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BRIDGING THE SILOS: EVALUATING DATA INTEROPERABILITY BETWEEN POLICE, COURTS, AND CORRECTIONS AND ITS POTENTIAL TO REDUCE CASE DELAYS, CUSTODIAL ERRORS, AND RECIDIVISM

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ABSTRACT

Criminal justice agencies make decisions that affect people's liberty, yet the information needed for those decisions often remains scattered across separate systems. This paper examines whether interoperability across police, prosecutors, courts, and corrections can shorten case processing, reduce custodial errors, and lower recidivism. Drawing on legal authorities, government reports, and experience in the United States, England and Wales, and India, it argues that fragmentation causes identifiable harms but that the reviewed sources provide limited evidence that interoperability itself produces these benefits. It proposes an evaluation framework, safeguards, and a governance-first approach.

I. INTRODUCTION

A criminal case passes through several agencies, and each stage depends on information reaching the next agency accurately and on time. An arrest record must reach a prosecutor; charging documents must reach a court; a court's order must reach a jail or prison; and, years later, release and supervision conditions must reach the agencies managing reentry. At every handoff, information can be lost, delayed, or corrupted, with consequences that go well beyond paperwork: a person may stay in custody after a court has ordered release, a hearing may be adjourned because a file has not arrived, or a person leaving prison may return home with no link to treatment or supervision.

The underlying problem is fragmentation: each agency typically procures its own case management software, defines its own data fields, and answers to its own funding authority. Interoperability, meaning the ability of separate systems to exchange information and use what has been exchanged, is the standard proposed remedy.¹ Governments have invested heavily in connecting these systems, but less is known about whether those investments have improved

¹ John Palfrey & Urs Gasser, *Interop: The Promise and Perils of Highly Interconnected Systems* chs. 1–2 (2012).

outcomes.

This paper asks two questions. First, what does the available evidence show about how fragmentation contributes to case delay, custodial error, and recidivism? Second, what legal and design conditions must be met for interoperability to reduce those harms without creating new ones?

Method and scope. This paper combines doctrinal analysis with a comparative policy review of a federated system (the United States), a more centralized institutional setting (England and Wales), and a large-scale integration program (India). Sources were identified through targeted searches of court-opinion repositories, official websites, and library catalogs, not a systematic database search, and were included if they were legal authorities, official reports or program documents, or scholarship on information sharing among criminal justice agencies; all were consulted through October 2026. The paper distinguishes legal authorities, descriptive statistics, program descriptions, and outcome evaluations. It reports no original empirical evaluation; it examines how interoperability might help and where the evidence falls short, rather than claiming that it causes better outcomes.

II. CONCEPTUAL FRAMEWORK

Interoperability is often mistaken for a purely technical goal. Palfrey and Gasser describe it as operating across four layers: technological, data, human, and institutional.² The distinction matters because connecting databases is often easier than persuading independent agencies to agree on shared definitions and responsibilities.

In criminal justice, the technological layer comprises the networks and message formats that let systems exchange information. The data layer asks whether agencies understand the information in the same way: a “charge” or “release date” must mean the same thing in police, court, and prison systems. The human layer concerns whether staff trust shared information and build it into workflows. The institutional layer comprises the statutes, agreements, and governance rules that authorize and constrain sharing.

Two further distinctions matter. Interoperability differs from centralization: agencies can keep custody of their records while exposing defined data elements to authorized partners. It also differs from mere access: a probation officer who can log in to a court system has access, but unstructured, inaccurate, or stale data may still be unusable. Connecting systems is useful only if the information they share is timely, accurate, and complete.

² *Id.*

III. THE HARMS OF FRAGMENTATION

A. Case Delay

Delay is the most visible cost, and constitutional law treats it as a harm in itself: the Sixth Amendment's speedy trial guarantee requires courts to weigh the length of the delay, the reason for it, the defendant's assertion of the right, and prejudice.³ Federal law adds statutory deadlines.⁴ Some delay stems from causes interoperability cannot touch, such as crowded dockets. Other delays arise because the information needed to move a case forward is missing, late, or inconsistent, as with paper charging documents, late forensic reports, and custody status unknown to the court.

Missed court dates are another information problem, generating adjournments, warrants, and detention. A randomized evaluation in New York City found that text message reminders reduced failures to appear among summons recipients; the most effective message set cut them by 10 percentage points from a 38% baseline, a 26% relative decrease.⁵ This shows that timely communication can improve attendance, not that interoperability reduces recidivism. Such reminders require reliable court-date and contact information, illustrating the importance of accurate communication.

