

Future of Cities is Being Built Now

Trend cards
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Helsinki-Uusimaa
Regional Council



Political Trends

In today's urban environment, key ideas regarding the interplay between politics and urban technology include the ongoing urbanization and population growth, the imperative of sustainability driven by environmental concerns, the integration of smart city initiatives, the complexities of data governance and privacy, efforts to bridge the digital divide, securing adequate infrastructure funding, establishing regulatory frameworks, enhancing disaster resilience, shaping housing policies, fostering citizen engagement, addressing security concerns, and adopting diverse strategic approaches. These ideas highlight how political decisions significantly shape the development and impact of urban technology in cities across the globe.

Urbanization and Population Growth

Rapid urbanization continues to drive the growth of cities worldwide. The increasing concentration of people in urban areas puts pressure on infrastructure, services, and resources, leading to the need for innovative urban technologies to manage and sustainably develop cities.



Environmental Concerns and Sustainability

Political focus on environmental issues, such as climate change and air pollution, has driven the adoption of sustainable urban technologies. Cities are implementing smart solutions to reduce carbon emissions, promote renewable energy, enhance waste management, and create more eco-friendly transportation options.



Smart City Initiatives

Governments and local authorities are investing in smart city technologies to improve urban living conditions. These initiatives include the deployment of IoT (Internet of Things) devices, data analytics, and connectivity to enhance urban mobility, energy efficiency, public safety, and overall quality of life.



Data Governance and Privacy

As cities collect increasing amounts of data to improve services and infrastructure, concerns around data privacy and governance have emerged. Political decisions regarding data ownership, sharing, and protection can significantly impact the development and adoption of urban technology.



Digital Divide and Inclusion

Access to technology and digital services is not uniform across urban populations. Political efforts to bridge the digital divide and ensure that urban technology benefits all citizens are crucial for equitable urban development.



Infrastructure Investment and Funding

Adequate funding for urban technology projects and infrastructure upgrades is essential. Political decisions related to budget allocation, public-private partnerships, and investment incentives can influence the pace and scale of urban technology adoption.



Regulatory Frameworks

Governments play a critical role in establishing regulatory frameworks for emerging technologies such as autonomous vehicles, drones, and digital platforms. Clear and adaptive regulations can facilitate innovation while ensuring public safety and security.



Resilience and Disaster Preparedness

The increasing frequency of natural disasters and the need for urban resilience have prompted governments to invest in technology solutions that enhance disaster preparedness, response, and recovery.



Housing and Affordable Living

Political decisions around housing policies, zoning regulations, and affordable housing initiatives shape the social and economic dynamics of cities. Urban technology can play a role in addressing housing challenges and creating more livable spaces.



Public Engagement & Participation

The involvement of citizens in shaping urban technology strategies is important for ensuring that solutions align with their needs. Political support for participatory processes can lead to more inclusive and effective urban technology projects.



Security and Surveillance

The balance between public safety and individual privacy is a crucial consideration in the deployment of urban technology, such as surveillance cameras and facial recognition systems. Political decisions influence the extent to which these technologies are implemented and regulated.



Technology- Centric Strategies

Cities can take strategic approach focuses on deploying advanced technologies like IoT, AI, and data analytics to enhance urban services, optimize infrastructure, and improve decision-making.



Citizen-Centric Strategies

Prioritizing citizen engagement involves involving residents in co-creating solutions, gathering feedback, and tailoring smart city initiatives to meet their specific needs.



Sustainability- Focused Strategies

Cities might emphasize eco-friendly practices, integrating renewable energy, green infrastructure, and waste reduction to create environmentally sustainable urban environments.



Economic and Innovation Strategies

Some cities might emphasize economic growth by attracting businesses, fostering innovation, and creating technology hubs that generate job opportunities and promote economic development.



Energy Policy and Regulations

Government policies and regulations played a crucial role in shaping the energy landscape. Initiatives such as renewable energy targets, carbon pricing, and incentives for clean energy technologies influenced investment decisions and market dynamics.



Political Instability

Political instability and governance challenges can impact urban development efforts and hinder effective decision-making.





