
THE INTEGRATION OF TECHNOLOGY IN ALTERNATIVE DISPUTE RESOLUTION PROCESS IN INDIA

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ABSTRACT

The convergence of technology and Alternative Dispute Resolution (ADR) represents a transformative shift in the Indian legal landscape. This paper examines the integration of digital technologies into ADR processes in India, analysing the evolution from traditional dispute resolution mechanisms to technology-enabled platforms such as Online Dispute Resolution (ODR). The study traces the historical roots of ADR in India from the Vedic period through the colonial era to the contemporary legislative framework, including the Arbitration and Conciliation Act, 1996, the Mediation Act, 2023, and the Information Technology Act, 2000. It evaluates the role of artificial intelligence, blockchain, video conferencing, and smart contracts in reshaping arbitration, mediation, and conciliation processes. The paper further assesses the digital ODR ecosystem in India, encompassing government initiatives such as the NITI Aayog ODR Handbook and the eCourts Mission Mode Project, alongside private platforms like SAMA, CADRE, and Presolv360. A comparative analysis with global best practices from the United Kingdom, Singapore, the European Union, and China provides a broader perspective on India's trajectory. The study identifies critical challenges, including the digital divide, data privacy concerns, authentication issues, and the absence of dedicated ODR legislation, while proposing recommendations for legislative reform, capacity building, and infrastructural development. The paper concludes that a comprehensive, principled approach to technology integration in ADR is essential for enhancing access to justice in India's rapidly digitising economy.

Keywords: Alternative Dispute Resolution, Online Dispute Resolution, Technology, Arbitration, Mediation, India, Artificial Intelligence, Access to Justice

1. Introduction

The Indian judicial system is confronted with an staggering backlog of over fifty million pending cases, a figure that continues to grow with each passing year. This persistent crisis of delayed justice has long necessitated the development and strengthening of Alternative Dispute Resolution (ADR) mechanisms as viable alternatives to conventional litigation. ADR, encompassing arbitration, mediation, conciliation, and negotiation, has historically provided a faster, more cost-effective, and less adversarial means of resolving disputes. However, even traditional ADR processes have not been immune to inefficiencies, including geographical barriers, procedural delays, and limited accessibility for marginalised populations. The advent of digital technology has introduced a paradigm shift in this landscape, offering unprecedented opportunities to integrate technological tools into ADR processes, thereby transforming how disputes are managed, resolved, and enforced across India.

The concept of Online Dispute Resolution (ODR) has emerged as a natural evolution of ADR in the digital age. ODR leverages information and communication technologies to facilitate the resolution of disputes through electronic means, encompassing online arbitration, virtual mediation, and technology-assisted negotiation. The COVID-19 pandemic served as a catalyst for the rapid adoption of digital technologies in legal proceedings, compelling courts, arbitral institutions, and mediation centres across India to transition to virtual platforms almost overnight. This forced experiment demonstrated that technology could be effectively integrated into dispute resolution processes without sacrificing procedural fairness or substantive justice, while simultaneously enhancing efficiency and accessibility.

The Government of India has recognised the potential of ODR through several significant policy initiatives. The NITI Aayog's landmark report, "Designing the Future of Dispute Resolution: The ODR Handbook," released in 2021, provided a comprehensive framework for mainstreaming ODR in India. The enactment of the Mediation Act, 2023, which explicitly recognises online mediation in Section 30, represents a significant legislative endorsement of technology-enabled ADR. Furthermore, the eCourts Mission Mode Project, now in its third phase with an outlay of ₹7,210 crore, seeks to integrate emerging technologies such as artificial intelligence and blockchain into the judicial infrastructure, creating a foundation for technology-assisted dispute resolution at scale.

Despite these promising developments, the integration of technology into ADR processes in

India faces substantial challenges. The digital divide, characterised by significant disparities in internet access between rural and urban populations, remains a formidable barrier to equitable access to ODR. Data privacy and cybersecurity concerns pose serious risks to the confidentiality and integrity of dispute resolution proceedings. The absence of a comprehensive, dedicated ODR statute leaves significant regulatory gaps, while the admissibility of electronic evidence under Indian law continues to present procedural complexities. Moreover, resistance from traditional legal practitioners and inadequate digital literacy among users further impede the widespread adoption of technology-enabled ADR.

This paper undertakes a comprehensive examination of the integration of technology in ADR processes in India. It analyses the historical evolution of ADR, the conceptual framework of technology-enabled dispute resolution, the current state of online arbitration and mediation, the digital ODR ecosystem, judicial and legislative developments, challenges and barriers, and comparative global best practices. The study concludes with recommendations for a principled, phased approach to technology integration that prioritises access to justice, procedural fairness, and inclusivity.

2. Historical Evolution of ADR in India

2.1 Ancient and Pre-Colonial Traditions

The roots of ADR in India extend deep into the country's civilisational heritage. Ancient texts including the Vedas, the Manusmriti, and the Arthashastra provide elaborate frameworks for dispute resolution that predate modern legal systems by millennia. The institution of the Panchayat, a council of five village elders, served as the primary mechanism for resolving civil and minor criminal disputes through mediation and conciliation at the grassroots level. These Gram Panchayats and Nyaya Panchayats operated on principles of community harmony and restorative justice, prioritising consensus-building over adversarial adjudication. The Sabha (assembly) and Samiti (council) mentioned in Vedic literature functioned as both deliberative and adjudicative bodies, reflecting a sophisticated understanding of collective dispute resolution.

