Implementation Execution

EXAMINATION PAPER SECURITY

A WATERTIGHT PROCESS

A POLICY NOTE

SECURING EXAMINATIONS.
SECURING THE FUTURE.

Ensuring fairness, protecting merit,
and empowering the youth of **Rajasthan.**

SECURE PROCESSES	YOUTH CENTRIC	TECHNOLOGY DRIVEN	ACCOUNTABLE INSTITUTIONS	ZERO TOLERANCE	STRONGER RAJASTHAN
End-to-end paper security	Safeguarding their hard work	Digital monitoring and tracking	Clear roles, strict responsibility	Strict action against malpractice	Merit, trust and progress

LEARNING FROM REAL FAILURES

REET 2021 Rajasthan | UP Police Constable 2024 | Delhi Police | NEET-UG 2024 Hazaribagh

Built by studying what's already gone wrong – not a generic checklist.

AUTHORED & PRESENTED BY

VIJAY SINGH BAINSLA

National President – Gurjar Arakshan Sangharsh Samiti
Trustee – Colonel Bainsla Foundation
Policy Researcher & Socio-Political Public Leader
Former BJP MLA Candidate, Devli Uniara, Rajasthan

+91-9953786123 | bainsla@gmail.com

STRONG SYSTEMS. FAIR EXAMS. EMPOWERED YOUTH. PROGRESSIVE RAJASTHAN.

Contents

AUTHOR PROFILE

Vijay Singh Bainsla is a management professional, corporate strategist, public policy researcher, and socio-political leader with more than **three decades of leadership experience** spanning multinational corporations, emerging markets, and public affairs. A graduate in **Biosciences from the University of Rajasthan**, he subsequently earned an **MBA in Marketing & Finance**, laying the foundation for a distinguished career in strategic management, business transformation, and organisational leadership. Throughout his professional journey, he has combined analytical thinking with execution excellence, building a reputation for leading complex organisations across international geographies through periods of rapid growth, market disruption, and business transformation.

Over the course of his corporate career, Mr. Bainsla has held senior leadership and CXO positions with some of the world's most respected organisations, including **ExxonMobil, LML, Idea Cellular, Reliance Communications, Vodafone, Hutch, MTS, Roshan Telecom,** and **Afghan Wireless**. His assignments have taken him across **India, Afghanistan, Middle East and North Africa (MENA) Region, South East Asia** where he successfully led business expansion, market-entry strategies, brand transformation, digital product innovation, customer acquisition, and commercial operations in highly competitive and rapidly evolving markets. As **Chief Marketing Officer at Afghan Wireless** and **Marketing Director at Roshan Telecom**, he spearheaded strategic initiatives that revitalised businesses, launched next-generation telecom voice & data services, rebuilt product portfolios, restored market competitiveness, and delivered sustainable revenue growth through innovation and disciplined execution.

Widely recognised for his expertise in **business turnaround, organisational restructuring, and strategic execution**, Mr. Bainsla has consistently worked at the intersection of technology, customer experience, and commercial performance. His leadership philosophy has been centred on transforming underperforming businesses into growth-oriented organisations through data-driven decision-making, market insight, operational excellence, and high-performance team building. His extensive exposure to multicultural environments and international business ecosystems has equipped him with a global perspective on governance, leadership, institutional reform, and sustainable development.

In 2018, alongside his corporate responsibilities, Mr. Bainsla assumed the role of **Trustee of the Colonel Bainsla Foundation,** a policy think tank dedicated to expanding access to quality education and healthcare for underserved communities in Rajasthan. Following the passing of **Colonel Kirori Singh Bainsla** in 2022, he accepted the responsibility of leading the **Gurjar Arakshan Sangharsh Samiti** as its National President, carrying forward one of Rajasthan's and India’s most influential social movements. He has since emerged as a prominent advocate for governance reform, social equity, reservation policy, water security, and institutional accountability, while actively contributing to public discourse and electoral politics with an emphasis on citizen-centric governance and inclusive development.

Drawing upon his unique combination of global corporate leadership and grassroots public engagement, Mr. Bainsla has increasingly focused his efforts on **public policy, artificial intelligence, digital governance, grounds up approach, administrative transformation, and evidence-based policymaking**. His work seeks to bridge the gap between policy formulation and implementation by applying private-sector principles of accountability, innovation, measurable outcomes, and execution excellence to public administration. This policy document reflects that philosophy - bringing together international best practices, strategic thinking, and practical governance solutions to build a more transparent, efficient, technology-enabled, and citizen-centric future for Rajasthan.

