

Lakshadweep UT

From Islands to Digital Hubs: E-Governance Evolution in UT

Edited by **NISSY GEORGE**

Lakshadweep, India's smallest Union Territory, is renowned for its natural splendor, characterized by sun-kissed beaches and crystal-clear waters. Visitors are captivated by the tranquility and isolation, along with vibrant coral reefs and rich marine life. This uni-district Union Territory includes 12 atolls, three reefs, five submerged banks, and ten inhabited islands, covering a total area of 32 sq km.

Since 1987, NIC UT Centre has been instrumental in implementing advanced information and communication technology (ICT) in Lakshadweep. NIC's efforts have significantly enhanced good governance by promoting transparency and efficiency in the Union Territory's administration. Through various e-governance initiatives, NIC has transformed the way administrative functions are performed, ensuring streamlined and effective public service delivery.



Dr. Suchitra Pyarelal
Dy. Director General & SIO
suchitra@nic.in



Beebi C G
Technical Director & ASIO
cgbeebi@nic.in



Shahina Beegum K K
Scientist - D
shahina@nic.in



NIC Lakshadweep stands at the forefront of the digital revolution, transforming the Union Territory into a beacon of e-governance and IT excellence. As the backbone of technological innovation, the UT Centre seamlessly integrates advanced digital solutions across government sectors, enhancing efficiency, transparency, and accessibility. From pioneering e-governance platforms to modernizing land records and healthcare services, the UT Centre is dedicated to empowering citizens and fostering a connected, future-ready community in the islands.



ICT Initiatives in the State

WEBSTAR (<https://lakport.utl.gov.in/>)

The scattered geography of the Lakshadweep islands in the Arabian Sea necessitates that ship travel serves as the primary mode of transportation for residents. Islanders frequently travel to the mainland for education, medical

treatment, and purchases, making shipping a crucial lifeline for the people of Lakshadweep.

To address the public's ship ticketing needs, NIC Lakshadweep Centre developed and implemented WEBSTAR (Web-based Ship Ticket Advance Reservation System). This application manages the unique and intricate ship routes, which often vary with each voyage from the mainland and sometimes include additional stops at various islands. This complexity distinguishes WEBSTAR from other reservation systems, such as those for railways or airlines.

The system also includes a module for helicopter ticketing, which is used by the Department.

Features

- Allows users to book ship tickets in advance
- Enables users to cancel previously booked ship tickets
- Facilitates the booking and tracking of cargo shipments, providing detailed reports
- Provides up-to-date information on ship departure and arrival times
- Displays the current status of booked tickets, including confirmations and waitlists

POWERLAK

(<https://powerlak.utl.gov.in/>)

POWERLAK (Portal & Official Website cum E-governance Repository of Lakshadweep Consumer-fraternity) is a digitally integrated Consumer Management System designed for the comprehensive management of consumer services, including billing, with integrated e-mail and SMS notifications. In the geographically dispersed territory of Lakshadweep, the value of such an online solution and Management Information System (MIS) is significant.

Major Business Processes

I. **Consumer Registration & Management System (G2C & G2E):** Facilitates the registration and management of consumers for both government-to-citizen (G2C) and government-to-employee (G2E) services.

II. **Energy Billing (Bill Generation &**

Cash Collection) (G2E & G2C): Manages the generation of energy bills and cash collection for both government-to-employee (G2E) and government-to-citizen (G2C) interactions.

III. Complaint/Fault Management System (G2E & G2C): Provides a system for managing consumer complaints and faults.

IV. Consumer Portal Online (G2C): Offers an online portal for consumers to access various services.

Operational Features

- Public portal & official website
- Total Consumer Management System
- SMS & e-mail alerts for consumers
- Consumer login and CSC service interface
- Online application for service connections
- BillDesk and NSDG/NSDL payment gateway integration
- Wallet payment and BBPS integration (launched in December 2020)
- Mobile app for reading collection (PowerLAK Reader-app)
- Workflow-based Complaint Management Cell

PGDMS

(<https://pgdms.utl.gov.in>)

The Power Generation & Distribution Management System (PGDMS) is a web-enabled backend application designed to monitor the operations of powerhouses and solar photovoltaic (SPV) power plants in Lakshadweep for the Electricity Department. This system utilizes a role-based authentication mechanism to ensure secure access and is workflow-based to streamline operations.

