



DIGITAL COURTS VISION & ROADMAP

PHASE III OF THE E-COURTS PROJECT
E-COMMITTEE, SUPREME COURT OF INDIA

Digital Courts

Vision & Roadmap

e-Courts Project Phase III



E-Committee, Supreme Court of India

2022

ABOUT THE E-COMMITTEE

The e-Committee of the Hon'ble Supreme Court was established in 2004 via an order of the Ministry of Law and Justice in pursuance of a proposal received from the then Chief Justice of India. The e-Committee is the governing body charged with overseeing the e-Courts Project conceptualized 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 a pan India initiative monitored and funded by the Department of Justice, Ministry of Law and Justice, Government of India.

The e-Committee has evolved in terms of its roles and responsibilities over the last 15 years. At present, the objectives that e-Committee seeks to achieve are: interlinking of all courts across the country; 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.

The Chief Justice of India 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. Former judge of the Bombay High Court, Justice R.C. Chavan is the vice-chairperson of the committee. There are four other members who are part of the e-Committee.

In June 2020, the e-Committee constituted a subcommittee of experts from Agami, DAKSH and Vidhi Centre for Legal Policy to envision Phase III of e-Courts Project.

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Uday U. Lalit
Chief Justice of India

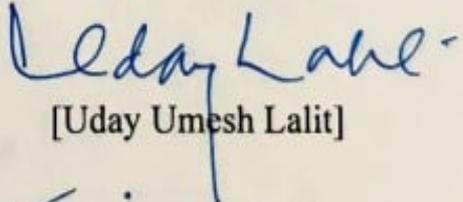
MESSAGE

The e-Courts project, undoubtedly, is one of the most challenging projects undertaken anywhere in the world. The eCommittee of the Supreme Court has been doing a stellar job in steering this mammoth exercise of providing access to justice to each person in need by way of adapting new and modern technologies, in tune with the times.

The eCommittee has successfully rolled out Phase I and Phase II of the e-Courts project aimed at developing networking infrastructure and digitization of the processes to provide easy access to information and various services. I am happy to note that the eCommittee is embarking on Phase III of the project with the noble aim of providing unhindered access to efficient and equitable justice delivery system in an inclusive manner.

This vision document, prepared with a holistic and scientific approach under the inspiring leadership of Brother Dr. Justice Dhananjaya Y. Chandrachud, will go a long way in meeting the people centric objectives enshrined in our Constitution. Given the scale and reach of the project which factors in the rich diversity of our country, this Indian model of e-Courts project will serve as an ideal template for quick adaptation anywhere in the world.

As the Patron-in-Chief, I take pride in the remarkable strides made by the eCommittee. I wish the eCommittee all success in its endeavours to turn its vision into reality.


[Uday Umesh Lalit]

New Delhi
September 23, 2022



DR JUSTICE D Y CHANDRACHUD
Judge, Supreme Court of India

FOREWORD

The goal of the eCommittee of the Supreme Court of India is to ensure transformation of the administration of justice in the country using technology. The eCourts Project embodies this goal and lays emphasis on increasing access to justice and providing qualitative, speedy justice through efficient court management.

Phase I and II of the Project were focussed on ensuring installation of hardware and software and updation of installed systems in all courts and court complexes across India. With the outbreak of Covid-19, it has become increasingly relevant to provide access to justice through seamless, paperless interactions and to prepare the judiciary to tackle similar challenges in the future.

Phase III of the eCourts Project seeks to build an accessible, efficient and transparent judicial system. The focus of Phase III is to realise the benefits of integration of technology in the judicial system, by making services deliverable to the doorstep of all citizens. 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.

The essence of Phase III lies in creating digital courts and ensure digitisation of records. Digitisation would ensure seamless transfer of data to the stakeholders. Phase III recommends a whole-of-system approach to make processes more efficient across the lifecycle of a dispute. The integration of technology in the judicial system of the country is in keeping with the transformative vision of the



DR JUSTICE D Y CHANDRACHUD
Judge, Supreme Court of India

Constitution. The eCourts Project resonates this vision as it seeks to build for the future, while remaining true to constitutional values of access to justice, equality, transparency and inclusivity.

With the support of the Hon'ble Chief Justice of India, the co-operation extended by the Hon'ble Law Minister through the Department of Justice, and with the participation of stakeholders, we have formulated a vision document for Phase III of the eCourts Project that will guide our efforts. I hope that our efforts to build a robust judicial infrastructure will pave the way for a futuristic judicial system.

D Y Chandrachud

[Dr Justice Dhananjaya Y Chandrachud]

EXECUTIVE SUMMARY



Phase III of the e-Courts project envisions a judicial system that is more accessible, efficient and equitable for every individual who seeks justice, or is part of the delivery of justice, in India.

It envisions additional infrastructure for the judicial system that is natively digital, while improving existing physical processes. 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 to 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 certainty of hearings, and judges are able to adjudicate fairly, through optimal hearings: video or audio, in-person or in writing; synchronous or asynchronous. It intends to create a system in which administrative processes such as collection of different kinds of fees and rote applications are simplified because technology enables it.

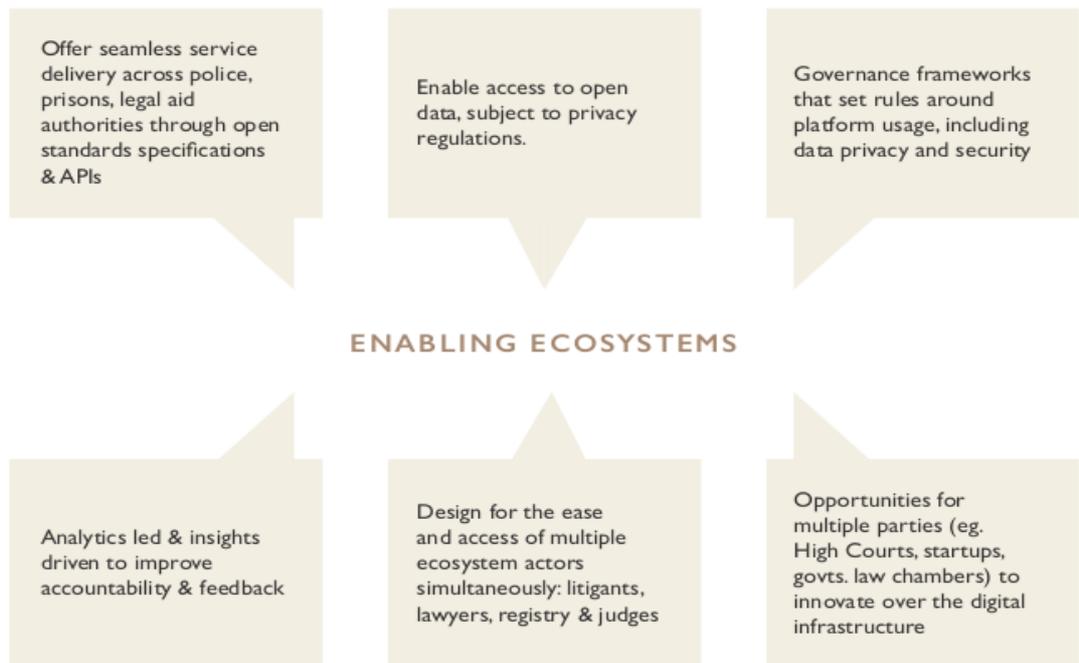
It seeks to put in place an intelligent system that enables data-based decision making for judges and registries when scheduling or prioritising cases and allows for greater predictability and optimisation of capacity of judges and lawyers. Build a “smart” system, in which registries will have to minimally enter data 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 extensions of the courts themselves. A system that combines the vast body of judicial data to foster legal literacy and furnish information on remedies to an aggrieved person at the click of a button. A future of macro data-driven decision making enabling

targeted interventions and resource allocation both on the judicial and administrative side.

AN ECOSYSTEM APPROACH

COVID-19 has amplified the need to strengthen digital capabilities and has provided the steppingstone to an unprecedented opportunity for change. But such a change cannot be achieved without adopting a radically different approach from that adopted in Phase I and II, while building on its foundations. Given the large, diverse and constantly evolving needs of different users and the constant evolution of technology, dispute resolution must not just remain as a sovereign function, but evolve as a service: to mitigate, contain and resolve disputes by the courts (in discharge of their sovereign function of justice administration) and a range of public, private and citizen sector actors (alongside courts).

To achieve this, it is critical to adopt an ‘ecosystem approach’ that supports scale, speed, and sustainability. Rather than focus on developing all the solutions itself, Phase III will curate the right environment and infrastructure for solutions to emerge rapidly from the ecosystem to create a multiplier effect for change. It can achieve greater adoption and impact by leveraging the collective strength of the ecosystem.



KEY BUILDING BLOCKS OF PHASE III

Rooted in values of trust, empathy, sustainability, and transparency, Phase III will enable the vision and a shift to an ‘ecosystem approach’ by:

I. SIMPLIFYING PROCEDURES:

Several repetitive and routine processes designed in a pre-digital era can be eliminated or simplified by taking advantage of digital technology to improve efficiency. 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. High Courts must prioritize process re-engineering exercises to redesign processes to reduce costs, time and effort for users.

2. CREATING A FOUNDATIONAL DIGITAL INFRASTRUCTURE:

Phase III will focus on creating Digital Infrastructure and capabilities (in contrast to services or solutions) that can facilitate the creation of an infinite number of

additional services / solutions. To enable interactions and exchange of data, co-creation of services by different ecosystem actors and improve the efficiency and intelligence of the system, it will provide open APIs (for systems to talk to each other) and also standards, specifications and certifications that can act as guardrails as different actors build solutions across space and time. It will design platforms for e-filing, summons delivery, digital hearings, virtual courtrooms, amongst others in a modular way that will enable agility to change elements constantly based on feedback or availability of newer technologies. More importantly, such infrastructure will enable different actors including High Courts to configure solutions and services without needing to be uniform or standardised.

3. PUTTING IN PLACE A NEW INSTITUTIONAL AND GOVERNANCE FRAMEWORK:

To achieve this vision, it is important to complement the skills within the judiciary with personnel that bring in specialised and functional skills. Towards this, Phase III aims to set up a Digital Courts Technology Office in the short term (which will evolve to a National Judicial Technology Council in the longer term) that will focus on designing the Digital Infrastructure based on consultations with all necessary stakeholders. This will include setting up of a blueprint which includes principles, architecture, identification of building blocks, standards, protocols and proof-of-concept studies. Such Digital Infrastructure will be available as a public good for configuration and adoption by all actors including High Courts. For actual development and implementation, it will procure specialised services while being completely responsible to the judiciary for committed deliverables and service levels. Phase III also envisions setting up of Technology Offices at High Courts that will support the configuration and adoption of the Digital Infrastructure, develop new services and address grievances.

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Digital Courts (i.e., courts equipped with a foundational Digital Infrastructure platform combined with simplified and re-engineered administrative procedural design) can lay the foundation of a future in which digital services are widely adopted. Such adoption will be an outcome of an evolving and open technology infrastructure that enables the creation of solutions specifically catered to the diverse and unique needs of lawyers, citizens, government institutions, companies, court employees and judges.

KEY GOALS OF PHASE III

In adopting an ecosystem approach, Phase III must prioritize the following three goals.

I. INSTALLATION OF RELEVANT HARDWARE

Basic hardware needed across courts to ensure the provision of digital services.

RELIABLE CONNECTIVITY
POWER SUPPLY
OTHER RELEVANT HARDWARE: COMPUTERS, PRINTERS & SCANNERS

2. ADOPT DATA GOVERNANCE

To balance principle of open courts and privacy & security.

3. CREATE THE DIGITAL INFRASTRUCTURE

These capabilities can enable the generation of many services

JUDICIAL TRUSTWORTHY DIGITAL REPOSITORIES	Unique case locator (CNR) linked to every case through data standards
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A COMPREHENSIVE & UPDATED REPOSITORY OF CASE LAW	Freely accessible aggregator of indexed case laws with appropriate standards, specifications & open APIs
MAKE DOCUMENTS MACHINE READABLE & SECURE	Adoption of OCR, smart & demat forms to increase the machine readability of documents. Digital signatures & blockchain to ensure authentication & security
INTELLIGENT SCHEDULING	Using AI to intelligently recommend schedules for hearing by optimising & coordinating the schedules & time of different actors
INTEROPERABLE CRIMINAL JUSTICE SYSTEM	Enable sharing of data between police, prison, legal aid, courts etc by developing data standards, specifications, protocols & certifications

4. ENABLE ACCESS TO CRITICAL SERVICES

DIGITAL CASE MANAGEMENT SYSTEMS	For seamless access and exchange of documents in a secure manner by lawyers, clients, registry and judges.
E-FILING	Leverage smart forms, eliminate physical duplications of e-filings, enable integrated payments. Extend to private complaints before magistrates & subsequent filings
COURTROOM LIVE AUDIO-VISUAL STREAMING SYSTEM	Explore & enable different forms of digitally enabled hearings: in person, asynchronous hearings, online or audio-only linkages
TRANSCRIPTIONS	Provide lawyers & litigants with technologically enabled transcriptions of court proceedings from audio or spoken format into a typed digital format immediately with the order.
SERVICE OF NOTICE	Automatically enable service on parties via email / SMS, where possible, with built in systems for confirmation of receipt, proactive alerts & integrated payments
E-SEWA KENDRA	Support for litigations with limited digital access: a help desk to call & find out information regarding listing of their case or apply for a copy

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	of an order/judgment to be sent by post, etc.
HELP DESK FOR ASSISTANCE IN COURT AND REMOTE	To support lawyers and litigents who are unable to access digital files
ADMINISTRATION OF LEGAL AID	Enable more equitable and efficient allotment of cases to legal aid lawyers aided by data analysis.
VIRTUAL COURTS	Set up more virtual courts for proceedings such as compounding of offences by payment of challans, probate proceedings where no objectors enter appearance, small cause money claims and mutual consent divorce pleas/

Successful operationalisation of these goals of Phase III will require careful planning around sequencing, budgeting, procurement, contract management, adoption and change management, and a robust monitoring and evaluation framework. This Vision Document provides the blueprint for such operationalisation.

ABBREVIATIONS

No.	Abbreviation	Expansion
1.	AI	Artificial Intelligence
2.	APIs	Application Programming Interface
3.	ATM	Automated Teller Machine
4.	CCTNS	The Crime and Criminal Tracking Networks and Systems
5.	CIS	Case Information System
6.	CNR	Case Number Record
7.	CPC(s)	Central Project Coordinator(s)
8.	CSCs	Common Service Centres
9.	DCTO	Digital Courts Technology Office
10.	DoJ	Department of Justice
11.	EPRC	Empowered Process Reengineering Committee
12.	FIR	First Information Report
13.	GPS	Global Positioning System
14.	HCCC	High Court Computer Committee
15.	ICJS	Interoperable Criminal Justice System
16.	ICT	Information and Communication Technologies
17.	IVRS	Interactive Voice Response System
18.	JO Code	Judicial Officer Code
19.	KPI	Key Performance Indicators
20.	NIC	National Informatics Centre
21.	NJDG	National Judicial Data Grid

22.	NJTC	National Judicial Technology Council
23.	NSTEP	National Service and Tracking of Electronic Processes
24.	OCR	Optical character recognition/ reader
25.	ODR	Online Dispute Resolution
26.	QR Code	Quick Response Code
27.	RFP	Request for Proposal
28.	SCI	Supreme Court of India
29.	UID	Unique Identification Number
30.	UI/ UX	User Interface and User Experience
31.	UPI	Unified Payment Interface

GLOSSARY

No.	Term	Definition
1.	APIs	Application Programming Interface is a protocol intended to be used as an interface by software components to communicate with each other.
2.	Case Management	Case management is a comprehensive system of management of time and events in any given case as it proceeds through the justice system, from initiation to resolution.
3.	Core Module	The existing Case Information Software has two functional components- Core and Periphery. The core of the software has all the features and functionalities with some configurable variances, as required by the Supreme Court, Parliament, the High Courts, the Central Government or any approved National Agency. The core of the software is not open for customization. The Core Module is not distributed in source code form.
4.	Court	A court is a room in a court complex designated for adjudication consisting of judges, lawyers, court staff and the necessary infrastructure for any dispute or case.
5.	Court Complex	A court complex houses courts with different jurisdictions in one compound. It may have several courtrooms such as Judicial Magistrate First Class, Second class and so on along with District and Sessions court, etc. Each district/state has a unique classification of courts together to form a court complex.
6.	Digital Courts	Digital Courts is a foundational Digital Infrastructure combined with services and simplified re-engineered administrative procedural design that can enhance access, amplify the existing capacity and enable the efficiency of the overall judicial administration system.
7.	Digital infrastructure	The digital infrastructure is a shared underlying technological framework that provides the context-independent components (such as knowledge, process, technology, connections and data)

		to develop solutions/services needed for the user. It can facilitate the creation of an infinite number of additional services / solutions on the core platforms.
8.	FOSS / Open Source	Open source is a philosophy, or methodology that promotes free redistribution and access to an end-product's design and implementation details.
9.	Master Trainers	Master Trainers are judicial officers who as part of the Training of Trainers programme are responsible for training judges, court staff, Registry officials and lawyers on various e-Courts initiatives.
10.	Modules	A module is a software component or part of a program that contains one or more routines. One or more independently developed modules make up a program. An institution-wide software application may contain several different modules, and each module serves unique and separate business operations.
11.	Open Data	Open data is digital data available in a format that allows it to be reused, redistributed and built-on by anyone, anywhere, for any defined purpose.
12.	Open Standards	Open standards are standards made available to the general public which are developed (or approved) and maintained via a collaborative and consensus driven process. They facilitate interoperability and data exchange among different products or services and are intended for widespread adoption.
13.	Online Courts	In online courts, human judges determine cases but neither in a physical courtroom nor in a virtual hearing. Instead, evidence and arguments are submitted through an online platform. Judges then deliver their decisions not in open court but again via the online service.
14.	Online Dispute Resolution (ODR)	ODR involves resolution of disputes through technology in a simple, fast, flexible and secure manner. ODR encompasses a broad range of approaches and forms (including but not limited to ombudsmen, complaints boards, negotiation, conciliation, mediation, facilitated settlement, arbitration and others), and the potential for hybrid processes comprising both online and

		offline elements.
15.	Peripheral Modules	The functionalities and specifications of the Periphery of the CIS will be finalized locally by the High Courts (depending on their requirements) ensuring that the Periphery Module is compatible with core and the same will be integrated with the Core Module.
16.	Platform	Platform is a model/layered method in which various entities can interact, allowing for a resolution. It leverages a digital infrastructure that is used as a base upon which other applications, processes or solutions are developed.
17.	Process Re-engineering	Process re-engineering is rethinking and redesigning of processes to achieve improvements in critical measures of performance, such as cost, quality, service and speed.
18.	Protocols	Protocols are a set of rules or procedures put in place for transmitting data between electronic devices.
19.	Systems	Systems are components built over digital infrastructure to create services or solutions.
20.	System Assistants	System Assistants are officers who are responsible for providing any technical assistance for software or hardware related issues as part of e-Courts project at the district and High Courts level.
21.	Virtual Courts	Virtual Courts is a concept aimed at eliminating the presence of litigant or lawyer in the court, allowing for adjudication of the case online. In their ideal form, virtual courts provide for end-to-end capability of conducting cases virtually consisting of different modules such as online court fees, e-Filing, online tracking of cases, virtual hearings and online delivery of judgements and orders. In their current form as seen in https://vcourts.gov.in , most of the above modules are enabled. However, for adjudication purposes, the litigant may have to appear in person or through the lawyer in the Court.

