

Paper two

TRANSITION AND IMPLEMENTATION

September 2019

*Whitepaper Series
On Next Generation
Justice Platform*

DAKSH



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About DAKSH: DAKSH is a Bengaluru-based civil society organisation working on judicial reforms. We are focused on solving the problem of pendency of cases in the Indian legal system. We approach the problem from the perspectives of data, efficiency, process, technology and administration.

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Introduction



This paper succeeds ‘Whitepaper Series on Next Generation Justice Platform, Paper 1: The Vision’, the first whitepaper in this series (Paper 1)¹, which established the vision of a ‘justice platform’, a next generation institutional structure where processes of the judiciary take place on a digital platform.

Paper 1 delves into the full range of benefits of such a platform, the need to transition towards such an institutional structure as well as some of the design principles to be kept in mind to mitigate any harms. As such, it is more of a vision document and does not dwell on implementation. This paper proposes a roadmap to implement such a platform, providing an overview of past approaches and their results, and outlining detailed design considerations when creating the platform and implementation strategies.

The first chapter provides an overview of the history of digitisation and computerisation of the judiciary, explaining the numerous initiatives from the 1990s onwards. It describes the various modules and systems under the ‘E-Courts mission mode project’ and the various tasks and functions they perform. This chapter maps out the Information and Communication Technology (ICT) landscape of the judiciary and illustrates why the proposed approach is necessary.

¹ DAKSH. 2019. ‘Whitepaper series on Next Generation Justice Platform, Paper 1: The Vision’. Bengaluru: DAKSH.

This paper proposes a roadmap to implement such a platform, providing an overview of past approaches and their results, and outlining more detailed design considerations when creating the platform and implementation strategies.

The second chapter compares the present modules with the principles described in Paper 1 and proposes modules of the future justice platform that would bridge the gaps between current capabilities and the fulfilment of these principles.

The third chapter describes some of the broad design considerations for transitioning towards the envisioned platform. The fourth and final chapter lists the essential functionalities of each module and some of the considerations that will have to be kept in mind when designing them.



1

Review of ICT adoption in the Indian judiciary

1.1 HISTORY OF DIGITISATION OF THE JUDICIARY

Computerisation of the Indian judiciary has been taken up under several schemes and projects since the 1990s. The recent E-Courts initiative implemented by the National Informatics Centre (NIC) has been the most successful effort to introduce ICT into the Indian judiciary. To understand the current state of ICT in the judiciary and to map the trajectory to the desired future state proposed in the vision document, it is important to trace the background of computerisation of the judiciary in India.

Figure 1 provides a timeline of ICT adoption in the Indian judiciary.² Efforts to streamline the activities of the judiciary through computerisation began in the 1990s, in the Supreme Court of India, followed by the high courts. To begin with, the National Informatics Centre (NIC) developed applications

such as COURTIS (Court Information System) and JUDIS (Judgment Information System) to computerise routine activities such as the filing of cases, cause list generation, and access to reported judgments of the Supreme Court.³ The high courts, which were also computerised on similar lines, granted access to digitally generated daily and weekly cause lists from LOBIS, (List of Business Information System), an information database of fresh, disposed and pending cases.⁴ In 1997, NIC attempted the digitisation of all district courts under a Centrally Sponsored Scheme similar to LOBIS but was unsuccessful.⁵ The project planned to computerise 430 courts but failed due to a lack of resources, leadership and coordination during implementation.⁶

³ Seema Narayan (ed.). 2006. *Documenting Reforms: Case Studies from India*. New Delhi: Macmillan.

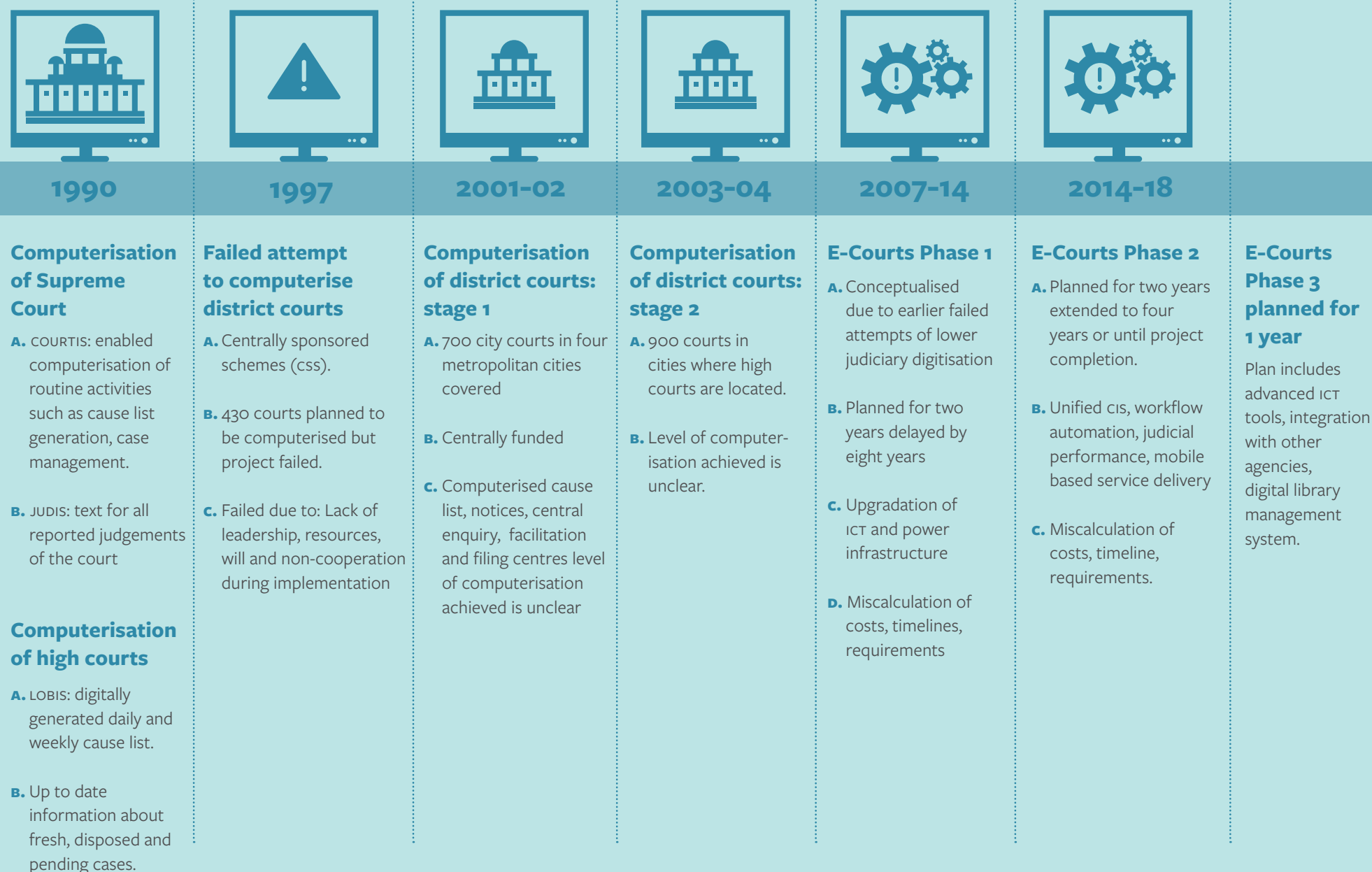
⁴ K. Pandurangan. 2009. *e-Justice: Practical Guide for the Bench and the Bar*. New Delhi: Universal Law Publishing.

⁵ Shalini Seetharaman and Sumathi Chandrashekharan. 2016. *Ecourts in India from Policy Formation to Implementation*. Delhi: Vidhi Centre for Legal Policy. Available at https://vidhilegalpolicy.in/wp-content/uploads/2019/05/eCourtsinIndia_Vidhi.pdf. (accessed on 20 July 2019). The NIC claimed that equipment such as machines, printers and cables were purchased and dispatched but there was no further progress. The failure of this project was broadly attributed to lack of leadership, will, resources and understanding of potentiality of ICT usage in the judiciary.

⁶ Seetharaman and Chandrashekharan. 'Ecourts in India from Policy Formation to Implementation.'

² DAKSH. Whitepaper series on Next Generation Justice Platform, Paper 1: The Vision.

Figure 1: Timeline view of ICT adoption in the Indian judiciary⁷



⁷ E-Committee, Supreme Court of India. 2005. 'National Policy and Action Plan for Implementation of Information and Communication Technology in the Judiciary. Delhi: Supreme Court of India'. Available at <https://sci.gov.in/pdf/ecommittee/action-plan-ecourt.pdf> (accessed on 10 August 2019).

There is a lack of information regarding the status of implementation and the level of digitisation achieved in subsequent initiatives. The E-Courts project was hence envisaged under the leadership of the Supreme Court to overcome the challenges faced by previous initiatives devising a National Policy and Action Plan (NPAP)⁸. The NPAP featured appropriate measures, plans, and phases to implement ICT in courts across India, with a primary focus on the lower judiciary.

The early attempts at computerisation of the district courts had multiple budgetary revisions and overlapping schemes for computerisation. These revisions, the irregular use of schemes, and the lack of any tracking of project progress demonstrated a lack of policy clarity and institutional coordination from the very beginning of computerisation efforts.

Phase I of the E-Courts project, which planned for the development of infrastructure, LAN facilities, and other web-enabled applications, also faced major issues due to incorrect estimates regarding the project's requirements, cost, and timelines for implementation. In a period of three years, the budget for Phase I was recalculated to be more than double of what was originally estimated. Cost overruns due to delays in implementation are not unusual, but the revised budget for Phase I was more than the budget initially proposed for all three phases.

