



**System and Organization Controls (SOC) 3 Report**  
**Report on “Affordable housing” system**  
**Relevant to Security, Availability, Processing integrity,**  
**Confidentiality and Privacy**  
**September 10, 2018**



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## Independent Auditor's Report of EY Company

To the Management of the State Housing Construction Agency of Azerbaijan Republic

### Approach:

We have examined the assertion by the Agency's management based on criteria presented by American Institute of Certified Public Accountants (hereinafter AICPA) in TSP Section 100, Trust services Principles and Criteria, for Security, Availability, Processing Integrity (complete, reliable, accurate), Confidentiality and Privacy and obtained reasonable assurance that at the date of September 5, 2018 the "Affordable Housing" system (hereinafter the System) was:

Protected against unauthorized access (logical and physical), use or modification;

Available for operation in accordance to the System regulation, taking to the account the cases mentioned in the "Observations" section below;

Processing was complete, reliable and accurate. At the same time, System's objective and principles (provision of equal conditions for persons willing to purchase apartments, ensuring transparency and efficiency during appeals, processing of users' requests in a real time) were addressed in accordance to its regulation;

Information designated as confidential was protected from unauthorized use and modification;

Personal information was collected, used, retained and disposed in accordance to the System regulation.

The Management of the Agency is responsible for its assertion in accordance to the System regulation. Our responsibility is to express opinion on management's assertion based on our examination.

We conducted our examination in accordance with the attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform our examination to obtain reasonable assurance about whether management's assertion is fairly stated, in all material respects. An examination involves performing procedures to obtain evidence about management's assertion, which includes:

- (1) obtaining an understanding of the Agency's relevant security, availability, processing Integrity (complete, reliable, accurate) and confidentiality policies, processes and controls,
- (2) testing and evaluating the operating effectiveness of the controls, and
- (3) performing such other procedures as we considered necessary in the circumstances.



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The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risk of material misstatement, whether due to fraud or error. We believe that the evidence obtained during our examination is sufficient and appropriate to provide a reasonable basis for our opinion. We believe that our examination provides a reasonable basis for our opinion.

There are inherent limitations in the effectiveness of any system of internal control, including the possibility of human error and the circumvention of controls. Because of inherent limitations in its internal control, those controls may provide reasonable, but not absolute, assurance that its commitments and system requirements related to security, availability, processing integrity and confidentiality are achieved.

**Observations:**

In purpose to provide a high level of security for users' private data and prevent the potential cyber threats, the initially planned start of sales process was postponed from 11:00 on 05 September, 2018 to 15:00 the same day.

In connection with the functional features of the security subsystem, there were minor delays in some users' request processing which did not affect on the overall System's availability and operational transparency.

**Opinion:**

Based on the outcome of the analysis and taking to the account the observations mentioned above, the Agency's management assertion is complete, reliable, accurate and address its objectives and principles mentioned in its regulation (provision of equal conditions for persons willing to purchase apartments, ensuring transparency and efficiency during appeals, processing of users' requests in a real time) as well as important aspects of principles of processing integrity (complete, reliable and accurate) and confidentiality.

10 September, 2018

Amangeldy Mussayev  
Partner, CPA



Nargiz Karimova  
Partner, Audit and Advisory services

# **Agency's business practices and control over "Affordable Housing" System**

## **Management Board Statement**

**September 5, 2018**

5 September, 2018

The State Housing Development Agency (hereinafter Agency) is a legal entity operating in the Republic of Azerbaijan. The main goal of the Agency is to organize the construction of residential buildings and other construction facilities that meet the ecological and energy efficiency requirements in the modern architectural style in the lands granted to its residents for affordable housing of citizens of the Republic of Azerbaijan, as well as territorial planning in those land plots, to participate in the implementation of policy in design and architecture and to coordinate activities.