THE JOURNEY SO FAR



ACHIEVEMENTS AND CHALLENGES OF PHASE I & II

The e-Courts mission commenced in 2005 with a vision to enhance judicial productivity both qualitatively and quantitatively, and also make the justice delivery system affordable, accessible, cost effective, transparent and accountable. It set in motion the processes of digitisation of the judicial administration process across approximately 19,000 courts in India.

The scale of the project demanded the involvement of multiple levels of government. To ensure uniformity of infrastructure in courts across India, the design and specification of the infrastructure was centralised. At the same time to accommodate diverse needs of courts and to enable ownership, including selection of vendors, the implementation was decentralised. To advance Phase I and 2, the following institutions were entrusted critical roles:

- Supreme Court e-Committee (E-Committee, SCI): responsible for the policy planning, strategic direction, high level design and specification and certifications
- National Informatics Centre (NIC): responsible for development of technology and providing support to the High Courts,
- High Court Computer Committees (HCCCs): responsible for implementing the project at the state level, and

- The Department of Justice (DoJ): responsible for obtaining financial approvals, disbursing, and monitoring utilisation of funds

A more detailed discussion of this governance structure is in the section titled “Institutional and Governance Framework”

I. ACHIEVEMENTS

Planned and executed in two phases: Phase I and Phase II, with an overall budget of INR 639.411 crores and 1670 crores respectively, the project has so far enabled the creation of infrastructure, systems and services for judges, lawyers and litigants. The following section captures some of the key achievements of Phase I and Phase II.

A. PUBLIC INFRASTRUCTURE

- a) Ensuring BSNL-MPLS WAN connectivity through optical fibre cable, with connectivity speed of minimum 10 Mbps upto 100 Mbps depending upon the number of functioning courtrooms in the Court Complex, to 13,606 courts.
- b) Enabling solar energy backup in 242 court complexes
- c) Installing hardware and software needed to support digital efforts across approximately 13,500 courts
- d) Enabling 3,477 court complexes to carry out hearings through video conference facilities

B. SYSTEMS

- a) Development of CIS based on free and open-source software for case management.

- b) Development of a unique case number record (CNR) for each case, essential for both processing of case related data as well as enabling interactions with other services in relation to a case (such as video conferencing, e-filing, tagging, or scheduling).
- c) Development of a quick response code (QR code) to link with pleadings, orders, and judgements to enable easy access to all related documents of a particular case.
- d) Creation of a judicial officer code (JO Code) to provide a unique ID for every judge. This enables tracking of case statistics of judicial officers and builds the capability for judicial assessment.
- e) Development of national codes for case types and legislations across all districts. This is to create back-end standardisation for diverse case classification systems across different High Courts, to enable collation of comparable meta-data at state and national levels.
- f) Launch of the Interoperable Criminal Justice System (ICJS) to improve transparency and effectiveness of the criminal justice system. ICJS aims to integrate and make data interoperable between different institutions such as police, prisons and courts involved in the criminal justice system.
- g) Launch of the National Judicial Data Grid (NJDG), which makes summary statistics of all cases across High Courts and District Courts, transparent and accessible to all.
- h) Launch of National Service and Tracking of Electronic Processes (NSTEP) to track service of processes by bailiffs / process servers through a global positioning system (GPS) enabled application. This is aimed at increasing accountability and transparency in the summons service processes.

- i) Digitisation of case records, especially old case records. This is essential to provide a foundation and capacity for digitisation of all administrative functions in the judiciary.

C. SERVICES

FOR LAWYERS AND LITIGANTS

- a) Launch of Virtual Courts: to reduce costs and increase speed of disposal of cases, virtual courts were set up for disputes relating to traffic challans in various states.
- b) E-seva Kendras were set up at all High Courts and one district court in each state to improve access of information and services to litigants and lawyers on the other side of the digital divide. It enables users to file cases online and access court related information.
- c) Information kiosks were set up at High Courts to provide access to case information to litigants and advocates. A few examples worth highlighting are: display boards outside the filing counters which inform a user about filing status, defects detected etc, a mobile based application which helps retrieve case information, and for legal aid services.
- d) Launch of a free downloadable e-Courts Services App that provides easy access and search of relevant case information (status, orders and cause list) using the QR code.
- e) Setting up systems for e-filing of pleadings and supporting documents at High Courts and District Courts. This has enabled lawyers to file their cases 24x7 as per their convenience.

- f) Setting up systems to accept e-payment of court fees, fines, penalties and judicial deposits at several High Courts to enable seamless payments online.
- g) Several District Court websites have been rolled out to disseminate all information relating to the cases in their respective jurisdictions.
- h) Launch of automated emailing systems to provide advocates and litigants with case status, next date of hearing, cause list, orders, if the email is registered in the system.

FOR JUDGES

- a) Launch of 'JustIS Mobile App' for all judges in the district judiciary. It provides details of cases in their courts along with features to support case management such as calendaring.
- b) Few High Courts have developed dashboards or e-diary for judges indicating daily disposal in addition to other details such as pending cases, number of judgements, etc which are available for every judge to track.

From the services and benefits highlighted above, it can be concluded that the first two phases of e-Courts project have not only built a solid foundation for the modernisation of the judiciary at all levels but have also allowed for innovation. The modular services developed by individual High Courts are a testament to the same.

In addition, the following measures were taken to create a supportive framework for the technology systems and services that were introduced:

1. Training programmes were designed to train court masters, court staff, advocates and their clerks, District Court judges, High Court judges, trainee judicial officers, system administrators, and registrars to use the

services effectively. This was done by creating a large pool of master trainers who in turn trained other officials through training programmes developed by the e-Committee in coordination with state judicial academies. Further, support for stakeholders was made available through kiosks and e-Sewa Kendra on court premises.

2. Support materials were provided through a consolidated 'Knowledge Management' tab on e-Courts website linking video tutorials on YouTube, brochures, and user manuals. In addition, pamphlets and e-filing manuals in regional languages were also created and uploaded.

II. CHALLENGES

While several efforts have been made to develop and enhance the use of technology, there remain challenges in **ensuring capability, integration of technology and data**, and most importantly, **adoption**. These challenges enumerated below, were identified through the interactions with the members of E-Committee, SCI and HCCCs and through an analysis of responses to the questionnaires that were circulated to the Central Project Coordinators (CPCs), Master Trainers and System Assistants/Officers.

AT THE BASE LEVEL, there is a network connectivity divide with some states having good internet connection across districts, while certain district courts in other states do not even have lease lines to provide internet. Adequate data speed and data volume are basic needs which are not uniformly available across the country. This creates disparity between different courts in accessing e-Courts systems and services. This disparity is due to several reasons including poor design of current process for budgeting, impacting the state judiciary, the absence of a centralised procurement agency and standardised specifications. In addition, there is a perceptible disparity amongst end-users, i.e. lawyers and litigants, in their ability to access devices such as smartphones, laptops or tablets that enable usage of e-Courts facilities.

In terms of capacity building for e-Courts, additional staff hired for this project or deployed full time to it were inadequate impacting the digitisation efforts. CPCs have highlighted that this has resulted in over-burdening of the existing staff. Another challenge affecting capacity building is the lack of focused and intensive training to fully utilise the various modules of e-Courts. All primary users including CPCs, Master Trainers and System Assistants have called attention to the need for a continuous programme for technical and advanced training for all stakeholders.

AT THE DEVELOPMENT LEVEL, the federal structure of the judiciary where each High Court has complete independence to devise its own administrative rules and procedures, has resulted in diversity in practices. For instance, there is no uniformity in case nomenclatures across courts, which poses a critical challenge to developing a unified data system that can enable analysis of meta data across courts. Further, stakeholders highlighted how every High Court has its own customised forms, processes and even captcha for websites. While technology needs to account for diversity in administrative and legal processes, the same must be built over a capacity to unify for the success of a nationwide project such as e-Courts.

AT THE ADOPTION LEVEL, due to shortcomings in undertaking process re-engineering exercises, technology integration has placed additional burden on the end-users, especially the registry officials. For example, in many courts the registries still need to maintain physical registers, lawyers still need to file physical copies of their e-filed cases, or bailiffs using NSTEP need to still file physical reports. The issue of lack of functional specialisation has been elaborated further in the section titled “Institutional and Governance Framework”

Further, as gathered from the System Administrators, there are limited frameworks available for organised feedback resulting in various stakeholders remaining alienated from the system and being passive users. This lack of feedback loop and engagement with the end-users has adversely affected adoption.

As a result of these challenges, technology has not been harnessed to its full potential. This has created mind-set barriers against technology solutions and services. Further, due to shortcomings in dissemination of information or lack of usability of certain solutions, most litigants and lawyers are not aware of the range of e-Courts services they can avail. As such, and concomitantly due to the unpredictable nature of technological development, the development of e-Courts has not followed the trajectory charted in 2005. Next, we discuss learnings from the previous phases with an outlook to build on them.

LEARNINGS AND THE OPPORTUNITY FOR ACTION



Phase I and Phase II have generated critical learnings that can help realise the full potential of the e-Courts project. It is central that Phase III of the project builds on these learnings:

ADOPT AN 'ECOSYSTEM' APPROACH

Reflecting on the evolution of the e-Courts project over the years, a clear shift in strategy in each phase becomes visible. It also becomes apparent that each phase adopted a strategy that reflected the dominant approach for government technology at that time.

Phase I largely focused on procuring and installing hardware and network connectivity, digitising case records and operationalising the national e-Courts portal (<http://www.ecourts.gov.in>) with limited online services to users such as details of case registration, cause list, case status, daily orders, and final judgments. In this phase, the focus of technology was primarily to address the needs of the judiciary and registry. Most services for citizens remained offline.

Phase II shifted to focusing on the needs of the litigant. And this was achieved by the creation of 'monolithic systems': the development of an end-to end digitisation system (such as CIS), portals that enable citizens to access information (NJDG) or systems for delivery of services (e-filing, e-payments etc). While this made significant progress, it has revealed three limitations. First,

while the design of such monolithic systems served the immediate needs of a user, the process of adapting and revising their design as per evolving needs of users was expensive and difficult to do without disrupting existing services. As a result, revisions were typically postponed until they could be done simultaneously as part of a periodic improvement, such as the release of a new version of CIS. Secondly, systems and services for a diverse group of actors were developed by the judiciary. This placed a huge burden on a few institutions to meet the scale of needs. Lastly, there was no (or limited) sharing across courts and other justice delivery institutions such as police, prisons, legal aid authorities, resulting in multiple citizen touchpoints or interfaces with the system.

Given the large, diverse, and constantly evolving needs of different users, it is critical to adopt an approach that supports scale, speed, and sustainability. For example, the COVID 19 pandemic has revealed the need to evolve services quickly and at scale for all users. This can be achieved by taking an ‘ecosystem’ approach, i.e.:

- Design the technology and processes for the ease and access of multiple ecosystem actors simultaneously: litigants, lawyers, registry or civil society.
- Enable and support participation from different ecosystem actors for creation and adoption of services.
- Adopt an architecture that is evolutionary and configurable by design which requires limited digital infrastructure (in contrast to monolithic).
- Design a system that enables different parts of the justice delivery system (legal aid authorities, prisons, police etc.) to collaborate and provide seamless delivery of justice to citizens by reducing touchpoints.

PHASE I	PHASE II	PHASE III
AUTOMATION	BUILDING 'SYSTEMS'	BUILDING 'ECOSYSTEMS'
1. Installing hardware infrastructure 2. Development of web based solutions 3. Digitisation of judicial records	1. Creation of linkages between judicial systems and other institutions 2. Development of monolithic services and capabilities for ease of use across users 3. Basic data analytics	1. Open, interoperable digital infrastructure allowing for unified, evolutionary systems 2. Standards and specifications governing integration of services and capabilities 3. Infrastructure capabilities allowing market players to innovate and collaborate 4. Analytics led, evolutionary system leveraging judicial data 5. Reimagined processes leveraging new capabilities.

Towards this, Phase III must evolve to enable justice delivery institutions (such as courts, investigation agencies, and prosecution) to connect, develop and evolve solutions in a seamless manner. This can significantly improve efficiency by breaking the silos between the different entities, eliminating duplication of efforts and realizing economies of scale. For example, if data and records (such as the FIR) from the police is seamlessly shared with the judiciary, the need for the judiciary to duplicate the effort of creating a digital copy of such records can be done away with. Data sharing among different bodies can also lead to improved analytics, policymaking, and contextual services.

Further, the ecosystem-based approach described above, is an opportunity to create a multiplier effect for change. Rather than focus on developing all the solutions itself, the judiciary can curate the right environment and infrastructure for solutions to emerge rapidly from the ecosystem of public and private actors. Drawing inspiration from the united payment interface (UPI), there is opportunity for the judiciary to invest in creating the infrastructure and enabling ecosystem needed.

India has seen a 383% growth in digital payments during the fiscal year 2018-19. Digital payments are today commonplace among a wide cross-section of citizens, including those who never had a bank account.

This would not have happened if the National Payments Corporation of India had not released its innovation, UPI, which was much ahead of several money centres all around the world. The UPI platform has given birth to a vibrant community of both public and private actors in financial services, such as the mobile wallet Payment Service Providers, who are building solutions in m-commerce, bill payments, peer to peer real-time payments, etc. Banks promptly joined hands to provide UPI as a payment mode to merchants and consumers paved the way for a revolution and played a massive part in mainstreaming fintech in the country. This ecosystem was made possible by shared, interoperable digital delivery platforms, anchored by strong governance frameworks and accountable institution(s). Designing it in a way that enabled anyone with basic connectivity and a smartphone to access it has also been the key to ensure inclusion and enable a wide cross-section of society to leapfrog into making digital payments.

STRENGTHEN FEEDBACK LOOPS

Phases 1 and 2 deployed limited strategies or processes for organised feedback at the mission, system, or service level. This inhibited the ability to monitor progress or effectiveness of the implementation of the project or improve design of the systems or services. For example, lack of clear metrics to monitor development and implementation of the mission led to a focus on the supply of solutions and not adoption. Further there is opportunity to include validation, authentication, or auditing processes for the data entered into the system coupled with varied periodicity of review mechanisms. This will improve data fidelity on the system. Similarly, mechanisms can be included for court staff and other users to share challenges and feedback to improve user design and increase adoption.

Phase III will have to build on these learnings to create strong feedback loops at the mission, system, and service level. This would include seamless communication and exchange of ideas between the implementation teams at states level as well as between District Courts, High Courts and the Supreme Court. Stakeholder feedback will have to be sought from judges, court staff, lawyers, and citizens. Such feedback loops must be designed expansively accounting for access and language barriers and means such as stakeholder interactions at panchayat levels must complement feedback sought through digital means.

ENSURE COMPETENCIES AND CREATE CLEAR ACCOUNTABILITY MECHANISMS

The roles and responsibilities in any large-scale digital initiative must be structured in a way that ensures competencies needed for the mission. While several iterations were made in the roles and responsibilities between Phases I and II of the Project to enable decentralised implementation, there remain several areas for improvement. For example, the time and capacity of many judges were allocated to advance implementation of the Project, when in fact

their time should be optimised for judicial decision making. Many judges were burdened with these additional responsibilities over and above their judicial decision-making roles. The opportunity to also include dedicated experts in process-reengineering, technology, product design and communication was missed. Ensuring competencies while creating clear and enabling accountability frameworks will be critical for Phase III.

Learning from both accomplishments and challenges from the previous phases it is critical that Phase III takes a transformative approach to making justice more accessible, inclusive, and efficient for the citizen while enabling an innovation landscape to allow for diverse solutions.

VISION FOR PHASE III



"I will give you a talisman. Whenever you are in doubt, or when the self becomes too much with you, apply the following test. Recall the face of the poorest and the weakest man [woman] whom you may have seen, and ask yourself, if the step you contemplate is going to be of any use to him [her]. Will he [she] gain anything by it? Will it restore him [her] to a control over his [her] own life and destiny? In other words, will it lead to swaraj [freedom] for the hungry and spiritually starving millions?"

Then you will find your doubts and yourself melt away."

M.K. GANDHI

Phase III of the e-Courts project in India is rooted in Gandhi's talisman. 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 it for redress.

At its core, the use of technology in the judiciary is animated 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.

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 which is provided to the community by different actors. And in that sense, technology integration towards better justice delivery in Phase III must encompass the complete lifecycle of justice:

- i. Dispute mitigation - To ensure a better understanding of legal rights and remedies for the common citizen, to empower them to decide the best way of resolving issues devoid of adversarial court litigation.
- ii. Dispute containment - Primarily referring to *alternative dispute resolution* methods where while trappings of adjudication exist, the process occurs outside the courts in a more amicable manner.
- iii. Dispute resolution- Imbuing traditional justice delivery institutions—courts, tribunals, police, prisons, legal aid with the vision outlined above.

This vision for Phase III is built on four building blocks: a set of core values, a whole-of-system approach, a focus on adoption of technology by users, and a robust governance framework.

CORE VALUES: Phase III must strive for a modern judicial system, governed by core values of trust, empathy, sustainability, and transparency which maximise the positives of technology, and minimise its risks and challenges. Details of these and principles relating to development of technology and implementation are listed in “Core Values of Digital Courts”.

WHOLE-OF-SYSTEM APPROACH: Phase III must aim to make processes more efficient across all three components of dispute management i.e. dispute avoidance, containment and resolution. Each of these components will require technological integration with different institutions. For instance, dispute avoidance can include an online service which can evaluate an (legal) issue faced

by an individual and provide sound and trustworthy pro bono advice on a suitable course of action. This would require information and communication technology (ICT) integration to extend to the State and National Legal Service Authorities. Going forward, a pragmatic approach may lie in the development of a *hybrid* model, allowing for both physical and Virtual Courts to co-exist. Such a hybrid model will supplement and not supplant physical courtrooms.

ADOPTION FRAMEWORKS: It is imperative for Phase III to focus on building strong adoption frameworks. Such frameworks must include behavioural nudges, adequate training and skill set development, feedback loops, along with the requisite mandate of law. It is reiterated that technological innovation cannot *per se* yield change; its integration and implementation is crucial to accomplishing the objectives it is built for.

GOVERNANCE FRAMEWORK: From a governance perspective, while numerous judicial decisions have validated the use of technology in judicial processes, Phase III must address the accompanying administrative structures. Through modification of existing laws, rules, and practices, as well as the enactment of newer ones, e-Courts, and any future technological endeavours regarding e-Courts must be founded on a stable governance framework. This will serve as the foundation of a complex, yet seamless justice system of the future, ensuring both scale and stability.

The key goals and strategy of Phase III 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.

As Gandhiji recognised during his years as a lawyer in South Africa, the profession of the law and the courts ought to be the highest form of public service. In order to ensure that it is a service that is oriented towards all citizens, irrespective of wherewithal, ability or assistance to approach the courts, the

justice delivery system must leverage the immense power of e-Courts. This will ensure that justice is not the privilege of the few, but the entitlement of all.

CORE VALUES OF DIGITAL COURTS



“The core values governing digital courts or trust, empathy, sustainability and transparency.”

TRUST

Digitisation efforts should ensure that constitutional and legal rights accorded to individuals, of dignity to life, liberty, equality, freedom, and fraternity are guarded and secured. They should enhance the trust and ability of the legal system to secure the rights of individuals. This demands that the process of digitisation is consultative by design, inviting inputs from all. Equally that digitisation processes advance trust by enabling and leveraging ecosystem capability to serve justice.