With repeated revisions to the timelines, the time lag between operationalisation and computerisation of these new courts created situations where some courts in a given court complex were still following manual processes, while others had been computerised.

The activities planned for Phase II in 2005 were significantly enhanced by 2014 to include implementation in additional court complexes, upgrades to infrastructure based on evolving technological progress, and corrective implementation based on lessons learnt during the operationalisation of Phase I. Miscalculation of cost estimates and project requirements, and considerable timeline extensions for implementation have characterised both phases of the E-Courts project planning. Even by November 2015, only about 95% of the

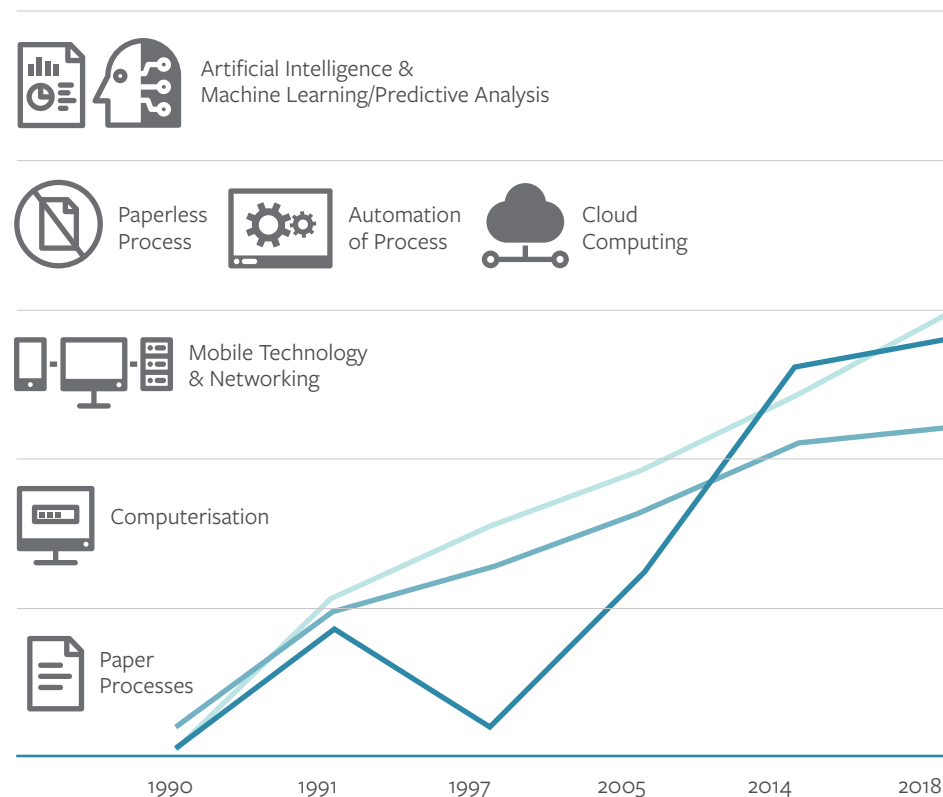


Figure 2: Technologies adopted until now⁹

Technological progress in the Indian judiciary since 1990.



District Court

High Court

Supreme Court

⁹ E-Committee, Supreme Court of India. National Policy and Action Plan for Implementation of Information and Communication Technology in the Judiciary.

⁸ DAKSH. Whitepaper series on Next Generation Justice Platform, Paper 1: The Vision.

mandated activities of Phase I were reported as completed. It is clear that project planning of Phase II failed to eliminate the time lags and implementation issues that were encountered during operationalisation of the first phase. As a result, there is no way to assess how this Phase II has been implemented.

Figure 2 showcases the technology solutions implemented in the judiciary over the last two decades. In the 1990s, computerisation efforts introduced computers and laptops for judicial officers and court level applications to record information. While the pace of incorporating new technologies was slow to begin with, over time there have been significant efforts under the E-Courts project to introduce newer technology solutions to drastically improve accessibility and efficiency of the courts. As depicted in the figure, from 2005 onwards, a few of the newer technology projects, such as cloud connectivity between courts, an integrated case management system, cloud computing and mobile-based solutions have been actively pursued till today.

Despite these changes, courts are not keeping pace with the rapid rate of technological advancements in society. The case studies of ICT reforms in other countries as described in Chapter 2 of Paper 1 show approaches to technological advancement that may be utilised, but it is also clear that the Indian judicial system will need to forge its own path.¹⁰ However, before outlining the technological changes needed to achieve the vision of the justice platform, it is first necessary to review the existing technology stack and its features.

1.2 CURRENT ICT MODULES IN THE JUDICIARY

The digitisation of the judiciary can be better understood by separating an electronic system into its parts, based on functionalities. There are many advantages to this approach, primarily that doing so facilitates a more efficient implementation strategy. Rather than tackling the entire judiciary as a monolith, identifying critical functions and components of an ICT-enabled court enables the prioritisation of processes that need to be digitised first.

¹⁰ DAKSH. Whitepaper series on Next Generation Justice Platform, Paper 1: The Vision.

Rather than tackling the entire judiciary as a monolith, identifying critical functions and components of an ICT court enables the prioritisation of processes that need to be digitised first.

Though the parts of current systems can be classified according to which court or jurisdiction they are being implemented in, such a categorisation is more relevant at the implementation stage. When analysing the current status of ICT systems, it is more useful to think in terms of the following four layers – applications, channels, the information layer, and infrastructure. These categories are explained below¹¹.

Applications

This category consists of all the core applications deployed within courts, such as the case information system (CIS), e-filing, and N-STEP, and modules for integration with other systems, such as the Crime and Criminal Tracking Network System (CCTNS), and systems used by legal aid authorities.

Channels

Channels describe the various touch points available for the litigants and the judicial staff to interact with the present information system of the judiciary. The JUSTIS mobile solution for judicial personnel, E-Courts mobile app, and the E-Courts internet portal for lawyers and litigants are a few examples for this category.

¹¹ For a detailed depiction of the categories and the relationships between them, see Appendix.

Information layer

The information layer today is represented mainly by the National Judicial Data Grid (NJDG) through which aggregate court statistics and related data can be accessed on by the litigants and the judicial staff.

Infrastructure

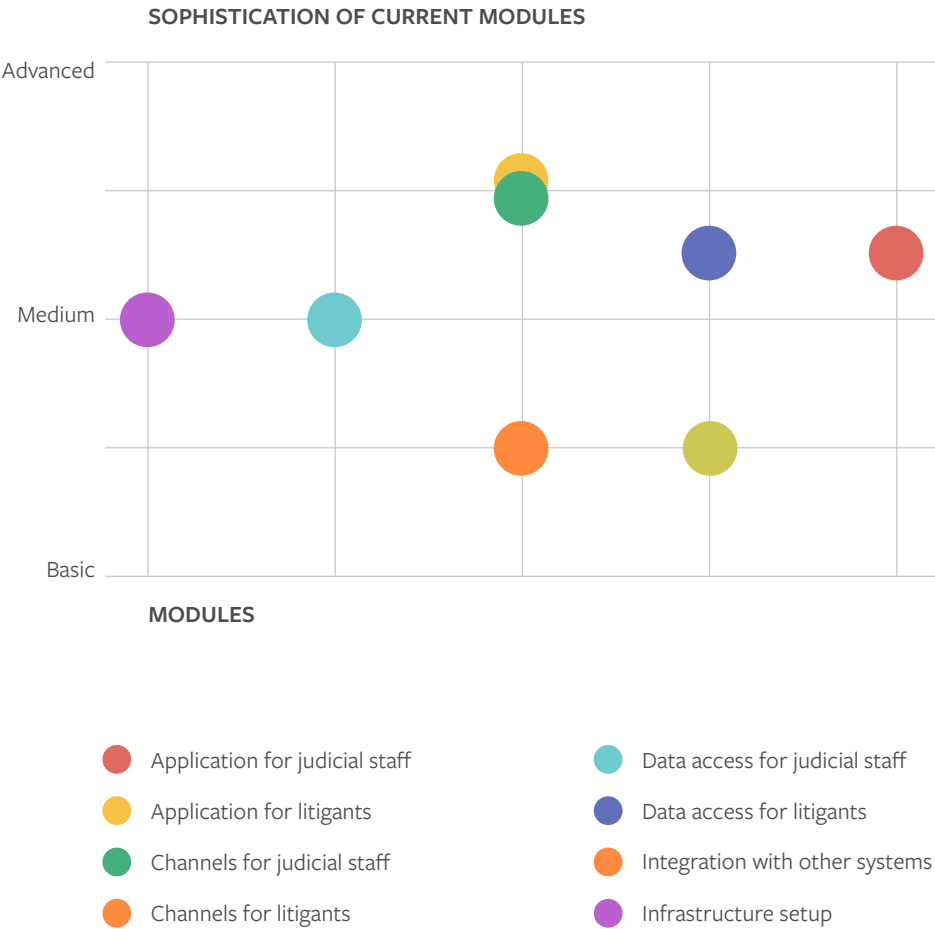
Current components of the infrastructure include hardware and systems for LAN/WAN connectivity, video conferencing facilities, and the cloud network set-up.

