JOURNAL OF CULTURAL ANALYSIS AND SOCIAL CHANGE

Journal of Cultural Analysis and Social Change,
2025, 10(4), 1870-1886
ISSN: 2589-1316

# Strategic Roadmaps in Smart Cities: A Comparison of Bucharest and Konya

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**Citation:** Söğüt, H. E., Söğüt, I. S. & Sunay, M. M. (2025). Strategic Roadmaps in Smart Cities: A Comparison of Bucharest and Konya, *Journal of Cultural Analysis and Social Change*, 10(4), 1870-1886. https://doi.org/10.64753/jcasc.v10i4.3092

**Published:** December 09, 2025

## ABSTRACT

This study presents a comparative analysis of smart city strategies between Bucharest, Romania (an EU capital) and Konya, Türkiye (a metropolitan city from a developing candidate country). The research aims to elucidate the similarities and differences in their strategic vision, governance models, implementation plans, technological infrastructure, and environmental priorities. Using a thematic analysis of the official strategy documents of both cities (Bucharest 2023-2030; Konya 2022-2030) with MAXQDA software, the study argues that the strategies are shaped by a dynamic tension between "outward alignment" with global standards and "inward embeddedness" in local contexts. The findings reveal that Bucharest's strategy is pragmatic and deeply aligned with EU policies, emphasizing economic competitiveness, service efficiency, and measurable outputs. In contrast, Konya has adopted a more holistic vision aligned with national strategies, focusing on local identity, cultural values, and innovative leadership. In governance, Konya plans a central agency and multi-layered stakeholder participation, while Bucharest prefers flexible integration with existing administrative structures. Technologically, Bucharest aims for an integrated digital platform, whereas Konya stands out with modular solutions, a cybersecurity center, and advanced technologies like IoT and blockchain. Environmentally, Bucharest focuses on the circular economy and energy efficiency, while Konya's strategy is shaped by pressing local needs such as water scarcity. The study concludes that smart urbanization is not a universal model; each city develops unique strategic pathways. The examples emphasize the critical importance of cities striking a balance between their integration into global networks and the urgent needs of their local contexts.

**Keywords:** Smart Cities; Strategic Plan; Bucharest; Konya

## INTRODUCTION

Cities are not merely physical structures and concentrations of population; they also embody an idea, an ideal. Although this ideal has assumed different forms throughout history, its essence has consistently reflected similar objectives. The ancient Greek polis was not simply a settlement but, as Aristotle defined it, a "community established for the sake of living well." The notion of "living well" (eudaimonia) here refers not only to material prosperity but also to a life shaped by virtue, justice, and civic participation. The ultimate promise of contemporary smart cities corresponds precisely to this: the aim is to enhance the well-being and quality of life of citizens. Modern technology serves as a set of instruments directed toward this purpose, enabling smart cities to pursue the ideal of "living well" through data-driven optimization, personalized services and applications, and sustainability. At this juncture, it becomes evident that humanity's fundamental needs-such as security, well-being, belonging, and

autonomy-are being reshaped under the influence of technological determinism, while the city itself ultimately reflects both human intellect and sociality. At the same time, it is also a fact that it is human reason which constructs the city, renders it at times uninhabitable, and simultaneously strives to resolve the problems that emerge therein.

Since the 2000s, the fact that the global urban population has surpassed the rural population has rendered the use of technology in urban governance and daily life inevitable. Despite the sustainability challenges arising from rapid urbanization, significant advancements in computer technologies and the gradual reduction of their costs have highlighted the ways in which rapidly developing and increasingly widespread technologies can facilitate urban life. In this context, smart city approaches and applications have emerged. The growth of urban populations, the continuous innovations in information and communication technologies, and the diversification of the demands and expectations of urban residents have compelled local governments and other urban actors to undergo transformation. Within this process of change, there is a widely held belief that by making greater use of the opportunities offered by smart technologies, limited public resources and densely populated cities can be managed more effectively and efficiently.

In the 21st century, the concept of the smart city demonstrates that it is no longer sufficient merely to integrate technological tools or applications into specific domains of urban life, nor for cities to undertake isolated projects. Rather, it necessitates a more comprehensive, nationally endorsed, strategic, integrated, and human-centered approach. This process requires a national and urban rational strategy, a determined political will, and a viable legal framework. Accordingly, characterizing a city as "smart" becomes possible only when the aforementioned components operate collectively and in harmony. Within this transformative trajectory, the comparison of one country with others and of one city with others-through international standards, benchmarks, strategic plans, and policy documents-holds significant importance in the context of smart cities. For a city to advance toward its envisioned future, it must formulate an original roadmap grounded in its local characteristics, social fabric, and the values and knowledge specific to its region. The formulation of urban strategies, which entails identifying relevant elements, selecting those of critical importance, ensuring their recognition by broader constituencies, and generating corresponding solutions or preferences, constitutes a complex process. Nevertheless, such complexity can be navigated and resolved through the implementation of strategic plans.

The main theoretical claim of this study is that smart city strategies are shaped within a dynamic tension between "alignment" with global standards and "embeddedness" in local contexts. Rather than merely describing the differences between the two cities' smart city strategic plans, this framework seeks to explain the underlying structural and political reasons behind these differences. Therefore, the study's contribution lies in proposing a new typology and providing case-based empirical evidence to the critical smart city literature.

The selection of Konya and Bucharest in this study was not random; rather, it was made with methodological intent, designed to answer a specific research question. While Konya and Bucharest share many fundamental characteristics, they diverge significantly in their smart city policies and implementations. This divergence allows for a clearer isolation and analysis of the factors that generate these differences. Both cities have recently published smart city roadmaps covering comparable timeframes (2023–2030 for Bucharest and 2022–2030 for Konya), which constitutes an important starting point for this research. Each city ranks among the most populous in its respective country (Konya ~2.5 million; Bucharest ~2 million) and both are major metropolitan centers in administrative and economic terms. Both also possess deep historical and cultural heritages: Konya, as the capital of the Seljuk Empire and a spiritual center, and Bucharest, often called the "Paris of the East," with a rich historical legacy. This means that both cities face similar tensions between "historical preservation" and "modernization" in implementing smart city policies.

Beyond these similarities, several notable differences exist between the two cities. Bucharest is the capital of an EU member state, granting it direct access to EU funds, regulations, and policy networks. Konya, on the other hand, is a metropolitan municipality in a candidate country for EU membership. This creates a marked contrast in terms of access to resources, governance structures, and exposure to external influences. The relationships between central and local governments in Türkiye and Romania also differ. While Konya's projects generally align with national government plans, Bucharest enjoys a greater degree of autonomy within the EU framework. The two cities' definitions and priorities regarding smart cities are also noteworthy. Konya emphasizes domestic and national technologies, whereas Bucharest's approach focuses more on European integration. Lastly, in the 2025 IMD Smart City Index, Bucharest drew attention by climbing 22 positions compared to the previous year, while Konya has not yet been included in the index. While Konya's strategy and implementations operate at the city-wide scale, Sector 5 provides a more micro-level analysis focused on local services and neighborhood development. In this way, the comparative analysis of smart city strategies at both macro and micro levels becomes a significant aspect of this study.

In the literature, numerous studies focus on Western European cities (such as London or Amsterdam) or Chinese cities (such as Hangzhou or Shenzhen). However, both Türkiye and Romania host dynamic cities that, while positioned at the geographical and cultural periphery of Europe, remain deeply connected to it. The smart

 

transformation of these cities provides an excellent case for understanding the "global North–South" or "West–East" divide. Furthermore, this study introduces an interdisciplinary and cross-cultural perspective to the smart cities literature by comparing a city governed by an Islamic-conservative local administration (Konya) with one that has a post-communist past and strives for Western integration (Bucharest). The comparison holds not only academic but also practical significance. The Konya case offers a valuable reference for cities in EU candidate countries and neighboring regions, while Bucharest's experience demonstrates how EU funds and policies can be internalized-providing a potential roadmap for cities like Konya. Ultimately, this study enables a comparative examination of the structures and characteristics of "top-down" (more centralized, as in Konya) and "bottom-up" (more EU-aligned, as in Bucharest) smart city models.