1. Where I'm Starting From

Every major paper leak in India over the last five years has come down to the same handful of points: the printing press, storage before dispatch, transport, or the exam centre's control room right before the exam starts. Not one of these was a hacking incident. Not one. Every single leak came down to a person - someone unauthorised got access, one individual ended up holding two roles that should've stayed separate, or a checkpoint existed on paper but nobody actually enforced it on the day.

Well, this isn't another generic security checklist, this is my own suggestive view of what we can do immediately - these for me are low hanging fruits that are easy to deploy – while these are not rocket science tech, they may be a good bet to close the barn door before the stallion gallops away.

I've gone back through four real cases - REET 2021, the UP Police exam, the Delhi Police exam, and NEET-UG 2024 - and traced exactly where each one broke down. Then I've built a process where every one of those specific failures has a specific, named fix. The idea running through all of it is simple: no one person should ever have both unsupervised access to the paper and nobody checking on them.

2. Four Real Leaks, Broken Down

I picked these four cases because together they cover all four physical custody stages - press, storage, transport, and exam centre. That gives a full picture of where things go wrong, instead of just one story.

Case Study 1 - REET 2021 (Rajasthan Eligibility Examination for Teachers)

26 September 2021 · ~16 lakh registered candidates · exam cancelled and re-held

Where it actually went wrong: STORAGE (post-print, pre-dispatch)

- Here's the thing - the paper wasn't stolen from the printing press. It was taken from the Shiksha Sankul building in Jaipur, where the district coordinator's office was sitting on the sealed bundles before they went out to the centres.
- A man named RM (we shall keep the name anonymous), who worked for that coordinator's office, simply opened a sealed envelope inside the storage room and pulled a paper out - about two days before the exam.
- And this wasn't some lone opportunist cashing in. The leak got monetised through an organised network: the paper reportedly sold for over ₹1 crore, and Bluetooth devices (later found hidden in candidates' shoes and slippers) were going for ₹6–7 lakh apiece.
- There was a red flag sitting there well before any of this happened - the Jaipur coordinator's post, which by rule is supposed to go to the Additional District Magistrate, had instead been handed to the head of a private outfit. An unauthorised person was sitting exactly where the paper's custodian was meant to be.
- Rajasthan's own SOG looked into it afterwards and found the printing presses were clean. The whole failure sat in that human custody gap between printing and the exam centre.

The takeaway: *A sealed paper is only ever as safe as the least-checked person allowed to be alone with it. The moment someone let an unauthorised appointee sit in that custodian's chair, the leak became almost inevitable.*

Case Study 2 - UP Police Constable Recruitment Exam 2024

17–18 February 2024 · ~48 lakh candidates · exam cancelled and re-conducted in August 2024

Where it actually went wrong: TRANSPORT (printing press → strong room)

- UP's own DGP confirmed it - the paper leaked while it was on the road, moving from the printing press to the district strong room. Not at the press. Not at the centre. In transit.
- Before it even reached UP, the paper had sat at an intermediate warehouse in Ahmedabad. That's an extra stop nobody needed to add, and it just widened the trail.
- The people behind it were former employees of the private logistics company hired to move the papers - working together with staff still on the payroll. This wasn't a one-off insider job; the vulnerability was baked into how often transport-vendor staff turn over.
- 54 people were eventually arrested across the country. That's not a lone actor - that's an established syndicate that had likely done this before, for more than one exam.
- The board chairperson lost the post, and the entire exam had to be redone five months later - over 6.5 lakh candidates per shift, re-examined under much tighter security: 25,000 police personnel, 2,300 magistrates. All because of one uncontrolled leg of a delivery route.

The takeaway: *Outsourced logistics is the blind spot nobody checks properly. Private transport contractors almost never get the same background verification or real-time monitoring as the board's own staff - and that gap is exactly where this leak lived.*

Case Study 3 - Delhi Police Constable Recruitment Exam

Leak surfaced in May; investigation and arrests over the following four months

Where it actually went wrong: PRINTING PRESS

- This one didn't even need to leave the building - the paper was taken straight out of the printing press itself.
- The named source was a press employee working the cutting and sorting machine, the stage where sheets get trimmed and collated. He hid a copy in his shoe and simply walked out with it.
- There was a second layer to the gang too - 'analysers' who didn't even need to know which exam it was for in advance. They worked it out from the number of questions, the time allotted, and the marks split, then matched it to whatever exam was coming up next.
- Coaching institutes and touts handled the actual selling, charging individual candidates ₹5–6 lakh each for solved answers.
- 27 people were arrested across four states over four months - the press employee, the courier, the solvers (several of them practising school teachers), and the touts.