1.3 SOPHISTICATION OF CURRENT MODULES

In order to gauge the level of digitisation of the judiciary, it is not enough to merely map out the categories of modules but also their level of sophistication. This is visually depicted in Figure 3, where each category is colour coded to indicate the phase of the E-Courts project during which it was implemented and its current status. While the colour code suggests that many modules taken up as part of the E-Courts phase II are still being implemented, it is difficult to be sure of the degree of completion or adoption of these solutions across the courts. After examining the current features of the platform, we review and classify these features as basic, medium or advanced as per definitions described in Chapter 2 of Paper 1.¹² The levels of sophistication of the modules are represented on the vertical axis of the graph as basic (1), medium (3), and advanced (5).

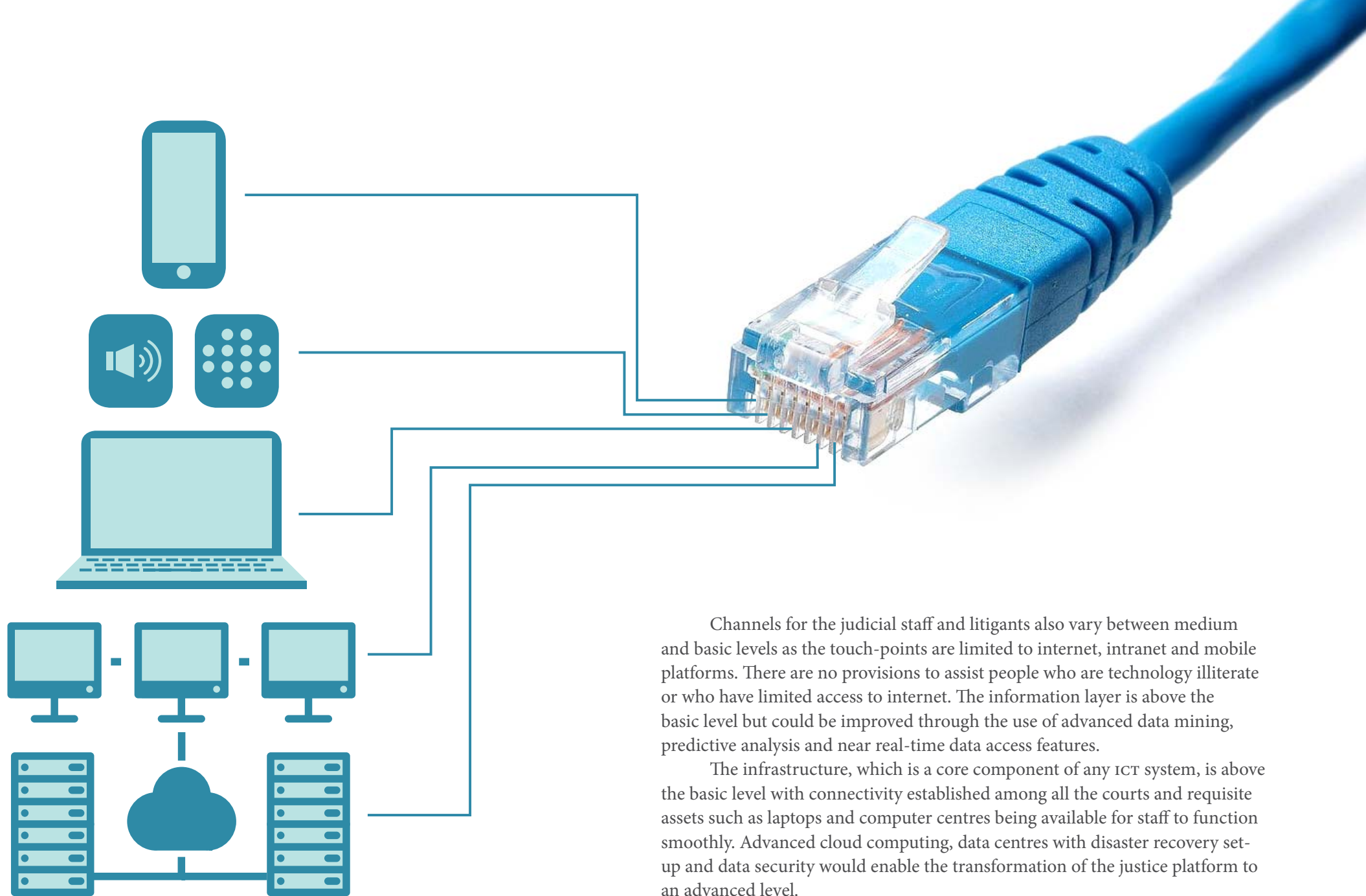
It is apparent that all the modules are more or less at the medium-level or below. The applications for litigants and judicial staff range from basic to medium levels. Today, litigants are able to follow the status of their cases and perform the simple tasks of filing and payment of court fees online. However, current systems are not interactive or intuitive, and are still largely manual, impeding both access and the ease of user experiences.

Figure 3: The sophistication of existing modules ¹³



¹² DAKSH. Whitepaper series on Next Generation Justice Platform, Paper 1: The Vision.

¹³ E-Committee, Supreme Court of India. 2019. eCourts Project Phase II Objectives Accomplishment Report As per Policy Action Plan Document, Delhi: Supreme Court of India. E-Courts. Available at https://ecourts.gov.in/ecourts_home/static/manuals/Objectives%20Accomplishment%20Report-eCourts-final_copy.pdf (accessed on 10 August 2019)



Channels for the judicial staff and litigants also vary between medium and basic levels as the touch-points are limited to internet, intranet and mobile platforms. There are no provisions to assist people who are technology illiterate or who have limited access to internet. The information layer is above the basic level but could be improved through the use of advanced data mining, predictive analysis and near real-time data access features.

The infrastructure, which is a core component of any ICT system, is above the basic level with connectivity established among all the courts and requisite assets such as laptops and computer centres being available for staff to function smoothly. Advanced cloud computing, data centres with disaster recovery set-up and data security would enable the transformation of the justice platform to an advanced level.



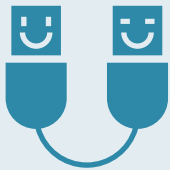
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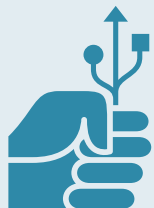
Principles as a basis for solutions



Given the lacunae in the current method of ICT implementation in the judiciary, there is a case to re-think strategies and devise new ways for the courts to operate more efficiently and effectively. This brings us to the discussion on the components or modules that are required to be in the next generation justice platform. Table 1 describes the guiding principles envisaged in Chapter 1 of Paper 1 and links them to the technology solutions or strategies that are required to bring the vision to fruition.¹⁴

¹⁴ DAKSH. Whitepaper series on Next Generation Justice Platform, Paper 1: The Vision.

Table 1: Mapping platform principles to technology solutions

S No	Guiding principles	Technology solutions
1	Minimal asymmetry of information 	Invest in Government-to-Citizen (G2C) technology solutions, using platforms and processes that will bridge the information gap between the citizens and the judiciary. Citizens should be able to access necessary information without having to navigate bureaucratic structures or using the services of agents.
2	Modularity 	Given that digitisation should be implemented in a uniform manner in one swoop, a modular approach will need to be taken by each of the various jurisdictions. As such, it becomes paramount that the main implementing agency sets open standards and practices in order to ensure interoperability between modules at vertical and horizontal levels.
3	Ease of use 	The solution should focus on interactive and intuitive designs for all users. It should consider the demographic mix in the population at the design and implementation stage. An easier-to-use platform will drive adoption amongst all stakeholders.

S No	Guiding principles	Technology solutions
4	Accessibility 	Given the demographic mix in India, it is imperative to focus on technology solutions that factor people with disabilities, litigants of different linguistic backgrounds and digital non-natives. It will also be necessary to structure the design and implementation to ensure that people with poor digital access are not deprived off access to justice.
5	Automation of key processes 	Investing in technologies to optimise workflows will be critical to improving efficiency outcomes. These will need to be accompanied by amendments to rules and procedures. The platform should be flexible enough to adapt to changes.
6	Provision of intelligent tools to stakeholders 	Intelligent tools can be deployed to analyse large volumes of data, case law history, and to assist with decision-making.

S No	Guiding principles	Technology solutions
7	Transparency 	Digital-by-default and digitisation-at-source technology solutions are imperative to drive transparency across the justice system. Use of optical character recognition (OCR) technologies to read data from scanned documents at the point of entry will help maintain consistent data across systems, and reduce opacity, to the extent that documents are submitted offline.
8	Privacy, security and fairness 	Secure network architecture and privacy protocols are essential to safeguard the interests of the citizens. The platform needs to be flexible enough to facilitate frequent security upgrades.



3 Design considerations

Careful design is necessary not just to ensure the success of the platform but also the way in which it is implemented. Detailed planning will help make the implementation of the platform seamless, minimising risks, and maximising the efficiency with which resources are spent. This section describes a few implementation strategies and best practices to guide the implementation of the next generation justice platform.

3.1 PROCESS RE-ENGINEERING PRIOR TO DIGITISATION

The importance of carrying out process redesign alongside technology changes has been acknowledged for a long time. At present, digital processes supplement physical processes. These processes delineate the administration and management of the judiciary, and how its external stakeholders engage with it. The existing efforts for process-re-engineering have largely involved a transition from manual to digital modes of performance, such as using software

“IT system changes should be planned to support redesigned business processes. Undertaking one without the other is unlikely to deliver value for money.”¹⁵

applications linked with the database to generate summons, and verifying their delivery through a mobile app (N-STEP).

