A Framework of Developing Integrated Citizen-centric Government Services

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Abstract. Traditional government services need to be transformed to meet the changing needs of citizens. Countries are accelerating the construction of integrated comprehensive government service systems driven by citizens' needs. It is necessary to sum up advanced experience and put forward guidance for building citizen-centric integrated government services. This article constructs a framework of developing integrated citizen-centric government services. It first introduces the primary goals and elements of this framework. Next it identifies requirements of each element. Conclusions show that this framework will provide guidance for government services providers and improves the efficiency and effectiveness of government services.

Keywords: Citizen centric service; Government service; Service integration; One Stop Portal; Social governance; Information management.

1. Introduction

In recent years, countries all over the world have deeply promoted "Internet +government services" and accelerated the construction of integrated comprehensive government services. However, problems such as decentralized management of government services, complex service systems, inconsistent service items, poor data sharing, and insufficient business collaboration are common.

Traditional government services are usually based on departmental structure and functions, rather than being driven by user needs. In order to promote innovation and collaboration among government vertical departments, meet the needs of citizens with faster speed, greater flexibility, and lower delivery risks, it is necessary to summarize the government's experience in providing urban services and develop guidelines for achieving the delivery of integrated citizen-centric government services, so as to improve service efficiency. This includes identifying the constantly changing needs of citizens, providing personalized services based on user characteristics, conducting business collaboration, sharing and exchanging data between urban departments, providing one-stop and multi-channel government services for citizens, and providing channels for citizens to participate in urban service improvement.

This article constructs an integrated citizen-centric government services framework with five elements. Section 2 introduces the development trend and advanced experience of delivery of government services in several countries. Section 3 introduces the framework of developing integrated citizen-centric government services and provides requirements for the five aspects of the framework. Section 4 is the conclusion of the purpose and strengths of the framework.

2. Background

E-government is defined by UNESCO as the way of information and communication technology use by the public departments to enhance information and service delivery, promote citizen involvement in decision-making, and boost government accountability, transparency, and efficiency [1]. Governments around the world are using new technologies to innovatively transform the way governments operate, share information, make decisions, and deliver services, and engage and collaborate with people to address issues of public concern.

The United States, which advocated E-Government as early as 1993, is a country with relatively complete government services and rapid development [2]. People in the United States can now

access various government programs online, including electronic voting, health care, and tax returns. Additionally, they have access to data from the government that weren't before [3].

In 2017, the Government of Canada developed a services strategy aimed at improving the way services are delivered to Canadians through digital technology. Its service strategy is committed to ensure client-driven design and delivery with multiple channels，make the digital service experience effortless and seamless [4].

Singapore's comprehensive government service website eCitizen center is designed according to the government services that residents may encounter at various stages from birth to death. It is a citizen-centered government service website [5].

China's 12345 government hotline is the general platform to centrally accept and identify citizens' appeals, implement classified and centralized handling of accepted matters. Realize the six in one, 24-hour acceptance of telephone, SMS, mayor's mailbox, microblog, wechat and app. Establish working links such as acceptance, direct handling, transfer, supervision, review and information release. Through various digital media channels such as voice telephone, user self-service, social network and video access, enterprises and people directly reflect problems and suggestions, promote the solution of problems that local governments need to pay attention to and solve [6].

Judging from the situation of each country, government services are increasingly emphasizing the object of "citizen-centered", gradually integrating various services, realizing one-stop service, and enhancing citizens' awareness of participation. The main factors affecting the delivery of government services include information integration between departments and between central and local governments; the ability of countries to use digital technology; the cooperation methods of public institutions; the organizational structure of government departments, etc.

3. Framework of integrated citizen-centric government services

3.1 Overall

The primary goal of citizen-centric integrated government service is to satisfy citizens' demands for city services, improve the quality of life of citizens, and improve their happiness. It provides guidance for citizen-centric integrated government service.