## LITERATURE REVIEW

The city is, without doubt, a complex entity. Some of the difficulties encountered in dealing with it stem from its inherent complexity (Harvey, 2003, p. 27). The city is defined as a unit of life in which technological developments and services are concentrated, production and commerce are organized, population increases, and which has become synonymous with the process of modernization. Urbanization, in turn, is regarded as a fundamental social phenomenon that has accelerated particularly since the Industrial Revolution through technological and socio-economic transformations (Lerner, 1964, p. 60). According to projections, by 2050, 70% of the world's population is expected to reside in cities. Yet, despite occupying only 3% of the Earth's surface area, cities account for 60–80% of energy consumption and 75% of carbon emissions (un.org, 2025). As Keleş (2015, pp. 100–103) notes, cities experiencing quantitative growth in number, surface area, and population density face various challenges in providing citizens with essential services such as technical infrastructure, housing, transportation, healthcare, and education. Numerous approaches have been developed to address the negative externalities caused by urbanization, including speculative dynamics in land and housing markets, irregular urban growth, failure to enforce zoning plans, the inability to protect cultural and natural assets, environmental pollution, social isolation and alienation, security concerns, population growth, migration crises, and global climate change. In response, several concepts have emerged over time-sustainable cities, smart cities, green cities, ecological cities, and low-carbon cities (de Jong et al., 2015, p. 12). Although expressed under different labels, these approaches share the common aim of raising awareness while striving to design livable cities characterized by low carbon emissions, reduced energy and water consumption, the preservation of natural ecosystem functions, and the promotion of sustainable development. At the current stage, it is difficult to claim that existing policies, planning strategies, design tools, and implementation mechanisms have demonstrated sufficient effectiveness in addressing sustainability and quality-of-life issues in contemporary cities. By contrast, the advances in information and communication technologies achieved over the past two decades have brought to the forefront the potential of leveraging technological means to tackle these structural urban challenges.

The concept of the smart city first emerged in the 1990s and has since continuously evolved, transformed, and ultimately become an industry dominated by major technology companies such as IBM, CISCO, Alcatel-Lucent, Hitachi, Siemens, and Huawei (Anthopoulos, 2017). In the early 2000s, public institutions began using email, websites, and online services. Over time, they enhanced their digital services with big data, artificial intelligence, IoT, sensors, cloud computing, and mobile applications. This transformation facilitated data management and led to the emergence of digital public services such as e-government (Hughes, 2017). In the literature, numerous definitions of smart cities can be found. The absence of a universally accepted definition of smart cities stems from two different approaches. The first approach emphasizes elements such as smart buildings, energy infrastructures, efficient use of natural resources, water and sewage systems, waste management, transportation, and logistics. The second approach, by contrast, encompasses dimensions such as education, cultural activities, and social participation (Albino et al., 2015). An examination of the conceptual framework reveals that the terms most frequently emphasized include technology, efficiency, sustainability, quality of life, innovation, and collaboration. In its broadest sense, a smart city can be defined as one that employs innovative technologies to improve the lives of its citizens, strategically mobilizes existing resources, and adopts a citizen-centered approach that addresses both present and future needs (undp.org, 2021).

For cities to be regarded as smart, they must collect data on their components and subsystems, record this data, process it into useful information, derive new insights from it, develop new tools and methods, and engage in planning for the future (Dameri, 2016). A city is considered smart insofar as its investments in human capital and human resources, traditional infrastructure, and modern information and communication Technologies-within the framework of participatory governance processes-enable sustainable economic growth, a high quality of life, and the prudent management of natural resources (Caragliu, Del Bo, & Nijkamp, 2011). The vision of Smart Cities aims to create future urban environments that are secure, sustainable, environmentally compatible, and highly

 

efficient. This vision entails the design, construction, and management of all infrastructure systems (such as electricity, water, and transportation) through computer-based networks that interact with advanced integrated materials, sensors, electronic components, databases, monitoring systems, and decision-support algorithms (Hall et al., 2000).

There are several approaches to planning and monitoring the smart transformation of cities. The most widely recognized approach-also adopted by the European Union-is Boyd Cohen's Smart City Wheel, a systematic model designed to classify the core dimensions of smart cities within a holistic framework. This approach functions as an analytical tool aimed at explaining the interaction between technology, governance, and civic participation in order to enhance urban quality of life. The wheel consists of six key dimensions: smart economy, smart people, smart governance, smart mobility, smart environment, and smart living. These dimensions, when linked to normative objectives such as sustainability, innovation, participation, and inclusiveness, provide an effective reference framework for measuring urban development levels. They are utilized both in academic research and in the policy-making processes of local governments for comparative analysis and strategic planning. In short, smart cities encompass three fundamental components: "technological," "institutional," and "human." Technological factors include physical infrastructure, smart technologies, mobile technologies, virtual technologies, and digital networks. Institutional factors comprise governance, policy, and regulatory frameworks. Human factors consist of human infrastructure and social capital (Nam and Pardo, 2011).

The technological debates concerning the post-human era, as envisaged by Vinge (1993), find concrete expression in urban governance through the increasingly central role of artificial intelligence–supported decision-making processes, data-driven infrastructures, and autonomous systems. When conceptualized as vast networks in which all vital urban systems-transportation, energy, water, and communication-are interconnected and managed by a central system (typically an AI), smart cities represent not only arenas for technological innovation but also laboratories for social, ethical, and administrative experimentation along the path toward singularity. In earlier years, the concept of the smart city was predominantly associated with digital and technological domains as indicators of urban performance. Today, however, it has evolved to encompass broader domains, including governance, environment, housing, and human factors. Critical literature on smart cities, however, points to two potential disadvantages: first, urban planners who adopt the smart city vision may risk exerting power and control over residents; second, there exists a perception that smart cities may be incompatible with informal urban structures (Dragan et al., 2023, p.1). According to Grossi and Pianezzi (2017, p. 79), although smart city initiatives are promoted as revolutionary utopias, in practice, they function as instruments serving the interests of urban elites under neoliberal ideologies. Hollands (2015) highlights the democratic deficit in smart city development, noting that urban rights, democracy, and equity receive little attention in many discussions, while technology companies play a dominant role in smart city projects-a concerning trend. Glasmeier and Christopherson (2015, pp. 5–6) argue that one of the fundamental problems of smart city initiatives is their frequent reliance on a single development model, with social objectives often subordinated to economic goals. This is particularly problematic as pressing social issues, such as poverty, are insufficiently addressed in smart city planning. While the use of information and communication technologies (ICT) in smart city development is associated with convenience, efficiency, and the creation of opportunities, it simultaneously exacerbates social sustainability challenges, such as digital divides, isolation, and societal polarization. Therefore, ensuring social equity, inclusiveness, and community participation is critical in smart city strategies. Technology projects must be carefully planned and supported by measures capable of responding swiftly to uncertainties (Popescul et al., 2024, p. 71103). In a study by Makki and Alqahtani (2024) employing the DEMATEL method to identify barriers to smart city development, these obstacles were categorized into twelve groups: technical problems, infrastructure deficiencies, high costs, security concerns, privacy issues, lack of coordinated planning, population size and growth, socioeconomic diversity, geographical proximity, economies of scale, information management, and innovation dynamics.