However, the scope of process re-engineering extends far beyond the digitisation of these processes and involves re-designing (and in some cases eliminating) parts of these processes altogether. According to Michael Hammer, a pioneer in the theory of business process re-engineering, “Merely overlaying new technology on old ways of working achieves very little”.¹⁶ Hammer states that process re-engineering involves questioning all the underlying rules and assumptions that determine how firms conduct their business, and the extent to which following the steps required for each task helps it achieve its goals. Shifting the location of these processes to a public platform offers the opportunity for the judiciary to do the same. This has the potential to radically transform the judiciary, especially with regard to efficiency.

Court processes in different states vary from each other because of historical processes and differences in practices. Digitisation will not lead to such differences being eliminated. The platform can accommodate such differences while ensuring efficiency and ease of use for citizens.

¹⁵ House of Commons Committee of Public Accounts. 2003. New IT systems for Magistrates’ Courts: the Libra project. London: *The Stationery Office Limited*. Available at <https://publications.parliament.uk/pa/cm200203/cmselect/cmpubacc/434/434.pdf> (accessed on 1 September 2019).

¹⁶ Michael Hammer and James Champy. 2009. *Reengineering the Corporation: Manifesto for Business Revolution*. New York: HarperCollins.

Hence, process re-engineering is a fundamental part of designing a platform for the justice system. Not all processes need to be forced into this, but only wherever possible, if the changes improve the overall functioning and flexibility.

3.2 UTILISE A MODULAR APPROACH


When approaching judicial reforms in any capacity, it is necessary to recognise that the judiciary is a complex system. A large amount of participants engage in a variety of interactions, which means that any given event in the judiciary has neither a single cause nor a single effect. As such, any redesign of the judicial system must respond to multiple causes and effects with dynamic interactions operating at multiple time-scales, levels, and interdependencies, when changes are being introduced. Additional complexities exist due to the multiplicity of jurisdictions and the variances between them due to India's federal structure.

As a result, implementing ICT reforms in a phased modular manner reduces the risks associated with a big-bang approach. A change management procedure that takes a modular approach would ensure smaller or more effective enhancements are made earlier while larger or less effective changes are staggered. This agile development and project management methodology also slowly familiarise users with new functionalities and enables designers to engage them in an on-going development loop. Managing projects in a series of 'sprints' helps to reduce risk, sustain momentum, and motivation. This entails dividing a large project into smaller achievable tasks that quickly add value. An incremental approach will also have the added advantage of producing early success stories that will demonstrate the value and viability of reforms among all stakeholders.


There are a few considerations that must be kept in mind when utilising a modular approach.

3.2.1 SEQUENCING OF MODULES

There are a number of factors that could determine the sequence in which modules of ICT reforms are implemented. There are two primary ways in which modules can be categorised, the first being on the basis of which court



Managing projects in a series of 'sprints' helps to reduce risk, sustain momentum and motivation.



or jurisdiction the module is being implemented in and the second being on the basis of the importance of the module's functionality. This categorisation of modules is necessary as it will be a factor in determining the ideal implementation methods. The two categorisations and how they will influence implementation are described below:

3.2.1.1 Jurisdiction

A truly modular approach would entail allowing each jurisdiction the discretion to create their own modules. Given that each state or high court has its own laws and processes, the task of designing a uniform module for all jurisdictions will be extremely complex and difficult to co-ordinate. The question of jurisdiction is further complicated by the fact that courts are only one component of the justice system, the others being the police, prosecutors, forensic labs and prisons. A better approach would be to allow each jurisdiction, whether it is a high court or a state police force to design their own modules. This would leave the control of the design to each jurisdiction, whose members are in the best position to meet the particular requirements of its constituent users. However, it would be necessary for the functioning of the overall justice platform, that the modules created by each jurisdiction should be able to exchange relevant information with the modules of other jurisdictions.

That being said, it would still be advisable, to begin with a pilot project in a court of small to medium size in an area where crucial stakeholders from within the judiciary are more open to digital initiatives. If an evaluation of the pilot project indicates that it was a success, it can be rolled out to the remaining courts and tribunals. The

benefits of this approach include minimising the risks of disruption to the justice system due to the smaller scale of the pilot project, and the ability to iron out issues before extending it to all courts. Larger courts should ideally be avoided as fine-tuning the platform would not only involve larger risks such as possible damage to justice delivery and the rights of litigants, but would also require significantly more resources to both manage as well as to mitigate these risks.

3.2.1.2 Importance of modules

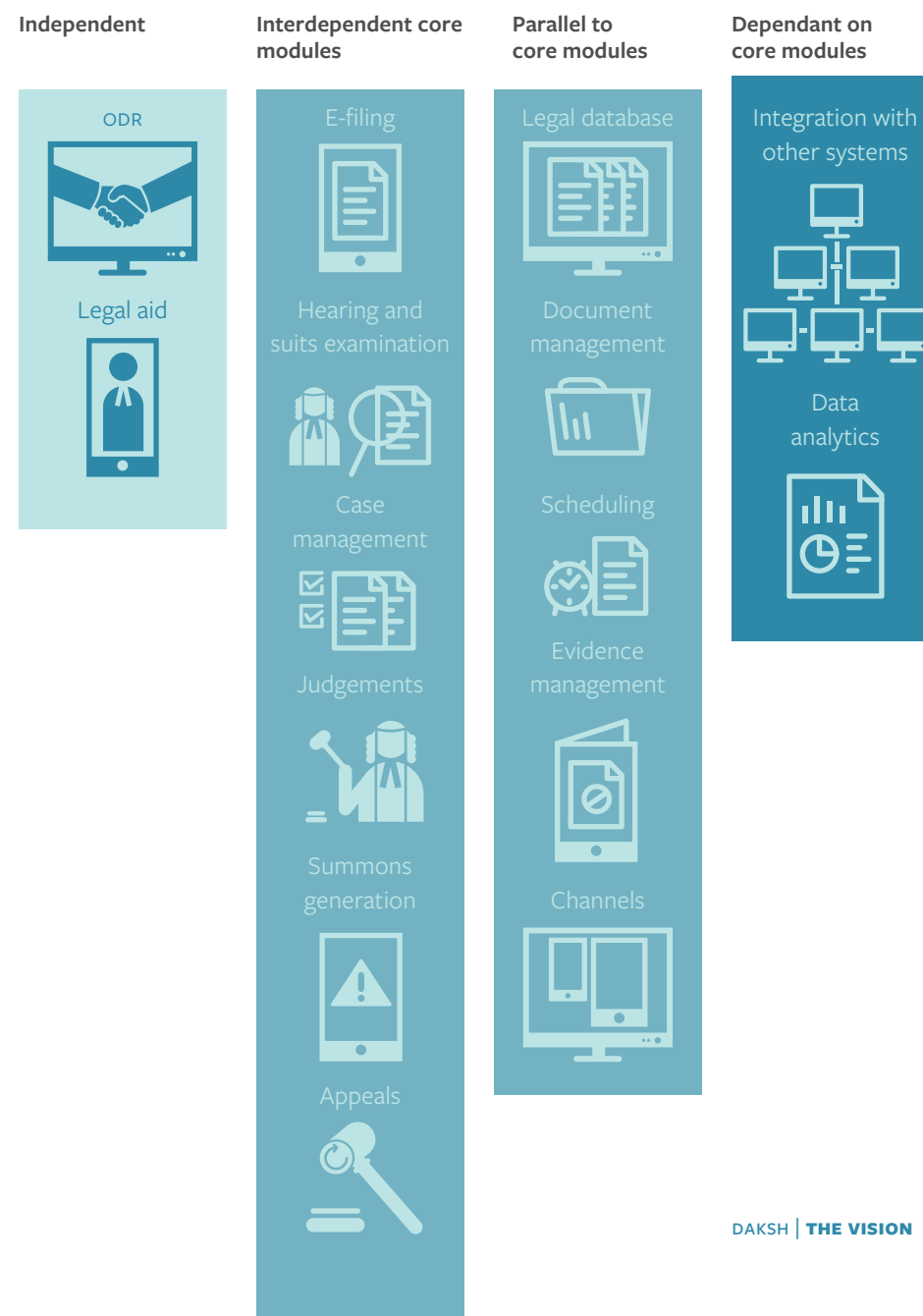
Even within a single jurisdiction, a phased roll-out of modules will be key. While the design of the platform needs to consider all the elements of the justice system, the implementation should be sequenced so that core functions of the judiciary can be digitally deployed at the earliest. One reason to do this is that some of these modules are essential requirements for later modules that cannot be deployed until their precursors are in place. But the more important reason is that they form the core of judicial activity, and truly digitising the judiciary will require porting them to the platform. As such, four basic categories of modules emerge, depending on their importance:

- **Interdependent core modules**
- **Dependent on core modules**
- **Independent modules**
- **Parallel to core modules**

The independent modules shown in the figure, namely, online dispute resolution (ODR) system and legal aid can be developed on a stand-alone basis and implemented in certain regions before launching it nationally. Although they will need to be integrated with the core modules once they are ready, these modules can be tested for usage and effectiveness, independently.

The core modules are interdependent, and their implementation will be effective if all the functions are planned for implementation at the same time. This could also reduce parallel runs of the system as it could

Figure 4: Sequencing roll-out of functionality



be deployed as one package. The package could start off with limited features, but would cover the end-to-end lifecycle of the cases such that they are processed through the new platform.

Modules such as legal databases, document management, scheduling, evidence management and channels can be planned for implementation parallel to the core modules. While there could be interdependencies, they can run parallel to the functionality being implemented and go through upgrades for newer features. Integration with other systems and advanced data analytics will need to be implemented once the core modules are in place and when there are cases being processed on the new platform.

