabling them for efficient communication and dissemination of Information among the stakeholders of the Government.



it has emerged as a globally recognized tourist destination. Spanning approximately 16,579 square kilometers, Nagaland is known for its rugged terrain, dominated by hills and rivers

that carve through the landscape, defining its geographical essence.

The inception of the NIC in 1989 through a memorandum of understanding between the Government of India and Nagaland marked a pivotal moment. NIC's establishment in Kohima, the state capital, as the first district-cum-state center, and its subsequent expansion to all 16 districts, notably transformed the landscape of e-governance services in the state.

Presently, 11 districts have operational NIC District Units, with plans underway to establish the remaining 5, highlighting the indispensable role of NIC in steering the state's Information Technology and digital services landscape.

ICT Initiatives in Nagaland

eOffice

<https://eOffice.nagaland.gov.in>

eOffice has been officially launched by the Hon'ble Chief Minister of Nagaland, Shri Neiphiu Rio, during the 77th Independence Day Celebration at Nagaland Civil Secretariat Plaza in Kohima on August 15, 2023. Since then, it has been working in the Nagaland Civil Secretariat, covering 5 departments.

This platform has streamlined government operations by simplifying document management and fostering efficient collaboration processes.

Vahan 4.0

<https://parivahan.gov.in>

Launched in 2018, this online application for vehicle registration and issuance of Registration Certificates in Nagaland. To date, it has registered a total of 4,28,473 vehicles, generating revenue of Rs. 12,66,28,12,035.

Sarathi 4.0

<https://parivahan.gov.in>

Introduced in 2018 alongside Vahan, this online platform for Driving License services has been effectively implemented in Nagaland. As of now, it has issued 2,84,487 Driving Licenses, collecting revenue of Rs. 14.13 Crs.

IRAD/eDAR

The Integrated Road Accident Database / e-Detailed Accident Report is a mobile/web application initiated by MoRTH and funded by the World Bank, executed by NICS. It involves stakeholders such as Police, Transport, Highways/PWDs, and Medical entities to gather accident-related data for analysis. This data-driven approach aims to identify accident-prone areas and causes, aiding authorities in devising strategies to reduce accidents and improve the country's Road Safety Policy. This nationwide project began in 2020 and in Nagaland, it went live successfully on April 7, 2022. The statistics highlight the accident scenario in Nagaland, offering valuable insights for proactive interventions.

Elections

NIC Nagaland plays a crucial role as the IT Nodal Officer for the Nagaland Legislative Assembly and Lok Sabha Elections, held every five years, including Bye-Elections. Tasked by the Election Commission of India, NIC oversees critical responsibilities such as randomizing Polling Personnel for Polling Officials. The Election Department consistently acknowledges NIC's contributions with appreciation letters following each election cycle.

ServicePlus Framework

NIC Nagaland utilizes the ServicePlus meta-data based e-Service delivery framework employing LowCode-NoCode (LCNC) architecture to create various applications for the state:

ePass: During the Covid-19 pandemic, the ePass application was launched to issue permits for vehicular and people movement in Nagaland. With nationwide lockdowns causing people to be stranded since March 24, 2020, the Nagaland Government sought the ePass Application from NIC to facilitate entry permits. The application was reviewed by the dedicated team at the Chief Secretary's Office and Empowered Committee

Team. After gathering feedback from stakeholders between May 6-8, 2020, the ePass was made available to citizens on May 8, 2020, at 12 Noon.

Craftsmen Training Scheme Stipend (CTSS): To digitize the State Council of Vocational Training (SCVT) Stipend for trainees under the Employment, Skill Development & Entrepreneurship Department, the CTSS was developed on the ServicePlus Platform by NIC Nagaland. It integrates Aadhaar & PFMS, offers mobile app configuration for UMANG integration, and facilitates online applications for the Scheme by beneficiaries or institutes' Data Entry Operators. The department has signed a MoU with NIC for Aadhaar-based DBT integration to authenticate beneficiaries and eliminate duplicates. After User Acceptance Testing (UAT) completed on April 11, 2023, the service is set to move to production after successful Aadhaar integration.

eKMC Service: Using ServicePlus, two applications - Utility Booking Services and Public Grievances and Redressal - were developed for the Kohima Municipal Council. Inaugurated on March 30, 2022, by Dr. Neikiesalie Kire, Advisor, Urban Development & Municipal Affairs, these services allow citizens to book services like Cesspool Vehicle, Excavators, and Trucks managed by KMC. The system includes features such as SMS notifications, e-payment with refund mechanisms, enhancing accessibility and convenience for citizens.

Immigration, Visa, Foreigners' Registration & Tracking (IVFRT)

Operational since 2014 in Nagaland, the IVFRT serves the Foreigner's Registration Offices at District Headquarters. It manages C-Form, S-Form, and eFRRO Services. Recently, new modules - District Police Module & Look-out Circular Information System - were introduced. NIC-Nagaland conducted online state-level training sessions for stakeholders of these modules in August, October, and November 2023. Technical support for accessing these hosted modules on Layer 2 Network is facilitated by NIC-Nagaland.

NIC Nagaland's contribution to the technological architecture of our state has been very important and it has laid the foundation for a robust and integrated digital infrastructure. NIC has provided last-mile network connectivity and videoconferencing facilities in 10 district HQs and is the backbone of the network infrastructure for internet services to the Government of Nagaland. It facilitates provision of e-mail and website hosting services, and is responsible for managing critical welfare services and flagship programs in Nagaland through the National Level Software Projects such as MDM-ARMS, TPDS, HAPIS, RCH, MGNREGA management, PMAY(G), NSAP, among others.

The State Government has also developed an online GPF statement system and is implementing an Aadhaar-based biometric attendance system in the State Civil Secretariat and Directorates to enhance efficiency and security in attendance management. In all these and other IT enabled initiatives including the implementation of SPARROW, Data Centre management, cyber security and the pilot phase of e-office in the Nagaland Civil Secretariat, NIC has been playing significant roles to achieve the objectives of the initiatives.

NIC Nagaland has provided seamless delivery of government services to both the State Government and the public. I commend NIC Nagaland for its invaluable contributions to the State's progress and look forward to continued support as we navigate the challenges to streamlined government operations, promoted transparency, accountability, enhanced citizen engagement and opportunities of the digital era.



J. Alam IAS

Chief Secretary
Government of Nagaland

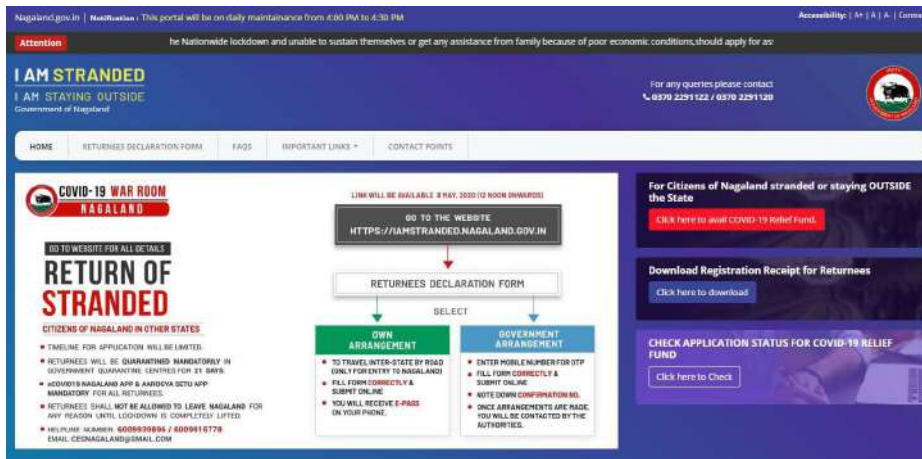
▼ Fig 3.1: Hon'ble Chief Minister of Nagaland officially launching eOffice at Nagaland Civil Secretariat Plaza Kohima on 15th August 2023



eCourts

eCourts, a nationwide initiative by the Department of Justice, Ministry of Law and Justice, Government of India, aligns with the "National Policy and Action Plan for Implementation of Information and Communication Technology (ICT) in the Indian Judiciary-2005."

In Nagaland, this project has been effectively implemented across all 11 districts,



▲ Fig 3.2: Nagaland ePass web application homepage

encompassing 26 courts, and the Gauhati High Court Kohima Bench with 3 courts, ensuring smooth functionality.

As of now, the status of cases is as follows:

- Pending cases, including both Civil and Criminal: 2,834
- Disposed cases, encompassing both Civil and Criminal: 3,934

Aadhaar enabled Biometric Attendance System (AeBAS) (attendance.gov.in)

AeBAS is a system extensively utilized by State Government employees in Nagaland, operating at both state and district levels. Currently, 6 departments are registered within the system, comprising a total of 9,332 registered employees. This platform facilitates the seamless recording

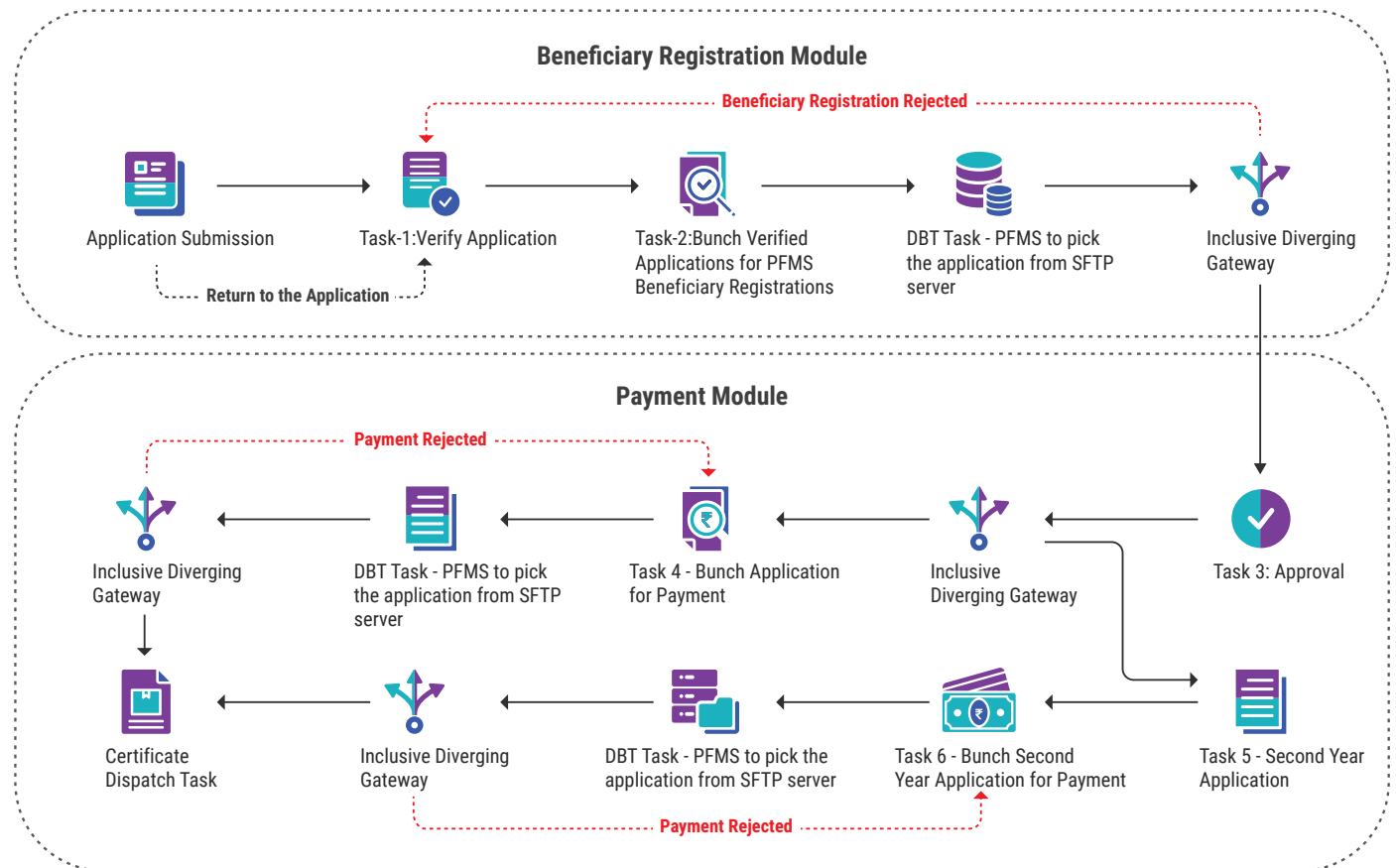
of daily attendance for government personnel, ensuring efficient and streamlined monitoring across various government departments.

CONFONET/eDaakhil Portal

In Nagaland, the Consumer Forum has been established in all 8 districts, dedicated to safeguarding citizen rights. Additionally, the eDaakhil portal, designed for consumers to lodge complaints and manage them effectively, was successfully launched on December 2, 2021. This platform marks a significant step towards enhancing consumer protection measures, offering citizens an accessible and efficient avenue to address their grievances.

National e-Vidhan Application (NeVA)

NIC Nagaland along with the Ministry of Parliamentary Affairs organized training on NeVA application during the year 2018 for the Nagaland Assembly Secretariat and has successfully implemented it in the state. NIC Nagaland along with the Secretary, Assembly Secretariat, Government of Nagaland, received with an appreciation certificate from Shri Arjun Meghwal, Hon'ble Union Minister of State (I/C) for Law & Justice, Parliamentary Affairs and Culture, Government of India during the New Delhi Workshop organized for successful implementation of NeVA in the State in May 2023.



▲ Fig 3.3 CTSS Application Workflow

SPARROW

SPARROW (Smart Performance Appraisal Report Recording Online Window) provides an integrated platform for AIS officers to file their Annual Performance Appraisal Reports (APAR) seamlessly.

eTPDS

<https://fcs.nagaland.gov.in>

eTPDS was introduced in Nagaland in 2018 under the National Food Security Act (NFSA). This initiative has significantly improved the efficiency and transparency of the Food and Civil Supplies Department in distributing food grains to PDS beneficiaries through Fair Price Shops. Currently, there are 3,29,981 Ration Card Holders and a network of 1817 Fair Price Shops operating within the system.

TaxSoft

<https://nagalandtax.nic.in>

TaxSoft was originally developed by NIC Karnataka and customized to suit the specific needs of Nagaland. It was implemented in the state to enhance the efficiency of Value Added Tax (VAT) administration. This customization aims to create a citizen-centric approach and establish service-oriented processes for better tax management within the region.

TreasuryNET Application

The TreasuryNET Application, initiated by the Finance Department of the Nagaland Government, aims to revolutionize financial and treasury management for the state's overall prosperity. Its objectives include effective budget oversight, real-time decision support, and in-depth analysis of revenue and expenditure trends.

NIC Nagaland, in collaboration with NIC Manipur, customized and implemented the TreasuryNET Application, previously used in Manipur, tailoring it to suit Nagaland's similar treasury systems. The project commenced with the pilot site at the Central Treasury, Kohima, launched on May 22, 2015, followed by a phased implementation across other Treasuries.

Initially, the project focused on establishing a web-based online Treasury software for bill processing, receipt management, and accounts compilation in all Nagaland Treasuries/Sub-Treasuries. It utilized isolated/distributed servers, connecting through Nagaland Government's State Wide Area Network (SWAN), NIC LAN, or WiMaX.

Data from these distributed servers is manually uploaded in CSV format to the TreasuryNET Central server located at the NIC Mini Data Centre, Kohima. However, challenges arose in real-time transaction monitoring due to delayed uploads from remote Treasuries. Compatibility issues with newer web-server and OS versions, difficulties in updating the application, and resolving vulnerability issues related to the outdated PHP 4.3.4 version prompted the development of a new Centralized TreasuryNET Application.

The upgraded application, utilizing modern software technology stack (Python 3.10, Django



▲ Fig 3.4: Smt. T. Lanusena Longkumer, Administrator, KMC, Shri Lanusungkum Aier, SIO, NIC Nagaland, Dr. Neikiesalie Kire, Hon'ble Advisor, Urban Development & Municipal Affairs, Shri K. Theunuo, Chief Executive Officer, KSCDL, Shri Thejawelie Gregory- DC Kohima and Shri J. G Lorin, Scientist-F & DIO, NIC Kohima during launch of eKMC services at Kohima Municipal Council Office on 30th March 2022



▲ Fig 3.5: NIC Nagaland along with the Ministry of Parliamentary Affairs organized training on NeVA application for the Assembly Secretariat during the year 2018



▲ Fig 3.6: Launch of eDaakhil Portal on December 2, 2021, led by Shri Pukhavi Sumi, Advisor for Food and Civil Supplies, Legal Metrology, and Consumer Protection, accompanied by department officials

Framework 4.2, Bootstrap 4.0, PostgreSQL 14.0) on Linux Ubuntu 22 server, underwent a security audit for safe hosting, enabling access to the TreasuryNET Application from anywhere via the Internet. All 23 Treasuries have transitioned to the new Centralized TreasuryNET System, offering a real-time statewide view. The system comprises modules for Billing Processing, Receipt/Challan, Compilation, Reporting, Monitoring, Dashboard, and Pension Bill Generation. Sub-modules facilitate data exchange with external systems like Accountant General Voucher Level Computerization System (AG-VLCS), SBI CMP, and PFMS, ensuring tight integration. Moreover, a Budget Management System was developed

for seamless integration with TreasuryNET, comprising Budget Placement, DDO-Wise Sub-Allocation, and Treasury Directorate Budget Sub-Allocation Verification modules.

The Department of Treasuries and Accounts has established IT Cells, deploying technical officers for operational support and further system enhancement. This computerization has alleviated pressure on Treasuries, enabling faster bill processing and accurate monthly accounts compilation within the 1st week of the following month. It has enhanced transparency in bill processing and record tracking for payments and receipts by the Finance Department, Nagaland.



▲ Fig 3.7: Certificate of Appreciation received by the NEVA team

Online General Provident Fund System

The Online General Provident Fund (GPF) System, managed by the Office of the Principal Accountant General (Pr. AG), Kohima, maintains records for GPF account holders among Nagaland State Government employees from Grade-C and above. In the conventional manual system, the Pr. AG office conducts monthly updates based on debit and credit vouchers received from the Treasury office. Annual GPF statements were manually collected by department nodal officers from the Pr. AG office in July each year, which sometimes led to issues like non-receipt, losses, and fraudulent withdrawals.

To address these issues, following a directive from the Office of the Comptroller and Auditor General of India, the Pr. AG Office explored transitioning to issuing GPF statements in

electronic mode. This initiative aimed to eliminate delays, non-receipt, and enhance security, offering a secure online platform accessible via the internet and smartphones. NIC Nagaland, with support from NIC Manipur, undertook the project's implementation, launching it on July 31, 2017. Since then, NIC Nagaland has provided technical support for the project.

The new online GPF application was developed and migrated to an open-source platform (PHP 7.4, Maria DB 10.3, Python 3.8.1, NGINX 1.18), clearing a security audit in February 17, 2022. An API integration with Digilocker was developed, allowing subscribers to access and download GPF statements through the Digilocker mobile app.

