

USING ARTIFICIAL INTELLIGENCE IN THE DEVELOPMENT OF SHARING SMART CITIES: THE GENERATION C PERSPECTIVE

Anna Irena SZYMAŃSKA

Krakow University of Economics; szymansa@uek.krakow.pl, ORCID: 0000-0002-1973-2696

Purpose: The primary aim of this article is to explore the self-declared interest in and adoption of AI-enabled solutions among members of Generation C as urban space users. The analysis underscores the pivotal role of artificial intelligence as a key driver in the development of smart cities, particularly with regard to the optimisation of resource allocation within the sharing economy.

Design/methodology/approach: The research concept is based on a literature review regarding the evolution of society in the context of economic and technological transformations, as well as on qualitative research employing the focus group interview (FGI) method. The collected empirical material was subjected to a semantic field analysis, resulting in the reconstruction of two definitions.

Findings: The analysis of two reconstructed definitions provided insight into how the participants perceive AI. The first definition presents AI in a positive light, defining it as a technology of the future that streamlines decision-making processes, automates tasks, and increases the efficiency of operations in areas such as science, medicine, and resource management.

The second definition focuses on the negative aspects of AI, such as its reproductive nature, the risk of errors in data analysis, and the likelihood of increased unemployment and social inequalities. A significant threat also remains the risk of privacy violations, data theft, and the lack of transparency in AI system operations. The research revealed that representatives of Generation C perceive AI in an ambivalent manner. However, they emphasized the necessity of implementing legal regulations and oversight mechanisms aimed at limiting potential abuses and ensuring the ethical use of this technology.

Research limitations/implications: The study focused only on Generation C, which limits the possibility of a broader perspective on the subject. Future research should include other age groups to explore generational differences in AI adoption.

Originality/value: This study explores Generation C attitudes toward AI within the context of the Sharing Smart City concept and the sharing economy. It also offers a conceptualization of the "Sharing Smart City" model as a citizen-centered paradigm of urban development. The findings provide valuable insights for both technology developers and policymakers responsible for its legal regulation.

Keywords: consumer behaviour, Generation C, sharing economy, sharing smart city, smart citizens.

Category of the paper: research paper.

1. Introduction – synergy between the Sharing Economy and Smart City concepts

The concepts of sharing economy and smart city are mutually interconnected. Both are based on the idea of more efficient resource utilization and require an appropriate level of digitalization within urban spaces. The smart city concept is grounded in the extensive use of information and communication technologies (ICT) to enhance efficiency, reduce costs, and improve the quality of life in urban areas (EC, 2013). It is viewed as an innovative approach aimed at addressing various social challenges. On the other hand, the sharing economy relies on the collaborative use of underutilized resources, facilitated by ICT in densely populated cities (Zvolska et al., 2019). The sharing economy is often defined through terms such as collaborative economy, access economy, or platform economy, although these terms are not synonymous (Szymańska, 2017). Both concepts are distinguished, among other things, by their focus on innovations driven by the needs of citizens and consumers, as well as the pursuit of more rational resource management (material, skills, time, data) through ICT (Gori et al., 2015). As a result, greater attention is paid to environmental protection and sustainable development (reduction of CO₂ emissions, extension of product life cycles, urban environmental protection). The use of ICT, along with new technologies equipped with AI solutions, is crucial for both concepts, enabling more effective management of urban infrastructure and supporting the development of sharing platforms.

In the context of smart cities, AI enhances the interactivity and efficiency of urban infrastructure, raising residents' awareness. An example of the synergy between these concepts is shared mobility systems, such as city bike systems (e.g., Barclays Cycle Hire), which use ICT to facilitate access and reduce transaction costs. Meanwhile, AI facilitates predicting the accuracy of shared vehicle rides, achieving prediction effectiveness of up to 95% (Zvolska et al., 2019; Kubik, 2022). It is important to emphasize that the use of AI in supporting shared mobility systems represents an innovative approach, paving the way for the automation of the evaluation of rides.

The development of smart cities creates a natural environment for the sharing economy due to the concentration of potential users and available resources (Jonek-Kowalska, Wolniak, 2022). Furthermore, both smart cities and the sharing economy are viewed as promising approaches to addressing the challenges associated with sustainable urban development, contributing to the advancement of digitally supported green urbanism (Hollands, 2008; McLaren, Agyeman, 2015; Zvolska et al., 2019). On a global scale, AI plays an increasingly significant role in transforming purchasing decisions toward more sustainable choices, interacting with e-commerce platforms and the sharing economy. Virtual assistants and AI-powered platforms can promote energy-efficient behaviours (Palomo-Domínguez, Zemlickienė, 2022). The management of complex networks in smart cities, such as electricity

grids or multimodal transportation systems, can also leverage a combination of pattern identification and the connection of various actors, representing a potential application domain for AI (Ernst et al., 2019).