3.2.2 OPEN STANDARDS

While taking a modular approach has the advantage of entrusting the design of modules to those who can tailor them to local conditions it comes with its drawbacks too. The first is that, if they are left unchecked, the variance between jurisdictions may be too much, which would make navigating the platform in different jurisdictions extremely complex for all end users. Two primary problems emerge – a lack of homogeneity of modules that make interacting with the platform a confusing experience for end users and the likelihood of compromised interoperability between different modules. If the modules are unable to interface and easily transfer information with one another, it would not only hinder the performance of the platform as a whole but also seriously compromise its value as the goal of the platform is to reduce inefficiencies, not create new ones.

As described in Paper 1, it becomes essential that there exist a set of open standards and protocols developed through a collaborative process between stakeholders, as per open standard principles.¹⁷ The Apex Justice

Platform Authority (AJPA)¹⁸ proposed in Paper 3 would oversee the standards development process. It would bear the responsibility of creating these open standards including, involving stakeholders in the process of standard setting, adoption, and revision; provision of ongoing standard-related support; and the publication of all meeting documents from the standard setting meetings.

The standardisation objectives set in advance by the AJPA will need collaboration between the judiciary, lawyers, police, prisons, investigation agencies, civil society, and public interest groups.

Integration of systems between all the organs of the criminal justice system is a key objective of the platform. On its own, such a reform represents a leap far beyond present systems of communication between these bodies. Although an integrated platform for the judiciary, prisons, and police is currently being piloted as part of the ICJS system, ICJS is a stand-alone system. The integration of information systems described in Paper 1 is only one component of the platform, which has many other user groups as well. This brings its own challenges in implementation, which could be dealt with as follows:

3.2.2.1 Implementation should be planned in a phased manner as it is important to minimise disruption, particularly when multiple agencies, vendors and stakeholders are involved.

3.2.2.2 The attempt to interface everything in one go should be avoided. There instead should be a plan to enable interfaces for the system to progressively build up towards increased levels of automation.

¹⁷ Ken Krechmer. 1998. 'The principles of open standards'. *Standards Engineering*, 50(6): 1-6.

Marco Fioretti. 2010. 'Why open digital standards matter in government', in Daniel Lathrop and Lauren Ruma (eds.), *Open government: Collaboration, transparency, and participation in practice*, p.363-73. California, USA: O'Reilly.

K.D. Simon. 2005. 'The value of open standards and open-source software in government environments'. *IBM Systems Journal*, 44(2): 227-238.

¹⁸ Hammer and Champy. *Reengineering the Corporation: Manifesto for Business Revolution*.

3.3 OFF-THE-SHELF VERSUS HOMEGROWN APPLICATIONS

ICT reforms in the judiciary typically imply high costs and attract high levels of public scrutiny. Off-the-shelf applications not only reduce the associated risks but also minimise disruption during the transition phase of the ICT solutions. This is because off-the-shelf applications have shorter transition times, thus easing and speeding up the migration to the new platform.

Using a seasoned, well-tested product already in the market ensures that the solution has evolved and is responsive to changing needs, which avoids the risks of using unproven solutions. Using an off-the-shelf solution also has the advantage of benefitting from ongoing upgrades, getting access to functionality developed for other courts, and ensuring access to evolving technology trends in the sector. The California State Auditor's Report cites "the lack of a mature underlying product" as an explicit reason for the lack of confidence of the superior courts in adopting a case management system.¹⁹ Hence, existing open source solutions, where available, offer the best compromise between flexibility, development cost, cost of adoption and implementation, and avoidance of vendor lock-in.²⁰

3.4 USING PRIVATE SECTOR EXPERTISE

Tasks such as maintenance may be achieved at lower cost and higher efficiency if the skills and expertise of the private sector are utilised. This includes not just for the development of solutions, as mentioned in the previous point, but also in the regular operation of the platform. Working with the private sector could save the judiciary the cost of investing in the infrastructure and human resources that would be necessary to create this capability internally.

¹⁹ California State Auditor, Bureau of State Audits. 2011. *Administrative Office of the Courts: The Statewide Case Management Project Faces Significant Challenges Due to Poor Project Management*. California: Bureau of State Audits. Available at www.bsa.ca.gov/reports/summary/2010-102 (accessed on 5 September 2019).

²⁰ Simon. 'The value of open standards and open-source software in government environments.' 227.

3.5 STAKEHOLDER ENGAGEMENT AND CHANGE MANAGEMENT

There are several variables such as the extent of stakeholder engagement, variation in local conditions, and associated costs and benefits that influence successful implementation of any change in a complex system. In addition to adapting to local conditions, stakeholder engagement and change management are the other vital components for a smooth implementation. Some strategic approaches to stakeholder engagement and change management are given below:

- 3.5.1** Effective communication with stakeholders will be critical to ensure user groups are involved at early stages and regularly participate in user acceptance testing. Authorities appointed for public engagement will be responsible for this.²¹
- 3.5.2** Early involvement of stakeholders in the approval of requirements, project updates, and showcasing prototypes is essential.
- 3.5.3** Various structures can be designed to manage the flow of changes, approvals and feedback from the users as part of the change management process.
- 3.5.4** Identification of success stories from early deployments tied to the experience of specific court staff and users will drive greater engagement, rather than top-down messaging.
- 3.5.5** It is crucial to gain senior stakeholder buy-in at an early stage and leverage it throughout the implementation. This may influence programme phasing. For example, early positive feedback from the judiciary may have a positive influence on judges or court staff inducted later on, or on other courts.

²¹ All authorities responsible for platform implementation, at the central (AJPA), High Court, (HCJPA) and district court (DCJPA) level, will direct a body responsible for public engagement. See DAKSH. 2019. 'Whitepaper series on Next Generation Justice Platform, Paper 3: Legal Framework'. Bengaluru: DAKSH.


4

Key features of the platform


Table 2 below shows the current state of a given module or functionality in the judiciary, and describes features required to progress from the current system to the next generation justice platform, as described in Paper 1. The table also provides approaches and strategies for each set of features, which serve to guide the design process in terms of the goals of the platform. These goals are defined as the fulfilment of the guiding principles described in Chapter 1 of Paper 1. The role each module plays in the life cycle of a court case are described in Chapter 4 of the Paper 1.




Table 2: Proposed key features of the platform modules

No	Module Name	Current state	Features required to advance to the next generation	Approaches to and strategies for re-designing the module
1	<p>Online Dispute Resolution (ODR)</p> 	<p>The Ministry of Law and Justice has taken measures to introduce online mediation, arbitration and conciliation.²² This is not yet being practiced widely in India</p>	<ol style="list-style-type: none"> 1. A fully automated internet platform utilising electronic chat or video conferencing, so that all proceedings can be conducted online if so desired. 2. ODR can be supplemented with the ability to process disputes using automated decision-making algorithms based on underlying data generated by the digital platform. 3. The design of the platform for the judiciary should prompt litigants to first explore ODR options before filing cases by giving statistical data (resolution, timelines) of other similar cases being resolved through the ODR route. 4. The ODR platform should be seamlessly integrated with the court platform for ratification, approvals and appeals. 	<ol style="list-style-type: none"> 1. Focus on accessibility and ease of use at the design stage as it will help drive the adoption of ODR. 2. Build trust and confidence of people in online technologies over time. 3. Measures to overcome hurdles such as differences in educational levels, language barriers, lack of access to technology and infrastructural limitations. 4. The training of lawyers, awareness campaigns will also be necessary to drive the adoption of ODR proceedings.


²² ANI. 2019. 'India gets its very own online platform for resolving legal disputes'. *Business Standard*. 7 March. Available at https://www.business-standard.com/article/news-ani/india-gets-its-very-own-online-platform-for-resolving-legal-disputes-119030700340_1.html (accessed on 1 September 2019).

No	Module Name	Current state	Features required to advance to the next generation	Approaches to and strategies for re-designing the module
2	Legal aid 	<p>Modules for referring cases to alternative dispute resolution (ADR) and record-keeping have begun to be introduced in Legal Services Authorities at the district and taluka levels. However, they have no features for potential litigants to take decisions for themselves.²³</p>	<ol style="list-style-type: none"> 1. Litigants should be able to view legal aid options when filing a case on the platform. This functionality, apart from confirming eligibility of the litigants, should also allow them to select lawyers from a list based on relevance to the case, expertise and availability. 2. The platform should enable litigants to talk to their lawyers online and communicate with other lawyers in bigger cities if the case is complex. 	<ol style="list-style-type: none"> 1. This module should focus on accessibility, ease of use and intelligent tools for stakeholders. 2. Special care should be taken to ensure that all litigants, legal aid users in particular, are adequately and thoroughly informed about the legal processes they will be navigating (discussed in further detail in Item 14 of this table).


²³ E-Committee, Supreme Court of India. eCourts Project Phase II Objectives Accomplishment Report As per Policy Action Plan Document.

No	Module Name	Current state	Features required to advance to the next generation	Approaches to and strategies for re-designing the module
3	E-filing 	<p>The proposed changes can leverage the existing e-filing module.²⁴</p> <p>However, the system of submitting hard copies of filed documents should be discontinued.</p>	<ol style="list-style-type: none"> 1. Litigants, or their lawyers, should be able to electronically file documents with courts. 2. The platform should also provide separate fields of information to be filled such as information about the parties, laws cited, etc. 3. Digital signature or e-signature facilities should be available for e-filing. 4. Statistics on cases similar to the one being filed should be available for litigants along with options to pay court fees online and access filing-related information. 5. The e-filing documentation should integrate with the court case and document management modules reducing data entry work for the court registry. 6. Manual scrutiny of the filed cases by the registry should be limited to cursory checks and the rest should be automated through validations built into the platform. 	<ol style="list-style-type: none"> 1. Digitisation of information at source is essential in order to avoid duplication of efforts and inconsistency in data. It also reduces asymmetry of information by making more information digitally accessible. 2. Accessibility, automation of processes (wherever possible) and ease of use are the other principles to be considered.

