

# Expert Method of Quality Management System of Housing and Communal Services

S. S. Achilov

Ph.D. in Economics, Senior Lecturer of Samarkand branch of Tashkent University of Information Technology  
Email: achilov.57@mail.ru, cell phone. +99890-6001739

## Abstract:

Housing and community services (HCS) quality and reliability management is one of the cornerstones of any investment in the country's real economic sectors. Addressing the quality of housing and communal services necessitates a holistic approach to housing facility management, as well as the full implementation of service concepts and norms by providers and customers. The article examines one of the novel and unconventional approaches to addressing the pressing issue of quality management in the housing and communal services sector, which is linked to expert evaluation and will result in the creation of convenience and comfort in the lives of the city's residents through the provision of a diverse range of modern and comfortable services. As a result, the new method outlined in this article is relevant and necessary in light of the need to improve the management system and build a market economic mechanism for evaluating the quality of public services in Uzbekistan.

**Keywords:** quality of housing and communal services, public utilities, housing services, municipal life support systems, management effectiveness, information technology, information system, online information portals, housing facilities, project management of HCS, design processes of HCS, expert method, expert ballot scores, questionnaires.

## 1. INTRODUCTION

Housing and community services are a substantial and socially significant sector of the economy in every country, since they ensure the proper operation of residential buildings and provide people with a safe, comfortable, and convenient stay. As a result, quality housing and communal services are provided to the population with the active participation of public authorities and private corporate structures. It is a complex industrial, technical and socio-economic complex, which includes the following components: housing and maintenance production; municipal energy and heat supply; water supply and sewage; exterior landscaping and routine cleaning; monitoring system and building overhaul; communication and control systems; environmental and sanitary-epidemiological control; settlements for utilities, as well as social and technical infrastructure to serve residents.

Management firms provide housing and communal services to ensure people's comfort by providing a wide range of modern community services and keeping housing facilities in good working order. Currently, the HCS is a unique sector of the Republic of Uzbekistan's economy, employing thousands of people around the country. They ensure that the complete engineering infrastructure of facilities, which includes not only housing but also administrative complexes, manufacturing facilities, and social buildings, runs smoothly. Management firms provide housing and communal services to ensure people's comfort by providing a wide range of modern community services and keeping housing facilities in good working order. Currently, the HCS is a unique sector of the Republic of Uzbekistan's economy, employing thousands of people around the country. They ensure that the complete engineering infrastructure of facilities,



which includes not only housing but also administrative complexes, manufacturing facilities, and social buildings, runs smoothly. Housing services include outside landscaping and environmental control, as well as maintenance and significant repairs of residential premises and common property of the apartment complex. Housing and community services are managed by a contract between the homeowner, the management business, and various types of ownership providers who offer services for the maintenance, repair, and operation of the housing stock and engineering infrastructure. Housing stock includes all sorts of housing (a room in a common apartment, a separate apartment, a private house, and so on). Each housing fund object serves as both a source of housing and a source of communal services, and it is owned by someone. The following types of dwelling are distinguished based on ownership: Private contains residential properties held by persons and legal entities; public funds, which are owned by public associations; state-owned housing in the face of authorized bodies; collective funds, which are owned collectively by numerous associations. As a result, the housing stock - the objects of housing and community services - governed by local governments must collectively provide excellent and reliable services to the population. [3,5,6]. The improvement of contractual relations between the homeowner, the management business, and energy providers is one of the most pressing issues facing public service authorities. One of the key causes of the housing crisis and its effects is the poor quality and fragility of the regulatory framework governing public relations in housing and community services. In this regard, citizen participation in housing management is increasing in order to save maintenance costs and improve the quality of repair and operation of public services. Quality and stable housing and community services are provided in the republic with the active cooperation of governmental agencies and