The Dharmashastra tradition emphasised dharma-based resolution, with the king appointing sabhyas (assessors) to assist in the adjudication of disputes. Merchant guilds, known as shrenis, maintained their own internal dispute resolution mechanisms for commercial disagreements,

establishing a tradition of specialised, industry-specific arbitration that bears remarkable resemblance to modern institutional arbitration. These indigenous practices demonstrated remarkable sophistication in procedural fairness, evidentiary standards, and enforceability of outcomes, laying a cultural foundation for ADR that persists in the Indian consciousness to this day.

2.2 Colonial and Post-Independence Framework

The formal legislative framework for arbitration in India was introduced during British colonial rule. The Bengal Regulation of 1772 was the earliest formal arbitration legislation, providing that disputes related to accounts could be submitted to arbitration with the consent of the parties. Subsequent regulations in 1780 and 1781 expanded this framework, empowering courts to refer cases to arbitration. The Indian Arbitration Act, 1899, modelled on the English Arbitration Act, 1889, was the first standalone arbitration statute in India, though its application was limited to the presidency towns of Calcutta,

Madras, and Bombay. The Arbitration Act, 1940, replaced the earlier legislation but was widely criticised for excessive judicial intervention, protracted proceedings, and making arbitration as slow and cumbersome as court litigation.

Following independence, the Constitution of India under Article 39A mandated the state to ensure that the legal system promotes justice on the basis of equal opportunity. The Legal Services Authorities Act, 1987, was enacted to constitute legal services authorities to provide free and competent legal services and to organise Lok Adalats (people's courts). Lok Adalats have proven remarkably effective, having resolved over fifty million cases cumulatively as of 2025, with awards deemed enforceable as civil court decrees under Section 21 of the Act. The Arbitration and Conciliation Act, 1996, which replaced the 1940 Act, was modelled on the UNCITRAL

Model Law on International Commercial Arbitration (1985) and the UNCITRAL Conciliation Rules (1980), significantly reducing judicial intervention and bringing Indian arbitration law in line with international standards.

The insertion of Section 89 of the Code of Civil Procedure through the CPC Amendment Act, 1999, which became effective in 2002, marked another milestone by mandating courts to refer

disputes to ADR mechanisms where elements of settlement exist. The Supreme Court's authoritative interpretation of Section 89 in *Afcons Infrastructure Ltd. v. Cherian Varkey Construction Co.* (2010) provided detailed guidelines for implementation, establishing that arbitration and conciliation require party consent while judicial settlement and mediation can be court-directed. These legislative and judicial developments created the structural foundation upon which technology integration in ADR would later be built.

3. Technology and ADR: Conceptual Framework

3.1 Defining ODR, e-ADR, and Technology-Assisted ADR

The conceptual vocabulary surrounding technology-enabled dispute resolution encompasses several related but distinct terms that require careful delineation. Online Dispute Resolution (ODR) is defined by the UNCITRAL Technical Notes on ODR (2016) as a mechanism for resolving disputes through the use of electronic communications and other information and communications technology. ODR encompasses the entire dispute resolution process conducted online, including the filing of claims, case management, hearings, and the issuance of awards or settlements. Electronic ADR (e-ADR) represents a broader concept, referring to the use of electronic tools to assist or facilitate any ADR process, whether partially or fully conducted online, including technology-assisted mediation, online arbitration, virtual conciliation, and hybrid models that combine physical and digital elements.

Technology-assisted ADR occupies a distinct position on this spectrum, referring to situations where technology plays a supporting role while the core ADR process remains traditional in character. This includes the use of video conferencing for hearings, artificial intelligence for document review and case management, and digital platforms for scheduling and communication. The distinction between these categories is not merely academic; it has significant implications for regulatory design, procedural safeguards, and the allocation of responsibility between human decision-makers and technological systems.

3.2 UNCITRAL Technical Notes on ODR

The UNCITRAL Technical Notes on ODR, adopted at the forty-ninth session of UNCITRAL in 2016, represent the most significant international instrument addressing ODR. Although non-binding and descriptive in nature, the Technical Notes reflect a consensus on the main elements

of an ODR process and provide guidance for states and institutions developing ODR frameworks. The Notes outline a three-phase ODR process: first, a negotiation and communication phase in which parties attempt to resolve their dispute directly; second, a facilitated settlement or conciliation phase in which a neutral assists the parties; and third, a final determination or arbitration phase in which a binding decision is rendered.

The Technical Notes emphasise principles of fairness, transparency, accessibility, and efficiency, and address the role of ODR platforms, the appointment and conduct of neutrals, and the drafting of ODR rules. They were intended primarily for cross-border low-value sales or service contracts concluded using electronic communications, reflecting the growing volume of e-commerce disputes that traditional court systems were ill-equipped to handle. For India, the Technical Notes provide a valuable template for developing domestic ODR regulations while ensuring compatibility with international standards.

3.3 Technologies Transforming ADR

A diverse array of technologies is reshaping the landscape of alternative dispute resolution. Artificial intelligence is perhaps the most transformative, enabling predictive justice tools that analyse case data to forecast likely outcomes, automated triage systems that classify and route disputes to the most appropriate resolution mechanism, and natural language processing tools that facilitate document review and case management.

In the Indian context, the Supreme Court has already begun deploying AI tools such as SUPACE (Supreme Court Portal for Assistance in Court Efficiency) and SUVIGYA for legal research assistance, demonstrating the judiciary's willingness to embrace technological innovation.