The purpose of applying the Agency's "Affordable Housing" system (hereinafter referred to as the "System") is the provision of equal conditions in the process of housing selection for persons wishing to buy apartments put up for sale in accordance with the Rules at a discount, simplifying the procedure of affordable housing for them, ensuring transparency and efficiency during consideration of appeals as well as real-time access to required documents using information and communication technologies, saving time and costs and improving the quality and efficiency of the provided services.

The Agency's Management is responsible for the organization, implementation and maintenance of effective control over the system to obtain sufficient assurance of the fulfilment of the obligations and requirements of the System.

There are some limitations in the effectiveness of any internal control system, including failure to follow the human factor and non-compliance controls. Accordingly, these control systems may provide sufficient assurance that security, accessibility, integrity of processes (integrity, reliability, and accuracy), confidentiality commitments and system requirements are met.

On September 5, 2018, the TSP (Trusted Services Principles) of the American Institute of Certified Public Accountants (AICPA) conducted assessment of efficiency of control over the System on the basis of security, accessibility, process integrity (integrity, reliability, accuracy) principles and criteria for safe confidentiality of the security services. Based on this assessment, the Agency affirms that control on 5 September 2018 is sufficiently reliable for:

- The system has been protected against unauthorized access (both physical and logical), use and change to comply with the enterprise's obligations and system requirements;
- The system's operation has been made available to users in order to meet the entity's commitments and system requirements;
- Processes in the system are complete, reliable and accurate. In particular, the objectives and principles set out in the System Statement (providing equal conditions for housing selection process, ensuring transparency and efficiency, and registering users' requests in real-time) are fully covered;
- Confidential information is protected from unauthorized access and alteration;
- Personal data has been collected, processed, stored and maintained in accordance with the legislation.

The following information about the system's description describes the aspects mentioned in our System Statement.

**Deputy Director**

**Sadig Sadigov**



## **Description of the State Housing Development Agency of the Republic of Azerbaijan**

### Agency and its system's purpose

The State Housing Development Agency of the Republic of Azerbaijan (hereafter the "Agency") was established by the Decree 858 signed by the President of the Republic of Azerbaijan on 11 April 2016. The Agency operates as a legal entity. The main goal of the Agency is to organize the construction of residential buildings and other construction facilities that meet the ecological and energy efficiency requirements in the modern architectural style in the lands granted to its residents for affordable housing of citizens of the Republic of Azerbaijan, as well as territorial planning in those land plots, to participate in the implementation of policy in design and architecture and to coordinate activities.

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The system allows individuals to participate in affordable housing sales and implements the following key business processes of the Agency:

- Creation of an e-cabinet for persons entitled to affordable housing;
- The e-cabinet organizes an electronic housing selection.

Description of key components of the Agency's control system is given below:

### **The staff**

The organizational structure of the agency ensures planning, implementation, management and verification of its activity. The agency's management believes that the establishment of an appropriate organizational structure should cover key areas of authority, responsibility and reporting. The agency has prepared an organizational structure that meets the requirements. The authority and responsibility of the agency is based on the factors such as the character of operational activities, reporting, authority hierarchies, as well as how the reporting relationships and the authority hierarchy are set. There is an information security policy passed to all staff of the Agency. Rule and procedures are reviewed and updated in case of need.

Guidelines and rules for design and operation of the system are posted publicly on the Agency's official website for the following links. The rules and guidelines provide users of the system with information on how to buy a discounted apartment through the System.



- System Statement:  
([https://mida.gov.az/documents/Sistem\\_in\\_esasnamesi.pdf](https://mida.gov.az/documents/Sistem_in_esasnamesi.pdf)).
- User's guide about system's "Registration" module:  
(<https://mida.gov.az/documents/Telimat.pdf>).
- User's guide about system's "Sale" module:  
(<https://mida.gov.az/documents/Sat%C4%B1%C5%9Fla%20ba%C4%9Fl%C4%B1%20t%C9%99limat.pdf>).

The Agency carries out initial trainings for staff on information security, confidentiality and personal data protection, as well as on system design and functioning for newly recruited employees. The effectiveness of the training is estimated based on the test results.

