



System and Organization Controls (SOC) 3 Report

Report on “Affordable housing” system

Relevant to Security, Availability, Processing integrity,

Confidentiality and Privacy

10 July, 2020

Independent Auditor's Report of EY Company

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

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 during the dates 30 June 2020 - 7 July 2020 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;
- ▶ 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.

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.

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.

Opinion:

Based on the outcome of the online System's analysis 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.

July 10, 2020



Adil Syzdykov
Partner, CPA



Nargiz Karimova
Partner, Audit and Advisory services



**Assertion of Agency's Management as to
Disclosure of Its Business Practices and Its Controls Over
Its «Affordable housing» system**

07 July, 2019

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The State Housing Development Agency (hereinafter - the Agency) is a public legal entity operating in the Republic of Azerbaijan. The main purpose 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 it for provision of concessional acquisition of apartments (affordable housing) to citizens of the Republic of Azerbaijan, as well as territorial planning in those land plots, to participate in the implementation of policy in the field of design and architecture and to coordinate activities.

The purpose of the Agency's "Affordable Housing" system (hereinafter - the System) is to provide equal conditions for persons willing to purchase apartments for sale in accordance with defined Regulation, simplify the procedure of concessional acquisition of apartments for them and to ensure transparency and efficiency during appeals, including taking advantage of information and communication technologies opportunities to receive the required documents in a real time, to save time and costs, to increase the quality and efficiency of the services provided.

Management of the Agency is responsible for designing, implementing and maintaining effective controls over the System to provide reasonable assurance that the commitments and system requirements related to the operation of the System are achieved.

There are inherent limitations in any system of internal control, including the possibility of human error and the circumvention of controls. Accordingly, respective controls may provide reasonable assurance on achievement of commitment and system requirements related to security, availability, processing integrity (completeness, reliability, accuracy) and confidentiality.

We performed an evaluation of the effectiveness of the controls over the System at 30 June – 7 July, 2020, using the criteria for the security, availability, processing integrity (completeness, reliability, accuracy) and confidentiality (Control Criteria) set forth in the AICPA's TSP section 100, Trust Services Principles and Criteria for Security, Availability, Processing Integrity (completeness, reliability, accuracy), Confidentiality, and Privacy. Based on this evaluation, we assert that the controls were effective for 30 June – 7 July, 2020 to provide reasonable assurance on the following:

- ▶ the System was protected against unauthorized access (physical and logical), use, or modification to meet the entity's commitments and system requirements;
- ▶ the System was available for operation and use to meet the entity's commitments and system requirements;

- ▶ the System processing was complete, reliable and accurate. At the same time, System's objective 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) were addressed;
- ▶ information designated as confidential was protected from unauthorized use and modification;
- ▶ personal information was collected, used, retained and disposed in accordance to the regulation.

Our attached description of the boundaries of the System describes the aspects of the System covered by our assertion.

Chairman of the Board

Sadig Sadigov



Description of State Housing Development Agency of Azerbaijan Republic

Overview of Agency's and its system's purpose

State Housing Development Agency is a public entity operating in the Republic of Azerbaijan (hereinafter - the Agency). The Agency was founded based on decree of the President of the Republic of Azerbaijan No.858 dated April 11, 2016. The main purpose 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 it for provision of concessional acquisition of apartments (affordable housing) to citizens of the Republic of Azerbaijan, as well as territorial planning in those land plots, to participate in the implementation of policy in the field of design and architecture and to coordinate activities.

The purpose of the Agency's "Affordable Housing" system (hereinafter - the System) is to provide equal conditions for persons willing to purchase apartments for sale in accordance with defined Regulation, simplify the procedure of concessional acquisition of apartments for them and to ensure transparency and efficiency during appeals, including taking advantage of information and communication technologies opportunities to receive the required documents in a real time, to save time and costs, to increase the quality and efficiency of the services provided.

The system provides with the opportunity for citizens to take part in Affordable housing sales and executes the following Agency's main business processes:

- ▶ To perform registration of eligible citizens who fit the requirements to purchase affordable houses;
- ▶ To perform sale of apartments selected by the registered citizens.

In order to ensure transparency, maintain the principle of equal conditions and enhance system security in the process of selection of apartments in "Affordable Housing" system, "CAPTCHA" (Completely Automated Public Turing test to tell Computers and Humans Apart) technology is implemented.

According to the "Rules of preferential acquisition of apartments at disposal of the State Housing Development Agency of the Republic of Azerbaijan by citizens" an apartment with limited access in the specified period of time can be selected sequentially according to waiting rule by two persons who have e-cabinet and who did not select an apartment within the framework of this announcement.

Only the person who has received the result on the Initial Agreement and placed it in the e-cabinet of the system is able to select mortgage payment method in the process of choosing apartment in the "Affordable Housing" system.



The following is a description of the key components of Agency's control environment:

Staff

The Agency's organizational structure provides the framework within which its activities are planned, executed, controlled and monitored. The Agency's management believes that establishing a relevant organizational structure includes considering key areas of authority, responsibility and lines of reporting. The Agency has developed organizational structure suited its needs. Agency's assignment of authority and responsibility are based on factors such as nature of operational activities and reporting and authorization hierarchies and how reporting relationships and authorization hierarchies are established. The Agency has documented information security policy, which communicated to all personnel. Policies and procedures are reviewed and updated as necessary.