Economic Trends

In the context of urban development with a strong economic focus, a multitude of significant factors converge, shaping the course of cities. These fundamental concepts revolve around the relationship between economic strategies, innovation, sustainability, and the strategic utilization of urban technology to ignite growth, address urban challenges, and propel urban areas toward economic prosperity. From fostering innovation hubs to making substantial investments in urban infrastructure and the resolute pursuit of sustainability objectives, these ideas underline the central role of economic methods in moulding the modern urban setting. This economically driven urban sphere ensures inclusivity, resilience, and adaptability to ever-changing economic dynamics and technological advancements.

Innovation & Entrepreneurship

Cities have become hubs of innovation and entrepreneurship, attracting startups and tech companies. Economic policies that promote innovation, research and development, and technology incubation can foster the growth of urban technology ecosystems.



Digital Economy and Job Creation

The rise of the digital economy has led to the creation of new types of jobs and industries. Cities that invest in digital skills training, education, and workforce development can capitalize on the opportunities presented by the urban technology sector.



Infrastructure Investment

Economic policies that prioritize infrastructure investment are crucial for the development of smart cities. Modernizing transportation networks, energy systems, and digital connectivity enables the implementation of advanced urban technologies.



Real Estate and Property Development

Economic trends related to real estate and property development influence the integration of technology into urban environments. Smart buildings, energy-efficient designs, and mixed-use developments are all influenced by economic considerations.



Sustainability and Resource Efficiency

Economic factors such as the cost of energy, water, and resources drive the adoption of technologies that enhance resource efficiency and sustainability in cities. Renewable energy systems, smart grids, and waste reduction technologies are influenced by economic viability.



Public-Private Partnerships

Collaboration between public and private sectors is a key driver of urban technology implementation. Economic policies that support and incentivize public-private partnerships can accelerate the adoption of innovative solutions.



Tourism and Hospitality

In cities with a strong tourism sector, urban technology can enhance visitor experiences, optimize transportation, and improve infrastructure. Economic strategies that leverage technology to boost tourism can have significant economic benefits.



Data Monetization and Analytics

The collection and analysis of urban data offer opportunities for economic growth. Cities that can effectively monetize data through responsible means can create revenue streams that support further technology investments.



Economic Inclusion and Equity

Economic disparities within cities can be addressed through technology-driven solutions. Policies that promote economic inclusion and digital access for all citizens are crucial for equitable urban development.



Transportation and Mobility Services

Economic trends related to transportation and mobility influence the adoption of technologies such as ride-sharing, electric vehicles, and autonomous transportation systems. Economic incentives and regulations can shape the future of urban mobility.



Retail and E-Commerce

The growth of e-commerce impacts urban logistics and last-mile delivery. Economic strategies that facilitate efficient delivery systems and support local businesses can be influenced by urban technology solutions.



Crisis Response and Resilience

Economic considerations play a role in investing in technology for crisis response and urban resilience. Cities that prioritize funding for disaster preparedness and recovery technologies are better equipped to handle unexpected challenges.



Economic Diversification

Many urban areas heavily rely on a single industry or economic sector, making them vulnerable to economic downturns or disruptions.



Energy Transition Investment

Investors were increasingly focusing on clean energy and sustainable infrastructure projects, reflecting a growing recognition of the financial opportunities presented by the energy transition.



Hydrogen Economy

The concept of a hydrogen economy gained momentum as hydrogen was seen as a potential clean energy carrier for sectors that are difficult to electrify directly, such as heavy industry and long-haul transportation.





Social Trends

Urban life, social dynamics and economic considerations meet, giving rise to innumerable influential factors. These fundamental concepts orbit around the interaction of societal shifts, technological innovations, and urban development. As cities evolve, they grapple with issues of social inclusion, cultural diversity, health, and community well-being, all while navigating the ever-changing landscape of work patterns, ageing populations, and the unique expectations of younger generations. In this intricate web of urban evolution, social aspects play a vital role, in shaping the direction and impact of urban technology and development.

