Panel Discussion on:

Policy and Governance for Smart Mobility

Introduction

Overview

Smart mobility involves leveraging advanced technologies and innovative solutions to enhance transportation systems, making them more efficient, sustainable, and user-centric.

Core Principles

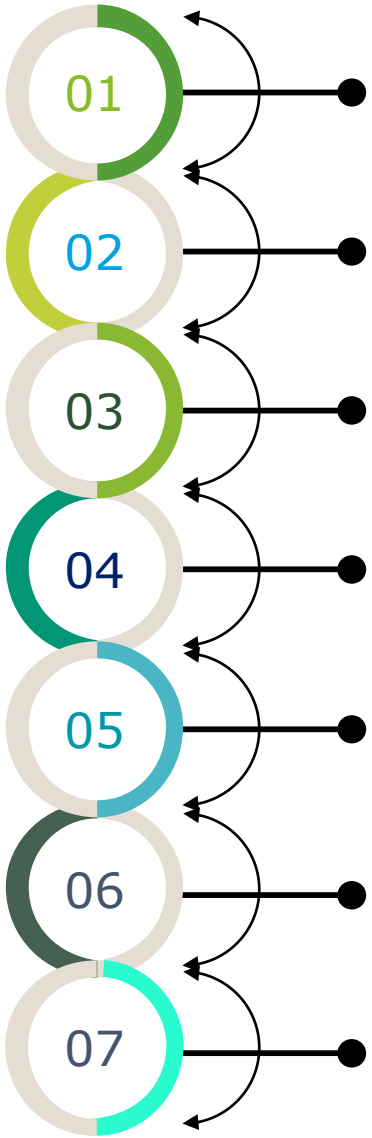
Efficiency
Optimizing traffic flow and reducing congestion.

Sustainability
Lowering carbon emissions and promoting eco-friendly transportation options.

Accessibility
Ensuring transportation is accessible to all citizens, including those with disabilities.

Safety
Enhancing road safety through advanced monitoring and communication technologies.

Key Components of Smart Mobility



Advanced Transport Technologies: Electric Vehicles, Autonomous Vehicles, and Connected Vehicles, allow vehicles to communicate with each other and surrounding infrastructure, enhancing safety and delivering real-time traffic updates

Intelligent Traffic Management Systems (ITMS): Uses AI, IoT, and big data for real-time traffic monitoring and management, reducing congestion, enhancing public transit efficiency and enhancing road safety.

Mobility as a Service (MaaS): A digital platform that integrates various transport services into a single accessible interface, allowing users to plan, book, and pay for multiple types of mobility services.

Smart Infrastructure Smart infrastructure with sensors and technology for real-time monitoring and traffic management, combined with dynamic road pricing using E-Tolling and congestion pricing to manage demand.

Integrated urban planning : Integrated urban planning that uses data to address current and future transportation needs, aligning transport solutions with broader smart city initiatives like smart grids, IoT, and sustainable urban development

Multimodal Transportation: Involves integrating various modes of transport to create a seamless and efficient travel experience.

Smart Public Transportation: Enhancing public transit with real-time information sharing and integrated ticketing systems to meet current and future transportation needs.

Opportunities & Benefits of Smart Mobility

Economic Growth: Investment in Smart Mobility can stimulate economic growth by creating jobs in areas of infrastructure, services as well as technology, infrastructure, and services.

Improvement in Urban Mobility: Solutions like , such as intelligent traffic management systems, real-time public transport information, and ride-sharing platforms, can alleviate traffic congestion, reduce travel times, and enhance overall urban mobility.

Environmental Benefits: Transitioning to alternate fuel technologies like electric vehicles and promotion sustainable transportation methods can help reduce air pollution and greenhouse gas emissions.

Increased Safety: Advanced technologies like autonomous vehicles, smart traffic lights, and real-time monitoring systems can improve road safety by reducing accidents and enhancing emergency response capabilities.