Key Features of the System Include:

- Role-based user access for different stakeholders (Subscribers, DDOs, Treasury Officers)

- SMS facility for instant updates on GPF deposits/withdrawals to account holders
- Enhanced security features using two-factor authentication (2-FA) system, involving User ID, PIN, Captcha, and OTP for system access
- QR code authentication on the annual GPF statement to verify account details, downloadable through an exclusive QR code reader from the AG website

ICT Infrastructure and Services

NKN/NICNET

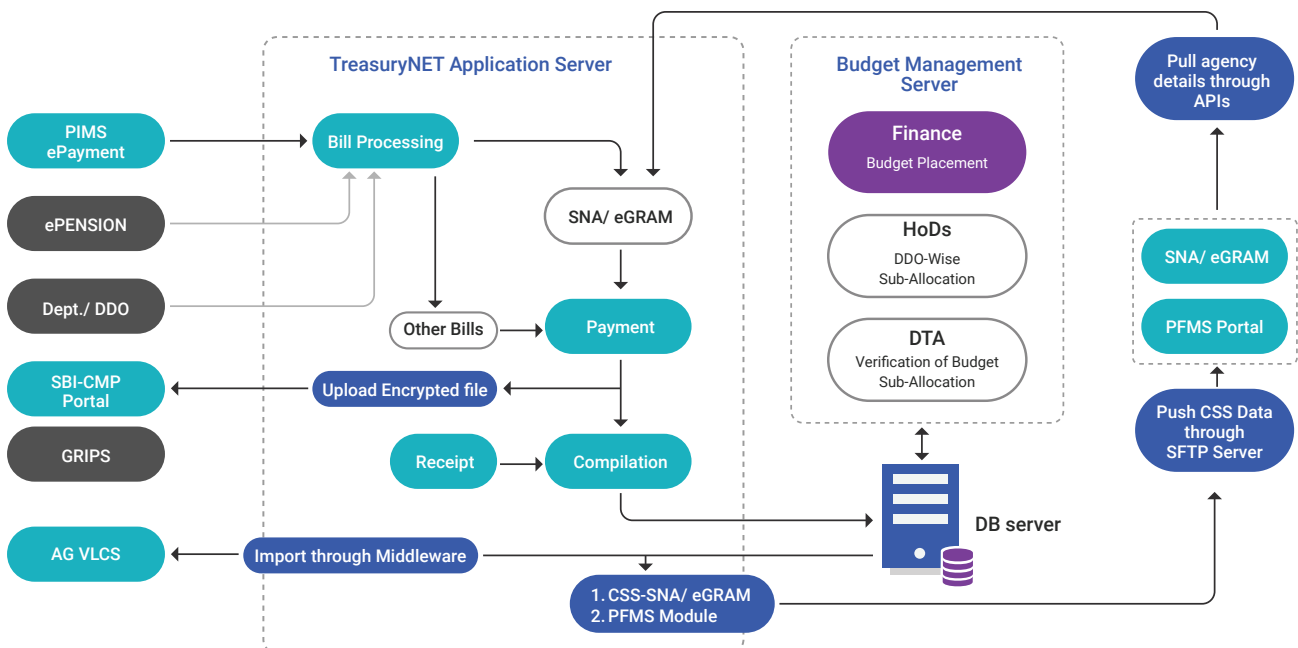
NIC Nagaland's ICT infrastructure and services are bolstered by two high-speed backbone links: a 10 Gbps connection via PGCIL and a 2.5 Gbps connection through BSNL at the State Centre. This robust network extends with 34/100Mbps links to all 11 districts, ensuring connectivity for user departments—a crucial last-mile connectivity aspect. Moreover, the NLDC and SWAN are seamlessly integrated through NKN.

The State Centre and District Units boast a robust Video Conferencing (VC) infrastructure, facilitating all government virtual and web meetings within dedicated VC studios. These studios, strategically established in key locations such as the CM's official residence, Raj Bhavan, CEO's office, CS's official residence, and DGP's office, are fully supported by NIC, ensuring efficient and effective communication across various government departments.

Web Hosting Services

NIC Nagaland offers comprehensive web hosting services across the state through various platforms:

▼ Fig 3.8 TreasuryNET Application Architecture



Mini Data Centre, Kohima: Equipped with Rack Servers and Blade Servers, this facility hosts several applications like Online GPF application, Central Institutes of Horticulture, Medziphema Website, LaPaM-Land Patta Management System, and co-locates servers for TreasuryNET Application and PFMS SFTP Server.

MeghRaj Cloud Service: NIC Nagaland manages website hosting through specific cloud accounts (CU-NL02 and CU-NL03) for seven Central Government Organisations Websites and four Nagaland State Department websites.

S3WaaS: This platform hosts a total of 25 websites, including those for District Administration, District Courts, and the NIC Nagaland Website.

Moreover, NIC Nagaland extends support for:

- Application and Website Security Audit conducted by the Centre of Excellence for Application Security, NIC Assam.
- Domain Name Registration and Renewal via the DNS Registry Portal.
- Provision of VPN Accounts through the VPN portal.
- Issuance of TLS/SSL Certificates facilitated through the TLS Labs Portal.

Upcoming Projects

eGRAS Implementation

The Finance Department expressed interest in adopting eGRAS for Government payment activities. A demonstration by the NIC Tripura Team was held on August 5, 2023. Following this, detailed hardware configurations and software technology stack specifications were provided to the Finance Commissioner via an official letter



▲ Fig 3.9: Officials from the state of Nagaland attending the launching program of ULPIN online

on October 10, 2023. The State Government's response is awaited.

GEMS Proposal

In response to the Principal Account General's Office request, NIC submitted a proposal for the Gazetted Entitlement Management System (GEMS) along with NICS PI. The PAG's Office forwarded the proposal to their headquarters in New Delhi, pending approval and financial sanction.

CollabFiles Implementation for Home Department

Considering the regular collection of departmental activities by the state home department for significant occasions like Statehood Day, Independence Day, and Republic Day speeches for VIPs, NIC Nagaland proposed

implementing the CollabFiles portal. This platform aims to manage documents and facilitate information collection for improved collaboration in handling office activities.

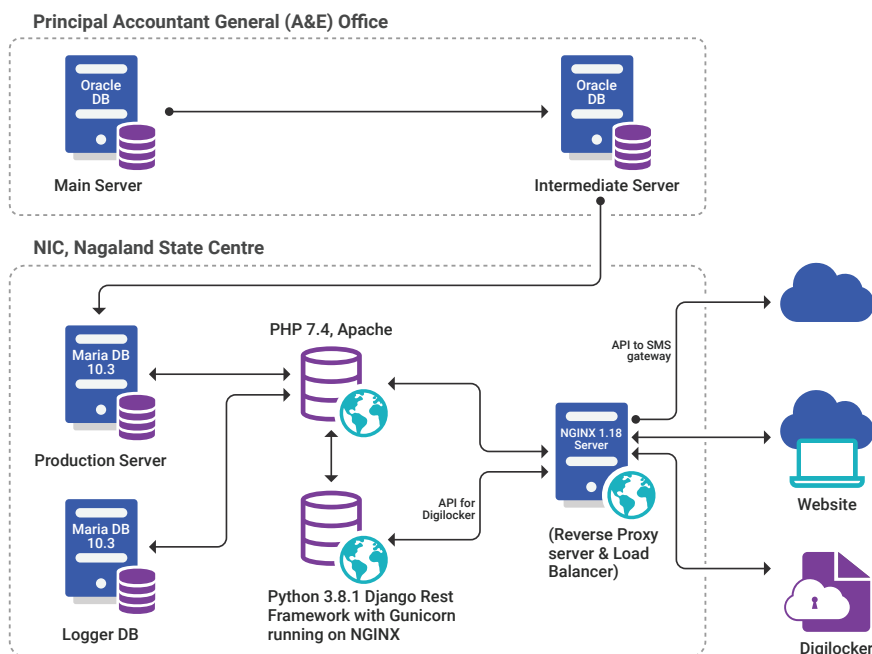
Accolades

NIC Nagaland received the Hon'ble Governor's Commendation Certificate during the 70th Republic Day ceremony at Kohima. Shri Padmanabha Balakrishna Acharya presented the award, acknowledging the commendable services rendered in the realm of ICT and e-Governance, significantly contributing to good governance in Nagaland. In his speech, the Hon'ble Governor of Nagaland highlighted the recognition bestowed upon the 'CM's Dashboard' of Nagaland by the Indian Express Group in 2018. This dashboard, developed and maintained by NIC, was specifically acknowledged for its excellence.

Way Forward

Since its establishment, NIC Nagaland has been a pivotal force driving ICT empowerment within the Government framework. The recognition from the Government of Nagaland serves as a significant encouragement, motivating NIC Nagaland to exceed governmental expectations. Our objectives include integrating financial activities like eGRAS and the Integrated Pension system, enhancing citizen service applications in the Transport sector, implementing SPARROW for all Government Employees in the Administrative sector, and expanding eOffice across the entire Government setup. These initiatives aim to enhance efficiency and transparency within the Government ecosystem. We are confident that with the support of the NIC family, we can successfully achieve these goals.

▼ Fig 3.10 Online GPF Application Architecture



Contact for more details

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Hardoi, Uttar Pradesh

Enabling the Growth of Digital India through ICT Solutions

Edited by **RAJEEV JOSHI**

NIC Hardoi has long supported Digital India initiatives in the district through in-house projects like Saakshi, Todarmal, and Sampada. The Centre's pivotal role in providing technical support and training to Central and State e-Governance stakeholders has significantly driven the district's digital transformation.

Since 1988, NIC Hardoi District Centre has been pivotal in creating diverse software and deploying various Central and State e-governance applications. Over time, the District Centre has provided the district administration with an array of ICT services. Leveraging its NICNET infrastructure within the District Collectorate building, it offers high-speed connectivity to a wide user base.

ICT Initiatives in the District

Sampada App

<https://play.google.com/store/apps/details?id=com.hardoi.sampada>

Sampada App, developed internally with NIC Hardoi's support, addresses land mafia and encroachment problems by employing a Google Maps-based geofencing system. Using basic smartphone features, it surveys, photographs, and maps land parcels, creating satellite images. By integrating Bhulekh portal data through APIs and leveraging Google Maps, it acts as a dynamic repository for Government Land records. This innovation accelerates land surveys, reducing the load on revenue administration and fostering a comprehensive land administration system.



NIC Hardoi has been assisting the district administration in promoting Digital India in the district for a number of years by developing and implementing a number of in-house initiatives, such as the Saakshi (Summon Information Management System), Todarmal Application, and Sampada Application. One of our mobile applications, Sampada, was recently honoured with a prize at the 20th CSI SIG e-Governance awards 2022 in New Delhi. Offering technical assistance and training to different Central and State e-governance project stakeholders has been indispensable contribution to the digital transformation of the district.



Impact

- Identification and allocation of land to economically weaker families
- Identification and reclamation of encroached government land
- Establishment of encroachment-free land areas
- Geofencing of government land through the app

Todarmal App

<https://play.google.com/store/apps/details?id=com.hardoi.todarmalapp>

The Todarmal App, available on both web and

mobile platforms, is created and deployed by NIC Hardoi for the revenue department. It enables citizens to submit applications concerning the measurement of their agricultural land while providing real-time application status updates. Its features include immediate notifications to applicants upon complaint registration, with all updates communicated via SMS. The app was launched by the Hardoi District Magistrate, Shri Mangala Prasad Singh, IAS, on 26 August 2023.

Integrated Command and Control Centre (ICCC)

<http://iccctest.digitalhardoi.in/Login.aspx>

The ICCC software was developed during the pandemic and proved incredibly beneficial for the administration. Utilized during COVID-19, it facilitated around 50,000 calls from the control room. This software generated automatic alerts based on these calls, greatly aiding COVID-19 monitoring in the district.

Saakshi

Saakshi is a Summon Information Management System which offers authorized personnel to issue summon notification to all stakeholders by entering case details, hearing dates, contact information for involved parties, district, and police station jurisdiction. This quickens witness appearances, ensuring accurate testimony with reduced chances of external influence. On behalf of the whole team, Smt. Shubhra Saxena, IAS, presented Saakshi to the Chief Secretary of Uttar Pradesh and the Hon'ble High Court of Allahabad, earning appreciation for its impactful contributions.

Other Key Initiatives

DARPAN - CM Dashboard

<https://up.cmdashboard.nic.in/login.aspx>

DARPAN provides administrators with an overview of diverse departmental activities via a user-friendly dashboard, facilitating effortless monitoring of programs and initiatives spanning up to the district level. This centralized system allows for streamlined access and analysis of critical information, ensuring efficient oversight and management across multiple sectors and geographical regions.



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Manav Sampada

<https://ehrms.upsdc.gov.in/>

Manav Sampada Portal houses a comprehensive Personnel Information System for government employees, incorporating service records, educational details, and posting/joining information. Departmental authorities oversee, verify, and secure employee data through three-tier logins. Employees utilize personal credentials to access their accounts, facilitating online applications for leave and permissions.

Jansunwai – Samadhan

<https://jansunwai.up.nic.in>

Samadhan is a cutting-edge grievance redressal system in Uttar Pradesh, fostering good governance by engaging all stakeholders through advanced technology. Citizens can easily file and track grievances across multiple platforms, receiving timely and quality responses. This system facilitates transparent interactions between citizens and government departments/ offices. By consolidating complaints from various sources onto a unified platform, it enhances access, resolution, and monitoring for all departments.

Board of Revenue (BoR) Portal

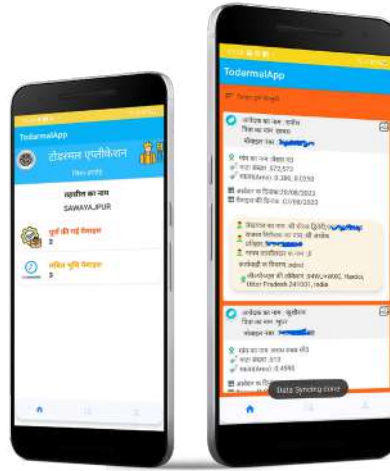
<http://bor.up.nic.in/>

The BOR Portal hosts various applications such as Revenue Soft, Revenue Court Computerization System, Vasooli Praman Patra, Aam Aadmi Bima Yojana, Vishesh Bhumi Vivad Nistarani Abhiyaan (Calendar), Milan Khasra, Revenue Administration Priorities, Virasat Abhiyaan - 2017, Seema Stambhon Ka Chinhankan, and numerous monthly progress report formats.

e-Lottery

<https://upexciseelottery.upsdc.gov.in/>

The e-Lottery system manages the allocation of various liquor shops including Country Liquor, Foreign Liquor, Model Shops, Beer Shops, and



▲ Fig 4.1 : Todarmal App

Bhaang. This significant project, led by our respected NIC UP SIO, Shri Sunil Sharma, has successfully conducted the lottery for liquor shop allocations in the district on behalf of the Government of UP.

Rani Lakshmi Bai Mahila Samman Kosh

<http://msk.upsdc.gov.in/>

The Rani Lakshmi Bai Mahila Samman Kosh provides monetary aid, medical relief, including reconstructive surgeries, to women affected by violence. It also supports educational and medical needs of minor children affected by such incidents. Additionally, it empowers women and girl children requiring critical social and economic assistance.

Other key projects driven by NIC Hardoi for district advancement include eDistrict, VAHAN, SARATHI, eChallan, Pollution Under Control Certificate (PUCC), and iRAD.

Accolades

- 20th CSI SIG e-Governance awards 2022 in New Delhi
- Certificate of Appreciation by District Collectorate for effective IT application implementation and round-the-clock cooperation in ensuring a smooth Vidhan Sabha Election 2022

Way Forward

Keep up with new developments in technology that may expand the centre’s capabilities. Determine innovative services that the NIC Hardoi can offer to further the effectiveness and growth

It is with great pleasure that I note the superb ICT support services that the District Administration is receiving from the NIC Hardoi District Centre. Through a variety of applications that they have developed, the district is able to offer ICT services to its citizens. They also play a critical role in the successful implementation of numerous state flagship programs and mission mode projects under the Digital India Initiatives.

I think NIC Hardoi is doing a great job advancing the Digital India Program, and I hope they will continue to push e-governance all the way down to the local level. Furthermore, I expect that the district team would support the implementation of numerous NIC-developed products across departments, fostering a paperless workplace environment that will improve the provision of citizen services.



Mangla Prasad Singh IAS

District Magistrate, Hardoi

of good governance. Create and carry out plans to enhance citizen participation using digital tools including social media, mobile apps, and online services. Use data analytics to extract knowledge from the enormous volume of information the centre gathers and processes.

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▼ Fig 4.2 : District Magistrate Hardoi, Shri Mangla Prasad Singh, IAS, inaugurates the Todarmal App at the District Collectorate.



Nashik, Maharashtra

Setting a benchmark in delivering efficient ICT solution and services

Edited by **RAJEEV JOSHI**

NIC Nashik at the forefront of the active promotion and implementation of ICT solutions and spearheaded the e-Governance drive in the district for building a strong foundation for better and more transparent governance and assisting the government's endeavour to reach the unreached.

ICT Initiatives in the District

Record Room Information System (RRIS)

The RRIS software by NIC Nashik provides systematic control over records, managing their creation, sorting, storage, and access. It eliminates manual efforts in selecting or searching for entries, streamlining the process. Implemented in Nashik and 10 districts of Maharashtra, it holds 175,394 recorded entries, simplifying information management in government offices.

eTapal System

eTapal, a web-based document management system by NIC Nashik, streamlines the entire document journey efficiently. It centralises inward and outward letter management, offers MIS Reports, and enables seamless file creation, forwarding, and closure. With unique system-generated numbers, it facilitates easy tracking of letters and files. Implemented in Nashik and 15 districts of Maharashtra, it holds 873,373 recorded entries, enhancing document handling in government offices.



Established in 1989, NIC Nashik is a leading ICT service provider for Divisional and District administration, enabling efficient G2G and G2C services. It has executed numerous state and central government e-Governance projects, including locally developed web applications like RRIS and eTapal. These applications are implemented in government offices across Nashik and multiple districts in Maharashtra. Furthermore, NIC Nashik manages State-level NSAP-PFMS payment processing and provides helpdesk support to all tehsils in Maharashtra.



Nashik District Website

<https://nashik.gov.in>

The Nashik District's official website follows the Secure, Scalable, and Sugamya Website as a Service (S3WaaS) platform. It undergoes regular updates and offers comprehensive information on various aspects such as history, demography, administration, tourism, public utilities, citizen services, quick links, helpline numbers, and a media gallery related to the district.

Divisional Commissioner Nashik Website

<https://divcommnashik.maharashtra.gov.in/index-en.html>

NIC Nashik Centre manages and maintains the Divisional Commissioner's website, ensuring regular updates of content and important orders as required by the administration. The Centre's dedicated efforts maintain the website as a reliable, up-to-date resource, ensuring seamless access to information for internal stakeholders and the public alike.

NKN Links

The District Centre provides 1 Gbps Leased Line connectivity to administrative offices within the collectorate, ensuring efficient communication. Additionally, secured NKN connectivity extends to various government offices such as GOI press, Currency Note Press, PTG, Indian Security Press, Ozar Airport BOI, DSGD Deolali (Cantonment board), FCI, and PAO GST Nashik.

Other Key Initiatives

NSAP-PFMS Payment Processing of IGY Scheme

<https://nsap.nic.in>

The District Centre manages State-level NSAP-PFMS payment processing for IGNOAPS, IGNDPS, IGNWPS, and NFBS schemes through the NSAP-PFMS DBT mode, disbursing funds directly to 12 lakh IGY scheme beneficiaries' accounts. This coordination spans 419 tahsils in Maharashtra, handling approximately Rs. 153 Crore in FY 22-23 and Rs. 272 Crore in FY 23-24. Over 1200 employees received training in 36 districts, covering troubleshooting and support for beneficiary registration, payment file creation, verification,



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iRAD

NIC Nashik District Centre has been actively training various departments including Police, Transport, Highways, and Health Departments in the district for the Integrated Road Accident Database (iRAD) project initiated by MoRTH. Conducting 250 training sessions, the Centre has trained 1622 officials, contributing to capacity building. Engaging in Monthly Road Safety Meetings, the Centre provides valuable insights to the Chairman and District Collector. Currently, the iRAD application has recorded 5729 accidents, among which 2986 were fatal.



