

# The Impacts of Urban Design on Community Well-Being with The Smart City Integration

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## Abstract

**Purpose:** The primary purpose of this paper is to discuss the impact of urban design on community well-being and the integration of smart cities to emphasise long-term community planning.

**Design/methodology/approach:** A comprehensive literature search was conducted to identify publications addressing smart city integration's effects on community well-being concerning urban design. SpringerLink, ScienceDirect, Google Scholar, and ScienceDirect were accessed for relevant information, and fifty publications were evaluated in total. The publications contain various kinds of literature on the impacts of urban design on community well-being with smart city integration. The period of the review is from 2019 to 2023. After a thorough review, we will filter out literature with redundancy and deemed unsuitable.

**Findings:** The findings revealed that community well-being focuses on urban people's overall quality of life. In contrast, urban design emphasises urban areas' physical layout and organisation to increase livability, and smart cities use technology to improve urban services and sustainability.

**Research limitations/implications:** Through a rigorous, comprehensive review, this study depicts the impact of urban design on community well-being and the integration of smart cities to emphasise long-term community planning.

**Practical implications:** This study offers several components used in community well-being, the impact of urban design and the integration of smart cities in the community.

**Originality/value:** To the best of the author's knowledge, little effort has been devoted to the impact of urban design on community well-being with the smart city integration. This research helps to close the gap.

**Keywords:** Urban design, community well-being, smart city

## Introduction

The term "urbanisation" refers to the process by which a population migrates to urban regions or cities, sometimes accompanied by the physical expansion of cities and the transformation of rural or less developed areas into urbanised landscapes. Urbanisation is also sometimes used synonymously with "suburbanisation." (Cai et al., 2019) People move from rural to urban areas to find better economic possibilities, outstanding quality of life, and access to city facilities and services.

The urbanisation process is influenced by several reasons, including changes in people's preferences towards their way of life, economic growth, technological improvements, and industrialisation.(Cai et al., 2019; Guo et al., 2022). The urban landscape, the social dynamics, and the overall structure of an area are all subject to change due to the growth of cities, which results in cities attracting more people, businesses, and infrastructure (Chen et al., 2022).

Both good and bad things can be seen as a result of growth.. On the bright side, it may result in higher economic development, improved access to education and healthcare, and enhanced chances for cultural activities and leisure pursuits. On the other hand, it may also bring about problems like increased traffic congestion and pollution, as well as socioeconomic inequality and inadequate housing (Yasin et al., 2022).

Urbanisation is a significant global trend, and its effects are observed across various scales, from local neighbourhoods to national and international levels (Guo et al., 2022). Managing urbanisation effectively involves urban planning, infrastructure development, sustainable practices, and social policies that balance economic growth with social and environmental well-being (Chen et al., 2022). The emergence of smart city concepts marks a transformative shift in how urban areas are planned, developed, and managed (Nahiduzzaman et al., 2021).

As urban areas continue to develop and become more receptive to technological advances, incorporating smart city concepts will play an increasingly important part in determining the character of the future urban environment. As a result, to resolve urban issues and improve people's quality of life, "smart cities" employ cutting-edge information and communications technologies and data-driven problem-solving strategies. The potential of smart city concepts to alter urban living is enormous. These concepts answer problems that have persisted in cities for a long time and pave the way for more environmentally friendly, efficient, and livable communities. (Sarate et al., 2019). This general review attempts to address this gap by exploring at least ten years' worth of literature on community well-being, urban design, and new technologies that can fall under the smart city concept. The aim is to assess the state of community well-being concerning the livability factors of the smart city community. This article presents a comprehensive review of the literature. It conducts an in-depth analysis of fifty eight research papers to identify the most effective approaches to community engagement in promoting community well-being and how sustainable smart cities function collaboratively. It further investigates the effects of integrating smart cities and urban design on community well-being.

## **Background**

### ***The strong connection between community well-being and urban design***

Individuals and their communities determine which social, economic, environmental, cultural, and political conditions are necessary for individuals to grow and realise their full potential. These conditions are referred to as the conditions of community welfare (Sarate et al., 2019). Therefore, relating urban design with community well-being involves considering how urban spaces' physical layout, features, and functionality impact residents' overall quality of life and satisfaction. The five components included in the framework are obtained by studying an enormous and extensive array of literature from various research fields. Figure 1 illustrates the framework.



