

Chandigarh UT

Digital Infrastructure as a Utility to Every Citizen

Edited by **MUKESH KUMAR RALLI**



Located in the foothills of the Shiwalik Hills, Chandigarh is best-known for its modern architecture and urban planning. The better living conditions and grass root level internet connectivity of the Union Territory (UT) has attracted talents from neighbouring states like Punjab, Haryana, Himachal Pradesh and Uttarakhand and made the City Beautiful as one of the emerging IT destination in the country.

Overview

NIC Chandigarh UT Centre has a very enriching and fulfilling journey. It has reached new heights with each new challenge. Since its inception, it has played a crucial role in fostering ICT culture in the UT by undertaking several significant eGovernance projects.

The UT Centre first began its operation in the region from the Office of Chandigarh Deputy Commissioner in 1990. Later, in response to growing demands for its digital services, it established its stand-alone office in the

NIC Chandigarh UT Centre has been instrumental in narrowing the ever-widening gap between Government and Citizens by providing the efficient and assessable citizen-centric digital solutions. These solutions are not only making lives of citizens easier by taking services to their doorsteps, but have also made the administration swift, responsive, transparent, hassle-free and easily accessible.



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Chandigarh Administration Secretariat Building in 1993. As of now, almost two decades later, the UT Centre has massively scaled its offerings with a Software Development Centre, Network and Data Centre, SWAN State Headquarters, and NKN Point of Presence.

With its newly launched Mini Cloud Centre in 2022, it has practically extended its network and infrastructure offerings to each and every user department which can make full use of them. It also offers these services to neighbouring states including Haryana, and Punjab.

Furthermore, in collaboration with Chandigarh

UT Administration, the UT Centre is also committed to providing G2C and G2E digital services, directly at the fingertips of the UT residents. It has actively participated in the entire process of designing, developing, and deploying these services for the benefit of the public.

Some of the key projects undertaken by the UT Centre include GePNIC, Jeevan Pramaan, Aadhaar Enabled Biometric Attendance System (AEBAS), Medico Legal Examination and Post Mortem Reporting (MedLEaPR), etc.

ICT Initiatives in the UT

Direct Benefit Transfer under National Food Security Act

The UT Centre implemented ePDS system for Direct Bank Transfer in lieu of food grains subsidy in Chandigarh. The system has replaced the Fair Price Shops (FPSs) in the region. It is a web-based multilingual ration card management system that provides faceless services for applying and updating Ration Cards, made available to beneficiaries covered in National Food Security Act. The system directly transfers food subsidy into the Aadhar linked bank account of head of family as per entitlement, on a monthly basis. Food subsidy of ₹ 417,51,524 has been transferred to 2,95,884 members of 68009 Priority Households (PHH) families and 763 Antodya Anna Yojana (AAY) families for the month of December 2022.

One Nation One Ration Card Scheme

One Nation One Ration Card (ONORC) scheme was started in light of the COVID-19 pandemic to help economically weaker migrant workers and their families. As of now, a total of 122 migrant families of 425 members have been enrolled under the scheme in Chandigarh.

Vahan & Sarathi

Vahan and Sarathi are national vehicle registration and driver's licence systems. They intend to automate all vehicle and driver information with road transport authorities in order to provide various digital services to citizens. Since 2015, both Vahan and Sarathi have been active in the UT. In May 2022, the faceless version of these services was also launched for citizens.

Through the twin system, 7,64,792 vehicle registration certificates and 7,23,769 driver licences have been issued to date. In addition, Dealer Point Registration, Fancy Registration Number Auction Portal, Pollution Under Control Certificate, and e-Challan have been enabled on the system.

Vehicle Location Tracking & Emergency Alert System (VLT&EAS)

In order to improve safety of women and children in public transport systems, the Chandigarh UT Centre implemented VLT&EAS in all public and UT government transport vehicles. The System is integrated with Emergency Response Support System (ERSS) and ensures real-time identification of vehicles and their location for immediate response in case of emergency.

In order to facilitate better services, monitoring centres are also set up for tracking as well as health checks of the VLT device and emergency buttons. The system has been made mandatory for public service vehicles by the Government of India.

