Analysis and Classification of Municipalities' Processes with Emphasis on Their Duties (Case Study: Yazd Municipality)*

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A R T I C L E   I N F O

A B S T R A C T

Objective: Creating a transparent and agile organization with optimized processes that achieves its goals with maximum efficiency and effectiveness of activities has always been emphasized. The process approach and standardization of the stages of performing executive activities in large complexes and organizations are currently being considered by most super organizations as a proven requirement to achieve the aforementioned goals. On this basis, the purpose of the research is to analyze and classify the processes of municipalities with an emphasis on their duties.

Methods: In terms of the purpose, the present research is of applied type and, in terms of the nature of the materials and information collected, it is descriptive-analytical and of the case study type. The approach used in designing the organizational structure is a process-oriented. First, by examining the duties of the municipal institution in Yazd and considering the experts' opinions, appropriate components and definitions were extracted..

Results: By classifying and improving processes, the output obtained from the research findings was divided into two categories: main processes and management and support processes, which included 12 different macro processes, among which the information technology management process was related to research.

Conclusion: The information technology management process pursues various goals, such as refining and clarifying municipal processes at the headquarters, regional, and organizational levels, reducing interference and parallelism of processes in the municipality, achieving a comprehensive process reference, and providing a platform for designing integrated systems.

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1. Introduction

Nowadays, updating information in urban areas is of great importance, because this information provides the basis for many applications, including land-use change studies and environmental studies. Remote sensing satellite data provide an opportunity to obtain information from urban areas at different resolutions and are widely employed for change detection applications. Change detection is a set of activities that define differences at various times. The subject of change detection provides concepts for studying and understanding patterns, and processes of ecosystems across a range of temporal and spatial scales (2012, X. Chen, J. Chen). Several methods have been developed to detect changes using remote sensing data, and new methods are emerging. However, it is often difficult to accurately identify land use from remote sensing data because urban landscapes are complex combinations of different levels (Waresi et al., 2016).

Cities are engines of economic growth, and social and economic opportunities, and the lack of proper urban management has caused them to face many problems. In the meantime, urban management is a relatively new issue that has gained great importance due to the increase in urbanization and the spread of a wave of decentralization programs in recent decades (Mousavi, 2014). In the modern world, the main role of urban management, in order to provide suitable living conditions and well-being for all citizens, is to provide urban services, including the provision of welfare facilities through the urban management system (Hezri, 2014). It can be said that many urban problems are not merely the result of intense demand and population density, but rather a combination of the two, along with the inability of municipalities to address urban problems due to the lack of appropriate tools for implementing projects, as well as issues related to their revenue generation give rise to these problems. Therefore, among the various sectors of urban management, the provision of financial and revenue resources for municipalities is of particular importance because, on the one hand, the acquisition of municipal revenue has a major impact on providing services to citizens, on the other hand, the lack of sufficient revenue causes the lack of essential services in the city (Ghanbari et al., 2019). Performance evaluation is one of the main and fundamental tools of top management to achieve the goals and plans of the organization. In public organizations such as municipalities, after specifying the goals, policies, and strategies that provide the goals are determined within the framework of legal duties, and then the necessary planning is carried out in order to achieve the goals, duties, and strategies. In the planning process, the needs, priorities, and expectations of citizens, as well as environmental conditions (economic, social, cultural, and political considerations), threats, opportunities, resources, facilities, and limitations are taken into account, and on this basis, the desired activities, the timetable for the implementation of activities, procedures, methods, indicators, criteria, and standards are determined (Ehsanifard, 2022).

There are common problems in the organizational structure of the country's municipalities. These problems have a significant impact on the performance of municipalities. The first problem in this regard is that this structure is not up-to-date. The current organizational structure of municipalities is a legacy of the past that has little scientific basis. The second problem is the lack of accurate descriptions of their jobs, positions, and conditions for their qualification and classification. The lack of experts, and the disproportion between the job and specialization of individuals, are other major problems in municipalities, even though there are currently many specialized fields associated with cities and municipalities at the level of postgraduate education. Another significant issue is the failure to consider the environmental characteristics of each city in designing the organizational structure. Iran is one of the countries that has a great deal of environmental, geographical, and even cultural diversity (Ashrafi, 2013). This wide diversity leads to differences in the organizational needs of the municipality and their duties. However, what has determined the jobs and organizational structure required for the implementation of the jobs of municipalities, has been dictated from high levels and derived from central policies and decisions. There are different approaches to studying and designing an organization. The essence of the prevailing approaches is that an organizational model is chosen as a basis, considering the nature of the organization, and based on that basis, a set of rules is presented for designing the structure, jobs, and horizontal and vertical relationships in the organization (Albino, 2015). One of the common approaches to designing organizations is the process approach. In this way, the tasks that the organization must do are determined. These tasks, then, are transformed into a set

of jobs with the help of job design. After that, the tasks and powers of each job are determined. In the meantime, the compatibility of duties and powers in different jobs is evaluated, and the duties and powers are coordinated. Then, jobs are categorized. Each category of jobs is defined in an organizational unit. This classification is accomplished for organizational units at different levels. The selected organizational model and the domain of control at different levels of the organization have a great impact on the classification of jobs and organizational units at different levels. After this, the horizontal and vertical relationships of the organization are designed (Hernaus, 2008).