Figure 1: Establishment of a strong connection between community well-being and urban design

Sources: Chen et al., (2022); Jr, (2023); Kim & Jin, (2019)

Looking at the community, we find three attributes that play a prominent role in well-being: connectedness, where connectedness is the degree of social interaction, cohesion, and interdependence among a community’s members. It represents the strength of relationships, shared values, and a sense of belonging that people experience within the community. Connectedness fosters a supportive and inclusive environment where individuals collaborate, communicate, and work together to accomplish shared objectives (Maulana & Wardah, 2023). Meanwhile, liveability refers to the overall quality of life and level of comfort that individuals in a particular location or community experience (Mohseni, 2021). It incorporates a variety of factors that contribute to the well-being, convenience, and contentment of a given area’s residents. Various social, economic, environmental, and infrastructure factors that collectively influence the viability of a city, neighbourhood, or region are considered in liveability assessments (Lindkvist et al., 2021). The last element is equity. Equity in community well-being means that resources, opportunities, and benefits are shared fairly and justly among all people of a community, no matter where they come from, who they are, or how much money they have. It considers that different people and groups may start in other places and face various obstacles. Its goal is to ensure everyone can reach their full potential and live a good life. Therefore, building a governance structure is important. Still, many studies have also looked at the importance of civic engagement and political participation, especially involving residents and other urban stakeholders in the decision-making process to make it more fair and inclusive (Chen et al., 2022; Nikki Han & Kim, 2021; Mouton et al., 2019). Each of these traits can be examined for community wellness considerations.

i. Engage the community

It is vital to engage the community to achieve community well-being. Doing so enables residents to become active participants in designing their environment and enhancing their quality of life (da Silva et al., 2020). The participation of citizens is an absolute requirement, given that citizens are the ones who carry out the numerous types of development activities that are already in place. As a result, it is essential to carry out various activities to encourage community participation. (

Levenda et al., 2020 ). These things include ensuring that the community will benefit from the activity, that the community will be able to comprehend its meaning, that the activity will be carried out following its context and purpose, that the activity will be carried out honestly and openly, that it will be able to be accounted for, and that the activity will involve the community in carrying it out (Jr, 2023).

To engage the community in the advances of the smart city can be viewed from a variety of perspectives, such as the following:

Establish transparent and open communication channels between residents, community leaders, and local authorities by holding community meetings, using online platforms, participating in social media, and sending out newsletters. This will ensure that information can move freely between people, community leaders, and local authorities (Mohseni, 2021).

Participation of community members in the planning and decision-making processes about urban development, services, and projects is an essential component of collaborative planning. At the same time, it can collaborate on creating projects that are compatible with the goals and ideals of the community (Pinochet et al., 2019). The ability to alter plans and strategies depending on feedback from the community and shifting requirements over time constitutes adaptability and flexibility (Träskman, 2022).

ii. Encourage mixed-use development

“Mixed-use development” refers to designing and constructing a single structure or a group of buildings that combine several functions and land uses within a single integrated project. Therefore, as new technologies emerge, the “Internet of Energy (IoE)” idea is getting much attention. New technologies have led to the “Internet of Energy (IoE)” to modernise and automate energy infrastructure. IoE mixes energy conservation systems with Internet of Things technology to improve energy efficiency (Hasija et al., 2020). This can be done for a single building or an entire group of buildings. A mixed-use development may include residential, commercial, office, retail, entertainment, and recreational applications. It is possible to have more mixed-use developments in various locations across both cities. This would result in more people living closer to stores, amenities, bus and tram stations, and other facilities. The strong relationship between density and diverse land use can lead to improved environmental, economic, and social sustainability. Denser communities tend to have a lower environmental impact and a higher economic and social value (Bibri et al., 2020).

iii. Promote social interaction

Promoting social interactions in a smart city requires the creation of an environment that encourages community engagement, fosters connections between residents, and ensures the safety and well-being of every individual (Sharifi & Khavarian-Garmsir, 2020). Public space design and activation are two strategies that can be employed. That is possible with seating, shelter, and recreational amenities; public spaces such as parks, plazas, and community centres should be designed to be inviting and comfortable. Organise regular events, markets, concerts, and cultural activities in these areas to attract individuals and foster interaction (Cassinger & Thufvesson, 2023).

