SUSTAINABLE URBAN MOBILITY

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As assumed in the project, the basis for the young people in taking initiatives and innovations in their local environment should be multidisciplinary knowledge on the European Green Deal strategy. It's been divided into four modules, corresponding roughly to the policy fields to which this strategy is addressed. The following study aims to approximate the scope of the field defined by the title.

1. HOW CAN A SUSTAINABLE URBAN MOBILITY SYSTEM BE DEFINED?

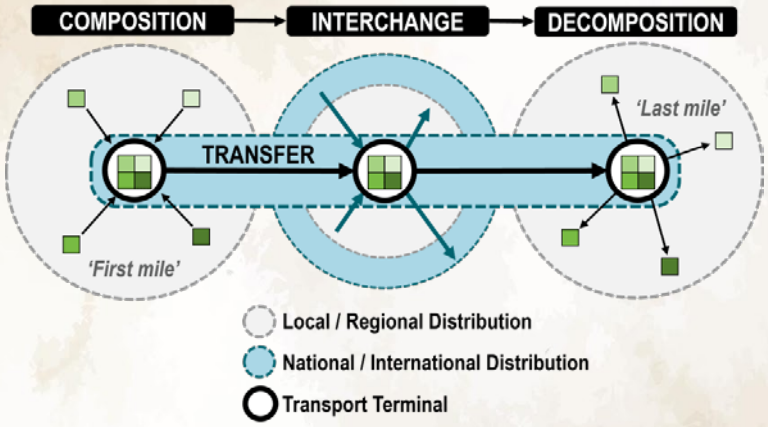

Fig. 1 Intermodal transport chain

A sustainable urban mobility system can be defined as a comprehensive framework of transportation modes and infrastructure designed to minimize negative environmental impacts, enhance the quality of life for residents, and efficiently utilize resources. It is characterized by a balance between various modes of transport and takes into account the needs and preferences of the local community. Key features of a sustainable urban mobility system include:

1. Enhanced Public Transportation: Prioritizing public transportation, such as buses, trams, metros, or trains, as a central element of the system. Investing in expanding and modernizing transportation networks to provide convenient, accessible, and efficient modes of transport for a wide range of residents.

2. Promotion of Walking and Cycling Infrastructure: Creating safe and comfortable pedestrian pathways and cycling lanes, encouraging the use of these modes of transport by providing suitable infrastructure.
3. Integrated Payment Systems: Establishing unified payment systems that allow for the use of various modes of transport through a single card or app. This facilitates seamless transitions between different modes of transport.
4. Development of Low-Emission Vehicles: Promoting electric or other low-emission vehicles to reduce air pollution and greenhouse gas emissions.
5. Spatial Planning: Designing cities in a way that minimizes the need for long trips and provides residents with access to essential services, thereby reducing the reliance on cars.
6. Traffic Management: Utilizing modern technologies to monitor and manage traffic flow, reducing congestion and improving traffic efficiency.
7. Education and Awareness: Conducting educational initiatives aimed at changing residents' habits, promoting the use of public transport and environmentally friendly modes of transportation, and increasing awareness about the impact of mobility on the environment.
8. Social Participation: Involving residents in decision-making processes related to urban mobility planning and development to incorporate their needs and opinions.
9. Diverse Transportation Options: Providing a variety of transportation modes so that individuals can choose the most suitable mode of travel based on distance, travel time, and preferences.
10. Monitoring and Optimization: Continuously monitoring the functioning of the mobility system and adjusting it based on data and user feedback to achieve the best outcomes.

The goal of a sustainable urban mobility system is to create a more environmentally friendly, efficient, and people-centric urban transportation environment that meets the needs of modern communities while minimizing negative impacts on the natural environment. Here are some of the most important innovations in sustainable urban transport:

1. Electric Vehicles (EVs): The widespread adoption of electric cars, buses, and bikes helps reduce air pollution and dependence on fossil fuels.
2. Autonomous Vehicles (AVs): Self-driving vehicles have the potential to optimize traffic flow, reduce accidents, and improve transport efficiency.
3. Micro-Mobility Solutions: Electric scooters, bicycles, and shared bikes offer convenient and eco-friendly options for short-distance travel.
4. Mobility as a Service (MaaS): Integrated digital platforms that offer a range of transportation options, including public transit, ride-sharing, and bike-sharing, making it easier for users to plan and pay for their journeys.

