Digital Courts

Detailed Project Report

e-Courts Project Phase III

E-Committee, Supreme Court of India
&
Department of Justice

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TABLE OF CONTENTS

THE JOURNEY SO FAR

The e-Committee of the Supreme Court of India was established in 2004 by the order of the Government of India to pursue a proposal received from Justice R.C. Lahoti, the then Chief Justice of India. The e-Committee is the governing body that oversees the e-Courts Project conceptualised under the "National Policy and Action Plan for Implementation of Information and Communication Technology (ICT) in the Indian Judiciary-2005". The e-Courts Project is an Integrated Mission Mode Project as part of the National e-Governance plan (NeGP) for the Indian Judiciary.

The e-Committee has evolved in its roles and responsibilities over the last seventeen years. The objectives that the e-Committee seeks to achieve are:

(i)   the interlinking of all courts across the country including High Courts and District and Taluka Courts;

(ii)   ICT enablement of the Indian judicial system;

(iii)   enabling courts to enhance judicial productivity both qualitatively and quantitatively; and

(iv)   to make the justice delivery system accessible, cost-effective, transparent, and accountable.

At present, the Chief Justice of India, Mr. Justice Uday Umesh Lalit, is the Patron-in-Chief of the e-Committee. The e-Committee is chaired by Dr. Justice D.Y. Chandrachud, Judge, Supreme Court of India. Justice R.C. Chavan, Former Judge of the Bombay High Court, is the Committee's Vice-Chairperson. The e-Committee also comprises of four other members – Mr. Atul M. Kurhekar, Mr. A. Ramesh Babu, Ms. R. Arulmozhiselvi and Mr. Kuldeep Singh Kushwah.

1.1 Context/Background

Phase I of the e-Courts Project was approved in February 2007 and revised in September 2010 with revised timelines of 31st March 2014. It was extended once again till 31st March 2015. The Government of India had sanctioned Rs. 935 crores for Phase I.

The Government of India approved the Phase II of the e-Courts Project with a budget of Rs. 1,670 crores in July 2015. As per the action plan of the Phase II of e-Courts Project, the respective High Courts are the implementing agencies under the overall guidance of the e-Committee, Supreme Court of India. Around 18,735 District & Taluka Courts, spread across 3452 court complexes in various states, have been electronically interconnected to provide transparent, fast, and efficient justice oriented litigant centric services. These services include e-filing, up-to-date online case status, availability of judgments and orders on the website, cause lists for advocates, litigants, and courts, digitally signed certified copies, etc.

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e-Courts Project – A Brief Timeline

2005: National Policy and Action Plan for Implementation of Information and Communication Technology (ICT) in the Indian Judiciary – 2005 submitted by e-Committee, Supreme Court of India.

2007: Phase I of the e-Courts Project begins. Court Complexes, Computer Server Rooms, and Judicial Service Centres were commissioned. The District and Taluka Courts were computerised, with the installation of hardware including Local Area Network (LAN) etc. and Case Information Software (CIS).

2013: The e-Courts national portal - e-Courts.gov.in was launched which provided District and Taluka Courts with a secure presence on the

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portal. The Portal provides case status, cause lists, orders, and judgments.

2015: Phase II of the e-Courts project was sanctioned. Phase II was complementary to Phase I which included completing pending objectives and targets of Phase I, as well as focusing on providing more services to different stakeholders. Phase II included the following services:

- Mobile App for e-Court Services - the adoption of technology for efficient use;

- National Service and Tracking of Electronic Process (NSTEP) App - for delivering processes and tracking the delivery up to the last mile;

- Electronic Payment (ePay) - for online payment of Court fees, fines, penalties, judicial deposit etc., bringing in efficiency and avoiding malpractices;

- JustIS Mobile App - for Judicial Officers to monitor the pendency and disposal in their court;

- Virtual court aimed at reducing footfalls in the courts by eliminating the physical presence of violators or advocates in the court, thereby saving precious judicial time.

I. ACHIEVEMENTS

HARDWARE INFRASTRUCTURE:

Under the e-Courts Project, **3452** Court Complexes and **18735** Court Rooms have been computerised. Funds have been released for procurement of various hardware for courts, court complexes, District Legal Service Authorities, Taluk Legal Service Committee and State Judicial Academies. The following types of equipment have been procured:

- o Court Rooms: Computers, LAN, display board monitor, extra monitor, printers, UPS, and servers.
- o Court Complexes: Kiosks, DG sets, smartphones for bailiffs, hard disks, projector with screen and justice clocks.
- o Video Conference: 4512 video conferencing devices provided to (3240 Court Complexes) and Jails (1272 Jails).
- o Computerisation of State Judicial Academies.
- o Computerisation of 652 District Legal Services Authorities and 2257 Taluka Legal Services Committee.
- o Installations of Solar panels in 5% of the total court complexes. Funds provided to install solar panels at 242 court complexes.

II. **WAN CONNECTIVITY:** The Wide Area Network (WAN) Project under e-Courts project is aimed at connecting all District and Taluka court complexes, spread across the country using various technologies like OFC, RF, VSAT. So far, **2970** sites have been commissioned out of 2992 sites with 10 Mbps to 100 Mbps bandwidth speed (completing **99.26**% sites). This forms the backbone for the e-Courts project ensuring data connectivity in courts across the country.

o Many courts under the e-Courts project are in far flung areas, termed as Technically Not Feasible (TNF) sites, where terrestrial cable cannot be used. These sites are being connected using alternative means like RF, VSAT, Submarine cable etc. In coordination with different stakeholders, the Department has been able to reduce the total TNF sites from 58 in 2019 to 11 in 2021 which has resulted in savings of Rs. 95.45 cr. to the exchequer. For these 11 sites also, Work Order has been issued. In the COVID-19 scenario, the WAN connectivity enabled better video conferencing facilities and improved access to justice.

III. **CASE INFORMATION SOFTWARE CIS:** CIS which forms the basis for the e court services is based on customized Free and Open-Source Software (FOSS) which has been developed by NIC. Currently, CIS National Core Version 3.2 is being implemented in District Courts and the CIS National Core Version 1.0 is being implemented for the High Courts.

Every single case has been provided with a Unique Identification code which is called CNR number and QR Code. This has led to the development of National Judicial Data Grid (NJDG) as a new communication pipeline for judicial data transmission.

IV. **COVID MANAGEMENT PATCH:** To ensure smooth functioning of Courts during COVID-19 pandemic, a new software patch has been developed to help in smart scheduling of cases. Courts can now hear urgent cases in scheduled time slots and accommodate lawyers, as per the convenience of their schedules, to prevent conflicting engagements. This has proved to be effective in managing overcrowding in the court premises
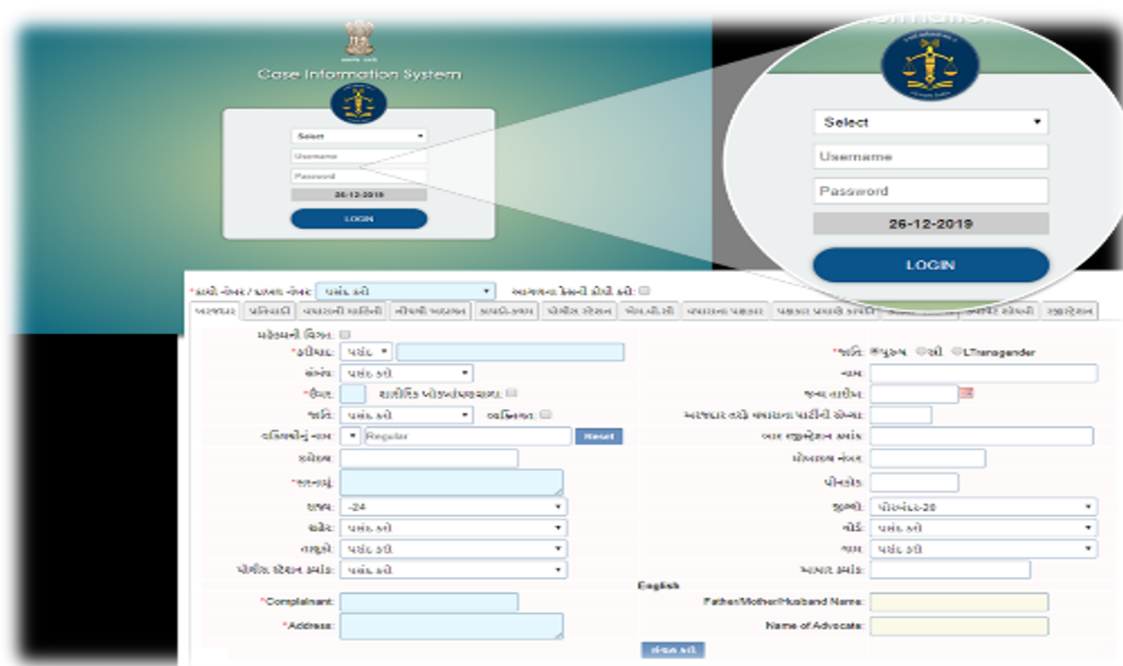
V. **THE NATIONAL JUDICIAL DATA GRID (NJDG):** National Judicial Data Grid (NJDG) is a database of orders, judgments and case details of High Courts, District Courts, and Taluka Courts. Data is updated on a near real-time basis by the connected District and Taluka courts.

o Using the elastic search technology available on thee-Courts services platform, litigants can access case status information pertaining to over 20.63 crore cases and more than 17.77 crore orders / judgments pertaining to these computerized courts. Case data is available on NJDG for both civil and criminal cases with the ability to perform drill-down analysis based on the age of the case as well as the State and District.

o NJDG works as a monitoring tool to identify, manage & reduce pendency of cases. It provides timely inputs for making policy decisions which helps reduce delays in the disposal of cases and helps in reducing case pendency. It also facilitates better monitoring of court performance and systemic bottlenecks, and, thus, serves as an efficient resource management tool.
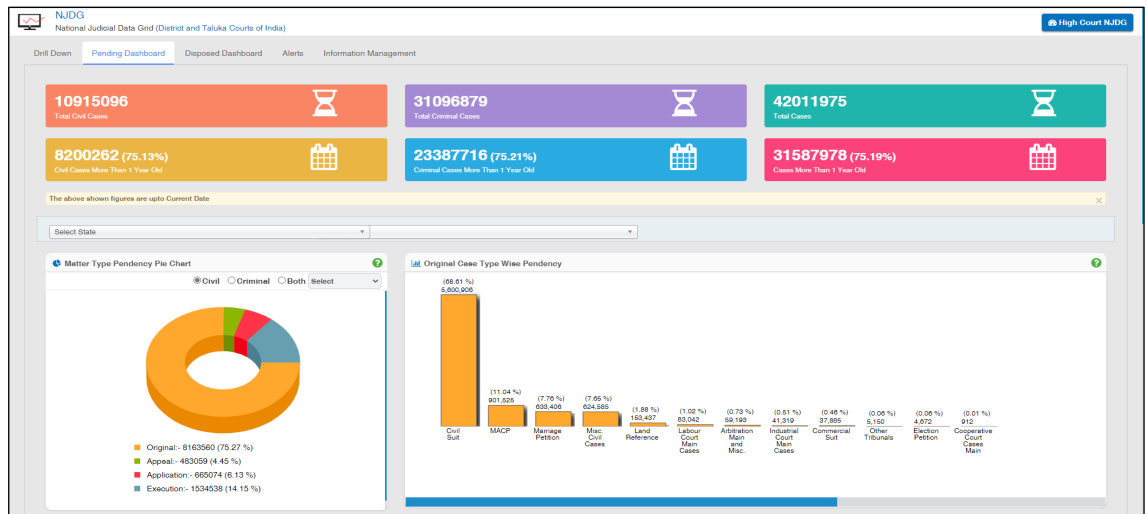
o The World Bank praised the National Judicial Data Grid in the Ease of Doing Business Report 2018, as it made it possible to generate case management reports, which made it easier to enforce contracts. In consonance with the National Data Sharing and Accessibility Policy (NDSAP), announced by the Government of India, the Open Application Programming Interfaces (APIs) have been provided to the Central & State Government which has allowed easy access to the NJDG data using a departmental ID and access key. This will allow the institutional litigants to access the NJDG data for evaluation and monitoring purposes.

o Recently, a feature incorporating the reasons for delay has been included in NJDG. The inclusion of features specifying the reasons for delay on the NJDG portal has the potential to keep track of concerns which the judiciary faces while adjudicating cases. This enables the judiciary as well as decision makers to take various steps in the redressal of the burgeoning pendency of cases. Apart from that, individual reasons for delay highlight the problems at a granular level, which would otherwise be cumbersome to keep track of and be remedied.

VI. **VIRTUAL COURTS:** A novel concept of virtual courts has been introduced under the e-Courts project to deal with petty traffic offence cases. The concept is aimed at reducing footfalls in the courts by eliminating the physical presence of violator or advocate in the court. Virtual court can be managed by a judge whose jurisdiction can be extended to the entire state and court's working hours may be 24X7. Neither litigant nor the judge will have to attend court physically to preside over the case. Thus, precious judicial time will be saved and there will be effective deployment of human resources while simultaneously increasing convenience for citizens.

As on 30.09.2022, there are 21 such courts in 17 States / UTs viz. Delhi (2), Haryana, Tamil Nadu, Karnataka, Kerala (2), Madhya Pradesh, Maharashtra (2), Assam, Chhattisgarh, Jammu and Kashmir (2), Uttar Pradesh, Odisha, Meghalaya, Himachal Pradesh, Madhya Pradesh, Tripura, and West Bengal.

Over 2.14 crore cases have been handled by these 21 virtual courts. In more than 30.07 lakh cases, fine paid online amounting to more than Rs. 316.29 crores have been realised till 30.9.2022.

Fine realised in Virtual Courts (INR cr.)
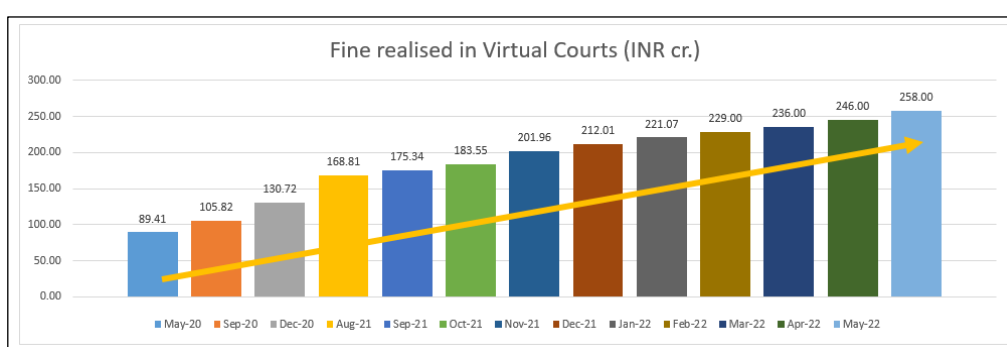
VII. **VIDEO CONFERENCING:** Video conferencing (VC) emerged as the mainstay of the Courts, during the Covid lockdown, as physical hearings and normal court proceedings were not possible. Since the beginning of the Covid induced lockdown, the District Courts across the country have heard 1,53,72,939 cases while the High

Courts have heard 75,43,589 cases (totalling 2.29 crore) till 30.09.2022 using video conferencing as a medium.

The Supreme Court conducted 3,22,814 hearings till 30.09.2022 since the beginning of lockdown. Model VC rules were framed by a five-judge committee which was circulated to all the High Courts for adoption after local contextualization. The proposal to provide a uniform video conferencing platform to all courts is actively under consideration by the e-Committee. One video conferencing equipment each has been provided to all Court Complexes including Taluka level courts and funds have also been sanctioned for additional VC equipment to be provided to 14,443 court rooms. Funds for setting up 2506 VC Cabins have also been made available. Additional 1500 VC licenses have been acquired. VC facilities are already enabled between 3240 court complexes and corresponding 1272 jails. A sum of Rs. 7.60 crore has been released for the procurement of 1732 document visualizers.

VIII. **LIVE STREAMING:** Live streaming of court proceedings, via video conferencing, has been started in High Courts of Gujarat, Orissa, Karnataka, Jharkhand, Patna, and Madhya Pradesh, thus allowing the media and other interested persons to join these proceedings. Under the guidance of e-Committee, Supreme Court of India, a sub-committee was constituted for framing Model Rules for Live Streaming. The said rules were forwarded to High Courts.

IX. **E-FILING:** An e-filing system (version 1.0) has been rolled out for the electronic filing of legal documents. This allows lawyers to access and upload documents related to the cases from any location, at any time of the day, which reduces the need to come to court for filing of such documents. To ensure accuracy of data the details of the case entered in the e-filing application are retained in the CIS software.

The new e-filing 3.0 Portal was inaugurated on 9 April 2021 and is accessible on: https://filing.ecourts.gov.in. In the latest version, a feature has been added which allows advocates and litigants to record their oath with an in-system video recording while uploading documents. It has also provided new dashboard which includes the options of my partners for Advocates, Case Filing, Vakalatnama, pleading, e-payments, applications, and portfolio. Tutorial videos, FAQs and user manual have also been made available in the help section provided in this latest version. The new portal also provides the option of indexing of the documents for the advocates.

Draft e-Filing Rules have been formulated and circulated to the High Courts for adoption. A total of 18 High Courts has adopted the

Model Rules of e-Filing as on 30.09.2022. Since the COVID-19 pandemic, the adoption of e-filing by lawyers and litigants has witnessed a surge.

To promote e-filing, all Central & State Government departments including the PSUs have been requested to use e-filing in all commercial disputes coming up in the commercial courts. Instructions have been issued by the e-Committee to all High Courts to ensure that all government litigation should be e-filed from January 2022. A similar communication has also been shared by the Department of Justice (DoJ) to all Ministries requesting usage of e-filing in all government litigation by January 2022.

X. **E-PAYMENTS:** Online payment of court fees, fines, penalties, and judicial deposits has been initiated through: https://pay.ecourts.gov.in since14 August 2018. Introduction of electronic collection of court fees and other civil payments requires appropriate amendments in the existing Court Fees Act enacted by the various State Governments, besides opening a bank account in a Nationalized Bank or in other bank suitable to receive, hold and disburse such payments electronically.

A total of 18 High Courts have implemented e-Payments in their respective jurisdictions whereas the Court Fees Act has been amended in 22 High Courts till 30.09.2022.

The e-Payments could be enabled through an electronic payment process like SBI ePay, GRAS, e-GRAS, JeGRAS, HimKosh etc. Apart from payments being made through credit / debit cards and bank transfers, other applications like BHIM App, RuPay etc. can also be leveraged along with private wallets like Paytm, Google Pay etc.

XI. **E-SEWA KENDRA:** e-Sewa Kendras have been rolled out to bridge the digital divide by providing e-filing services to lawyers and litigants. Covering all High Courts and one District Court as pilot project, the e-Sewa Kendra project is being expanded to cover all court complexes. The Government has released Rs. 12.54 crore for setting up e-Sewa Kendras. These facilities are being set up at the entry point of the court complexes with the intention of facilitating the lawyer or litigant who requires any kind of assistance. This could range from providing information to e-filing of documents. As of 30.09.2022, 601 e-Sewa Kendras have been made functional in District Courts under 25 High Courts.

On 30 October 2020, India's first e-Resource Centre was inaugurated at Nagpur in Maharashtra. The e-Resource Centre "Nyay Kaushal" will facilitate e-filing of cases in Supreme Court of India, High Courts, and District Courts across the country. It will also assist the lawyers and litigants in accessing online e-Courts services. These facilities are a boon for those who cannot afford the technology. It will provide several benefits such as saving time, avoiding physical exertion, travelling long distances, and will also help in saving costs by offering facilities of e-filing of cases across the country. This will help to conduct court proceedings virtually and provide facilities such as scanning, accessing e-Courts services etc.

XII. **NATIONAL SERVICE AND TRACKING OF ELECTRONIC PROCESSES (NSTEP):** NSTEP has been launched to provide a technologically enabled process for the serving and issuing of summons. A GPS enabled device is given to the Bailiff for the service of summons leading to greater transparency and the implementation of a faster delivery mechanism. It provides real time status update of service of summons while also tracking of geographical coordinates of the

process server at the time of serving. It has currently been implemented in 28 States/ UTs.