private businesses. The state must create the necessary conditions for the development of a viable legal and regulatory framework for communal services. It is well known that community services are mostly confined to municipal authorities regulating the activity of private firms and protecting the rights of the population, ensuring the delivery of high-quality, uninterrupted services. HCS management is a sort of private enterprise in nations like the United States, Sweden, Finland, Germany, Poland, and England. Management is done by management organizations or firms that are paid for their services. The homeowners' association is in charge of housing stock maintenance, while the owners are in charge of ensuring the housing complex's operation and disposing of the property. They are known as homeowners associations in Uzbekistan, and they handle financial resources, enter into contracts for the procurement of services, and are required to have a certificate confirming their professionalism, experience, and financial stability. According to independent researchers, the HCS is one of Uzbekistan's most monopolized sectors in the economy. Monopolism in the public service system prevents consumers from exercising their rights, diminishes organizations' accountability for service delivery and quality, and leads to the establishment of monopolistic prices. Housing and communal services, in our opinion, should be understood as a complex political, socio-economic sphere that provides vital and socially important services to the country's population, with the simultaneous linkage of construction and housing organizations in a single process chain with public utility enterprises. We believe that Uzbekistan should take advantage of historical and international expertise in managing the quality of community services and try to follow a "market model." Because of the historical conditions of centralization of heating, wastewater, and water supply systems in Uzbekistan, it is the easiest to



put into practice. The authorities and the judiciary both provide substantial legal protection for consumers in this approach. Furthermore, for effective management of the housing and community services sector, its role and location in the country's economy must be substantially reconsidered. As a result, it must be evaluated not only economically, but also politically and socially, taking into account the country's history and population mentality, as well as climatic and natural circumstances in the area. [2,5,11]. However, in other circumstances, an inadequate management structure and poor service delivery result in a true HCS crisis. All of these issues existed previously, but they have gotten much worse due to market conditions. The following are the primary factors, in our opinion:

- excessive concentration of management at the level of local executive authorities and state monopoly on property;
- weak technical base, lack of industry capacity and control over the use of resources;
- lack of necessary funds for development and unreasonably high costs of current maintenance of housing facilities;
- ineffective mechanism for setting tariffs and collecting payments for utilities, payment systems;
- inconsistency of prices and tariffs for services with the actual cost of their production;
- underdevelopment of market relations and lack of effective economic incentives;
- lack of modern scientific and technical management and protection of consumer interests;
- lack of an effective system of social protection in the introduction of market mechanisms based on information technology;

Only by eliminating the aforementioned causes can management efficiency in the multi-branch structure of community services increase, resulting in a good human livelihood as well as the stable operation of the territory's social and industrial

infrastructure. [2,3,10]. According to statistics, the HCS sector accounts for 50 to 70 percent of fixed assets owned by local executives and acts as the material foundation for their operations as well as the most essential aspect of their social duty. Lack of funding for housing facility maintenance, irrational mechanisms of their formation and usage, and unjustifiable reorganization of the management structure have all contributed to a severe fall in the quality and dependability of housing and communal facility operation. As a result, organizers and developers of technical public-service initiatives establish a quality management system based on basic effective procedures. The growth of transparent private and public investments in the real sectors of the economy should be recognized as one of the cornerstones of quality management in the field of housing and communal services. According to international and a number of other national standards, the goal of any project is to meet the requirements of the project customer. This goal is achieved by ensuring quality management and the end result of this project. Quality is a synthetic indicator that reflects the cumulative manifestation of various factors in a given process. It is known that the main indicators that reflect the quality of any project are: purpose, reliability, manufacturability, standardization, unification, safety, etc. Quality and reliability in the sphere of HCS are evaluated on the basis of quantitative measurement of its determining properties, where the ultimate goal is to create convenience and comfort in the lives of citizens by providing a wide range of modern utilities and housing services. [1,4,9]. Among the many problems that require urgent solutions in the implementation of housing and communal reform, a prominent place is occupied by the objectivity, reliability and accessibility of information. Namely, information about the housing stock and residents, the consumption of energy resources, information about the current state of