▲ Fig 5.1 : Shri Deepak Pandey, Commissioner of Police, inaugurates the iRAD Project in June 2021

PFMS rejected files, computation errors, agency code changes, re-registration, pension settings, ledger updates, and PFMS configuration issues.

Electronic Quasi-Judicial Courts Management System

<https://eqjcourts.gov.in>

This system is implemented across Nashik District, expediting the resolution of land-related disputes and cases. It empowers departments to conduct quasi-judicial proceedings efficiently, contributing to improved governance and justice administration. With 34,114 registered cases, 28,737 have been disposed of, streamlining the process for the benefit of citizens.

eOffice

The District Centre has deployed is deploying eOffice across various State and Central Government offices in the district. Currently, eOffice is successfully operational at the Divisional Commissioner, District Collector, and SDO offices. Efforts are underway to implement eOffice at Tehsil and block levels to promote a paperless work culture district-wide. Comprehensive training programs conducted at

YASHDA, Pune, have familiarized staff with the eFile system, generating over 3500 eFiles. The Centre's concerted efforts are evident through over 30 effective training programs conducted up to the Circle level, marking a significant achievement in the adoption of eOffice.

Important Events Organised

Hon'ble Prime Minister Shri Narendra Modi launched the Viksit Bharat Sankalp Yatra Program from Khunti, Jharkhand on 15th November 2023, celebrating Janjatiya Gaurav Diwas. NIC Nashik arranged an online live interactive VC session from Gram Panchayat Nanashi, attended by Smt. Bharati Tai Pawar (Union Minister of State for Health and Family Welfare), Shri Dadaji Bhuse (State Minister of Public Works), Shri Narhari Zirwal (Dy. Speaker of Maharashtra Legislative Assembly), and Shri Jalaj Sharma (Collector & District Magistrate, Nashik). Approximately 700 to 800 participants joined the event. The Sankalp yatra covered 123 GPS across six blocks of Nashik district, attended by approximately 58,000 people till date.

Provided ICT support for the PM Vishwakarma Yojana launching event on 17th Sept. 2023 from

Delhi, which had around seventy locations nationwide, including Nashik. The Nashik event, held at Kalidas Kalamandir, Shalimar, was virtually connected to the main event. Smt. Bharati Tai Pawar, Union Minister of State for Health and Family Welfare, attended and addressed the event, which drew approximately 1000 beneficiaries

The NIC Nashik has played a pivotal role in championing and spearheading eGovernance activities within the district. Their steadfast commitment to ensuring uninterrupted services, coupled with the diverse array of services offered through web and mobile applications, is indispensable for the seamless execution of governmental operations.

NIC-supported digital initiatives enhance citizen participation, streamline service delivery, and promote good governance. Commendation is extended to the NIC District Unit for its instrumental role in the implementation of eGovernance projects and the provision of technical support for diverse ICT initiatives. This acknowledgement underscores the team's unwavering dedication and proactive approach, contributing significantly to the cultivation of a positive ICT work culture.



Jalaj Sharma IAS

Collector & District Magistrate, Nashik

▼ Fig 5.2 : Smt. Bharati Tai Pawar, Hon'ble Minister, MoSHFW, GoI, flags off the Viksit Bharat Van in Nashik District.



Way Forward

NIC Nashik is committed to the Digital India vision, providing extensive ICT support to District and Divisional Administration. As an integral part of the district administration, NIC Nashik has initiated and implemented numerous ICT-enabled services. The centre remains dedicated to offering full technical support for ICT-based services, striving to utilize technology and digital solutions to improve governance, streamline processes, and elevate service delivery standards.

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Nabarangpur, Odisha

Empowering governance for the last-mile service seeker

Edited by **KAVITA BARKAKOTY**

Established in 1997, the NIC Nabarangpur District Centre has been a trailblazer, delivering state-of-the-art ICT services with cutting-edge solutions and advanced infrastructure. Through adept use of information, data, and technical expertise, the Centre empowers the District administration, playing a crucial role in efficient planning and decision-making for public service delivery. The collaborative synergy between the District Administration and NIC is pivotal, influencing the landscape of the state. Despite the predominantly tribal nature of the district, challenges persist in ensuring comprehensive government program outreach. Serving as a technology intermediary, NIC Nabarangpur facilitates electronic services, effectively bridging the gap between citizens and the government.

Key Initiatives in District

Viksit Bharat Sankalp Yatra

The celebration of Viksit Bharat Sankalp Yatra (VBSY) in all Gram Panchayats within the district is a concerted effort to promote government programs. The pivotal role played by NIC is evident in providing essential technical support to the district administration. This includes facilitating the seamless dissemination of data from the Gram Panchayats level to the Government. The Centre, equipped with a robust network infrastructure and reliable internet connectivity, actively engages in various aspects of VBSY. As a core member of the VBSY committee, the Centre contributes significantly by creating credentials, mapping routes, troubleshooting issues, and effectively managing programs to ensure their success.

Aspirational District Programme

The Aspirational District Programme, launched in 2017 and supported by NIC Nabarangpur District Centre in collaboration of the District



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Established in 1997, NIC Nabarangpur is a pivotal ICT service provider for Divisional and District administration, excelling in G2G and G2C services. Renowned for executing state and central government e-Governance projects, the centre has played a vital role in the digital transformation of the region. Leveraging its expertise, NIC Nabarangpur has developed locally tailored web applications, contributing significantly to efficient governance. With over two decades of experience, the centre remains a key player, fostering technological advancements and enhancing service delivery.



Administration, represents a strategic initiative overseen by NITI Aayog. This program aims to enhance district performance by closely monitoring key performance indicators across diverse government initiatives. Emphasizing improvement in underperforming areas, the District Centre plays a vital role in monitoring applications, analyzing and validating data, overseeing the uploading process, conducting performance monitoring, and generating comprehensive reports. Notably, Nabarangpur District's remarkable progress in Health &

Nutrition, Education, Agriculture, Water Resources, and Basic Infrastructure secured its top position among Odisha's 10 districts and 13th nationally in the delta ranking of district performance for 2021.

Covid-19 Support

Amidst the Covid-19 crisis, NIC Nabarangpur emerged as a key player, offering crucial technological support to the district administration. This multifaceted support encompassed monitoring and updating the Covid-19 Dashboard, a vital tool for real-time information. Additionally, the Centre facilitated virtual meetings and video conferences, ensuring seamless communication. In a proactive response to the healthcare challenges, the Centre contributed to the inauguration of dedicated Covid hospitals, overseeing patient reference monitoring. The provision of internet services for control rooms bolstered effective crisis management. Furthermore, the Centre played a pivotal role in daily reporting of Covid patient information and containment zones, enhancing transparency and public awareness through the district website.

Elections

NIC has been instrumental in election management, supporting various general elections from 2004 to the upcoming 2024. Responsibilities include preparing and managing the polling personnel database, randomization at different stages, report generation, uploading affidavits and nomination/rejections in the ECI Portal, daily reporting of arm seizure, electronic postal ballot, counting management, and declaring poll results. EVM management, segregation, FLC, commissioning, and randomization of EVMS also fall within the NIC District Centre's purview. The election management for GE 2019 earned NIC Nabarangpur District an award from the ECI, acknowledging its excellence.

Furthermore, as a part of its social contribution, NIC Nabarangpur has conducted several tech-oriented programmes to spread awareness among citizens. The District Centre has been involved in taking up meeting and discussions on various cutting edge technologies that come in benefit of society such as Machine Learning and Artificial Intelligence.



▲ Fig 6.1 : Training on Auction of IMFL Shops to District Revenue Department

Other Key Initiatives in District

iRAD

The District Centre launched the iRAD Application, efficiently capturing crucial road accident data in Nabarangpur district. The District Centre has conducted several training sessions for Police Personnel, RTO, Health, and PWD/NH Departments, enabling real-time reporting of road accidents. A District Roll-out Manager (DRM) has been appointed to oversee training and provide hands-on support. Guided by the State iRAD Coordinator & DIO, the DRM ensures a step-by-step reporting process and offer guidance to departments as needed.

e-Office

e-Office is now operational in three offices within Nabarangpur District, digitizing over 45 files. NIC Nabarangpur, serving as the technology partner, collaborated effectively with the GA&PG Department to implement this system in Labor & Employment Department Offices situated in the district.

DAMPS

The District Revenue & Disaster Management department has adopted DAMPS (Disaster Assistance Monitoring and Payment System) Portal in full-swing to report, process and payment of ex-gratia to the dependents of deceased in scheduled natural calamity. A total of 434 cases have been processed and 48 cases are in pipeline at different stages of disbursement.

Revenue & Service Delivery

The Revenue & Service Delivery System aims to modernize state land records, ensuring accuracy, transparency, and accessibility. It aims to create reliable, updated land records reflecting ground realities.

The District Centre provides support by training Tahsildars and staff while addressing daily issues for effective implementation.

Awards

Her Excellency the President of India, Smt. Droupadi Murmu, conferred the “Bhoomi Samman Award” to Nabarangpur District for achieving

saturation in DILRMP Core Component Digitization during July 2023.

Knowledge Sharing

NIC Nabarangpur actively contributes to society through informative programs, including a talk on applying Machine Learning to identify HSRP Number Plates. Another session explored “Media in the age of Artificial Intelligence” on World Press Day.

Additionally, the District Centre represented the district at the “Digital India Week Programme” in Ahmedabad in July 2022.

NIC District Unit Nabarangpur, established in 1988 has been facilitating District Administration with its State-of-the-Art ICT services to leverage the e-Governance scenario in the District. The services and infrastructure provided by NIC play a complementary role in manifesting the objective of 5T Initiative of Government of Odisha (Teamwork, Transparency, Technology, Time, and Transformation). The skilled officer serving has been proactive in implementation of important techno-driven works such as Aspirational Dist Programme, Covid-19 Reporting, Elections and roll-out of state/central software applications etc.



Dr. Kamal Lochan Mishra IAS
Collector & District Magistrate
Nabarangpur

▼ Fig 6.2 : SIO Odisha and District Police Officers on inauguration of iRAD Application



Way Forward

NIC Nabarangpur has been instrumental in raising governance standards, improving service delivery, and fostering citizen engagement in the digital realm. Continuously evolving, it will leverage emerging technologies to further strengthen the state’s ICT infrastructure.

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Rupnagar, Punjab

Taking ICT initiatives to the common Citizens

Edited by **RAJEEV JOSHI**

The historical town of Rupnagar, steeped in antiquity, carries within its roots tales of a legacy dating back to the 11th century. Legend has it that Raja Rokeshar, a ruler of eminence during that era, founded this town, naming it after his son, Rup Sen. Recent excavations conducted in Rupnagar have unveiled a remarkable revelation—the town was once a flourishing hub of the well-developed Indus Valley Civilization. However, transcending its historical significance, Rupnagar now hosts the NIC District Centre, established in 1988. The collaboration between the District Administration and NIC has ushered in an era of transformative e-governance initiatives. New and innovative ICT initiatives, designed and developed in tandem with the district's vision, continue to redefine administrative paradigms, reinforcing the commitment to progress and development at Rupnagar.

Key Initiatives in the Districts

In District Rupnagar, a series of transformative initiatives have been implemented, each designed to modernize and streamline various facets of governance. These initiatives are emblematic of the district's commitment to technological advancement and efficient service delivery. Some of them are profiled below:

Sakhi

Sakhi is a comprehensive digital ecosystem that incorporates dashboards and computer-based platforms to streamline the process of complaint registration and resolution. This platform enables swift registration and tracking of complaints spanning across various sectors such as Education,



Since its establishment in 1988, the NIC Rupnagar District Centre has spearheaded transformative e-governance initiatives. Collaborating closely with the District Administration, it has heralded an era of innovative ICT projects aligned with the district's vision. These initiatives consistently redefine administrative norms, reflecting a steadfast dedication to progress and development in Rupnagar. The District Centre remains a pivotal hub, driving technological advancements that shape the administrative landscape and propel the district towards a more efficient and visionary future.



Skill Development, Employment, and social security. It serves as an online hub for the Sakhi One Stop centre, catering to women in need of integrated support and assistance concerning different forms of violence, including domestic violence, sexual assault, harassment, trafficking and honor crimes.

The platform offers a range of services, including psycho-social support, legal aid and counselling, temporary shelter, and medical assistance along with emergency response and rescue services.

Powered by PHP Laravel and MySQL, this platform operates from the Punjab State Data Centre in

Chandigarh, ensuring efficient and centralized management of the critical services.

DISE

The District Information System for Election (DISE) is an essential software utilized for the efficient deployment and randomization of Polling Parties, Micro Observers, and Counting staff during significant elections like General Elections, Assembly Election, Zila Parishad Election, and Gram Panchayat elections. The NIC District Centre plays a pivotal role in extending robust support to the District Administration for these elections. It actively engages in capacity building by serving as a master trainer for various ICT-enabled applications and provides ongoing support for web-based and mobile applications. Moreover, the District Centre undertakes crucial activities such as setting up hardware and LAN services at Polling stations and Counting Halls, as well as monitoring Poll day SMS services, ensuring smooth and effective election processes.

Scholarship Portal of Punjab

The Scholarship Portal of Punjab, a citizen-centric service by the Government of Punjab and facilitated by NIC Punjab, supports SC and OBC students by providing financial aid for their education. It operates as an online platform where eligible students apply for post-matric scholarships. The process involves registration, application submission, and approval stages, culminating in funds being directly disbursed to students' bank accounts. This initiative aims to aid needy students, eliminate discrimination, decrease dropout rates, enhance societal well-being, bridge educational disparities, and ensure round-the-clock access to vital information for everyone.

District Administration Website

<https://rupnagar.nic.in>

NIC District Centre with inputs from District Administration has designed and developed an official website for dissemination of information on public utilities, citizen services, administrative structure, press releases, office orders, public notices and recruitments across the district. The website is regularly updated and built on the S3WaaS platform.



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▲ Fig 7.1 : Shri Ashwini Vaishnaw, Hon'ble Minister of Railways, Minister of Communications and Minister of Electronics and IT visited the Sub Division Nangal of District Rupnagar

Additionally, during the COVID-19 pandemic, the NIC District Centre was instrumental in operating a data collection control room and disseminated crucial information. Further, it offered round-the-clock support to the District Administration.

Important Events Organized

Shri Ashwini Vaishnaw, Hon'ble Minister of Railways, Communications, and Electronics and Information Technology, visited Sub-Division Nangal in District Rupnagar on 12-10-2022. NIC Punjab extended a warm welcome to him through the DIO NIC Rupnagar.

As the Nodal Agency, provided technical support to the District Administration for establishing ICT infrastructure for live telecasts of various programs.

ServicePlus

NIC Punjab is emerging as a pioneer in development and implementation of citizen centric services. Citizen centric services have been implemented in the District Rupnagar which are end to end digitized. These services are equipped with Digital Signature, SMS integration, Email integration and Payment Gateway. Applicants can apply from his/her home or from Sewa Kendra established by the Government. Digitally signed output certificate is delivered to the applicant at the doorstep. Applicants receive SMS and email alerts, keeping them informed about the status of their applications and the expected time for approval. The services are available at <https://eservices.punjab.gov.in>.

The implementation of eOffice has streamlined administrative processes, reducing paperwork and enhancing workflow efficiency across government offices. NGDRS has simplified property transactions and registrations across all Tehsils and sub-tehsils, while IFMS has revolutionized financial management systems to align with modern standards. iHRMS integrates manpower planning and extends benefits to various government employee services.

The District Centre has also introduced an RCMS module for efficient Revenue Court Case management and NDAL, a web-based repository for arms licenses, improving regulatory oversight. The collaborative iRAD project has significantly boosted road safety efforts with contributions from stakeholders like Police, Health, NHAI, and PWD. Furthermore, the ePrison modules have modernized prison management, focusing on efficiency and security within correctional facilities. These initiatives collectively reflect a steadfast commitment to modernization, transparency, and service excellence within District Rupnagar's governance framework.

Other Key Initiatives

Through collaboration with NIC Headquarters and NIC Punjab State Centre, District Rupnagar has led the development of multiple transformative initiatives aimed at modernizing its governance framework.

▼ Fig 7.2 : Deputy Commissioner, Dr. Preeti Yadav, IAS, launching the Sakhi Application



NIC District Centre Rupnagar is an integral part in District administration's e-Governance initiatives and plays a major role as an Advisor/ consultant for the ICT infrastructure and IT enabled initiatives. The eOffice system implemented in District Rupnagar has increased the productivity and better time management among the officials. I would like to appreciate the team of NIC Rupnagar for their dedication towards the ICT work culture and extend my best wishes for their future endeavors.



Dr. Preeti Yadav IAS
Deputy Commissioner, Rupnagar

These included the Hon'ble CM Punjab's visit on 3rd December 2021 at Shri Chamkaur Sahib and Morinda, as well as the Hon'ble Governor and Hon'ble CM Punjab's visit on 19th November 2021 at Shri Chamkaur Sahib, and the Hon'ble CM Punjab's visit on 3rd October 2021 at Tehsil Morinda.

Way Forward

NIC Rupnagar aims to introduce and implement innovative eGovernance solutions for increased output and efficiency in order to provide better and more effective service delivery to the citizens and district administration.

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AQCMS

Revolutionising Agricultural Quality Control

Edited by **KAVITA BARKAKOTY**

The journey of agricultural produce, from farms to our tables, relies heavily on quality assurances and standards. AGMARK certification, emblematic of quality, ensures adherence to defined grade standards set by the DMI. With 11 Regional offices, 27 Sub offices, 11 Regional Agmark Laboratories, and 1 Central Agmark Laboratory, AGMARK covers 232 agricultural commodities, ensuring quality across fruits, vegetables, cereals, pulses, and more.

Agmark Quality Control Management System (AQCMS), a cutting-edge digital platform developed by the NIC, stands as a game-changer in AGMARK certification. Introduced in 2018, AQCMS breaks away from traditional manual procedures, offering a robust digital infrastructure comprising Certification Management, Laboratory Management, and Content Management System (CMS). This platform revolutionises AGMARK certification, aiming to streamline processes, boost efficiency, and introduce transparency into agricultural quality control.



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AQCMS, developed by NIC, Central Projects, Nagpur, redefines AGMARK certification by replacing manual procedures with a robust digital platform. Built on Certification Management, Laboratory Management, and Content Management System (CMS) modules, AQCMS streamlines compliance and laboratory operations. AQCMS has introduced QR codes, refined roles, and bolstered Laboratory Information Management System (LIMS) capabilities for their laboratories spread across pan India. Thus ensuring quality, trust and transparency in the AGMARK certification processes. With its online application processing, Aadhaar-based e-signed documents, and advanced LIMS features, AQCMS significantly elevates efficiency, trust, and market competitiveness for Indian agricultural products. The computerization of a department operational since 1937 within AQCMS achieves higher efficiency, aligning with the Government of India's ease-of-doing-business policy.



Objectives

AQCMS is designed with several core objectives, aiming to achieve a diverse range of goals pivotal to its purpose and functionality. These objectives include, but aren't confined to:

Efficiency Boost: AQCMS aims to streamline and speed up AGMARK certification by minimising manual steps and enhancing operational efficiency.

Transparent Process: Ensuring transparency at every certification stage builds trust among stakeholders by providing clarity.