India illustrates the stakes. Undertrial prisoners, who are detained pending trial rather than after conviction, have made up nearly three-quarters of its prison population in recent years: 75.8% in 2022 and 72.6% in 2024.⁶ The Supreme Court of India recognized the right to a speedy trial as part of Article 21 as early as 1979, after learning that undertrials in Bihar had been held longer than the maximum sentences for the offenses charged.⁷ Delay has many causes, but weak information flow among police, courts, and prisons is among the problems the Interoperable Criminal Justice System (ICJS) was designed to address.⁸

B. Record Errors and Wrongful Custody

Fragmentation also produces errors in the records on which liberty decisions rest. Two Supreme Court decisions illustrate the problem. In *Arizona v. Evans*, a court employee failed to tell the sheriff's office that a warrant had been quashed, so it remained in a police database and led to an

³ *Barker v. Wingo*, 407 U.S. 514, 530 (1972).

⁴ 18 U.S.C. § 3161(c)(1).

⁵ Brice Cooke et al., *Using Behavioral Science to Improve Criminal Justice Outcomes: Preventing Failures to Appear in Court* (ideas42 & Univ. of Chi. Crime Lab 2018).

⁶ Nat'l Crime Recs. Bureau, Ministry of Home Affairs, Gov't of India, *Prison Statistics India 2022* (2023); Nat'l Crime Recs. Bureau, Ministry of Home Affairs, Gov't of India, *Prison Statistics India 2024* (2026).

⁷ *Hussainara Khatoon v. Home Sec'y, State of Bihar*, (1980) 1 S.C.C. 81 (India); see also India Const. art. 21.

⁸ Press Info. Bureau, Gov't of India, *Interoperable Criminal Justice System: Making Information Sharing in Judicial System Seamless* (June 23, 2022) (MHA factsheet).

arrest.⁹ In *Herring v. United States*, a police employee in one county failed to remove a recalled warrant, and officers in another county arrested the defendant on it.¹⁰ In neither case did the Supreme Court require exclusion of the evidence. *Evans* reasoned that exclusion aims to deter police misconduct and would not meaningfully deter court clerks.¹¹ *Herring* treated the error as isolated police negligence attenuated from the arrest, leaving open that reckless or systemic recordkeeping failures might be treated differently.¹² Both cases show how failures to update records can expose individuals to arrest on warrants that are no longer valid.

Information can also fail to travel from courts to custodians, as with release orders and sentence computations. Disposition reporting is a documented weak point of American criminal history repositories: in the Bureau of Justice Statistics' 2020 survey, an average of 69% of arrests across 49 states and the District of Columbia had a final disposition reported.¹³

C. Recidivism and Reentry

A third potential consequence concerns reentry and recidivism. About 82% of prisoners released in twenty-four states in 2008 were rearrested at least once within ten years.¹⁴ Interoperability cannot by itself change those figures, but reentry scholarship suggests a plausible pathway through continuity of care and supervision: risk assessments completed in custody must reach parole and community providers, treatment begun in prison must continue after release, and court-ordered conditions must be visible to supervising officers.¹⁵ When correctional records do not reach the community agency, continuity may break during a critical transition period.

Information sharing may affect these outcomes in different ways. Timely warrant updates and release orders can remedy identifiable administrative failures. Effects on case duration depend on how much delay originates in information exchange rather than other bottlenecks. Effects on recidivism are the most indirect, requiring shared information to improve service continuity, supervision, or access to support. This distinction describes possible pathways; it does not show which benefits are greatest in practice.

⁹ *Arizona v. Evans*, 514 U.S. 1, 4–5 (1995).

¹⁰ *Herring v. United States*, 555 U.S. 135, 137–38 (2009).

¹¹ *Evans*, 514 U.S. at 14–16.

¹² *Herring*, 555 U.S. at 144, 146–48.

¹³ Becki R. Goggins & Dennis A. DeBacco, Bureau of Just. Stat., U.S. Dep't of Just., NCJ 305602, *Survey of State Criminal History Information Systems*, 2020 (2022).

¹⁴ Leonardo Antenangeli & Matthew R. Durose, Bureau of Just. Stat., U.S. Dep't of Just., NCJ 256094, *Recidivism of Prisoners Released in 24 States in 2008: A 10-Year Follow-Up Period (2008–2018)* (2021).

¹⁵ Jeremy Travis, *But They All Come Back: Facing the Challenges of Prisoner Reentry* (2005).