Since its launch on 30th May 2022, around 35 percent of the public service vehicles registered in Chandigarh have been onboarded on the system and have been equipped with the VLT device and panic button by the end of December 2022.

iRAD

Integrated Road Accident Database (iRAD) is a major initiative by the Ministry of Road Transport and Highways (MoRTH), Government of India aimed at reducing the number of road accidents in the nation by improving road designs and identifying accidental black spots. The system was launched on 22th April 2022 in the UT and has lowered the road accidents in the region.

As of now, a total of 2,021 accidents in the region have been recorded through the system. For optimal use and success of the system, the UT Centre is imparting training to all the stakeholders on the iRAD application on a regular basis.

eTula

The District Centre implemented the eTula (e-Transformation of Legal metrology Administration) system for the Department of Consumer Affairs and Legal Metrology, Chandigarh Administration, in order to safeguard the interest of the consumers by ensuring that goods sold and bought are correct in quantity and volume as claimed. The system aids in verification, inspection, and licences issuance to commercial

establishments, manufacturers and repairers of weights and measures. The stakeholders can online register their establishments and apply for issuance / renewal / amendment of licences by paying a nominal fee online. After receiving an application, the department concerned verifies the application and issues the certificates online.

eHospital

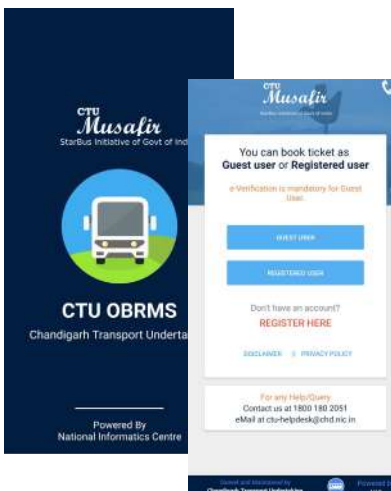
e-Hospital application is a cloud-based Hospital Management Information System for digitization of internal workflows and processes of hospitals, including such as OPD / IPD, Emergency, Blood Bank, Billing, Lab, and Stores management. It helps in connecting patients, hospitals and doctors on a single digital platform and provides delivery of citizen-centric services like online appointment booking, access to lab reports online and blood availability status. The system has successfully been implemented by the UT Centre across several major government hospitals across the Union Territory, including Government Medical College & Hospital, Sector 32; Government Multi-Specialty Hospital, Sector 16; alongside their subordinate hospitals and dispensaries.

In 2022, the new NextGen eHospital was implemented in Civil Hospital, Manimajra alongside 10 other Health & Wellness Centres across the region. The new system is integrated with Ayushman Bharat Health Account (ABHA) Health ID for providing better health services. As of now, around 85,000 appointments have been made by patients a year in Chandigarh.

eAuction

eAuction is a web-based auctioning solution implemented for the UT Administration that enables the auctioneers to download the auction schedule and participate in auction online. The bidders and companies can register online on the portal for bidding. Printing and Stationery department, Engineering Department, Estate Office, Housing Board, Excise & Taxation are few

▼ Fig. 2.1: Chandigarh Musafir app



NIC Chandigarh UT Unit has played a key role as an integrator and IT solution provider, playing a proactive role in various IT enabled initiatives and development of applications for various services of different departments. Many innovative steps have been taken by NIC to promote eGovernance activities and have carved a path for IT implementation and delivery of services (G2C). Besides being the backbone of network, applications like Property management, Land records, Transport, Treasury, Excise and Taxation, Health etc. have been implemented very effectively.

I would congratulate and appreciate NIC Chandigarh UT team for their qualitative support, diligence and proactive attitude towards ICT and wish them all the best for future assignments.



Nitin Kumar Yadav, IAS
Secretary (IT), Chandigarh UT

UT departments, which have boarded the system.

Swagatam

Swagatam is a web-based appointment management software that smoothens the process of visiting the government offices. Anyone can take an appointment online in advance by simply registering themselves on the portal and making the request to concerned officers. Once approved, the person can easily visit the office by quoting their basic details.