The concept of the sharing economy, also known as the collaborative economy, access-based consumption, or platform economy (Jonek-Kowalska, Wolniak, 2022; Ratilla et al., 2021; Szymańska, 2017), is defined as a socio-economic system based on the sharing or mutual provision of both material and immaterial resources (such as services, time, skills, data), between individuals or groups, often through digital platforms (Zvolska et al., 2019; Veretennikova, Kozinskaya, 2022; Ratilla et al., 2021). Belk (2014) defines the sharing economy as the process of distributing what we own for others' use and accepting what others provide for our use. Hamari et al. (2016) view the sharing economy as a peer-to-peer activity involving obtaining, giving, or sharing access to goods and services, coordinated via online community platforms. The literature highlights that the traditional consumption model based on ownership is being reconfigured in favour of access to resources (Bardhi, Eckhardt, 2012; Belk, 2014; Ratilla et al., 2021; Veretennikova, Kozinskaya, 2022; Frenken, 2017; Schor, 2017). Botsman and Rogers (2010) are among the principal scholars who contributed to the popularization of the concept of collaborative consumption. In work *What's Mine Is Yours: The Rise of Collaborative Consumption*, they systematized examples of collaborative consumption into product-service systems, redistribution markets, and collaborative lifestyles, highlighting key principles of this model such as critical mass, unused capacity, belief in the commons, and trust between strangers. Meanwhile, Bardhi and Eckhardt (2012) introduced the concept of the spread of access-based consumption, where consumers prefer access to goods and are willing to pay for temporary access rather than purchasing and owning the goods. An overview of key sharing economy characteristics is provided in Table 1.

Table 1.

Key characteristics of the Sharing Economy

Key Characteristics	Description
resource sharing	Repeated utilization of assets that would otherwise remain unused or rarely used in the traditional model, e.g., car-sharing, short-term apartment rentals, coworking spaces.
access over ownership	The ability to temporarily access goods and services instead of permanently owning them; model addresses the need for flexibility and cost reduction associated with ownership.
utilization of idle assets	Sharing economy platforms facilitate the identification and commercialization of underutilized or idle assets owned by individuals or organizations. As a result, resource efficiency improves, fostering a shift towards access-based models.
community role	Activities based on user interactions, fostering a sense of community and trust.
value co-creation	The co-creation of value between providers and consumers is a fundamental aspect of this model, directly linked to participation in collaborative consumption. Sustainability and environmental protection play a crucial role in this process.

Source: own study based on: Bardhi, Eckhardt, 2012; Belk, 2014, Ratilla et al., 2021; Veretennikova, Kozinskaya, 2022; Jonek-Kowalska, Wolniak, 2022; Grönroos, 2011; Hamari et al., 2016; Szymańska, 2017.

The concept of a smart city is complex and multidimensional, with no single, universally accepted definition. However, the prevailing view in the literature is that a smart city leverages information and communication technologies (ICT) strategically to enhance residents' quality of life, improve urban governance efficiency, and promote sustainable development (Zvolska et al., 2019; Veretennikova, Kozinskaya, 2022; Lazaroïu, Roscia, 2012). Smart cities strive to integrate urban systems and services through advanced digital infrastructure, facilitating more effective data collection, analysis, and utilization to support informed decision-making (Zvolska et al., 2019; Mora et al., 2017).

The literature review, which forms the foundation of the above considerations, has revealed a significant research gap in the conceptualization and development of the Sharing Smart City - an interdisciplinary synthesis of the sharing economy and smart city paradigms. These two approaches exhibit complementary characteristics in resource allocation and technological deployment. Both models emphasize the critical role of integrating information and communication technologies (ICT) and advanced technological solutions, including artificial intelligence (AI), into decision-making and operational processes. An essential exogenous driver of the Sharing Smart City concept is undoubtedly smart citizens - a well-educated and creative group of urban stakeholders who actively adopt technological innovations to shape an intelligent city based on sharing economy principles. Their competencies, innovativeness, and ability to collaborate, supported by widespread access to ICT, create added value by improving both the quality of life and urban ecosystem efficiency.