Changing Work Patterns

The rise of remote work, flexible schedules, and the gig economy has shifted traditional work patterns. Urban technology responds to these changes with innovations in co-working spaces, smart offices, and digital collaboration tools.

Aging Population

The ageing population in many cities has led to a focus on age-friendly urban technology solutions. Smart homes, healthcare technology, and accessible transportation options cater to the needs of older residents.

Youth and Digital Natives

Younger generations, who are often digital natives, have different expectations for urban experiences. Urban technology can cater to their preferences for digital engagement, convenience, and sustainable living.

Cultural Diversity and Inclusion

Cities are melting pots of cultures and ethnicities. Urban technology that respects and integrates diverse cultural practices, languages, and traditions is crucial for fostering inclusion and a sense of belonging.

Health and Well-being

Societal trends toward health and wellness are reflected in urban technology solutions that promote active lifestyles, green spaces, mental health support, and access to healthy food options.

Sharing Economy and Collaborative Consumption

The sharing economy trend has influenced the development of urban technology platforms for ride-sharing, home-sharing, and other collaborative consumption models, contributing to resource efficiency.

Privacy Concerns and Digital Ethics

As technology becomes more integrated into urban life, concerns about data privacy, surveillance, and digital ethics have emerged. Socio-cultural considerations influence the balance between technological convenience and individual rights.

Civic Engagement and Participation

The desire for greater civic engagement and participatory decision-making has led to urban technology platforms that enable citizens to voice their opinions, report issues, and contribute to urban planning.

Arts and Culture

Urban technology can enhance cultural experiences through augmented reality, digital art installations, and interactive exhibitions. Cities are integrating technology to showcase local art and heritage.

Social Innovation and Grassroots Initiatives

Socio-cultural trends often give rise to grassroots initiatives and social innovation. Urban technology can support these efforts by providing tools for community organizing, resource sharing, and advocacy.

Polarization and Social Fragmentation

The echo chambers and filter bubbles created by social media algorithms can contribute to polarization within cities. This polarization can hinder constructive dialogue, lead to social divisions, and impact community cohesion.

Algorithmic Bias

Algorithms used in urban technology platforms can inadvertently contribute to polarization by showing users content that aligns with their existing beliefs. Addressing algorithmic bias and promoting diverse perspectives is important for reducing polarization.

Media Literacy and Education

Urban technology can play a role in promoting media literacy and critical thinking skills among residents. Educational initiatives that help individuals discern credible sources of information can mitigate the impact of fake news and polarization.

Community Building

Urban technology can be harnessed to foster inclusive and open community dialogues. Platforms that encourage respectful conversations and diverse viewpoints can counteract the negative effects of polarization.

Flexible Workspace Providers

Coworking spaces, remote work solutions, and flexible office arrangements are catering to changing work patterns and contributing to the evolution of workspaces in urban areas.

Elderly Care and Aging-in- Place Services

Startups focused on providing technology-enabled home care, health monitoring, and social engagement solutions are addressing the needs of ageing populations in urban areas.

Healthcare and Pandemic Preparedness

Recent global health crises highlight the need for robust healthcare systems and pandemic preparedness plans in urban areas to protect public health and manage disease outbreaks.

Cultural Preservation

Rapid urbanization can sometimes lead to the loss of cultural heritage and identity. Preserving local cultures, traditions, and historical sites is a challenge amid urban development.



Public Health and Well-being

Urban areas need to address public health concerns, promote mental well-being, and provide access to healthcare services for all residents. The urban environment can contribute to mental health issues due to factors like stress, isolation, and lack of green spaces.

Gentrification & Displacement

Urban development can lead to gentrification, where rising property values displace long-standing communities and disrupt social fabric.

Cultural Integration and Diversity

Urban areas with diverse populations may struggle to foster integration, inclusion, and cultural understanding among different ethnic and social groups.

Social Isolation

Despite the urban environment, some individuals experience social isolation and feelings of disconnectedness due to factors like digital interactions and busy lifestyles.

Illegal Activities and Crime

Urban areas may grapple with crime, safety concerns, and challenges in providing effective law enforcement.

