

Networked Intelligence Governance: Digital Empowerment Frameworks

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Abstract. This article explores strategies for advancing the modernization of urban community governance through networked thinking and digital intelligence empowerment. It emphasizes strengthening organizational leadership, promoting diversified participation, and stimulating internal momentum by unifying procedural standards, empowering specialized grid management, and leveraging social forces. The integration of artificial intelligence, 5G, and cloud computing is proposed to achieve dynamic precision in governance, enhance data aggregation, and promote multi-network integration. The article also highlights the optimization of platform construction, vertical and horizontal connectivity, and the establishment of robust institutional frameworks to ensure standardized operations. By focusing on grassroots governance innovation, intelligent empowerment, and systematic integration, the article underscores the significance of urban community governance as a foundational and strategic task, aiming to reshape and modernize societal governance structures.

Keywords: Urban Community Governance, Digital Intelligence Empowerment, Networked Thinking, Modernization, Multi-Network Integration, Grassroots Governance, Institutional Frameworks.

1. Introduction

How communities within a city can proactively adapt to the new changes of the digital and intelligent era, explore the application of network thinking and digital intelligence empowerment, integrate organizational advantages with technological strengths, promote the modernization of community governance systems and capabilities in megacities, and achieve a shift from "stability" to "effective management," holds extremely significant theoretical and practical guiding significance. [1]

2. Strengthening Organizational Leadership and Multi-Participation Mechanisms

To achieve the modernization of urban governance, top-level design is essential, and a strong organization must lead the way. [2] At the same time, it is crucial to adhere to the people-centered development philosophy. By actively guiding and widely mobilizing efforts, we can transform external impetus into an organic blend of internal and external drivers, turning the city's governance from "blood transfusion" to "self-sustaining." [3]

2.1. Standardizing Procedural Frameworks for Cross-Level Coordination

Unify the "procedure standards," with district-level development and street-level application. [4] Currently, various entities within urban jurisdictions have multiple development procedures. [5] It is necessary to thoroughly research the autonomous development of mini-programs, application platforms, and distinctive scenarios by streets and communities, gather their strengths, and lead this effort by the district-level big data bureau. [6] This will integrate and enrich the content of mini-programs across all streets, exploring the creation of a "Happy Community" level application (platform) to enhance user engagement and promote it comprehensively throughout the region. [7] On the basis of ensuring data security, fully leverage the convenience and ease of use of external network clients like WeChat and Alipay to broaden channels for public participation in grassroots social governance. [8]

2.2. Professionalizing Grid Operations through Specialized Task Allocation

Endow grids with exclusive attributes, assigning specialized tasks to professionals. [9] For comprehensive and complex venues such as residential complexes, we should actively explore granting exclusive attributes to grids, innovatively setting up dedicated grids and hiring professional grid officers. [10] For example, for national historical sites and cultural areas, a dedicated grid for site protection and promotion should be established, led by the culture, tourism, and sports departments, appointing dedicated grid officers who focus on protecting cultural relics and promoting tourism and culture, ensuring that grid work is professional, precise, and efficient. [11]

2.3. Mobilizing Social Forces in Collaborative Governance

Widely engage social forces to leverage grid-based social resources. [12] Note the increased efforts in nurturing and incubating social organizations, actively fostering self-governing organizations of the people, and accelerating the formation of a governance framework characterized by "one core leading multiple entities," which is "grassroots party organizations + social organizations + self-organized groups." Explore, tap into, and cultivate internal resources within grids, expedite the recruitment of micro-grid officers, and select from among the heads of local social organizations, volunteer organizations, and the "five elders" groups. [13] Actively explore ways to involve delivery personnel, food delivery workers, taxi drivers, and other groups in grid-based grassroots governance. In particular, for unmanaged residential areas, continuously explore the "red property" model led by party building and involving volunteers in grid management. In village-to-residential communities, explore the establishment of community collective economic organizations controlled by the community committee, set up community funds, and have residents serve as shareholders and consumers, participating in grid management and community governance. Coordinate various resources within the jurisdiction to address the "first mile" issue at the very end of social services and the very beginning of community services, both addressing the shortcomings in community services and promoting the optimization and strengthening of the community service industry. [14]