Features:

- End-to-end computerization of powerhouses
- Real-time monitoring of diesel generators and SPV power plants

School Application Suite

School application suite is a significant advancement in centralizing and streamlining the management of educational data across the scattered islands of Lakshadweep. By providing a unified platform for collecting and managing teacher and student details, it enhances coordination among the various schools. The system also facilitates student transfers and promotions and generates comprehensive reports on both students and teachers. Figure 3.2 showcases the number of (a) schools, (b) teachers, and (c) students registered on the school application suite across various islands.

PEARL

PEARL (Package For Effective Administration For Registration Laws) Registration Software streamlines all functionalities of Sub Registrar Offices in Lakshadweep. It consists of two modules: Public Pearl (<https://pearlnet.utl.gov.in>) and Open Pearl (<https://openpearl.utl.gov.in>).

Through Public Pearl, citizens can apply for required services by signing up and logging in. They can obtain a token from the available ones

and enter all necessary details for registration as per their documents. Applicants must submit the documents for verification at the allotted time before the Sub Registrar Office (SRO). The SRO official will then verify the entered details and either approve or reject the request based on the records. The public can check the status of their submitted applications through Public Pearl.

Land Records Information System

(<https://land.utl.gov.in>)

The computerization of land records in Lakshadweep has been achieved through digitization, ensuring that land and owner details are accurately entered into the system. Various reports are generated to meet the diverse requirements of the administration. The application is integrated with digital maps via the Collabland application, enabling citizens to check map details by providing the survey or subdivision number of their land parcel.

Functional Coverage:

- Record of Right
- Land Register Extract
- Fair Area List
- Island-Wise Landholdings
- Owner-Wise Holdings
- Land Type-Wise Holdings
- List of All Landowners
- Missing Survey Numbers

e-Counselling

(<https://ecounselling.utl.gov.in>)

The Department of Education, Lakshadweep, used to conduct the seat allotment process for higher studies in mainland colleges through a cumbersome procedure. This involved inviting applications to the Education Directorate, preparing candidate rank lists, and selecting seats from Kavaratti, requiring candidates to

travel from other islands. e-Counselling is a digital platform designed to streamline the seat allotment process for Lakshadweep candidates seeking admission to mainland colleges after completing their school education, eliminating the need for extensive travel.

Features:

- End-to-end digitized process flow
- Online registration for candidates
- Online verification
- Online application status tracking
- Online counselling sessions
- Sponsoring letter generation

e-Permit

(<https://epermit.utl.gov.in>)

The e-Permit application processing system issues permits for visiting the islands of Lakshadweep for various purposes. It is a key initiative by the Lakshadweep Administration to advance e-governance. Given the strategic significance of Lakshadweep under the Union of India, entry to the islands is restricted, and the UTL Government issues permits to those wishing to visit.

Visitors can apply online for permits and download approved permits in PDF format.

Features:

- Tracking of permit holders
- Statistics of visitors
- Profession-wise statistics of various islands
- SMS integration
- Online payment integration