Blockchain technology offers immutable record-keeping capabilities that address evidence integrity concerns in digital proceedings, while smart contracts enable self-executing agreements with coded dispute resolution clauses that can automatically trigger ODR processes when disagreements arise. Video conferencing technology, which became ubiquitous during the COVID-19 pandemic, has proven effective for virtual hearings, remote testimony, and cross-border proceedings. Cloud computing provides scalable case management platforms and secure document storage, while data analytics enables case outcome analysis and pattern recognition for settlement suggestions. The convergence of these technologies creates an

ecosystem in which dispute resolution can be conducted more efficiently, transparently, and accessibly than ever before.

Table-1: Technologies Transforming ADR and Their Adoption Status in India

| Technology | Application in ADR | Stage of Adoption in India |
|-------------------------|--|----------------------------|
| Artificial Intelligence | Predictive analytics, document review, case triage | Emerging |
| Blockchain | Immutable records, evidence preservation, transparency | Experimental |
| Video Conferencing | Virtual hearings, remote testimony | Widely Adopted |
| Smart Contracts | Automated dispute triggers, escrow management | Nascent |
| Cloud Computing | Case management, document storage | Widely Adopted |
| Digital Signatures | Authentication of awards and agreements | Established |
| Data Analytics | Outcome analysis, settlement suggestions | Emerging |

4. Online Arbitration in India

Legal Framework Under the Arbitration and Conciliation Act, 1996

The Arbitration and Conciliation Act, 1996, does not explicitly provide for “online arbitration” as a distinct category. However, several provisions of the Act enable the conduct of arbitration proceedings through digital means. Section 7 recognises arbitration agreements in writing through electronic communications, including the exchange of letters, telex, telegrams, or other means of telecommunication, thereby providing a legal basis for online arbitration agreements. Section 19 grants arbitral tribunals the flexibility to determine their own procedure, which can include digital proceedings, making this the most significant enabling provision for online arbitration. Section 23(4) allows pleadings to be exchanged through electronic means, and Section 24 permits hearings to be conducted as the tribunal deems appropriate, including through video conference.

The critical issue of the “seat of arbitration” in online proceedings has been addressed by Indian courts, which have consistently held that the juridical seat, rather than the physical location of the arbitrators or parties, determines the supervisory jurisdiction. This principle, established in cases such as *Bharat Aluminium Co. v. Kaiser Aluminium Technical Services* (2012), is particularly relevant for online arbitration, where participants may be located in different jurisdictions. The flexibility afforded by these provisions has enabled arbitral institutions and tribunals to adapt their procedures to digital formats, particularly during and after the COVID-19 pandemic.

4.2. Virtual Hearings and the COVID-19 Impact

The COVID-19 pandemic, which necessitated nationwide lockdowns from March 2020, dramatically accelerated the adoption of virtual arbitration in India. Arbitral institutions including the Delhi International Arbitration Centre (DIAC) and the Mumbai Centre for International Arbitration (MCIA) rapidly developed protocols for conducting virtual hearings. The MCIA issued detailed guidelines for virtual arbitration hearings, addressing technical requirements, confidentiality protocols, and procedural safeguards. International institutions such as the Singapore International Arbitration Centre (SIAC) and the International Chamber of Commerce (ICC) similarly adopted remote hearing protocols, affecting Indian parties involved in international arbitrations.

Industry surveys indicated that over seventy per cent of arbitrations involving Indian parties shifted to virtual hearings during 2020 and 2021, demonstrating the viability and effectiveness of digital proceedings. The pandemic experience revealed both the advantages and limitations of virtual arbitration: while video conferencing enabled proceedings to continue uninterrupted, challenges relating to technological reliability, the effectiveness of cross-examination in a virtual environment, document handling, and the maintenance of confidentiality in home settings required careful management. Nevertheless, the widespread adoption of virtual hearings established a precedent that has persisted beyond the pandemic, with many practitioners and institutions continuing to offer hybrid hearing options that combine physical and virtual attendance.

4.3 Enforcement Challenges

The enforcement of arbitral awards rendered through online proceedings presents several

distinctive challenges. Authentication and identity verification remain primary concerns, although the Information Technology Act, 2000, through Sections 4 and 5, provides legal recognition to electronic records and signatures, and the Aadhaar-based authentication system offers a potential solution. Due process concerns have been raised regarding whether virtual hearings satisfy the “equal treatment” and “full opportunity to present one’s case” standards mandated by Sections 18 and 24 of the Arbitration and Conciliation Act. Awards rendered in online proceedings may be challenged under Section 34 on grounds of procedural impropriety if due process was not adequately ensured in the virtual format.

Stamp duty requirements present a practical obstacle, as several states, including Maharashtra and Karnataka, require physical stamping of arbitration agreements and awards, creating barriers for fully online processes. The 2021 Amendment to the Arbitration and Conciliation Act introduced a controversial provision allowing courts to grant unconditional stays on enforcement of arbitral awards if prima facie evidence of fraud or corruption in the arbitration agreement or contract is presented, a development that has been criticised as creating additional hurdles for enforcement regardless of whether proceedings were conducted online or in person. These challenges underscore the need for targeted legislative reforms to create a supportive legal environment for online arbitration in India.

5. Online Mediation and Conciliation

5.1 Supreme Court Initiatives and the MCPC

The Supreme Court of India has been at the forefront of promoting mediation as a preferred ADR mechanism. The Mediation and Conciliation Project Committee (MCPC), established by the Supreme Court in 2005, oversees court-annexed mediation programmes across the country and has facilitated mediation in thousands of cases. Court-annexed mediation programmes have achieved success rates of approximately sixty to seventy per cent, demonstrating the effectiveness of mediation as a dispute resolution tool. The Supreme Court has consistently encouraged mediation, noting its capacity to produce durable, mutually satisfactory outcomes that preserve relationships between disputing parties.