3. Enabling Dynamic Precision through Intelligent Technologies

To integrate AI, 5G, cloud computing, and other new-generation information technologies, we must continuously promote comprehensive perception, intelligent scenarios, and all-round empowerment across the board, building an intelligent city. [15]

3.1. Data Convergence and Label-Based Population Management

Improve data aggregation to achieve dynamic precision. Ensure that all departmental data at the district level is fully aggregated, solidifying the data foundation of the district platform, accumulating "quantity," and then transitioning to "quality." [16] Through the management of "six elements" with labels, precise classification, and dynamic updates, continuously enrich and enhance the data foundation of the smart operation platform, providing precise data support for modernizing urban governance. [17] Following the method of "comprehensive coverage, dynamic adjustment, and accurate labeling," shift the focus from "surface" to "substance." On one hand, adhere to a people-centered approach. Further strengthen database construction and application to ensure that population data is "comprehensively true and dynamically controllable." [18] While fully covering actual residents, grassroots service forces, key service personnel, closely monitored individuals, and skilled personnel, focus on comparing with the city's base figures, accurately labeling and forming files for disadvantaged groups, elderly people, pregnant women, children, etc., with industry departments proactively entering them into grids for precise services; analyze high-level talents in blocks, integrate social intellectual resources, and accumulate momentum for continuously enhancing governance capabilities. [19] On the other hand, adhere to the "grid" as the sole standard. Using the grid as the sole "channel" for statistical information, updates, and application information, we will integrate data from health, public security, hospitals, and other departments on the basis of data visualization. By

connecting through platforms such as digital urban management and the "Bright Snow Project," we will continuously increase front-end sensing hardware, ensuring that all population, legal entities, and events are integrated into the grid under a unified "channel." Feedback, verification, implementation, and handling of social sentiment, online public opinion, and early warning alerts will be achieved in a closed loop based on the grid. [20]

3.2. Visual-IoT Network Integration in Key Urban Zones

We need to promote network integration and accelerate the construction of visual networks and the Internet of Things. Pilot projects should be launched in key areas such as railway stations, major historical and cultural districts, and industrial parks to explore scenarios where visual networks integrate with grid work, creating intelligent governance models for happiness and well-being that embody the "four modernizations." These models will serve as pilot projects to gradually expand coverage. [21] We must strengthen data security management. Adhering to the principle of "Party leadership over data," we will implement a tiered and categorized authorization mechanism for data, establish a unified data security management standard system, and ensure that security work is integrated throughout all stages and processes of project development, data bidirectional flow, and grassroots practical use, guaranteeing system security, data security, platform security, and information security. [22]

4. Optimizing Platform Architectures for Integrated Governance

In accordance with the "goal of happiness, health, and high-quality innovative development," the focus should be on addressing frequent matters at the grassroots level, accelerating the integration of multiple networks, enhancing platform functions, and boosting the effectiveness of platform empowerment in grassroots governance. [23]

4.1. Multi-Center Convergence in Smart Urban Operations

Explore the realization of a smart operation mechanism that integrates multiple centers. [24] From an overall perspective of modernizing city governance, highlight the primary responsibility of the city, scientifically and reasonably argue for the integration of multiple centers, focusing on solving "barrier" issues within the region. [25] On the basis of integrating seven specialized networks such as emergency response and food safety, promote the simultaneous integration of the district-level peace-building promotion center with the district urban operation center, pilot the implementation of non-police incidents on the smart platform, and simultaneously explore the deep integration of the media convergence center, the new era civilization practice center, and the district urban operation center, promoting the transformation of community grid officers into "public opinion sentinels." [26]

4.2. Decentralized Law Enforcement Deployment Strategies

Further advance the deployment of law enforcement forces at the grassroots level. Establish a unified professional social comprehensive governance team. Learn from Hangzhou's experience in "grid-based management and group-style service," integrate law enforcement forces involved in market regulation, safety supervision, environmental protection, health, urban management, and public security, and deploy these forces at the district level to the streets. At the street level, establish a comprehensive law enforcement team to effectively address the weak coordination capabilities of grassroots streets and the numerous comprehensive governance issues. [27]

4.3. Unified Command Systems for Cross-Departmental Coordination

Further promote the integration of multiple centers. In accordance with the principle of "city-wide integration and unified management," we will advance the "five concentrations and five arrivals" in institutional staffing, personnel teams, physical locations, platform data, and resource forces. This aims to create a new type of smart city comprehensive operation command center that integrates

multiple centers such as the reception center, data center, urban management center, grid center, comprehensive governance center, petition center, and emergency center. At the same time, we will promote system integration and platform connectivity for "smart petition" and "smart conflict resolution" systems. [28]

5. Institutionalizing Safeguards for Sustainable Governance

It is essential to adhere to goal-oriented and problem-oriented approaches, establishing and improving institutional safeguards.