The following principles can be formulated and followed to construct integrated citizen-centric government services:

a) citizen-centric: take a citizen-centric approach to all aspects of service design and delivery [7];

b) digital: enable a ubiquitous, integrated, and inclusive digitization of city spaces and systems [8];

c) open and collaborative: embed openness and sharing in the way the city works [7];

d) multi-department cooperation: realize the coordinated integration and cross-function of multiple departments in the government service [7];

e) low cost & low risk: develop government services in a phased, low-cost, and low-risk way, by rolling out a number of cross-department business;

f) personalized service: based on around specific citizen segments, provide appropriate and convenient service process to meet the needs;

g) process optimization: integrated handling should be implemented for government service items with a high degree of business process correlation [9].

Developing and delivering integrated citizen-centric government services contain five elements (Figure 1) which lead to achieve object defined above.
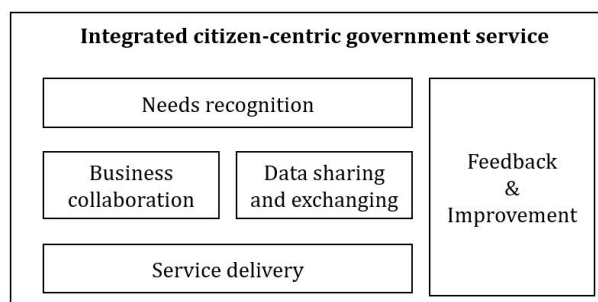
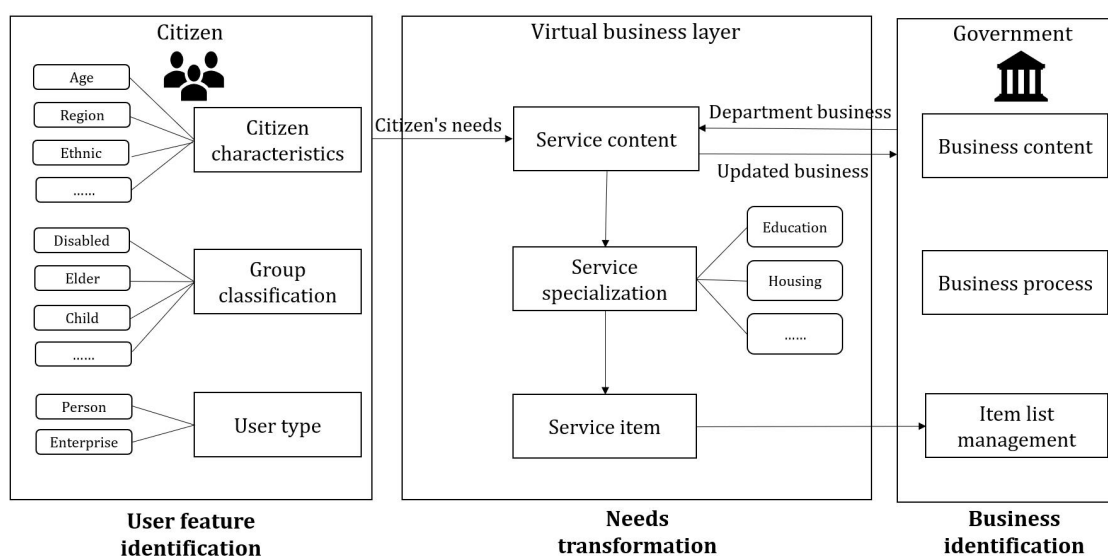Fig.1 Elements of the Framework

3.2 Needs recognition

Fig.2 Process of needs recognition

Government needs to build a new virtual business layer, focused round the needs of citizens and businesses, which enables the existing silo-based structure of government to collaborate effectively in understanding and meeting citizen needs. It is responsible for connecting the needs of users and the responsibilities of the government to determine the service content, and dividing it into different fields and departments according to the service category to form a list of government service items. It is also responsible for tracking the changing needs of users and giving feedback to the government to help adjust and optimize the business. The government department is responsible for the management of the list of items.