²⁴ E-Committee, Supreme Court of India. 2018. 'User manual, E-filing procedure for high courts and district courts in India'. *E-Courts*. Available at https://ecourts.gov.in/ecourts_home/static/manuals/efiling-User-manual.pdf (accessed on 2 September 2019).


No	Module Name	Current state	Features required to advance to the next generation	Approaches to and strategies for re-designing the module
4	Case information system 	<p>The current case information system has basic modules of case management and case scheduling with predefined templates which are static and not interactive.</p> <p>This system does not use the case database to provide a means for lawyers to perform any task online.²⁵</p>	<ol style="list-style-type: none"> 1. End-to-end electronic case management system without physical documents. 2. Intelligent case allocation based on existing caseload, nature of cases and subject. 3. The platform should enable easy collection and maintenance of the data of all the parties, their roles, and other unique information pertaining to the case. 4. Much can be gained from using the database of cases entered through the case Information system to provide facilities for users such as lawyers, who could create and review notes, filings, memos, documents and case records from chambers or from remote locations. 5. Setting and tracking performance targets. 6. Electronic workspace, access control and administration for security purposes, audit trail and activity log to be available. 	<p>Processes should be automated wherever possible to maximise efficiency and frictionless information transfers. However, this should not be at the cost of the privacy of participants or transparency in judicial outcomes and procedures.</p>

²⁵ This can be seen from the workflows explained in E-Committee, Supreme Court of India. 'Case Management Through CIS 3.0'. *E-Courts*. Available at https://ecourts.gov.in/ecourts_home/static/manuals/Case%20Management%20through%20CIS%203.0.pdf (accessed on 10 August 2019).


No	Module Name	Current state	Features required to advance to the next generation	Approaches to and strategies for re-designing the module
5	Scheduling 	Currently scheduling is a basic feature based on the date the cases are filed and adjournments granted. ²⁶ In practice, manual overrides are common. ²⁷	<ol style="list-style-type: none"> 1. Scheduling based on complexity, workload, time case type. Cases should be allocated to the right judges, with the right skills and the right time. 2. Intelligent scheduler makes sure that judges are not overloaded with cases. 3. Flexible algorithm keeping in mind the need of the court to make the best use of court resources. 	The module should consider efficiency, transparency and fairness principles.

²⁶ E-Committee, Supreme Court of India. 'Case Management Through CIS 3.0'.


²⁷ Source: discussion with judges and practitioners

No	Module Name	Current state	Features required to advance to the next generation	Approaches to and strategies for re-designing the module
6	Evidence management 	<p>The present system does not have any unified facility through which the judiciary, lawyers, and police can view electronic records of the evidence submitted in any case, although police academies have conducted training in the preservation and management of electronic evidence in cyber crime.²⁸</p>	<ol style="list-style-type: none"> 1. Provision to use records of evidence, in the form of documents, images and descriptions of physical evidence, audio-video recordings, which can be viewed together with the case data, with tools to assist in the preparation of a case. 2. Ability to perform video and image analysis using AI tools that can deal with large volumes of information. 3. The evidence management system should integrate with the forensic infrastructure. 4. The evidence management system should be interactive to have the latest updates available on the platform. 	<p>This module needs to focus on the principle of privacy and have strong security protocols to ensure the citizens' interests are protected. The system should also look to automate key processes wherever possible.</p>

²⁸ E-Committee, Supreme Court of India. 2014. 'Policy and Action Plan Document Phase II of the E-Courts Project'. *E-Courts*. Available at https://ecourts.gov.in/ecourts_home/static/manuals/PolicyActionPlanDocument-PhaseII-approved-o8o12o14-indexed_Sign.pdf. (accessed on 2 September 2019).

No	Module Name	Current state	Features required to advance to the next generation	Approaches to and strategies for re-designing the module
7	Generation and service of summons 	Currently managed through E-Courts and N-STEP. ²⁹	<ol style="list-style-type: none"> 1. Where parties are already registered on the platform, summonses can be served through it. 2. Issuing summons to the defendants, serving the notice of hearing to the advocates of petitioners and defendants through faxes, electronic media such as email, WhatsApp to avoid waste of time, expenses on manpower. 3. Reminders or notifications via SMS and email facility. 	The module should incorporate automation of processes wherever possible and minimise information asymmetry principles.

²⁹ E-Committee, Supreme Court of India. 2018. 'National Service and Tracking of Electronic Processes User Manual'. *E-Courts*. Available at https://ecourts.gov.in/ecourts_home/static/manuals/efiling-User-manual.pdf (accessed on 2 September 2019).


No	Module Name	Current state	Features required to advance to the next generation	Approaches to and strategies for re-designing the module
8	Document management ³⁰ 	A system for storage, archival, and retrieval of documents has been planned, ³¹ but not implemented. ³²	<ol style="list-style-type: none"> 1. The platform should enable checks of the validity of documents. 2. Documents should include all data related to the case from filing, evidence, and judgments. The platform should provide access to documents for other users in the justice system such as police, investigation agencies, and prisons. 3. It is essential to provide the ability for all users to create and analyse case information, as well as track cases as they progress through the system. 4. Public access terminals should be available for the citizens to access materials related to cases at designated places in the court complex. 	<ol style="list-style-type: none"> 1. Digitisation of courts' systems of document management serves as the foundation and catalyst for improving transparency and efficiency. 2. However, suitable strategies have to be designed into a digital document management system that will ensure the privacy, security and credibility of the documents.

³⁰ Chaitanya Mallapur. 2018. 'Here's how courts can help save 2k trees, 24k tankers of water every year'. *Business Standard*. Available at https://www.business-standard.com/article/current-affairs/courts-can-save-2k-trees-24k-tankers-of-water-by-using-double-sides-paper-118101700142_1.html (accessed on 1 September 2019).


³¹ E-Committee, Supreme Court of India. 'Policy and Action Plan Document Phase II of the E-Courts Project'.

³² E-Committee, Supreme Court of India. 'eCourts Project Phase II Objectives Accomplishment Report As per Policy Action Plan Document'


E-Committee, Supreme Court of India. 'Policy and Action Plan Document Phase II of the E-Courts Project'.

No	Module Name	Current state	Features required to advance to the next generation	Approaches to and strategies for re-designing the module
9	Hearing of suits and examination 	Currently audio-video conferencing feature is available to connect to the parties remotely. ³³	<ol style="list-style-type: none"> 1. Provision of an audio/ video recording system to record proceedings and save them in digital formats. 2. Audio conferencing may be used for simple proceedings such as the determination of hearing dates or case management dates. 3. Video conferencing should be available for the substantive hearing stages like arguments and evidence, and should be presided by judges in an open court. 	This module should consider principles of transparency, fairness and privacy in its design.


³³ E-Committee, Supreme Court of India. 'eCourts Project Phase II Objectives Accomplishment Report As per Policy Action Plan Document'.

No	Module Name	Current state	Features required to advance to the next generation	Approaches to and strategies for re-designing the module
10	Judgments 	Templates for standard judgments have been implemented. ³⁴	<ol style="list-style-type: none"> 1. Court Recording and Transcribing (CRT) to record hearings so that court proceedings can be stored in audio-video format for reference and long term preservation. These recordings can be used by the judge to review all stages of a case's progress when formulating a decision. 2. This application can also allow automated transcription of judgments. 3. Special attention should be made to the deposition box to ensure a detailed capture of witness testimonies. 4. Technological features that this module should include the ability to live stream over network, voice-activated video switching, multi-user logging, single/multi-user transcribing, real-time segmentation for remote transcription, and enhanced microphones. 	This module should consider principles of privacy, fairness and security in its design. There need to be adequate measures to ensure the security and privacy concerns of all participants are met. For instance, an option to not be live-streamed should be available, especially to witnesses.

³⁴ E-Committee, Supreme Court of India. 'eCourts Project Phase II Objectives Accomplishment Report As per Policy Action Plan Document'.


No	Module Name	Current state	Features required to advance to the next generation	Approaches to and strategies for re-designing the module
11	Appeals 	<p>Currently there is a module to transfer case information in the cis from one jurisdiction to another. The unified key ID known as CNR number can be used to track cases and associated information. This feature is available in cis 3.0 and HC CIS NC 1.0, which is used in high courts.³⁵</p>	<ol style="list-style-type: none"> 1. Litigants should be able to file appeals and responses via the platform. 2. Once the appeal is filed, there should be an automatic transfer of all data to the respective appellate court through the platform. 3. Unique case numbers should be used to identify a case from the moment of its inception. This number should be used to identify the case if and when it travels upwards through appellate courts. 4. A notification feature to parties should be created to intimate information such as where the case is being transferred or whether the final orders are stayed/to be executed. 	<ol style="list-style-type: none"> 1. The first principle that this module should consider should be efficiency and automation of processes as awaiting lower court records is frequently a cause of delay in appellate cases. 2. The appeal module should also provide intelligent tools to stakeholders such as litigants but not be at the cost of fairness.

³⁵ E-Committee, Supreme Court of India. 'eCourts Project Phase II Objectives Accomplishment Report As per Policy Action Plan Document'.