EXAMPLE: Live streaming or sharing recorded court proceedings can enable courts to become more open. Similarly leveraging technology to enable transcriptions of court proceedings can enable courts to realise their full potential to become ‘courts of record’. Adopting open-source software and algorithmic transparency, sharing open data will enhance trust. In addition, the process of adoption of Digital Courts, too, by virtue of being a consultative process, will foster trust by engaging with feedback at every step.

EMPATHY

The Constitution requires the State to enhance and ensure equal opportunity, accessibility, and inclusivity in the entire judicial process. In line with this mandate, digitisation efforts should be based on empathy for all actors and especially oriented towards securing access to services, information, and data to all persons, irrespective of their socio-economic circumstances. It must be designed to consider the impact of existing and proposed norms on the most marginalised and vulnerable sections of the population. It must be accessible online and offline in self-service and assisted modes and have in-built translation tools and frameworks that allow for multi-lingual access to all services. Digitisation efforts must be conscious of ‘last mile’ delivery issues, and to solve ground level exclusion concerns. To ensure empathy in the application of technology, it is imperative that concerns of inclusion and integration are addressed at the design stage as well as during adoption, particularly through harnessing a greater understanding of the experiences of those at the margins of the digital divide, including users with additional challenges. Such applied empathy in implementation and adoption of technologies will enable the system to be intuitive, proactive and responsive to user needs, especially in terms of filing, access to case information, scheduling, and overall litigation ease and experience. The use of technology by the judiciary will abide by the principles of ‘fair trial’ and safeguard the right of parties involved.

EXAMPLE: E-filings and hearings through video-conferencing, especially if made accessible to use on a smartphone, can make the Supreme Courts more accessible to people from remote corners of the country who may currently be effectively excluded from accessing the court because of the costs and other resources involved in procuring representation before the Supreme Court. Technology can make court proceedings accessible to litigants with disabilities and vulnerabilities. Similarly, solutions can be designed to enable the court to proactively monitor if a person granted bail has actually been released from prison

and take appropriate action, instead of depending on a lawyer to file necessary applications for reduction of surety amounts or change of bail conditions. Translation tools leveraging technology to ensure judicial documents are available in regional languages is another example of empathy as it seeks to include more people in the judicial process. Solutioning with an empathetic mindset is critical to the success of Digital Courts and fostering adoption.

SUSTAINABILITY

Digitisation should enable judicial administrative processes to move towards becoming more environmentally sustainable by, for example, minimising paper-based filings, physical movement of documents from one forum to another, and travel of lawyers, litigants and other actors to reduce the carbon footprint of the courts. Although Phase II incorporated efforts to introduce solar energy in courts, these can be expanded significantly. Digitisation of courts should proceed with respect to continuity of those traditions that are meaningful and effective. Additionally, it should also target sustainable technology enhancement and evolution in tune with the community it serves. Given the tremendous monetary and human resources being invested in the e-Courts project, it is critical that it is scalable and financially sustainable. An environmental impact assessment will be undertaken to ensure any new technology/hardware being introduced do not cause any negative repercussions to the environment.

EXAMPLE: The introduction of ‘paperless courts’ in New Delhi, reworking document sizes, permitting two-sided printing for submissions, etc., were conceived of as steps towards becoming more sustainable. Further, e-filings, remote hearings, and the digitisation of court records can significantly reduce the environmental burden of the judicial process.

TRANSPARENCY

The principle of ‘open courts’ is at the core of the functioning of our judicial system. Openness includes access to courts and public hearings, reasoned orders, and to information regarding the functioning of courts. Open justice promotes transparency, trust, and accountability, both to the public at large, and within the institution. Adoption of open technology (codes, data, standards, licenses, and application programming interfaces (APIs)) and opening access to data and information about the functioning of courts, including administrative processes will enhance shared visibility around the functioning of courts for all actors. It will generate data, which could be used to enable evidence-based policy making about the judicial process. The design of open courts should be subject to a data governance framework and be sensitive to privacy and security of parties, whilst preserving the integrity of the judicial process.

EXAMPLE: An evolving and expanding ecosystem requires standards and certifications that govern and enable solutions to plug into the platform. Prior publication of open standards creates a level playing field for market operators to develop solutions. In addition, adopting algorithmic transparency to make available AI algorithms and design models from the Judiciary will enable independent and transparently conducted, periodic technical audits.

BENEFITS FOR STAKEHOLDERS



Through a whole-of-system approach, a focus on adoption of technology by users, and a robust governance framework, Phase III aspires to create value for each user. While the full potential of Digital Courts will be unlocked over time, certain illustrative benefits within the timeline of Phase III are discussed below.

FOR CITIZENS

- Better scheduling mechanisms, online digital filings, and different mediums of hearings will provide certainty of events, increase access to courts from anywhere, and advance access to timely justice.
- Digital orders in multiple regional languages will significantly improve understanding of the process and access to justice.
- E-filings and virtual hearings will reduce legal and travel costs, thereby reducing the costs of accessing justice.
- Proactive alerts and information, live streaming of cases, and open data that would constantly evolve and better the system, will increase transparency and trust in the system.
- Real-time assistance through eSeva Kendras and helpdesks will empower users to utilise available services.

- Case information across various courts can be uniform in structure, which will enable tracking of case status in various courts simpler.
- Conscious design will ensure that courts are made more accessible to persons with additional challenges.

FOR 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.
- Make available the same records of files as the courts since the digital case file available with the lawyer / litigant will be identical to the court record of the case. Further, changes being in real time, will reduce the need for inspection or regular updation of case files by the lawyer / party. This will also avoid issues arising from loss of case records or the need to reconstruct case files.
- Better scheduling will enable better time utilisation.
- Orders from different courts made available in regional languages will enable smoother transition of cases from court to court.
- 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.
- Real-time assistance to facilitate adoption of digitally enabled processes.

FOR JUDGES

- There will be greater data, information and support for decision making about the management of the case flow. Forms and data fields will be designed to capture information relevant to support this process.
- 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 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.

FOR COURT STAFF

- Automating processes for scrutiny and review of filed documents. Digital filings will optimise time, minimise errors and increase effectiveness of the Registry.
- Reduce dependence on the physical registry.
- Smart templates for orders and the design of case management systems being built on top of machine-readable files can reduce workload of court staff by minimising need to input data.
- Dedicated real-time assistance will reduce the burden on court staff in correcting errors and providing guidance on processes.

FOR THE JUDICIAL AND LEGAL SYSTEM

- Better data visibility on types and classes of cases that create most caseloads and 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., which 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.
- Minimising paper-based processes will bring a significant reduction to the environmental costs of the judicial and legal system.
- There will be increased security, and minimal time and costs, of moving physical documents from one court to another.

TOWARDS DIGITAL COURTS



To realise the vision of improving efficiency and increasing access to justice, it is vital that Phase III of the e-Courts Project advances India towards Digital Courts by simplifying processes and fortifying the foundations of the judicial administration system on a digital platform.

The guiding premise of Digital Courts is that a foundational digital Platform, combined with simplified procedures, can enhance access, amplify the existing capacity and improve the efficiency of the overall judicial administration system.

It is imperative that the processes of digitisation of all court files and extension of uninterrupted and high-speed internet connectivity to all courtrooms across the country be completed as a priority. Further, to be truly effective and transformative, it is critical that Digital Courts go well beyond digitising existing processes. Given that most judicial processes and procedures evolved in the pre-digital age, it is critical to examine whether such processes continue to remain relevant in a digital age or can be simplified and transformed to better serve justice. Existing processes must be reevaluated for conformity with the vision and underlying values of trust, empathy, sustainability, and transparency. It is critical to explore which processes can be made more efficient using technology or be fundamentally redesigned to enable courts to deliver services not previously conceivable.

Further, for the reasons mentioned in the section “Learnings and Opportunity for Action” evolving the e-Courts project architecture from a monolithic, centralised system to a ‘platform’ is central to:

- support configuration of services to diverse and evolving needs of users (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 constantly evolve collaboratively from the ecosystem.
- 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 wider 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. Basis a uniform set of rules, such information and data can be used such that it benefits the *data principal*, i.e., litigants, *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 put in place in Phases I and II, as far as they align with platform goals.

I. 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 (ATMs) 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 application of judicial mind as has already been done with Virtual Courts for disposal of traffic challans in Phase II. This can be extended to such cases under the Motor Vehicle Act, 1988 and Employee Compensation Act, 1923 in which the disputes primarily relate to the calculations for 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 or contain disputes. Transformative technology can also enable intelligent scheduling of cases in such a manner as to reduce the cognitive burden on judges.

It will be essential to adopt a data governance and security policy, modify relevant existing laws, rules and guidelines to effectuate the application of such automated or transformative technologies.

II. THE DIGITAL INFRASTRUCTURE

A digital infrastructure will serve as the backbone that advances the vision of the e-Courts Project. This constitutes an underlying technological framework housing components (such as knowledge, processes, platforms, connections, and data) to develop and operate services utilised by a user. Its technology architecture must be designed to meet the diverse and evolving needs of stakeholders, while still remaining unified (and not uniform). For example, for judges to optimise judicial time through intelligent scheduling technology, for lawyers to seamlessly file cases online, or for the judicial system to be integrated with other systems such as that of the police, prisons, etc.

Further, in contrast to closed ‘monolithic systems’, it is critical that the digital infrastructure enables different 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 discussed below.

A. BENEFITS OF ADOPTING A PLATFORM APPROACH TO ECOSYSTEM DESIGN

I. CREATES A MULTIPLIER EFFECT BY BUILDING A SHARED DIGITAL INFRASTRUCTURE

The digital infrastructure and capabilities can facilitate the creation of an infinite number of additional services / solutions. Such infrastructure must focus on creation of capabilities (with no user interface such as apps or websites) that act as the technology backbone needed to create services needed for the user.

For example, digital platforms and capabilities such as a digital case registry, can not only help evolve services such as e-filing and service of notice, but also allow the generation of data to create new parameters for judicial performance evaluation and support intelligent law-making to avoid or contain disputes. The capability of ‘intelligent scheduling’, can help evolve services such as a queue management system for lawyers or support judges managing legal aid services through digital allotment of cases. Another example of an essential component of digital infrastructure is a reliable means of verifying identities of participants of court cases, such as lawyers, litigants, and witnesses. Basic capabilities such as well-defined access controls, natively machine-readable documents of laws and cases, automated process checks and stage-wise filtration (e.g., admission by registrars), text-to-voice, voice-to-text, and digitally assisted language translation must form the basis for redesigning some of the most effort and time-intensive administrative processes.

Focusing on building the digital infrastructure, will strengthen each platform's ability to support the constant evolution of existing services and creation of additional services, such as updated repositories of law or creating self-assessment tools for judges. It will also avoid repeated investment in migration between updated systems over time.

2. ENABLES CO-CREATION OF DIVERSE AND SUSTAINABLE SOLUTIONS

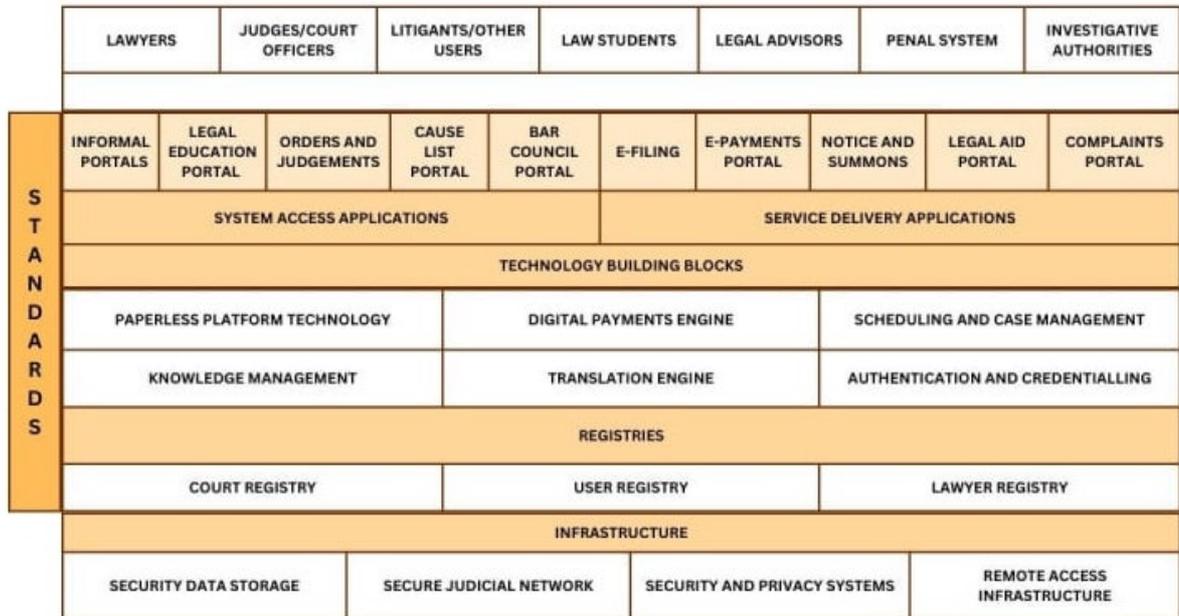
Given the diversity and evolving needs of users of the judicial system, it is critical to embrace a design that enables a high level of decentralised improvements, configuration and extensions by different courts and other users.

This can be achieved by adopting 'microservices architecture' that designs technology in a modular way, creating several pieces that are interchangeable and replaceable without necessitating a redesign of the infrastructure as a whole.

Think of microservices / modular architecture as a house. It is built using bricks, steel, windows, doors and a host of other inputs independently created that can be assembled together as per our unique requirements. In case a windowpane shatters, it is replaceable without having to take down the entire house to its constituent elements. This is the essence of modularity.

This allows for the design of services initiated by the courts to evolve, and scale based on both feedback from users and with change in technology, such as improved encryption and ID verification. Irrespective of which element of the service (an e-filing portal, a transcription service) or micro-service (payment, signing) is required to be changed based on the needs of users, it can be done easily without having to change or re-design the entire system. Such a continuous process of iteration and co-creation will help inform and design new infrastructure capabilities and services. Thus, enabling each court and other

users to configure the services and capabilities to its context easily, without disrupting other parts of the system, and without making the system more complex. A visual of the platform design is depicted below in Figure



Enabling interactions and exchange of data between capabilities, and services is critical to enable co-creation of services by different ecosystem actors and also improve the efficiency and intelligence of the system by allowing elements to ‘talk’ to each other. This can be achieved through the creation of interfaces or APIs that can help different services connect seamlessly, much like the grooves in Lego blocks.

Such APIs can empower citizens, lawyers and law firms, other organisations within the justice system such as police and prisons, companies, government departments (as litigants), and many other stakeholders, to access and use data and capability to develop new services, tools and solutions relevant to their context. For example, it can enable Tribunals to build on such capabilities to evolve solutions relevant to their context, which can further feed intelligence into the platforms. Subject to certification (see below), law offices or the private sector can evolve tools for discovery, tracking filings and managing documents. Law

offices may build a filing interface over the e-filing infrastructure that enables automated pre-screening for defects or consistency in documentation.

3. AMPLIFIES IMPACT THROUGH ECOSYSTEM PARTICIPATION FOR IMPLEMENTATION AND ADOPTION

To achieve impact and implement at scale, it is central to leverage the collective strength of the ecosystem: civil society, public and private sector. Each of their diverse and complementary strengths such as deep understanding of context, access to infrastructure, resources, and talent.

It can allow the ecosystem players to extend and leverage the infrastructure to continuously develop new technological capabilities for their own needs or that of courts and the associated administration. For example, it could lead to the development of applications by the private sector that can integrate listing of cases with billing services for lawyers / proactive alerts for litigants. Similarly orders and judgements can be integrated with better research tools for judges and lawyers. Pending case information can be integrated with case management systems for large companies or government departments, thereby increasing the adoption of the infrastructure. It can also enable civil society organizations to integrate services, such as e-filing, ODR with their programs on the ground.

KEY ELEMENTS OF DIGITAL INFRASTRUCTURE

The Goal:

To meet the diverse and evolving needs of different users of judicial system, while remaining unified

IMPLEMENTATION AND ADOPTION	CSC'S PARTNERSHIPS WITH AWARENESS COMPLIANT RESTRAINT TRAININGS
SERVICES AND SOLUTIONS	DIGITAL HEARINGS E-FILINGS

	NSTEP
	TRANSCRIPTION
	ONLINE PAYMENTS
ENABLING CASE INFRASTRUCTURE	DIGITAL CASE REGISTRY
	JUDGE AND LAWYER
	REGISTRY
	PROTOCOLS AND STANDARDS
	MACHINE READABLE DOCUMENTS
	SUVAS
	INTELLIGENT SCHEDULING

B. STANDARDS, SPECIFICATIONS AND CERTIFICATIONS

It is critical to promote trust and collaboration in such an ecosystem by providing standards, specifications and certifications that can act as guardrails as different actors build solutions across space and time.

STANDARDS OF DATA, processes and technology can enable effective coordination through a common vocabulary and experience across various areas. To illustrate, today, different states have different methods to classify what a ‘case’ is. Some states classify an interim application as a distinct case from the main case while others classify it as a part of the main case. Developing a uniform standard (as opposed to standardisation) for the classification of a ‘case’ and case types will not only increase transparency of data but will also enhance interoperability of data across courts and with other entities such as police, prisons etc, subject to relevant legal processes and access controls. Standards can also be developed for processes (such as filing) and technology (hardware or software) that can enable efficiency. Such standards can also allow interaction of data between different services such as e-filing and intelligent case scheduling to

enable how each of these services evolve over time to become more intelligent and efficient.

SPECIFICATIONS OF DATA and technology ensure uniformity and quality of technology. For example, open API specifications can help in ensuring seamless communication between diverse systems (e.g., services). Taxonomy specifications can provide the metadata for the classification systems to enable meaningful data exchange.

CERTIFICATIONS on the capability of actors who can use or engage the platforms act as an effective mechanism to create trust in the ecosystem. For example, the Digital Infrastructure can develop authenticated processes to enable different actors to use a platform: judges, lawyers, mediators, registry or litigants. Certifications can also create the governance processes and accountability to facilitate the collaboration between the appropriate actors, including High Courts, regulators, other justice delivery authorities and private sector companies, to build and deliver solutions.

Open and published standards and specifications enable increased interoperability between solutions and systems and reduces the barriers to participation by ecosystem actors. For this to happen, standards and specifications must be adopted through a collaborative process in which stakeholders can participate and must be within the purview of applicable data governance and privacy laws. Documentation of standards and specifications should be made open and accessible.

The digital infrastructure will be ever-evolving, scalable, agile and sustainable. It will not only enable better delivery of services but also improve the efficiency and intelligence of the system. For instance, at the base level, the data from the system would streamline courts' caseloads through better court management and intelligent scheduling and create new parameters for judicial performance and accountability. Better data systems can also provide the necessary analytics to support intelligent lawmaking towards reducing disputes.