During the COVID-19 pandemic, the MCPC adapted its mediation framework to virtual formats, conducting mediations through video conferencing platforms. Private ODR platforms reported a three hundred to four hundred per cent increase in dispute resolution requests during

2020 and 2021, with mediation constituting a significant proportion of the cases handled. The rapid transition to virtual mediation demonstrated that the core elements of effective mediation, including confidentiality, voluntary participation, and the facilitative role of the mediator, could be preserved and even enhanced in a digital environment. Features such as virtual breakout rooms, secure document sharing, and real-time communication tools proved particularly valuable for online mediation sessions.

5.2 The Mediation Act, 2023 and Online Mediation

The enactment of the Mediation Act, 2023, on 15 September 2023, represents a watershed moment for technology-enabled ADR in India. Section 30 of the Act explicitly provides for online mediation, establishing it as an acceptable and cost-effective process. This legislative recognition is significant for several reasons: it removes any ambiguity about the legal validity of online mediation outcomes; it provides a statutory framework for the conduct of online mediation; and it signals the legislature's intent to embrace technology as a means of enhancing access to justice. Section 5 of the Act mandates pre-litigation mediation for specified categories of disputes before court proceedings can be initiated, a provision that is likely to drive significant demand for mediation services, including online mediation.

The Act establishes the Mediation Council of India (MCI) under Section 35 for the registration and regulation of mediators and mediation service providers, which may include online platforms. Section 27 provides for the enforcement of mediated settlement agreements as court decrees, ensuring that outcomes achieved through online mediation carry the same enforceability as those reached in person. The Act also recognises community mediation and online mediation as distinct modalities, acknowledging the diverse contexts in which mediation can be effectively deployed. This comprehensive legislative framework provides the institutional and regulatory foundation necessary for the growth of online mediation in India.

5.3 ODR Platforms: SAMA and Private Initiatives

The private sector has played a crucial role in developing India's ODR ecosystem. SAMA, recognised by the Ministry of Law and Justice as a key ODR platform, offers online mediation, online arbitration, and online Lok Adalat services across consumer, commercial, employment, and family law domains. Empirical data from SAMA indicates that more than seventy per cent of all ODR cases in India involve parties from different jurisdictions, highlighting the

geographic bridging capability of online platforms. Other significant platforms include CADRE, which specialises in online mediation for commercial and workplace disputes; Presolv360, which handles consumer and commercial disputes through online mediation, arbitration, conciliation, and negotiation; and WeVaad, JustAct, and CODR, each serving specific segments of the dispute resolution market.

AGAMI, which began in 2018 and is now part of the PUCAR mission to transform dispute resolution, functions as an ODR ecosystem enabler rather than a direct service provider. These private platforms have demonstrated that technology can effectively overcome geographical barriers, reduce costs, and accelerate the resolution of disputes.

However, the lack of standardised regulatory standards for ODR platforms, the absence of a certification or accreditation mechanism, and concerns about data protection and cybersecurity represent significant gaps that need to be addressed to ensure the quality, reliability, and public trustworthiness of private ODR services.

6. Digital Platforms and ODR Ecosystem in India

6.1 NITI Aayog ODR Handbook

The NITI Aayog's report, "Designing the Future of Dispute Resolution: The ODR Policy Plan for India," released in 2021 under the chairmanship of Justice (Retd.) A.K. Sikri, constitutes the most significant government policy document on ODR in India. The report proposes a three-pillar framework for ODR development: structural, focusing on creating institutional infrastructure; behavioural, addressing the cultural shift necessary for ODR adoption; and regulatory, developing a supportive legal and regulatory environment. The Handbook recommends court-annexed ODR, allowing virtual arbitration and online mediation to be integrated into the judicial system, and advocates for a principles-based framework for ODR platforms, including standards for data protection, accessibility, and impartiality.

Among its key recommendations, the Handbook proposes that all consumer disputes up to ₹5 lakh should be mandatorily resolved through ODR, a suggestion that has significant implications for access to justice in the consumer protection domain. The report also advocates for the integration of ODR with the eCourts Mission Mode Project, the creation of a national ODR portal, and the development of standardised ODR rules and protocols for different

categories of disputes. These recommendations, if fully implemented, would create a comprehensive infrastructure for technology-enabled dispute resolution that could substantially reduce the burden on Indian courts while improving the speed and accessibility of justice.

6.2 eCourts Mission Mode Project

The eCourts Mission Mode Project represents the most ambitious government initiative to digitise the Indian judicial system. Phase I (2007–2015), with an outlay of ₹935 crore, installed ICT infrastructure in 14,249 district and subordinate courts and computerised case flow management. Phase II (2015–2023), with an outlay of ₹1,670 crore, established video conferencing facilities in all court complexes, launched the

National Judicial Data Grid (NJDG), and created e-filing systems. Phase III (2023–2027), with a substantially increased outlay of ₹7,210 crore, earmarks funds for future technological advancement, including artificial intelligence and blockchain, and focuses on digital courts, live streaming of proceedings, enhanced video conferencing, and the integration of emerging technologies.