No	Module Name	Current state	Features required to advance to the next generation	Approaches to and strategies for re-designing the module
12	Legal database 	E-Courts portal ³⁶ and NJDG ³⁷	<ol style="list-style-type: none"> 1. An electronic database of judgments with information from each case file to serve as a quick reference point for judges and legal practitioners. 2. This database should be integrated across the judiciary, with the users being able to access information from all courts in the country. 3. Case files should be preceded with an intuitive display of a summary of cases for an easier user experience. 	This module will need to balance principles of transparency and privacy to ensure that the judiciary maintains an open court policy but does not violate the rights of parties. Intelligent tools will also need to be designed for crucial stakeholders such as judges and lawyers to encourage the use of the database.

³⁶ High courts, district courts, and taluka courts of India and the National Informatics Commission. 'E-Courts Services'. *E-Courts*. Available at https://ecourts.gov.in/ecourts_home/ (accessed on 10 June 2019).

³⁷ High courts, district courts, and taluka courts of India and the National Informatics Commission. 'National Judicial Data Grid'. Available at <https://njdgecourts.gov.in/njdgnew/index.php> (accessed on 10 June 2019).

No	Module Name	Current state	Features required to advance to the next generation	Approaches to and strategies for re-designing the module
13	Integration with other systems 	<p>The integration status is not clear although there are provisions in the cis to integrate with other systems. The Interoperable Criminal Justice System (ICJS), which has been introduced in Warangal district of Telangana, links E-Courts with aspects of the police information system such as the Crime and Criminals Tracking Network and Systems (CCTNS) and the information system used in prisons, E-Prisons.³⁸</p>	<ol style="list-style-type: none"> 1. The platform should have real-time, interoperable integration with the police, prison and forensic systems, and government lawyers/public prosecutors. 2. All the actors of other systems should be able to access case information at any given point with real-time updates of changes made to either system. However, care should be taken to ensure that such information is sequestered to only allow permitted access. 3. Using open standards will ensure that the integration of the various systems will be compatible with newer technologies and have the ability to integrate seamlessly. 	<p>This module should consider the principles of transparency, security, privacy and automation of key processes wherever possible.</p>

³⁸ Saurabh Gupta and Ajay Singh Chahal. 2013. 'Inter-operable Criminal Justice System'. *National Informatics Commission*. October 2013. Available at https://informatics.nic.in/uploads/pdfs/28a2d864_ICJS.pdf (accessed 10 September 2019).

No	Module Name	Current state	Features required to advance to the next generation	Approaches to and strategies for re-designing the module
14	Channels 	<p>Currently, litigants and lawyers access the judicial system through physical channels, the E-Courts internet portal and the E-Courts mobile app. Limited services are available through SMS services, internet (including mobile internet) and intranet.³⁹ There is no dedicated channel for the digitally excluded to access digital services, and physical processes are still the norm.</p>	<ol style="list-style-type: none"> 1. Limitations of existing channels could be overcome by supplementing them with channels that offer assistance such as chatboxes, virtual reality, and self-help desks with live support. 2. Focus on digitally excluded segments of society by providing channels such as automated support kiosks with voice-over in regional languages to guide through the application, supported braille devices, live help and remote troubleshooting options. 	<p>The focus of this module will have to be accessibility. This must factor in every aspect of the solution to ensure that technology acts as an enabler to all rather than a disabler.</p>

³⁹ E-Committee, Supreme Court of India. 'eCourts Project Phase II Objectives Accomplishment Report As per Policy Action Plan Document'.



Conclusion

As we progress into the 21st century, the Indian judiciary will rely heavily on technology to perform its functions and meet its goal of delivering justice. In the coming years, there will be an expectation from the public that the judiciary adopts new systems, technologies, and services that will provide additional functionalities and benefits that the public is accustomed to in other walks of life. While there is no doubt that technology will greatly influence future courtroom and litigation practices, the extent to which this change will occur is dependent on the design and implementation of these new features. As indicated in this paper, the guiding principles of judicial functions such as fairness, accessibility and privacy should be integrated with the design principles of a technological framework so that technology serves the general public, judges, and judicial staff effectively.

Given that the implementation of a justice platform will be a mammoth task, it is essential that a few design considerations are kept in mind before

even beginning. The first of these should be to utilise the opportunity to revise judicial processes to remove any redundancies created by a transition to a justice platform. The second is to utilise a modular approach, as a less centralised approach will be more feasible in India's federal structure provided that the individual modules are interoperable with one another. Additional implementation strategies of planning big - starting small, minimising parallel running systems and a progressive roll-out of functionalities will ensure the quality and reliability with which technology will serve the judiciary's objectives.



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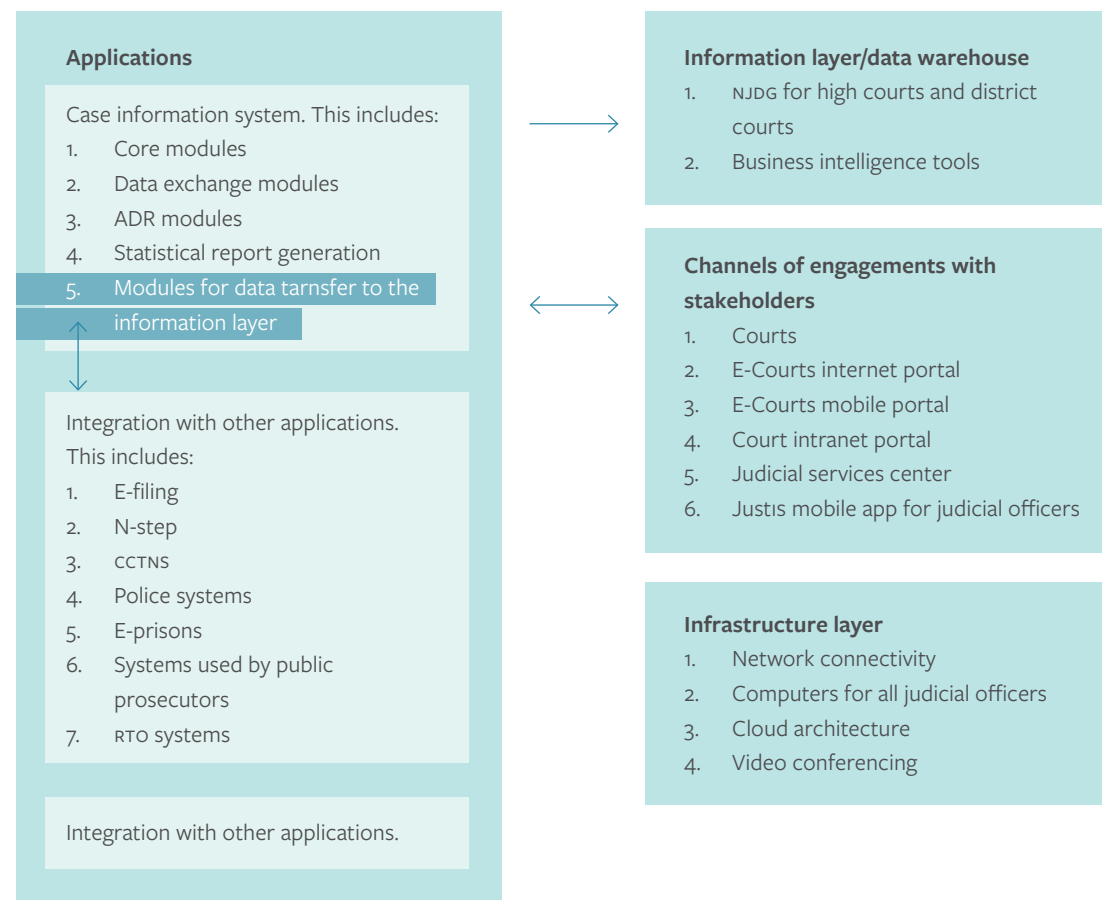
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Appendix: current ICT landscape

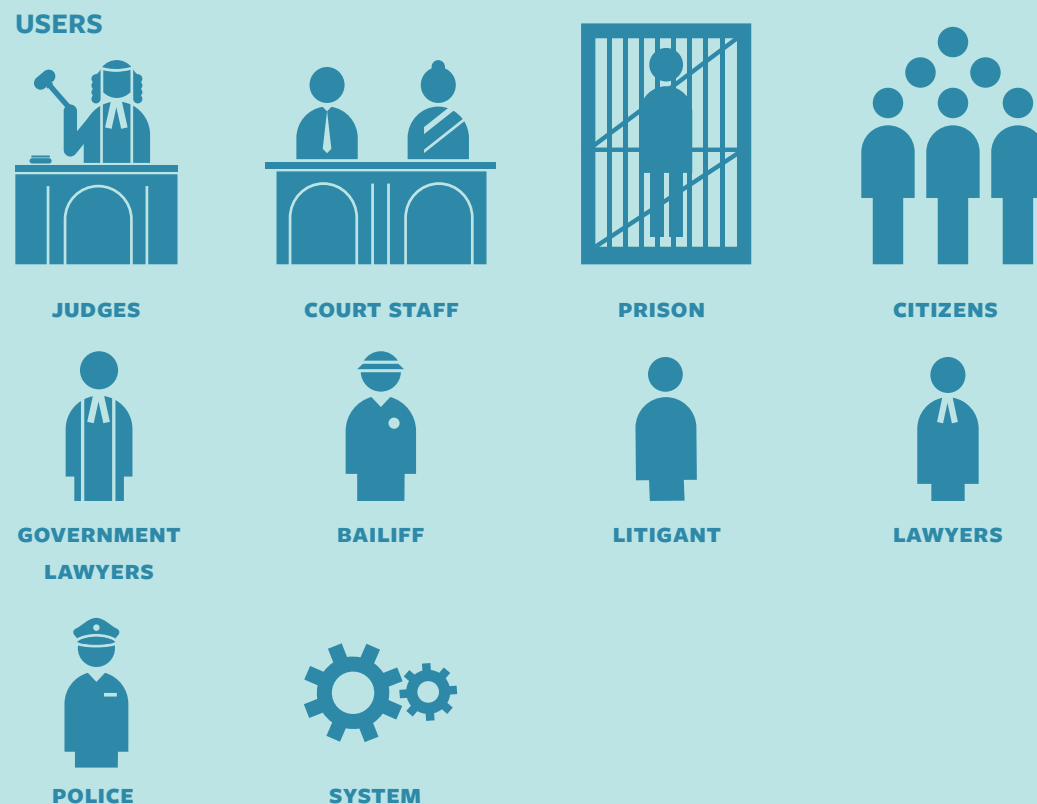
The diagrams in this Appendix depict the current information system in the judiciary.⁴⁰ These modules may be classified as per the layer they belong to. These are:

1. The application layer, which can be split into the core Case Information System, and integrations with other applications.
2. The information layer, consisting of the 'data warehouse' of the judiciary. It is fed by the Case Information System setup.
3. The channels of engagement with external stakeholders.
4. Infrastructure layer, consisting of the hardware and network.