C. PRINCIPLES FOR DEVELOPMENT OF A DIGITAL INFRASTRUCTURE AND PLATFORMS

Building on the “Core Values of Digital Courts” laid out the development of the digital infrastructure should adhere to the following guiding principles to ensure it can evolve over time, as the needs of its users change:

I. PRIVACY AND SECURITY BY DESIGN

Ensuring security and privacy of data will be a critical part of building the digital infrastructure and maintaining trust between ecosystem stakeholders. Designing with the principles of capturing minimal personal identifiable or other sensitive data, keeping the transient data in memory only, storing data in anonymised ways and displaying only relevant attributes on the user interface is key to ensuring privacy and security. The judiciary needs precise, codified regulations which specify categories of information, the restrictions and access permissions associated with them, and how these relate to specific actors such as judges, the registry, lawyers, and litigants. It would need to designate categories of data, based on several relevant factors. One of these would be the kind and magnitude of harm that the person it pertains to would be exposed to if the data was made public. Tier-based access to data must be specified, based on the role of a person, for example, whether they are a judge, lawyer, litigant, investigating officer, or witness. People identifiable in judicial data must have data rights, and obligations must be imposed on any users of judicial data, including the judiciary and external users. These rights and obligations must be codified and made enforceable. For cases in which the regulation is ambiguous, the regulation must prescribe tests of both the level of vulnerability resulting from making certain data public, as well as of the transparency demanded to ensure public accountability, so that these may be weighed against one another. It would also need to specify case types and legislations for which privacy regulations may be more stringent, such as cases under the Protection of Children from Sexual Offences Act or matrimonial cases. Assessments of vulnerability must take into account the quantity and detail in which data is made available, which we will

discuss below in the context of open data. Finally, these tests should be designed to ensure that the process is as consistent and objective as possible. To bring these aspects to fruition, the e-Committee has already formed a Privacy and Data Security sub-committee to formulate a data governance 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. Designing for openness from an interoperability perspective includes building and promoting open-source code as the e-Courts mission is already doing. FOSS software can be relied on not only in the interest of cost and development time, but also because it allows configurability and adaptability and allows collaborative development. Along with this, it should also include open data, designs, standards, licenses, research, infrastructure, APIs and more. The design should also promote interoperability to help realise inter-platform efficiencies. Such interoperability should uphold the principle of independence of the judiciary and adhere to the data governance framework that is being formulated. Further, adopting algorithmic transparency to make available AI algorithms and design models will enable independent and transparently conducted, periodic technical audits.

Further, adopting open standards with an API driven architecture allows ease of integration with existing systems such as UPI and integration of latest technologies with the platform in future. Open APIs will enable a wide range of Digital Courts application providers to build on the digital infrastructure developed by ecosystem players, by making use of the existing capabilities and services available. For example, data collection tools for universities and researchers to undertake studies on a range of issues including pendency, research tools for judges and lawyers, and case management solutions for institutions with large numbers of disputes. Open APIs can also allow the

ecosystem players to access open data and produce relevant data services for the judicial and legal community, including towards dispute avoidance and containment.

It must also be recognised that there is a close relationship between regulations intended to preserve privacy and data security and those intended to promote openness and transparency. Regulations for data disclosure and a unified data policy must balance both. In addition to categories of information based on vulnerability and permissions described above, regulations should specify a hierarchy of categories of case type and legislation, based on the need for transparency in those cases.

3. ACCESSIBLE AND INCLUSIVE

The design should enable people's rights to access the judicial process irrespective of their socio-economic background. Ease of access can be secured by incorporating user-friendly user interface and user experience (UI / UX) design, ensuring compatibility with standards designed for those with challenges, minimising friction and reducing the cost of interaction so that nobody is excluded. In addition, ensuring optimal service delivery through omni-channel (e.g., web, mobile), universal, and affordable access is essential. For example, ensure availability of content on a platform in all official languages (not only Hindi and English), create multiple formats of access to the services offered by the platform, such as interactive voice response system (IVRS) services for users without smartphones or internet. A greater understanding of the user experiences of those at the margins must be sought to inform design on a continuous basis.

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

Instead of spending upfront time to build a solution incorporating all value-added features, parts of which may be obsolete or irrelevant by roll-out, a platform should be built incrementally. This can be done by developing the most minimum viable products to which additional features can be added as understanding of user behaviour improves and / or new use cases emerge. Such an iterative and incremental approach enables and encourages rapid and flexible response to change, of all kinds. FOSS software has an advantage in that commonly understood software can rapidly be adapted and modified.

Generating data by design and regularly reviewing data about the performance of the system will enable the ongoing user centric evolution of the platform. Leveraging analytics to identify new features and capabilities can also improve its user-centricity and effectiveness. Where appropriate, independent research partners can help with research on pilot projects, particularly with regard to supplying technical expertise and developing and evaluating performance metrics.

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, including for example, the enabling blended offerings of online and offline services, while leveraging eSeva Kendras and help desks to provide real time assistance. This should be accompanied by the institution of an effective training programme for potential users and setting up mechanisms for technical support and grievance redressal, such as through appointment of dedicated support staff that can serve as point-of-contact. For

ease of access and in the interest of transparency, appropriate Court related information to be made publicly available online along with facilities to file RTIs online.

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 have an architecture 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 also to adapt seamlessly to unexpected scenarios.

10. COMMODITISED AND HETEROGENEOUS

The choices to pick the technologies while building a public infrastructure are different than those while building a private infrastructure as the risks are different. It is preferable to choose commoditised technologies such as

technologies provided by several providers (e.g., broadband services) rather than proprietary technologies for building the digital infrastructure for Digital Courts. In the long run, commoditised technology products, licenses, algorithms, and software (e.g., open-source code) make development cheaper and reliable at scale. Commoditised technologies allow integration across services, unlike a proprietary technology, where data stored in proprietary format is only compatible with its own services. The adoption of FOSS software, in particular, 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. For example, the cloud-based website development product [‘Secure, Scalable and Sugamya Website as a Service’](#) could be utilised.

II. UNIFIED NOT UNIFORM DEVELOPMENT

Broad design and specifications of technologies and processes should be outlined at the national level. This is key from the point of view of hardware and software to be used, and services to be rendered, being seamless and unified (allowing for variations from State to State). However, budgeting, deployment and implementation need to be decentralised to allow for greater ownership, flexibility, and adaptation to local contexts. Effectuating the vision described above including the design and building of a digital platform for the judiciary requires a suitably empowered institutional structure. Please see the section titled **“Institutional and Governance Framework”** discussing relevant considerations to choose of institutional structure and a suggested option.

KEY GOALS FOR PHASE III



While developing infrastructure and services that may plug into dispute resolution immediately, ecosystem capabilities for dispute mitigation and containment must also be strengthened through conscious technology and institutional design on an ongoing basis.

Based on the values and principles laid out in the previous sections and to mitigate challenges that may be faced, Phase III must ensure (i) access to the relevant hardware, (ii) the creation of needed digital infrastructure and (iii) access to critical services.

I. ENSURE THE INSTALLATION OF RELEVANT HARDWARE

A critical prerequisite for Digital Courts is that all courts have stable, effective and reliable broadband connectivity, data storage capabilities, timely maintenance, power supply and the required hardware to be able use and deliver digital services. Since many courts rely on obsolete hardware which is inadequate for many of the goals of Phase III, replacement of obsolete hardware is an important early objective. In identification of requisite hardware, due consideration must be afforded to critical user centric issues such as accessibility for persons with additional challenges, and conformance with relevant standards.

Adoption of solar energy in courts would be an important contribution to efforts to mitigate climate change, especially given the increases in immediate electricity consumption that accompany digitization. By eliminating or reducing dependence on paper, digital processes and record keeping can significantly reduce deforestation, energy consumption involved in transporting physical

records, energy usage in production of paper, and generation of waste, among other environmental costs of paper usage. In addition, adoption of solar energy is beneficial because unreliable supply of electricity has been a recognized obstacle to the transition to digital judicial services under Phases I and II. The Government of India approved solar power in 5 % court Complexes under Phase II of the e-Courts Project, and the scope of this effort should be expanded for Phase III

II. ADOPT DATA GOVERNANCE FRAMEWORK

It is imperative for Digital Courts that the judiciary adopts a comprehensive data governance framework for the datasets that it is a controller of. Such a framework would balance the principle of open courts and data privacy and security. The judiciary will establish guidelines and standards governing the onus of safekeeping and terms of use/ processing of data including safeguarding interests of litigants, encryption of evidence and documents submitted and methods in which data is utilized and stored by the judiciary. The framework will include details regarding how different stakeholders may access the judicial data.

The framework will be forward-looking to include the use of artificial intelligence, address problems of cyber security and interoperability between judicial and non-judicial platforms. The judiciary has laid the foundation of drafting a privacy policy for the judiciary by setting up a sub-committee, Privacy and Data Security Committee, under the aegis of the e-Committee.

III. CREATE THE DIGITAL INFRASTRUCTURE

Some of the core digital platforms that must be prioritised for Phase III are:

JUDICIAL TRUSTWORTHY DIGITAL REPOSITORIES (JTDRS)

Judicial Trustworthy Digital Repositories (JTDRs). They 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 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.

A COMPREHENSIVE AND UPDATED REPOSITORY OF CASE LAW

A freely accessible, updated, and comprehensive database of all legal precedents must form the backbone to 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 precedent 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.

MAKE DOCUMENTS MACHINE READABLE AND SECURE

Having all documents entering and exiting the system in machine-readable formats will create the capability to continuously gain and share data at scale. This will advance the effectiveness and transparency of Digital Courts. Building capabilities that ensure the security and integrity of documents will also generate trust and effectiveness of Digital Courts.

Towards this, Phase III of the project will prioritise adoption of different technologies that increase the machine readability of typed, handwritten, scanned or printed documents including optical character reader (OCR), smart forms etc. Such digital documents should be supported with authentication systems like digital signatures. It should also be supported by necessary processes and technology such as blockchain to secure the court records from tampering

and ensure their integrity. Data generated from such capability can help evolve services to enable litigants track trends and patterns to determine the cost and time of pursuing a case. The data can also help identify cases which use fairly formulaic pleadings such as mutual consent divorce pleas, to develop templates in the future to simplify processes for litigants. A step beyond formulaic pleadings is dematerialising certain applications and processes whereby the need to populate even formulaic fields is done away with. Applications such as a request for adjournment on medical grounds within defined limitations may be dematerialised i.e., made accessible through one-click buttons.

Machine readable documents will support effective digitisation of data and will significantly contribute to reducing the workload of the registry to input data. Further, data derived from such capability can enable the identification of patterns in cases to take steps to avoid and contain disputes (both within the court and outside). SOPs would need to be developed and implemented for both the digitisation process and the E-Filing process to ensure that a consistent level of accuracy and quality of records is maintained.

INTELLIGENT SCHEDULING

Co-ordinating the availability and schedules of different users: 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.

INTEROPERABLE CRIMINAL JUSTICE SYSTEM (ICJS)

Courts, police, and prisons currently have independent systems including technology enabled e-Courts, The Crime and Criminal Tracking Networks and Systems (CCTNS), and e-prisons, respectively. These function in silos and are not interoperable for the most part. There is a need for seamless exchange of live data, subject to restrictions and rules under the applicable data governance framework, between these and other arms of the criminal justice system such as legal aid, forensic labs and prosecutors, to accelerate processes, prevent procedural lapses and ensure judicial orders are executed efficiently.

While the ICJS project has identified and commenced the sharing of certain kinds of data and metadata between systems (such as PDF versions of first information reports (FIR) and case diaries), it will be critical to develop data standards, specifications, protocols and certifications needed to operationalise and scale ICJS Processes will also have to be examined and reengineered to accelerate the services. For example, virtual submission of FIRs and chargesheets (entered through smart forms) to judges will save time and enable easier analysis and will avoid unnecessary filing of applications before courts. However, along with the focus on increased efficiency, there should be sufficient checks and balances to ensure that the independence of the judiciary is always maintained and that such systems are not misused against any stakeholder.

Allowing elements of the criminal justice system to “talk” to each other, will allow for seamless tracking and prioritisation of processes. This will also eliminate

duplication of data across platforms and will eliminate delays in the transmission of documents across agencies and across states. For example, it can enable the immediate transmission of the release order from the courts to the parsons for the release of the bail applicant. Further, in the event the applicant is not able to fulfil the bail conditions within a fixed time period, the magistrate granting bail should be automatically notified so that the bail conditions may be reexamined.

IV. SERVICES

Building on the infrastructure described above, services will have to be designed after factoring processes that can be re-engineered, accompanied with necessary amendments to applicable laws. Drawing from such process-reengineering some of the services that must be prioritised for Phase III are:

DIGITAL CASE MANAGEMENT SYSTEMS

The reliance on the need to physically move case files (orders and filings) from one court to another consumes significant time and environmental costs for all actors. The secure access to digital case files (orders and filings) from anywhere will significantly advance access and efficiency of Digital Courts for all actors.

To achieve this, Phase III will build a case management system that can be securely accessed by lawyers, clients, registry and judges. Such a system will leverage the capability to make documents machine readable, to enable case documents available in multiple languages. It should allow for seamless access and exchange of documents among authorised users and the development of applications and interfaces to use this data. Digital case files should be supported with processes for authentication and ensuring integrity of the documents. Features such as bar codes that would help authenticate and track material objects submitted to courts, can be explored. Time stamps for the uploading of documents, depositions, and orders should be provided to all authorised users.

A digital case management system will enable greater ease to search, track and index documents. This will not only reduce the time taken during a hearing but also make facts and legal precedents easier for lawyers and judges to access in real time. Judges in particular can benefit greatly from being able to access tools and services remotely, by logging into a profile that enables them access to case databases, software for typing and dictation (once speech recognition is sufficiently advanced, particularly in Indian languages), tools for performance monitoring and case management, and templates for writing orders and judgments.

E-FILING

The ability to file pleadings and pay fees 24 x 7 from anywhere will significantly enhance ease of access to courts. This along with automating processes for scrutiny and review of pleadings can optimise time, minimise errors and the effectiveness of the registry. This will be in tandem with smart templates for filing documents such as petitions and pleadings and will also include features such as prompters for seeking consent from litigants/advocates who are entering the data for publication of personal information. Such capabilities will be leveraged to ensure that the litigants/lawyers have the option to withdraw consent at any stage of the case cycle.

Phase III of the e-Courts project will evolve the e-filing system developed in Phase II to make it more inclusive, seamless, and effective. It will achieve this by extending interactions between lawyers, litigants and mediators/ arbitrators and enable making subsequent filings to cases online. It must eliminate physical duplications of e-filings, enable integrated online payments while allowing those without the means to make digital payments to do so at a physical counter in the court premises. Further, e-filing services must also be extended to filing of private complaints before magistrates. The system should explore putting in place smart streamlined forms, especially for appropriate cases where standard pleadings are employed such as negotiable instruments and transfer of property. Such forms will help remove redundancies, minimise errors, simplify processes for lawyers

and clients and reduce workload for the registry. It can be made accessible by making the E-Filing process adaptable to different kinds of devices and secure enough to be used from locations ranging from cyber cafes to kiosks.

Such digital filings will enable secure access to filings across different jurisdictions without the need to move the documents. Through the employment of standards and specifications across jurisdictions and modes of formal dispute resolution, e-filing portals will serve to eliminate duplication in effort for access to *Lok Adalats* and mediation centers. In addition, the automated generation of receipts will engender transparency, facilitate ease-of-use by providing stepwise instructions, reduce clerical errors such as in the computation of court fees and significantly lower costs of preparation of multiple duplicates of filings.

COURTROOM LIVE AUDIO-VISUAL STREAMING SYSTEM (CLASS)

Enabling seamless and inclusive digital hearings will be key to minimise travel costs of litigants and lawyers, thereby increasing access to justice and reducing environmental costs. Different forms of digitally enabled hearings must be explored for diverse use cases. Certain proceedings may require to continue with in person hearings, while others may explore possibilities of asynchronous hearings, purely digital hearings, audio-only linkages where necessitated or even virtual courts. Exploration and adoption of appropriate media would be key for timely delivery of justice.

Phase III, will focus on enabling courts to deploy quality digitally enabled hearings, based on nature and type of case. This will have to be supported by efforts by the High Courts to identify classes/ types of cases where in-person hearings should be retained, and where various forms of digital hearings can be adopted. Sound analysis of stakeholder interest is vital before initiating such deployment particularly in matters of criminal justice where additional safeguards may be necessary for the rollout of digital hearings. Further High Courts must re-engineer processes and specify time limits where possible. Such process re-engineering assumes importance in relation to tasks such as marking

of documents in suits and computation of damages payable in workmen compensation disputes which may be accomplished without application of judicial mind therefore eliminating the need for a traditional hearing.

Digital hearings should also be supported by efforts to make the hearing public, and the process transparent. This can be achieved either through live streaming of hearings or where that is not possible, by making records of the proceedings freely accessible to ensure courts retain the 'open courts' principle. Digital hearings have been adopted by certain states to conduct Lok Adalats. This can promote transparency and optimise time of lawyers, litigants and judges, whilst shortening the timelines for deciding cases and increasing access to hearings for differently abled persons. For easier management, scheduling, archiving, and other tasks related to open digital hearings under the CLASS system can be integrated with CIS/case management software.

TRANSCRIPTIONS

Transcriptions of court proceedings are key to building trust and transparency in the system.

Phase III will prioritise providing lawyers and litigants with technologically enabled transcriptions of court proceedings from audio or spoken format into a typed digital format immediately with the order.

Digital transcriptions will provide a precise record of what was said in court. This will help lawyers and litigants plan their trial plans or appeals, understand the decision, use the transcription as evidence or share with litigants who were not present. It will also enable lawyers and litigants to quickly store, search for, and locate the information they need and increase access to court proceedings for differently abled persons. In addition, transcriptions may serve as a reference point for judicial officers, particularly in relation to suggestions of out-of-court settlements by parties seeking adjournments.

SERVICE OF NOTICE

Significant time of the court, lawyers and litigants is lost due to delay in service of notice. Reengineering processes of service of notice and adopting digital technologies can positively impact simplification of and speed of delivery of service on other parties to the litigation.

Phase III of the Project will leverage and build upon the Phase II E-filing module and NSTEP application to enable service process by automatically enabling service on parties via email / SMS, where possible, with built in systems for confirmation of receipt. To enable requisite action by the petitioner, it will enable the proactive disclosure of the status of service of notice to the petitioner prior to the scheduled date of hearing. Subject to requirements of law, it will also integrate the payment of process fee along with court fees to minimise delay. It can also provide alerts to necessary actors by leveraging applicable court rules to ensure compliance with specified timelines.

Such a service can significantly save time of litigants and lawyers, eliminate the need for manual processing by registry officials and eliminate disagreements of receipt of the documents and enhance speed of delivery of justice.

E-SEWA KENDRA

E-Sewa Kendras are centres in court premises that provide information on cases, as well as digital services. These include providing soft copies of orders and judgments, answering enquiries on case status, providing services such as e-filing, online purchase of e-stamp papers, online disposal of traffic challans, and online payments. Many of their functions overlap with help desks in that they also provide guidance to litigants in availing legal aid, configuring, and using digital services from digital services to video conferencing applications for hearings. They have been created in 19 High Courts and in 219 district courts. For the expanded scope of digital services envisioned under Phase III, E-Sewa Kendras could be developed as the main point of contact for litigants at courts

themselves, where all litigant-facing and lawyer-facing administrative tasks and services can be performed digitally.

HELP DESK FOR DIGITAL ASSISTANCE - IN-COURT AND REMOTE

There exists a significant digital divide across Indian society. As Phase III adopts and leverages technological capabilities, it is imperative that this divide be bridged rather than exaggerated to improve access to justice.

Services such as remote digital assistance for litigants who are unfamiliar with computers and mobile devices, or who are unable to access digital services. They would also increase access for litigants who cannot travel physically to the court premises, can play a critical role in achieving this. Initially such assistance may be a help desk for litigants to call and find out information regarding listing of their case or applying for a copy of an order/judgment to be sent by post, etc. They can also be provided assistance via web chat or a voice response system. Over time, remote digital assistance can also be expanded to providing litigants copies of orders/judgments in vernacular languages through post. Assistance can be provided at court premises themselves for services such as configuring and explaining software for video hearings, as well as for procedures such as e-filing. Special assistance can be provided at courts for digitally excluded individuals for whom remote assistance is inadequate.