The takeaway: *A proper frisking and exit check on the press floor - not just at the exam hall - is where this entire chain could have been stopped at the very first step.*

Case Study 4 - NEET-UG 2024 (Hazaribagh Centre)

5 May 2024 · national medical entrance exam · Supreme Court-monitored CBI probe

Where it actually went wrong: EXAM CENTRE (control room, same-day)

- The papers arrived at Oasis School, Hazaribagh, on exam morning and went straight into the centre's control room - the last stop before the exam itself.
- Here's where it fell apart: the school's Principal was also the official NTA City Coordinator, and the Vice Principal was the Centre Superintendent. Between the two of them, they let an outsider into that control room, completely unsupervised, within minutes of the trunks arriving.
- That outsider cracked open the sealed trunk, and paper copies went straight to hired solvers from medical colleges - AIIMS Patna, RIMS Ranchi, a college in Bharatpur - who solved it on the spot.
- The solved answers were scanned and sent out to at least four locations in Bihar within hours. Even a leak that starts the same morning, in the same city, can outrun every physical checkpoint once it goes digital.
- Investigators only cracked the case because the culprits made a mistake - half-burnt question papers turned up at a hostel in Patna. That's not a detection system catching it. That's a lucky break.
- The real design flaw: the same two people held both the official oversight role and unsupervised physical custody of the paper. Nobody was checking on them, because on paper, they were the ones doing the checking.

The takeaway: *The moment the person meant to be watching is also the person left alone with the paper, you've removed the only check that mattered. That control room needed an outsider with no stake in the local exam - someone who couldn't be talked into anything.*

3. The Pattern, Side by Side

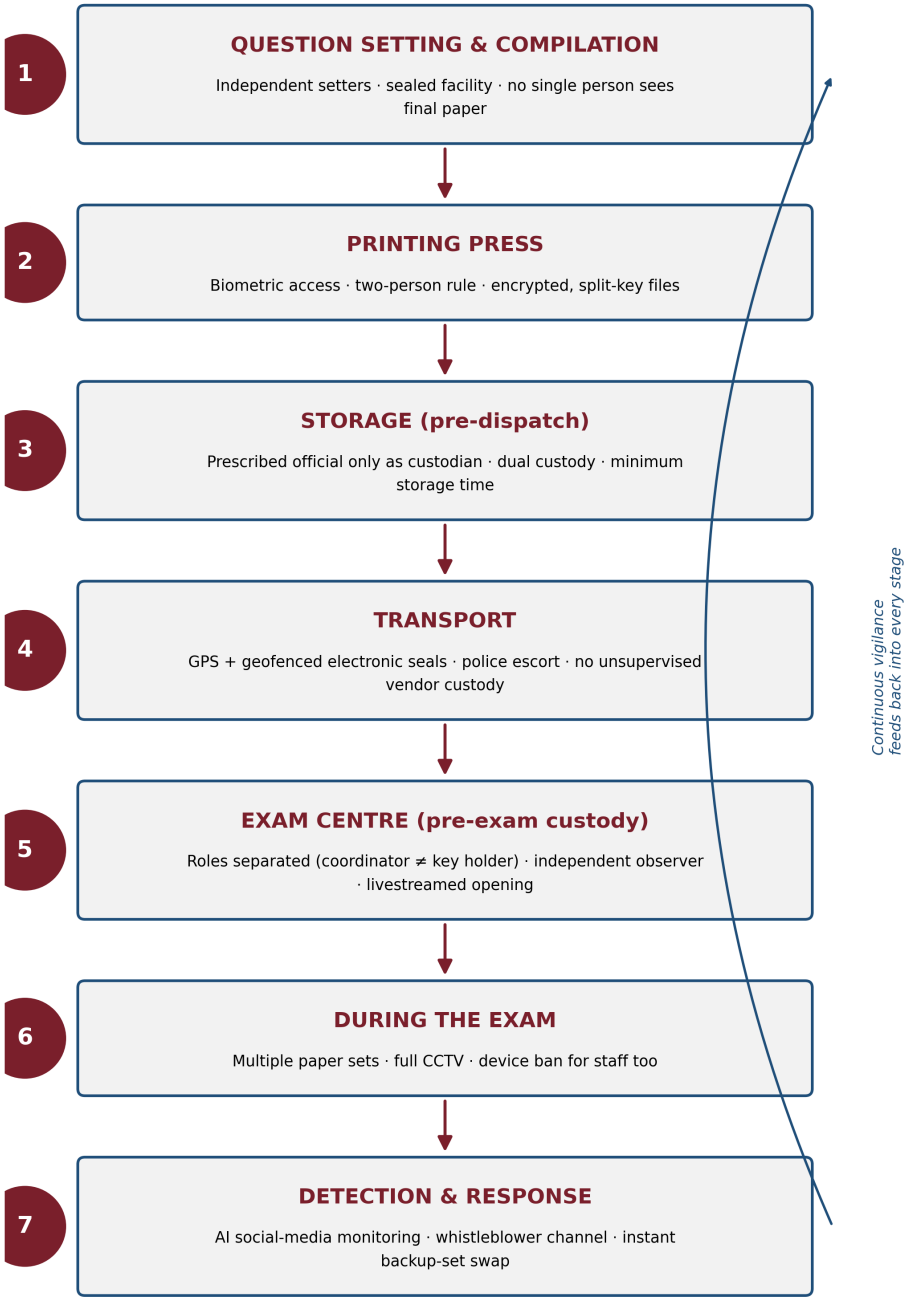
Put these four cases next to each other and the pattern jumps out - **the stage, the actual human failure,** and whether the **rules that already existed** were even followed.