2- Research Background

Hassanloo (2023) conducted a study titled "Analysis and Recognition of Public Relations and Electronic Municipality in the Financial Administrative Management System of Municipalities". He classified the development, formation, and establishment of electronic municipalities, which follow the e-government model, into four stages: emergence, promotion, interaction, and integration. All municipal services are provided online and around the clock with high quality and secure factors using information and communication technology tools. The importance of public relations and electronic municipality in the financial-administrative management system of municipalities in order to increase the speed and accuracy of various activities of organizations and the relationship between its various components and, as a result, increase their productivity is clearly evident.
Safari and Kanaani Ahmadbegloo (2022) have also referred to the e-municipality as the basis of the e-city. The position and role of public relations in the municipality have stated that public relations has two general and specific practical concepts, and from its general concept, two perceptions are inferred: the quality of a person's relationship with the person or people of the society around him and determining the attitudes governing the existing relations in a society. The term public relations in its specific sense means a specific department, sector, unit, or a specific part of a governmental or non-governmental body.
Shahrokh and Khoshal (2031) have studied the reasons for the necessity of establishing an electronic municipality in Darab Municipality and the obstacles and problems. They pointed out that the realization of e-municipality achieves the goals of urban management in the sustainable development of the city and the participation of citizens. Alborz, Saeedi, and Afkhami (2021) studied the components related to the position of electronic public relations in Tehran Municipality (11 districts). The findings of this study, focusing on the components of computer literacy, namely electronic public relations training, attitudes of managers and experts towards electronic public relations, and the extent of use of electronic public relations technologies (e-mail, e-newsletter, SMS system, multimedia, discussion forum, electronic survey, telegram), showed that electronic public relations are used in a desirable manner in the public relations units of the 11 districts of Tehran Municipality.
Rahimi and Khodadad (2014) have investigated the effect of the roles of public relations of the municipality on the satisfaction of clients in the municipality of Ardabil province. The main purpose of this study was to measure the effect of the roles of public relations of the municipality on clients' satisfaction in the municipality of Ardabil province. The roles of public relations as an independent variable include the components of persuasive role, informative role, problem-solving role, consultative role, relationship development role, and public education role.
Mousavi (2013) conducted a study titled "Analyzing the Role of Factors Affecting the Performance of Municipalities and Measuring Citizen Satisfaction". The results of evaluating the performance of municipalities from the perspective of citizens show that of the 33 criteria examined, the municipality of District 1 had the best performance and the municipality of District 3 had the worst performance. Based on the results of the path analysis, the variables of increasing sustainable income with a rate of 0.889 and participatory investment with a rate of 0.846 have the greatest effects on the desired performance of the municipality.

3- Research Methodology

In terms of the purpose, the present research is of applied type and, in terms of the nature of the materials and information collected, it is descriptive-analytical and of the case study type. The method of data collection is survey-library. In this study, first, by examining the duties of the municipal institution in Yazd and according to the opinions of experts, appropriate components and references have been extracted. The research population consisted of 105 employees of Yazd Municipality based on the initial sample and using a stratified (group) sampling method. The reliability and validity of the questionnaire were measured in SPSS software using Cronbach's alpha method, respectively. The reliability of this questionnaire is 0.878 and its validity is less than 0.05, which indicates the validity and reliability of the questionnaire. The results of the questionnaire were implemented in EXCEL and SPSS and analyzed by descriptive statistical analysis of the real characteristics of Yazd Municipality employees. There are different approaches for analyzing and classifying the processes of municipalities. The common approach for classifying the processes of municipalities is a process-oriented approach that is used for service and project organizations. Since the municipality is also a service organization in its essence, the process-oriented approach has been used to examine and propose an appropriate organizational structure. That is, the organizational position from micro to macro is determined based on work procedures. In fact, if a task is added or removed, its organizational position is also added or removed. In order to determine the appropriate organizational structure for Yazd Municipality, information was collected that deals with the status of the municipality, its duties, shortcomings, and strengths from various aspects. In order to analyze the organizational structure of Yazd Municipality, first the organizational chart of the municipality is examined and analyzed up to three levels. For this purpose, using a process-oriented approach, organizational positions and posts up to three levels are examined and compared with the tasks assigned to them.

4- Theoretical Framework of the Research

4-1- Introduction to Municipality

A municipality is a local organization that is established according to the principle of decentralization of administration for the purpose of managing local affairs such as development and improvement, welfare, social, cultural and health affairs, management and expansion of urban facilities, etc. in any place with a population of at least five thousand people. It consists of two units called the city council and the municipal administration, the first one is the supervisory and decision-making unit in the city and the second one is its executive (Tabatabai Momeni, 1999). Article 55 of the Municipality Law approved on 11/07/1955 and other legal articles have explained the duties of the municipality in an unfocused manner. Municipalities all over the world, especially in developed countries, have various and numerous duties. However, in Iran, the duties of municipalities are distributed among many governmental and non-governmental organizations and companies. The duties of the municipality are in various social, cultural, developmental, urban and service fields so that every urban dweller needs the services of this non-governmental organization from birth to the end of his or her life (Amanpour et al., 2015).

4-2-Criteria for creating an organizational structure

Organizational structure refers to the way in which organizational activities are divided, organized, and coordinated (Stoner, 1995). Organizational structure includes activities such as work allocation, coordination, and monitoring to achieve organizational goals (Pugh, 1990). It is also the perspective that the organization and its environment provide to the organization's employees (Jacobides, 2007). The structure of each organization determines its ability to respond to environmental challenges and strengthens practical processes, making strategies, and achieving the organization's goals. In the meantime, the methods of doing work, reporting, and communication channels are determined, and the employees of the organization are associated with the available positions in it (Mozaffar, 2007).

There are different approaches to studying and designing an organization. The essence of the prevailing approaches is that an organizational model is chosen as the basis according to the nature of the organization. Then, on this basis, a set of rules is presented for designing the structure, jobs, and horizontal and vertical relationships in the organization.

One of the common approaches to designing an organization is the process approach. In this way, the tasks that the organization must do are determined. Then, these tasks are transformed

into a set of jobs with the help of job design. Following that, the duties and powers of each job are determined. In the meantime, the compatibility of duties and powers in different jobs is evaluated, and the duties and powers are coordinated. After determining the jobs, they are categorized. Each group of jobs is placed in an organizational unit. This classification is done for organizational units at different levels. The selected organizational model and the size of the control area at different levels of the organization have a great impact on the classification of jobs and organizational units at different levels. After this, the horizontal and vertical relationships of the organization are designed (Hernaus, 2008).