housing and utilities, prices and tariffs for services in accordance with the Presidential Decree on 18 April 2017 № PD-5017 "On measures to further improve the management of housing and communal services" is relevant to ensure the effective organization of the HCS units of the Republic of Uzbekistan. Many residents are now expressing a desire to be able to communicate with management companies, utility and resource providers, and homeowners' association management in real time. This desire is due to the fact that people are dissatisfied with the way housing managers and executives treat their day-to-day responsibilities. To protect your rights, you need to properly draft a claim and be familiar with many laws, regulations and legal documents in the field of HCS. Understanding the entire bureaucratic system of independent problem solving for ordinary residents of the republic is difficult and, in some cases, without results. Therefore, the introduction of modern information technology will create a qualitatively new system of management of local executive bodies of public services, as well as a system of regulated interaction with the executive bodies of state power. Modern information technology should provide monitoring of the state of utilities, engineering and communication networks, control of payments for services rendered, as well as information support for management decision-making. Consequently, the systematic use of modern technology will lead to qualitative changes in the life of the population, as well as allow, at the first stage, to make available information about the state in the sphere of services in real time. To date, the republic is gradually automating all areas of HCS, as well as the calculation and accounting collection of utility bills for all types of services. The systematic introduction of Web-portals of housing and communal services ([e-kommunal.uz](http://e-kommunal.uz)), open data ([data.gov.uz](http://data.gov.uz)) and regulations ([regulation.gov.uz](http://regulation.gov.uz)) as positive examples of the state providing mechanisms of

openness, transparency and feedback to the public on their daily problems. Created a unified online information portal at the first stage to make available information on the calculations for public services rendered, then allow the payer to remotely manage their personal account for all services issued. By registering on the portal of the information center, any resident or organization of the republic, using Internet access, can not only submit indications of meters of their housing, but also see the charges on all types of public services made on his personal account, to pay the accrued amounts in real time. Thus, the introduction of information technology is relevant and necessary to control the work of public utilities and convenient work with appeals from citizens. The information system helps to improve the quality of decision-making, social protection of the population and enhances control over the quality of services in the sphere of public utilities. It should be noted that informational Web-portals were created in the sphere of housing and communal services, through which citizens have the opportunity to real-time, rapid and comfortable communication with management companies, suppliers of public services and resources. That is, to assert their legal rights and monitor the quality of communal and housing services provided to them [3,13]. However, the prospects for the development of information technology in the HCS and, in particular, in the housing sector, at the level of international standards are still disappointing. And even those various automated systems, which are now used in the housing and communal complex, do not meet modern requirements: they, for example, do not provide for the implementation of the social orientation of the population and protect the rights of consumers of housing and communal services in disputed situations. And this is one of the priorities of the reform of housing and communal services. Most of the implemented systems do not provide dynamic adjustment to the constantly



changing legislation and regulatory framework and do not provide, say, transparency and reliability of the process of calculation and payment of housing and utility bills. The problems of accelerated and high-quality introduction of new technologies in the sphere of housing and communal services are due to several reasons: the system of tariff education itself does not stimulate the introduction of new technologies and complexes, as well as for the formation of tariffs does not take into account the principles of the market mechanism. Therefore, the current tariffs do not allow increasing the cost of overhaul and complete replacement of equipment and instrumentation with qualitatively new and modern technology. Thus, the purpose of improving the quality management of public services is to create favorable conditions for bringing the housing stock and communal infrastructure to world quality standards, which will provide comfortable living conditions for citizens. The provision of targeted and transparent financial support for HCS objects, will ensure the effectiveness of infrastructure management of housing facilities and improve the quality of public services. However, the current negative situation hinders the introduction of the world's most advanced information systems in the sphere of public services. Therefore, according to many experts, this sphere of economic services is in crisis, historically conditioned by a number of circumstances: inefficient management system, high material costs, undeveloped competitive environment, chronic non-payments. This problem can be solved successfully only on the basis of advanced information technology, as well as the introduction of regulated interaction with the executive bodies of state power. Modern information technology should provide transparent and objective monitoring of the state of the housing stock, engineering networks and communications of buildings, passportization of houses, settlements with the population and targeted social assistance, control of

payments for heating and hot water, as well as informational support for management decision-making. A single information and billing center is a database for the entire spectrum of housing and communal services and combining into a single information and technological chain all services of public utilities. The initial basis for the introduction of information technology should be an already built and well-established technical base of the city and the district, which is a communication system. It should be based on a qualitatively new information system that will bridge the gap between the already relatively developed base and law enforcement practice. And this will improve the quality of decision-making, social protection of the population and increase control over housing and communal sphere of activity. The effect of the use of information technology is possible only with the rational and targeted use of monetary and material resources, which results in sustainable economic development and improves the quality of life of the population. Therefore, the main deterrent to the introduction of modern technology in the system of public services is economic, i.e. lack of or lack of funding is of key importance. It should be emphasized that, in the transition to full-scale automation of business processes utilities, using innovative methods and technologies of the Internet of things will allow to form a unified information space of the industry, to create IT systems of informing customers and processing their data, to implement mobile and cloud solutions. [5,16]. The design processes of modern communal and housing services are accompanied by regular scheduled inspections by the relevant government agencies to determine whether the services meet all regulatory requirements. Only strict adherence to the rules of service production and a given technological process can be ensured by the production discipline of all participants in the project process. However, for some reason, complying with all regulatory rules