Strengthened Quality: AQCMS maintains stringent standards in agricultural produce, ensuring adherence to predefined quality benchmarks.

All-in-One Portal: Corporate users can apply, pay via Bharat Kosh, check status, and download certificates. Department users handle scrutiny, inspection, and approvals. Department laboratory users process samples, generate test reports, and issue grading certificates. Each stakeholder has a customised dashboard and receives alerts at every stage.

Business-Friendly Approach: Several new orders simplify processes (e.g., eliminating site inspections for renewals, removing joint action commitments, minimum quantity grading requirements). Online processes and improved transparency save time and effort for both the public and departmental users, fostering a better environment for doing business.

LIMS Integration: The online system, LIMS, manages samples drawn by DMI nationwide, ensuring confidentiality and faster processing. Doubly coded samples enhance secrecy and reduce report processing time, connecting all DMI Offices with CAL and RALs to maintain high AGMARK grading standards.

Framework

AQCMS comprises three primary modules, each serving distinct purposes:

- Certification Management (for DMI)
- Laboratory Management (LIMS) (For DMI, RAL, and CAL)
- Content Management System (CMS) (for informational content management)

These modules cover a wide array of scenarios

for AGMARK certification and LIMS, eliminating manual intervention. The system's automation has earned multiple endorsements from NIC for its comprehensive handling of intricate use cases. Key attributes of these modules have been described below:

Certification Module

Integrates crucial elements enhancing the certification process. It features "Online Application Processing" for simplified certificate acquisition, Aadhaar-based e-signed documents, and online payment options for expeditious processing. Real-time SMS and email alerts ensure prompt communication. Online scrutiny and standardised business rules across India foster transparency and accountability, supported by detailed audit trails. Provides public and officials with easy access to MIS reports, online application tracking, and role-based dashboards for efficient decision-making.

LIMS Module

Enhances laboratory operations with features like online sample submission, facilitating data input. Online result processing streamlines AGMARK gradation, ensuring traceability and user-friendliness. Offers data analytics for



▲ Fig 8.1: Hon'ble Minister of Agriculture and Farmers' Welfare Shri Radha Mohan Singh launched the online software for Agmark on September 2018 in New Delhi (File Photo)

AGMARK laboratories, aligns central AGMARK standards with international ones, and supports research and standardisation, promoting innovation and quality enhancement. Role-based dashboards enable efficient access to relevant information, aiding effective management and decision-making.

Technology Used

Following is the technological setup that forms AQCMS's core, ensuring stability, security, and flexibility to support its intricate operations.

Operating System: Ubuntu 18.04 LTS for stability and reliability.

Web/DB Server: Apache HTTP Server 2.4.51 for efficient web request handling.

Platform Language: PHP 8.1.10 for robust web development.

Database System: PostgreSQL 13.2 for robust data management.

Application Framework: CakePHP 4.2 for rapid application development.

Design Framework: Bootstrap v5.2.1 for responsive design.

Features

Following are the key features of AQCMS.

- **Export Lab Integration:** Simplifies the licensing process significantly.
- **Streamlined Replicas Generation:** Advanced payment system enables swift issuance of replicas, e-codes, and 15-digit instant codes.
- **Complete Registration Cycle Management:** From payment to approval, suspension, and beyond, AQCMS manages the entire cycle seamlessly.
- **Online Product Mis-grading Tool:** Empowers DMI for effective monitoring and actions within the system.

Development

AQCMS was planned in phased development using Agile methodology. Phase I was completed


in 2018. Subsequently, the NIC, Central Projects, and Nagpur team diligently enhanced the system's robustness and configurability in Phase II.

The development scope in AQCMS encompasses an array of improvements, upgrades, and new modules to enhance the efficiency and effectiveness of the existing system. Here's an outline of the extensive scope of work:

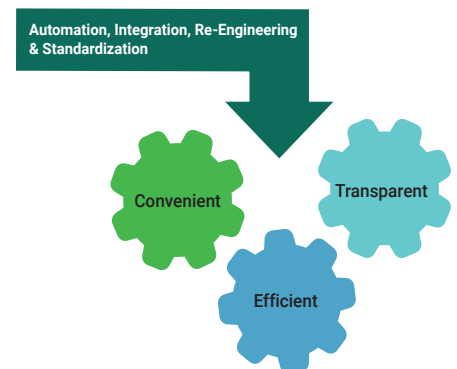
New Additions in Certification Module

- Refining roles between Regional Offices (RO) and Sub-Offices (SO).
- Transfer of entries from RO dashboard to respective SO dashboards.
- Option to mark applications as "Rejected."
- Provision for optional site inspections during CA renewal, Laboratory Approval, and Printing Press permissions.
- Data structure enhancements with increased field data limits.
- Enabling file uploads (.PDF or .jpeg) and comments during referral stages.
- Redefining "MO/SMO" roles as "Scrutinizer."
- Adding comment options during approval by AMA.

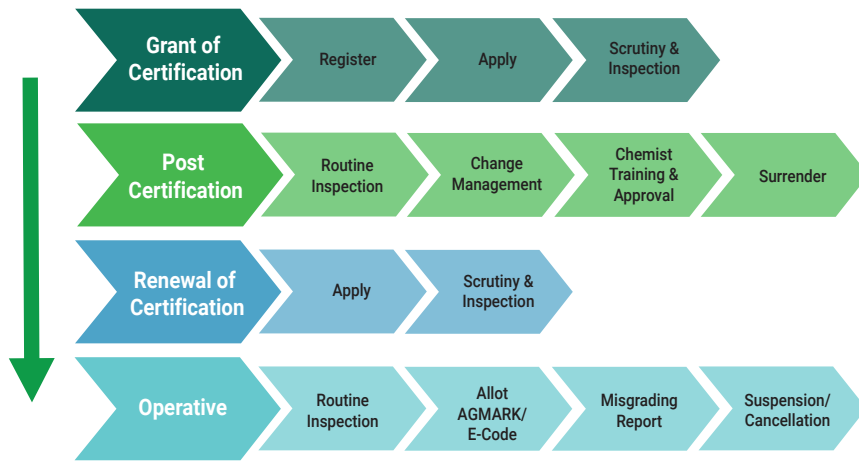
It gives me immense pleasure to express our sincere thanks to National Informatics Centre (NIC), Nagpur on behalf of the Directorate of Marketing and Inspection, Department of Agriculture and Farmers Welfare, Ministry of Agriculture and Farmers Welfare for developing and commissioning of Agmark Quality Control Management System (AQCMS) Phase-I & II for AGMARK Certification activities to online mode. The AQCMS phase I was launched by the then Hon'ble Agriculture Minister on 26.09.2018. Since then the AQCMS software has been made more user friendly, transparent, secure and 24x7. It is being upgraded with new features using modern technology from time to time and has become highly beneficial to Agmark stakeholders, packers, laboratories, consumers, public and to officers/officials of this Directorate.



Faiz Ahmed Kidwai IAS
 Additional Secretary (Marketing)-cum-
 Agricultural Marketing Adviser
 Government of India



▲ Fig 8.2 Benefits of AQCMS



▲ Fig 8.3 AQCMS Process Flow

- Workflow changes for Printing Press permissions regarding ownership and tie-up arrangements.
- Incorporating SO jurisdictions in existing forms for applications within SO districts.
- Handling Approval of Laboratory (Export) and its renewal through RO and SO jurisdictions.
- Comprehensive change/modification management across various categories.
- Implementing QR code creation and issuance in various application processes.
- Provision for advance payment enabling auto generation of replica serials, 15-digit code, E-code etc. saving a lot of efforts of issuance of

replica serial, 15-digit code, E-Code.

- Improved MIS

New Process Flows in Certification Module

- With new features, a new process flow has been also adopted for the certification module. It has been briefly described below:
- Dedicated module for logging and displaying application progress history.
- Modules for Chemists' training and approval, Printing Permission, and Routine Inspections Management.
- Handling Misgraded reports and integrating

LIMS analytical reports with Grading and Misgrading Module.

- Modules for Surrender, Suspension/Cancellation of CA, Printing Press, and Laboratory.
- Backlog data entry modules for syncing physical data with the system.
- Application history modules for easy document retrieval and status tracking.
- Upgrading AQ CMS systems/platforms to the latest versions.
- Integration of Load Balancer Servers for managing increased user traffic.

New Features in LIMS Module

- Aadhaar-based e-signing, SMS, and email alerts for Sample Test Reports.
- Monthly performance reports, MIS reports, and concise statistics.
- Distinguishing NABL accredited and non-accredited laboratories.
- Flows for 'Inter Laboratory Comparison' and 'Research Sample Analysis.'
- Flow for 'Commercial Sample Analysis'.
- Preparation of statistical and analytical reports for standards.
- QR codes in sample encoding and printing.
- Work allocation modules for officer transfers or retirements, ensuring effective workload management.

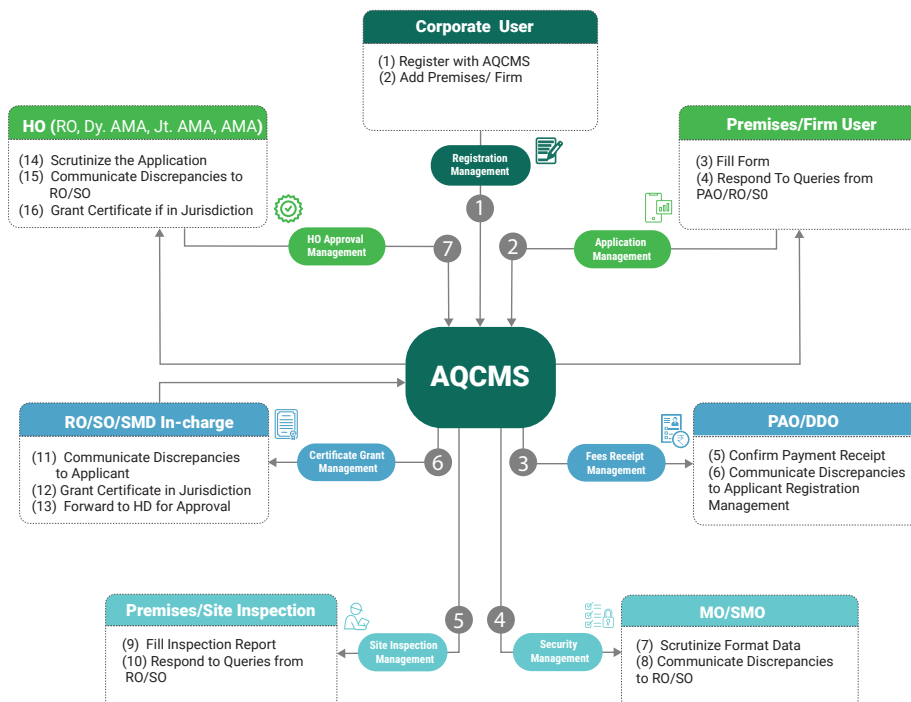
Impact

AQCMS holds significant importance in the AGMARK context due to its numerous benefits: 24/7 availability, online payments, user-friendliness, reliability, and cost-effectiveness. It not only facilitates ease of doing business but also improves efficiency, transparency, and consumer trust while strengthening market competitiveness. Stakeholders benefit from appealing dashboards displaying pending actions, statuses, and required steps.

Way Forward

As AQCMS progresses, Phase III aims to propel this platform to new heights. This phase revolves around extensive expansion, leveraging advanced technologies to streamline processes, boost user accessibility, and enhance scalability. It will focus on deeper integrations with evolving agricultural systems, incorporating IoT, AI advancements, Improved MIS, Mobile applications, and creating a more interconnected agricultural quality control network. Embracing this transformative journey, AQCMS is set to surpass expectations, establishing new benchmarks in AGMARK certification and LIMS.

▼ Fig 8.4 AQCMS Workflow



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CARINGS

Child Adoption Resource Information and Guidance System

Edited by MOHAN DAS VISWAM

CARINGS is a web-based monitoring system designed to facilitate transparent and child-friendly adoption processes across the nation. It accelerates smooth adoptions, improves transparency, ensures accountability of implementing agencies, nurtures stakeholder networks, and maintains a national database for informed policymaking and research. The latest version, 3.2 of CARINGS, was released in November 2022 and is accessible on CARA's official website: <https://cara.wcd.gov.in>.

CARINGS plays a pivotal role in effectively executing, overseeing, and evaluating the national child adoption program in compliance with the evolving Adoption Guidelines set by the Government of India. Its significant impact is widely recognized across various levels and has garnered international appreciation for its innovative approach to adoption initiatives. In line with the Hague Convention on Protection of Children and Cooperation in Respect of Inter-country Adoption, 1993—of which India is a contracting State—CARINGS adheres to both international protocols and national laws.

NIC serves as the technology partner responsible for implementing the



CARINGS (Child Adoption Resource Information and Guidance System) portal is an e-governance system on adoption designed, developed, deployed and maintained by the National Informatics Centre. It ensures transparency in the adoption process, increases accountability of implementing agencies, creates a network of stakeholders and maintains a national database to enable effective policy making and research. CARINGS provides online monitoring of the adoption and post-adoption process by Central Adoption Resource Authority (CARA) at central level and state government level.



comprehensive adoption process using the CARINGS system, a role it has fulfilled since 2011. This platform caters to approximately 511 Specialized Adoption Agencies, 735 District Child Protection Units, 5960 Child Care Institutions (CCIs), and 35 State Adoption Resource Agencies within India. Moreover, it facilitates connectivity for international entities such as the Central Authorities of other contracting countries, foreign accredited bodies, and Indian Diplomatic Missions Abroad, enabling seamless interaction with CARA.

Features

CARINGS offers the following key features:

Transparency in Adoption Processes: CARINGS is designed to bring transparency to every stage of the adoption journey. It ensures that the adoption process is clear, accessible, and understandable for all involved parties, including prospective adoptive parents (PAPs), adoption agencies, and authorities.

Minimization of Adoption Delays: One of its primary objectives is to streamline the adoption process, minimising unnecessary delays that could arise due to administrative bottlenecks or inefficiencies. By offering a centralised platform, CARINGS aims to expedite the procedural aspects of adoption.

Empowerment of Prospective Adoptive Parents: CARINGS provides comprehensive information and resources to prospective adoptive parents, enabling them to make well-informed decisions throughout their adoption journey. This empowerment ensures that PAPs have access to the necessary details and support required for the adoption process.

Database Analysis for Policy Decisions: By accumulating and analysing adoption-related data, CARINGS offers intelligent insights to policymakers. This analysis aids in making informed and effective decisions related to adoption policies, ensuring that they are well-aligned with the needs and trends observed within the adoption landscape.

Online Monitoring at Central and State Levels: The system allows for real-time monitoring of the adoption and post-adoption processes, both at the central and state government levels. This monitoring ensures compliance, efficiency, and accountability across all stages of adoption.

Comprehensive Database for Policy Planning: CARINGS serves as a centralised repository for adoption-related information. It amalgamates data from various adoption agencies and child care institutions, facilitating diligent policy planning based on accurate and comprehensive information.

Establishing Connections between Agencies and Institutions : The platform fosters linkages between adoption agencies and child care



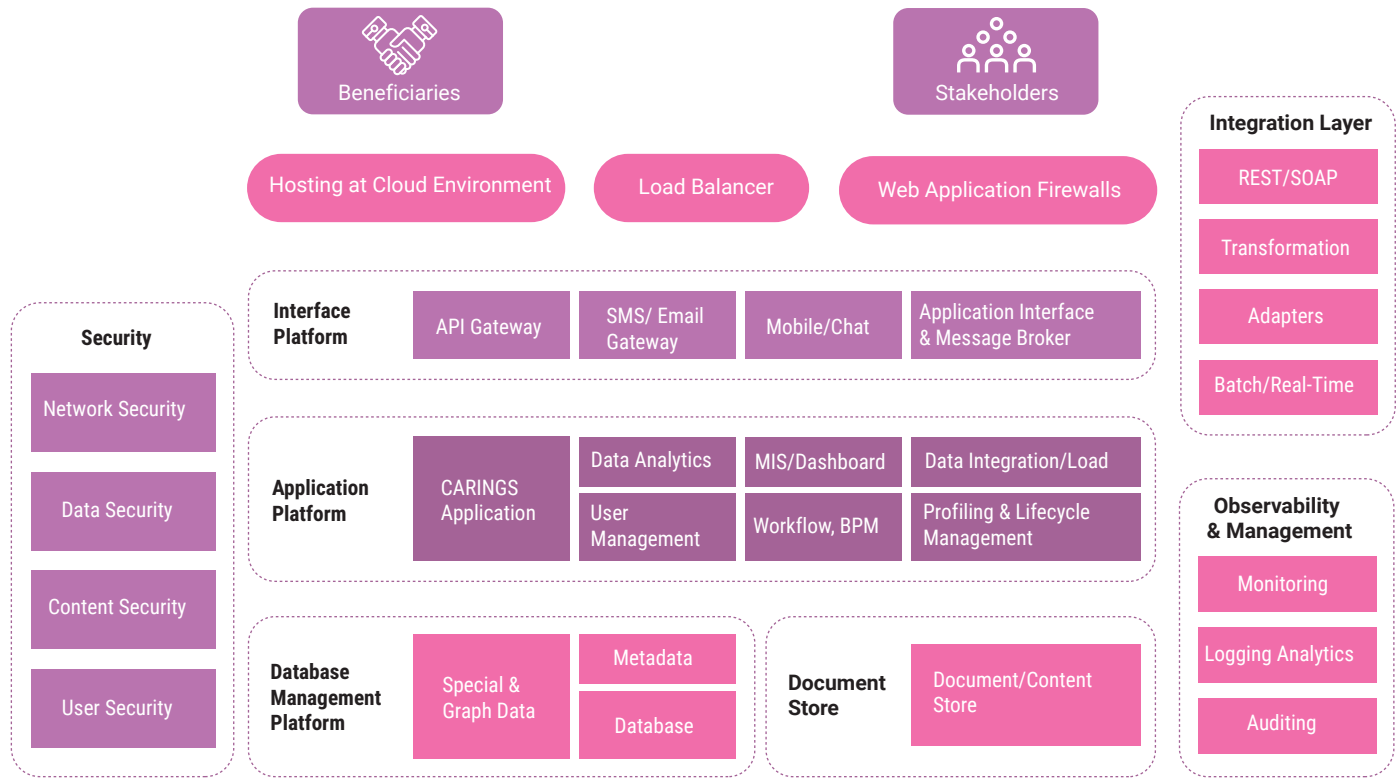
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▲ Fig 9.1 CARINGS Software Architecture

institutions, aiming to create a comprehensive database of children without parental care. This connectivity expedites the process of finding suitable families for these children, ensuring they are placed in nurturing environments promptly.

Profiling for Better Matching: CARINGS allows for detailed profiling of both children in need of adoption and prospective adoptive parents. This feature aids in better matching, ensuring that children are placed in homes that suit their needs, and prospective parents find children who fit well within their family dynamics.

Assistance and Status Tracking for Adopting Parents: The system provides relevant information and facilitates easy tracking of the adoption process for adopting parents. It ensures they are well-informed about the status of their application, thereby reducing anxiety and uncertainty during the adoption journey.

Technical Specifications

CARINGS is developed using Visual Studio .NET Framework and Microsoft SQL Server for the database. It utilises technologies like JavaScript, HTML, and CSS and is hosted on Amazon Web Services (AWS).

Software Architecture

The software architecture of CARINGS serves

as a centralised portal facilitating the adoption process involving three key stakeholders:

Prospective Adoptive Parents: Individuals seeking to adopt children.