User's type needs to be identified. The needs of an individual and the needs of an enterprise are often different. Based on the needs of all citizens, the scope of government service is identified. Government services providers should understand the needs of a specific customer segment for government services (for example, parents, motorists, disabled people). They identifies citizen's feature based on their characteristics such as origins, ethnics, age or disabled status, then multi-language services, convenient process or help will be provided.

Government service providers and managers should have a clear plan for the scope of city services. The communication and participation of various stakeholders in city services should reach a consensus within the scope of government services. For example, issues that need to be resolved through the formulation and implementation of laws and regulations are not within the scope of communication for government services.

City service providers improve community management and services by identifying service issues and suggestions from citizens, integrating and using city data, specialize and divide services by domain and topics. Government service matters include but are not limited to: welfare, birth, death, marriage and care, business and self-employed, child care and child-rearing, justice and law,

rights and benefits of the disabled, driving and transportation, education and learning, employment, environment and countryside, housing, debt and self-assessment, passport, etc.

Government service providers need to establish a unified item list to manage government service. Except for those stipulated by laws and regulations or involving state secrets, all government services shall be handled in an integrated way. It is necessary to sort out and form a unified list of service items for the integrated citizen-centric government services, establish a "list management system" and implement the dynamic management of the list. The list management system should have the basic functions of sorting out items, entering items, reviewing items, adjusting items, etc. The list will be reviewed and updated based on citizen's changing needs. The list of items shall be published and updated in a timely manner through online platforms, mobile terminals, offline affair halls and other channels. The needs of each citizen will correspond to one item in the list of services.
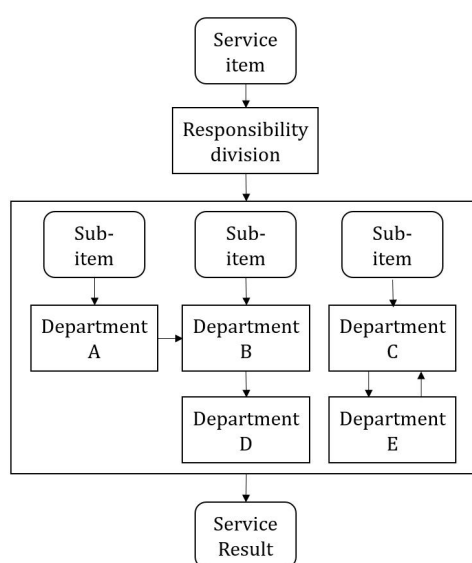
3.3 Business collaboration

Fig.3 Process of business collaboration

From the perspective of citizens, they prefer to make demands or applications through a certain channel, regardless of which departments handle it and how they work together. This puts forward requirements for how to carry out business cooperation within the government

Within government departments, they should clarify the responsibilities of each department. Clarify the functional scope of each department, and distinguish which sub-item belong to the scope of collaboration between departments, so as to solve problems more pertinently. Each service item has a clear and complete workflow and process. Service items are divided into multiple sub-items according to department responsibilities and handling procedures, and business collaboration is carried out between departments.

Good management structure and performance management system help to ensure coordination and cooperation. The structure of multiple departments is simple and clear, and there are communication positions connecting other departments. Change the performance management mode. Bring some collaborative problems that often occur between departments into the assessment and improve the performance assessment system, which is conducive to strengthening communication between departments and improving collaboration problems. In the process of handling each government service item, each department has clear measurable indicators and time nodes for completion or feedback.

Plan the integration and construction of integrated information systems, and promote the integration and effective integration of business systems of various departments. The use of some office software or tools makes communication and collaboration between departments more convenient. In response to the problem of government service, identify the city department