In addition, encouraging mixed-use development, including residential, commercial, and recreational spaces, also helps to create interaction between different user groups. Workshops,

seminars, and discussion forums that address community issues can be organised as part of community engagement activities. These events allow locals to connect over their shared passions and concerns (Jr, 2023).

iv. Enhanced safety and security

One of the most essential variables that can significantly contribute to the citizens' overall sense of well-being is the degree to which the community is given the impression that they are safer and more secure. As a result, more and more urban areas are establishing roadside connections to make it possible to find solutions for reducing traffic, improving public safety, and enhancing emergency services (Law & Lynch, 2019). Community policing programmes aim to cultivate healthy connections between the community members and the law enforcement officers who serve them. Create programmes called "neighbourhood watch," in which residents and the local police work together to identify and address issues relating to public safety. In several of the more developed states, measures such as Crime Prevention through Environmental Design (CPTED) are utilised to protect community members from being subjected to criminal activity (Rajadurai et al., 2022). Using Crime Prevention Through Environmental Design (CPTED) concepts, the rules were made to make the built area safe. The neighbourhood is also a part of an intelligent city. This means that rules for gender mainstreaming were used to plan a smart city. This essay only discusses safety and the impact of smart facilities like CCTV, smart signs, on-site emergency bells, and street lighting (Chang et al., 2022).

Create accessible and walkable spaces

Spaces that are accessible and walkable encourage residents to participate in regular physical activity, such as walking and cycling. This helps to maintain a healthier lifestyle, reduce the risk of chronic diseases, and enhance overall fitness levels to promote physical health (Zhang et al., 2020).

When urban areas are designed for walking, residents are more likely to choose walking as a mode of transportation for short distances. This reduces traffic congestion, air pollution, and reliance on private vehicles, contributing to a cleaner and more sustainable environment (Baobeid et al., 2021).

Suppose communities build a culture of active involvement and collaboration. In that case, they can collaborate to co-create solutions that promote well-being, establish stronger social linkages, and improve the overall quality of life for all people. This goal is attainable via concerted efforts made in partnership with others to cultivate a culture of active engagement and collaborative work.

## **Literature Review**

### **Impact of Urban Design on the Community well being**

The mental, physical, social, and environmental components of citizens' lives are all influenced by urban planning, which significantly and profoundly affects a city's overall health and well-being (Mouratidis, 2021). Figure 2 illustrates the impact.

#### ***Physical health***

The well-being of individuals and the community are inextricably linked (Qiao et al., 2019). The physical environment, accessibility to healthcare services, and lifestyle factors of a community can significantly impact the health of its residents and contribute to their well-being as a whole (Mouratidis & Yiannakou, 2022). The critical areas to cover are using well-maintained footpaths, pedestrian crossings, and pedestrian crossings to create streets and pathways conducive to walking. Implement traffic mitigation measures to provide pedestrians and cyclists with safe passageways.

Therefore, well-planned communities prioritising walkability, bike-ability, and mixed-use developments generate an atmosphere that stimulates physical activity and lowers reliance on automobiles, creating an environment that encourages physical activity and reduces reliance on cars (Mansor et al., 2019).

The interaction between physical health and community well-being underscores the importance of holistic approaches to urban planning, healthcare access, and community development. A community prioritising physical health factors is likely to foster a population with higher levels of well-being, improved quality of life, and increased resilience to health challenges (Qiao et al., 2019).

### ***Mental well being***

Mental well-being profoundly impacts the overall health and functioning of a community. A community's mental health affects its residents' social fabric, productivity, and overall quality of life (Qiao et al., 2019). Within a community or society, the level of social cohesiveness is the degree to which individuals and groups feel connected and a sense of mutual trust, collaboration, and solidarity (Lindkvist et al., 2021). It exemplifies the capacity of persons from various origins, identities, and points of view to work together, maintain amicable relationships, and come together to accomplish common goals despite their differences. Strong social cohesion is necessary for a community to be robust and healthy (Mouratidis & Yiannakou, 2022). The happiness levels and overall quality of life of community residents prioritising mental health are higher. Collaboration among community leaders, organisations, healthcare providers, educators, and citizens is necessary to promote mental well-being within a community (Majeed & Samreen, 2021). Communities can experience positive transformations and enhance the lives of their citizens by building an atmosphere that supports mental health through destigmatisation, education, awareness, and access to resources, additionally, by removing the stigma associated with mental illness.(Mansor et al., 2019).