A specific allocation of ₹53.57 crore has been designated for AI initiatives within Phase III, reflecting the government's recognition of AI's transformative potential for judicial processes. The eCourts project provides the essential digital backbone upon which ODR services can be built and integrated. The Vision Document for Phase III explicitly mentions the creation of court-annexed ODR cells, AI-powered case management, and a national ODR portal integrated with the eCourts system. The NJDG can serve as the data infrastructure for monitoring ODR outcomes, tracking resolution rates, and identifying systemic patterns that can inform policy adjustments. The eCourts project thus represents the most significant vehicle for mainstreaming ODR into India's judicial infrastructure.

Table-2: eCourts Mission Mode Project Phases

| Phase | Period | Outlay (₹ Crore) | Key Achievements |
|-----------|-----------|------------------|--|
| Phase I | 2007–2015 | 935 | ICT in 14,249 courts; case flow management |
| Phase II | 2015–2023 | 1,670 | Video conferencing; NJDG; e-filing |
| Phase III | 2023–2027 | 7,210 | AI integration; digital courts; ODR cells |

6.3 Consumer Dispute Resolution and the Digital India Programme

The Consumer Protection Act, 2019, introduced e-filing of consumer complaints and virtual hearings before consumer forums, representing a significant step towards technology-enabled consumer dispute resolution. The National Consumer Disputes Redressal Commission (NCDRC) and state and district commissions have adopted virtual hearing capabilities, and online mediation is being piloted for consumer disputes in several states. The Digital India Programme, launched on 1 July 2015, provides the broader digital infrastructure framework supporting ODR adoption, including broadband connectivity through the BharatNet project, digital identity through Aadhaar, document storage through DigiLocker, and unified access to government services through UMANG.

Legal technology startups are building the ecosystem for technology-enabled dispute resolution. Platforms such as OpenNyai, which provides AI for legal research, SpotDraft for contract automation, and LegitQuest for legal research, are developing the tools and infrastructure that support the broader ODR ecosystem. The convergence of government digital infrastructure, legislative reforms, and private sector innovation creates a fertile environment for the expansion of ODR services in India, though significant challenges remain in ensuring that these services are accessible, reliable, and equitable.

7. Judicial Endorsement and Legislative Framework

7.1 Supreme Court Orders During COVID-19

The Supreme Court of India played a pivotal role in enabling virtual hearings during the COVID-19 pandemic through a series of landmark orders. In *Suo Motu Writ Petition (C) No.*

1/2020, titled *In Re: Cognizance for Extension of Limitation*, the Court, through successive orders dated 23 March 2020, 27 April 2020, and subsequent dates, extended limitation periods and recognised the necessity of virtual court proceedings. The Court directed all courts across India to adopt video conferencing for hearing cases, establishing a nationwide framework for digital justice delivery. The e-Committee of the Supreme Court, chaired by Justice D.Y. Chandrachud as he then was, issued detailed standard operating procedures for virtual hearings, addressing technical requirements, confidentiality protocols, and procedural safeguards.

Chief Justice D.Y. Chandrachud expressed disappointment in February 2023 with several High Courts that had abandoned virtual hearings despite significant investments in e-court infrastructure. The Supreme Court has consistently maintained that technology should enhance, not replace, access to justice, and that virtual proceedings satisfy the requirements of natural justice when conducted with adequate safeguards. The Court's position reflects a pragmatic understanding that technology is a means to an end, namely, the more efficient and accessible delivery of justice, rather than an end in itself.

7.2 Legislative Developments

The Arbitration and Conciliation (Amendment) Act, 2019, introduced several significant changes, including Section 11(3A), which empowers the Supreme Court and High Courts to designate arbitral institutions for appointing arbitrators, and modifications to Section 29A regarding timelines for making arbitral awards. The 2021 Amendment introduced a controversial provision allowing unconditional stays on enforcement of arbitral awards where prima facie evidence of fraud or corruption exists, a development that has been criticised as undermining India's arbitration-friendly framework. The Mediation Act, 2023, however, represents a more progressive legislative approach, explicitly recognising online mediation and establishing the Mediation Council of India as a regulatory body.

The Information Technology Act, 2000, provides the foundational legal infrastructure for technology-enabled dispute resolution. Section 4 grants legal recognition to electronic records, Section 5 recognises electronic signatures, and Section 10A validates contracts formed through electronic means. The admissibility of electronic evidence, governed by the provisions that were formerly Sections 65A and 65B of the Indian Evidence Act, 1872, and are now Sections 62 and 63 of the Bharatiya Sakshya Adhiniyam, 2023, is critical for ODR proceedings. The Supreme Court's ruling in *Anvar P.V. v. P.K. Basheer* (2014) that Section 65B certification is

mandatory for electronic evidence creates a significant procedural requirement for ODR, while the subsequent relaxation in *Shafhi Mohammad v. State of Himachal Pradesh* (2018) provides some flexibility.

7.3 The Digital Personal Data Protection Act, 2023

The Digital Personal Data Protection Act, 2023 (DPDP Act), enacted on 11 August 2023, introduces a comprehensive data protection framework that has significant implications for ODR. Section 31 of the DPDP Act provides for dispute resolution through mediation, stipulating that if the Data Protection Board believes a complaint may be resolved by mediation, it may direct parties to attempt resolution through that mechanism. ODR platforms, which collect and process sensitive personal and commercial data during dispute resolution proceedings, qualify as “Data Fiduciaries” under the Act and are subject to obligations regarding data protection, consent management, and breach notification. The implementation of the DPDP Act’s rules will be crucial for establishing the data protection standards that ODR platforms must meet to ensure the confidentiality and integrity of dispute resolution proceedings.