Phase III presents an opportunity to leverage technology to reduce the dependence of litigants on lawyers as a gateway into the legal system. Through self help facilities and remote assistance, litigants shall be empowered whilst helping reduce financial and time investments into seeking judicial information.

ADMINISTRATION OF LEGAL AID

The provision of free legal aid is a constitutional mandate to ensure access to justice. While resources are allocated to this end by legal services authorities, a

lingering issue has been transparency in case management and provision of services by empanelled advocates.

Phase III with an accurate case management system, open hearings, ICJS and digital transcription of proceedings can greatly assist the judges in-charge of legal aid authorities in more equitable and efficient allotment of cases to legal aid lawyers aided by data analysis. By appropriately adjusting for stage and pendency of cases already assigned to lawyers, such service will allow for an equitable distribution of the caseload amongst empanelled lawyers. Further, since legal aid cases to be monitored may be filtered electronically (by pendency, adjournments requested, non-appearance, etc), the judge in charge can ensure greater accountability by monitoring and tracking cases where their attention is required.

A dedicated service tracking disputes involving legal aid advocates will allow for judicial officers to effectively discharge their roles as administrators. It will also create an effective feedback loop where litigants assigned legal aid advocates may not only track the progress of their case but also bring forth grievances with case management.

VIRTUAL COURTS

As part of the judicial process re-engineering, Phase III will proactively explore the application of technology for processes and proceedings that take up judicial time but where only certain stages necessitate application of judicial mind.

Such proceedings such as compounding of offences by payment of challans (such as in traffic rule violations), probate proceedings where no objectors enter appearance, small cause money claims and mutual consent divorce pleas (building in the possibility of mediation) are an opportunity to automate several processes and shift them online, while introducing asynchronous judicial involvement and reduce burden on courts.

By entertaining pleas where no adversarial process is required, asynchronous courts will allow for optimal use of judicial time as well as extend convenience of online process to litigants in appropriate cases.

Provision of digital tools in both virtual and physical courts should be as similar as possible to each other. This way, lawyers, judges, litigants, and other participants in proceedings can switch between them easily. Files, records, and transcripts used in one hearing should be accessible in all subsequent hearings, irrespective of whether they are held virtually or in person.

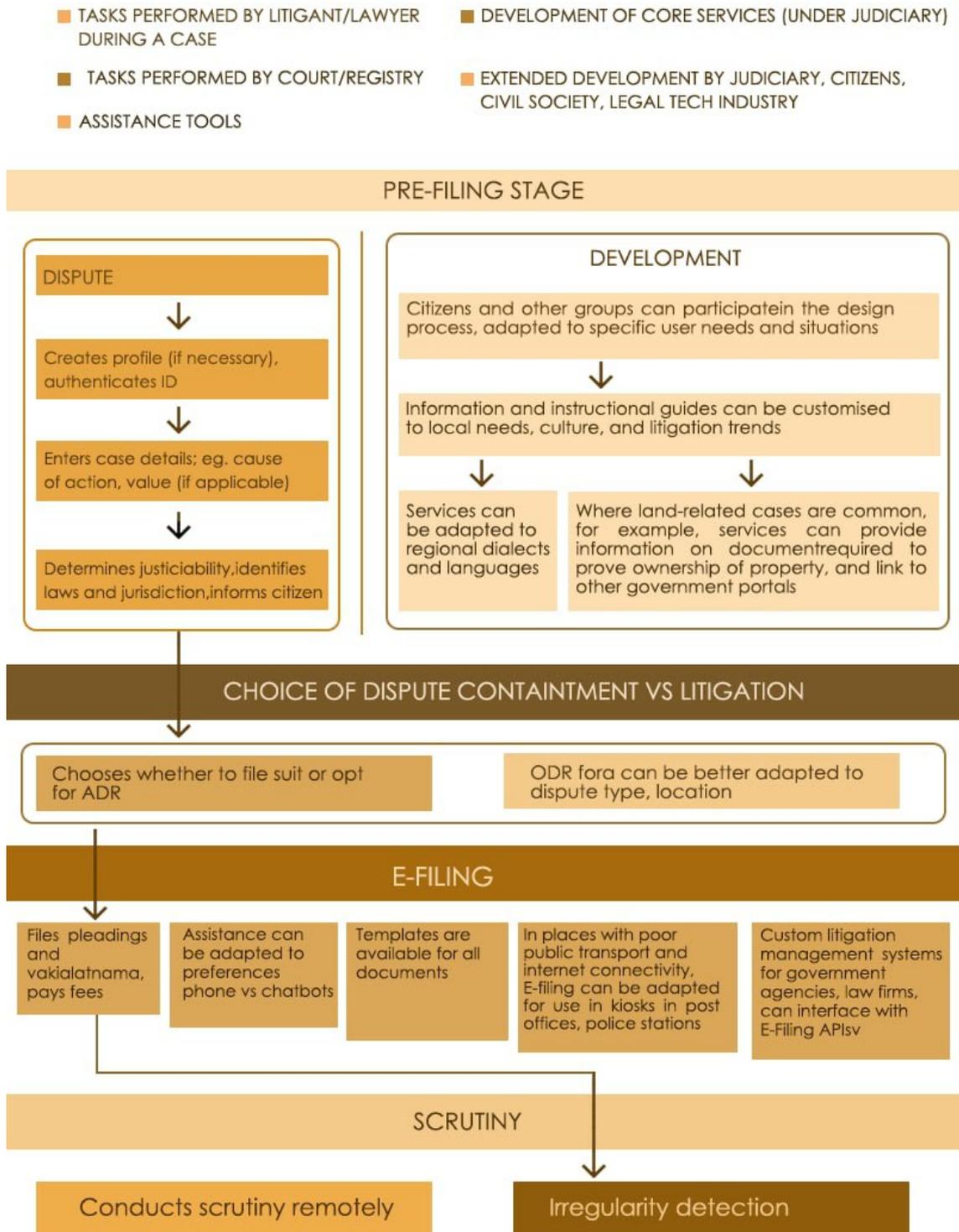
WHAT WOULD A COURT USER'S EXPERIENCE OF A DIGITAL COURT LOOK LIKE?

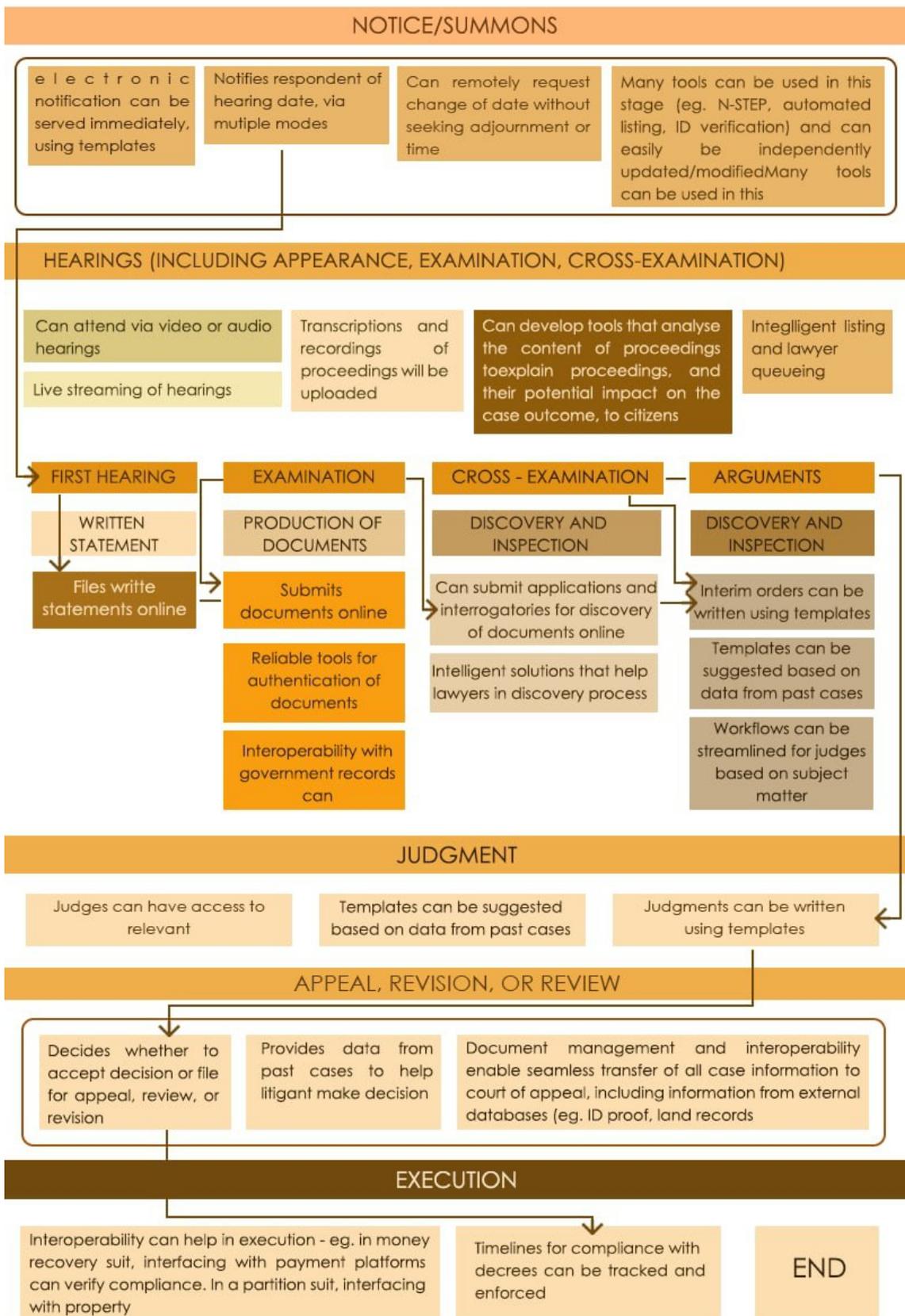
The proposed setup of digital courts, and the digital infrastructure that will enable them, are both technical concepts that may be a little difficult to imagine. This section will illustrate the benefits that they can deliver to citizens, judges, lawyers, registry staff, and non-judicial court staff so that the document is easier to relate to. It depicts how a digital court would function, what the experience of a litigant could potentially look like, and what tools can be made available to stakeholders through digital infrastructure. The section will focus on the life cycle of a civil case and its progress through typical stages that such a case may encounter to illustrate the benefits of a digital court. However, it is necessary to note that the participants in the criminal justice systems can also benefit significantly from digital infrastructure. The benefits of the approach proposed in this document therefore apply not only to the judiciary, litigants, lawyers, but also the police, public prosecutors, investigation agencies such as NIA and CBI, and prison authorities.

Figure_ below illustrates potential use cases where proposed platform-enabled services could fit within the context of the stages of a civil case.

Figure_ below illustrates potential use cases where proposed platform-enabled services could fit within the context of the stages of a civil case.

ILLUSTRATION OF PLATFORM APPLICATIONS IN THE LIFECYCLE OF A CIVIL CASE





PRE-FILING STAGE

Citizens without legal expertise typically find it difficult to understand the complexity of legislation and judicial procedure, and how it would apply to their disputes. This can be addressed through the creation of a single online point of access to judicial services, provided through a portal, and an app for mobile devices. This would not only provide services but would enable citizens to avail of them in an informed manner as described below. After utilising services delivered in this manner, citizens without prior knowledge and expertise should ideally be empowered by the knowledge they gain on the judicial processes and the options they have to seek relief in a given situation.

In a digital court, a citizen would initiate the judicial process by creating an account on this portal, and would then authenticate their identity through any accepted government-issued document. Once their account is created, they would enter the information pertaining to their dispute into the portal, in order to learn about their options for legal recourse. Well-designed forms with questions and drop-down responses, written in accessible language, can be used to ascertain relevant details such as the cause of action and the value of the suit (if relevant). Using appropriate data from the e-Courts database, the portal can then provide the citizen with information on the justiciability of the case, the court with jurisdiction over it, and applicable legislation.

Since the specifications of e-Courts functionalities such as ID verification must ultimately be made open, judicial services can be designed collaboratively, and non-judicial stakeholders can provide more input in the design process. Services can therefore be adapted to specific user needs and situations. Multiple features can be provided for differently abled users, such as audio assistance and text display. Each of these would be available in local languages and dialects. Information and instructional guides can be customised to local needs and adapted to trends in litigation. For example, where land-related cases are common, potential litigants can be provided with information on documents

required to prove ownership of property and can link to government portals such as state land record databases.

Given that many citizens in India do not have access to computers, access must be well-optimised for mobile usage. For remote places where access to both public transport and mobile internet is limited, the portal for judicial services can also be optimised for access through kiosks in court complexes and other physical locations such as police stations. Further assistance can be provided in local languages through a designated helpline.

CHOICE OF LITIGATION OR ADR

Once the litigants have a clear picture of the legal status of their dispute and understand whether they will be able to contest the case in court, the citizen can then be given information on how to proceed. They can be informed on the differences in procedure, costs, and outcomes of filing a suit, or alternative dispute resolution (ADR) options such as arbitration, mediation, or conciliation. The ability to easily share and receive data with the e-Courts database means that online ADR (ODR) forums can be linked with this portal. Once the litigant and their lawyer opt for a given forum, sharing documents and other data with that forum from the portal would be easy. Similarly, should the litigant choose to file a suit for the same matter at a later point, documents from the ODR proceedings can be efficiently shared with the court. The ability to share and access data remotely means that more ODR forums can adapt to local contexts and can study data to adapt to specific types of disputes.

E-FILING

When a litigant files a suit, they or their lawyer can upload all documents, including pleadings and vakalatnama, and pay all fees via the portal or app. Assistance can be provided through any channel that litigants and lawyers prefer, such as through phone, chatbots, or email. The E-filing procedure must be flexible enough to work smoothly on many kinds of devices, much like the pre-

filing information services described above and should allow for the uploading of large files.

Special features can be added to the portal for lawyers' accounts, to enable them to keep track of their cases, and to plan and manage associated tasks. Allowing seamless transfer of data between the e-Courts database and certified third-party applications will enable lawyers, government agencies, and public prosecutors to use custom litigation management systems to manage their cases. The advantage of this is that these systems can be adapted to their specific needs, such as dealing with a large volume of cases, the need to reduce the complexity of performing tasks unique to specific types of case or performing tasks specific to their office such as public prosecutors'. Templates for legal documents can save them time and effort in drafting, and these may be recommended by automated tools, based on analysis of the case data.

Reliable tools for authentication of documents can be built into the submission portal. Linking the portal to government databases such as property records, compliance filings under the Companies Act, 2013, and vehicle records can speed up both the submission and authentication of these documents. Once documents are submitted by a party are admitted, the judge can instantly grant online access to the other party.

SCRUTINY

Once the pleadings and documents have been uploaded, they can be scrutinised remotely by the registry. The digital formats of these documents can enable the registry staff to use automated tools to verify their authenticity and detect irregularities.

NOTICE OR SUMMONS

If the respondent is already a registered user of online judicial services, they can be served with processes automatically, and may receive an email or SMS telling

them to log in and view the process. If they do not yet have an account, they may be served processes by other modes of communication, such as SMS, post, email. The summons would direct them to create an account on the judicial services portal, and they can choose their preferred mode of receiving alerts, such as mobile or email. The processes themselves can be generated using templates, as is presently done in some jurisdictions. If the respondent has an account, the information that they have already provided in the past regarding their contact details can be automatically fed into the templates. Multiple functionalities will be available for judicial stakeholders to use in this stage, such as updated versions of N-STEP, ID verification, and scheduling algorithms used in listing of cases.

HEARINGS

Judges would be able to view and manage their docket in real time, through judge-facing services. They would be equipped to do so in their chambers and in the courtroom. Cause lists would be generated algorithmically, on the basis of a combination of criteria, including subject matter, stage, and the urgency of the specific purpose of hearing. These criteria would be used to determine the prioritisation of hearings, but the cause lists can be reviewed and adjusted if the judge deems it necessary. If the judge finds that a specific matter is more urgent than determined by the listing algorithm, they can manually override the listing algorithm and advance its date and time. The algorithm would adjust the cause list accordingly and reschedule other cases if necessary.

Expanding on present video conferencing capabilities will enable more flexibility in scheduling hearings, as dates need not depend on the physical presence of parties or lawyers. Proceedings can be transcribed and recorded, and these can be made available to litigants, their lawyers, and third parties online.

Parties and lawyers would be informed about hearing dates through the portal and other alerts, such as via SMS. If a party or lawyer is unable to attend the hearing, they will be able to request rescheduling of the date, which can potentially reduce delay-inducing adjournments. Limits on the number of such

requests, as well as guidelines for acceptable justifications for them, can both be specified by case flow management rules. Algorithmic generation of cause lists and lawyer queuing, using e-Courts data, can increase both the efficiency and predictability of case timelines.

During hearings themselves, judges would have access to a device, maybe a laptop or tablet, to view evidence, pleadings, issues, prior orders, and other relevant documents. It should also provide a convenient and streamlined means of referring to legislation and prior judgments. The workflow for viewing these would be streamlined, for judges to easily switch between and annotate them, make general notes, or assign tasks.

In the various stages of hearing a case, including appearance, examination-in-chief, cross-examination, and arguments, numerous functionalities can make the work of courts and lawyers more efficient and provide more information to litigants themselves. At each stage, litigants can be provided with information online explaining the outcomes of their hearings and their potential impact on the case outcome. These insights would be generated through analysis of data from past cases in the database and could be provided via litigant-facing dashboards.

DISCOVERY AND INSPECTION

In the process of discovery and inspection, lawyers can submit interrogatories and applications for discovery to the other party online and can use both in-built and independently developed tools for discovery. This enables them to benefit from recent developments in data analytics and natural language processing, saving their time in determining the relevance of documents.

ADMISSION AND FRAMING OF ISSUES

If either party admits to the claims of the other and the judge passes an order, the order can be written using templates generated using data from past cases.

Workflows for judges can be streamlined based on the type of case, with tasks and functionalities adapted to the demands of each type. In less complex matters, for example, tools for writing orders can be configured to allow importation of information from documents, and the judge would only need to verify this information, unless they choose otherwise.

EXAMINATION-IN-CHIEF AND CROSS EXAMINATION

Witnesses can be summoned by multiple modes of communication, in a manner similar to parties, as described above. Lawyers can submit their lists of witnesses online, and the judge can remotely grant access to the other party.

ARGUMENTS

Lawyers can submit written arguments remotely and asynchronously, if the judge sees fit. Oral arguments would be recorded and transcribed much as other stages heard in court, and can be conducted remotely, via video conferencing.

JUDGMENT

Judges would have access to a range of tools to help them decide a case and write the decree/order/judgment. The judge could indicate which party they have decided in favour of, and for simpler cases, they could indicate their reasons for doing so by selecting one or more of several options, via a checkbox or dropdown. Templates for judgments can be suggested based on analysis of these inputs, other data from the case, and data from similar cases that have been disposed of. The templates could be based on textual analysis of both past judgments and the templates' usage patterns. Judges would be provided with a database with judicial precedent and legislation, enabling them to identify legislations used and earlier rulings in similar fact situations. Where the judgment refers to a given law or prior ruling, online copies of the judgment that parties and lawyers receive would link to them.

APPEAL, REVISION, OR REVIEW

After the decree/order/judgment either party may want to better understand what choices are available to them if they are dissatisfied with the outcome. This information would be hosted on the portal, automatically provided to parties at the conclusion of a case. Parties and lawyers can both view trends in outcomes for similar cases, both in their first instance and upon appeal, to understand how their case may proceed if they choose to pursue it further.