In conclusion, smart cities are not merely a matter of technological infrastructure innovation; they also represent a lifestyle and a philosophy of urbanization. In this context, accurately defining what smart cities are-and what they are not-is critical for the sustainable development of urban areas. Approaches to smart cities, which claim to be fully integrated with technology and aimed at enhancing the quality of life, reshape not only urban infrastructures but also social, economic, and environmental systems. Therefore, cities that are truly "smart" are those that prioritize environmental sustainability, foster social participation and accessibility, and place the highest importance on data privacy and security.

## The Importance of Strategic Planning In Addressing Problem Areas in Smart City Policies of Romania and Türkiye

Although the concept of smart cities in Romania began to gain traction in 2007 with the implementation of Bucharest's traffic management system, and despite the initiation of numerous smart city projects nationwide,

 

these initiatives cannot be said to be clearly classified or emphasized from a comprehensive smart city perspective (Bălăşescu et al., 2022). An analysis of the spatial distribution of 1,001 smart city projects conducted in Romania in 2022 reveals that the majority of projects (571) were located in county centers, 66 in other municipalities, and 249 in smaller towns. This distribution indicates that smart city applications are increasingly proliferating across the country and extending to settlements of various scales. Bucharest, with 115 projects, has the highest number of smart city initiatives; however, this figure aligns with the capital's share of the national population, and thus Bucharest does not hold a dominant position at the national level. As the capital concentrates resources from the southern half of the country, it may limit the development of surrounding cities. At the regional level, the spatial distribution of projects is uneven. For instance, cities in the south and southeast, such as Constanţa, Craiova, Ploieşti, and Galaţi, despite their large populations, are almost devoid of smart city projects. A comprehensive analysis of smart city projects in Romania highlights the existence of unequal power relations in the design and management processes of these initiatives (Dragan et al., 2023, p. 4). While many municipalities in Romania have reached a certain level of maturity in digitalization by providing online services such as property tax payments, public transportation information, and civil status documents, significant disparities in the quality and accessibility of these services remain nationwide. This underscores the need for more standardized digitalization efforts. It is crucial for the government to establish national standards for municipal digital services and provide professional training to municipal staff in areas such as website development, usability, and citizen engagement strategies. In this context, national and European Union funds should prioritize projects in regions that are lagging in digitalization-particularly in the northeastern and southern regions-to reduce the digital divide (Vrabie, 2025). Smart city applications in Romania's major cities remain in a developmental phase. Although these initiatives range from mobile applications to large-scale infrastructure projects, smart city policies as a whole lack consistent national-level data, funding, and a coordinated approach. Problems persist, including insufficient information about smart city initiatives and incomplete public disclosure of reports. Moreover, these projects have not yet been widely understood or accepted by the general population. The expansion of smart city strategies is expected to align with the 2030 Sustainable Development Goals and the European Green Deal (Ibănescu et al., 2022, p. 252).

According to a comprehensive study summarizing the strengths, weaknesses, opportunities, and threats of smart city applications in Türkiye, the primary strengths include high technological capability, a young and dynamic population, government support, increasing internet and mobile usage, strategic geographic location, and developing infrastructure projects. In contrast, weaknesses are highlighted as insufficient investment, gaps in data security and privacy, inequalities in digital literacy and education, complex bureaucracy, inadequate cybersecurity infrastructure, and regional disparities in access to technology. Opportunities identified include international funding and investments, renewable energy potential, the promotion of technological entrepreneurship, university-industry collaborations, innovation in the tourism sector, and digital transformation projects, while threats encompass cyberattacks, economic instability, political uncertainties, global economic fluctuations, natural disaster risks, and dependence on foreign technologies (Öztaş Karlı, 2025, p. 186). The study by Nohutçu and Akpınar (2022) analyzed the smart city readiness of 25 metropolitan municipalities in Türkiye based on their 2020–2024 strategic plans and related findings to national policy documents. Their results indicate that, at the national level, smart city policies are largely delegated to local governments, adopting an approach that is incentivizing, regulatory, and collaborative while emphasizing localism and domestic capacity. At the local level, mobility is prioritized in smart city applications, whereas economic and governance dimensions remain secondary; moreover, only five metropolitan municipalities have undertaken institutional organization for smart city governance. According to Gürsoy's (2019) SWOT analysis, smart city initiatives in Türkiye's metropolitan municipalities remain limited due to deficiencies in fundamental objectives and strategies, centralized top-down processes, inter-organizational coordination challenges, legal and data-sharing obstacles, insufficient academic research, and technology-focused rather than citizen-centered approaches.

In public administration literature, strategic planning stands out as a fundamental component of sustainable institutional success, with this process gaining meaning through effective implementation and the adoption of the plan by the entire organizational hierarchy. The primary contributions of strategic planning to public performance management can be summarized as a stakeholder-oriented service approach, the promotion of employee participation, result-oriented performance measurement, a data-driven analysis approach, and effective resource management. Among the private sector-derived management tools integrated into the public sector on a global scale since the 1980s, strategic planning has been the most widely adopted method (Demirkaya, 2015, p. 16). Strategic planning, in addition to being a distinct field of study, is defined as a process that guides organizations and institutions in identifying the goals and activities necessary to fulfill their missions. This process is constructed around six fundamental elements (USDOE, 1991): the formulation of the mission, analysis of the current situation in terms of strengths, weaknesses, opportunities, and threats, definition of vision and strategic objectives, identification of barriers between the vision and the current situation, development of strategies and action plans to overcome these barriers, and, finally, the creation of program plans to ensure the implementation of the

 

strategies. While strategic planning in the public sector should evolve toward a strategic management approach that encompasses managing the general policy agenda and validating the effective implementation of strategies, it is particularly important, with a focus on the public sector performance management cycle, to examine whether smart city plans and programs have clearly defined objectives and whether these programs are executed through effective strategies (Caragliu and Del Bo, 2016, p. 660).

The study by Mora, Deakin, and Reid (2019) examines Europe's leading smart city initiatives through a comparative case study approach, identifying the fundamental principles underlying successful smart city strategies. The research emphasizes that smart cities cannot be reduced solely to technological infrastructure investments; rather, they require a holistic approach encompassing governance, stakeholder participation, economic development, and sustainability. Based on strategy documents and implementation examples from various European cities, the study identifies ten core strategic principles. These include: developing a long-term vision, strengthening institutional capacity, supporting innovative ecosystems, establishing multi-level governance mechanisms, promoting inter-stakeholder collaboration, prioritizing citizen-centricity, ensuring scalability, aligning with international contexts, managing resources sustainably, and adopting a flexible, learning-oriented strategic approach. The findings indicate that successful smart city strategies rely not merely on technology-focused solutions but on a multi-actor, adaptive governance framework that integrates social, institutional, and economic dimensions.

In light of the above, a city's smart city strategy and roadmap constitutes a critical governance instrument that defines the principles, norms, objectives, goals, and implementation approaches related to spatial, organizational, and technological transformation. It achieves this by harmonizing global sustainable development goals with national, regional, and local priorities in a comprehensive manner. By integrating top-down decisions with data, information, and demands derived from lower scales, it guides resource allocation and ensures the city's pursuit of its unique future. Depending on the institutional frameworks in different countries, the strategy and roadmap can be developed either independently or in connection with other strategic documents.

## RESEARCH METHODOLOGY

The methodology of this study is limited to a systematic comparative thematic analysis of the official smart city strategy documents of Bucharest and Konya. This approach is highly valuable for understanding the official intentions, priorities, planning philosophies, and self-positioning of city administrations. Strategy documents represent the most formal expression of a city's future vision, values, and governance approach, and therefore constitute a rich source of data for comparative policy analysis.

However, the scope of this study does not extend to evaluating the actual implementation of these strategies, their performance outcomes, or the practical challenges encountered in the process. This represents an important limitation of the research, and our findings should therefore be interpreted as reflecting planned rather than executed actions. Despite this limitation, the strength of the study lies in its ability to provide a detailed "map of intentions" by uncovering the strategic ambitions and planning approaches of two cities operating in different contexts. Future research can build upon this work by examining the gap between these intentions and their implementation outcomes.