A municipality is a local organization that is established according to the principle of administrative decentralization in order to manage local affairs such as development and settlement, city health and the welfare of the residents of that city. A municipality is a type of city administration system that consists of two units, namely the city council and the municipal administration (Organizational Regulations of the Municipality, Ministry of Interior, 2015).

Places where municipalities are established: According to the bylaw of the Divisions of the Country dated 15/11/1984, municipalities are established in places that are recognized as cities. According to Article 1 of the Municipalities Law, a municipality must be established in any place with a population of at least 5,000 people. However, this law has allowed the Ministry of the Interior to establish municipalities in areas that don't meet this threshold but satisfy the following conditions:

In any place where the foundation of a municipality is necessary in terms of location and importance;
• In some places where the foundation of a municipality is necessary only in some seasons, such as rural areas;
• For several places that are closer to each other and are collectively suitable for the foundation of a municipality;

In any case, the formation of a municipality is subject to the discretion and decision of the Ministry of Interior (Organizational Regulations of the Ministry of Interior, 2015). Accordingly, the organization of municipalities throughout the country has a pyramid structure, and the assigned tasks are carried out in functional departments. In other words, the organizational position is arranged based on the mandatory tasks of the organization in the organizational structure. The Organization of Municipalities and Village Areas of the country, in order to reform the organizational structure of municipalities, has classified them into several groups, which are as follows:

- Municipalities of cities with less than 110 thousand inhabitants
- Municipalities of cities with 110 to 250 thousand inhabitants
- Municipalities of cities with 250 to one million inhabitants
- Municipalities of cities with more than one million inhabitants

The Organization of Municipalities and Rural Areas, as a subordinate unit of the Ministry of Interior, has 1,411 municipalities and 38,816 rural areas. 37 percent of the country's population resides in 9 metropolises, 23 percent of the urban population resides in 39 large cities with a population between 200 and one million people, and 34 percent of the urban population resides in 478 small and medium-sized cities with a population between 10,000 and 200,000 (Organization of Municipalities and Rural Areas, 2023).

Deputyship: The highest organizational level that is responsible for carrying out some of the duties and missions of the municipality, and is headed by a deputy. Each deputyship is composed of organizational units proportional to the volume and type of duties and missions in question (Organizational Regulations of the Municipality of the Ministry of Interior, 1394).

Director: It is the second level of the organization that is responsible for performing part of the duties and missions of the municipality in the field of policy-making, planning, and applied or executive studies, and is administered by a manager. This organizational unit is only included for municipalities of cities with more than 200,000 people and provincial capitals. Each director has at least eight organizational positions in accordance with the assigned duties and missions. Director can be created from the organizational units of the department, group, or affairs, or according to the assigned missions, duties, and organizational positions that are organized

directly under the supervision of the manager (Organizational Regulations of the Municipality of the Ministry of Interior, 2015).

Administration: The third organizational level is responsible for carrying out some of the municipality's duties and missions, and its predominant aspect is execution, and is headed by the head of the department. Each department with assigned duties and missions will have four organizational positions under the supervision of the head of the department (Organizational Regulations of the Municipality of the Ministry of Interior, 2015).

Group: The fourth organizational level that is responsible for carrying out some of the municipality's duties and missions, and its main focus is policy-making, planning, and applied studies, and is headed by the group head. Each group will have at least four organizational positions under the supervision of the group head, in accordance with the assigned duties and missions.

Affairs: The fifth organizational level which is responsible for carrying out the duties and missions of the municipality and, as the case may be, is placed under the mayor, deputy, general administration, management, department, and group. It is headed by the person in charge of affairs. Each affair shall have at least two organizational positions under the supervision of the person in charge of affairs following the assigned tasks and missions. Regarding those duties and missions that the municipality performs through the cooperative sector, private sector, NGOs, institutions, and professional and trade associations, it is possible to envisage the organizational unit of affairs without the organizational post of its subsidiary (Organizational Regulations of the Municipality of the Ministry of Interior, 2015).

4-3-Ranking of municipalities

Municipalities are ranked every year based on the criteria proposed by the competent organizations while relying on the classification can prevent the enactment of laws in general for municipalities and achieve the sustainability of revenues. At the same time, empowering urban management and raising public awareness by using the city's capacities and potentials can accomplish a move towards sustainability and sustainable development. This is important because emphasizing the collection of sustainable income and moving towards empowerment will ultimately lead to the realization of sustainable development. The history of grading municipalities in the country dates back to 1955, as the Municipal Law enacted on 11/04/1955 raised the issue of grading municipalities based on their income for the first time to determine the salaries of mayors. According to the aforementioned law, municipalities in the country were divided into three levels. After that, in 1964, the municipalities were classified based on population and were divided into five classes. In 1974, the Council of Ministers approved the bylaws on the salaries and benefits of mayors and divided the country's municipalities into 12 classes, which was the standard of practice until 1987.

In 1987, and based on the note below to Article 1 of the bylaws on the salaries and benefits of mayors (enacted on 12/28/1974), the criteria for classifying municipalities were prepared by the Ministry of Interior and approved by the Administrative and Employment Affairs Organization.

5- Introduction to the research case study area

The study area of the research is the city of Yazd, located in Yazd province. The city of Yazd, the center of Yazd city with an area of 100 square kilometers, is located on the Isfahan-Kerman road. In terms of geographical location, it is located in the center of the city and province of Yazd between 47 22 54 and 33 24 54 east longitude and 39 47 31 to 51 56 31 north latitude and has an altitude of 1215 meters above sea level. Yazd, with a population of 529,637, is the twelfth most populous city in Iran and the seventh largest city in Iran with an area of 100 square kilometers (Statistical Center of Iran, 1400). The population growth rate of Yazd city has always been faster than other urban areas of the province over time. This trend has led to an increase in the population in proportion to the total population of the county and even the province, and over a period of 50 years (1976-2021), the population of Yazd has increased from 135925 to 598999 people, which is almost 5 times (Statistical Center of Iran, 2021).