### ***Social connectivity***

The role of social connectedness in community well-being is paramount as it facilitates the development of a sense of belonging, mutual support, and collective identity among individuals within the community. Social connections within a community have been found to positively impact individuals' overall well-being, including their happiness, mental health, and overall quality of life (Lindkvist et al., 2021). It is possible to attain community well-being through various activities, such as organising community projects to beautify public spaces, promoting neighbourhood pride and facilitating engagement with one another (Sarate et al., 2019). Another activity is organising regular neighbourhood gatherings, such as picnics, block parties, and potluck dinners, where residents can interact, share stories, and strengthen bonds.

### ***Environmental sustainability***

The viability of the environment and the community's health are inextricably linked. The foundation for a thriving community is laid by an environment that is both healthy and sustainable, and the well-being of a community also contributes to protecting its surrounding environment (Guo et al., 2022). Sustainable design, alternatively referred to as eco-friendly or green design, is a methodology for creating products, buildings, systems, and ecosystems that consider environmental, social, and economic considerations to mitigate adverse effects and foster enduring sustainability. Therefore, the primary objective of sustainable design is to develop solutions that effectively reconcile the requirements of human beings with the preservation of the environment while simultaneously guaranteeing social fairness and economic feasibility (Lindkvist et al., 2021).

The use of locally sourced resources and the promotion of local economies both help reduce the carbon footprint connected with transportation and foster a more sustainable environment at the community level (Nahiduzzaman et al., 2021). Concerning environmental sustainability, the objective is to reduce travel requirements and, consequently, greenhouse gas (GHG) emissions through walking, cycling, and public transport; to reduce pressure on verdant and natural areas; and to conserve energy through building densities that support combined heat and power systems (Bibri et al., 2020). Therefore, the technologies that are used in smart cities now provide the most promising answer for long-term sustainability; nevertheless, the effect of such solutions will be severely decreased if residents do not accept them in a long-term and widespread manner. There is a pressing requirement to create efficient solutions that will assure sustainability (Harrison et al., 2020).

