

Research on Smart Community Construction from the Perspective of Agile Governance

Gao Lin

Logistics Department, Taizhou Vocational and Technical College, Taizhou 318000, Zhejiang, China

ABSTRACT

The concept of smart communities emphasizes the synergistic effects between decision-making at the computational level and service delivery, which aligns perfectly with the notion of 'agile governance'. Leveraging 'agile governance' as an analytical framework for the study of smart community construction, this paper decomposes the construction of smart communities supported by big data analytics technology into four aspects: balancing multiple objectives, collaborative governance among stakeholders, efficiency of tool transformation, and adaptability propagation. It also proposes relevant suggestions for constructing a community agile governance model based on smart community technology platforms, aiming to achieve efficient, intelligent, and sustainable development of community governance.

KEYWORDS

Smart Communities; Agile Governance; Community Governance.

1. INTRODUCTION

The concept of smart communities emphasizes the synergistic effects between decision-making at the computational level and service delivery. This implies the need to increase the response speed to grassroots governance, with promoting social welfare and value positioning as the top priorities, which aligns perfectly with the notion of 'agile governance.' Agile governance means using a set of actions or methods that are flexible, fluid, flexible, or adaptive, achieving governance effectiveness in an adaptive, people-centric, inclusive, and sustainable manner, without sacrificing rigor, effectiveness, and representativeness for speed. When we look back at the intrinsic attributes of smart communities, smart community construction should not only be limited to the use of technology. Instead, it should be based on the construction of the information platform of smart communities to improve information dissemination efficiency. It should also seize the rate at which smart communities are linked in information acquisition and delegated service, relying on the core concept of agile governance to promote social welfare and value positioning as the top priorities, guiding the development and utilization of emerging technologies to promote smart community construction. This paper uses 'agile governance' as an analytical framework for the study of smart community construction, decomposing smart community construction supported by big data analytics technology into four aspects: balancing multiple objectives, collaborative governance among stakeholders, efficiency of tool transformation, and adaptability propagation.

2. COMMUNITY AGILE GOVERNANCE MODEL

When it comes to the community agile governance model built on a smart community technology platform, it is typically constructed from four key aspects:

2.1. Balanced Objectives

This model focuses on achieving a balance in various aspects of community governance. This includes balancing power relations between the government and residents, managing the interests of different stakeholder groups within the community, and balancing economic, social, and environmental goals for community development. By balancing these factors, it ensures the comprehensiveness and sustainability of community governance^[1].

2.2. Interactive Stakeholders

The community agile governance model emphasizes active interaction and collaboration among various stakeholders. This includes government departments, residents, businesses, non-profit organizations, etc., participating and cooperating in the governance process. By establishing open communication channels and negotiation mechanisms, it fosters collective participation in community affairs, forming a multi-stakeholder governance model.

2.3. Shift Towards Tools

This model advocates the use of smart technologies and digital tools to support community governance. This includes the application of advanced technologies such as artificial intelligence, big data analytics, the Internet of Things, as well as the construction and utilization of smart community platforms^[2]. Through these tools, it enhances governance efficiency and the level of intelligence, providing technological support for community development.

2.4. Service Effectiveness

The ultimate goal of the community agile governance model is to improve the effectiveness and quality of community services. By optimizing service processes, elevating service levels, and enhancing service accessibility, it meets the diverse needs of residents, improving the quality of life and happiness of community residents. Simultaneously, through technological and managerial means, it continuously enhances the intelligence and innovation capabilities of services, ensuring the sustained development of community governance^[3].

These aspects collectively form a community agile governance model based on a smart community technology platform, aiming to achieve efficient, intelligent, and sustainable development of community governance.

3. BALANCING MULTIPLE OBJECTIVES

In addressing the dilemma of multi-objective, multi-task governance in smart community development, a series of comprehensive strategies and methods need to be adopted. Here's a detailed analysis of this issue:

3.1. Establish Clear Governance Goals and Priorities

Identify the core objectives of community governance and break them down into specific sub-goals. Set clear priorities to facilitate decision-making and planning in resource-constrained scenarios.