6-Research findings
6-1- Organizational structure of Yazd Municipality

The organizational structure of Yazd Municipality consists of four deputy departments. At the highest level, there is the mayor's area. The second level is deputyship which includes the deputyship of urban planning and architecture, the deputyship of construction, transportation and

traffic, the deputyship of urban services, development management and management resources. It also has five districts. Diagram 1 shows the organizational chart of Yazd Municipality. Until 2017, Yazd City had three municipal districts, which were increased to 5 districts since 2017 to pay more attention to the districts and delegate some powers.
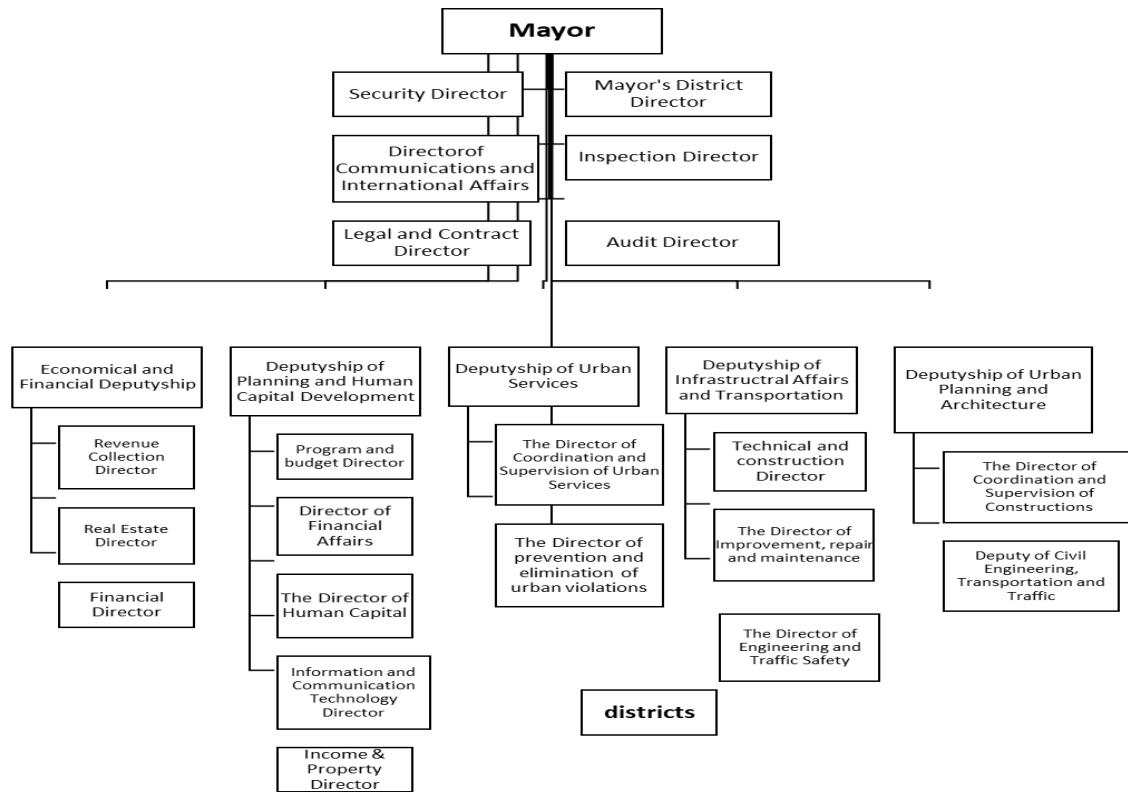
Diagram 1 shows the organizational chart of Yazd Municipality

Affiliated Organizations
• Cemeteries Management Organization

• Freight and Passenger Transportation Organization

• Cultural, Social and Sports Organization

• Fire and Safety Services Organization

• Urban Landscape, and Green Space Organization

• Urban Development and Regeneration Organization

• Urban Jobs and Agricultural Products Organization

6-2-Deputyships and job descriptions in the Central Municipality of Yazd

The job descriptions of the municipal organization are explained in the table below.

Table (2) Job descriptions of the municipal organization and the production of spatial data

Deputyship	director	Task	Data Production
Deputyship of Urban Planning and Architecture	Director of Urban Planning and Urban Development Plans	Study and compilation of strategies, plans and urban planning for the development and development of Yazd city Developmental and physical urban planning and architecture according to the current and future needs of the city Planning, design and supervision of the implementation of city beautification Projects and renovation of timeworn and historical regions with priority to traditional and native architecture Design and engineering of the traffic network and city streets according to the density and current and future needs	Production of maps related to city development, urban planning, and architecture according to the current and future needs of the city Production of city-level traffic network maps
	The Director of Coordination and Supervision of Constructions	Issuing permits for land zoning and repurposing in compliance with the criteria of the comprehensive map and approved detailed plans Issuing permits and supervising the performance of brokerage offices regarding licensing and completion services Supervising the issuance of permits for land zoning and repurposing in compliance with the criteria of the comprehensive map and approved detailed plans Performing legal formalities in order to register and classify the files referred to the Commission of Article 100	Producing the map of changes to the city's detailed plan Producing the map of buildings under construction Producing the audit map
Deputyship of Infrastructral Affairs and Transportation	The Director of Technical and Civil Services	Technical, economic and environmental review and evaluation of construction plans and projects and their prioritization Supervising the implementation of the executive plans and profiles of the streets and carrying out construction affairs. Coordinating all the executive affairs of the construction units of the subordinate regions of the municipality Supervision of the implementation of street construction plans and implementation, repair, and maintenance of buildings belonging to the municipality	Identification of the current status of roads Identification of city-level construction projects Production of maps related to sidewalk construction and repair buildings belonging to the municipality