EXECUTION

If neither party wishes to file for appeal, review, or revision, then the court can monitor and enforce the execution of the decree/order online. Compliance with the decree can be recorded either when the party in favour of whom the decree is executed declares it through the portal, or if the other party uploads proof of compliance to the satisfaction of the judge, who can acknowledge this on the portal. Interoperability with other databases can help verify compliance. For example, linking with property records in real time can help a court verify the execution of a partition deed.

OPERATIONALISING PHASE III

I. INSTITUTIONAL AND GOVERNANCE FRAMEWORK



An enabling and strong institutional and governance (I&G) framework, is vital to transform the citizen experience with the justice system and realise the vision of Digital Courts.

In designing a sound, I&G framework for a large and complex initiative like the e-Courts Project, there is a need to first diagnose the sources of difficulties in the existing institutional structure. Further, to realise the vision of Digital Courts, it is essential that institutional capacity be built to effectively design and rapidly roll out the Digital Infrastructure, achieve and sustain high levels of reliable performance on an ongoing basis. The I&G framework must also offer clarity on objectives of the institutions, the roles, and responsibilities of different actors, specifically determining who has the responsibility of decision making, and designing the processes that will be utilised for information flow between different components of the framework.

As we look back at learnings from Phases 1 and 2, we are cognizant that there is a sense of implementation shortfall, with a gap between aspirations and outcomes from the structures. When reviewed through the lens of institutional design, critical shortfalls include:

- 1) **Not Conducive for Holistic and Effective Technology Design:**
Currently, the needs for technology development and design (of CIS and

different services) are determined by the judiciary and communicated to the NIC for development. Such a bi-lateral relationship results in the design of the technology being driven primarily by the lens of the judiciary and misses the perspective of other users, such as lawyers, litigants, researchers, citizens whose needs and perspectives are critical for effective adoption. The lack of an intermediary who can play the role of an assimilator and designer results in the creation of services that are not suitably designed based on the needs of all users.

- 2) **Need for Functional Specialisation:** The implementation of e-Courts and the sanctioning of periphery modules at the High Court level are currently headed by judges in the HCCCs or CPCs. As a result, specifications for technology are driven primarily by judges. This results in individuals who lack deep functional knowledge being responsible for different roles.
- 3) **Sub-optimal use of judicial time:** The processes in place for procurement of hardware and its inventory management, and vendor selection are time consuming, rigid and complex. These are currently overseen by the Registrar IT/ Registrar Computers or the CPC - and take up significant amounts of time with similar decisions having to be taken by each High Court, resulting in inefficient use of judicial time. There is a need to support courts in managing the executive processes and setting standards and specifications to be met by prospective tender applicants.

These issues are symptomatic of the absence of a strong dedicated team focused on building technology- driven products and driving implementation, within the judiciary on an ongoing basis.

Towards the adoption of a Digital Infrastructure and an ecosystem approach in Phase III, technology will be employed to play a more transformative role. More than ever before, this necessitates the need to ensure competencies and functional capacities to design the infrastructure that could cater to the needs of

a range of different users (including courts, lawyers, and citizens), formulate standards and specifications, manage day to day operations of building and maintaining a platform that includes vendor management, monitoring, complaint redressal, communication and outreach. Today, the judiciary has officers who have a deep understanding of legal processes and the judicial administration system. For the execution of large complex projects that include mission-critical IT systems, it is important to complement the skills within the Judiciary with specialised skills from the private sector.

I. TRANSITION FROM PHASE II TO PHASE III

The transition from Phase II to Phase III of the Project is required to be so managed that there is no halt of activities or any disruption to the existing I&G structure. This assumes critical importance given the heavy reliance of the judiciary on its digital systems accelerated by the COVID-19 pandemic.

The development and adoption of the Digital Infrastructure is envisaged in the following broad stages:

- Stage 1: Design of the blueprint which includes principles, architecture, identification of building blocks and standards
- Stage 2: Development of the Digital Infrastructure
- Stage 3: Implementing and adopting the Digital Infrastructure in at least 1 High Court
- Stage 4: Implementing and adopting the Digital Infrastructure in 2 High Courts, building on the learnings from the first pilot
- Stage 5: Offering and extending the Digital Infrastructure for adoption in all courts

Given the development and adoption of the Digital Infrastructure will take 1-2 years, it is critical that the existing I&G framework, roles and responsibilities continue to service the needs of stakeholders, accentuated by additional technological and design capabilities, until a pivot is made to the blueprint to be designed under Stage 1.

In parallel, it will be critical that the appropriate I&G framework be put in place for the purposes of designing and development of the Digital Infrastructure immediately and support its growth and adoption in the longer term.

Towards this, we discuss below certain principles that must drive the formulation of the I&G framework. Building on these principles, it is proposed to create (a) a time-bound transitory structure that can initiate the development of the Digital Infrastructure in the immediate term and (b) an institutional structure that will enable the development and adoption of the Digital Infrastructure in the longer term.

II. PRINCIPLES GUIDING THE INSTITUTIONAL AND GOVERNANCE FRAMEWORK

1. JUDICIAL INDEPENDENCE

The separation of powers between the legislature, executive, and judiciary is a fundamental tenet of the rule of law in India. Keeping in line with the concept of separation of powers while balancing the needs of a modern justice system, the institutional structure must empower the judiciary to independently make decisions governing its functioning. This includes allowing for close interaction with other arms of the justice system (police, prisons, and legal aid), whilst retaining strategic control.

2. FEDERAL ADMINISTRATION STRUCTURE

Although India has a single judiciary for the purpose of enforcing laws, it has a federal system for judicial administration. The Constitution of India empowers High Courts to exercise control over all subordinate courts within their jurisdiction. In this context, High Courts have the strategic autonomy for digitisation and configuration of digital services for their state judiciary. The institutional structure proposed must maintain and enable such a federated administrative structure while still enabling a unified system. For example, this can be achieved by implementing an institutional structure that gives every High Court the choice of selecting its technology service provider at its discretion. High Courts may choose to work with the Development Unit of a statutory body (discussed below) that will be set up under Phase III to build and create the core Digital Infrastructure or work with any other vendor. Towards configuring the Digital Infrastructure to their local needs, High Courts should also have the discretion to create their own teams or leverage services of the statutory body.

3. FUNCTIONAL SPECIALISATION

The roles and responsibilities must be structured in a way which ensures that the functional specialisation of individuals is maximized, while not exhausting their time and effort in handling challenges outside of their core competencies. As the judiciary lacks technical manpower with the competencies required to design and implement a complex information technology system, there is a need to bring in personnel with such competencies. However, introduction of external actors must be suitably designed to ensure accountability to the judiciary and retention of strategic control. For example, at various levels, the design and development of the Digital Infrastructure, Platforms and individual solutions as well as its implementation should be primarily driven by a dedicated team of experts.

4. ACCOUNTABILITY

A framework to monitor, measure, and report on the progress of a project is key to its success. A governance structure with a built-in system of accountability can help ensure that the judicial technology services are effectively tracked through

the stages of ideation, design, implementation, and evaluation. The authorities and personnel working on Phase III must have clear goals for performance assigned to them in the beginning of each year. There must also be adequate internal review mechanisms to oversee the quality of their performance and gain feedback for improvement. For example, the setting up of a structure that also allows for some services to be provided by a dedicated wing within the judiciary while contracting for other specialised services under an agreement with an external body allows for greater accountability and efficiency.

5. FEEDBACK MECHANISMS

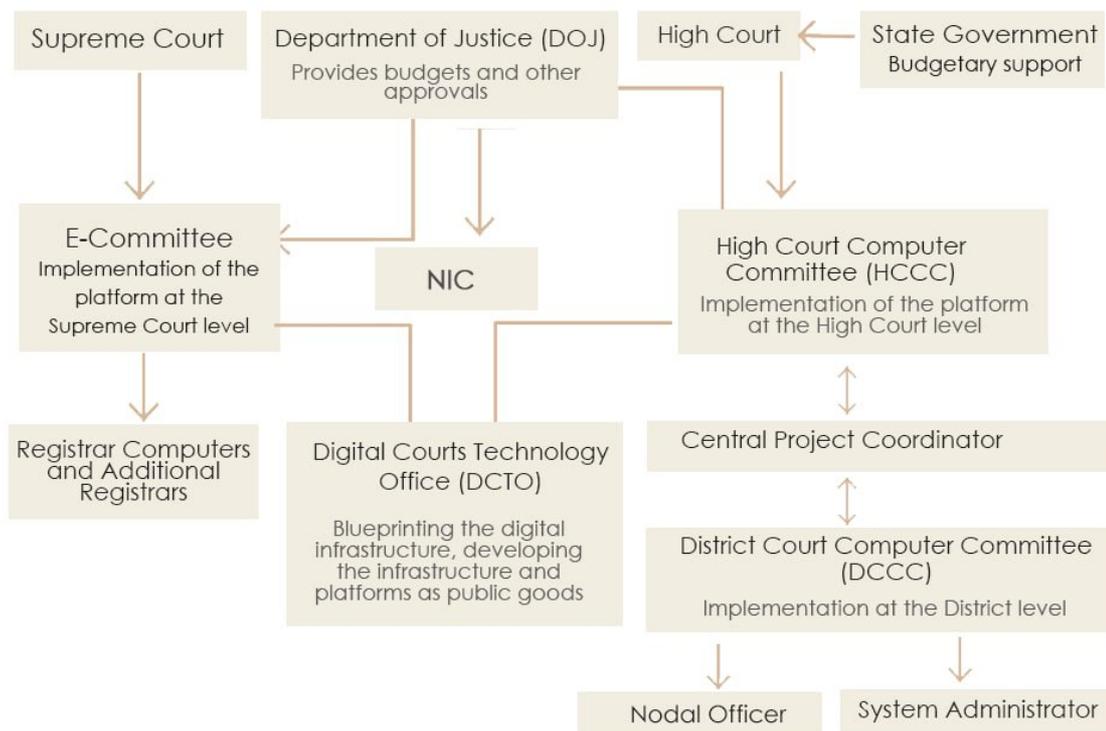
Engaging with stakeholders and getting their buy-in on a project at the stage of inception, while also continuing to engage with them during the implementation and evaluation of a project, will play a crucial role in helping the judiciary realise its vision for the judicial technology services. The I&G structure must account for ways in which stakeholder participation can be ensured through needs evaluation, grievance redressal, and provision of feedback. For example, given the critical dependency on technology in the dispensation of justice, it is vital that any instances of malfeasance or malfunctioning be suitably addressed. To this end, it is important that there be instituted a grievance redressal mechanism to adequately address grievances of users of the platform.

6. TRANSPARENCY

Transparency in the internal functioning of each institutional entity would imply that a robust standard of documentation is maintained about its internal functioning and the internal decisions taken. Such documentation should be maintained and made public on the court websites to support an independent assessment of decisions taken. For example, minutes of meetings of the committees and decisions on vendor agreements. Equally, consulting stakeholders should be a norm for critical decisions.

III. TIMEBOUND TRANSITORY STRUCTURE

As the institutions constituting the I&G framework are set up, it is critical that several processes are commenced with a commitment to complete the transition within a period of 1 year. The following institutions shall drive Phase III of the Project through this transitional period:



A. E-COMMITTEE, SCI

It is critical that control over policy formulation and enforcement be retained by the Judiciary to ensure its judicial independence. Strategic control should be achieved by having a strong dedicated team within the court *inter alia* to drive policies, the choice to determine service providers or develop their own teams,

set goals for the team, supervise execution, frame appropriate contracts, and conduct independent audits.

Composition: The E-Committee, SCI should comprise primarily judicial members with a deep understanding of legal processes and the judicial administration system. Chaired by a sitting Supreme Court judge, this committee should be expanded to include representatives of High Courts on a rotating basis.

Roles and Responsibility: The E-Committee, SCI must be responsible for:

- Setting the vision, necessary policies for Phase III.
- Putting in place the Digital Courts Technology Office (DCTO), which is to lead the design, execution and implementation of the Digital Infrastructure in the transitory stage of Phase III.
- Review progress of the DCTO and evaluate the realisation of benefits on a periodic basis.
- Coordinate with the High Courts, DoJ and other stakeholders, and provide strategic direction.
- Facilitate the transition to create institutions of the bodies recommended in this report.

B. DCTO (DIGITAL COURTS TECHNOLOGY OFFICE)

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

A DCTO distinct from the E-Committee, SCI, 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 evolving model operational processes and guidelines for the setup of the proposed institutional structure (in a federated and unified manner) including assisting courts in identifying appropriate personnel and roles for development, configuration and adoption of the Digital Infrastructure and in order to facilitate adoption, coordination, resourcing and adherence to timelines.

As a public good, 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 the State in question the choice 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.

It will be responsible and accountable to the E-Committee, SCI for delivering on the outcomes of design, development, and implementation.

Roles and Responsibility: The DCTO should be responsible for:

- Designing the high-level blueprint of the Digital Infrastructure which includes principles, architecture, identification of building blocks, standards protocols, and provide proof-of-concept studies, in collaboration with and in consultation with a wide spectrum of stakeholders and experts, needed to serve the goals of the project.
- Outlining, finalising and developing Platforms, including empanelment of vendors/ companies for development and/ or implementation through a managed service provider or otherwise.
- Liaising with HCCC's to understand their unique needs, processes and inputs into design of the platforms and provide guidance in setting up their technological offices, if required.
- Increasing capacity of High Courts by ensuring adequate support for adoption, service and maintenance of the infrastructure to the courts, and guide in setting up Technology Offices at High Courts.

C. HCCCS

To advance and strengthen the federal administrative structure, it is desirable that High Courts house a HCCC that is responsible for policy formulation and has strategic control over digitization efforts in its jurisdiction. High Courts should consider putting in place a strong dedicated team along with the choice to determine service providers or develop their own teams, set goals for the team, supervise execution, frame appropriate contracts, and conduct independent audits.

Composition: The HCCC may consist of three sitting High Court Judges who have interest in and commitment to digitisation efforts. Further the HCCC may also invite technical experts, practicing lawyers from the state bar association, and other relevant experts to be 'invitee members' of the HCCC on the lines of the E-Committee, SCI.

Roles and Responsibilities: Ideally, the HCCC could be responsible for the following:

- Providing inputs on implementation of the vision and policy for Phase III.
- Liaising with the DCTO to share needs, processes and other inputs into the design and development of the platform.
- Set up Technology Offices, if they choose to do so, to manage their technology needs.
- Support the configuration and adoption of the Digital Infrastructure when it is ready. The High Courts have the option of setting up Technology Offices in its courts to play this role or seek the guidance of the DCTO, if required, in doing so.
- Review progress of the Technology Office and evaluate the realization of benefits on a periodic basis.

D. TECHNOLOGY OFFICES AT THE HIGH COURTS

Composition: It is desirable that this Technology Office be led by a person who has expertise in development, configuration, and adoption of technology systems. Such a Technology Officer would be responsible to put in place a team of dedicated experts needed to support its mission. Ideally, the Technology Office could be responsible for the following:

- Understand the unmet needs of the court and other stakeholders and identify opportunities / projects for action.
- Ensure that technological solutions meet the requirements of end-users, and are inclusive and accessible to all, considering the digital divide of India.

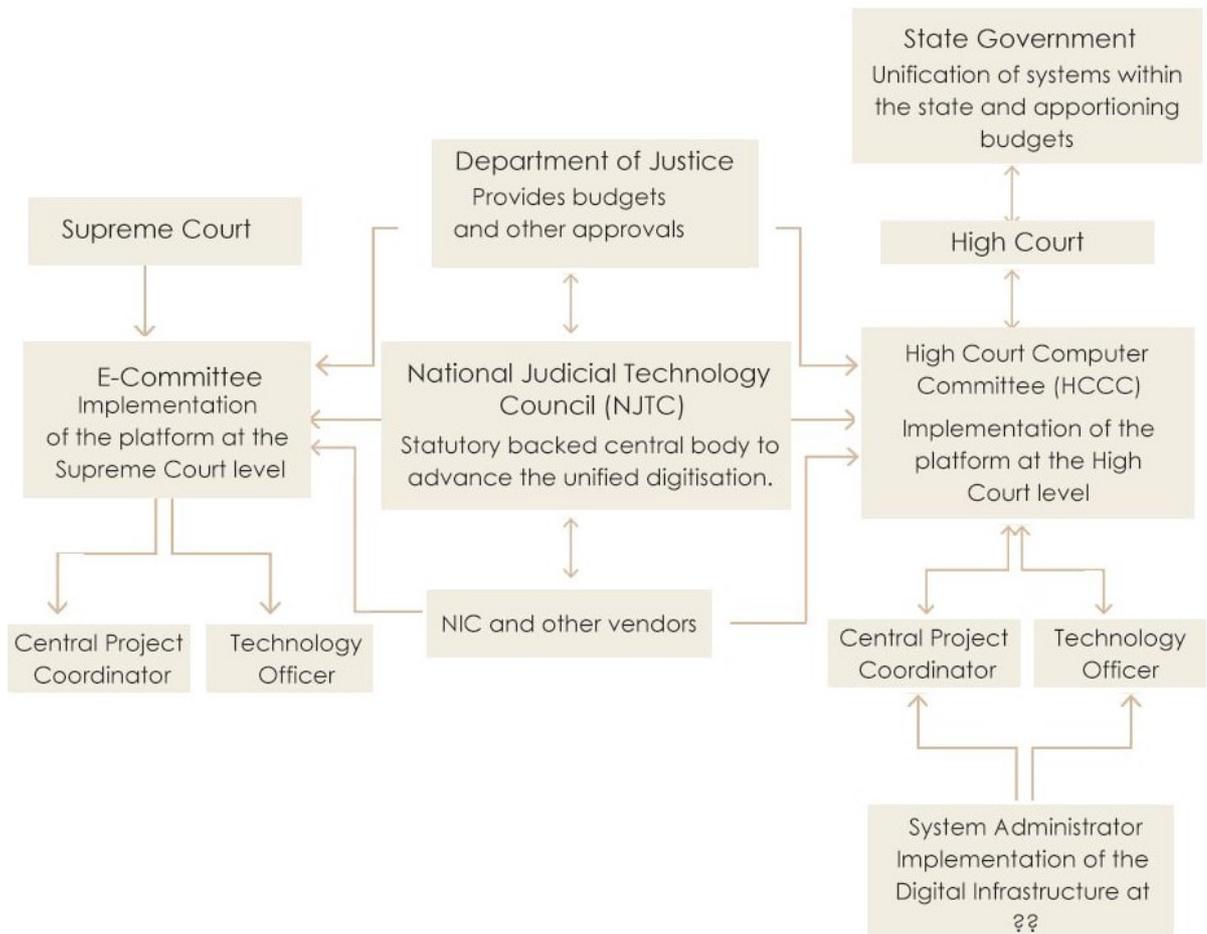
- Ensure adequate connectivity, equipment and hardware needed by stakeholders.
- Provide inputs and feedback to the DCTO regarding the Digital Infrastructure.
- If developing software for digital services, work collaboratively with the representative of the DCTO to create the RFP, design document formulation and select vendors.

E. DEPARTMENT OF JUSTICE (DOJ)

The DoJ will be responsible for necessary financial and other approvals from competent authorities, and for disbursement to the E-Committee, SCI. The E-Committee, SCI will be responsible to appropriately allocate budgets to the DCTO and the High Courts. The DoJ will set up a Project Monitoring Unit to monitor budgeting aspects and timelines.