2. Super Smart Society - Society 5.0

The information revolution, which has driven the development and widespread adoption of information and communication technologies, and consequently the rise of professions related to information and modern technologies, has contributed to the emergence of the information society (post-industrial society), referred to as Society 4.0. A primary role in its development is undoubtedly played by knowledge and its utilization. According to Mark E. Hepworth, the process of wealth creation and the generation of new jobs within the post-industrial economy is dominated by the production of information based on network infrastructure (both computer and telecommunications) (Hepworth, 1990). Information is a defining feature of the modern world. The omnipresence of media, the expansion and specialization of information-related professions, and the development of the Internet all contribute to making membership in the information society an evident reality.

The knowledge-based economy is a central element of Society 4.0, whose defining feature should be innovation, viewed as a collective research effort in which the exchange of information and resources plays a crucial role, along with access to goods without the need to

acquire ownership (various solutions from the sharing economy sector). 'Knowledge and technological and market skills, which form the foundation of innovation, are intangible by nature and are therefore acquired through learning by doing, learning by using, and through interactions with customers, suppliers, and businesses from related industries' (Majewska et al., 2013). Digital technologies are not just an area, but a dimension of modern human existence. This shift in perspective leads to the understanding that digital communication technologies are considered not only as a separate field but also as an integral component present in other domains of human activity, facilitating their functioning (Du Vall, 2019).

The response to what some scholars have already identified as the fifth industrial revolution (Furmanek, 2014; Blicharz, 2023) may be found in the proposal of the Society 5.0 concept, understood as a modern, forward-looking, and human-centered society, where the integration of cyberspace and the real world is achieved through the use of cutting-edge technologies such as artificial intelligence, the Internet of Things, robotics, and big data. The super-intelligent society aims to create a world in which essential goods and services are provided to everyone, at any time and place, regardless of region, age, gender, language, or other limitations. Its goal is to simultaneously achieve economic growth and prosperity while overcoming social challenges, thereby contributing to the well-being of the global community (Du Vall, 2019).

Table 2. presents a comparison of social transformations, beginning with the Hunter Society 1.0 and ending with the latest concept of the Super Smart Society 5.0. These transformations are responses to economic changes, the development of new technologies, and the emergence of solutions such as artificial intelligence, the Internet of Things, robotics, and big data. The analysis is conducted within the context of the three waves of civilization proposed by Alvin Toffler.

It is important to note the significant impact of rapid technological development and the social challenges associated with adapting to these fast-paced changes in recent years. According to Toffler, the third wave not only accelerates the flow of information but also alters the very structure of information, which influences human behaviour. These transformations have been termed "future shock", which is caused by three interconnected sets of phenomena: transience, novelty, and diversity. They lead to "physical and psychological exhaustion resulting from the overload of physical adaptive mechanisms in the human body, as well as decision-making mechanisms" (Toffler, 1974; Augustyniak, 2014). This exhaustion is a response to the excess of stimuli that reach individuals on both the affective and cognitive levels.

Table 2.*Realization of Society 5.0 with its evolutions and involvement of emerging technologies*

Toffler's Waves of Civilization	Development of industry	Development of society
-	Subsistence economy (gathering-hunting-fishing)	Hunting Society 1.0 Hunter-gatherer society
First wave – 8000 BCE – 1650/1759 agricultural revolution, the transformation of nomadic tribes into settled communities engaged in agriculture; production of food and raw materials	manufacturing economy (agricultural and livestock)	Agriculture Society 2.0 pre-industrial, trade-based society
Second wave – 1650 (England)/ 1750 (Western Europe) – 1955/1970 Industrial Revolution, industrialization, cheap labour, mass production	Industry 1.0 - mechanisation, industrialisation steam engine, internal combustion engine, electric motors, atomic energy	Industrial Society 3.0 hierarchically organised, class division, power hierarchy, 'iron cage' phenomenon (Weber)
Third wave – 1955/1970 – until now technological and post-industrial revolution, occurs in the most developed cities new methods of acquiring and utilizing knowledge, advanced technology "super-symbolic economy"	Industry 2.0 – Human relations, urban expansion	Information Society 4.0 (post-industrial) Innovation, knowledge and its application, exchange of information and resources (sharing economy), learning by doing, learning by using
	Industry 3.0 – technologically advanced, information revolution	
	Industry 4.0 – process automation, Artificial Intelligence (AI)	Super Smart Society 5.0 modern, human-centred, integrating cyberspace and the real world through cutting-edge technologies
	Industry 5.0 – symbiosis between humans and technology, sustainable development	

Source: own study based on: Toffler, 2006; Du Vall, 2019; Mishra, Thakur, Singh, 2022; Szymańska, 2024.

