JOURNAL OF MULTIDISCIPLINARY SCIENCES AND INNOVATIONS
VOLUME 5, ISSUE 03
MONTHLY JOURNALS
ISSN NUMBER: 2751-4390
IMPACT FACTOR: 9,08

DIGITIZATION OF VETERINARY POINTS AND IMPROVEMENT OF THE CONTROL SYSTEM

Raxmanov Qurbon Sodikovich
International Islamic Academy of Uzbekistan, Tashkent, Uzbekistan
raxmanov@gmail.com
Rustamova Moxichexra Yaxshiboyevna
Senior Lecturer, TATU named after Muhammad al-Khwarizmi, Tashkent, Uzbekistan
mohimrustamova83@gmail.com
Tilavova Nilufar Ochilovna
Senior Lecturer, Academic Lyceum named after Mamlakat Sobirovna Vosiqova under Tashkent State University of Law, Tashkent, Uzbekistan
nilufartilavova8@gmail.com

Abstract

This article analyzes the organizational and legal foundations of the operation of veterinary points in the Republic of Uzbekistan, their role within the state veterinary control system, and modern digital integration processes. The study highlights the importance of veterinary points in monitoring the movement of animals and animal products, their role in strengthening epizootic safety, and their functions in ensuring compliance with international veterinary requirements during export-import operations. Furthermore, the significance of digital technologies, unified information systems, and inter-agency integration mechanisms in effectively organizing veterinary control is scientifically substantiated. The research findings indicate that digitization of veterinary points contributes to enhancing biosafety, increasing transparency in control processes, and facilitating international trade operations.

Keywords

veterinary control, veterinary points, biosafety, epizootic safety, digital transformation, information systems, inter-agency integration, veterinary certificate, export-import operations

Introduction

The veterinary control system plays a crucial role in ensuring animal health, food safety, and biosafety in any country. Effective monitoring of the movement of animals and animal products has become particularly relevant in the context of expanding global trade relations. From this perspective, veterinary points operate as a key institutional component of the state veterinary control system.

In the Republic of Uzbekistan, the organizational and legal framework for the operation of veterinary points is regulated by Presidential Decree No. PQ-4254 of March 28, 2019, and Presidential Resolution No. PF-90 of June 10, 2023. These normative legal acts are aimed at modernizing the state management system in the veterinary and livestock sectors, improving institutional structures, and establishing effective control mechanisms.

The main objective of this article is to analyse the organizational and functional aspects of the operation of veterinary points and to scientifically substantiate opportunities to enhance their efficiency in the context of digital integration.

Organizational Role of Veterinary Points

Veterinary points are one of the key institutional elements of the state veterinary control system. Their activities are essential for protecting animal health, ensuring food safety, and maintaining epizootic stability. These points are strategically located at state borders, transport-logistics hubs, and international trade routes, where they enforce mandatory state control over the movement of animals and animal products.

In Uzbekistan, the organizational framework of veterinary points is regulated by Presidential decrees and other normative legal acts. Specifically, to modernize the state management system and centralize veterinary control, a unified vertical management system for veterinary services has been established. Within this system, veterinary points operate as regional units under the Committee for Veterinary and Livestock Development and are subject to unified management and control mechanisms.

The organizational structure of veterinary points enables systematic control over animals, animal products, livestock raw materials, feed, and biological preparations transported across state borders. They operate in close coordination with other divisions of the state veterinary service and implement comprehensive measures aimed at ensuring epizootic safety.

Organizationally, veterinary points are also integrated with other state control bodies, including customs authorities, sanitary-epidemiological services, phytosanitary control, and transport regulatory agencies. Such inter-agency collaboration helps form a comprehensive border control system and increases the efficiency of inspection processes.

Moreover, modern information technologies play a crucial role in the organizational activities of veterinary points. The implementation of unified veterinary information systems has transformed veterinary points into a key component of the digital management system. Electronic document circulation, real-time data exchange, and inter-agency integration significantly enhance the efficiency of veterinary control.

Thus, veterinary points function not only as inspection bodies within the state veterinary control system but also as strategic institutional mechanisms that ensure biosafety, regulate international trade processes, and improve the efficiency of state governance.

Key Functions of Veterinary Points

The activities of veterinary points encompass multi-stage control processes aimed at protecting animal health, preventing the spread of infectious diseases, and ensuring the safety of livestock products. These points enforce mandatory state veterinary control over animals, animal products, and other livestock-related goods transported across state borders.