responsible for the service problem. When the service problem involves multiple departments in the city, multiple departments exchange and share service-related information.
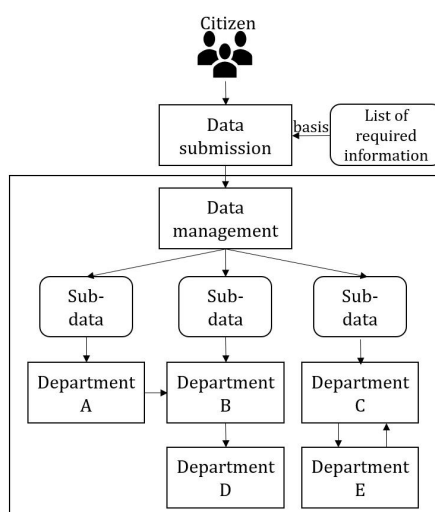
3.4 Data sharing and exchanging
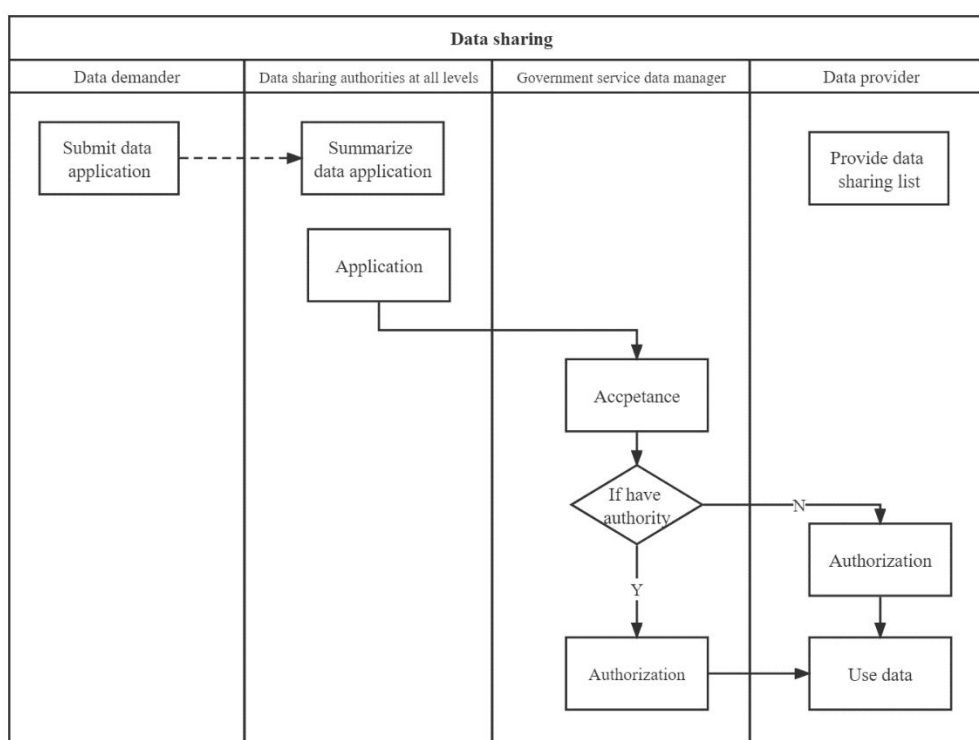

Fig.4 Process of data exchanging

Fig.5 Process of data sharing

It is necessary to establish a clear list of materials required for handling each government item and construct an integrated data system. For the data that can be directly obtained from the system, the department submits the data application and obtains the data. For example, query and obtain the relevant information of the citizen through the ID number. For the proof or information that needs to be provided by the citizen, the citizen only needs to submit it once, and there is no need to submit it again. The data will be exchanged and sharing between departments. Data sharing methods include providing library table files or data interfaces.

Each department shall sort out the data according to its own responsibilities and business, sort them in a unified format, and submit them to the integrated data sharing system. All departments shall apply for data according to the application requirements of government service items based on

the government service data resource directory released by the integrated data sharing system. They should specify the data application scenario, fill in the application basis, application items, usage period and other information. The government service data manager shall uniformly manage the data and handle the application of the data demander.

The government service data manager is responsible for the overall planning and coordination of data supply and demand connection. Supervise the data provider to provide a data sharing list, uniformly accept data requirements and conduct normative inspections, and forward the approved data requirements in a unified manner; evaluate the quality of the data requirements application form filled in by the demander.