Flexible and Remote Workspaces

The COVID-19 pandemic accelerated the trend of remote work and highlighted the importance of flexible home spaces. Home offices, study nooks, and multipurpose rooms became essential for accommodating work, education, and leisure activities.

Co-Living and Shared Spaces

Co-living spaces, where residents share common areas and amenities, gained popularity as a response to rising housing costs and changing social dynamics, especially among younger generations.

Shared Mobility Services

The rise of ride-sharing platforms like Uber and Lyft, as well as car-sharing services, indicated a shift towards mobility as a service (MaaS) rather than individual car ownership. This trend aimed to optimize resource utilization, reduce congestion, and provide more convenient transportation options.

Energy Access and Equity

The need to provide reliable and affordable energy access to underserved populations globally remained a priority. This included initiatives to bring electricity to remote areas and improve energy equity.



Technological Trends

Urban tech trends are reshaping cities worldwide. From data analytics and AI for smarter planning to smart mobility, renewable energy, and digital solutions, technology is enhancing urban living. These trends include blockchain security, wearable health tech, resilience measures, circular economy solutions, and smart infrastructure. Additionally, they include collaborative platforms, urban agriculture, robotics, biophilic design, decentralised energy systems, and smart waste management. Precision agriculture, e-government, and health monitoring improve services and safety, while smart retail, smart homes, and material innovation enhance daily life. Lastly, last-mile solutions, renewable energy adoption, energy storage, electrification, and carbon capture tackle environmental challenges.

Data Analytics and Artificial Intelligence (AI)

The use of AI and advanced analytics helps cities make sense of the vast amount of data they collect. Machine learning algorithms can optimize traffic flow, predict maintenance needs, and improve urban planning.



Smart Mobility

Technologies such as electric vehicles, autonomous vehicles, ride-sharing platforms, and mobility-as-a-service (MaaS) solutions are transforming urban transportation. These advancements aim to reduce congestion, emissions, and the reliance on private cars.



Urban Energy Solutions

Renewable energy sources, energy storage, smart grids, and energy-efficient building designs are reshaping how cities produce, distribute, and consume energy. These technologies contribute to sustainability and resilience.



Digital Twins

Digital twin technology involves creating virtual replicas of physical infrastructure and urban environments. These digital twins enable simulation, testing, and predictive analysis, aiding in urban planning and maintenance.



Blockchain and Digital Identity

Blockchain technology offers secure and transparent transactions, making it valuable for areas such as property management, secure voting systems, and digital identity verification.



Wearable Technology

Wearable devices and health monitoring technologies are impacting urban life by promoting active lifestyles, enhancing healthcare access, and providing real-time health data to individuals and healthcare providers.



Resilience and Disaster Preparedness

Urban technology can enhance disaster response and resilience through real-time monitoring, early warning systems, and predictive modeling to mitigate the impacts of natural and human-made disasters.



Circular Economy Solutions

Urban technology is being used to promote a circular economy by facilitating recycling, reducing waste, and optimizing resource utilization through data-driven insights.



Smart Buildings and Infrastructure

Buildings equipped with smart systems for energy management, security, and occupancy monitoring contribute to energy efficiency and improved quality of life for residents.



Collaborative Platforms and Sharing Economy

Digital platforms that enable resource sharing, co-working, and peer-to-peer exchanges are reshaping how people use urban spaces and services.



Sustainable Urban Agriculture

Urban farming, hydroponics, and vertical gardening technologies are being adopted to address food security, reduce transportation-related emissions, and promote local produce.



Privacy and Security Solutions

As urban technology collects and processes sensitive data, the development of secure and privacy-preserving solutions becomes essential to maintain public trust.



Robotics and Automation

Robotics technology is being integrated into urban environments for tasks such as sanitation, package delivery, and maintenance. Autonomous robots and drones are becoming key players in enhancing efficiency and reducing human intervention.



Biophilic Design

Biophilic design incorporates natural elements into urban spaces to improve residents' mental well-being and connection to nature. Technologies like vertical gardens, natural lighting, and biomimetic architecture contribute to this trend.