Sarai / Guest House Booking App

The Chandigarh UT Administration manages a number of state properties, including the UT Guest House and Panchayat Bhawan, which are available to visitors during their stay in the Union Territory. In order to simplify the booking process, the UT Centre has developed an online Guest House Booking system that allows users to reserve rooms with a single click.

The system also facilitates booking in the Sarai building on the PGIMER Campus for the attendants of out-of-town patients receiving treatment at the medical campus.

Right to Education Admission Portal

(<http://admser.chd.nic.in/rteOnline/Home>)

The Right to Education Admission Portal is being developed for online admissions of children from economically weaker sections and disadvantaged groups in entry-level classes in



▲ Fig. 2.2: Hon'ble Administrator of Chandigarh, Shri Banwarilal Purohit launching services made using Service Plus Framework

government unaided schools of UT Chandigarh. The software randomises the applications and facilitates automatic draw and allotment of seats in the school of choice.

Chandigarh Transport Undertaking

The UT Centre has designed two softwares for Chandigarh Transport Undertaking (CTU). First, the Driver / Conductor Roster Management System, which is used by the CTU for duty allocation of bus driver and conductor on stipulated routes as per bus timings. Second, the Online Bus Reservation Management System (OBRMS) software, which can be used by citizens to book tickets online on CTU run buses. It can also be used for booking CTU lodges.

In addition, there are designated mobile apps, CTU Conductor and CTU Musafir, to facilitate these services on mobile phones.

Manav Sampada

Manav Sampada is an electronic Human Resource Management System (eHRMS) developed for the effective monitoring of employee service books with complete details.

The UT Centre has implemented the system across 75 departments of Chandigarh Administration.

Over 25,000 employees working in these departments use this system for filing Annual Performance and Appraisal Report (APAR) and Property Returns.

eGovernance Applications developed on Service Plus Framework

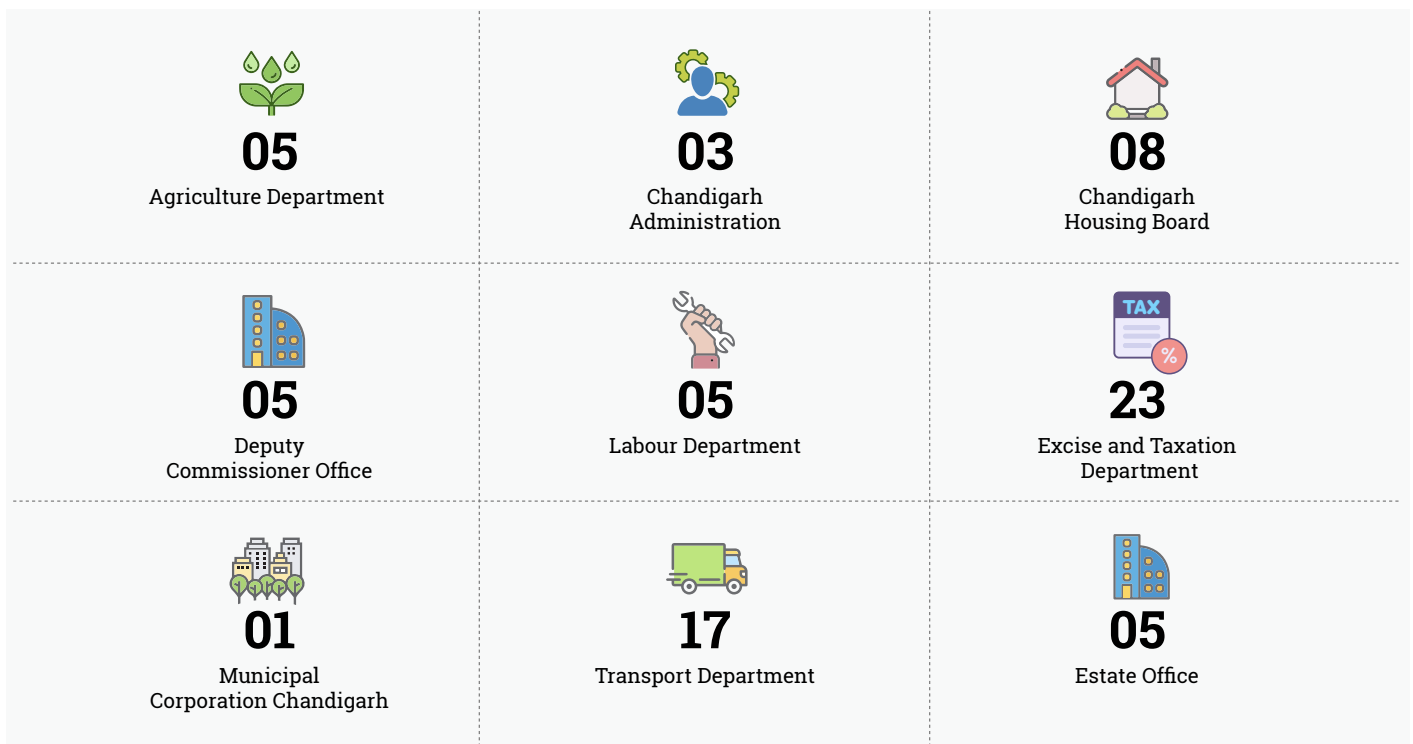
In an effort to provide better services to the citizens of the Union Territory, the UT Centre digitised 58 services for various UT departments. These services were built on LowCode-NoCode (LCNC) architecture using ServicePlus meta-data based e-Service delivery framework.