Establish a data supply and demand evaluation mechanism. The data demander evaluates the length of the acceptance review, the quality of the supplied data, and the stability of the service. The data provider evaluates the quality of the data request application form. The government service data manager summarizes the evaluation data, such as data demand frequency, demand pass rate, demand rejection rate, demand rejection reason, average audit duration, etc., focuses on coordinating the data with high demand frequency, solves the data with many supply problems, and focuses on promoting the data with good application effect.
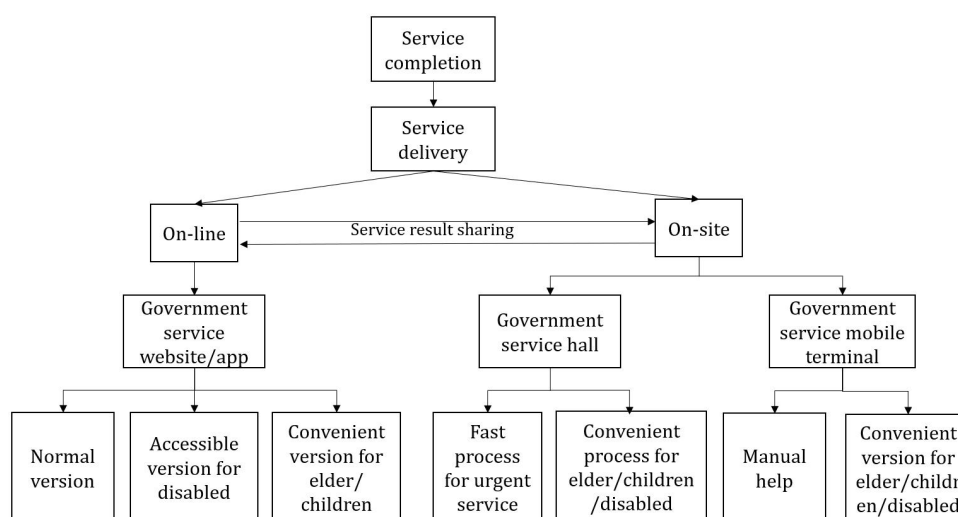
3.5 Service delivery

Fig.6 Process of service delivery

After the request is completed, the service problem handling result will be fed back to the requester through telephone, email, website or APP reply. The results of online processing and on-site processing can be shared. Citizens can choose any channel to obtain service results according to their own needs.

For the elderly or children who are not good at using smart devices, delivery of results through on-site delivery, telephone communication, etc. should be prioritized. On website, app and mobile terminal, a simple version with enlarged font that is more convenient for the elderly to operate should be set up. For disabled people, accessible versions such as voice broadcasts to disabled users on websites, apps and mobile terminals should be provided.