Decentralized Energy Systems

Microgrids, distributed energy resources, and renewable energy installations are empowering cities to create their own energy ecosystems, enhancing resilience and reducing dependency on centralized power sources.



Smart Waste Management

Technology-driven waste management solutions, such as smart bins and sensors, optimize waste collection routes, reduce litter, and promote recycling.



Precision Agriculture

Even in urban settings, precision agriculture techniques are used to optimize crop production, minimize water consumption, and enhance food security through data-driven approaches.



E-Government and Digital Services

Urban technology enables the delivery of government services online, improving citizen engagement, reducing bureaucracy, and enhancing transparency.



Health Monitoring Infrastructure

Cities are incorporating health monitoring technologies into public spaces to ensure safety during pandemics and monitor air quality and other environmental factors affecting public health.



Smart Retail and Experiential Commerce

Retail spaces are evolving with the integration of technology like augmented reality (AR), virtual reality (VR), and interactive displays to create immersive shopping experiences that cater to changing consumer preferences.



Smart Homes

The integration of Internet of Things (IoT) devices and smart technologies into homes is a significant trend. Smart thermostats, lighting systems, security cameras, and voice assistants were becoming increasingly common, enabling homeowners to control and automate various aspects of their living spaces.



Material Innovation

Innovations in construction materials and techniques aimed to reduce the environmental impact of homebuilding. This included the use of sustainable and recycled materials, as well as 3D printing for faster and more efficient construction.



Last-Mile Solutions

Innovative approaches to solving the last-mile transportation challenge, such as electric scooters, e-bikes, and micro-mobility solutions, were gaining traction as urban populations sought more efficient ways to complete short trips.



Transition to Renewable Energy Sources

The shift toward renewable energy sources, such as solar, wind, hydro, and geothermal power, was a significant trend. This transition is driven by concerns about climate change, the desire to reduce greenhouse gas emissions, and advancements in renewable energy technologies.



Energy Storage Advancements

Advances in energy storage technologies, including batteries, were enabling the integration of intermittent renewable energy sources into the grid. Battery storage was becoming crucial for storing excess energy generated during peak production periods and using it during high-demand times.



Electrification of Transportation

Improving energy efficiency in buildings, industries, and transportation was a key driver to reduce overall energy consumption. Demand response programs were gaining popularity, allowing energy consumers to adjust their usage based on supply conditions and pricing.



Carbon Capture, Utilization, and Storage (CCUS)

Technologies aimed at capturing and storing carbon dioxide emissions from industrial processes and power plants were being developed to mitigate the impact of emissions on the environment.





Environmental Trends

Urban tech has a central role in addressing environmental challenges and promoting sustainability in cities. It supports climate change mitigation through renewable energy, resilience against climate impacts, and sustainable infrastructure. Additionally, urban tech aids in green space management, circular economy adoption, waste reduction, and resource management. It also assists in resolving land use conflicts, fostering environmental education, and planning for climate resilience. It is instrumental in creating more eco-friendly and resilient urban environments.

Climate Change Mitigation

Cities are increasingly focused on reducing greenhouse gas emissions to mitigate climate change. This involves adopting renewable energy sources, promoting energy efficiency, and implementing sustainable transportation solutions.



Resilience and Adaptation

Urban areas are vulnerable to the impacts of climate change, including extreme weather events and rising sea levels. Cities are investing in resilience measures such as flood defenses, green infrastructure, and disaster preparedness plans.



Sustainable Infrastructure

Urban infrastructure is being designed to minimize environmental impacts. Sustainable building practices, green roofs, permeable pavements, and smart water management systems are becoming standard.



Green Spaces and Biodiversity

Urban green spaces, parks, and urban forests are recognized for their role in improving air quality, reducing heat island effects, and providing habitats for wildlife.



Circular Economy Strategies

Cities are adopting circular economy principles to minimize waste generation and promote recycling, reuse, and resource efficiency.



Zero Waste Initiatives

Zero waste goals involve diverting waste from landfills and incineration by promoting source reduction, composting, and recycling.