One of the most important functions of veterinary points is the verification of veterinary documents for cargo and live animals. During this process, the authenticity of veterinary certificates, their validity period, the epizootic status of the issuing country, and the origin of the products are carefully examined. Verifying the accuracy of these documents is critical to preventing the introduction of hazardous diseases into the country.

Additionally, veterinary points assess the compliance of products with sanitary and biosafety requirements. When necessary, samples are taken from products and additional diagnostic tests are conducted in accredited laboratories. Based on laboratory test results, the safety of the products is determined, and appropriate decisions are made.

Another key function of veterinary points is making management decisions based on control results. According to inspection outcomes, decisions are taken to permit, transit, or refuse the import of cargo into the country. These decisions are made in accordance with epizootic safety standards, sanitary compliance, and international veterinary requirements.

Furthermore, veterinary points collect, analyse, and monitor data from control processes. Modern information systems ensure that all inspection results are entered into a unified electronic database. This allows for statistical analysis, monitoring of epizootic conditions, and the improvement of control strategies.

Currently, a risk-based control approach is widely applied in the operations of veterinary points. This approach helps allocate control resources effectively. Products classified as high-risk undergo in-depth inspections, while low-risk products are processed through simplified procedures. As a result, control efficiency is improved, and unnecessary delays in international trade operations are prevented.

In summary, the functions performed by veterinary points are crucial for ensuring biosafety, maintaining epizootic stability, guaranteeing food safety, and regulating international trade processes. Their effective operation not only sustains the stability of the veterinary control system but also contributes to the country's economic and epidemiological security.

Digital Transformation in Veterinary Point Operations: International Experience and Management Model

1. The Significance of Digital Transformation in Veterinary Control Systems

Globalization, the increase in international trade volume, and the expansion of the movement of animals and animal products necessitate the modernization of veterinary control systems. In modern conditions, traditional paper-based control systems cannot fully meet the demands for speed, accuracy, and transparency. Therefore, digitizing the veterinary control system has become a key direction in state governance.

Veterinary points represent one of the primary operational units of the state veterinary control system, through which the movement of animals, animal products, livestock raw materials, and biological preparations is monitored. The efficiency of these points largely depends on the speed of information exchange, accuracy of document circulation, and the effectiveness of control mechanisms.

Digital transformation in veterinary point operations is manifested in the following main areas:

- Implementation of electronic document circulation;
- Data exchange through inter-agency integration;
- Real-time monitoring systems;
- Risk-based control mechanisms;
- Automation of control processes.

This approach contributes to modernizing the veterinary control system, strengthening biosafety, and facilitating international trade operations.

JOURNAL OF MULTIDISCIPLINARY SCIENCES AND INNOVATIONS
VOLUME 5, ISSUE 03
MONTHLY JOURNALS
ISSN NUMBER: 2751-4390
IMPACT FACTOR: 9,08