Online Inventory System

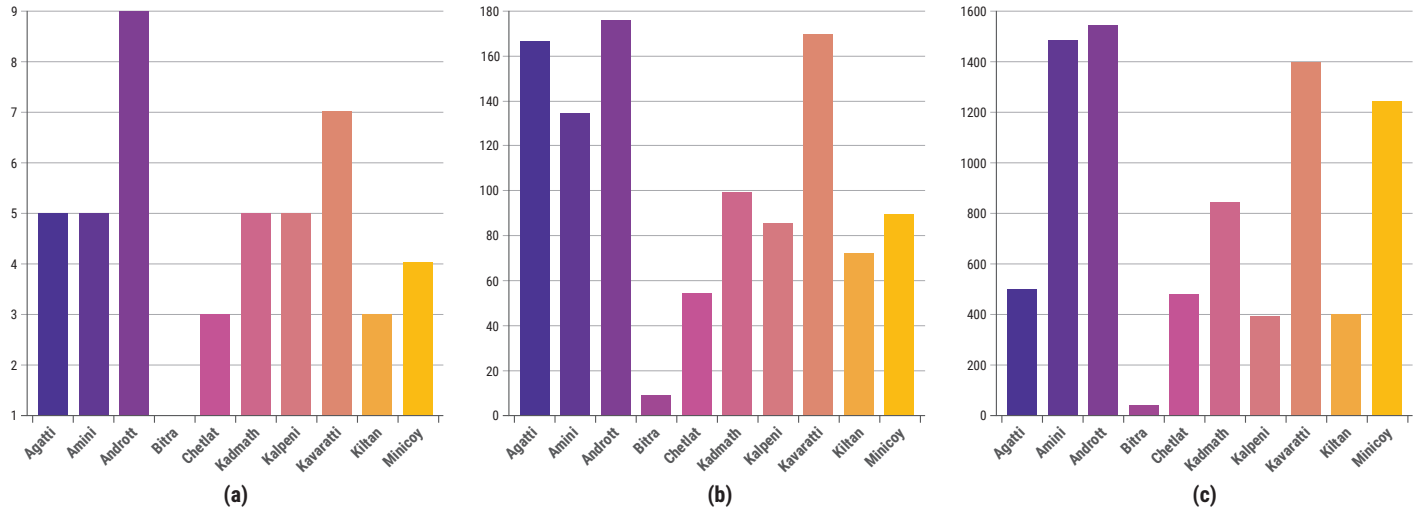
(<https://powerlak.utl.gov.in/invent/login.aspx>)

Developed for the Department of Electricity, UT of Lakshadweep, this online system tracks inventory and manages activities in a workflow model. It ensures transparency and security with at least two levels of user control and

▼ Fig 3.1: eCounselling Lakshadweep Homepage



From the States



▲ Fig 3.2: Number of (a) schools, (b) teachers, and (c) students registered on the school application suite across various islands.

monitoring. Real-time stock positions from this system determine the schedule of cargo barges transporting High Speed Diesel (HSD) oil, ensuring uninterrupted power supply to the islands.

Fisheries e-store

(<http://fisheries.utl.gov.in/>)

The Fisheries e-store, developed for the Department of Fisheries, UT of Lakshadweep headquartered in Kavaratti, centralizes tendering and procurement processes. Operating on a workflow-based system with multi-level sanctioning, it features a centralized activity window for monitoring ROL (Reorder Level), indent, purchase order, shipment, packing, and sales statuses. Items are categorized for efficient management.

Key features include single-entry item management, short supply alerts, ROL notifications, automated email alerts, and consumption analysis. The sales module

manages counter sales of fisheries equipment, HSD oil, etc., generating daily consolidated sales and consumption reports for assessment and monitoring by higher authorities.

Lakshadweep Guest House Management System

(<https://lghms.utl.gov.in>)

The Lakshadweep Guest House Management System aims to digitize all guest houses administered by the Lakshadweep Administration, enhancing transparency and accountability in reservation and allotment processes. A mobile application allows the public to book rooms and track application statuses.

Official Website of Lakshadweep Administration

(<https://lakshadweep.gov.in>)

Managed by NIC using an indigenous solution developed by NIC Lakshadweep, the official

website of the Lakshadweep Administration has recently been redeveloped on the S3WAAS platform. It incorporates CMS features and complies with Government of India guidelines, ensuring it remains one of the most updated websites under S3WAAS in terms of content.

eDistrict Lakshadweep

(<https://edistrict.utl.gov.in>)

NIC Lakshadweep leads the eDistrict initiative to digitize 29 services across various departments. Using the ServicePlus platform, this initiative provides citizens with a unified interface for applying and obtaining services online, including additional value-added services, thereby enhancing government-citizen interactions.