XIII. **JUDGMENT SEARCH PORTAL (https://judgments.ecourts.gov.in):** The portal for judgments' search is a repository of judgments and final orders passed by the High Courts.

   a. This facility is provided to search judgments based on several search criteria and parameters. The most important feature of this portal is use of free text search engine, which provides judgments based on a given keyword or combination of keywords.

   b. The combination of several search options may assist the stakeholders in getting the desired results.

   c. Multiple search boxes help to narrow search results.
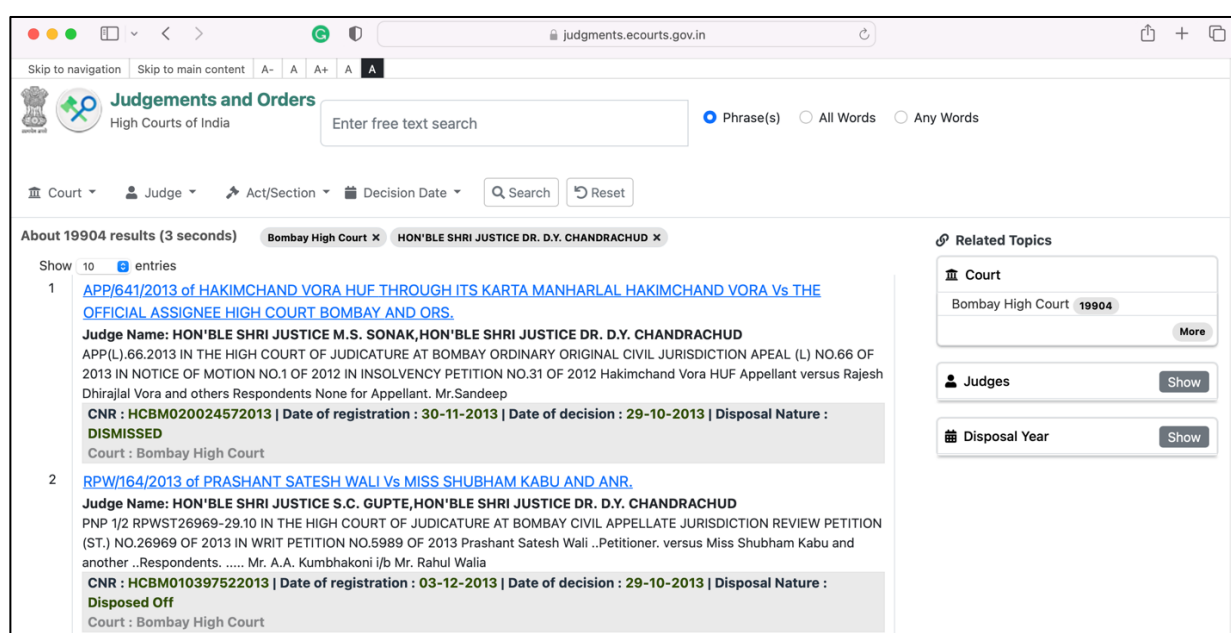
XIV. **JUSTICE CLOCK:** To make effective use of database created through National Judicial Data Grid (NJDG) and to make the information available to public, LED Display Message Sign Board System have been installed. The purpose of Justice Clock is to

spread awareness about justice dispensation, various schemes of the e-Courts project to the public. The electronic signage system provides information regarding the disposal of cases by courts, various schemes and services offered in the court complexes. It also provides statistical data of the case status on various parameters to the public and other information through which the citizens can benefit. A total of 38 Justice Clocks are functional in 24 High Courts. An amount of Rs. 13 lakhs have been sanctioned by e-committee for each Justice Clock. Till date Rs. 4.94 crore has been released for 39 Justice Clocks to different High Courts by the e-Committee, Supreme Court.
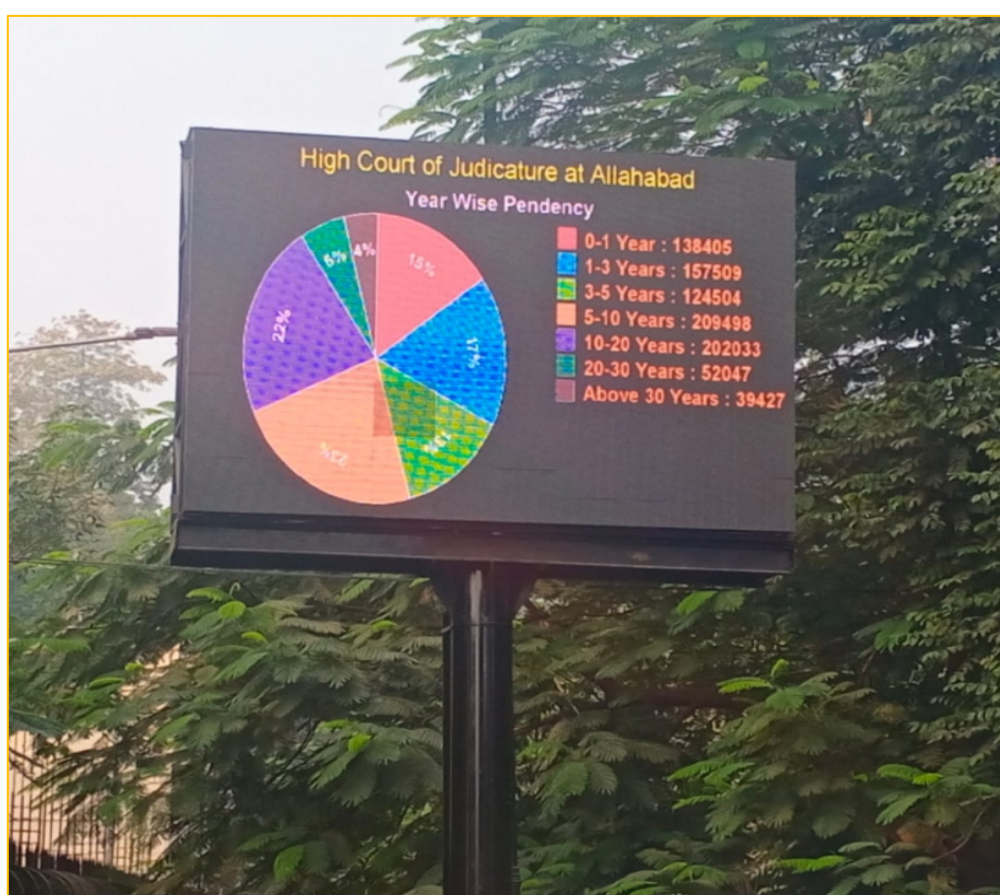
XV. **SECURE, SCALABLE & SUGAMYA WEBSITE AS A SERVICE (S3WAAS):** A new divyang friendly website for e-Committee, based on S3WaaS platform is live in 13 regional languages including English & Hindi.

All other court websites are being upgraded from the existing system to the S3WAAS platform, which is much more secure, scalable, and accessible. Content published on the website is accessible to persons with the disability – who will be able to access information using assistive technologies.

XVI. **AWARDS AND RECOGNITION:**

a) As per data published on Electronic Transaction Aggregation & Analysis Layer (eTaal) portal, e-Courts ranked No.1 among the Mission Mode Projects (MMPs) in India based on e-Transactions.

b) e-Courts Project has also been awarded the National Award 2020-2021 in 'Gold Category I – Excellence in Government Process Re-engineering for Digital Transformation', under the patronage of Department of Administrative Reforms and Public Grievances for exemplary implementation of e-governance initiatives.

c) e-Courts Services has been awarded the prestigious Digital India Award 2020 instituted under the aegis of the National Portal of India for Excellence in Digital governance.

d) Under the Digital India Award 2018, the e-Courts Project for its e-Courts Services Mobile App has been awarded the Platinum Award for Best Mobile App.

e) Ministry of Electronics and Information Technology, Government of India has awarded the e-Courts Project with the Gems of Digital India Award 2018 (Jury's Choice) for excellence in e-Governance.

XVII. **INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) AND TRAINING:** As part of ICT campaign, several initiatives have been taken to educate the judicial officers, lawyers and public about the citizen centric services available under e-Courts Project, such as

a. e-Committee Website: Launched exclusively for the e-Committee and linked to the website of the DoJ for dissemination of information relating to e-Courts Project amongst all stakeholders and to enable High Courts to upload their achievements and best practices.

b. Awareness and familiarization of e-filing: Webinars for Bar Council of Tamil Nadu, Goa, Maharashtra, and Delhi were held. Manual and Brochure on e-Filing is made available on e-Filing Portal.

c. YouTube Channel: Under the title 'e-Courts Services' for video tutorials on e-Filing. 12 help videos in 7 regional languages, apart from Hindi and English have been uploaded and circulated for advocates as part of awareness, through e-filing portal help desk and on social media through e-Committee YouTube channel.

d. e-Committee Training at National, State, District level: Training and awareness programmes on the ICT have been conducted covering 5,13,080 stakeholders including Advocates, Advocate Clerks, High Court Judges, District Judges, Judges of District Judiciary, Court Staff, Master Trainers among Advocates, Judges & staff, Technical Staff of High Court & Law students through NJA, SJAs, and High Courts. 25 Advocate Master Trainers have been trained in each High Court who in turn have already trained 5409 Advocate Master Trainers across the country. These, 5409 Advocate Master Trainers have in turn imparted training programme on e-Courts Services and e-filing in each district of the country for advocates in their regional languages and identified Master Trainer Advocates. e-Committee, Supreme Court has acknowledged and appreciated Master trainers

by issuing Digital certificates. These certificates can be authenticated by scanning QR Code from mobile.

II. CITIZEN CENTRIC SERVICES

As part of e-Courts project, 7 platforms have been created to provide real time information on case status, cause lists, judgments etc. These services are provided to lawyers/litigants through web portal, SMS Push, SMS Pull, Email, Mobile App, JSC (Judicial Service centres) and Kiosks.

Under the E-Courts project, the citizen centric services are provided to citizens through the following 7 platforms:

i. **Web Portal** (https://ecourts.gov.in/ecourts_home/): e-Courts services portal is a one-stop solution for all stakeholders such as litigants, advocates, government agencies, police, and ordinary citizens to procure the status of cases, view cause lists, judgments, daily orders etc. Citizens can locate the case details arising from any court across the country using various search criteria available on the website. The e-Courts services website receives 1.07 crore hits daily.

ii. **Mobile Apps**

   a. **e-Courts services Mobile App** for advocates and litigants is a platform wherein users can view case status, cause lists, orders etc. e-Courts Services mobile app provides a facility for all stakeholders to create a portfolio of interested cases and track those for future alerts. Total 1.317 crore downloads till 30.09.2022.

   b. **JUSTIS MOBILE APPLICATION:** JustIS mobile application has been created for the Judicial Management System. Judicial management, planning, monitoring, and administrative decisions can be taken with the help of information generated through the National Judicial Data

Grid and JustIS application. Total 17,609 downloads till 30.09.2022.

iii. **SMS PUSH:**

Case status is sent automatically to the registered advocates and litigants through SMS by the CIS 3.2 software using the SMS push facility. In 2022 (up to 30 September 2022), 9,94,27,128 (9.94 Cr.) SMS sent to the registered users (Average per day 3,64,201).

iv. **SMS PULL:**

For litigants who have no internet connection, the case details can be obtained through the SMS Pull application by sending the CNR number to 9766899899 through SMS. An SMS with the case details will be sent automatically to the user's mobile.

v. **Automated Emailing Service to Registered Users:**

The CIS software will automatically send emails to advocates and litigants with the status of their case, next hearing date, cause list and judgment/orders if the user email is registered with the CIS software. In 2022 (up to 30 September 2022), 9,46,74,007 (9.46 Cr.) automated emails were sent to the registered users (Average per day 3,46,791).

vi. **Judicial Service Centre (JSC) cum Central Filing Centre (CFC)**

Although technology is used extensively to deliver transparent and efficient updates regarding the case to litigants, some section of litigants are still not acquainted with technology. For such users Judicial service centre cum Central filing Centre is established in each and every court complex for dissemination of information related to cases.

vii. **Kiosk**

Apart from the Mobile App and eCourts portal, every court complex in the country is equipped with Touch Screen Kiosk using which Litigants and the public can check the status of their cases based on various criteria. Funds released to high courts for procurement of 3293 kiosks.

e-Courts Services recorded 293.73 crore e-transactions from 1 January 2022 to 30 September 2022 as per e-Taal (Electronic Transaction Aggregation & Analysis Layer) (**https://etaal.gov.in/**) Data:

- e-Courts Services recorded 1229.81 crore e-transactions since the inauguration of e-Courts services website on 7 March 2013 till 30 September 2022.
- e-Courts Project is ranked first under Mission Mode Projects for providing the highest number of e-transactions to the citizen.

Number of e-Transactions under eCourts Project as per eTaal Website (Yearwise) up to 30.09.2022
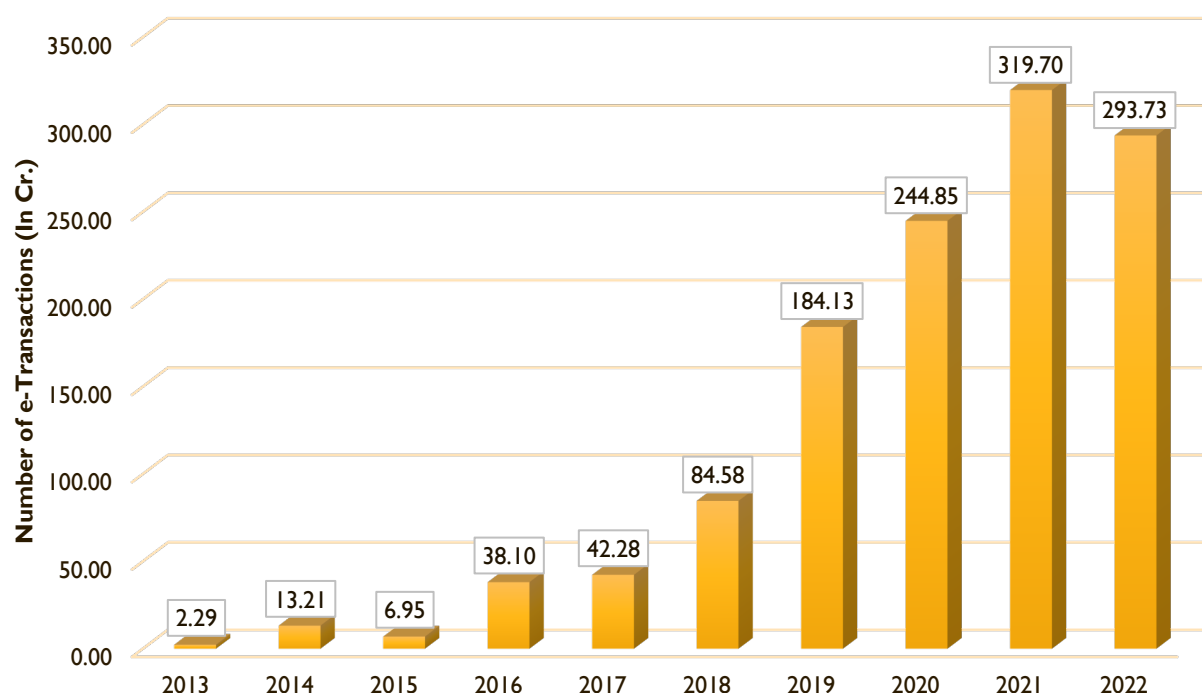
III. CHALLENGES

The following common problems are to be resolved

Bridging the digital divide	Lack of awareness	Resistance to change
Insufficient infrastructure	Digital exclusion is still a problem for many lawyers and litigants, especially amongst underprivileged sections of society	Robust and stable connectivity
Institutionalise the practises	Standardisation	Digitisation of case records
Tools to be created for dispute avoidance	To be implemented across all the states	Integration with other departments without affecting privacy and data security

LEARNINGS AND THE OPPORTUNITY FOR CHANGE

The sudden onset of the pandemic forced all the courts to switch to virtual hearings. The virtual hearings required massive technical infrastructure like video conferencing equipment, software applications and internet connectivity. It also required case papers and documents in a digitised format. The virtual hearings necessitated the creation of virtual courts, e-Filing, paperless courts, live streaming of court proceedings and digitisation of case records.

DoJ got the scheme implementation of Phase II evaluated by National Council of Applied Economic Research (NCAER) in early 2021. This study provides an evaluation of the e-Court Mission Mode Projects- Phase II. The study is based on a sample survey of its key stakeholders, covering the various components of the project and an analysis of the secondary information on the performance of the courts in terms of new cases, disposition, and pending cases in the period when the project has been in operation. The report submitted by them also highlighted a few recommendations briefed below which have been taken into consideration in subsequent chapters of this DPR.

Key recommendations submitted by NCAER are:

1   There is a need to generate more awareness regarding the program that makes the legal processes more efficient and provides access to information about the cases for litigants, through publicity campaigns.

2   As benefits from increased computer literacy among the public are not limited to access to justice alone, efforts to raise computer

usage or more generally the electronic communication media may be needed from a general policy perspective. The role of CSCs may be greater in facilitating the spread of information regarding judicial services, especially among the marginalised sections of the population. The CSCs- located near the courts or elsewhere would be the key points of interface for the public and the remote services provided by the judicial system.

3   There should be some initiation program into new processes introduced under the project, for facilities such as in NSTEP and e-filing to the end-users. Until the usage is widespread, support in the utilization of these services would create more confidence amongst the users and feedback by the users will help improve the services.

4   Staff should be trained in operating the hardware fully and should be given adequate support specifically for handling issues related to VCs.

5   While the e-Courts project has created the basic infrastructure for more efficient operations of the courts, maintaining these infrastructure services at high performance levels is critical to the success of the scheme. Training personnel at all levels in the use of new ICT infrastructure is also essential to the success of the project. While reduction in the pendency of cases may not be entirely dependent on the introduction of ICT in the system, the modernisation of operations is one of the key initiatives in this sector that will complement all other initiatives.

6   Increasing monitoring of the progress of the e-Courts project in terms of effective use of new ICT infrastructure through some measurable indicators, such as the number of hearings that take place in a specified period. These would include the monthly or quarterly reports on filing of cases, the use of VC facilities, use of e-filing cases or use of facilities in CSCs.

7   Reviewing and streamlining the financial processes to make the procurement process more efficient so that the ICT infrastructure in the e-Courts continues performing at its optimal capacity.

8   Improving inventory management of parts and other requirements to reduce the down time for the infrastructure services.

9   Looking into the possibility of expanding the coverage of ODR in all courts.

In India, around 50% of the people do not have access to robust internet connections; making access to justice difficult for those who do not have Internet and technical infrastructure. Availability of judicial facilities only through the internet may further the digital divide amongst the people. Therefore, a need was felt to provide a single point access centre to provide digital services. All the necessary services like video conferencing, e-filing and enquiry services are provided in the e-Sewa Kendras under the umbrella of access to justice to all. There is a need to enhance the ambit of e-Sewa Kendra by including other citizen centric services under one roof.

The existing video conferencing infrastructure was created to provide connectivity between courts and jails, but the current video conferencing infrastructure is insufficient for conducting virtual hearings. Hence, the video conferencing infrastructure must be enhanced to cater to virtual hearings and be expanded to other stakeholders like government hospitals, jails, and district legal services authorities. If different video conferencing applications are used in courts, it will be an inconvenience for the staff, advocates, and litigants. A common video conference application must be developed for the use of the judiciary.

Virtual hearings and paperless courts require the case records in digitised form—the scanning and digitisation of the legacy and new case records

must be done at the earliest. The existing infrastructure provided under Phase II is only sufficient for data entry and preparation of judgments/orders. Hence, a robust infrastructural regime for scanning and digitisation must be created. It has been identified that around 3100 crore pages are to be digitised. A subcommittee headed by Dr Justice D.Y. Chandrachud has finalised a Standard Operating Procedure (SOP) to digitise the court records. The SOP has been prepared with the help of domain experts by incorporating international scanning and archiving standards.

There is a growing demand for e-filing of the papers electronically without visiting the courts. E-filing will enable secure access to filings and allow access from different jurisdictions without moving the documents. In addition, the automated generation of receipts will engender transparency, facilitate ease-of-use by providing stepwise instructions, reduce clerical errors such as at the time of computation of court fees and significantly lower costs of preparation of multiple duplicates of filings.

The Department-related Parliamentary Standing Committee on Personnel, Public Grievances, Law, and Justice in its 107th Report has also recommended that the e-Court Project need to be continuously upgraded. The relevant recommendation is as follows:

> "5.40. *Since, there is no end to development of modern information and communication technologies, the Committee recommends that e-Court Project needs to be continuously upgraded by making it more litigant friendly, interactive, by providing details regarding attendance/leave of judges dealing with the case, disposal rate, SMS/email about case status to litigants after each hearing, deploying Artificial Intelligence and Blockchain to automate*

routine judicial process, including provisions of complaint and grievance redressal by litigants against court staffs/officials etc."

In Phase III, modern technologies like artificial intelligence, blockchain, big data politics analytics etc. will be used in the e-Courts applications. Modern technologies will help to predict and forecast case pendency as well as litigation patterns. These modern technologies will be helpful in reducing the pendency of the cases.

The Online Dispute Resolution (ODR) technology platform guides parties through negotiation, reduces confrontation and helps level the playing field. The technology is advancing regularly and providing various new tools to tackle the issues in an organization. To achieve all the objectives as mentioned above, judiciary must keep updating its technological tools. The policy regarding use of ODR will be decided by e-Committee in consultation with the High Courts.