IV. INTEROPERABILITY MODELS IN PRACTICE

A. The United States: Voluntary Standards in a Federal System

The American approach rests on voluntary standards rather than a single system, reflecting federalism and thousands of locally controlled agencies. The Global Justice Information Sharing Initiative pre-released the Global Justice XML Data Model in 2003, and in April 2005 the chief information officers of the Departments of Homeland Security and Justice launched the National Information Exchange Model (NIEM), building on it to create a common vocabulary for exchanging data.¹⁶ Shared standards help agencies describe information consistently, but they do not require agencies to exchange it, so adoption is uneven and depends on grant funding and local leadership.

B. England and Wales: A More Centralized Institutional Setting

England and Wales are more centralized because the Crown Prosecution Service and HM Courts & Tribunals Service are national bodies. The Common Platform, live in every criminal court since 2023, is described by the government as holding case materials in one place from arrest through trial and on to prison and probation.¹⁷ In 2021, however, its design shifted from a single shared system to interfaces with the prosecution service's own system, and Parliament's Public Accounts Committee reported repeated delays and resets across the wider reform program.¹⁸

C. India: The Interoperable Criminal Justice System

India's ICJS, conceptualized by the Supreme Court's e-Committee and implemented under the Ministry of Home Affairs, seeks to connect five pillars: police (the Crime and Criminal Tracking Network and Systems, CCTNS), courts (e-Courts), prisons (e-Prisons), forensic laboratories (e-Forensics), and prosecution (e-Prosecution).¹⁹ Scale and the heterogeneity of state systems make data standardization the central challenge: without common identifiers and definitions of events such as arrest, bail, and release, connecting these systems may simply allow inconsistent information to spread more quickly. Across all three jurisdictions, the sources provide a clearer picture of which systems have been connected than of whether those

¹⁶ *NIEM's History*, Nat'l Info. Exchange Model, <https://niem.gov/node/13> (last visited Oct. 15, 2026).

¹⁷ Press Release, Ministry of Justice & HM Cts. & Tribunals Serv., *Every Criminal Court Now Connected to Single Data System for the First Time* (Aug. 3, 2023), <https://www.gov.uk/government/news/every-criminal-court-now-connected-to-single-data-system-for-the-first-time>.

¹⁸ Comm. of Pub. Accts., *Progress on the Courts and Tribunals Reform Programme*, 2022–23, HC 1002, at 5–6 (UK).

¹⁹ Press Info. Bureau, *supra* note 8.

connections have improved outcomes.

V. EVALUATING THE EVIDENCE

Despite two decades of investment, the sources reviewed here provide little rigorous evaluation of interoperability's effect on case delay, custodial error, or recidivism. The evidence takes three forms: process metrics, such as agencies connected; official program descriptions and audit reports; and indirect evidence from adjacent interventions, such as court-date reminders. India's program documents list expected benefits, such as fewer adjournments, but these are projections, not findings.²⁰ In England and Wales, the Public Accounts Committee reported that the courts service did not yet fully understand how its reforms were affecting court users.²¹ The programs show that systems can be connected, but they do not establish the effects of those connections. It is difficult to separate the effects of interoperability from those of new funding, leadership changes, or procedural reforms introduced at the same time, and adopting jurisdictions are not randomly selected.

A credible evaluation would measure four families of indicators. Timeliness: days from arrest to charge and from charge to disposition (cases never charged reported separately), and adjournments coded as caused by missing information and independently audited. Accuracy: the share of cases with a final disposition recorded in the repository within the applicable reporting deadline (pending cases reported separately), and days held after a verified release order or beyond the maximum lawful sentence, excluding other lawful holds. Continuity and communication: releases for which the supervising agency acknowledged receipt of the risk assessment and court-ordered conditions before release; the share of people needing ongoing treatment who receive a documented referral before release, since receiving information and delivering service are different outcomes; and failure-to-appear rates. Recidivism: rearrest, reconviction, and technical violations, measured separately at one and three years.

Design matters as much as indicators. Rollout timing will usually be observed, not assigned, so a difference-in-differences comparison would treat later-connected districts as controls and log concurrent reforms; where authorities can randomize rollout order, a stepped-wedge design gives stronger evidence. Evaluators should also consider whether changes in recorded outcomes reflect better detection rather than changes in behavior: rearrest reflects policing intensity as well as behavior, and better information sharing can raise detected supervision

²⁰ *Id.*

²¹ Comm. of Pub. Accts., *supra* note 18, at 5–6.

violations even when long-term outcomes improve.