Stage	Real incident	Root failure	Was SOP followed?
Printing press	Delhi Police constable exam	Insider at cutting/sorting stage smuggled a copy out in his shoe	No - no frisking or exit search at press floor level
Storage (pre-dispatch)	REET 2021, Rajasthan	Unauthorised person appointed as custodian; sealed envelope opened inside the office	No - the prescribed official (ADM) had been replaced by an unauthorised appointee
Transport	UP Police Constable 2024	Vendor staff (past and present employees) colluded during press-to-strongroom movement	No - an undisclosed extra warehouse stop widened the custody trail
Exam centre / control room	NEET-UG 2024, Hazaribagh	Coordinator and superintendent - the same two people - gave an outsider unsupervised access	No - one person wearing two hats bypassed the intended checks
Post-leak detection	All four cases	The leak surfaced through rumour, an informant, or a lucky physical find - never a designed detection system	No - nothing was actively watching for any of this

Quick Reference - End-to-End Process Flow Diagram

END-TO-END PAPER SECURITY PROCESS FLOW

Each stage closes a specific failure seen in a real leak case (see Section 2)



4. The Process, Stage by Stage

Here's the process itself, one stage at a time. Each one calls out exactly which real failure it's closing and what needs to change on the ground - not just what should happen in theory.

4.1 Question Setting & Compilation

What this fixes: *None of the four cases started here, but this is the origin point, so it has to be sealed regardless*

- Get multiple, independent people setting questions, and don't let any one of them know which questions actually make the final cut.
- Do the final compilation somewhere sealed and phone-free, with cameras running live to a third party like state vigilance - not just to the exam board's own control room.
- Don't finalise the paper too early. The closer to the print date, the smaller the window for something to go wrong.

4.2 Printing Press

What this fixes: *Delhi Police recruitment exam - a press-floor employee smuggled a copy out at the cutting/sorting stage*

- Frisk press-floor staff and run metal detectors at every shift change, not just at the exam hall. Given what happened with Delhi Police, this alone might be the single biggest fix here.
- Nobody works the cutting and collating stage alone. Put two people on it, and rotate the pairing so the same two people can't plan around it.
- Only use presses that actually pass a security audit - full camera coverage, no personal phones on the floor, real access logs. Don't just go with the lowest bidder.
- Keep the digital files encrypted and air-gapped, and split the decryption key between two people, so no single press employee can open the file without someone else signing off too.

4.3 Storage Before Dispatch

What this fixes: *REET 2021 - an unauthorised custodian appointment let an insider open a sealed envelope inside the storage office*

- The custodian has to be whoever the rules actually name - the Additional District Magistrate, for instance - never handed off to a private individual, an NGO, or someone with coaching-industry links, no matter how convenient that seems locally. This one rule, broken, is what caused the entire REET leak.
- Cut down how long the paper sits in storage. Get it from the press to one secure strong room and keep it there the shortest time possible - a day or two, not several.
- Every bundle gets a tamper-evident, individually numbered seal, checked against a manifest by a second officer both before and after storage - not just signed off.
- Nobody is ever alone with a sealed bundle. Two officers, two separate locks, every single time someone needs into that strong room.