8. Challenges and Barriers to Technology Integration

8.1 The Digital Divide

The digital divide remains the most formidable barrier to equitable access to technology-enabled ADR in India. As of June 2025, India had approximately 1,002.8 million internet subscribers according to TRAI data. However, this aggregate figure conceals profound disparities. A 2022 Oxfam report revealed that only thirty-one per cent of the rural population used the internet compared to sixty-seven per cent of the urban population. Of the 954.40 million internet subscribers as of March 2024, only 398.35 million were rural subscribers. The gender divide is equally stark, with women constituting only approximately thirty-three per cent of internet users in India. Digital literacy remains a critical bottleneck: nearly half of rural and over forty per cent of urban offline households remain disconnected not for lack of infrastructure but because they lack the knowledge and skills to use the internet.

These disparities have direct implications for ODR access. A disputant in a remote village without reliable broadband connectivity, or a woman without digital literacy, cannot

meaningfully participate in online arbitration or mediation. The digital divide risks creating a two-tier system of justice in which technology-enabled ADR is available only to the digitally privileged, while marginalised populations remain dependent on overburdened traditional courts. Addressing this divide requires not merely infrastructure investment but targeted digital literacy programmes, community-based ODR access points, and the design of ODR platforms that are accessible to users with limited technological proficiency.

Table-3: Key Statistics on India’s Digital Divide and Judicial Backlog

Table-3: Key Statistics on India’s Digital Divide and Judicial Backlog

| Indicator | Value | Source |
|---|-----------------|---------------------|
| Total internet subscribers (June 2025) | 1,002.8 million | TRAI |
| Rural internet subscribers (March 2024) | 398.35 million | PIB |
| Rural internet usage rate | 31% | Oxfam (2022) |
| Urban internet usage rate | 67% | Oxfam (2022) |
| Women internet users (share of total) | ~33% | Various sources |
| Pending court cases | 50+ million | NJDG |
| eCourts Phase III outlay | ₹7,210 crore | Government of India |

8.2 Data Privacy and Cybersecurity

ODR platforms collect and process sensitive personal and commercial data, including confidential information disclosed during mediation and arbitration proceedings, making data protection paramount. The recently enacted DPDP Act, 2023, imposes obligations on ODR platforms as Data Fiduciaries to protect personal data, obtain valid consent, and notify affected individuals in the event of data breaches. However, the specific rules and standards for data protection in the ODR context have not yet been developed, creating regulatory uncertainty. Confidentiality in mediation and arbitration proceedings may be compromised in digital environments due to cybersecurity risks, unauthorised recording, data breaches, and the potential for interception of communications.

India ranked third globally in cyber threats according to various reports, underscoring the severity of the cybersecurity challenge. ODR platforms are vulnerable to hacking, data breaches, and manipulation of proceedings. The IT Act, 2000, through Sections 43 and 66, provides remedies for cybercrime but may be inadequate for protecting ODR proceedings from sophisticated attacks. Secure communication channels, end-to-end encryption, and tamper-proof record-keeping are essential but not uniformly mandated or implemented across existing ODR platforms. The development of sector-specific cybersecurity standards for ODR platforms should be a priority for regulatory action.

8.3 Absence of Dedicated ODR Legislation

Perhaps the most significant regulatory gap is the absence of a comprehensive, standalone ODR statute in India. The existing legal framework, comprising the Arbitration and Conciliation Act, the Mediation Act, and the IT Act, provides partial support for technology-enabled dispute resolution but contains significant lacunae.

There is no statutory recognition of ODR platforms or standards for their operation, no specific rules for the admissibility of evidence generated during online proceedings, no provisions addressing the unique procedural challenges of virtual hearings, and no mechanism for the accreditation or certification of ODR service providers. The lack of dedicated ODR legislation creates legal uncertainty, inhibits investment in ODR infrastructure, and undermines public confidence in the legitimacy of online dispute resolution outcomes.

The absence of a regulatory framework also raises concerns about the quality and consistency of ODR services. Without standardised rules for online proceedings, there is a risk that ODR platforms may adopt varying and potentially inadequate procedural safeguards, leading to inconsistent outcomes and potential violations of due process. A dedicated ODR Act should define ODR platforms, establish operational standards, provide for data protection and cybersecurity requirements, ensure the enforceability of ODR outcomes, and create a regulatory body to oversee the ODR ecosystem.

8.4 Resistance from Legal Practitioners and Other Barriers

Resistance from the legal profession constitutes a significant non-technical barrier to ODR adoption. Many senior lawyers and arbitrators prefer in-person proceedings, citing concerns

about the effectiveness of cross-examination and the assessment of witness credibility in virtual formats. The legal profession's traditional orientation, combined with inadequate training and capacity building in technology use, creates institutional inertia against ODR adoption. Physical stamp duty requirements in states such as Maharashtra and Karnataka create practical obstacles for fully digital arbitration processes. The verification of party identity in ODR proceedings, while technically addressable through Aadhaar-based authentication and digital signature certificates, remains a concern in practice, particularly for illiterate or technologically unsophisticated users.

9. Comparative Analysis: Global Best Practices

9.1 United Kingdom: HMCTS Reform and Online Courts

The United Kingdom's approach to technology-enabled dispute resolution provides valuable lessons for India. Lord Briggs' Civil Courts Structure Review (2016) recommended the creation of an Online Court for lower-value civil claims, operating entirely through digital channels. The HM Courts and Tribunals Service (HMCTS) Reform Programme, a £1.3 billion digital transformation initiative, has implemented the Online Civil Money Claims (OCMC) service, which has achieved significant improvements in timeliness: cases submitted online are completed over three times faster than the previous paper process, with an average completion time of eleven weeks compared with twenty-nine weeks under the old system. The recently launched Damages Claims Portal represents a mandatory digital system for issuing civil money claims for damages.