Natural Resource Scarcity

Water scarcity and resource depletion can strain urban areas. Sustainable resource management practices are essential to ensure long-term availability.



Land Use Conflicts

Balancing competing interests for land use, such as residential, commercial, and recreational, can lead to conflicts and challenges in urban planning.



Environmental Education and Awareness

Cities are promoting environmental education and awareness campaigns to engage residents in sustainable practices and behavior change.



Climate-Resilient Land Use Planning

Urban planning incorporates climate-resilient land use practices that anticipate future climate impacts and prioritize sustainable development.



Climate Change and Environmental Challenges

Rising sea levels, extreme weather events, heatwaves, and air pollution pose significant threats to urban areas. Cities will need to implement climate adaptation and mitigation strategies to protect infrastructure, residents, and ecosystems.



Waste Management

The growth of urban populations generates substantial waste, and managing waste in an environmentally responsible manner is a persistent challenge for cities.





Legal Trends

The legal dimension of urban technology trends is a complex web of regulations and frameworks that deeply influence their implementation and impact. Data privacy and protection laws, exemplified by GDPR, respond to the growing concerns surrounding data use in urban tech. In parallel, cybersecurity regulations are emerging to safeguard critical infrastructure and sensitive information. Meanwhile, smart city regulations involve matters of data governance and citizen rights, whereas urban planning and zoning laws significantly shape urban growth and resource allocation strategies. Building codes adapt to promote sustainability, while discussions on data ownership continue to mould urban data utilisation. Energy and environmental regulations play a crucial role in advancing sustainability goals, while clear land tenure and property rights are vital for addressing issues like gentrification. Public space, transportation, community engagement, ethics in AI, public health, and international climate change agreements all contribute significantly to the legal framework surrounding urban technology, ensuring its responsible and sustainable integration into urban development.

Data Privacy and Protection

The increasing collection and use of data in urban technology raise concerns about data privacy and security. Laws like the European Union's General Data Protection Regulation (GDPR) influence how data is collected, processed, and shared in urban contexts.



Cybersecurity Regulations

As cities become more connected and reliant on technology, cybersecurity regulations are emerging to safeguard critical infrastructure and sensitive data from cyber threats.



Smart City Regulations

Governments are developing regulatory frameworks to govern the implementation of smart city technologies, addressing issues such as data governance, infrastructure standards, and citizen rights.



Urban Planning and Zoning

Legal regulations around urban planning, land use, and zoning impact how cities grow, develop, and allocate resources for infrastructure and public spaces.



Building Codes and Regulations

As urban infrastructure evolves, building codes and regulations are adapting to incorporate energy-efficient designs, sustainable materials, and innovative construction methods.



Data Ownership and Sharing

Legal discussions around data ownership, sharing agreements, and data marketplaces are shaping how urban data is used by various stakeholders.



Energy Regulations

Laws related to renewable energy integration, energy efficiency standards, and incentives for sustainable practices influence urban energy systems.



Environmental Regulations

Laws related to pollution control, waste management, and sustainable development impact urban efforts to address environmental challenges.



Land Tenure and Property Rights

Legal frameworks for property ownership and land tenure are critical for ensuring clear property rights and addressing issues of gentrification and displacement.



Public Space Regulations

Legal considerations around the use of public spaces, access rights, and regulations for events and gatherings shape the urban experience.



Transportation Regulations

Legal frameworks for transportation services, including ride-sharing, micro-mobility, and public transit, influence mobility options and urban traffic management.



Community Engagement Laws

Some cities are adopting legal requirements for public engagement and participation in urban planning and policy-making processes.



Ethics and AI Regulations

As artificial intelligence is integrated into urban technologies, discussions around ethical AI use, transparency, and accountability are shaping regulations.



Public Health Regulations

Laws related to public health, hygiene, and sanitation play a vital role in managing disease outbreaks and ensuring urban well-being.



Climate Change and International Agreements

Global efforts to combat climate change, including agreements like the Paris Agreement, were influencing energy policies and encouraging countries to transition toward low-carbon energy sources.