Children Available for Adoption: Information about children legally available for adoption is captured and managed within the system.

Adoption Agencies: Responsible for overseeing and completing the adoption process.

The system captures information about children legally available for adoption (OAS children). It initiates a social investigation to locate their biological parents. If the biological parents cannot be found, the children are declared legally free for adoption. Subsequently, a Medical Examination and Child Study report are processed through the online system. These children are then referred online to Prospective Adoptive Parents who have registered on the portal and are waiting for clearance via their Home Study Report.

Upon finding a suitable match, the child is placed for adoption, and the system maintains a post-adoption follow-up record for a duration of two years. The recent launch of CARINGS 3.2 aligns with the business rules of the New Adoption Regulations 2022 and the amendments of HAMA 2021, particularly focusing on inter-country adoption.

Impact

Identifying and Addressing Delays: The online adoption process aids in identifying delays across different levels, enabling the system to address and rectify gaps efficiently.

Timely Decision-making via Data Analysis: Data analysis capabilities empower timely and informed decision-making regarding adoption-related matters.

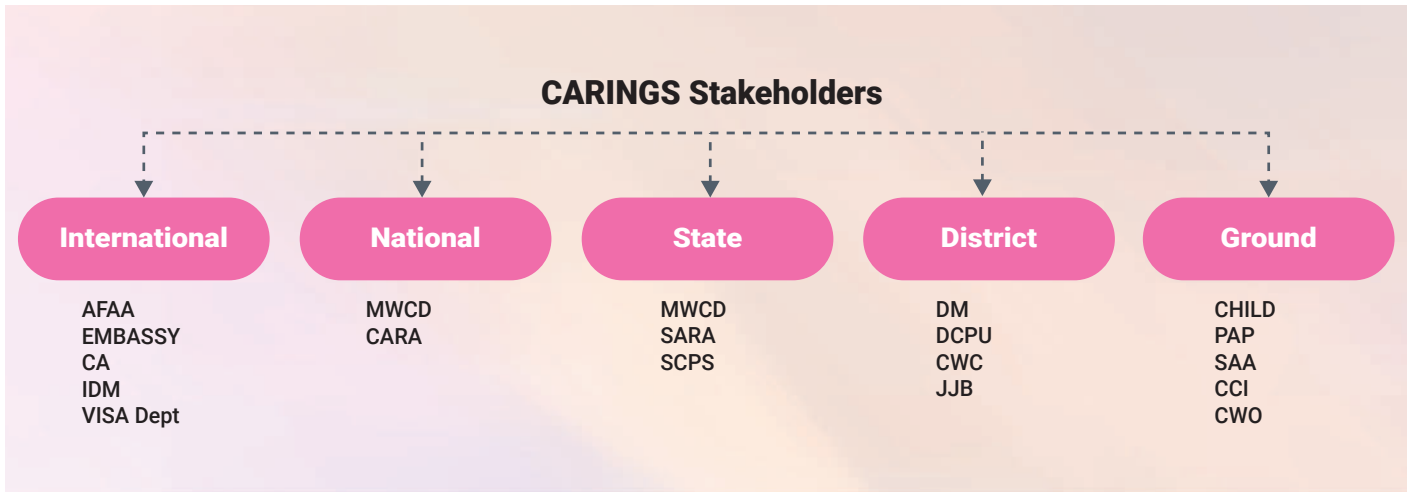
Registration of Adoption Agencies: CARINGS facilitates the seamless registration of adoption agencies, ensuring a comprehensive network for adoption processes.

Online Registration for PAPs: The system allows PAPs to register online for domestic adoption, streamlining the application process.

Centralised Adoption Application Reception: CARA serves as the central hub for receiving adoption applications, streamlining the application management process.

Early Placement of Special Needs Children: The system prioritises the placement of special needs children, expediting their adoption process.

Online Post-Adoption Follow-up: CARINGS maintains an online post-adoption follow-up system, ensuring ongoing support and monitoring after the adoption process.



▲ Fig 9.2 CARINGS Stakeholders

Adoption via Linkages: Establishing connections between adoption agencies and child care institutions facilitates the adoption of children without parental care.

Priority to Domestic Adoption: The system ensures priority to domestic adoption, promoting a focus on placing children within the country.

Additionally, since its inception in 2010, CARINGS has facilitated over 46,618 in-country adoptions and more than 6,142 inter-country adoptions, demonstrating its significant impact on facilitating successful adoptions both nationally and internationally.

Way Forward

CARINGS operates with the overarching mission to encompass every CCI across the country, striving to reach and identify every child eligible for adoption. The core objectives focus on broadening the pool of adoptable children and simplifying the adoption process. The initiative is geared towards the comprehensive identification of adoptable children—be it orphans, abandoned, or surrendered—within all CCIs across districts. It ensures a meticulous legal process in accordance with the Juvenile Justice Act 2015, involving the Child Welfare Committee (CWC) to declare these children legally free for adoption. Moreover, CARINGS

aims to establish seamless connections between CCIs and the nearest Specialized Adoption Agencies within the system. This linkage facilitates the compilation of detailed profiles including essential reports such as the Child Study Report, Medical Examination Report, and legal status as declared by the CWC. Ultimately, these efforts streamline and expedite the adoption procedures for these children.

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Unified Data Hub

Empowering Proactive Governance through Integrated Solutions

Edited by **SANGEETHA MANJUNATH**

The Government of Puducherry Union Territory is committed to provide various welfare schemes offered by both the Central and UT Governments to its citizens. Ensuring that these benefits reach the rightful recipients without any misappropriation or losses is a key priority. To achieve complete and effective coverage, the government aims to identify and address any gaps in the implementation of these schemes. While traditional methods such as officer-based models or performance rankings have been employed, they have proven inconsistent and unsustainable, necessitating a shift towards technological solutions.

The UT government welfare schemes, which often involve monthly and recurring benefits, encounter challenges in verifying beneficiaries due to the absence of dynamic data updating and validation checks. This results in complexities such as invalid Aadhaar details, incomplete data, and instances of duplicate records, creating obstacles in accurately identifying eligible beneficiaries. Furthermore, different departments maintain beneficiary data in separate formats without efficient collaboration.



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UDH has established an adaptable system for validating and eliminating duplicate beneficiaries. Presently, it encompasses Puducherry's residents and their enrolled schemes, incorporating 24 departments and 150 central and state schemes. Its scalability allows seamless integration with new schemes. The Cross-referencing feature, available to all welfare departments, streamlines beneficiary selection based on specific criteria, significantly reducing the time-consuming process of identifying eligible beneficiaries from months to just a few selections and menu clicks.



In response to these challenges, in collaboration with NIC, the Government of Puducherry introduced the Unified Data Hub (UDH) web portal. UDH is designed to enhance public service delivery by minimising errors in beneficiary selection and creating a comprehensive and unified database encompassing all government schemes. By integrating with the Direct Benefit Transfer (DBT) system, UDH efficiently allocates resources to those genuinely in need, ensuring that welfare benefits are effectively targeted and delivered.

Process

UDH operates an efficient system for organising beneficiary data by employing online de-duplication and validation processes:

- **Data Verification:** Welfare departments cross-check data against UDH parameters, ensuring accuracy in district, scheme, age, and gender details while eliminating duplicated information

I am happy to inform you that the Unified Data Hub (UDH) designed by NIC, Puducherry has been a very convenient and robust tool that has on boarded all the 23 welfare Departments and around 150 schemes implemented in the UT. These Departments are performing on-line validation, de-duplication through onboarding mechanisms in UDH. Further, the cross referencing facility has been provided to all Departments for identifying eligible beneficiaries by applying inclusion and exclusion criteria through UDH. The Birth and Death integration with UDH has immensely benefit the Departments to update the beneficiaries details in the respective schemes. The API integration, 360 degree view of beneficiaries, integration of Block chained certificates and auto enrolment of pension beneficiaries are some of the visionary objectives towards pro-active governance.

I would like to congratulate the NIC team, Puducherry for developing such a collaborative mechanism to effectively identify the intended eligible beneficiaries as well as update the beneficiary details and providing the necessary trainings for on boarding all the welfare schemes.



Dr. D. Manikandan IAS
Secretary (IT)
Government of Puducherry

- **Departmental Uploads:** Each department adheres to UDH requirements by utilizing a designated service template to upload beneficiary data
- **Validation Engine:** An online validation engine scrutinises the uploaded records, distinguishing validated data and transferring it to UDH. Any erroneous records are promptly returned to the respective departments for rectification
- **Unique Beneficiary Records:** UDH exclusively maintains de-duplicated beneficiary data, ensuring that only unique beneficiary details are present. Summaries detailing accepted and rejected beneficiaries are available for reference

The Cross-referencing feature within UDH significantly simplifies and expedites the verification process across various departments:

- **Beneficiary Verification:** Departments can swiftly verify beneficiary data by applying inclusion/exclusion criteria for schemes, drastically reducing the time required for eligibility assessments
- **User-Friendly Interface:** An intuitive interface enables the selection of beneficiaries, criteria application, and comparison of data from different departments within UDH. This generates lists of eligible and ineligible beneficiaries, facilitating further necessary actions
- **Adaptable Filtering:** Criteria for filtering beneficiary data can be easily adjusted to accommodate changes in scheme details, ensuring the system remains flexible and responsive to evolving requirements

API Services

API services in UDH enable seamless data exchange between department databases and UDH through automated connections. Examples include:

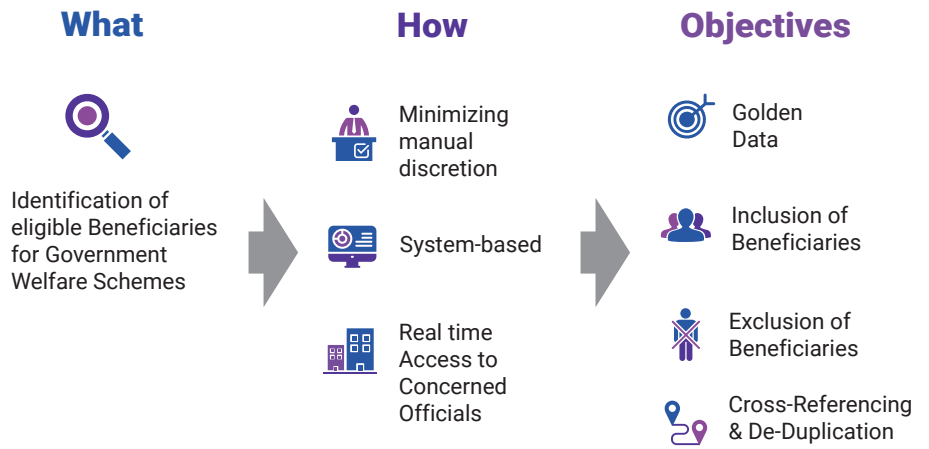
- Verifying beneficiary details directly from a registration page
- Enhancing a Self-Care Portal for departments
- Downloading certificates from UDH to department websites

Additionally, welfare departments can automate incremental updates or deletions of data through web services, facilitating server-to-server interactions without manual intervention.

BCT integrated Certificates Generation

UDH advances paperless, faceless e-governance by offering electronic records of welfare assistance and integrating with blockchain certificates, covering:

- Beneficiary and family details
- Comprehensive list of welfare schemes utilized
- Blockchain-secured proof documents (e.g., marriage certificates, ration cards)
- Real-time beneficiary data, automatically updated through web services without manual intervention, ensuring continuous data accuracy



▲ Fig 10.1 A basic overview of UDH application

Technologies Used

Technologies in UDH adhere to UIDAI guidelines by utilizing Aadhar Data Vault for secure Aadhar storage, following the Aadhar security act of 2016. Beneficiary data is uploaded in JSON format and stored as documents in MongoDB. Web APIs use JSON Web Token (JWT) for authentication, enabling secure data retrieval and storage on the UDH server.

The 12-digit Aadhar numbers are transformed into 36-digit reference numbers stored in the Aadhar Data Vault, linked to 5-digit randomized UDH Codes for inter-departmental sharing and cross-referencing. Alerts and Notifications are shared across departments for necessary beneficiary updates.

Dynamic Dashboards, tailored to defined roles, empower welfare officials in effective data utilization. UDH operates as a Service (UaaS),

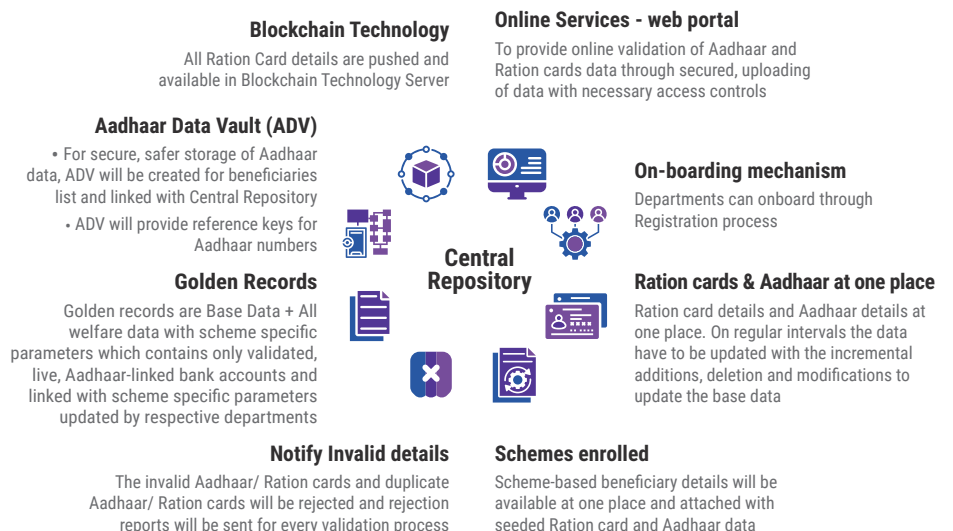
allowing seamless onboarding and utilization for new welfare departments or schemes.

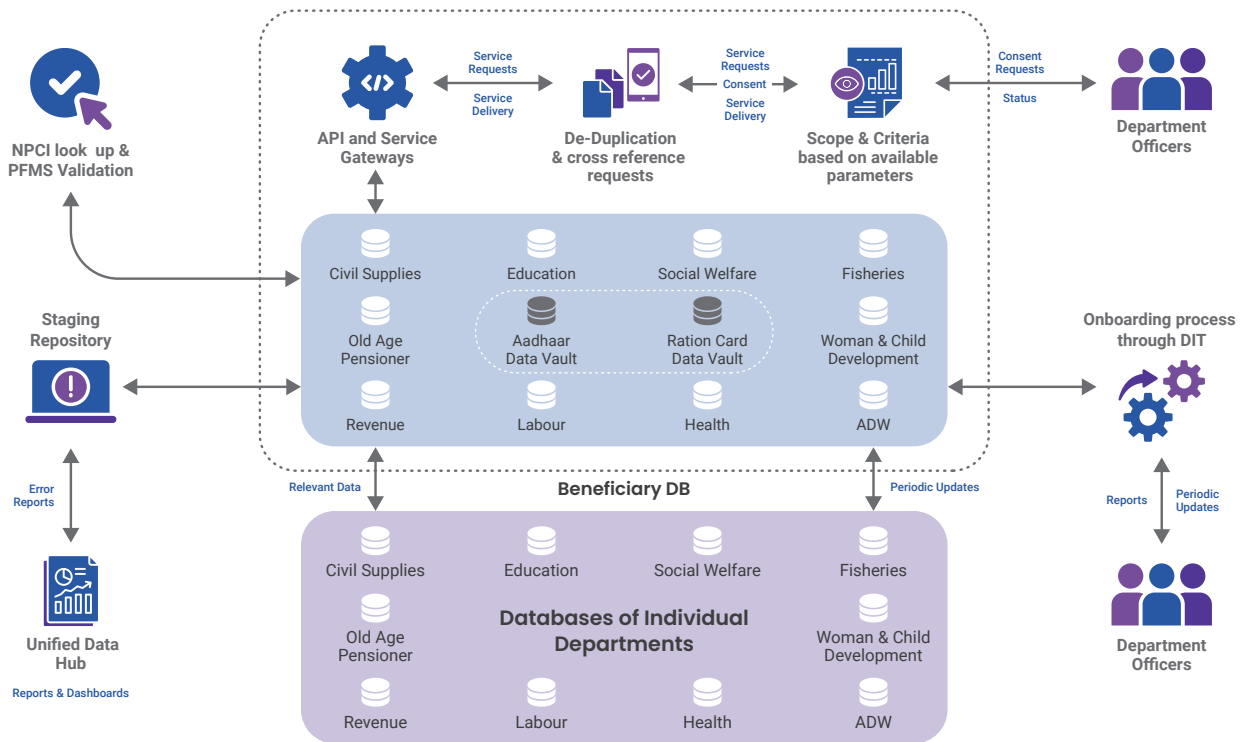
UDH Ecosystem

Though, started as a tool for Online de-duplication, validation and cross referencing, UDH has brought a major impact on the complete gamut of activities after integrating nearly 23 major welfare departments including Public distribution system, Social Welfare, Women and Child development, Fisheries, Adi-dravidar welfare as single point access. Some of its benefits are briefly listed below:

- API integration has provided instant verification of beneficiaries by welfare departments.
- Birth and Death registrations are updated from local bodies directly to UDH in turn prepare the new born child data to various welfare assistance programs. The updation of expired beneficiary

▼ Fig 10.2 UDH Process Flow





▲ Fig 10.3 UDH Architecture diagram

details are given as alerts to welfare departments through portal for downloading and deleting the same in the respective beneficiary database of the department. The process already has saved several lakhs of rupees for the exchequer.

- 360 degree view of beneficiaries help to view the beneficiary and the household details along

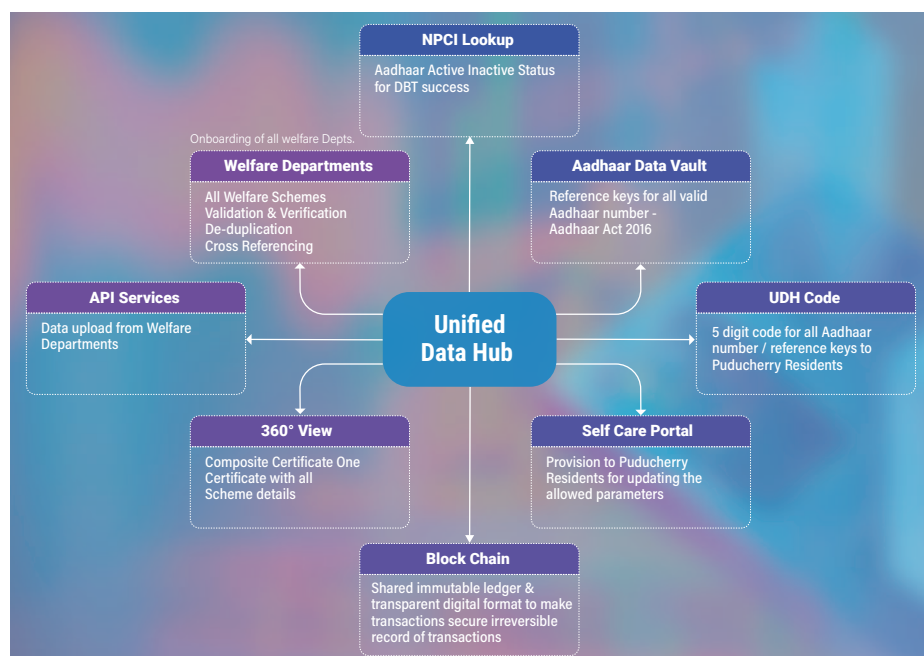
with welfare benefits availed by them at one place. The eligibility as well as verification mechanism has found immense benefits for quick decision making through this facility.

