Transportation Planning and Urban Development in Asia-Pacific

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What is Safe and Sustainable Transport?

- **Meets Mobility Needs:** Caters to all users
- **Minimizes Negative Impacts**
  - Reduces environmental harm
  - Limits societal disruptions
  - Protects public health
- **Ensures Safety:** Prioritizes user safety
- **Facilitates Access:** Provides access for everyone
- **Protects the Environment**
- Reduces pollution and greenhouse gas emissions
- Promotes non-motorized transport modes

Four Levels

1. Urban Planning
2. Land Use Planning
3. Urban Design
4. System Design

The Role of Urban Planning in Transport

- Determines land use patterns and movement within a city
- Impacts transport needs, distances, and travel modes
- Poorly designed cities increase car dependence
- Reduces safety for vulnerable road users

Sustainable Transport and Land Use Planning

Land Use Planning

- Encouraging dense, mixed-use neighborhoods
- Reducing travel distances

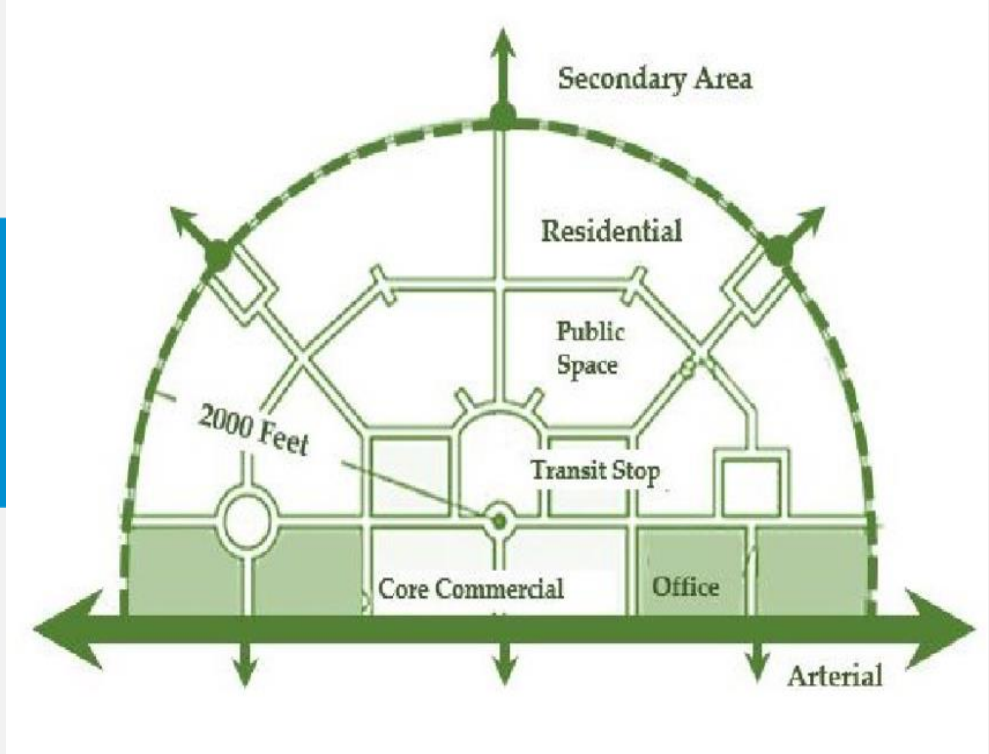
Prioritizing Non-Motorized and Public Transport

- Promoting walking and cycling
- Enhancing public transport systems

Reducing Dependence on Private Vehicles

- Implementing policies to discourage private car use
- Supporting car-sharing and ride-sharing initiatives

Methods of Integrating Transportation and Urban Planning



Concept of transit-oriented development (TOD) (Calthorpe, 1993)

- Core Strategies
- Transit-Oriented Development (TOD): Dense, mixed-use development near transit stations
- Intermodality: Seamless transfer across multiple transportation modes
- Greening & Sustainability: Eco-friendly infrastructure, bikes, electric vehicles

Methods of Integrating Transportation and Urban Planning

- 15-Minute City: Neighborhoods where residents reach daily needs within 15 mins on foot or bike
- Complete Streets Policy: Streets designed for all users—pedestrians, cyclists, transit, vehicles
- Mobility as a Service (MaaS): Digital platforms integrating multiple transport options
- Urban Growth Boundaries: Limiting sprawl, focusing development near transit/infrastructure
- Transportation Demand Management (TDM): Carpooling, flexible hours, parking incentives
- Smart City Technologies: IoT, data-driven traffic and land use management
- Public Space & Urban Design: Green, walkable spaces linking land uses and transit
- Policy & Institutional Coordination: Cross-sector planning and governance

Designing Safer Streets

Dedicated lanes for cyclists and pedestrians

- Ensures safety for non-motorized road users
- Reduces conflicts between vehicles and cyclists/pedestrians

Safe crossing points and well-lit areas

- Improves visibility and safety at night
- Encourages pedestrians to use designated crossings

Accessible and well-placed public transport stops

- Enhances convenience for public transport users
- Reduces walking distance to transport stops

Overview of the Peshawar BRT System

Key Statistics

- **Total Length:** Approximately 26.6 kilometers, seven routes .
- **Number of Stations:** 30 stations and 80 direct bus stops.
- **Number of Buses:** Around 158 hybrid buses, articulated buses
- **Headway:** 2.5 minutes in-between buses.
- **Passenger Capacity:** Designed to carry approximately 250,000 passengers daily.

Integration with Urban Planning

- Enhanced Pedestrian Infrastructure
- Developing Greenways
- Optimizing Public Transportation (intermodal)
- Addressing Social Equity
- Impact on Urban Governance
- Improves urban governance and sector innovation

Environmental Impact

Carbon Emission Reduction

- 31,000 tons of CO_2 emissions annually
- Encourages public transport use

Active Mobility

- Encourages cycling
- Bike share integrated with the system

Conclusion

- Importance of Urban Planning: Essential for creating safe, sustainable, and inclusive transport systems
- Prioritizing Mixed-Use Developments: Encourages diverse land use and reduces travel distances
- Safe Infrastructure: Ensures safety for all users, including pedestrians and cyclists
- Inclusive Designs: Caters to the needs of all community members

Resources

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