Thematic analysis is an analytical technique used not only in studies aimed at identifying human behavior and nature but also in the analysis of data sources such as texts, images, and videos. Thematic analysis is a method used to systematically identify patterns of meaning in a data set and provide insights related to these patterns (Braun and Clarke, 2013). In this study, the strategic documents "The Smart City Strategy of Sector 5 of the Municipality of Bucharest for the period 2023 – 2030" for the city of Bucharest, Romania, and "Konya Smart City Strategy and Roadmap 2022–2030" for the city of Konya, were evaluated using the MAXQDA qualitative analysis software, and codes were created. Subsequently, the codes were grouped together; the categories that outlined the main structure of the study were formed, and these categories were then transformed into themes. Content analysis was conducted based on the identified themes.

The inductive coding process revealed the prominent themes in the strategy documents of Bucharest and Konya. Interestingly, these themes directly align with Boyd Cohen's well-known "Smart City Wheel" model in the smart city literature. Consequently, the analyses were structured and the findings organized based on this framework.

This study proposes an analytical framework that goes beyond the dominant "best practice" models in the smart city literature (such as Cohen's Smart City Wheel) to better understand smart city strategies. While existing models effectively identify which components cities should focus on, they often fall short in explaining why strategies take certain directions-particularly in capturing the tension between global standards and local realities.

 

Through the comparison of Bucharest and Konya, this study argues that smart city strategies are positioned between two poles:

- ***Outward Alignment***: Strategies shaped by EU policies, global competition, international funding criteria, and universal "smart city" discourses. In this model, the city positions itself as a global actor.
- ***Inward Embeddedness:*** Strategies shaped by urgent local needs (such as water scarcity or skilled labor migration), national political agendas, dominant cultural identities, and historical heritage. In this model, the city is defined primarily as a local entity.

The theoretical contribution of this study lies in proposing this dual framework, which enables us to understand not only what smart cities do, but also why they act in particular ways. Our findings suggest that no city belongs exclusively to either pole; rather, each seeks to strike a balance between the two through its strategic priorities, governance structures, and technological choices. This framework allows us to interpret smart cities not as "local implementations of a global model," but as unique political texts shaped at the intersection of global and local dynamics.

## RESEARCH RESULTS

The smart city strategic plans of Konya and Bucharest were examined using document analysis methods and evaluated from a content analysis perspective. The statements in both plan documents were systematically coded, yielding a total of 361 codes during this process. Similar codes were then grouped together to form categories, and the main themes were determined by regrouping the categories at a higher level. Thus, the study followed an inductive approach, moving from practice to theory. The coding process not only provided a conceptual classification but also made it possible to highlight the common and different aspects of the two cities' strategic documents.

Table 1, which was created, is a comprehensive reflection of this analysis and provides a framework in which all codes are organized together with the relevant categories and main themes. Thanks to the table, the research has moved beyond the classification of specific statements and gained the opportunity for systematic comparison. In the findings section, Konya and Bucharest's strategic visions, governance models, implementation plans, technological infrastructures, approaches to the environment, and current situation analyses are examined in detail through these themes.

Throughout the findings, particular emphasis has been placed on the similarities (e.g., sustainability, human and environment-centeredness, participation) and differences (e.g., Bucharest's EU-focused integration, Konya's alignment with local identity and national strategies) in the smart city strategies of both cities. This comparative approach has not only helped to understand the current situations of the two cities, but has also revealed how smart city strategies are shaped in different socio-economic and cultural contexts.

**Table 1** – Code Book

| Main Themes | Categories (Sub-Themes) | Codes |
|---|---|---|
| 1. Strategic Framework and Vision | Vision Statement and Focus Areas | Human- and Environment-Centeredness, Citizen Quality of Life, Commitment to Local Values and Cultural Identity, Economic Competitiveness and Investment Climate |
| | Core Principles and Values | Sustainability and Climate-Friendly Approach, Innovation and Leadership, Participation and Inclusivity, Circular Economy and Decarbonization, Digital Transformation and Open Data Orientation |
| | Alignment with National and International Strategies | National Smart Cities Strategy (Turkey), European Union Policies (Green Deal, Urban Agenda, etc.) |
| 2. Governance Model and Stakeholder Engagement | Institutional Governance Structure | Central Coordination Unit (Smart City Konya Agency/Commission), Implementation and Monitoring Organizational Structure (SOIM – Bucharest) |
| | Stakeholder Mapping and Classification | Identification of Internal and External Stakeholders, Classification by Level of Influence, Quintuple Helix Model, Public-Private-Academia Collaboration (PPA) |
| | Participation Mechanisms | Large-Scale Field Surveys (Konya: 2400, Bucharest: 995), Focus Group Meetings, High-Level Executive Consultations |
| 3. Implementation | Project Prioritization and Scheduling | Analytical Prioritization Method (DEMATEL), Multi-Criteria Analysis for Prioritization, Four-Stage Timeline (2023–2030), Three-Stage Timeline (2023–2030) |

 

| | | |
|---|---|---|
| and Action Planning | | |
| | Financing Models and Resources | Municipal Internal Resources and National Funds, International Loans and Grants (JICA, KfW, etc.), European Union Funds (Regional Programs, PNRR), Public-Private Partnership (PPP) and Build-Operate-Transfer (BOT) |
| | Monitoring and Evaluation System | Performance Indicators and Target Value Table, Diagnostic Radar Chart (Current Situation vs. Targets), Feedback and Data Analysis Unit |
| 4. Technological Infrastructure and Data Management | Data Management and Platforms | Open Data Platform, Smart City Data Inventory, Integrated Smart City Digital Platform |
| | Advanced Technologies | Digital Twin, Artificial Intelligence Applications (process automation, chatbots), Internet of Things (IoT – sensor networks), Blockchain and Metaverse |
| | Cybersecurity Approach | Establishment of Central Cybersecurity Center, Data Security and Privacy |
| 5. Sustainability and Environmental Focus | Energy Efficiency and Renewable Energy | Solar and Wind Power Plants, Monitoring and Reducing Energy Consumption in Buildings, Energy Production from Waste, Smart Lighting Systems |
| | Waste Management and Circular Economy | Smart Waste Collection Systems, Application of Circular Economy Concept, Recycling Platforms and Zero-Waste Projects |
| | Water Management and Drought Mitigation | Strategic Projects for Water Scarcity, Smart Irrigation Systems, Modernization of Water and Sewerage Infrastructure |
| | Environmental Quality Monitoring | Air Quality and Noise Monitoring Systems/Maps, Low-Emission Zones |
| 6. Current Situation Analysis and Adaptation to Local Context | Identified Urban Challenges and Needs | Water Scarcity and Agricultural Productivity, Retaining Qualified Workforce, Outdated Urban Infrastructure (energy, water, housing), Traffic Congestion and Parking Problems |
| | Citizen Expectations and Perceptions | Simplification of Relations with Administration and Transparency, Environmental Concerns and Demand for Green Spaces, Solving Transportation Problems |
| | SWOT Analysis Findings | Inter-Institutional Cooperation Potential, Lack of Promotion and Visibility of Applications, EU Framework and Funding Opportunities, Inequalities in Digital Skills and Technological Access |

*Source: Own processing*

**Strategic Framework and Vision**

The strategic framework and vision theme outlines the fundamental philosophies and roadmaps for cities' smart city transformation. Upon examining this matrix, it is clear that Bucharest has built its strategic vision around two main axes: Citizen Quality of Life and Economic Competitiveness and Investment Environment. This demonstrates that the city uses smart urbanisation as a tool to achieve concrete, measurable and pragmatic outcomes. On the other hand, Konya has placed much greater emphasis on the principles of Commitment to Local Values and Cultural Identity and Innovation and Leadership when defining its vision. This approach reflects Konya's desire to make technological transformation part of its identity and to take a pioneering role in this field. The fact that both cities attach importance to the principle of Participation and Inclusiveness shows that they share a common modern governance approach.