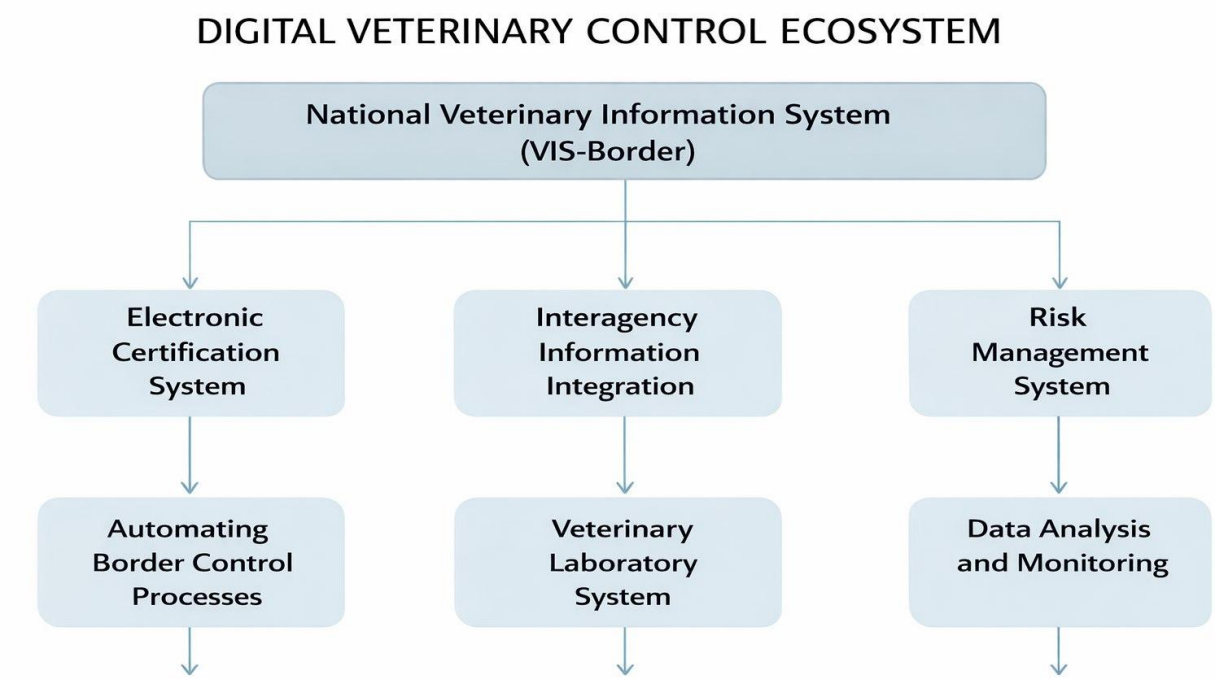

Figure 1. Digital management architecture of veterinary control point

1. Digital Transformation Architecture at Veterinary Control Points.

Figure 1 represents the digital management architecture of veterinary control point operations. In the model, all control processes are carried out in an integrated manner based on a unified information system.

2. Mechanisms for Implementing Digital Technologies in Veterinary

Point Operations. The process of digitalizing veterinary point operations consists of several key components that ensure the comprehensive modernization of the control system.

Electronic Document Circulation. One of the main directions of digital transformation is the electronic processing of veterinary documents. Electronic certificates, permits, and other documents are issued through information systems.

This enables:

- A reduction in the need for manual re-entry of documents;
- Lower costs associated with paper-based documentation;
- Rapid verification of document authenticity.

Electronic document circulation increases the efficiency of veterinary control and reduces human error.

Interagency Information Integration. Data exchange at veterinary points is carried out with multiple state authorities, including:

- Customs authorities;
- Sanitary-epidemiological services;
- Phytosanitary control agencies;
- Tax authorities;

- Transport control services.

Digital integration automates the process of data exchange between these organizations. As a result, repetitive inspections are reduced, and processing procedures are accelerated.

Real-Time Monitoring. Information systems provide veterinary points with real-time monitoring capabilities, enabling:

- Rapid control over the movement of goods;
- Continuous monitoring of the epizootic situation;
- Detection of products coming from high-risk areas.

Risk-Based Control. Digital technologies enable the application of a risk-based approach in veterinary control. According to this approach:

- High-risk products undergo enhanced inspection;
- Low-risk products are processed through simplified procedures.

As a result, control resources are allocated efficiently.

3. International Experience in Digitalizing Veterinary Control

European Union Experience. In the EU, veterinary control is carried out through the TRACES (Trade Control and Expert System) platform. This system:

- Monitors the movement of animals and animal products electronically;
- Issues veterinary certificates in electronic form;
- Provides data exchange between states.

All veterinary documents are stored on a unified information platform and checked in real time. As a result:

- Control processes are accelerated;
- Risk of document forgery is reduced;
- International trade procedures are simplified.

China Experience. In China, veterinary control for export-import processes is carried out via the e-CIQ platform. This platform provides:

- Electronic processing of export and import documents;
- Automated risk analysis;
- Automation of control processes.

The e-CIQ system is integrated with customs and other state information systems, and all data is processed on a single platform.

Russia Experience. In the Russian Federation, veterinary control is carried out through the “Merkuriy” information system. This system:

- Issues veterinary certificates electronically;
- Tracks the product supply chain;
- Automates control processes.

The “Merkuriy” system plays a key role in monitoring the safety of food products.

Kazakhstan Experience. In Kazakhstan, veterinary control is implemented through the ISZH (Information System for Animal Health) system. This system automates:

- Animal identification;
- Veterinary certificates;
- Epizootic monitoring processes.