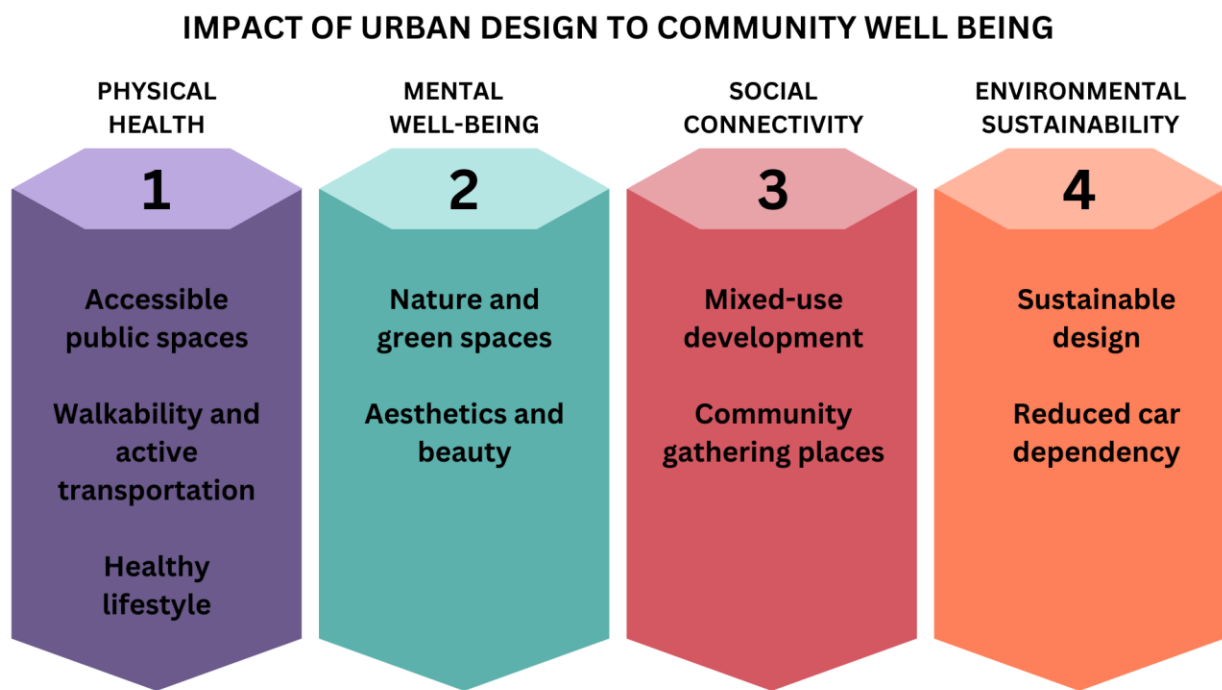


Figure 2: Impact of Urban Design on community well being

***Smart City and Community Well-being***

Concerns have been raised because of the population shift towards urban regions, which has the potential to put a strain on municipal services, diminishing their efficiency and exacerbating other problems such as pollution and the misuse of resources. There is a growing need to balance improving living conditions and accommodating an increasing population. (Pinochet et al., 2019). Therefore, achieving urban sustainability should be a goal of future cities to drive urban development and value production. The future cities should be environmentally friendly, knowledge- and innovation-based, and technologically enabled. (Romanelli, 2020).

When discussing smart cities, it is essential to note that they facilitate the connection between individuals and networks of information, thereby establishing urban operating systems that effectively control traffic, promote sustainable energy consumption, and implement intelligent governance strategies. (Verhulsdonck et al., 2023). The concept of a “smart city” originated

throughout the 1990s. The underlying premise of this concept is rooted in the notion that a harmonious amalgamation of many systems about urban living assistance should exist, encompassing both human and technological resources, with the ultimate objective of enhancing the interplay between the city and its inhabitants. (Pinochet et al., 2019). Moreover, technology is an indispensable component of smart cities, serving an essential dual role as a facilitator of citizen engagement and an enabler of their participation. (Träskman, 2022).

***The integration of smart cities to emphasise long-term community planning***

Integrating smart city initiatives with long-term community planning involves aligning technological advancements with the needs and aspirations of residents and ensuring the sustainability and inclusivity of these initiatives (D’Ignazio et al., 2019).

It is possible to look into a strategy that focuses on long-term community planning and smart city technologies in several different ways, such as through community involvement, phased execution, goal alignment, education and knowledge, and sustainability (Nahiduzzaman et al., 2021). It can mean that these places have built smart cities differently, even though they both use and make technology to improve services and the economy. Two types of structures were used in the two cities. The American cities used “participatory governance,” while the Chinese cities used a hierarchy model that emphasised the government’s controlling role and didn’t set up any planned ways for people to be involved. The goal of smart city projects in the United States was to get businesses to move to cities by building digital infrastructure and improving public services. The smart technology business is growing and getting more help from local Chinese governments. These governments are also taking care of the environment and building smart facilities. The central government has helped them with more policies and money (Nikki & Kim 2021). This particular writing focuses more on the discussion surrounding the community and sustainability. Figure 3 illustrates the Integrated smart cities to prioritise long-term community planning.



Figure 3: Integrated smart cities to prioritise long-term community planning

***Community engagement***

Community engagement plays a crucial role in the development and success of smart city initiatives. Engaging the community ensures that the technological advancements align with residents’ needs, preferences, and aspirations, leading to more inclusive, sustainable, and influential smart city solutions (Goodman et al., 2020). However, suppose the community does not actively participate in



these efforts and work together. Given such circumstances, it is conceivable that these endeavours may fail to sufficiently address the genuine concerns and requirements of the populace (Enssle, F., & Kabisch, N., 2020).

Community engagement, synonymous with public participation and consultation, originates in democratic ideas, particularly the notion of deliberative democracy and the concept of a right to the city. To share vital and pervasive online social experiences and physical space with other users, residents of smart cities are required to engage in conversation with one another and interact with one another. (Kirimtat et al., 2020).

Citizens in smart cities become the passive recipients and information suppliers of automated data through smart city technologies. In contrast, the data influences their behaviour more reasonably (Chen et al., 2023). The subsequent passage provides a concise overview of the efficacy of community engagement in fostering community well-being.