Central Projects

MGNREGA

(<https://nrega.nic.in>)

This national project aims to bolster livelihood security in rural areas by guaranteeing at least 100 days of wage employment per financial year to households whose adult members opt for unskilled manual labor. It is operational across all islands.

PM Kisan

(<https://pmkisan.gov.in>)

PM Kisan is a Central Sector scheme fully funded by the Government of India. Implemented in Lakshadweep, it is administered by the Department of Agriculture to provide direct income support to eligible farmers.

VAHAN & SARATHI

VAHAN & SARATHI are comprehensive systems implemented in Lakshadweep to streamline vehicle registration and driving license processes. VAHAN automates activities related to Vehicle Registration, Fitness, Taxes, Permits, and Enforcement, allowing the Transport Department to focus on critical business issues. SARATHI 4.0,

▼ Fig 3.3: NIC Officers explaining the benefits of Sarathi 4.0 to RTO Officers at Lakshadweep Regional Transport Office during Sarathi 4.0 launch event in 2022.



launched in 2022, facilitates the issuance of learners licenses, new driving licenses, renewals, and transactions like changes in name, address, and biometrics. Both systems feature workflow-based processing and generate Management Information System (MIS) reports to enhance operational efficiency.

National Scholarship Portal (<https://scholarships.gov.in>)

The National Scholarship Portal serves as a comprehensive platform facilitating student applications, receipt, processing, sanction, and disbursement of various scholarships. As part of the National e-Governance Plan (NeGP), it is a Mission Mode Project implemented centrally for the Department of Education in the Union Territory of Lakshadweep.

GST Accounting and Inventory Package for LCMF

The GST Accounting and Inventory Package for LCMF, available at <https://lcmf.utl.gov.in>, integrates modules for demand management, indenting, work order generation, supply management, dispatch, packing, stock details, and comprehensive reporting. This solution also incorporates an accounting module with integrated GST features to streamline financial operations and compliance for the Lakshadweep Co-operative Marketing Federation (LCMF).

PMAY-G (<https://pmayg.nic.in/>)

The Pradhan Mantri Awas Yojana Grameen (PMAY-G) is a Government of India initiative aimed at providing affordable housing to rural areas. Beneficiaries listed in the Socio-Economic Census receive the housing assistance in three installments. In Kalpeni, Amini, Kadmat, Agatti, and Kavaratti Islands, a total of 45 houses have been granted and constructed under this scheme.

NSAP

The NSAP (National Social Assistance Programme) is a Centrally Sponsored Scheme by the Government of India aimed at providing financial assistance to elderly, widows, and persons with disabilities through social pensions. It ensures support and financial security to vulnerable sections of society.

eHospital

eHospital, available through the e-Hospital@NIC application, serves as a comprehensive Hospital Management Information System (HMIS). It integrates internal workflows and processes within hospitals, providing a unified digital platform connecting patients, healthcare facilities, and medical professionals.

GePNIC (<https://tendersutl.gov.in>)

GePNIC is the eProcurement System of the U.T. Administration of Lakshadweep. It facilitates tenderers to freely download the Tender



▲ Fig 3.4: eHospital team visit Lakshadweep UT Government Hospital to take a comprehensive overview of the application usage at the user site.

Schedule and submit bids online through the portal.

Users can navigate to the 'Latest Active Tenders' link on the homepage to view all tenders hosted on the portal and download the Tender Schedule at no cost. This system is extensively utilized by all departments of UTL for floating and processing tenders efficiently.

eOffice Lakshadweep (<https://eoffice.utl.gov.in>)

The eOffice platform is designed to enhance governance by facilitating efficient and transparent inter and intra-government processes. It aims to achieve simplified, responsive, effective, and transparent operations across all government offices. Built on an Open Architecture, eOffice serves as a reusable framework that can be replicated across different levels of government—from central to district administrations. This integrated system consolidates various independent functions and systems into a unified framework.

▼ Fig 3.5: eHospital implementation discussion



Introduced in Lakshadweep in 2017, the electronic file flow management system initially onboarded six departments. It has since been migrated and hosted on RailTel DC, now operational across all departments at the UT headquarters in Kavaratti.