VISION FOR PHASE III

Phase III of the e-Courts project envisions a judicial system that is more affordable, accessible, cost-effective, predictable, reliable, and transparent for every individual who seeks justice or is part of the delivery of justice in India.

Phase III of the e-Courts project in India is rooted in Gandhian philosophy. At its core, the use of technology in the judiciary is characterized by two facets central to Gandhian thought—access and inclusion. This, when combined with the other long-standing objectives of the judicial system— equity and efficiency—provide the founding vision of Phase III of the e-Courts project towards digital courts. The continuing endeavour of the Indian judiciary in independent India has been to provide expeditious and inexpensive access to justice for citizens. Today, technology is a powerful tool to accelerate this endeavour. It offers the opportunity to make the justice system equitable, facilitating each citizen, especially the marginalised, to approach the courts for redress. Hence, ICT enablement of the Indian judicial system and enhancing judicial productivity, both qualitatively and quantitatively, is one of the crucial objectives of this Phase.

To achieve this vision, we need to fundamentally expand the scope of what we mean by the justice system. In the 21st century, we must see the administration of justice not just as a sovereign function but as a service to mitigate, contain and resolve disputes by the courts. And in that sense, technology integration for better justice delivery in Phase III must encompass the complete lifecycle of justice.

COVID-19 has amplified the need to strengthen digital capabilities and has provided the stepping stone to an unprecedented opportunity for

change. But such a change cannot be achieved without adopting a radically different approach from the one adopted in Phase I and Phase II while building on its foundations. Given the large, diverse, and constantly evolving needs of other users and the constant evolution of technology, the focus of Phase III is on adopting technology and providing a robust governance framework. It envisions an infrastructure for the judicial system that is natively digital. It does not merely digitise paper-based processes, it transforms processes for a digital environment.

Phase III will enable any litigant or lawyer to file a case from anywhere, at any time, without having to go through multiple windows in the premises of any specific court. It seeks to create a reality in which lawyers and litigants can effectively plead their cases with the certainty of hearings. Judges can decide fairly through optimal hearings: either on the virtual platform or in-person or hybrid mode.

Phase III envisions smart scheduling which is to put in place an intelligent system that enables data-based decision making for judges and registries when scheduling or prioritising cases and allows for greater predictability and optimisation of the capacity of judges and lawyers.

Today many activities related to NSTEP, ICJS implementation, Virtual Courts, e-Filing, e-Pay, e-Sewa Kendra, Solar energy etc., are in distinct phases of implementation. They are yet to achieve the project milestones.

In addition, the e-Committee in Phase III recommends a whole-of-system approach to make processes more efficient across the lifecycle of a dispute, i.e., dispute avoidance, containment, and resolution. Each of these components will require technological integration with different institutions. In addition, Phase III suggests specific adoption and governance frameworks with the goal and strategy to prioritise the creation of a core digital infrastructure that can enable the development

of services for dispute resolution by the judiciary and services of solutions for dispute containment and resolution by the ecosystem.

A. AIMS AND OBJECTIVES

The following are the proposed aims and objectives;

- Harness technology to "empower" and "enable" the Indian judicial system;

- ICT enablement of the Indian judicial system and enhancing judicial productivity, both qualitatively and quantitatively;

- Creating an efficient and responsive judicial system;

- Easy and efficient access to real-time case information anytime and anywhere;

- Offer multiple channels for service delivery for broader access to the services Advanced interlinking of all courts across the country;

- Enhanced service delivery channels like Kiosks, Web portals, Mobile App, email, SMS Pull, SMS Push etc.;

- Develop a robust nationwide monitoring mechanism;

- A move towards paperless courts through digitisation, e-filing, virtual courts, e-payments etc.;

- Enable audio and visual communication between persons at various locations for judicial hearings;

- To improve transparency, accessibility, and accountability through Live Streaming;

- Integrating modern technologies for smoother user experience;

- Smart scheduling: Put in place an intelligent system that enables data-based decision making for judges and registries when scheduling or prioritising cases and allows for greater predictability and optimisation of the capacity of judges and lawyers;

- Build a "smart" system in which registries will have minimal data entry or scrutinise files owing to foundational capabilities of data connected through leveraged technology;

- Design a system that integrates alternative means of dispute resolution into the judicial process, such that they are seen as extension of the courts themselves;

- Several repetitive and routine processes designed in a pre-digital era can be eliminated or simplified using digital technology to improve efficiency;

- Creating Digital Infrastructure and capabilities (in contrast to services or solutions) that can facilitate the creation of an infinite number of additional services/solutions.

1.2   e-Courts Project Phase III - Highlights

In Phase III, the following activities will be taken up:

1. Fully functional advanced e-Sewa Kendras in all court complexes with the number of such Kendras in each complex depending on the size of the court complex;

2. Interlinking of all courts across the country including High Courts and District and subordinate courts; ICT enablement of the Indian judicial system; enabling courts to enhance judicial productivity both qualitatively and quantitatively; and to make the justice

delivery system accessible, cost-effective, transparent, and accountable;

3. Setting up the infrastructure for paperless courts, phase-wise, with all commercial courts becoming paperless in the first instance.

4. Expansion of the virtual courts for hearing of court cases by creating a robust digital infrastructure. Initially, these courts could be set up in a few courts as pilot projects;

5. Live streaming of court proceedings;

6. Digitisation of the entire court records, both legacy records and pending cases;

7. E-filing of cases;

8. Provision for enhancing and upgrading the available infrastructure of video conferencing;

9. Online Dispute Resolution (ODR);

10. Future technological advancements (Artificial Intelligence, Blockchain, etc.);

11. Solar power facilities for ensuring seamless availability of ICT infrastructure;

12. Replacement of obsolete hardware supplied to courts and judicial officers in Phase I and II and provision of ICT infrastructure in newly set up courts;

13. Integration of duty holders (like court, jails, police stations and forensic laboratories) with Inter Operable Criminal Justice System (ICJS);

14. Migration of all District Court websites to the S3WAAS platform;

15. Migration to cloud technology and providing adequate cloud storage and other requirements incidental to it;

16. Training all stakeholders in ICT awareness / change management;

17. Providing adequate NSTEP facilities in all States and Union Territories commensurate with the number of districts, size of court establishments, case filing and pendency;

18. Providing accessible ICT enabled facilities to persons with disabilities;

19. Development of software applications;

20. Judicial knowledge management;

21. Enhancing the bandwidth for the Connectivity, Service desk, e-Office, and Project Monitoring Unit (PMU) in e-Committee and DOJ.

Each component has been detailed out in the subsequent chapter of this document.

B. IMPLEMENTATION

Similar to the procedure followed in Phase II, the implementing agency in Phase III will also be the High Court. The procurement of hardware, its maintenance and upkeep will also be done by respective High Courts.

The e-Committee will provide policy inputs. NIC or any other agency selected by the e-Committee will provide software developed open source as well as technical and development support for core CIS.

The Project Monitoring Unit (PMU) will continue to be at the e-Committee. Department of Justice (DoJ) will continue to assist the e-Committee and the DoJ will also assist in day-to-day monitoring of the Project.

The formula for providing hardware to the courts will be based on A= courts already covered in Phase II; B= courts not covered in Phase II; C= new courts which have come into existence post the cut-off date. Therefore, the total Courts to be covered will be A + B + C.

The project period for Phase III will be four years, with additional adequate support for sustenance after this period. The warranty period and

obsolescence for computer hardware will be three and five years, respectively.

C. TRANSITION FROM PHASE II TO PHASE III:

The transition from Phase II to Phase III of the Project is required to be managed in such a manner that there is no halt of activities or gap in the Project durations between Phase II and Phase III. This assumes critical importance given the heavy reliance of the judiciary on its digital systems which has only increased post the COVID-19 pandemic.

All the pending tasks of the Phase II have also been carried forward to the Phase III of the Project. The carried forward arrears of Phase II of the Project will be taken up for implementation along with the components of Phase III as per this project report.

The budgeting of Phase III will take care of all the pending objectives and targets of this phase regarding the deliverables of Phase II for all the Courts covered, it will also cover the Courts covered but not fully accomplished in Phase II due to time-lags or other operational issues etc. This roll-over component will ensure a smooth and seamless transition to the next phase.

BENEFITS FOR STAKEHOLDERS
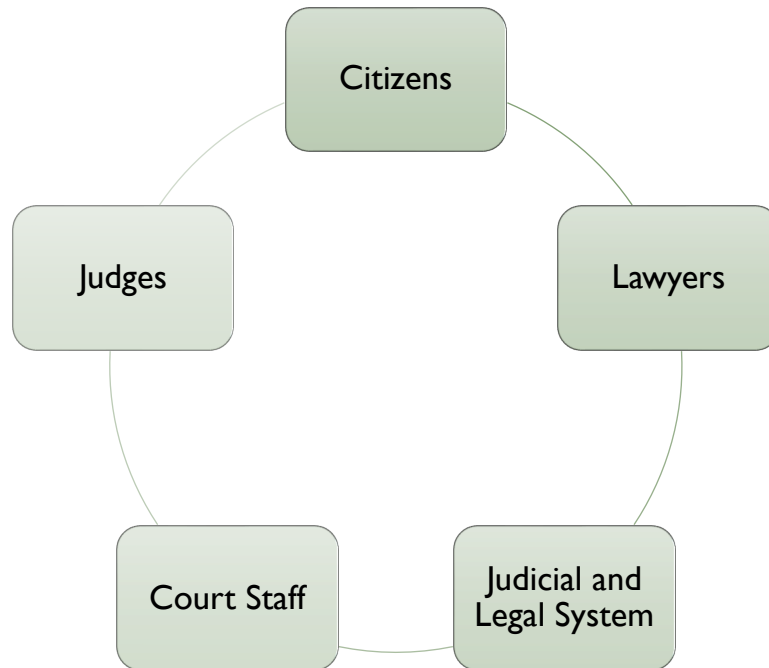
CITIZENS

- Better scheduling mechanisms, online digital filings, and different mediums of hearing will provide certainty of events, increase access to courts from anywhere, and advance access to timely justice.

- E-filings and virtual hearings will reduce legal and travel costs, thereby reducing the costs of accessing justice.

- Proactive alerts and information, such as transcription of cases, live streaming of cases, and open data that would constantly evolve and better the system, will increase transparency and trust in the system.

- Case information across various courts can be uniform in structure, which will simplify the process of tracking of case status in various courts.

LAWYERS

- Seamless filings, service of summons / prior notice to the opposite party and hearings from their cities or homes will bring time and cost efficiencies to their practice.

- The digital case file will be available with the lawyer / litigant. Further, changes being made in real-time will reduce the need for inspection or regular updating of case files by the lawyer / party. This will also avoid issues arising from the loss of case records or the need to reconstruct case files.

- Better scheduling will enable better time utilisation.

- Digital hearings and e-filings will enable the practice of law to become more inclusive for women and differently abled lawyers.

- Greater access to information about similar cases will support crafting legal arguments and strategies.

JUDGES

- There will be greater data, information and support for decision making about the management of the case flow.

- A unified digital platform will enable courts to track the progress of cases from the court of original jurisdiction through appellate courts.

- Intelligent scheduling will support the prioritisation of cases as well as time management.

- Greater ease to search, track, and index digital documents, will make it easier to access facts and legal precedents in real-time.

- Greater access to information and research tools.

COURT STAFF

- Automating processes for scrutiny and review of filed documents. Digital filings will optimise time, minimise errors and increase the effectiveness of the Registry.

- Reduce dependence on the physical Registry.

- The smart design of case management systems being built on top of machine-readable files can reduce the workload of court staff by minimising the need to input data.

JUDICIAL AND LEGAL SYSTEM

- Better data visibility on types and classes of cases that form the largest part of caseload and information on how they proceed will enable more targeted intervention and resource allocation by the judiciary.

- Seamless integration of the judicial system with that of the police, prisons, prosecution etc. will improve the speed of information sharing and more efficient processes.

- Data generated by the system will help inform better laws, procedures, and more effective resource allocation.

- Accessible open data will enable researchers, academics, and civil society to better understand the functioning of the judicial system.

- Minimizing paper-based processes will bring a significant reduction to the environmental costs of the judicial and legal system. There will be increased security, along with minimal time and costs, of moving physical documents from one court to another.

- It will help in institutionalising judicial processes.

TOWARDS DIGITAL COURTS

I. JUDICIAL PROCESS RE-ENGINEERING

Technology can be used to improve, streamline, and optimise traditional court processes. Several repetitive and routine processes designed in a pre-digital era can take advantage of digital technology to improve efficiency. This approach emphasises elimination of redundant steps in pursuit of better performance on predetermined measures of performance. Part of this involves removing digital replication of traditional paper-based tasks, reducing costs, time, and effort for users. Some examples include:

- Granting legal recognition to digital copies of all documents that are part of a case file, with the ability to authenticate them quickly and easily. Where possible, similar recognition should be granted to digital records held by government departments, to streamline the process of providing courts with documents and to track execution of decrees.

- Removing the need to file the entire copy of the main petition and supporting documents along with appeals or applications to higher benches by enabling citizens to refer to the case number of the main matter.

- Eliminating repetitive work for court staff to enter data in the manual registers, in addition to the digital platform.

- Audio and video recording of evidence and presenting arguments through audio-visual media which would also be a record of proceedings.

- Scheduling pre-hearing conferences to fix the time schedule in advance for carrying out the hearing.

- Necessitating that a case be scheduled before a judge in the usual course only after submission of complete pleadings by all parties.

- Integrating payment of process fee with the court fee, at the time of filing and enabling service of notice through digital means to reduce time taken.

Beyond automation, technology can also play a more transformative role by enabling users to perform tasks or deliver certain services that would not have been previously possible. Automated teller machines in the banking system are a good reference point of such simple yet transformative technology. In the judicial system, such transformative technology can target processes that do not need the application of a judicial mind as has already been done with Virtual Courts for the disposal of traffic challans in Phase II. The Chairperson of the e-Committee suggested that the virtual courts can be expanded to cover other summary cases, especially those involving the imposition of fines for minor regulatory violations where statistics indicate that a plea of guilt is entered on the first date. This can be extended to such cases under the Motor Vehicle Act 1988 and Employee Compensation Act 1923. Within these Acts, it can be used for the category of cases in which the disputes primarily relate to the calculations of compensation based on norms conclusively settled by statute or case-law. In such cases, technology can help empower lawyers and litigants to determine fair compensation and help avoid disputes. Transformative technology can also enable intelligent scheduling of cases to reduce the cognitive burden on judges.

A. PROCESS RE-ENGINEERING COMMITTEE (PRC) AT THE HIGH COURTS

Process reengineering is central to effectively move towards Digital Courts. The Digital Courts Technology Office (DCTO) shall provide guidance on opportunities for action and best practices nationwide. However, as processes differ widely between jurisdictions and the authority to amend local relevant rules vests with the High Courts in their respective jurisdictions, it is critical that the High Courts constitute a permanent body that independently analyses and modifies relevant rules and guidelines to effectuate the application of automated or transformative technologies and recommend amendments to applicable laws.

COMPOSITION: The High Courts may constitute the PRC under the e-Committee / High Court Computer Committee (HCCC) or as a separate committee, preferably consisting of sitting judges, retired judges, as well as members who are experts with relevant technological, processes and legal experience to analyse and suggest changes for process re-engineering.

ROLES AND RESPONSIBILITIES: The responsibilities of the PRC would be to:

- Assess existing processes to identify those which need to be changed to improve efficiency and accountability;

- Carry out frequent structured interactions with judges, lawyers, and litigants to understand their needs and experiences to improve existing processes;

- Understand the impact of potential changes to various stakeholders and how any negative impact can be prevented;

- Suggest relevant amendments to existing rules and in consultation with other relevant committees, draft new rules to enable implementation of the re-engineered processes;

- Suggest relevant amendments to procedural laws.

II. DIGITAL INFRASTRUCTURE

A. PRINCIPLES FOR DEVELOPMENT OF DIGITAL INFRASTRUCTURE AND PLATFORMS

Building on the core values of digital courts as envisioned, the development of the Digital Infrastructure should adhere to the following guiding principles to ensure it can evolve over time, as per the changing needs of its users:

1. PRIVACY AND SECURITY BY DESIGN

The e-Committee has already formed a Privacy and Data Security sub-committee to formulate a data governance and privacy framework for the judiciary.

2. OPEN AND INTEROPERABLE

Openness should be core to all processes and outcomes. This serves two key purposes – promoting transparency and ensuring interoperability between the judicial platform and other systems.

3. ACCESSIBLE AND INCLUSIVE

The design should enable people's right to access the judicial process irrespective of their socio-economic background.

4. REUSABLE AND EXTENSIBLE

Incorporating modular architecture will promote repurposing and extending of elements in diverse contexts. It helps in saving valuable time that would otherwise be wasted in reinventing the wheel for every separate build. It also promotes innovation by extending open architectures to new ecosystems.

5. AGILE, DATA-DRIVEN DEVELOPMENT METHOD

FOSS has an advantage as open source and commonly understood software can be rapidly adapted and modified.

6. USER-CENTRIC DESIGN

Rather than relying heavily on changing the behaviour of potential users, be it lawyers, judges, court managers or litigants, their diverse needs should be incorporated into the design of the Platforms.

7. SCALABLE

Digital Courts should be designed for the future and should keep pace with new expectations and technological breakthroughs, as they evolve over the years. Hence, it should be designed in a manner that can easily accommodate new systems and capabilities, as required. The Digital Infrastructure should have the ability to serve any unexpected surge in demand and unplanned expansion at scale. It should also be designed for scale to ensure that it can be deployed nationwide.

8. SYSTEM WIDE PERSPECTIVE

The Digital Infrastructure should focus on removing silos and enabling the delivery of services, record keeping and sharing of data towards

integrating courts, tribunals, prisons, legal aid authorities, forensic service agencies and the police.

9. RESILIENT

When dealing with complex problems and processes, a Platform should have the ability to deal with the variability of the challenges. Solutions and services should be replaceable and adaptable to minimise the impact of any changes, and to adapt seamlessly to unexpected scenarios.

10. COMMODITISED AND HETEROGENEOUS

commoditised technology products, licenses, algorithms, and software (e.g., open-source code) make development cheaper and reliable at scale. The adoption of FOSS software offers the advantage of preventing the judiciary becoming dependent on any vendor or solution ('vendor lock-in'). Technologies already developed, both market products and those developed by the public sector, can be relied on to save time and resources that would go into in house development.

11. UNIFIED NOT UNIFORM DEVELOPMENT

Broad design and specifications of technologies and processes should be outlined at the national level. This is relevant from the point of view of hardware and software to be used, and services to be rendered. It is important that this technology remains seamless and unified (allowing for variations from State to State). However, budgeting, deployment and implementation needs to be decentralised to allow for greater ownership, flexibility, and adaptation to local contexts.

B. SCANNING, DIGITIZATION AND DIGITAL PRESERVATION

Digitization of court records is the central focal point of the e-Courts initiatives. It would enable judicial administrative processes to move towards becoming more environmentally sustainable by minimizing paper-based filings, physical movement of documents from one forum to another, travel of lawyers, litigants, and other actors to reduce the carbon footprint of the courts.

Digitization is critical to the e-Courts project to provide various citizen centric services to litigants and lawyers. Digitization of court records is at the core of the ICT enablement initiatives in judicial domain and for effective hearing of court proceedings in virtual or paperless courts, availability of court records in digitised form is imperative.

Digital courts can lay the foundation for a future in which digital services are widely adopted. COVID-19 pandemic has amplified the need to strengthen digital capabilities and has provided an unprecedented opportunity for change. During the COVID-19 pandemic, the e-Committee innovatively adopted the Information and Communication Technology ("ICT") tools to ensure dispensation of justice in a seamless manner. Globally India has been at the forefront conducting cases through video conferencing during the pandemic.

The Parliamentary Standing Committee (PSC) in its 103rd Report also supported the digitization of court records. The PSC has observed that the digital transformation of the judiciary has important implications for clearing a significant backlog of cases. It will make justice accessible and affordable to a large section of the population and help in overcoming physical and logistical barriers which prevent many litigants from seeking justice. The PSC also observed that introduction of virtual courts would

result in an improvement over traditional Courts as they are more affordable, citizen friendly and offer greater access to justice.

There are many advantages of digitization of court records. A few of them are listed below:

1.EFFICIENT COURT AND CASE MANAGEMENT:

(a) Digitised records are easy to locate, read, represent, render, and interpret. The digital record will accurately correspond to the original physical record. The digital record will also contain all the associated information necessary for proper comprehension. The digital record will be preserved in such a manner that it remains accessible, reliable, discoverable, authentic, and usable for a subsequent reference.

(b) The standardization of all aspects of digital preservation across all High Courts and District Courts will help in achieving greater interoperability between data repositories and benefit the judiciary in accelerating its justice delivery processes. Such records can be shared, exchanged, and accessed at any point in time, enhancing the efficiency of the court in the dispensation of justice.