5. **Smart Traffic Management:** Real-time data analytics and smart traffic lights help manage traffic flow, reduce congestion, and improve air quality.
6. **Shared Mobility Services:** Ride-sharing, car-sharing, and carpooling reduce the number of vehicles on the road and promote efficient use of resources.
7. **Transit-Oriented Development (TOD):** Designing urban spaces around transportation hubs encourages walking, cycling, and public transit use.
8. **Green Infrastructure:** Implementing green spaces, pedestrian-friendly areas, and dedicated cycling lanes improves the overall urban environment and promotes sustainable transport options.
9. **Renewable Energy Integration:** Charging stations powered by renewable energy sources further reduce the carbon footprint of electric vehicles.
10. **Last-Mile Solutions:** Innovations such as drone deliveries and delivery robots help solve the last-mile transportation challenge for goods.
11. **Dynamic Ride-Sharing:** Platforms that match travellers with similar routes encourage ride-sharing and reduce vehicle congestion.
12. **BRT Systems:** Bus Rapid Transit systems provide efficient, high-capacity public transportation with dedicated lanes and fast boarding processes.
13. **Pedestrian-Friendly Infrastructure:** Designing streets and intersections to prioritize pedestrians enhances safety and encourages walking.
14. **Urban Air Mobility (UAM):** The development of electric vertical take-off and landing (eVTOL) aircraft could revolutionize urban transportation by reducing congestion and travel times.
15. **Contactless Payments:** Simplifying fare payment processes using contactless cards or mobile apps encourages the use of public transportation.
16. **Data-Driven Planning:** Utilizing data analytics and modelling to optimize transportation routes, predict demand, and plan infrastructure upgrades.
17. **Urban Placemaking:** Creating attractive public spaces encourages walking, cycling, and social interactions, reducing the need for motorized transportation.
18. **Flexible and On-Demand Transit:** Dynamic shuttle services that adapt to real-time demand offer more convenient alternatives to fixed-route public transit.
19. **Zero-Emission Zones:** Designated areas where only zero-emission vehicles are allowed promote cleaner air and sustainable transport.
20. **Multi-Modal Hubs:** Integrated transportation hubs that connect various modes of transport make it easier for commuters to switch between different options.

These innovations collectively contribute to the development of more sustainable, efficient, and eco-friendly urban transportation systems.

READ MORE: *https://transport.ec.europa.eu/transport-themes/urban-transport/sustainable-urban-mobility-planning-and-monitoring_en*

2. What can be the consequences of using an outdated public transport system and basing it on the use of a private car?

Using an outdated public transport system and relying heavily on private cars can lead to a range of negative consequences for both the environment and the quality of life for residents. Here are some of the potential consequences:

1. Congestion and Traffic Jams: Reliance on private cars can lead to road congestion and traffic jams, resulting in longer travel times and increased stress for drivers.
2. Air Pollution: Increased car traffic contributes to higher emissions of pollutants, leading to air pollution. This negatively impacts the health of residents and the overall environment.
3. Greenhouse Gas Emissions: The use of fossil fuel-powered private cars contributes to the emission of greenhouse gases, accelerating the process of climate change.
4. Reduced Public Space: A high number of private cars often leads to the allocation of significant public space for parking, limiting access to spaces for pedestrians, cyclists, and other forms of transport.
5. High Costs: Maintaining a car-centric transportation system requires investments in roads, parking infrastructure, and ongoing maintenance, as well as significant expenses for fuel and vehicle upkeep.
6. Low Efficiency: Private cars often have low occupancy rates, with one or few passengers per vehicle, resulting in inefficient use of resources.

7. **Lack of Access Equality:** Individuals without access to private cars may face difficulties reaching workplaces, educational institutions, and services, particularly if alternative transportation options are limited.
8. **Safety Hazards:** An increase in the number of private cars can lead to more accidents on the roads, posing risks to pedestrians, cyclists, and other road users.
9. **Social Isolation:** Overreliance on private cars can lead to reduced social interactions in public spaces, potentially affecting community cohesion.
10. **Dependency on Fossil Fuels:** Basing the transportation system on private cars perpetuates a dependence on fossil fuels, making the system vulnerable to fluctuations in oil prices and availability.
11. **Urban Sprawl:** Relying on private cars can encourage urban sprawl, where cities spread out and become less compact, leading to longer commutes and increased energy consumption.
12. **Noise Pollution:** The increased use of private cars contributes to noise pollution in urban areas, affecting residents' quality of life.
13. **Health Impacts:** Air pollution and sedentary lifestyles associated with car-centric transportation can have negative health effects on residents.
14. **Environmental Degradation:** The combination of increased car usage and the expansion of road infrastructure can lead to habitat fragmentation and destruction of green spaces.
15. **Lack of Sustainability:** An outdated public transport system that doesn't offer convenient, efficient, and sustainable alternatives can hinder a city's progress towards sustainability goals.