4.4 Transport

What this fixes: *UP Police Constable 2024 - colluding logistics vendor staff during the press-to-strongroom move*

- Don't hand the paper's transport over to a private logistics vendor as a standalone job. If you have to use one, put an armed police escort and a government officer - not a vendor employee - in the vehicle holding the manifest, so the vendor is never alone with the consignment.
- GPS-track every vehicle with a live feed back to a control room, and only tell the driver the route once they've actually left - not before.
- Skip unnecessary stops. UP Police's extra Ahmedabad warehouse leg is exactly the kind of gap that shouldn't exist - go as direct as possible from press to strong room.
- Vendor staff, if you're using them at all, need the same background checks as government employees, and when they leave the job, their access to facility and route knowledge needs to be properly cut off. That's exactly how the UP leak happened - ex-employees who still knew too much.

4.5 Exam Centre - Pre-Exam Custody

What this fixes: *NEET-UG 2024, Hazaribagh - the coordinator and superintendent, the same two people, gave an outsider unsupervised control-room access*

- Separate the roles properly. Whoever runs the administrative side of a centre should never also hold the keys to its control room. Case 4 happened precisely because both jobs sat with the same two people.
- Put an independent, unannounced observer in every control room - someone from a different district or a central agency, with no ties to that centre - from the moment the trunk arrives until the exam starts.
- Only open the trunks at a fixed, publicly announced time shortly before the exam. Livestream it, and let candidates or their representatives actually watch the seal being checked.
- Ban devices for everyone in that room - invigilators, coordinators, superintendents, not just candidates - and keep signal jammers running from the moment the trunk arrives until the exam starts.

4.6 During the Exam

What this fixes: *No single case study here, but this closes the loop everything else feeds into*

- Print multiple versions of the paper so candidates sitting next to each other never have the same one - that alone limits what a single photographed sheet is even worth.
- Cover the hall fully with CCTV, and keep the footage for a set period so a third party can review it if needed.

4.7 Detection & Response

What this fixes: *All four cases - the leak surfaced by accident (burnt papers, social-media chatter, an informant), never through a designed detection system*

- Actually monitor social media and Telegram/WhatsApp for leak chatter, run through the board's own vigilance team, instead of waiting for a journalist or a candidate to notice first.
- Set up a proper whistle-blower channel - legal protection, a real reward - aimed specifically at press, storage, and transport staff, since that's exactly where the risk sits.
- The moment there's a credible signal, even without hard proof, swap in a sealed backup paper immediately. Don't spend weeks investigating first - that's exactly what turned the UP Police case into a costly, months-later re-exam.

5. The Digital Layer

None of the four cases here were hacking incidents - every one came down to a person. But digital controls still matter, because they do two things a physical process alone can't: they make tampering provably detectable, and they let you check on the paper's location and integrity in real time, instead of finding out only after the scandal breaks. Everything below sits underneath the physical process in Section 4 - it doesn't replace it.

5.1 Encrypted, Split-Key Digital Custody

- Encrypt the question paper file itself - AES-256 or similar - from the moment it leaves the setting facility until it reaches the press or the exam centre's printer. It should never sit around as a plain, readable file outside those two places.
- Use split-key decryption (Shamir's Secret Sharing, say, a 2-of-3 scheme) so no single administrator, press manager, or coordinator can open the file alone. This is exactly what would have stopped Hazaribagh, where one or two people had total, unsupervised access.
- Make the decryption keys time-boxed - they only work in a narrow window (printing day, or the last 30 minutes before an exam) and expire automatically after. A stolen key is useless outside that window.

5.2 Just-in-Time Remote Printing

- Where it's feasible, skip physical transport altogether. Send the file encrypted to secure printers inside police-verified strong rooms at the district level, and print only a few hours before the exam, not days. This removes the transport stage entirely - exactly where UP Police 2024 fell apart.
- Keep remote print terminals air-gapped from the general internet, able to receive only from one authorised server, sitting inside camera-monitored rooms with dual custody.
- If remote printing isn't realistic yet, treat it as the next big upgrade - it collapses two of the highest-risk stages, press and transport, into a single controlled transmission.