5.1. Hierarchical Accountability and Performance Evaluation Mechanisms

Strengthen the high-level promotion and organizational leadership mechanism. Treat grid-based grassroots governance as a "Party Secretary Project," with the district Party secretary taking personal charge, the street Party committee secretary responsible for specific tasks, and community secretaries handling specific matters. Continue the work model of "leadership group + working team + urban operation center," further optimizing and reinforcing the work forces at both levels of the urban operation center. Reinforce the responsibilities of "unit residency" and "personnel sitting in seats" to ensure the stability and professionalism of the workforce. Establish and improve supervision and evaluation mechanisms, incorporating the implementation of grid-based grassroots governance into performance assessments. [29] The district Discipline Inspection Commission, Organization Department, and Supervision Office should form a joint supervision team to conduct joint inspections. The results will be linked to cadre evaluations, departmental performance, rank promotions, and individual commendations, ensuring responsibilities are layered and pressure is transmitted.

5.2. Bidirectional Incentive Systems for Grid Officers

Explore and improve the two-way incentive evaluation mechanism for grid officers. The role of grid officers is crucial in grid-based grassroots governance. Clarify their duties, standardize work processes, define handling standards, enhance evaluation and supervision, and implement two-way incentives. Gradually shift from passive work to proactive service. Further optimize the "Grid Event List" and the "Immediate Collection and Immediate Processing List," specifying the responsible units and bases for event handling, so that both grid officers and departments know what they need to do in daily work. For matters outside the grid, strict approval procedures must be followed, with clear task sources and responsible entities. Further refine the incentive mechanism. Develop and improve reward and incentive measures for grid officers, integrating various public channels such as Alipay and WeChat, launching the "Snap and Share" app to provide functions like issue reporting, party member registration, volunteer sign-up, service order placement, and points rewards; at the same time, formulate a reward policy for public "Snap and Share," encouraging widespread participation through point redemption and other forms, thereby enhancing public enthusiasm. [30]

5.3. Patrol-Handling Separation Model for Operational Efficiency

Explore the "patrol and handling separation" mechanism. Promote the improvement of event flow efficiency, actively exploring the "patrol and handling separation" mechanism, further strengthening institutional construction in team building, incident handling, and performance incentives. Professionalize team settings. Following the principle of "unified command, patrol and handling separation, independent supervision," establish four types of teams: commanders, collectors, handlers, and supervisors, corresponding to grid scheduling, patrols, handling, and evaluation processes respectively, achieving separation of responsibilities between identifying and addressing issues, eliminating concerns of grid officers when reporting issues, increasing the number of reported incidents, and refining the incident handling process. Institutionalize incident handling. Explore and formulate regulations such as the "Grid Patrol Officer Service Management Standards," standardizing patrol content reporting requirements, implementing quality (star rating) evaluations for reported

incidents, precisely controlling qualified incidents; standardizing the incident handling process and result feedback, managing the entire process with clear traceability before, during, and after incidents. Entity-based performance evaluation. [31] Clearly define a points-based evaluation system for dedicated patrol grid officers, assessing multiple dimensions including activity levels, incident reporting quality, safety hazard inspections, and community evaluations by residents. At the same time, intelligent evaluation is explored. The system platform automatically records the scores of inspection and disposal problems and the scores of public evaluations, and automatically generates the monthly ranking, quarterly assessment and annual commendation basis for grid personnel.

6. Summary

Urban community governance is a fundamental, comprehensive, and strategic task, as well as an important work that reshapes, systematizes, and innovates. It holds significant meaning and far-reaching impact. [32] The journey toward modernizing social governance remains long, with tasks still pressing. We must shoulder our mission, take responsibility, unify our thoughts and actions with the decisions and plans, remain confident, continue to strive, and wholeheartedly complete all tasks assigned by organizations and the public.

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