	The Director of Improvement, repair and maintenance	Supervision of the maintenance and renovation of buildings and also the repair of buildings, construction and facilities belonging to the municipality Planning and presenting plans related to the improvement, repair and maintenance of urban infrastructure Developing and supervising standards and guidelines related to the improvement, repair and maintenance of urban infrastructures	Identification of excavations in the city Traffic and traffic network improvement plans Speed bumps and speed humps in the city Directional signs on the streets Traffic signs in the city –
	The Director of Engineering and Traffic Safety	Implementation of traffic plans and improvement of traffic network in the city Installation of speed bumps speed humps in the city Preparing and proposing amendments and improvements to the budget of traffic plans Traffic control in the city and providing solutions to improve it	
Deputyship of Urban Services	The Director of Coordination and Supervision of Urban Services	Policy-making, planning, coordination and supervision of urban services affairs Planning and monitoring the improvement of the city's environment Formulating the standards for assigning municipal services to contractors and supervising their proper implementation. Supervision of the proper implementation of the duties of the managements of the districts and organizations in the field of urban services of Yazd Municipality	City-level curbs and refuges Production of park and green space maps Properties located in the plans Production of surface water disposal maps Construction of water features of the city
	The Director of prevention and elimination of urban violations	Policy-making, planning, supervision of prevention, reduction and elimination of urban violations Supervision of the performance of the teams for removing roadblocks, unauthorized constructions, beggars and unauthorized occupations	

Deputyship of Planning and Human Capital Development	The Director of Program and Budget	Formulating one-year and long-term municipal plans with the participation of relevant specialized units	
		Technical-economic evaluation and prioritization of all development plans and projects in various areas of the municipality and affiliated organizations	
		Monitoring the optimal receiving of funds in approved plans	
		Designing and implementing performance management models for the optimal allocation of funds between plans, programs, and overall goals of development vision programs	
	The Director of Administrative Renovation and Transformation	Preparing and implementing administrative renovation and transformation programs in order to improve the productivity and satisfaction of municipal service recipients and affiliated organizations	
		Planning and taking measures to provide information technology and its security and the electronic municipal system in the headquarters area and districts in cooperation with the Information and Communication Technology Organization	
	The Director of Human Capital	Planning and taking action to attract, retain, and employ the municipality's required human resources	
		Monitoring the preservation and maintenance of letters, documents, and files in accordance with archiving regulations and principles	
		Monitoring the provision of administrative communication between the municipality and institutions and individuals, both legal and natural, in terms of correspondence and referrals	
		Planning and monitoring welfare plans for municipal employees	
Deputyship of Finance and Economics	Financial Director	Monitoring all municipal expenditures and transactions and maintaining expense accounts, as well as monitoring spent credits of units.	
		Monitoring the fulfillment of financial obligations within the limits of previously approved budget credits according to financial regulations of the municipalities	
		Preparing financial reports, and discharging budget and the annual balance sheet of the municipality, and reviewing and approving them	
	Revenue	Planning and taking necessary actions to collect the approved municipal income and	

	Collection Director	charge tariffs, including the tariff collected by the center or charge tariffs whose collection has been delegated to regions or other subordinate units, and maintaining accounts of various items of the aforementioned tariffs. Planning to identify weaknesses in operations related to the collection of charges and revenues in the municipality Planning and coordination necessary to standardize the procedures for collecting charges and revenues in the municipality	
	Real Estate Director	Reviewing, evaluating and assessing of lands and properties traded by the municipality, including purchase, sale, lease, rental and preparation of the list required for each project Planning and supervision in order to prepare the identity certificate of the municipality's properties Taking actions to officially register the municipality's ownership of real estate belonging to the municipality and maintain their documents Registering the specifications of the municipality's public properties	Production of a map of the property identity certificate Municipality-related properties in the city Identification of public properties related to the municipality
	Administrative and Financial Deputyship	Planning and taking measures to develop the organization's revenue sources Supervision of fulfilling financial obligations within the limits of the approved budget credits Collection of income from providing the organization's services according to regulations	

Source: Yazd Municipality, (Compiled by the author, 2023)

6-3-Classification and improvement of municipal processes

By classifying and improving processes, the output obtained was divided into two categories of main processes, and management and support processes, which include 12 different macro-processes (among which the information technology management process is related to the research according to Table 3) as follows:

- Development of the city's vision and planning
- Supervision of services and products
- Supervision and issuance of urban permits
- Provision of services and products
- Human capital director and development
- Information technology director
- Director of financial resources
- Construction, equipment, maintenance and repairs
- Asset and investment director
- Interaction and communication director
- Organizational transformation and development director
- Transaction support and guidance

Identifying the organization's processes is an important step in most process management cycles. Most organizations do not have sufficient resources to implement process management for all the processes of the organization. Even if there are sufficient resources to model the details, analyze, implement, and continuously monitor and control all processes, it is still necessary for the organization to focus more energy and effort on processes that have greater feedback and impact on organizational goals.

This has led to the necessity of the process identification phase in the process management life cycles for the organization to include all processes that are important according to the criteria such as strategy, core business issues, stakeholder needs, legal and regulatory requirements, in the organization's process architecture (Robbins, 2013).

6-4-Information and Technology Management

This section includes management and support processes that are divided into several sub-processes: 1- Data and information management, 2- IT security and resilience management, 3- Development and support of IT infrastructures, 4-Needs assessment, development and support of software, which are described in the following tables.

