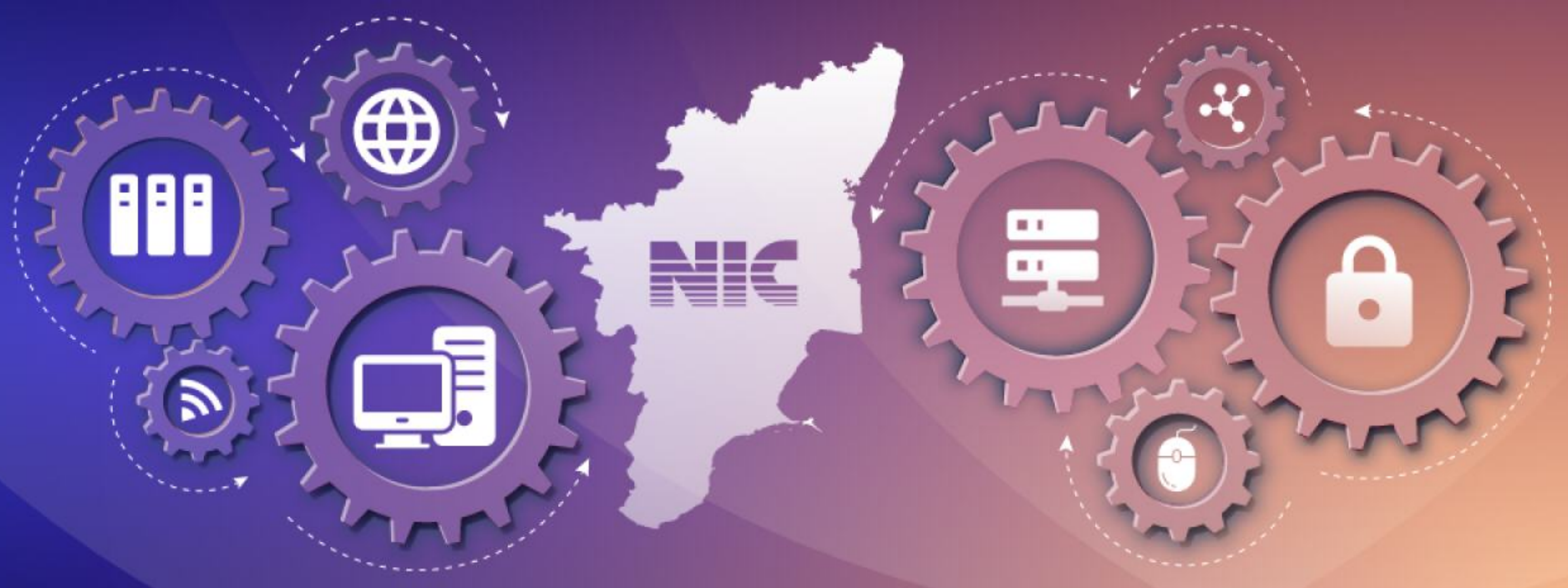




Shri Abhishek Singh , IAS
Director General, NIC

I am delighted to share with you, the efforts and the achievements of the Tamil Nadu NIC team. This edition of the newsletter is a celebration of Tamil Nadu's digital journey and the testament of what diligent teams can achieve.

The state-wide implementation of the Integrated Temple Management System shows how tradition and technology can seamlessly interact. Introduction of QR donations, POS receipts, Unicode records, and mobile apps and other e-services are helping modernize the temple experience. The eKalaal application has been streamlining excise licensing by enabling transparent, paperless workflows. The Kalaigharin Kanavu Illam has been providing transparent housing disbursements, backed by geo-tagged evidence and timely payments.

In Ariyalur the successful implementation of ICT initiatives likes digitization of land management, monitoring of court cases, and uninterrupted support for video conferencing has ensured that benefits of digital initiatives extend to the grassroots. In Tirunelveli, next generation digital solutions have been deployed like AI that flags high-risk pregnancies for timely care, GIS maps that make elections more transparent, and cleaner land data

that shortens queues for families. This edition also highlights how the adoption of HTTP security headers can promote greater resilience of digital government assets. Observation of outreach campaigns, such as the Safer Internet Day and Swachhta Pakhwada are key to improving citizen awareness.

It is my hope that the initiatives of the dynamic **NIC Tamil Nadu** team can inspire other state teams to expand the reach and impact of their activities.

It gives me great satisfaction to acknowledge the significant contributions of the NIC Tamil Nadu State Unit in advancing the vision of Digital India and supporting the State Government's digital transformation journey. The Unit has been instrumental in developing citizen-centric platforms that enhance transparency, accessibility, and efficiency in governance.

Key initiatives such as Tamil Nilam for the Revenue Department, DBT platforms for Rural Development and Panchayati Raj, temple management systems for HRCE, and the PICME 3.0 system for Health and Family Welfare have empowered citizens with seamless access to public services. NIC's pivotal role in strengthening ICT infrastructure, e-Governance, mobile governance, cloud services, video conferencing, and cybersecurity deserves special appreciation. These achievements reflect the dedication and teamwork of NIC officers and government partners. Looking ahead, NIC Tamil Nadu remains committed to strengthening digital governance and ensuring that technology continues to positively transform the lives of citizens across the State. Under the able leadership of our Director General and the guidance of the State Informatics Officer, I am confident that the entire NIC Tamil Nadu team will continue to achieve greater milestones, developing innovative solutions that can be replicated across other states.



Smt Alka Misra
Deputy Director General, NIC
State Coordinator



Shri Kamalakkannan M
DDG & SIO, NIC TN

It gives me great pleasure to present the quarterly edition of Thisai. The newsletter continues to serve as a valuable medium for sharing successful projects, new e-Governance initiatives, technology updates, and notable contributions from state and district offices across Tamil Nadu. Each edition reflects the dedication, technical expertise, and collaborative spirit of our teams in advancing the digital governance landscape of the State. The inclusion of technical articles, knowledge-sharing inputs, and acknowledgements of retirements and milestones adds further depth and relevance to this publication.