 

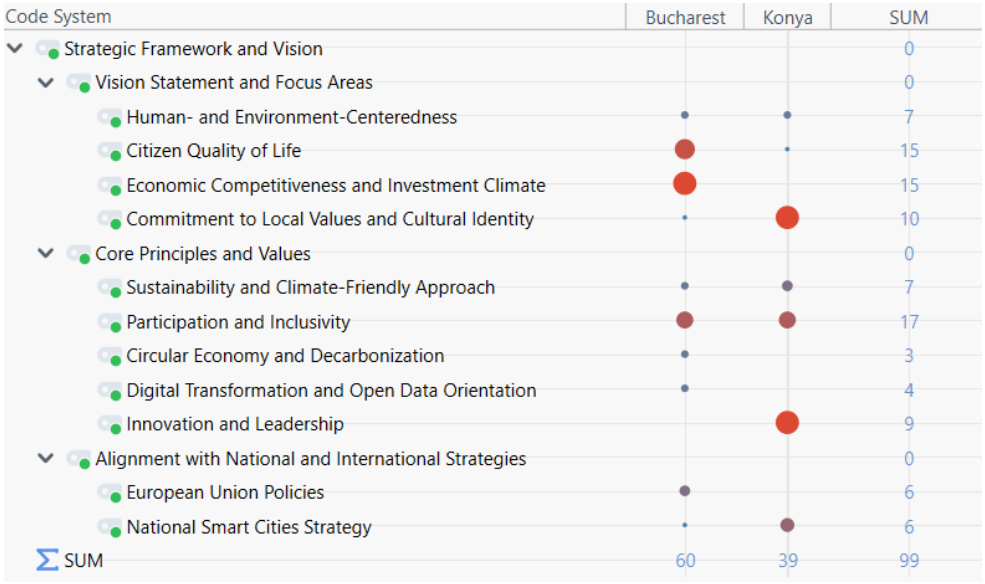


**Figure 1.** Code matrix for strategic framework and vision themes

Both Bucharest and Konya build their smart city visions on a common ground that emphasizes people and the environment, yet their approaches differ in scope and focus. Bucharest frames its vision with the motto "technology for people", highlighting practical, service-oriented solutions to everyday problems and placing a strong emphasis on measurable improvements in citizens' quality of life. Konya, meanwhile, defines its vision as "human and environment-centered", enriched by local and universal values, which gives it a more cultural and identity-based dimension. In this sense, Bucharest's approach is more pragmatic and output-driven, while Konya's emphasizes identity, tradition, and long-term social harmony.

These differences are particularly visible in the economic and cultural dimensions. Bucharest positions its smart city strategy as a tool for strengthening economic competitiveness, attracting investments, and fostering entrepreneurship, aligning closely with global competition and European Union priorities. Konya, by contrast, focuses on internal dynamics such as agricultural productivity and local economic development, while placing strong emphasis on cultural identity and heritage, exemplified by references to Mevlevi culture and the principle of coexistence. Innovation and leadership also diverge: Konya adopts them as core values tied to its vision of pioneering transformation, whereas Bucharest treats innovation as a means to improve efficiency without the same cultural or identity-oriented framing.

At the strategic framework level, Bucharest's vision is deeply aligned with EU policies such as the European Green Deal and EU Urban Agenda, reflecting an outward-looking, integrationist approach. Konya's plan, however, is firmly situated within Turkey's national strategies, prioritizing compliance with domestic frameworks like the National Smart Cities Strategy. Both cities share common ground on sustainability, inclusiveness, and citizen participation, but Bucharest emphasizes continuous digital participation mechanisms and targeted solutions for disadvantaged groups, while Konya's participation efforts are more concentrated in planning and consultation stages. Ultimately, Bucharest pursues a pragmatic, EU-integrated, service- and economy-oriented strategy, whereas Konya advances a holistic, culturally grounded, and nationally aligned smart city vision.

### Governance Model and Stakeholder Engagement

The governance model and stakeholder participation theme explains how strategies will be organized and how social actors will be involved in the process. Konya's most prominent focus in this area has been to institutionalize the Public-Private Sector-Academia Cooperation model. This reveals the city's strategy of leveraging a broad ecosystem in its innovation and implementation processes. It also aims to ensure two-way participation through both Focus Group Meetings at the grassroots level and High-Level Executive Consultations at the highest level. Bucharest, on the other hand, has focused more on defining the Implementation and Monitoring Organizational Structure that will oversee the implementation of the strategy in its governance model. In terms of stakeholder participation, Bucharest has placed particular emphasis on focus group meetings, which enable the collection of qualitative data.

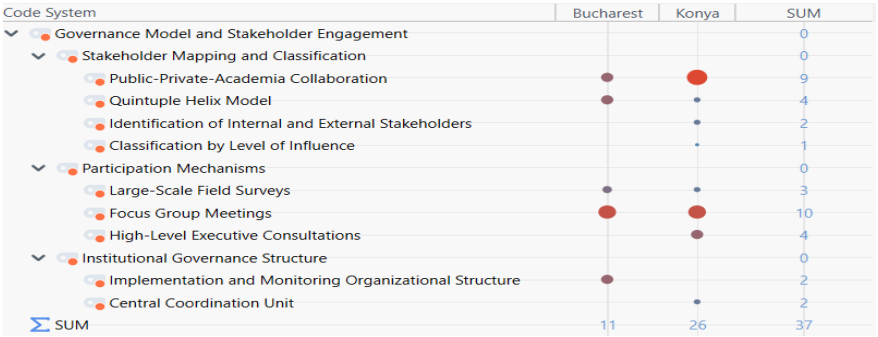


**Figure 2.** Code Matrix for Governance Model and Stakeholder Engagement Themes

When examining smart city governance models, it is evident that Bucharest has adopted a flexible structure integrated with existing administrative mechanisms, while Konya aims for a more centralized and ambitious institutional structure. Bucharest has established an operational oversight mechanism called the "Implementation and Monitoring Organizational Structure (SOIM)" to monitor its smart city strategy alongside other local development plans. In contrast, Konya has put forward a vision to establish a "Smart City Konya Agency" that will manage the process holistically from a single center, with broad and strategic powers such as roadmap preparation, technology monitoring, and international promotion of the city. This distinction shows that Bucharest prefers pragmatic integration, while Konya prefers controlled and centralized transformation.

While both cities have carried out extensive work on stakeholder participation, it is understood that Konya has planned this process with a more systematic and multi-layered methodology. Konya stands out by mapping and classifying more than 450 internal and external stakeholders, conducting a large-scale field survey of 2,400 people, and consulting with 40 senior executives to secure the support of decision-makers in particular. Furthermore, public-private-academic cooperation is at the heart of Konya's governance model. Bucharest, on the other hand, has adopted stakeholder participation as a modern principle, such as the "five-pronged approach", and has placed particular emphasis on qualitative methods such as focus group meetings; however, the methodology of this process has not been documented in as much detail as in Konya.

Parallel to all this, the governance approaches of the two cities reflect the general character of their strategies. Bucharest has charted a more organic course of progress by establishing a monitoring model that is flexible, results-oriented, and compatible with existing administrative structures. Konya, on the other hand, planned the process from the outset with a detailed methodology; mapped stakeholders, combined broad-based public participation with high-level political and bureaucratic support, and aimed for a more controlled transformation process with a vision of establishing a central agency to manage the entire process.