The rapid development of information and communication technologies, along with the significant acceleration in the implementation of novel solutions - particularly in urban areas - forces society to adapt to on-going transformations. Adaptive processes are characterized by considerable variability in the pace of their execution and the tools implemented, depending on various factors (e.g., demographic, socio-economic, cultural, and psychological).

The above considerations, along with the belief (supported by numerous scientific studies) that the group most interested in and open to technological innovations consists of young and educated individuals, led to the decision to conduct direct market research using focused group interviews as a research tool.

3. Research Methodology

Between October and November 2024, direct research was conducted using Focus Group Interviews (FGI) as the research method. Focus Group Interviews (FGI), which belong to the group of qualitative research methods, allow for the exploration of specific behaviour,

motivations, attitudes, associations, and cognitive patterns related to the research topic. Furthermore, they enable the study of subjective phenomena that are difficult to measure quantitatively.

The research provided an in-depth examination of the use of artificial intelligence (AI) solutions by members of Generation C, who are also users of urban spaces – a key factor in the evolution of smart cities. Undoubtedly, access to such solutions and the ability to utilize them in daily life significantly enhances the position of young urban citizens compared to other residents.

This publication presents the results of an analysis of qualitative data collected during five focus group interviews conducted with individuals born after 1990 (Generation C – the connected generation: connect, communicate, change), who are considered digital natives. Members of Generation C represent the group most open to innovation, demonstrating a greater interest in the possibilities these innovations offer and in applying them to daily life. The characteristics that distinguish Generation C include (Hardey, 2011; Szymańska, 2022):

- membership determined not by age, but by upbringing in a digital environment and the internet era (digital natives),
- above-average creativity,
- a desire to influence the surrounding world (control),
- communication and establishing relationships with others online (connection),
- creating bonds with friends on the internet (community),
- lack of knowledge about a world without computers,
- ease of navigating virtual reality, with parallel functioning in both the real and virtual worlds,
- new technologies being an inseparable part of their lives - constant connectivity, lack of ability to function without the internet, social media, smartphones, laptops, and other such electronic devices,
- preference for health over intense work,
- focus on content creation and introducing changes to the existing reality, while showing little interest in seeking information in the virtual environment.

The research process consisted of several stages, which are presented in Figure 1.

A total of 56 individuals participated in the FGIs, distributed across 5 focus groups, with each group consisting of 10 to 12 participants. The FGI participants were selected through purposive sampling. They were urban residents, students aged 21-24. The respondents' gender distribution was as follows: 80.3% (45 respondents) were female, and 19.7% (11) were male. The majority of the respondents, 67.8% (38), were already employed.