3. EU Green Deal solutions

The European Green Deal is the European Union's strategy to achieve climate neutrality by 2050 and transform the European economy towards a sustainable future. In the context of urban transport, the European Green Deal introduces a number of initiatives to improve the environmental performance, efficiency and accessibility of transport in cities. Here are some of the urban transport-related solutions being introduced by the programme:

1. Sustainable Transport Connections: The programme promotes investment in modern, sustainable and coordinated urban transport connections, such as metro, tram and bus systems, to increase the share of public transport in urban traffic.
2. Cycling and Walking Infrastructure: Green Deal initiatives encourage the development of cycling and walking infrastructure to create safe and comfortable paths for cyclists and pedestrians and encourage the use of these environmentally friendly modes of transport.
3. Electrification of Transport: The programme promotes the electrification of transport modes in cities, including the introduction of electric buses and other electric vehicles on public transport to reduce emissions and improve air quality.
4. Supporting Public Transport: EU funds are directed to support public transport systems, through investment in new rolling stock, the modernisation of existing transport modes and the development of intelligent traffic management systems.
5. Innovative Payment Systems: Innovative payment solutions that facilitate the use of various modes of public transport through a single source, such as mobile applications or contactless cards, are supported.
6. Supporting Logistics and Freight Transport: The programme encourages sustainable urban logistics and freight transport, including by developing eco-friendly delivery fleets and modernising delivery infrastructure.
7. Green Emission Zones: The European Union encourages the creation of low-emission or completely emission-free zones, which limit the access of high-emission vehicles to city centres
8. Financing and Investment: The programme supports financing for investment in sustainable urban transport by providing financial resources for infrastructure expansion and transport vehicle modernization.
9. Development of Smart Cities: The Green Deal promotes the development of smart cities where technology is used to manage traffic, public transport, monitor emissions and improve the quality of life for residents.
10. Education and Awareness: the programme encourages education and awareness-raising among residents about the benefits of using sustainable modes of transport and the need to reduce greenhouse gas emissions.

All these initiatives and solutions aim to accelerate the transformation of urban transport in Europe towards more sustainable and greener solutions.

4. How you can influence these solutions, ie: call to action - there is a chance to save the Earth if we all get behind it!

Everyone living in a city can have an important role in contributing to greater urban transport sustainability by taking informed action. Here are some ways in which you can contribute to this improvement:

1. Choose Sustainable Means of Transport: Choose modes of transport with low environmental impact, such as public transport, cycling, walking, electric scooters and car-sharing.
2. Reduce Private Car Use: Try to limit the use of your private car, especially for short distances. If possible, choose other forms of transport.
3. Support Public Transport: Use public transport such as buses, trams or the metro to reduce the number of cars on the road. Buy tickets and season cards that financially support the public transport system.
4. Promote Cycling and Walking: Cycle or walk, especially for short distances. Support the development of cycling and walking infrastructure in your city.
5. Sharing Transportation: If you have access to it, use ride-sharing services such as car-sharing, bike-sharing or ride-sharing.
6. Education and Awareness: Participate in educational campaigns on sustainable transport. Share your knowledge and encourage others to use environmentally friendly modes of transport.
7. Raise Your Voice: Get involved in local initiatives and campaigns to improve urban transport. Support infrastructure projects that promote sustainable transport.
8. Support Transparency and Innovation: Encourage city governments to invest in sustainable transport, develop new solutions and utilise innovative technologies.
9. Change Habits: Evaluate your daily transport habits and choices. Even small changes, such as giving up your car for short trips, can make a difference.
10. Involving the Community: Encourage family, friends and neighbours to use sustainable modes of transport and educate them about the benefits of these choices.

Small changes made by each citizen in their everyday habits can make a significant contribution to making urban transport more environmentally sustainable and friendly cities!!

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PROJECT PARTNERS:

Lead Partner: Polish Ecological Club Pomeranian Branch

Co-partners: