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Organizational and Legal Mechanism for Managing the Use of Predictive Policing Technologies in Internal Affairs Bodies

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Abstract: The increasing use of data-driven technologies in law enforcement creates a need to define how predictive information should be incorporated into institutional management. This article examines an organizational and legal mechanism for managing the use of predictive policing technologies in internal affairs bodies. The study proceeds from the premise that predictive output is not itself a managerial decision but an information-analytical resource that requires institutional assessment before it may influence police activity. Particular attention is paid to data provenance, validation, meaningful human oversight, documentation, accountability and feedback. The article proposes a seven-stage mechanism consisting of legally permissible purpose, information-base verification, validation, institutional assessment, authorized managerial decision, implementation and monitoring, and feedback and adjustment. It argues that technical accuracy alone is insufficient for institutional reliance and that predictive systems should also be assessed comparatively, operationally and in terms of outcomes. Transition logging is proposed as a means of making consequential managerial decisions traceable and reviewable. In the context of the continuing digital transformation of public administration and public-safety activities in Uzbekistan, the mechanism provides a structured approach to integrating predictive technologies while preserving human authority and institutional responsibility for final decisions.

Keywords: Predictive policing, internal affairs bodies, management, managerial decision, validation, data governance, human oversight, accountability, transition logging, feedback, digitalization, artificial intelligence.

Introduction: The digital transformation of law-enforcement activities is changing not only the technical instruments available to internal affairs bodies but also the process through which information is converted into institutional decisions. Predictive policing is one manifestation of this broader transition toward data-driven law enforcement. Perry and co-authors describe predictive policing as the use of analytical techniques to identify likely targets for police intervention or prevention. For management purposes, however, the central issue is not the existence of a forecast itself, but the institutional process through which such information is assessed and transformed into an authorized decision.

Prediction is therefore not decision. A predictive system may estimate the probability of a particular event or identify an area associated with elevated risk, but the output remains analytical information. It does not possess independent managerial or legal authority. The relevant process is better understood as data, analytical model, prediction, institutional assessment, authorized decision, implementation, monitoring and feedback. Each transition creates a separate management task and requires a distinct form of justification.

This distinction is important because technical accuracy does not automatically establish institutional usefulness. Mohler and co-authors showed that a particular predictive method could outperform comparison crime-analysis practices under the

conditions tested, while the Shreveport experiment evaluated by Hunt and co-authors did not establish a statistically significant crime reduction in experimental districts compared with control districts. Meijer and Wessels likewise identify both potential benefits and important limitations, while the systematic review by Lee, Bradford and Posch indicates that strong policy-relevant evidence of effectiveness remains limited. These studies support a cautious conclusion: the institutional value of a predictive system depends on the purpose, data, model, operational environment and the outcome claimed for it.

For this reason, validation should not be reduced to statistical accuracy. Four dimensions should be distinguished. Technical validation asks whether the model predicts its defined target with sufficient reliability. Comparative validation determines whether it adds meaningful value compared with existing analytical methods. Operational validation examines whether the predictive output changes authorized institutional practice in the intended manner. Outcome validation asks whether the intervention informed by the prediction produces the result attributed to it. These dimensions are related but non-substitutable. A technically accurate model may provide little managerial value, while a change in police practice does not by itself establish a successful outcome.

The resulting standard may be described as institutional fitness for purpose. Before predictive information is relied upon, the internal affairs body should be able to explain what the system predicts, what data it uses, how reliably it performs, whether it improves on existing analysis, which decisions it is authorized to inform and what evidence supports the expected consequences of its use. This shifts the focus from the algorithm alone to the socio-technical process within which the algorithm operates.

The information base requires separate scrutiny. Police data are produced through institutional processes: an event must become visible or be reported, detected, classified, recorded, retained and made available for analysis. Lum and Isaac demonstrate how enforcement-sensitive datasets may partly reflect where police activity has historically been concentrated rather than only the underlying distribution of prohibited conduct. Richardson, Schultz and Crawford likewise show why the institutional history through which police data were produced can affect their later fitness for predictive use. Lawful access to data and suitability of those data for prediction are therefore distinct questions.

The problem becomes recursive when predictive information itself influences deployment and enforcement activity. Ensign and co-authors demonstrate how repeated allocation of police attention according to police-generated observations can create self-reinforcing feedback loops. Increased attention may produce additional recorded incidents, those incidents enter the dataset, and the same territory may then appear to justify further attention. Management procedures should therefore distinguish, as far as practicable, between changes in underlying criminogenic conditions and observations generated by previous police activity.

Predictive technologies also affect professional discretion. Brayne and Christin show that algorithmic technologies do not necessarily eliminate discretion; they may relocate it to different and less visible stages, including data selection, system configuration and interpretation of results. Consequently, management should identify where consequential judgments are actually made rather than assuming that discretion exists only at the final decision stage.

This requires meaningful human oversight. Formal participation of an official is not sufficient if the official merely confirms an algorithmically generated recommendation. The responsible person should understand the authorized purpose and relevant limitations of the system, consider independent or contradictory information and retain the practical authority to modify or reject the recommended course of action. Meaningful human control therefore requires legal competence, access to relevant information and real discretion. Responsibility for the final managerial decision must remain attributable to an authorized official.

Legal scholarship reinforces the need for institutional controls. Ferguson emphasizes accountability and transparency in the governance of predictive policing. Söderholm highlights the importance of fundamental-rights control at the implementation stage, while Rossa examines predictive policing through principles of algorithmic administration. Gallese's analysis of predictive policing under emerging artificial-intelligence regulation similarly underscores data governance, transparency and accountability. These approaches differ in legal context, but they converge on the need to regulate institutional use rather than treating algorithmic output as a self-executing authority.