Table (3) Needs Assessment, Development and Support of Software

	Process	Activities	Steps
Software Needs Assessment, Development and Support Process	Needs Assessment, Feasibility Study and Design of Soft wares	Understanding the current situation and determining approaches to software development	Determining criteria for assessing the status of information systems Determining criteria for assessing the status of software infrastructure Examining the status of software using the determined criteria
		Feasibility assessment and prioritization of software developmen	Developing an executive plan to achieve the desired situation in the field of software
			Adapting the implementation plan of the desired situation to financial constraints
			Summarizing the executive priorities for software system development
		Designing software systems	Identifying the needs of beneficiaries through interviews, binding documents, approved documents, experts' opinions, etc.
			Compiling a list of beneficiary needs
			Summarizing various dimensions of the software system design document
		Software Analysis and Modeling	Receiving software design or development requests from requesting unit
			Review of Information Technology Systems Design Document
			Refer the required documentation to the software development and support process
	Software Development and Support	Software development	Determining software's interface and structure
			Programming and implementing the specified needs and requirements
			Delivering the software to the requesting unit
		Deployment and support of software	Installation and activation of software on the user's server
			Developing a software update plan
			Documentation of the actions taken
		Software Development & Improvement	Receiving comments on software improvement or development from the user
			Reviewing and validating comments on improvement or development

		Providing the updated version to the requesting group
	Maintaining and optimizing server databases	Storing software databases
		Cleaning spam and redundant information
		Monitoring the status of servers at specific time intervals in order to optimize databases and improve system performance
	Design and support of websites of collections	Receive website design requests from units
		Provide different website templates to the requesting units
		Website training to the website administrator (representative of the operating unit)
	Data Processing Equipment Improvement	Receive Processing Equipment Improvement Request from units
		Reviewing and validating the received request
		Adapting the received request to the existing facilities
		Recording information in the monitoring system

Source: Yazd Municipality, (Compiled by the author, 2023)

In the Information and Technology Management section, IT Security and Resilience Management is explained in accordance with the following table.

Table (4) IT Security and Resilience Management

	Process	Activities	Steps
IT Security and Resilience Management	IT Security Monitoring and Evaluation	Developing the policies to secure critical and sensitive IT structures	Identifying the security requirements of the organization
			Identifying risks in IT
			Determining macro IT security policies
		Monitoring systems and equipment	Continuous monitoring of existing systems
			Detecting security incidents and events
			Referring security incidents to the custodians
		Activating and monitoring antiviruses	Determining the antiviruses required for the systems
			Monitoring security events related to antiviruses
			Updating the systems' antiviruses on time
	Protect data and implement resilience operations	Protecting against ransomware & Cyber Attacks	Data Backup
			Informing human capital about choosing secure passwords and being vigilant against phishing attacks (cyber fraud)
		Checking user	Requesting to verify the user's access protocols from the

		access	security department
			Verifying the user's access protocols from the security department
			Monitoring the implementation of the access protocol at different levels of expertise and management
		Supporting requests for activating portable drives	Receiving requests for activating communication port management from various units
			Reviewing and validating requests for activating communication port management by the custodians
			Activating portable drives for the requesting unit's system
		Checking and verifying the security of software, hardware, and infrastructure	Preparing a security checklist
			Planning and scheduling the review of software, hardware and infrastructure in terms of security
			Visiting software, hardware and infrastructure and completing checklists

Source: Yazd Municipality, (Compiled by the author, 2023)

In the information and technology management section, the development and support of it infrastructure is explained according to the following table.

Table (5) Development and Support of IT Infrastructure

	Process	Activities	Steps
Development and support of IT infrastructure	Infrastructure implementation and deployment	Creating an electronic payment infrastructure for citizens in the public transport fleet	Needs assessment for establishing an electronic payment infrastructure for citizens in the public transport fleet
			Coordinating the purchase of the required equipment
			Coordinating with the concerned units in order to install equipment in the fleet
			Installation and commissioning of equipment in the fleet
			Delivering installed and commissioned equipment
		Designing the data center site room	Receiving a request for designing a data center site room from related collections
			Visit the site and assessing equipment needs
			Delivering the data center site room to related units
		Data network management	Receiving a request for establishing a network connection from the Technical Support and Supervision Department
			Reviewing and validating the request received by the relevant official
			Setting up a network at the requested location
		Setting up an intra-organizational wireless network	Receiving a request to set up a wireless network from related collections
			Reviewing and validating the request received by the relevant official
			Setting up an internal wireless network at the requested location

		Developing and maintaining a passive network	Receiving a request for developing and maintaining a passive network
			Reviewing and validating the request received
			On-site attendance and fixing an existing problem or network development
		Activating an notification alert for systems	Receiving a request in order to activate notification alert from related collections
			Reviewing and validating the Received Request
			Activate the notification alert in the desired system (if possible)
		Setting up the Integrated Communications Services Infrastructure	Receiving Integrated Communications Services (VOIP[†]) Requests from Related units
			Reviewing and validating the received request
			Deliver line to requesting collection
		Wireless Network Development	Receiving wireless network connection requests from related collections
			Visiting the requested location and preparing the executive plan and cost estimation
			Delivery of the wireless network to the requesting unit
		Construction and improvement of data transmission infrastructure (fiber optics)	Receiving requests / needs assessment of construction and improvement of data transmission infrastructure (fiber optic)
			Reviewing and validating request
			Checking the fiber-optic network monitoring system and ensuring its connection
		Construction of Towers	Receiving Request / Needs Assessment of Construction and Improvement of Towers
			Reviewing and validating request
			Conducting studies and locating the construction of the towers based on the research, studies and design process
	Infrastructure support	Wireless network maintenance	Detecting the communication problems in the monitoring system by a broadband expert or announcing the problems by the operating unit
			Recording work reports, delivery of minutes and documentation of services performed
		Fixing the Fiber Optic Network disconnection	Monitoring the Fiber Optic Network
			Detecting the location of the fiber optic network disconnection
			Checking the Fiber Optic Network Monitoring System and Ensuring Its Reconnection
		Periodic service of municipal computer equipment	Developing a schedule for periodic service of computer equipment
			On-site attendance and periodic service of computer equipment
			Monitoring the periodic service of computer equipment
		Maintenance of the physical infrastructure of the data center	Maintenance and repairs in accordance with the maintenance and repair implementation process
			Compiling a checklist for maintenance and repairs of electrical, Installation, and infrastructure equipment

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[†] Voice over Internet Protocol