2. VIRTUAL COURTS:

(a) Virtual courts are the courts of the future in Indian judicial domain. As observed by the PSC, virtual courts will make justice accessible and affordable to a large section of the population and help in overcoming physical and logistical barriers which prevent many litigants from seeking justice.

(b) Virtual courts for traffic violations have proved their utility and efficiency. They eliminate the presence of a litigant or a lawyer in court premises through online adjudication.

(c) The e-Committee is working on extension of the scope of virtual courts to other summary proceedings, especially those involving imposition of fines for minor regulatory violations. The PSC also suggested that the virtual court system should be allowed to continue experimental basis with the consent of all parties for certain categories of cases like appeals and final hearings where physical presence of the parties/counsels is not required, and online virtual hearing is sufficient. Expansion of the scope of virtual courts to other categories of cases will add to the cause of cost effective and expeditious dispensation of justice.

(d) To succeed in these objectives, along with the use of virtual platform for the hearing of regular court cases by the High Courts and district judiciary, the availability of digitised case records in a standardised format is imperative.

3. SAFE AND SECURE:

Digital preservation is a secure and trustworthy mechanism to ingest, process, store, manage, protect, find, access, and interpret information such that the same information can be used at any point in the future despite obsolescence of, inter alia, hardware, software, processes, format, and people. Digitization enhances the security of a document and maintains its confidentiality. Since scanned documents are traceable, access to such documents can be controlled. Information stored on paper is degradable as paper degrades every time it is handled manually. Digitization keeps data safe and easy to access in future.

4.DISASTER RECOVERY:

Any disaster, whether natural or artificial, can cause major damage to paper documents affecting the court processes adversely. Digitization of case records will create a safe backup of data, which can be retrieved at any point in time.

5.ENVIRONMENT FRIENDLY PROCESS:

(a) It is also important to visualize how ICT enablement can positively affect the environment. Indian judicial system is one of the biggest consumers of papers. Production of paper has an adverse impact on the environment. The introduction of paperless courts through projects like virtual courts, digitization of case records and e-Filing will help in reducing the carbon footprint of the courts by reducing consumption of papers, thereby positively impacting the environment.

(b) These projects will also help in minimizing physical presence in courts, thereby reducing greenhouse-gas emissions resulting from commuting to courts and the protracted nature of physical hearings which consume energy resources.

6. COST EFFECTIVE:

(a) It is also necessary to consider that the total pendency of court cases in subordinate judiciary across India is more than 4.11 crore whereas in the High Courts it is around 58,91,239. For the present, all the case records are maintained in physical form. Maintenance of case records of around 4.7 crore pending and approximately 15 crores disposed of cases in physical form is a humongous task, requiring huge storage spaces and human resources for maintenance and transmission of these case records. Digitization of record across India will result in substantial decongestion of court complexes.

(b) Digitization exercise across India will not only help in reducing the costs of maintaining and storing physical files but also result in decongestion of space in court complexes, giving way to utilize this additional space for implementation of other citizen centric services.

(c) Courts must engage substantial human resources for processing, maintaining, and transmitting physical case records. Digitization of court

records will reduce the requirement of human resources on this count, resulting in a reduction of costs spent on such resources, particularly those that are shared or funded by the Central government.

(d) A uniform and long-term approach for preservation of digitized and born-digital records will certainly reduce costs in contrast to a non-standardized and fragmented process of digitization.

Digitization of court records is thus the central focal point of Phase III of the e-Courts project. Around 3100 crore documents will be digitized in the next five years, including all old and current records.

"Digital Preservation" encompasses, inter alia, scanning, digitization, preservation, storage, search, and retrieval. It not only covers digitized data but also born-digital data (commonly referred to as computer-generated e-records). The born-digital data requires greater attention and sustained efforts for preservation since it is far more vulnerable to technological obsolescence.

With these objectives in mind, e-Committee, Supreme Court of India has constituted a sub-committee of judges of High Courts for preparing a Digital Preservation Standard Operating Procedure (SOP) for scanning, storage, retrieval, digitization of court records and preservation of legacy data of the judiciary, along with a working group of domain experts to help in preparing a SOP for digitization of court records.

The sub-committee, considering the international standards of data preservation methodology, security management and open standards, has drafted the Digital Preservation SOP for digital preservation of court records, which will be extremely useful in exchange of data across different technologies. The SOP focuses on the following objectives:

> 1. Covering digitized as well as born-digital records and addressing the looming challenges and threats of technological obsolescence.

2. Envisaging an interoperable implementation model and trustworthy mechanism for digital preservation of High Courts' and District Courts' data boosting efficiency, consistency, and exchange of reliable records / data between judicial entities.

3. Providing coverage for all major aspects of digital preservation, in line with international standards. The document incorporates select ISO standards where an exhaustive set of globally accepted and auditable best practices, procedures and methods are readily available; and

4. Creating Judicial Trustworthy Digital Repositories (JTDRs) as an interoperable and reliable source of digital records, which could be leveraged for building AI /ML based intelligent applications making the judicial system efficient.

The SOP provides a comprehensive budget estimate of around Rs. 2677 crores spreading across 5 years. The overall cost turns out to be 0.86 paise per page. It includes the cost of digitization, metadata creation, curation, establishment, and management of cloud infrastructure by the High Courts as well as JDR management, audit and certification, development, deployment and technical support for the digital preservation tools and software solutions.

To achieve the ICT enablement of Indian Judiciary in its true sense and to make the justice delivery system accessible, transparent, efficient, and cost effective, digitization of court records is of utmost importance and needs to be addressed on priority.

IMPLEMENTATION MODEL FOR SCANNING AND DIGITIZATION

To preserve unified and standardized digitization parameters, design and specifications will be finalized centrally for being adopted for this component of the Project. This is vital to ensure seamless integration and

interoperability amongst the Document Repositories of the Courts across the country. The experiences gained at Supreme Court and other High Courts in this area will be useful reference for designing the methodology and specifications for this activity.

C. CLOUD COMPUTING

To utilize and harness the benefits of Cloud Computing, Ministry of Electronics & Information Technology (MeitY), Government of India has started an initiative – "GI Cloud" (Meghraj). The focus of this initiative is to accelerate delivery of e-services in the country while optimizing ICT spending of the government. MeitY has simplified the procurement process of the cloud, and it has laid down procedures, steps to be followed while migrating to the cloud.

The Guidelines for procurement of Cloud Services and the List of MeitY empanelled Cloud Service Providers (CSPs) are available on the following MeitY website:

https://www.meity.gov.in/content/gi-cloud-meghraj

PROCUREMENT OF CLOUD SERVICES THROUGH GEM

MeitY has empanelled the Cloud Service offerings of major CSPs for ease of cloud procurement for the government departments. The government departments can easily procure the cloud services from CSPs which have been empanelled by MeitY through Government e-Marketplace (GeM). The government departments can avail any one of the three following categories of cloud services from the bouquet of Cloud Services:

i. Basic Cloud Services consisting of Compute Service, Storage Service, Network Service, Database Service, Security Service, Support Service;

ii. Advanced Cloud Services consisting of Container Service, Managed Database as a Service, Content Delivery Network, MPLS Connectivity, HSM, DDoS, TLS / SSL Certificate Management, Dual / Multi Factor Authentication, Monitoring Services, Office Productivity Suite, Analytics Services;

iii. Managed Services consisting of Disaster Recovery as a Service and Backup as a Service.

ENHANCEMENT OF CLOUD

During Phase II of the e-Courts project, cloud storage was procured based on the requirements of storing the metadata and judgments/orders. Now, cloud storage is required for storing the digitisation of court records, live streaming, and electronic evidence etc. Cloud storage is also necessary for establishing paperless courts. Hence, the existing cloud storage needs enhancement to cater to the present requirements' needs. Software applications will also be hosted in the cloud during Phase III. The compute power of the cloud is also proposed to be enhanced to cater to the requirements. Adequate cloud storage and other requirements incidental to it will be provided. Around twenty-five petabytes will be provided for the use of Courts during this Phase. Based on the usage and demand by the High Court, the e-Committee will allocate cloud resources.

Management of cloud compute, storage, database, backup, and disaster recovery are complex tasks, and it requires expert human resources to maintain it. The need to avail managed services for cloud/data centre from MeitY empanelled CSPs as Infrastructure as a Service (IaaS) instead of procuring hardware for cloud/data centre is emphasised.

Security and privacy concerns must be taken into consideration while outsourcing the cloud infrastructure. It is proposed to have cloud infrastructure as follows:

i.   in-house infrastructure for fifteen petabytes of cloud storage for preservation of data.

ii. For another ten petabytes of cloud storage for hosting services and active data, High Courts may decide to have either in-house infrastructure or outsource to MeitY empanelled CSP. The option is being given as market has evolved and there are vendors with specific services with servers physically established in the country.

D. WIDE AREA NETWORK (WAN)

During Phase II, 3,332 courts complexes have been provided with a minimum of 10 Megabits Per Second (MBPS) bandwidth Multiprotocol Label Switching (MPLS) connectivity through BSNL. The DoJ paid the charges for laying optical fibre cables and bandwidth charges for the first two years. As per the Memorandum of Understanding executed during Phase II, the State government will pay the bandwidth charges after two years. Now several State governments have started to incur the expense of the bandwidth charges. Phase III will also extend connectivity to High Courts and District Courts which are not covered under the Phase II.

During the COVID-19 pandemic, Courts have conducted virtual hearings. Video conferencing live-streaming, paperless courts and storing of digitised files requires more bandwidth. Hence, the existing bandwidth for the central infrastructure must be enhanced. The data will be stored in the National Data Centre (NDC) at Delhi and Pune. The bandwidth charges for the NDC are to be paid centrally by the DoJ.

At present around 209 court complexes are functioning without BSNL MPLS WAN connectivity. These court complexes must be provided with BSNL

MPLS connectivity. BSNL has provided an estimated cost of Rs 26.86 crore for first year for connectivity to these 209 new sites. During the Phase III, the sites are expected to increase due to the construction of around 200 new court complexes. Hence, budget has been provisioned for connectivity for approximately 409 new court complexes.

The Computer Committee of High Courts with the help of Central Project Coordinator may deliberate with State Government and e-committee to ensure seamless connectivity using all the options mentioned above. High Courts will plan and arrange redundant connectivity to combat any existing network failure from funds available at State level.

III. SOFTWARE DEVELOPMENT

Objectives

1. Improve time and cost efficiency by automating the entire judicial process through CIS.

2. Re-engineering processes in the judicial system to eliminate efficiencies retained from paper-based processes.

3. Improved transparency and time efficiency.

4. Efficient workflow.

5. Development of standard business practices to build the software application.

6. Develop applications to provide services for citizens.

7. Integrating modern technologies for smoother user experience.

The overall vision of software development is to facilitate the adoption of open technologies in all e-Governance applications and services. While it enables e-Governance services to be made available to the masses, it

also helps the Government to save huge costs on licenses etc. The core of the CIS will be developed centrally under the direction and supervision of the e-Committee. Due to security and privacy concerns and to streamline the data transmission, the CIS will interact with other locally developed standalone periphery and other software applications only through APIs. The database / schema / structure of standalone periphery applications shall be separate from the CIS Core database. High Courts shall use the APIs to develop standalone periphery applications, if any.

In case High Courts develop their own CIS software to suit their needs, then its maintenance, ownership and development will be the responsibility of the respective High Court. The High Court shall share data for publishing on NJDG or such national applications through APIs as per the format and requirements given by e-Committee.

A. FREE AND OPEN-SOURCE SOFTWARE (FOSS)

The e-Committee implemented FOSS solutions in all the E-Courts Projects. Phase II had adopted the Core-Periphery model of CIS, the core being unified as National Core, while the periphery developed according to requirements of each High Court.

In Phase III, digital infrastructure will serve as the backbone that advances the vision of the E-Courts Project. This constitutes an underlying technological framework which houses components (such as knowledge, processes, platforms, connections, and data) to develop and operate services utilised by a user. Its technological architecture must be designed to meet the diverse and evolving needs of stakeholders, while remaining unified.

Further, it is critical that the digital infrastructure enables various parts of the justice delivery system (prisons, legal aid authorities, police, private players etc) to connect and collaborate for improving access to justice. The benefits of such an architecture, key elements to its adoption and principles guiding its design are as follows:

1. Creating a multiplier effect by building a shared digital infrastructure;

2. Amplifying impact through ecosystem participation for implementation and adoption; and

3. Enabling co-creation of diverse and sustainable solutions.

For digital infrastructure to deliver the intended benefits, setting open standards is an essential step. This involves setting standards through a public, collaborative process and making these standards publicly available. In this context, standards consistently repeat specifications for objects (such as data) and processes (such as authentication of personal identity) so that applications can be developed independently but still be compatible with one another.

Since 2010, all the Courts are using customised Ubuntu operating systems in all desktop computers and servers. The customisation has been done by the in-house technical team of the e-Committee and by the NIC's Open Technology Group (OTG), Chennai. The latest stable version of the Apache web server, PHP and PostgreSQL database will be used for development and deployment.

B. OPEN API

E-Committee has prepared an Open Application Programming Interface (Open API) for sharing its data with other government departments. Use of Open API is an innovative solution in harnessing the unlimited potential

of technology to connect stakeholders in the justice delivery system and in finding solutions that are affordable and efficient. It can be used to track cases centrally at an institutional level, monitor readiness of the case, manage pendency and compliances. An API for sharing e-Courts data electronically has been prepared. It is hosted on Bharat API website. Central and State Government departments can apply for API access of e-Courts data. It can be used for litigation management by government departments, local bodies, insurance companies and banks. In Phase III, the data exchange through Open API will be expanded to all government departments.

C. VIRTUAL JUSTICE CLOCK

Virtual Justice Clock will be created for all court establishments. The access for the virtual justice clock will be added to the respective District Court websites. The public can access the virtual Justice clock of any court establishment on the District Court's websites. It will enhance the transparency and accountability of the judicial systems.

IV. ACCESSIBLE ECOSYSTEM

Objectives

Create an accessible digital infrastructure and an appropriate support system in the judiciary.

Section 12 (4) of the Rights of Persons with Disabilities Act 2016 mandates that:

> "(4) The appropriate Government shall take steps to—
>
> (a) ensure that all their public documents are in accessible formats;
>
> (b) ensure that the filing departments, registry, or any other office of records are supplied with necessary equipment to enable filing, storing, and referring to the documents and evidence in accessible formats; and
>
> (c) make available all necessary facilities and equipment to facilitate recording of testimonies, arguments or opinion given by persons with disabilities in their preferred language and means of communication. "

Section 42 of the Rights of Persons with Disabilities Act 2016 mandates that:

> "42. Access to information and communication technology- The appropriate Government shall take measures to ensure that: -
>
> (i) all content available in audio, print and electronic media are in accessible format;
>
> (ii) persons with disabilities have access to electronic media by providing audio description, sign language interpretation and close captioning;
>
> (iii) electronic goods and equipment which are meant for everyday use are available in universal design."

The e-Committee has also taken up the task of making judicial processes, including digital services, accessible to persons with disabilities by taking steps to make the court websites accessible, initiating e-filing for filing

cases online and making orders and judgments available in accessible formats for persons with disabilities.

Websites, tools, and technologies will be designed and developed so that persons with disabilities can use them. It encompasses all disabilities that affect access to the web, including visual, auditory, physical, speech, disabilities.

All the websites of High Courts are being modified to be made disabled friendly. Accessible features such as increase/decrease between the contrast and text, screen reader access, accessible calendar and audio captcha are available on the websites of High Courts. Modifications have been done to allow access to judgments/orders, case status and cause list using screen reader software. But more features must be included in the e-Courts ecosystem. Websites, mobile applications must be regularly audited for accessibility features and continue to be upgraded/modified accordingly.

The e-Courts services system is developed with accessibility features thus enabling the lawyers and litigants with disabilities to participate in the legal profession on an equal footing as compared to their able-bodied counterparts.

Key Features

1. Accessible websites and documents;

2. Fully functional audio captcha;

3. Removal of watermark on all the judgments/orders;

4. Judgments/orders in Hyper Text Markup Language (HTML) format on websites, along with the PDF format;

5. Clearly labelled buttons and calendars to select dates;

6. Use of digital signatures or requiring signatures only on the last page of paper books.

V. INTEGRATION WITH INTER-OPERABLE CRIMINAL JUSTICE SYSTEM (ICJS)
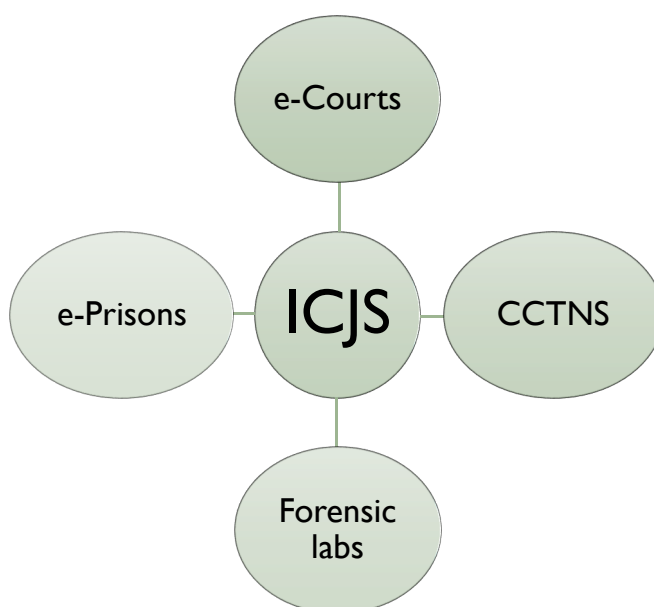
The Inter-operable Criminal Justice System (ICJS) is an initiative to enable seamless transfer of data and information among different pillars of the criminal justice system, like courts, police, jails, and forensic science laboratories.

Most High Courts have implemented live electronic exchange of data between courts and police through ICJS. This will also eliminate data duplication across platforms and delays in the transmission of documents across agencies and states.

The salient features of ICJS are as under

• Enables court users to access FIR and Charge Sheet data directly, thereby eliminating the need for manual entry;

- Reduces time delays due to physical transfer of documents and manual entry;

- Inter-links two-pillar projects, namely Crime and Criminals Tracking Network and Systems (CCTNS) project with the e-courts and e-prisons databases;

- Allows for ensuring compliance with judicial orders and summons expeditiously, ensuring effective time management;

- Enables all the stakeholders to have online and instant access to data from respective software applications;

- Improves time efficiency by avoiding manual exchange or collection of documents from respective departments;

- Makes process of coordination with different stakeholders simplified through process reengineering.

VI. FUTURE TECHNOLOGICAL ADVANCEMENTS

A. ARTIFICIAL INTELLIGENCE (AI)

The main objectives of the e-Courts Project Phase III are to integrate modern technologies for smoother user experience and to build a "smart" system in which registries will have minimal data entry or scrutiny of files owing to foundational capabilities of data connected through leveraged technology.

To create a smart system, the latest technologies like AI and its subsets Machine Learning (ML), Optical Character Recognition (OCR), Natural Language Processing (NLP) must be used in the e-Courts software applications.

In judiciary, AI may be used in the following areas. They are

TRANSLATION:

AI will be used to translate the judgments/orders and other documents.

PREDICTION AND FORECAST:

AI can be used to analyse the case pendency and forecast the future litigation patterns.

IMPROVING ADMINISTRATIVE EFFICIENCY:

AI can be used to improve administrative efficiency by optimizing the time required for various judicial processes and automating the ones which can do away with the manual intervention.

NATURAL LANGUAGE PROCESSING (NLP):

NLP will find the word patterns in the judgements and orders. The act, sections, and earlier judgements referred to in the judgement will be automatically scanned and extracted using NLP.

AUTOMATED FILING:

AI can be used in an e-filing system for checking for defects and court fees. It will notify the defects, if any. If everything is in order, it will automatically feed the Case Information System (CIS) software data and generate the Case Number Record (CNR). CNR will be communicated to the advocate/petitioner. The entire process of scrutiny and registration can be done within minutes.

INTELLIGENT SCHEDULING:

Co-ordinating the availability and schedules of different stakeholders: judges, lawyers and litigants is a critical part of the court administrative process. Leveraging technology to create an infrastructure that can

optimise and coordinate their time can unlock significant capacities for justice administration and overall bring greater efficiencies to the system. Over time, this will also increase reliability in the system by enabling all actors to manage their time better.

Such a scheduling system must intelligently recommend (and not decide) appropriate schedules by using AI. Such tools can factor in variables such as the schedules of judges, lawyers (including the requirement of their presence in other courts), witnesses, registrars, existing caseload, the type of case, nature of hearings, data from earlier cases to evolve and become more intelligent over time. Such intelligent scheduling can generate data to identify cases that need to be prioritised and generate data and act as a capability to support digital listing and other services. Over time, this infrastructure can enable services such as an 'intelligent queue management system' for lawyers to get a better estimate of the time when their hearing may come up.

This capability can reduce the number of adjournments, increase the capacity of judges and lawyers, and overall bring greater efficiencies to the system.