The key lesson from the UK experience is the value of phased, court-integrated digital transformation with mandatory use for specific claim categories. The UK model demonstrates that a mandatory online court can achieve significant efficiency gains while maintaining procedural fairness, provided that adequate safeguards for vulnerable users and appropriate exception mechanisms are incorporated into the design. India could adapt this model by making ODR mandatory for certain categories of low-value disputes, such as consumer e-commerce claims, while preserving access to traditional forums for those who cannot participate online.

9.2 Singapore: SIAC and ODR Leadership

Singapore has established itself as a global leader in international arbitration and ODR. The

Singapore International Arbitration Centre (SIAC), one of the world's leading arbitral institutions, has embraced technology with online case filing, virtual hearings, and electronic case management. The 7th Edition of the SIAC Rules (2025) introduces streamlined procedures for disputes below S\$1 million, demonstrating how institutional rules can be designed to facilitate efficient technology-enabled arbitration.

The Singapore International Mediation Centre (SIMC) offers online mediation services, and Singapore spearheaded the United Nations Convention on International Settlement Agreements Resulting from Mediation (2019), commonly known as the Singapore Convention on Mediation, which enhances the enforceability of mediated settlements globally.

Singapore's experience underscores the importance of investment in world-class arbitral infrastructure, progressive institutional rules, and active participation in international harmonisation efforts. For India, the lesson is that developing competitive ODR institutions requires not merely technological infrastructure but also procedural innovation, international engagement, and a regulatory environment that attracts both domestic and international users. India's participation in UNCITRAL's deliberations on ODR and its ratification of the Singapore Convention on Mediation would signal its commitment to integrating into the global ODR ecosystem.

9.3 European Union: Centralised ODR Platform

The European Union's ODR Platform, established under Regulation (EU) No 524/2013, provides a centralised online platform enabling consumers and traders to resolve disputes over online purchases through alternative dispute resolution. All traders selling online in the EU must provide a link to the ODR platform on their websites, ensuring that consumers are aware of and can access the dispute resolution mechanism. The platform connects parties with approved ADR entities across EU member states, covering consumer disputes arising from both cross-border and domestic online transactions. This model demonstrates how a mandatory, centralised ODR platform can ensure wide access and standardised processes for specific categories of disputes.

For India, the EU model suggests the potential value of a centralised national ODR portal for consumer e-commerce disputes, integrated with the Consumer Protection Act, 2019, and mandatory for online marketplace transactions above a specified threshold. Such a portal could

standardise procedures, ensure quality control through the accreditation of ADR providers, and provide a single point of access for consumers seeking to resolve disputes with online vendors.

9.4 China: Internet Courts

China’s establishment of dedicated internet courts represents perhaps the most ambitious experiment in technology-enabled dispute resolution globally. The Hangzhou Internet Court, established in August 2018 as the world’s first dedicated internet court, handles cases entirely online from filing to judgment. The Beijing Internet Court and Guangzhou Internet Court, both established in September 2018, followed the Hangzhou model. As of November 2025, the Supreme People’s Court implemented new rules adjusting the jurisdiction of internet courts to focus on cutting- edge digital disputes including data ownership, privacy protection, virtual property infringement, and unfair competition in cyberspace. The internet courts use artificial intelligence and blockchain technology for case management, evidence verification, and judgment assistance, and the model of “online disputes adjudicated online” has resolved millions of cases efficiently.

The Chinese experience demonstrates that dedicated technology courts with fully digital processes can dramatically improve efficiency for technology-related disputes. India could consider establishing specialised technology dispute resolution forums, either as separate courts or as specialised divisions within existing courts, equipped with digital infrastructure and staffed by judges and neutrals with technology expertise. The eCourts Phase III project, with its focus on digital courts and AI integration, provides a natural vehicle for such an initiative.

Table-4: Comparative Analysis of Global ODR Models

Table-4: Comparative Analysis of Global ODR Models

| Country/Region | ODR Model | Key Feature | Lesson for India |
|----------------|----------------------|---------------------------------|------------------------------------|
| United Kingdom | Online Court (HMCTS) | Mandatory digital claims portal | Phased mandatory adoption |
| Singapore | SIAC / SIMC | Progressive institutional rules | Invest in world-class institutions |
| European Union | EU ODR Platform | Centralised consumer ADR portal | National ODR portal for e-commerce |
| China | Internet Courts | Fully digital adjudication | Specialised technology courts |
| Hong Kong | eBRAM | Blockchain-enabled ODR | Government-backed ODR institution |

10. Future Prospects and Recommendations

10.1 Artificial Intelligence and Blockchain in ADR

The future of technology integration in ADR will be shaped significantly by advances in artificial intelligence and blockchain technology. AI-powered predictive analytics can analyse case data and predict likely outcomes, assisting parties in making informed settlement decisions and reducing the time and cost of dispute resolution. Automated negotiation platforms can facilitate blind bidding and algorithmic negotiation between parties, while AI-driven document review can dramatically reduce the time required for e-discovery in arbitration proceedings. Under the eCourts Phase III framework, the specific allocation of ₹53.57 crore for AI initiatives signals the government's commitment to harnessing AI for judicial modernisation.