3.2. Establish Collaborative Governance Mechanisms

Introduce collaborative governance mechanisms to promote cooperation among different departments, levels, and stakeholders. By establishing cross-departmental communication platforms, ensure smooth information flow and resource sharing to enhance governance efficiency.

3.3. Utilize Intelligent Decision Support Systems

Leverage intelligent technology to establish decision support systems to assist decision-makers in understanding and analyzing multi-objective, multi-task scenarios. This can include tools such as data analysis and simulation modeling to support scientific and feasible decision-making.

3.4. Introduce Resident Participation Mechanisms

Engage residents in community governance through digital platforms and social media tools. Establish mechanisms for online voting, opinion collection, etc., allowing residents to directly participate in decision-making, making governance more responsive to community needs.

3.5. Strengthen Data-Driven Governance

Establish comprehensive mechanisms for data collection, analysis, and utilization to make governance decisions based on data. Monitor various indicators in the community and adjust governance directions promptly to ensure goal achievement.

3.6. Promote Integrated Information Platform Construction

Develop an integrated information platform that integrates various data and information resources. Through this platform, achieve information sharing and communication for multi-task governance, enhancing decision-making efficiency and collaborative governance levels^[4].

3.7. Establish Performance Evaluation and Incentive Mechanisms

Design scientific performance evaluation mechanisms to assess various governance tasks regularly. Meanwhile, establish incentive mechanisms to motivate proactive participation in governance among community managers and residents.

3.8. Cultivate Professional Governance Teams

Establish professional community governance teams comprising urban planners, sociologists, data analysts, etc. Such teams can better address the challenges of multi-objective, multi-task governance and provide professional support and advice.

3.9. Continuous Learning and Improvement

Foster a learning organization culture, encouraging community managers and staff to engage in continuous learning. By summarizing experiences and lessons learned, continuously improve governance models to adapt to the ever-changing community development landscape.

By comprehensively applying the above strategies, it is possible to better address the challenges of multi-objective, multi-task governance in smart community development. This not only enhances governance efficiency but also better meets the needs of residents, achieving sustainable development in community governance.

4. COLLABORATIVE GOVERNANCE AMONG STAKEHOLDERS

The interaction status of participants in smart communities across cyberspace, biospace, and physical space is crucial for achieving effective collaborative governance among stakeholders. Here's a detailed analysis of this issue:

4.1. Establish Multidimensional Communication Channels

Establish diverse communication channels in cyberspace, including social media platforms, online forums, mobile applications, etc., to facilitate information exchange and interaction among participants.

4.2. Promote Cross-Sector Collaboration and Innovation

Encourage collaboration and innovation among participants from different sectors and industries to collectively address issues and challenges in community development^[5]. Establish cross-sector alliances or cooperation mechanisms to promote resource sharing and collaborative development.

4.3. Build Digital Community Management Platforms

Establish digital community management platforms in cyberspace to integrate various data and information resources and provide convenient services and decision support. Through the platform, facilitate information sharing and collaborative work among participants to improve governance efficiency.

4.4. Facilitate Community Activities and Interactions

Organize various community activities and interactions in biospace and physical space to promote communication and cooperation among residents, businesses, governments, and other stakeholders. Through community activities, enhance mutual understanding and trust among participants, and facilitate the implementation of collaborative governance.

4.5. Establish Mutually Beneficial Cooperation Mechanisms

Establish long-term and stable cooperation relationships to form mutually beneficial cooperation mechanisms. Through a co-building and sharing model, enable participants to jointly share resources and achievements, achieving win-win cooperation.

4.6. Enhance Community Education and Training

Conduct community education and training activities to enhance the governance awareness and capabilities of residents and other participants. Through training, increase their enthusiasm and initiative to participate in community governance, promoting the realization of collaborative governance.