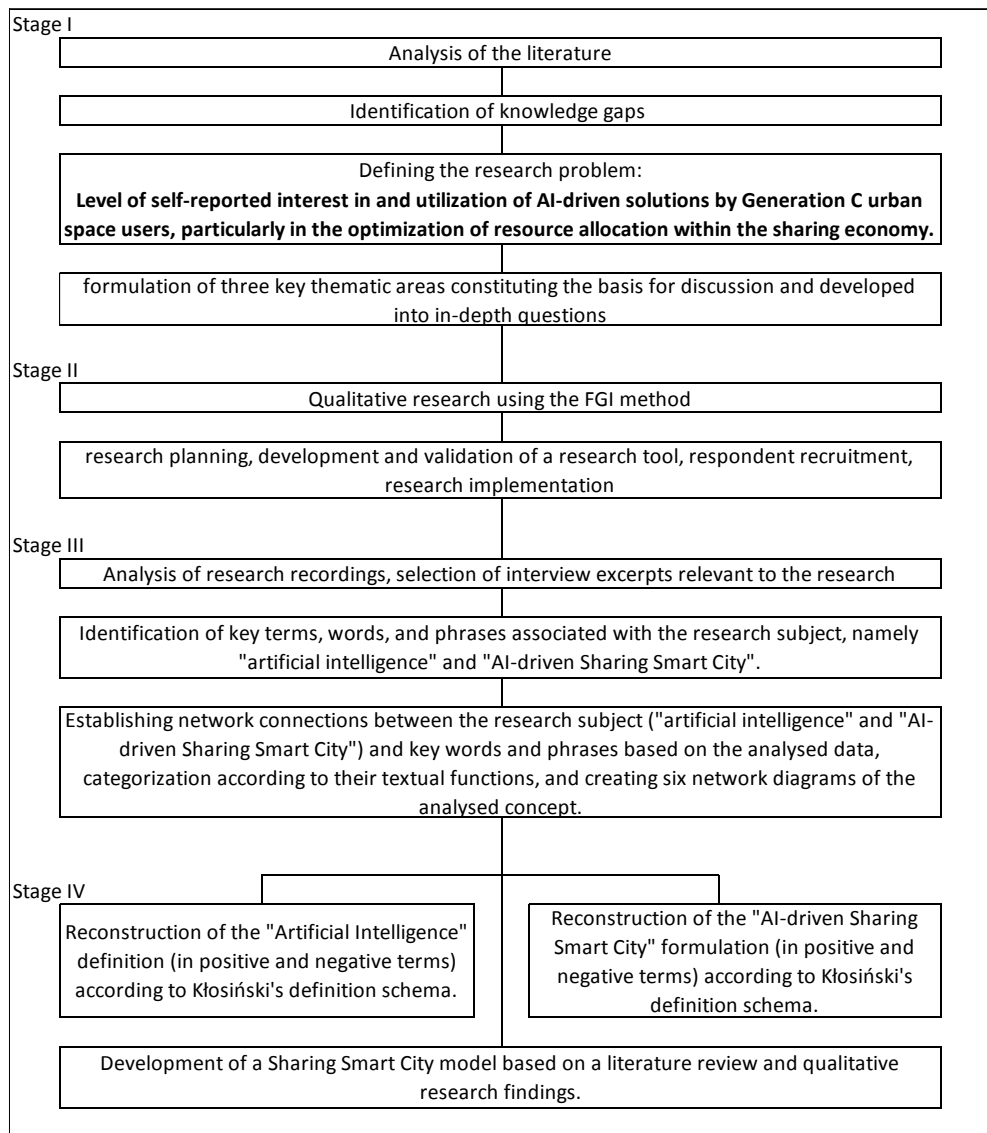


Figure 1. Procedure of the conducted qualitative research.

Source: own study.

The meetings were conducted based on a pre-prepared, standardized script that outlined the general research framework. The level of activity and engagement of the respondents in the discussions varied across the different groups, and the course of each interview depended on the individual responsiveness of the participants and the topics discussed. The use of probing questions enhanced the intensity of the discussions and led to the acquisition of more detailed information.

The primary objective of the research was to assess the level of interest in and use of artificial intelligence (AI)-driven solutions by members of Generation C, who are also users of urban spaces, with a particular focus on improving resource efficiency within the sharing economy model. Based on this objective, three key thematic areas were formulated, which served as the foundation for the conversations and were subsequently expanded upon through probing questions during the discussions (Figure 2).

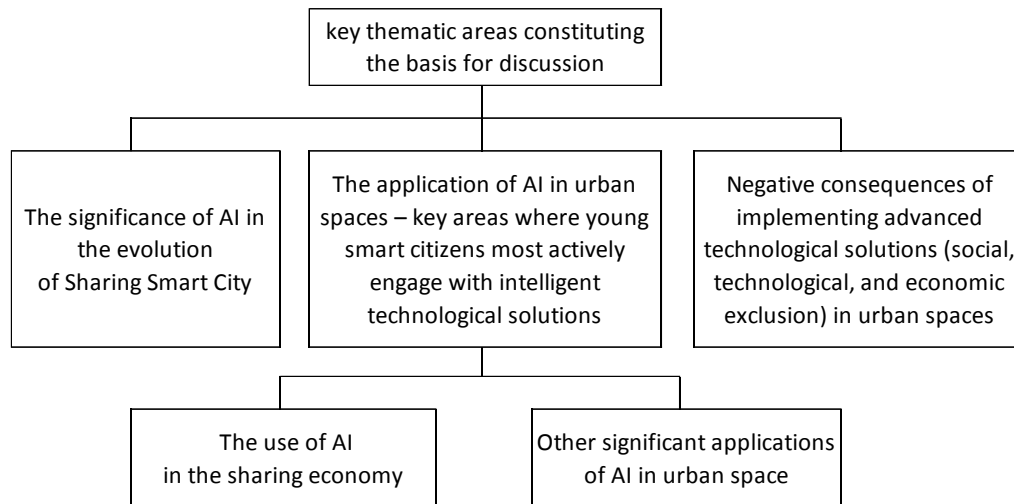


Figure 2. Critical concepts developed during the FGI discussion.

Source: own study.

The collected research material was coded into segments corresponding to the research problem posed. Subsequently, the gathered empirical data was analysed using the semantic field method. The research employed an open approach within the adopted methodological framework, with the assumption that the approach could be developed as needed. The semantic field method allows for the placement of the subject within its semantic context, thereby reconstructing the actual stance of the authors of the statements towards the phenomenon under study (Sińczuch, 2014). The semantic field analysis "provides researchers and change initiators with an opportunity to carry out the communication process in a non-invasive manner, tailored to the social reality as perceived by practitioners – those social actors on whom the occurrence (or non-occurrence) of social change will ultimately depend" (Dudkiewicz, 2015).