Instructions and guidelines about design and operation of the System are publicly available in the official site of Agency with the following links. It provides users of the System with the information of procedures for purchase of concessional apartments through the system:

- ▶ Statute of the System:
(https://mida.gov.az/documents/Sistemin_esasnamesi.pdf).
- ▶ the System's user instructions for «Registration» module
(<https://mida.gov.az/documents/Qeydiyyat%20modulu%20telimat.pdf>).
- ▶ the System's user instructions for «Sales» module
([https://mida.gov.az/documents/GM%20sistem%20telimat%20\(sale\).pdf](https://mida.gov.az/documents/GM%20sistem%20telimat%20(sale).pdf)
- ▶ the System's user instructions for «Initial approval of mortgage loan» module
(https://mida.gov.az/documents/telimat-ilkinraziliq_03.06.2019_v2.pdf)
- ▶ The System's user instructions for «Waiting» module
(https://mida.gov.az/documents/telimat-qozleme_03.06.2019_v3.pdf)

The Agency conducts periodic awareness program to the personnel regarding information security, confidentiality and privacy practices. Also, an induction training is performed for new hires for provision of information about design and operation of the System. Training effectiveness is evaluated based on testing results.

Infrastructure

The System infrastructure is co-located in Data Center of third-party organization which offers cloud-based "Infrastructure as a Service" (IaaS) solutions (virtual network, virtual storage, virtual



infrastructure, backup, etc.). Agency relies on formal contract, which refers to the policies and procedures, including the management of the infrastructure and data center access restriction.

Network Monitoring and Security

A firewall system is in place to filter unauthorized inbound network traffic from Internet. The Agency has alternative firewall system for continuance of security and provision of high availability in the event of failure of primary firewall.

Antivirus software is utilized to protect registered production servers and workstations. The antivirus software is configured to scan for updates for viruses.

Network Architecture and Management

The Agency has implemented perimeter devices to protect the System's network from external attacks. Network monitoring mechanisms are in place to prevent and disconnect unauthorized access to the System's network from unauthorized devices.

Policies and Procedures

Formal policies and procedures codify the principles and requirements ensuring the security, availability, processing integrity (completeness, reliability, accuracy), confidentiality and privacy of the System. All personnel are required to adhere to the Agency's policies and procedures. These are located on the Agency's shared folder and can be accessed by any Agency personnel.

The Agency has documented and implemented the following policy and procedures:

- Access Control Management;
- Change Management;
- Incident and Problem Management;
- Backup and Restoration Management;
- Disaster Recovery Policy/Plan;
- Information Security Policy;
- Capacity and Availability Management;
- Risk Management procedure;
- Internal Control procedure.



Backup and Restoration management

The Agency has documented and implemented procedure for management of backup and restoration of the System. The document includes information such as backup schedule for components of the System, restoration schedule, roles and responsibilities for performance and monitoring of backup performance, backup storage requirements.

Daily incremental and weekly full backup of database is performed automatically. Performed backup is restored once in a month in the test environment for testing recoverability and integrity of backup.

Change Management

The Agency has documented and implemented procedures for management of change process to the System and ensuring that all the changes to the System have been approved and tested for functioning prior to implementation to production environment.

Change development is outsourced and supported by third party organization. Migration of change to the production is performed by developers, however this action is performed under monitoring and control of the Agency.

Logical Access management

Access request to the system is approved by head of respective department and Director of the Agency based on request form. The request form includes information regarding needed access rights and based on the approved request form, employees of IT Department provides access to the user in the system.

Access rights of terminated employees are timely revoked from the system. Procedure for changing access rights of users in the system due to transferring to the new job position is performed in accordance to the new user access setup procedure mentioned above.

Administrative access rights on application, database and OS level of servers are granted to limited number of employees who need such access to perform their job duties and responsibilities.

Incident and Problem management process

The Agency has documented and implemented procedures for identification and resolution of incidents and problems within the Agency. Employees have various communication channels such as telephone, e-mail and helpline to report the incidents to the Service Desk service.

Service desk service performs initial diagnostics and analysis of the received request and if the request falls under the incident category, it is registered in the helpdesk system for resolution.

Those incidents which are recurring or has wide impact is managed with problem management



procedures. The Agency has formalized a register for tracking of all the identified problems, their reasons and action plans for remediation of these problems.

Risk Management

The Agency recognizes that risk assessment is a critical component of its operations which helps to ensure that data is properly managed and secured. The Agency has undertaken the following approach for its risk management initiatives:

- Development of policies and procedures for identification, assessment and management of risks related to the operation of the System;
- Definition of roles and responsibilities within the risk management framework.

All the identified and assessed risks are tracked and registered in the Risk Register for further monitoring and management.

Disaster Recovery Policy / Plan

The Agency has documented and implemented disaster recovery policy and procedures with assigned roles and responsibilities for recovery of the System in case of disruption and continuance of business.

Privacy Notice

The Agency respects privacy and is committed to maintaining the privacy and confidentiality of the personal data collected. The purpose of Privacy Notice is to demonstrate the Agency's commitment to the privacy and protection of all persons who provide personal data to the Agency through the System. This notice is available in the Agency's official site.