			Maintenance and repairs of equipment according to the prepared checklist
			Delivery of the line to the Requester
		Support and maintenance of the emergency power system	Maintenance and repairs in accordance with the maintenance and repair implementation process
			Need assessment of support and maintenance of the emergency power system
			Support and maintenance of the emergency power system
		Support, maintenance and troubleshooting of urban displays	Maintenance and repairs in accordance with the maintenance and repairs implementation process
			Compiling a schedule for preventive maintenance and repairs of signs
			Monitoring of urban display (RTPIS‡)
			Fixing defects in displays
		Maintenance of clients	Maintenance and repairs in accordance with the process of performing maintenance and repairs
			Receiving a request to fix the problem from the headquarters units
			Follow-up of the procurement of the required equipment and installation on the desired device
		Maintenance of AVL equipment	Maintenance and repairs in accordance with the process of performing maintenance and repairs
			Receiving requests to install or troubleshoot AVL devices
			Monitoring the installation process or troubleshooting
		Design and development of video surveillance systems	Receive requests for installation or troubleshooting of security cameras
			Attendance at the requested site in order to assess the environment and estimate the required equipment
			Testing and Delivery to the Requester
		Protection and maintenance of fiber optic	Maintenance and repairs in accordance with the process of performing maintenance and repairs
			Inspection of routes, Ducts and Overall Structure of Fiber Optic Network
			Digging and repairing of optical fibers
		Protection and maintenance of towers	Maintenance and repairs in accordance with the maintenance and repairs implementation process
			Periodic inspection of towers
			Repair of corrosion in towers

Source: Yazd Municipality, (Compiled by the author, 2023)

7-Conclusion and Suggestions

Urban management consists of a set of decisions and processes that lead to practical and effective actions for the urban community, these actions are based on complex mechanisms, processes, relationships, and institutions through which citizens and groups express their interests, exercise their rights and obligations, and raise their differences. Finally, according to the analyses carried out and within the framework of the Yazd City Strategic Document, and the perspectives developed for the

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‡ Real-Time Passenger Information System

city and the municipality in this document, the organizational structure of the Yazd Municipality is determined to be a hybrid one. The main body of the organizational structure of the Yazd Municipality, due to its service nature and the existence of numerous duties, is a pyramid, which is in accordance with the current structure of the municipality. Common problems are observed in the organizational structure of the country's municipalities. These problems have a significant impact on the performance of the municipalities. The current organizational structure of municipalities is a legacy of the past that does not have much scientific basis and lacks a precise description of duties, positions, and conditions for their qualification and classification. Processes are the most important elements of any organization that affect executive activities, human resource organization, and even organizational structure. Therefore, it is necessary to take action to fully assess the realities and needs in order to provide the basis for the proper implementation of the process management system and organizational transformation. E-municipality will take citizens out of the one-dimensional world of traditional and modern cities and guide them towards a new world, a world that is the achievement of modern information and communication technologies. Municipality, as one of the most important elements of urban management, can play an influential role in providing public services and managing some local affairs, in such a way that citizens have a transparent and accessible framework to monitor urban issues and interact with urban management agencies on a common platform. It also provides managers and planners with the opportunity to perform best in planning and decision-making, given the huge volume of classified urban information and the instantaneous participation of citizens in various matters. Therefore, a fundamental transformation in the structure of urban management and solving problems, such as eliminating inter-sectoral, cross-sectoral, and organizational information conflicts, facilitating communication and sharing of reference location data between different organizations and departments, transparency in access to all urban reference information, defining a specific framework for classifying spatial information, accessing information at any time and place, assisting managers and planners in decision-making, minimizing physical inter-sectoral, inter-organizational and citizen referrals, providing managers with access to up-to-date information, and reducing the costs of organizations in classifying and classifying information.

Suggestions

Creating a place for citizens to exchange opinions about the performance of the mayor and the municipal organization, taking into account the increase in public participation in urban administration; - Reducing urban traffic; - Eliminating processes related to municipal files and reducing the increase in physical travel to the organization and saving urban resources; - Providing daily information on urban development activities and city-related matters by launching information systems and increasing public awareness; -Reducing the costs of urban administration and affairs activities, as well as reducing administrative corruption and the integrity and credibility of public relations and employee performance.

REFERENCES

−Albino, V., Berardi, U., Dangelico, R.M., 2015. Smart Cities: definitions, dimensions, performance, and initiatives. J. Urban Technol. Vol 22, No 1, pp 3e21. DOI:10.1080/10630732.2014.942092

−Alborz, Razieh; Saeedi, Rahman and Afkhami, Hossein Ali (2021) A Study of the Components Related to the Position of Electronic Public Relations in Tehran Municipality (11 Districts), Journal of New Media Studies, Vol. 7, No. 25, pp. 197-222. https://www.magiran.com/p2353003

−Aliabadi, Javad (2003). Municipalities and the Necessity of Structural Reform, Monthly Journal of Municipalities, Fifth Year, No. 58, Statistical Center of Iran, Statistical Yearbook of Markazi Province, 2009. DOI:20.1001.1.20089562.2019.6.3.3.6

−Amanpour, Saeed; Kamelifar, Mohammad Javad; Bahmani, Hojjat, (2015), Analysis of land use changes in metropolises using satellite image analysis in ENVI environment (case study of Ahvaz metropolis), Quarterly Scientific-Research Journal of Geographic Information, Vol 26, Issue 102, Summer 2017. DOI. /10.22131/sepehr.2017.27463

−Ashrafi, Yousef (2013). Analysis and Design of an Appropriate Organizational Structure for Intermediate Municipalities, Geographical Research in Urban Planning, Vol 2, Issue 1, Spring 2014. DOI 10.22059/jurbangeo.2014.51485

− Baclija, I. (۲۰۱۰), urban management: concept, disengage in koradji. Ljubljana, University of Ljubljana, Faculty of Social Sciences۲۵-۴۶.
   https://www.researchgate.net/publication/۲۸۷۴۴۸۸۶۰_Reconceptualisation_of_urban_management_Evidence_from_EU_cities

−Barakpour, Naser and Asadi, Iraj (1388) Urban Management and Governance. Tehran: Vice-Chancellor of Research, University of Arts Saveh Municipality, Research on Urban Planning Geography, Volume 2, Issue 1, Spring 2014. https://www.researchgate.net/publication/377534447_Urban_management_and_governance