ENHANCING THE CASE INFORMATION SYSTEM:

AI can be used in development of latest version of CIS which can help streamline processes, thus boosting developers' productivity, speed, and the quality of their work. Additionally, past data and software analytics of previous versions of CIS can be fed to AI-powered programming assistant, which can learn from experience and identify common errors thereby mitigating the same.

COMMUNICATE WITH LITIGANTS THROUGH CHATBOTS:

Chatbots use natural language processing to understand litigants and allow them to ask questions and get information. These chatbots learn over time to add excellent value to customer interactions.

B. BLOCKCHAIN

Today, blockchains are primarily used as ledger systems to keep track of transactions made and provide multiple mechanisms to ensure that data regarding these transactions are not tampered with or revised in any manner. The legal system can benefit from this emerging technology and move towards a world where document counterfeiting is outdated. People can use cryptographic hashes as proof of document ownership in the court of law.

Blockchain is a way of organizing and storing information and transactions. It is a data structure used in some distributed ledgers that store and transmit data in packages called 'blocks' connected in a digital 'chain.'

DISTRIBUTED LEDGER

A distributed ledger is a database updated by each independent participant (or node) in an extensive network. Like the communication network in a distributed computing network, the distribution in the distributed ledger is unique. Records are not transmitted to various nodes by a centralised authority but are independently constructed and held by every node.

Department-related Parliamentary Standing Committee on Personnel, Public Grievances, Law, and Justice has given the following recommendation in its 103rd Report:

"2.43 The Committee recommends that Blockchain technology should be leveraged to improve the reliability of evidence and security of transactions and to fortify digital security of case files. Proper standardized systems of authentication need to be put in place. Online systems should be underpinned by proper procedural safeguards."

The PSC has reiterated the same in its 107th Report as follows:

"5.41. The Committee also believes that advanced technologies, particularly Blockchain and Artificial Intelligence technology, it can supplement judicial process and help in reducing judicial delays. Blockchain can help in preserving cryptographically safe digital record management ensuring its authenticity. Artificial Intelligence can assist the judges in making predictions, or take decisions, based on previous experiences in a case. It can also help in allocating cases to judges/judicial officers based on their area of expertise. The Committee, accordingly, recommends the Department to explore the possibility of introduction and integration of these technologies with the justice delivery system under the e-Court Project and submit its status note to the Committee during the Action Taken Replies."

NEED FOR BLOCKCHAIN IN E-COURTS

As we move forward in Phase III implementation of e-Courts, where the emphasis is on improving process efficiencies by adopting advanced technologies, it is critical to find a solution to the complex computing challenge of tamper-proofing a key asset: the case evidence.

STORING OF THE DIGITAL EVIDENCE:

Whether an evidence file is a text, image, video, or any other media file, when a case is filed, and records of proceedings are stored online, there is a need for secure storage of the "evidence" files. Evidence files that reside on a Blockchain data storage network are safe from manual manipulation and do not require any central vigilance by a single authority.

Bailable/Non-bailable warrants can be issued using blockchain technology. It cannot be altered/modified. It will expedite the execution of the warrants.

JUDGEMENTS AND ORDERS

Blockchain technology will authenticate the judgements and orders uploaded to the e-Courts website. The users can easily verify the authentication of the judgements uploaded on the website by clicking the "verify" button. If the judgement has not been modified and its hash key matches with the blockchain key, then the user will get an authenticated message; if any modification is done, it will notify the user about the change. It will enhance the authenticity of the judgements uploaded on the e-Courts website.

KEY GOALS FOR PHASE III

I. ACCESS TO CRITICAL SERVICES

A. E-SEWA KENDRAS

Many advocates and litigants, especially those living in rural and remote areas, lack basic infrastructure and a high-speed internet connection. This digital divide makes access to justice unaffordable and inaccessible for the vast majority. Litigants who do not have access to the internet must be provided with access to the services of the e-Courts.

e-Sewa Kendras will serve as a One-Stop Digital Centre for the common litigant /advocates to cater their e-Court related digital needs. It will act as a digital bridge, reduce the digital divide, and ensure access to justice to all in the emerging digital legal system. Litigants who do not have access to the internet must be provided with access to the services of the e-Courts.

The PSC on Personnel, Public Grievances, Law, and Justice in its 103rd Report has observed that the digital divide has three dimensions-namely access divide (access to equipment and infrastructure), connectivity divide (access to broadband connectivity) and skill divide (knowledge and skills required to use digital platforms).

The PSC was highly appreciative of the E-Sewa Kendra initiative and believes that it will go a long way in bridging the 'access divide' and hopes that such facilitation centres be set up in all court complexes across the country at the earliest.

The e-Committee, Supreme Court of India, has resolved to create e-Sewa Kendras in all the High Courts and all court complexes.

Aim	Motto	Mission

- To create a bridge between the judiciary and litigants/advocates who do not have digital access/ IT tools.

- To provide access to justice to all and make available litigant centric information.

- To overcome the digital divide in accessing services of the e-Committee.
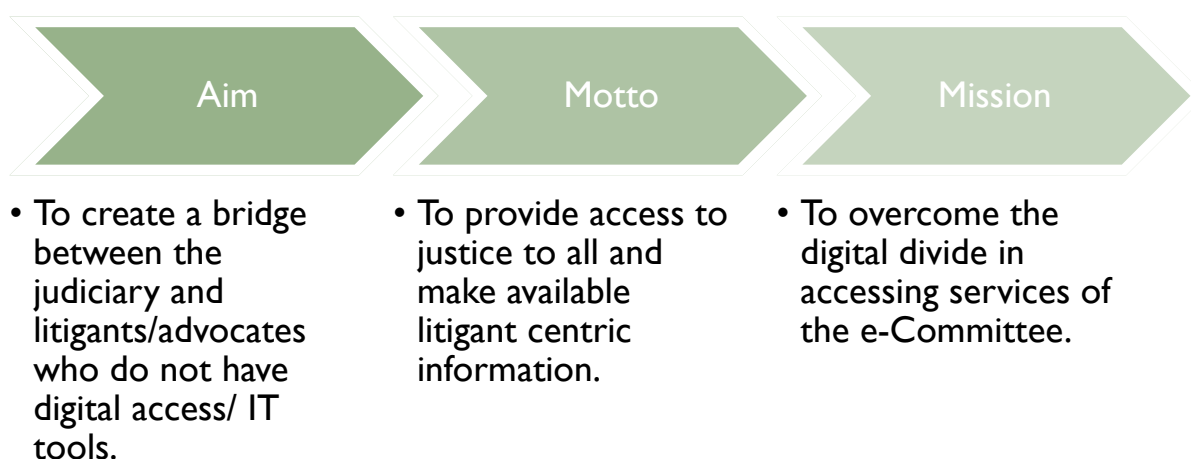
Basic infrastructure requirement for a E-Sewa Kendra

Infrastructure item	Quantity
Scanner	1
All in one Computers	6
Porta Cabin (if required)	1
Contractual Staff	1
LAN and Internet	1
Camera	3
Printer	1
Document Visualiser	1
Speaker and Mic	2

Services provided in e-Sewa Kendras:

Enquiry services

- Handling inquiries about case status, hearing date / cause list etc.
- Providing a soft copy of judicial orders/judgments via email etc.
- Taking a printout of copy of judicial orders/judgments.
- Handling queries about judges on leave.

E-filing services

- Facilitating e-filing of petitions, including the scanning of hardcopy petitions.

Video conferencing services

- Filling the requisite application forms for video conference hearings.
- Assisting in video conference court hearings.

Regular filing services

- Facilitating online application for certified copies of judgments/orders.
- Receipt of the processes fees.
- Assisting in payment of fees/fines through online mode.
- Receipt of the regular applications.

Other services

- Assisting in downloading the Mobile App of e-Courts for Android/IOS.
- Assisting in online purchase of e-Stamp papers/e-Payments.
- Facilitating the disposal of traffic challan in virtual courts and online compounding of traffic challans and other petty offences.
- Guiding people regarding free legal services from DLSA, High Court Legal Service Committee and Supreme Court Legal Service Committee.

B. PAPERLESS COURTS

Objectives

Increased efficiency making the law more attainable.	Access to documents and filing becomes easier with everything online.	Saves time and money.
More physical space will be available across all the Courts.	Efficient document retrieval system.	Positive impact on the environment.

Paperless Courts must go well beyond digitising existing processes to be truly effective and transformative.

In Phase III, the e-Courts Project will move the architecture from a monolithic system to a 'platform' approach. This aims to achieve the following goals:

- All commercial courts will become paperless in a phased manner. Support configuration of services to diverse and evolving users' needs (courts, lawyers, citizens, and other government systems) without needing to be uniform or standardised. Create the infrastructure that can enable many solutions or services to evolve collaboratively from the ecosystem constantly. Enable other pillars of the justice system (namely prisons, police, and legal aid authorities) to interface with the judicial system — through open standards, specifications, and APIs.

- Enable participation and broader adoption of the digital infrastructure, services, and solutions by all segments of society.

- Make data such as pleadings, arguments, and judgments from the judicial system publicly accessible, subject to privacy regulations.

- Such information and data can be used to benefit the data principal, i.e., litigants, the data controller, i.e., Registry, and potential data users, i.e., academics, researchers, technologists, and professionals who can leverage machine learning and AI to build solutions on this data.

- Evolving into a platform architecture in Phase III would leverage and adapt systems already in Phases I and II, as far as they align with platform goals.

- All court proceedings take place in a digital format in a digital court. Electronic Courts are one of the primary enablers of the Information and Communication Technology (ICT) system in India, accredited with bringing transparency and accountability in the Indian Judiciary and warrant speedy disposal of cases.

The primary benefit of paperless courts is that the entire database of information related to a case can be accessed online by the parties, lawyers, and the public. This makes legal research much simpler than perusing multiple volumes of legal documents.

Key Features:

- Cloud-based storage will ensure convenient, easy access to data, and cost-effective data recovery.

- Data security through endpoint security agents, firewalls, and internal intrusions detectors.

- No physical transfer of papers reduces cost, saves papers, and improves time efficiency.

- Backup facility for recovery

Basic infrastructure requirement for a Paperless Court

Infrastructure item	Quantity
LED Display 55 inch	3
LED Display 65 inch	2
VC Unit	1
Surround sound System	1
Microphones	5
Assistive listening system	1
Document visualizers	1
Scanners	1
Telephones	1
Computer Systems	5
PDF Tool kit software license	1
Speech to text software	1
Wacom Tablet/ iPad pro*	1
PTZ Camera (1080p PTZ Camera with HDMI, IP & 3G-SDI Output (Black, 4K Upgradable))	1
Site Preparation	1
Workforce	0.5

Note: High Courts can also procure enhanced and integrated hardware solutions.

A customised software application for paperless courts

A customised software application will be created for paperless courts. The case files submitted through the e-filing system and documents scanned by the court officials will be shown in the customised paperless court application. Judicial officers can access the cause list and the digitized case papers/ paper books of their respective courts through their laptop or desktop systems. The facilities of the JustIS app will also be available in the paperless court software application.

Judicial officers can bookmark/highlight and make notes in the digitised case papers. The notes, bookmarks and highlights will reside only on the judicial officer's laptop or computer. It will not be accessible to anyone. The application will allow only to download case papers from the application (one-way communication). The modification done on the local system will not be reflected in the CIS.

C. ONLINE COURTS

Objectives

Increased efficiency making the law more attainable.	Access to documents and filing becomes easier with everything online.	Saves time and money.
More physical space will be available across all the courts.	Efficient document retrieval system.	Positive impact on the environment.
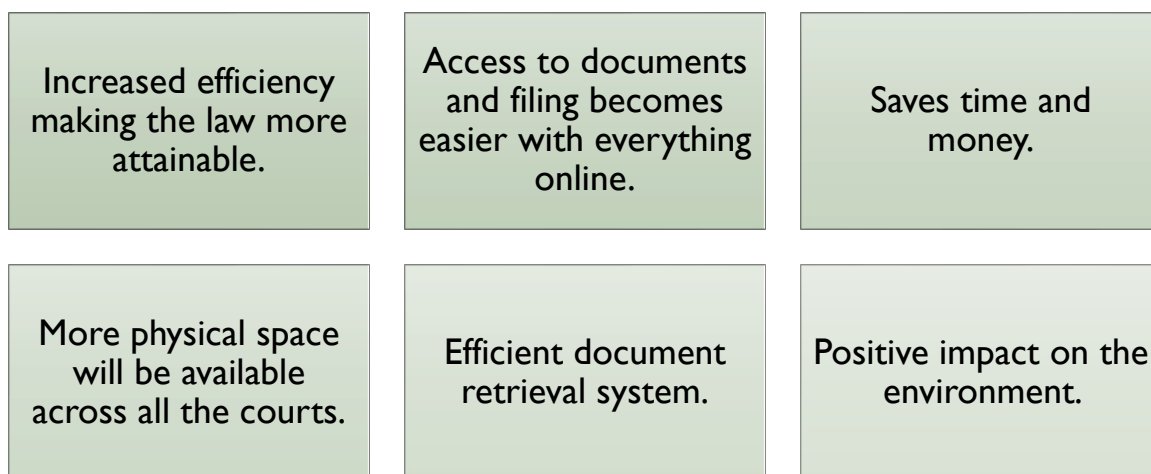
Different forms of digitally enabled hearings will be explored for various cases. Certain proceedings may require continuing with in-person hearings, while others may explore possibilities of asynchronous hearings, purely digital hearings, audio-only linkages where necessitated or even

online courts. Exploration and adoption of appropriate media would be essential for timely justice delivery.

In its 103rd Report on 'Functioning of Online Courts/Court Proceedings through Video Conferencing', the PSC has also emphasised the importance and utility of online courts. Some of the valuable suggestions and observations of the PSC are:

- The Committee noted that the transition from physical courtrooms to online courtrooms requires massive investment as the basic infrastructure required to support digitized court hearings such as (i) electronic case files; (ii) equipment to project documents and images, audio, and video; (iii) tools to record hearings; (iv)video conferencing tools; and (v) reliable Wi-Fi needs to be put in place.

- Without proper infrastructure in place, online hearing of cases is an impossible proposition. Moreover, the Committee feels that the benefits of online courts will percolate down only when all court complexes are fully ICT enabled.

- The Committee is of the opinion that introduction of online courts would result in an improvement over traditional Courts as they are more affordable, citizen-friendly and offer greater access to justice. They yield substantial savings in costs for both individual litigants and courts. Traditional courts are accessible to few people and, even then, only at disproportionate expense and effort. Online courts can help overcome these injustices.

- The Committee is of the considered opinion that traditional courtrooms may well remain necessary for our future, but they are certainly not sufficient. There is a need to integrate online courts into the country's legal ecosystem.

Phase III will enable courts to deploy quality digitally enabled hearings based on nature and type of case. It proposes to create 1150 online

courts. Each online court will be provided with display units, video conference equipment, surround sound system, microphones, document visualisers, PTZ camera, scanners, computer systems, speech to text software, telephone, Wacom/iPad as tabulated below. A sufficient workforce for managing the online courts will also be provisioned.

Basic infrastructure requirement for an Online Court

Infrastructure item	Quantity
LED Display 55 inch	3
LED Display 65 inch	2
VC Unit	1
Surround Sound System	1
Microphones	5
Assistive listening system	1
Document Visualizers	1
Scanners	1
Telephone	1
Computer Systems	5
PDF Tool kid software license	1
Speech to text software	1
Wacom Tablet/ iPad pro*	1
PTZ Camera (1080p PTZ Camera with HDMI, IP & 3G-SDI Output (Black, 4K Upgradable))	1
Site Preparation	1
Workforce	0.5

Note: High Courts can also procure enhanced and integrated hardware solutions.

D.EXPANSION OF VIRTUAL COURTS

A novel concept of virtual courts has been introduced under the e-Courts project. It is one of the tools used for implementing ODR. Petty criminal offences can be dealt with and resolved through online mode. This idea aims to reduce footfall in the courts by eliminating the physical presence of violators or advocates in the court premises. Virtual courts can be managed by judges whose jurisdiction can be extended to the entire state and working hours may be 24X7. This mode of facilitating proceedings requires neither the litigants to come to court, nor does it require the judge to preside over the court proceedings physically. The number of judges required for adjudicating traffic challans across the state can be reduced, by way of this virtual mode, to a single judge.

Virtual Court will issue summons to a violator as per Section 208 of the Motor Vehicles Act 1988 on the violator's mobile phone. The message will contain a web link, which on being clicked, will redirect the violator to the Virtual Court web portal. After that, the violator may make a payment of the traffic challan online or may opt to contest the challan as per law.

The flow of process in virtual court is show below:

eChallans automatically filed to the virtual court for adjudication. Virtual Judge can proceed with adjudication of the cases online by imposing fine.

On imposing the fine by a virtual judge, the violator gets the SMS on his/her mobile to visit the portal.

Litigants/violators can plead guilty and pay the fine online without visiting court. On successful payment of the fine, the case is deemed to be disposed of.

If a violator wishes to contest the case, the response is recorded by entering OTP on the portal. In such eventuality, the case is transferred to regular court for further hearing.

E. COURTROOM LIVE AUDIO-VISUAL STREAMING SYSTEM (CLASS)

Objectives

- To adopt the concept of open courts for online dispute resolution.

- To improve transparency, accessibility, and accountability.

- Apart from the utility of live streaming in the process of justice, it can also serve as an immense value in legal education.

Courtroom Live Audio-visual Streaming System (CLASS) moves towards greater transparency in the courtrooms by telecasting the proceedings live.

In the Indian judicial system, unless otherwise provided, we follow an open court system. In Swapnil Tripathi v. Union of India, the Supreme Court has advocated telecasting the proceedings live, a move towards greater transparency of and in the courtroom. Open trials and access to the public during the hearing of cases before the Court is an accepted proposition.

The judgment speaks of the various merits of live telecasting, including transparency, accessibility, and accountability. The need for live streaming was highlighted during the pandemic, as courts functioned on virtual platforms and citizens had no direct access to it. Even post-pandemic, the hybrid model of court functioning may continue, necessitating the need for live streaming of court proceedings.

The e-Committee is working on model live streaming and recording rules.

Basic infrastructure requirements for live streaming (per court)

Infrastructure item	Quantity
LED Display 55 inch	3
LED Display 65 inch	2
VC Unit	1
Surround sound System	1
Microphones	6
Assistive listening system	1
Document Visualizers	1
Scanners	1

Telephone	1
Computer Systems	5
Speech to text software	1
Wacom Tablet/ iPad pro*	1
PTZ Camera (1080p PTZ Camera with HDMI, IP & 3G-SDI Output (Black, 4K Upgradable))	1
ATEM Television Studio +AJA U-Tab HDMI	1
Site Preparation	1
Workforce	0.5
* Depends upon number of Judges	

Note: High Courts can also procure enhanced and integrated hardware solutions.

F. NATIONAL SERVICE AND TRACKING OF ELECTRONIC PROCESS (NSTEP)

Phase III of the project will utilize and build upon the NSTEP application to enable the service process by automatically enabling service upon parties via email / SMS, where possible, with built-in systems for confirmation of receipt.

Objectives

The system provides real-time and transparent tracking of the service	Easy and speedy process delivery	Reduces inordinate delays in process serving

Centralized tracking of the process serving	Efficient workflow for the Bailiff
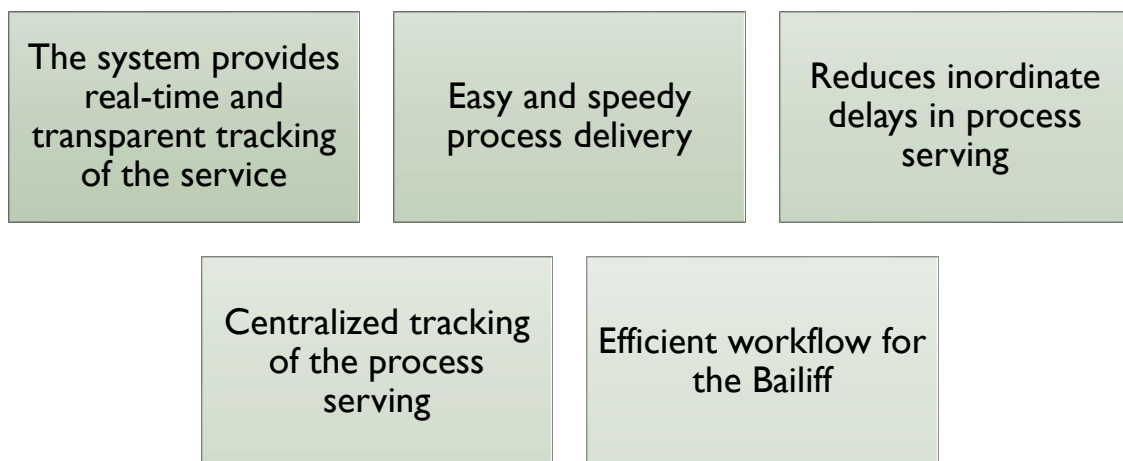
The e-Committee has digitised the delivery of processes through the NSTEP. It has been developed for speedy and efficient delivery of processes. It consists of a centralised process service tracking application and a mobile app for bailiffs. NSTEP helps to track service of processes by bailiffs/process servers through a Global Positioning System (GPS) enabled application. The mobile app is available in bilingual mode. This is aimed at increasing accountability and transparency in the summons service processes. NSTEP mobile application which has been provided to bailiffs helps in real-time and transparent service tracking. Once the process is published through CIS software by the respective court, it becomes available on the NSTEP web application in electronic format. Using NSTEP, the GPS location, a photograph of the addressee, a photograph of door lock as proof of service/non-service can be tracked. At present, it is available only for civil cases. In Phase III, it will be expanded to criminal cases as well. The existing app will be upgraded with more citizen centric features.