and technology at the stage of operation, all kinds of utilities are fundamentally different in quality, durability from their foreign counterparts and standards. As a result, it turns out that either our technology and regulatory documents are much outdated, or just not suitable for our local climatic and natural conditions, or most importantly, corrupt structures are successfully involved in the preparation of project documentation or tenders. At the same time, in the system of public services corruption, figuratively speaking, participates invisibly, it is very difficult to detect it. Meanwhile, corruption in the sphere of services can be detected only after a very thorough and objective analysis of the final results of the services provided. Here, we agree that the main problem is the inordinate appetite of corrupt officials, who make money from the implementation of the project by lobbying the interests of other competitive companies. As a result, the cost of the utility project increases, and the quality and reliability is very different from the regulatory readings. The most important aspect of the project is to consider its actual cost and the duration of its operation. Therefore, we offer an optimal and effective bottom-up approach to quality management of implemented and operated utility projects. The essence of the method is as follows: firstly, after the development of project documentation, it is necessary that it passed the examination, according to the provision. Then, in order to evaluate and analyze the quality of the project operation process, competent specialists - experts must participate. Sample expert survey is conducted in all phases of the implementation of the HCS project:

- in planning and organizing;
- at the stage of formation of fixed assets;
- in operation.

From this we can assume that the proposed new approach is an effective, efficient and effective method of managing the quality of public services. The main purpose of the bottom-up method is to integrate all major processes of implementing housing and

communal services projects into a single quality management plan called "plan - control - cost" based on expert assessment methods. Each phase of the work and services performed should be an amalgamation of all the critical parts of the whole project. The proposed new method of quality management of public services provides efficiency and focus of all organizational, technical and technological solutions to achieve the end result, with the required quality, within the specified time frame, with minimum cost. Managing the quality of public services is a complex, scientific, technical, economic and social problem. Therefore, the project must represent a single chain, from individual local organizational and technical measures to continuous activities within the framework of the sectoral large utility organizations. Consequently, the quality of public services, should be considered at various stages of project implementation, aimed at meeting certain production, economic and social requirements. Therefore, the proposed expert method is used when the indicators of quality of public services cannot be determined due to insufficient reliable information and the impossibility under specific conditions of assessment. Currently, the expert method of assessing the quality and control of public services is a scientifically sound method of analyzing complex problems that cannot be formalized. The expert is the repository of a large amount of objective and rationally processed information and can therefore be regarded as a qualitative source. The group opinion of experts (more than 35 experts) is close to the true solution of the problem. The main varieties of peer review method include: questionnaire, interviewing, brainstorming, discussion, meeting, operative game, and scenario. Each of these methods of expert evaluation has its own advantages and disadvantages, determining the rational area of application. To build survey procedures and data processing algorithms, methods of measurement theory and mathematical statistics are



usually used. The generalized judgment of experts obtained as a result of statistical processing is accepted as an objective solution to the problems. In the practical use of the expert method to assess the quality of public services, a working and expert group is formed. The working group organizes the procedure of interviewing experts, collects questionnaires, works out and analyzes expert scores. The expert group is formed from highly qualified and competent specialists in the field of housing and communal services. It is very important that the expert group is formed not for one-time expertise, but as a permanent and functioning body with a stable composition of experts. In order to obtain reliable results, a scientifically based system of questioning and ballot scores of experts on the specified questions of the questionnaire are required. The processing of the data received from the experts serves as the source material to confirm the quality and reliability, as well as the effectiveness of the operation of the project processes of HCS. [4,7,8]. The article also shows that in order to maximize the effectiveness of public services, it is necessary to establish a quantitative or point scale for all quality indicators used. Then the sum of points of each of the factors and the total sum of points is determined. Then the weighting coefficients of the points of each factor are evaluated and the results are checked by summing up. Below is an example, where the questionnaire on the survey of competent experts on the quality and reliability of housing and communal services in Samarkand in 2020. The questionnaire consists of 12 questions, and the answers of experts (more than 35) are recorded on a 10-point scale for all participating expert members (1-min point, 10-max point).