Blockchain technology offers complementary capabilities, including immutable record-keeping of proceedings that addresses evidence integrity concerns, smart contracts with coded dispute resolution clauses that can automatically trigger ODR processes, and automated escrow and payment release upon resolution that reduces enforcement challenges. The eCourts Phase III Vision Document explicitly mentions blockchain as a technology for judicial modernisation. India could develop blockchain-enabled ODR platforms that ensure transparency, auditability, and tamper-proof recordkeeping, thereby enhancing the legitimacy and reliability of online dispute resolution outcomes.

10.2 Recommendations

First, India should enact a Dedicated ODR Act providing a comprehensive legal framework for online dispute resolution. This legislation should define ODR platforms, establish operational standards and accreditation mechanisms, provide for data protection and cybersecurity requirements, ensure the enforceability of ODR outcomes, and create a regulatory body, potentially a National ODR Authority under the Ministry of Law and Justice, to oversee the ODR ecosystem. The Act should harmonise the existing patchwork of provisions across the Arbitration and Conciliation Act, the Mediation Act, and the IT Act, creating a unified and coherent legal framework.

Second, ODR should be made mandatory for consumer e-commerce disputes up to ₹10 lakh, building on the NITI Aayog's recommendation and the EU's model of mandatory ODR for

online transactions. This would create a significant volume of ODR cases that would drive platform development, build institutional expertise, and generate data for continuous improvement.

Third, ODR should be integrated with the eCourts Phase III infrastructure for seamless court-annexed online dispute resolution. Every district court complex could have an ODR cell for referring appropriate cases, and a national ODR portal integrated with the eCourts system could provide a single window for accessing certified ODR services. AI-powered case routing from courts to ODR platforms based on case type, value, and complexity could optimise the allocation of disputes between traditional and online forums.

Fourth, significant investment in digital literacy and infrastructure in underserved areas is essential to bridge the digital divide and ensure equitable access to ODR. This should include community-based ODR access points in rural and semi-urban areas, targeted digital literacy programmes, and the design of ODR platforms that are accessible to users with limited technological proficiency, including multilingual interfaces, voice-based interaction, and simplified navigation.

Fifth, India should strengthen data protection for ODR through the implementation of DPDP Act, 2023, rules that address the specific requirements of dispute resolution, including provisions for the confidentiality of mediation and arbitration proceedings, standards for data retention and deletion, and requirements for cybersecurity certification of ODR platforms. India should also promote international cooperation on cross-border ODR, actively participating in UNCITRAL and Hague Conference deliberations, and consider ratifying the Singapore Convention on Mediation to enhance the enforceability of mediated settlements.

11. Conclusion

The integration of technology into Alternative Dispute Resolution processes in India represents both an unprecedented opportunity and a formidable challenge. The historical evolution of ADR in India, from the Panchayat system of the Vedic period to the modern legislative framework of the Arbitration and Conciliation Act, 1996, and the Mediation Act, 2023, demonstrates a sustained cultural and institutional commitment to consensual dispute resolution. The advent of digital technology, catalysed by the COVID-19 pandemic, has introduced transformative possibilities for enhancing the efficiency, accessibility, and

scalability of ADR through online platforms, virtual hearings, and technology-assisted processes.

India has made significant strides in building the legal and institutional infrastructure for technology-enabled ADR. The NITI Aayog ODR Handbook, the eCourts Mission Mode Project, the Mediation Act's explicit recognition of online mediation, and the emergence of private ODR platforms such as SAMA and Presolv360 collectively represent a substantial foundation for the growth of ODR. Judicial endorsement of virtual proceedings during and after the pandemic has established the legal legitimacy of technology-enabled dispute resolution, while comparative analysis of global best practices from the United Kingdom, Singapore, the European Union, and China provides valuable models and lessons for India's continued development.

However, the challenges confronting technology integration in ADR are substantial and cannot be underestimated. The digital divide, which disproportionately affects rural populations, women, and marginalised communities, threatens to create a two-tier system of justice. Data privacy and cybersecurity concerns pose risks to the confidentiality and integrity of dispute resolution proceedings. The absence of dedicated ODR legislation leaves significant regulatory gaps, while resistance from the legal profession and inadequate digital literacy further impede adoption. These challenges require a comprehensive, principled, and phased approach that prioritises access to justice, procedural fairness, and inclusivity.

The path forward requires legislative reform, institutional innovation, infrastructure investment, and cultural change. A Dedicated ODR Act would provide the legal certainty and regulatory framework necessary for the growth of online dispute resolution. Integration with the eCourts Phase III project would create the institutional infrastructure for court-annexed ODR. Investment in digital literacy and accessible platform design would bridge the digital divide. And sustained engagement with the legal profession through training and capacity building would overcome institutional resistance. India's ambition of becoming a global hub for arbitration and dispute resolution depends critically on its ability to harness technology in service of justice, ensuring that the benefits of digital transformation are shared equitably across all segments of society.

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Glossary of Non-English Terms

Dharmashastra: Hindu legal treatises prescribing righteous conduct and law

Gram Panchayat: Village-level local self-government institution

Lok Adalat: People’s court; a forum for voluntary resolution of disputes

Nyaya Panchayat: Village court for adjudicating minor disputes

Panchayat: Council of five village elders serving as a dispute resolution body

Sabha: Assembly; a deliberative and adjudicative body in Vedic tradition

Sabhyas: Assessors appointed to assist in dispute adjudication

Samiti: Council; a deliberative body in Vedic tradition

Shrenis: Merchant guilds with internal dispute resolution mechanisms