Thisai exemplifies our collective commitment to innovation, capacity building, and service excellence. I encourage all officers and teams to continue sharing their experiences, insights and best practices, and I extend my sincere appreciation to all contributors for their dedicated efforts in making the newsletter informative, engaging, and meaningful.

Let us continue to work together towards our shared vision of digital transformation and citizen-centric governance.

EDITORIAL

Welcome to this month's edition of Thisai. Whether you are a long-time reader or joining us for the first time, we are delighted to have you with us. This issue brings you a curated mix of software products, state and district contributions, technology updates, and events across Tamil Nadu. We are especially pleased to feature voices from our community those driving change and making a difference. Thisai is more than a newsletter; it is a platform for dialogue. Your feedback and contributions keep it meaningful, and we encourage you to share your thoughts and experiences.

Thank you for being part of this journey. Let us keep the ideas flowing and the spirit of collaboration strong.

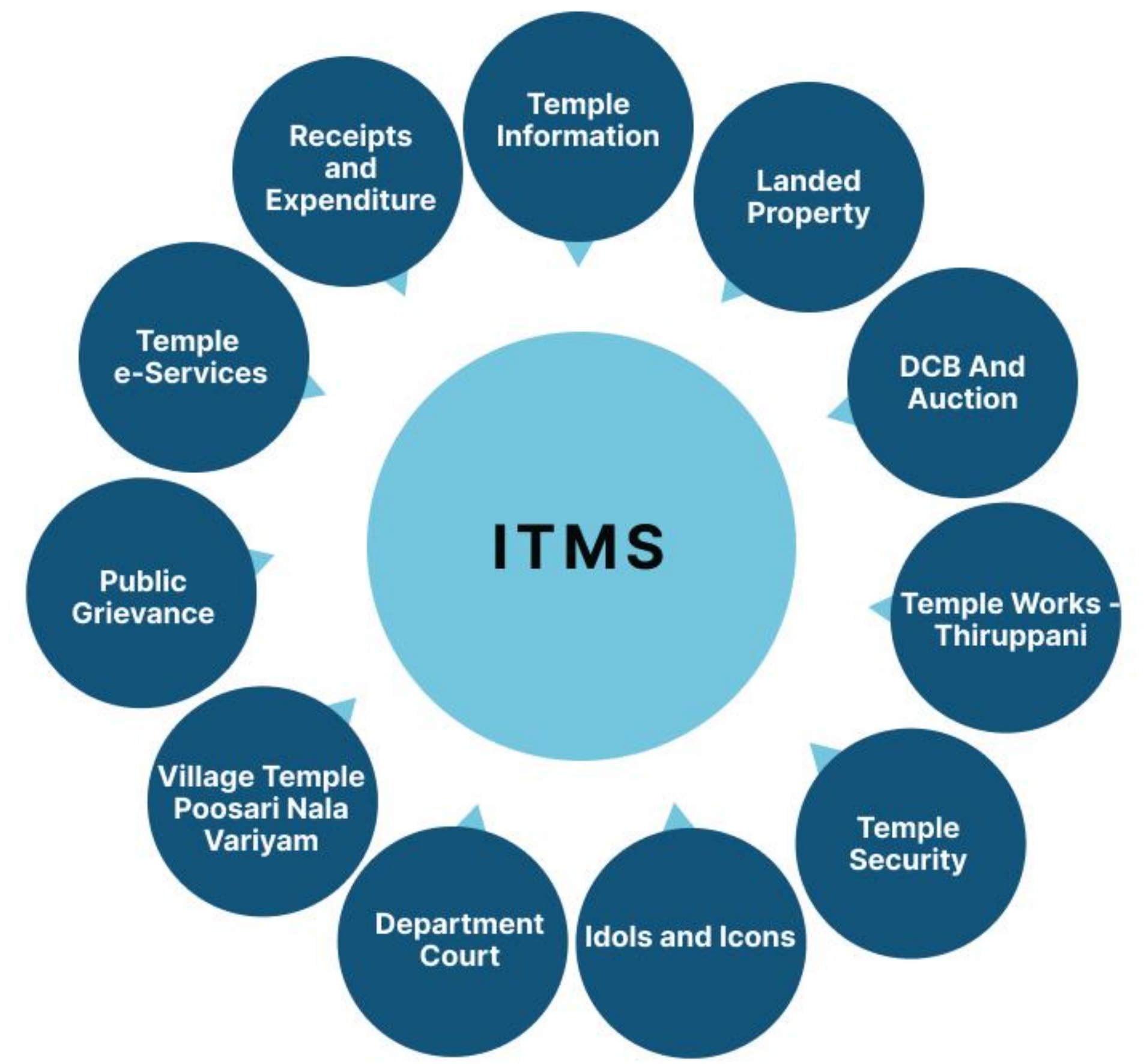
Shri R. Sainath, Scientist-F
Shri S.P. Karthikeyan, Scientist-F
Smt. Joyce R. Amirtharaj, Scientist-F
Shri Y. Venkata Subramanian, Scientist-F
Shri R. Kannan, Scientist-F
Shri Cecil Elango, Scientist-E

INTEGRATED TEMPLE MANAGEMENT SYSTEM



The Hindu Religious and Charitable Endowments Department (HRCE), Government of Tamil Nadu, in collaboration with the National Informatics Centre (NIC) - Tamil Nadu, has developed Integrated Temple Management System (ITMS) a state-of-the-art digital platform to bring transparency, accessibility, and efficient management to the temples across Tamil Nadu State. The official website, <https://hrce.tn.gov.in/>, serves as a one-stop portal for all temple information, services, and administration all designed for the benefit of devotees, Temple and Department Administration.

The HRCE portal digitizes temple management processes that were traditionally manual and fragmented. This portal serves as a robust administrative backbone with 15+ modules developed and integrated, that facilitates real-time monitoring of temple operations at State, Regional, Divisional and Temple levels. This multi-tiered monitoring system ensures good governance, accountability, efficient and uniform service delivery across all temples under HRCE Department.