The questionnaire includes the following topical issues determining the quality and efficiency of housing and communal services of the city:

1. Convenience and comfort of housing and communal services after the introduction of modern information technology;
2. Introduction of qualitatively new principles and rules for the organization of housing and communal services on the basis of foreign analogues;
3. Level of quality and reliability of housing and communal services, taking into account local climatic and natural conditions;
4. Evaluate the effectiveness and monitoring of implemented HCS projects according to national and international standards;
5. Create a unified information space for the industry, create IT systems to inform customers and process data;
6. The need to introduce the world's most advanced information systems and methods for calculating public services.
7. Development of market methodological guidelines for assessing the efficiency and monitoring of public utilities;
8. Improving the efficiency and quality of capital investments, as well as the transparency of project documentation;
9. Supporting the development of national innovative projects in the HCS that develop digital infrastructure, platforms and technologies;
10. Potential integration with different management solutions with national specifics using modern IT products;
11. Introduction of information modeling technologies in engineering and management processes of HCS, as well as motivation of their participants.
12. Improvement of the system for managing the condition of the network of HCS facilities;

Table 1. Expert scoring of factors



Expert s Factors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	6	4	4	5	4	5	4	3	4	4	5	4	5	4	5	6	4	5
2	5	5	6	4	5	3	5	4	3	6	4	6	3	4	5	6	5	3
3	4	5	6	3	4	5	4	5	6	3	5	4	5	3	6	5	6	5
4	4	6	5	3	6	4	5	3	6	5	6	5	4	3	5	6	5	3
5	5	6	3	4	5	4	5	4	5	4	5	4	5	3	5	6	5	3
6	5	6	4	3	6	5	4	3	5	4	5	3	4	6	3	5	6	5
7	6	5	4	4	3	4	5	6	5	6	3	4	5	6	4	5	3	4
8	5	6	5	4	5	6	5	3	6	5	4	5	6	5	6	5	4	5
9	4	5	6	5	6	5	5	6	5	4	5	6	6	5	4	3	5	6
10	5	6	5	5	4	6	5	6	4	5	3	5	5	6	5	5	6	4
11	4	5	6	5	6	7	5	6	5	4	5	6	5	4	6	5	6	5
12	5	6	7	5	4	6	6	5	5	4	3	4	5	6	7	6	5	5
<b>Total</b>	<b>58</b>	<b>65</b>	<b>61</b>	<b>50</b>	<b>58</b>	<b>60</b>	<b>58</b>	<b>54</b>	<b>59</b>	<b>54</b>	<b>53</b>	<b>56</b>	<b>58</b>	<b>55</b>	<b>61</b>	<b>63</b>	<b>60</b>	<b>53</b>

Continuation of Table 1.

19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	Total
3	6	5	4	4	6	4	7	4	6	4	4	3	4	7	4	5	<b>161</b>
5	5	5	5	3	4	7	4	5	4	4	6	4	7	4	4	6	<b>164</b>
3	5	4	3	6	5	4	7	4	4	5	4	6	4	5	4	6	<b>163</b>
5	6	4	6	3	4	7	4	6	4	6	4	5	4	4	6	5	<b>167</b>
6	5	6	5	4	4	3	5	6	4	6	4	3	4	7	5	6	<b>164</b>
3	5	5	6	5	4	3	6	5	5	4	5	6	5	5	6	5	<b>165</b>
5	6	6	5	6	5	6	4	6	3	7	4	5	6	5	6	5	<b>172</b>
6	5	5	6	5	6	4	5	6	5	4	7	6	5	6	5	6	<b>182</b>
4	5	6	5	6	5	6	5	5	6	6	5	4	5	4	5	6	<b>179</b>
5	6	5	5	6	6	5	4	6	5	6	5	4	6	5	6	5	<b>180</b>
4	7	6	5	5	6	6	5	4	6	5	4	5	6	5	5	6	<b>180</b>
6	4	5	6	5	6	5	6	5	4	6	5	6	5	5	6	5	<b>184</b>
<b>55</b>	<b>65</b>	<b>62</b>	<b>61</b>	<b>58</b>	<b>61</b>	<b>60</b>	<b>62</b>	<b>62</b>	<b>56</b>	<b>63</b>	<b>57</b>	<b>57</b>	<b>61</b>	<b>62</b>	<b>62</b>	<b>66</b>	<b>2061</b>