Table 1: Effectively of community engagement to promote community well-being

Authors	Item	
<b>Harrison, K., et. al. (2020)</b>	Inclusivity and Diversity	Engaging with a diverse range of community members ensures that the smart city solutions are inclusive and cater to the needs of all residents, regardless of their backgrounds, abilities, and socioeconomic status.
<b>Čukušić, M., et. al. (2019).</b>	Needs Assessment and Prioritisation	By involving the community in the planning and decision-making process, the city can identify the most pressing challenges and prioritise projects that will have the greatest positive impact on well-being.
<b>Yu, J., et. al. (2019)</b>	Co-Creation of Solutions	Collaborating with residents to co-create solutions ensures that the technology and innovations implemented are aligned with the actual needs and preferences of the community. This leads to more relevant and effective solutions.
<b>Kundu, D. (2019)</b> <b>Matheus, R., et. al. (2020)</b>	Transparency and Trust	Engaging the community fosters transparency in governance. Residents are more likely to trust and support smart city initiatives if they are involved in the decision-making process and understand how their input is being utilised.
<b>Cagaňová, D., et. al. (2019)</b>	Education and Awareness	Smart city technologies can be complex. Engaging the community helps in educating residents about the benefits,

		risks, and implications of these technologies, empowering them to make informed decisions.
<b>Enssle, F., &amp; Kabisch, N. (2020)</b>	Social Connectedness	Smart city technologies can sometimes lead to social isolation. Community engagement initiatives can help design technologies enhancing social interactions and bonding.
<b>Zhou, Q., et. al.(2021)</b> <b>Zhu, S., et. al. (2019)</b>	Sustainability and Resilience	Engaging the community in discussions about sustainable practices and disaster preparedness can contribute to the long-term resilience and well-being of the city.

In essence, the community’s involvement in smart cities is centred on granting citizens the agency to actively participate in determining their city’s future, cultivating a feeling of inclusion, and guaranteeing those technological progressions contribute to the holistic welfare of the community.

***Sustainable smart city initiatives***

Future cities should work towards urban sustainability to generate urban value and expand urban growth. The communities that make up the future cities should be environmentally friendly, focused on knowledge and creativity, and supported by technology. Cities of the future provide significant contributions within knowledge-based societies to promoting sustainable, social, and economic progress by developing knowledge, human, and technology sources. The growth of human capital, innovation, and knowledge development are all supported by the city being planned as a community. This contributes to the production of urban value—cities as models of environmentally responsible urban ecosystems (Romanelli, 2020). Therefore, “sustainable” and “smart” should be intertwined to accomplish the desired results in smart sustainable cities. As a result, the idea of creating intelligent and environmentally friendly cities has become a highly debated subject worldwide (Bouzguenda 2019 & Bibri 2020)

The concept of sustainable development faces a variety of conditions and obstacles to overcome in cities all over the world. The challenges that currently face urban sustainability encompass a wide variety of different types of environmental problems. These issues include local traffic congestion, air pollution, an ever-increasing amount of solid waste output, excessive energy usage (which is frequently inefficient), and materials linked to climate change (Bouzguenda, 2019). Before implementing these technological solutions, society must first initiate smart city initiatives. Therefore, to attain sustainability, cities need to utilise smart strategies enabled by smart technology (Law & Lynch., 2019). Refer to Table 2 for the sustainability of smart cities.

Table 2: Sustainable smart cities work in collaboration with the community

Authors	Item	
<b>Vishwakarma &amp; Tyagi (2021)</b>	Inclusive Planning	<p>Involve residents, businesses, and community organisations in planning to ensure that smart city initiatives align with their needs and aspirations.</p> <p>Address diverse perspectives and consider the needs of all demographic groups, including marginalised and vulnerable populations.</p>
<b>Xia et. al. (2021). Prasad (2020)</b>	Needs assessment	<p>Conduct thorough assessments of community needs and challenges to identify areas where smart technologies can positively impact.</p> <p>Focus on improving quality of life, reducing inequalities, and enhancing community resilience.</p>
<b>Leclercq et. al. (2022)</b>	Co-creation	<p>Foster collaboration between citizens, local governments, and technology experts to co-create solutions that address community challenges.</p> <p>Enable residents to participate in designing and shaping smart city projects actively.</p>
<b>Kamnuansilpa et. al. (2020)</b>	Education and engagement	<p>Educate the community about the benefits of sustainable smart city technologies, emphasising their potential to enhance daily life and the environment.</p> <p>Facilitate ongoing engagement through workshops, town hall meetings, online platforms, and feedback loops.</p>
<b>Kundu, D. (2019) Matheus, R., et. al. (2020)</b>	Data transparency	<p>Ensure transparency in data collection, usage, and sharing. Communicate how data is anonymised, protected, and used for the greater good.</p> <p>Involve the community in decisions about data collection and privacy policies.</p>
<b>Han et. al. (2021) Mohapatra (2021)</b>	Sustainable infrastructure	<p>Implement energy-efficient buildings, renewable energy sources, and green infrastructure to minimise environmental impact.</p>