IV. PROPOSED INSTITUTIONAL STRUCTURE

Based on the learnings from Phases I and II, vision for Phase III and principles laid out so far, an I&G framework for Phase III is proposed as presented in Figure. This revised I&G structure will be a critical foundation for realising the objectives of Phase III.



A. NATIONAL JUDICIAL TECHNOLOGY COUNCIL (NJTC)

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

Evolving from the rationale and functions of the interim DCTO, it is critical to set up a permanent entity backed by a statute: the NJTC. As a statutory body, the NJTC would have continuity in its policy and operations, be vested with operational independence from the government, flexibility in funding appropriations and constitution of its governing and operational bodies whilst deriving its constitution, role, powers and functions from an Act of Parliament according to sanctity to its operations. The NJTC will assume the role of a central

body, to advance the unified (not uniform) digitisation of the judiciary through design and creation of public goods and infrastructure for adoption by States, prescription of standards, specifications, and protocols, and to afford assistance to courts in adoption. In addition, the NJTC will play a key role in evolving model operational processes and guidelines for the setup of the proposed institutional structure (in a federated and unified manner) including assisting courts in identifying appropriate personnel and roles for development, configuration, and adoption of the Digital Infrastructure and in order to facilitate adoption, coordination, resourcing and adherence to timelines.

Composition: The NJTC Board will comprise members of the E-Committee, SCI, Chairpersons of HCCCs, independent technology experts, and representatives of relevant government departments such as Department of Law and Justice, Department of Legal Affairs, Ministry of Information and Technology. The Hon'ble Chief Justice of India or a sitting Supreme Court Judge nominated by the Hon'ble Chief Justice of India is to act as the Chairman of the Board.

To ensure judicial independence, the judicial members must always be more than half of the total number of Board members.

The body should be headed by a CEO who should be a professional manager. Such a person should have requisite managerial and administrative skills in leading high performing technology organisations for delivery of public goods.

The office of the CTO established as part of DCTO in the transitory phase will be subsumed into the NJTC.

Roles and responsibilities: The NJTC is to be constituted with two distinct units functioning autonomous to each other: 1. Design and Standards Unit and 2. Development Unit. The role and responsibilities of the NJTC would be to:

A) DESIGN AND STANDARDS UNIT

- Design the blueprint of the cloud based Digital Infrastructure. Outline, finalise, principles, architecture, identification of building blocks, standards, specifications and certifications in consultation and co-creation with all necessary stakeholders including High Courts and technology experts.
- Design the Digital Infrastructure for development of the digital platforms with generalised and externalised capabilities and services for each High Court to implement within its respective jurisdiction.
- Co-create processes to ensure interoperability of platforms and elements of the Digital Infrastructure, subject to the applicable data governance framework.
- Ensure the security of the platform and set in place appropriate protocols for operationalisation and curation including APIs; and
- Standardise hardware through prescription of specifications and enable a responsive means of procurement by High Courts autonomously or with the assistance of the NJTC.
- Coordinate with representatives from the police, prisons, legal aid authorities and other arms of the government to improve interoperability of the new system architecture;
- Enable the formulation of policies on technology grievance redressal, and coordinate with the Grievance Redressal Authorities in each state to ensure unified response protocols and means of handling grievances;
- Offer guidance and recommendations to the Supreme Court and High Courts for process-reengineering; and

- Keep track of technology adoption and innovations in the judiciary and publish periodical reports in the public domain in this regard.

B) DEVELOPMENT UNIT

- Building of the Digital Infrastructure and platforms to deliver the core functionalities of the Digital Infrastructure as public goods, by appropriately leveraging existing platforms and assist in the creation and co-creation of interoperable platforms by High Courts and other stakeholders.
- Outline, finalise, manage and monitor vendors for development and/ or implementation of the Digital Infrastructure through NIC, a managed service provider or otherwise. The NJTC will be responsible for delivering on the outcomes of development and implementation by the vendors.
- Create training and troubleshooting services to allow for High Courts to appropriately utilise, implement, and operationalise the capabilities developed; and
- Provide such services as the High Courts and the Supreme Court may require in their technology related projects, including grievance redressal and maintenance.
- Build a team with the right competencies and relevant experience and capabilities. Such team members may be recruited from within the Judiciary or from the private sector on a full time, part time, contractual or volunteer basis as may be necessary.

In the longer term, the NJTC may consider hiving of the Development Unit to a distinct entity.

B. E-COMMITTEE, SCI AND HCCC'S

Composition: The E-Committee, SCI shall consist of a Chairperson and two or more sitting Supreme Court Judges. The HCCCs should ideally consist of a High Court Judge acting as Chairperson, two or more sitting High Court Judges as members, and three Principal District Judges to be members on a rotational basis. The E-Committee, SCI could invite technical experts, practicing lawyers at the Supreme Court, other relevant experts to be 'invitee members', while the HCCC, once constituted, could also similarly invite technical experts, practicing lawyers from the state bar association, other relevant experts to be 'invitee members' of the HCCC.

Roles and Responsibilities: Ideally, the E-Committee, SCI and HCCC's could perform the following functions:

- Prioritise needs of the courts and formulate key policies needed to advance Digital Courts in their respective jurisdiction.
- Develop technological platforms- services or solutions, either through the NJTC or any other external provider.
- Co-create processes with the Design and Standards Unit of the NJTC to ensure interoperability of platforms developed with Digital Infrastructure, subject to the applicable data governance framework.
- In adopting platforms developed by the NJTC, appropriately configure the platform to its unique needs leveraging the services of the NJTC or build its own teams and capability to configure the platform.
- Set targets for and review the efforts of the teams/ committees constituted under it to ensure realization of benefits of the Digital Infrastructure on a periodic basis.

I. CENTRAL PROJECT COORDINATOR (CPC)

A full time CPC deputed at the Supreme Court and High Courts assume the onus and accountability to ensure the adoption and implementation of the platform.

Qualification: A person with a track record in enhancing adoption of technology which may be a person of the rank of District Judge or Senior Civil Judge, or any expert recruited.

Roles and Responsibilities: The CPC shall:

- Coordinate the implementation and adoption of the Digital Infrastructure and oversee day-to-day operations with the help of dedicated staff;
- Liaise with judges of the Supreme Court/ High Court and other officers to understand their needs and propose areas for technology reform to the E-Committee, SCI/ HCCC respectively.
- Design strategies and build partnerships to build awareness and train relevant stakeholders including lawyers, citizens and judges.
- Report to the e-Committee on the adoption of the technology in the Supreme Court or in the state as may be applicable; and

II. TECHNOLOGY OFFICE

Composition: This Technology Office should be led by a person who has expertise in development, configuration, and adoption of technology systems. Such a Technology Officer should be responsible to put in place a team of dedicated experts needed to support its mission.

Roles and Responsibilities: The Technology Office shall:

- Understand the unmet needs of the court and other stakeholders and identify opportunities / projects for action
- Appropriately configure and adopt the Digital Infrastructure developed by the NJTC and develop any additional solutions, using API's provided to meet the needs of the E-Committee, SCI/ HCCC;
- Engage the services of the Development Unit of the NJTC or other vendors to develop integrable solutions in accordance with local needs;
- Ensure that technological solutions meet the requirements of end-users, and are inclusive and accessible to all, considering the digital divide of India;
- Provide support to end users, including preparation of training templates for master trainers in collaboration with the statutory body; and
- Address technology-related grievances filed before the grievance redressal wing, liaison with the statutory body as required, and publish periodical reports in the public domain in this regard.
- Identify and suggest areas for process reengineering to the PRC
- Ensure adequate connectivity, equipment and hardware needed by stakeholders to adopt the Digital Infrastructure.
- Technology Offices at the HCCC must supervise the implementation of the platform architecture by system administrators at the district level.

C. SYSTEM ADMINISTRATORS AT EVERY COURT COMPLEX AT THE DISTRICT LEVEL

Qualification: Persons with relevant technical expertise.

Roles and Responsibilities: The System Administrators will be required to:

- Implement and configure the platform architecture while delivering on the timelines set by the HCCC;
- Consult with the Technology Officer at the High Court to develop any additional modules or integration to the platform architecture as required by judges at their court complex;
- Report to the Technology Officer on the implementation of technology;
- Report to the CPC on the development of new modules and the services that the modules provide; and
- Report to the CPC on the adoption of technology and process reengineering through the use of technology.

D. PROCESS RE-ENGINEERING COMMITTEE (PRC) AT THE SUPREME COURT AND THE HIGH COURTS

As stated in the previous section, process reengineering is central to effectively move towards Digital Courts and the NJTCSA shall provide guidance on opportunities for action and best practices nationwide relating to this exercise. However, it is critical to have bodies at each of the Supreme Court and High Courts as processes differ widely between jurisdictions and the authority to amend local relevant rules vests with the Supreme Court or High Courts in their respective jurisdictions. In this context, it is critical that the Supreme Court and

High Courts constitute a permanent body that independently analyse and modify relevant rules and guidelines to effectuate the application of automated or transformative technologies and recommend amendment to applicable laws.

Composition: The Supreme Court and High Courts may constitute the PRC under the E-Committee, SCI / HCCC or as a separate committee. The PRC may consist of sitting judges, retired judges, and shall also have as members, 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.

E. DEPARTMENT OF JUSTICE (DOJ)

The DoJ will be responsible for necessary financial and other approvals from competent authorities, and for disbursement to the High Courts. The E-Committee, SCI will be responsible to make necessary allocation of funds to the

NJTC and the High Courts for development and adoption of the Digital Platform. In addition, High Courts may leverage funding from the state departments to support their efforts.

Separately, specialisation in judicial administration is a need that has been widely acknowledged within the judicial system. In tandem with the changes in the I&G framework, we recommend that courts in the country consider the most appropriate methods of ensuring the appointment of specialised personnel who are trained in management, technology administration and judicial processes. This may take the form of a specialised cadre of persons who will be suitably trained for this task through appropriate modules in dedicated judicial and legal education programmes at graduate and post-graduate level, as well as in-service training.

II. CHANGE MANAGEMENT AND ADOPTION

Affecting transformation in a complex public system such as the judicial system will be challenging. It is thus necessary to put in place change management processes to enable smooth adoption, reduce any unintended negative consequences and achieve its objectives in a time-bound and effective manner. These change management processes are necessary at four levels:

1. **LAW AND POLICY FRAMEWORK:** Given that Phase III envisages digitisation of processes and establishment of digital courts, a vast amount of data is going to be generated across various levels. It is therefore essential that such data which includes sensitive, personal information of various stakeholders, is managed well and protected from misuse. Towards this, a key requirement is the development of suitable legal frameworks and policies to govern all data controlled by the judiciary. This framework will aim to address concerns regarding privacy of individuals, exchange of data between platforms and lay down standards for collection, storage, retrieval, access and archival of judicial data.

2. **TECHNOLOGY:** Although Phase III will build on the progress made in the previous phases of the e-Courts project, it will involve significant technological changes. Given the crucial function performed by the judiciary, it is important that these technological changes are rolled out in a manner that does not disrupt the functioning of the judiciary and allows for the training and skilling of the users of the system. Any such technological change will be backed by the regulations and guidelines laid down under the data governance framework.

3. **HUMAN RESOURCES:** The reforms envisaged in Phase III of the e-Courts project must evolve the organisational culture across all levels of the judiciary. Such reforms cannot be imposed in a top-down manner and will require deep engagement with all stakeholders. To ensure effective engagement of all

stakeholders, there is a need to bolster dialogue among them in all parts and levels of the judiciary.

4. INSTITUTIONS: Phase III envisages the establishment of certain new institutions which will change the nature of the institutional arrangements within courts. This will also change the working and reporting relationships between various stakeholders and introduce several new actors in the system. The change to these new institutional arrangements will need to be managed with care and through deep engagement with the relevant stakeholders.

Effective change management will require the following four elements to be in place from the very beginning:

1. COMMITTED LEADERSHIP

The role of leadership in driving change is indisputable. Committed leadership is required for change management across technology, human resources and institutions. Judges of the Supreme Court and High Courts will need to own the reforms and communicate a comprehensive change vision and establish clear norms about how changes will be implemented.

2. COMPELLING COMMUNICATION PLAN

Proactive and compelling communication is essential to introduce stakeholders to the vision and its rollout, explain its benefits and reduce resistance. Regular forums should be created at the Supreme Court, High Court and district court levels where judges and non-judicial staff, lawyers, citizens and other users can give feedback on the tools and services rolled out. Periodic consultations should be held where these stakeholders are given an opportunity to voice their concerns.

3. CROSS-FUNCTIONAL TEAMS

Studies of change management in the public sector have revealed the contribution of cross-functional teams towards improved organisational performance, and the production of novel outputs brought about by combining expertise from a range of sources. Cross-functional teams will enable institutional change management to be a richer process. The implementation of this project will need people who have expertise in law, judicial processes, research, project management, and technology.

4. REGULAR MONITORING

It is important to monitor the performance of all the stakeholders through the implementation process to ensure they are adhering to the change plans. Regular monitoring is essential for all three levels of change management. Monitoring plan, adherence, and following up on deviations from the plan as well as building in adaptability are key to successful change management efforts. Objective and quantified metrics should be used for monitoring the progress of implementation. The Monitoring and Evaluation Framework section provides a detailed roadmap for this.

Ensuring appropriate adoption of technology across stakeholders is central and critical to realising the digital future of courts. The following guiding principles will be key to ensuring successful adoption of the Digital Courts by judges, court staff, lawyers and citizens:

PRINCIPLES

1. DRIVE END-USER ENGAGEMENT

Catalysing adoption will be a continuous mission as the Digital Infrastructure is developed and rolled out. This can be achieved through the use of incentives, behavioural nudges and spread of awareness via creative offline and online channels and proactive steps (e.g., workshops, incentives, YouTube videos in different languages, etc.) to onboard and retain users from diverse socio-

economic backgrounds. For example, to incentivise lawyers and clients to opt for e-filing, the cost savings from e-filings (e.g., costs related to scanning, handling paper books, etc.) may be passed on to litigants in terms of reduced court fees.

2. FACILITATE ONBOARDING OF JUDGES AND REGISTRARS

The design must allow court staff, registrars, and judges to be onboarded in a phased manner. For example, through helplines, standard onboarding procedures can be made available, along with onboarding toolkits, and dedicated and easily accessible support teams.

3. ENABLE GRIEVANCE REDRESSAL

Enabling and addressing feedback in real-time and in a continuous manner is central to improving the platform and accelerating adoption. So is defining accessible and transparent mechanisms for grievance redressal, i.e., defined interfaces, processes, and responsible entities, with a strong focus on actions for resolution. Such facilities will be available both offline and online, and accessible for all litigants including litigants with physical or situational disabilities.

4. ENABLE VALUE EXCHANGES

Beyond the value of the service being opted for (such as e-filing, digital payments or digital hearings), every interaction through Digital Courts needs to be relevant and valuable to the participants (such as judges, court staff and citizens) at every stage of the process. For example, when making an e-filing, a lawyer or a citizen can get information from the system on the estimated time for the next stage in the process (filing to scrutiny) or average time taken for resolution of such matters in the court. Facilitating such valuable interactions can enable the adoption of Digital Courts and also encourage actors to engage in more valuable interactions.

5. FOCUS ON INCREMENTAL CHANGES

Uncertainty is the only certainty at scale. Addressing uncertainty is an evolving process, especially when it involves actors with diverse backgrounds. Introducing incremental changes rather than expecting people to make sudden radical shifts in behaviour can induce routine changes in individuals and institutions. It allows for the assessment of solutions and making necessary changes. It is also easier to implement without overburdening the system with changes.

6. ENSURE DISCOVERABILITY

Discoverability is the ease with which users can find relevant services and processes. For example, enabling tagging and description of documents could be useful for judges and lawyers. Similarly, enabling a lawyer or litigant to easily discover all the cases they are involved in and their status, will help them plan their litigation strategy and approach. This could increase the participation of users in different administrative processes.

7. EMPOWER WITH DATA

Providing access and ownership access to data to the users is critical for the adoption of any service or process. Case information such as metadata, orders and judgements should be made public and accessible on the internet, subject to statutory limitations concerning privacy and confidentiality. Pleadings, evidence, and documentation in all cases can be made accessible to authorised users online subject to orders of the court and consent of parties. This will be in addition to existing mechanisms for gaining access to court documents. Having access and ownership to the data provides the participants with the ability to decide who can access or make use of the data.

ACTION

1. SPREAD AWARENESS THROUGH A HOST OF PARTNERSHIPS

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. For example, when e-filing services are launched, a court must create simplified content (visual and video) in local language in partnership with local bar associations and non-profit organizations to spread awareness among lawyers and citizens respectively. Their networks will spread awareness and enable onboarding of lawyers and litigants on to the platform.

2. OFFER TRAINING ON USING NEW SERVICES

As new services are launched, in the short and long-term, mechanisms to support 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 to 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.

3. PUT IN PLACE SYSTEMS FOR FEEDBACK AND COMPLAINT REDRESSAL

Building systems and processes to take real-time feedback will be critical to improve adoption and evolve systems and instil trust. In the e-filing or digital hearing applications adopted, courts can create a space for lawyers and citizens to share their feedback and adopt transparent processes to create visibility of complaints received and their status of redressal. Further, a separate help desk for lawyers and citizens to share their feedback, and a team to support timely complaint redressal via email, phone or chat will be critical.

4. LEVERAGE COMMON SERVICE CENTRES (CSCS) 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 cost online, provisions of notary services, machine-readable audio content of judgements / 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.

5. INCENTIVISE A SOLUTION ECOSYSTEM TO MASSIVELY INCREASE ADOPTION

To increase adoption, there is a need to focus on providing different modes of interaction for the services available. By making certain APIs available for the ecosystem players to build applications, users with different ways of interacting with the platform can be serviced. For example, Digital Courts Application Providers can be encouraged, like GSPs (GST Suvidha Provider) in the Goods and Services Tax system. They are recognised and authorised entities that help users to access GST services such as invoicing and filing returns. Similarly, Digital Courts Application Providers can enable access to Digital Courts through various other interactive applications, in a manner consistent with integrity of the judicial system, and the imperatives of privacy and security of data.

6. FACILITATE CLERKSHIP SUPPORT FOR JUDGES

If the courts move towards in-person hearings becoming an exception instead of a norm for some categories of cases or certain stages of proceedings, more reliance would then be placed on written pleadings and written submissions of arguments and case laws for these identified categories of cases or stages of cases. This is likely to increase the workload for the judges to effectively scrutinise the pleadings and documents without active assistance from the lawyers, which is usually available during in-person hearings. This can be addressed by considering engaging law clerks, at every level of the judiciary, as a formalised system.

7. CAPACITY ENHANCEMENT OF CERTAIN FUNCTIONS

Given the transformative technological interventions envisaged in Phase III, it is important that capacity within the judiciary to procure and manage such technological services also be enhanced. Procurement processes, contract management and the budgeting function need to be strengthened in parallel for the success of the vision.

III. PROCUREMENT

In order to realise the immense potential of the platform architecture to be developed in e-Courts Phase III, it is essential that the most appropriate vendors be selected for the various tasks involved in designing, implementing and rolling out such a Digital Infrastructure. Procurement should also be carried out online through tools designed for the judiciary's needs to increase efficiency, accountability, transparency, and facilitate the participation of a range of qualified entities. For this, the judiciary may consider several models of procurement adopted by public agencies. Rules should be created to govern every stage of procurement through such tools.