4.7. Establish Information Transparency and Accountability Mechanisms

Establish information disclosure and accountability mechanisms to safeguard the right to information and supervision of participants. Through information transparency, enhance participants' trust in the governance process, and encourage them to actively participate in collaborative governance.

4.8. Strengthen Community Organization and Network Building

Strengthen community organization and network building to establish a multi-level and diversified network of participants. Through networked organizational forms, facilitate communication and cooperation among participants, and promote the deepening of collaborative governance.

By comprehensively implementing the above measures, it is possible to effectively promote the interaction of participants in smart communities across cyberspace, biospace, and physical space, achieving effective collaborative governance among stakeholders. This will help improve the efficiency and quality of community governance, and promote sustainable development in communities.

5. EFFICIENCY OF TOOL TRANSFORMATION

As a technical platform tool for grassroots governance, smart communities, guided by policy instruments, can implement effective community service supply through the following means:

5.1. Policy Formulation and Planning

Develop relevant policies for smart community construction, clarifying government support and guidance. Policies may include funding support, technical standards, data security, and privacy protection to provide policy support and legal guarantees for the development of smart communities.

Conduct smart community planning to determine the development direction and key areas of community services. Based on the actual situation of the community and residents' needs, formulate corresponding planning schemes to ensure that community service supply matches residents' needs.

5.2. Infrastructure Construction

Strengthen the construction of smart community infrastructure, including information networks, sensor devices, and intelligent equipment. Ensure the interconnection of information within the community, providing technical support and basic conditions for community service provision.

5.3. Data Sharing and Openness

Establish a sound data sharing mechanism to promote the sharing and openness of data among departments and inside and outside the community. By integrating and sharing data, improve the efficiency and quality of community services, and achieve the optimal allocation and utilization of resources.

5.4. Application of Intelligent Services

Develop intelligent community service applications covering residents' daily lives, transportation, environmental protection, etc. Through channels such as smartphone apps and intelligent terminal devices, provide residents with convenient and efficient community services.

5.5. Community Participation and Governance

Guide residents to participate in the decision-making process of community governance and service provision. Establish residents' councils, volunteer teams, and other organizational forms to promote resident participation and feedback, enhancing the targeting and sustainability of community services^[6].

5.6. Technological Innovation and Application

Encourage technology companies and innovation teams to participate in smart community construction and promote technological innovation and application. By introducing new technologies and products, continuously improve the level and quality of community services to meet residents' diverse needs.

5.7. Supervision and Evaluation Mechanism

Establish a sound mechanism for supervising and evaluating community services to ensure the quality and effectiveness of service provision. Through methods such as resident satisfaction surveys and service evaluations, promptly identify problems and promote the continuous improvement of service levels.

5.8. Cross-Departmental Collaboration and Cooperation

Strengthen collaboration and cooperation among government departments and inside and outside the community. Establish cross-departmental collaboration mechanisms, break information barriers, promote resource sharing and collaborative operations, and improve the overall efficiency and level of community service provision.

5.9. Information Security and Privacy Protection

Strengthen the management and supervision of community information security and resident privacy protection. Establish a sound information security system, take measures to protect personal privacy, and ensure the security and lawful use of community information.

Through the organic combination and comprehensive implementation of the above measures, smart communities can effectively provide community services under the guidance of policy instruments. This not only helps improve residents' quality of life and enhance community governance but also lays a solid foundation for sustainable development.

6. ADAPTABILITY PROPAGATION

Under policy guidance, designing, organizing, and delivering smart community services can address the challenges of grassroots governance effectiveness. Specific measures include:

6.1. Designing Smart Community Services

Develop smart community service designs that align with policy directives. Tailor services to meet both policy requirements and resident needs, incorporating features such as informatization, intelligent automation, and convenience to enhance service relevance and effectiveness.