These digital schemes were launched by the Hon'ble Governor of Punjab and Administrator of Chandigarh, Shri Banwarilal Purohit, in a state level event on 2nd May 2022. (Ref Fig. 2.2)

Out of these 72 services, 8 services were launched for Chandigarh Housing Board covering its various residential property schemes; 5 services were launched for Chandigarh Labour Welfare Board (CLWB) and Chandigarh Building & Other Construction Workers Welfare Board (CBOCW Board) covering their 23 schemes; 23 Services were launched for Excise & Taxation Department covering 86 regulatory compliance certificates, 17 services were launched for Chandigarh Transport Department and 5 services were made online for Estate office. (Ref Fig. 2.3)

In addition, 26 welfare social schemes were also digitised and onboarded on ServicePlus and Umang app. Out of 26 schemes digitised, 11 schemes were from Social Welfare, Women and Child Development, 8 schemes were from Directorate of School Education, 2 schemes were from Zila Sainik Board, and one scheme each from CCET (Degree Wing), Directorate of Technical Education, Chandigarh State Aids Control Society,

▼ Fig. 2.3: Department-wise summary of citizen-centric services





▲ Fig. 2.4: Department-wise summary for DBT Schemes digitized

Punjab Engineering College, and GMSH. (Ref Fig. 2.4) With this launch, the UT has become first among states and union territories to digitise all direct bank transfer (DBT) schemes.

eDistrict Chandigarh
[\(http://chdservices.gov.in/\)](http://chdservices.gov.in/)

eDistrict Chandigarh is a web-based workflow system that provides end-to-end computerisation of citizen-centric services. Its objective is to provide these services in a transparent, efficient, and hassle-free manner. It is integrated with Aadhaar for online registration and issuance of digitally signed certificates. It is also integrated with eTaal and Digilocker in order to offer better services.

As of now, it provides 25 citizen-centric services, including residence certificates, income certificates, marriage certificates, birth / death certificates, legal heir certificates, etc.

Chandigarh Housing Board Online Payment System
[\(https://payonline.chb.gov.in/\)](https://payonline.chb.gov.in/)

Chandigarh Housing Board (CHB) Online Payment System deals with all kinds of tax payments related to various residential and commercial properties in Chandigarh. The system

maintains a Personal Ledger Account (PLA) and has made the PLA statement for 60,000 flats online. It further facilitates the department for conducting draw under various schemes online.

Chandigarh GIS App

The entire area of Chandigarh UT has been captured by aerial and mobile LiDAR images. The project covers the entire UT region of Chandigarh, around 140 square km, which comprises 63 Sectors in gridded form and 23 villages. The map mainly comprises residential area, commercial area, industrial area, institutional area, agricultural area, forest area, scheduled green belts, parks, gardens, road network, water bodies and all villages (inside and outside the laldora). This map has 420 layers and is available with Chandigarh Administration for making better administrative policies for the betterment of Union Territory.