Increased Efficiency: Smart mobility solutions can optimize transportation networks, reducing energy consumption and operational costs. This includes better route planning, efficient fleet management, and enhanced public transport scheduling.

Enhanced User Experience: Smart mobility solutions can lead to a more user-centric transportation experience, offering features such as personalized route recommendations, real-time updates, and improved customer service.

Policies related to Smart Mobility

National Electric Mobility Mission Plan (NEMMP) Launched in 2013, the NEMMP aims to promote the adoption of electric vehicles (EVs) in India and reduce reliance on fossil fuels. The plan includes incentives for EVs and infrastructure development.

FAME India Scheme (Faster Adoption and Manufacturing of Hybrid and Electric Vehicles) Launched in 2015 and extended through various phases, FAME India provides financial incentives for the purchase of electric and hybrid vehicles. Offers subsidies for electric and hybrid vehicles, including two-wheelers, three-wheelers, and cars, and supports the establishment of EV charging stations.

National Smart Cities Mission (NSCM) Launched in 2015; this mission aims to develop 100 smart cities across India. Smart mobility is a key component of smart city development. Promotes the integration of smart transportation solutions such as intelligent traffic management systems, real-time public transit information, and sustainable urban mobility planning.

Policies related to Smart Mobility

National Policy on Biofuels Promotes the use of alternative fuels, including biofuels, to reduce dependence on conventional fuels. Encourages the use of biofuels in transportation, which complements the goals of smart mobility by reducing environmental impact.

National Road Safety Policy Aims to improve road safety through better management and technological advancements. Incorporates smart traffic management systems, real-time incident detection, and data analytics to enhance road safety.

State-Level Transport/ EV Policies Various states have their own transport / EV policies that may address aspects of smart mobility, including EV adoption and infrastructure development. Local policies can influence the implementation of smart mobility solutions at the state and city levels.

Regulations related to Smart Mobility

Motor Vehicles Act, 1988 Regulates vehicle registration, driver licensing, road safety, and traffic regulations. The Act is being updated to incorporate provisions related to electric vehicles (EVs), autonomous vehicles, and the use of technology in traffic management.

Information Technology Act, 2000 Governs electronic commerce, cybersecurity, and data protection. Applies to the management of data collected through smart mobility systems and the protection of user privacy.

Data Protection Laws Protects personal data and privacy of individuals. Emerging data protection regulations will impact how data collected from smart mobility systems is handled and protected.

Environmental Protection Act, 1986 Provides a framework for environmental conservation and pollution control. Supports smart mobility initiatives aimed at reducing emissions and improving environmental sustainability.

National Highways Act, 1956 Governs the development and management of national highways. Impacts the integration of smart mobility solutions on major road networks.

Questions - Policy & Regulatory

Q1. What are the main regulatory and policy barriers hindering the adoption of smart mobility technologies?

Q2. How can we develop a cohesive strategy and a policy framework for smart mobility that integrates various modes of transport, and technologies?

Q3. What standards should be established for data interoperability among smart mobility systems?

Q4. What strategies should be implemented to ensure the secure management and privacy of data collected through smart mobility systems?

Q5. How can data sharing between different entities (viz. government, private) be facilitated while protecting user privacy?

Questions - Institutional

Q6. What role should the central and state governments play in regulating and enforcing smart mobility policies?

Q7. How can city level agencies (municipal authorities, bus companies, etc.) be better integrated into national smart mobility initiatives to ensure effective implementation?

Q8. How can institutional capacity of city level agencies dealing in urban transport be ramped up to handle new technologies in smart mobility? Will traditional approach work or a different approach is required?

Q9. What mechanisms can be established to improve coordination among different governmental agencies and stakeholders involved in smart mobility?

Questions - General

Q10. What are the most effective funding models for smart mobility projects, and how can they be sustained over the long term?

Q11. What lessons can be learned from international best practices in smart mobility that can be applied to the Indian context?

Q12. What are the key benefits of public-private partnerships ? What are the key policy interventions needed to encourage public-private partnerships in the smart mobility sector?

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