During 2016, the development of integrated temple management system (ITMS) was announced by Former Chief Minister of TN, and the ITMS portal was officially inaugurated by Former Minister of HRCE Department on 24th December, 2018, marking a significant milestone in the digital transformation of 46,000+ Temples under HRCE Department, Govt of Tamil Nadu.

Temple Information Module - A Digital Record of Sacred Heritage

This module acts as a comprehensive digital repository of Temple Information with 25 web forms including history, services, deity information, inscriptions, consecration details,

festivals, Pooja details, etc. The captured temple information is published in bilingual format to the public through dynamic creation of websites of all 46,000+ temples in a single web portal, after moderator approval. The subdomains are created for major temples under <https://hrce.tn.gov.in>.

Landed Property Module: Digitizing Temple Immovable Assets for Monitoring

The Landed Property Module is a core module of ITMS for monitoring temple lands across the State. Temple lands are recorded digitally along with relevant details including survey numbers, classification, and extent.

Main Features:

- Integrated with many stakeholders via API like Tamil Nilam Portal, Registration Department Portal and Collabland.
- 4.78 lakh acres of temple lands have been digitized by verifying with Tamil Nilam Portal via API and classified as Fully Matched / Partially Matched / New Properties.
- 3.43 lakh acres of temple lands (72%) are classified as fully matched, published to the public in ITMS, and blocked in the Tamil Nilam portal to prevent the illegal registration of temple lands.
- Every identified land parcel is assigned a unique land code for easy traceability and reference.
- Easy identification of used and unused lands for generating revenue at State level.
- GIS integration for disseminating the temple locations and temple landed properties on a map.

DCB & Auction Module: Monitoring of Revenue Collection

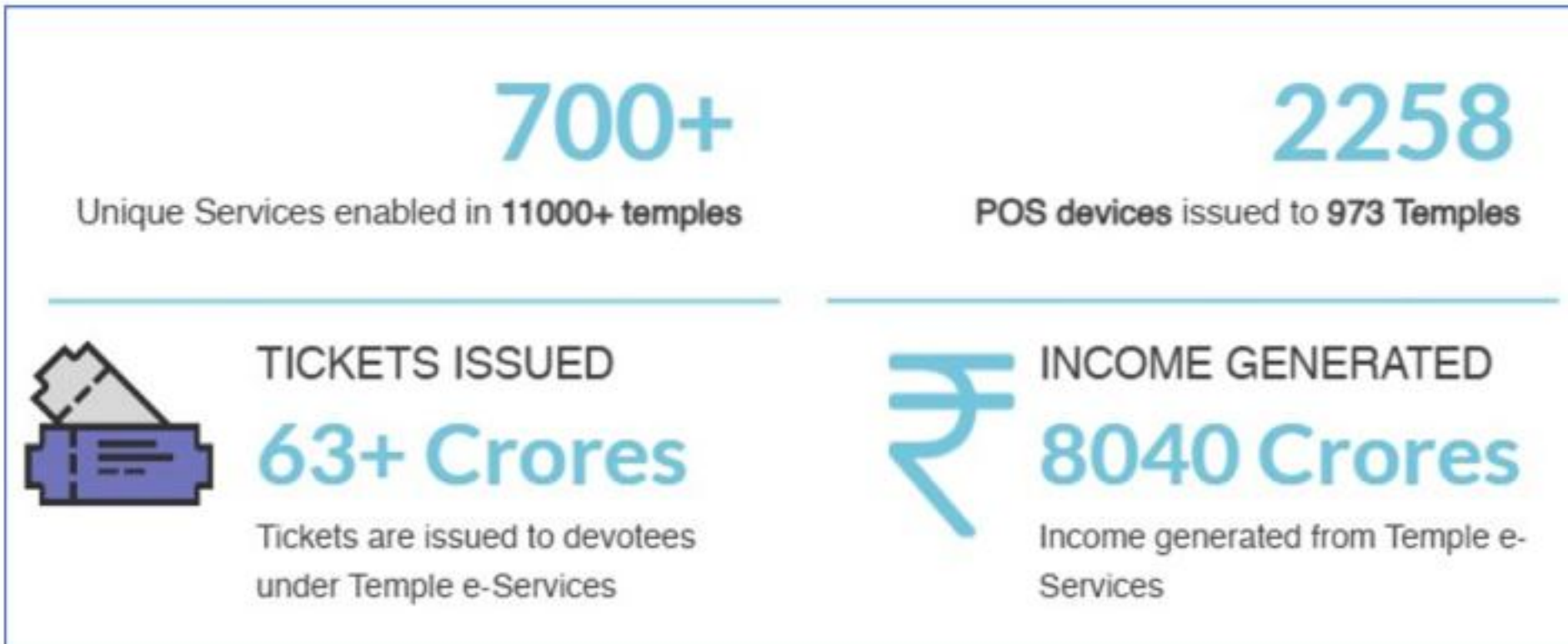
The Demand Collection and Balance (DCB) and Auction Module is a core financial component of the HRCE digital platform, to capture the detailed information of tenants using temple lands, buildings and manai for collecting revenue from rent, lease, or grains on landed properties.

Main Features:

- Captured around 2.5+ lakh DCB & Auction properties registered across 7,234+ temples
- ₹1000+ Crores of revenue collected through rent/lease payments and monitoring of grain collections
- Provision for Fair rent fixation, Monitoring of disputed land cases
- Allows tracking the extent of land usage and vacancy status
- Automated generation of demand (Fasli-wise) and real-time monitoring of collections
- Tenants can make payments online / at temple counters

Temple e-Services: Seamless Digital Access for Devotees

The Temple e-Services Module is a robust digital framework that enables devotees to conveniently access temple services (both paid and free) through online, counter, and POS. It empowers temples to modernize operations while enhancing the devotee experience with transparency, flexibility, and ease of access. This module facilitates the online and counter-based delivery of temple services such as ticketing, donations, all booking services and Annadhanam, supports automated reconciliation and real-time monitoring.