Estate Office Property Management System
[\(https://estateoffice.chd.gov.in\)](https://estateoffice.chd.gov.in/)

Estate Office Property Management System has been developed to create a functional ICT-enabled solution for delivering digital services by the department to public. It ensures service delivery in a time-bound manner as per a defined citizen

charter. It is also integrated with other offices for information sharing. As of now, a citizen can avail 21 different services onto the platform.

eOffice

eOffice is a cloud-based system designed to support Governance by introducing more efficient and transparent inter- and intra-Government processes. It aims to achieve simplification, responsiveness, efficiency, and openness in workings of all government offices. Beginning in November 2017 with only two departments, NIC UT Chandigarh has implemented eOffice in each and every UT department and their sub-departments. The Centre has also implemented the system in Municipal Corporation of Chandigarh.

Composite Financial Accounting System
[\(https://egras.chd.nic.in/\)](https://egras.chd.nic.in/)

Composite Financial Accounting System (CFAS) is a common integrated platform developed and implemented by the UT Centre for financial services of UT Administration, comprising Payroll Processing, Budget Accounting System, DDO Accounting System, Treasury Information System, Government Receipts Management System and Public Financial Management System (PFMS).

▼ Fig. 2.5: NIC Chandigarh team at the Mega Launch of eServices



Engineering Works and Budget Monitoring System

(<http://admser.chd.nic.in/ewbms/>)

Engineering Works & Budget Monitoring System (EW&BMS) is a work-flow based application being implemented for the Engineering Department (PWD) of Chandigarh Administration to monitor progress of various ongoing works in terms of both physical and financial aspects.

There are four stakeholders involved in this application, viz. Engineering Department, Treasury, Client Departments and Contractors. This application is integrated with PFMS for the management of expenditures and other finances.

Online Jamabandi

(<http://164.100.147.11/onlineakal/>)

Online Jamabandi is a land record management system developed for the Revenue Department of Chandigarh UT. It aims to help people to access official land record of Chandigarh such as Registration, Mutation and Jamabandi using Owner name, khewat number and khasra numbers.

This portal also serves as an authoritative source of information on rules and regulations regarding property registration in UT region.

eAwas

(<https://eawas.chd.gov.in/>)

The Chandigarh Administration House Allotment Committee services are fully computerised by eAwas. These services include online application receipt, verification, bidding, and allocation. The system can provide information on house allotment and vacation, generate and update seniority-based lists, issue rent payment details, allow bidding for vacant houses, handle mutual exchange applications, and manage employee grievances and complaints.

The system is supplemented by a mobile app that helps field inspectors report on the status of houses. Currently, a chatbot has been integrated to assist applicants. NIC has replicated the system for the Municipal Corporation and the Police Department in Chandigarh and Punjab State.

eVigilance

(<https://evigilance.chd.gov.in/>)

eVigilance portal has been developed for the convenience of more than 33,000 Chandigarh UT employees. It has cut short the time taken for vigilance clearance from several weeks or months to a maximum of 2-3 days. The user department only has to apply on the portal to get the Vigilance Clearance Certificate.

As of December 2022, the portal has received a total of 21,856 applications and out of which, 20,876 have been cleared for the same.

eGazette

(<https://egazette.chd.gov.in/>)

eGazette portal publishes official Gazette and Notifications issued by the Chandigarh UT Administration. These Gazettes and Notifications are of great use to Industry, Citizens, and



▲ Fig. 2.6: UT Administration and NIC teams at the inauguration of New Chandigarh UT Secretariat

Governments. The portal is managed by the Department of Printing and Stationery, Chandigarh UT. Since October 2019, the portal has published a total of 1,294 notifications and 514 gazettes.

Reservation Roster, Recruitment Rules and Vacancy Management System

This application is developed for Department of Personnel and Social Welfare, Chandigarh UT in order to fill the information gap related to updation of Recruitment Rules and vacancies in UT machinery. It allows the Head of Department (HoD) to monitor on his / her dashboard category-wise vacant positions in their departments and send automated quarterly alerts to the Branch In-charges to update the information, so that the posts do not lapse after two years of remaining vacant. Furthermore, this increases the transparency in cadre management and improves employee satisfaction.