Incorporate advanced technologies like artificial intelligence and big data analysis to optimize service processes and content, thereby improving service levels and efficiency. For example, utilize intelligent algorithms to predict community events, enabling proactive prevention and management to enhance governance effectiveness.

6.2. Community Service Organization and Coordination

Establish robust mechanisms for organizing and coordinating community services. Set up dedicated community service management bodies or departments responsible for organizing, coordinating, and supervising services to ensure their orderly implementation and efficient operation.

Foster collaboration and communication among departments within and outside the community. Establish cross-departmental coordination mechanisms to facilitate resource integration and information sharing, eliminating information silos and redundant construction to improve governance effectiveness and resource utilization efficiency.

6.3. Information Platform Construction

Develop smart community information platforms to integrate and share information resources. Integrate various data sources and establish unified data standards and interfaces to support government decision-making and citizen services.

Build intelligent service platforms to provide convenient online services and interactive communication channels. Through websites, apps, and other platforms, offer residents comprehensive service information and convenience features, enhancing service accessibility and convenience.

6.4. Community Service Delivery and Implementation

Develop detailed service implementation plans, clarifying service content, responsibilities, and standards. Increase resident awareness and participation in services through publicity and training, promoting service implementation and execution.

Establish regular evaluation and supervision mechanisms to assess service effectiveness and gather feedback. Based on evaluation results, adjust and optimize service plans promptly to ensure timeliness, effectiveness, and sustainability of services.

6.5. Community Participation and Feedback Mechanisms

Encourage resident participation in community governance and service design and evaluation. Establish channels for resident feedback, regularly organize hearings, forums, and other forms of engagement to solicit resident opinions and suggestions, enhancing resident satisfaction and ownership of services.

Strengthen surveys and analysis of resident needs, timely grasp community dynamics and changes, adjust service content and direction accordingly, and maintain alignment and responsiveness to resident needs.

Through the organic combination and comprehensive implementation of these measures, the challenges of grassroots governance effectiveness can be effectively addressed, improving governance efficiency and service quality, and promoting the harmonious and stable development of communities. Policy guidance and support provide crucial assurance and backing for the innovation and development of smart community services.

7. CONCLUSION

This article is based on grassroots community agile governance built on information technology, proposing the concept of 'agile governance' within smart community technology platforms, which is constructed from four aspects: balanced objectives, interactive stakeholders, shift towards tools, and service effectiveness. It expands the dimensions of community services, forming an agile matching efficiency mechanism between grassroots community governance and smart community service delivery, which requires critical technologies and policy execution outputs. This provides theoretical support for achieving efficient, intelligent, and sustainable development of community governance.

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REFERENCES

- [1] Cardullo P, Kitchin R. Being a ‘citizen’ in the smart city: Up and down the scaffold of smart citizen participation in Dublin, Ireland[J]. *Geo Journal*, 2019, 84(1): 1-13.
- [2] Pérez-González, D., & Díaz-Díaz, R. Public services provided with ICT in the smart city environment: The Case of Spanish cities [J]. *Journal of Universal Computer Science*, 2015,21(2): 248-267.
- [3] Albert Meijer. Governing the smart city: a review of the literature on smart urban governance[J]. *International Review of Administrative Sciences*, 2016, 82(2): 392-408.
- [4] Tony Fillipovitch. The Responsive City: Engaging Communities through Data-Smart Governance, by Stephen Goldsmith and Susan Crawford[J]. *Journal of Urban Affairs*, 2017,39(3): 458-459.
- [5] Milenkova V, Lendzhova V. Digital citizenship and digital literacy in the conditions of social crisis[J]. *Computers*, 2021, 10(4): 40.
- [6] Simonofski A, Asensio E S, Wautelet Y. Citizen participation in the design of smart cities: Methods and management framework[M]. *Smart cities: Issues and challenges*. Elsevier, 2019:47-62.