NFSA Portal

The NFSA Portal aims to modernize and computerize Targeted Public Distribution System (TPDS) operations nationwide, addressing challenges such as food-grain leakages, fake ration cards, inclusion errors, and lack of transparency. This initiative, led by States/UTs with support from the Government of India, includes digitizing ration cards and beneficiary databases, computerizing supply-chain management, establishing a Transparency Portal, and implementing grievance redressal mechanisms. It is part of a comprehensive effort to enhance TPDS efficiency and accountability during the 12th Five Year Plan (2012-17).



▲ Fig 3.6: Digitization awareness session on NIC services at NIC Lakshadweep UT Centre.

Smart City Utility Mapping

(<https://smartcitygis.utl.gov.in>)

Smart City Utility Mapping provides detailed visualizations of buried infrastructure such as sewers, electric cables, telecom cables, gas mains, and water mains. These maps are essential for effective land-use planning, road and utility maintenance, emergency management, infrastructure assessment, development, and property management. By enhancing citizen engagement, these visualizations aim to improve quality of life and enhance the overall functionality of the city.

BAS

(<https://adminlut.attendance.gov.in>)

The Biometric Attendance System (BAS) facilitates seamless attendance management for employees by utilizing biometric authentication (fingerprint/iris) through dedicated biometric devices. The system verifies attendance online using Aadhaar-linked biometric data stored in the Unique Identification Authority of India (UIDAI). Currently operational in 32 departments

in Kavaratti, BAS is slated for implementation across all UT administration offices throughout the Lakshadweep islands. This initiative aims to enhance efficiency and transparency in employee attendance monitoring across the region.

SPARROW

(<https://sparrow.eoffice.gov.in>)

SPARROW (Smart Performance Appraisal Report Recording Online Window) is an online system designed for maintaining comprehensive performance appraisal dossiers for members of the Service within State and Central Governments. Its primary objective is to enable officers to electronically fill Performance Appraisal Reports (PAR) conveniently from any location and at any time. This user-friendly system supports officers at various workflow levels, ensuring efficient filling and submission processes. SPARROW is anticipated to minimize delays in the submission of fully completed APARs, enhancing overall efficiency in performance appraisal management.

BHAVISHYA

(<https://bhavishya.nic.in>)

BHAVISHYA is a central application designed to facilitate the timely delivery of retirement dues and pension payment orders to retiring employees on their retirement day. It provides online tracking of the pension sanction and payment processes, ensuring complete transparency throughout. The UT of Lakshadweep Administration is also integrated into the Bhavishya system, enhancing efficiency in pension management and delivery.

Randomization of Polling personnel and counting officials

NIC Lakshadweep extends its full support to the Election department in randomizing polling officials and counting officials during general elections. It is conducted in 3 stages for both polling personnel and counting officials. Necessary reports, ID cards and appointment orders are generated.

eGranthalaya

eGranthalaya 4.0, a library automation software, has been implemented by the Art and Culture Department in the Public Library of Kavaratti. Following its successful launch, the software is set to expand to nine other libraries across the islands. This initiative aims to enhance in-house activities and member services, creating a connected and efficient library network. With its cloud-ready application, eGranthalaya 4.0 offers a web-based solution with a centralized database, ensuring accessibility and user-friendliness for both library staff and patrons.

Service plus

(<https://serviceonline.gov.in>)

The launch of end-to-end digitization of citizen services in Lakshadweep represents a milestone, facilitated by the introduction of a high-bandwidth network that revolutionizes connectivity across the islands. A total of 182 schemes have been earmarked for digitization, with 9 services already operational on the platform and twenty Direct Benefit Transfer (DBT) schemes configured. This initiative signifies a substantial leap forward in advancing e-governance and improving service delivery for citizens.

Additional Projects

e-MPEDA

The e-mpeda portal, developed by NIC, transforms the Marine Products Development Authority (MPEDA) into an IT-enabled organization, enhancing efficiency through digitalization. This initiative, facilitated by NIC's Lakshadweep Unit in Kochi, involves re-engineering processes and deploying multiple online applications in phases. Ongoing support and maintenance, including updates and security audits as per Government of India guidelines, ensure robust operation on the CLOUD platform.