Excise & Taxation

The UT Centre has developed three application modules for the Department of Excise & Taxation, namely, ePermit, Liquor Licensing System and Label Registration to facilitate better service delivery.

Court Computerization

(<http://chddistrictcourts.gov.in>)

(<http://admser.chd.nic.in/>)

A centralised solution is in place covering all the 19 District courts. The data is being used to generate the cause list case details, judgments etc. Besides, computerisation has been carried out at State Consumers Disputes Redressal Commission (SCDRC) and Central Administrative Tribunal.

Initiatives during COVID

COVID-19 pandemic is a once in a lifetime event. It disrupted life in a unprecedented way. It required efforts from both Government and Citizens to tackle the menace, and UT Centre was no different. The UT Centre has played a pivotal role in providing infrastructure services in terms of Internet / Email / Bulk Messaging / Web / Mobile based applications and Video Conferencing facilities to the UT Administration on a 24 X 7 basis. Besides infrastructure services, the UT Centre was also involved in the following activities:

- Issuing movement passes for people involved in essential services
- Registration and issuance of passes for migrants
- SMS alerts for Rapid Antigen and RTPCR Reporting
- Issuance of exemption certificate for tax free import of COVID-19 relief materials
- ePermits for Oxygen Cylinder for Home
- Mobile app for distribution of free food grains under PMGKAY.

Network and Infrastructure Services

NKN

Under NKN Project, NIC Chandigarh provides high-speed network connectivity to top educational and research institutions in UT and neighbouring states. IIT Roop Nagar, CSIR-IMTECH, Chandigarh, Panjab University, Chandigarh, and NDRI, Karnal are just a few names in a very long list. The network is designed using a proactive strategy that anticipates future needs and opportunities, both in terms of usage and perceived value.

Regional Network Centre

In 2003, the UT Centre commissioned a leased line network to connect all offices in District Collectorate (Punjab, Haryana & Chandigarh), Punjab and Haryana High Court, Haryana and Punjab Secretariat, and all other state government departments and offices in the territory. Later, this was extended to other neighbouring regions of Himachal Pradesh, Jammu & Kashmir, Punjab and Haryana. In addition, the UT Centre also offered a Managed Leased Line Network connectivity to various central government departments and offices which include Census, Directorate General of Foreign Trade, Environment and Forest, Unique Identification Authority of India, Registrar of Companies, and Central Government Health Scheme, etc. The base bandwidth for NICNET / Internet access for the network has been strengthened to 10 Gbps links through different ISPs.

Chandigarh SWAN

The UT Centre successfully implemented Chandigarh State Wide Area Network (CSWAN), funded by the Government of India. Under

this project, all the major offices of Chandigarh UT Administration along with eSampark, eJanSampark, and GramSampark Centres were connected under CSWAN. There are also 7 Points of Presence (PoPs) namely Chandigarh Municipal Corporation, Deputy Commissioner Office, Sub Divisional Magistrate (South) Office, Sub Divisional Magistrate (East) Office, Government Medical College and Hospital Sector-32, Government Multi-Specialty Hospital Sector-16, and Registration & Licensing Authority, which were connected to the CSWAN. NIC also ensures connectivity on 24 x 7 basis.

Chandigarh State Data Centre

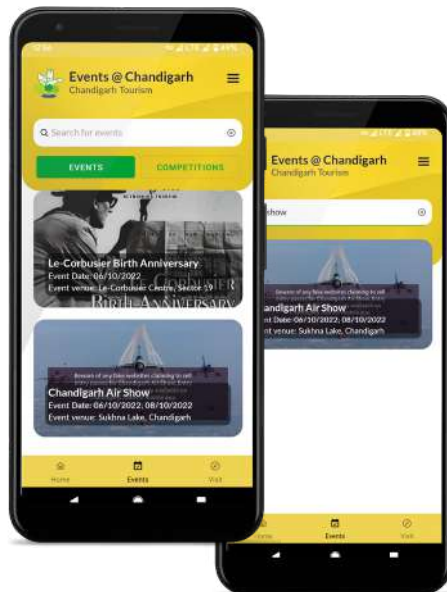
Chandigarh Administration decided to use the existing NIC Chandigarh Network & Data Centre established in 2004, as State Data Centre (SDC) to cater ICT services to Chandigarh Administration. It is equipped with state-of-the-art infrastructure to facilitate eGovernance initiatives as well as to cater diverse computing and networking requirements of Chandigarh Administration. A cutting edge high capacity (30 TB) storage area network (SAN) is also set up in SDC to provide a shared pool of storage to Servers. It is operational on 24 x 7 basis and is manned by technical persons in different shifts to respond to any kind of technical support to concerned users. All the major departments under Chandigarh Administration are connected to SDC through high speed channels to provide efficient services.