### Implementation and Action Planning

The theme of implementation and action planning, which includes the methodologies for implementing strategies, is one of the areas that most clearly demonstrates the difference in planning philosophy between the two cities. Konya has adopted a technical approach such as the Analytical Priority Method (DEMATEL), which analyzes the cause-and-effect relationships between projects in the project prioritization process. It has also placed great importance on establishing an institutional Feedback and Data Analysis Unit to ensure the continued success of its applications. Bucharest's approach, on the other hand, is based more on the fundamental pillars of the monitoring and evaluation system; clearly presenting the current situation and objectives with the Diagnostic Radar Chart and tracking progress with the Performance Indicators and Target Value Table have been Bucharest's primary focus points in planning.

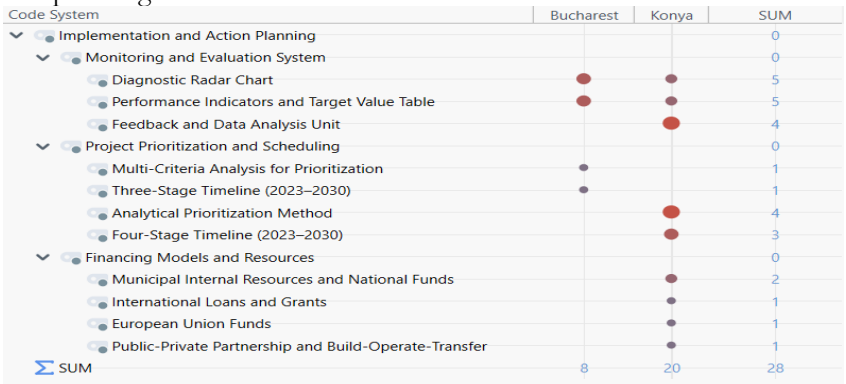


**Figure 3.** Code matrix for implementation and action planning themes

 

In terms of implementing smart city strategies, Bucharest and Konya have adopted different planning philosophies. Bucharest uses a flexible Multi-Criteria Analysis method that includes factors such as citizen perception, impact on climate change, and financing opportunities in project prioritization. Konya, on the other hand, has opted for a more technical and structural Analytical Prioritization Method (DEMATEL) that analyzes the cause-and-effect relationships and mutual interactions between projects. This methodological difference is also reflected in the implementation timelines; while Bucharest offers a broader three-phase timeline, Konya has established a four-phase plan consisting of two-year periods, allowing for tighter control.

Both cities have adopted modern approaches to monitoring and evaluating the implementation process. Bucharest clearly defined the starting point with a Diagnostic Radar Chart visualizing the current situation and objectives, while Konya similarly established a foundation with impact and adoption analyses of existing practices. Both strategies plan to track progress using Performance Indicators. However, Konya differs from Bucharest in that it aims to establish a dedicated Feedback and Data Analysis Unit to continuously analyze user feedback as part of institutionalizing this process.

Financing models and general strategy characteristics also highlight the differences in the approaches of the cities. Konya offers a diverse and detailed financing portfolio, including Municipal Internal Resources, International Loans and Grants, and Public-Private Partnerships (PPP). Bucharest, on the other hand, has considered financing as a criterion in project selection and has envisioned a structure primarily based on European Union Funds. Ultimately, while Bucharest's action plan outlines a flexible, pragmatic, and stakeholder-focused roadmap, Konya's offers a structured framework that is analytical, systematic, and institutionalizes both feedback mechanisms and the financing strategy in greater detail.

### Technological Infrastructure and Data Management

The technological infrastructure and data management section addresses the components that form the digital backbone of smart cities. Bucharest's strategy in this area is almost entirely shaped around the vision of establishing an Integrated Smart City Digital Platform. This platform aims to create an integrated and centralized technology architecture where all smart city services can communicate with each other. Konya's technology focus is more diverse; while it attaches similar importance to advanced technologies such as the Open Data Platform and Digital Twin as Bucharest does, it focuses much more on cybersecurity. In particular, the goal of establishing a Central Cybersecurity Center proves that Konya has addressed the security of its digital infrastructure as a strategic priority from the outset.

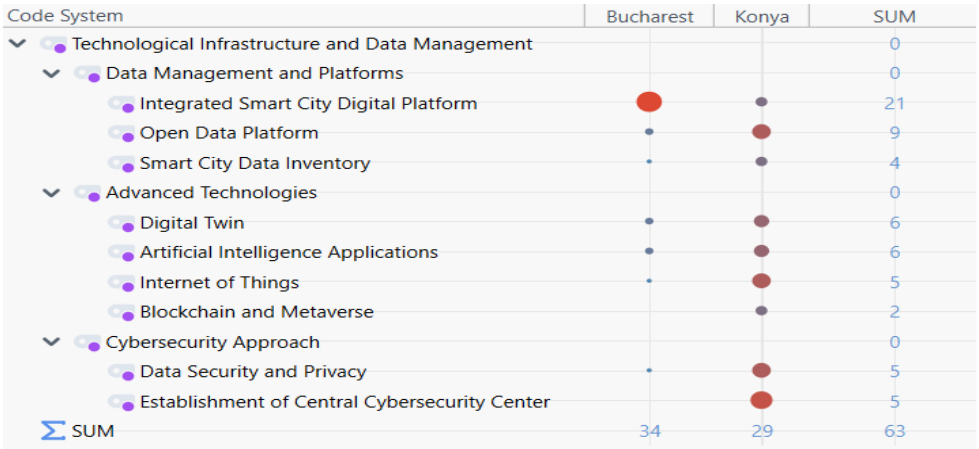


**Figure 4.** Code matrix for technological infrastructure and data management themes

Technological infrastructure and data management strategies demonstrate a clear difference between Bucharest and Konya in terms of architectural and application focus. Bucharest's technology vision is based on the Integrated Smart City Digital Platform, which will bring all smart city components under one roof and ensure interoperability from the outset. This approach reflects a holistic and centralized technology architecture that aims to transition from isolated systems to full integration. In contrast, Konya has adopted a more modular and application-centric model; its strategy focuses on strengthening the core infrastructure that will support numerous specific applications to be developed across different sectors and envisions a more flexible structure where integration will be achieved over time.

Both cities share a common vision of creating an Open Data Platform and embracing advanced technologies such as Digital Twin and Artificial Intelligence. This indicates that both cities aim for data-driven, predictable, and optimized urban management. However, they differ in terms of technological courage and risk management. Konya has reinforced its goal of technological leadership by including more speculative technologies such as

Blockchain and Metaverse in its action plan and placing greater emphasis on Internet of Things (IoT)-based projects. Bucharest, on the other hand, appears to be focusing more on proven platform technologies.

These technological approaches have also shaped cities' stance on cybersecurity. Konya has defined cyberattacks as a strategic threat and set the concrete goal of establishing a Central Cybersecurity Center to protect its entire IT infrastructure and manage this risk. This highlights the corporate and central importance attributed to cybersecurity. In Bucharest's strategy, data security is addressed as a natural component of the planned integrated platform, but it does not stand out as a central strategic priority supported by a specific institutional structure as it does in Konya.

**Sustainability and Environmental Focus**

The theme of sustainability and environmental focus demonstrates how cities adapt their smart city strategies to local and global ecological issues. The sharpest distinction in this area stems from the geographical realities cities face. For Konya, the most dominant and urgent issue has been Strategic Projects for Water Scarcity, and the environmental dimension of its strategy has largely been shaped around this issue. Bucharest, on the other hand, has focused on Monitoring and Reducing Energy Consumption in Buildings and Implementing the Circular Economy Concept, in line with European Union policies. The fact that both cities attach high importance to Air Quality and Noise Monitoring Systems/Maps confirms that they recognize this issue as a universal urban problem that directly affects citizens' quality of life.