Comparative public-sector practice also offers useful governance instruments. Canada's Directive on Automated Decision-Making and its Algorithmic Impact Assessment illustrate a structured approach in which automated decision systems are assessed according to their potential impact and remain subject to testing,

monitoring and human intervention requirements. These mechanisms are not a predictive-policing code and should not be mechanically transferred to another jurisdiction. Their value lies in demonstrating how algorithmically supported decisions can be governed before and during institutional use.

Documentation is another necessary component. Where predictive information materially influences a managerial decision, the principal decision path should be reconstructable. This study proposes transition logging: recording consequential transitions from predictive output to institutional assessment and from institutional assessment to the managerial decision. Relevant records should identify the authorized purpose of the system, the output relied upon, known limitations, additional information considered, the responsible official, the decision taken and the subsequent implementation. Transition logging is broader than ordinary technical logging because its purpose is accountability for the decision process rather than only system performance.

Traceability is important because failure may arise at different stages. A problematic outcome may result from poor-quality data, model limitations, inadequate validation, incorrect interpretation, an unjustified managerial decision or deficiencies in implementation. Without reconstructable records, these sources of failure may be conflated. A documented process permits more accurate allocation of responsibility and makes it possible to select an appropriate corrective response.

These questions are increasingly relevant in Uzbekistan. The Law of the Republic of Uzbekistan 'On Internal Affairs Bodies' establishes the general legal basis for the organization and activities of internal affairs bodies and identifies protection of rights and lawful interests, maintenance of public order and prevention of offences among their core tasks. The law provides the general institutional framework within which information-analytical technologies may support internal affairs activities, but it does not create a specific legal regime for predictive policing.

The broader national regulatory environment for artificial intelligence is developing. Presidential Resolution No. PQ-358 of 14 October 2024 approved the Strategy for the Development of Artificial Intelligence Technologies until 2030. The Strategy provides for further development of the regulatory framework, data and technical infrastructure, and information-security measures connected with artificial-intelligence technologies. For internal affairs management, its significance lies in the broader movement toward regulated and infrastructure-supported use of data-driven technologies rather than in any direct authorization of predictive policing.

These reforms should not be interpreted as establishing predictive policing in Uzbekistan. They indicate an institutional environment in which data integration, digital tools and analytical support are becoming more significant. If predictive technologies are introduced, a sector-specific organizational and legal procedure will therefore be required.

On this basis, the study proposes the following seven-stage organizational and legal mechanism: legally permissible purpose, information-base verification, validation, institutional assessment, authorized managerial decision, implementation and monitoring, feedback and adjustment. The mechanism treats meaningful human oversight, transition logging and continuing validation not as separate models, but as safeguards operating throughout the management cycle.

At the first stage, an authorized institutional act should define the legally permissible purpose: what phenomenon is to be predicted, the geographical and temporal scope, the categories of decisions the output may inform and the uses that remain outside the authorized purpose. This reduces the risk of function creep, in which a system validated for one task is gradually used for another without separate assessment.

The second stage is verification of the information base. Data origin, completeness, currency, representativeness and possible dependence on previous police activity should be assessed. The third stage is validation, which should cover technical, comparative, operational and outcome dimensions. Institutional approval should identify precisely which propositions have been demonstrated and which remain unproven.

The fourth stage is institutional assessment. Predictive output should be considered together with current operational information, contradictory evidence and known limitations. The fifth stage is an authorized managerial decision. The legally competent official must retain practical authority to accept, modify or reject the predictive recommendation, and responsibility for the decision must remain identifiable.

The sixth stage is implementation and monitoring. The institution should determine whether the decision was implemented as intended and whether predictive information actually contributed to the expected organizational or operational effect. The seventh stage is feedback and adjustment. Results should return to the management cycle, while the institution assesses whether new observations represent genuine changes

in conditions or are partly generated by previous police attention. Material changes in data, models, practice or law should trigger revalidation and, where necessary, restriction, suspension or discontinuation of use.

Based on the analysis, the following proposals and recommendations are put forward:

if predictive analytical technologies are introduced into internal affairs activities, a departmental procedure should define their authorized purposes, limits and management responsibilities before operational use;

standardized requirements should be established for assessing the provenance, completeness, currency and representativeness of data used for predictive analysis;

technical, comparative, operational and outcome validation should be required before institutional reliance and repeated after material changes to data, models or conditions of use;

the authority of a competent official to independently assess, modify or reject algorithmically generated recommendations should be legally and organizationally preserved;

transition logging should be introduced for consequential managerial decisions in which predictive information plays a material role;

periodic institutional review should identify data-quality deterioration, feedback effects and divergence between predicted and actual outcomes;

procedures should be established for modification, temporary restriction, suspension or discontinuation where the system no longer satisfies its authorized purpose or validation requirements.

Predictive policing technologies therefore create a management problem that cannot be reduced to algorithmic accuracy. Their institutional significance arises from the process through which data are transformed into prediction and prediction is subsequently transformed into managerial action. The central organizational and legal task is to regulate these transitions and preserve the distinction between analytical information and managerial authority.

The seven-stage mechanism proposed in this study combines purpose specification, data verification, validation, institutional assessment, authorized decision-making, implementation, monitoring and feedback within a single management cycle. Meaningful human oversight, transition logging and continuing validation operate as safeguards ensuring traceability, accountability and human responsibility for consequential decisions.

The continuing development of artificial-intelligence technologies and digital public-safety systems in Uzbekistan creates conditions in which predictive analytical instruments may become increasingly relevant. Their legitimate and effective use, however, will depend on a clear organizational and legal architecture defining purpose, data requirements, validation, decision-making authority, documentation, monitoring and responsibility. Predictive technology should therefore function as a controlled information-analytical component of internal affairs management rather than as an autonomous source of managerial authority.

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