Mini Cloud Centre

Due to advancement in communication technology and increasing penetration of mobile networks, there has been drastic change in the way Government services are delivered to the citizen.

The computerisation of citizen services and G2G services have increased dependence on reliable, robust and high speed networks and state-of-the-art data centres. To meet the increasing needs and due to insufficient space at the existing Chandigarh State Data Centre, a new 6100 sq. ft. Mini Cloud setup has become operational from February 2022. Further enhancement of the ICT infrastructure including Networking, Computer, Storage and Backup infrastructure at this Centre is also being done to meet the increasing needs of the UT administration.

▼ Fig. 2.8: Chandigarh Network and Mini Cloud Centre



▲ Fig. 2.7: Chandigarh Tourism app

Video Conferencing

The UT Centre is providing VC facility to all Chandigarh Administration departments for which, a VC Studio has been set up at the Chandigarh UT Secretariat. Apart from this, 15 more VC studios have been set up at various UT departments to handle their VC sessions including one at Punjab Raj Bhawan Chandigarh for VIPs sessions. The UT Centre also provides technical support to Chandigarh Administration for Network and VC services at remote locations during VIPs events. On average 100 VC sessions are conducted per month by the UT Centre. This includes both legacy and web-based VC solutions.

Internet & Email

The UT Centre has promoted the use of government eMail services across all UT administration departments and offices. As of now, the Centre manages over 7,200 email accounts, which have been provided to officers and staff of Chandigarh Administration and Central Government departments in Chandigarh.

Web Development and Management

NIC Chandigarh UT Centre provides web hosting

and management services to all Chandigarh UT and Central Government departments. As of now, there are 67 websites hosted and managed by UT Centre team under Chandigarh State Mini Cloud and National Cloud Meghraj. Most of these websites are based on NIC S3WAAS framework, which stands for Secured, Scalable, and Sugama Website as a Service. These websites have a uniform and responsive design, which makes them easily accessible through a variety of devices viz. mobile, tablets, and personal computers. These websites are GIGW compliant and follow accessibility standards.

Important Events Organised

● Sukhna Lake Air Show

Indian Air Force celebrated its 90th anniversary at Sukhna Lake, Chandigarh on 8th October 2022. The event was attended by the Hon'ble President Smt. Draupadi Murmu alongside Hon'ble Union Minister of Defense, Shri Rajnath Singh. For the smooth functioning of the event, the UT Centre provided technical support by establishing the Green Houses at Sukhna lake, Punjab Engineering College, and Punjab Raj Bhawan in coordination with various Departments of Chandigarh UT. A mobile app for Chandigarh Tourism Department was also developed to provide passes to the general public and facilitate crowd management. (Refer Fig. 2.7)

● New UT Secretariat Building Launch

Successfully provided VC and Network during the launch of the New Secretariat Building by the Hon'ble President of India, Smt. Draupadi Murmu.

Accolades

- National Silver Icon Award for Comprehensive Web Presence
- National Golden Icon Award for e-Sampark
- National Silver Icon Award for Best Government Website
- CSI-Nihilent Best eGoverned State/UT Award
- CSI-Nihilent Award of Appreciation for General Elections 2014
- Best Performance Award for Government eProcurement System (GePNIC)

Way Forward

NIC Chandigarh UT Centre stands committed to provide a valuable impact on digital governance. In collaboration with the UT Administration, the Centre endeavours to take forward several ICT enabled G2G, G2E and most importantly G2C services into general public. As of now, it is working toward rollout of Property Management System, Tax Management System and One Map GIS Portal.

Contact for more details

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