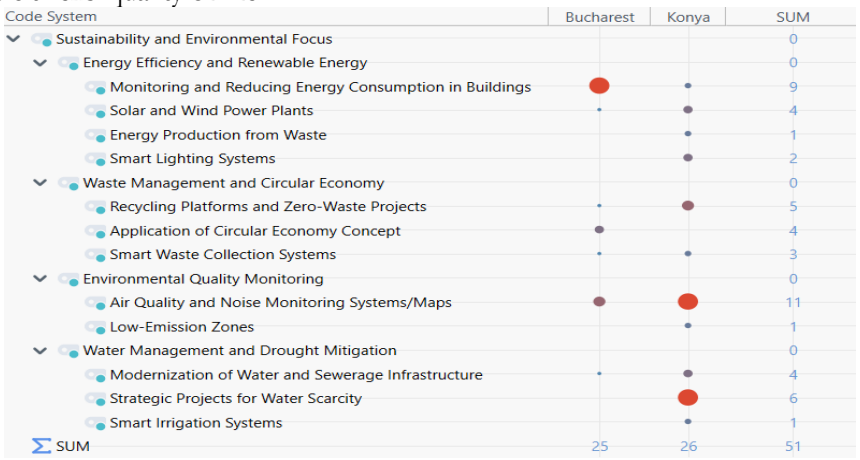


**Figure 5.** Code matrix for sustainability and environmental focus themes

Sustainability and environmental focus occupy a prominent place in the strategies of both cities, but priorities vary according to local and regional contexts. The areas where this difference is most evident are the circular economy and water management. Bucharest has adopted the Implementation of the Circular Economy Concept as a fundamental strategic principle, in line with European Union policies, and has approached waste management as an opportunity for resource efficiency and economic value creation. In contrast, Konya's environmental strategy, reflecting geographical and climatic imperatives, has been shaped almost entirely around Strategic Projects for Water Scarcity. The city's fight against drought, supported by concrete technological solutions such as Smart Irrigation Systems, demonstrates how the smart city vision can be used as a response to an urgent ecological problem.

In terms of energy and environmental quality monitoring, the cities' approaches are more aligned around common goals. Both cities plan to invest in renewable energy sources such as solar and wind power plants; however, while Bucharest aims to spread this initiative across a social base through schools, Konya has offered a more diverse portfolio, including waste-to-energy production. While goals such as Monitoring and Reducing Energy Consumption in Buildings and establishing Air Quality and Noise Monitoring Systems/Maps are shared, Konya's plan to create Low Emission Zones in addition to these monitoring systems stands out as a more proactive step towards solving the problem.

Ultimately, both cities' environmental strategies are a product of their ecosystems. Bucharest's approach offers a policy-based framework aligned with EU policies, prioritizing issues such as the circular economy and energy efficiency. Konya's strategy, on the other hand, focuses on vital and urgent local needs such as water scarcity, centering on technology-based and project-focused solutions to these problems. Despite common goals in areas such as environmental monitoring and renewable energy, the fundamental factor determining the spirit and priorities of the strategies has been the decisive influence of the local context on strategic planning.

 

### Current Situation Analysis and Adaptation to Local Context

The theme of current situation analysis, which forms the basis of the strategies, reveals how each city diagnoses its own unique problem areas. The most prominent issues in Bucharest's analysis were Outdated Urban Infrastructure and, in particular, Inequalities in Digital Skills and Technological Access. This situation shows that the city prioritized addressing deficiencies in both its physical and social infrastructure. In Konya's self-assessment, the most notable weakness is the Lack of Promotion and Visibility of Applications, despite the many applications developed. However, the challenge of Retaining Qualified Workforce has been identified as a critical issue for the city's socio-economic future.

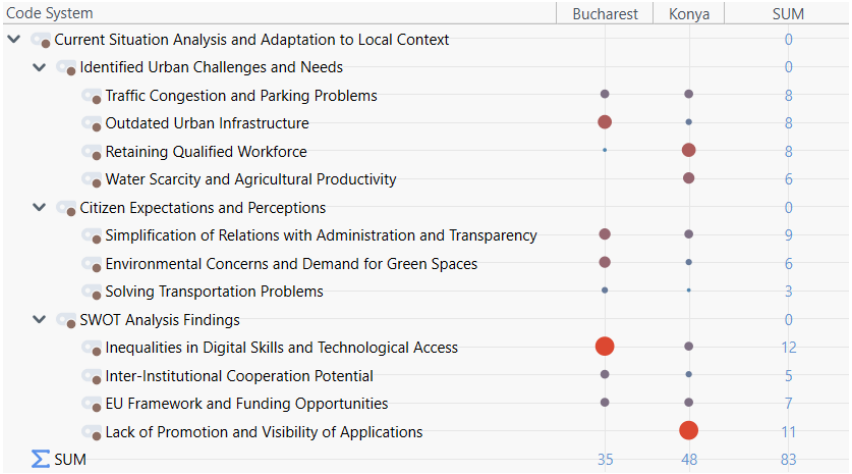


**Figure 6.** Code matrix for current situation analysis and adaptation to local context themes

The smart city strategies of both cities are designed to respond to on-the-ground realities and urban challenges. Analyses reveal that Bucharest and Konya face common problems, but also have unique challenges that shape their priorities. While Traffic Congestion and Parking Problems are a common headache for both metropolises, Bucharest's analysis highlights the need to modernize its Aging Urban Infrastructure (housing, water, energy) left over from the communist era. In contrast, Konya's strategy focuses on unique and urgent issues such as Retaining Skilled Labor, which points to a brain drain problem, and Water Scarcity and Agricultural Productivity, which are part of the city's geographical destiny.

Citizen expectations and SWOT analyses shed light on the social and communicative dimensions of strategies. In both cities, the public's most fundamental demand has been the Simplification of Relations with the Administration and Transparency rather than technological innovations; this indicates that the core of the smart city perception is an expectation for better local government services. Similarly, Environmental Concerns and Demand for Green Spaces have also emerged as common expectations. SWOT analyses reveal that both cities face the problem of Inequalities in Digital Skills and Technological Access, which poses a barrier to inclusiveness. In addition to this common weakness, a notable finding specific to Konya is the Lack of Promotion and Visibility of Applications, despite the development of numerous applications.

Therefore, analyses of the current situation have demonstrated that strategies are built on solid ground, but that the local realities forming this ground differ significantly from one another. While Bucharest focuses on issues such as modernizing its aging infrastructure and closing the digital divide, Konya faces more unique challenges, such as retaining skilled labor in the city, combating water scarcity, and increasing awareness of the applications it has developed. Citizens' demand for better governance and a greener environment serves as a common foundation upon which these different strategic paths are built, confirming that the ultimate goal of smart city transformation is not technology, but human life.

## DISCUSSION AND CONCLUSION

This study compares the smart city strategies of Konya and Bucharest within a multidimensional framework, revealing how the two cities have developed differing approaches in terms of vision, governance model, implementation planning, technological infrastructure, environmental sustainability, and current situation analysis.

Bucharest has developed a more pragmatic strategy that is deeply aligned with European Union policy documents and aims to increase economic competitiveness, service efficiency, and citizen quality of life through measurable outputs. In contrast, Konya has put forward a more holistic and identity-focused vision based on Turkey's national strategies, centering on local identity, cultural values, and innovative leadership. In terms of

governance and implementation, it was found that Konya preferred a more institutionalized and controlled model, such as establishing a central agency and multi-layered stakeholder participation, while Bucharest developed a flexible, results-oriented integration model compatible with existing administrative structures. In implementation planning, Konya has emphasized analytical and technical methods, while Bucharest has demonstrated a more flexible planning approach that takes into account citizen perception and financing conditions. This situation shows that differences in strategic visions are also decisive at the implementation level.

Differences between the two cities have also been observed in the areas of technological infrastructure and environmental sustainability. While Bucharest stands out with its goal of an integrated digital platform encompassing all components, Konya reflects its desire to take a leading role with modular solutions, a cybersecurity center, and advanced technologies (IoT, blockchain, metaverse). In environmental sustainability, Bucharest embraces EU-focused policies such as the circular economy and energy efficiency, while Konya prioritizes projects that directly address local issues such as drought and water scarcity. These differences demonstrate how decisive the geographical, political, and economic contexts of cities are in shaping their strategies.