The final quantitative assessment of the factor is determined using the method of simple ranking, the data are shown in Table 1. Using the method of mathematical statistics, we obtain the generalized opinion of the experts. The average rank of each factor, the average statistical value of the  $S_j$ -th factor is determined.

$$S_j = \frac{\sum_{i=1}^{35} a_{ij}}{m_j}$$

where,  $S_j$  – average value of factors,  $a_{ij}$  – expert evaluation of the factor.

$m_j$  - number of experts, evaluating the  $j$ -th factor,  $i$  - expert number,  
 $j$  - factor number. After processing the data in Table 1, the average rank of the factors was:

$S_1=4,6;$      $S_2=4,7;$      $S_3=4,7;$   
 $S_4=4,8;$      $S_5=4,7;$      $S_6=4,7;$   
 $S_7=4,9;$      $S_8=5,2;$      $S_9=5,1;$   
 $S_{10}=5,1;$      $S_{11}=5,1;$      $S_{12}=5,3;$

Based on the results of expert scoring, we can conclude that the overall expert opinion on the quality and reliability of public



services in Samarkand is approximately at the average regulatory level, i.e., at a satisfactory level. Statistical processing of the final Statistics processing of final results on the current state of housing stock and engineering communications and the quality of public services, received from the experts' scores confirms that the expert methods are the most effective and optimal tools for determining qualitatively new indicators and directions of efficiency of housing and communal services projects. [7,9]. Consequently, the planned level of quality of public services of the city must be balanced with the amount of consumer demand, determined by the actual ability to pay potential consumers. As a result, we can recommend that Uzbekistan should be updated at the legislative level of standards and regulations in the field of public services, as well as the rules of their implementation based on expert evaluations and foreign analogues. Further, in all stages of the implementation of the city's public services project, as well as national regulatory guidelines and international standards should include the following relevant requirements and recommendations:

- introduction of qualitatively new principles and rules of organization of housing and communal services on the basis of foreign analogues;
- control the level of efficiency and quality of implementation of housing and public utilities projects, according to national and international standards;
- Improvement of the system for managing the condition of the network of HCS facilities;
- Increasing the efficiency and quality of capital investments, as well as the transparency of project documentation;
- introduction of information modeling technologies into engineering and management processes in the housing and utilities sector, as well as the motivation of their participants;
- supporting the development of national innovative enterprises of the housing and

utilities sector that develop digital infrastructure, platforms and technologies;

- potential integration with different solutions, including those with national specifics, using modern IT products.

- development of market methodological recommendations for assessing the effectiveness and monitoring of public service facilities, taking into account available resources;

- introduction of the world's most advanced information systems and methods of calculation in the sphere of public services. Thus, modern methods of managing the quality of communal services have good potential for digitalization. The gradual transition to digital for economic reasons is overdue: despite many unfavorable factors, a significant number of the most progressive housing and communal services companies are adopting new technologies in their work, seeing their high potential and efficiency. The degree of complexity of building a digital economy of the HCS sector is among the most important areas, which, according to experts, should begin the digital transformation of the Uzbek economy. This point of view is supported by both the quite obvious social importance of the industry and a number of economic and political factors. The introduction of unified billing will enable utility customers to receive reliable information about the status of personal accounts by entering PINFL in payment services such as Payme, Apelsin and Click. This will eliminate the need to provide additional certificates to each utility company and reduce the time it takes to pay for utilities. [5,16]. Thus, the modern global digital economy is radically changing the way we think about familiar things. New terms and methods are appearing that can best explain the processes taking place. Solving the problem of the quality of public services requires a comprehensive approach to project management, with priority on the requirements of the consumer and the supplier. The economic reforms carried out in Uzbekistan have had



a significant impact on the development and functioning of the housing and communal sector. The main objectives and priorities of development in this sector have changed, that is, a gradual transition to 100% prepayment for housing and communal services; promote the introduction of new technologies; support the structural transformation of HCS services. To summarize, the expert method is an optimal and effective tool for managing the quality of public services. Therefore, the expert method should be used as one of the new and non-standard approaches to solving the urgent problem of the efficiency of public services, which will lead to qualitative changes in the life of the population of the city. Consequently, only a comprehensive approach based on methods of expert evaluations and systematic use of modern information technology will seriously improve the quality and transparency of monitoring of communal service facilities in Uzbekistan and is a determining criterion for the effectiveness and durability of their operation.