		Promote water conservation, waste reduction, and sustainable transportation options.
<b>Almalki et. al. (2021)</b>	Community services	<p>Deploy smart technologies to enhance public services such as healthcare, education, transportation, and waste management.</p> <p>Improve accessibility and efficiency of essential services for all residents.</p>

Cities can create environments that foster well-being, social cohesion, and environmental stewardship for both the current and future generations if they prioritise sustainability and community engagement in their smart city programmes (Bouzguenda, 2019; Guo et al., 2022)

### Method

A comprehensive literature search was conducted to identify publications that addressed the effects of smart city integration on community well-being concerning urban design. SpringerLink, ScienceDirect, Google Scholar, and ScienceDirect were accessed for relevant information. fifty-eight publications were evaluated in total. The publications contain various kinds of literature on the impacts of urban design on community well-being with the smart city integration. The following keywords are used in this literature search: urban design, community well-being, smart city and safety and security. The period of the review is from 2019 to 2023. After a thorough review, literature with redundancy and deemed unsuitable were filtered out. The distribution pattern of the publications related to urban design and smart city on community well-being throughout 2019-2023 is shown in Table A1 as indicated in the Appendix.

### Findings

The creation of surroundings that foster health, happiness, sustainability, and inclusion can be achieved through the interaction of urban design and smart cities, which together have a combined and significant impact on the well-being of communities. As illustrated in Table 3, the finding as below:

Table 3: Finding of Community Well-being, Urban Design and Smart Cities

<b>Author (Year)</b>	<b>Impact on community well-being</b>	<b>Integration of Urban Design and Smart Cities</b>
<b>Laufs et al. (2020)</b>	Physical Health	<b>Urban design:</b> Neighbourhoods that are thoughtfully constructed to be walkable and have accessible sidewalks, parks, and green areas encourage people to be physically active and engage with the outdoors. (Transportation planning)
<b>Chen et al. (2022)</b>		<b>Smart cities:</b> Congestion in the roadways can be alleviated by implementing intelligent transportation systems such as public transit that operates effectively and

		programmes that encourage active forms of transportation, promoting physical fitness.(Sustainability)
<b>Enssle &amp; Kabisch (2020)</b>	Mental well-being	<b>Urban design:</b> Reducing stress and improving mental health can be accomplished by designing places with natural features, vegetation, and aesthetic appeal.(Green spaces and sustainability)
<b>Sarate et al., (2019)</b>		<b>Smart cities:</b> Residents can receive information about noise levels, air quality, and other elements that impact their mental well-being through the use of technology that enables real-time data exchange and notifications.(Community engagement)
<b>Khavarian-garmsir et al., (2023)</b>	Social connectivity	<b>Urban design:</b> Interaction among neighbours and participation in community activities are fostered by the presence of public squares, community centres, and mixed-use complexes.(Community engagement)
<b>Lindkvist et al., (2021)</b>		<b>Smart cities:</b> Residents can be connected through digital platforms and social apps, which can help establish virtual communities and make communication and collaboration easier.(Community engagement)
<b>Bibri et al., (2020)</b>	Environmental sustainability	<b>Urban design:</b> The environmental effect of urban areas can be reduced by using sustainable design practices, such as green infrastructure and energy-efficient buildings.(Creating livable spaces)
<b>Harrison et al., (2020)</b>		<b>Smart cities:</b> Systems for managing resources that are driven by data can optimise the use of energy, the collection of waste, and the conservation of water, all of which contribute to sustainability.(Sustainability)