- Aadhaar Data Vault (ADV) integration helps the UDH for the safe and secured storage of Aadhaar details by storing Aadhaar as well as generating

a UDH code for equivalent reference key. By this, the footprints of Aadhaar has been reduced as well as usage for comparison of beneficiary data.

- Block chain certificates can be easily integrated with UDH with the beneficiary data to save papers for proof of documents as well as using the original documents. An electronic copy of the UDH certificate with block chained certificates will help the beneficiary to have an electronic way for availing all the welfare assistance and delivery of benefits.

▼ Fig 10.4 UDH Ecosystem



Conclusion

UDH's transformative approach enables efficient beneficiary identification based on set criteria, eradicating the need for new registrations. With its dynamic database updated through daily Web API transactions, departments can access, verify, and notify eligible beneficiaries seamlessly. Field verifications, if necessary, streamline enrollment without the hassle of extensive paperwork. SMS notifications facilitate swift benefit disbursement, empowering proactive governance for departments to access pertinent beneficiary details as needed.

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SATHI

An ecosystem where each seed tells its own story

Edited by MOHAN DAS VISWAM

Seeds are the fundamental units of agriculture, serving as the starting point for plant growth and crop production. The quality of seeds significantly influences agricultural productivity, making their careful selection and management crucial for ensuring robust and sustainable farming practices. Governments play a crucial role in ensuring the availability of quality seeds to farmers by implementing seed regulations, promoting research and development, and facilitating seed certification programs. The Seed Authentication, Traceability & Holistic Inventory (SATHI) project, available at <https://seedtrace.gov.in>, is designed to assist the government in ensuring the timely and accurate distribution of high-quality seeds and eliminating the potential spurious seed from the ecosystem.

SATHI goes above and beyond as a multi-tenant application, seamlessly serving all states



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SATHI, or Seed Authentication, Traceability & Holistic Inventory, strives to create a nurturing digital environment. It aims to oversee seed production, ensure quality certification, and manage distribution with utmost care. The core objective is to offer complete traceability of seeds from their inception to the hands of farmers across successive generations. It envisions a system that not only monitors the journey of seeds but also fosters a holistic approach, acknowledging the significance of each step in empowering farmers and ensuring the authenticity of their agricultural resources.



on a single project instance. What makes it truly exceptional is its remarkable configurability, allowing each state to personalise its experience. Everything from state-specific workflows, unique terminologies, and individualised payment collection methods to data capturing and validation logics can be easily configured to suit the distinct needs of each state.

The vision of SATHI is to alleviate crosscut concerns and elevate the focus on quality assurance activities among concerned officers. By intricately connecting the dots throughout the generations of seed production and

certification, SATHI aims to strengthen the supply chain, enhance overall quality, and prevent any deceptive practices within the seed chain.

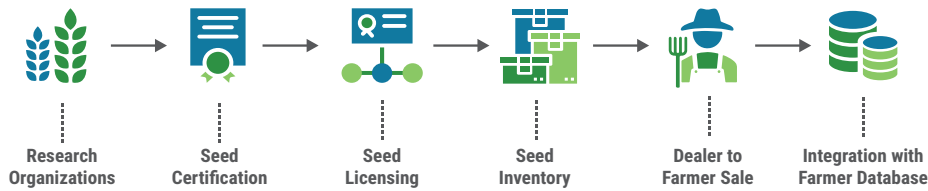
The key stakeholders within the SATHI ecosystem encompass diverse entities such as ICAR, Breeder Seed Production Centres, State Seed Certification bodies, State Seed Testing Labs, Central Seed Testing Lab, Seed Producing Companies, Seed Processing Plants, Seed growers, Seed wholesalers, Seed retailers, State Governments, and ultimately, the farmer. Strategic engagement and alignment of objectives among these entities are crucial for achieving the overarching goals of the ecosystem.

The development of the project comprises 2

The SATHI project has proven to be pivotal, serving as a centralised online system for seed traceability, authentication, and inventory management. It effectively addresses the intricate challenges associated with seed production, quality identification, certification and supply chain management. The rollout of SATHI marks a significant breakthrough in the digitalization of core processes, fostering increased operational efficiency, seamless collaboration, and heightened transparency. I extend my heartfelt appreciation and congratulations to the NIC team for their unwavering dedication and sustained efforts in the effective implementation and adept handling of change management, to suit state specific flavours contributing to the success of this transformative initiative.



Pankaj Yadav IAS
Joint Secretary (Seeds)
Dept. of Agriculture and Farmers' Welfare



Seed with Valid Certification Only can be sold by Valid Licensed Dealers to the Registered Farmers

▲ Fig 11.1 Six Verticals of Seed Chain

phases. Phase 1 of the project covers workflow automation of Nucleus to Breeder seed production, Breeder to Foundation and Certified seed production processes. Phase 2 of the project will cover seed dealer licensing, seed supply chain and inventory management.

By implementing SATHI, farmers gain comprehensive traceability for the purchased seed bags, along with real-time information on seed availability in their vicinity. This system acts as a robust deterrent against the infiltration of substandard, spurious, or duplicate seed bags into the supply chain, permitting the sale of QR coded seed bags exclusively sourced through authorised channels. The primary focus is on ensuring farmers receive genuine seeds, ultimately contributing to increased agricultural production and enhanced income for the farmers.

Features

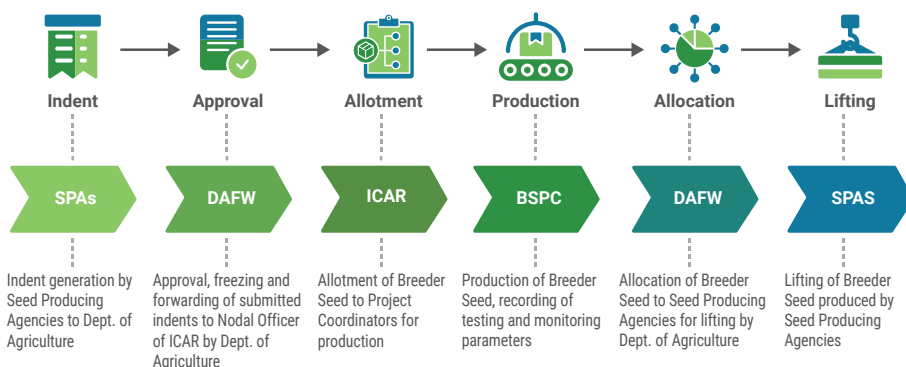
The SATHI portal offers following features aimed to enhance and streamline the entire lifecycle of seeds:

- **End-to-End Visibility and Traceability:** The portal provides complete visibility and trace-

ability of seeds from their inception to the end of their lifecycle

- **Traceability via Backward Linkage:** It enables the identification of seed sources, varieties, and quality through backward linkage, allowing tracing back to their origin
- **Automation of Breeder Seed Processes:** Manual processes like indent submission, allocation, and lifting for breeder seeds are automated, ensuring efficiency
- **Real-Time Monitoring of Seed Demand and Supply:** The portal facilitates real-time monitoring of the demand for breeder seeds, their allocation, and the supply chain, ensuring timely responses
- **Automation of Seed Certification:** It automates the seed certification system involving registration, inspection, testing, and issuance of certificates, reducing manual intervention
- **Reduced Paperwork and Mobile/Tablet Inspection App:** Paperwork is minimized, and inspection processes are made more efficient through the use of a mobile/tablet app, enabling easier and more effective inspections

▼ Fig 11.2 Nucleus to Breeder Seed Production, Monitoring & Distribution



On behalf of all the Seed Growers, Seed Producers of Punjab & PSSCA Staff, I salute NIC team for their whole-hearted support to Punjab in transformation from Offline Certification to Online mode. It is really wonderful to work with such an efficient team under the able guidance of NIC Officer and the dedicated team members of NIC Help desk were always available 24 X 7 for support. We look forward to nurturing the seed of relationship shown between Punjab and NIC, to attain exemplary achievement together.



Dr. J.D.S. Gill
Chief Seed Certification Officer
Punjab State Seed Certification Authority

- **Automated Seed Dealer Processes:** The portal automates the registration of seed dealers, facilitates application renewal, and issuance of licenses, thus, streamlining administrative procedures

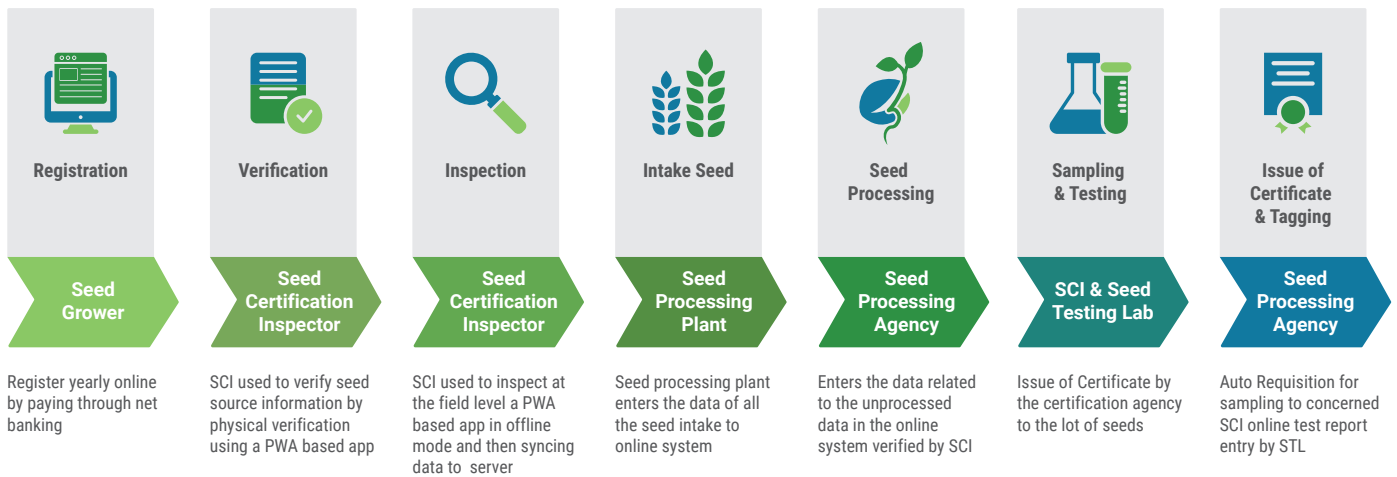
While trial run of SATHI Phase 2, all the things worked perfectly in the SATHI portal and physical trial done successfully for Supply chain Management.



Jyoti
Joint Director (Q&C) & Nodal Officer SPMU
Uttarakhand

- **Dashboard-Based Monitoring and MIS:** A dashboard provides comprehensive monitoring and Management Information System (MIS) capabilities, enabling oversight of all seed lifecycle activities
- **Inventory and Sales Monitoring:** It allows for the monitoring of seed inventory and tracks sales to farmers, ensuring better management of supply and demand

In essence, the SATHI portal integrates various technological solutions to automate and enhance the entire spectrum of activities involved in the life cycle of seeds, from sourcing and certification to distribution and monitoring, ultimately bene-



▲ Fig 11.3 Process flow of Seed Certification

fitting both stakeholders and farmers.

SATHI is engineered on a robust Microservices Architecture, ensuring modular and independent components for seamless operation. Leveraging container-based deployment, SATHI exhibits lightweight characteristics, optimising resource usage. The application achieves high scalability through Kubernetes orchestration, allowing efficient management of containerized instances. With its Big-Data readiness, SATHI employs NoSQL databases, accommodating large and diverse datasets. Importantly, SATHI is developed with a commitment to use open-source technologies, mitigating the risk of vendor lock-in.

Technology Stack

- Operating System:** Linux
- Deployment mode:** Container
- Modular Architecture:** Microservice
- Message Broker:** RabbitMQ, NATS.io

- Database:** PostgreSQL, MongoDB, Redis
- Orchestration Platform:** Kubernetes
- Frontend:** Angular, html, Javascript, CSS
- Middleware:** Node.js

Impact

Phase I of SATHI was officially launched by the Honourable Minister of Agriculture, Shri. Narendra Singh Tomar, on April 19, 2023.

Till date, 14 states such as Odisha, Uttarakhand, Punjab, Chhattisgarh, Maharashtra, Rajasthan, Jammu, Kashmir, West Bengal, Himachal, Karnataka, Jharkhand, Sikkim and Assam have been on-boarded and 2 states integrated with API on the platform.

- SATHI already integrated 16 states into the national seed grid
- More than 5678 seed producing agencies are on-boarded
- More than 75330 Seed growers are registered

- Breeder Seed Indents have been received for Kharif 2024

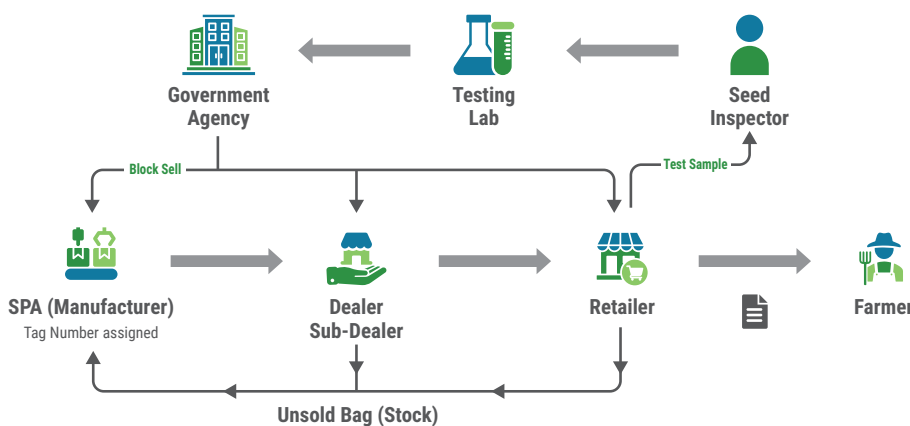
The conduction of a successful trial run of supply chain management has marked a significant milestone in the project's journey. User feedback received during the trial was positive and satisfying. Valuable insights have been gained for further enhancements.

The National Level Workshop on SATHI was successfully conducted in October 2023 to facilitate interactions among stakeholders (Department of State Agriculture, ICAR, and Central Agencies like NSC, KRIBHCO etc.) and to enrich knowledge on SATHI portal. More than 75 Officers from agriculture departments of different States and Centre participated in the workshop in person.

Way Forward

To add more trust and authentication, it is planned to adopt Blockchain technology and set up a 'Seed Blockchain'. The Seed certificates and movement of Seed bags in Supply chain (movement transactions) will be pushed to Seed blockchain. The Authentication and Trace and Track will be through APIs provided by Seed Blockchain. The PoC for the same is demonstrated successfully. To monitor the physical movement of goods, it is proposed that an IoT based tracking system may be integrated with the core supply chain management module.

▼ Fig 11.4 Seed Bag Movement



Contact for more details

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Cyber Risk Insurance

Insurance Policy to cover financial liabilities arising from cyber incidents

Edited by MOHAN DAS VISWAM

Digital revolution has transformed the way individuals and communities act, interact and transact. No other scientific advancement, perhaps, has made inroads among all cross sections of the society in such a short span of time. While the envisaged dividends of this advancement are amazing, the associated risks and costs are also equally enormous. Data being the new oil, cyber criminals are burning the midnight oil to take advantages of any failure of the people, process or technology associated with this revolution. Even the slightest failure in ensuring the security of the data and associated services is a luxury that no individual or organization can ever afford.

Cyber threats are a constant concern for organizations of all nature. The assumption that commercial establishments such as banking and financial institutions alone are prone to such threats is a misnomer. Organizations in other sectors such as energy, healthcare and aviation are also equally, often even more, getting susceptible to cyber-attacks. Hence the data owners are under constant vigil with the right tools and expert manpower in place to protect the organization's sensitive information and assets. Any lacuna from their end in protecting the interests of the customers will cause an irreparable loss in business and of reputation to the agencies concerned.



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Cyber Risk Insurance, also simply known as Cyber Insurance, is a kind of insurance policy which protects business houses as well as individuals from financial losses due to cyber-related incidents. These incidents include various forms of cyber-crimes such as data breaches and cyber-attacks. The policies usually cover costs associated with extortion payment, restoring data and systems, legal fees, and liability for damages to third parties. Cyber insurance protects businesses to manage cyber risks and safeguards them from potential financial losses.



Losses due to cyber-attacks are often intangible and difficult to quantify. Impalpable losses like that of reputation and leak of intellectual property will be slow in taking its toll on the prospects of the organization. The assessment of tangible losses is also difficult as the spread and depth of the damages takes time to get revealed. These losses need to be filled as and when they are revealed for ensuring mere business continuity. Besides, clients and other stake holders are likely to seek compensation for

denied services, loss of personal information and other collateral damages. All these may throw the organization into deeper financial turmoil which will be difficult to circumvent without external support.

Cyber Risk Insurance

Cyber risk insurance helps business establishments to manage the risks associated with cyber-attacks. It is a special insurance product that covers liabilities related to information technology infrastructure and activities that are normally not covered by other insurance products. It protects the organisations against the potentially devastating financial consequences of data breaches. It provides a smooth funding mechanism to recover from major losses without any assistance from other sources such as banks and government agencies. Thus it helps businesses to return to normal in a short period of time in the event of a large-scale security breach.

Liabilities Covered

Cyber insurance, like other insurance products, provides coverage for various kinds of liabilities to the stake holders associated with the business. The coverage of cyber insurance policies typically includes the costs associated with extortion payment, restoring data and systems, legal fees, and liability for damages to third parties. The policies can be further customized to suite the specific requirements of the organisations. The major liabilities covered for the first, second, and the third parties are listed below.

Theft and Loss

Cyber Risk Insurance provides protection against costs of theft or destruction of the insured data. This enables organisations to compensate for the possible losses out of destruction of the data insured. Further it provides compensation for theft of the funds insured under the policy. This includes recompense for funds directly lost by banking and other financial institutions due to cyber-attacks.



Cyber Extortion

Payment of extortion money is not generally recommended in case of ransomware attacks. However, recovering from such attacks may sometime require payment of ransom. Cyber insurance provides compensation of expenses towards payments to extortionists who encrypted the data and/or threaten to disclose sensitive information. The cost of hiring the services of a professional negotiator is also covered under such insurance policies.

Business Interruption

Loss of income due to actual or potential impairment or denial of operations in the aftermath of cyber-attacks is a major concern for many business establishments. Cyber insurance covers the loss of income as well as the extra expenses incurred during the recovery period.

Response Cost

Businesses sometimes find it difficult to cop-up with the expenses for Forensic Investigation to assess the spread and depth of the attack following a security breach. As a result a complete root cause analysis is often avoided and the security holes are left unidentified and unattended. Cyber insurance comes to the aid of such organisations so that the chances of recurrence of similar security incidents are minimised.

Legal Recourse

Cyber insurance policies provide reimbursement of expenses towards legal advice and regulatory compliance in the wake of a cyber incident. This includes cost of determining indemnification obligations in the contracts of the organisations with a third party. Policies also provide indemnity against violation of privacy laws caused by a security breach.

Public Relation

Media handling is a vital activity in management of any crisis. Cyber insurance policies can be customized to include the cost of handling reputation attacks in the event of a security

breach. The expenses to mitigate any negative publicity and cyber defamation due to the security incident are also often covered by such policies.

Notification Expenses

This includes the costs of notifying third parties potentially affected by a security breach. This often deserves importance considering the vast extend and strategic nature of the clientele of the affected organisation.