G. ELECTRONIC FILING (E-FILING)

e-Filing is necessary for making a transition to paperless courts and conducting virtual hearings. Digitisation of legacy records alone would not give the expected outcome unless the new case documents are received in digitised form through the e-filing mechanism. It has many

advantages when compared to the regular hardcopy filing mechanism. They are as follows:

Saves time and cost by filing cases before the courts thereby minimizing the physical presence of litigants, advocates etc.	Enables electronic filing of cases and uploading of legal papers	Online payment of court fees through the e-Filing module
To enhance the ease of access to courts by filing pleadings and paying fees 24 x 7 from anywhere	Saves Paper	Automates processes for scrutiny and review of pleadings which will optimise the effectiveness of the registry
	Improved transparency and time efficiency.	

- E-filing system is a complete end-to-end solution developed for the online filing of plaints, written statements, replies, and various applications related to cases. Both civil and criminal cases can be filed before any High Court or District Court. Its various sub-modules help perform all mandatory tasks which are performed by Advocates and Litigants for filing a case. The web links for e-Filing websites are https://efiling.ecourts.gov.in/ and https://filing.ecourts.gov.in/

- The latest e-Filing software application has several novel features that will reduce the physical movement of advocates and clients to courts or even advocates' offices only for the purpose of pleadings or recording of oath.

- It provides a medium for an exchange of information and case papers between advocates and courts as well as between advocates and clients.

- e-Filing system is a complete end-to-end solution developed for online filing of plaints, written statements, replies, and various applications related to cases. Both civil and criminal cases can be filed before any High Court or District Court.

- It is designed as a bilingual software (English and local language) to reach a wider group of advocates/litigants.

- It creates a collaborative work environment, where an advocate, their partners or juniors representing the case and clients/litigants can work, in asynchronous mode on the same case file, while sitting at different geographical locations. The stakeholders can view the documents and e-Sign the documents from their respective places without travelling or physically meeting each other.

- Several ready-made templates are available for drafting pleadings and applications. This will assist advocates in preparing and submitting pleadings and applications quickly.

- A facility to integrate the State Bar Council data with e-Filing is available.

H. COURT MANAGEMENT TOOL FOR JUDICIAL OFFICERS

More features will be added to the existing JustIS App. The app will show the case statistics, judgment, and orders of the concerned judicial officer from the date of joining till the present posting.

Principal district judges will be provided with more access. The Judges can access the case statistics like pendency and disposal of all judicial officers

working in their district. It will assist in monitoring the work done by each judicial officer in the district.

Similar access will be provided to the portfolio judges. The portfolio judges can keep track of the performance of the judicial officers of the district.

I. ONLINE DISPUTE RESOLUTION (ODR)

ODR refers to the usage of ICT tools to enable parties to resolve their disputes. [1]

People can participate in a dispute resolution process from their home (a particularly relevant benefit during the COVID-19 pandemic). ODR platforms can expedite communication, negotiation, and resolution.

It also facilitates resolution by increasing the availability of resolution processes. It does so by improving the flow and character of information, reducing conflict, and minimizing many financial and time constraints.[2]

Benefits of ODR[3] are:

Cost effective	Convenient and quick	Encourages dispute resolution
Allows for customisable processes	Limits implicit bias caused by human judgment	

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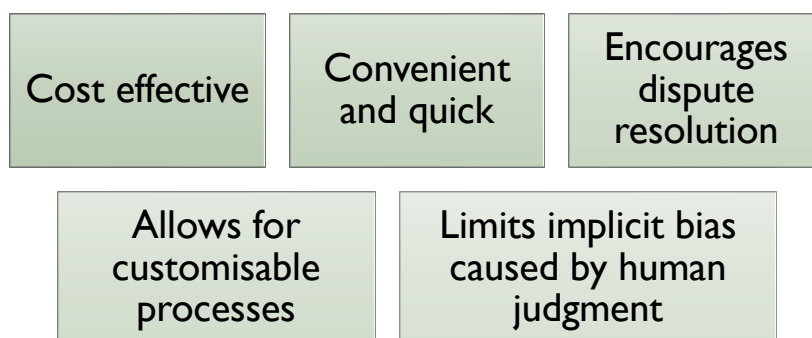
[1] Designing the Future of Dispute Resolution: The ODR Policy Plan for India

[2] ODR for Courts JTC Resource Bulletin. National Center for State Courts. November 2017.

[3] Designing the Future of Dispute Resolution: The ODR Policy Plan for India

Court-related Online Dispute Resolution (ODR) is a digital space, geared towards the public, where parties can convene to resolve their dispute or case.

Three essential components help differentiate between court-related ODR from other forms of technology-supported dispute resolution:

- The first is that the program operates exclusively online

- The second is that the program is explicitly designed to assist litigants in resolving their dispute or case, rather than merely creating a technology platform to support judicial or court staff decision-making; and

- Third, the program is hosted or supported by the judiciary. It extends dispute resolution services offered by the judiciary into digital space to serve citizens efficiently, effectively, transparently, and fairly.

It can provide dispute resolution services without necessarily filing a formal complaint. It can support a variety of decision-making aids, including discovery exchange, direct party-to-party settlement negotiations, synchronous or asynchronous mediation support, and technology-supported adjudication. If the dispute is resolved, the software will populate standard settlement forms and file them electronically. If the dispute is not resolved, then the software will send the data to the Courts software.

An ODR centre for each High Court and dedicated software platform will be created for handling court related ODR. A separate software team and centralised cloud-based hardware will be set aside for running these ODR platforms.

J. DISTRICT COURT WEBSITES (S3WAAS):

The District Court websites have been built on FOSS Content Management System framework to ensure most user-friendly updating of records and redesign as per pre-designed templates.

S3WaaS - Secure, Scalable & Sugamya Website is a website which provides the service of generating a product based on SaaS (Software as a Service) model. It provides an organized layout and consistent navigation. Users should be able to locate information with a minimum number of clicks and using the least effort. It will empower district courts to generate, configure, deploy, secure, scalable, and accessible websites for publishing specific information and services without much effort and technical knowledge. It follows the national standard Guidelines for Indian Government Websites (GIGW), which are coordinated with World Wide Web Consortium's (W3C's) Web Content Accessibility Guidelines (WCAG).

Features of S3WaaS platform:
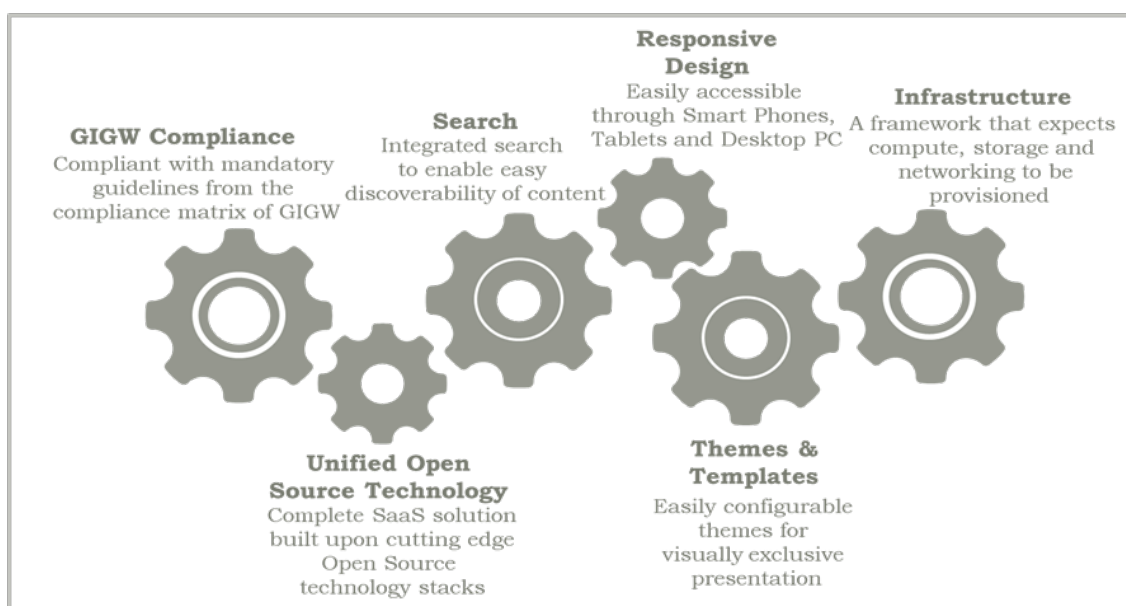
Key Features

- Easy to generate, create and customise the multilingual, accessible website;

- Saves users initial development, customisation, and deployment time & resources;

- Easy content management;

- Easy deployment with no or minimal technical skills;

- Pre-packaged/embeddable components with basic functionality;

- Easily configurable themes for visually different presentation; and

- Integrated search to enable easy discoverability of content.

K. E-PAYMENT GATEWAYS

e-Filing of cases requires the option for electronic payment of fees which includes court fees, fines and penalties which are directly payable to the Consolidated Fund. Online payment of court fees, fines, penalties, and judicial deposits has been initiated through https://pay.ecourts.gov.in from 2018.

Though e-Payments was rolled out in Phase II of the Project, implementation in some states is still pending. This can be replicated for other Courts as well, if the respective State Government deploys the requisite mechanisms to facilitate these processes.

L. SERVICE DESK

Objectives:

To provide a centralized help desk system for all the users.	Role-specific dashboard for reports and performance indicators.	Availability of complaint and knowledge management modules.
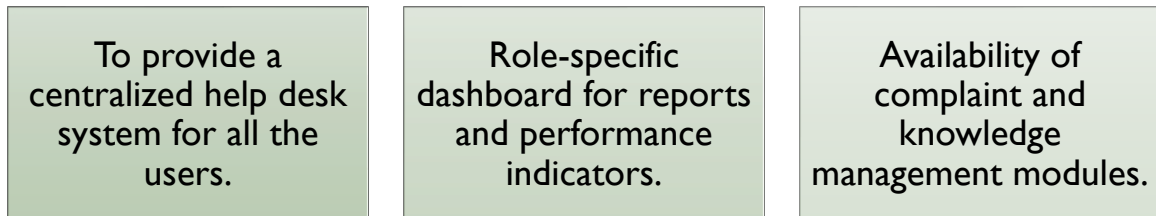
The purpose of the Service Desk is to implement a single point of contact for the service delivery and support under e-Courts project. NIC is using a service desk software application to receive several types of complaints/issues from the various stakeholders. A similar software application will be created to manage the complaints/issues from the stakeholders. All the complaints/issues will be given a unique number to track the status through an online portal. The compliance/issues will be forwarded to the concerned officials for prompt redressal of their grievances.

The Service desk will provide information and additional support related to diverse services pertaining to the end-user or internal user and public interfaces. It will provide a centralized interface for resolving queries related to technical/service or product-related issues.

The help desk will have the following basic features:

- Government to Employees (G2E) Service desk system;

- Channels of communications would be Internal resolution executives will use a web portal for resolution;

- Authentication of the user would be Lightweight Directory Access Protocol (LDAP) for e-Courts project;

- Engage external Call Centre agencies and integrate their customers;

- Customer Relationship Management (CRM) with the service desk;

- Receiving notifications through a web portal, SMS, and email;

- Develop a multilingual system;

- Publish knowledge-based articles to users;

- FAQ search for users;

- Operation and management of the Call Centre and internal e-Courts system to be done by the e-Courts team.

- Commissioning of Primary Rate Interface (PRI).

- Content, Workflow, dialogue flow, FAQs, escalation matrix to be provided by e-Courts.

M. VIDEO-CONFERENCING SETUP FOR ALL STAKEHOLDERS

Objectives

1. Enable audio and visual communication between persons at various locations;

2. Improve cost efficiency, time efficiency, safety, convenience, etc.;

3. Increase overall security associated with the project; and

4. Reduce in fuel consumption by avoiding transportation cost.

In Phase II of the E-Courts Project, video conferencing facilities and recording of witnesses through VC was implemented at certain locations. In Phase III, the video conferencing facilities will be expanded to district hospitals, more courts and jails, and District Legal Services Authorities.

During the COVID-19 pandemic, the e-Committee innovatively adopted the ICT tools to ensure dispensation of justice in a seamless manner. 2,29,16,528 Cases (High Courts – 75,43,589 and District Courts – 1,53,72,939) were heard by courts through video conferencing from 25 March 2020 till 30 September 2022 using the digital infrastructure provided by the e-Courts Project. Globally, India has been at the forefront of conducting cases through video conferencing during the pandemic.

The PSC in its 103rd Report on 'Functioning of Virtual Courts/Court Proceedings through Video Conferencing' has also emphasised the importance and utility of virtual courts. Some of the valuable suggestions and observations of the PSC are:

- The Committee noted that the transition from physical courtrooms to virtual courtrooms requires massive investment, especially in the basic infrastructure required to support digitized court hearings such as (i) electronic case files; (ii) equipment to project documents and images, audio, and video; (iii) tools to record hearings; (iv)video conferencing tools; and (v) reliable Wi-Fi.

- Without proper infrastructure in place, virtual hearing of cases is an impossible proposition. Moreover, the Committee feels that the benefits of virtual courts will percolate down only when all court complexes are fully ICT enabled.

Provisions will be made for enhancing and upgrading the available infrastructure of video conferencing in jails, District Government Hospitals, DSLAs and Courts. Desktop based video conference equipment will be provided based on the size of the establishment.

Basic infrastructure requirements for Video conferencing (per court)

Infrastructure item	Quantity
USB Based Microphones cum Speaker with Built-in-Echo Canceller for desktop-based VC System Or Bluetooth / Wireless enabled speaker cum microphone for desktop-based VC System	1
USB Based PTZ Web Camera for Desktop Based VC System	1
Display Unit for VC System with HDMI Cable	1
UPS for VC System	1
All-in-One Computer System	1
Broadband Connectivity of 2 Mbps or better (Only for jails/hospitals)	1

Note: High Courts can also procure enhanced and integrated hardware solutions.

OPERATIONALISING PHASE III

I. INSTITUTIONAL AND GOVERNANCE FRAMEWORK

A. FUNCTIONS AND ROLE OF THE E-COMMITTEE:

The e-Committee will perform the following functions and roles:

i. Provide policy planning, strategic direction, and guidance to the Project for effective implementation of all components of the Project. The Committee will also address any incidental aspects for the resolution of issues hindering implementation of the Project.

ii. Be responsible for designing the high-level blueprint for digital infrastructure including principles, architecture, standards, protocols, building blocks, etc., in consultation with stakeholders and experts.

iii. Putt in place the Digital Courts Technology Office (DCTO), which will lead the design, execution, and implementation of the Digital Infrastructure in the transitory stage of Phase III.

iv. Review progress of the DCTO and evaluate the realisation of benefits on a periodic basis.

v. Coordinate with the High Courts, DoJ and other stakeholders.

vi. The e-Committee will also ensure the connectivity, equipment and software needs of all stakeholders are met in an inclusive and accessible manner.

vii. The e-Committee will oversee the development, configuration, and adoption of technology systems. The office will also engage with

other vendors, technical experts to develop technological solutions, address technology-related grievances, publish periodical reports and suggest areas for process reengineering.

VIII. The e-Committee will assess existing processes to identify the processes that need to be changed. It will also undertake an impact evaluation of modern technology for various stakeholders and suggest relevant amendments to existing rules and laws and/or draft new rules and laws, to enable the implementation of better structured processes.

B. DIGITAL COURTS TECHNOLOGY OFFICE (DCTO)

Given that the process of digitisation is of growing importance to the country and will evolve beyond the term of this project, it is necessary to institutionalise a system that can enable functional specialization while respecting and still maintaining the federal administrative structure.

A DCTO, which is distinct from the e-Committee, will first enable the setting up of a blueprint which includes principles, architecture, identification of building blocks, standards, protocols, and proof-of-concept studies to design the digital infrastructure based on consultations with all necessary stakeholders. It shall ensure functional specialisation and be accountable for initiating technological development. For actual development and implementation, it will manage contracts with vendors from the market for specialised services while being completely responsible to the judiciary for committed deliverables and service levels. In addition, the DCTO will play a key role in developing model operational processes and guidelines for the setup of the proposed institutional structure (in a federated and unified manner). This would include assisting courts in identifying the appropriate personnel and roles for development, configuration, and

adoption of the digital infrastructure. This would help facilitate adoption, coordination, procurement of resources and adherence to timelines.

ROLES AND RESPONSIBILITY:

The DCTO shall advise the stakeholders on policies, programs, and activities that should be undertaken to improve business processes and practices in courts. These would involve the promotion, development, and use of technology standards for courts; ensuring adequate technology education and training for stakeholders; and promoting a collaboration between the judiciary and other stakeholders in developing and implementing such effective technology solutions for courts.

These measures would enable High Courts to be proactive in developing and implementing technology. The following steps are the goals that the DCTO seeks to achieve:

I.   To advance the development of applications for a wide variety of existing and emerging technologies in the court environment.

A.   Promote the development and adoption of standards for the exchange of data, documents, and other electronic information between courts and other individuals and institutions.

B.   Encourage the development and expanded use of technologies that aid in providing services to the public, such as access to case information, court schedules etc., through the Internet, kiosks, and other forms of public access to court information.

C.   Assist in developing the next generation of court case management systems.

II.   To investigate and evaluate future and emerging technology tools in the public and private sectors and their potential to assist in the administration of justice.

III.   To assemble, create, organize, and disseminate information about new technology through articles, education programs, etc.

   A.   Collect relevant published materials on court technology and judicial administration and consolidate information resources in a single location, on an Internet world wide web site.

III. To improve the administration of justice through better use of technology tools.

   A. To provide information about courts as learning organizations and their use of technology to turn data into information and information into knowledge.

   B. To evaluate the ways in which technology is changing judicial branch operations.

   C. To ensure that emerging automation technology refines and improves information available to judges and court staff, enhancing policy development and the administration of the courts.

   D. To study policy issues, legal questions, court rules, operational procedures, and management practices to identify and remove barriers to the use of technology.

      a. Continue to monitor privacy, security, and public access issues and the often overlapping and conflicting problems they present.

      b. Monitor the continuing debate concerning the current system of legal citation and the obstacles it imposes on electronic research.

c. Develop improved acquisition procedures that provide the flexibility, rapid response, and extraordinary detail necessary for technology procurement.

d. Prepare a model Request for Proposals (RFP) for automation and other court technology projects.

e. Create a strategy for the transition between generations of technology, including operation of legacy systems and the creation of data warehouses.

E. To provide direction for the construction and renovation of courthouse facilities to minimize the expense of future technology upgrades and expansion.

In the collective interest of the public, the digital infrastructure and platforms developed by the DCTO would be available for adoption by any High Court on behalf of the courts within its jurisdiction. Adopting the platform architecture would allow States the option to not only employ the digital infrastructure developed by the DCTO, including platforms and capabilities such as case registry, e-filing, intelligent scheduling, summons delivery, etc., but also plug into the national shared digital infrastructure that hosts the ecosystem of platforms connected with the judiciary (such as prisons, police, legal services authorities, ADR fora, etc). Policy formulation and strategic control will be retained within the judiciary and the DCTO should not in any way perform any judicial function.

COMPOSITION

- The DCTO shall consist of four regular members of the e-Committee who shall be permanent members supported by a team of twenty technical domain experts on contractual basis.

- Out of the twenty, six would be non-permanent members representing their High Court's technical cadre, having suitable

technical domain expertise, for the period of one year. After completion of their tenure of one-year, other High Courts will be given opportunity to nominate non-permanent members on rotation basis.

- Rest of the technical members (14) will be selected by the e-Committee to suit its needs and requirements for a term of two years or for the period as decided by the Chairperson, e-Committee.

WORKING GROUPS

At the discretion of the Chairperson, e-Committee, the DCTO may form and dissolve such working groups as it believes necessary to address specific issues. The DCTO may develop standard operating procedures for a working group to assist it in organizing and structuring its work.

To enable High Courts to be proactive in developing and implementing technology, it may be necessary to provide adequate human resources. In view of this, High Courts should be permitted to engage maximum five technical persons on contractual basis for four years and they may be funded centrally for such period.