4. Comparative Analysis of International Experience

Country	Information System	Main functions
European Union	TRACES	veterinary certificates, control monitoring
China	e-CIQ	export-import control
Russian Federation	Merkuriy	food safety control
Kazakhstan	ISZH	animal identification
Uzbekistan	VIS-Chegara	digitalization of veterinary control

GLOBAL DIGITAL VETERINARY CONTROL

European Union	China	Russia	Kazakhstan
TRACES	e-CIQ	MERKURIY	ISZH
Trade control system	Export-Import Control	Food Safety Control	Animal Identification System

Uzbekistan Digital Model VIS-Border

This diagram enables a comparative analysis of international veterinary control practices. The comparative analysis shows that in developed countries, veterinary control systems are fully digitized and operate based on inter-agency integration.

5. Digital Management Model for Veterinary Checkpoints.

To effectively organize the activities of veterinary checkpoints, it is important to develop a digital management model. This model consists of the following key components:

1. **Information Integration.** All government agency information systems are integrated through a single platform.
2. **Electronic Document Circulation.** All veterinary documents are issued in electronic form.
3. **Risk Analysis Module.** The information system automatically evaluates the risk level of products.
4. **Monitoring and Analytics.** The system generates statistical data in real-time.
5. **Decision-Making Module.** Automatic recommendations are generated based on control results.

This model serves to improve the efficiency of veterinary control, ensure biosafety, and modernize state governance.

Digitizing veterinary checkpoints is one of the key directions for modernizing the veterinary control system. Digital transformation increases the speed and transparency of control processes, simplifies document circulation, and strengthens biosafety.

International experience shows that the effectiveness of veterinary control is directly linked to the advancement of information systems and the level of inter-agency integration. Therefore, organizing veterinary checkpoint operations based on a digital management model is one of the priority directions for improving state veterinary control.

Analysis and Discussion

The digitization of veterinary checkpoints helps enhance the efficiency of state governance. Through inter-agency integration mechanisms, information exchange is established among customs, sanitary-epidemiological, and other control authorities. This reduces redundant inspections and accelerates the processing of documentation.

Analysis of international practices shows that in many developed countries, veterinary control is carried out via information systems such as TRACES and e-CIQ. These systems help automate control processes, assess risks, and expedite trade operations.

In the Republic of Uzbekistan, digitization of veterinary control is being steadily implemented. The introduction of the VIS-Border unified information system significantly contributes to improving the efficiency of veterinary checkpoint operations.

Conclusion

The study results show that veterinary checkpoints are a crucial component of the state veterinary control system. They play a key role in monitoring the movement of animals and animal products, strengthening biosafety, and ensuring compliance with international trade requirements.

Organizing veterinary checkpoint activities using digital technologies leads to the following benefits:

- Increased speed and efficiency of control processes;
- Simplified document circulation;
- Reduced human errors and mistakes;
- Improved information exchange between state authorities.

Therefore, further development of the veterinary control system prioritizes digital integration and the enhancement of information systems.

References

1. Decree of the President of the Republic of Uzbekistan No. PQ-4254, March 28, 2019.
2. Decree of the President of the Republic of Uzbekistan No. PF-90, June 10, 2023.
3. Law of the Republic of Uzbekistan “On Electronic Government,” December 9, 2016, No. ZRU-423.
4. Resolution of the Cabinet of Ministers of the Republic of Uzbekistan No. 516, September 20, 2022.
5. Uzbekistan Standard DSt 2590:2012. Requirements for Interoperability of Information Systems.
6. Uzbekistan Standard DSt 1135:2007. Data Exchange Formats and Technical Requirements.
7. European Commission. TRACES – TRAde Control and Expert System, 2017.
8. General Administration of Customs of China. e-CIQ Platform Materials.

9. Rustamova M.Y., Boboqulov I.X. Digitization of Export-Import Processes in the Veterinary Sector // Digital Economy Scientific-Electronic Journal, 2025.
10. Rustamova M.Y. Analysis of International Experience in Organizing Information Exchange at Border Veterinary Checkpoints // Digital Economy Scientific-Electronic Journal, 2026.
11. Rustamova M.Y., Boboqulov I.X. Conceptual Model of the Document Exchange Module in Veterinary Information Systems, 2026.
12. Rustamova M.Y., Abdurahmanov A.A. Efficiency of the VIS-Chegara Unified Information System, 2025.