Privacy Liability

Cyber insurance policies provide indemnity against third-party damages that result from the disclosure of confidential information handled by the insured. This also includes coverage for vicarious liability where a vendor loses information the insured had entrusted to them.

System Liability

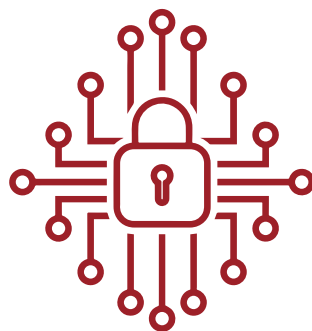
Damages that result from the failure to protect the electronic data of a third party during a cyber-attack is a major cause of concern for many organisations. Policies provide coverage for defense costs for which the insured is liable for third-party damages.

Access Liability

Businesses often may have to compensate for denial of services to the clients in the wake of cyber-attacks. Insurance policies provide indemnity from claims resulting from unavailability of IT systems to such customers.

Source of Cyber Threats

Cyber threats can emanate from internal as well as external source, and insurance policies usually provide coverage for such threats irrespective of their source and cause. Ignorance and negligence of employees are the most common cause of internal threats. Lack of awareness and training among employees causes improper handling of



systems which may ultimately pave way to cyber-attacks. Negligence among employees may lead to serious security issues such as misconfiguration of systems and loss of credentials and even the devices. Malicious and disgruntled employees are another common cause for internal threats which may lead to loss of data and denial of services.

Ransomware attacks are the prominent form of external threats covered under cyber insurance.

There exists a cyber-crime business model called Ransomware as a Service where malicious elements hire the services of operators who are technically skilled to develop malware and launch ransomware attacks. State and non-State Hackers as well as Hacktivists form another major source of cyber-attacks which jeopardizes the services of any business house. Corporate espionage and malicious stakeholders (such as vendors in supply chain) are also serious cause of concern for many organisations. Proper risk assessments and contractual agreements will enable businesses to function in a realistic environment.

Side Benefits

Cyber Risk Insurance has a couple of side benefits as well. A comprehensive security audit of the digital assets is one of the pre-requisite for the candidate organisations to avail the coverage of the risk insurance. This effort will help the entities to determine the existing vulnerabilities and to undertake necessary remedial measures to fix those vulnerabilities. This process in-turn improves the security posture of the organisation and reduces the chances of security incidents.

A qualitatively superior and quantitatively accurate assessment of risk is another prerequisite to arrive at the premium of cyber risk insurance policies. This exercise distributes risks fairly among all the parties involved and avoids concentration of risk with any one of the stakeholders. This ultimately will put an end to free-rides by some players and burden each one with their share of risk. Ensuring security audit and risk assessment, whenever the insurance policies are renewed, will maintain the organisation in a healthy condition vis-a-vis cyber security and financial stakes.

Conclusion

With the increasing frequency of cyber-attacks, it's more important than ever to have the right people, policies and technologies in place to protect organization's sensitive information and assets. It is increasingly becoming important to establish a backup mechanism to shoulder the financial burdens of any such attacks. Like any other insurance product, consumers feel the premium spent on cyber insurance policies as a wasteful expenditure until they once claim the benefits of the same. While every endeavor may be made to secure one's data by deploying appropriate cyber security solutions, the benefit of an insurance policy that provides coverage for financial liabilities arising from cyber incidents also may be simultaneously ensured for a healthy and peaceful business atmosphere.

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Appscape

Mobile technology has emerged as a primary tool for governments to serve their citizens. It has bypassed the need of traditional physical networks for communications and collaborations. It is also much more affordable and accessible, thus strengthening the nation through better citizen-government interaction. To further nourish this interactivity, NIC has created a repository of more than 730 mobile apps available through both the Android and iOS platforms. This issue of Appscape covers some of the more popular mobile apps launched recently. These apps belong to different sectors such as Administration, Development, Finance, Public Distribution, Health and Education.



NREGA Mobile Monitoring System

NREGA Mobile Monitoring Service (NMMS) app transforms oversight at MGNREGA worksites by enabling real-time worker attendance tracking with geotagged photos. This ensures transparency and accountability in the program. Its features include:

- **OTP-based Validation:** Ensures secure ID creation in the Management Information System, requiring validation only during the initial login
- **Gender-Neutral Registration:** Eliminates the need for gender-based registration, promoting inclusivity.
- **Downloaded Muster Roll Viewing:** Users can access and view the list of issued muster rolls downloaded within the app for easy reference
- **PDF Creation for Attendance Proof:** Enables the creation of PDFs containing captured attendance data, facilitating submission to the block when technical constraints prevent direct uploads
- **Attendance Tracking:** Offers a 'View Uploaded Attendance' option within the app, displaying workers' attendance details recorded and uploaded within the panchayat over the past month

Through these functionalities, the app streamlines monitoring, fosters transparency, and provides a robust platform for efficient oversight.

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Sickle Cell

The 'Sickle Cell' mobile app is a critical tool in the fight against sickle cell anemia, a debilitating genetic blood disorder. The app streamlines beneficiary registration, enables comprehensive test detail capture, and integrates with the Ayushman Bharat Digital Mission (ABDM) to facilitate the creation and registry of Ayushman Bharat Health Account (ABHA) IDs. Its key features are:

- **Streamlined Registration:** Health Facility Users can register beneficiaries using their registered mobile numbers. The app also offers multiple authentication methods, such as OTP, fingerprint, facial recognition, to link with ABHA IDs
- **Comprehensive Detail Capture:** The app efficiently records screening and confirmatory test details for various conditions like Sickle Cell Disease and Thalassemia. It supports different testing methods, both online and offline, ensuring that data is captured even in areas with limited connectivity
- **ABDM Integration:** The app's integration with ABDM enables the creation and registry of ABHA IDs, providing beneficiaries with a secure digital platform to access their health records

Overall, the 'Sickle Cell' app plays a vital role in the National Anaemia Elimination Mission by offering improved registration and data collection.

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mHimBhoomi

mHimBhoomi empowers landowners and stakeholders in Himachal Pradesh to seamlessly access and manage their land records.

The app serves as a centralized repository for Jamabandi and Shajra Nasb records, enabling users to retrieve crucial land ownership details with ease. Its comprehensive features and intuitive interface make it an indispensable tool for navigating the complexities of land records in the state. Some of its key features are

- Access to Jamabandi and Shajra Nasb records for any Revenue Estate with ease
- Provides a visual representation of landholdings by viewing plot maps for digitized villages
- Locate specific land parcels precisely and efficiently using Khewat, Khatoni, or Khasra Number
- Explore family trees using Unicode Hindi characters, catering to the linguistic needs of the region
- Save frequently accessed land records for quick and effortless retrieval
- Link Aadhaar for easy and secure access to land ownership details

Overall, mHimBhoomi stands as a force in the land records management landscape of Himachal Pradesh, empowering landowners, streamlining administrative processes, and promoting transparency.

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Raj Aangan

The Raj Aangan App is a cornerstone of Rajasthan's Integrated Services Program, a comprehensive initiative dedicated to improving the nutritional and health status of children across the state. Its overarching goal is to promote holistic psychological, physical, and social development, effectively addressing child mortality, illnesses, malnutrition, and school dropouts.

At the heart of the program lies a concerted effort to foster effective coordination among relevant departments, ensuring seamless delivery of crucial nutrition and health education.

Operating through Anganwadi centres, the program also empowers mothers with the knowledge and skills to address their children's general health and nutritional needs.

To ensure smooth functioning, monitoring, and supervision, a dedicated funding software developed in collaboration with the National Informatics Centre (NIC) facilitates timely disbursement of honorariums and various payments.

This robust system promotes efficient and effective operation while maintaining vigilant oversight over the program's implementation and progress, empowering Raj Aangan to play a pivotal role in shaping a brighter future for Rajasthan's children.

 Jitendra Kumar Verma (sio-raj@nic.in)

RGGBKMNY

The RGGBKMNY app, an initiative by the Government of Chhattisgarh, is part of the Rajiv Gandhi Gramin Bhumiheen Krishi Mazdoor Nyay Yojana, specifically targeting rural landless beneficiaries.

Launched under the guidance of Chief Minister Shri Bhupesh Baghel, this scheme aims to provide financial support to the most impoverished individuals without land.

The scheme's objective is to offer annual financial assistance of ₹7000 directly to the bank accounts of eligible beneficiaries engaged in landless agricultural labor in rural Chhattisgarh. Having a bank account is a prerequisite for application.

The primary goal of RGGBKMNY is to elevate the income of agricultural laborers, empowering them to become self-reliant and resilient. This financial aid is intended to enable these laborers to support themselves and their families adequately.

The scheme extends eligibility to various rural workers. The RGGBKMNY app is designed to facilitate the easy application process and disbursement of financial assistance to these deserving beneficiaries, thereby contributing to their economic empowerment and well-being.

 Dr. Piyush Gupta (piyush@nic.in)

mSainik

The mSainik App was launched by the Hon'ble Home Minister of Madhya Pradesh as part of the Directorate of Sainik Welfare, Madhya Pradesh services. The app, along with Sainik Kalyan Portal, offers a range of beneficial features:

- Users can create detailed profiles to access services effectively
- Provides detailed information about various welfare schemes available
- Facilitates the management and organization of information
- Enables users to check eligibility for schemes
- Access to forms and letters required for different schemes, available for download
- Allows for the submission and approval of applications through the app
- Provides beneficiaries with updates and notifications via SMS regarding their applications

The app serves as a comprehensive platform catering to needs of veterans and their families, offering convenience, accessibility, and streamlined access to various services provided by the Directorate of Sainik Welfare in Madhya Pradesh.

 Vijay Vishwakarma (sio-mp@nic.in)

TS-eMining

TS-eMining app serves as an integrated mineral transport solution for the Department of Mines & Geology, Government of Telangana.

Launched officially on September 30, 2023, this app enables various stakeholders to access essential mineral transport services such as online verification of transit forms, transit passes, and road inspections. Specifically, it facilitates field officers at the district level to verify the validity of transit forms/passes, sand way bills, and brick transportation.

In cases of unauthorized mineral transportation, the app automates penalty calculations based on mineral type and quantity. It enables online payment of penalties imposed due to pass unavailability or excess quantity during transportation, thereby reducing manual cash handling by officers. Moreover, the app sends payment links via SMS to vehicle owners/defaulters, ensuring efficient communication.

It provides an online platform for viewing and verifying receipts and reports, streamlining administrative processes. Continuously enriched with new functionalities and tested live in pilot districts like Ranga Reddy, the app undergoes continuous improvements based on feedback from the Department of Mines and Geology.

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AI screens for autism in the blink of an eye

A groundbreaking study by the University of South Australia and Flinders University has uncovered a potential game-changer in diagnosing autism spectrum disorder (ASD) in kids, leveraging artificial intelligence (AI). Using an electroretinogram (ERG) test, which measures retinal electrical activity in response to light, researchers employed AI to spot unique patterns aiding in ASD classification.

Involving 217 children aged 5-16 (71 with and 146 without ASD), the study unveiled distinct retinal responses in ASD-diagnosed kids compared to neurotypical peers. Surprisingly, a single flash of light to the right eye revealed the most robust indicator, and AI analysis dramatically slashed testing time. The findings highlighted reduced higher frequency retinal signals in ASD cases.

Dr. Fernando Marmolejo-Ramos underscored the test's potential to revolutionise ASD diagnosis, using the REteval unit to potentially screen for autism within 10 minutes. This swift, non-invasive method could streamline support for thousands of children on the spectrum, easing the burdens on both parents and kids.

With ASD affecting 1 in 70 Australians (four times more in boys), this test's implications are substantial. Dr. Paul Constable, the project lead, is excited about using ERG and AI for more accurate ASD classification. He stressed the eye-brain connection, a doorway to understanding ASD's brain development.

Furthering the study, Dr. Constable emphasized researching younger children and other conditions like ADHD to ensure test specificity. Dr. Hugo Posada-Quintero echoed the potential in using advanced signal processing and



machine learning to analyze retinal responses, advocating for transforming these methods into practical clinical tools.

This collaborative effort opens a new chapter in ASD diagnosis. Integrating AI with ERG holds promise for faster, accurate ASD identification. The potential impact on early intervention and support for ASD children is immense, fueling hope for improved outcomes. As research progresses, this innovation could significantly ease the diagnosis journey for countless families globally.

Source- <https://www.unisa.edu.au>

Hong Kong introduces Super App for Smart Cities

The MetaBIM Research Lab at the University of Hong Kong has introduced a game-changing SuperApp set to transform smart city technology. This app aims to elevate urban development by streamlining data processing and using ISO knowledge to glean valuable insights.

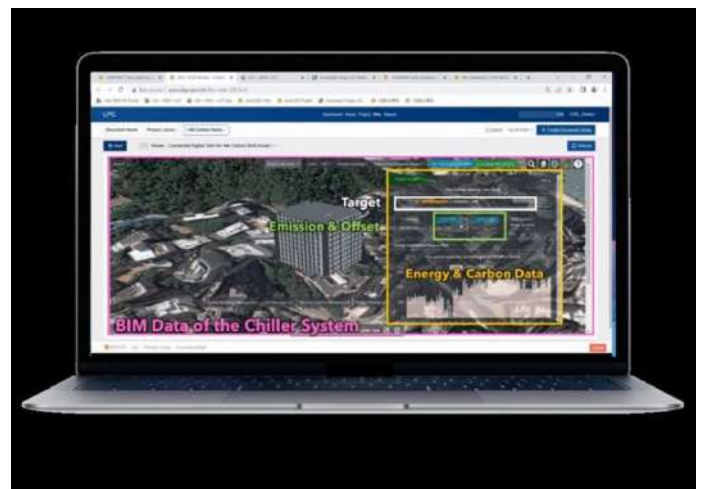
At its core, the SuperApp's AutoCDE system offers advanced Building Information Modeling (BIM) capabilities, promising major impacts across sectors like transportation, property management, utilities, and community initiatives. Its specific focus on achieving carbon neutrality makes it a standout innovation. The app is designed for global use and plans to expand across 160 countries.

Recent milestones include securing HK\$25 million in a series A funding round, valuing the project at HK\$424 million. Moreover, a significant partnership was formed with the Hong Kong Green Building System and an investment firm, signifying a strategic alliance.

This collaboration aims to drive innovation in smart tech and carbon management, targeting markets in the United Arab Emirates, Saudi Arabia, and Indonesia. The primary goal is to promote carbon management standards and sustainable practices in these regions, aligning with global smart cities' potential.

Their joint vision revolves around implementing intelligent tech solutions that adhere to Environmental, Social, and Governance (ESG) principles and Carbon Neutrality goals. This entails deploying smart digitalization and ESG solutions, leveraging each partner's expertise.

Aligned with the Hong Kong government's strategic objectives, the SuperApp is a significant contribution to the city's vision of a smart and sustainable future. It optimizes data processing, especially in Building Information Modeling (BIM), benefiting vital sectors such as transportation and property management.



The successful funding and partnership underscore the SuperApp's global reach, focusing on key markets like the United Arab Emirates, Saudi Arabia, and Indonesia. The collaboration's commitment to ESG principles aligns with Hong Kong's pursuit of responsible business practices and enhances its international influence in innovation and technology.

This partnership exemplifies the synergy between academia and industry, supporting the government's strategy to apply research practically. Ultimately, the SuperApp initiative and its partnerships significantly propel Hong Kong's leadership in pioneering sustainable urban development, both locally and globally.

Source- <https://www.hku.hk>

Japan Proposes Originator Profile Technology to safeguard Intellectual Property Rights from AI

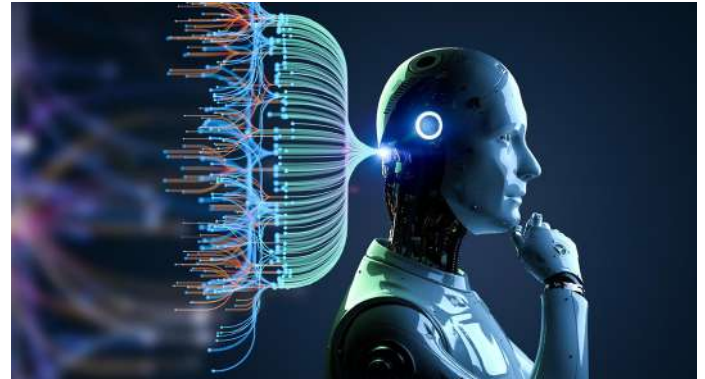
In a recent online meeting of the intellectual property protection panel, discussions centered around combating the challenges posed by generative artificial intelligence to safeguard intellectual property rights. The panel underscored the efficacy of Originator Profile (OP) technology in discerning the credibility of online information sources, particularly in mitigating risks associated with AI-generated content.

Emphasizing the need to address emerging issues related to technological advancements, the panel's proposals focused on utilizing innovative solutions to mitigate risks such as copyright infringement by AI. Notably, OP technology was hailed for its capability to authenticate content origin by distinguishing AI-generated content, thereby aiding in intellectual property protection efforts.

While acknowledging the potential of digital watermarking technology in identifying AI-generated texts or images, the panel highlighted the necessity for further deliberations. Key discussions revolved around determining the extent to which a work should be recognized as AI-generated, indicating the complexity of categorizing content in this context.

Additionally, the panel scrutinized technologies aimed at preventing automatic data collection by AI, cautioning about potential limitations if the content gets redirected to other platforms for AI aggregation.

A critical point of examination involved determining the regulatory framework applicable to generative AI under Trademark Law and Design Law. The panel concluded that although no rights infringement occurs during the AI training phase, the creation or use of generative AI may fall



within regulatory purview, considering such instances as potentially illegal, akin to other prohibited activities.

This deliberation signals the evolving landscape of intellectual property protection in the face of advancing AI capabilities. As technology continues to evolve, regulatory considerations and the application of innovative solutions like OP technology become pivotal in safeguarding intellectual property rights amidst the proliferation of AI-generated content.

Source- <https://japannews.yomiuri.co.jp>

US develops Chip-Free Wearable Sensor transmitting biological signals wirelessly

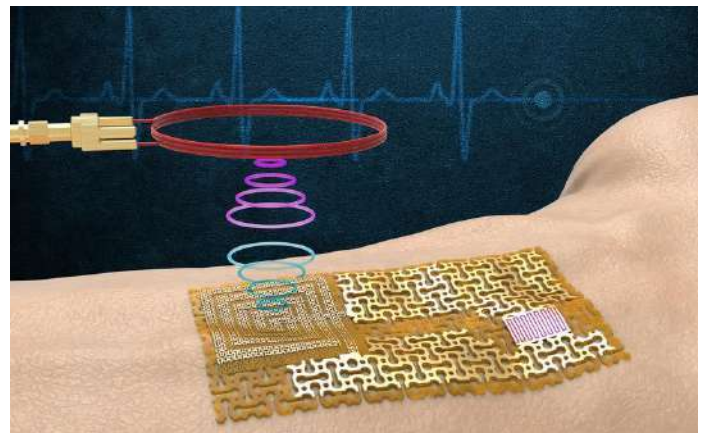
Wireless technology has revolutionised wearable sensors, allowing seamless transmission of vital signs like glucose levels, blood pressure, heart rate, and activity levels to smartphones for analysis. Traditionally reliant on embedded Bluetooth chips and batteries, these sensors are evolving to smaller, flexible forms for the next generation.