− Boyne, (۲۰۲۰): Performance targets and public service improvement, Journal of Public Administration Research and Theory, 17, 455-477 DOI:10.1093/jopart/mul007

−Comprehensive Statistical Regulations of Metropolitan Municipalities of the Country (Approved by the Planning Commission of the Secretariat of Metropolitan Cities of the Country).DOI: 10.1093/jopart/mul007

−Educational Vice-Chancellor of ACECR, (2007). Familiarity with the Duties and Structure of Municipalities, Office of Education and Applied Studies of the Organization of Municipalities and Rural Areas of the Country, First Edition, Tehran.DOI: 10.1017/9781009160926

−Ehsanifard, Alireza (2014). Presenting a strategic model for measuring, managing and evaluating the effective performance of municipalities by combining the two BSC and EFQM models; Case study: Districts 3 and 18 of Tehran Municipality, Urban Management, Issue 31 Spring and Summer 2013. http://ijurm.imo.org.ir/article-۱-۳۹-fa.html

−Ghanbari, Abolfazl, Mirnajaf Mousavi, Rashid Saeedabadi, Ali Bagheri Kashkooli and Hassat Hosseini Amini (2014), Empowerment strategies to increase the income of municipalities in small cities (case study: Zarch city), Journal of Geography and Environmental Planning, Year 77, Issue 27, No. 7.DOI: 20.1001.1.20085362.1390.22.2.3.6

−Hasanloo, Mojtaba (2023). Analysis and Recognition of Public Relations and E -Municipality in the Financial-Administrative Management System of Municipalities, Quarterly Journal of New Research Approaches in Management and Accounting, Vol. 7, Issue. 88, Spring, 2023, pp. 1239-1252. https://www.magiran.com/p2879346

− Hernaus. (۲۰۰۸). Beyond the World Bank Agenda: An Institutional Approach to Development. Chicago: The University of Chicago Press۶۵-۷۴. DOI:10.7208/chicago/9780226771656.001.0001

− Hezri, A. A., (۲۰۱۴), "Sustainability Indicator System and Policy Processes inMalaysia: a Framework for Utilization and Learning", Journal of Environmental Management 73, pp. 357-371.DOI 10.11648/j.ijepp.20150304.11

− Jacobides(۲۰۰۷), Regions on Their Way to Sustainability: the Role of Institutions in Fostering Sustainable Development at Regional Level, Environment, Development and Sustainability, 12. Method for Identifying Urban Changes Using

Spatial Spectral Change Indices and Remote Sensing Data, Scientific Research Journal of Mapping Sciences and Techniques, Volume 6, Issue 4, May 2017. DOI:10.1007/s10668-008-9184-x

− Mousavi, Mirnajaf (2014) Analysis of the function of the border on the spatial. DOI:20.1001.1.20087845.1401.11.43.10.1

− Mzini.Lb (٢٠٢٣): The relationship between accountability and customer satisfaction in Sedibeng District Municipality, South Africa, A Multinational Conference on Improving the Quality of Public Services,Moscow,Rus٣٩-٥٢. DOI: 10.1108/03068291211199350

− Owusn,G(٢٠٠٨):T he role of small towns in regional development and poverty reduction Planning. Environment and Planning A, 30(10), 1531-1546. DOI:10.1111/j.1468-2427.2008.00794.x

− PMI; (٢٠٠٨). A Guide to the Project Management Body of Knowledge, PMBOK 4th edition, p. 11 Pugh, D٢٢ DOI: 10.4236/jhrss.2025.133018

− Pugh.; (١٩٩٠). Organization Theory: Selected Readings. Harmondsworth: Penguin٢٥-٤٧. urn:lcp:organizationtheo0000pugh:lcpdf:6e059823-d9ee-4427-a5c1-09177b391e24

− Rahimi, Gholamreza, Khodadad, Maghsoud. (2014) Investigating the Effect of Public Relations Roles of Municipality on Clients' Satisfaction in Municipality of Ardabil Province, The First International Symposium on Management Sciences with a Focus on Sustainable Development, Tehran, Mehr Arvand Institute of Higher Education, Center for Strategies for Achieving Sustainable Development.DOI: 10.48308/jimp.15.1.9

− Robbins, S.P. and Judge, T.A. (2013) Organisational Behavior. 15th edition, Pearson, Boston. DOI: 10.4236/jhrss.2025.133018

− Safari, Saeed & Kanaani Ahmadbegloo, Ali. (2022) E-Municipality Infrastructure of Electronic City, The First International Conference on Electronic City, Tehran.

− Shahrokh, Samira and Khushal, Fatima. (2021) Studying the Reasons for the Necessity of Establishing an E-Municipality in Darab Municipality and Obstacles and Problems, 15th National Conference on Urban Planning, Architecture, Civil Engineering and Environment.

− Statistics Center of Iran, General Census of Population and Housing, 1956-2021.DOI: 10.1111/pirs.12381

− Stoner, James; Yiferman, Edward; (1996). Management, translated by Ali Parsaian and Mohammad Arabi, First edition, Business Studies and Research Institute Publications, Tehran.

− Structure of border cities (case study, West Azerbaijan), PhD thesis in Geography and Urban Planning, University of Isfahan.DOI: 10.22067/jgrd.2024.87112.1410

− Wachira, E. (٢٠٠٩). Organizational capacity audit tool. Global e-Schools and Communities Initiative١٤-٣٤.DOI: 10.3389/fpubh.2018.00056

− Warsi, Atefeh, Ali Mohammadzadeh, Milad Janalipour (2016). Presenting DOI: 10.1016/j.jtice.2015.07.034

− X. Chen, J. Chen, Y. Shi, and Y. Yamaguchi(٢٠١٢), "An automated approach for updating land cover maps based on integrated change detection and classification methods," ISPRS Journal of Photogrammetry and Remote Sensing, vol. 71, pp. 86 -95, 2012. DOI:10.1016/j.isprsjprs.2012.05.006