TICKETING COLLECTION		
Online	Counter	POS
46 Crores	7098 Crores	320 Crores

DONATION COLLECTION		
General	Annadhanam	Renovation
188 Crores	289 Crores	20 Crores

Main Features:

- Full customization of e-Services configuration is provided at the temple level
- Multiple payment gateways are enabled for online services. **Auto-reconciliation**
- **Multiple bank POS devices** are integrated in ITMS and distributed to temples for preventing duplication.
- Cash, Card, and UPI payments through POS are enabled in 1000+ temples.
- Separate mobile app is developed for issuing tickets through POS devices.
- All receipts are printed with QR codes for digital verification
- Online booking of Temple prasadam and delivered through postal department in 49 senior-grade temples with tracking system through API.
- General, Annadhanam, and Thiruppani donation services are enabled in **7,100+ temples**.
- Quick Donations through Static QR Codes generated by ITMS enabled in **3,400+ temples** with receipts shared via SMS.
- Annadhanam (Free meals) schemes are monitored by temples in ITMS.

Temple Works – Thiruppani Module: Digitizing Temple New Construction / Renovation Works

The Thiruppani Module is a workflow-based administrative sanction approval and monitoring system, developed to monitor the temple renovation or construction of new works in a transparent, efficient, and accountable manner.

INTEGRATED TEMPLE MANAGEMENT SYSTEM

Main Features:

- **Online Proposal Submission:** Temple Executive Officers (EOs) can initiate and submit Thiruppani project proposals through the portal. Proposals include work details, cost estimates, technical specifications, etc.
- **Expert Review & Opinion:** Experts (archeological experts and Sthapathy) can review proposals through temple visit and submit their recommendations through online or offline mode.
- **Committee Approvals - RLEC / SLEC:** Regional Level Experts Committee (RLEC) and State Level Experts Committee (SLEC) review and approve the proposals digitally.
- **Monitoring & MIS Reports:** Extensive MIS reports have been developed for monitoring the work status at Regional and State Level.
- **Post-Approval Monitoring:** A dedicated Works Monitoring System (WMS) is developed for monitoring the post-approval activities.

Budget Module: Streamlined Financial Planning and Approval for Temples

The Budget Module facilitates the digital preparation, submission, and approval of annual temple budgets through a structured, transparent, and workflow-driven process with e-sign. It helps to receive the approved budget on time from the Assistant Commissioner (Division), Joint Commissioner (Region), and Commissioner (State) according to the temple administrative level.

Main Features:

- It is a workflow based approval system (Temple → Division → Region → State)
- Temples can submit fasli year budgets online with e-sign and forward it.
- Capturing of last three fasli years' approved budgets for comparison.
- Automatically fetches HOA-wise receipt data for 8 months (July–February) and auto-calculation of surplus amounts in each approval levels.
- Temple can submit the supplementary budget within the Fasli year.
- Dashboard and MIS reports are developed for monitoring the budget in all levels

Receipts and Expenditure Module:

Strengthening Financial Transparency and Accountability

The Receipts and Expenditure Module facilitates end-to-end digitization of temple receipts and expenditures and brings all financial activities under a unified and auditable system to ensure transparent, accurate, and efficient financial management across all temples governed by HRCE Department.

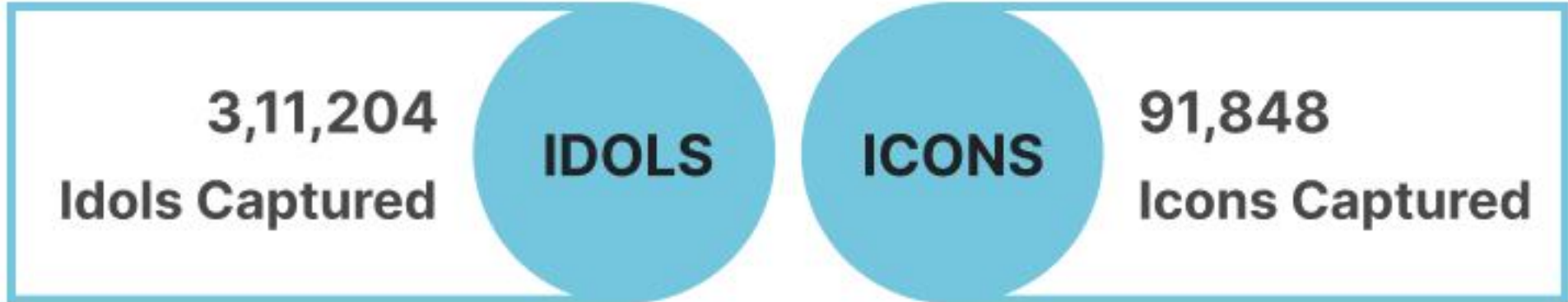
Main Features:

- Temple Authority can approve the bills, indent and voucher with e-sign.
- Digital disbursal of payments through Cheque or RTGS, with built-in checks and balances.
- Auto fetching of receipts of 700+ HOAs and display the sanctioned amount, utilized amount, and balance during voucher preparation.
- First-In-First-Out (FIFO) system in voucher approvals and mapping of cheque.

- Two separate inventory systems are maintained - General Inventory and Annadhanam Inventory.
- Auto-generation of Cash Book, Ledger, Voucher Register, Deposit Register, Loan register, etc.

Idols & Icons Information Module - Digitally Preserving Sacred Artifacts

More than 4+ lakhs of Idols and Icons information are captured in 40,000+ Temples through Idols and Icons module including material type, dimensions, age, exact location, security details, Archaeological Survey of India (ASI) registration details, high-quality four-sided photographic documentation, etc.



Mobile App:

The following mobile apps are developed as part of ITMS:

- 'Thirukkoi' - disseminating the temple information and online booking of Temple services to the public.
- For issuing tickets in POS, an android (flutter) mobile app has been developed and implemented.
- For GIS, developed a mobile app for capturing the geo-coordinates of the temple and landed properties.
- A separate mobile app has been developed for verification of the issued tickets to eliminate reusing of tickets

Other Modules in ITMS

Temple Security Information Module: This module captures comprehensive details about the security infrastructure of temples, including CCTV cameras, strong rooms, burglar alarms, safety locks, etc.