Not only manual help when citizen needs, but also IT support such as electronic seal, digital signature and electronic certificate and other basic support are needed.
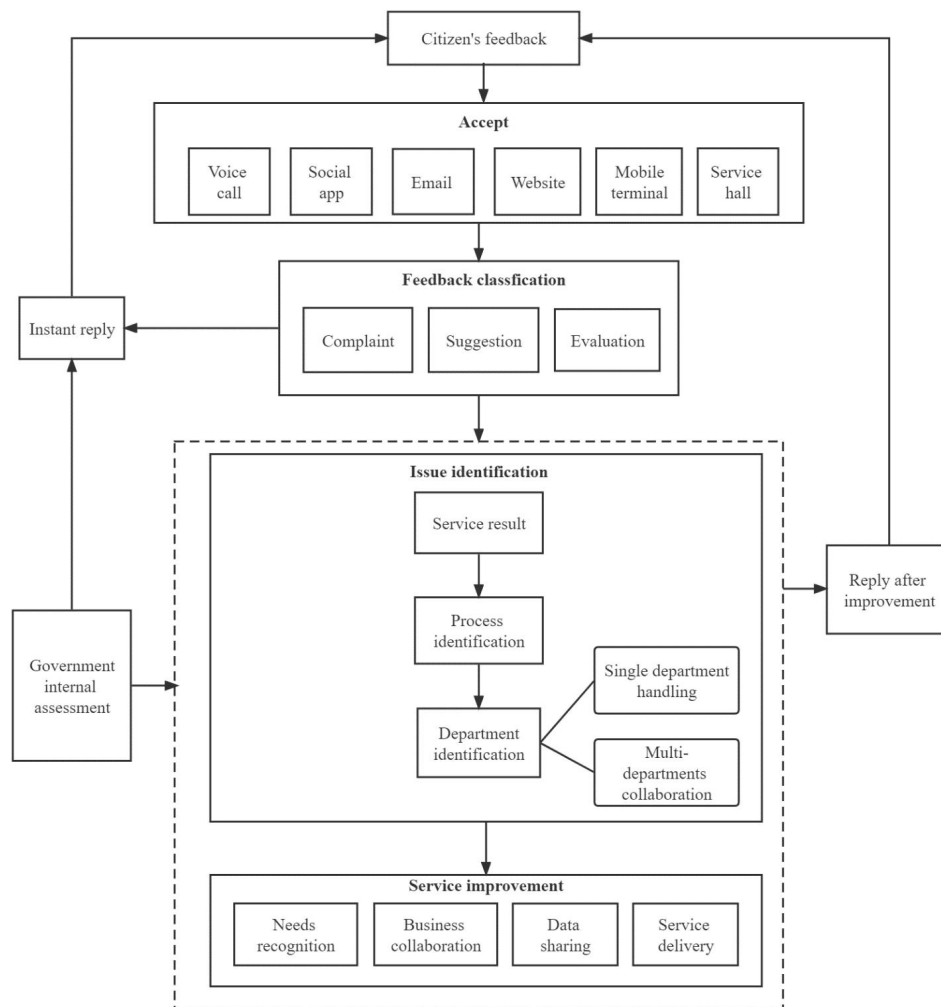
3.6 Feedback & Improvement

Fig.7 Process of feedback and improvement

Cities need to establish unobstructed channels to enable individual citizens and organizations in the city to communicate with government service providers and managers, express their needs for government services, and their satisfaction with existing government services, complain about dissatisfaction, and provide opinions and suggestions for improvement, so as to help city managers make decisions, plan, and design government services, improve service quality, and improve the ability and level of social governance.

Citizens' feedback on service results includes complaints, suggestions, and evaluations. They do not need to know the specific handling process and relevant departments. They only need to make comments or suggestions on service results or service efficiency. It is the responsibility of the service provider to identify specific processes and departments that need improvement. After identifying the corresponding processes and relevant departments, it is necessary to optimize and improve elements of government services, including needs recognition, business collaboration, data sharing and exchanging and service delivery. Feedback or suggestions for process and policy may not be adopted directly but can be recorded and considered in the process of continuous improvement of government service.

After a government service is designed and released, if the service object fails to meet the needs and requirements of users during and after using the service, service users will feed back to the service provider in the hope that the city service can be improved and better meet their appeals. Continuous improvement of government services is a cyclical process including city service plan, design, deliver, check and feedback to plan. Through feedback from citizens, governments can gain

full understanding of citizen' needs so that they can deliver quickly and adapt to changing requirements over time in order to deliver more citizen centric services- which in turn, is proven to drive higher service take-up and greater citizen satisfaction.

The government also needs to internally evaluate and assess their process and results of government service items and establish a social supervision system, accept the supervision of the process and results of request processing by all stakeholders in the city, and continue to improve city services based on suggestions.

4. Summary

This article constructs an integrated citizen-centric government service framework with five elements: needs recognition, business collaboration, data sharing and exchanging, service delivery, feedback & improvement. And this article puts forward suggestions and requirements of building an integrated citizen-centric government service system from these five elements. Its primary goal is to meet the needs of citizens for urban services, improve their quality of life and sense of happiness. This framework focuses on the needs of citizens, promotes the participation of citizens and organizations in government services through a holistic approach that promotes cooperation among all relevant parties, establishes multi departmental collaboration and integrated management in the city, avoids service silos, and improves the efficiency and effectiveness of government services. This framework will help government service managers and providers build an integrated government service mechanism driven by citizens' needs.

5. Acknowledgements

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