The semantic field of a given concept is the "network of its connections with other words, phrases, expressions, and concepts appearing in the analysed text, which enables the interpretation of its full meaning or set of meanings in which it has been used" (Robin, 1980). The modification proposed by M. Kłosiński to the method above involves creating one or several definitions of the subject, considering the individual networks of terms. B. Fatiga's team stated that this is an open methodological proposal, which can be developed depending on the needs. Emotionally charged expressions are analysed in terms of their frequency and co-occurrence. The networks of connections are categorized according to the roles played by the words in the analysed text in relation to the key word. The most commonly identified functions are as following: specifications, associations, oppositions, equivalents, descriptions of the subject's actions, and descriptions of actions towards the subject (Research Practices, 2015; Robin, 1980; Kłosiński, 1994).

4. Research results

The research employing focus group interviews facilitated an in-depth exploration of the subject and the collection of detailed data on the studied phenomenon. The interaction was structured around posing questions, eliciting responses, and fostering spontaneous discussions among respondents, adhering to the principles of "brainstorming" and the "snowball effect". A key discussion theme was the integration of artificial intelligence (AI)-driven solutions into the daily lives of Generation C members, who are also urban space users. Special attention was given to the application of AI solutions within the broadly defined domain of sharing economy activities, which could significantly contribute to the advancement of the Sharing Smart City concept. Based on the transcription of respondents' statements, a compilation of expressions corresponding to specific functions within the semantic field was developed. By analysing the resulting network of key word associations, a reconstructed definition of the artificial intelligence (AI) phenomenon was formulated.

Positively, respondents described AI as the technology of the future - an advanced system based on intelligent algorithms. AI accelerates and simplifies human work, significantly saving time, suggesting solutions, and facilitating decision-making. These intelligent, modern technologies enable the personalization of services, contribute to increased work efficiency, and lead to greater accessibility of information. According to the respondents, artificial intelligence aids in disease diagnosis, enables the personalization of medical treatments, optimizes urban traffic management, facilitates obstacle detection in autonomous cars, and analyses data from internet communications, recognizing patterns in user behaviour. It supports data analysis in video surveillance systems and assists in fraud detection in financial analysis. AI also simplifies the analysis of large datasets, optimizes resource utilization in cities (e.g., electricity, water), and enables the forecasting of extreme weather events. Considering this understanding of artificial intelligence, there is a call for education aimed at preparing individuals to work with new technologies and creating ethical and responsible algorithms.

In contrast, analysing the negative connotations attributed to artificial intelligence by young respondents, it emerges as a logical machine that operates in a reproductive manner, processing what humans have already done. AI, when viewed negatively, is associated with calculation errors and the need for supervision due to inefficient self-learning (hallucinations). Furthermore, it generates feelings of fear, anxiety, and reluctance to engage with it. The actions of AI systems are not always fair or transparent in terms of data acquisition methods. By taking over human labour, AI may contribute to an increase in unemployment. The implementation of this technology is associated with high costs for purchasing devices and software, and it may lead to greater inequality in society and technological exclusion. In light of this perception of AI, respondents emphasize the need for the creation of legal regulations to control the development and use of AI across various industries, the introduction of oversight systems for

AI algorithms to ensure accountability and avoid abuses, and the development of technological solutions to protect users' personal data (Szymańska, 2024).

In the next stage of the study, a reconstructed definition was formulated to clarify how study participants perceive the application of AI in urban spaces, with particular emphasis on sharing. The semantic field of the examined concept was found to be ambiguous, carrying both positive and negative emotional connotations, as reflected in the number and nature of the identified keywords.

Respondents referred to the versatility of AI-driven solutions, highlighting their application in various aspects of urban space management, such as optimizing parking systems, addressing city congestion, regulating and managing traffic flows, and enhancing video surveillance. They also pointed to AI's role in fleet management within the sharing economy (carsharing, vehicle-sharing, carpooling), real estate management (short-term rentals), and healthcare (monitoring air and noise pollution, tracking waste generation, and optimizing electricity and water consumption). Additionally, they emphasized the economic benefits for individual citizens, including cost savings, rational resource management, and access to goods without the necessity of ownership. AI was also recognized for its contributions to education and knowledge acquisition (training, information exchange) and strengthening local communities. As a result, two definitions were developed, each capturing a narrower perspective on the studied phenomenon, specifically its role in private life, professional activities, and urban environments. The first definition outlines the positive aspects of the subject under investigation (Table 3).