## 2. REFERENCES:

1. Achilov S.S., Vafaev M.A. "Effective implementation of information technologies in the system of housing and communal services. The importance of information and communal technologies in the innovative development of industries, 4-5 March 2021. Republican scientific and technical conference. Tashkent. 2021. Collection of reports. Part 1. p.39-42.
2. S.S. Achilov, M.H. Razokova "Information technologies in the sphere of housing and communal services" Proceedings of the Republican scientific-practical conference "Development of innovation activity in the region: scientific problems and solutions" November 19, 2021, Fergana, Collection of reports, p.110-111.
3. Achilov, S. S., & Razokova, M. H." INFORMATION TECHNOLOGIES IN THE SYSTEM OF HOUSING AND COMMUNAL SERVICES ", CENTRAL ASIAN JOURNAL OF THEORETICAL & APPLIED SCIENCES, 3(1), 19-23. Retrieved from January, Vol.3No.1(2022): <http://cajotas.centralasianstudies.org/index.php/CAJOTAS/article/view/378>
4. Achilov S.S., «Expert Method of Quality Management of Road Construction Project», published on the journal of, «Middle European Scientific Bulletin, VOLUME», 15-August 2021, Chexiya, ISSN(E):2694-9970, p. 40-47.
5. Presidential Decree No. PD-5017 on April 18, 2017 "On measures to further improve the management of housing and communal services system, [lex.uz/@hugugiy/axborot](http://lex.uz/@hugugiy/axborot)
6. National review of housing and land use in Uzbekistan. Country reviews. UNITED NATIONS. New York and Geneva, 2015, p.156.
7. Website: <http://www.unece.org>  
.Электронная почта: [info.ece@unece.org](mailto:info.ece@unece.org)
8. Beshelev S.D., Gurvich F.G. Mathematical and statistical methods of expert evaluations,. 2nd ed.1980.p.263.
9. Expert estimates in scientific and technical forecasting / G.M. Dobrov, Y.V. Ershov, E.I. Levitin, L.P. Smirnov. - Kiev: Naukova Dumka, 1974. – p.160.
10. Quality Management. Textbook, Edited by S.D. Ilyenkova. 3rd ed. revised and supplemented, Moscow: UNITI-DANA, 2012. P.352.
11. Parshkov A.E. Information technologies and their application in the sphere of housing and communal services / A. E. Parshkov. - Text: direct // Technics. Technologies. Engineering. -2018r. — № 1 (7). — P. 14-17. — URL:



- <https://moluch.ru/th/8/archive/76/3012/> (circulation date: 15.10.2021).
12. Kozhevnikov S.A. A. Public-private partnership in the region's housing and communal services: problems and prospects for development [Text]: monograph / S. A. Kozhevnikov, T. V. Uskova. - Vologda: ISED T RAS, 2016. — P.18.
  13. Chaadaeva V. V. Information technologies in the management of HCS enterprises// New Science: Strategies and Vectors of Development. 2016. — № 3–1 (70). — P. 250.
  14. Innovations and new technologies in the sphere of HCS [Electronic resource]. - Mode of access: <https://www.rc-online.ru/about/smi/innovatsii-i-novye-tehnologii-v-sfere-zhkh> (circulation date 20.1.02017)
  15. Internet of Things in Housing and Communal Services - IoT in HCS 2017 [Electronic resource]. - Access mode.: <https://www.rspectr.com/events/295/internet-veshej-v-zhilishno-kommunalnom-hozyajstve-iot-v-zhkh-2017> (circulation date 20.10.2017)
  16. Digitalization of housing and communal services [Electronic resource]. - Access mode: <https://www.osp.ru/cw/2017/10/13052377/> (circulation date 20.10.2017)
  17. Zotov V.B. Modern information technologies in reforming housing and communal services / V.B. Zotov. [Electronic resource]. - Access mode: [http://vasilievaa.narod.ru/ptpu/174\\_](http://vasilievaa.narod.ru/ptpu/174_)