Village Temple Poosari Nala Variyam (PNV) Module: This module enables the online registration of Poosaris (temple priests) in non-HRCE temples for issuing the PNV membership ID cards to avail financial assistance for the family members.

Public Grievance Module: This workflow-enabled module for the public to register their grievances, suggestions, or complaints online through the ITMS portal and to know their grievance status.

Department Court Module: This module facilitates capturing the court case details including details of petitioners, respondents, and legal counsel at Regional and State Department Courts and generates cause lists, court diaries, and publishes case details and MIS reports through the ITMS portal.

Sale of Books Module: An inventory system has been developed for the Sale of religious books and magazines published by the HR&CE Department and monitoring the sales. The Honourable Chief Minister of Tamil Nadu has launched the 108 Religious books for sale to the public in January, 2023. A dedicated public portal (publication.hrce.tn.gov.in) has been developed for online sale of books with tracking system through Professional Courier, and it will be launched by Chief Minister of Tamil Nadu shortly.



Replication of ITMS:

The Integrated Temple Management System (ITMS), originally developed for Hindu Religious & Charitable Endowments (HR&CE) Department, Govt of Tamil Nadu as a product, has proven to be a robust and scalable platform. Recognizing its efficiency and adaptability, the system has been successfully replicated and implemented in the following States and Departments:

Replicated State / UT	Web portal
HRICE Department, Karnataka State	https://itms.kar.nic.in
Travancore Devaswom Board, Kerala State	https://tdb.kerala.gov.in
HRI & Wakf Department, Puducherry UT	https://hri.py.gov.in
Tamil Nadu Waqf Board, Govt of TN	https://tnwb.tn.gov.in
Tamil Nadu Urban Habitat Development Board, GoTN	https://tnuhdb.tn.gov.in

Technology Stack

ITMS is completely developed in Open-Source Technology using PHP 8.1 with PostgreSQL 17, Alma Linux 9.5 and Nginx 1.25. It is a comprehensive Bilingual Web Portal developed with Responsive Web Design using Bootstrap Libraries to support multiple devices.

Awards:

ITMS got the Digital India Award for Exemplary Product in December, 2020.



ITMS got the Skoch National Award – Gold for Best e-Governance in March, 2025.



The **eKalaal application** is an end-to-end solution for comprehensive transformation of State Excise Department. The solution envisages paperless system to apply online for all types of New Licenses and License Renewals and other allied services such as Real Time Monitoring(RTM) of usage of Methanol, Import Permit, Transport Permit, Holiday Permission and Central Stores Department (CSD) Permit. Total of 72 Services (32 License Renewal, 34 New License and 6 allied services) has been developed.

This application helps Excise Administration in streamlining license processing, monitoring and enforcement.

The application has been implemented at Tamil Nadu State Data Centre in the URL <https://ekalaal.tn.gov.in>

Core Features of eKalaal application:

Licenses & Permits Management

- Apply and renew various excise licenses (Distilleries, Hotels, Schools, Colleges and retailers) online.
- Issue of permits such as import and transport permit of the spirits.

Dynamic Workflow and Uploading of Documents

- Configurable workflow and Documents uploading for each service

Fees Master

- State Admin can manage the Fees Master for each Service
- eKalaal is integrated with the Tamil Nadu Treasury Payment Gateway for online payments
- Digital Signature is implemented while approving the Licenses.
- Email alerts have been provided to all stakeholders
- Real Time Monitoring ensures that data related to Methanol usage, import and inventory is continuously updated in the system in real time and made available on the eKalaal dashboard to monitor by Commissioner, Home Secretary and Chief Secretary.



A Training Programme on eKalaal application was organized along with hands-on session from 26-11-2024 to 28-11-2024 in three batches covering 38 Districts.

KALAINARIN KANAVU ILLAM THITTAM



The **Kalaingarinar Kanavu Illam** is a social welfare scheme launched by the Tamil Nadu State authorities to provide permanent houses to homeless citizens. According to the Government of Tamil Nadu State, a total of 8 lakh houses will be built for all the homeless citizens in the state in the next 6 years. During 2024-2025, 1,00,000 houses will be built with the budget of 3200 crores.

NIC, Tamil Nadu State Centre has developed an Online Application for Rural Development & Panchayat Raj Department, Govt. of Tamil for the implementation of these Schemes. Funds to the beneficiaries are paid in 4 installments through this Software.

A survey of beneficiaries was conducted, estimation was carried out by engineers and the data was entered from block level in online application. The survey contains Name of the beneficiary, Father/Husband Name, Sex, Ration Card, Bank Account details.

- The eligible beneficiaries are selected from Housing for All Survey
- Every selected house is geo-tagged and photographed with the beneficiary through mobile APP
- The Bank Account details of the beneficiaries are sent to Nodal Bank and verified through the software.
- After Validation of bank account of beneficiaries, payment can be initiated to beneficiaries based on the stage of the House which is captured through THITTAM APP

STATE PROJECTS

- The cement and Steel supplied to beneficiaries are captured and it will be deducted from the Total bill amount. The payment to Cement vendors and Steel Vendors are paid through this software
- After Verification of account, the bills are prepared by Deputy Block Development Officer (Maker) from the block using his login
- After bill is prepared by Maker, the bill is sent to Block Development Officer (Checker). The BDO verifies the Bill and signs the bill through e-Sign.
- After e-signing of bills by maker and Checker, the Checker (Block Development Officer) generates Fund Transfer Order (FTO), a XML file containing the debit account of the Scheme and credit account of the beneficiaries and sent to the bank for payment.
- After making the payment, the bank returns the status of the payment to the NIC Server next day.
- Various reports are made available to monitor the payment status, monitoring reports to monitor Makers and Checkers by District and State level officers.
- Payment of around 3000+ Crores is completed.



Chief Minister M.K.Stalin handing over keys to a beneficiary of 'Kalaingarinar Kanavu Illam' scheme during the function organised at Palayam Pudur in Dharmapuri district, for the launch of rural extension of 'Makkaludan Mudhalvar' scheme on 11-07-2024 Thursday.