MIT engineers have introduced a groundbreaking wearable sensor showcased in the journal *Science*, eliminating the need for onboard chips or batteries. Termed an electronic skin or "e-skin," this flexible, semiconducting film adheres to the skin, leveraging gallium nitride's piezoelectric properties to both sense and wirelessly communicate.

By producing ultrathin, high-quality gallium nitride films paired with a conductive gold layer, the team created a sensor that responds to mechanical strain and electrical impulses, essentially converting vibrations into electrical signals. These signals, wirelessly transmitted to a nearby receiver, allow monitoring of vital signals like heartbeat and sweat composition.

The researchers utilised this sensor to detect heartbeat and sodium levels, showcasing its sensitivity in response to surface acoustic waves on the skin. Additionally, by incorporating an ion-sensing membrane, the device successfully monitored changing sodium levels in sweat.

This breakthrough paves the way for chip-free wireless sensors that could monitor various biomarkers, offering versatility by swapping sensing membranes to detect different compounds like glucose or stress-related cortisol. The device's applications extend to diverse health monitoring needs, making it a versatile platform for future medical advancements.



Notably, the potential for continuous and non-invasive monitoring is immense, allowing users to track their health in real-time without bulky components. The sensor's thinness, about 100 times thinner than a human hair, and its wireless capabilities offer a glimpse into the future of wearable health technology, promising a revolution in remote healthcare monitoring and diagnostics.

Source- <https://news.mit.edu>

Hon'ble Chief Minister Uttar Pradesh launches Online Recognition Portal for UPSEB

On 13th October 2023, Hon'ble Chief Minister of Uttar Pradesh, Shri Yogi Adityanath, inaugurated the "Online Recognition Portal" for UP Board Schools, marking a significant stride towards modernizing the education system. Hosted at Lok Bhawan, Lucknow, the launch promises to streamline the recognition process for schools under the Secondary Education Department, Government of Uttar Pradesh (GoUP).

The crux of this portal lies in its end-to-end software solution, which caters to the comprehensive needs of school management seeking recognition. This innovative platform initiates the application process, where school managements can seamlessly begin their recognition journey. Upon completion of the application and payment of fees through the Rajkosh (U.P. Treasury Online System), the progress is reflected on the dashboard of the respective District Inspector of Schools (DIOS) login.

A remarkable feature of this portal is its integration with various external departments, including Treasury, Revenue, Fire, and others. Each department plays a pivotal role in the online generation of No Objection Certificates (NOCs) once the application is visible on their respective logins. The DIOS meticulously evaluates each application against qualifying parameters and verifies the online NOCs received from the concerned 11 external departments.

Upon approval by the DIOS, the application seamlessly navigates through the departmental hierarchy via the Board's login and further proceeds to the Regional Office. Approved applications then ascend to the Apex State Government for the final stamp of recognition, thus granting official acknowledgment to schools under the UP Board.

The inauguration ceremony witnessed the esteemed presence of Hon'ble



Hon'ble Chief Minister of Uttar Pradesh, Yogi Adityanath, launches the "Online Recognition Portal" for UP Board Schools at Lok Bhawan, Lucknow aiming to streamline the school recognition process under the state's Secondary Education Department

Smt. Gulab Devi, MoS (Independent Charge), Secondary Education, GoUP, and other dignitaries, signifying the importance and gravity of this transformative initiative.

Acknowledgements were extended to the National Informatics Centre (NIC UP) for their timely development and hosting of the "Online Recognition Portal" under the guidance of State Informatics Officer, Shri R.H. Khan, Scientist-G & DDG.

- Parwiz Islam, Uttar Pradesh

Hon'ble Chief Minister of Tripura propels Digital Governance with eCabinet Launch in Tripura

Hon'ble Chief Minister of Tripura, Dr. Manik Saha, launched eCabinet Solution of NIC for the automation of Cabinet meetings in the State at Agartala on Wednesday, 27 September 2023 to promote digital infrastructure development and digitisation of government services and information. eCabinet system digitalizes cabinet activities and promotes paperless processes by enabling smart Governance using technology.

Tripura has thus become the fourth state—and second in the Northeast—after Uttarakhand, Uttar Pradesh and Arunachal Pradesh, to have introduced an e-cabinet system. All future cabinet meetings in the state will be paperless, reducing the carbon footprint and environmental degradation in the process, with ministers and bureaucrats using tablets.

In the debut e-cabinet meeting, the government approved a proposal to procure a loan of Rs 160 crore from the Asian Development Bank, which has earlier provided soft loans with low interest rates to the government and partnered with it in several developmental projects. The new Asian Development Bank (ADB) fund will be used by the tourism and urban development department for boosting infrastructure and fostering an ecology of sustainable livelihood generation, Tourism Minister Sushanta Chowdhury said.

Hon'ble Chief Minister said the e-cabinet would follow a similar model introduced in Uttarakhand. The e-cabinet system was launched by executives of the NIC as well as the state's information and cultural affairs department. He added that digitisation would bolster e-governance and align the state's development journey with the national Digital India initiative. The shift will increase transparency, efficiency and accountability. He further explained that the e-cabinet app would have features to facilitate uploading of cabinet



Hon'ble Chief Minister of Tripura, Dr. Manik Saha, introducing the NIC's eCabinet Solution in Agartala on September 27, 2023, with an aim to advance digital infrastructure and digitize government services

memos marked with date and time and that ministers, the chief secretary, secretaries and other officials would be able to review and approve them online.

The government also rolled out honorary commendations to departments that have gone paperless as part of 100 per cent e-office adoption. Out of 94 government departments that are being trained in paperless operations, 41 got the commendations on Wednesday.

- Chaitali Bhattacharjee, Tripura

Hon'ble Transport Minister Manipur inaugurates VLT & EAS to bolster Public Safety

Hon'ble Transport Minister of State, Shri TJ Lalnuntluanga, inaugurated the Vehicle Location Tracking & Emergency Alert System (VLT & EAS) on September 15, 2023, at the Vehicle Location Tracking System (VLTS) Command and Control Centre, Directorate of Transport, Aizawl, Mizoram. During the inauguration, the Minister emphasized the significance of installing emergency buttons and tracking systems in public service vehicles, especially in ensuring safety for women and children. He commended the State Transport Department and NIC for their collaborative efforts in achieving this milestone, noting that this system will enhance driver vigilance and consequently boost passenger security.

The Director of Transport, Shri Er. R. Lalrammawia, underscored the successful collaboration between NIC, Transport Department, NICS, and the Project Implementing Unit (PIU) in implementing this crucial initiative. He praised NICS and NIC teams for facilitating local purchases of essential hardware and furniture for setting up the Command and Control Centre (CCC).

Key objectives of the project, including enhanced safety for women and children, real-time vehicle identification and tracking, health monitoring of VLT devices, and integration with the Emergency Response Support System (ERSS) for swift emergency responses, were detailed during the event. Additionally, it was highlighted that vehicles without VLT devices and emergency buttons would not be registered in Mizoram, as per the notification issued by the Transport Department on August 22, 2023. For existing vehicles, a 12-month deadline was set to equip them with activated VLT devices and emergency buttons approved by the Ministry of Road, Transport & Highways, Government of India.

A comprehensive Technical Report on VLT & EAS was presented by Transport Project Coordinator, Smt C. Lalmuanawmi, Scientist-C, NIC. She empha-



Hon'ble Transport Minister of State, Shri TJ Lalnuntluanga, emphasizing on the public safety during the launch of VLT & EAS on September 15, 2023, at VLTS Command and Control Centre, Aizawl, Mizoram

sized the necessity of such systems, referencing the tragic "Nirbhaya Case" in 2012. She outlined that the implementation involved deploying 15 personnel under NICS and highlighted the round-the-clock operation of the Command and Control Centre.

The event saw the participation of the Aizawl SP Traffic, representatives from public service vehicle associations, media personnel, and several invitees. Shri R. Lalchhanhima, Addl. Secretary, Transport Dept., chaired the inaugural program, concluding with a Vote of Thanks by Shri R. Lalrammawia, Director of Transport.

– Lalmachhuani, Mizoram

Hon'ble LG Delhi launches VCIMS to tackle Corruption in Delhi

In a significant move towards promoting transparency and accountability, the Hon'ble Lieutenant Governor of Delhi, Shri VK Saxena, launched the Vigilance Complaint Information Management System (VCIMS) of the Vigilance Department, GNCTD. This system, developed in collaboration with NIC, revolutionizes the process of receiving online vigilance-related complaints from citizens.

The VCIMS portal, accessible via <https://vcims.delhi.gov.in>, stands as a robust platform enabling citizens to lodge complaints seamlessly. Notably, the system allows complainants to submit substantial evidence in the form of PDFs, audio, or video files, empowering individuals to articulate their grievances comprehensively.

One of the key features of this system is the ability to track the status of lodged complaints. Complainants receive SMS alerts, ensuring they stay updated on the progress of their grievances, fostering a sense of transparency and accountability.

This initiative is a breakthrough in combating corruption, offering a portal for citizens to submit complaints without revealing their identity. The system ensures the confidentiality of complainants' identities, safeguarding them against any potential repercussions, while efficiently communicating the complaints to concerned authorities for necessary action.

Hon'ble Lieutenant Governor, during the launch at Raj Niwas, highlighted the uniqueness of VCIMS. He emphasized how this online system marks a pivotal step towards expediting action against corruption complaints while maintaining transparency and confidentiality. Saxena stressed that the portal covers complaints against employees of various government depart-



Hon'ble LG Delhi, Shri VK Saxena, launching the Vigilance Complaint Information Management System (VCIMS) for the Vigilance Department, GNCTD

ments and agencies, thereby reducing the potential for malicious or frivolous complaints.

In essence, the launch of VCIMS symbolizes Delhi's commitment to empowering its citizens, ensuring their voices against corruption are heard while protecting their identities. This progressive step aligns with the vision of fostering a corruption-free society, where honesty is encouraged, and wrongdoing is swiftly addressed.

– Informatics New Desk, NIC-HQ

Hon'ble LG Puducherry inaugurates the Unified Data Hub for Comprehensive Data Management



Dr. Tamilisai Soundararajan, the Hon'ble Lieutenant Governor of Puducherry, inaugurating the Unified Data Hub (UDH) for Comprehensive Data Management

Dr. Tamilisai Soundararajan, the Hon'ble Lieutenant Governor of Puducherry, inaugurated the Unified Data Hub (UDH), developed by the National Informatics Centre (NIC) Puducherry. UDH serves as a comprehensive system, consolidating data from 23 departments and 140 welfare schemes, providing extensive insights into beneficiary profiles.

This centralized repository efficiently manages beneficiary details from various departments and schemes, ensuring regular updates on Birth and Death Registrations from Local Bodies. UDH aids welfare departments in identifying eligible beneficiaries, employing features like deduplication, validation, cross-referencing, integration with Aadhaar Data Vault, and birth/

death notifications. Shri S Rajasekaran, SIO Puducherry, emphasized UDH's impact and highlighted its features and facilities for Welfare Departments. He stressed the integration of Web API services, BlockChain Technology, and Digilocker for streamlined verification. Additionally, Shri Arulraj Sr., Director (IT), outlined UDH's Phase I and II features, explaining the portal's data life cycle during beneficiary updates.

UDH plays a crucial role in collecting incremental data for welfare scheme beneficiaries, accumulating necessary details for de-duplication and cross-referencing purposes, ensuring accurate and efficient governance.

– V. Gopi Swaminathan, Puducherry

Hon'ble Chief Minister of Himachal Pradesh launches School Safety Application for Disaster Preparedness

The 13th edition of the Annual Mass Awareness Campaign on Disaster Risk Reduction - SAMARTH, organized by the Himachal Pradesh State Disaster Management Authority (HPSDMA), became the platform for a significant launch. During SAMARTH 2023, Honourable Chief Minister of Himachal Pradesh, Shri Sukhvinder Singh Sukhu, unveiled the Schools Safety application, developed by NIC Himachal Pradesh, aiming to bolster disaster preparedness in educational institutions.

The event witnessed the presence of key dignitaries including Shri Jagat Singh Negi, Hon'ble State Revenue Minister, Shri Sanjay Awasthi, Chief Parliamentary Secretary, Shri O.C. Sharma, Principal Secretary (Revenue), Shri Ajay Singh Chahal, DDG & SIO Himachal Pradesh, Shri D.C. Rana, Director SDMA & Special Secretary (Revenue), Shri Sandeep Sood, Scientist-F & Group Head, and Shri Sanjay Kumar, Scientist-E, who graced the occasion with their presence.

The Schools Safety application, available as both a web and mobile platform, aims to streamline the process of preparing the Disaster Management Plan (DMP) for schools across the state. Designed to simplify the annual DMP creation, the mobile app provides a standard template for effortless and automatic plan preparation. Nodal officers from each school log in to the app, adding necessary information to generate and submit the plan. The app allows Block, District, and State administrators to monitor plan preparation progress seamlessly.

As part of the initiative, selected pilot schools were provided with the mobile application for the preparation of their Annual School Disaster Management Plan for the ongoing academic year. In recognition of exceptional performance, the Honourable Chief Minister awarded top-performing schools with cash prizes ranging from Rs. 50,000 to Rs. 1.25 lakhs.



Hon'ble Chief Minister of Himachal Pradesh launching School Safety Application for Disaster Preparedness during the 13th edition of Annual Mass Awareness Campaign on Disaster Risk Reduction - SAMARTH

The Schools Safety Management Information System (SSMIS) is complemented by a web application and mobile app, available on Android and iOS. Schools utilize their UDISE code as a User ID to access these platforms. The software enables schools to develop their DMPs while allowing State, District, and Block-level authorities to monitor disaster preparedness across various schools under their jurisdiction.

This technological intervention stands as a significant step towards ensuring safety measures and disaster readiness in schools across Himachal Pradesh, allowing for effective monitoring and evaluation of preparedness levels by higher authorities.

– Sandeep Sood, Himachal Pradesh

Hon'ble Chief Minister Punjab launches NeVA for Paperless Punjab Assembly



Hon'ble Chief Minister of Punjab along with other senior ministers and officials launching NeVA for Paperless Punjab Assembly at Punjab Vidhan Sabha on September 21, 2023

On September 21, 2023, Hon'ble Chief Minister Sardar Bhagwant Mann inaugurated the National e-Vidhan Application (NeVA) at the Punjab Vidhan Sabha, marking a significant step toward empowering MLAs and ensuring a paperless assembly. The event was attended by all Ministers, MLAs, and Administrative Secretaries.

During the event, Speaker Sardar Kultar Singh Sandhwan acknowledged NIC Punjab's efforts in timely NeVA implementation and envisioned a comprehensive software solution to empower Members, starting with paperless House Business, internal workings of House Committees, and e-Constituency management.

Chief Minister Bhagwant Mann launched NeVA and unveiled four additional initiatives to support its implementation in Punjab. These initiatives included a two-day Conference-cum-Workshop, a vision brochure for NeVA Punjab, the new Punjab Vidhan Sabha website developed by NIC Punjab, NeVA 2.0 functionalities, NeVA Sewa Kendra, and a Digital Wing at the Punjab Vidhan Sabha Secretariat.

SIO & DDG Vivek Verma presented NeVA's efforts, challenges, and roles of NIC Punjab, NICS, and DoGR Punjab in its implementation, detailing the project's current status and the integration of high-speed internet and wi-fi across the Vidhan Sabha premises.

Sr. Director (IT) Dharmesh Kumar outlined software modules for House, House Committees, and e-Constituency Management, emphasizing the complementary NeVA 2.0 for the internal workings of these areas, offering a comprehensive software solution. Sr. Director (IT) Sanjeev from NIC-MoPA shared guidelines and experiences in implementing NeVA in various Indian states. Notably, all officers and officials of NIC Punjab State Unit attended and contributed to the NeVA conference.

The Chief Minister hailed the initiative as revolutionary, enhancing legislative responsiveness and proudly noting Punjab's pioneering launch of various applications under NeVA as a complete software solution. He emphasized that the digitization of the Vidhan Sabha would bolster MLAs' efficiency in addressing public concerns, envisioning its utilization by members from both opposition and treasury benches.

The Chief Minister heralded this move as the dawn of a new era, ensuring a paperless Assembly and transparent, accountable processes, thereby empowering MLAs. He pledged further efforts for public benefit. Notably, iPads were distributed to ministers and MLAs, further embracing digital functionality. Deputy Speaker Sardar Jai Krishan Singh concluded the event with a vote of thanks.

- Parminder Kaur, Punjab

Hon'ble Chief Minister of Gujarat initiates 'CM Relief Fund' Portal to Aid Needy Citizens

Hon'ble Chief Minister of Gujarat, Shri Bhupendra Rajnikant Patel, has unveiled the 'CM Relief Fund Portal in Gujarat, a user-friendly digital platform developed by the National Informatics Centre (NIC) Gujarat. This initiative allows citizens to make online donations effortlessly through Internet Banking and UPI services.

Donors provide basic details and complete payments via UPI, debit/credit cards, internet banking, or QR codes. Upon payment, they receive instant e-receipts, 80-G certificates, and a personalized appreciation certificate from the Chief Minister, ensuring transparency and swift documentation.

To this date, the government has allocated Rs 30.81 crore for serious illnesses and Rs 18.85 crore for accident victims since September 2021. These contributions aid in calamities, critical medical treatments, and fatal road accidents. The launch in Gandhinagar witnessed significant dignitaries endorsing the digitization of donation receipts, including the State Relief Commissioner and senior officials from the State Bank of India. This portal empowers global individuals to seamlessly extend support, aligning with the government's mission to aid those in distress and uphold solidarity.



Hon'ble Chief Minister of Gujarat, Shri Bhupendra Rajnikant Patel, unveiling the 'CM Relief Fund Portal in Gujarat' at Gandhinagar in order to enable individuals to effortlessly offer support to Government assistance missions

- Amit Dinkerbhai Shah, Gujarat

NIC Honoured for Exceptional Support in Shri Amarnath Ji Yatra-2023



Hon'ble Lt. Governor of Jammu & Kashmir, Shri Manoj Sinha, honoured NIC officers for their exceptional ICT support and services provided through a dedicated online portal during the successful 62-day-long Shri Amarnath Ji Yatra-2023.

During a commendation event at Raj Bhawan Auditorium, the Hon'ble Lt. Governor conveyed gratitude to all officers and service providers for ensuring a memorable and smooth pilgrimage experience for the devotees.

Highlighting the significance of this pilgrimage, the Hon'ble Lt. Governor mentioned that around 4.5 lakh devotees would serve as ambassadors of Jammu & Kashmir, carrying tales of transformation, peace, and prosperity

back to their respective states and Union Territories. This, in turn, is expected to boost tourism and bring renewed energy to the tourism sector in Jammu & Kashmir. Expressing heartfelt appreciation, he commended Team Jammu & Kashmir for their wholehearted support and dedication toward the devotees, signifying a pursuit of excellence and outstanding achievements by the team.

Detailed arrangements, including eKYC, RFID, and a prepaid system, were efficiently organised by various agencies and government bodies along both Yatra Tracks to facilitate the Yatris and ensure easy access to services.

eHospital Acknowledged for Spearheading ABHA 'Scan & Share' Service Innovation

eHospital platform developed by the National Informatics Centre (NIC) has been recognized with a Certificate of Appreciation for its pioneering role in implementing and launching the Ayushman Bharat Health Account (ABHA) 'Scan & Share' Service by the National Health Authority. This innovative service utilises Quick Response (QR) codes integrated into health facilities to streamline patient registration processes, effectively reducing long queues and ensuring precise data entry. The implementation of this technology marks a significant advancement in enhancing efficiency within healthcare facilities, allowing for smoother operations and improved accuracy in patient information management.