5.3 Tamper-Evident Digital Chain of Custody

- Log every handover - press to strong room, strong room to transport, transport to centre, centre to control room - on a centralised, write-once ledger: timestamp, GPS location, a photo of the seal, digital signatures from both sides. No handover counts without both signatures.
- Generate a cryptographic hash of every sealed bundle at packing, and re-check it at every checkpoint. Any mismatch triggers an alert to the vigilance team right then, not weeks later.
- Make that ledger append-only, so nobody can quietly edit or delete a record after the fact. In both the REET and UP cases, the real custody chain only came out weeks later through interrogation - this fixes that.

5.4 GPS, Geo-fencing & Electronic Seals

- Put tamper-sensing electronic seals on every vehicle and trunk, not just wax or plastic ones, so an alert fires the instant one is opened, moved off-route, or delayed past its checkpoint.
- Geo-fence the approved route and destination so any deviation pings the control room automatically - the exact fix for UP Police's undisclosed Ahmedabad detour.

5.5 Biometric Access Control

- Use biometric entry logging - fingerprint or face - at the press floor, the strong room, and the control room, tied to named individuals. No shared keys, no shared logins. This answers Delhi Police directly, where a named employee had free access to the cutting stage.
- Keep those logs centralised and timestamped, and flag anyone entering outside their role or time-window automatically - don't wait for a complaint to find out.

5.6 AI-Assisted CCTV & Anomaly Detection

- Run anomaly-detection software over the CCTV feeds at press, storage, and control rooms - flag things like only one person at a two-person checkpoint, a trunk opened outside its scheduled window, or unusual time spent near the paper. That's exactly the pattern that let Hazaribagh go unnoticed for hours.
- Retain and hash the footage so it can't be quietly swapped out after something goes wrong.

5.7 Signal Detection & Device Control

- Deploy RF/Bluetooth detectors at centres and control rooms, not just metal detectors - REET 2021 showed candidates hiding Bluetooth devices in their shoes that simple frisking missed entirely.
- Include coordinators, superintendents, and invigilators in the device bans and RF sweeps too. Hazaribagh happened because the officials, not the candidates, were the ones nobody was watching.

5.8 Per-Set Digital Watermarking & Traceability

- Give every paper set a unique, invisible digital watermark or micro-serial code. If a copy turns up online or with a solver, you can trace it back to the exact centre and custodian within hours, instead of relying on burnt paper and lucky breaks, like every case here did.

5.9 Digital Vigilance & Whistle-blower Platform

- Run AI-assisted monitoring of social media and messaging platforms - Telegram, WhatsApp forwarding patterns, relevant keywords - through the board's own vigilance unit, instead of waiting for journalists or candidates to flag it first.
- Set up a secure, encrypted whistle-blower app with real anonymity protection, aimed at press, storage, and transport staff - the people actually present at the riskiest stages.
- Lock down every admin account on these systems - key custodians, ledger admins, remote-print operators - with hardware security keys, not passwords alone. Once all this is digitised, those accounts become high-value targets in their own right.

6. What Needs to Change Institutionally

- Set up a dedicated agency - legally empowered, separate from the exam board - whose only job is custody-chain security. **Keep 'who runs the exam' and 'who guards the paper' as two different jobs**, always.
- Push for a proper anti-paper-leak law with real minimum sentences and asset seizure for organisers, this has been set up at the centre level, we also need to get moving this way - it needs to be consistent everywhere, not a reaction to whichever scandal just happened.
- Publish the **custody chain** after every exam - who held the paper, when, where - and let an independent body audit it. That way gaps show up before a scandal, not after.

7. Where to Start

- Rajasthan needs to **map current exam's actual custody chain** end-to-end, and we need to be honest about which of the four stages - press, storage, transport, centre - is weakest right now.
- We need to **fix the storage-custodian rule** first. Case 1 shows this is cheap and high-impact - it's just about enforcing who's legally allowed to hold that role.
- Audit and re-approve your printing presses against the checklist in Section 4.2, and add **biometric access logging** (5.5) while we are fixing this.
- Bring transport in-house or under direct police escort instead of leaving it to a vendor. Add **GPS and geo-fenced seals** (5.4) as a quick, low-cost layer even before making that bigger change.
- Separate the **coordinator and control-room-key-holder** roles at every centre before the next exam cycle.
- Get the **vigilance monitoring** and **whistle-blower channel** (5.9) running - that's software and process, not infrastructure, so it can be live within weeks.
- Pilot the **digital chain-of-custody ledger** (5.3) and **split-key encryption** (5.1) on one exam cycle before rolling it out state-wide.

~:~