Kalaingarinar Kanavu Illam

Payment File Monitoring Details Report

Created From Date : 06-03-2024

To Date : 27-06-2025

Show Report

[Download XLS](#)

S.No	Date	Total File Sent	Total Records Sent	Total ACK Files Received	Total RES Files Received	No of RES Records			Amount		
						Sent	Success	Failure	Total	Success	Failure
185	2025-06-18	1076	2983	0	1076	2983	2971	12	21,89,88,115.55	21,81,31,415.23	8,56,700.32
186	2025-06-19	1135	3702	0	1135	3702	3693	9	28,75,38,448.17	28,68,47,248.17	6,91,200.00
187	2025-06-20	618	1894	0	618	1894	1890	4	13,66,89,451.94	13,64,06,551.94	2,82,900.00
188	2025-06-21	1750	4948	0	1750	4948	4930	18	39,47,60,445.59	39,35,39,675.59	12,20,770.00
189	2025-06-23	535	1728	0	452	1520	1515	5	14,14,23,875.92	12,62,15,561.42	3,43,650.00
190	2025-06-24	733	2067	0	0	0	0	0	15,62,88,059.83	0.00	0.00
191	2025-06-25	498	1284	0	0	0	0	0	9,03,90,733.56	0.00	0.00
192	2025-06-26	727	2461	0	0	0	0	0	18,88,57,450.83	0.00	0.00
193	2025-06-27	322	911	0	0	0	0	0	7,60,75,878.05	0.00	0.00
	Total	155755	466803	0	153387	459829	458617	1212	34,58,31,91,099.51	33,96,50,71,672.50	8,85,86,214.64



Ariyalur district is situated in the central region of Tamil Nadu. It is relatively small and predominantly rural, Ariyalur holds significant archaeological importance, being known for the discovery of fossils, including dinosaur eggs and bones. The district is also industrially notable, with several major cement factories established here due to the abundance of rich limestone deposits.

ICT Initiatives

TamilNilam

The Tamil Nadu Information System on Land Administration and Management (TAMILNILAM) portal facilitates access to Patta/Chitta, A-Register extracts (Rural and Natham), and FMB sketches. Ariyalur was selected as one of the pilot districts for this rollout.

iCCMS

The Integrated Court Case Monitoring System was implemented in Ariyalur for seamless access to High Court cases, by the line departments. Training and on boarding of the departments were carried out with technical assistance from NIC, Chennai.

iRAD

The Integrated Road Accident Database (iRAD) was successfully rolled out to collect and manage road accident data from multiple stakeholders includes RTO, Police, Health and Highways department. Over the past six months, regular refresher trainings were conducted from time to time for approximately 120 officials to use both mobile and web applications to ensure smooth usage and reporting. As a result, 85% of accident data has been successfully recorded in the portal.

Service Plus

Using the Service Plus Framework, applications like Jallikattu and Cracker License were developed and used by the District Administration.

VC Services and Networking

NIC's video conferencing services were facilitated for all the departments with over 150 sessions conducted since January 2025. Network connectivity has been extended to 30+ departments/sections within the Collectorate using NICNET. These services have enhanced administrative coordination and real-time communication across departments.

Management of District Website

The Ariyalur district website (<https://ariyalur.nic.in/>) has been designed and developed by NIC on the S3WaaS platform, plays a key role in dissemination of enriched content, including geographical and historical information, departmental overviews with all Govt. schemes, photo and video galleries, and contact details of district officials, and so on.

Workshops and Trainings

Training for CSC operators and departmental officials

Training sessions were conducted for Common Service Centre (CSC) operators on key e-governance platforms. The sessions covered CCMS for court case monitoring, Tamil Nilam for land records access, and e-Office operations.

Officials were trained on creating and moving files, and applying digital signatures within the e-Office system. These trainings enhanced the capacity of CSC staff to deliver citizen services more effectively.



Cybersecurity workshop

An awareness workshop was conducted on Safer Internet Day (February 11) for school students, aiming to educate and equip them with essential cybersecurity knowledge. The session focused on identifying online risks and promoting preventive measures to ensure safe and responsible internet usage.

Tamil Nilam - CollabWeb Integration Training

Detailed sessions on the integration of CollabWeb and Tamilnilam were conducted for officials of the Survey Department from other districts, includes Perambalur, Coimbatore, Thanjavur, Nagapattinam, and Mayiladuthurai to support the rollout of the integration system.



Key events and VIP Visits

Apart from these, NIC provided ICT support during VIP visits, like Hon'ble Chief Minister of Tamil Nadu, and also played the role of technical auditors for the Online Examinations conducted by Govt. of Tamil Nadu and Govt. of India. NIC has been part of many technical committees to support the district administration.

Way Forward

NIC Ariyalur remains committed to supporting the District Administration and citizens through

reliable and efficient ICT services. Continued efforts will be made to strengthen digital initiatives by leveraging emerging technologies and scalable solutions. The focus will remain on enhancing service delivery through secure, citizen-centric applications and seamless departmental integration. NIC Ariyalur will actively collaborate with stakeholders to ensure transparent, efficient, and technology-driven governance across the district.

NIC Ariyalur has been instrumental in providing essential ICT support to enhance governance and citizen-centric services in our district. Their commendable work in the digitization of land records, covering both rural and Natham lands, which include textual records and field maps, has brought greater transparency, accuracy, and efficiency in service delivery. Processes such as Land mutation, ownership transactions and verification, land record access have become significantly more streamlined and citizen-friendly through online platforms. The implementation of the CCMS portal has further strengthened the monitoring and management of court cases, contributing to improved legal administration. The NIC district unit has also ensured uninterrupted and reliable support for various video conferences, which are crucial for effective administrative coordination. Timely updates of press releases and departmental information on the district website have played a significant role in enhancing public awareness and transparency. Their efficient system management and consistent on-ground presence have ensured that digital initiatives translate effectively into grassroot-level improvements. I appreciate and acknowledge the continued efforts of NIC Ariyalur in driving digital transformation across the district.