## **Infrastructure**

The infrastructure of the system is located in a third-party Data Centre offering cloud infrastructure such as "Infrastructure Services" solutions (virtual network, virtual storage, virtual infrastructure, etc.). The Agency is based on an official agreement on supervisory rules and procedures, including infrastructure management and restriction to access to the information centre.

## **Network control and security**

The Network firewall (firewall) is used to detect and neutralize unauthorized traffic from the Internet. Agency has been provided with alternate network firewall (firewall) to maintain security and create high availability in case of failure of the main network firewall (firewall).

Antivirus software is used to protect operating servers and workstations. Antivirus software is installed to scan for new viruses.

## **Network architecture and management**

The agency has been equipped with enough devices to protect the network from external attacks. The network monitoring mechanism is used to prevent unauthorized access to the system from unauthorized devices.

## **Rules and procedures**

Official procedure and rules ensure the principles and requirements providing system's security, accessibility, completeness of processes (integrity, reliability, accuracy) and confidentiality. The Agency requires all staff to comply with the rules and procedures. Rule and procedures are in the public folder in which the relevant employees of the Agency have access.



The Agency has documented and implemented a number of rules and procedures on the following areas:

- Management of user authorities;
- Management of changes;
- Management of incidents and problems;
- Establishment and restoration of a backup copy;
- Emergency restoration policy/plan;
- Information security policy;
- Management of quality and accessibility;
- Risk management process;
- Internal Control procedure.

### **Establishment and restoration of a backup copy**

Agency has a documented and applicable procedure for managing and restoring the system's backups. The document includes the creation and restoration of copies for the components of the System, roles and responsibilities for copy creation and monitoring, and requirements for storing copies.

The system's database automatically extracts daily incremental and weekly full copies. Reserve copies of the backup copy are reviewed and tested once a month in the testing environment.

### **Management of changes**

The Agency has documented and applied the changes management procedure to ensure that all test scenarios are tested for the purpose of applying changes to the system and testing their functionality.

Changing or programming the system is carried out by an outside company. The application of changes to the real environment of the system is done by the programmers under the supervision of the Agency.

### **Logical input management**

The user's access to the system is carried out on the basis of service information based on the approval of the head of the relevant structural unit and the Agency's management. The service information indicates the user's right of the employee and on the basis of this confirmation letter, employees of the IT department provides the user with rights in the system.

User accounts of dismissed employees are blocked on time in the system. Changes related to the transfer of the user's authority to the new position is carried out in accordance with the above-mentioned procedure.

The system's high level of software, databases, and operating systems has been assigned to a limited number of user accounts only to fulfil its commitments.

### **Management process of incidents and problems**



The Agency has documented and applied procedures for detecting and resolving of incidents and problems. There are various communication channels, such as telephone, e-mail and hotline to inform the Technical support team about the incidents. Technical support team conducts a preliminary diagnostics and analysis of the survey and registers the accepted request for the solution in the technical team system when it meets the “incident” category.

The recurring or major incidents are governed on the basis of problem management procedure. The Agency has an official registry to track the identified problems, their causes and action plans to address these problems.

## **Risk management**

The Agency recognizes that risk assessment is one of the main procedures for the proper and safe management and protection of data. The Agency has applied the following approach to risk management initiative:

- Preparation of rules and procedures for determination, assessment and management of risks affecting the functioning of the System within the Agency;
- Determination of roles and responsibilities within risk management.

Defined and assessed risks are monitored and recorded in the Risk Registry for future monitoring and management.

## **Rule and procedure for emergency situations**

The agency has rules and procedures, including roles and responsibilities for emergency situations and business continuity sustainability during emergencies.

## **Confidentiality notice**

The Agency respects confidentiality and protects the confidentiality of collected personal information. The purpose of the confidentiality notice is to demonstrate its commitment to the protection of the personal data of the individuals who submit personal information to the Agency through the System. The notice was posted on the official website of the Agency.