C. DEPARTMENT OF JUSTICE, GOVT. OF INDIA:

Department of Justice (DoJ) will process necessary financial and other approvals from competent authorities and convening of the Empowered Committee. DoJ will also be monitoring the budgetary aspects and the timelines of the implementation as per the Project objectives through its Project Monitoring Unit (DoJ-PMU) It will also be responsible for matters relating to the Parliament.

The Empowered Committee shall be chaired by Secretary (Justice) and have as members representatives of e-Committee, NITI Aayog,

Department of Expenditure, MeitY and Internal Finance Division (IFD) of Ministry of Law and Justice. Empowered Committee will be competent to re-allocate funds within various project components within the overall numerical and financial ceilings of the Project, including on recommendation of the e-Committee.

D.HIGH COURTS:

For effectively implementing the project objectives, the High Courts will have the same institutional structure as per Phase II, which is:

   i.   High Court Computer Committee (HCCC)

   ii.   Central Project Coordinator (CPC)

   iii. District Court Computer Committee (DCCC)

   iv.   Nodal Officer for Every Court Complex

II. PROCUREMENT

1. The e-Committee will decide the minimum specifications and the estimated cost for the procurement of hardware in consultation with DoJ and NIC. Each High Court is at liberty to improve upon the specifications. If the High Court is desirous of procuring hardware with specifications higher or better than the minimum specifications, any additional cost in procurement will be borne by the High Court.

2. As only Free and Open-Source Software (FOSS) applications will be used in the hardware being procured, no purchase of any software will be provisioned.

3. The number of items required for each Court/Court Complex is as per the number approved in the Project.

4. The total hardware required to be procured will be based on the proposals received from High Courts.

5. The procurement will be made only through the Government e-Marketplace (GeM) portal. If the hardware is not available in the GeM portal, then the same must be procured through the e-procurement websites as per the General Financial Rules (GFR) 2017 and Central Vigilance Commission (CVC) guidelines.

6. The utilisation certificate must be prepared in a format as approved by the General Finance Rules. The High Court will directly provide a utilisation certificate to the e-Committee within 30 days of installing the hardware.

Contingency Budget Head:

Like Phase II of the Project, a budget-head for contingency expenditure will have to be provided to meet the urgent miscellaneous expenses for effective and expeditious implementation of the Project. Contingency expenses like Conferences/meetings, official travel expenditure by e-Committee / DoJ functionaries, equipment / infrastructure requirements for PMUs etc., will have to be covered by the contingency budget head in Phase III. This list is illustrative only, and any incidental expenditure for meeting the Project objectives may be met with this head as per Project approvals from time to time.

III. CHANGE MANAGEMENT AND ADOPTION

A. CAPACITY-BUILDING MEASURES

E-Courts Phase III capacity-building programme aims to expand coverage beyond its prominent stakeholders to all the beneficiaries of the Indian judicial system to ensure overall digital usage enhancement. The Capacity Building Programme for Phase III will extend its arms to various prominent stakeholders like advocates, advocates' clerks, litigants, public prosecutors, police officials, court constables, and other department-related stakeholders apart from its regular stakeholders, which include judicial officers and court staff.

The Department-related PSC on Personnel, Public Grievances, Law, and Justice has given the following recommendation in its 103rd Report:

> "2.15 *To address 'skill divide,' the third facet of digital exclusion as mentioned previously, the Committee recommends that training and awareness programmes should be conducted in all Court complexes across the country including Subordinate Courts to acquaint advocates with the technology and to enable them to acquire skills required for handling digital platforms so that advocates operate digital platforms themselves.*"

As Phase II has seen an exponential increase in digital usage in the Indian Judiciary, it has become necessary to enhance the digital capacity-building activities through a variety of training programmes. During Phase II of the e-Courts Project, the ICT training was extended to Chief Justices, High Court Judges, advocates, and their clerks. Although, the pandemic crept in during Phase II, the e-Committee has conducted 309 training and awareness programme during May 2020 to September 2022 covering nearly 5,13,080 stakeholders which includes Advocates, Advocate Clerks, High Court Judges, District Judges, Judges of District Judiciary, Court Staff,

Master Trainers among Advocates, Judges & staff, Technical Staff of High Court & Law students through NJA, SJAs, High Courts etc in coordination with the respective State Judicial Academies.

B.   ICT TRAINING AND EDUCATION

JUDICIAL OFFICERS:

The E-Courts project, aimed at revolutionising the digital infrastructure of the Indian Judiciary, has a crucial role in acquainting and empowering the Judicial Officers at all levels to use the digital infrastructure seamlessly. With increased digitisation, virtual court hearings, handling of digital evidence and cyberlaw cases, the need for continuous training for the Judicial Officers is a sine qua non for the successful functioning of the digitised Indian Judiciary.

Phase III will focus on providing training programmes to entry-level Judicial Officers and to extend its training arms to the Administrative Judges of High Courts and the Supreme court through NJA. Various training methodologies like E-learning platforms and online distance learning programmes will also be introduced in Phase III of the e-Courts Project. The advanced training will focus on smaller groups and will be conducted quarterly/half-yearly to update the existing trainers/ instructors - further disseminating it to other stakeholders. Initial training is now being proposed as a part of the induction training of all newly recruited Judicial Officers. The preparatory training programmes will be based on the specific projects of the e-Courts Project, and it will be focused on the projects which will be rolled out and which are under implementation.

ADVOCATES/ADVOCATE CLERK:

As a first-time initiative, the e-Committee took on training advocates and advocates' clerks. This was aimed at empowering advocates in the digital

usage of the various projects of e-Courts like e-Filing, where advocates have a prominent role. During Phase II, 4006 Advocate Master Trainers were trained by the e-Committee. During Phase III, using the Training of Trainers (TOT) Module, regular training programmes will be conducted for advocates/advocate clerks.

COURT STAFF:

E-Courts Phase II had seen effective participation of staff in the training programmes even during the COVID-19 pandemic. Now in Phase III, the number of Master Trainers will be enhanced. Regular training for the newly inducted court staff, advanced training for existing court staff, and preparatory training are proposed to be given for court staff.

TECHNICAL STAFF:

The entire e-Courts project is being staffed by District System Administrators (DSA) and technical staff under their respective High Courts. The work includes maintenance of servers, LAN, and hardware, data replication, hardware installation and software expertise. Hence, periodic training programmes for DSA and technical staff are accordingly proposed.

CENTRAL PROJECT COORDINATORS:

The Central Project coordinators are responsible for implementing the e-Courts Project at their respective High Courts. The high magnitude of e-Courts project management requires professional training to be imparted to the Central Project Coordinators for its effective implementation. An annual project management training is proposed for the Central Project Coordinators.

DIGITAL EVIDENCE & CYBERLAW:

With e-Filing and virtual hearing, there is a multi-fold increase in receipt and handling of electronic evidence. This necessitates a regular training programme for the judicial officers on handling and appreciating electronic evidence. There is an increased need for cyber law training as well. The increasing number of cyberlaw-related offences and the increase in receipt of digital evidence in connection with cybercrimes also flags the need for the digital storage and retrieval of the digital evidence at the courts. Hence taking note of the above factors, it is proposed to have periodic training for all the stakeholders

LAW STUDENTS:

The law students, the future stakeholders of Bar and Bench, need to be trained on the ICT modules to take up their roles in the Bar and Bench confidently on the digital front. Hence, the ICT syllabus for law schools, along with the training on ICT modules for law students, is proposed. Further, in connection with the training and awareness programmes for law students, TOT trainers at the law student level will be created who will take the ICT awareness to the common litigant and average persons at the Village/Taluka/District levels through the law school legal aid clinics.

TRAINING ON USING NEW SERVICES:

As new services are launched, in the short and long-term, mechanisms to support the onboarding of judges, court staff and lawyers will be essential. Training in specifics of technology will be required, as well as training videos, modules, and guides to familiarise users with a different way of functioning. Training material/curricula should be updated frequently and provided to judges and court staff as often as is necessary to keep pace with technological developments. To ensure immediate adoption, judicial

academies can continue to function as nodal agencies, along with the e-committees, to create and roll out training programmes catering to judges, registrars, and court staff. IT experts as faculty in judicial academies can help make this permanent.

SOPs for training can make it more efficient and streamlined. The training for trainers' model can be adopted for lawyers in coordination with local bar associations. This would entail a few lawyers being trained, who would then train larger groups of lawyers locally. Such training programmes in coordination with local bar associations can also extend to lawyers' clerks by providing certification programmes. This can also help lawyers' clerks progress in their career. Several online legal and technology training platforms exist, and the courts can consider leveraging them and customising them to context. Such training programmes can be conducted online till it is possible to conduct them offline.

C. OUTREACH PROGRAMMES FOR COMMON CITIZENS/LITIGANTS

For the effectiveness of any service, it is critical that users, especially lawyers and litigants, are aware of them. To enable widespread awareness of such new services as and when they are launched, courts can partner with a range of institutions and organisations, such as legal aid authorities, local non-profit organisations, bar council associations, universities, media, and others. Phase III will focus more on the awareness programmes for common citizens, litigants and for the marginalised section which are proposed to be conducted at the State, District, Taluka, and village levels.

D. LEVERAGE COMMON SERVICE CENTRES (CSC) TO EXTEND SERVICES:

The Courts can leverage the wide network of CSCs that offer web enabled e-governance services in rural areas, to bridge the geographical and digital divide. Most of these CSCs are run and managed by the Information Technology Departments of each state and are already equipped with internet connectivity, computers, printers, scanners, and cameras. Through a partnership with the Department, the services at the CSCs can be expanded to include e-filing, payment of court fees, fines, penalties, and other kinds of costs online, judgments / orders, translation, and video conferencing. CSCs offering e-Courts services would require technologically competent staff to support citizens, offer online information or help desk support, and facilitate training.

E. PUBLICITY CAMPAIGNS ON THE E-COURTS SERVICES

To popularise the citizen-centric services available under the e-Courts Project, media/print-based publicity programme will be accelerated in Phase III to have more wide awareness for the common citizen and litigants. This has also been highlighted in the National Council of Applied Economic Research (NCAER) evaluation report. Use of multimedia for spreading awareness of citizens centric services. Informative boardings at Court, district collectorate and other government offices, public places like bus stand, railway station, integration with legal services to sensitise citizens about e-Courts project thereby holding awareness programmes at the village and taluka levels could help us in achieving objectives and e-Courts project initiatives. Department of Justice in consultation with e-Committee will be instrumental in executing publicity campaigns for e-Courts initiatives.

F.AWARENESS & TRAINING MATERIALS IN REGIONAL LANGUAGES

Training and awareness programmes for stakeholders need to be supported by professional awareness & training materials in regional languages. The following awareness and training materials in various regional / local languages was released by the e-Committee during Phase II. They are:

- A step-by-step guide on e-Filing (11 languages)

- e-Courts Service Module application (14 languages)

- Brochures on registration of advocates in e-filing (14 languages)

- Video tutorials on e-filing (14 languages)

These training materials had an overwhelming effect among advocates, litigants, and judicial officers. Hence, the brochures, video tutorials, manuals, and high-quality professional videos are to be created with the help of professional persons. They are necessary for effective implementation of the various e-Court related projects, and for creating awareness amongst the stakeholders to use them. The said materials will also be used in online e-Learning platforms, which are also proposed by the e-Committee.

IV. WORKFLOW AND PROCESS AUTOMATION TOOLS AND MEASURES

A. E-OFFICE SUITE FOR HIGH COURTS AND DISTRICT COURTS

e-Office Architecture

A robust e-Office framework and architecture must be evolved to develop an e-Office product suite in any organisation. The suggested architecture should be in alignment with open standards. The other salient features of the architecture include - common data sets and standards, role-based access for authorisation, workflow manager, and Unicode compliant support for local languages.

The aspects of extensibility, scalability, security, interoperability and open standards, and performance and productivity improvements need to be considered while defining the overall architecture. The architecture recommendations include enterprise architecture, technology architecture and application deployment architecture with the breakup in hardware components and performance service levels.

The e-Office suite was developed by NIC, which is in the maturity stage and consists of the following modules:

Admin module	eFile	eLeave
eTour	eService Book	Personnel Information System

Admin Module

The admin module of the e-Office solution is the controlling module that allows administration of user groups, access management, role definition, covering various e-Office modules such as correspondence manager, e-file, e-Leave, e-Tour etc. among other things.

e-File

The existing manual system of file movement poses several challenges to the effective functioning of the government. One of these challenges is the difficulty in searching, retrieving, and tracking files when needed. The storage of the files is another challenge, both in terms of space and secure preservation.

To cater to the requirement mentioned above, NIC has developed e-File. E-File is a workflow-based system that replaces the existing manual handling with a more efficient electronic system. This system involves all stages, including the diarisation of inward receipts, creation of files, movement of receipts and files, and finally, archival records. With this system, the movement of receipts and files becomes seamless, and there is more transparency in the system since each action taken on a file is recorded electronically. E-Files can be easily searched and retrieved, and actions can be taken instantly. They can also link to and reference relevant files, documents, rulings, and decisions. This simplifies decision making, as all the required information is available at a single point.

B. PUBLIC FINANCIAL MANAGEMENT SYSTEM

The Public Financial Management System (PFMS) is a web-based online software application developed and implemented by the Controller General of Accounts (CGA), Department of Expenditure, Ministry of Finance, Government of India. PFMS started in 2009 with the objective of tracking funds released under all Plan schemes of the Government of

India, and real time reporting of expenditure at all levels of programme implementation. Subsequently, the scope was enlarged to cover direct payment to beneficiaries under all schemes. Gradually, it has been envisaged that digitization of accounts shall be achieved through PFMS. The outputs/deliverables for the various modes/functions of PFMS include (but are not limited to):

1   Payment & Exchequer Control

2   Accounting of Receipts (Tax & Non-Tax)

3   Compilation of Accounts and Preparation of Fiscal Reports

4   Integration with Financial Management Systems of States

The primary function of PFMS today is to facilitate sound Public Financial Management System for the Government of India by establishing an efficient fund flow system as well as a payment-cum-accounting network. PFMS provides various stakeholders with a real time, reliable and meaningful management information system, and an effective decision support system, as part of the Digital India initiative of the Government of India.

Under the e-Courts Project Phase III, PFMS will be rolled out to all the High Courts for the release of funds under the e-Courts Phase III scheme.

v. JUDICIAL KNOWLEDGE MANAGEMENT SYSTEM

A. NEUTRAL CITATION

A neutral citation is a unique court-assigned reference number for a judgment. The primary objective of a neutral citation system is to create an infrastructure for permanent identification of judicial decisions independent of their mode of publication. Unlike the traditional citations that are conferred by publishers reporting the decision and which contain proprietary elements, neutral citations are designated by the court or tribunal making such decisions (vendor/publisher neutral). Several common law countries (like the United Kingdom, Canada, Australia, the United States, and others) have adopted their own version of neutral citations.

The neutral citation aims to permit the permanent identification of a judicial decision independently of its mode of publication, be it paper or electronic. It has no descriptive elements pertaining to the hierarchical level or to the internal structure of the institutions concerned.

Advantages of neutral citation

- No unreported judgments

- No requirement of mapping between reporters

- Court-given citation (neutral)

- Authenticity

- Accessible on internet

- No access/subscription barriers ensuring easy access to all

- Machine-readable and processable

- Can be used in Machine Learning and Artificial Intelligence

In Phase III, neutral citations will be given to all judgements of Supreme Court of India, High Courts, District and Taluka Courts.

B. JUDICIAL TRUSTWORTHY DIGITAL REPOSITORIES (JTDRS)

Judicial Trustworthy Digital Repositories (JTDRs) will function as an authoritative digital case registry. They will include a collection of case related data including the unique case number and case type. A reliable way of 'locating a case' is key to processing data related to a case efficiently and enabling all interactions that need to happen in relation to a case (whether it is video conferencing, e-filing, tagging, or scheduling). To this end, a unique case locator is a high leverage point to build the foundational capabilities of digital courts.

With the CIS, the e-Courts mission has made significant strides towards developing a unique CNR and QR codes for each case. Phase III will build on this to ensure unified standards for identifiers of a case, ensuring CNR is linked in every case and scaling its adoption across India. It will enable a unified case registry across courts through the creation of data standards. Given that records in JTDRs will be maintained in accordance with these standards, APIs can be implemented to provide data from JTDRs to other information systems or applications that require a reliable source of judicial records. Examples of these could include litigation management systems for government departments or large legal firms or researchers in academia and civil society. CNR and QR codes should be assigned in a manner that enables all relevant stakeholders to track the lifecycle of a case from institution to final disposal, including appeals. This will help litigants and lawyers trace the case history and retrieve information from earlier instances of cases and will make case flow management easier for the judiciary.

Such a unique case locator will enable tagging of related matters across jurisdictions, enhance the visibility of the status of a case for all parties involved and access services related to a case. It will enable the generation of data relating to every service linked to the case, which in turn can inform better laws, procedures, and more effective resource allocation. Over time the collation and analysis of reliable and unified data sets may enable the implementation of litigation risk assessment services.

C. A COMPREHENSIVE AND UPDATED REPOSITORY OF CASE LAW

A freely accessible, updated, and comprehensive database of all legal precedents must form the backbone of a judicial system based on common law. In addition to the e-Courts website, each High Court has one or more databases of the decisions and opinions of the courts within its jurisdiction. The repository of case law across India on the web is therefore fragmented and may sometimes be restricted to certain courts within a state. A national repository for legal precedents from all courts will ensure a uniform, reliable and visible database for all case laws.

Towards this, Phase III will build over the platform of the e-Courts website to create a freely accessible aggregator of indexed case laws through coordination with High Courts and the use of appropriate standards and specifications along with open APIs.

A reliable repository will allow for democratised access to precedents for users, standardised citations across the judiciary. In addition, open APIs will allow service providers such as case reporters to construct tools for value addition, further enabling ease of access, research, reporting and analysis.

D. LEARNING MANAGEMENT SYSTEM (LMS)

There are six significant advantages of LMS:

- Interoperability,

- Accessibility,

- Reusability

- Durability

- Maintenance Ability

- Adaptability.

As part of the knowledge management exercise, an online e-learning platform is being proposed, catering to the needs of various stakeholders which enables educators to create their private website filed with dynamic courses that extend learning anytime, anywhere. It will be customised according to the requirement of the judiciary. The online e-learning platform will give a variety of courses specifically directed to the needs of each stakeholder like e-Courts for the Judicial Officers, court staff, advocates and e-awareness courses for litigants and other stakeholders. Open-Source e-Learning Management Tools will aid to augment the training potential and reach. e-Learning courses for all the stakeholders will be made available 24 X 7 online, which will be cost-effective and save travelling to distant places for training.

VI. ENVIRONMENTAL IMPACT

It is important to visualize how ICT can positively affect the environment in a practical way. Environmental effects are classified into several categories, such as consumption of material resources, transport of people or goods, office and warehouse space, ICT equipment etc. which leads to an increase in carbon emission figures.

The following components of the e-Courts Project are creating positive environmental impacts, and they are:

Reducing carbon footprint by saving paper	Decreasing Fuel consumption	Increasing Renewable energy
• Paperless courts • Virtual Courts • Digitisation • e-Filing • Integration with ICJS • e-Office	• Virtual Courts • Video Coferencing • NSTEP • ODR • Connectivity	• Use of Solar Energy

Under the digitization project, approximately 3100 crore documents will be digitized in the next five years that will include all old and current records. The proposed projects aim at going paperless in an environment-friendly manner. It has been observed that the court machinery is one of the biggest consumers of paper, therefore it necessitates the introduction of paperless courts through projects like Virtual Courts, e-Filing, etc. This will help in reducing the carbon footprint by ensuring saving of paper and the protection of trees, thereby positively impacting the environment.

These projects will also help in minimizing physical presence in courts, thereby reducing greenhouse-gas emissions. The projects will have the ability to improve efficiency and cut the use of fuels, materials, papers,

etc, thus reducing energy demands and the burden upon the environment.

A. SOLAR ENERGY

e-Committee has a project for utilisation of non-conventional energy, like solar for the Court Complexes in India. Using solar energy can have a positive effect on the environment when solar energy replaces or reduces the use of other energy sources that have larger effects on the environment.

It helps to reduce air pollution, dependence on non-renewable energy sources, improves humanity's health overall and helps fight climate change.

Department-related PSC on Personnel, Public Grievances, Law, and Justice has also recommended in its 103rd Report as follows:

> *"2.26 The Committee recommends that Judiciary may consider promoting harnessing of renewable energy in all Court complexes as it entails twin benefits of uninterrupted power supply and positive ecological impact."*

During Phase II, solar power was implemented in 5% of court complexes (242 court complexes). In Phase III, solar panels will be installed in 50% of the court complexes. To promote harnessing of renewable energy, as it entails twin benefits of uninterrupted power supply and positive ecological impact, the solar power panels will be installed in 1530 Court Complexes.