Within this framework, although the smart city strategies of both cities converge around common human values and a sustainability approach, they diverge in terms of implementation methods and strategic orientation. While Bucharest advances along the axis of EU integration and global competitiveness, Konya aims for transformation through national strategies and local identity. These different approaches prove that smart urbanization is not a one-size-fits-all model; rather, each city develops unique paths appropriate to its own context. The smart city strategies of Bucharest and Konya also involve some risks and challenges.

We are still in a relatively early stage to access implementation data for the smart city strategic plans of Bucharest and Konya. Looking beyond the strategy documents can provide early indications of how these plans are being implemented. For example, existing digital applications by the Konya Metropolitan Municipality, such as AKIS (Smart Konya Communication System), serve as concrete examples of the citizen-focused digital transformation vision promised in the strategy document. Similarly, Bucharest's ongoing projects in traffic management or smart lighting can be interpreted as the initial practical steps toward its vision of an integrated digital platform. However, the ultimate success of these projects and whether they achieve the inclusive objectives outlined in the strategy will be the subject of future independent performance evaluations. Therefore, the critical question at this point is to what extent these strategic plans will deliver on their promises. There is often a gap between what strategy documents promise and the actual implementation capacity in the real world. In light of our findings, it is possible to anticipate potential implementation challenges for both cities. Bucharest's strategy, being highly dependent on EU funds, may be vulnerable to bureaucratic delays or changes in funding criteria. Moreover, its emphasis on measurable outputs carries the risk of overlooking long-term social capital investments that are difficult to quantify, such as community-building initiatives. Its flexible structure could also lead to coordination issues if priorities conflict with other local development plans. Konya's vision, on the other hand, may encounter bureaucratic resistance or jurisdictional conflicts with other municipal departments. Promises related to advanced technologies like blockchain and the metaverse risk remaining mere "technological showmanship" if they fail to translate into tangible benefits for citizens. Additionally, implementing the emphasis on cultural identity in a way that inclusively accommodates the city's diverse urban population presents a complex governance challenge. These potential gaps indicate that the success of a strategy document depends not only on how well it is written but also on institutional capacity, political will, flexibility, and the ability for continuous learning.

Bucharest and the Risk of "Technocratic Neoliberalism": The findings suggest that Bucharest's deep integration with EU funds and policies aligns it more closely with the "technocratic neoliberal" model identified by Grossi & Pianezzi (2017). The emphasis in its strategy on economic competitiveness, investment climate, and measurable service outputs carries the risk of restructuring the public sphere within a market-oriented logic. However, Bucharest's citizen participation mechanisms (such as focus group meetings) can be interpreted as elements that mitigate this risk. Still, the "democratic deficit" highlighted by Hollands (2015) remains a challenge for Bucharest, as participation appears to be concentrated more in the planning stage rather than in the implementation phase of the strategy.

Konya and the Possibility of "Localized Techno-Nationalism": Konya's emphasis on alignment with national strategies, domestic technology, and cultural identity can be interpreted as a search for an alternative to the global neoliberal model. However, this raises a different critical question: could this approach imply the mobilization of public resources within a centralized structure (such as the Smart City Konya Agency) in pursuit of the "domestic and national" technology agenda? While Konya's model may seem like a response to critiques of the dominance of technology corporations, it carries the counter-risk of subordinating citizen participation to a centralized, "visionary" mode of governance. Moreover, the limited visibility and communication of Konya's initiatives may lead to questions about their legitimacy in the eyes of citizens.

Common Ground: Both cities extend the smart city concept beyond the narrow framework defined by technology companies. Bucharest achieves this by integrating EU social and environmental norms, while Konya

 

does so by blending it with local identity and developmental needs. This demonstrates that the notion of a smart city is no longer a universal "blueprint," but rather a product of local political and cultural negotiation processes.

Within the scope outlined above, the comparative analysis in this study not only highlights the differences between Bucharest and Konya but also offers significant insights and practical policy recommendations for other cities. Our findings indicate that there is no single "best" smart city model; rather, there are multiple alternative roadmaps that cities can consider when shaping their strategies.

This section proposes strategic approaches for cities operating in different contexts. For EU member or candidate cities, the Bucharest model (Outward Alignment) demonstrates how EU funds and policies can be used not as a cost, but as a catalyst. Such cities can facilitate access to financing and enhance their global competitiveness by integrating their strategies with key European agendas such as the European Green Deal and the Digital Transition. However, the critical lesson from Bucharest is to avoid becoming trapped in a technocratic approach and instead place citizen participation at the heart of the strategy. EU alignment should not be reduced to a mere bureaucratic box-ticking exercise; rather, it should serve as a tool to strengthen social inclusion.

In contrast, the Konya model (Inward Embeddedness) highlights the importance of maintaining strategic autonomy for cities in EU candidate or non-EU developing countries, rather than closing themselves off from external influences. These cities should align their smart city strategies with national development plans and urgent local needs (such as water scarcity, agricultural productivity, or brain drain) instead of blindly following global trends. Konya's use of cultural identity not as a marketing tool but as a source of social cohesion and innovation motivation offers inspiration for other cities with comparable historical and cultural depth.

When viewed through the lens of economic capacity, resource-constrained mid-sized cities may find Konya's modular and application-oriented technology approach more feasible than attempting to establish a fully integrated platform all at once. As Konya has done, such cities can build public support and momentum by launching small-scale, quick-win projects that address pressing and visible problems such as waste management or smart parking. For resource-rich large metropolises, Bucharest's vision of an integrated digital platform offers a more sustainable long-term solution to prevent data silos and system overlaps. However, these cities should also heed Konya's emphasis on a centralized cybersecurity hub, as cyber risks grow exponentially with increasing digitalization.

Both cases illustrate that a successful smart city strategy depends on several universal elements. Strategy must come before technology; both Konya's DEMATEL analysis and Bucharest's multi-criteria analysis demonstrate that technology choices should be guided by strategic priorities, not made arbitrarily. Financial diversification is essential; as shown in Konya's case, cities should diversify their funding sources (municipal resources, international loans, public–private partnerships), since reliance solely on central government funds or EU grants jeopardizes sustainability. Institutional structure determines ownership; Konya's "Smart City Agency" vision underscores the importance of a dedicated institutional body to coordinate and accelerate transformation rather than dispersing smart city activities across existing bureaucracies. Finally, communication and visibility are key to legitimacy; Konya's challenge of limited promotion and visibility reflects a common shortfall among many cities. Developing projects that generate tangible benefits for citizens is vital-but effectively communicating these successes is equally critical.

The findings of this study offer several practical implications for policymakers and urban planners. First, a city's smart city journey requires balancing its degree of integration into global networks with the urgent needs of its local context. Second, a successful strategy depends not only on a well-defined vision but also on the institutional capacity, diversified funding, and ongoing citizen dialogue necessary to bring that vision to life. The cases of Bucharest and Konya provide two distinct yet equally valid "compass" that can inspire cities in different contexts as they chart their own unique paths. As a continuation of this study, testing this comparative framework across cities from different continents and levels of development would further enrich our understanding of smart city theory and practice.

In conclusion, this study not only reaffirms the importance of local context but also provides an analytical framework for understanding how that context operates. Our findings show that smart cities can act as active strategic agents, rather than passive recipients of global models, in countering the risks identified by critics such as Hollands and Grossi & Pianezzi. Bucharest achieves this by internalizing global (EU) norms, whereas Konya does so by emphasizing local and national references. The practical contribution of this study is to demonstrate to urban policymakers that they must consciously manage this global–local tension when shaping their own strategies. Future research could explore how this dual framework manifests in other cities within EU member and candidate countries.

 

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