As illustrated in Figure 4, community well-being, urban design, and smart cities are interconnected concepts that aim to create urban environments that are livable and sustainable. Community well-being refers to the contentment and quality of life of the residents of a particular community or neighbourhood. It includes social, economic, environmental, and cultural components. Access to essential services (healthcare, education, housing), social cohesion, safety, a clean environment, and a sense of belonging and identity are crucial to community well-being. Urban design is the process of influencing the physical organisation and layout of cities and urban areas. It involves the planning and designing of public spaces, transportation systems, buildings, and infrastructure to create sustainable, functional, and aesthetically appealing environments. Effective urban design promotes walkability, accessibility, diverse land use, green spaces, and human-scale development, improving urban quality of life. Smart cities use sophisticated technologies and data-driven solutions to improve urban life's efficacy, sustainability, and quality. These cities optimise transportation, energy, waste management, healthcare, and governance using information and communication technologies (ICT). Through digital platforms and real-time data analysis, smart cities seek to enhance urban services, reduce environmental impact, increase public safety, and engage citizens.

Community well-being generally focuses on urban people's overall quality of life. In contrast, urban design emphasises urban areas' physical layout and organisation to increase livability, and smart cities use technology to improve urban services and sustainability. These ideas are intricately intertwined and frequently collaborate to produce urban landscapes that are more dynamic, welcoming, and environmentally responsible.



Figure 4: The relationship between Smart City, Urban Design and Community well-being

### Discussion and Conclusion

Our review introduced the relationship of community well-being by focusing on the urban area's layout design. In contrast, smart city concept focuses more on the technologies used to achieve good community well-being. However, some of the examined interventions corresponded with the traditional functions of security interventions as sensors and actuators. We proposed a new classification for smart security interventions based on their functions with a combination of a proper urban design to ensure the community will stay safe, happy and calm in their comfort zone.

Hence, our discussion focuses on the smart city categories with two subcategories and urban design categories with four subcategories. The smart city categories concentrate on sustainability and community engagement, while urban design categories focus more on creating livable spaces, community engagement, green spaces, sustainability, and transportation planning. Therefore, by integrating the smart city and urban design, we can look at community well-being from different categories through physical health, mental well-being, social connectivity and environmental sustainability.

In conclusion, it is vital to keep in mind that the general wellness of a community may be determined by applying a variety of indicators that pertain to both the surrounding environment and the culture

of the community itself. Consequently, smart cities need to consider various perspectives, and the urban design categories can be altered in terms of how they behave to meet the community's needs.

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Appendix

**Table A1**  
**The distribution pattern of the publications**

No.	Journal Name	Publications
1	China Political Economy	1
2	China Contents Courtesy of Springer Nature	1
3	Cities	3
4	Development in the Built Environments	1
5	Environment, Development and Sustainability	1
6	Environment and Planning C: Politics and Space	1
7	Environment and Urbanization ASIA	1
8	Environmental Science and Policy	1
9	Facilities	1
10	Frontiers in Built Environment	1
11	Geography and Sustainability	1
12	GeoJournal	1
13	Government Information Quarterly	1
14	Habitat International	1
15	IT Professional	1
16	Information Technology & People	1
17	International Journal of Human-Computer Interaction	1
18	International Journal of Social Economics	1
19	IEEE Access	1
20	Journal of Construction in Developing Countries	1
21	Journal of Cleaner Production	1
22	Journal of Place Management and Development	1
23	Journal of Knowledge Economy	1
24	Journal of Transformative Governance and Social Justice	1
25	Journal of Public Budgeting, Accounting & Financial Management	1
26	Journal of Urban Planning and Development	1
27	Journal of Smart Cities and Society	1
28	Kybernets	1
29	Land Use Policy	1
30	Manufacturing & Services Operations Management	1
31	Mobile Networks and Applications	1
32	Revista de Gestao	2
33	Sustainable Cities and Societies	2
34	Science of Total Environment	1
35	Southeast Asia: A Multidisciplinary Journal	1

36	Security Journal	1
37	Sustainability (Switzerland)	1
38	The Canadian Geographer	2
39	The Journal of Asian Finance, Economics and Business (JAFEB)	1
40	The Right to the Smart City	1
<b>No.</b>	<b>Conference / Proceedings</b>	
1	International Symposium on Technology and Society	1
2	3 <sup>rd</sup> Smart Cities Symposium (SCS 2020)	1
3	Proceedings of the 6th International Conference of Contemporary Affairs in Architecture and Urbanism-ICCAUA2023	1
	<b>Book</b>	
1	The Right to the Smart City	1