VII. TECHNOLOGY

A. ADDITIONAL HARDWARE FOR COURTS COVERED DURING E-COURTS PROJECT PHASE II

With a focus on unified digital infrastructure, Phase III aims to ensure adequate connectivity, equipment and hardware needed by stakeholders to adopt the Digital Infrastructure. During Phase II, funds have been released for computerization of 18735 Courts. The hardware procurement started in 2016, and most of the hardware has reached its end-of-life period. Hardware which is more than five years old is now to be replaced.

It is proposed to provide the following hardware to strengthen the existing computerised courts.

Additional hardware requirement for Courts covered during e-Courts project phase II

Infrastructure item	Quantity
All in one Computers	4
Scanner	1
LAN Nodes	4
Digital Signature Token Class 3 or e-Sign	4

B. PROVISION FOR ICT INFRASTRUCTURE IN NEWLY SET UP COURTS AND COURT COMPLEXES:

The courts and court complex created before the cut-off date i.e., 31st December 2019 are covered under Phase II of the E-Courts Project. The

computerization has been done for these courts and court complexes created before the cut-off date. Computer hardware must be given to the new courts, and court complexes that have started functioning after the cut-off date. Around 2500 new courts and 400 new court complexes will be computerised during Phase III.

Basic infrastructure requirement for New Courts

Infrastructure item	Quantity
All in one Computers	8
MFD printer	1
Scanner	1
Extra Monitor + 2 port VGA/HDMI Splitter/Extension/Distribution Unit	1
Display Monitor for Current Case Display Board outside Court Room with basic shared computing client and cable of required length	1
LAN Nodes	16
500 VA UPS	1
Digital Signature Token Class 3 or eSign	4

Basic infrastructure requirement for New Court Complexes

Infrastructure item	Quantity
Site Preparation	1
Projector with screen	1
Touchscreen Kiosk	1
USB Hard Disk 2 TB	1

D. G. Set (2-hour backup) for Network Room – Average for 5 KVA	1
UPS (2-hour backup) for Network Room – average for 2 KVA	1

Infrastructure requirement for High Courts and Benches

Infrastructure item
Servers
Rakes
Storage NAS 500TB – 1
Network 24/48 Port Switches
Firewall -1

VIII. MANAGEMENT

The existing Project Monitoring Units (PMU) at e-Committee and Department of Justice will continue in Phase III for effective management and monitoring of the project.

1. Project Monitoring Unit - e-Committee –with Member (Project Management) looking after the day-to-day management and monitoring of the Project activities for their timely and proper execution. Member (PM) will be assisted by a Personal Assistant and a team of two Sr. Court Assistants, Consultants, Data Entry Operators, Office Assistants and MTS etc. It will ensure that the Project is heading in the right direction and with the right optimal speed.

2. Project Monitoring Unit - DoJ -with Joint Secretary, DoJ and a team comprising of a Director/DS with a PA, an Under Secretary with a PA, a Section Officer, ASO, consultants, data entry operator and MTS looking after day-to-day managing and monitoring of the Project for budgetary aspects, release of funds and timely completion of financial deadlines, responsibilities towards the parliament etc

3. Output and Outcome Monitoring Framework (OOMF) Portal- An OOMF portal will be created to effectively monitor the project progress, outputs, and outcomes. Key Performance Indicators (KPI), quarterly output and outcome targets for all the project components have been defined. The OOMF portal with more useful and MIS-like features will be useful to facilitate and effectively monitor the progress while ensuring timely follow-up actions.

IX. EVALUATION

An output and outcome framework (OOMF) has been prepared for monitoring and evaluating the project's outputs and outcomes. Quarterly targets for outputs and outcomes have also been defined for all the project components. The project will be effectively managed and monitored using the OOMF targets

In Phase I and Phase II, the evaluation of the project was done by the National Council of Applied Economic Research (NCAER). In Phase III, third-party midterm or end term evaluation will also be done.

The project will be monitored and evaluated at all three levels: Central, State and District. The e-Committee, Supreme Court of India will monitor the achievement of the output and outcome targets at the National level. High Court Computer Committee will monitor the project implementation and progress at their respective High Court level. District Court Computer Committee will monitor the project implementation in their respective district courts. OOMF portal will be developed by the e-Committee. High Court Computer Committee will also be required to develop monitoring mechanism for monitoring the progress of the project and its different components.

X. COST BENEFIT ANALYSIS

The table below provides the summary of the benefit envisaged for the projects. The total cost includes implementation, workforce, software/technical development, technical assistance, audit requirement, etc, as applicable to the component.

A. INTEGRATION WITH ICJS

Assumption of Papers/Sheets Per Annum	
Total Criminal Cases Filed Per Year (Approx.)	1,00,00,000
Approx. Pages per FIR and Charge sheet	50
Total Pages	50,00,00,000
Cost of Paper (Rs. 0.30 /- Per Page, as one ream of paper, consists of 500 pages and it costs around Rs. 150/-)	15,00,00,000
Total Cost in Crores	15
Assumption of Fuel Cost saving for Police to submit the papers in Courts	
Total Criminal Cases Filed Per Year	1,00,00,000
Per Trip Cost	100
Total trip cost (Assumed 10 litres of fuel per case)	1,00,00,00,000
Total Cost in Crores	100
Assumption of Man days Saved per case (Police Department)	
Total Cases (Assumed one trip for 5 cases on an average)	20,00,000
Persons Traveling to Court and coming back	2
Total Hours per person spend	8

Person-hours for an entire year	3,20,00,000
Total Man Days *Considered 12 Hours Duty as against the standard norm of 8 Hours*	26,66,667
Salary Per Man-Day	1,000
Total Saving on Man Days (Crores)	267
Assumption of Man days Saved per case (Court Department)	
Time Saving for Data Entry of FIR and Charge sheet in Court (minutes)	20 Minutes
Person-hours for entire year	3,33,33,334
Total Man Days *Considered 8 Hours Duty*	41,66,666
Salary Per Man Day	1,000
Total Saving on Man Days (Crores)	416
Overall Savings- ICJS (Crores)	**798**

B. NSTEP

Postal Cost Saving (Outside Jurisdiction)	
No of civil cases per year	35,00,000
No of processes for outside jurisdiction (20%)	7,00,000
Postal Cost Per Process	50
Total Cost Saving (Assuming ONE Process Per Case)	4
Cost Saving due to reduce recurrences of Process Delivery	
No of civil cases per year	35,00,000
No. of recurrences reduced per process	1
Cost of per service delivery	200

Total Fuel Cost Saving	70
Overall Savings - NSTEP (Crores)	74

C. E-FILING

Assumption of Papers/Sheets Per Annum	
Total CRIMINAL and CIVIL Cases Filed Per Year (Approx.)	1,70,00,000
Approx. 10% cases are e-Filed	17,00,000
Both Parties Can File Cases	34,00,000
Approx. Pages per case	50
Total Pages	17,00,00,000
Cost of Paper (Rs. 0.30 /-Per Page, as one ream of paper consists of 500 pages, and it costs around Rs. 150/-)	5,10,00,000
Total Cost in Crores	5.1
Oath	
34 Lack people need not travel to court for purpose of Oath	34,00,000
Per Trip Cost	500
Cost Saved (Crores)	170
Application Filing	
Cases Listed per day	10,00,000
Assumed applications filed for 30% cases	3,00,000
Per Trip Cost for Advocate Per Case	500
Total Cost in Crores	50
Assumption of Fuel Cost saving for Advocates, Litigants to submit the papers in Courts	
Total CRIMINAL and CIVIL Cases Filed Per Year	1,00,00,000

Per Trip Cost for Advocate Per Case	100
Per Trip Cost for Litigant (either private or public transport)	100
Total Cost in Crores	200
Overall Savings – e-Filing (Crores)	425.1

D. VIRTUAL COURT

Assumption of Papers/Sheets Per Annum	
Total Cases for Traffic Per Year	50,00,000
Total papers per case	5
Cost of Paper (Rs. 0.30/- Per Page, as one ream of paper consists of 500 pages, and it costs around Rs. 150/-)	0 .75
Fuel Saving as National Resource	
Persons per case not traveling to court (1 person per case)	50,00,000
Fuel expenses per Trip	100
Total Fuel Cost Saving	50
Saving of Judicial Time	
Total Judges required for Traffic reduced to 5 from 50	
Total Judges allocated to other cases	45
Judge Cost/expenditure Per Month (including staff of three)	2,00,000
Total Judges cost per year	10,80,00,000
Total Judicial Cost Saved	10.8
Assumption of police officers' cost for court visits to submit challans	
Number of Policemen	100

Cost per person for 1 year (man hours + travelling expense)	10,00,000
Total Cost Saving	10

E. VIDEO CONFERENCING

Assumption of Cost Per Trip for Police Escorts to Courts	
Total Undertrials (as per e-Prisons website)	545823
Total number of Court Visits (Assuming 10 visits per case)	5458230
Cost of Police Escort Per Visit (10 prisoners/visit)	5,000
Total Cost per Trip in Crores	272.91
Assumption of Cost Per Trip saving for Doctors/Govt. Witnesses etc.	
Total number of Criminal Cases (as per NJDG)	28997112
No. of cases which require Witness to travel (Assumed 30% of cases)	8699133
Doctors Visit to Court as Witness (including loss of doctor hours at clinic/ hospitals, etc) (Rs. 5000/- Per Case)	2500/ per case
Cost of Police Person as a Witness (Senior Officers & Junior Officers both in stations and Outstations)	1000/ per case
No of Cases which require Forensic Expert Visit to Court (Assumed 2% Cases)	579942
Cost of Forensic Expert Per Visit	7500
Total Cost of Doctors and Police	3043 (2174+869)
Total Cost of Forensic Expert Per Visit	435
Total Cost in Crores	3478
Overall Savings - VC (Crores)	3478

F. PAPERLESS COURTS

Assumption of Papers/Sheets Per Annum	
Total CRIMINAL and CIVIL Cases Filed Per Year (Approx.)	1,70,00,000
Approx. Pages per case	300
Cost of Paper (Rs. 0.30/- Per Page, as one ream of paper consists of 500 pages, and it costs around Rs. 150/-)	153,00,00,000
Total Cost in Crores	153

G. SOFTWARE DEVELOPMENT

Proprietary Software's	Unit Cost	Total No. Units	Total Cost	Open-Source Software's	Unit Cost
Microsoft Office Home 2019	9199	18735	17,23,43,265	Libre Office	NIL
Microsoft Windows	11999	18735	22,48,01,265	Ubuntu	NIL
Microsoft Windows Server 2019 Standard X64 16core	39995	3400	13,59,83,000	Ubuntu Server	NIL
Oracle Enterprise Edition Databases Total License Fee per Server (Capex)	137400000	25	343,50,00,000	PostgreSQL	NIL

Total			396,81,27,530		NIL

Note: All prices are approximate totals based on published information obtained from vendors and/or the General Services Administration (GSA) schedule website.

H.CITIZEN SERVICES AND OTHERS

Assumption of Fuel Cost saving for Advocates, Litigants	
Total cases filed per year (civil + criminal)	1,70,00,000
Total number of persons involved in a case (2 persons per case	3,40,00,000
Total number of visits per person per case	5
Cost per person per visit	200
Total Cost in Crores	3,400

XI. RISK ANALYSIS

Component	Associated Risks	Mitigation Plan
ICJS	Dependency on other third-party applications like CCTNS, e-Prisons etc. Availability and flow of data between the applications as per the requirement Correctness of data Security of data	A proper integration plan between the various applications needs to be devised for seamless flow of data Data validation along with data audit needs to be in place to ensure correctness of data All the applications need to ensure enforcement of security features
NSTEP	Timely delivery of process to avoid delay Technical issues with Personal digital assistant (PDA) will delay the delivery of process	Stringent monitoring and tracking of bailiff Training to bailiff on use of PDA
E-Filing	Incorrect data entry/ submissions of incomplete data may increase workload of verification department in court Citizens might not use the system (either because not conversant with the technology or because they do not feel confident about the system for legal matters) Despite filing the case through the system, people might carry hard copies faulting the whole purpose of the system (towards paperless court) Dependent on availability of net which might not be possible in some parts	Data validation along with data audit needs to be in place to ensure correctness of data Change management and awareness creation among the people will ensure proper use of system Creating a robust networking system

Virtual Courts	Dependency on other departments applications, such as the transport and traffic police Citizens will need gadgets to use the system, thus may not be accessible for everyone Incorrect vehicle number entry by traffic police may generate challans for different vehicle owner Any error while using the system leave user confused and might result in not using the system	SOPs for sharing and use of data to be published and followed by all the stakeholders End to end training on the use of system and devices needs to be provided A secure environment will ensure data privacy is maintained wherever required.
Service desk	Provision of correct and relevant information Low response and resolution time	A systematic Information Technology Infrastructure Library (ITIL) approach to IT service management will help to manage risk, strengthen operations, and improve customer satisfaction.
Software Development	Timely completion of development Development without taking proper requirement	Ensuring techno-functional resources are deployed Training of the domain before the development of the systems,
Accessible websites	Dependency of third-party software for use of accessibility functionality	Analysis of the various available software's needs to be done
Citizen Services	Incorrect information might be available to citizens due to delays in updates (in data entry or due to net availability) Citizen needs to be well conversant with the technology to avail benefits Non-availability of help desk	Ensuring availability of robust infrastructure (connectivity and data entry) Creating awareness among the people to use the system
Video	Reluctant to use the	Need for a robust infrastructure

Conferencing and CLASS	infrastructure Non-availability of the network may result in delays and wastage of judicial time High implementation cost System may not be effective if not maintained properly at all the locations	with redundancy at server, network, and hardware level. Capacity building using TOT model Creating awareness for use of system Need for a DR in case of site failure
Paperless Courts	Lack of data security Digitisation of existing data is huge task and may not be completed in the planned period Any negligence in digitising data may result in incorrect/incomplete information Data will not be available in absence of internet or electricity	Data should be stored in secured data storage and critical data must be encrypted Ensuring data validation during digitization Ensuring data audit to ensure correctness of data Need for a robust infrastructure with redundancy Ensuring proper data backup police as per the requirement

XII. ECOURTS DELIVERABLES

The table below provides the details of the concerns that needs to be addressed;

Sr. No.	Project	Problems to be addressed
1	ecourts.gov.in	Gateway to all the e-Courts portals To be enhanced to make it multilingual and accessible
2	Services Portal	To be enhanced to make it multilingual and accessible As and when new services are launched, facility to view the services to be provided considering the requirements of litigants, advocates, and other stakeholders
3	Services Mobile App	To be enhanced to make it multilingual and accessible As and when new services are launched, facility to view the services to be provided considering the requirements of litigants, advocates, and other stakeholders
4	Automated Mailing	As and when new services are launched, facility of providing services through mail to be provided. Facility of automated/proactive mailing to be enhanced to provide more services like delivery of processes etc. Provision of mailing to be extended to various stakeholders.
5	SMS	As and when new services are launched, facility of providing services through mail to be provided.
6	District Court Web Sites	All the district court web sites shall be converted into S3WAAS platform
7	NJDG	National Judicial Data Grid can be enhanced to provide more data insights NJDG Intranet portal specially developed for Judicial Management can be enhanced to cater

		pendency/disposal at various levels including State/District and individual Judicial Officer.
		Proactive alerts on deviations can be embedded in the system
8	Judgments Portal	Can be enriched to cater Judgments of High Courts even for the previous Judgments (pre computerization) as and when digitized.
9	ICJS	Implementation depends on quality and availability of CCTNS data. To be replicated in states where CCTNS is implemented
		Integration with NICs e-Prisons software for seamless sharing of data between courts and prisons
		Provision of case information to police through Bharat APIs.
		Sharing of process to ICJS through APIs.
10	NSTEP	Implementation in states where devices are procured
		Maintaining existing application and enhancing further to suit the requirements
		Criminal process to be extended through APIs to ICJS and further CCTNS.
		Extending processes to other agencies/stakeholders as proposed by e-Committee from time to time through APIs
11	e-Filing 3.0	Implementation in other states
		Templates for filing cases filed U/S 138 of NI Act, MACP.
		Extending to other stakeholders like police, banks, insurance companies, and other institutions to file the documents digitally.
12	e-Pay	Online payment facility to be extended to all states for all sorts of payments including court fee, fine, penalty and Judicial Deposits subject to availability of the facility with respective state finance departments
13	Virtual Courts	Implementation in other states where e-Challan is implemented.
		Possibility of extending in other types of cases fully or partially may be explored so that cases that can be

		resolved without contest do not clog the system.
14	Helpdesk	24x7 helpdesk operation may be established state wise or centrally
15	Accessible websites	All the Citizen services to be made accessible
16	Paperless Courts	Many courts have initiated e-filing
		Data from ICJS in the form of FIR and Chargesheet is also received
		Digitization is in progress
		Facility for viewing the digitized case files by the Judicial Officer to be created
17	Emerging Technologies	e-Courts shall focus on adopting emerging technologies like Blockchain, Artificial Intelligence, Machine Learning, Mobile Computing etc
		Provision for research and innovation in these technologies to supplement and assist the need of judiciary
18	Open Data	Facility for researchers for bulk downloading of data, after formulating policy on data privacy
19	Open APIs	Open APIs where National Core CIS is implemented are extended to government institutions
		Facility can be extended to other agencies after formulating policy on data privacy
20	JustIS App	To be enriched with more services for Judicial Officers
		Facility to be extended to Principal District Judges, Portfolio Judges, Chief Justice, and Supreme Court Judges
21	CIS	National Core Version of Case Information System for District Courts and High Courts with enhanced features to be periodically developed as per the requirements of e-Committee.
		The version can be cloud enabled for court complexes where seamless connectivity is available.

XIII. COST ESTIMATION

Sr. No	Component	Year I	Year II	Year III	Year IV	Total	
		Financial (In Cr.)	Financial (In Cr.)	Financial (In Cr.)	Financial (In Cr.)	Physical Targets	Financial (In Cr.)
1	Fully functional eSewa Kendras in all court complex with the number of such Kendras in each complex depending on the size of the court complex	98.62	98.62	98.62	98.62	4400	394.48
2	Setting up the infrastructure for paperless courts, phase wise with all commercial courts becoming paperless in the first instance	53.88	107.76	107.76	89.8	1000	359.2
3	Expansion of the Virtual Courts for hearing of court cases by creating the robust digital infrastructure.	53.88	125.72	125.72	107.76	1150	413.08
4	Live Streaming of Court proceedings.	37.42	37.42	18.71	18.71	300	112.26
5	Digitisation of the entire court record - both legacy records and fresh filing of cases	509.59	509.59	509.59	509.59	3108	2038.4
6	E – filing	65.47	50.39	50.054	50.054	18000	215.97
7	Provision for enhancing and upgrading the available infrastructure of Video Conferencing in jails including additional facilities based on the size of the establishment	90.55	45.77	45.922	46.234	10200	228.48
8	Creating environment for Online Dispute Resolution (ODR)	7.94	5.78	4.87	5.13	0	23.72
9	Future Technological Advancements (AI, Blockchain etc)	11.46	11.7	14.83	15.58	188	53.57
10	Solar facilities for ensuring seamless availability of ICT infrastructure	57.45	57.45	57.3	57.3	11.892	229.5
11	Additional hardware to courts and judicial officers in Phase and II	193.1	193.1	128.73	128.73	18735	643.66
12	Provision for ICT infrastructure in newly	127.88	127.88	85.25	85.25	2500	426.25

Sr. No	Component	Year I Financial (In Cr.)	Year II Financial (In Cr.)	Year III Financial (In Cr.)	Year IV Financial (In Cr.)	Total Physical Targets	Total Financial (In Cr.)
	set up courts						
13	Expenditure envisaged for successful implementation of ICJS	2.54	2.79	3.07	3.38	16000	11.78
14	Migration of all High Court and District Court websites to S3WAAS platform	1.48	1.55	1.62	1.7	752	6.35
15	Providing adequate cloud storage and other requirements incidental to it.	516.85	515.70	61.38	111.30	25PB	1205.2
16	Requirements of training all stakeholders in ICT awareness / Change Management	45	49.45	54.34	59.72	272	208.52
17	Providing adequate NSTEP facilities in all States and UTs commensurate with the number of districts, size of court establishments, case filing and pendency	6.51	6.82	6.02	6.4	8000	25.75
18	Providing disabled friendly ICT enabled facilities	8.14	5.86	6.45	7.09	300	27.54
19	Software Development	42.14	61.22	66.92	73.24	1746.4	243.52
20	Project Monitoring Unit (PMU) in e-Committee and DOJ.	13.77	13.72	14.31	15.07	100%	56.87
21	Knowledge Management	6.25	6.31	5.33	5.41	290000	23.3
22	Connectivity (Primary + Redundancy)	52.17	52.19	52.19	52.19	409	208.72
23	e-Office for High Courts & District Courts	6.33	6.33	4.22	4.22	700	21.1
24	Judicial process re-engineering	16.5	16.5				33
	Total (In Cr.)	**2024.91**	**2109.61**	**1523.21**	**1552.49**		**7210.2**

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