Key Applications under e-mpeda:

▼ Fig 3.7: Spices Board - FAS inauguration





▲ Fig 3.8: e-Mpeda portal

- Online Registration System
- Online Financial Accounting System
- NRCP Monitoring System (e-NRCP)
- HR System
- Pension System
- Financial Assistance Management System
- Asset Management System
- Online RCMC System
- Online PHT System
- Online Certificate Fee System
- Online Enrollment System for Feed Mill, Hatchery, and Aqua Farms
- API Services of e-MPEDA
- Newsletter Subscription
- Recruitment Module
- Online Export Certificates

SPICES BOARD – PROJECT
(<https://fas.spicesboard.gov.in>)

The Integrated Online Financial Accounting System (FAS) of the Spices Board, developed by the Kochi Unit of the NIC, Lakshadweep, is a sophisticated digital platform aimed at

▼ Fig 3.9: Spices Board - FAS inauguration



enhancing the financial management processes of the Spices Board. This system integrates key financial functions such as budgeting, expenditure tracking, revenue management, and reporting into a centralized online platform.

Key Features:

- **Centralized Financial Management:** Integrates budgeting, expenditure tracking, revenue management, and reporting.
- **Real-time Monitoring:** Allows for real-time monitoring, analysis, and control of financial transactions.
- **Decision Support:** Facilitates efficient decision-making through comprehensive financial data and reports.
- **Chart of Accounts:** Organizes transactions into assets, liabilities, income, and expenses for clarity and accuracy.
- **General Ledger:** Utilizes a double-entry accounting system to maintain organized financial records.
- **Financial Statements:** Generates statements like trial balances and income statements to aid in decision-making.
- **Security Features:** Includes OTP-enabled log-ins, integrated payment gateways, and payment intimations for enhanced security.
- **Communication Channels:** Supports communication via email, SMS, and Sandes for seamless interaction.

Network and Infrastructure Services

Video Conferencing

NIC operates one of the largest High Definition Video Conferencing Networks in India, providing services since 1995. These services are instrumental in monitoring Government Projects, flagship programs of the Prime Minister, various schemes, handling Public Grievances, overseeing Law and Order, conducting RTI case hearings, enabling Distance Education, Tele-Medicine, monitoring Election processes, and launching new initiatives. NIC’s VC services are regularly



▲ Fig 3.10 CSI Nihilent Award for Excellence

utilized by dignitaries including the President of India, Prime Minister, Chief Ministers, Cabinet Secretary, Chief Secretaries, Chief Information Commissioner, Central and State Government Ministers, and Department Officials at all levels nationwide. NIC has established Desktop Video Conferencing facilities (EVCS) in NIC Kavaratti, Kochi, and Minicoy Centre, enhancing communication capabilities across these locations.

Accolades

The e-Government solution implemented for the Department of Electricity, Lakshadweep UT, has been acknowledged as a leading application in the e-Government sector. It played a pivotal role in the department receiving the CSI-Nihilent Award for Best E-Governed Department in 2008. Furthermore, the Online PHT System of e-MPEDA was honored with the CSI Nihilent Award for Excellence in 2013-14.

Way Forward

NIC Lakshadweep UT plays a crucial role in India’s e-governance infrastructure. To strengthen its impact, emphasis can be placed on enhancing cybersecurity measures and cultivating a resilient digital ecosystem. The NICLAK team remains dedicated to advancing this ecosystem by developing user-friendly platforms and facilitating seamless integration with diverse government services. This commitment underscores NIC’s mission to deliver state-of-the-art e-governance solutions that effectively serve both the government and its citizens.

Contact for more details

State Informatics Officer (SIO)
NIC West Bengal State Centre
HJ8R+2MH, Central Secretariat
Kavaratti Island, Lakshadweep - 682555
Email: sio-laks@nic.in, Phone: 0471-2729894