VI. LEGAL AND ETHICAL CONSTRAINTS

Privacy. Sharing criminal justice data raises concerns about purpose limitation, retention, and secondary use. In the United States, federal regulations restrict the dissemination of criminal history record information and the operation of federally funded criminal intelligence systems.²² Lageson shows how arrest records spread through commercial data brokers and persist after dismissal or sealing.²³ A system that propagates data quickly also propagates errors quickly, so it must propagate corrections, sealing orders, and expungements at the same speed. In India, the Supreme Court has held that privacy is a fundamental right and that state intrusion must satisfy legality, legitimate aim, and proportionality.²⁴ India's Digital Personal Data Protection Act, 2023 (most provisions take effect in May 2027) exempts processing in the interest of preventing, detecting, investigating, or prosecuting offenses from its notice, consent, and data-principal-rights provisions, but preserves the fiduciary's general responsibility and duty to keep reasonable security safeguards.²⁵

Due process. Shared data must also be disclosable and contestable. Under *Brady v. Maryland*, the prosecution must disclose material evidence favorable to the accused,²⁶ and under *Kyles v. Whitley*, the prosecutor must learn of favorable evidence known to others acting on the government's behalf, including the police.²⁷ Integration may make relevant information easier to identify, but agencies still need clear responsibilities for reviewing and disclosing it. People must also be able to challenge inaccurate records through an identifiable official who can ensure that corrections reach every connected system.

Bias and security. Ferguson cautions that data-driven policing can amplify biases embedded in the underlying records.²⁸ Arrest data reflect enforcement patterns, and integration without auditing risks carrying them into bail, sentencing, and supervision decisions as neutral fact. Interconnection also enlarges the cyberattack surface, so integration requires role-based access, audit logs, and breach response duties of the kind found in the FBI's Criminal Justice

²² 28 C.F.R. § 20.21 (2025); 28 C.F.R. § 23.20 (2025).

²³ Sarah Esther Lageson, *Digital Punishment: Privacy, Stigma, and the Harms of Data-Driven Criminal Justice* (2020).

²⁴ *Justice K.S. Puttaswamy (Retd.) v. Union of India*, (2017) 10 S.C.C. 1 (India).

²⁵ Digital Personal Data Protection Act, 2023, No. 22 of 2023, §§ 8(1), 8(5), 17(1)(c) (India); see Digital Personal Data Protection Rules, 2025, G.S.R. 846(E), r. 1 (Nov. 13, 2025) (India).

²⁶ *Brady v. Maryland*, 373 U.S. 83, 87 (1963).

²⁷ *Kyles v. Whitley*, 514 U.S. 419, 437 (1995).

²⁸ Andrew Guthrie Ferguson, *The Rise of Big Data Policing: Surveillance, Race, and the Future of Law Enforcement* ch. 7 (2017).

VII. RECOMMENDATIONS

The analysis points to six priorities for reform. First, governance should precede technology: jurisdictions should establish an interagency body with a clear mandate, binding data-sharing agreements, and a common data dictionary before procuring systems. Second, agencies should adopt open standards such as NIEM and avoid proprietary lock-in. Unique identifiers should link only the records needed to match a person across agencies, be visible only to authorized staff, and reveal nothing beyond the match, so that unnecessary disclosure is limited.

Third, reform should prioritize exchanges where errors cost liberty: release orders and custody status from courts to corrections, final dispositions from courts to repositories, charging documents from police to prosecutors and courts, and reentry packages from corrections to supervisors. Fourth, systems should propagate corrections, sealing orders, and expungements and give individuals a route to redress. Fifth, evaluation should be funded from the outset, with baseline data, staggered rollout, and public reporting of the Part V indicators. Sixth, shared information will improve decisions only if staff understand it and use it effectively in their daily work, so agencies should invest in training and workflow redesign.

VIII. CONCLUSION

Fragmented criminal justice data is a risk to liberty as well as an administrative inconvenience. Stale warrants, unreported dispositions, and missing release orders show that information failures can translate directly into unnecessary detention, while broken handoffs between prison and community can undermine reentry. Interoperability is a plausible remedy, but the reviewed sources provide limited evidence that it reduces delay, custodial error, or recidivism, and poorly governed integration can magnify errors, erode privacy, and entrench bias. Policymakers should pair investment in connectivity with investment in governance, safeguards, and rigorous evaluation. Bridging the silos is a plausible response to documented information failures, but its value should be judged by whether it improves timeliness, accuracy, lawful custody, and continuity of support, not simply by how many systems are connected.

²⁹ Fed. Bureau of Investigation, U.S. Dep't of Just., *Criminal Justice Information Services (CJIS) Security Policy*, v. 6.1 (June 25, 2026).

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