Thiru. P. Rathinasamy, IAS

Ariyalur District Collector

TIRUNELVELI

ICT Support And Implementation

Tirunelveli: Green energy Hub of Tamil Nadu; The Ainthinai landscape

Tirunelveli District, situated in the south of Tamil Nadu, has a long history and heritage of more than 3200 years. Tirunelveli is the 'Green Energy Capital' of Tamil Nadu with more than 25% of state's total installed wind energy capacity. The district is also an emerging industrial hub. It is also the land of Ainthinai (five themes), a term that denotes the five major emotional themes of Sangam literature, which is also connected with the five unique landscapes and heritage of ancient Tamil civilisation. The district has a rich heritage.

Over the past decades, the National Informatics Centre (NIC), Tirunelveli, has pioneered several e-Governance solutions that have revolutionized public service delivery. With a focus on leveraging emerging technologies like GIS, AI, and UPI, these initiatives have significantly improved transparency, efficiency, and accessibility especially in District Administration, Healthcare, Education, and Rural Development.

Kodaganallur – A Self-Sustainable Digital Village

Kodaganallur Village Panchayat became the district's first self-sustained digital village on **19th April 2023**. Socio-economic data from over 1,200 households were collected to identify beneficiaries for at least one Central or State Government welfare scheme, based on socio-economic and educational parameters. Public and local traders were also trained in **UPI-based digital transactions**. Internet connectivity (via **TAFINET**) was extended to key government buildings in the village, including the PHC, Anganwadi centres, ration shops, and village libraries.

ThaiCare Nellai: AI-Driven Maternal Health Monitoring (2022, Impact: 20,000+ High-Risk Pregnancies Monitored)

With a vision to reduce maternal mortality, ThaiCare Nellai, a risk management framework is designed by NIC, Tirunelveli that leverages Artificial Intelligence (AI) to monitor high-risk pregnancies. Key technical aspects include:

- **AI-based Risk Prediction:** Analysed 56 health parameters periodically to identify high-risk mothers.
- **Telemedicine Integration:** High Risk alerts were sent to healthcare workers for quick treatment at their door step.
- **District Dashboard:** Provided real-time maternal health statistics for District Collector, Dy Director (Health Services) and Dean (Tirunelveli Medical College Hospital) for easy monitoring and quick treatment.

Due to its success, ThaiCare Nellai achieved zero maternal deaths in the district over continuous three months and received special appreciation and recognition from the Hon'ble Chief Minister of Tamil Nadu. And now it is scaled up to the State Level.



Shri Arumuganainar, DIO NIC receiving Commendation Certificate from the then District Collector Shri V Vishnu I.A.S.,

GovTechThon: Open Innovation Challenge Hackathon

GovTechThon, organized by the District Administration with NIC's support, invited tech-based solutions to civic challenges. These included creation of a virtual assistant chatbot for welfare scheme recommendations, Patient's Health Management using Public Health Registry (PHR) population framework, AI/IoT-based food adulteration detection, and traffic optimization at Vannarapettai in Tirunelveli-Palayamkottai. Following its success, StartupTN has approved a regional innovation hub office for Tirunelveli.

Highlights included:

- Creation of a **virtual assistant chatbot** for welfare scheme recommendations
- **Patient Health Management** using the Public Health Registry (PHR) population framework
- **AI/IoT-based food adulteration detection & Traffic optimization** at Vannarapettai in Tirunelveli-Palayamkottai

Following the event's success, **StartupTN** approved the establishment of a **Regional Innovation Hub Office** in Tirunelveli.

Tamil-NILAM: Digitization of Land Records (2023-2024, 9.12 Lakh Rural Land Records Validated and made ONLINE)

NIC spearheaded the Tamil-NILAM (Natham) project, which modernized land records management. The migration to an online land record database was achieved using:

- **SQL-Based Data Validation:** Structured queries identified and rectified data inconsistencies.
- **Unicode Conversion:** Converted linguistic data to Unicode for easy compatibility.
- **DSC-Based Secure Transactions:** Implemented Digital Signature Certificates (DSC) for authorized data updates from time to time.

Tamil-NILAM (Natham) has been instrumental in enabling **seamless online land transactions**, significantly reducing processing time for citizens and in all 8 Taluk Offices in the District.

GIS-Based Election Monitoring System (2019, Scale: 2,979 Polling Stations)

NIC Tirunelveli developed an innovative GIS-Based Polling Stations Monitoring System during the 2019 General Elections. This system integrated:

- **Geo-spatial Mapping:** Geo-mapped 2,979 polling stations along with administrative boundaries.
- **Real-Time Election Monitoring:** Dynamic maps were generated using PostgreSQL, GeoServer, and Open Street Maps based on spatial and non-spatial queries.
- **Thematic Data Analysis:** Integrated key facilities like police stations, fire stations, roads, water bodies and railway lines to support quick decisions and smooth election operations in the District.

This solution won two National Awards from the Election Commission of India (ECI) and "Governance Now" Award for the best IT implementation in General Elections, setting a new benchmark in election monitoring.

**Online Transfer & Posting Counseling Software**

To ensure transparency in transfer and postings of Tahsildars and BDOs, NIC Tirunelveli has developed software with the modules such as Seniority management, Position of vacancies, Eligibility verification, Employees list seeking transfer and Instant Transfer order generation. Built on PHP Laravel and MySQL, the system facilitated smooth counseling sessions in 2023 and 2024.

NIC Tirunelveli's initiatives exemplify how focused use of ICT can transform District Administration and these promote innovation, scalability, and collaboration, setting a benchmark for other districts.

Conclusion

These initiatives demonstrate NIC Tirunelveli's commitment to leveraging cutting-edge latest technologies to solve challenges in governance. As the digital landscape evolves, the focus remains on adopting the recent technologies to create more efficient, secure, and citizen-centric solutions. The future of e-Governance lies in continuous innovation, collaboration, and scalability, and NIC Tirunelveli stands as a beacon of technological excellence in public administration, impacting millions of lives here in Tirunelveli District.