Figure 5: Broad view of modules



⁴⁰ E-Committee, Supreme Court of India. 'eCourts Project Phase II Objectives Accomplishment Report As per Policy Action Plan Document'.



Colour coding is based on either E-Courts project phase timelines that the module belongs to or due to various reasons the module has not been used.

Data Flow

E-Courts project towards end of Phase II

Modules are relatively new, released in the last two years and current usage is low

E-Courts project end of Phase I beginning of Phase II

Modules are already implemented due to various reasons, lacks full fledged use. The problem could be training, infrastructure gaps, lack of planning. The users are still in transition.

E-Courts project Phase I

Modules are in operation for sometime now and large numbers of users are using the module.

Planned for implementation

Figure 6: Key for figures 8 to 11

Figure 6 presents a broad map of these layers, and how they are connected. The modules that each layer contains are given below, showing the intended users of each module, and the phase of E-Courts in which they were implemented is depicted.

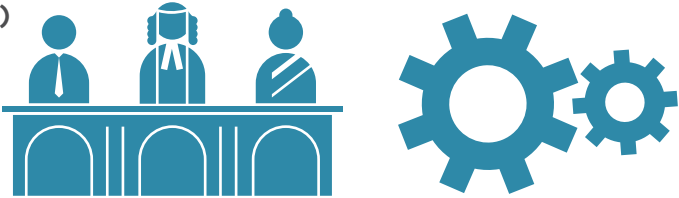
Figure 7 provides a key for the following diagrams that explain each module, for the user groups of the current information systems. These consist of the stakeholder groups described in Paper 1, as well as the Justice Platform Authorities, represented by the 'System' symbol. It also explains the colour coding of each module, which shows which phase of the E-Courts project it was implemented under.

Figure 7:
Applications in
the current IT
system of the
judiciary

APPLICATIONS

Case information system (CIS)

District courts have migrated to the CIS 3.0. High courts are still in the process of migrating to the high court CIS V1.0 software.



Core modules

Manual filing, file scrutiny, registration and fee payment

1. Workflow for manual filing in the filing counter and registration after case scrutiny. Unique Case Reference Number (CNR) generated with QR code to track the lifecycle of the case.
2. Fee payment mode of cash, cheque, DD.

Daily proceedings, bulk proceedings, a-diary, case lifecycle, upload of orders and judgements.

1. Ability to post daily proceedings, proceedings with video conferencing, bulk proceeding features to update dates for many cases at once.
2. A-diary lists the cases for a particular date, B-diary consolidates cases for all dates.
3. Status of cases available at any point in the lifecycle.
4. Upload documents in PDF format.

Data transfer to the information layer

1. Date is replicated on a real-time basis based on a replication tool named Stony.
2. There is dependency on the courts to ensure they enter the case data to benefit from this feature.

Reports

1. Standard reports are available inbuilt in CIS.
2. Query builder is available to create custom reports, including reports of performance.

Integration module to exchange data with other applications

1. E-filing: receive data
2. N-STEP: send and receive data
3. CCTNS: send and receive data
4. RTO: receive data

Transfer of cases

1. Transfer of cases between district courts and Talukas through the establishment transfer facility.
2. Vertical integration feature provides transmission of data across court hierarchies. Filing of appeals, revision in high courts arising out of district courts can be accessed based on CNR number.

Lok adalat and mediation

1. Assign cases to Lok adalat panel with report generation facility.
2. Mediation members list, and ability to allocate cases along with mediation reports.

Integration with other applications



E-filing online portal

Digital filing of parties' information

1. Forms to fill petitioner and respondent information.
2. Upload digitally signed documents.

E-pay

1. An official payment facility through electronic medium.
2. Digital payment of court fees, penalties, judicial deposits, and fines.
3. Integrated with the e-filing process.

E-sign

1. Sign documents in a quick and secure way for litigants and lawyers.
2. Upload documents in PDF format with e-signature using AADHAR or digital token.
3. This facility is an alternative to digital signatures and is integrated with the e-filing module.

National Service and Tracking of Electronic Processes

1. N-STEP web application is used to consume process from CIS for allocation to bailiffs.
2. Monitor the process delivery by the bailiffs, track process status and archive completed processes.
3. The mobile version is used by the bailiffs for process delivery and to update the status on completion.



Interoperable Criminal Justice System (ICJS)

Crime and Criminal Tracking Networks Systems (CCTNS)

1. Police to enter the FIR and the charge sheets in the CCTNS system which can then be shared with CIS.
2. The courts can access the information in CIS based on FIR number avoiding entry of data in two places.
3. Once the CNR number is generated by the courts, police receive the current information of the case.



E-prisons

Forensic investigation agencies

Public prosecutors

Regional transport offices

Based on vehicle number data or driving license, records can be fetched by the courts.

To Figure 9

To Figure 8

INFORMATION LAYER

NJDG for district courts and taluka

1. Data is represented both in the form of summary statistics and graphical charts on the cases in high courts.
2. Cases filed/disposed monthly, pendency of cases by their case type.



Business intelligence tools

1. Data mining and online analytical processing for useful insights on the litigation trends which can feed into the policy or decision making process.
2. Standardisation of nomenclature across district courts and high courts supports doing advanced analytics on the data.



NJDG for high courts

Data is represented both in the form of summary statistics and graphical charts on the cases in high courts. Cases filed/disposed monthly, pendency of cases by their case type.



Figure 8: Information Layer

CHANNELS OF ENGAGEMENT WITH EXTERNAL STAKEHOLDERS

Courts

E-Court mobile services for litigants

1. Easy access to case information system.
2. Case status information, case next date notifications.
3. Daily orders/proceedings, online certified copies and judgements.
4. Scan QR code to retrieve case information.

E-Courts internet portal

1. Hosts NJDG.
2. Training information for judicial officers and staff.
3. General information to the public.
4. Case status, court orders and cause lists.
5. Designed to be compatible any device (laptop, tablet, phone etc), support for visually challenged.

Courts intranet portal

1. Management portal for judicial staff based on NJDG data.

Judicial service centres with kiosks

1. Providing benefits to litigants and lawyers on status of the cases and certified copies for a given case number.
2. Application filing details, party details for a given case.

Justis mobile services for judicial officers

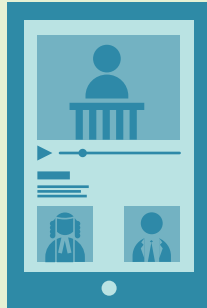
1. Mobile version of the courts Intranet portal using the data in NJDG.
2. Assists in management, planning and administrative decisions for judicial officers.

Figure 9: Channels of engagement and communication with external stakeholders

HARDWARE AND NETWORK SET-UP

Video conferencing

1. Able to video conference the judges, prosecutors with the prisoners. video conferencing hardware is made available in all high courts. The movement of undertrial prisoners to be produced before Court for remand is dispensed with and proceedings conducted through audio-video link in few high courts.
2. Facility is available to record evidence, remand, meetings.
3. 488 courts and 342 jails already connected with this facility.



Laptop and printers to all judicial officers

1. For judicial staff to discharge their judicial and administrative functions at the requisite work places, hardware, connectivity and training is provided.
2. The high courts have procured the infrastructure towards this.



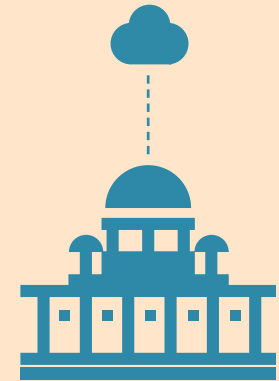
Network connectivity

1. LAN, WAN connectivity is being provided for all courts.
2. Renewable energy like solar energy for backup is being provided.



Cloud computing

1. Application and databases used by the courts is envisaged to be hosted in the cloud environment.
2. This has been set-up in the state of Goa. WAN connectivity is a pre-requisite to enable this set up.



Transition from computer server rooms to network rooms

The courts are in the process of migrating to a cloud architecture. The computer server rooms are planned to be converted into network rooms to support the cloud infrastructure.

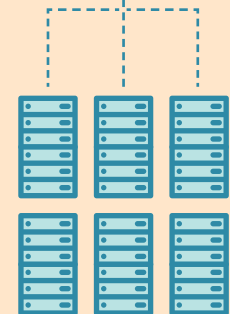


Figure 10: Application layer, and channels of public engagement



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