Table 3.

The positive aspects of AI in urban spaces with consideration of the sharing economy

subject of the semantic field	<i>AI in urban spaces with consideration of the sharing economy</i> (positive perception of the subject)
equivalents	efficient urban sharing models, intelligent exchange and sharing platforms, digital urban planning, advanced urban systems, optimized urban environment, innovative urban infrastructure, adaptive urban systems, efficient city management, integrated urban technologies, responsive city, intelligent sharing platform
definitions	co-creates value in urban spaces, solves problems, facilitates city residents' lives, suggests optimal mobility solutions, increases accessibility to urban services, supports urban mobility, enhances the quality of urban life, creates an intelligent living environment, promotes local initiatives for clothing and item exchange, detects fraud and abuse in sharing economy systems, personalizes sharing economy application interfaces for different user groups
oppositions	risk of abuse, risk of personal data theft, inefficient urban resource management, high city maintenance costs, low efficiency of public transport, waste of goods, excessive waste generation, high housing rental costs
associations	social integration and cooperation, intelligent solutions, modern technologies, optimization of urban resource utilization, fast decision-making, service personalization, convenience and flexibility in service use, increased efficiency, digital security, support for people, improved information accessibility, the opportunity to generate income by sharing one's resources

Cont. table 3.

actions of the subject	Optimizing urban traffic management; analysing internet communication data; matching supply and demand in the sharing economy; optimizing the distribution of bike and scooter stations based on usage data; automatically managing pricing in car-sharing and rental systems; supporting fraud detection; optimizing resource utilization in cities (e.g., electricity, water)
actions towards the subject	education to prepare individuals for working with new technologies, creating ethical and responsible algorithms, promoting the exchange of best practices in AI implementation in urban environments

Source: own study.

In contrast, the second definition focused on the negative aspects of the studied phenomenon. It is worth noting that negative opinions expressed by respondents constituted a relatively substantial proportion of all recorded statements (Table 4).

Table 4.

The negative aspects of AI in urban spaces with consideration of the sharing economy

subject of the semantic field	<i>AI in urban spaces with consideration of the sharing economy</i> (negative perception of the subject)
equivalents	logic machine, information processing algorithm, data analysis systems, digital manager of the city fleet, automated system for sharing vehicles and other goods
definitions	processes what people have already done, operates in a reproductive manner, collects data on routes and user habits, categorizes residents based on their transportation behaviours, limits access to sharing for those without the app
oppositions	saves time, suggests and solves problems, facilitates decision-making, enables full user control over their data, provides equal access to public transport
associations	calculation errors, need for supervision (hallucinations), inefficient self-learning, limited trust, reluctance to engage with artificial intelligence, the risk of digital exclusion for people without access to the app
actions of the subject	actions of the systems are not always fair or transparent in terms of data acquisition; it may lead to increased inequality in society and technological exclusion, limit the availability of vehicles in less profitable areas of the city, make vehicle availability dependent on the user's rental history
actions towards the subject	creating legal regulations to control the development and use of AI in various industries, introducing oversight systems for AI algorithms to ensure accountability and avoid abuses, developing technological solutions to protect user personal data in the context of AI development, creating regulations to limit the rapid growth of the sharing economy

Source: own study.

5. Conclusions

The concepts of the sharing economy and smart city are interrelated, both driven by the idea of more efficient resource utilization and requiring a certain level of digitalization in urban spaces. The sharing economy plays a key role in implementing the smart city concept -referred to as the Sharing Smart City. This is reflected in the following actions: (1) more efficient use of city resources, leading to cost reductions for municipal authorities, (2) improved urban space management, including pollution and degradation reduction, congestion mitigation, and stimulation of local entrepreneurship, and (3) the introduction of new technological

solutions to enhance residents' quality of life, optimize resource management, and increase access to information.

The Sharing Smart City concept represents a paradigm of urban development in which innovation is driven not only by central administrative bodies but by active and creative residents, referred to as super smart citizens (Figure 3). Their endogenous intellectual and entrepreneurial potential initiates and co-develops the implementation of advanced technological solutions based on the sharing economy model.