Configuring HTTP security headers is often missed or overlooked by some administrators who manage the web/application servers of various Government websites/applications. Due to the misconfiguration in HTTP Security Headers, it gets flagged as a non-compliance in many Application Security Audit reports. It is pertinent for the Developers & Administrators (both NIC employees and contractual staffs) to understand the vital role played by HTTP Security Headers in the security of Government web applications, because they provide a powerful, browser-level defense against a wide array of cyber threats. Here's a breakdown of why they are so important.

Mitigating Common Web Vulnerabilities: Headers act as explicit instructions to the user's browser, dictating how it should handle content from your website. This prevents or significantly hampers common attacks like:

Cross-Site Scripting (XSS):Headers like Content-Security-Policy (CSP) allow you to specify approved sources for scripts, styles, and other assets. This makes it extremely difficult for attackers to inject and execute malicious code in your users' browsers.

Clickjacking:The X-Frame-Options header prevents your website from being embedded in a malicious iframe on another site, protecting users from being tricked into clicking on hidden elements.

Man-in-the-Middle (MITM) Attacks:Strict-Transport-Security (HSTS) forces browsers to always connect to your site over HTTPS, even if the user types HTTP. This prevents attackers from downgrading connections to unencrypted HTTP to intercept sensitive data.

MIME-Type Sniffing:X-Content-Type-Options: nosniff prevents browsers from "guessing" the content type of a file, which can be exploited to execute malicious scripts disguised as images or other safe file types.

Enforcing Best Practices:Security headers encourage and enforce good security practices by ensuring that your application adheres to modern security standards. This includes always using HTTPS, controlling resource loading, and managing referrer information for privacy.

Enhanced User Protection:By proactively preventing various attack vectors, security headers directly protect your users' data, privacy, and overall browsing experience on your site. This builds trust and confidence in your application.

Reduced Attack Surface:Instead of solely relying on application-level logic to prevent every potential vulnerability, security headers provide a broad, foundational layer of defense at the browser level, effectively shrinking the potential attack surface and safeguarding both your application and its users.

Relatively Easy Implementation:Compared to implementing complex security features within application code, many security headers can be configured directly at the web server level (e.g., Apache, Nginx) or through web application frameworks, offering a high return on investment for security.In a nutshell, HTTP security headers are an indispensable part of a comprehensive web application security strategy. These headers act as the first line of defense, instructing web browsers on how to behave when interacting with your site, effectively mitigating common web vulnerabilities before they can be exploited. They empower your application to communicate critical security instructions to browsers, significantly reducing the risk of exploitation

NICNational Informatics Centre

CYBER SECURITY GROUP, RSOC- CHENNAI

HTTP Security Headers

HTTP headers are metadata sent between the client and server that define how content is transferred, secured, and handled during an HTTP request or response.

01Content-Security-Policy (CSP)

02Strict-Transport-Security (HSTS)

03X-Frame-Options

04X-Content-Type-Options

05Cross-Origin-Resource-Policy (CORS)

06Cross-Origin-Opener-Policy (COOP)

07Cross-Origin-Embedder-Policy (COEP)

08Permissions-Policy

09Referrer-Policy

10Access-Control-Allow-Origin (CORS)

CSP tells your browser what kind of content it's allowed to load and from where. This acts like a rulebook for your browser, stopping it from running anything suspicious.
Example: Content-Security-Policy: default-src 'self'; script-src 'self' https://apis.google.com;

HSTS tells the browser to always connect to your website using HTTPS, never HTTP. It ensures all connections are encrypted, even on first visit.
Example: Strict-Transport-Security: max-age=31536000; includeSubDomains; preload

This header tells the browser whether your site can be embedded inside frames or iframes.
Example: X-Frame-Options: DENY

This header stops the browser from guessing the content type of a file and forces it to follow the declared Content-Type. It reduces the risk of malicious file execution.
Example: X-Content-Type-Options: nosniff

CORS controls whether your site's resources (like images or scripts) can be loaded by documents from other origins. It helps prevent cross-origin data leaks.
Example: Cross-Origin-Resource-Policy: same-origin

COOP ensures that your web page runs in its own browsing context, separate from other origins. This improves security and isolation between browser tabs.
Example: Cross-Origin-Opener-Policy: same-origin

COEP ensures that any cross-origin resources you embed (like scripts, images, or media) explicitly allow being loaded by your site. It helps enforce secure embedding.
Example: Cross-Origin-Embedder-Policy: require-corp

Permissions-Policy controls which browser features (like camera, microphone, geolocation) are allowed to be used by your site or its embedded iframes.
Example: Permissions-Policy: geolocation=(), microphone=(), camera=()

Referrer-Policy tells the browser how much of the page's URL should be sent when the user clicks on links that go to a different site. It helps reduce data leakage.
Example: Referrer-Policy: strict-origin-when-cross-origin

CORS tells the browser which external websites (origins) are allowed to make requests to your server. It's used to control who can access your APIs or web resources from a different domain.
Example: Access-Control-Allow-Origin: https://google.com

FOR REPORTING SECURITY INCIDENTS : incident@nic.in

OSS CORNER - OPEN SOURCE SOFTWARE

This section shares key OSS (Open Source Software) information and essential Linux commands relevant to Server/ Systems used - each **Thisai** release.
RPM-Based Systems (Red Hat / AlmaLinux / Rocky Linux)

OS & System Info	Performance & Load	Hardware Details
View OS details: cat /etc/os-release View minor release version: cat /etc/redhat-release Display kernel name, hostname, release & architecture: uname -a Show system hostname and OS metadata: hostnamectl	Current load average: cat /proc/loadavg System boot time: who -b Boot performance statistics: systemd-analyze	Retrieve hardware & BIOS info: sudo dmidecode -t system CPU architecture summary: lscpu Detailed CPU info: cat /proc/cpuinfo View block devices and partitions: lsblk

State Informatics Officer and District Informatics Officers delivered the lecture on Safe use of Internet, Common Cyber Threats, Cyber Hygiene Practices, Mechanism to report cyber-crimes.



Swachhta Pakhwada 2025 successfully promoted awareness on cleanliness and environmental responsibility, inspiring collective action for a sustainable future.



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