PRINCIPLES

The following principles should be followed in the process of procurement:

1. TRANSPARENCY

Potential vendors of goods and services should be given clear and consistent information regarding the requirements of the specific project and the procurement process. Access to applicable laws and regulations, judicial and/or administrative decisions, standard contract clauses on public procurement and the actual means and processes by which specific procurements are defined, awarded and managed should be shared publicly. The selection of vendors should be based on publicly available criteria, which are defined in a clear and objective manner, are not discriminatory and cannot be altered afterwards.

2. INTEGRITY

Clear standards of integrity must be set throughout the procurement and implementation cycle starting with the selection process. Steps should be taken to mitigate possible risks to integrity through enhanced transparency, guidance and control where exceptions are made to the open bidding process. Depending

on the financial value of the transaction and the risk involved, there should be a system of multiple-level review and approval for certain matters. This avoids sole authority over decision making resting with a single individual and will introduce an independent element to the decision-making process.

3. EFFECTIVE UTILISATION OF FINANCIAL RESOURCES

The utilisation of public financial resources for this project should be accompanied by transparency and accountability. Internal audit mechanisms should monitor the management of the funds used for this project to verify that needs were adequately estimated, and vendors utilised the funds for the intended purposes.

4. MANAGEMENT OF PROCUREMENT AND VENDORS

Officials charged with procurement should have experience with large projects and should have the highest levels of integrity so that they have the capacity to prevent mismanagement, waste and potential corruption. They should be empowered to take decisions regarding the management of vendors. Adequate policy/rules should be put into effect to ensure that there is no conflict of interest while outsourcing any projects to third parties.

II. STEPS IN PROCUREMENT

The responsible authority may follow the following various steps in the procurement process:

1. ESTABLISHING THE RULES FOR PROCUREMENT

Clear rules should be established to govern the procurement process. Competitive procedures should be the standard method for procurement above a certain monetary limit, since it drives efficiencies, reduces corruption, obtains fair and reasonable pricing and ensures competitive outcomes. If extraordinary

circumstances justify exceptions to competitive tendering and the use of single-source procurement, such exceptions should be limited, pre-defined and should require appropriate justification when employed, subject to adequate oversight. Apart from technical specifications, contracts must provide for

- **Support:** Vendors should provide suitable support for the goods and services they supply. The contract should specify the manner in which such support will be provided (i.e., phone helpline, physical support etc.) and hours during which support will be available. The contract should also specify the maximum time the vendor will take to acknowledge a support request and the maximum time they will take to resolve different categories of requests.
- **Monitoring:** The parameters of the contracts should be monitored on a periodic basis. In the event the performance of the goods/services deteriorates significantly during the contract and if a vendor does not implement immediate measures to rectify these issues to the satisfaction of the contract manager, then appropriate penalties should be imposed.

2. EVALUATION

The results of the procurement process should be assessed periodically and consistently. Consistent, up-to-date, and reliable information and use data on prior procurements, particularly regarding price and overall costs, in structuring new needs assessments, creating a source of insight to guide future procurement decisions. Indicators to measure performance, effectiveness, and savings of the public procurement system for benchmarking and to support strategic policy making on public procurement, must also be tracked.

3. GRIEVANCE REDRESSAL

There should be a grievance redressal mechanism that can handle complaints regarding procurement in a fair, timely and transparent way through the

establishment of effective courses of action for challenging procurement decisions to correct defects, prevent wrong-doing and build confidence of bidders in the integrity and fairness of the procurement system. There should be a system of effective and enforceable sanctions for public officials or vendors found to have committed any violation of the procurement rules to provide adequate deterrence without creating undue fear of consequences or risk-aversion among vendors.

III. CONTRACT MANAGEMENT

Irrespective of the method of procurement there needs to be a rigorous system of contract management. Contract management is the process of actively drafting contracts with the legal framework and managing their implementation to ensure the efficient and effective delivery of the contracted goods and services. The objectives of effective contract management are broadly to ensure that the contract is:

- drafted in a clear manner, providing for well-defined responsibilities and accountability
- delivered on time, at the right place and in the right quantity
- completed to the required specifications, standards and/or quality
- completed within the agreed price.

Over the course of time, contract management teams headed by a contract manager could be set up at the High Court and Supreme Court. Such teams will draft contracts and monitor their performance. This contract manager should have a thorough knowledge and understanding of the subject matter of the project and must be familiar with all aspects of the contracts and understand their interdependencies. The contract manager may be hired in-house if adequately qualified and experienced staff are available or may be outsourced to a specialist contract management entity.

IV. SEQUENCING

There are two aspects to sequencing, geographical sequencing and sequencing based on functionality. Given the transformative nature of the Digital Infrastructure envisaged in Phase III, it is important that the geographical rollout be staggered. Pilot projects should be conducted in certain test geographies and such pilots should be evaluated rigorously. If such evaluations indicate that modifications need to be made, then such modifications should be made before the platform is implemented in other geographies. The second aspect of sequencing is based on functionality. The rollout of the Digital Infrastructure of the platform should be sequenced in a manner that core functions of the judiciary can be digitally deployed at the earliest.

Several approaches to sequencing may be adopted as appropriate:

- a) Independent: The implementation of independent services do not depend on other services and hence they can be implemented on a stand-alone basis. For example, transcription is an independent service that is not dependent on any other service.
- b) Interdependent: Some services are dependent on other services and need to be implemented only after the latter is implemented and functional. For example, the digital case management system is dependent on a functional e-filing service being in place.
- c) Parallel: Certain services can be implemented in parallel to other modules. While these modules are interdependent on others in some aspects, they can run parallel to the latter being implemented. For example, remote digital assistance is dependent on digital case management system in some aspects, but the implementation of the former does not require the latter to be fully functional.

Given the complexity of this project, the various stages may not be implemented in a linear manner and some stages may be implemented parallelly. An indicative sequence of implementation is as follows:

1. BUDGETING

The process of budgeting should be given priority since it is dependent on the budgeting cycles of the union and state governments. The budget should be prepared in line with the recommendations. Once the budget is approved, at every subsequent stage of implementation there should be regular appraisals of the expenditure to assess if the budget is adequate and if output planned under the project are being achieved according to timelines.

2. APPOINTMENT OF THE CONTRACT MANAGEMENT TEAM

Once the budgets are approved courts may appoint contract management teams led by a qualified contract manager. Given the importance of this project, this team should ideally be working on this project full-time and should not have other administrative responsibilities.

3. DESIGN OF THE DIGITAL INFRASTRUCTURE AND SERVICES & PROCESS REENGINEERING

As discussed, process re-engineering is crucial to this project since it aims at creating a platform that does not merely digitise paper-based processes but re-designs (and in some cases eliminates) parts of these processes altogether to achieve improved judicial outcomes. Process re-engineering and the process of designing the various aspects of Digital Infrastructure (digital case registry, making documents machine readable and secure, intelligent scheduling, and ICJS) should take place in tandem. These are both iterative processes and will both through multiple revisions. Of the various aspects of Digital Infrastructure, ICJS and intelligent scheduling can be designed independently. The digital case registry and making documents machine readable and secure can be designed in

parallel since these are interdependent processes. Once the Digital Infrastructure is designed, the services (digital case management systems, e-filing, open digital hearings, transcriptions, service of notice, remote digital assistance, administration of legal aid, single source of machine-readable judgments and virtual courts) need to be designed. Of these, transcriptions, e-filing and service of notice are not dependent on the other services. Open digital hearings, digital case management, virtual courts and administration of legal aid are dependent on e-filing, transcription and service of notice.

4. SELECTION OF VENDORS

Suitable vendors should be selected, subject to due process for conflict-of-interest checks, for the design and implementation according to the budget and technical specifications. The most appropriate method of procurement should be decided for each contract.

5. DEVELOPMENT OF THE DIGITAL INFRASTRUCTURE AND SERVICES

The next stage is the development of the digital infrastructure. This development should be for scale even though the deployment will first be in pilot sites.

6. SELECTION OF PILOT SITES

The process of selection of pilot district court and High Court sites can take place simultaneously with the development process since the former is not dependent on the latter. The district court pilot sites should be a combination of geographically dispersed urban, per-urban and rural districts. Similarly in the event of simultaneous pilots at multiple High Courts, pilot sites should be representative of diversity. Once these sites are selected, appropriately staffed teams with requisite project management experience should be appointed in all these sites to implement and evaluate these pilots.

7. DEPLOYMENT IN PILOT HIGH COURT AND DISTRICT COURT SITES

Next, the digital infrastructure and services should be deployed in the pilot sites. The deployment should be accompanied by a rigorous evaluation system. The pilot project team should be aware of the indicators for the evaluation system and how these are to be measured right from the beginning.

8. PLANNING STAGE-WISE DEPLOYMENT

To make the process of deployment more manageable, deployment across the country should be in phases. In the first phase 20% of districts in each state should be covered. In the next phase, 40% of the districts and in the final phase the remaining 40% should be covered. This plan should be harmonised with ongoing efforts to complete rollout of earlier software such as CIS 3.0 and CIS 3.2.

9. EVALUATION OF PILOT SITES

After the pilot is completed, its implementation should be evaluated rigorously. This evaluation should inform the design of the platform for the all-India platform.

10. IMPLEMENTING PHASE-WISE DEPLOYMENT

This process should start only once the evaluation of the pilots has been conducted and necessary changes have been made to the design of the platform accordingly. The Digital Infrastructure should now be implemented according to the planned phases. At this stage as well, the implementation should be continually evaluated, and such evaluation should feed into the process of making improvements to the platform.

V. BUDGETING

The budgeting process is not merely a means to plan and allocate expenditure, it should be an integral part of the evaluation process of a project. Ex-post appraisal of the expenditure under the project can be used to strengthen the design and the implementation of the project.

Performance budgeting is the most recommended method of budgeting in the public sector.

However, for a project of this nature it may be imprudent to link the budget with outcomes. Inputs into this project may be difficult to link to outcomes in terms of judicial performance e.g., reduction in pendency or clearing backlogs since there is no clear correlation between such inputs and these outcomes and the team implementing the project are not controlling these outcomes. For a project such as this, it may be more feasible to link the budget with outputs since those are in the control of the project team. The steps involved are:

- Identify all the outputs for the project. Outputs in this context are the expected results of the planned activities for the project.
- Group together costs of achieving each output, including overhead costs
- Identify outputs in terms of measurable indicators to measure the outputs
- Collect data on the indicators throughout the project period.
- Evaluate outputs to gauge budgetary effectiveness and make the necessary tweaks for the subsequent budgetary period

Designing and building information systems that support such budgeting and the collection of high-quality data is key in ensuring that process and systems transformation goes hand in hand.

VI. MONITORING AND EVALUATION FRAMEWORK

A continuous monitoring and feedback framework is critical to attaining the Key Goals of Phase III. Beyond monitoring the development and launch of services and infrastructure, continuously tracking the qualitative and quantitative metrics that indicate adoption and impact of the platform is of utmost importance.

For monitoring the adoption and impact of the platform, we recommend that a dashboard capture, for all courts and services, certain key performance indicators (KPIs). The KPIs will primarily measure two parameters:

- What is the level of adoption of the digital platform and services?
- What is the impact of the digital platform and its services?

The dashboard will be made available to each court to view their progress in real time as the single source of truth. The outcomes of current initiatives, the targets against goals (including key KPIs from the National dashboard) along with the goals for future for the platform will be published annually by the E-Committee, SCI.

Some illustrative KPIs for both the parameters are shared below. Different KPIs can be prioritised and evolved to track different qualitative and quantitative evidence at different stages of the project:

Adoption	Impact
Networks Active Partnerships Network Effects Exponential Adoption	Scale Access Adoption Agency

Solution Co-Creation Value Addition Co-Creation User Preference	Speed Acceleration Affordance Acceptance
Shared Enabling Infrastructure Architecture Evolutionary Data Empowerment	Sustainability Assimilation Amplification Adjacency

INDICATORS OF ADOPTION:

NETWORKS

- **Active partnerships:** Whether relevant actors such as technologists, designers, experts, bar councils, have been involved as partners within the project? How active are such partnerships? Have key elements been co-designed with them? For instance, were advocates/litigants/court staff involved in the Beta version testing of any application that impacts them?
- **Network Effects:** How many first mile beneficiaries have created unique identification numbers (UIDs) to access the platform? Is the number of monthly user interactions on the platform increasing? What are the trends of retention of users and repeat users? For instance, can the gg service be tracked to identify new users, growth in traffic whether through organic Google search, states with maximum traffic, etc?
- **Exponential Adoption:** Are existing users, such as lawyers, contributing to more beneficiaries being added on the platform? Are external systems integrating into the platform? For example, are the Securities and Exchange Board of India and Reserve Bank of India pushing notifications onto a common repository accessible through the platform?

SOLUTION CO-CREATION

- **Value Addition:** What is the core-value gained by users on the platform? Is it being created online or offline? What are the key learnings? Have digital services significantly advanced offline processes? For instance, has the digital registry resulted in a significant reduction of maintaining physical records thereby leading to a reduction of workload for the staff?
- **Co-creation Diversity:** Are private actors or other government entities using APIs provided to create new solutions? How can this be amplified? For instance, have any law offices created plugins to allow for ease of filing from their internal platforms and dashboards?
- **User Preference:** Whether the platform has achieved the status of preferred mode of availing of a service which is available both online and offline? By mapping each part of the user journey for online and offline use, whether the additional value through the platform can be identified? What frictions exist in the current processes that are being eliminated? For instance, tracking applications for certified copies filed online and offline.

INFRASTRUCTURE

- **Architecture:** Can multiple solutions be created on top of the existing architecture? Whether the modular design itself is configurable to the needs of different High Courts? For instance, where a jurisdiction requires an additional means of authentication of a document during e-filing, whether the architecture allows for such configuration.
- **Evolutionary:** Whether the platform design has witnessed additional iterations since rollout? How often does the platform design, solution and infrastructure get evaluated? Has the frequency of evaluation changed over time? Court websites may be tracked for updates to evaluate their iteration.

- **Data Empowerment:** Whether the platform appropriately leverages data to help amplify core interactions, improve benefits for the users and help engage new actors on the platform? For instance, smart cause lists may be generated to efficiently employ judicial time by populating cases at appropriate stages of proceedings subject to the availability of time of the concerned bench.

INDICATORS OF IMPACT:

I. SCALE

- **Access:** How many users have access to the platform? How many registered users are there? Whether marginal users and those with disabilities have indicated a preference for the platform? What is the diversity of registered users? For instance, number of users across geographical locations may be tracked, or their mode of access (website, phone-based application, kiosks at service locations). Whether appropriate standards (such as WCAG) have been adopted / evolved for appropriate uses?
- **Adoption:** An indicator of the value of the platform as a preferred means of availing services is the number of active users. How many registered users are actively using the platform where offline modes of availing the service is available? For instance, comparing the number of applications for certified copies filed online and offline.
- **Agency:** How is the platform affording agency and choice to its users? Is it empowering data principles to control their data? Is it enabling each court to configure their own services? What is the percentage of relevant services on the platform? What are the number of grievances/ feedback and rate and speed of resolution? How many users have been onboarded onto the platform through assisted means?

II. SPEED

- **Acceleration:** What is the rate of increase of users on the platform? What are the number of transactions or services availed on the platform per minute/ second?
- **Affordance:** How quickly is a user able to find and move to the page they need to access? How well does each step inform the user of the next step? How high is the configurability of the infrastructure?
- **Acceptance:** What are the ratings for different services? How much does the platform personalise the experience for different users (lawyers, judges, citizens)?

III. SUSTAINABILITY

- **Assimilation:** Has the platform and services been integrated fully with the day-to-day processes of law chambers and citizens? Are judges and registries relying on the platform for their everyday administration? For instance, whether judges utilise templatised orders in appropriate cases to be modified per a case's needs.
- **Amplification:** Is the platform now used by a critical mass of citizens and network partners? Is it available in more languages? Are systems in place to proactively identify solutions for diverse needs / contexts? For instance, customisation of N-Step to suit the dialects and needs of a specific state and district would be a good measure of this indicator.
- **Adjacency:** Has the platform been integrated into other systems and sharing data with prisons, police and tribunals? For instance, interoperability of CCTNS with the requisite modules of platform architecture would enable to track this.

INSTITUTIONAL ENABLEMENT

In addition to the above metrics for adoption and impact, it is imperative to put in place strong feedback loops at the mission, system, and service level. Building over the suggested I&G framework a key goal is to foster open communication and exchange of ideas between the implementation teams at states level as well as between District Courts, High Courts and the Supreme Court. This could also extend to stakeholder interactions at panchayat levels to ensure adoption and aid in bridging the language divide. Appropriate metrics to track the institutional facilitation of such feedback may be employed. Such feedback/grievance redressal mechanism should be accessible for all litigants transgressing digital divide. The feedback mechanism should not be restricted to complaints against e-courts services but extended to all facets of the judicial system including staff, procedure and any additional functionaries that support e-courts services.

Some indicative issues where regular data and feedback for institutional enablement must be captured include: Whether an appropriate system of training for different users has been implemented? What are the number and percentage of employees who have been trained across services and interfaces? What proportion of the sanctioned funds for the project have been utilised and the application thereof? What number and percentage of all sanctioned roles, activities and competencies are filled? Whether any hardware procurement requests are pending resolution?

METHODOLOGY

It is a mammoth exercise to envision the design for the Digital Courts in India. Therefore, the sub-committee adopted a multi-pronged approach of desk-based research, focused group survey and consultations with relevant stakeholders to gather data and information necessary for the envisioning exercise.

EVALUATING E-COURTS PHASE I AND II

Before embarking on drafting a vision document for phase III, the sub-committee undertook an exercise in evaluating phases I and II of the e-Courts project. The sources of this evaluation are:

- Multiple interactions with the members of the E-Committee, SCI and NIC;
- Interactions with CPCs across different courts to understand their roles and responsibilities, as well as the challenges faced;
- Multiple documents shared by the E-Committee, SCI and NIC on planning and implementation frameworks for specific modules under phases I and II;
- Data gathering exercises through curated questionnaires for different actors in charge of implementing the e-Courts project. These questionnaires were sent to CPCs, Master Trainers, and System Administrators:

The questionnaires were designed to gather information on the present status in terms of the kind of technology driven services and systems deployed under the two phases, the processes and protocols in place, and the implementation and adoption hurdles faced by each of the different actors in the system.

The sub-committee had gathered information on the following points at the end of the above consultations and data gathering exercises:

- **Technology:** architecture, details of core and peripheral modules of CIS, API specifications, processes to ensure data fidelity;
- **Administration:** the designations, qualifications, roles and responsibilities, and the hierarchy of officials in charge of implementation of e-Courts project;
- **Supporting frameworks:** extent of process re-engineering undertaken, training structures and schedules
- **Challenges:** shortage of trained and qualified staff, lack of adoption, duplicity of efforts, inefficient processes, etc.

ENVISIONING PHASE III

Based on the learnings from the above evaluation of Phases I and II, the sub-committee consulted several technocrats and technology experts to understand the latest developments in technology and how they can be adopted in the context of Indian judiciary.

CONSULTATION WITH HIGH COURTS

The sub-committee then prepared a draft vision document and the key takeaways from this document were shared with the HCCC's across the country. In addition, the sub-committee was able to consult with High Courts. In these consultations, the sub-committee solicited their insights into challenges faced, suggestions on potential solutions and feedback on the proposed vision.

PUBLIC CONSULTATION

The objective of this vision document is to conceptualize a futuristic judiciary that facilitates better access to justice. Given this, feedback from the end-users-individual litigants, businesses and other entities was felt critical. Therefore, the sub-committee published the draft vision document opening it up for public comments. In all, 2051 responses were received on the draft Vision Document. The sub-committee evaluated all the responses and made relevant changes to the draft Document in consultation with the e-Committee.

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