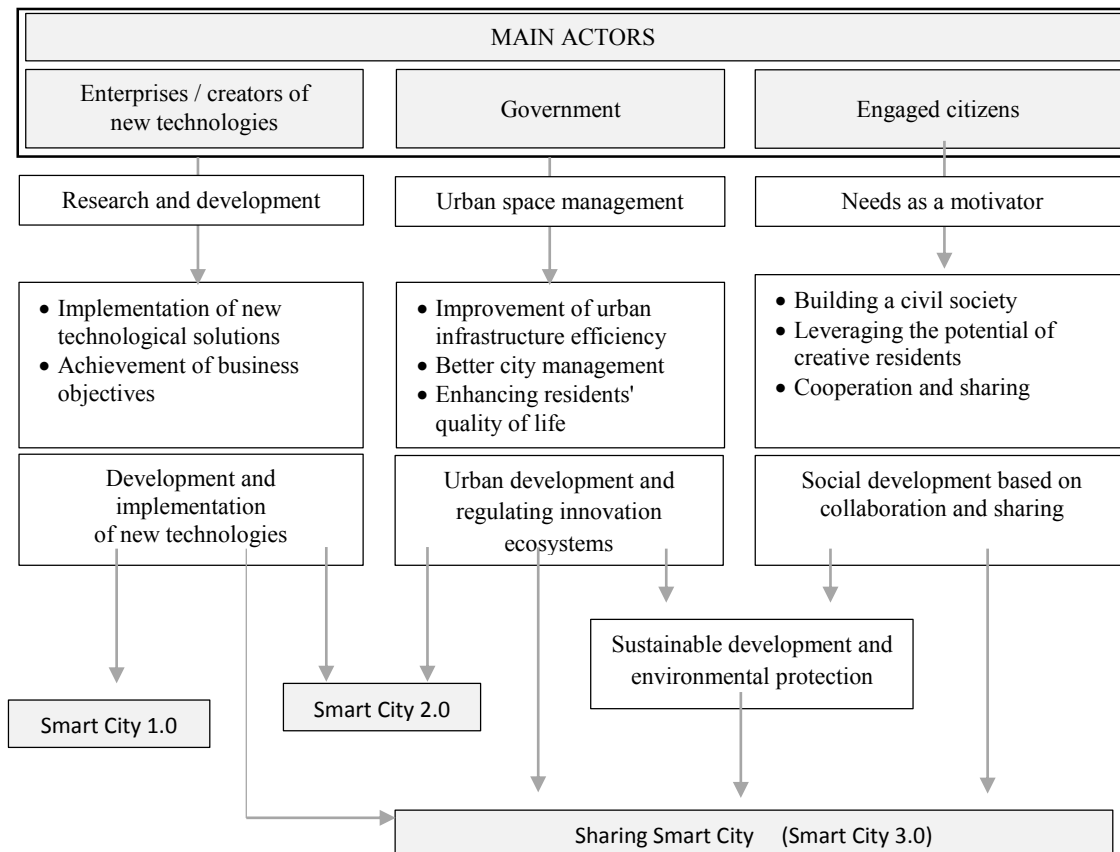


Figure 3. Sharing Smart City Model.

Source: Own study based on a literature review and on: Szymańska, 2024.

The bottom-up activity of residents leads to a significant increase in the efficiency of urban resource allocation through the optimization of their use within collaborative consumption models. Super smart citizens, possessing digital skills and openness to innovation, actively participate in the creation and adoption of sharing economy platforms, resulting in:

- reducing operational costs for the city by minimizing resource waste and optimizing infrastructure,
- increasing productivity and innovation at the local level by stimulating entrepreneurship based on sharing,

- improving residents' quality of life by increasing access to diverse services and resources under more flexible and economic conditions,
- strengthening social capital and cohesion within local communities by promoting interaction and cooperation among residents.

Human capital, characterized by high qualifications, creativity, and the ability to cooperate with the support of ICT and AI, is a fundamental driver of Sharing Smart City development. The engagement of smart society in initiating and co-creating solutions based on the idea of sharing serves as the key engine driving the transformation of cities into smart and sustainable urban ecosystems.

6. Limitations

Presented research findings serve as a foundation for further analysis of the level of interest in and adoption of artificial intelligence (AI) solutions by members of Generation C, who simultaneously act as users of urban spaces. Conducting similar studies among representatives of other age groups could yield valuable insights. It can be hypothesized that these groups may be less proficient in utilizing AI-enabled devices and consequently less receptive to adopt new technological solutions.

An important direction for further research could be the application of a longitudinal approach, which would allow for capturing the dynamics of attitudes toward AI over time and gaining a deeper understanding of adaptation processes in the context of rapid technological transformation in urban environments. At the same time, to increase the validity and practical relevance of the analysis, methodological triangulation could be employed - complementing qualitative analysis with quantitative research (e.g., surveys) and expanding the research sample. Such an approach would facilitate the formulation of more generalizable conclusions and provide a basis for assessing the extent to which AI-based solutions can foster the development of the sharing economy in urban environment.

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